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LECTURES
ON
THE SURGICAL TREATMENT OF STONE IN THE BLADDER.

Delivered in the Royal College of Surgeons of England, June, 1886.

By WILLIAM CADGE, F.R.C.S.,

Hunterian Professor at the Royal College of Surgeons; Senior Surgeon to the Norfolk and Norwich Hospital.

LECTURE III.

Advantages of Suprapubic Lithotomy.—Disadvantages.—Application. Lithotrity.—Operation.—Causes of Death.—Litholapaxy in Children —in Adults—in the Aged.—Recurrence of Stone after Lithotrity.—Choice of Operation.—Conclusion.

Advantages of the Suprapubic Operation.—These are considerable. 1. It is easier of performance than perineal lithotomy, or, in many cases, than litholopaxy; and this is a point of no small importance, especially to those who are not frequently called on to operate for stone. The high operation, as formerly practised, was by no means free from difficulties, due chiefly to the greater proximity of the peritoneum, to the sinking of the bladder, when opened, into the depths of the pelvis, and to the consequent inability to reach it. Now, with the bladder brought well into the abdominal cavity, and retained there by the rectal bag, it needs only common skill and prudence to operate. In this, however, as in most other operations, much facility will be acquired by previously practising it on the dead body. 2. By it, stones of the greatest magnitude may be removed. Dr. Cayley, in India, Dr. Morison, of Hartlepool, and Mr. Rivington, have removed stones weighing 25 and 23 ounces. These could never have been extracted through the perinæum, and it is not to be supposed that their removal by the high operation was easy. Mr. Rivington found it necessary to break up the stone with a chisel and mallet, and withdraw it piecemeal, and M. Guyon mentions a case in which he had to do the same. Both these cases, however, recovered from the operation. Dr. Morison found it impossible to extract the stone with any lithotomy-forceps, but managed cleverly to deliver it—if I may use the term—with a pair of small midwifery-forceps. 3. Infiltration of urine, it is said, should not occur after the high operation. Anatomically considered, the loose cellulo-adipose tissue covering the bladder would, I think, induce one to fear the permeation of it with urine and blood, and consequent mischief; and it must be admitted that some deaths from this cause have already been reported, while, by the old method of operating, fatal infiltration was by no means uncommon. 4. Freedom from troublesome bleeding ought to be, and probably will be, found to be greater than after perineal lithotomy. There are no arteries lying in the knife's course, but there are some considerable veins coursing over the bladder, and the bladder-wall itself is vascular; notably, there are two veins which I have repeatedly observed (best in thin people) running parallel with each other from the apex down the front of the bladder, to join the plexus around the prostate; the line of incision would usually run between, but close to them, and they might, without care, be easily wounded. In several cases recently reported, sharp bleeding has occurred, checked in one case by a timely ligature, and in another by a firm plug and compress; so that on this point, as on others, we must suspend judgment for the present. 5. The suprapubic is certainly less liable than the lateral operation to various subsequent drawbacks, such as fistula, wound of the rectum, impotence, etc. 6. There should be but little risk of leaving stones or fragments of stone undetected. In certain cases of lateral lithotomy, where the prostate is enlarged, and the bladder not within reach of the finger, this is a very real risk; but, in the *sectio alta*, the finger will almost always be able to explore every part of the cavity; and, as less force is required to extract the stone, so there will be less liability to break it.

The risks and disadvantages of the operation are, happily, not great. The chief one is the possible opening of the peritoneal cavity, leading to peritonitis from urinary extravasation, or to hernial protrusion of the intestines. With the present plan of operating, this danger is remote, but it has occurred. It is not easier to recognise the outside of the serous membrane in this operation, than it is in ovariotomy, or in dividing the coverings of a hernia; should it be opened, it may be well to consider what is the best course to adopt. M. Polaillon, in one case, closed the wound, and postponed the further steps of the operation. Dr. Tremaine, of Buffalo, having removed the stone and partially closed the wound, was called to the patient in less than half an hour; and found that, under the stress of vomiting, a quantity of small intestine had escaped through the wound. He at once clipped the sutures, returned the bowel, and stitched the anterior wall of the bladder to the abdominal wound, so as effectually to close the aperture in the peritoneum, and the patient made a good recovery. Some surgeons contend that the contact with, or entrance of, healthy acid urine into the peritoneal cavity, would not necessarily produce peritonitis; but I know of no evidence to justify this opinion, and, moreover, the urine in stone cases is seldom quite healthy. The safest course, however disappointing, would probably be, if the accident were immediately discovered, to close the wound, and postpone further proceedings for a short time. Rupture of the bladder from over-distension is not likely to occur, if the injection of fluid be arrested as soon as real resistance is felt. Violent straining of the bladder and rectum, with extreme rigidity of the abdominal muscles, are apt to come on, but they will subside in a short time. In the case, lately, of a girl whose bladder contained a stone, this straining, I found, came on before three ounces were injected, and the water was expelled with great force when the catheter slipped out. The quantity of fluid used varies with the retaining power of the bladder; in children, probably not more than a few ounces; and in old men, with atonic bladder, twelve to fifteen ounces, or more, may be introduced. Similarly, injury to the coats of the rectum will not happen in future, if the quantity of water introduced into the bag be limited to twelve or fourteen ounces. Petersen and Guyon speak of larger quantities; but a larger quantity is neither necessary nor safe. The only instance of this accident that I know of, occurred in my own practice, in the case of an old man, into whose rectum I injected, slowly and easily, nearly eighteen ounces; he died of kidney-disease and suppression of urine five days after the operation. All the surroundings of the bladder were healthy; but there was a rupture of the mucous membrane and of the circular muscular fibres of the rectum, to the extent of an inch, near the bladder. The report of published cases would seem to show that recovery is rather slower after suprapubic than after lateral lithotomy; the urine resumes its natural route more tardily, and the operation-wound takes a long time to heal; and this, not only after the removal of very large stones, but even when they have been small. This, however, will not deserve much consideration, if it can be shown that the cure is more certain and more complete than after other methods. It must be admitted that the suprapubic wound is unfavourably placed for thorough drainage of the bladder; it is at the least, instead of the most, depending part, as the patient rests on his back; and, to obviate this difficulty, it is well to place him on his side. Trendelenburg tried the prone position; but this evidently could not be long maintained, and did not answer.

Application.—The cases for which, and the limits within which, the suprapubic operation is applicable, I cannot at present be confidently stated. All are agreed that it is to be preferred to other methods for very large stones; those, namely, which exceed the size of a hen's egg; but how, it may be asked, should a stone, which is just too large to be amenable to lithotrity, be dealt with? by perineal or by suprapubic lithotomy? Should the advantages claimed for the latter be made good

(and there are strong grounds for the expectation), then the lateral method, however reluctant we may be to relinquish it, must yield the field to its newer rival.

It cannot be denied that lateral lithotomy has, in most hands, for stones weighing over 2 ounces, proved fatal in the proportion of 40 to 45 per cent. The record of the Norwich Hospital gives, for stones of 2 to 3 ounces, 54 cases with 20 deaths; of 3 to 4 ounces, 14 cases and 9 deaths; of 4 to 5 ounces, 9 cases with 3 deaths; of 5 to 6 ounces, 3 cases with 2 deaths; of 6 to 8 ounces, 2 cases with 1 death; total, 86 cases (males) of stones over 2 ounces with 39 deaths, being 1 in 2.20, or about 45 per cent. The death-roll of four of the large London hospitals for similar cases is, I believe, somewhat larger than this; whilst the mortality of the suprapubic operation for stones weighing over two ounces is, according to Dr. Dulles, somewhat less: namely, 62 cases with 22 deaths, or 1 in 2.8, being 35½ per cent. It would not be safe to put too much trust in these statistics; the conditions are not equal. The Norwich tables are fairly taken; they include all the cases, successful and unsuccessful alike, which have occurred in one institution, and it may be conceded that the large majority of them were done by fairly competent hands; but the suprapubic cases were gathered from all sources, and were done by many hands, competent and incompetent. They include those only which the various surgeons choose to publish, and we know how reluctant many are to put forward unsuccessful cases. This inference would, of course, tend to reduce the success of the suprapubic operation; on the other hand, we may confidently expect that, with our improved methods, with our increased knowledge of abdominal surgery, and with the partial use of antiseptic measures, the results obtained will be far better in the future than they have been in the past.

There is a class of cases for which the high operation will probably become more and more applicable; namely, the combination of stone with considerable enlargement of the prostate gland. Looking back at my own experience, I perceive that these cases constitute a very large proportion of the whole, and they furnish also a large proportion of the unsuccessful, incomplete, and fatal cases. They are more difficult to cope with than any other class; the bladder often cannot be reached; stones, or fragments of stone, are apt to be left behind; hæmorrhage is frequently serious, and is difficult to deal with; in short, a full-sized stone associated with a large prostate constitutes, as I have before said, the maximum of difficulty in lateral lithotomy. Those surgeons who, like Mr. Reginald Harrison, believe that it is good practice to try, not only to remove the stone, but also to cut away portions of the prostate gland, or to make incisions through obstructing parts of it, will still prefer the perineal route. For my part, with all respect for these views, I am disposed to treat the enlarged prostate with forbearance and respect, and to leave it absolutely untouched. The pain, cystitis, and misery which these patients endure, are due, not so much to the prostate, as to the added trouble of the stone; and, in my experience, the entire removal of the stone will, in almost all cases, place the patient in comparative comfort. The high operation in these cases would present no unusual difficulties; the bladder is usually large and dilatable, and the stone would be within easy reach. An awkwardly enlarged prostate not only impedes the lithotomist; it equally frustrates the lithotritist, and renders his efforts unsatisfactory, as I shall presently show; and so, should the high operation have anything like the success which is predicted for it, not only will it supplant the lateral operation in such cases, but I can conceive that it will sometimes take the place of lithotrity also.

In all cases, the stone is much more within reach by the high operation than by any other; therefore, if the stone be encysted, it will probably offer some decided advantages. The distance between the surface of the perinæum and the entrance to the bladder is always considerable; but, in many cases of encysted stone, the distance is increased by reason of hypertrophy of the prostate, and so the entrance to the enclosing cyst can seldom be got at with precision or safety, so as to extricate the stone; but, in the high operation, this would probably be more practicable.

In children (boys), the suprapubic operation has hitherto found its best success. The abdominal position of the bladder, the higher position of the anterior fold of the peritoneum, and the slight liability of children to urinary infiltration, are strong inducements to its adoption. On the other hand, lateral lithotomy is also very successful; still it is not always an operation free from difficulty, and occasionally it fails altogether, even in experienced hands. When the stone is of any considerable size, the high operation is preferable to the lateral; and, when the stone is quite small, lithotrity, even in young children, has much to recommend it; but, in the average run of cases of stone in the young, results alone can decide which method is the safer.[1]

Lithotrity.—In discussing the subject of lithotrity, we stand on much firmer ground than in speaking of suprapubic lithotomy. There are facts and experience in abundance, on which to ground a reliable judgment, although there are still some points of detail requiring further elucidation. Like the high operation, it has recently undergone a remarkable development, but this development has already stood the test of time and trial enough to justify its general adoption.

The history of Bigelow's brilliant innovation on the old method is too well known to need detailed notice. It is curious how near some of the earlier lithotritists approached it. Heurteloup certainly seized the true idea, but had not the instruments wherewith to carry it out. Sir Philip Crampton used suction to extract fragments of stone from the bladder, and Clover contrived the rubber aspirator and large-mouthed catheter, which differ but little from those which are now in constant use. It is with a feeling almost of chagrin and regret, that I recall the fact that, as regards the suprapubic operation and litholapaxy, with Garson's plain hints as to the one, and Clover's helpful appliance in the other, English lithotomists and lithotritists should have overlooked the true meaning of these hints, and have left it to Petersen and Bigelow to recognise their intrinsic principles, and to adopt and fully introduce them into practice. It is true that Brodie, more than forty years ago, removed fragments of stone by suction, but he only advised it for the final fragments in a paralysed bladder. It is also true that, with Clover's rubber bottle and catheter, some of us have tried to clear bladders that could not clear themselves; but none of us had realised or thought of the possibility of attacking and removing at one sitting an ordinary stone from a healthy bladder. Otis's discovery, if I may so describe it, of the full dilatability of the urethra without injury, paved the way for the introduction of litholapaxy. Bigelow saw clearly enough that, without a full-sized evacuating catheter, the removal of any but small stones could not be effected at one sitting, but that with it, and with lithotrites of adequate strength, the field covered by lithotrity would be greatly extended. This anticipation has been abundantly proved; the principle of the proceeding is good and sound, and the practice is brilliant and successful. But, while admitting and maintaining this position, I am not unaware that there is some drawback to this picture; that it is held by many surgeons, and, amongst them, some of the most eminent, that the success of lithotrity is, in too many cases, temporary, and not permanent; palliative, and not radical; that, while the immediate result is good and satisfactory, the future history of a patient relieved by lithotrity too often is full of trouble, caused by persistent bladder-disease and frequently recurring stone. I cannot deny that there is some ground for this adverse opinion; how much, I will endeavour to show. In the meantime, let me say a few words as to the operation, and then as to its application to children, to adults, male and female, and to the aged.

Litholapaxy.—I have followed the usual method of operating. The urinary organs and urine are first brought into as favourable a condition as possible, by rest and appropriate treatment. I invariably begin an operation with a fenestrated lithotrite of adequate size. The stones most frequently met with in the eastern counties are generally composed of pure uric acid, and are of intense hardness; so hard are they, that it has sometimes required my utmost strength of wrist, and the help of a towel folded round the handle of the instrument, to accomplish the first break of the stone. Dr. Freyer, in India, where very large stones are frequently crushed, has experienced this difficulty, and has suggested the addition to the handle of the lithotrite of a cross-bar, which would give great power, would save one's hand, and could be removed when not required for large and very hard stones. As the fragments diminish in size, the unfenestrated instrument comes to be the best; it holds, crushes, and pulverises the fragments better, and makes quicker work. It is desirable that all lithotrites should have the female blade made rough, so as to prevent slipping of the smooth round or oval stones when

[1] The rate of mortality of suprapubic lithotomy, since the introduction of Petersen's method in 1879, is, according to M. Garcin, of Strasbourg, 94 cases with 23 deaths, or 24 per cent.

Age.	Cases.	Ratio.	Percentage.
1 to 10	22	1 in 4.40	22.2
10 ,, 20	26	1 ,, 2.6	38.4
20 ,, 30	8	1 ,, 4	25
30 ,, 50	7	1 ,, 7	14.28
50 ,, 70	16	1 ,, 2.8	43.75
70 ,, 90	11	1 ,, 2.75	36

M. Tuffier, of Paris, gives more recent cases, including the above, namely, 120 operations, with a mortality of 27 per cent. (*Vide* Ashurst's *International Encyclopædia of Surgery*, vol. vi, article on Stone, by Dr. Keyes.)

caught. These stones are apt to slide out of the instrument and escape when the male blade is pressed down on them, but this rough surface enables the blades to grip at once. Great care should be taken to raise the stone towards the centre of the bladder before using the screw, so as to avoid contact with, and injury to, the mucous membrane. The evacuating catheters have varied but little from those first introduced by Bigelow. I have always used the curved, because it has seemed to me that the straight tube, when pressed down into the bladder, is not quite free from the risk of injuring, or even perforating, its walls, especially if they be thin and weak. It is important to keep the curved end of the catheter slightly pressing down the fundus of the bladder during the evacuation of *débris;* this is done with the left hand, while the eye of the experienced operator will ceaselessly watch and wander over the whole apparatus. If the aspirator do not quickly expand, this may be due to blockage from fragments, in which case the characteristic click will be heard, or it may result from a portion of mucous membrane becoming entangled in the aperture, or from the end of the tube having been inadvertently withdrawn into the prostatic urethra.

The aspirators are of various shapes. Bigelow, Otis, Berkeley Hill, Morgan, and Sir H. Thompson, have all separate patterns. I have tried most of them, and I must give the preference to Bigelow's last (*Lancet*, January 6th, 1883), or to that made by Down, with the addition of a funnel for easy filling; both have the glass receiver below the aspirator, and this has the decided advantage, that the water in it does not become quickly coloured with blood, and you can see at a glance how the evacuation is progressing and when fragments cease to fall into it. That which Sir H. Thompson prefers answers very well, but I have found it open to two objections. Some patients are apt to bleed, especially old prostatic cases; and small clots, with minute fragments of stone entangled in them, or shreddy mucus, become fixed in the hanging wire valve, and block, wholly or partially, the return stream into the bladder; moreover, the slightest stain of blood immediately reddens the fluid in the receiver and obstructs the view, so that it is not easy to see how the evacuation is going on. It is surprising how little water is required to be forced into the bladder at each squeeze of the aspirator; a tablespoonful is almost enough; much more than this will only disturb the bladder unnecessarily and hurtfully, and will not assist in extracting fragments.

It is very desirable that the entire stone should, if possible, be removed at one sitting. At one time, and with the habit, according to the old method, of dividing the treatment into several sittings, I was not unwilling to leave a portion of the stone for a second operation; with a full-sized stone, the proceeding is very fatiguing to the surgeon, and, moreover, as the stone diminishes in size, the smaller fragments are less and less easily met with, so that the inducement to make two sittings is strong. This, however, is a mistake; the bladder and urethra, injured and bruised to a slight extent as they necessarily are by the prolonged use of instruments, are far more likely to recover tone and health if there be no sharp fragments present to excite or keep up cystitis; therefore, there should be entire clearance if possible, even if this should require another half-hour of endurance on the part of both patient and surgeon.

Of immense importance is it not only to secure the removal of the chief bulk of the stone, but especially of the very last atom or final fragment, so that no starting point or nucleus may exist for recurrent stone or phosphatic deposit. This has always been the difficulty and defect of lithotrity by the old method; but it is claimed for the new that, with the evacuating catheter and a good aspirator, there is no difficulty in removing the last fragment. I can fully coincide with this view when we are dealing with a healthy, smooth, and vigorous bladder, but it is far otherwise with a half-paralysed, hypertrophied bladder, in which the muscular columns stand out, and the mucous membrane is pocketed, as it were, between them; where the prostate projects backwards, and pouches are formed on one or both sides of or below it. In such cases as these, and they are frequent in practice, I do not hesitate to say that no evacuating catheter, and no aspirator, even in the most skilful and experienced hands, can with certainty ensure the extraction of every minute fragment; the suction-action of the aspirator extends but very little distance from the opening in the evacuating catheter; and we cannot explore all these recesses, pockets, and pouches. Tiny atoms become hidden; they mingle with small clots of blood, and with mucus, and cling around and amongst these irregularities of the lining membrane; and although clots and mucus are readily drawn up through the catheter, we can never be sure that all are removed. Even Bigelow, who is certainly not willing to admit any defect in the operation, and whose manipulative skill is perfect, confesses that "we fail to discover a last fragment in some bladders, even by repeated washing" (*Lancet*, January 1st, 1883).

Advocate as I am of the new lithotrity, I feel constrained to admit this difficulty with the final portions of stone, and further to admit that to it is due, as I shall presently show, the great tendency to recurrence of stone and phosphatic deposits which are lamentably prone to follow lithotrity in a certain class of cases.

The causes of death after lithotrity deserve the closest attention; they point out the dangers which beset the operation, and the accidents which may happen; and, when fairly described, they convey a great amount of information. In my own practice, I have seen eighteen deaths; the list is a long one; but as in lithotomy, when I remember the large number of old, neglected, and otherwise diseased patients I have had to treat, men who will only apply for aid when they can no longer work, with complications of various kinds and broken-down constitutions, I can almost wonder that the list is not longer. Sir H. Thompson, in speaking of the early detection of stone, says he has treated 100 cases of these small stones, with only one death. I can only say that I see but few of these desirable cases, and the recital of them almost excites envy.

The following table, giving the salient points of these eighteen fatal cases, show that, in four, the cause of death was independent of the treatment, and ought, perhaps, to be omitted from the list: namely, one each from angina pectoris, erysipelas of the head and face, apoplexy, and chronic bronchitis. In four at least, pyæmia was the cause, all being hospital-cases. Peritonitis occurred in five, in four of which there were sacculi, and the inflammation spread from them, and, in three of these, a stone, or fragments of stone, were found in the sacculi; in two, the bladder-wall was injured by the catheter; and in one there was pelvic abscess, caused by a false passage in the prostatic urethra. In more than half the deaths, kidney-disease was either the sole or, to some degree, a contributory cause of death.

Lithotrity in Children.—Until recently, lithotrity has been assumed to be unfit for quite young children; but our brethren in India have lately opened new views on this subject. I cannot mention Indian surgeons without bearing my testimony to the great and excellent work they are doing in the surgery of stone. They possess, especially those who reside in the north-west provinces, unrivalled opportunities of observation in the vast number of stone-patients who seek their aid; and it is a pleasure to recognise the sound and practical character of their published papers, while their operative skill is abundantly proved by the great success they have obtained. The papers of Dr. Freyer and Dr. Keegan are well known; while Drs. Beaumont, Anderson, Saunders, and others, have contributed much information. Dr. Beaumont, at Indore, I believe, first applied lithotrity to young children. In his early cases, he says: "I used no evacuating catheter at all, breaking the stones up very small with the small hand-lithotrite (No. 5), and the *débris* were passed safely, without the use of any evacuating instrument." He was succeeded at Indore by Dr. Keegan, who, at first, hesitated to apply litholapaxy to children, because of the great success of lithotomy; but, at the close of 1881, he began, and, in the *Indian Medical Gazette* of May, 1884, and June, 1885, he has reported forty-two cases, with only one death. The ages of the children varied from 2 to 11 years; the weight of stone from 5 to 308 grains, the average being 128 grains; the average stay in hospital was a little less than a week. In his first paper, he deprecated litholapaxy for stones composed of oxalate of lime; but, in his last, he has given three cases of mulberry stones crushed, which weighed respectively 308, 230, and 200 grains, in boys of 11, 11, and 10 years of age. Keegan always uses fenestrated instruments, for fear of clogging by *débris*, and only those lithotrites and catheters which will readily pass without undue stretching. As in the adult, so in children, it came almost as a surprise for English surgeons to learn that proportionately large instruments could be easily passed into the bladder. English surgeons, and even Dr. Freyer, in India, have hitherto objected to the operation, because of the small urethra, the undeveloped genito-urinary organs, and the tender and sensitive mucous membrane in children, as well as the generally successful results of lithotomy. Keegan found that, in boys, there is great difference as to the size of instruments that are admissible. Speaking generally, boys of 4 to 6 will bear No. 7 or 8 lithotrite, and No. 8 or 9 evacuator, and boys of 8 or 10 will admit No. 8 or 10 lithotrite, and No. 10 or 12 evacuator. A No. 8 fenestrated lithotrite will easily crush a stone of two to three hundred grains. It is necessary to break up the stone very thoroughly. The evacuator, though proportionately large, is actually small; and the operation, therefore, in children, occupies a longer time than in the adult, the average being rather over an hour. He contends that the bladder and urethra in children will bear rough handling quite as well as or better than in adults. They recover easily from the operation, as a rule. Some had swelling of the penis and prepuce, and some had pain in micturating for a few days; but these

Deaths after Lithotrity.

No.	Age.	Sittings.	Remarks and Cause of Death.
1	72	2	Cystitis; retention twelve days after last sitting; prostate size of orange; mucous membrane of bladder dark in colour.
2	76	1	Feeble man; enlarged prostate; alkaline urine; stone hard; eleven lines; fever and cystitis; abdominal pain; died in twelve days; bladder small and contracted; thick walls; mucous membrane dark; a sacculus at lower and right side larger than bladder itself; pieces of stone in it; thin walls; intensely inflamed and pelvic peritonitis around it; prostate enlarged; ureters dilated; kidneys coarse and dilated.
3	75	1	Feeble man; three stones; death in fifteen days; abdominal pain; fever; cystitis; peritonitis spreading from sacculi at back of bladder; sac walls thin, almost sloughy; bladder large and dilated; sacculi everywhere; mucous membrane inflamed; median lobe of prostate large; kidneys healthy.
4	63	2	Came in with cystitis, having been crushed by surgeon a month before; bad state; great pain; fœtid urine; crushed once or twice, but he failed, and died in two months. Bladder inflamed; sacculated; one full-sized sac at apex contained two pieces of stone; kidneys not unhealthy.
5	59	3	Stone and stricture; dilatation up to No. 11; crushed twice, phosphatic stone; urine alkaline, with muco-pus; bladder improved, but he became ill with pleuro-pneumonia, and died five weeks after first crushing. Bladder small, mucous membrane inflamed; a small piece only of stone remained. Prostate not enlarged. Kidneys congested; right contained two small abscesses; left a cyst with clear fluid. Right pleura contained three or four pints of turbid serum. Right lung collapsed, not inflamed; left lung healthy. Pericardium universally adherent, thickened, and contained two large plates of bony matter, some inches in diameter; at one part, the edge of this bony plate was the seat of a sloughy abscess, probably pyæmic.
6	59	2	Favourable case, crushed easily; no bladder-irritation; passed [illegible] freely; death from chronic pyæmia and suppurative nephritis six weeks after operation. Bladder healthy; mucous membrane pale, a few small fragments of stone remaining; abscess in both kidneys, one lung, and in sterno-clavicular joint.
7	62	3	Cured by lithotrity in 1871; recurrence; crushed again three times 1874; retention; peritonitis; death three weeks after first sitting. Peritonitis chiefly in pelvic region. Bladder thick, not large. Mucous membrane not much inflamed, sacculated; one sac at apex was sloughy, and communicated with peritoneal cavity by small round hole; catheter, which was used every few hours by the house-surgeon and dresser, had evidently entered sac, and perforated its thin walls. Prostate enlarged, especially median lobe. Ureters dilated.
8	65	8	**Tall, florid, free living man. In April, 1875, four sittings; cured, but still an irritable bladder. Came again in February, 1876, with cystitis; felt stone fixed at upper fundus, crushed with difficulty. Two or three sittings, under anæsthetics; improved greatly; suddenly attacked with alarming dyspnœa; recovered; another attack a week after, fatal. No *post mortem* examination.**
9	74	3	Crushed five times; all stone removed. Slight phlebitis of leg during treatment; passed off; was going home cured, when erysipelas of head and face came on; proved fatal. Bladder healthy, no stone left. Prostate enlarged.
10	74	2	Multiple stones; chronic retention; fœtid, purulent urine; feeble health; rapidly declining. Two trivial crushings; improvement in urine followed, but anorexia and debility went on, and he died of marasmus in about a month. Bladder small, but not over [illegible]; mucous membrane dark in colour, and inflamed; a sacculus as large as the bladder itself behind it, having an aperture of communication with the post-wall opposite the urethra; its walls were composed of mucous membrane and peritoneum; the former black and sloughy, and the peritoneum even looked dark and purple, the sac filled with thick pus and urine. Six small stones, some of them broken, found in bladder. Prostate moderately enlarged.
11	67	1	Several stones; all urine by catheter five or six years. For two [illegible]; [illegible] cystitis, with alkaline muco-purulent urine. Hesitated whether to cut or crush. Lithotomy; removed some *débris*, but left more. In few days, fever, cystitis, and nephritis; died two weeks after crushing. Right kidney atrophied; three ounces; [illegible] dilated. Left enlarged, eleven ounces; pelvis and ureter inflamed, and filled with offensive bloody urine and pus. Prostate [illegible] as an orange, median lobe projected far into bladder, deep pouch behind it. Bladder inflamed; hypertrophy with dilatation; [illegible] small sacculi, one large, one near left ureter, filled with calculous mass size of walnut. Orifice of sac would just admit tip of forefinger; stone projected through it into bladder, and was rounded smooth by contact with stones there. In bladder, two large stones, and one larger unbroken one. Lithic acid covered with phosphates.
12	62	1	Multiple stones. Lithotomy; 220 grains lithic stone, easily removed. Peritonitis, death in four days. Extravasation and sloughing found round the bladder, with pelvic peritonitis. Bladder [illegible] and there at back part of lower fundus was a hole, through [illegible] muscular coats, large enough to admit tip of [illegible], of it covered with sebulous matter. Prostate enlarged.
13	72	1	Lithotomy, stone of moderate size; in ten days, seemed almost well. Then had erysipelas, swelling of arm, acute pleuro-pneumonia, and died in four days. Pyæmic infarctions in kidneys and lungs, no actual pus, death came so quickly. Bladder hypertrophied with dilatation, honeycombed, mucous membrane pale; a few minute pieces of stone left.
14	68	1	Large hard lithic stone; enlarged prostate; litholapaxy; 400 grains red lithic *debris* removed; a good many fragments left, 150 grains passed, some impacted in urethra, and had to be picked out; fever ensued, swelling of one hand, urinary abscess in perineum, death in twelve days. Bladder hypertrophied, mucous membrane not much inflamed, piece of stone remaining. Prostate large, especially median lobe, which projected into bladder, like a large walnut; ureters large and convoluted; kidneys large, congested, and riddled with disseminated abscesses.
15	77	1	Hard lithic stone; 290 grains; litholapaxy; prostate large, tendency to bleed on slightest touch; bladder sensitive; abdominal pain; fever; bloody urine; death in four days. Over left kidney signs of inflammation, patch of lymph, and vivid injection on intestinal peritoneum adjacent; kidneys showed black hæmorrhagic infarcts; bladder of moderate size, but thick; mucous membrane injected and red, but not plum-coloured; no sacculi; some old clots, and a few small fragments of stone; prostate much enlarged, especially right lobe, which projected into lumen of bladder, and impeded use of instruments; very distinct and prominent "bar" at vesical orifice, and in front of it a deep prostatic sinus; mucous membrane on the bar slightly abraded.
16	75	1	Multiple small stones, easily removed by litholapaxy; some cystitis and retention; quickly removed by catheter and washing, but some vesical irritability remained. Seized with apoplexy on the morning of his going home; died quickly; enormous clot in corpus striatum. Bladder pale and healthy, free from stone; at apex was a malignant tumour, size of a walnut, in the bladder-wall; puckering peritoneum over it, and just showing through the mucous membrane; this was undetected in life, and caused the slight irritability left after the operation.
17	46	1	Large hard stone; crushed with large lithotrite and 18 tube, and removed 470 grains, leaving a few fragments, which were removed shortly after; only slight cystitis, and he was nearly well; then pain about the bladder came on, but not in micturating; fever and acute abdominal pain, and he died a month after operation. Peritonitis, beginning in pelvis; bladder perfectly healthy; no stone left; no cellulitis, but there was a large circumscribed abscess below it, on one side of rectum, containing healthy pus; this was set up by a false passage, leading into it from the prostatic urethra. Prostate rather increased in size; very deep prostatic sinus; lacunæ by side of vera-montanum very large. Into one of these the catheter, or some instrument had passed, and coursed under the mucous membrane, and led to the abscess; a small fragment of stone was entangled in the passage.
13	72	1	Red-faced man, with bronchitis and chronic cystitis; very ill, and getting worse; under chloroform, removed a soft phosphatic stone; bladder washed out daily, and urine became acid and clear; but he gradually became choked with bronchial phlegm, and died three weeks after operation. No *post mortem* examination.

symptoms yielded readily; while in some, as in adults, it was requisite to slit the orifice of the urethra slightly, to gain admission for the proper instruments. Keegan concludes his observations by insisting on the following rules: "Use small fenestrated lithotrites; if possible, crush the stone into fine powder; and you will not then require large-sized catheters to evacuate the *débris*. Never use a lithotrite or catheter which will not pass readily in and out of the bladder and urethra; be extremely gentle and careful in practising all manipulations on the urinary passages; do not be in a hurry to complete the operation; use the aspirator freely, and never, if possible, leave a single grain of *débris* behind in the bladder; and rest assured that, if all these conditions are fulfilled, you may count on a very large average of success. Some cases you will meet with where no lithotrite, however small, can be employed with safety, and these are the cases which should be dealt with by lithotomy." As I have quoted Keegan's figures, I have also thought it due to him to give his conclusions; he speaks after full experience, and not from a few cases only.

The advantages of lithotrity in children over perineal lithotomy may be thus stated. 1. It is probably more successful; the mortality of lithotomy is about 5 or 6 per cent.; of litholapaxy, probably not more than 2 or 3 per cent. 2. There is no risk from bleeding, or from wound of the bowel or of the seminal ducts. 3. The recovery is much quicker. 4. It is probably easier of execution than lithotomy. In female children, there can be no question that, for small stones, it is the proper operation. Dr. Freyer, who has objected to lithotrity in boys, has adopted it in girls in several instances with success; and in them it has not, as in boys, to stand the test of a rival lateral lithotomy. At the Clinical Society, lately, the subject was discussed, and the general tone of the speakers was one of cautious expectancy and reluctant assent. Personally, I have no experience of lithotrity in children; I do not often see stone cases in the very young, having ope-

rated on only thirty-one cases under 10 out of 360, and those were treated by lithotomy.

Lithotrity in the Adult, by which I mean the middle-aged adult, before the prostate begins to enlarge, and unfavourable bladder-changes occur, is capable of great things. In this period it achieves its greatest triumphs and its best results. In such cases, the kidneys are probably sound, and the bladder healthy; it is smooth, fairly capacious, its contractility and nerve-power are unimpaired, and, above all, there is no impediment to the outflow of urine. The operation is easy of execution; the complete removal of all the fragments can be accomplished almost with certainty, and, if any small portions be left, the patient will expel them with ease in a day or two. It is under these conditions that stones of full, and even great size, have been successfully removed. In this connection, the Indian surgeons take the lead. Dr. Keegan reports the case of a man aged 67, from whose bladder he removed a stone weighing about 3½ ounces. He used a No. 15 lithotrite at first, and for half an hour the stone was too large for the lithotrite to act by its screw; during this time, he nibbled at its surface, and at length so diminished its size, that the screw came into action, and the stone was broken, and easily dealt with. He introduced the lithotrite fourteen times, and the largest catheter an equal number. On the third day, he extracted a small piece which had been left, and, on the fourth day, the urine was quite clear, and the patient went home. The operation lasted four hours, and the surgeon adds that, once or twice, he was on the point of relinquishing it through fatigue.

Dr. Freyer also gives two cases in which he removed stones, each weighing over three ounces, one composed of lithic acid and the other of oxalate of lime. In these cases the calculus was single; and I need not say that it is more difficult to break up and remove a large single stone than to deal with double the weight of small multiple stones, which are generally laminated and friable. There must, I conceive, be some difference between the texture and composition of these large Indian calculi, and those pure red uric acid ones, which I often meet with. I can hardly believe that any instrument capable of being introduced could break up an uric acid stone of three ounces, unless, indeed, these large stones should be found to yield more easily in proportion than smaller ones. These very large stones, however well they may exhibit the scope and power of Bigelow's brilliant operation, can only be considered as exceptional. They require not only a healthy and capacious urethra and bladder on the part of the patient, but also great skill, and not a little strength and endurance on the part of the surgeon.

I cannot help thinking that the Indian patient, with his frugal mode of living and generally spare habit, is a less inflammatory and safer person to deal with than the beer and spirit drinking, and often hard living Briton. It is true that lithotomy in India is not more successful than in England; but this operation is probably done by the many, skilful and unskilful, whereas litholapaxy is only practised by the few and the able.

Litholapaxy in the Aged requires a more qualified statement as to its merits, chiefly because, in them, stone is frequently accompanied by complications of one kind or another, which often lead to trouble, or imperfect results. When no complications are present, the operation is quite as successful in the very old as in the middle aged; indeed, I think they bear the use of instruments better, and are less sensitive and resentful of interference.

The most common of all complications is prostatic enlargement. When slight, this is of little importance, but when it is considerable, it leads to changes in the bladder of a serious kind; it may impede the free and efficient use of the lithotrite, and render the removal of all the calculous fragments difficult. There is generally some impediment to the escape of urine; this necessitates increased action of the bladder, but the necessity comes at a time of life when the nervous and vital forces are declining; and, as a result, we see, not the hypertrophy with contraction and thickening of the bladder, common in obstruction from stricture in early adult life, but hypertrophy with dilatation and thinning, and consequent inability to contract and empty itself either of urine, or of fragments of broken stone.

Prostatic hypertrophy seldom affects equally the entire gland; it may be of one or other lobe, or of the median portion almost exclusively; and, in this way, the urethral canal may be so displaced, that its devious course is not easily followed by instruments of a definite and awkward shape. But this irregular enlargement may, and generally does, project into the cavity of the bladder, and lead to the formation of deep hollows or pouches, not sacculi, on each side of, or behind and beneath, the prostate, in which broken fragments of stone will hide where it is most difficult to follow them, and from which it is sometimes impossible to dislodge them by any means, or by any instrument.

Again, prostatic hypertrophy, as I have already described, induces hernial protrusions of the mucous membrane between the muscular fibres, and sacculation in all its degrees and varieties. When a stone is broken in such a bladder, some trifling piece, or fine *débris*, may, at moments when the bladder is distended, find their way into one of these sacs, and lay the foundation of encysted stone and frequently recurring symptoms. The imprisoned fragment first fills the cyst; then, by continued accretions of phosphates, it grows up into the bladder like a mushroom, and is probably again and again nibbled off by the lithotrite, each time with temporary benefit to the inflamed bladder, until the patient dies, worn out with chronic cystitis and pyelitis.

This is no fancy picture, nor is it so rare as some lithotritists would have us believe. I have met with a considerable number of cases, some of which have been reported; and increasing experience proves to me that prostatic enlargement is a very real source of failure in lithotrity.

The risk of this entanglement of *débris* in sacs or pouches is probably lessened by the removal of the stone at one sitting, but it is by no means certainly abolished. By turning the aperture in the evacuating catheter towards these pouches, and by the free use of the aspirator in all directions, the fragments may be washed out of them and all removed; but it cannot be denied that it is always a serious matter to shatter a stone into innumerable fragments in a bladder of this description. On the other hand, lithotomy, either suprapubic or perineal, is an operation of magnitude, and of greater and more serious risk than lithotrity, so far as immediate results are concerned.

Recurrence of Stone after Lithotrity.—Although the immediate and direct mortality of lithotrity is small, the recurrence of stone is lamentably frequent. In my own list of 133 cases, there were eighteen in which recurrence, one or more times, took place, being about 1 in 7. Sir H. Thompson, with a much larger number of cases, gives about the same proportion. I am disposed to infer, however, that recurrence is more frequent even than this, because it is not likely that all who get relapse apply to the same surgeon again. Living, as I do, in a local centre, and drawing cases chiefly from a limited area, I am probably more able to trace, and more called on to treat, those who suffer a second or third time, than he who lives in the metropolis, and draws his cases from great distances. Patients may, and frequently do, apply to the same operator once or twice; but, after a time, they either apply to their own surgeon, or they decline further treatment; and too often their subsequent history is one of painful endurance of chronic bladder-disease and gradual exhaustion. If, moreover, there be added to the list those numerous cases of phosphatic deposit or concretions so frequently noticed after lithotrity, the relapses would, I believe, reach to nearly 20 per cent. This seems a heavy indictment to bring against lithotrity, but I am afraid there is no gainsaying it; and, if so, it would be wrong to pass it over, or make light of it. Many of these relapses might be prevented if the patients would observe directions, and persevere with treatment. It certainly is so with the unenlightened and uncomplaining hospital patient. Feeling himself well, or what he considers well, he goes to his work, and neglects the use of the catheter and other means; and, instead of returning in a month or two to have his cure certified, or a minute remaining fragment removed, he toils away as long as he can, and returns, perhaps in a year or two, with a fresh uric acid stone, or with chronic cystitis, and a phosphatic one. The educated, sensitive, private patient, on the other hand, will watch his symptoms narrowly, and return if the slightest indication of the old trouble should reappear. It is this difference which makes lithotrity in hospital practice sometimes disappointing and unsuccessful.

This frequent recurrence must be due either (1) to the descent of a fresh stone from the kidneys, or (2) to a fragment of stone having been left at the first operation. As to the descent of a fresh stone: there can, of course, be no doubt as to the occasional occurrence of this cause, just as we see it occur after lithotomy. The bladder being entirely cleared of stone, there will be the same liability to the descent of a fresh renal calculus after one operation as after the other. What, then let me ask, is the fact as to lithotomy? I have already shown that there were only 21 cases out of more than 1,000 of lithotomy at the Norwich Hospital, in which recurrence was clearly traced to perfectly fresh formations coming like the first, from the kidney, or about 1 in 50; whereas, in Sir H. Thompson's list of about 600 persons treated by lithotrity, he mentions 61 cases in which he operated twice, 9 three times, 3 four times, and 2 five times; 75 in all, or about 1 in 8. The inference from these data seems to me to be inevitable, that relapse of stone after lithotrity is chiefly due to other

causes than the descent of a fresh renal stone. To my thinking, the majority of recurrences is caused by the great difficulty in insuring the complete removal of all the *débris*; I have already referred to this in old persons, with enlarged prostate and feeble atonic bladder, and it is this class of patients who are especially liable to relapse. I have traced this in my own cases, and, I may also add, in cases of other and better lithotritists than myself, too often to have any doubt in my mind.

It is frequently said, and it is quite true, that lithotrity is often followed by a tendency to phosphatic deposit in the bladder, and this tendency constitutes one of the chief objections to the operation. Thus, Sir H. Thompson says, "many who submit to lithotrity, become afterwards the subjects of chronic cystitis and phosphatic deposit, sometimes to a distressing extent" (*Medico-Chirurgical Transactions*, vol. lxi, p. 175). Dr. Freyer also says, "In prostatic enlargement, the disease (stone) frequently recurs, owing to the fact that the bladder is never completely emptied of urine during micturition" (*Lancet*, March, 1885). Why, I would ask, should this special tendency to phosphatic deposit ensue after lithotrity? Not, I think, as Dr. Fryer would have us believe, because of vesical incompetence and residual urine.

It is admitted that, in ordinary cases of prostatic hypertrophy, with atony and "catarrh" of the bladder, when no stone has ever existed, there is little or no proneness to phosphatic deposit. However fœtid, alkaline, and loaded with mucus the urine may be, no phosphatic deposit will take place in the bladder, except on some pre-existing nucleus. In such a bladder, we know how soon a catheter becomes encrusted; and similarly, if a clot of blood, or any foreign body, or even an abraded surface or a new growth exist, phosphatic deposit will soon take place. Without some kind of nucleus, no deposit will occur. The mucous membrane with its epithelial covering has probably some inherent vital power, which seems to guard it against deposit of calculous matter; remove the epithelial covering, and deposit may occur at once on the rough surface. After lithotomy, how often do we see this phosphatic deposit along the tract of the wound, but it is not found on the mucous membrane, unless some ulceration or abrasion has taken place.

I think I am justified, therefore, in saying, that when phosphatic deposit (call it concretion or call it stone) follows lithotrity, it is, in the large majority of cases, engrafted by aggregation on a fragment which, notwithstanding all the skill and care taken, has been overlooked at the first operation. This consideration should make us pause before breaking up a stone in an atonic bladder; I have often felt some misgiving in doing it. With the aspirator and evacuating catheter, we may hope to succeed in clearing out all the *débris* from these bad bladders better than we could by the old method; but even with this improvement, as Bigelow says, "we fail to discover a last fragment in some bladders even by repeated washing."

On the other hand, what better alternative is open to the surgeon? Lateral lithotomy is a harsh proceeding and more immediately perilous to life; and, moreover, it is not itself wholly free from the danger of leaving a portion of a broken stone behind. Suprapubic lithotomy, should it prove to be, in its modern form, more successful than it formerly was, may come to supplant not only perineal lithotomy in this class of cases, but lithotrity also.

Selection of Operation for Stone.—This is a subject of no small difficulty in many cases. The size of the stone, or, if more than one be present, the total amount of them; the condition of the kidneys, bladder, and prostate; the temperament and general health of the patient; his class in life; co-existing diseases and complications, if any; the surgeon's own experience and facility in manipulation; all these have to be duly weighed. An experienced hand will generally make a tolerably accurate estimate on these points, but mistakes are not unfrequent. For example, measurement of a stone is sometimes apt to mislead. A month or two ago, I introduced a No. 12 lithotrite into a man's bladder, and found a stone which measured over two inches, while the screw reached only two inches exactly. I hesitated, and for a moment felt inclined to do lithotomy. Finding, however, that the bladder was healthy, and the prostate not large, the urethral orifice was incised a little so as to admit a full-sized instrument, the stone was quickly and easily disposed of, and the *débris* weighed only 480 grains. No doubt this was a flattened oval stone which had been seized in its long diameter. Again, when two or three stones of unequal size co-exist, it is easy to pick up the smallest over and over again. We are thus led to think that only a moderate amount of calculus is present, whereas, when the small one is disposed of, surprise, and even dismay, are felt when a still larger one is grasped. Again, when more than one stone is suspected, it is customary to seize one, fix it in the instrument, and proceed to sound afresh; this, however, may mislead; for, a stone having been grasped by the tips of the blades, and moved about in the bladder, it will sometimes rotate a little in the blades of the lithotrite, and communicate a grating feel to the hand which is very like touching a second stone. A glance over the recently reported cases of the high operation will show how repeatedly the operators were mistaken on some point, either as to the size of the stone, or the condition of the bladder, or their ability to seize the stone. All this demonstrates, not that there was any want of skill, for the skill was of the best, but that, in not a few cases, there are inherent difficulties in coming to a correct conclusion as to the proper choice of the operation. I confess to having sometimes felt regret that I resorted to lithotrity when some unforeseen circumstance showed me that lithotomy would have been the better operation; and I have not seldom seen patients subjected to the risk of lithotomy when the milder plan by crushing might easily have been adopted.

Permit me to summarise the views, as to choice of operation I have attempted to enforce in these lectures, in a few propositions, which, if they are somewhat indefinite, are still the nearest approach to rules of practice which our present knowledge on some points seem to me to admit of.

1. In children, litholapaxy should be more adopted than has hitherto been the custom.

2. In male children, when the stone is at all large, the suprapubic will probably prove to be easier to do, and safer than, the perineal operation.

3. In female children, litholapaxy should be the rule for small stones and the high operation for all large ones.

4. In adult females, litholapaxy, or dilatation and extraction, should be adopted for stones of moderate size; vaginal lithotomy for those somewhat larger; and the high operation for those decidedly of large size.

5. In adult males, litholapaxy should be the rule for stones up to an ounce or an ounce and a half; above that size, lateral, or possibly suprapubic lithotomy—certainly the latter for all stones over three ounces.

6. In the aged, the same rules apply when the urinary organs are healthy; but when the prostate is large and the bladder atonic, suprapubic lithotomy should be more adopted, until its success or failure is demonstrated.

Conclusion.—I cannot close these lectures without thanking you, Mr. President and gentlemen, for your courteous attendance. No one is more sensible than myself of the imperfect and halting way in which much of this important department of surgery has been treated. This is due, not alone to my deficiencies, but, also, to the transition state in which we seem to be with regard to some questions relating to the operative treatment of stone in the bladder. There are some amongst us, and those fully entitled to guide professional opinion, who prophecy that the old and historic operation of Cheselden will shortly disappear, and be no more witnessed in our hospitals; that this will give place to newer methods, or older ones in a new form. Should this prophetic view of what the next generation of surgeons are likely to achieve be true; should the time-honoured lateral operation become obsolete, and all its literature merely a curiosity of history, and should the life's work of men of my standing be thus proved to have been more or less wrong, and should come to be replaced by other and better methods—we shall submit to the inevitable; shall even, with open minds, adapt ourselves, in what remains for us to do, to the new order of things; shall, perhaps, bear a part in shaping or correcting these new proceedings, and shall rejoice greatly if the result be that suffering is diminished and life prolonged. At present, however, this is but a prophecy, waiting for fulfilment or failure; and, while waiting and watching, I am thankful that I have been permitted to cast a retrospective glance at what I have seen and done in the surgery of stone in the bladder, uncomplaining if it should prove to be merely a record of bygone work, but abundantly content if it should afford a few useful hints for the guidance of my younger brethren.

DR. EASTWOOD.—A resolution was unanimously passed at the last monthly meeting of the Darlington Rural Sanitary Authority, on the proposition of Mr. W. A. Wooler, J.P., "That the best thanks of this body be tendered to Dr. J. W. Eastwood, J.P., who for twelve years had ably and assiduously presided over the business of the authority, and as a special acknowledgment of the vast amount of labour he freely gave to sanitary matters generally, and particularly to the settlement of the authority's by-laws, in agreement with the Local Government Board." Dr. Eastwood is an ex-President of the North of England Branch of the British Medical Association.

AN ADDRESS
ON
CASES OF VALVULAR HEART-DISEASE LONG FREE FROM SERIOUS SYMPTOMS.

Delivered before the Birmingham and Midland Counties Branch.

By SIR DYCE DUCKWORTH, M.D., F.R.C.P.,
Physician to, and Lecturer on Clinical Medicine at, St. Bartholomew's Hospital.

THE discussion which I am asked to open here to-day, in the name of the Collective Investigation Committee of the Association, is one which has bearings upon the whole vast subject of clinical medicine. The subject of it relates to one of the most difficult problems that come, but too often, before practitioners. Large, however, as is the whole subject of prognosis in cardiac valvular disease, limits are set to our discussion by the specific terms of the inquiry we are set to make, and which confine our attention to cases of heart-valve disease which have been for upwards of five years free from serious symptoms.

The fact that such an inquiry as we now seek to make is thought feasible is, in itself, suggestive that the prognosis of cardiac valvular disease has brightened with the general advance of medical science, and such we know to be the case. When, in 1862, Dr. Walshe issued the third edition of his book, on *Diseases of the Heart*, he remarked that the hopeless motto of Baron Corvisart's work on cardiac diseases (*Essai sur les Maladies et les Lésions Organiques du Cœur*; Paris, 1811), published half a century previously,—"*Hæret lateri letalis arundo,*" (Virgil, *Æneid*, Lib. iv, line 73)—"infinitely well-chosen in his time, grows yearly less and less appropriate."

The advances of the last quarter of a century, in respect of cardiac diseases, as a whole, may fairly be said to surpass those of the previous fifty years. We are not, however, met to discuss this large question. It were easier to do this, perhaps, than to confine ourselves, as we must, to the particular inquiry before us.

In considering cases which properly fall into the category prescribed, we shall find that some of them have been practically symptomless up to the time of recognition.

At the outset, it may be noted that valvular disease of the heart is not always detectable by skilled auscultators; that when it exists, the physical signs of it may be inconstant; and that when murmurs are present, they do not always indicate organic disease. It is certain, for example, that much difficulty sometimes attends the determination of organic as against hæmic or so-called functional murmurs. The inconstancy to which I have alluded is probably associated as much with disease of the mitral, as with that of the aortic valves. In any given instance, the prognosis depends upon an exact diagnosis of the lesion and of the conditions that have induced it.

I think it may fairly be affirmed that we can now better prognosticate the future in any case than was formerly possible, because more attention is paid to the life-history and the diathetic state of the individual, though much still remains to be done in these directions. The mere fact of a murmur, as we all now know, tells little or nothing as to the antecedents or the future of the subject of it. It is literally a "*vox et præterea nihil.*" To verify this much is in the power of any good third-year student. To find its exact significance is a tax on the acumen of the well-trained and observant clinical physician.

I apprehend that the scope of our present inquiry is to discover the conditions under which heart-valve diseases exist, without making their presence known to the subjects of them. What are the conservative conditions which prevent the betrayal of the ordinary symptoms in these cases? Are they constitutionally inherent in the individual, or are they due to concomitant, but inhibitory, states, themselves morbid, or, at any rate, not physiological? We ought, perhaps, to look outside the area of cardiac pathology to find some analogous problem whose elucidation might, perchance, be helpful, and I think we may find one in the morbid condition we recognise in albuminuria. This perverted state of renal function we know to exist, in many instances, without plain indications of its presence till it is suddenly detected in the routine examinations of the ward or consulting-room. How long it may have persisted, we often cannot surmise. Some stray symptom may have led to a suspicion of it, but it may often be unsuspected. Again, do we not occasionally meet with patients who present the marked hepatic perversion we recognise in the form of glycosuria, who yet present no diabetic symptoms, and enjoy, seemingly, very fair health? It will be conceded that, to determine the precise significance of each of these states, and to found a prognosis concerning them, demands much discrimination and large experience founded on other like cases. Whence comes the constitutional resistance, in such instances, whereby no ravages are wrought, and the patient is saved the ordinary, but grievous, troubles respectively of Bright's disease and of diabetes mellitus? Here lie some problems for future observers. That cases such as I have described exist, have been doomed to a dark future, and have lived on to the surprise of their advisers, is within the knowledge of some, if not of all, of us. It is also certain that many subjects of cardiac valvular disease have been despaired of on the ground of physical signs alone, and have lived a fair life-time in spite of ugly prognosis, and, I may add, too, of ugly treatment.

In supplying facts to determine the question before us, we must refer to our case-books, and extract such examples as have come before us in which unequivocal signs of valvular heart-disease have been made out, and in which the patient has remained under observation for at least five years, and has presented no serious symptoms. My belief is that those in large practice will find considerable numbers fulfilling these conditions. In most cases, however, the subject of the disease will have come first under notice for some trouble distinctly referable to the heart or the circulatory system. We must then try to find the probable starting-point of the disease. In doing this, we should probably all think foremost of some antecedent attack of rheumatic fever. I shall presently go more into details respecting the points which must be weighed here. Next, I think we should seek evidence of possible congenital malformations, especially amongst younger patients. As guides in this ætiological search, we must always have regard to the age, previous illnesses, occupation, and family history of the patient. In more advanced life, we are to bear in mind the possible existence of valvulitis as part of the cardio-vascular disturbance of chronic renal disease, and as part of more general senile and sclerosing degenerations. In adult life, we must not forget the influences of strain, alcohol, and syphilis. To these, and to some others, I propose now to address myself more in detail; and, for better method, I will take these in the following order: (1) Congenital malformations and endocarditis in early and in adult life; (2) Rheumatic valvulitis in its widest aspect; (3) Valvulitis in the adult as the result of strain, or of strain together with alcoholic intemperance and hard-living in general, including arteritis and valvulitis traumatica; (4) Valvulitis in connection with renal disease, and as associated with general arterio-capillary fibrosis; (5) Valvulitis in connection with anæmia; (6) Syphilis in relation to valvulitis.

When all these shall have been considered, we shall hardly have exhausted the subject before us. There remain other causes capable of provoking cardiac murmurs which, however, are hardly likely to furnish many examples fulfilling the conditions imposed in this inquiry.[1]

1. I consider first the cases of valvular disease due to congenital malformation. The large majority of these are inconsistent with viability, or with continuance of life beyond a few months or years. Cases of morbus cæruleus may reach adult life, but they are naturally attended with many symptoms and risks. None of these claim our attention. In some cases, however, we meet with evidences of congenital cardiac malformation, unattended by cyanosis, or by very little. Sometimes the general bodily development is satisfactory, though, most commonly, such patients are stunted in growth, and slim. In the less marked cases, the first-noticed signs of imperfect health may be the very slow general growth and development. The child is backward, and so much so that the rachitic state may be suspected; but, on careful examination, no signs of rickets are to be found. A little duskiness of the fingers and toes, and a slight clubbing, may be appreciable, both here and at the end of the nose, but not always. In any such case, it is proper to examine the heart, and a murmur will not uncommonly be found; albeit, no symptoms of cardiac disturbance have obtruded themselves. With care, such children may grow up, and if their constitution be good, they seem to do fairly well in life. They may pass through the exigencies of school-life, and may even take part in athletic exercise. The prognosis is naturally better for girls than for boys. The period of puberty is trying for

[1] Of scarlet fever as a direct factor in the production of endocarditis I have no experience. When such occurs, there are always associated rheumatismal symptoms, of which the nature is hardly, as yet, determined. Measles is alleged to cause endocarditis, and to lay the foundation of valvular disease. Happily never met with a instance, I have given [illegible] as to this

the former, but may be surpassed; some dyspnœa on exertion, or inability for prolonged exercise, may be all that is complained of, but not even this in some cases. Acute illnesses may be tided over, of which pertussis, measles, and scarlet fever, are the most trying; and, in one of these, it may be, or on some other account, if the heart be examined, a murmur is detected. It may be very loud, and cause alarm or anxiety to the observer. In some cases, the subjects of malformation may enter upon the active duties of life with their special trouble undetected. I have met with several of such instances. The following, I believe, to be an example. J. A., aged 41, a well-grown man, came under my care lately in St. Bartholomew's Hospital. When he was 18 years old, he was enlisted in the Royal Marines, and served for four years; he was then discharged from the service on account of palpitation. He had scarlet fever at 9 years of age. When he was 29, he was admitted to St. Bartholomew's for dyspnœa and palpitation. At the age of 33, he had hæmoptysis for the first and last time. He had never had rheumatism or syphilis, so far as he knew. For twenty years past, he had been subject to dyspnœa. Examination of his heart revealed no obvious enlargement, the apex-beat in natural situation, and a loud, rough, systolic murmur heard all over the chest and both sides of the back. The murmur was loudest in the area of the conus arteriosus and pulmonary artery, the second sound being but faintly audible over the right ventricle. The pulse was locomotory, but not otherwise of aortic type. There was clubbing of fingers and toes, no dropsy, and but the slightest appearance of cyanosis. The kidneys were healthy. The diagnosis here was congenital stenosis of the pulmonary artery. I could not satisfy myself as to an imperfect ventricular septum, albeit it might have been expected in such association, and because of the widely diffused convection of the murmur, especially posteriorly. Had this existed, I should have expected more marked cyanosis, and generally graver symptoms. Now, this man had been accepted for the hard service of the Marines, and had gone through the most trying part of his military training—the first two years, and only failed after four years' duty. It is to be supposed, therefore, that his cardiac murmur had been undetected when he passed as a recruit, and he probably had it all his life. The worst feature of his case, on his last admission, was the presence of pulmonary consolidation and softening at both apices, also a laryngeal ulcer; and though bacilli were not found after several examinations, I have no doubt, from his symptoms and temperature-chart, that he is the subject of tuberculosis, which we know to supervene commonly in association with congenital cardiac disease when this happens to permit viability, and consists mainly of pulmonary arterial stenosis. The prognosis, in such a case, has reference, henceforth, to the condition of the lungs rather than of the heart. Tuberculosis is apt to proceed, but there exists evidence to show that its progress is somewhat inhibited by the presence of the cardiac disease.

Another example is the following. In 1883, I was consulted about a gentleman, aged 27, one of a family of five. He was known to have had heart-complaint from the age of 10 years. He was tall and spare; his general health was fair; he was never robust, and was not long able to remain at a public school. His chief complaints were of occasional languor and attacks of faintness, the latter commonly associated with some dyspepsia, and called by him "bilious." He was able to shoot, dance, and play tennis. As a child, he was frail. There was no cyanosis, and no clubbing of the digital extremities. The cardiac dulness was two inches transversely; the apex struck in the left sixth space just inside the nipple. A loud systolic murmur was heard all over the præcordia, loudest at the lower sternal region, and upwards to the right in the aortic area; it was not heard behind. The impulse was forcible; there was no thrill. The second sound nowhere accentuated. The pulse was small and regular.

These physical signs seemed significant, mainly, of aortic stenosis, the forcible impulse being, however, somewhat contradictory of this, according to Traube's teaching. There was clearly hypertrophy of the left ventricle; the urine was healthy; there was no rheumatic history of any kind.

I believed this to be a case of congenital defect. Since I saw this patient, he has led an active life, travelled much, has married, and become a parent. The slight syncopal attacks occur at intervals, especially after long exertion, and any gastric derangement seems also to determine them. In this case, the cardiac disorder has been known of for twenty years, the patient being now thirty years of age.

I should like to say here, parenthetically, to a point respecting the prognosis in cases of congenital cardiac disease, the subject of the exanthemata, or of continued fever. It is a matter of interest, and but little is known about it. Are these patients ill fitted to bear acute disease of this kind? I have known them, even when very cyanotic, to pass through measles, enteric fever, and pertussis. Scarlet fever seems to be particularly dangerous, even in a mild form.

Pertussis and measles are naturally dangerous, owing to pulmonary complications. At the London Fever Hospital, Dr. Cayley informs me that they do not appear to have had any patients with cyanosis suffering from scarlet fever or enteric fever in a severe form, though the results have not been favourable. In one case, the attack of scarlet fever was very mild, but the patient succumbed from the state of the heart and lungs. One case of enteric fever, the subject of cardiac malformation without cyanosis, died after a long, but not very severe, attack. There was found, after death, an opening from the aorta into the pulmonary artery. All the valves were healthy and normal.

Sir William Jenner has suggested that the peculiar condition of blood in these cases may possibly present to the respective fever-poisons, or to some of them, a too favourable pabulum, whereby overpowering multiplication of them occurs.

In my experience, it is quite the exception for cyanotic cases to be free from symptoms, oftentimes serious, referable to the heart and pulmonary circulation in the course of their short lives. I believe that cases of simple aortic stenosis may perhaps be most favourably regarded in this category. These may be for many years symptomless. Dr. Peacock recorded several examples illustrating this.[2]

In one, the patient, an iron-founder, lived to the age of 40 years, and had cardiac symptoms for only twelve weeks before death. In another, a woman, enjoyed good health, had no dyspnœa on exertion, and lived to the age of 76 years, dying incidentally after an operation for strangulated hernia. There was no rheumatic history. The aortic aperture was reduced to a mere slit, but the heart only weighed ten ounces, indicating no great hypertrophy under the circumstances. Corvisart, Stokes, and Graves have all recorded very similar examples, living respectively to seventy-seven, middle age, and fifty-four years. The mitral valves partake of congenital defects, together with the aortic segments, in some cases. Dr. Peacock believed that complete fusion of two aortic valves indicated congenital origin in any given case. (Mr. Barling showed an example of this defect at the meeting. There had been evidence of valvular disease for ten years. I believe the two fused valves were here practically competent; death was, however, very sudden.) Dr. Peacock also thought that cases in which all the sigmoid valves were fused in either the aorta or pulmonary artery were commoner than those in which only two of them were affected; and he found the malformation more commonly in the aorta when the heart was otherwise natural, only having notes of eight cases in which uncomplicated disease of the pulmonary valves existed.

In many of these cases, the physical signs indicated both obstruction and reflux, the latter probably supervening in course of time from sequential changes in the aperture, as is now well recognised. Congenital tricuspid and mitral stenosis commonly co-exist. Dr. Pearson Irvine (Pathological Society's *Transactions*, vol. xxxi, p. 79, 1880) recorded a case in a woman, aged 37, who had worked as a housemaid, but always had suffered from dyspnœa. There was also aortic stenosis. In many of these cases in adults, there is rheumatic history—50 per cent., according to Dr. Bedford Fenwick's statistics (Pathological Society's *Transactions*, vol. xxxii, p. 42, 1882)—and in 25 per cent. of all cases there was stenosis of the aortic orifice as well.

Professor Gairdner's case of tricuspid obstruction (*Clinical Medicine*, p. 602, 1862), due to a "ball-valve" partial closure of the orifice by a tumour in the right auricle, may be referred to here. The man lived for over ten years after the discovery of the murmur, and died, aged 30 years, not of any cardiac affection, but of pneumonia. The heart was nearly normal in size and relations. I saw it in the museum of the British Medical Association at the meeting in London in 1873.

Consideration of cases such as these seems to teach plainly that, in cases of congenital malformation permitting viability, without cyanosis, we may find life to be maintained over longer periods than we might naturally expect. I cannot suppose that any law prevails here to prevent the access of grave cardiac symptoms, other than may be found to explain similar conditions met with in cases not of congenital origin. The tendency to tuberculosis associated with pulmonary arterial stenosis pure and simple, the lungs being anæmic, or with imperfect ventricular septum, remains to be duly taken note of in any given example. One lesson coming out of a study of these cases is, that we must not believe all cardiac valvular defects in early life, as is perhaps still too commonly conceived, to be of rheumatic

[2] *On some of the Causes and Effects of Valvular Disease of the Heart.* Croonian Lecture, 1868.

origin. I believe, however, in the occurrence of rheumatic disease during fœtal life.

Wilks and Moxon record a case of congenital cardiac malformation in which there was history of the mother having suffered from rheumatism during gestation (*Lectures on Pathological Anatomy*, 2nd edition, p. 596, 1875).

The congenital cases that do best are certainly those in which there is little or no cyanosis. Dr. Walshe kindly gives me particulars of two cases in which he believed an imperfect septum to exist between the ventricles. In one, there were no symptoms till the fourteenth or fifteenth year, no cardiac symptoms being even suspected. In the other, seen with Dr. Murchison, the patient was free from any indications of heart-trouble till the age of 17, and then there was only occasional dyspnœa and slight cyanosis. He also met with a case of stenosis of the pulmonary artery which was symptomless till the ninth or tenth year. This patient was remembered to have been a little dusky at the time of his birth. He has frequently seen cases of congenital aortic stenosis in youths presenting themselves for military and other public service, and has also met with some rare cases of mitral regurgitation in the adult, for which he has presumed a congenital origin. Persistence of the foramen ovale seems to be rarely recognised for certain during life. It is often suspected in cases which prove to be pulmonary arterial stenosis. It is very common to find this aperture large enough to admit a small quill in cases which have lived a full term, and have been free from any symptoms. Cases have been recorded in which murmur existed with patency (Hayden and Wolfe, quoted by Sansom in the *Proceedings of the Medical Society of London*, 1877-79, p. 206), and some in which there was no murmur (*ibid.*, Markham, B. Foster, and Mayne) with this condition.

Dr. Latham, in his classical work (*On Diseases of the Heart*, p. 241, London, 1846), gives the histories of two cases of (probably congenital) disease in young ladies who had no serious symptoms for twelve and nine years respectively after the discovery of systolic murmurs; also one of a boy aged nine, famous for gymnastic feats, who had a loud systolic murmur audible all over his chest and posteriorly. He had no untoward symptoms.

2. I pass on to consider cases of rheumatic valvulitis in its widest aspect. It is in this category that most cases with which we are now concerned will fall. The essential characters of these are too well-known to need recital here. It is still not sufficiently recognised that the rheumatic, or, as I prefer to call it, the arthritic diathesis, has other and well-marked characters beyond the joint and cardiac manifestations. Its features may be discerned by those who will study them in their physiognomical as well as in their textural expression. Strong heredity attaches to it. Rheumatic taint may be roused to activity in intra-uterine as well as in extra-uterine life. Thus may be explained some of the cardiac defects met with congenitally. In the motorial neurosis, termed chorea, we have also, as I believe, in the large majority of cases, an expression of the rheumatic habit of body. Hence, we must be prepared to meet with cardiac valvulitis in persons who have suffered no other manifestation of it than the choreic form. When we come to seek evidence of this, and of the former existence of so-called "growing pains," we shall find that the rheumatic habit has much to answer for—far more, indeed, than we should elicit if we only sought proof of a definite rheumatic illness such as rheumatic fever. We have learned of late years to associate the existence of cutaneous and subcutaneous nodules on various parts of the body with co-existing rheumatic cardiac valvulitis, a very nice and useful point in etiology and diagnosis. We must take this wide conception in forming our opinion as to the cause of any cardiac murmur with which we may be suddenly confronted, and where rheumatism may be suspected as the cause of the mischief thus indicated.

Instances are numerous where murmurs are found when unsuspected, significant of valve-lesions which have given no tokens of their presence in past life. Some are thus practically symptomless; but, in most cases, there is commonly to be found an indication of cardiac or pulmonary disturbance, not grave, it may be, but sufficiently marked to prove that all was not right with the patients.

We find aortic disease more frequent in males, and more common in females who have done laborious work akin to men's pursuits. We meet with mitral stenosis more commonly in females. Males are, more than females, subject to valvular disease in general, as shown by statistics, but this undue incidence for the male is shown to be due to the greater prevalence of aortic disease in them. Cases of mitral incompetency sometimes live to full term of years. As much cannot be said for those in which aortic reflux prevails. In some cases of aortic obstruction and regurgitation, life may be prolonged for many years. In reviewing cases due to rheumatic influence, we must not lose sight of the ill-effects produced in certain cases by myocarditis, leading to softening and dilatation of the heart's walls, whereby fleeting murmurs may be generated, capable, on recovery, of disappearance. Nor can we omit to mention the effects of pericarditis, leading to adhesion of the sac, with general cardiac hypertrophy as the result of this. The latter is more common in children, and, when present, is rarely long survived.

In entering, thus far, into particulars of these cases, I am aware that I seem to depart somewhat from my text; but I am rather concerned now to lay down principles to guide us in sifting the facts which have already come before us, or may do so hereafter. Our clinical facts must be accurate, if we wish to deduce trustworthy prognostics.

Amongst my notes of cardiac cases, I find many in which no serious symptoms occurred till many years had elapsed. I imagine that this is a common experience after rheumatic valvulitis. In many instances, the lesion was mitral, and of obstructive character. I believe that this is often long unaccompanied by serious symptoms. Professor Gairdner informs me that this is also his experience; but many observers are of a different opinion. Thus, Broadbent affirms that it stands in point of danger next to aortic incompetence, "being, indeed, the most serious of the two in early life." (*International Journal of the Medical Sciences:* London, January, 1866, p. 57.) Dr. G. W. Balfour affirms that, in mitral disease, it is rare for the patient to be long without some breathlessness, though no serious troubles may supervene for many years. At any rate, in hospital practice, it is rare for patients to come for advice before the graver symptoms have set in. In most of my cases, the rheumatic attack had occurred some years previously, most often in early life.[4] With respect to many cases of mitral stenosis, I am quite in agreement with Dr. Sansom, as to overt attacks of rheumatic fever forming no part of their history or ætiology; but I believe, with him, that the valvular mischief is, nevertheless, often truly rheumatic, the result of a chronic form of the disorder, which leads to stenosis and gradual maiming of the valve. Anæmia is, probably, also an ætiological factor in some of these cases

To speak vaguely of mitral disease, and of prognosis in regard to it, is, of course, too loose a method. The prognosis of mitral reflux, and of mitral stenosis, in pure cases of each, certainly varies in respect of the specific lesion. It is better, I believe, in the former, though I do not necessarily regard the latter, in well-to-do patients, in the second decade of life, with very fearful forebodings.

Where reflux co-exists with obstruction, I think the prognosis much graver. As to compensatory changes in the heart, in mitral stenosis, I would call attention to the fact that there may be limits placed to hypertrophy of the left auricle, by reason of the fibrous toughness of the endocardium, which naturally exists here, and which is often described as morbid. But both hypertrophy and dilatation occur in this chamber. The average age at death, in nineteen cases of mitral stenosis, observed by Dr. Sansom, was 35 years; and of forty-two cases, collected by Dr. Hayden, 37.82 years.

In these cases, compensatory action is secured *pari passu* with the progressing lesion, and no bad symptoms appear, till, with failing health, advancing stenosis, or as the result of undue exertion, they at last supervene. Dr. Sansom is of opinion that compensation is, on the whole, more certain and more persistent in mitral stenosis than in mitral insufficiency. My experience accords with this. In discussing the question before us, much depends on what we consider to be serious symptoms. I apprehend we should be agreed that by these we mean failure of compensation, cardiac dilatation, tricuspid stenosis, dyspnœa, pulmonary congestions, and dropsy. Of minor symptoms we meet with many in such cases, such especially as palpitation induced by overwork, dyspepsia, or emotion; pulmonary congestion evidenced by cough, and even by hæmoptysis, and occasional epistaxis. Some of these rapidly subside after rest and simple treatment. In some instances of rheumatic valvulitis, mitral or aortic, phthisis is associated, and it has seemed to me that the latter disease has been long inhibited by the cardiac concomitant. Drs. Walshe and J. E. Pollock have called attention to this point (*Elements of Prognosis in Consumption*, p. 272; 1865). The latter found that death more often resulted from the cardiac than from the pulmonary disease.

Professor Gairdner records, in his *Clinical Medicine*, some important cases of rheumatic valvulitis, illustrating prolonged immunity from cardiac symptoms, where loud murmurs were present.

In one, described in 1862 (*Clin. Med.*, p. 562), in the person of a medical man, a murmur indicating mitral reflux was known to exist for many years. He had rheumatism when a very young man. He

[4] On the Ætiology of Mitral Stenosis, by Sir D. Duckworth. (*St. Bart. Hosp. Reports*, vol. xiii, p. 263. 1877.)

married twice, the second time late in life. He has had many threatenings of a break-down, and once had anginoid symptoms. Professor Gairdner informs me he is still living, and continues his practice. He took much digitalis, and lost his murmur; two months ago he reported himself comfortable and well. I am indebted to the kindness of Dr. G. W. Balfour, of Edinburgh, for the history of a case in which there was one attack only of rheumatic fever, at the age of eleven or twelve years. The patient is a policeman, married, over 40 years of age, living at the top of a high house in Edinburgh. Many years ago, Dr. Littlejohn accidentally discovered an aortic murmur in this case. This man has now a heart, as Dr. Balfour describes it, like an ox, with loud double aortic murmurs, and he is now failing, having only had cardiac symptoms for a few weeks, following a bad attack of bronchitis. This case has been absolutely symptomless for nearly thirty years. I think it is hardly to be doubted that the records of most life-insurance offices would add testimony to the fact that cases of rheumatic valvulitis live on for long periods without the occurrence of serious symptoms. Our proposed inquiry will be largely aided, if medical officers of assurance societies will procure the testimony needed.

Respecting mitral reflux, Sir Andrew Clark reports a case of a gentleman who was condemned to die in less than six months, and who, forty years afterwards, was enjoying good health; and also one where the patient was living, in fair health, forty-two years subsequently, at the age of 85, (*Proceedings of Med. Soc. of Lond.*, p. 49, 1877-79). Dr. Semple (*Diseases of the Heart*, p. 114. London, 1875) has recorded a case of mitral and aortic valvulitis, after five attacks of rheumatic fever, in a lady, in whom the disease has existed for thirty years. She is now in New Zealand, and is, Dr. Semple informs me, still in good health. In the museum at St. Bartholomew's Hospital, are several specimens, taken from patients who appear to have been long free from symptoms of heart-disease. In one there is sclerosis of the mitral valve, with vegetations on it, and on the left auricular wall; a pendulous vegetation is also attached to an aortic cusp. This came from a woman, aged 27, who had attacks of rheumatic fever at the ages of 16 and 23. She had a loud murmur at the apex, audible behind. She had no inconvenience from her heart, and died of acute nephritis with anæmia.

In another specimen there are but two aortic and two pulmonary valves. These and the tricuspid and mitral valves are all thickened. The aortic valves are quite rigid and stenosed. The whole heart is enlarged proportionally in its several parts. This came from a man, aged 30, who had rheumatic fever fifteen years before death. There were no symptoms till a year before his death, when he had dyspnœa on exertion, much increased in the last week of life. Anasarca only existed for three days at the last. Murchison (*Path. Soc. Trans.*, vol. xix, p. 100, 1865) recorded a case of mitral and aortic disease in a man, aged 45, who had rheumatism eight years previously, had drank freely of beer, and went on without any symptoms till within six months of his death, from cardiac failure, rupture of the right ventricle (which was fatty), and rupture of an aortic valve. I have under my care a lady, who has had mitral reflux without any serious symptoms for nearly ten years. The lesion began insidiously. There was gouty history in the family.

Dr. Walshe has met with two or three cases with imperfect second sound at the aortic base, which have suggested imperfect closure of the valves, and which have passed on to perfect reflux. These cases were void of all symptoms. I have seen several of such cases, and have now two of rheumatic origin under my care at this time. This would indicate that incipient aortic regurgitation may be a symptomless lesion, and as much might, perhaps, have been predicated.

Dr. Fothergill (*The Diseases of the Heart*, p. 500, 2nd edit., 1875) records two noteworthy cases of aortic disease. In one, a medical man, had thus suffered often for twenty years. He had had serious attacks occasionally, but had recovered from them. He had led a very active life, and the disease made no progress. In the other, a woman over forty years of age, there had been signs of aortic reflux for more than twenty years. She had an enormous left ventricle. It is not, however, stated if these were cases of rheumatic disease. Dr. King Chambers (*Lectures chiefly Clinical, etc.*, p. 307, 4th edit., 1865) has recorded cases of valvular cardiac diseases, of long standing, many of them of rheumatic origin. He seldom refers to the special valves affected, and only mentions that murmurs were present. The histories were taken from private practice, and from insurance examinations. There was evidence, in these cases, of great prolongation of life from the time of the original rheumatic attack, and the periods varied from one to fifty-seven years. In most of these cases, eighteen in number, there were no symptoms, and few that could be called serious, save some anginal attacks in a case of aortic disease, in a lady, which had lasted seven years. Dr. Chambers remarks, upon this series of cases, that "you know very well that cases like these are not to be met with in hospital practice, or among the paupers in a workhouse." They are, indeed, only found amongst patients of the well-to-do class, who are able to live carefully, without exposure to poverty and hard labour. Dr. Walshe gives me his experience, to the effect that it was very common to meet with examples of mitral reflux, aortic stenosis and reflux, running on for years, without symptoms fairly traceable to valvular defect. He has known cases, observed by himself from the first, of mitral reflux remain functionally innocuous for upwards of twenty years. Cases of aortic regurgitation, which are symptomless, he has not found to be commonly of rheumatic origin.

[*To be continued.*]

CONGENITAL CLUB-FOOT.

THE PART PLAYED BY THE TARSAL LIGAMENTS IN MAINTAINING THE DEFORMITY; AND THE VALUE OF THEIR SUBCUTANEOUS SECTION IN ITS CURE.

By ROBERT WILLIAM PARKER, M.R.C.S.Eng.,

Surgeon to the East London Hospital for Children, and to the Grosvenor Hospital for Women and Children.

For some years past, I have been much occupied in the study of the anatomical conditions existing in congenital club-foot, and, in conjunction with my friend Mr. Shattock, I contributed to the Pathological Society a paper on the subject, which appeared in the *Transactions* of that Society for the year 1884. I may very briefly say of that paper, that it was commenced without reference to the conclusions at which Mr. Shattock and I both arrived, long before we had finished it. When we commenced the study of club-foot, we were both dominated by what, I believe, is the most widely accepted doctrine as to its mode of causation; namely, that it is either a paralysis or a spasmodic contraction of certain muscles of the leg acting upon the foot. Neither of us was prepared to find the nerve-centres, the nerve-trunks, and the muscles of the afflicted limb in a state of absolute histological integrity; neither of us was prepared to find that, after all the soft parts had been entirely removed from the limb, the deformity would persist in just as marked a degree, and in just as intractable a form, as previously to the dissection. Yet such was the case. My object in this paper is not to merely repeat the substance of what I said at the Pathological Society, but rather to advocate the practical lessons which, I venture to think, this anatomical condition imposes on all who are concerned with the treatment of club-foot.

Brief Abstract of the Anatomy of Congenital Club-Foot.—In a not inconsiderable number of cases of club-foot, which I have had the opportunity of dissecting during the past four or five years, mostly still-born children at term, but including also three cases in children ranging from 6 to 18 months of age, the only constant condition, which I have found, has been inability to overcome the deformity (even after removal of all the muscles), until some of the ankle and tarsal ligaments have been divided. This condition of ligaments can hardly be described as a shortened condition, because such a term would imply that, once long enough, they have in some way or other become shortened; and this is not in accordance with the actual facts. These ligaments are short, but they are not shortened; they are as they have been developed; they are in the same condition as certain of the muscles, that is to say, shorter than normal, owing to the fact that the points of attachment have been unduly approximated during development and growth. Microscopic examination of the muscles shows them to be histologically normal in all respects in early infancy; the nerve-trunks also, and the spinal cord, show a healthy structure; the full supply of normal ganglionic cells was particularly striking in the lumbar enlargement of the spinal cord in the cases examined, and shown at the Pathological Society.

As regards the bones of the tarsus, I may say that, although an exaggerated inclination inwards and forwards of the neck of the astragalus was found in the great majority of cases, yet this condition was not constant; that in one well marked case the inclination inwards was much below the average amount found in the infantile normal astragalus, a fact which demonstrates that this conformation of the astragalus is not only not the essential element of the deformity, but also that it is not even a necessary part of it. The average amount of this obliquity in club-foot is 49°, while the maximum has reached as high as 64° in my own cases. Some authors

have even described the neck of the astragalus as pointing directly inwards. The average normal obliquity amounts to 38°. In one case of talipes, it amounted to only 31°. A comparison between the human talipedic astragalus, and that of the ourang-outang, shows how nearly the former approximates the latter.



Fig. 1.—Talipedic astragalus from child, aged 18 months. Natural size. Obliquity of neck, = 53°.
Fig. 2.—Astragalus from ourang-outang. Reduced one-third. Obliquity of neck, = 45°.

This peculiar conformation of the astragalus appears to be associated with the great power of inversion which the fœtal and infantile foot enjoys, a movement which, in the anthropoid apes, is one of the characteristics of the *pes* throughout life; it is as little pathognomonic of the condition of talipes in the one as in the other. The calcaneum likewise presents a slight incurvation; that is to say, the outer margin of the bone is more convex than normal, and the cuboid surface, instead of looking forwards, looks forwards and inwards. This incurvation is probably produced by the traction made on the bone through the external calcaneo-cuboid ligament. In congenital club-foot, all the constituent bones are slightly altered in shape; they present, when seen in horizontal section, as in Fig. 3, a slight incurvation; in severe cases, this may be very accentuated. The importance of taking cases of congenital club-foot in hand very early, before ossification of the bones has occurred or had time to complete itself, becomes abundantly manifest; for the bones, once fairly ossified in this incurved condition, will oppose themselves, with all the strength of an arch, to rectification, which will then become exceedingly difficult, not to say impossible.

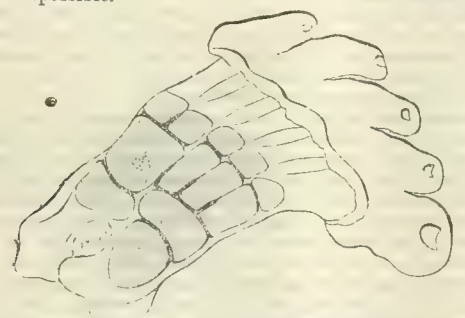


Fig. 3.—Horizontal section through talipedic foot. Reduced one-third.

As regards the ligaments, structurally I have not found any changes at all. The condition, which is abnormal in them, is again purely anatomical, and consists in an altered and abnormal mode of attachment. Talipes, in the great majority of cases, is a deformity only because it is a fixed position; it is a physiological position at one or other period of fœtal life; it has become pathological, owing to the fact that the assumption by the foot of the other (physiological) positions, which are necessary for the due development of all the parts concerned in the production of these movements, has been interfered with.

These anatomical details will strike other surgeons than myself, and their bearing on treatment will hardly need emphasising at my hands.

Subcutaneous Division of Ligaments as a means of Treatment.—I am not going to enter into the details of the treatment usually applied to talipes; as is well known, this treatment is partly operative and partly mechanical, the latter monopolising the greater share. I wish rather to advert to what I consider the insufficiency of this treatment, and to propose the adoption of such further measures as the knowledge of the foregoing anatomical considerations naturally suggests. The ligaments chiefly at fault are those placed on the inner border of the deformed foot, namely, the anterior portion of the internal lateral ligament of the ankle, the astragalo-scaphoid, and the calcaneo-scaphoid ligaments, all three being blended into one indistinguishable capsule of great strength (spoken of in this paper as the "astragalo-scaphoid capsule"); in a less degree, the capsular ligaments between the scaphoid and the internal cuneiform bone, and between the latter and the first metatarsal bone, are at fault. In the severest cases—those which have relapsed, and have been walked upon—in which the patient walks upon the dorsum pedis, and in whom the outer edge of the foot is greatly inverted, the long and short (calcaneo-cuboid) plantar ligaments will be found short. Hence it follows that tenotomy leaves the major part of the anatomical conditions unaltered. With the exception of the calf-muscles, represented by the tendo Achillis, I believe, in the majority of cases, that the muscles of the leg may be left out of consideration; that is to say, I believe they may be elongated to the required extent by systematic manipulation. If the ligaments and the muscles were equally extensile (which they are not), it is evident that more gain would be expected from the muscles than from the ligaments, on account of the difference in length; in the former, there is more material to gain upon; the latter are so extremely short, that we cannot expect much gain from stretching them; moreover, an unyielding nature is one of the characteristics of ligamentous structures. For these reasons, therefore, I would urge subcutaneous division of the tarsal ligaments, whenever the short condition of these structures prevents the unfolding and rectification of club-foot. I have practised the method a good many times during the past three or four years, and with uniformly satisfactory results. The time necessary to the rectification of a severe case of talipes is materially shortened, the chances of relapse are lessened, and the treatment of this congenital deformity is placed on a sound anatomical basis.



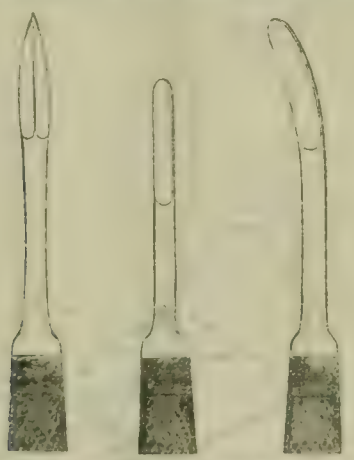
Fig. 4. The sole of a talipedic foot. The transverse line in front of the heel corresponds to the chief ligamentous attachments.

The adjoining woodcut is taken from a plaster cast of a foot, on which I operated as just described, about twelve months ago. The transverse line in front of the heel indicates very well the position occupied by the ligaments above alluded to, or rather the points at which they exercise their power of resistance. The inner extremity of the transverse line corresponds to the astragalo-scaphoid capsule, the outer extremity to the calcaneo-cuboid capsule; and it is in this line that section of the ligaments may most advantageously be made. The posterior ligament of the ankle may occasionally require dividing in cases where the equinus portion of the deformity is much marked. This is best accomplished by means of a small spear-headed knife, which should be passed through the tendo Achillis in the direction of its fibres, and then turned flatways, and passed through the posterior ligament about its middle, cutting first on one side and then on the other. Most authors refer to the difficulty of flexing the ankle after division of the tendo Achillis in certain cases, and attribute this to adhesions in the sheath of the tendon, rather than to its true cause, the short condition of the posterior ligament of the ankle.

Rules for the Division of Ligaments.—The ligament which will most frequently need division is, fortunately, quite subcutaneous, can be easily reached, and divided without any risk to other structures.

The "astragalo-scaphoid capsule" extends from the tip and sides of the internal malleolus across the astragalo-scaphoid articulation, on to the internal cuneiform bone, and loses itself in a fibrous expansion, blending with other ligaments on the fore part of the inner border of the foot. The extent and direction of the fibres which chiefly oppose rectification of the foot can be felt with the finger-tip, when traction is made on the inverted foot. A curved tenotome should be entered immediately in front of the anterior border of the internal malleolus, the blade as far as possible being kept between the ligaments to be divided and the superjacent skin. In the next stage of the operation, the blade is to be turned against the surface of the ligament, and, by means of a gentle sawing motion, is made to divide it. As the superficial fibres are divided, deeper ones come into play, and must in their turn be divided until bone is reached. By keeping the knife close to the bones, and directing its point towards the plantar aspect, the calcaneo-scaphoid ligament, which forms an important part of the capsule in these cases, can be easily divided. In this operation, the tendon of the posterior tibial muscle will almost certainly be divided, and not improbably that also of the anterior tibial muscle. The long and short plantar (calcaneo-cuboid) ligaments can most effectually be reached just where they pass between the two bones. A straight tenotome must be entered as nearly as possible over the calcaneo-cuboid articulation on the outer edge of the foot. If there be much inversion, this point will appear to be on the sole of the foot. The blade must be kept close to the bone, and be made to follow the direction which this articulation takes. In this manner, the two ligaments, mostly blended together at this point, will be divided simultaneously.

I append the forms of tenotome which I have found most useful in children. They differ from those in ordinary use, chiefly in the fact that the stem is longer and the cutting blade shorter. They were made for me by Mayer and Meltzer; the drawings have accidentally been made quite one-third larger than the knives themselves.



Figs. 5, 6, and 7.—Tenotomes; these sizes must be considerably reduced for infants.

The success of all such operations depends on the smallness of the external incision; that is, on their being subcutaneous. I therefore prefer a short cutting blade, as I think the danger of enlarging the external wound is lessened thereby. If it be intended to divide several structures at the same sitting, I should recommend an anæsthetic to be given, and that an Esmarch's bandage be applied. In this manner, all undue hæmorrhage is prevented. I would just add that general rigidity of the foot is a means of gauging the extent to which the ligaments, being affected, need division. This rigidity depends partly on their unyielding nature, and partly on their shortness. Even in contracted muscles, there is always more or less elasticity, dependent, among other things, on their length. The subsequent treatment of these cases is simple enough. My practice is to rectify the foot as much as possible, and to apply a plaster-of-Paris bandage. I leave this first dressing undisturbed for a week or a fortnight, in order that healing of the cutaneous wound may complete itself. After this period, manipulations, etc., may be commenced. I shall not enter into these well known details; each case must, of course, be treated in relation to its special requirements.

It must not be supposed that syndesmotomy (section of the ligaments) is necessary in all cases; or that this operation alone will cure club-foot, any more than tenotomy cures it. Moreover, there will always be a residuum of cases for which neither the one nor the other operation will suffice, and in which tarsectomy, in some form, will have to be entertained. But the subcutaneous, or even the open, division (for the skin itself is often no mean factor in resisting rectification of the foot), in suitable cases, of the strong unyielding ligamentous structures which I have shown by dissection to be constantly implicated in this deformity, will, I venture to think, not only secure a better result, but lessen the tendency to relapse, and reduce the length of time necessary to effect a cure.

ON FRACTURE OF THE METACARPAL BONE OF THE THUMB.

By EDWARD H. BENNETT, M.D.,

Professor of Surgery in the University of Dublin; Ex-President of the Royal College of Surgeons of Ireland, etc.

At the meeting of the British Medical Association, held at Cardiff last summer, I referred in the remarks I made in opening the session of the Surgical Section, amongst other matters, to the subject of fracture of the metacarpal bone of the thumb. (British Medical Journal, August 1st, 1885.) I directed attention to the fact that the most common simple fracture of this bone, and of the entire metacarpus, had been overlooked until the publication by myself of a note of the injury in 1881. (Proceedings of Dublin Pathological Society, *Dublin Journal of Medical Science*, vol. lxxiii, p. 72.) In support of my statement, I exhibited in the Pathological Museum of the Association, then open, a collection of these fractures, united, six in number, all bones from the right hand. Beside them, I placed the entire collection of similar fractures of the remaining bones of the metacarpus in our collection, which had been obtained without any attempt at selection of individual bones, or any knowledge of the relative frequency of fracture in them. These are, in all, nine, two from one hand and seven from separate individuals.

I stated that the discovery of these facts had led me to look out for the injury in the living, and that I had found it to be sufficiently common, capable of ready recognition and of efficient treatment; but that it is constantly overlooked, greatly to the disfigurement and damage of those to whom it happens.

I now write this short note to make a correction in my account of the injury, which, though of secondary importance only, I prefer to make myself, rather than to have it made by another. I stated that every example I had seen in the living or dead occurred in the right thumb.

I avoided committing myself to the assertion that it could not occur on the left side. I merely said, "most remarkable is the fact that in every case the accident has been on the right side of the body."

I am now able to supply a drawing taken from a left hand, deformed by the fracture, and to record the observation of two other examples on the left side, in patients seen this session in Sir P. Dun's Hospital. Thus I hope to correct whatever of error might have arisen from my record of my experience in August last. This correction appears called for by the observations contained in the review of my address, published in this Journal, from which I quote the following: "It will, no doubt, soon appear whether our author is correct in affirming the frequency of this injury, and its constant limitation to the right hand; for the matter is one of too much daily interest, both to surgeon and patient, to be overlooked."



Fig. 1.

To render this note intelligible to those who may read it without requiring them to refer to my previous statements, I republish the original sketch of the fracture (Fig. 1), and also woodcuts taken from the left and right hands deformed by the injury, abandoned to the natural means of recovery only.

For comparison with these illustrations, I have copied Hamilton's

representation of the deformity produced by "partial luxation of the metacarpal bone of the thumb backwards," on which I wish to make a few observations.

Fig. 1 represents exactly the details of the united fracture in one of my specimens, and is the illustration published in 1881. It represents the union of an oblique fracture (*a b*) which detached the palmar half or more of the articular surface of the metacarpal bone of the right thumb, which faces the trapezium, with that projection of the base of the bone into the palm which supports the surface. The entire bone, except the little piece so separated, had slipped backwards, a displacement which, seen in the living subject, simulates a subluxation of the bone in this direction. The appearance of subluxation in the living is confirmed by measurement; for, as the fracture does not reach the dorsal surface of the bone, no shortening of this surface can be detected.

In all the six specimens I exhibited, the fracture is the same, and the displacement of the larger fragment similar. In the living, while the fracture is still recent, it is easy to detect crepitus by pressing on the base of the bone with the finger and thumb placed on its dorsal and palmar aspects, while extension is made sufficient to reduce the deformity.



Fig. 2.

The woodcut (Fig. 2) represents the deformity produced by the fracture in the left hand of a young gentleman, a student of the School of Physic, Trinity College, a member of my surgical class. His is the first example I have met with on the left side. He gives me the following account of the accident which produced it.

"On July 18th, 1885, I was riding a horse over a water-jump, in front of which, at the height of three feet, there was fixed a pole. The ground being very soft, the horse slipped on his hind feet, at the same time trying to raise his fore legs for the jump. He, however, only managed to get one fore leg over the pole, which he, in consequence, carried with him across the water, and fell heavily on his right side. As he fell, he stretched out his neck, so that I, having the reins in my left hand, the point of my thumb was dashed with great violence against the pommel of the saddle, causing fracture of the base of the left first metacarpal bone, and dislocating the proximal phalanx on to the dorsal aspect of the metacarpal bone. On getting to my feet, I at once reduced the dislocation, and bound the thumb to the hand with a handkerchief, so as to keep it reduced, not noticing the other lesion. After this, I went to the nearest doctor, but, when I reached him, about half an hour after, my hand and wrist were so much swollen that he did not notice the fracture, but just left it as I had it. In about seven days, the swelling having gone down, I noticed a tumour at the base of the metacarpal bone, which I showed to the doctor, but he was unable to reduce it. The tumour still remains, but does not impede the movements of my hand in the least."

This note was given to me in the first week in April this year, and I may only add that, within the last few days, in the course of operative surgery I have just closed, I called on this young gentleman to amputate a limb through the hip-joint. During the operation, I noticed him to wince, and asked the reason, when he said: "My left thumb never failed me until now"—a fair proof of the long-lasting ill effects of the injury allowed to go without treatment.

I need not give the details of the two other left hand cases, which are in essential points similar to this, with only this difference, that one, being recognised and treated in the out-room of Sir Patrick Dun's Hospital recovered, in the ordinary course, with the least possible deformity. The second was an old injury caused during a fight, and united with characteristic deformity.

I now pass to the comparison of a typical case represented by Fig. 3, with the case of "partial luxation of the metacarpal bone of the thumb backwards," Fig. 4, published by Hamilton (*Fractures and Dislocations*, 6th ed., 722).

One cannot look at these representations without being struck with their likeness, so far as the tumour, formed by the base of the metacarpal of the thumb in each, is concerned; and I cannot help expressing the opinion that the injury in each is the same.

When we bear in mind the form of the articulation in question, it is



Fig. 3.



Fig. 4.

difficult to conceive the idea of a partial dislocation occurring in it, and remaining as a permanent deformity. If we apply the analogy of a rider and his saddle to this perfect saddle-shaped joint, the difficulty will, I think, be evident. A rider, thrown on to the pommel, must, as we know, adopt one of two courses: make his dislocation complete, or get back into his seat; there is no permanent partial displacement possible.

Hamilton's account of the partial dislocation runs thus: "Incomplete backward luxations of the metacarpal bone of the thumb seem to be produced by the same causes which cause complete luxations. The signs of this accident are sometimes obscure, owing to the presence of considerable swelling, and they have been often left unreduced." I believe we shall gain in the accuracy of our diagnosis, and the certainty of our treatment, by searching for the signs of fracture in these examples of apparent partial dislocation; and by recollecting that we have positive proof that the fracture is not only common, but very constant, in its character.

The treatment necessary, in these cases, is careful reduction of the fracture by extension, and the application of an accurately fitting compress over the extremity of the displaced bone, maintained in place by a light splint fixed to the lower end of the radius, and extending to the extremity of the thumb; this apparatus must be maintained for at least four weeks.

MEDICAL PRACTITIONERS IN JAPAN.—The *Sei-I-Kwai* medical journal, of Japan, for April last, states that, according to statistics recently published by the Central Sanitary Bureau of the Home Department, the total number of practitioners in Japan, up to August, 1883, was 39,768, of which number 3,395 hold licences from the Home Department, and 36,373 held licences from the prefectures. As compared with the total number of practitioners in 1881-2, there was an increase of 3,472, of whom 531 held licences from the Home Department, and 2,941 from the prefectures. This gives an average of one practitioner to 910.82 of the population. The total number of specialists was 1,844, of whom 191 were auralists, 701 oculists, 567 obstetricians, and 387 bone-setters. This shows an increase of 281 specialists, as compared with the number in 1881-2. The total number of midwives was 19,035, or one to every 49 births. Compared with the total in June, 1880, this shows an increase of 1,251, or more than 10 per cent. yearly.

PRESENTATION.—Mr. J. S. Dykes, of Glynneath, has been presented with an illuminated address, a silver tea-service, and life-size oil paintings of himself and Mrs. Dykes, subscribed for by about 1,500 of the people of the neighbourhood, as a mark of the high esteem and regard in which he is held by them.

MOLLITIES OSSIUM IN THE MALE, WITH SPONTANEOUS FRACTURES.

By JAMES A. RIGBY, M.D.Lond., Preston.

The extreme rarity of mollities ossium, in the male, induces me to bring under notice the following case. Concerning the rarity of this disease, Bristowe (*Theory and Practice of Medicine*, 1876, page 901) says: "It has been recognised only in women; and, for the most part, in women who are bearing children." Niemeyer (*Text-book of Practical Medicine*, vol. ii, page 565) says: "This is a rare disease; up to the present time, it has been observed almost exclusively in women." Trousseau (*Clinical Medicine*, vol. v), who names the disease adult rickets, does not specifically assert that it is never met with in men, yet, all the cases he mentions occurred in women; and he seems to assume that the disease is exclusively confined to women; particularly to women just after repeated pregnancies. Sir William Mac Cormac (Quain's *Dictionary of Medicine*, page 997) states that mollities ossium "affects the female sex almost exclusively; only occurs in adults, and during the period of child-bearing." He also says it "very rarely is observed in the male sex."

William G., aged 43, married, a schoolmaster, with no family-history of any softening of the bones, about eight years ago began to suffer from severe pains in his knees, attributed to rheumatism. Then pains came in his feet and shoulders. He was also dyspeptic, and always of a costive nature. Four years ago, he began to be much troubled with pains in his hips, and difficult locomotion. These increased steadily till he was unable to walk erect; then he gave way on the right side so much, that he thought his right hip was either wholly or partially dislocated.

Coincidently with these alterations in the hips, the hands began to undergo changes, which have ultimately resulted in the present state



Fig. 1. Hands.

of things. There is a more or less complete absorption of the muscular tissue of the hands; the ungual phalanges are all shortened in a marked degree; the articular extremities of the other phalanges are enlarged at the base. This is most distinctly perceptible in the thumb, of which the base of the first phalanx is so much enlarged, that it causes the extensor tendon to run in a curved direction, something like the course of the string passing over the bridge of a violin; the obvious effect of this is to cause insufficiency of length of tendon, and so dislocation backwards of the ungual phalanx of the thumb; the pad of the thumb is thus placed transversely on the end of the thumb, and looks upwards, instead of forwards, towards the palmar aspect. (Fig. 1.)

The chest has altered much in shape. It is now more or less rounded in every diameter, compressed laterally, and bulging forwards, more particularly at the lower part. (Fig. 2.) There are well marked swellings at the junction of the ribs with the costal cartilages. The sternum is sickle-shaped, the handle being upwards, and the convex surface of the sickle looking forwards.

Two years ago, the patient sustained a fracture of the right humerus, through simply trying to prevent a man from jostling him in the street.

On December 29th last, the patient first came under my care. He was then quite unable to walk without a crutch and stick. He had been bending down to tie his boot-lace, when the right femur broke through the middle of its shaft. (Fig. 3.) The fracture united distinctly in six weeks. Meantime, the patient suffered from considerable pain in the



Fig. 2. Chest.

left thigh, the muscles of which wasted. While he was still in bed, the left femur bowed outwards, and seemed to rotate on its axis, so that the front aspect of the knee turned outwards. Soon after its reunion,

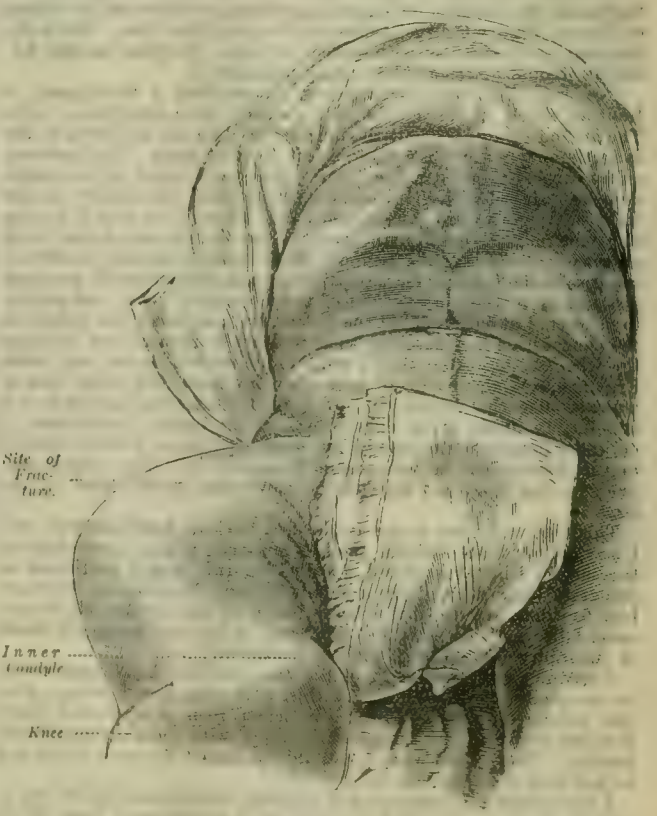


Fig. 3. Fractured Femur.

the fractured right femur became subject to very similar alterations in shape, though a little more marked.

The bones of the head remain unaltered. The organs are quite

healthy. The mental faculties are perfect. He has no cough, diarrhœa, or perspirations; no pyrexia or hectic.

REMARKS.—The above is a typical case of mollities ossium. Numerous views have been advanced as to the nature of this disease. Trousseau (*Clinical Medicine*, vol. v, page 81) says: "Ought we to consider that there is a similarity between osteo-malacia and rickets? I say, we ought. In my opinion, and in that of many other physicians, they are one and the same." This opinion, he supports by statements, for which I must refer readers to the article itself; but which, in my experience, are quite contrary to fact. For instance, in the case above described, there has been an entire absence of the constitutional symptoms which are characteristic of rickets: pyrexia, profuse sweats, soreness of the bones, derangements of the alimentary tract, and inflammatory affections of the respiratory organs. Again, in alluding to the occurrence of fractures in rickets, he says (*Ibid.*, page 81), there is a "greater rarity of fractures in the rickets of adults than in the rickets of children." This is quite contrary to my experience; for, unfortunately, in Preston, rickets is most prevalent, yet I never have seen a case of spontaneous fracture in any out of a very large number of cases I have attended. Moreover, rickets is generally traceable to some definite cause, chiefly dietetic; but, in the case described, there is a total inability to discover any predisposing cause.

Niemeyer, in discussing the etiology of osteomalacia, says (*Op. cit.*, page 565) that, in this disease, "bones which have been hard become soft from re-absorption of the salts of lime. This explanation of the disease at once shows its difference from rachitis, where the lime-salts do not disappear from the bones, but have never been deposited there." I think it is open to some doubt, and contrary to clinical experience, to say that, in rickets, the lime-salts do not disappear from the bones. In rickets, a bone, that has hitherto been rigid and unbendable, becomes soft and yielding; and, I think, it requires something more than a mere *ipse dixit* to say that, in such a case, there has been no reabsorption of calcareous matter already deposited. Niemeyer further says: "The exciting causes are unknown; we only know that the first signs of it, in most cases, appeared some time after confinement, so that pregnancy, parturition, or the puerperal state, undoubtedly have much to do with the etiology." The effect of this statement is undoubtedly very much weakened by the fact that, in the case described above, the patient is a male; which clearly proves one thing, at any rate, that osteo-malacia may occur totally independent of pregnancy; so that, as fixed factors in the causation of this disease, pregnancy, parturition, and the puerperal state, are non-existent.

DIPHTHERIA.

By EDWARD PENNY, M.D.,
Medical Officer of Marlborough College.

MANY interesting communications have lately appeared in the BRITISH MEDICAL JOURNAL on the subject of diphtheria; notably the report of a paper by Dr. Astley Gresswell, on the chronic and recrudescent form of the disease, read before the Epidemiological Society.

I should like to state the results of my experience of diphtheria, as seen in a country practice during the past two years. In this period of time I have had fully 150 cases of sore throat, to which I venture to attach the specific name. Out of this number five died, three from extension of membrane to the larynx, and two from cardiac failure and vomiting; while in two other cases of laryngitis, ending fatally, I believe no membrane was present, though in the absence of *post mortem* examination I cannot be quite certain. But the point to which I wish specially to draw attention, is that the large majority of the cases were exceedingly mild, the patients perhaps feeling ill for a day or two, often scarcely complaining of sore throat at all, and in many instances refusing even to keep at home. I have sometimes seen, on the first day of illness being felt, a small patch of membrane on the tonsil, while on the following day there would be present only a shallow excoriation where the membrane had existed, and on the next day again even this had disappeared, and the surface appeared smooth and even. Usually, however, a considerable part of the tonsil would be affected, and the membrane would adhere longer; while, in one severe case, patches were still present, after three weeks' illness. In nearly all, the membrane was confined to the tonsils, but in a few the discharge of clear or blood-stained fluid from the nose showed that the nasal cavities were affected, and in one a patch of membrane was seen on the margin of the anterior nasal orifice. In two or three severe cases the soft palate and pharynx were thickly coated, and in the three fatal cases mentioned above, the larynx became involved. Often in the convalescent stage the tonsils remained enlarged (as Dr. Gresswell has remarked), and in the crypts would lurk remnants of membrane, giving an aspect closely resembling follicular tonsillitis. Indeed, in some cases I do not think it is possible to make a distinguishing diagnosis between the two diseases, when the throats are seen for the first time at this stage. Another error easily made in such patients, is to overlook the presence of the membrane altogether, for the swollen tonsil may completely hide the fragments of membrane in the crypts, when the throat is viewed in the ordinary manner; but if the spoon-handle be passed into the fauces, and the action of retching induced, the tonsil seems to start forward and open out as it were, disclosing the patches of membrane still lurking in its recesses.

The disease was chiefly found in the young; and, in the fatal cases, the age varied from 2 to 5 years. It appeared in the better-class cottages, as well as in the miserably dirty ones; in isolated houses as well as in those grouped together. Generally, no history of contagion could be obtained; but, in some cases, it could be clearly traced. In three families, every child was attacked, only excepting the baby in each.

As regards recurrence, one of the fatal cases had had a well marked attack five months before, and, in another decided case, there had been an equally well marked attack six months previously.

The household, of which the last mentioned case was a member, figures largely in my note-book; for, out of its eleven people, no fewer than eight have had "sore-throat" during the past two years; in some, when examined, membrane was present, in others not. Again, one of the eight has been under treatment four times, though no membrane was visible at any time when I examined her. These instances become of great interest when considered with reference to Dr. Gresswell's paper mentioned above.

With regard to albuminuria, in the few instances of slight attacks in which I tested the urine, I failed to find albumen, but, in the severe cases, it was usually present.

The sequelæ noticed were very few, for in only two cases was there paralysis of the soft palate (accompanied by oculo-motor paralysis), and in one or two other cases prolonged general weakness.

The district was a country one, though well populated, and the subsoil a heavy clay. No particular relation to weather or season could be detected.

I may add that, at times, there occurred numerous cases of ulceration of the mouth in children, the mucous-membrane of the cheeks opposite the basis of the tooth-crowns being the part usually affected. Once or twice I have seen a similar ulceration of the vulva. I was unable to establish any direct relation between these cases and those described as diphtheria, but they occurred sometimes in houses afterwards affected by diphtheria, and in some cases, at all events, appeared to be contagious, and to give rise to a similar attack in others.

PURE TEREBENE IN WINTER-COUGH.

By J. HUTCHISON, M.D., Shawlands, Glasgow.

FOR some months past, I have been using pure terebene in the treatment of winter-cough and bronchitis. I have before me notes of fifty-one cases so treated, and the conclusions at which I have arrived from my experience of the drug are as follows.

In cases where the trouble has not been of long standing, and the symptoms are slight cough, more especially at night; expectoration moderate in quantity and easily voided; no feeling of rawness in the chest, and little or no disturbance of the general health, I consider that pure terebene is almost to be ranked as a specific, so quickly is a cure effected.

In cases where there is emphysema, and the ailment has been present for some time, it may be for some years, with the following symptoms: cough very troublesome, and sometimes even violent; expectoration tough and adhesive, or it may be easy and copious; great shortness of breath and rawness of chest; sleep broken, and general health much disturbed, the beneficial effects of the medicine do not manifest themselves for some little time, and not unfrequently the dose has to be increased to ten, or even fifteen, drops. If, however, the drug be persevered with faithfully and regularly, the cases are few in which I have to record a failure. Altogether, I consider pure terebene one of the most valuable remedies at our command in the above class of cases.

In six cases of phthisis in which I prescribed the drug, the patients, in every instance but one, remarked that they were not in any way benefited, and requested the medicine to be changed. In catarrh, also, the results were not satisfactory.

My method of prescribing the drug was sometimes pure terebene alone—10 drops on sugar three times a day. In other cases, I combined it with cod-liver oil, as follows: pure terebene, two drachms; cod-liver oil, to four ounces; two drachms three times daily. I could not say, however, that the effects produced were any better in the one case than the other. If there were any difference, pure terebene alone had the preference.

Some of the patients complained that the medicine made them sick; others that their appetite was improved by it. In a few of the cases, it appeared to have a laxative effect. In a very large proportion, drowsiness was complained of; while in some giddiness, or even a slight transient intoxication, was observed.

SEVERE LACERATED WOUND OF RIGHT LEG: TOTAL LOSS OF EXTENSOR POWER: SUCCESSFUL OPERATION.

By JAMES T. RUDALL, F.R.C.S.Eng.,
Consulting Surgeon to the Melbourne Hospital.

Miss Z., aged 16, was sent for my advice by Dr. Cutts on May 11th, 1885. Nine weeks ago, while tending some plants in a conservatory, she fell through a skylight and cut the front part of her right leg deeply, about two inches above the ankle-joint. She was placed under the care of a local medical practitioner, who, besides other treatment, applied sutures to the skin-wound; but, when the dressings were taken off and she left her bed, she was quite incapable of stepping or standing, except with the help of crutches.

Upon examination, I found in the situation before described a transverse depressed and adherent scar, about two inches long. She was unable to extend the foot, but could just perceptibly move the four smaller toes—doubtless by the action of the extensor brevis digitorum pedis. The scar was rather tender, but she had otherwise no pain. The tibialis anticus, extensor proprius hallucis, and extensor longus digitorum pedis, were quite without action, and it was evident that their tendons had been completely divided. The muscles of the calf were much wasted.

Although not quite without misgivings as to ultimate success, I strongly advised her parents to allow me to try what could be done, rather than let her continue permanently in such an unfortunate helpless condition.

The patient, having been taken to lodgings in Melbourne, on May 14th, was anæsthetised by Dr. Cutts; and, being otherwise assisted by Dr. F. Godfrey, I operated. Esmarch's bandage was applied, and the parts having been washed, and bathed with the antiseptic fluid, which I have found very reliable (sublimate $\frac{1}{10}$, sodium chloride $\frac{3}{4}$ per cent.), an incision about four and a half inches long was made in the front of the leg, just on the outer side of the tibia, crossing the cicatrix of the injury at right angles. The fascia was then divided for the same distance. The cicatrix was dissected up, and the tendons were sought for. The upper end of the distal portion of the tibialis anticus was densely matted in with the cicatrix. The lower end of the upper portion of the tibialis eluded discovery for some time, and it was reached only after lengthening upwards the incisions in the skin and fascia. The ends of the extensor proprius hallucis tendon were about two and a half inches apart, but were slightly joined by intervening connective tissue.

After separating the surrounding adhesions, and dissecting out the tendons, it was found impossible to bring down the upper part of the tibialis anticus to meet the lower portion. I therefore freshened the side of the lower portion of the extensor hallucis, and the upper end of the lower portion of the tibialis anticus, and united them by fine strong carbolised silk sutures, and then cut out about an inch of the connective tissue medium of the extensor hallucis, and joined the ends by silk sutures. The ends of the extensor longus digitorum pedis, after a small bit had been cut off from each, were fairly well brought together, and kept in contact by sutures. The previous separation was about two inches only, yet there was no trace of connective tissue developed between their ends. The operation-wound in the fascia was closed as nearly as was found possible by means of carbolised catgut sutures; but, after the extensive loosening of the subjacent parts by the dissection, this was by no means easy, and, indeed, could not be effected for the whole extent with precision.

After thorough washing with the antiseptic fluid, the skin-wound was closed by nine or ten sutures, two drainage-tubes being put in. The whole was well powdered with iodoform, and covered with salicylic wool (10 per cent.) a domet bandage being applied over all. The limb was then placed on a Neville's splint. A grain of opium was given at night. On May 15th, she did not sleep much, but had a fair night without pain. Pulse 80; temperature 99.5°. Evening pulse 88; temperature 100.0°. After this the temperature never rose above 99.4°, and in a few days it became normal. On May 19th, the wound was dressed; it was healing; there was no pus. On May 24th, the wound was dressed, and the drainage tubes which, by pressure, had caused a little ulceration, were removed. The wound was washed with sublimate solution, powdered with iodoform, and a few adhesive straps were applied across.

On June 12th, all was soundly healed. On June 15th, the Neville's splint was removed, and a poroplastic splint was applied. She was allowed to get up, and in a few days she left Melbourne for her own home. On June 29th, massage, which had been ordered, excited a good deal of movement of the flexors of the toes, and she had distinctly more power of extending them. On July 9th, there was more power. The tendon of the tibialis anticus was thought to come up a little on stretching. She could raise the foot from the ground while standing up, which she could not do before.

On October 20th, I was almost as much surprised as delighted to see her walk into my room without stick, crutch, or any assistance whatever. The power regained over the foot was quite remarkable, although the toes drooped and turned inwards slightly when she took a step. A week later, the calf of the injured leg was barely half-an-inch less in circumference than the other. The tendon of the extensor longus digitorum pedis could easily be felt under the skin when the muscle acted. She could stand firmly on the injured leg, and she told me that she could walk "any distance."

Remark.—It was to be expected that, in the absence of efficient means to keep them together, there would be found wide separation of the ends of the tendons divided by the accident, and that their lower portions would be closely adherent to the scar and its neighbourhood; it was therefore part of my plan in operating, not only to join the ends, but also to avoid lateral adhesion of the tendons to the tissues around them, and this was more or less well attained by antiseptic management, and by massage in the after-treatment, which, doubtless, also conduced towards the favourable result.

A CASE OF CHLOROFORM POISONING; RECOVERY.

By WILLIAM MARTIN, M.B., C.M., Stockton-on-Tees.

The following case may be of interest. Between two and three o'clock on the morning of Sunday, March 7th, I was called to see a young man, aged 26, who was said to be in a "fit." The account given to me by his father was that he came home at 11.30 on Saturday night a little under the influence of liquor, but was able to speak and act correctly. The family retired to rest at twelve o'clock, but he remained in the sitting-room, saying that he was going to write a letter. Some time after this, his father called down to him, and, receiving no answer, he went down, and found him sitting on a sofa with one leg under him, his body and head bent over to one side, almost black in the face, and "salivating." Thinking he was in a fit, he laid him straight out on the floor in front of the fire, and came for me.

On my arrival, I found him, as stated, lying in front of the fire. He was breathing stertorously; his pupils were widely dilated; reflex action was completely abolished; temperature low, and pulse slow, very weak, and irregular. His breath smelt very strongly of what I thought was chloral-hydrate, and, therefore, I asked his father if he ever used it, but he did not know. His father, who is conversant with the use of drugs, then smelt his breath, and immediately declared he must have taken a dose of methylated chloroform, a large quantity of which was in the house, and which his father was in the habit of using; but he could not say how much had been taken out of the bottle.

As the case was serious, I called in the assistance of my principal, Dr. Dale, who at once recognised the strong smell of chloroform in his breath. The stomach-pump was applied; and, after pumping in fully a pint of water, he began to retch; and the tube being withdrawn, he vomited all the water. We could not be positive that there was a smell of chloroform in the vomited water, as the sour gastric smell was strong, and no doubt disguised it, and also because the room was so full of the vapour from his breath that, unless it had been very marked, we could not have detected it. As he was unable to swallow, we pumped in some strong coffee. Galvanism was used, but with no apparent effect. The character of his breathing changed rapidly. He would breathe stertorously for half an hour; for the next half hour he would breathe as if in a deep sleep; then the stertorous breathing would come on again; and so on alternately all through

the night and forenoon. Up to twelve noon, he continued in the same state; quite unconscious, the pupils widely dilated, no sensation in the conjunctiva, or anywhere else; and could not swallow. At this time, mustard poultices were put on the back of the neck and the calves of the legs, and his lips were wetted at intervals with brandy.

Shortly after this, slight twitchings of the facial muscles were observed, and he swallowed a drop or two of brandy placed on the back of his tongue. Next he responded to a pinch on the arm, and, in a little more time, he began to move his legs. When his mother spoke to him, he tried to open his eyes, but failed. Movements of his legs, and also of his head, now became frequent; and it was evident that these were caused by the mustard. On being spoken to, he mumbled a reply. Up to this time his breath smelt strongly of chloroform.

At 1.30 P.M. I left him, and did not see him again until 9.30 P.M., when I learned that he had been able to walk about the room a little, but was very dazed all the afternoon. He was lying on a sofa, sleeping heavily, and his breath still smelling strongly of chloroform. I spoke to him, and shook him gently, but did not rouse him. On Monday he was very sick, and vomited often, and complained of severe pain in the stomach. On Tuesday the sickness, vomiting, and pain continued, but were not so severe. On Wednesday, he only complained of weakness, and since then he has gradually recovered strength, and is now quite well.

A CASE OF DIAPHRAGMATIC EMPYEMA.

By C. J. CULLINGWORTH, M.D., M.R.C.P.,
Physician to St. Mary's Hospital, Manchester; Professor of Obstetrics and Gynæcology at the Owens College, Victoria University.

THE very interesting communication on a case of diaphragmatic empyema by Dr. Vincent D. Harris, in the JOURNAL for May 22nd, induced me to look up my notes of the following case, which I saw a few years ago in consultation with my friend, Dr. J. R. Woodcock, then of Knutsford, in Cheshire, and which, though it was made the subject of a short paper read at a Branch meeting of the Association, has not hitherto been published.

A Cheshire farmer, aged 61, had for some months been seized, from time to time, while at work, with severe pain in the right side, incapacitating him for a few hours on each occasion. About two months before I saw him, he had been thrown from a mowing-machine, receiving a bruise on the shoulder. When just recovering from the effects of this accident, he had an attack of nausea and vomiting, with some febrile disturbance lasting several days. During this attack, and about a fortnight before my visit, he was suddenly taken very ill while on the commode. Dr. Woodcock was sent for, and found him cold and collapsed, lying with his knees flexed, and complaining of intense pain across the abdomen. From this condition, the patient unexpectedly rallied, though he continued for some days to be too ill for a satisfactory examination to be made.

On October 8th, 1880, Dr. Woodcock and I saw him together. He had a worn and emaciated appearance, and lay on his back, careful to avoid the slightest movement. He had no cough or expectoration; the breathing was a little hurried, the pulse quick, the temperature in the axilla 99.3° Fahr., the tongue red and furred, the bowels constipated. The right side of the chest was absolutely dull on percussion, anteriorly, from the upper border of the fourth rib downwards, and posteriorly from the spine of the scapula to the base. The breath-sounds were inaudible over the dull area; above it, on the same side, respiration was bronchial. Change of position made no alteration in the signs. The left lung was resonant throughout, and its sounds normal. The heart's apex could be seen and felt beating half an inch to the left of the nipple, and on a level with it. The heart-sounds were feeble and irregular, but otherwise normal. The abdomen was tympanitic, but not much distended; its parietes were rigid, and everywhere tender on pressure, especially over the epigastrium. The right lobe of the liver did not reach below the ribs; the left lobe extended to within an inch of the umbilicus.

A few hours after our visit, the patient was seized, for the first time, with an attack of coughing, and this was followed by the expectoration of a little fœtid pus. These symptoms continued up to the patient's death, on October 12th.

At the necropsy, made on October 13th, by Dr. Woodcock and myself, there was found, on the right side of the chest, a broad band of adhesion running along the outer border of the lung continuously from the base nearly to the apex, and then passing backwards to the vertebral column. On breaking through this, and passing the hand behind the lung, a quantity of serous fluid was found, containing a large clot of coagulated lymph. This fluid had been rigidly confined by a boundary line of firm adhesions. On removing the lung, about a pint of fœtid pus was found lying between the diaphragm and the base of the lung. The margin of the lung was adherent to the diaphragm all round, so that the abscess could not have been reached from the chest-wall at any point without piercing lung-tissue. In the pleura lining the arched roof of this cavity, there was an ulcer, equal in size to a shilling, which had perforated the lung. In the centre of the ulcer was an open bronchial tube, with jagged edges, and filled with pus. On section, other tubes in the same lobe were seen to be similarly filled with pus. The upper lobe of the right lung was less crepitant than it should be, and exuded, on section, an abundance of frothy serum, slightly blood-stained. The left lung was healthy, and free from adhesions. The heart was firmly adherent to the pericardium over a considerable part of its surface, both before and behind. The liver was normal in size, and hyperæmic. It was matted to all the tissues around it, and especially to the diaphragm, by very firm adhesions. The other abdominal viscera were healthy.

SURGICAL MEMORANDA.

CASE OF OPERATION IN HYDATID DISEASE OF THE LIVER.

MRS. C., the wife of a sea-captain, observed an enlargement of the right side, in the region of the liver. On examination, the bulging was found to be very considerable, so as quite to alter the symmetry of the figure. Under the impression that it was due to a hydatid cyst, the needle of a hypodermic syringe was introduced, and some clear non-albuminous fluid drawn off, the operation being followed by the usual appearance of some spots of urticaria.

On January 12th, 1883, an incision, about two inches long, was made in the most prominent part of the swelling, through the integument and down to the cyst. This was packed with iodoform gauze, and was dressed over this with carbolic gauze.

On January 19th, the cyst was opened, about a pint of fluid, with a good deal of blood, escaping. A tube was placed in the cyst, and a dressing of carbolic gauze laid over it. The operation was followed by another eruption of urticaria. Both operations and the subsequent dressings were conducted under the carbolic spray. The cyst gradually shrank; and, in the beginning of May, the patient was able to accompany her husband upon a voyage; but the wound did not perfectly heal till the middle of June. It may be worthy of remark that the lady was accustomed to fondle a lap-dog.

In a short article on Operation in Hydatid Disease of the Liver, which appeared in the JOURNAL of May 8th, it is related that Korach did six of his cases by the method originally advocated by Volckmann, in which the incision through the integument and cyst-wall is done in two stages; and that all of these were successful. This case is recorded simply as another example of the same operation, with a like result.

E. HOOPER MAY, F.R.C.S., Tottenham.

OBSTETRIC MEMORANDA.

A CASE OF SPONTANEOUS EXPULSION OF A FEMALE FŒTUS.

ON Sunday, June 13th, I was called to see Mrs. L., aged 39. I found the patient in strong labour, and, upon examination, discovered that the shoulder presented; the liquid amnii had all drained away, and the uterus firmly contracted upon the fœtus. After some time, the uterine action, to a great degree, abated, and I endeavoured to turn, but with a negative result.

As the patient was in a very delicate state of health (being the subject of advanced phthisis, complicated with valvular disease of the heart), and the uterine action became now more marked, I determined that some radical measure must be resorted to. The presence of the fœtus in the uterus appeared to act banefully on the patient's condition, for great weakness supervened. I resolved now to perform embryulcia, but was delighted to find a prolonged and severe uterine pain, resulted in the arm and shoulders being thrust into the vagina; then, resting on the perinæum for a few seconds, was, with a superhuman effort, expelled beyond the vulva. It appeared now difficult

to determine what course the fœtus would take; but all doubt was set aside when the next pain expelled part of the thorax, the head then followed, and, finally, the abdomen and lower extremities were born. The pelvis was quite normal, the os uteri very dilatable, and the parts of generation generally, very relaxed.

In this case, the most remarkable feature to note is, that the child was born alive. The mother and child are both living now, although in very inferior health. It is doubtful, indeed, if the child will long survive its birth. It is a very small, wizened-looking little being, though born at full term.

HAYGARTH ADDISON, L.F.P.S.G.

THERAPEUTIC MEMORANDA.

CURE OF HAY-FEVER.

AFTER thirty years' annual misery from the above complaint, I have at last got relief, and hasten to publish how I obtained it, so as to be in time to save suffering to others as well as myself this season.

Having found the relief afforded by cucaine too transient and too slight to be of any practical benefit, I tried another remedy I saw suggested last year—namely, the irrigation of the nostrils with a weak solution of alum and borax. However, the pain it occasioned was so intolerable, that, having the hypodermic syringe by me, I took a dose of one-twentieth of a grain of morphine and one-two-hundredth of a grain of atropine; that was one minim of the hypodermic solution I carry about with me. Ten minutes later, I was perfectly comfortable; pain gone; nose dry; eyes neither watering nor itching. That occurred four days ago; and since then a minim night and morning has sufficed to enable me to go about my work in comfort during the day, and to sleep at night.

Possibly others have used the same remedy; but, though always on the look-out for any suggestions about hay-fever, I have never seen the morphine and atropine, given hypodermically, suggested.

T. H. MOORHEAD, M.D.

CUCAINE IN HAY-FEVER.

I WISH again this summer to draw attention to the use of cucaine in this troublesome complaint. I am fully convinced of its efficacy, not only from the relief afforded to patients suffering in various degrees from the affection, but also from its employment in my own case.

I see it has been recently urged that the effects of the drug are altogether too transitory for any considerable relief; that the catarrhal symptoms are aggravated after the physiological effects have passed off; and that, to afford anything like continuous relief, so much of the drug has to be employed that there is a danger of producing toxic symptoms. Happily, I have no experience upon the latter point; I have used the drug constantly, ever since it came in vogue, for every conceivable purpose, and seen no evil arising therefrom. I believe that the cases reported, from time to time, where unpleasant results, such as a tendency to syncope, have been noticed after its employment in slight operations, are illustrations, for the most part, of slight mental shock, and in no way dependent upon the drug; these cases must be familiar to all, as, for example, the tendency to faintness sometimes observed in a strong adult with the first scratch of the vaccinating lancet.

In hay-fever, I now employ a small spray-producer, and use a weak solution (two per cent.); about twenty five minims (half-grain) is sufficient at one time; spraying the eyes very slightly, with the lids half closed; and afterwards each nostril, passing the nozzle well into the aperture. Of course, too much must not be used upon the eyes, or inconvenient dilatation of the pupil will ensue. This plan, repeated several times a day, or whenever the symptoms become urgent, will afford the greatest relief, only to be appreciated by those who suffer from this complaint, and, in conjunction with the wearing of smoked-glasses, seems to me to yield more satisfactory results than any treatment hitherto adopted.

WM. S. PAGET, M.D.Lond., M.R.C.P., Great Crosby.

CLINICAL MEMORANDA.

MEMBRANOUS CROUP AND DIPHTHERIA.

THE case related by Dr. Phillips, in the JOURNAL of June 5th, does not go far to establish the identity of membranous croup and diphtheria. There is a form of hospital gangrene, of a mild type, which not uncommonly attacks wounds exposed to the contact of urine, especially if the urine be alkaline. This disease is called, by Billroth, urinary diphtheria, and it generally runs its course with few constitutional symptoms, if the wound be kept clean. To this type of hospital gangrene, the cases related by Drs. Phillips and Mackie seem to me to belong.

J. WHITEHOUSE, F.R.C.S.Eng., Sunderland.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

SPINAL CARIES IN THE OLD.

(Under the care of Dr. GOWERS.)

A CASE of spinal caries recently came under observation, which afforded an instructive illustration of some points in the history and diagnosis of this disease. The patient was a woman, 57 years of age, who applied for treatment on account of almost complete paraplegia. Two years and a half earlier, she began to suffer pain in the lower dorsal region of the spine, and the pain quickly extended round the trunk on the left side, being especially severe in the left hypochondriac region. It was of a peculiar character, "as if the ribs were being bent into one another," and was increased to some extent, but not greatly, by movement. She noticed no distinct weakness in the legs until nine months before she was seen, when she found that the legs rapidly lost power and sensation, so that in a month she could not move them or feel upon them. Both motor and sensory palsy occurred in the left leg before the other; the sphincters were also paralysed. After two months, sensation returned in the legs, but motion continued absent. When seen, the legs were powerless, fairly well nourished, and presented great excess of reflex action, and an increased knee-jerk; a clonus could be readily obtained in both the extensors of the knee and of the ankle.

Before examining the spine, Dr. Gowers pointed out the significance of the pain. Such pain as that described, passing along the course of certain spinal nerves, meant irritation of their roots. The occurrence of the pain before the paraplegia signified that the irritation of the roots preceded the disease of the spinal cord itself, and, therefore, that the latter was secondary to disease outside it. A morbid process within the cord was never so local as to cause limited irritation of sensory root-fibres, without interfering with other functions. The common diseases outside the cord causing such symptoms were three;—a tumour of the membranes, a tumour of the bones, and caries of the bones. Primary inflammation of the membranes was never so limited in its range or effects. Of the three possible diseases, a tumour of the membranes, as a rule, caused symptoms of uniform course. The spinal cord suffered slowly; the long stationary period and the rapid invasion of the cord in this case were both opposed to the diagnosis of meningeal tumour. Between caries and growth in the bones, the diagnosis was sometimes difficult, especially in the old. In each, the symptoms might be the same, early nerve-root pains and later cord symptoms; but there was an important difference in the severity of the nerve-root pains, which, in tumours of the bones, were usually very severe, and were increased by movement to agonizing intensity. It was said that the root pains of caries were sometimes very severe; but, of a large number of cases of caries that had come under Dr. Gowers' observation, in not one was the pain comparable to that of the cases of growth in the spine which he had seen. Moreover, the symptoms of growth were generally steadily progressive, and the long stationary period in this case was strongly in favour of caries.

An examination of the spine was then made, and it confirmed the diagnosis drawn from the symptoms. There was extreme tenderness in the lower dorsal region, and distinct displacement at the seventh and eighth dorsal spines. Dr. Gowers observed that caries was not nearly so rare in late life as was often thought. He had seen several other cases in which the patients were over 50. In these cases, the disease was similar in nature to that which occurred in early life. In connection with these late cases, it should be remembered that simple caries was not the only cause of destruction of bone. This might result from any suppurative inflammation, and he had met with one instance in which it was clearly due to a pyæmic abscess in the bone. The paraplegia in all cases was due to the compression of the cord, and to the inflammation set up by the pressure—"pressure-myelitis." This inflammation was not always proportioned to the pressure, either in degree or in acuteness. In the substance of the compressed cord, Dr.

Gowers had found a remarkable thickening of the walls of the vessels, which might go on to actual obliteration of their calibre; and this process must add very much to the degree of damage to the nerve-elements, and to the impairment of function. The precise mechanism by which the pressure was exerted varied; it was generally inflammatory matter outside the dura mater; but displaced bone alone sometimes compressed the cord, and very often assisted in the compression, the cord being nipped between the inflammatory matter on the one hand and the displaced bone on the other. It was probable that some movement of the bone, or sudden displacement of inflammatory products, often determined the occurrence of compression, which might then be apparently produced by some muscular effort. In one case, that of a woman 45 years age, severe tingling in one leg followed instantly three violent sneezes, and weakness was considerable at the end of three days. (The diagnosis in this case was ultimately verified.) The initial impairment of sensation in the patient examined was an unusual feature. The paralysis in caries was, in most cases, motor only; and the loss of sensation, in any case, suggested that inflammation had more effect than mechanical pressure in causing the impairment of function. The same conclusion was suggested by the circumstance that the sensory loss passed away, just as it did in most cases of simple myelitis. The loss was an indication that the damage to the cord was severe, since in the cord and in the nerves a greater degree of damage was required to arrest sensory than motor conduction. One explanation of this probably was, that a slighter nerve-impulse sufficed to excite the sensory centres in the brain than was necessary to stimulate the motor structures in the muscles. Anæsthesia thus increased a little the gravity of the prognosis, but it did not preclude recovery. The presence of an excess of myotatic irritability (revealed by the so-called "tendon-reflexes") did not even lessen the prospect of recovery. Dr. Gowers had known perfect recovery to occur in caries when there was not only a well-marked clonus, but an actual spastic state of the legs. The condition, no doubt, indicated degeneration of the lateral columns (pyramidal fibres); but regeneration might occur in these, just as in a peripheral nerve. The prognosis was, however, much worse in the second half of life than in the first. The tendency to recovery in the bones was much less; and the patients responded in much slighter degree to the influence of tonic agents, which, with local measures, were the most important therapeutic agents at all ages.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.

SUCCESSFUL GASTROSTOMY.

(Under the care of WILLIAM SQUARE, F.R.C.S.)

J. W.; aged 62, a monthly nurse, was admitted on April 10th, 1885. For some months, she had had progressing difficulty in swallowing. About a week before admission, she came to an absolute stop. Her history was good. Some blood in the vomit, and increasing tenderness, prevented the passage of any tube. Without operative interference, it was evident that she must die very soon.

On May 1st, 1885, the first part of the operation of gastrostomy was performed after the usual custom. The stomach was easily found, and silver sutures were used. Nutrient enemata consisting of beef-tea and brandy, with some tincture of opium, were given every four hours.

On May 3rd, the stomach was opened with a Gräfe's cataract-knife. A soft India-rubber tube was introduced, being retained in place by a suture passed through it; one ounce of peptonised milk was given every two hours by the tube; in addition, one enema was given every five hours.

On May 9th, peptonised strong beef-tea (two ounces) was given every three hours by the tube. The temperature was always normal, and there were no symptoms after operation but slight retching for two days. She was discharged on May 23rd, 1885.

On April 6th, 1886, she looked almost as well as ever. She had travelled to Brighton and back, and, by the courtesy of the guard, fed herself *en route* in a separate compartment. She always lay down to feed. There had been an interval of one month, during which she could swallow as well as ever, even hard meat and crusts. During all this month, however, she vomited mucus and blood until the capability of swallowing ceased.

She was in the habit of making her day's food each morning—a large basinful of beef-tea, bread, and milk. She injected as much as she wanted when hungry. Her meal-times corresponded with those of the family. Her mouth watered before. The only thing that she could taste injected was whiskey. It had the usual alcoholic effects. She appeared very well, and it seemed that the diagnosis of carcinoma might be wrong.

On April 14th, 1886, she was taken suddenly ill with vomiting, and a condition of semi-collapse. A large amount of green, highly offensive, pus was discharged by the side of the tube. She slightly recovered, but, up to the time of her death, took in but little, and was constantly sick. The green pus was always exuding, more or less, by the side of the tube. She became gradually worse, and sank on April 25th, 1886.

REMARKS BY MR. SQUARE.—At the necropsy, the whole of the lower part of the œsophagus was one enormous ulcer; but there was no thickening nor suspicion of cancer. The whole mucous membrane was simply destroyed. It was very offensive. The mucous membrane of the stomach was not healthy, but had nothing very remarkable about it. The orifice of the hole was very peculiar. I had expected to see it valvular, or dilated into a funnel; but it was no larger inside than out, being perfectly circular, and about the size of a No. 16 catheter. There was a little left pleurisy, but nothing else to record. I think we may say that the poor woman had one year of happy life, without ache or pain; and hence I am justified in calling this a case of "successful gastrostomy."

REPORTS OF SOCIETIES.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, JUNE 3RD, 1886.

T. S. BYASS, M.D., President, in the Chair.

Hypnone: Resorcin: Naphthol.—Dr. MACKEY showed specimens of these, and also of Unna's plasters (Beiersdorf). The special use of resorcin referred to was in gastric catarrh.

Urethan.—Mr. F. J. PALEY read notes upon this hypnotic, with brief record of ten cases in which it was administered, including examples of pulmonary, cardiac, gastric, and cutaneous disorder. He reported the drug uncertain in action, but efficacious in about half the number of cases quoted, producing several hours of quiet sleep. Ten to fifteen grains was the minimum dose which effected this, and it sometimes required repetition. Nausea and vomiting occurred in two or three instances, but no marked depression; dyspnœa was no contra-indication.—The experience of Dr. UHTHOFF and of Mr. SCOTT, with doses of ten and fifteen grains in a few cases, had given no satisfactory result, and the former emphasised the value of morphine in cardiac cases when pulmonary congestion was not marked.—Dr. MACKEY had seen no marked benefit from urethan, but referred to Mauret's recent observations, which put the effective dose at thirty grains. In contradistinction, hypnone would act in one-drop doses in some cases.

Renal Calculi, Hæmaturia, and Pneumonia Hyperpyrexia.—Dr. J. EWART read the case of a child, aged 4 years, illustrating these conditions. When admitted to the Children's Hospital in January last, the urine contained pure blood, and uric acid crystals. It was passed without pain or sudden stop. The mother said that two small stones, like hemp-seeds, with sharp points, had been passed, and she had noticed "trembling fits" several times, also pulling of the penis. At first he could sit up and play, but, two days later, was taken suddenly worse, and the temperature went up from 100° Fahr. to 105°. A transient scarlet rash appeared several times. In the evening, he was apparently moribund. There was pain over the kidneys, especially over the left. Aconite and a saline were ordered, but the temperature went up next day to 106°, which was reduced by a bath at 90°, cooled to 70°. He remained in this ten minutes, till a slight shiver occurred, and then the temperature was 101°. Next day, the base of the right lung was dull, with tubular breathing. On January 26th, the temperature was 106°, pulse 156. The urine was smoky, and contained pus, which was not ropy. The pneumonic area was increased; he had rigors, muscular twitchings, and transient scarlet rash; there was much pus in the urine. He was ordered quinine, two grains, every three hours, and afterwards ammonia and bark, with potash, etc. From this date all symptoms improved, and, on February 12th, he was convalescent. Dr. Ewart attributed the lithiasis to chill and constipation, followed by hepatic congestion; and he concluded that, from the irritation of the calculus, an abscess had formed near the pelvis of the kidney rather than in the ureter. Whether the pneumonia was septic, or due to chill in the bath, was doubtful; but recovery from such grave conditions was of much interest.

A PUBLIC MEETING of the working men has been held at the Assembly Rooms, Carmarthen, and "The Carmarthen Provident Dispensary" established; and Dr. Edwards, St. Peter Street, appointed medical officer for the first three months.

CAMBRIDGE MEDICAL SOCIETY.

FRIDAY, MAY 7TH, 1886.

J. B. BRADBURY, M.D., President, in the Chair.

Naegele and other Deformities of the Pelvis.—Dr. W. S. A. GRIFFITH exhibited a specimen of the Naegele pelvis, which he had recently obtained from a patient who died in St. Bartholomew's Hospital, after a labour terminated by craniotomy; also a model of the similar but bilateral deformity of the pelvis described by Robert, belonging to the Museum of St. Bartholomew's Hospital. The Naegele pelvis was a rare deformity, there being only three other specimens in London. Dr. Griffith described the chief characters of each pelvis, and the views held with regard to their causation, some holding that the synostosis and the consequent deformities might be acquired by disease of the sacro-iliac joint and pressure-effects; others, including Naegele himself, believed that the ill-development was congenital. His own view was, that the sacro-iliac synostosis and arrest of development was congenital, and that the deformities of obliquity and flattening were part of the original defect, and only to a slight, if any, extent caused by altered pressure. Dr. Griffith described the operation of cranioclasm as a perfected operation of delivery by the craniotomy-forceps. The operation included three stages: 1, perforation; 2, removal of the vault of the skull, especially the parietal bones; 3, extraction of the child; and it was this part that needed an instrument that would give a firm grip. In order to prevent the instrument tearing away pieces of the child's head, the head must be seized either by the face, one blade under the chin, the other in the open forehead, or by the side of the base of the skull, one blade under the ear, the other inside the skull. As this operation could be done with a pelvis having a conjugate of 2½ inches, and needed no heavy or expensive instrument, it was likely to supersede all other methods.

REVIEWS AND NOTICES.

A MANUAL OF SURGERY: in Treatises by various Authors. In three volumes. Edited by FREDERICK TREVES, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, the London Hospital, etc. London: Cassell and Co. 1886.

As this book has come out about the same time as Heath's *Dictionary of Practical Surgery*, we look with more than usual interest to see how the two works compare with one another. They are drawn, however, on quite different lines. We notice at once that, in this *Manual of Surgery*, operative surgery does not find a place. One essay appears upon the General Principles of Operative Surgery by Dr. Stokes, of Dublin; but, as it only occupies ten pages, it cannot, however concise, give what is expected in a dictionary of practical surgery.

In the treatises upon special subjects, the different authors give instructions about some special operations, such as tracheotomy, gastrostomy, nephrectomy, herniotomy, ovariotomy, and the like; but amputations, excisions, plastic operations, and ligature of arteries, are not specially described. Even surgical pathology is only discussed in so far as it directly affects the clinical phases and the intelligible treatment of surgical disease. The three small volumes have, therefore, a limited scope, and the eighteen hundred pages which comprise them are made up of about sixty treatises upon different subjects by thirty-three different authors.

The treatises, many of which are excellent, are, of course, not equal; but, putting ourselves in the place of a novice, we feel that we have before us much valuable and reliable information. Looked at from the practitioner's point of view, it is hardly full enough; and, for either student or practitioner, we cannot help thinking that the illustrations might as well have been omitted; for neither in importance or goodness are they worthy of the text.

The work commences with a short paper on the Process of Repair, by Mr. Chiene, of Edinburgh, which is simple and clear; and here we find a very acceptable account of the germ-theory and the general principles of antiseptic surgery. Then follow short treatises on Wounds, Contusions, Abscesses, Ulcers, and Gangrene; and then comes a practical paper on the General Principles of Operative Surgery, by Professor Stokes of Dublin. Mr. Farneaux Jordan's name is so identified with the subject upon which he has written—Shock—that it would be unnecessary to refer to it, but we hardly think it up to the author's usual standard; we find no reference to shock from blow over the epigastrium or other nerves, or to that which is due to extravasation into the serous cavities, or to that which accompanies burns, scalds, and [illegible]. We look in vain to find the shock from these causes spoken of specially in a chapter from shock generally; but we think a student would be better off for having his attention drawn to these cases as not uncommon, and he could study the symptoms, perhaps, better if a simple case of the kind were detailed.

The reader will be pleased with Mr. Jonathan Hutchinson's (junior) short paper on Tetanus, and with Mr. Mansell Moullin's on Pyæmia and Septicæmia; though we cannot help feeling that the hard-and-fast line drawn between the two diseases is not strictly clinical. Are we to examine a patient's blood for living germs, or the chemical poison allied to the ptomaines, before we can clinically determine whether a case is one of pyæmia or septicæmia? Every surgeon will probably have his favourite method of treating Burns and Scalds; but Mr. Eve is right in laying down the principles of treatment rather than the material used, and when he mentions the latter we do not think his list complete.

Mr. Jonathan Hutchinson has so lately given his views on certain moot points on the natural history of Syphilis that the profession will be glad to see his views on the subject arranged with definiteness for the student's use. These are given with the author's usual clearness; and, at the same time, we cannot help noticing that, in some respects, they do not correspond with the views expressed in his Lettsomian lectures. Moot points are not so much for students, as for those who have had experience from which to form their judgment; but the author here expresses, without comment, the generally received views as to the difference in the character of the bubo following infecting and non-infecting sores, and does not urge his peculiar views with regard to this question. Similarly, the period of incubation is given from three to five weeks, instead of, as he urged in the Lettsomian lectures, at rarely under five or over six weeks.

The article on Scrofula and Tuberculosis, and that on Rickets, by Mr. Eve, are clear and good, and contain what few of the other treatises contain, references by foot-note to authorities. The general want of such references seems to be a fault in the work, and this is noticeable especially in such a treatise as that on Tumours; which, excellent as it is sure to be in Mr. Butlin's hands, decidedly wants a reference to reliable plates to make up for the absence of any illustrations in the text. The last paper in the first volume is by Mr. Anderson, on Animal Poisons, and is more thoroughly illustrated than any other papers. Like most of the others, it is short but thorough, and clearly written.

The second volume contains treatises upon Surgical Diseases of the Organs of Locomotion, and of the Special Senses, the Respiratory Passages, the Head, and the Spine. Mr. Southam takes Fractures, Mr. Greig Smith Diseases of Bones, Mr. Pick Dislocations, and Mr. Marsh Diseases of Joints; and these, together, constitute about half the volume. The arrangement is clear, and the essays are good, and will be acceptable to the student as well as to the practitioner. Mr. Page gives short papers later on upon Diseases and Injuries of the Spine, and the Organs of Special Sense are considered by Mr. Field and Mr. Marcus Gunn.

The third volume treats of the Thorax, the Organs of Digestion, and the Genito-urinary Organs. It begins with an excellent paper on the Surgery of the Chest, written by Mr. Pearce Gould, whose companion work on *Surgical Diagnosis* stamps him as a sound clinical teacher, as well as a practical surgeon; and this paper bears out the reputation the author has obtained in these respects. Mr. Morris's treatise on Injuries and Diseases of the Abdomen, and that on the Kidney, are sure to be good and clearly written from the special experience he has had; but we may notice that no reference is made to manual examination by the rectum, which, though attended with danger in rough hands, is sometimes of special value in intestinal obstruction. Simple tapping of the distended intestine, too, has been found sometimes a means of permanent relief. Sir William Mac Cormac's paper on Hernia is also excellent, and forms a very thorough and concise treatise on the subject. Mr. Cripps also gives a practical essay on Diseases of the Rectum, and Mr. Banks on Diseases of the Breast; but we do not find any reference to the important though simple affection of cracked nipples, or that form of spurious eczema which is sometimes a prelude to more serious disease. The essay on Diseases of the Female Generative Organs is by Mr. Treves, and is characteristic of the Editor in the clearness of writing and arrangement. Ovariotomy is now an operation of so much more general application than formerly, and certain surgeons have devoted themselves to it so much more than others, that we are almost surprised that some surgeon, more identified with the surgery of the female organs, has not been selected to write upon the subject. We miss any reference to the use of the actual cautery for the pedicle, and do not find that peritonitis is mentioned as a consequence of the operation. The use of sponges is adhered to, and Listerism is looked upon by the author as advisable; the length of the incision is perhaps not so limited as some now urge.

Mr. Cantlie and Mr. Moullin have good papers on the Surgical Affections of the Male Genito-urinary Organs; and the third volume closes with a fairly copious Index.

As a whole, this work is a manual of diagnosis and treatment which will prove very serviceable. It is, of course, impossible to give everything in so limited a compass, and we have pointed out some matters in which the treatises appear to us to fall short of the requirements; but cordially recognise—with all its limitations, omissions, and peculiarities—the practical and thorough manner in which the various subjects are treated.

A System of Practical Medicine by American Authors. Edited by William Pepper, M.D., LL.D., Provost and Professor of the Theory and Practice of Medicine, and of Clinical Medicine in the University of Pennsylvania. Assisted by Louis Starr, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Vols. I, II, III. Philadelphia: Lea Brothers and Co. 1885.

It has been the proudest boast of the practitioner of medicine that his art has an universal application among every race, and in every clime. *Opiferque per orbem dicor* The chief element in determining the methods of his art, the physiological constitution of man, is everywhere the same. In the preface to the first volume of this System of Medicine occurs a passage which, if it be admitted to have a general application, would demand a protest. The time had come, it is said, "for the presentation of the whole field of medicine as it is actually taught and practised by its best representatives in America." Medicine, as practised in America, is the same art, resting on the same foundations, and using the same methods as medicine practised in Europe or in Australia. But there are at least two great advantages attaching to such an undertaking as this which is rapidly approaching completion under Dr. Pepper's hands. In the first place, it presents to the American reader the estimate which the leading men in his own country have formed of the relative value of the work done by various physicians and investigators in Europe and America; while, for the European reader, it discharges the parallel function of appraising the relative value of work done by American students. In short, it helps to form a standard of criticism; in the second place, it forms a compendium of American observation and practice which, since the outward circumstances are different, must present differences—relatively to the whole mass of medical lore—minute, but individually instructive and suggestive.

The first volume contains a series of able articles on the acute infective diseases. The scale on which the work is projected may be gathered from the statement that the article on Typhoid Fever by Dr. James Hutchinson, of Philadelphia, occupies more than a hundred and thirty pages. In this article, the history of the recognition of the disease is traced, its geographical distribution indicated, and its etiology very fully discussed; many instructive, and, as a rule, often quoted, epidemics being described. The clinical description of the disease is most elaborate, and questions of treatment are very fully discussed. With regard to the so-called typho-malarial fever, Dr. Hutchinson solves the difficult question of its nosological position by assuming that two sets of cases are included under that term, namely, cases of remittent fever which assume the typhoid form, and cases of typhoid fever occurring in persons who have been exposed to malarial influences. Dr. Bemiss, of New Orleans, in his article on Malarial Fevers, considers the term to be useful, since it leaves "questions of precedence or predominance in abeyance." If no such term were in use, there would be confusion in determining whether a case should be called typhoid fever complicated by malaria, or malarial fever complicated by typhoid. This article by Dr. Bemiss is surprisingly short, but very full of matter, and written with the assured tone of a man who has had large experience, and, therefore, tends towards dogmatism; the same qualities may be recognised in his article on Yellow Fever. He holds that the poison of yellow fever undergoes some change after leaving the human system before it can reproduce the disease, and that infection takes place through the air only. The extraordinary difference recorded in the mortality in hospital and in private practice in New Orleans appears inexplicable; taking the cases given among the white population only, the mortality in hospital was 51.7 per cent., and in private practice 10.11 per cent.; these figures are drawn from the statistics of the epidemic which occurred in 1878. Dr. Jacobi's article on Diphtheria contains a most useful history of the investigations which have been conducted with regard to the pathology of the disease. In addition to articles on all the acute infective diseases, the volume contains a section dealing with General Pathology and Sanitary Science, to which Dr. John S. Billings contributes an article on Hygiene.

The second volume deals chiefly with nutritional diseases. Its first section, on General Diseases from Derangements of the Normal Processes of Nutrition, contains articles on Rheumatism, Gout, Rickets, Scurvy, Purpura, Diabetes, Scrofula, and Hereditary Syphilis. The article on Rickets, by Dr. Jacobi, is learned with the learning of books, but not altogether satisfactory, owing to an absence of any adequate attempt to grapple with the main pathological difficulties of the subject. Dr. J. William White has treated the subject of Hereditary Syphilis with much discrimination, and has made a very careful and painstaking compilation of the facts and opinions of all the chief syphilographers. The remaining portion of this volume, extending over more than eight hundred pages, is occupied with a series of articles on the Alimentary Tract and the Chylopoietic Viscera. It may be noticed that Dr. W. H. Welch, of Baltimore, who has written on the Chronic Affections of the Stomach, describes and recommends a method of treatment which has attracted surprisingly little attention in this country. It is almost twenty years since Kussmaul introduced the system of washing out the stomach; yet it would not be easy to find any good account of the method and its uses in any student's handbook published in this country, nor is it a system which has been carried out, to any considerable extent, in the hospitals of this country. Dr. Welch gives a full description of the method, of the various forms of apparatus used, of the mode of conducting the operation, and the class of cases to which the method is applicable.

The third volume is devoted to the diseases of the respiratory, circulatory, and hæmatopoietic systems, which are treated, in a thousand pages, with much elaboration. The principle of subdivision of labour even seems to have been carried to an extreme in this volume; for instance, the articles on Hæmoptysis and on Pulmonary Apoplexy are written by Dr. Carson, of Cincinnati; on Pulmonary Embolism, by Dr. Beverley Robinson, of New York; on Catarrhal Pneumonia, by Dr. Pepper (the editor); on Pulmonary Phthisis, by the late Dr. Austin Flint; and on "Pneumonokoniosis," which is defined as "a generic term applied to pulmonary diseases due to the inhalation of particles of irritating dust," by Dr. E. T. Bruen, of Philadelphia. Again, the article on Laryngoscopy and Rhinoscopy is by Dr. Carl Seiler, of Philadelphia; while that on Diseases of the Larynx is by the late Dr. Louis Elsberg; and that on Diseases of the Nasal Passages, by Dr. Harrison Allen, of Philadelphia. The result, however, appears to be not unsatisfactory, and the various articles combine into a treatise of great value. To the second section of the volume, that which treats of the diseases of the circulatory and hæmatopoietic systems, Dr. William Osler has contributed two most able articles, the one on Diseases of the Heart-muscle, and the other on Diseases of the Blood and Blood-glandular System. Dr. John B. Roberts has a short article on the Operative Treatment of Pericardial Effusions; he recommends aspiration as the first step, a fine needle, of special design, with an internal sliding cannula, is introduced in the fifth interspace, just above the sixth rib, and about two inches or two and a quarter inches to the left of the median line of the sternum; incision may, subsequently, become necessary, and Dr. Roberts thinks that the results have been "exceedingly good, when the frequent postponement of the operation till the patient is almost moribund is recollected."

Each volume has a very full and useful index, and the greatest care has been expended on all the mechanical details of classification, pagination, and binding, which add much to the utility of a work of reference.

Clinical Studies on Diseases of the Eye. By Dr. Ferdinand Ritter von Arlt. Translated by Lyman Ware, M.D. 1886.

Anything emanating from the pen of the veteran professor in Vienna will be received with respect, and read with attention. The volume before us does not profess to be more than the first instalment of a work which may be completed in the future, and deals only with affections of the conjunctiva, sclera, iris, and ciliary body. We think that the volume would have been more useful to those in general practice, for whom Dr. Arlt tells us the work is primarily intended, had affections of the eyelids and lacrymal apparatus been included; but we trust it will not be long before another volume appears.

The book is written in a terse business-like style, and bears evidence of having been subjected to much condensation. References to authorities are given in most important subjects, but few of these are of recent date. There is, indeed, a somewhat old-fashioned tone about the book, the author having relied almost exclusively upon his own

vast and extensive experience, and paid little attention to modern innovations. Cucaine did not come into use soon enough for it to be considered in the original text, but the translator has endeavoured to supply the defect by frequent interpolations. In several points, we notice that Professor Arlt is at variance with the teaching of many of the more modern writers. Thus he uses eserine but little in corneal affections; but he is a staunch advocate of Saemisch's operation. In the treatment of pannus, peritomy is condemned, and jequirity is mentioned only by the translator. No sharp distinction is drawn between sympathetic neurosis and sympathetic ophthalmitis, the former being looked upon merely as the early stage of the latter. The writer adopts the theory of transmission by the ciliary nerves, and other theories receive but scanty consideration, Deutschmann's experiments not even being mentioned.

In the description of symptoms and morbid processes, the writer is at his best. The classification adopted is scientific, and the broad lines of treatment are laid down clearly and concisely; unfortunately, the details of treatment are in many instances unintelligible without a knowledge of the *American Pharmacopœia*.

In a book intended for the use of general practitioners, we confess that we should have liked to have seen more definite directions given as to the proper treatment of ophthalmia neonatorum. This is just the kind of case in which a practitioner would refer to a book for the best advice, and we believe that he would be disappointed. In purulent ophthalmia in adults, the old and inconvenient plan of covering up the sound eye with a pad is recommended. Buller's glass shield, which is superior in every respect, is not mentioned. The chapters on diseases of the iris and ciliary body, and the descriptions of the various forms of corneal ulceration, are excellent.

On the whole, we should say that this volume is of great interest as a record of an experience which is probably unique, but that it will prove more valuable to the specialist than to the general practitioner, for whom is it chiefly intended. Dr. Ware is to be congratulated upon the manner in which he rendered the work into English, and the interpolations which he has introduced are of great value.

WHERE TO TAKE A HOLIDAY: BEING THE HOLIDAY NUMBER OF THE LONDON MEDICAL RECORD. London: Smith, Elder, and Co. 1886.

ANOTHER number of this cheap annual compilation has recently appeared. It has now reached its third or fourth time of publication, and appears to increase in value from year to year. Its contents are probably so well known to most of our readers, that it may suffice to say that it consists of original papers written by medical men of repute, on various subjects connected with the taking of holidays, and the choice of a health-resort. Several new papers appear in this present number. Amongst these is one, entitled, "Along the Bristol Channel, from Bristol to Ilfracombe," which gives an excellent account of that fine piece of coast. Another original paper describes the sea trip from Glasgow through the Kyles of Bute and the Crinan Canal to Oban, Ballachulish, Banavie, and the Caledonian Canal to Inverness. Not one word in the article overdraws the splendid scenery of this grand trip. A third paper, relating to Madeira, is written by Dr. M. C. Grabham; it gives an account of the meteorology of the island, of the voyage thither, and of the patients for whom the climate is particularly suitable. The great body of the work is taken up by a description of about sixty-four English and foreign health-resorts, being an addition of twenty-one to those described in the Holiday Number of 1885. The places that now receive notice, for the first time in this publication, are Bude Haven, Davos Platz, Dawlish (Devon), Deal (Kent), Harwich and Dovercourt (Essex), Herne Bay, Hythe, Kingsbridge (Devon), Kreuznach, the Lizard (Cornwall), Matlock Bath (Derbyshire), Morecambe (Lancashire), Padstow (Cornwall), Rhyl (Flintshire), Saltburn (Yorkshire), Seaton (Devon), Skegness (Lincolnshire), South Shields, St. Ives (Cornwall), Tynemouth (Northumberland), and Walton-on-the-Naze. Most of the old articles are much enlarged; particularly is such the case in that describing Ramsgate. The statistics, and information relating to the health of each locality, are furnished by medical officers of health and medical practitioners; these departments are thoroughly reliable, and brought up to date. The section devoted to reviews is also greatly enlarged. Altogether, this number of the *London Medical Record* is likely to secure considerable success, as it details, with no stinted hand, the very kind of information which those who require a holiday and change—and their name will soon be legion—desire to obtain before starting forth upon their rambles, if they would obtain from the holiday the maximum of benefit to mind and body.

A TEXT-BOOK OF NAKED-EYE ANATOMY. By JAMES CANTLIE, M.A., F.R.C.S. Baillière, Tindall, and Cox. 1886.

THIS is a book of nearly five hundred pages, written by Mr. CANTLIE as a text-book to make use of the artistic French plates of Professor Masse, which have done such yeoman's service in past years. These last are 113 in number, and are full-page engravings on steel, and admirably coloured and finished. They are certainly excellent, and will prove of value to the student or practitioner who wishes to refresh his memory and learn exactness "as far as that is possible from mere plates." The author does not intend the work to replace naked-eye anatomy as seen and learned in the dissecting-room, as is evident from the remark just quoted from his preface; and we, therefore, look rather critically at the text, as well as the plates, lest readers should be led to trust too implicity to a work which is very attractive, and so likely to lead the student especially to neglect the dissections upon which it should be founded.

Of the plates themselves, they are known to many by having been once before re-issued by Mr. Bellamy, with descriptive text by him. The first twelve are of the bones, and these are too small to be of much value to the student; and the illustrations on this subject found in text-books generally will prove more useful, though often more diagrammatic. The descriptions given of the bones are too short to be satisfactory; and we notice that, though the right bones have been generally, if not universally, depicted, the student, who may want the information, is not told the fact, though it is an important one, and the selection very judicious in teaching. This plan has not been adhered to in the ligaments, and the student may be readily misled when there is nothing to indicate that the ligaments of the left upper extremity and right lower are shown him in the plates. In the letter-press of the ligaments, as of the bones, we can only wish for more; but what is given is to the point and accurate. The mechanism of the joints is so dependent upon the attachment of ligaments, as well as the shape of the bones, that the student would have been benefited by a fuller reference to this subject. However, we recognise that the work does not aim at much more than a thorough explanation of the plates, and, by this means, at being a compendium of anatomy.

Eighteen plates are devoted to the muscles, and here begins the most valuable part of the work, both for its plates and for the descriptive text. The drawings are accurate, and the colouring delicate; and Mr. Cantlie has added a very clear and thorough outline of human myology, arranged in a manner which the student will find useful. We find paragraphs for the origin, insertion, nerve, and action of each muscle, and these are given briefly but with accuracy. There is much that a student now would find necessary for the higher examinations, which is not attempted here; but we should prefer to see in any work of anatomy some reference to possible abnormalities, and neither in this part of the book nor elsewhere do we find any indication of this. This is, perhaps, a most notable omission when we come to the anatomy of the vessels, and would bear consideration in any future edition.

The fasciæ occupy five plates, and the viscera fifteen, and we are again struck with the delicacy of drawing and colouring in these. There is no attempt to delineate more than the naked-eye anatomy, except in the case of the skin, for some not very obvious reason. Only one figure seems not clear to us, and that is one supposed to represent the anterior part of the eye seen from behind.

Twenty-eight plates are devoted to the vascular system, including arteries, veins and lymphatics, and these are excellent. And then follow about seventy pages of letter-press, giving the vessels briefly, but accurately. And here Mr. Cantlie has devoted one paragraph to the "relations" of each important vessel, and another to "branches." We find both he and Professor Masse adhere to what we look upon as an unusual origin of the acromio-thoracic artery from the first part of the axillary. We may also call the author's attention to page 286, where the glands above the inner condyle of the humerus are not clearly indicated. And is the commonly accepted action of the serratus magnus, as a muscle of inspiration, correct? and is the action of the sterno-mastoid at all fully or correctly given, when we say, "When both muscles act, the head is drawn forward, and the neck bent towards the sternum?" But the descriptions are generally so good, though brief, that we cannot but congratulate the author upon the thoroughness of his work.

The last twenty-seven plates are of the nervous system, and these are done in a way for which the French school has become famous. The nerves are clearly defined,—rather exaggerated in this respect,—but we can understand them better because they are diagrammatic. Mr. Cantlie's description, which follows them in the next seventy

pages, is a trustworthy compendium of the subject, and he finishes with another seventy pages on the alimentary canal, the viscera, and special organs of sense. The whole is completed by a very full index.

We feel that the work will prove an excellent refresher of anatomy to those who have mastered it in the dissecting-room; and we congratulate Mr. Cantlie, as well as the publishers, upon this useful re-issue of one of the most convenient and artistic of anatomical treatises.

THE DIAGNOSIS OF DISEASES OF THE BRAIN: Lectures delivered at University College Hospital. By W. R. GOWERS, M.D., F.R.C.P., Physician to University College Hospital, and to the National Hospital for the Paralysed and Epileptic. London: J. and A. Churchill. 1885.

THIS book attempts to supply to the student and practitioner a manual similar in scope and method to the work formerly published by the same author on *Diagnosis of Diseases of the Spinal Cord*. This last was deservedly popular, and, at the time, supplied a great want; for, at the period when the first edition appeared, the whole question of the anatomy, physiology, localisation of the functions, and diagnosis of the diseases of the spinal cord were, except to the initiated, in an undeveloped state, and greatly demanded generalisation and practical application. These requirements Dr. GOWERS's little book eminently fulfilled, and, by utilising the knowledge possessed by experts of the day, he simplified and arranged it to suit the comprehension and practical demands of the clinical student. On somewhat similar lines, the object of the present work is to do for the brain what was formerly done for the cord, and, in the same way, to demonstrate how the recent advances in our knowledge of the cerebral organs and functions may be made available for the investigation and diagnosis of disease.

To review, in the strict sense of the term, a book of this kind, is confessedly difficult, as it does not attempt to discuss original doctrines or investigations, but only professes to lay before its readers a succinct account of the present state of knowledge on the subject of which it treats. Although of necessity a compilation, it is one which is tempered and adorned by the experience and original observation of the writer. Considering the complexity, extent, and uncertainty of all the problems connected with the anatomy, physiology, and pathology of the brain, any author may be pardoned for standing aghast at the task before him, of attempting to unravel and arrange the confused and multitudinous facts, to sift the wheat from the chaff, to bring into prominence the important features, and to make clear to the initiated what is of practical utility. All this, we consider, has been effected by Dr. Gowers with considerable skill and ingenuity; and the book which he has issued will be found of great service to those students and practitioners who desire a general summary of the functions of the brain, and the manner in which a knowledge of these may be made serviceable in medical practice. The anatomy and physiology of the brain may be said to be one of the great questions of the day, and there is no one which is more mutable, or in which greater or more rapid advances are being made. Accordingly, what is dark to-day may be illuminated to-morrow; and what we now believe to be truth, may soon be shown to be error. Taking these difficulties into consideration, Dr. Gowers's work gives an able and temperate account of our knowledge at the present time, prominently indicating what appears to be proved, and no less impartially suggesting what yet remains to be solved.

COMPANION TO THE BRITISH PHARMACOPŒIA. By PETER SQUIRE. Revised by PETER WYATT SQUIRE, F.L.S., F.C.S., and ALFRED HERBERT SQUIRE, jointly Chemists-in-Ordinary to the Establishment of the Queen, etc. Fourteenth Edition. London: J. and A. Churchill. 1886.

THE appearance of the fourteenth edition of this excellent and useful work will be hailed with satisfaction by most men engaged in practice, to whom the qualities of the work have long been familiar. The revision, necessary to bring the book into harmony with the latest edition of the *Pharmacopœia*, has been in itself a task of some magnitude; but it has been carried out on the same lines as the rest of the volume. The drugs which now, for the first time, appear as officinal are marked "new," while the others are marked "modified," or "altered," as the case may be. Most of the remedies which have been expunged are still allowed to appear as "non-officinal," only the notoriously useless being altogether dropped. The extensive list of additions in the last *Pharmacopœia* has necessarily diminished the number of non-officinal remedies requiring notice; but, with this exception, most of those at all known to the profession are treated to a mention. The more useful formulæ, from the later editions of the *Pharmacopœias* of Belgium, France, Germany, and the United States of America, issued since the last edition of this work was published, have been introduced, and will be found, as non-officinal remedies, in their proper place. The therapeutical directions are naturally brief; but they have been brought up to date, and special attention is called to alterations in the strength of preparations likely to give rise to difficulty in prescribing. The notices of malt and pancreatic extracts, and pepsin, would, perhaps, have admitted a little more detail and variety, seeing their daily increasing importance as medicinal agents; but, at the same time, the difficulty of doing justice to these subjects, without lauding the products of particular manufacturers, is possibly a justification for any shortcomings in this respect. The solubility of hydrochlorate of apomorphine, given as 1 in 7 in the *Pharmacopœia*, is mentioned here as 1 in 70, which is probably nearer the correct proportion. The discrepancy is, however, of importance; the more so as the solution for hypodermic injection is directed to contain ten grains in a hundred minims of camphor-water—an impossibility, if one part in seventy is to be accepted as the proper degree of solubility. A similar inconsistency is noticeable in the degree of solubility of croton-oil in alcohol, which is stated to be absolute in the *British Pharmacopœia*, but only "partially soluble" here. What particular preparation is alluded to as "terebene," is not specified; but, seeing that this designation does not represent any definite chemical compound, more detailed information would have been of service, more particularly as a preparation for disinfecting purposes would scarcely be suitable for internal administration.

We can cordially recommend the present volume as fully equal to its predecessors, which is in itself a sufficient guarantee of its comprehensiveness and accuracy.

NOTES ON BOOKS.

A West Indian Sanatorium and Guide to Barbadoes. By the Rev. I. H SUTTON MOXLY, pp. 209. (London: Sampson Low and Co. 1886).—The author of this nicely printed volume appears to be a military chaplain who has lived for ten years in Barbados, and likes the island. He recommends the island as highly salubrious, and the climate in the months of December, January, February, March, and April, having a temperature of 82° to 76°, with north-east trade wind, as delightfully equable and dry, very different from the moist and variable climate of Madeira and the Azores. He gives ample details about life in Barbados, about the inhabitants, and the cost of living. Nevertheless, the account he gives is not to us very attractive. The society he paints as dull, the amusements as few. He admits that the greater part of the island, that to which Europeans resort, near Bridgetown, is flat and uninteresting; indeed, our author dwells on its moonlight as being the great attraction of the island, of which it can scarcely have a monopoly. If he seriously wish to attract invalids, he should give some definite returns of mortality, in addition to general assurances of healthiness, also tables of weather; a sketch-map of the island, too, is a *desideratum*. Mr. Moxly gives, we dare say, a true enough account of the share in the medical practice of the island taken by unqualified practitioners, which, undoubtedly, ought to be checked, and then goes on to complain that the young medical men of the army have not their attention specially directed to tropical disease before they leave home, seemingly not knowing that very complete instruction in these subjects is given at Netley. He seems to suppose that the medical profession is different from all others, and that its youngest member sought to start with the experience of its older ones. We are told that phthisis and typhoid fever are not rare among the negroes. The author makes very light of possible visits of yellow fever, as, in these days of frequent steamers, it is as easy to escape from Barbadoes as to reach it. Although we can recommend this volume as a guide to those who propose to pay a visit to Barbadoes, we cannot say that it has made out a strong case for persons with delicate lungs visiting it during the fine season, or for old men selecting it as a permanent residence, which are the two main points on which the author insists.

THE Leek Guardians and Rural Sanitary Authority have reduced the salaries of all the officials; and, amongst them, that of the medical officer of health from £80 to £60 *per annum*.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ELECTRICAL CABINET.

THIS illustration represents an electrical cabinet recently made for Dr. Steavenson by Messrs. J. Coxeter and Son of Grafton Street. The cabinet is made of American walnut. The cells (forty-eight) for the continuous current are placed on shelves in the lower part of the cabinet, and can be arranged and attended to through the cupboard doors, which open both at the back and in the front. In the upper part of the cabinet are a number of Coxeter's large powerful cells, with two collecting plates, each of specially-prepared carbon. Five of these cells are used for a three-volt electric lamp, which can be used for lighting up the mouth or other cavities of the body, or with a mirror for the larynx. Three of these powerful cells are used to work the faradic coil, which is made on the principal of Dubois-Reymond's sledge form. The primary current is controlled by a specially-made rheostat, composed of bobbins of German silver wire, each offering a resistance of 800 ohms. The rheostat is capable of introducing into the circuit a resistance of 12,000 ohms. The resistance can be introduced into the circuit by means of a dial and switch, and is divided into multiples of 800 ohms up to the maximum of 12,000. One of the binding screws for the attachment of the rheophores is also adapted for the use of a water-rheostat, should the German-silver one from any cause get out of order. The secondary coil is distinct from the primary, and is provided with separate terminals; the intensity of the current it produces can be regulated by the distance it is slid over the primary coil. The element board is made of vulcanite, with nickel-plated silver mountings. The dial on the right-hand side is for collecting the current from the cells contained in the base of the cabinet, which are introduced into the circuit singly from 1 to 10, and by two at a time from 10 up to 48. The circuit is closed by a switch on the right-hand corner of the element board. The current is made to traverse one of Coxeter's patent vertical galvanometers in the centre of the element board, which has been specially and carefully graduated in milliampères. The rheophores are attached to the terminal ends of a commutator situated above the galvanometer. Separate switches and terminal binding-screws are provided for the electric light and faradic current. The front of the cabinet folds back on some sliding bars of wood as in an old-fashioned *escritoire;* the top can also be raised to inspect the cells used for the electric light and interrupted current. When closed, the cabinet makes a handsome piece of furniture.

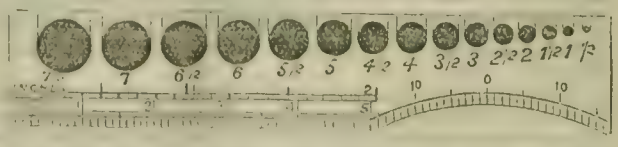


PURE TEREBENE.

MESSRS. BURROUGHS, WELLCOME AND CO., have recently introduced a new form of package for their pure terebene. It contains an extra cork to replace the one which must of necessity be destroyed in opening the bottle, and a dropper which is very convenient for measuring the dose. The pure terebene (Burroughs) is perfectly clear and limpid: an excellent preparation. At this period of the year it will be found very useful in the treatment of coryza.

AN OPHTHALMIC POCKET-RULE.

THE convenient little pocket-rule here figured has been executed by Messrs. Pickard and Curry, from the design of Mr. Edgar Browne. It comprises a pupillometer, with blackened discs from a half to seven



and a half millimètres in diameter. The tangents from each disc are drawn to the edge of the rule. At one end is a curved scale graduated in millimètres from a central zero, for the measurement of strabismus-angles. The remaining space is occupied with an inch and centimètre scale, useful for the comparison of small measurements. As a pocket-companion, the rule may be recommended as a convenience to physicians as well as specialists.

QUARANTINE.—At a recent meeting of the Piedmontese Section of the Royal Italian Society of Hygiene, after assenting to the order compelling passenger-ships, on the Adriatic and Mediterranean coasts, to have on board an officer charged with the medical superintendence of the people on board, and the disinfection of goods and merchandise which form the cargo, addressed a plea to the Italian Government, begging the revocation of the compulsory seven days' quarantine. The Society considers that this quarantine is most prejudicial to commerce; and is, besides, hygienically superfluous and useless. Also, the Society repeats the demand that the Government prohibit sanitary *cordons* round the parishes; also, postal disinfection and individual fumigation, which only serve to increase the panic among the population.

DEATH by DROWNING.—Mr. David, the resident assistant of Dr. A. G. Lawrence, the medical officer of the Severn Tunnel-works, met with an untimely death last week by drowning, while on a yachting excursion with a party of friends in the Severn. The yacht, which at the time was running up the stream, was seen to suddenly heel over, and the occupants were precipitated into the water. Mr. David, who was an excellent swimmer, struck out for the shore with the intention of procuring help, but unfortunately sank in the endeavour, being, it is surmised, seized by cramp.

MEDICAL MAGISTRATE.—Surgeon-Major Metcalfe Johnson has been placed on the Commission of the Peace for the Borough of Lancaster.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 3rd, 1886.

OUGHT ARMY SURGEONS TO ENGAGE IN PRIVATE PRACTICE?

COMPLAINTS have now and then reached us from medical practitioners, that their professional avocations have been trenched on by military surgeons who have happened to be stationed in their neighbourhood; and very recently we have received a formal statement of an alleged grievance of this kind from a civil practitioner residing in one of our distant colonies, together with copies of correspondence which has passed between the complainant and the Director-General of the Army Medical Department in London on the subject. The correspondence sent to us on the subject is very long, but the principal allegations and statements contained in it are the following. It is asserted that the medical officer in charge of the troops stationed near the town in which the complainant lives has for two years systematically engaged in private practice in the town itself; that he has, in one of its principal thoroughfares, an office in which he receives patients; and that his scale of fees is below the established rate agreed upon by the resident practitioners of the place. It is urged that there is no lack of medical attendance in the town, there being seven practitioners, four possessing British qualifications, two American, and one a Vienna graduate, among a population numbering between four and five thousand persons, mostly coloured persons; and it is further asserted that the privileges attached to the position of an army surgeon in the colony are so great, as to place the civil practitioners at an immense disadvantage.

Some other matters are brought to notice which are altogether of a personal nature, and for the accuracy of some of which, such as the use of disparaging remarks by the army surgeon to patients regarding the abilities of the civil practitioners, our correspondent must have depended on statements made by third parties. It is sufficiently obvious that such charges, whatever amount of truth there might be in them, could not be even investigated, much less adjudicated upon, by the authorities at the War Office to whom they were officially made. We are not surprised, therefore, to find that, in the reply from the War Office, these matters are not noticed, but the issue is confined to the statement that the surgeon in charge of the troops had engaged in private practice at the town named; and on this point it is remarked that "officers of the Army Medical Staff are not prohibited from taking such practice, provided their doing so does not interfere with the proper performance of their duties."

Leaving on one side the grave charges advanced by our correspondent against the army surgeon of courting practice by depreciating the professional characters of his civil brethren in the estimation of the people of the place, and of habitually accepting remuneration below the settled scale of charges, involving, as they do, conduct which would be equally discreditable in all members of the profession, whether civil or military, and which it would be unfair to comment on without the other side having an opportunity of being heard, we think the general question to which our attention has been called, the question of army medical officers undertaking civil practice, is one which is worthy of some consideration. It is evident, from the reply of the Director-General of the Army Medical Department, that there is no military rule forbidding army surgeons to engage in private practice. Their doing so is not likely to happen very often, we imagine, on account of their uncertain tenure of the particular positions they may be sent to occupy. We judge this from the complaints which are frequently made by military surgeons of the many changes of station to which they are subjected; but, on the other hand, it is evident that some medical officers may be retained sufficiently long in one station to engage in practice outside their special charge, since it has happened in the instance which has led to the complaint under notice. The question of the propriety of the proceeding should, therefore, be put on some settled basis.

On the first view of the subject, we cannot but sympathise with any private practitioner who, like our correspondent, has incurred considerable expense in establishing himself in the position he is holding, and who finds the income which he has been legitimately entitled to expect, lessened by another practitioner who already possesses a fixed charge, and whom, therefore, he regards as an intruder in his own province. Such a feeling may well be entertained without any undue desire to maintain a monopoly of professional practice, and even with readiness to acknowledge the right of any medical practitioner, starting on the same footing as himself, to compete with him.

On the other hand, if we look at the question from the army practitioner's point of view, we can imagine him saying it would be hard to restrict him from employing his leisure time in turning his professional abilities to account, and so adding to his income, if the opportunity should come in his way, and his military engagements should not prevent his taking advantage of it. It may happen, too, that the military practitioner has special acquaintance with some particular conditions of disease, owing to the opportunities he has had of becoming acquainted with them in other climates to which his duties have taken him; and it might well be urged that it would not be right, under such circumstances, to forbid patients having the benefit of this special experience when it was within their reach. It is well known that civil practitioners are occasionally glad to have the opportunity of consulting with some of their military brethren who have gained special acquaintance with the diseases of tropical climates.

These considerations lead us to the conclusion that it would not be wise to restrict army surgeons from extending their professional avocations beyond the strict limits of their military duty; provided always, be it understood, that there is no unseemly "touting" for patients, that the advice of the military practitioner is sought in a regular way, and that his practice is honourably conducted in accordance with professional ethics.

While considering the point in question, we have been reminded that the subject of army surgeons being permitted to occupy themselves in private practice is one which was very fully discussed, nearly

thirty years ago, by the Army Sanitary Commissioners, who inquired into various matters connected with the medical department of the army, under the presidency of Lord Herbert, subsequently to the Crimean war. The conclusion which the Commissioners adopted on this subject, is recorded in the report which they presented to Parliament at the close of their inquiries. They appear to have looked at the subject under a different aspect from the one under which we have regarded it in our previous remarks. They considered the question as it affected the welfare of the officers and soldiers of the Army; and they expressed their conviction that the interests of the Army and State would be best promoted by medical officers being permitted to accept private practice. The report which the Commissioners adopted was published in the following terms. "Looking at the want of variety incidental to the medical care of a small detachment, or even of a service-battalion of six hundred men, in a healthy station, which offers but little to the observation of the medical officer, beyond the ordinary diseases to which most adults, between the ages of 18 and 35, are liable, we think that no opportunity of keeping up or adding to his professional knowledge should be neglected; and we consider that the army medical officer should, therefore, be permitted to take private practice whenever it can be obtained. The rules of the service are stringent enough to ensure attention to his military duties; and the stay of his regiment at each station is so short, that it is not likely that he will be able to obtain, in competition with permanent resident practitioners, a practice so extensive as to absorb too large a portion of his time. On the other hand, the greatest practice makes the best men, by utilising the highest theoretical attainments; and the military patients will reap the full benefit of the skill and science which the army medical officer will have attained in the course of his private practice." In accordance with the foregoing remarks, the Commissioners finally make the recommendation, that "medical officers be permitted to take private practice, under such regulations as may ensure attention to their medical duties." It seems not improbable that this recommendation has been the source of what appears to be the existing rule in the War Department on the subject; and that it has acted as the guide to the decision expressed in the reply of the Medical Director-General to our correspondent. We do not see that any legitimate objection can be taken to such a decision, if it be understood to include the limitations with regard to the methods by which the practice is obtained, to which we have already adverted.

LEPROSY.

THE discovery of the bacillus lepræ has led to increased attention being given to the etiology and pathology of leprosy in many parts of the world. Investigations are somewhat impeded by the fact that the science of bacteriology is still so new, that experts are hardly to be found, except in the few great centres of medical teaching, whilst in these centres there are few cases of leprosy. The most successful effort which has been made to overcome this difficulty is due to the initiative of the Board of Health of Honolulu. Leprosy, in the Sandwich Islands, has assumed proportions which entitle it to be considered as a veritable pest; and the action of the Honolulu Board, in inviting Dr. Edward Arning to proceed from Germany to Honolulu, for the purpose of investigating leprosy, is likely to have results of great importance both to science and to practical medicine.

Investigations of this nature require great expenditure of time and patience; but, even in the comparatively short period of two years, Dr. Arning has succeeded in making a discovery of the first importance, having shown that in anæsthetic leprosy the bacillus is present in the nerve-trunks that supply the parts which have lost their sensibility. Dr. Arning states, in his report to the Honolulu Board, that "in the so-called anæsthetic cases, the bacillus is not found in the anæsthetic patches, nor in the chronic sores of necrotic parts of skin, tissue, and bone, but, as nerve-excisions have proved to him, in the nerves supplying these mutilated parts with vitality." He further states that the bacillus cannot be found in the bright red patches frequently ushering in the first formidable attack of disease, and mostly occurring on the face, these patches being always located in the distribution of some larger nerve. It is important to observe that Dr. Arning states that the bacillus, as such, cannot be found in the blood, not even during the febrile attacks marking the progress of the disease. Dr. Arning's studies have included searches for the germ of leprosy in the air, water, and food, and attempts to breed it outside of the living organism on artificial soils, employing the greatest variety of composition of soil and different grades of constant temperature. Of soils, he used Koch's meat-peptone gelatines of varying strengths; gelatines made of sea-weed and meat; gelatines made of sea-weed and fish; bouillons of meat and fish; sterilised and solidified serum of blood, taken direct from the carotid arteries of bullocks and sheep; vegetables, solid and in decoctions; and "poi." After being sterilised, that is, freed, by high temperature (steam and dry heat), of any germs they might accidentally contain, these soils were implanted in sterilised containers with the leprous germ, and kept, for weeks together, at constant temperature in the incubator, and carefully watched day by day. The results of this work have been altogether negative. Under all the varied conditions, he has not once succeeded in obtaining an independent and pure growth of the bacillus lepræ.

Parallel with these culture-experiments on artificial soils, a large number of experiments were conducted to grow the germ in living tissue. For this purpose, he inoculated a variety of animals at ages ranging from a few days old to grown-up beasts—rabbits, guinea-pigs, rats, hogs, pigeons, and a monkey. They were inoculated in and under the skin, in the cavity of the abdomen, under the conjunctiva of the eye, in the anterior chamber of the eye, and in the ulnar nerve, mostly with small pieces of leprous tubercle excised under antiseptic precautions. He has been able to follow up, microscopically, the presence of the bacillus lepræ at the spot of inoculation for months after the introduction; but has not, in a single instance, been able to observe any general symptoms of leprosy. Dr. Arning has come to the conclusion that the bacillus lepræ is a parasite limited to the human race, and that it must be transmitted either directly from individual to individual, or pass through a stage of intermediate life (spore condition), which we are at present unable to detect: it may be present in the soil, water, or food, but can only enter them from the diseased tissue of a leper.

Dr. Arning has not limited his work to pathological investigation; but, utilising the abundant material available, has tried various remedies and modes of treatment in cases which were under his care. He has found, in the external use of salicylic and pyrogallic acids, agents of undoubted value for symptomatic local treatment. With them, it is possible to destroy leprous tubercles and soften diffused leprous infiltrations, sometimes even to restore a portion of the feeling

lost over these infiltrated patches. Especially, the conspicuous red patches which usher in the commencement of tubercular leprosy, and often stand, for years, without fading, subside readily under local treatment with an ointment or paste containing 10 per cent. of salicylic acid. Isolated tubercles, and serpiginous leprous papules, have been entirely removed with a strong solution of pyrogallic acid. For the diffused leprous infiltrations, he uses a 10 per cent. solution of salicylic acid in oleic acid. Internally, he has used either nothing, so as to be sure that the disappearance of the symptoms was due to the local applications alone, or salicylic acid in large continued doses. He has seen fresh febrile eruptions occurring during this treatment; but in several cases there was a decided improvement, even when it was used without any local application. Electric treatment was used in a number of cases, and, when persevered in long enough, proved very efficient. One patient especially, a white man, who had several anæsthetic patches on the arms, recovered entirely. He had, at the same time, been taking one and a half to three grammes of salicylate of soda daily, for a whole year. Another patient, a native woman, who had, besides other symptoms, a nearly complete anæsthesia of the left arm and a contracted useless hand, for over ten years, is now able to stretch her fingers and use them for needlework, the feeling being completely restored in two of the fingers. The treatment, in her case, was extended over nearly eighteen months, and very high doses of arsenious acid, up to nine centigrammes daily, had been taken internally, the patient bearing this drug extremely well, although, from other experiences, Dr. Arning learned to be extremely cautious with this drug in the treatment of leprosy.

Whilst perusing this extremely valuable report, we have observed, with surprise and regret, that, on account of some friction between Dr. Arning and the President of the Honolulu Board of Health, there is a possibility of these important researches being hampered or even discontinued. On the merits of the case, in connection with these differences, it is not for us, at this distance, to enter; but we earnestly appeal to the Honolulu Government, in the interests of science and humanity, to take a wide view of the situation. In Dr. Arning, they may be assured, they have secured the assistance of a gentleman who has the confidence of those European pathologists whose opinion is most valuable; and even if they could replace him by a man equally trained and able, a matter that would by no means be easy, the loss of his experience of the disease could not be replaced. It would be another two years before the best man they could get from Europe would be in the position in which Dr. Arning now is, to pursue these investigations with a chance of success. We can assure them that, in difficult studies of this kind, two years is but a very short time; and whilst we would urge them not to be too impatient as to results, we acknowledge, with thankfulness, that what Dr. Arning has already done is full of promise for the future. As to the exact conditions in which Dr. Arning should work, that gentleman should, we plead, be allowed great liberty; and even if proposed conditions should not always commend themselves to the Board, we would urge, in consideration of the great objects to be attained, the exercise of a generous indulgence. We cannot think that money considerations have much to do with these unfortunate differences; but, should we be mistaken, we would suggest an appeal for assistance to the great civilised governments of Europe, and more particularly to the English Government, amongst whose Indian subjects leprosy causes much misery.

THE RIGHTFUL CLAIMANTS.

THE claims sometimes put forward by certain practitioners, at home and abroad, of originality in the use of this or that drug, not unfrequently border on the absurd. The principle that should rule the award of honours in the domain of therapeutics is not appreciated as it ought to be, and individuals seek to take credit to themselves for what is really but an insignificant application of the general rules laid down by earlier observers. Many drugs, the physiological action of which we have now ascertained with some approach to accuracy of detail, were employed empirically many years—and, it may be, centuries—before someone, by painstaking and intelligent research, enabled us to give a reason for the faith that is in us, and to use the drug, not merely because it has been recommended for the purpose, but because its action is such as to authorise a hope of benefit being derived. Some credit is doubtless due to the persons who have the good sense to recognise an useful agent when chance or accident puts it into their hands; but the real substantial honour is due to the man who applies himself to the task of working out its properties on the healthy organism, and then applies the knowledge so acquired to the treatment of disease.

The science of therapeutics has been much less indebted of late years to chance discoveries than of yore. Every new compound evolved from the laboratory of the chemist is carefully examined, with a view to its possible employment as a medicinal agent; and in this way the stock of available drugs—especially hypnotics—has been largely increased. Even where these later additions do not fulfil the programme laid down for them by their introducers, the method is commendable as a means of extending our knowledge.

Take, for example, the case of cucaine, which was introduced not long since as a mucous anæsthetic. It would be difficult to overrate its value in a limited class of cases; and the person who first made its useful qualities known may experience a legitimate pride in seeing how widely his suggestions have been adopted, and how useful they have proved. The general rules of its action as a local anæsthetic having been laid down, there is no room left for further claims of originality on the ground of its more limited application in particular ailments; and the fact of having first rammed it into an aching tooth, or smeared it over a too sensitive vagina, cannot be considered a sufficient justification for anyone to arrogate to himself a little brief authority on the subject.

The mere introduction of a hitherto unknown drug is not, *per se*, anything to be very proud of; anybody can look out some plant or substance not noticed in current treatises on materia medica, and then advocate it as suitable for the treatment of a certain disease. All that is necessary is to ascertain or provide a Latinised botanical name, and publish it accordingly. The credit, if any, is due to the systematic observer who checks the vague assertions made by the other, and shows how and why it is or is not of use. He who shall lay down exact rules for the administration of such a drug as digitalis, and show us how, why, and when it should be employed, will not be second even to the physician who, just 100 years ago, first called attention to the advantages attending its use in certain diseases. For want of such information, notwithstanding the knowledge we possess of its physiological action, this remedy has to be used rather in the hope that it may do good than on any preconceived idea of its suitability. So far, our knowledge concerning it is as often as not misleading, for

its employment in cases where theoretically it should be productive of benefit, is only too frequently followed by disappointment; while in others, where reason would lead us to anticipate undesirable results, its effect may be markedly beneficial.

A CANDIDATE FOR A DRUNKARD'S RETREAT.

UNDER this heading, a daily contemporary has reported an application by two gentlemen, on behalf of a third person, for admission into a "drunkard's retreat." The applicant was described as "rather strange in his manner," and was cross-examined by the magistrate as to his knowledge of the provisions of the Acts under which he wished to be detained.

The Acts in question were only passed after strenuous efforts; and the difficulties inherent to these and similar enactments were only overcome by much devotedness on the part of those philanthropic persons who have made the treatment and cure of the inebriate the object and purpose of their life. It might have been hoped, therefore, that so much self-abnegation and goodwill would meet with due appreciation and assistance at the hands of those who, in their official capacity, are called upon to intervene in the case, as well as by the general public. We cannot say that these hopes and anticipations have been altogether realised. From time to time a crotchety magistrate has prolonged a painful situation by unnecessary quibbles; while the police authorities, who are perhaps naturally disposed to look upon "running in" as a sovereign remedy for inebriety, do not always show that alacrity in acting up to their instructions which might reasonably be expected. These little hindrances, however, hamper rather than prevent due recourse from being had to these homes; but such cannot be said of the practice for which a precedent has now been established. If the unhappy victim of a degrading vice is to be labelled forthwith as an "applicant for admission to a drunkard's retreat," his name and his shame blazoned forth in all the daily papers, with a reversionary interest in a heritage of shame, while he is cross-examined in open court as to his acquaintance with the details of the law under which he consents to alienate his liberty for a time, then we may be sure that the number of applications will be small.

It is already difficult to bring the repentant sinner to make and indict a formal confession of his failing; and if the publicity, which is already unjustifiable in ordinary police reports, is, in future, to be accorded to these particular cases, no one, with enough self-respect left to desire reformation, will be induced to face the unutterable shame of such a declaration.

We would, in the first instance, appeal to the Press generally to decline such contributions; and, should this fail, it would not be amiss to take measures for the introduction of a Bill which shall deal with the question of publicity—at any rate, as far as names are concerned—of affairs of simple police. The very least that can be done will be to cause such applications to be made *in camerâ;* and, possibly, means may ultimately be found whereby the intervention of so public a functionary as a magistrate may be avoided.

Justice and mercy suggest the propriety of throwing a veil over the frailties of our fellows, especially when the very effort indicates a desire to regain self-command, and avoid the inevitable consequences of a degrading vice.

The reports of these homes are, on the whole, encouraging. Even where a cure has not been effected, the good is beyond and above suspicion. Every march stolen on so redoubtable an enemy as habitual drunkenness, is an achievement of which the temperance church militant may justly be proud, and will serve to encourage further efforts in the same direction. Of course, where inebriety is only the expression of what we may term a "neurotic diathesis," the good can only be temporary, and the benefit from treatment in such cases is not to be measured by the permanency of its results; but many—and, doubtless, the vast majority—of cases of chronic inebriety, are attributable simply to the besotting influence of pernicious social customs—customs which we are glad to see surely, if slowly, becoming less general. In this class, the work may be undertaken with fair hope of lasting success, and the advocates of this method of temporary restraint may legitimately call on their friends to "rejoice over one sinner that repenteth."

MR. T. H. BARTLEET, of Birmingham, tied the external iliac artery of a patient, the subject of common femoral aneurysm, this week. The ligature used was stout carbolised catgut.

SIR JAMES PAGET was this week elected a foreign associate of the Academy of Medicine of Paris by 57 votes out of 64. Dr. Charles West, of London, and M. van Beneke, of Brussels, were the other candidates.

DR. BERG wishes to call attention to the fact that his views on iodide of sodium and iodide of potassium, to which we recently called attention, are set out in full in an article contributed by him to the *Archives of Medicine* of April, 1884.

THE Congress of the Sanitary Institute will be held this year at York, on September 21st, 22nd, 23rd, 24th, and 25th, under the Presidency of Professor de Chaumont, F.R.S. The exhibition of sanitary appliances, which opens at the same time as the Congress, will remain on view until October 16th.

WE understand that Professor Oscar Liebreich, of the University of Berlin, the illustrious discoverer of chloral, and one of the limited number of eminent persons who are honorary members of the British Medical Association, will probably attend the annual meeting at Brighton, and deliver an address in the Therapeutical Section.

IT is reported that, by subaural inoculation of portions of the brain and spinal cord of a man, who had succumbed with symptoms of hydrophobia after being bitten by a dog, Dr. Sternberg has produced rabies in two rabbits, after a period of incubation of sixteen days in one case and eighteen in the other.

DR. GEORGE WATT, of the Bengal Educational Service, in charge of the Imperial Indian Economic Court at the Colonial and Indian Exhibition; and Dr. John William Tyler, Superintendent of the Central Prison at Agra, in charge of the Indian Gaol Manufactures at the Exhibition, have been nominated Companions of the Order of the Indian Empire, for their services in connection with the Exhibition.

DR. SAMUEL WILKS, F.R.S., headed the poll taken at the meeting of the Convocation of the University of London on June 29th, by a substantial majority. The numbers were—Wilks, 428; Magnus, 379; Thiselton Dyer, 187. According to precedent, the Crown will now appoint Dr. Wilks a Fellow of the University with a seat on the Senate.

THE CAMBRIDGE MEDICAL SCHOOL.

OUR notice last week should have stated that, during the long vacation, in addition to the demonstrations in Physiology by the Demon-

strator of Physiology, and in Osteology by Professor Macalister, and the clinical work at the hospital, there will be Lectures on Surgery, by Professor Humphry; instruction in Surgical Anatomy, by Professor Humphry and Mr. Francis; Practical Surgery, by Mr. Wherry; Medical Jurisprudence, by Dr. Anningson; Midwifery, by Dr. Ingle; and Practical Histology, by Dr. Hill; besides courses and laboratory work in Chemistry and Botany. Indeed, the so-called long vacation is really as much a working-time to the medical student as the terms. The courses of lectures then given are recognised; and it is as important for his progress that the student should be at work in Cambridge, during the vacation, as it is during terms. Unless he be so, it is impossible for him to complete his studies, and pass his examinations, within the assigned period.

HOSPITAL SUNDAY FUND.

THE collections on behalf of this fund are coming in in a satisfactory manner, most of the collections showing an increase of from 25 to 30 per cent. The amount announced on Thursday morning (July 1st) was £13,000, or £2,700 more than at the corresponding period last year, a much smaller increase than might fairly have been anticipated from the extensive machinery set to work at district public meetings. The result is, we believe, very distressing to those who had hoped to induce Londoners to realise and adequately discharge the immense debt to the hospitals, and fill the vast gap which yawns between annual expenditure and receipts. We trust they will not be discouraged. The political excitement and financial distresses of the year have probably injured the hospital collections.

THE REFORM OF THE UNIVERSITY OF LONDON.

ANOTHER meeting of Lord Justice Fry's Subcommittee of the Senate of the University of London has been announced for next week. We understand that the Subcommittee have already affirmed the principles that the teachers in certain institutions should be admitted to a part in the government of the University, and that these institutions should not be limited to London. Either at this or at some subsequent meeting, the Subcommittee will be able to take into consideration the scheme drawn up by the Committee of Convocation, over which Mr. Magnus presided. The scheme was finally adopted at the last meeting of Convocation, on June 29th, as a basis of discussion. The two schemes have much in common, but there seems reason to suppose, on the whole, that which is now being moulded by the Senate has the more liberal tendency.

BACTERIOLOGY AT THE ANNUAL MEETING.

MANY of our members will be glad to know that Dr. Edgar Crookshank (of King's College) has undertaken to give an extended illustration of Bacteriology, at the annual meeting at Brighton in August. For this purpose, the loan has been obtained of three large rooms at the School of Science and Art, in the Grand Parade, the use of which will be solely at his disposal during the whole week. He has visited Brighton for the purpose of making arrangements, and proposes to divide his subject thus: 1. Apparatus employed in the cultivation of micro-organisms, etc.; 2. Demonstration of cultivations of micro-organisms; 3. Demonstration of microscopic preparations of bacteria; 4. Photo-micrographic apparatus, and exhibition of photographs of bacteria.

M. PASTEUR.

MILAN is the first of Italian cities to turn M. Pasteur's experiences to practical account. Dr. Barattieri has returned to Milan from Paris, after having spent three months at the Pasteur laboratory, where he has been well initiated into the orthodox method of combating hydrophobia, taking with him a quantity of virus and several of the animals already operated upon by the great French scientist. After a consultation between the directors of the Scuola di Veterinaria and others, it has been decided to found a Pasteur Institute in Milan, the expenses of which are to be defrayed by the municipal authorities and the Government. Meanwhile, Dr. Barattieri has been accommodated with a temporary laboratory, where he is to commence active operations in the course of a week or two. Dr. Ullmann, of the University of Vienna, who has also spent several weeks in the laboratory of M. Pasteur, has returned, taking with him some of the virus, with which he proceeded to inoculate his first batch of patients, consisting of thirteen men and one woman, all said to have been bitten by rabid dogs.

THE TROOPS IN EGYPT.

A CORRESPONDENT writes from Assouan: It is wholesale murder keeping the troops at Assouan. The frontier force lost 105 men dead, nearly all of enteric fever, in April and May, and the rate goes on increasing. The last week in May, ending June 1st, there were 21 deaths at Assouan, besides which there are now 215 men in hospital at Assouan, 500 have been sent down the river sick, and 160 weakly men are now being sent to Cyprus to spend the summer there. If all this goes on there will be a very small proportion of the brigade fit for any fighting there may be in the autumn. The men who are not sick, get so depressed and "slack," that they are not a bit of good. I think that if it were better known at home what the state of things really is out here, it would not be allowed to go on. They are nearly all young men that die, giving their ages between 21 and 23, but really much younger, and quite unfit to stand the climate here. If they spent the summer at Alexandria they would be healthy enough, and ready for anything in the autumn. If stores are kept at Assouan, the troops can be brought up in a very short time. I think people should know at home how the men's lives are being thrown away at Assouan.

THE ROYAL FAMILY AND THE HOSPITALS.

THE vivid interest taken by the Royal Family in the working of hospitals has been shown, during the last few days, by the large number of public functions in which one or more members have taken part. On June 25th, the Prince and Princess of Wales, accompanied by their three daughters, visited Marylebone, to open the new wards of Queen Charlotte's Lying-in Hospital; on June 26th, the Duke of Cambridge attended a meeting at Stratford, and spoke at length in favour of the Hospital Sunday Fund; on June 30th, the Prince and Princess of Wales, again accompanied by their daughters, went to Chelsea, to open the new Nursing-Home and Out-Patient Department of the Victoria Hospital for Children; and yesterday (July 2nd), the Princess Louise had arranged to open a bazaar, in aid of the funds of University College Hospital.

THE VICTORIA HOSPITAL FOR CHILDREN.

THE Victoria Hospital for Children, which stands in Tite Street, close to the Thames Embankment at Chelsea, was founded on a very small scale twenty years ago. The wards for in-patients have been from time to time enlarged and improved, but the out-patient department and the home for nurses remained inadequate and inappropriate. Owing, to a considerable extent, to the exertions of the Princess Louise, the Committee found themselves, last year, in a position to remedy these defects; and, on June 30th, the Prince and Princess of Wales visited the hospital in order to open a new block which has been built to the south of the hospital. This block, which is an ornate building in red brick designed by Mr. Saxon Snell, contains, on the ground floor, a large waiting-room, two consulting-rooms, a dressing-room, and small operating-room for out-patients. Covered stalls for perambulators—a very necessary adjunct to any out-patient department where children attend in large numbers—have been erected at a convenient point. A new mortuary and a *post mortem* room have been built in the basement; the latter is badly lighted and imperfectly ventilated; and the out-patient department

nowhere shows that perfection of detail to which Mr. Snell has accustomed us in his other works. The upper stories contain rooms for the nurses and lady-probationers; a separate bedroom is provided for each person, and the usual bath-rooms and water-closets are found on each floor. There is a sitting-room for the lady-probationers on the first floor, and for the nurses on the second floor, from which a view of the river is obtained. In acknowledging an address read by Earl Cadogan, the Prince of Wales expressed his interest in the work of the hospital, and congratulated the Committee on their success in obtaining funds for the new building.

THE BRITISH MEDICAL BENEVOLENT FUND: JUBILEE BANQUET.

In addition to the sums already mentioned, the following donations have been received: W. Cadge, Esq. (Norwich), £52 10s.; G. D. Pollock, Esq., £21; Sir Henry Thompson, £21; Sir Spencer Wells, £21; Dr. Wegg, £21; Lady Wilson, £21; Mrs. Montefiore, £21; Dr. Ord, £20; E. Parker Young, Esq., £20; Dr. Brodie Sewell, £10 10s.; W. Morrant Baker, Esq., £10 10s.; Sir William Mac Cormac, £5 5s.; M. Berkeley Hill, Esq., £5 5s.; D. de Berdt Hovell, Esq., £5 5s.; F. E. Webb, Esq., £5 5s.; C. A. Aikin, Esq., £5 5s.; C. E. Aikin, Esq., £5 5s.; Dr. Withers Moore, £5 5s.; Mrs. Franz (through Dr. Parsons, Dover), £5. Mr. Veasey's donation is £25, instead of £20, as previously stated. At the annual meeting of the Metropolitan Counties Branch on Tuesday last, a donation of £5 5s. was voted. We are requested to state that the list of guests at the banquet must be closed almost at once; and it is requested that all who have not replied will do so without delay to Dr. W. H. Broadbent, Secretary, 34, Seymour Street, Portman Square, W.

STALE EGGS.

At a recent meeting of the Council of Hygiene, in the department of the Seine, France, a question was raised as to the fitness for food of eggs which had been laid for a considerable length of time, and which offered certain peculiarities, such as external and internal spots, and the yolks having a strange colour, and adhering to the shell. Various considerations on the subject had been submitted to M. Chatin, with the request that he would inform the Council whether, in the case of eggs so affected, it would be necessary to prohibit their sale. The reporter stated that eggs which had spots about them were not necessarily damaged, and that they might be used by bakers and confectioners for glazing bread, and some kinds of pastry, whilst the whites could be used by leather-dressers, who employ albumen in the preparation of articles made of leather. He added that eggs which were really damaged, could easily be distinguished on account of the smell. Under these considerations, M. Chatin thought there was no necessity to forbid the sale of them. That a stale egg may, in some cases, be safely eaten, like high game, is quite comprehensible; but game, as well as eggs, cannot be eaten when putrid beyond a certain extent, probably because germs of extreme septic virulence, resisting the gastric juice, have been developed. In the earlier stages of decomposition, both these articles of diet appear to remain innocuous, the game being toothsome to the many, the eggs to the few.

TRAINING POOR-LAW NURSES.

The Nurses' Home erected by the St. Marylebone Board of Guardians, opened by H.R.H. Princess Christian in 1884, has been most successful in supplying a much needed want of trained nurses to attend to the sick under treatment in the extensive Infirmary of that parish. On Thursday last week, in the presence of Mr. Edmund Boulnois, chairman of the guardians, the Infirmary Committee, and a large number of visitors, including Lady Wantage, Mr. and Mrs. Bonham Carter, Mr. Wardroper, and several ladies interested in the management of poor-law infirmaries, Mr. John Croft, Surgeon to St. Thomas's Hospital, conducted an examination of the thirteen probationers at present under training at the Home, and stated that, although the maximum number of marks that could be reached by any of the nurses was 500, every one of them had attained more than 450. He considered that such a satisfactory result was as creditable to the application of the probationers as it was to the labours of the indefatigable medical superintendent, Mr. John Lunn, who was ably seconded by the matron, Miss Vincent. He congratulated the guardians upon the success of their institution, which was a well-deserved recognition of the public spirit which had influenced them in providing for so desirable and excellent a work. After Mr. E. Boulnois had addressed the visitors and the nurses, and thanked Mr. Croft for his attendance on that and previous occasions, the visitors proceeded to inspect the wards of what has been described by Miss Florence Nightingale as the model Poor-law Infirmary. An interesting incident in the day's proceedings was the receipt of a telegram from that lady, conveying her best wishes, and expressing her warm sympathy with the work of the institution with which her name was identified.

ELECTIONEERING EXCITEMENT.

The ill-effects of the excitement and turmoil of a general election are not, by any means, confined to fluctuations in the stocks, or a temporary lull in trade, or the curtailment of the London season. The extra strain thrown on to the shoulders of a number of individuals, many of whom are well past their prime, inevitably results in the collapse of a certain number, whose enfeebled heart or brittle arteries are not equal to the extra heat. Already, we hear from different localities of the sudden death from apoplexy, pneumonia, etc., of would-be members, or their more energetic partisans; and, before calm is re-established, others will doubtless succumb. It would be interesting to tabulate the deaths ascribable to times of political excitement; and, as the task would not be altogether an easy one, it offers a good field for work for individuals gifted, or plagued, with the "bump" of statistical inquiry. One might suppose, *à priori*, that the more ascetic methods of living of the candidates with more advanced views would secure them a certain immunity from mishap. Figures alone can tell us whether this assumption has any foundation in fact. Certain it is that the combat materially influences the chances of individuals in the matter of longevity, even when no physical violence (a factor not to be overlooked at political meetings) intervenes to complicate the risks. So far as the latter contingency is concerned, the spectators, or rather auditors, have at least an equal chance with the candidate and his supporters. An inoffensive member of the profession was enabled to corroborate this statement, at a meeting last week, when it was his ill fortune to be belaboured with the leg of a chair, while endeavouring to listen to Mr. Richard Chamberlain—a chair-leg being a very substantial weapon, when skilfully wielded, as it appears to have been on this occasion. We are pleased to note, however, that prison, without the option of a fine, was the reward of the assailant, who will thus be incapacitated from further fun during the present elections.

THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS.

The Conservator, Mr. Stewart, has issued his annual report of the condition of the museum, and the additions to the various collections which it contains. Advances in surgery and novel procedures are illustrated by new specimens of excision of the pylorus, and of vesical and renal calculi extracted by the suprapubic operation and by nephro-lithotomy. Among the most noteworthy additions to the collection are a series of models of pterosauria, made by C. Heitgen, of Munich, and a large and fine specimen of a Spanish donkey, presented by Mr. Sutherland. The museum already possesses a good series of the skeleton of the auditory apparatus of the vertebrata. A series of sound-producing organs of the invertebrata has been obtained. A considerable number of birds' skeletons have been added, in view of a new addition of the catalogue of the series illustrating the osteology of Aves. To the special invertebrate group, a specimen of Peripatus and another of the same animal dissected, together with some dissec-

tions of the Urochorda, form the commencement of preparations by which it is intended to illustrate the general anatomy of type-forms. A beautiful series of dissections by Mr. W. Pearson, illustrating the lacrymal apparatus, has been added to the anatomical series. Mr. Eve, the Pathological Curator, has prepared descriptions of several hundred specimens which have been added to the collection during the progress and since the completion of the catalogue of the pathological series. Of the principle of keeping good catalogues and publishing annual lists of additions, we have always spoken favourably. Several of the museums of the London Medical Schools now possess good catalogues, and at St. Bartholomew's Hospital, at least, a list of new specimens is issued yearly. We understand that Mr. J. H. Morgan is preparing a catalogue of the museum of Charing Cross Hospital.

A MODEL LYING-IN HOSPITAL.

QUEEN CHARLOTTE'S Lying-in Hospital, which was visited by the Prince and Princess of Wales on June 25th, has not only been enlarged, by the erection of wards to contain twenty-seven additional beds, but has been thoroughly overhauled from basement to roof, so as to render it capable of fulfilling all the onerous requirements of modern developments of the obstetric art. The alterations were commenced last October, and were only completed shortly before the day on which the Princess of Wales declared the new buildings open. The hospital contains four labour-wards—light, airy rooms, sixteen feet square, connected together in pairs for administrative purposes, the ward below being put into communication with the ward above by means of a speaking-tube. Each labour-ward contains one bed for the patient, upon large castors, so that it can be wheeled, after delivery, into one of the adjoining lying-in wards. Each labour-ward is provided with a sink and lavatory, which are drained into a separate disconnecting chamber; the drainage from all the labour-wards is conducted to this chamber, and thus kept quite apart from the system of drainage applied to the lying-in wards and the rest of the building. Every person who comes into contact with the patient in the labour-ward is required to wash the hands in carbolic lotion (five per cent.); and the oil for anointing the finger is kept in an ordinary oil-can, so as to avoid contamination. Perchloride of mercury (1 in 2,000) is used as a vaginal wash during the second stage of labour (with the result that ophthalmia seldom occurs) and after delivery of the placenta; in cases where the child is dead, or where instruments are used, the uterus is washed out. An ordinary can-douche, suspended to the wall, is used for this purpose; and the nozzles, which are of glass, are kept in weak sulphurous acid, when not in use. All the soiled linen from the labour-wards is taken to the new tank-room outside the hospital, where it is immersed in a tank of running water, in which a bag of rock salt lies; the blood and discharges are thus prevented from decomposing. They are wrung out by a machine before being despatched to a laundry, where they are treated with superheated steam. Near the tank-room is a room containing a large disinfecting stove of the pattern designed by Dr. Ransome. The thermometer of this stove, when it reaches 230° Fahr., completes an electric circle, and rings an electric bell in the hospital, which is under the supervision of the matron; in this way, it is assured that the clothes are neither over nor underheated. Bedding, blankets, and linen for use in both the labour and lying-in wards, whether by patients or nurses, are stored before use. The new lying-in wards are four in number, two on each story; they are warmed by Galton's stoves; air can be admitted through Sherringham valves, Tobin's tubes, and, in warm weather, by windows in two walls. The windows throughout the hospital are of a special pattern; the large central portion consists of sashes varying in number with the height of the window, and opening inwards on a horizontal axis; the lateral parts have French pairs, opening inwards on a vertical axis. By this arrangement, it is stated that good ventilation can be obtained when fires are not in use. The lavatories and water-closets are in a separate tower, and are fitted with modern sinks and pans. The basement contains two wards holding six beds for cases which require to be isolated; separate sculleries, and a separate entrance from the area outside are provided. Near these wards there is a furnace for burning the antiseptic pads which are now used in all cases instead of napkins; these inexpensive substitutes are thus consumed twice a day. In the basement, also, is a room where students can await the summons given by an electric bell to the labour-ward; as many as seven or eight students can be accommodated in this room if necessary; and those who had to attend their cases under the old system in the patients' own homes, will appreciate the luxury of a clean room and a comfortable couch. In another part of the basement is a lecture-room for pupil-nurses and midwives; and, on the occasion of a visit recently paid, twenty-eight pupils were assembled to await a lecture by Dr. W. C. Grigg. The midwives, and pupil-midwives, live in a detached house at a little distance, and can be summoned by telephone. The pupil-nurses live in the hospital.

YELLOW FEVER IN SOUTH AMERICA.

THE unhealthiness of many localities on the northern shores of South America, and in Central America, deserves to be seriously taken into account by any who contemplate seeking employment in that part of the world. Yellow fever especially seems to hang over these countries, and the reports which have reached us during the last few months, show that this disease has prevailed more or less severely in Rio de Janeiro, Bahia, Pernambuco, Guiana, on the railway works at Caracas and La Guayra, and on the Canal works at Panama. The latest information is from Her Majesty's Minister at Caracas (Venezuela), who reports great mortality among British subjects resident there, and states that many English mechanics are induced to emigrate to Venezuela under false impressions as to the climate, a better knowledge of which would enable those who thus risk their lives to obtain more favourable terms. Reliable and authentic information, derived from disinterested sources, on subjects of this sort, is not at present readily available in this country. It is, therefore, with some hopefulness, that we view the promised establishment, by Her Majesty's Government, of the nucleus of an Emigration Bureau in connection with the Colonial Office. It will be a boon to thousands of intending emigrants (who as a rule are ignorant, and very suspicious of information that is not obviously disinterested), if one of the chief functions of this new department be to collect and render generally available in an intelligible form, the most trustworthy and recent information to be obtained concerning all places to which emigration takes place. The health statistics, sanitary conditions, and climatic influences of the various places, would of course be of great importance to intending emigrants, and special efforts should be made to obtain the fullest information as to these.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

IN two consecutive numbers of the *Eira*, Dr. A. P. Silverskiöld gives an interesting account of his observations on fifty-eight cases of cerebro-spinal meningitis during the Gothenburg epidemic of 1883. He adds a table of the relative frequency of these epidemics in different countries, which shows that Switzerland has had the greatest number, namely, fifty-eight; North America, sixteen; Sweden, seven; England and Italy, five each; Denmark, four; Spain and the Netherlands, only one each. The disease appears to rage during the winter and spring months. The Gothenburg epidemic commenced in January, reached its maximum in February and March, its minimum being in May and June. The disease commenced with a severe rigor, lasting from half an hour to six hours, followed by intense heat and headache. The rigors recurred at irregular intervals, and did not resemble those of pure ague. Unconsciousness and delirium usually set in quickly, in some cases coma, not always terminating fatally, even when the patient was perfectly livid. The temperature was not raised to any very abnormal extent, and some cases ended fatally with a temperature of only 40° Cent. (104° Fahr.). All sorts of nervous symptoms were met

with as complications, the prominent features being intense headache and pain in the back, shivering, convulsions, and delirium. Sometimes hydrocephalus occurred. During convalescence, there were great changes in temperature, which sometimes rose to 40° Cent., and sometimes fell to normal. Difficulty of swallowing and great distaste to food lasted during the whole period. The pulse was as irregular as the temperature; in most cases, there was a slight increase in frequency. Dr. Silverskiöld tried a large number of drugs, without any satisfactory result. Salicine and quinine had scarcely any effect. Cold on the head and along the spine lessened the pain, but the most serviceable means were local bleeding and opiates. He found large doses of morphine most efficient in giving sleep, when there were delirium and convulsions. Chloral was less frequently used, and opium was wholly avoided. When the most serious symptoms had abated, Dr. Silverskiöld used bromide of potassium to promote re-absorption. He is of opinion that the disease arises from malaria, and states at some length the ground for his belief, founded on observation of the physical features of the districts around Gothenburg, which are low and marshy. During an east wind, these marshes are exposed, and exhale malarial vapours. In 1883, this was especially the case.

THE BACILLUS OF CHOLERA.

DURING the summer of 1885, an epidemic of cholera occurred at Shanghai, and proved fatal to a considerable number of Chinese residents. Dr. Macleod and Mr. Milles, who are associated in practice at Shanghai, and whose names will be familiar to some of our most experienced bacteriologists in London, with whom they were recently fellow-workers here, seized the opportunity of investigating cholera from the bacterial aspect of the question. Their full report is not yet ready; but a preliminary statement, supplied to Dr. Henderson, the health-officer of Shanghai, has been printed in the Report of the Municipal Council of that settlement. The statement briefly sets forth that the investigation was entered into for the purpose of testing Dr. Koch's results; and his methods, so far as they have been made known, were employed. Twenty-seven cases of Asiatic cholera, seven cases of diarrhœa, two cases of dysentery, and four specimens of healthy saliva, furnished the material; and the following are some of the results. 1. Koch's comma-bacillus, distinguished by (*a*) shape and size, as seen in specimens of the stools under the microscope, (*b*) vital characteristics, furnished by growth in pure cultivations, was found in 25 out of 27 cases of cholera. In two cases, it was not found; but, in these, the stools were not collected during the stage of collapse, and were not characteristic, being fœtid and fæcal. (The bacillus found in the rice-water stools of a given case is frequently absent from the later non-characteristic stools of the same case.) 2. Microscopic examination of the stools of seven cases of diarrhœa and two cases of dysentery, also of four specimens of saliva from healthy individuals, demonstrated the presence of comma-shaped bacilli; but the cultivation test (which had succeeded in the cholera cases) failed in every instance; thus proving them, though identical as to size and shape, to be different in the more important vital characteristics of growth under the same conditions. 3. The rice-water stools, as they are called, that is, the characteristic stools of cholera, always contained these organisms, and often an almost pure cultivation of them few, if any others, being present; whilst, in the less characteristic stools of the later stages of the disease, they were difficult of detection and sometimes absent, there being often as many as four or five other micro-organisms present. 4. The organism was not found in the tissue of the intestinal wall, as stated by Koch; but, as he has not published his method of detecting it in that position, failure may have been due to a different method of examination. 5. The organism was destroyed by being dried, whilst it was found capable of growth after being kept moist for more than four months. Probably, it is capable of much longer preservation in this state. 6. The bacillus grew luxuriantly at a temperature of from 75° to 100° Fahr., slowly between 50° and 60° Fahr., little, or not at all, below 40° Fahr., but was still capable of resuming growth when the temperature was raised. A series of experiments for the production of the disease in guinea-pigs is now being conducted, but is not advanced sufficiently for report.

THE CO-ORDINATE ACTION OF THE PUPILLARY AND CILIARY MUSCLES.

MR. WALTER H. JESSOP communicated an interesting paper, founded on a long series of original investigations, dealing with the anatomy and physiology of the intra-ocular muscles, to the Royal Society, at its meeting on June 10th. Mr. Jessop stated that, in man, the pupil contained no dilator muscles; a few fibres, having a radial distribution, were occasionally present, but never extended the whole breadth of the pupil; he therefore concluded that dilatation of the pupil was due to the combined effect of the relaxation of the sphincter, and the elasticity of the posterior limiting membrane. He found that the motor nerves of the pupillary and ciliary muscles were derived from the third nerve, as has been generally recognised, but he also found that both these muscles received fibres from the fifth nerve, which inhibit the action of the muscles, thus producing dilatation of the pupil, and relaxation of accommodation. This was the only nervous apparatus in birds, in whom the intra-ocular muscles belonged, to the voluntary type; but in mammals, the pupil, in addition, received fibres from the cervical sympathetic, which have an inhibitory influence, producing dilatation of the pupil. He concluded, from his observations, that the fifth nerve was concerned in co-ordinating the pupillary and ciliary muscles in accommodation, while the cervical sympathetic was concerned in the light-reflex. With regard to the action of atropine, he found that it paralysed both the endings of the third nerve in the muscles, and the muscular fibres also; eserine acted as a stimulant directly on the muscular fibre, and, therefore, unless the muscular fibres were completely poisoned by a large dose of atropine, eserine was, by its direct action on the muscular fibres, able to produce some contraction of the muscles, which was, however, of a temporary nature.

SCIENTIFIC ADVANCE IN THE TREATMENT OF TUMOURS OF THE BRAIN.

EXPERIMENTAL research is constantly adding to the resources of the curative art, and is aiding to achieve new triumphs over diseases hitherto beyond reach. A correspondent writes: In a paper read before the Royal Society on June 10th, Dr. C. E. Beevor and Professor Victor Horsley, F.R.S., gave the result of an experimental investigation of the functions of that area of the cortex of the brain, which Dr. Ferrier showed to be the centre for the movements of the upper limb. They found that, when the upper part of this area was stimulated, the movements which followed commenced in the shoulder; that, when the lowest part was stimulated, the movements commenced in the thumb; and that, when the intermediate part was stimulated, the movements commenced in the wrist. These phenomena will be seen to be in agreement with the observations on the priority and the "march" of movements made by Dr. Hughlings Jackson in the particular type of epilepsy to which his name is often applied. It was not long before an occasion arose for applying the knowledge gained by these experiments to the cure of disease. A man was admitted into the National Epileptic Hospital (to which both Dr. Beevor and Mr. Horsley are attached), suffering from Jacksonian epilepsy, by which he had been incapacitated for two years. The fits began in the thumb; and Dr. Hughlings Jackson, under whose care the patient was, believed that the case was one to which the new knowledge with regard to the situation of the centre for the thumb might be applied, although the symptoms diagnostic of tumour were very vague. Owing to the great difference in complexity between the brain of the monkey and of man, there was, when the investigations of the functions of the cortex of the brain were first undertaken, considerable difficulty in

applying the results obtained. At the present time, however, these difficulties have been almost completely overcome, and the relation of the cranium to the subjacent convolutions has been thoroughly worked out. Mr. Horsley, therefore, although the patient presented no external signs of disease, and the skull had not been injured in any way, was yet able, by measurement, to apply his trephine over the cortical area which contained the thumb-centre. On removing the piece of bone cut out by the trephine on its first application, a tumour was detected immediately beneath. The hole made by the trephine was enlarged, and the tumour, together with the rest of the thumb-centre, was freely excised. As in the case to which reference was made a fortnight ago, Mr. Horsley treated the wound on precisely the same principles as those which he had found to be successful with monkeys after experimental operations, and the result has left nothing to be desired. The operation in this second case was performed on June 21st, and the wound healed by immediate union, so that on June 26th there was only a very small granulating surface, where drainage had been maintained. We find, on inquiry, that a week after the operation, the man was quite well, had had no fits, and was recovering power in the paralysed limb. The other patient, upon whom Mr. Horsley operated three weeks ago, is also in excellent health, and has had no fits since the operation; it will be remembered that this man was suffering from traumatic epilepsy of a very severe type, and that the operation consisted in the excision of the scar in the brain. The second case, however, which we now record, is distinctly more remarkable, inasmuch as there was no wound or other external sign to guide the operator, who had to depend entirely on the knowledge of the anatomy and physiology of the brain gained by experiment, combined with the pathological generalisation established by Dr. Hughlings Jackson. It is not too much to say that the successful termination of these two operations proves that a new departure in the treatment of certain diseases of the brain has in truth commenced. In operating on monkeys, it has been found that the wound in the brain and membranes and scalp, made in the operation of trephining, will, as a rule, heal in four or five days; and this case of Mr. Horsley's shows that the same holds good with man when the line of treatment is the same. These two cases will form an interesting subject for discussion at the meeting of the British Medical Association at Brighton. The subject of cerebral surgery will be introduced by Mr. Horsley, who will explain his method of treating the wounds; and among the large mass of illustrative material which he is bringing together to illustrate his paper, will be photograghs of these patients before and seven days after operation, showing the condition of the wound at the latter date. The discussion is certain to be of the highest interest, for both Dr. Hughlings Jackson and Dr. Ferrier have expressed their intention of taking part in it. It would be rash to speak of either of these two cases at present as cured; it is possible that the traumatic epilepsy may recur, and that the patient from whose brain a tumour has been removed may have another elsewhere within the cranium; in both cases, however, a hopeful attitude is fully justified; the probabilities are distinctly in favour of the anticipation that the cortical tumour was solitary, and will not recur. The point in treatment, and a very important point it is, which has been established is, that the operation of excising a tumour from the cortex of the brain is unattended by danger to life when the wound is treated on the basis of the knowledge acquired by recent experimental research on the principles which have been found to be successful in monkeys.

WORRY *versus* HEALTH.

One of the unerring signs of failing or debilitated health is the inability to withstand the pressure of daily cares. It is one of the many infirmities of advanced years, when the stamina of the individual has been sapped by retrogressive changes in which the nervous system participates, that cares which sat lightly on the shoulders when young, then become a well nigh insupportable burden. The enfeebled powers of resistance, unable to throw off the incubus of worry with the elasticity of an early period of life, not unfrequently render the person a prey to melancholy thoughts which may embitter his declining years. This is, of course, but one factor in the altered character of the aged, and is partly a cause and partly an effect of the changed physical circumstances of his existence. So far, it is, in civilised nations, a natural and almost inevitable infliction. When, however, this same proneness to discouragement shows itself in individuals not past their prime, and not overwhelmed with special preoccupations of a harassing nature, it is assuredly a sign of being "below par;" and the proper treatment is, undoubtedly, not to stifle the feeling by injudicious blending of the effects of alcohol, tobacco, and excitement, but to afford an opportunity for the recuperative powers of the system to assert themselves, and so restore the mental tone which is wanting. In the excellent little work on Digestion, recently published by Sir William Roberts, he suggests, with great plausibility, that, although the effect of habitual alcoholic indulgence is, beyond question, injurious to the average constitution, yet it may, under circumstances of intense and passing worry, save the individual whose mental equilibrium is menaced from positive mental aberration, by rendering him simply insusceptible of the violent emotions which unhinge and deprave the intellect. The idea is, doubtless, correct in a limited number of cases, but, from its nature, it is very undesirable that it should be generally accepted. People are very partial to self-medication as it is, and rush to alcohol as a panacea for the ills to which flesh is heir. Hence, nothing should be advanced which can in any way be construed as authorising recourse to such a dangerous method of treatment. When even an attack of dyspepsia, from over-indulgence in cucumber, or anything else, is known to plague the unhappy patient in the throes of apprehension as to his condition and prospects, it can be no matter for surprise if nervous exhaustion, from over or misdirected application, or liver-derangement from gastronomic excesses, give rise to feelings of what Georges Sand has described as "profound melancholy, with a wish to die." In the majority of cases, fortunately, this "wish to die" does not survive the visceral derangement which gave it birth; but if the condition be allowed to assume a chronic form, the psychical depression is also likely to become more or less permanent, and may then exercise a markedly prejudicial effect on the health and happiness of the subject. It should not be forgotten that work, pure and simple, however hard and however constant, is rarely the cause of impairment of health, if only common hygienic precautions be observed. It is the hurried and irregular meals, and still more irregular "pick-me-ups," which do the mischief. Monotony of work is, however, in the long run, as detrimental to intellectual vigour as is a monotonous diet to the digestive functions; but relief here is easily obtained by forcible diversion of energy, during some part of the twenty-four hours, into another channel. The statesman, exhausted by the responsibilities and cares of office, may seek recreation in the felling of timber; while the wood-cutter, if he be wise, will take his over a book or a paper by the fireside. The complete change of occupation and mental activity on Sundays, must be of immense utility to the jaded bank-clerk or busy tradesmen, and if for no other reason, is highly to be commended.

WASHING-OUT THE STOMACH OF LUNATICS WHO REFUSE FOOD.

Dr. E. Regis, having been asked to give the members of the Bordeaux Medical Society some account of the progress which has been made during recent years in the treatment of insanity, selected a single practical point of great importance; namely, refusal of food, or as he called it, sitiophobia. This, he remarked, is very frequent in asylums; it is but a symptom only, or rather a complication, not a disease of itself. It is especially common amongst female patients, and is the rule amongst subjects of lypemania, or melancholy. It is sometimes seen in mania, and alcoholic cases; and, though more rare in general paralysis, is still seen in the depressive or non-grandiose form, the patients believing

that they have no stomach, intestines, or mouth, and that therefore they are incapacitated for eating. In patients who believe themselves to be undergoing persecution, and in religious and mystical mania, sitiophobia is very common. The gravity of the condition is not equal in all classes of cases, but it is always to be looked upon as of serious import. In melancholy, it is certainly possible for it in tedious cases to bring on a fatal result by inanition. With regard to the treatment, and the manner of carrying on alimentation by force, the speaker reviewed the various plans that had been adopted by Marcé, Esquirol, Baillarger, Leuret, Marchant, Blanche, Farabœuf, Billod, Ritti, Sizaret, and F. Raspail, stating that his own preference was for a simple nasal sound of soft rubber, lubricated with vaseline instead of with oil. In addition to forced feeding, M. Regis has, for some years past, been in the habit of washing out the stomach, especially in cases where there were signs of gastric catarrh, which is very frequent amongst lunatics. For this purpose he used the double current stomach pump of Kussmaul, and obtained most marked success, which encouraged other physicians to follow his example with the result of obtaining similar favourable changes in the patients. Of late he has altogether discarded the stomach-pump for a simple Faucher's tube; and he is convinced that, if the washing out of the stomach were to become universal in this condition, a large number of such patients would be very much improved. Even in the case of non-sitiophobic melancholics, this treatment would, he thinks, prove very beneficial.

AN UNUSUAL CASE OF EXTRA-UTERINE PREGNANCY.

A CASE of suspected extra-uterine pregnancy was recently contributed by Dr. Blackwood to the *Philadelphia Medical Bulletin*. The patient, whose age is not stated, was the mother of two children. In December, 1883, she had an attack of menorrhagia, which was treated by faradism of the uterus, and she menstruated normally early in January, 1884. She had connection on January 8th, for the first and only time since early in December. The intra-uterine treatment, by means of caustic applications, was resumed on January 15th. Early in February, severe abdominal pains were complained of, and relieved by morphine. The uterine applications were discontinued, as the Fallopian tubes on either side were perceptibly dilated. Since menstruation, ten applications had been made to the interior of the uterus, which, Dr. Blackwood affirms, was empty. Signs of impregnation, however, showed themselves, although no trace of the fœtus could be discovered. By the middle of March, a globular mass, of the size of a large walnut, was detected above the right groin. The tumour was very mobile, not tender, and was diagnosed to be a tubal pregnancy. Electricity was employed up to 59 volts, with the object of arresting the development of the fœtus. In the course of a few days, the mass disappeared, and the patient became very weak and prostrate. A fortnight later, the tumour could again be detected, but was more central in position. The sound apparently showed the womb to be empty, and it could be drawn away to the left, and separated completely from the tumour. Dr. Blackwood was naturally very anxious about the case. By the end of April, the fœtus, which had been gradually coming nearer the uterus, had entered its cavity, and the internal os had closed. Ultimately, normal labour took place in the following December, fully six weeks beyond term, without any complications during or after. Dr. Blackwood suggests that the delay in development may have been attributable to the employment of electricity, but he is quite at a loss to explain the other curious features of the case.

ANÆMIA AND GOITRE IN THE HELMSLEY DISTRICT.

DR. BRUCE LOW, the health officer of the Helmsley rural sanitary district, has before been mentioned by us as a typical sanitary investigator working amongst many discouragements, but with opportunities for unravelling the tangled skein of epidemics denied to etiologists in more crowded districts. Dr. Low does what scientific investigations he can, but is terribly handicapped by overwork and lack of leisure. He deplores, in his last annual report, that he has no fresh contribution to make this year to the general fund of knowledge. But we are indebted to him for suggesting to Dr. A. Macvie, his deputy medical officer of health, an inquiry into the prevalence of anæmia in young persons, often associated with endemic goître in this locality. By means of exact scientific apparatus (the hæmocytometer and the hæmoglobinometer) he was able to estimate the number of blood-corpuscles and the amount of colouring matter in the blood of each patient. The results of Dr. Macvie's observations may be summed up as follows. There is a larger proportion of persons suffering from bloodlessness in the Helmsley district than is met with elsewhere. This bloodless condition of the system is often associated with goître. Although not altogether confined to females, it is more prevalent among them than in males. This bloodless condition is probably due to the same cause which gives rise to endemic goître, but which is not yet distinctly defined. In many cases, the condition seemed to be aggravated by dampness of dwellings, want of sunlight and fresh air in the houses, improper or insufficient food. There seemed to be a hereditary predisposition to this bloodlessness in certain families. This condition predisposes to hæmorrhages, as shown by the frequent occurrence of flooding in childbed. The administration of iron is rapidly followed by an increase in the number of blood-corpuscles, and in the proportion of colouring matter in the blood.

SCOTLAND.

DR. OLIVER WENDELL HOLMES AND EDINBURGH UNIVERSITY.

ON Friday, a ceremony of a most interesting nature took place in the Upper Library Hall of Edinburgh University, where the degree of LL.D. was conferred on Dr. Oliver Wendell Holmes. In presenting Dr. Holmes for the degree, Professor Kirkpatrick eulogised him, evidently with approbation of the distinguished audience present, and the new LL.D. made a short and pithy reply. On Saturday, the Students' Representative Council presented Dr. Wendell Holmes with an address, and entertained him at a concert. Dr. Holmes was evidently much touched by the students' reception and appreciation of him, and made a welcome and suitable speech.

PHYSICIAN FOR EDINBURGH FEVER HOSPITAL.

AT a meeting of Edinburgh Town Council, held on Tuesday, Dr. Littlejohn, Medical Officer of Health for the City, reported that he had been unable to recommend for the approval of the Town Council any medical man of sufficient standing, to act as visiting physician for the Fever Hospital, and that he considered it would be absolutely essential that a salary should be given. The Council agreed to give £100 a year to the medical officer to be appointed; this sum, of course, to be increased should it be found inadequate. At the same meeting, the convener of the Public Health Committee gave satisfactory reasons for declining to set aside beds for patients from contiguous places.

HEALTH OF GLASGOW.

DR. RUSSELL'S report, for the fortnight ending June 19th, shows a death-rate of 23.6 per 1,000 living, instead of 25.0 for the preceding fortnight, the registered deaths being 475 compared with 501. Eighty-eight of the deaths were of persons below one year, and 76 were of persons of 60 years and upwards. Among children of school-age (5 to 13 years, both inclusive) the deaths were 34; 1 from enteric fever, 1 from erysipelas, 3 from scarlet fever, 1 from whooping-cough, 1 from diphtheria, 6 from consumption, 3 from acute diseases of the lungs, and 18 were unclassified; 39 per cent. of the total deaths were due to lung diseases, to diarrhœa 7 were due, and to fever 3 (all enteric). There were among children 26 deaths from whooping-cough, 8 from scarlet fever, and 1 from measles. Eighty-five cases of scarlet fever were registered, 64 of whooping-cough, 50 of measles, and 8 of diph-

theria. One case of small-pox was dismissed from the small-pox hospital on June 11th, and the hospital has remained empty since that date. The mean temperature during the fortnight was 55.4° Fahr., and the rainfall 0.64 of an inch falling in four days. The highest temperature was 79°, and the lowest 44.5°, both registered on June 19th, the mean range of temperature between day and night being 16.5°.

POSTGRADUATE COURSES OF LECTURES.

STEPS are likely to be taken in Glasgow to organise postgraduate lecture courses, and a meeting was held in the Faculty Hall on June 30th to consider the subject. In an early number of the JOURNAL we shall state the proposals of the Glasgow teachers.

GLASGOW UNIVERSITY SETTLEMENT.

A MOVEMENT has been started in Glasgow for the purpose of founding, in the east-end of the city, a University Settlement, akin to that of Toynbee Hall in London. The movement is the result of a lecture on Toynbee Hall, delivered some time ago in Queen Margaret College, by Mr. William Smart, M.A., a young political economist. The objects of the settlement are to provide lectures for the working-classes, to be delivered by university graduates; to form a centre for educational, social, and benevolent work among the poor; and to do something to bridge the gulf between the different classes of society. For two years past, courses of lectures on English literature, moral philosophy, political economy, and anatomy and physiology, have been delivered to the working-classes by graduates of the University, and have been fairly successful. Such courses will be increased, practical hygiene being one of the proposed additions; and it is expected that this part of the scheme will soon receive the formal recognition and support of the University. The want, however, of definite and suitable lecture-rooms has done much to hinder the successful accomplishment of the courses of lectures; and the scheme of the University Settlement proposes a building containing lecture-hall and class-room accommodation. It is intended, also, to provide, in the buildings, rooms for the residence of about six University men, who are interested in the work, and would exercise some superintendence over its various departments. The proposed site of the building is in High Street, in the immediate neighbourhood of what was the old College, which is now a railway-station. A large and influential committee has been formed, and a considerable sum of money has already been subscribed. It is expected that the scheme will take still more definite and practical shape in the autumn, when it is intended to hold a public meeting, in order to bring it fully before the Glasgow public.

ST. ANDREW'S AMBULANCE ASSOCIATION.

IF any evidence were needed of the useful work which is being done by the St. Andrew's Ambulance Association with its various centres, it would be abundantly found in the report presented at its last annual meeting, presided over by Professor John Chiene, of Edinburgh. During the year, it is seen there were no fewer than 625 calls made on the wagons of the Association. Of this number, 531 were made in the city of Glasgow alone. Six new ambulance-wagons have been built, and stationed at Glasgow, Edinburgh, Dumbarton, Paisley, Hamilton, and Baillieston. Nine hundred and fifty more pupils have been trained than in the previous year; the total number of pupils trained by the Association since 1882 amounting to 7,401. Of the number so trained, many are policemen; and, as the report observes, it must be a source of great satisfaction to the inhabitants of the towns where they are stationed to know that their streets are guarded by men capable of rendering intelligent aid in accident-cases. The railway companies of Scotland are also appreciating the value of ambulance instruction, and classes have already been started at several of the stations. The Executive Committee are looking forward to the formation of many new centres. It is gratifying to know that the affairs of so useful an Association are in a very satisfactory state.

IRELAND.

DR. BURKE, Local Government Board Inspector, has suggested that the Enniscorthy Dispensary, which is at present under the same roof as the Fever Hospital, should be removed to more suitable premises.

VACCINATION.

DURING the year ended March 31st last, 3,397 applications were received from medical officers of workhouses and dispensaries, and other public institutions, from military medical officers stationed in Ireland, and from private practitioners, for lymph; and 17,244 points and 2,532 tubes charged with lymph were distributed.

HOUSING OF THE WORKING CLASSES ACT, 1885.

APPLICATIONS for sanction to loans have already been received by the Local Government Board from the corporations of Dublin, Cork, Limerick, and Sligo. The Corporation of Dublin propose to expend the sums of £20,000 and £9,000 respectively in erecting dwellings under the Labouring Classes Lodging Houses Act of 1866, as incorporated with the Housing of the Working Classes Act, 1885; the Corporation of Cork, £6,500; the Corporation of Limerick, £3,500; and the Corporation of Sligo, £3,500; and the necessary preliminary steps to obtaining the money and building the dwellings are being taken.

JERVIS STREET HOSPITAL.

MR. THOMAS MYLES, Demonstrator of Anatomy in the school of the Royal College of Surgeons in Ireland, has been appointed Surgeon to this hospital in succession to Mr. Chance, appointed to the Mater Misericordiæ Hospital. Mr. Myles was Resident-Surgeon to Dr. Steevens's Hospital, and was the Secretary to the recent Dublin Hospital Commission.

BELFAST ROYAL HOSPITAL.

A MUNIFICENT gift by Dr. Whitla to the Belfast Royal Hospital was the occasion, on Saturday last, of an interesting public gathering. Dr. Whitla, who has been connected with the Royal Hospital as resident pupil, resident medical superintendent, and subsequently physician to the hospital, has taken an active interest in the recent remodelling of the hospital and the renovation of its wards. Recently, much has been done by large gifts to make the wards, once dismal and dreary, now beautiful and attractive, thus adding to the efficiency of the institution, in which so good a work has long been carried on. Dr. Whitla's gift to the hospital is a fine painted window, placed on the main staircase, and consisting of three lights. The subject illustrates the parable of "The Good Samaritan." On the left light are the arms of the Royal Hospital and the Queen's University of Ireland; and on the right, the arms of the Queen's College, Belfast, and the Royal University of Ireland. Between the medallions on the left is an emblematic design of "Happiness;" and on the right of "Health." The window is executed by Mr. Swaine Bourne, of Birmingham, and is described as a work of remarkable artistic merit. A large company assembled; and the Rev. J. C. Street, on behalf of the Board of Management, expressed the thanks of the Board for the generosity of Dr. Whitla's act, which was a fitting expression of the profound and intelligent interest which he had always shown in the institution, in which he had been trained, and in whose work he took so large and valuable a part. Dr. Whitla, in replying, recounted the history of the recent renovations of the hospital, and referred briefly to its great work in medical education. Between 200 and 300 students enter yearly at the Belfast Hospital to receive their practical instruction in medicine and surgery; and a large part of the sick, poor and rich, in the North of Ireland, were under the care of practitioners educated in the Belfast Medical School. Hence, in this window were combined subjects illustrative of he

claims and benefits to mankind of this noble charitable institution, and of the blessings of the charity, together with the heraldic emblems of the universities and colleges presiding over the medical education of the students of the hospital. The Rev. Dr. Hanna and others addressed the meeting, which closed with warm votes of thanks to Dr. Whitla and to the managers of the hospital.

THE MEDICAL ACT, 1866.

BE it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Short Title and Construction.*—This Act may be cited as the Medical Act, 1886, and shall be construed as one with the Medical Acts.

PART I.—ADMISSION TO MEDICAL PRACTICE AND CONSTITUTION OF GENERAL COUNCIL.

Qualifying Examinations.

2. *Examination before Registration.*—On and after the appointed day, a person shall not be registered under the Medical Acts in respect of any qualification referred to in any of those Acts, unless he has passed such qualifying examination in medicine, surgery, and midwifery, as is in this Act mentioned.

3. *Qualifying Examinations held by Medical Authorities.*—(1.) A qualifying examination shall be an examination in medicine, surgery, and midwifery held, for the purpose of granting a diploma or diplomas conferring the right of registration under the Medical Acts, by any of the following bodies, that is to say: (*a*) Any university in the United Kingdom, or any medical corporation legally qualified at the passing of this Act to grant such diploma or diplomas in respect of medicine and surgery; or (*b*) Any combination of two or more medical corporations in the same part of the United Kingdom who may agree to hold a joint examination in medicine, surgery, and midwifery, and of whom one at least is capable of granting such diploma as aforesaid in respect of medicine, and one at least is capable of granting such diploma in respect of surgery; or (*c*) Any combination of any such university as aforesaid with any other such university or universities, or of any such university or universities with a medical corporation or corporations, the bodies forming such combination being in the same part of the United Kingdom. (2.) The standard of proficiency required from candidates at the said qualifying examinations shall be such as sufficiently to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery; and it shall be the duty of the General Council to secure the maintenance of such standard of proficiency as aforesaid; and for that purpose such number of inspectors as may be determined by the General Council, shall be appointed by the General Council, and shall attend, as the General Council may direct, at all or any of the qualifying examinations held by any of the bodies aforesaid. (3.) Inspectors of examinations appointed under this section shall not interfere with the conduct of any examination, but it shall be their duty to report to the General Council their opinion as to the sufficiency or insufficiency of every examination which they attend, and any other matters in relation to such examination which the General Council may require them to report; and the General Council shall forward a copy of every such report to the body, or to each of the bodies, which held the examination in respect of which the said report was made, and shall also forward a copy of such report, together with any observations thereon made by the said body or bodies, to the Privy Council. (4.) An inspector of examinations appointed under this section shall receive such remuneration, to be paid as part of the expenses of the General Council, as the General Council, with the sanction of the Privy Council, may determine.

4. *Withdrawal from Medical Authorities of right to hold Qualifying Examinations.*—(1.) If at any time it appears to the General Council that the standard of proficiency in medicine, surgery, and midwifery, or in any of those subjects or any branch thereof, required from candidates at the qualifying examinations held by any of the bodies for the time being holding such examinations is insufficient, the General Council shall make a representation to that effect to the Privy Council; and the Privy Council, if they think fit, after considering such representation, and also any objections thereto made by any body or bodies to which such representation relates, may by order declare that the examinations of any such body or bodies shall not be deemed to be qualifying examinations for the purpose of registration under the Medical Acts; and Her Majesty, with the advice of Her Privy Council, if, upon further representation from the General Council or otherwise, it seems to Her expedient so to do, shall have power at any time to revoke any such order. (2.) During the continuance of any such order, the examinations held by the body or bodies to which it relates shall not be deemed qualifying examinations under this Act, and any diploma granted to persons on passing such examinations shall not entitle such persons to be registered under the Medical Acts, and any such body shall not choose, either separately or collectively with any other body, a member of the General Council; and the member (if any) for the time being representing such body in the General Council shall, unless he was chosen by such body collectively with any other body not subject to an order under this section, be suspended from taking part in the proceedings of the General Council.

5. *Qualifying Examinations held by Medical Corporation, with Assistant-Examiners.*—(1.) If a medical corporation represents to the General Council that it is unable to enter into such combination as is in this Act mentioned for the purpose of holding qualifying examinations, and the General Council are satisfied that the said medical corporation has used its best endeavours to enter into such combination as aforesaid, and is unable to do so on reasonable terms, it shall be lawful for the General Council from time to time, if they think fit, on the application of such corporation, to appoint any number of examiners to assist at the examinations which are held by such corporation for the purpose of granting any diploma or diplomas conferring on the holders thereof, if they have passed a qualifying examination, the right of registration under the Medical Acts. (2.) It shall be the duty of the said assistant-examiners to secure at the said examinations the maintenance of such standard of proficiency in medicine, surgery, and midwifery as is required under the foregoing provisions of this Act from candidates at qualifying examinations, and for that purpose the said assistant examiners shall have such powers and perform such duties in the conduct of those examinations as the General Council may from time to time by order prescribe; and any examination held subject to the provisions of this section shall be deemed to be a qualifying examination within the meaning of this Act. (3.) Assistant-examiners appointed under this section shall receive such remuneration, to be paid by the medical corporation at whose examinations they take part, as the General Council determine. (4.) A medical corporation shall have power to admit to its examinations assistant-examiners appointed under this section, and to conduct its examinations in accordance with the requirements of this section, and of any orders made thereunder, anything in any Act or charter relating to such corporation to the contrary notwithstanding.

6. *Effects of Registration.*—On and after the appointed day a registered medical practitioner shall, save as in this Act mentioned, be entitled to practise medicine, surgery, and midwifery in the United Kingdom, and (subject to any local law) in any other part of Her Majesty's dominions, and to recover in due course of law in respect of such practice any expenses, charges in respect of medicaments or other appliances, or any fees to which he may be entitled, unless he is a fellow of a college of physicians, the fellows of which are prohibited by by-law from recovering at law their expenses, charges, or fees, in which case such prohibitory by-law, so long as it is in force, may be pleaded in bar of any legal proceeding instituted by such fellow for the recovery of expenses, charges, or fees.

Constitution of General Council.

7. *Members of General Council.*—(1.) After the passing of this Act, the General Council shall consist of the following members, that is to say: Five persons nominated from time to time by Her Majesty, with the advice of Her Privy Council, three of whom shall be nominated for England, one for Scotland, and one for Ireland; one person chosen from time to time by each of the following bodies: the Royal College of Physicians of London; the Royal College of Surgeons of England; the Apothecaries' Society of London; the University of Oxford; the University of Cambridge; the University of London; the University of Durham; the Victoria University, Manchester; the Royal College of Physicians of Edinburgh; the Royal College of Surgeons of Edinburgh; the Faculty of Physicians and Surgeons of Glasgow; the University of Edinburgh; the University of Glasgow; the University of Aberdeen; the University of St. Andrew's; the King and Queen's College of Physicians in Ireland; the Royal College of Surgeons in Ireland; the Apothecaries' Hall of Ireland; the University of Dublin; the Royal University of Ireland; three persons elected from time to time by the registered medical practitioners resident in England; one person elected from time to time by the registered medical practitioners resident in Scotland; one person elected from time to time by the registered medical practitioners resident in Ireland. (2.) The provisions of this section relating to the representation of the Universities of Edinburgh and Aberdeen,

shall take effect on the occurrence of the first vacancy in the office of the person representing those universities at the time of the passing of this Act; and the provisions of this section relating to the representation of the Universities of Glasgow and St. Andrew's shall take effect on the occurrence of the first vacancy in the office of the person representing such last-mentioned universities at the time of the passing of this Act; but nothing in this section shall affect the duration of the term of office of any person who at the time of the passing of this Act is a member of the General Council.

8. *Regulations as to Election of Representatives of the Medical Profession.*—(1.) The members of the General Council, representing the registered medical practitioners resident in the several parts of the United Kingdom (in this section referred to as "direct representatives"), shall themselves be registered medical practitioners; they shall be elected to hold office for the term of five years, and shall be capable of re-election, and any of them may at any time resign his office by letter, addressed to the President of the General Council; and upon the death or resignation of any one of them, some other person shall be elected in his place; but the proceedings of the General Council shall not be questioned on account of a vacancy or vacancies among the direct representatives. (2.) Each direct representative shall be a member of the branch council for the part of the United Kingdom in which he is elected; he shall also be entitled to fees for attendance and travelling expenses to the same extent as other members of the General Council are entitled to the same. (3.) The President of the General Council, or any other person whom the General Council may from time to time appoint, shall be the returning officer for the purpose of elections of direct representatives; and such returning officer shall, some time not less than six weeks nor more than two months before the term of office of any such representative will expire, and as soon as conveniently may be after the occurrence of any vacancy arising from the death or resignation of any such representative, issue his precept to the branch council for that part of the United Kingdom in which such representative was elected, requiring the said branch council to cause a representative to be elected by the registered medical practitioners resident in that part of the United Kingdom within twenty-one days after the receipt of the precept of the returning officer. (4.) The election shall be conducted in such manner as may be provided by regulations to be made by the Privy Council, provided as follows: (*a*) The nomination shall be in writing, and the nomination paper of each candidate shall be signed by not fewer than twelve registered medical practitioners; and (*b*) The election shall be conducted by voting papers; and it shall be the duty of the branch council, in any part of the United Kingdom in which an election is to be held, to cause a voting paper to be forwarded by post to each registered medical practitioner resident in that part at his registered address; but the election shall not be rendered void by reason of the omission of the branch council to cause such voting paper to be forwarded in any particular case or cases, and any registered medical practitioner to whom a voting paper has not been sent, in pursuance of this Act, may, on application to the registrar of the said branch council, obtain one from him; and (*c*) Any registered general practitioner entitled to vote at such election may vote for as many candidates as there are representatives to be elected. (5.) Each branch council shall certify to the returning officer the person or persons elected by the registered medical practitioners resident in the part of the United Kingdom to which such branch council belongs. (6.) A direct representative elected in place of any such representative retiring on the expiration of the period for which he was elected shall come into office at the expiration of that period, and a direct representative elected to fill a vacancy caused by the death or resignation of any such representative shall come into office on the day on which he is certified by the branch council to the returning officer to have been elected. (7.) The expenses attending the election of a direct representative shall be defrayed as part of the expenses of the branch council for that part of the United Kingdom in which such representative is elected. (8.) For the purpose of the first election of direct representatives the returning officer shall, in the course of such period of seven days (ending not later than the fifteenth day of November next succeeding the passing of this Act), as the Privy Council may appoint, issue his precept to the branch council in each part of the United Kingdom, requiring such branch council to cause the proper number of representatives to be elected in the part of the United Kingdom to which such branch council belongs, within twenty-one days after the receipt of the said precept; and the said representatives shall come into office on the first day of January, one thousand eight hundred and eighty-seven.

9. *Election of President of General Council.*—The General Council, from time to time, on the occurrence of a vacancy in the office of President of the General Council, shall elect one of their number to be president for a term not exceeding five years, and not extending beyond the expiration of the term for which he has been made a member of the said Council; but nothing in this Act shall affect the duration of the term of office of the person who, at the time of the passing of this Act, is president of the General Council.

10. *Revision of Constitution of General Council.*—(1). The General Council may, at any time, represent to the Privy Council all or any of the following matters: (*a*) That it is expedient to confer on any university, or other body in the United Kingdom, capable of granting a medical diploma, not being one of the constituent bodies, for the time being, of the General Council, and being, in the opinion of the General Council, of sufficient importance to be worthy of such a privilege, the power of returning a member to the General Council, either separately or collectively with any other body or bodies in the same part of the United Kingdom, capable of granting a medical diploma. (*b*) That it is expedient to confer on any constituent body, for the time being, returning a member to the General Council, collectively with any other body or bodies, and being, in the opinion of the General Council, of sufficient importance to be worthy of such a privilege, the power of returning a member to such Council separately. (*c*) That it is expedient to confer on the registered medical practitioners, resident in any part of the United Kingdom, the power of returning an additional member to the General Council. (*d*) That it is expedient that any constituent body having, in the opinion of the General Council, so diminished in importance as not to be entitled to such privilege, should either be wholly deprived of the power of returning a member to the General Council, or be deprived of the power of returning a member separately to the General Council, or be deprived of the power of returning a member separately, and permitted to return a member collectively with some other body or bodies. (2.) The Privy Council, before considering such representation, shall cause the same to be laid before both Houses of Parliament. (3.) If either House of Parliament, within forty days (exclusive of any period of adjournment for more than one week) next after any such representation has been laid before such House, present an address to Her Majesty, declaring that such representation, or any part thereof, ought not to be carried into effect, no further proceedings shall be taken in respect of the representation in regard to which such address has been presented; but if no such address is presented by either House of Parliament within such forty days, as aforesaid, the Privy Council may, if they think fit, report to Her Majesty that it is expedient to give effect to such representation; and it shall be lawful for Her Majesty, by Order in Council, to give effect to the same; and any Order in Council so made shall be of the same validity as if it had been enacted in this Act.

PART II.—COLONIAL AND FOREIGN PRACTITIONERS.

11. *Registration of Colonial Practitioner with Recognised Diploma.*—On and after the prescribed day, where a person shows to the satisfaction of the registrar of the General Council that he holds some recognised colonial medical diploma or diplomas (as hereinafter defined) granted to him in a British possession to which this Act applies, and that he is of good character, and that he is by law entitled to practise medicine, surgery and midwifery in such British possession, he shall, on application to the said registrar, and on payment of such fee, not exceeding five pounds, as the General Council may from time to time determine, be entitled, without examination in the United Kingdom, to be registered as a colonial practitioner in the *Medical Register;* provided that he proves to the satisfaction of the registrar any of the following circumstances:—(1) That the said diploma or diplomas was or were granted to him at a time when he was not domiciled in the United Kingdom, or in the course of a period of not less than five years, during the whole of which he resided out of the United Kingdom; or (2) That he was practising medicine or surgery, or a branch of medicine or surgery, in the United Kingdom, on the said prescribed day; and that he has continuously practised the same, either in the United Kingdom or elsewhere, for a period of not less than ten years immediately preceding the said prescribed day.

12. *Registration of Foreign Practitioner with Recognised Diploma* — On and after the said prescribed day, where a person shows to the satisfaction of the registrar of the General Council that he holds some recognised foreign medical diploma or diplomas (as hereinafter defined) granted in a foreign country to which this Act applies, and that he is of good character, and that he is by law entitled to practise medicine, surgery, and midwifery in such foreign country, he shall, on application to the said registrar, and on payment of such fee, not exceeding five pounds, as the General Council may from time to time determine, be entitled, without examination in the United Kingdom, to be registered as a foreign practitioner in the *Medical*

Register: provided that he proves to the satisfaction of the registrar any of the following circumstances:—(1) That he is not a British subject; or (2) That, being a British subject, the said diploma or diplomas was or were granted to him at a time when he was not domiciled in the United Kingdom, or in the course of a period of not less than five years, during the whole of which he resided out of the United Kingdom; or (3) That, being a British subject, he was practising medicine or surgery, or a branch of medicine or surgery, in the United Kingdom, on the said prescribed day; and that he has continuously practised the same, in the United Kingdom or elsewhere, for a period of not less than ten years immediately preceding the said prescribed day.

13. *Medical Diploma of Colonial and Foreign Practitioner, when deemed to be recognised.*—(1.) The medical diploma or diplomas granted in a British possession or foreign country to which this Act applies, which is or are to be deemed such recognised colonial or foreign medical diploma or diplomas as is or are required for the purposes of this Act, shall be such medical diploma or diplomas as may be recognised for the time being by the General Council as furnishing a sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery. (2.) Where the General Council have refused to recognise as aforesaid any colonial or foreign medical diploma, the Privy Council, on application being made to them, may, if they think fit, after considering such application, and after communication with the General Council, order the General Council to recognise the said diploma, and such order shall be duly obeyed. (3.) If a person is refused registration as a colonial or foreign practitioner on any other ground than that the medical diploma or diplomas held by such person is or are not such recognised medical diploma or diplomas as above defined, the registrar of the General Council shall, if required, state in writing the reason for such refusal; and the person so refused registration may appeal to the Privy Council; and the Privy Council, after communication with the General Council, may dismiss the appeal, or may order the General Council to enter the name of the appellant on the *Register*. (4.) A person may, if so entitled under this Act, be registered both as a colonial and a foreign practitioner.

14. *Separate List of Colonial and Foreign Practitioners in Medical Register.*—The *Medical Register* shall contain a separate list of the names and addresses of the colonial practitioners, and also a separate list of the names and addresses of the foreign practitioners registered under this Act. Each list shall be made out alphabetically according to the surnames; and the provisions of the Medical Act, 1858, relating to persons registered under that Act, and relating to the *Medical Register* and to offences in respect thereof, shall, so far as may be, apply in the case of colonial and foreign practitioners registered under this Act and of the said lists of those practitioners, in the same way as such provisions apply in the case of persons registered under the said Medical Act, 1858, and of the *Register* as kept under that Act.

15. *Medical Titles of Colonial and Foreign Practitioners.*—On and after the appointed day it shall be lawful for any registered medical practitioner, who, being on the list of colonial or of foreign practitioners, is on that day in possession of or thereafter obtains any recognised colonial or foreign medical diploma granted in a British possession or foreign country to which this Act applies, to cause a description of such diploma to be added to his name in the *Medical Register*.

16. *Registration of Foreign Degrees held by Registered Medical Practitioners.*—On and after the appointed day it shall be lawful for any registered medical practitioner who, being on the *Medical Register* by virtue of English, Scotch, or Irish qualifications, and in possession of a foreign degree in medicine, to cause a description of such foreign medical degree to be added to his name as an additional title in the *Medical Register*, provided he shall satisfy the General Council that he obtained such degree after proper examination, and prior to the passing of this Act.

17. *Power of Her Majesty in Council to define Colonies and Foreign Countries to which this part of the Act applies.*—(1.) Her Majesty may from time to time, by Order in Council, declare that this part of this Act shall be deemed, on and after a day to be named in such Order, to apply to any British possession or foreign country which, in the opinion of Her Majesty, affords to the registered medical practitioners of the United Kingdom such privileges of practising in the said British possession or foreign country as to Her Majesty may seem just; and from and after the day named in such Order in Council such British possession or foreign country shall be deemed to be a British possession or foreign country to which this Act applies within the meaning of this part thereof; but until such Order in Council has been made in respect of any British possession or foreign country, this part of this Act shall not be deemed to apply to any such possession or country; and the expression, "the prescribed day," as used in this part of this Act, means, as respects any British possession or foreign country, the day on and after which this part of this Act is declared by Order in Council to apply to such British possession or foreign country. (2.) Her Majesty may, from time to time, by Order in Council, revoke and renew any Order made in pursuance of this section; and on the revocation of such Order as respects any British possession or foreign country, such possession or foreign country shall cease to be a possession or country to which this part of this Act applies, without prejudice, nevertheless, to the right of any persons whose names have been already entered on the *Register*.

18. *Amendment of 21 and 22 Vict. c. 90, s. 36., as to Medical Officers in Ships.*—Nothing in the Medical Act, 1858, shall prevent a person holding a medical diploma, entitling him to practise medicine or surgery in a British possession to which this Act applies, from holding an appointment as a medical officer in any vessel registered in that possession.

Part III.—Miscellaneous Provisions.

19. *Default of General Council.*—If at any time it appears to the Privy Council that the General Council has failed to secure the maintenance of a sufficient standard of proficiency at any qualifying examinations, or that occasion has arisen for the General Council to appoint assistant examiners under this Act for the purpose of examinations held by any medical corporation, or to exercise any power or perform any duty or do any act or thing vested in or imposed on or authorised to be done by the General Council under the Medical Acts or this Act, the Privy Council may notify their opinion to the General Council; and if the General Council fail to comply with any directions of the Privy Council relating to such notification, the Privy Council may themselves give effect to such directions, and for that purpose may exercise any power or do any act or thing vested in or authorised to be done by the General Council, and may, of their own motion, do any act or thing which, under the Medical Acts or this Act, they are authorised to do in pursuance of a representation or suggestion from the General Council.

20. *Addition to Qualifications under 21 and 22 Vict. c. 90.*—The diploma of Member of the King and Queen's College of Physicians in Ireland, and the degree of Master in Obstetrics of any university in the United Kingdom, shall be deemed to be added to the qualifications described in Schedule A to the Medical Act, 1858.

21. *Registration of Diploma in Sanitary Science.*—Every registered medical practitioner to whom a diploma for proficiency in sanitary science, public health, or state medicine has, after special examination, been granted by any college or faculty of physicians or surgeons or university in the United Kingdom, or by any such bodies acting in combination, shall, if such diploma appears to the Privy Council or to the General Council to deserve recognition in the *Medical Register*, be entitled, on payment of such fee as the General Council may appoint, to have such diploma entered in the said register, in addition to any other diploma or diplomas in respect of which he is registered.

22. *Exercise of Powers of Privy Council.*—(1.) All powers vested in the Privy Council by the Medical Acts or this Act may be exercised by any two or more of the Lords and others of Her Majesty's most honourable Privy Council. (2.) Any act of the Privy Council under the Medical Acts or this Act, shall be sufficiently signified by an instrument signed by the Clerk of the Council; and every order and act signified by an instrument purporting to be signed by the Clerk of the Council, shall be deemed to have been duly made and done by the Privy Council, and every instrument so signed shall be received in evidence in all courts and proceedings, without proof of the authority or signature of the Clerk of the Council, or other proof.

23. *Evidence of Orders.*—The following copies of any orders made in pursuance of the Medical Acts or this Act, or the Dentists Act, 1878, shall be evidence; that is to say: (1.) Any copy purporting to be printed by the Queen's printer, or by any other printer in pursuance of an authority given by the General Council. (2.) Any copy of an order certified to be a true copy by the registrar of the General Council, or by any other person appointed by the General Council, either in addition to or in exclusion of the registrar to certify such orders.

24. *Saving as to Practice of Existing Practitioners.*—This Act shall not increase or diminish the privileges in respect of his practice of any person who, on the day preceding the appointed day, is a registered medical practitioner; and such person shall be entitled on and after the said appointed day to practise, in pursuance of the qualification possessed by him before the said appointed day, in medicine, surgery, and midwifery, or any of them, or any branch of medicine or

surgery, according as he was entitled to practise the same before the said appointed day, but not further or otherwise.

25. *Saving as to Local Laws.*—Any person who at the time of the repeal of any enactment repealed by this Act was, in pursuance of such enactment, legally entitled to practise as a medical practitioner in any colony or part of Her Majesty's dominions other than the United Kingdom, shall, after the date of such repeal, continue to be so entitled if he would have been entitled if no such appeal had taken place.

26. *Provisions as to 41 and 42 Vict. c. 33.*—It is hereby declared that the words "title, addition, or description," where used in the Dentists Act, 1878, include any title, addition to a name, designation, or description, whether expressed in words or by letters, or partly in one way and partly in the other. There shall be repealed so much of section four of the Dentists Act, 1878, as provides that a prosecution for any of the offences above in that Act mentioned shall not be instituted by a private person, except with the consent of the General Council or of a branch council, and a prosecution for any such offences may be instituted by a private person accordingly. Notwithstanding anything in section five of the Dentists Act, 1878, the rights of any person registered under the Dentists Act, 1878, to practise dentistry or dental surgery in any part of Her Majesty's dominions other than the United Kingdom, shall be subject to any local law in force in that part. It shall be lawful for Her Majesty, at any time after the said appointed day, to declare by Order in Council, that section twenty-eight of the said Dentists Act, 1878, shall be in force on and after a day to be named in such Order, but in the meantime, and until such order has been made, and before such day as last aforesaid, such section shall not be deemed to be in force. Save as in this Act mentioned, the Dentists Act, 1878, shall not be affected by this Act.

27. *Definitions.*—In this Act, unless the context otherwise requires—The expression "part of the United Kingdom," means, according to circumstances, England, Scotland, or Ireland. The expression "British possession" means any part of Her Majesty's dominions exclusive of the United Kingdom, but inclusive of the Isle of Man and the Channel Islands; and where parts of such dominions are under both a central and a local legislature, all parts under one central legislature are for the purposes of this definition deemed to be one British possession. The expression "local law" means an Act or Ordinance passed by the legislature of a British possession. The expression "the appointed day" means the first of June, one thousand eight hundred and eighty-seven, or such other day in June, one thousand eight hundred and eighty-seven, as may be appointed by the Privy Council. The expression "medical corporation" means anybody in the United Kingdom, other than a university, for the time being competent to grant a diploma or diplomas conferring on the holder thereof, if he has passed a qualifying examination, the right of registration under the Medical Acts. The expression "registered medical practitioner" means any person for the time being registered under the Medical Act. The word "diploma" means any diploma, degree, fellowship, membership, licence, authority to practise, letters testimonial, certificate, or other status or document granted by any university, corporation, college, or other body, or by any departments of or persons acting under the authority of the government of any country or place within or without Her Majesty's dominions. The expression "medical diploma" means a diploma granted in respect of medicine, surgery, and midwifery, or any of them, or any branch of medicine or surgery. The word "person" includes a body of persons, corporate or not corporate. The expression "the Medical Acts" means the Medical Act, 1858, and any Acts amending the same, passed before the passing of this Act.

28. *Repeal of Enactments in Schedule.*—The Acts mentioned in the first part of the schedule to this Act are hereby repealed to the extent mentioned in the third column of the said part; and the Acts mentioned in the second part of the said schedule shall be repealed on and after the prescribed day as used in Part II of this Act to the extent mentioned in the third column of the said last-mentioned part; provided that the repeal enacted by this section shall not effect anything done or suffered, or any right or title acquired or accrued, before such repeal takes effect, or any remedy, penalty, or proceeding in respect thereof.

THE SCHEDULE.

First Part.

Session and Chapter.	Title or short title of Act.	Extent of Repeal.
21 and 22 Vict. c. 90	The Medical Act, 1858	Sections four and five Section twenty-four
46 and 47 Vict. c. 19	The Medical Act (1858) Amendment Act, 1883	The whole Act

Second Part.

21 and 22 Vict. c. 90	The Medical Act, 1858	Section thirty-one
31 and 32 Vict. c. 29	The Medical Act Amendment Act, 1868	The whole Act.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AT a meeting of the Royal College of Physicians held on Tuesday, June 29th—Sir W. Jenner presiding—a communication was received from the Royal College of Surgeons relative to the new Examination Hall and the management of the conjoint examinations. Three additional delegates having been nominated by the College of Surgeons, with a request that the College of Physicians would do the same, the President nominated the Treasurer, Dr. Quain, and Dr. Pye-Smith, as additional delegates.

The adjourned discussion on the Report of the Croonian Trust Committee was resumed. Sir Risdon Bennett moved the adoption of this report, which recommended that the income of the Trust should, in future, be devoted to lectures and researches intended to promote therapeutic science, with a view to the better prevention, control, and cure of disease. This report had been discussed at great length on two previous occasions, and amendments had been moved by Dr. Bristowe, Dr. Wilson Fox, and Dr. Quain. It was felt by many of the Fellows that it would not be wise to attempt to bind down the future action of the College too closely; and, by a considerable majority, they adopted, in place of the report of the committee, the following two amendments, moved by Dr. Quain:

1. That there shall be one or more Croonian Lecturers appointed by the College, who shall be required to deliver lectures on one or more subjects in anatomy, physiology, or pathology, with a view to the prevention, control, and cure of diseases.

2. That the College shall devote the funds derived from the Croonian Trust (*a*) to the payment of such lecturer or lecturers, and (*b*) to the contribution of such sums as the College may think fit towards the promotion of scientific investigations on the subjects of the lectures. In the course of discussion, it was elicited that the word physiology would be understood to include physiological chemistry.

Another adjourned subject was then again brought forward by Dr. West, who proposed to add to the by-law defining the duties of the Council words which would confer upon it the power of initiative. At present, the Council discusses only such matters as have been referred to it by the Comitia. Grave objection was expressed to the proposed alteration; and, on a division, Dr. West's motion was rejected.

On the motion of the Registrar, it was resolved that it be referred to the Committee of Management to consider what staff should be appointed, and under what conditions, for the efficient management and conduct of the business of the new Examination Hall, and to report to the two Colleges.

THE UNIVERSITY OF LONDON.

A MEETING of Convocation took place on Tuesday last, at which Dr. J. F. Wood, the Chairman of Convocation, presided.

A resolution was agreed to, requesting the Annual Committee to appoint a deputation, to confer with the Senate as to the proposed celebration of the jubilee of the University, and, in the event of the concurrence of the Senate being obtained, to take such steps as may be expedient to carry out the proposed celebration.

On the motion of Mr. H. NEWSON, the regulations for the examination for the degrees in laws, including the honours examination, were referred to a special committee.

Consideration of the scheme proposed by the Special Committee on the Constitution of the University being resumed, Mr. P. MAGNUS moved that the committee's suggestions for remodelling the Senate should be approved. Considerable discussion followed, the opponents of these suggestions holding that they would place too much power in the hands of teachers; while, on the other hand, it was contended that they would only establish a wholesome connection between the University and various teaching bodies. The resolution was carried by a considerable majority, the proposals approved of being: That the Senate should consist of a chancellor, a vice-chancellor, six *ex-officio* members—namely, the Chairman of Convocation, the Council of Education, and the four Boards of Studies—and twenty-five ordinary members, six to be appointed by the Crown, eight by Convocation, four by the Council of Education, and one each by University College, King's College, the Royal Society, the Royal College of Physicians

(London), the English Royal College of Surgeons, the Council of Legal Education, and the Council of the Incorporated Law Society; the Senate to have the control and management of the University.

Approval was also given to the committee's proposal, that the University should have power to hold real property; that the Senate should take steps to secure a fixed endowment from the State; that it should have power to appoint professors, lecturers, and examiners in any branch of knowledge, and to subsidise or endow laboratories, libraries, and museums, etc. Finally, it was agreed that these and the other portions of the scheme should be adopted as a basis of conference with the Senate, and that the Special Committee should be reappointed.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE elections into the Council took place on Thursday, the 1st instant. The President, Mr. W. S. Savory, declared the ballot closed at 5 o'clock, and the counting of the votes was immediately proceeded with. The President declared the numbers to be the following.

For Mr. E. Lund, Manchester	162,	including	1 plumper.
,, Mr. M. Berkeley Hill, University College	142	,,	10 ,,
,, Mr. Reginald Harrison, Liverpool	109	,,	10 ,,
,, Mr. S. W. Sibley	108	,,	3 ,,
,, Mr. Alfred Willett, St. Bartholomew's	96	,,	10 ,,
,, Mr. John Couper, London	80	,,	5 ,,
,, Mr. R. Brudenell Carter, St. George's	71	,,	5 ,,
,, Mr. James Rouse, St. George's	34	,,	1 ,,

There being four vacancies, the President declared Messrs. Lund, Hill, Harrison, and Sibley, duly elected. Mr. Sibley is the first general practitioner who has been elected on the Council of the College. We are glad, also, to record the success of Mr. Reginald Harrison, of Liverpool.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee of the British Medical Association was held at the offices of the Association, 161A, Strand, on Tuesday, June 22nd, Mr. Ernest Hart in the chair. The following members were present: Mr. Sibley (London), Dr. Langdon Down (London), Mr. Reginald Harrison (Liverpool), Dr. Orton (Newcastle-under-Lyme), Dr. Wickham Barnes (London), Mr. D. B. Balding (Royston), Dr. J. W. Browne (London), Dr. W. J. Mickle (London), Dr. W. C. Grigg (London), Dr. H. H. Phillips (Reading), Dr. Alfred J. Harrison (Clifton).

Letters were received from the following gentlemen expressing their inability to be present: Dr. Henry Barnes (Carlisle); Dr. Philipson (Newcastle on-Tyne); Mr. R. W. Watkins (Towcester); Mr. Owen (Llangefni).

The minutes of the previous meeting were read and confirmed.

The CHAIRMAN having stated that the immediate business of the meeting was to agree on a report for presentation to the General Council, read the draft report, which he had prepared for the consideration of the meeting, to which Dr. Mickle, to whom he had applied, had furnished some detailed paragraphs on the Lunacy Acts Amendment Bill.

The draft of the Annual Report of the Committee was then considered.

It was moved by Dr. LANGDON DOWN, seconded by Mr. SIBLEY, and

Resolved: That the report be adopted, and submitted to the Council at the next Council meeting.

Medical Service of Atlantic Steamships.—Copies of a memorandum, with reference to the present position of the medical service of Atlantic steamships published in the JOURNAL of May 1st, 1886), were distributed at the meeting, and taken as read. The CHAIRMAN, in referring to this subject, said it would be remembered that, two years ago, the Committee collected a considerable amount of material with reference to the position of medical officers in the mercantile service, and especially on the Atlantic steamships, which they put before Mr. Chamberlain, as the then President of the Board of Trade. They had since collected some further information, which, he proposed, they should adopt, and forward to the Royal Commission (now sitting), and that the Commission be asked to consider this further memorandum, together with the memorial which the Committee printed in 1883.

Mr. REGINALD HARRISON said this was a matter which personally he should like to see urged. In Liverpool, he heard a great deal on this subject, and a great many grumbles from the medical officers of the mercantile marine, and he was sure they were looking forward to the work of this Association in connection with this subject with a very considerable amount of interest, and anything the Committee could see their way to promote in connection with this work would be welcomed by the class of men to whom he had referred.

The following resolution was moved by Mr. REGINALD HARRISON, seconded by Dr. ORTON, and carried *nem. con.*:

"That, in the opinion of this Committee, the memorandum now read is one which, in the interests of the public and of the medical officers of the mercantile marine, should be urgently pressed upon the attention of the Royal Commission, and that accordingly it be reprinted, and a copy of it forwarded to all the members of the Commission, with a request that they will take it into their special consideration."

On the proposition of the Chairman, it was decided to instruct the Secretary to communicate with the local Branches, for which the members of the Royal Commission are representatives in Parliament, and to ask them to urge the point upon those gentlemen.

The CHAIRMAN submitted to the meeting for approval the list of members of this Committee, subject to such additions as the Branches may make by nominating new members.

The question arose as to the number of representatives which each Branch was permitted to nominate as members of the Committee; a matter on which the by-laws were silent. After some discussion, it was

Resolved: That it be recommended that each Branch should be allowed to nominate one member; and any Branch having more than 200 members should have the power of nominating two.

It was proposed to invite the following gentlemen to join the Committee: Dr. Walter Dickson, Surgeon-Major Evatt, Dr. Slight, and Mr. F. Wallace.

PROFESSOR SIR DOUGLAS MACLAGAN.

A CONGRATULATORY address was presented to Sir Douglas Maclagan by the students of the University of Edinburgh, on the occasion of his knighthood, on Wednesday afternoon, June 23rd, in the Anatomy Lecture Theatre, which was literally packed from floor to ceiling with teachers, graduates, and students. Professor Sir WILLIAM TURNER presided, and was supported by Professors Chiene, Simpson, Cossar Ewart, Crum Brown, Dickson, and Greenfield.

The CHAIRMAN said they were met there that afternoon for a very pleasant duty. The announcement that the Queen intended to bestow the honour of knighthood upon Professor Sir Douglas Maclagan was received by all of them with great joy. There was no member, not merely of the Faculty of Medicine, but of the Senatus Academicus, for whom they had a greater regard.

The following address was then read, and afterwards presented by Mr. G. W. MOSELEY, President of the Students' Representative Council.

To Sir Douglas Maclagan, Kt., M.D., F.R.S.E., Professor of Medical Jurisprudence in the University of Edinburgh, President of the Royal College of Physicians, etc.

We, the Students' Representative Council of the University of Edinburgh, desire, on behalf of our constituents—the whole body of the students of the University—to express to you our sincere and hearty congratulations on the recent high honour which it has pleased Her Most Gracious Majesty to confer upon you.

For a quarter of a century you have occupied the Chair of Medical Jurisprudence, and during the whole of that period, by the high standard and noble tone of your teaching, by your personal courtesy and scholarly accomplishments, you have raised the subject which has engaged your more particular attention to the honourable position in which it is held by the professions.

You have, during your professional career, acted as the confidential adviser of the Crown in medico-legal matters, especially those involving toxicological questions, and the value of your opinion has been recognised both by the bench and the bar.

To your unfailing energy and devotion to your subject we owe the thoroughly equipped hygienic department and the practical character given to the science degree in public health—a new and very valuable departure in medical science.

You have attained to eminence in the widely different spheres of medicine on the one hand, and of the "ars poetica" on the other; and we can assure you that your academic song "Alma Mater" would be alone sufficient to hand down your name to posterity as the Laureate of the University.

That you may long be spared to shed lustre on the University which you have so worthily adorned, and to enjoy the honours you have so nobly won, is the earnest prayer of the community at large, and of the students in particular.

In name of the Students' Representative Council, University of Edinburgh,—ARCHIBALD FLEMING, GEORGE W. MOSELEY, ROBERT C. BUIST, Presidents.—June 22nd, 1886.

Professor Sir DOUGLAS MACLAGAN, on rising to acknowledge the address, was received with loud and prolonged cheering, the students at the same time standing and waving hats and sticks. He said he trusted they would give him credit for sincerity when he said that he never felt so much embarrassed in his life as he did at that moment. He did not take refuge under the plea of being unaccustomed to speaking in public, because he feared, in the language of the Judiciary Court, there were too many previous convictions recorded against him. When, however, he had spoken in public on other occasions, it had been in reference to questions of medicine or science, or questions of a social nature, that had to do with other people, and not with regard to himself. It was needless for him to say how strongly gratify-

ing this remarkable demonstration was to him. He thanked them most cordially and sincerely for their congratulations on the honour which Her Majesty had been graciously pleased to bestow upon him. He had had many felicitations from personal friends there, and many more from those scattered about the country. Those that he valued most decidedly and most strongly were from former pupils who were now in different parts of the United Kingdom. But these felicitations had been passed, in the first place, by the kind greeting he received from his own students in his own class-room, when he lectured for the first time after this occurrence; and then now, in the second place, by the great assemblage at present round about him. He looked upon that occasion as an outcome of the feeling which had always been characteristic of the relations of the students of the University of Edinburgh to their professors; he meant their kind sympathy, warm regard, and loyalty. He felt extremely proud, indeed, that he should be the humble instrument in drawing out such a manifestation of that feeling. He made a very large abatement from the language of the address. For five-and-twenty years nearly—not quite—he had been a professor in the University; and he had to acknowledge with gratitude the Divine Providence that had spared him so long, and left him in the enjoyment of such bodily strength and, he hoped, mental vigour. Allusion was made to his scholarly accomplishments; that was rather a strong expression to use with regard to him. He was hardly entitled to the appellation of a scholar in an academic sense, but, so far as he could accept of it, he could say that since he ceased to be a schoolboy, he had never cut himself adrift from literary and classical enjoyments. With regard to the "ars poetica," he was not a poet, he was a rhymester. He had written many rhymes, as they knew, and a great proportion of them he had written in his laboratory. They were mostly for the edification of his friends in social intercourse; and if it was the case that that little *nugæ*, "Alma Mater," conjoined as it was with the very excellent composition of his friend and colleague, Sir Herbert Oakeley, was so successful, it was extremely gratifying. Might he be allowed to refer to what was not in the address—the interest he took in their sports outside of these walls? He delighted to see some swift-footed Achilles upon the plains of Corstorphine distancing all his competitors. He delighted to see one well balanced upon his bicycle moving swiftly and silently along the high roads of Mid-Lothian—one whom *Pulverem Olympicum collegisse juvat*. And he rejoiced particularly to see a stalwart member of No. 4 Company, under the acute supervision of his learned and gallant colleague, Major Sir William Turner, within the royal precincts of the Queen's park—

Lift on high
The dauntless brow and spirit-stirring eye.

He desired once more to sincerely thank them. The kindest way in which they could concentrate the expressions of that address in one sentence was to say of him—and might it be said of him when he was gone—that "He was five-and-twenty years amongst us as a Professor, and he strove to do his duty."

The proceedings closed with a vote of thanks to the Chairman, on the motion of Dr. Woodhead.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room Exeter Hall, Strand, London, on Wednesday, the 14th day of July next, at 2 o'clock in the afternoon.

June 24th, 1886. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS FOR 1886. ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Meetings of the Council will be held on July 14th, and October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before each meeting, namely, June 24th, and September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 161A, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research, in furtherance of which the grant was made.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

The inquiry on Acute Rheumatism is now closed as the printing of the Tables is completed.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

General inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE have been issued. A report will be made to the Section of Therapeutics at the annual meeting.

PROGNOSIS IN HEART-VALVE DISEASE, based on an examination of cases in which the lesion has existed for an unusual length of time without producing serious symptoms; THE EXTREME DURATION OF INFECTIOUSNESS IN INFECTIOUS DISEASES. The Committee has proposed these two subjects for future inquiry, and has referred them to the Branches of the Association, in accordance with its regulations, with a view to preliminary discussion during the present year. Arrangements have also been entered into with the Section of Medicine of the Annual Meeting of 1886 to hold a discussion upon "Cases in which Disease of the Heart-Valves has been known to exist for upwards of five years without causing serious symptoms;" and with the Section of Public Health to hold a discussion on "The Duration of Infectiousness." The former discussion will be opened by Sir Andrew Clark, Bart., the latter by Dr. Arthur Ransome. The inquiry-papers, to be subsequently issued, will be based upon the information afforded in these Branch and general discussions.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

SOUTH INDIAN BRANCH.—Meetings are held in the Medical College, Madras, on the first Friday in the month, at 4.30 P.M. Gentlemen desirous of reading papers or exhibiting specimens are requested to communicate with the Honorary Secretary. —J. MAITLAND, M.B., Honorary Secretary, Madras.

SOUTH-WALES AND MONMOUTHSHIRE BRANCH.—The annual meeting will be held at the Infirmary, Cardiff, on Thursday, July 8th. Gentlemen wishing to join the Branch or Association should send notice before July 7th.—A. SHEEN, M.D., D. A. DAVIES, M.B., Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of this Branch will be held in the Town Hall, Lancaster, on Wednesday, July 7th, at 2 P.M. The President, Dr. Harker, will deliver an inaugural address. Subject: The Study of Nature as the Foundation of Medical Thought and Practice. The following medical and surgical communications have been promised. Mr. Walter Whitehead: Three cases of Suprapubic Lithotomy. Dr. Stewart: A paper on Provident Dispensaries. Dr. Farrar will show Gerrard's Ureometer, and give a prac-

tical demonstration of its action. Mr. Christopher Johnson: A paper on Sanitary Reform a Hundred Years Ago. Dr. Ashby will shew a specimen of Congenital Biliary Cirrhosis of the Liver from an infant aged 4 months. Dr. Griffith will read a paper on Tobacco Amblyopia in Women. Dr. Walter will show an unusual form of Uterine Polypus. Dr. Davidson will read a short communication upon a Medical Subject. Dr. Charles Rayne will read a paper on General Peritonitis as an early and prominent feature in Glanders. Luncheon will be provided by the President, at the Town Hall, from 12.30 to 2 o'clock. The members will dine together at the King's Arms, at 5 P.M.; dinner-tickets, 7s. 6d. (wine not included).—CHARLES EDWARD GLASCOTT, M.D., Honorary Secretary, 23, St. John Street, Manchester.

NORTHERN COUNTIES (SCOTLAND) BRANCH.—The annual meeting will be held at Elgin, on Wednesday, July 7th. Members wishing to show cases, or to read papers, will oblige by communicating the titles at once to the Honorary Secretary, J. W. NORRIS MACKAY, M.D., Elgin.

OXFORD AND DISTRICT BRANCH.—The annual meeting will take place at Oxford on Wednesday, July 14th. Members who wish to read papers or show cases of interest are requested to inform one of the Honorary Secretaries on or before July 11th. Dr. DARBISHIRE, 60, High Street, and Mr. MORGAN, 42, Broad Street, Oxford, Honorary Secretaries.

CAMBRIDGE AND HUNTINGDON AND EAST ANGLIAN BRANCHES.—A conjoint meeting of these Branches will be held at the Town Hall, Ipswich, on Friday, July 9th, 1886; President, W. A. Elliston, M.D. Programme of Proceedings:—12 noon. Meetings of the Council of each Branch. 12.30 P.M. Separate meetings of each Branch for business purposes. Election of officers, representatives in Council, etc. 1.30 P.M. Luncheon. 2 P.M. Conjoint meeting of the two Branches, President's address, papers, discussions, etc. 5 P.M. River-trip, at the invitation of the President and Mrs. Elliston. The steamer will leave the landing stage at 5 P.M. punctually. 6 P.M. Dinner at the Town Hall. At the meeting of the East Anglian Branch, at 12.30, Dr. Holden, of Sudbury, will move a resolution upon the subject of Medical Defence. The following papers have been promised, and, time permitting, will be read: 1. G. M. Humphry, M.D., F.R.S.: On the Recovering Powers of Old Age. 2. M. Beverley, M.D. (Norwich): Gynæcological Notes, Emmet's Operations for Lacerations of Cervix Uteri, and for Prolapsus Uteri. 3. Mr. J. L. Currie (Ipswich). Short Notes of five cases of Lithotrity at one sitting—one Encysted Stone, one without Anæsthetics, one with Preliminary Injection of Cocaine, one ordinary. 4. Mr. Alan Reeve Manby (East Rudham): To Exhibit a New Lithotrite. 5. C. S. Sherrington, M.B. (Cambridge): A brief series of remarks upon the Relation of the Comma Bacillus to the Epidemic of Cholera in Spain. 6. Dr. Isambard Owen: Remarks upon the Work of the Collective Investigation Committee. 7. Dr. J. E. Taylor, F.L.S., F.G.S.: A brief address upon the remarkable Forest Bed beneath the Estuary of the River Orwell, extending almost from Ipswich to Harwich. B. ANNINGSON, M.D., M. BEVERLEY, M.D., W. T. JACKMAN, G. S. ELLISTON, Honorary Secretaries.—Ipswich, June 28th, 1886.

NORTH WALES BRANCH.—The annual meeting will be held at the Queen's Hotel, Blaenau Festiniog, on Tuesday, July 20th, at 12.30 P.M. Papers and contributions have been promised by Lawson Tait, F.R.C.S.; F. Imlach, M.D.; John Roberts, M.D.; E. T. Davies, M.D.; A. Emrys-Jones, M.D.; John Richards, M.R.C.S.; Robert Jones, M.R.C.S.; D. M. Williams, M.R.C.S.; C. E. Steele, M.R.C.S.; in addition to the Presidential Address by T. Eyton Jones, M.D.—W. JONES-MORRIS, Honorary Secretary.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting will be held at the Green Dragon, Hereford, under the presidency of Mr. T. Bates, of Worcester, on Tuesday, July 6th, at 3.45 P.M. Business:—To elect Officers and Council for the ensuing year. The President's Address: Mr. T. Bates, Worcester. The Tonic Treatment of Epilepsy as opposed to the present method of treatment by Bromides: Mr. Tyrrell, Malvern. Pseudo-hypertrophic Paralysis (with case and microscopic specimens): Dr. Paul Chapman, Hereford. A "Porro's Operation": Mr. Bates. Case of Aneurysm of the Radial Artery; treatment by Ligature; subsequent bony deposit in the Sac: Mr. Turner, Hereford. The annual dinner will be at 5.30 punctually. Dinner tickets, 5s. each, exclusive of wine.—GEO. W. CROWE, M.D., Honorary Secretary, Worcester.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—The annual meeting of the Branch will be held at 198, Union Street, Aberdeen, on Saturday, July 17th, 1886, at 11 A.M. Hospital visit and demonstrations. 11 A.M. Business: 1. Minutes, etc.; 2. Ballot for admission of new member; 3. Council's Report and Treasurer's Balance-sheet; 4. President's address; 5. Election of President-elect for the ensuing year; 6. Election of Honorary Secretaries and Treasurer; 7. Election of Members of Council; 8. Selection of place of next June meeting. Dinner in the Imperial Hotel, Stirling Street, at 3 P.M.; price, exclusive of wine, 5s. per head.—ROBERT JOHN GARDEN, J. MACKENZIE BOOTH, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: ANNUAL MEETING.

THE thirty-fourth annual meeting of this Branch was held at the Holborn Restaurant, on Tuesday, June 29th, at 5.30 P.M. The chair was taken by the retiring President, WALTER DICKSON, M.D., who afterwards resigned it to his successor, JOHN S. BRISTOWE, M.D., LL.D., F.R.S.

Report of Council.—Dr. GRIGG, one of the honorary secretaries, read the following report.

In presenting the thirty fourth annual report, the Council of the Metropolitan Counties Branch have to announce that the number of members remains nearly the same as at the last annual meeting. The number then on the list was 914; since that time, 10 have died, and the names of 45 have been removed on account of resignation and other causes. On the other hand, there has been an accession of 58 new members.

The members whose deaths have been reported are: Mr. G. D. Brown, of Ealing, formerly a much respected member of the Council of the Branch; Mr. J. M. Burton, of Lee, formerly a vice-president of the Branch; Mr. W. White Cooper, Surgeon-Oculist in Ordinary to Her Majesty the Queen; Mr. George Hazel; Mr. A. R. Lee; Deputy Surgeon-General C. G. Logie; Mr. Francis Mason, surgeon to St. Thomas's Hospital; Mr. James Smart; Dr. Sigismund Sutro; and Dr. Frederic Weber.

The death of Mr. White Cooper took place just after Her Majesty had expressed her approval of the honour of knighthood being conferred on him. Since the last annual meeting, several other members of this Branch have received this mark of royal favour, namely, Sir J. Crichton Browne, Sir William B. Dalby, Sir Dyce Duckworth, Sir E. H. Sieveking (a former president of this Branch), and Sir John Tomes, F.R.S.

At the end of November of last year, a meeting of your Council was held to consider the case of Dr. Alexander Collie. Dr. Collie had for many years been superintendent of the Eastern Hospital of the Metropolitan Asylums Board at Homerton, and had also on various occasions undertaken extra duties on behalf of the Board. Certain irregularities having occurred in the management of the hospital, Dr. Collie was held to be in great measure responsible for them, and was suspended from duty for nine months. It was shown to the satisfaction of your Council, that the duties which Dr. Collie had been called on to perform outside the hospital had been of very great benefit in arresting the spread of infectious diseases; and that his purely medical work within the hospital had been at times so overwhelming as to quite prevent him from performing certain clerical duties connected with the office of medical superintendent. A meeting of the Metropolitan Asylums Board being about to be held for the purpose, among other matters, of considering whether Dr. Collie should be reinstated in office, your Council prepared a memorial for presentation to the Board, embodying the reply of Dr. Collie to the charges made against him, drawing attention to the great public value of his professional services, and urging on the Board the opinion of the Council, that his suspension for nine months far exceeded the penalty called for by any omissions of duty which had occurred when he was overburdened with professional work. A deputation of your Council had an interview with the Asylums Board on December 5th, when the reinstatement of Dr. Collie in office was proposed and carried, although by a small majority. The Council believe that the arguments then adduced by your President and other members contributed materially to this satisfactory result.

At the time of the last annual meeting, the Council of this Branch was engaged in negotiations with the Senate of the University of London, with the view of obtaining greater facilities for the admission of London medical students to the degrees of the University. The Senate, however, have not made such concessions as, in the opinion of your Council, would meet the necessities of the case; and your Council accordingly determined on summoning a meeting of the Branch to consider the subject of degrees for London medical students, and to discuss the question of approving the plan proposed by the Royal Colleges of Physicians and Surgeons, of obtaining power to grant, under certain conditions, a degree or title of Doctor of Medicine. A general meeting was accordingly held at the Royal School of Mines on May 31st, when the following resolution, proposed by Sir Andrew Clark, and seconded by Mr. Jonathan Hutchinson, was carried *nemine contradicente*:

"That, negotiations with the University of London not having led to the desired result, this meeting recommends that the Royal College of Physicians of London, and the Royal College of Surgeons of England, should continue their endeavours to obtain power to grant degrees in medicine."

Your Council believe that the action taken by the Metropolitan Counties Branch will have an useful effect in encouraging and stimulating the two Colleges in their endeavours to find a means of supplying a much felt want in the profession.

At the annual meeting, last year, a report from the Council regarding out-patients of hospitals was approved; and your Council were authorised to take such steps as might be necessary for carrying into effect the recommendations contained in the Report. On January 27th, a deputation from your Council had an interview with the Hospitals Association. Your President (Dr. Dickson), Dr. Henty, and Dr. Gilbart Smith, explained the views arrived at by the Branch, especially with regard to the objections to the system of payments by patients. The deputation were courteously received, and attentively listened to by the Chairman (Sir Andrew Clark) and the other members present at the meeting; and a discussion followed, the tone of which was generally in accordance with the opinions of this Branch.

Your Council have had before them for consideration the following proposal to form a Medical Defence Fund, adopted by a meeting of the Essex district of the East Anglian Branch.

"That, as medical men may at any time become liable to false and groundless charges of a ruinous nature, it is most desirable that a Medical Defence Fund be formed and administered in connection with the British Medical Association, and that its members should be asked to contribute a small sum, annually, to this legal fund. Those who do so to become entitled, should occasion arise, to legal advice and assistance."

While they do not express disapproval of the principle implied in the foregoing resolution, but regard the proposal as worthy of careful consideration, your Council have come to the conclusion that the proposition, as laid before them, is so difficult in its details, that it cannot be carried out practically, with safety to the Association; which, if it allowed an institution of the kind proposed to be connected with it, might incur a dangerous pecuniary responsibility.

The beneficial effects, as observed in Germany, of the statutory revaccination of school-children, have been brought under the notice of your Council; and they would suggest that the subject is one which deserves careful consideration by the Branch on an early occasion.

In pursuance of an instruction given at the last annual meeting, your Council has considered the question of increasing the number of members of Council of the Branch. The subject has been debated at two meetings of the Council; and it has been decided that, under present circumstances, an increase would not be desirable.

Dr. Walter Smith, a member of the Branch, has given notice that he will propose at the present meeting that the number of Vice-Presidents be increased from four to six, and that of ordinary members of Council from eighteen to twenty-four.

The Council regrets to record the retirement of Dr. Alexander Henry, the Senior Honorary Secretary of the Branch, after a service of twenty-seven years, during which he has devoted himself with most exemplary fidelity to the duties of his office; and it desires to bear testimony to the great ability, zeal, and energy with which Dr. Henry has conducted the business of the Branch, which, from the increase in the number of members (about 100 to 900) has become much more onerous than it was at first. To his never failing kindness and courtesy, the office-bearers and Council are deeply indebted; while his intimate knowledge of the affairs of the Branch, and constant endeavours to promote its usefulness, have greatly contributed to its growth and prosperity. The Council is glad to announce that Dr. Henry has agreed, as Secretary of a Finance Committee of the Council, to continue to receive the subscriptions of members, and so render valuable service to the Branch.

Your Council have had under consideration the subject of the tenure of office by the honorary secretaries of the Branch, and have decided that, in future, it is expedient that the secretaries should not hold office for more than six years; they being subject, however, to annual re-election according to the by-laws.

Dr. E. Hart Vinen and Dr. Hale White have resigned the office of secretary in the West Middlesex and South London Districts, and the thanks of the Branch are due to them for their labours. Your Council wish that the number of members attending the District meetings were more numerous, and that the hopes entertained when the Districts were first established were more amply fulfilled than is at present the case. At the same time, the exertions of the District Secretaries to bring the members together for instructive intercourse deserve, and will no doubt receive, grateful recognition on the part of the Branch.

By the kind permission of the Council of the Royal Medical Benevolent College, the recent meetings of your Council have been held at the office of the College in Soho Square. Your Council have directed the Treasurer to pay a subscription of £5 5s. to the College from the funds of the Branch.

The result of the ballot for the election of officers and Council, and of representatives of the Branch in the Council of the Association, is as follows. *President:* John S. Bristowe, M.D., LL.D., F.R.S. *President elect:* Arthur E. Durham, Esq. *Vice-Presidents:* C. Macnamara, Esq., E. H. Vinen, M.D. W. Dickson, M.D., S. Cartwright, Esq. *Treasurer:* S. W. Sibley, Esq. *Secretaries:* W. C. Grigg, M.D., G. Eastes, Esq. *Eighteen Ordinary Members of Council:* C. A. Aikin, Esq., G. P. Bate, M.D., Alfred Cooper, Esq., S. Coupland, M.D., C. Davidson, M.D., M. Davis, M.D., F. J. Gant, Esq., A. T. Gibbings, M.D., C. J. Hare, M.D., A. Henry, M.D., G. E. Herman, M.B., Berkeley Hill, Esq., Isambard Owen, M.D., R. W. Parker, Esq., A. E. Sansom, M.D., T. Gilbart Smith, M.D., T. Thyne, M.D., J. Williams, M.D. *Representatives in the Council of the Association:* T. Bridgwater, M.B. (Harrow), H. T. Butlin, Esq., W. C. Grigg, M.D., S. W. Sibley, Esq., F. Wallace, Esq.

Dr. BRIDGWATER proposed, Mr. WICKHAM BARNES seconded, and it was resolved:

"That the report of Council now read be received, adopted, and entered on the minutes."

Treasurer's Report.—Mr. SIBLEY, Treasurer, presented the financial reports. The receipts, including a balance of £5 2s. 1d. from last year, amounted to £176 13s. 7d., and the expenditure to £91 1s. 10d., leaving a balance in hand of £85 11s. 9d.

Dr. HARE moved:

"That the Treasurer's Report be received, adopted, and entered on the minutes; and that the Treasurer be authorised to pay a donation of £5 5s. from the funds of the Branch to the British Medical Benevolent Fund."

Dr. GRIGG seconded the motion.

An amendment was proposed and seconded, to refer the question of the donation to the Medical Benevolent Fund to the Council of the Branch. This was lost, and the original motion was carried.

Proposed Increase of Council of Branch.—Dr. WALTER SMITH proposed that the number of Vice-Presidents be increased from four to six, and of ordinary members of Council from eighteen to twenty-four.

Mr. WICKHAM BARNES would second the motion so far as regarded the increase in the number of ordinary members of Council.

Dr. GRIGG proposed as an amendment:

"That a committee be appointed to consider the whole question of officers and ordinary members of Council, and to report to the Council at an early date, with a view to the whole question being submitted to a general meeting of the Branch."

Mr. NOBLE SMITH seconded the amendment, in favour of which Dr. Walter Smith withdrew his motion. The amendment was thus carried as the substantive motion; and the committee was appointed to consist of the past President (Dr. Dickson), the President (Dr. Bristowe), the President-elect (Mr. Durham), the Treasurer, the Branch and District Secretaries, Mr. Macnamara, Mr. Wallace, Mr. Noble Smith, and Dr. Walter Smith.

Dr. DICKSON, after a few valedictory remarks, left the chair, which was taken by the new President, Dr. BRISTOWE, F.R.S.

Vote of Thanks to the Retiring President.—Mr. SIBLEY moved, Dr. BRIDGWATER seconded, and it was carried unanimously:

"That the cordial thanks of the Branch be given to Dr. Walter Dickson for his able and courteous conduct as President of the Branch during the past year, and for the deep interest which he has at all times shown in the prosperity of the Branch, and in the discussion of matters affecting the welfare of the medical profession."

President's Address.—Dr. BRISTOWE delivered an address, the chief subject of which was the means of providing degrees for London medical students. It was proposed by Dr. HENRY, seconded by Dr. HENTY, and carried by acclamation:

"That the best thanks of the Branch be given to Dr. Bristowe for his able and instructive address."

Dinner.—At 7.15 P.M., the members and their friends, to the number of 140, dined together, Dr. Bristowe in the chair. Among the guests present were Professor Humphry, of Cambridge, and Sir John W. Reid, Director-General of the Medical Department of the Navy.

SOUTH-EASTERN BRANCH: ANNUAL MEETING.

THE forty-second annual meeting of this Branch was held at the Town Hall, Worthing, on Tuesday, June 8th.

The retiring President, Dr. T. S. ROWE (Margate), took the chair, and introduced his successor, Mr. W. J. HARRIS.

Vote of Thanks.—Mr. NAPPER, senior, proposed a vote of thanks to the retiring President and Vice-Presidents. This was seconded by Dr. PARSONS, and carried; and was acknowledged by Dr. ROWE.

President's Address.—The PRESIDENT delivered an address on the Rise and Progress of Worthing, especially since it came under the operation of the Public Health Act of 1853.

Dr. BAGSHAWE proposed a vote of thanks to Mr. Harris for his address, which was carried unanimously.

Report of Council.—Dr. PARSONS, Honorary Secretary, read the following report.

After an interval of fifteen years, your Council have again the pleasure of meeting the members and presenting their annual report to them in the town of Worthing. During this period, the Branch has been steadily increasing, both in numbers and influence. At the present time it consists of 491 members; last year there were 488.

Death has deprived us of three members only during the year—Mr. Cooper Forster; Dr. Stephen Monckton of Maidstone; and Mr. John

Burton, of Lee. The last two were members of the Council of the Branch, who commanded the respect and esteem of all with whom they were brought into contact. The uprightness of their conduct, the integrity of their lives, and the honourable manner in which they practised their profession with such marked success, are well known and acknowledged in the Branch. But your Council have to deplore the loss in them of two colleagues whose ripeness of judgment, and practical common sense, were invaluable in deliberation at the Council table; and whose opinions were always received with the respectful attention of those who sat with them. Your Council thought it right that letters of sympathy and condolence should be sent to the bereaved families of these two gentlemen, and the Honorary Secretary has conveyed the sentiments of the Council to them accordingly.

As regards the Districts, your Council have to report some changes in the Secretarial department. Mr. T. W. Reid has retired from the East Kent District, after holding the office of Honorary Secretary for some years, and is replaced by Dr. Tyson, of Folkestone. Dr. Herbert Stowers also has retired from work in the East Surrey District, and Dr. P. T. Duncan, of Croydon, has been appointed Honorary Secretary to the District in his stead. Your Council desire to express their admiration of the very excellent work which both Mr. Reid and Dr. Stowers have done in their districts respectively; and they would also congratulate the members upon having secured the services of such highly qualified successors. In the West Kent District, it is gratifying to report that Mr. Nankivell has returned from his voyage round the world, renewed in health and vigour, and has resumed his duties as District Honorary Secretary with his wonted energy. Your cordial thanks are due to Dr. Lewis Jones for having kindly and efficiently carried on the work of the District during the absence of Mr. Nankivell from his post.

The arrangements for the Annual Meeting of the Association at Brighton, in August next, are proceeding satisfactorily. The Reception Fund has already reached substantial dimensions, and contributions continue to flow in. The gathering promises to be larger than usual, and a considerable sum of money will be necessary for the entertainment of the visitors. At the annual meeting last year, at Margate, the members present voted £50 from the funds of the Branch to this Reception Fund, and a cheque for this amount was duly forwarded by the Honorary Secretary to the Treasurer, Mr. G. F. Hodgson, at Brighton.

The East Anglian Branch, having taken into consideration the groundless and false charges of a ruinous nature which, from time to time, are brought against medical men, came to the conclusion that it was desirable that a Medical Defence Fund should be formed, and administered in connection with the British Medical Association, with the object of affording legal advice and assistance to those members who were unjustly accused. This resolution was submitted to your Council for adoption; but, after considering the matter from every point of view, they arrived at the conviction that the establishment of such a fund would probably tend to increase the number of false charges, instead of diminishing them, inasmuch as the existence of such fund would guarantee costs. They declined to lend the subject their support.

The Parliamentary Bills Committee continue to keep a jealous watch over the proceedings in Parliament, lest measures, injurious to the profession and the public should pass the House of Commons, without having been submitted to judicious criticism. Two measures especially have engaged their attention—namely, the Lunacy Act Amendment Bill and the Medical Act Amendment Bill. These Bills have been so recently reviewed in the pages of the JOURNAL, that it is unnecessary to do more than merely allude to them. Your Council, however, cannot refrain from congratulating the members upon the success which has been so far attained in regard to the Medical Act Amendment Bill. Of the three points, which the Association has always maintained should form a portion of any Bill entitled to the support of the members—namely, the one portal system, the direct representation of the profession on the General Medical Council, and compulsory examination in the three branches of the profession for qualification to practice—the two latter have been conceded by the Government in the Bill which is now before the House of Commons.

The struggles of the Association, therefore, have not been in vain; and the efforts which have been made have been solely with a view to protect the public, and to benefit the profession at large, without regard to individual interests.

Financial Report.—The financial report showed, balance in hand, 1885, £91 0s. 8d.; subscriptions received, £86 16s.; total income, £177 16s. 8d.; total expenses during the year, £121 17s. 9d.; balance in hand, £55 18s. 11d.

The report and balance-sheet were adopted.

Vote of Thanks.—Dr. FULLER moved a vote of thanks to the Council, the auditors, and Scrutineers, for their valuable services during the year. This was seconded by Mr. SIMPSON, and carried.

Council of the Branch.—The following were elected: E. L. Adeney, M.D.; F. Bagshawe, M.D.; R. L. Bowles, M.D.; C. W. Chaldecott, Esq.; T. Eastes, M.D.; J. Ewart, M.D.; E. H. Galton, Esq.; J. H. Galton, M.D.; A. H. B. Hallowes, Esq.; F. B. Hallowes, Esq.; H. Jeaffreson, M.D.; B. Marsack, Esq.; Withers Moore, M.D.; A. Napper, Esq.; C. E. Oldman, Esq.; T. F. Raven, Esq.; J. Reid, Esq.; B. Roberts, M.D.; J. H. Stowers, M.D.; E. W. Thurston, Esq.; W. K. Treves, Esq.; T. Trollope, M.D.; J. S. Turner, Esq.; J. L. Worship, Esq.

Representatives on the Council of the Association.—The following were elected: C. Holman, M.D. (Reigate); G. F. Hodgson, Esq. (Brighton); C. Parsons, M.D. (Dover).

Secretary.—On the proposal of Dr. HOLMAN, Dr. Charles Parsons, of Dover, was unanimously reappointed honorary secretary.

Place of Meeting in 1887.—On the motion of Mr. NAPPER, Aldershot was chosen as the place for the next annual meeting, and Dr. E. J. Barker was appointed President-elect.

Excursions, etc.—After the meeting, some of the members drove to Goring Woods; others visited the infirmary and waterworks; and some made a short trip along the coast in Dr. Fuller's steam-yacht.

Dinner.—At half-past 5, the members dined together at the Steyne Hotel; Mr. W. J. Harris occupying the chair, and Dr. Fuller, the vice-chair.

GLOUCESTERSHIRE BRANCH: HALF-YEARLY MEETING.

THE ordinary half-yearly meeting was held at the Infirmary, Gloucester, on Tuesday, May 18th, at 6.45 P.M.; Dr. GOODING (President) in the chair. Twenty members were present.

Representative on the Council of the Association.—It was proposed by Mr. ELLIS, seconded by Dr. WILSON, and carried unanimously: That Dr. Needham, of Barnwood, be re-elected representative on the Council of the British Medical Association.

Communications.—The following communications were made.

1. Dr. Oscar Clarke read a paper on Tumours of the Kidneys, and showed a specimen.—A short discussion took place, which was joined in by Drs. Gooding and Batten, and Messrs. Bower and Ellis.

2. Dr. Batten read the history of a case of Intrathoracic Aneurysm, and exhibited the patient.

3. Dr. Batten opened a discussion on the Duty of the Profession in the Present State of the Vaccination Question.—A long and interesting debate took place.

The *Supper* was held at the Bell Hotel after the conclusion of the meeting.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

THE fifty-fourth Annual Meeting of the British Medical Association will be held at Brighton, on August 10th, 11th, 12th, and 13th, 1886.

President: W. T. Edwards, M.D., F.R.C.S., Physician to the Glamorgan and Monmouth Infirmary, Cardiff.

President-elect: Withers Moore, M.D., F.R.C.P., Senior Physician to the Sussex County Hospital, Brighton.

President of the Council: Balthazar Foster, M.D., F.R.C.P., Professor of Medicine in Queen's College and Physician to the General Hospital, Birmingham.

Treasurer: C. Macnamara, F.R.C.S., Surgeon to the Westminster Hospital, London.

An Address in Medicine will be delivered by Surgeon-General John S. Billings, M.D., United States Army Medical Department, Washington.

An Address in Surgery will be delivered by Frederick Abell Humphry, F.R.C.S., Surgeon to the Sussex County Hospital.

An Address in Public Medicine will be given by E. D. Mapother, M.D., Consulting Medical Officer to the City of Dublin.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

MEDICINE.—*President*, W. H. Broadbent, M.D. *Vice-Presidents*, Frederick Bagshawe, M.D., Hastings; Joseph Ewart, M.D., Brighton. *Honorary Secretaries*, Francis Warner, M.D., 24, Harley Street, London; Henry Seymour Branfoot, M.B., 42, Norfolk Square, Brighton.

SURGERY.—*President*, John Eric Erichsen, F.R.C.S., F.R.S., London. *Vice-Presidents*, Frederick William Jowers, M.R.C.S., Brighton; John

Ward Cousins, F.R.C.S., Southsea. *Honorary Secretaries*, William Johnson Walsham, F.R.C.S., 27, Weymouth Street, London; Willoughby Furner, F.R.C.S., 2, Brunswick Place, Brighton.

OBSTETRIC MEDICINE.—*President*, Alfred Meadows, M.D., London. *Vice-Presidents*, Constantine Holman, M.D., Reigate; Frederick W. Salzmann, M.R.C.S., Brighton. *Honorary Secretaries*, Charles J. Wright, M.R.C.S., Lynton Villa, Virginia Road, Leeds; Alban Doran, F.R.C.S., 9, Granville Place, W.

PUBLIC MEDICINE.—*President*, Richard Patrick B. Taaffe, M.D., Brighton. *Vice-Presidents*, Sir Charles Alexander Cameron, M.K.Q.C.P., Dublin; Charles Kelly, M.D., Worthing. *Honorary Secretaries*, W. Brown, M.R.C.P.Edin., Carlisle; William Joseph Tyson, M.D., Folkestone.

PSYCHOLOGY.—*President*, Thomas Smith Clouston, M.D., Edinburgh. *Vice-Presidents*, Charles A. Lockhart Robertson, M.D., Brighton; Joseph Raymond Gasquet, M.B., Brighton. *Honorary Secretaries*, Charles Spencer Waller Cobbold, M.D., Earlswood Asylum, Redhill; James M. Moody, M.R.C.S., Surrey County Asylum, Canehill, Purley.

PATHOLOGY.—*President*, Julius Dreschfeld, M.D., Manchester. *Vice-Presidents*, James Frederick Goodhart, M.D., London; Heneage Gibbes, M.D., London. *Honorary Secretaries*, John E. Ranking, M.D., Mount Ephraim Road, Tunbridge Wells; John Caldwell Uhthoff, M.D., 9, Brunswick Place, Brighton.

THERAPEUTICS AND PHARMACOLOGY.—*President*, Thomas Lauder Brunton, M.D., F.R.S., London. *Vice-Presidents*, John Mitchell Bruce, M.D., London; Edward Mackey, M.D., Brighton. *Honorary Secretaries*, Cornelius William Suckling, M.D., 108, Newhall Street, Birmingham; John Theodore Cash, M.D., Drumearn, Earlsfield Road, Wandsworth Common, S.W.

OPHTHALMOLOGY.—*President*, Chas. Oldham, F.R.C.S., Brighton. *Vice-Presidents*, Louis Tosswill, M.B., Exeter; George Anderson Critchett, F.R.C.S.Edin., London. *Honorary Secretaries*, Frank Henry Hodges, F.R.C.S.Edin., 17, Horse Fair Street, Leicester; Arthur Nicholson, M.D., 98, Montpellier Road, Brighton.

OTOLOGY.—*President*, G. F. Hodgson, M.R.C.S., Brighton. *Vice-Presidents*, Alphonso Elkin Cumberbatch, F.R.C.S., London; Edward Cresswell Baber, M.B., Brighton. *Honorary Secretaries*, Henry Albert Reeves, F.R.C.S.Edin., 78, Grosvenor Street, W., London; Patrick William Maxwell, M.D.Edin., 16, Warrington Place, Dublin.

Honorary Local Secretaries: Thomas Jenner Verrall, M.R.C.S., 95, Western Road, Brighton; Alfred Scott, L.R.C.P., German Place, Brighton.

TUESDAY, AUGUST 10TH, 1886.

2 P.M.—Meeting of 1885-6 Council.
3 P.M.—General Meeting. Report of Council and other business. Adjourn at 5 P.M.
8 P.M.—General Meeting. President's Address, and any business adjourned from meeting at 3 o'clock.

WEDNESDAY, AUGUST 11TH, 1886.

9.30 A.M.—Meeting of 1886-87 Council.
11.0 A.M.—Second General Meeting. Address in Medicine.
2 to 5 P.M.—Sectional Meetings.
8 P.M.—A *Conversazione*.

THURSDAY, AUGUST 12TH, 1886.

9.30 A.M.—Meeting of Council.
11 A.M.—Third General Meeting. Address in Surgery.
2 to 5 P.M.—Sectional Meetings.
6.30 P.M.—Public Dinner.

FRIDAY, AUGUST 13TH, 1886.

10 A.M.—Address in Public Medicine.
11 A.M.—Sectional Meetings.
4 P.M.—Concluding General Meeting.
8 P.M.—Reception.

SATURDAY, AUGUST 14TH, 1866.

Excursions.

The following discussions and papers are promised up to the present time. Members desirous of reading papers, or joining in the discussions, are earnestly requested to communicate, without delay, with the Secretaries of the respective Sections.

SECTION A.—MEDICINE.

The following subjects have been chosen for special discussion.

1. Cases in which Disease of the Valves of the Heart has been known to exist for upwards of five years, without causing Serious Symptoms. Introduced by Sir Andrew Clark, M.D., F.R.C.P., F.R.S., London. The following gentlemen have promised to take part in the discussion: Drs. Gairdner, Clifford Allbutt, B. Foster, Douglas Powell, Sir Dyce Duckworth, M. Bruce, Burney Yeo, Skerritt, Byrom Bramwell, Saundby, Sansom, Tyson, Thomas, S. Mackenzie, and Oliver.

2. On the Effects produced by Gall-stones, with particular reference to some Rarer Points in their Symptomatology. Introduced by W. Ord, M.D., F.R.C.P., London. The following gentlemen have promised to take part in the discussion: Drs. Byrom Bramwell, Clifford Allbutt, B. Foster, Pavy, Shingleton Smith, Saundby, and Ralfe.

The President of the Section will deliver his Address on August 12th.

The following papers are promised.

CHURTON, T., M.D. Two Cases of Acetonæmia with Diabetes.
COUTTS, J. A., M.B. Latter Effects of Rickets.
CULLIMORE, D., M.D. Tropical Hepatic Abscess.
CROCKER, H. Radcliffe, M.D. A New Treatment for obstinately recurring Eczema
DRYSDALE, C. R., M.D. The Treatment of Phthisis.
EARDLEY-WILMOT, R., M.B. A Case of Gall-stones.
EYLANDT, J. E., M.D. (Riga). Treatment of Diphtheria.
GAMGEE, A., M.D. On Compressed and Rarefied Air.
HALL, F. de Havilland. Meningitis as a complication of Pneumonia.
HANDFORD, H., M.D. Menstruation and Phthisis.
MANTLE, A., M.D. Etiology of Rheumatism considered from a Bacterial Point of View.
MOXON, W., M.D. Effects of Turpentine, Ergot, and Water, on Albuminuria.
MYRTLE, A. S., M.D. Chronic Inflammation of Mucous Membrane of Pyloric end of Stomach, Duodenum, Common Gall-duct, and Bladder, their Symptoms and Treatment by Harrogate Waters.
OLIVER, T., M.D. On the Relationship of Urea to certain Diseased Processes.
PLAYFAIR, W. S., M.D. Some observations on what is called Neurasthenia.
RALFE, C. H., M.D. Functional Albuminuria.
SAVAGE, George H., M.D. Mental Symptoms with Locomotor Ataxy.
STRAHAN, J., M.D. Intestinal Ulcers and their Treatment, more especially by Arsenic.
WHITE, W. Hale, M.D. Inexplicable Pyrexia.
WHITTLE, E. G., M.D. Melancholia and Insanity in the Sane-Treatment.

SECTION B.—SURGERY.

Sir Henry Thompson will open a discussion on Suprapubic Lithotomy. The following gentlemen will take part in the discussion: Messrs. W. Cadge, Reginald Harrison, Professor Humphry, Berkeley Hill, T. R. Jessop, Greig Smith, W. Pye, Barwell, Bruce Clarke, Edward Lund, Walter Whitehead, and J. Ward Cousins, who will exhibit a new mouth-gag with throat-guard.

The following papers are promised.

HARLEY, George, M.D., F.R.S. Hepatic Phlebotomy and Puncture in Hypertrophic Congestions of the Liver.
IMLACH, Francis, M.D., Liverpool. A Case of Renal Hydatids.
TAIT, Lawson, Esq. Surgical Treatment of Diseases of the Liver.
THORNTON, J. K., Esq.
WILLETT, A., Esq., and MEREDITH, W. A., Esq. Cholecystotomy.

Messrs. Macnamara, Morris, Bellamy, Jessop, and Professor Gastin, of Georgia, will take part in the discussion.

HORSLEY, Victor, M.B. A paper, illustrated by Photographs illuminated by the Lime-light, in connection with the Advances in the Surgery of the Central Nervous System.

Mr. E. Bellamy and Dr. Hughes Bennett will join in the discussion.

ADAMS, W., Esq. On the Treatment of Congenital Displacement, the so-called Congenital Dislocation of the Hip-Joint, by long-continued Recumbency and Extension.
ANDERSON, W., Esq. On Treatment of Aneurysm by Galvano-Puncture, illustrated by cases.
BENTON, S., Esq. Fistula in Ano of the Horse-Shoe Shape.
CLARKE, Bruce, Esq., and STEAVENSON, W. E., M.D. The Employment of Electricity in the Treatment of Diseases of the Urinary Organs.
FITCH, Simon, M.D. (Nova Scotia). The Dome-Trocar and associated Instruments in Paracentesis, Aspiration, Transfusion, Ovariotomy, and Tunnelling the Prostate.
HARRISON, Reginald, Esq. On the Treatment of Urethral Stricture by Internal and External Urethrotomy combined.
JESSETT, F. B., Esq. Surgical Treatment of certain Tumours of the Neck.
KEETLEY, C. B., Esq. Further Remarks on the Radical Cure of Hernia by Injections into the Inguinal Canal.
OWEN, Edward, Esq. Psoas Abscess: when and where to evacuate it.
PYE, W., Esq. A Case of Multiple Papilloma of the Bladder, removed by the Suprapubic Operation.
SMITH, Noble, Esq. On Obscure Disease of the Spinal Column.
STARTIN, James, Esq. The Surgical Treatment of Acne and Lupus.
SYMONDS, Charters J., M.D. The Treatment of Malignant Stricture of the Œsophagus by Tubage.
SYMPSON, Thomas, Esq. A Case of Myositis Ossificans.
WHITEHEAD, Walter, Esq. Three Hundred Consecutive Cases of Hæmorrhoids cured by Excision.

SECTION C.—OBSTETRIC MEDICINE.

The President will deliver a short address.

The following two special discussions will take place.

1. The Alternatives to Craniotomy. This discussion will be introduced by Dr. Robert Barnes; and Professor Porro, Dr. Halliday Croom, Dr. E. T. Davies, Liverpool, Dr. Walter, Manchester, Mr. Greig Smith, Clifton, and others, will be among the speakers.

2. On Removal of the Uterine Appendages. Papers will be read by

Dr. Savage, Birmingham; Dr. More Madden, Dublin; and others; and Dr. Bantock; Dr. E. T. Davies, Dr. G. Elder, Nottingham, and Dr. Imlach, Liverpool; Dr. Walter, Manchester; Mr. Lawson Tait, Birmingham; Mr. Vincent Jackson, Sheffield, and others, will take part in the discussion.

The following papers are promised.

AVELING, J. H., M.D. A Case of Extra-uterine Gestation arrested by Electricity.
BALLANTYNE, J. W., M.B., Edinburgh, Sphygmographic Tracings in Labour and the Puerperium.
BARNES, Fancourt, M.D. On Perinæorrhaphy.
BEVERLEY, Michael, M.D., Norwich. Cases of Laceration of Os Uteri treated by Emmet's operation; Three Cases of Procidentia Uteri treated by Emmet's operation.
BLACK, J. Gordon, M.D., Harrogate. The Use of Stem-Pessaries.
BRAITHWAITE, J., M.D. On a Mode of Treating certain Cases of Amenorrhœa.
EDIS, A. W., M.D. Cases illustrating the Difficulties of Diagnosis in Gynæcological Practice.
ELDER, G., M.D. A Case of Vesico-vaginal Fistula.
EMMET, T. C., M.D., New York. On certain mooted points in Gynæcology.
GRIGG, W. C., M.D. On the Antiseptic Use of Bichloride of Mercury in Obstetric Practice.
HANDFIELD-JONES, M., M.B. Scanty Secretion of Liquor Amnii in the Early Months of Pregnancy, and its Bearing on Diagnosis.
HART, D. Berry, M.D. Successful Case of Abdominal Section for Ruptured Fallopian Tube Fœtation, with Microscopic Examination of the part of the tube removed.
HEWITT, W. M. Graily, M.D. The Early History and Etiology of Uterine Flexions and Displacements.
KINKEAD, R. J., M.D., Galway. Craniotomy and Cæsarean Section.
LUSK, W. T., M.D. (New York). The Proper Moment for the Performance of Gastrotomy in Abdominal Pregnancy.
ROUTH, C. H. F., M.D. On some Points of Difficulty as affecting Medical Men in Cases of Hysteria with Erotic Symptoms.
WALTER, W., M.D. A Case of Uterine Myoma causing obstruction of the Bowels, treated by the Removal of the Appendages.

SECTION D.—PUBLIC MEDICINE.

The general subjects for discussion are the following.

1. Scarlet Fever; its Causation, and the best Sanitary Measures for Dealing with the Disease as it exists among Urban Populations. Dr. Ewart, of Brighton, will open this discussion. Dr. W. Squire will take part.

2. On the Duration of Infectiousness in the following Infectious Diseases: Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. Dr. A. Ransome, of Manchester, will open this discussion. Dr. E. W. Hope, of Liverpool, and Dr. W. Squire, will take part.

3. Diphtheria in Rural Districts: (*a*) Causation; (*b*) Influence of Soil upon the Disease. Dr. C. Kelly will open this discussion.

4. Reports of Water Analyses: the best Method of Stating these so as to secure one Uniform Plan. Dr. Whitelegge will open this discussion.

Dr. Edgar Crookshank will exhibit the various apparatus employed in a Bacteriological laboratory, and give demonstrations of cultivations, microscopic preparations, and photographs of bacteria.

The following papers are promised.

ASHBY, H., M.D. On the Duration of Infectiveness in Scarlet Fever.
CARPENTER, A., M.D. The Causation of, and on the Quarantine which is necessary to be observed in, Scarlatina.
DRYSDALE, C. R., M.D. 1. On Animal Vaccination. 2. Sewage Pollution by the Thames.
EVATT, Surgeon-Major G. J. H. On the Medical Department of an Army Corps in War, with proposal for a more efficient Volunteer Medical Organisation.
HANDFORD, H., M.D., Nottingham. Death-rate of Enteric Fever.
KERR, Norman, M.D. On Hydrophobia, and its Prevention.
PAGET, C. E., Esq. The Influence of Acute, supposed Simple, Sore-Throat in the Spread of Diphtheria.
PRINGLE, Surgeon-Major R., M.D. 1. The Advantages and Disadvantages of Human and Animal Lymph compared. 2. State Vaccination, with special reference to the Compulsory Clauses in the Vaccination Acts.
SEATON, E., M.D. A paper on Scarlet Fever.
SQUIRE, W., M.D. On the Influence of Increased Means of Isolation upon the Prevalence of Scarlet Fever in London.
TATHAM, J., M.D. Scarlet Fever, and the best Means for its Prevention amongst Urban Populations.
VACHER, F., Esq. Duration of Infectiousness in the Exanthemata and Allied Diseases.
WHITELEGGE, B. A., M.D. Reports of Water Analyses.

SECTION E.—PSYCHOLOGY.

The President, Dr. T. S. Clouston, will deliver an address on the Relationship of Bodily and Psychical Pain.

The following papers are promised.

CLARKE, A. Campbell, M.B. Glasgow. Experimental Dietetics in Lunacy Practice. A Record of Investigation and Results.
GILL, Stanley A., Esq., B.A. The Use and Abuse of Seclusion.
SAVAGE, G. H., M.D. On Alternations of Neuroses.
SHUTTLEWORTH, G. E., M.D. The Relation of Marriages of Consanguinity to Mental Unsoundness.
THOMSON, D. G., M.D. On the Separate Care and Medical Treatment of Recent Cases of Insanity, either in Existing Asylums, or in Lunatic Hospitals to be Established for that Special Purpose.
TUKE, D. Hack, M.D. On the Alleged Increase of Insanity.

The President will introduce a discussion as to How the Medical Spirit can best be kept up in Asylums for the Insane.

Discussions will also be invited upon Degradation of Habits and Feelings in Relationship to Mental Disease, and other subjects. The Secretaries will be glad to receive communications from members willing to read papers or to take part in the discussions.

SECTION F.—PATHOLOGY.

The following subjects have been chosen for special discussion.

1. Peripheral Neuritis. Opened by papers by Dr. Ross (Manchester), and Dr. Buzzard (London). Mr. Watson Cheyne, Professor Charcot, Drs. Clifford Allbutt, Hadden, Poore, Drummond, Saundby, Maguire, and Whittle, will take part in the discussion.

2. Aneurysm. Introductory paper by Timothy Holmes, F.R.C.S. Messrs. Barwell, Bryant, Savory, H. Morris, C. J. Symonds, Watson Cheyne, R. Maguire, and E. Lund, will take part in the discussion.

3. The Etiology and Pathology of Pneumonia. Introductory papers by Dr. Octavius Sturges and Dr. R. Douglas Powell. Dr. Churton, Dr. R. Maguire, Sir Andrew Clark, Dr. Duckworth, and Dr. Hollis will take part in the discussion.

The following papers are promised.

BARWELL, R., Esq. On Aneurysm.
CHEYNE, Watson, M.B. On Cholera.
CHURTON, T., M.D. The Pathology of the Adrenals.
CROCKER, Radcliffe, Esq. The Anatomy of the Early Stage of Keloid, and will show drawings of different types of Leprosy
GREVES, E. Hyla, M.D., Liverpool, will show a Rare Form of Cerebral Tumour, and give an account of the same.
HOLLIS, W. A., M.D. Pulmonary Tuberculosis, associated with Heart-Disease.
MAGUIRE, Robert, M.D. On Albuminuria in Diabetes.
RAKE, B. N., M.D., (Government Medical Officer, Trinidad). 1. An Inquiry into the Distribution of the Leprosy Bacillus. 2. Experiments on the Communicability of Leprosy to Animals.
YOUNG, Professor A. N., Manchester. On Traumatic Malignancy.

SECTION G.—THERAPEUTICS AND PHARMACOLOGY.

An Introductory Presidential Address will be given by Dr. T. Lauder Brunton, F.R.S.

The following subjects have been selected for special discussions.

1. Antipyretics; to be opened by Dr. Carter, of Liverpool.
2. Analgesics; to be opened by Dr. Spender, of Bath.
3. Action of Drugs in Albuminuria; to be opened by Dr. Saundby, of Birmingham.

The following gentlemen have promised papers: Messrs. Mitchell Bruce, J. M. Jessop, and Stone.

DRYSDALE, Charles R., M.D. Mercury as an Antidote in Syphilis.
HANDFORD, H., M.D., Nottingham. The Pathology of a rare form of Skin-disease affecting the Sebaceous Follicles.
ST. GEORGE, George, Esq., Lisburn. Experiments with Manaca in the Treatment of Rheumatism.

SECTION H.—OPHTHALMOLOGY.

Mr. Jonathan Hutchinson will open a discussion on the Different Forms of Choroiditis, in relation to their several Causes.

Mr. Anderson Critchett will open a discussion on Episcleritis.

An improved Electric Refraction Ophthalmoscope will be shown by Mr. Henry Juler.

The following papers are promised.

ABBOTT, G., Esq. The Use of Styles in the Treatment of Epiphora.
ANDREW, Edwyn, M.D. Ophthalmic Hints.
BARRETT, J. W., Esq., and LANG, W., Esq. On the Causation of Phlyctænula, Ophthalmia and Sycosis.
BROWN, Edgar, Esq.
CRITCHETT, G. Anderson, Esq. On Dislocation of the Lens.
FROST, W. Adams, Esq. What is the best Method of Dealing with a Lost Eye?
GLASCOTT, C. E., M.D. On Sarcoma of the Choroid, followed by Amblyopic Symptoms in the Sound Eye.
HARTRIDGE, Gustavus, Esq.
HEWETSON, H. B., Esq. The Treatment of Interstitial Keratitis by Operation, without Constitutional Remedies.
HIGGENS, Charles, Esq.
JOHNSON, L. L., Esq. Paper, and Demonstration of several new Ophthalmic Instruments.
TAYLOR, Charles Bell, M.D. 1. Is it Desirable, in Certain Cases, to Substitute Resection of the Optic Nerve for Ablation of the Eye-ball? 2. On a Method of Treating Epiphora without Slitting the Punctum Lacrymale.

SECTION I.—OTOLOGY.

The following papers are promised.

BABER, E. C., Esq. On Examination of the Nasal Cavities from the Front (illustrated with Diagrams).
BARR, T., M.D. 1. On the Varieties, with Appearance, of the Tympanic Membrane compatible with Good Hearing. 2. On the Value of Rinne's Test, in the Diagnosis of Disease of the Nervous Structures of the Ear.
CUMBERBATCH, A. E., M.B. Aural Vertigo.
ELLIS, Richard, Esq. Labyrinthian Hæmorrhage, with Exhibition of Patient.
MACDONALD, Greville, M.D. The Functions of the Nose in Health and Disease.

PRITCHARD, Urban, M.D. Counter-irritation in the Treatment of Ear-disease.
WOAKES, E., M.D. Diagrammatic Scheme, showing relations between Aural and Nasal Diseases.

Discussion to be opened by Spencer Watson, Esq. : On the Complications of Nasal Polypi.

Members desirous of reading papers are particularly requested to communicate without delay, with the Secretaries of Sections, that the arrangements may be as complete as possible prior to the meeting.

ANNUAL MUSEUM.

THE twentieth annual museum will, by permission of the Town Council, be located in the Corn Exchange, a large hall, communicating with the Dome, and having a separate entrance in Church Road.

It will be open to the profession from August 9th to August 15th, and will be classified in three sections.

SECTION A.—Foods, drugs, hygienic and sanitary appliances. A specialty will be made of all kinds of prepared, peptonised, and other compound nutrients. (Honorary Secretary, Dr. Mackey, 1, Brunswick Road, Hove, Brighton.)

SECTION B.—New books, instruments, and appliances—medical and surgical; galvanic and other batteries and apparatus. (Honorary Secretary, Dr. Whittle, 65, Dyke Road, Brighton.)

SECTION C.—Anatomical and pathological specimens, diagrams, casts, or models; microscopes and microscopical preparations. (Honorary Secretary, D. W. Giffard, Esq., 5, Pavilion Parade, Old Steine, Brighton.)

A name and description, printed, if possible, must be attached to each exhibit, which should be sent to the Corn Exchange, Brighton (to the care of the Secretaries of the respective sections), between Monday, August 2nd, and Saturday, August 7th. Ample counter space will be provided, and, so far as possible, equal facilities will be given to every exhibitor.

A description, for insertion in the Museum Catalogue, should be forwarded to the private address of the respective Secretaries, at least one month before the meeting, that is, by July 10th.

CATALOGUE.—The catalogue will be provided gratis, but advertisements will be charged at the usual rate, namely, one page, £1; half-page, 12s. 6d.; quarter-page, 7s. 6d.

TO EXHIBITORS.—The expenses of carriage and of removal to be borne by the exhibitor. The Committee will exercise every reasonable care as to objects entrusted to them, but will not be responsible for risk or accident.

NOTICES OF MOTION.

Dr. WARD COUSINS hereby gives notice that he will move the following addition to, and alteration of, the By-laws; namely,

Page 17, By-laws. Addition to "d," second line, after the word "member," add "of a Branch within the limits of the United Kingdom of Great Britain and Ireland."

Addition to "d."—"No person shall be eligible as a representative member of a Colonial or Indian Branch unless, at the time of his election, he shall be a recognised member of the Branch, and shall have resided within the area of the Branch for at least twelve months prior to his election. The election of Crown, Colonial and Indian members of the Council shall be annual, and shall be subject to the same by-laws as the election of other representative members."

May 6th, 1886. FRANCIS FOWKE, *General Secretary.*

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Reflex Neurosis determined by Nasal Affections.—Tetanus Cured by removing Compression from the Radial Nerve.—Tetanus Cured by Sedatives and Electricity.—Micrococcus in the Interior and Exterior Granular Cells of the Eye.—Rancid Butter.—M. Pasteur.

IT has been observed that chronic nasal affections are frequently co-existent with certain neuroses, such as asthma, migraine, vertigo, laryngeal cough, and dyspnœa. Dr. Hering has recently published notes, in the *Annals des Maladies du Larynx et des Oreilles*, of a case which presented curious symptoms. The patient was a man aged 50. He had suffered for eleven years from the results of violent vocal exertion whilst under the influence of anger. Whenever he talked loudly and excitedly for a few minutes, aphonia ensued, and continued for about half an hour; then the voice returned, and disappeared a few hours later. The following day, the patient recovered his voice; but the pitch was quite altered; it was cracked, and speech became more and more difficult, and a phrase of any length was checked by a spasmodic inspiration, and the patient frequently stuttered. This condition increased under the influence of emotion, or physical fatigue. After suffering in this way for ten years, fits of dyspnœa occurred, and obliged the patient to seek medical advice. The first attack came on suddenly in the night, without any evident reason; it lasted for at least five minutes, and was accompanied with all the symptoms of laryngeal spasm. The respiration was loud and blowing, and then became inaudible; speech was entirely lost; the patient suffered from physical distress, and violent palpitation of the heart. After this attack, which was short, violent perspiration set in; the patient slightly frothed at the mouth, and expectorated. From that time, the attacks came on almost every second day. The patient was carefully examined. The middle turbinated bones of the nose were found to be hypertrophied. The application of caustics cured the local condition, and the symptoms of neurosis disappeared. Dr. Hering mentioned several other similar cases, but, nevertheless, did not agree with those authors who believed that nasal affections were the only cases of hysterical paralysis or spasm of the larynx. Still he considered that these affections had frequently their origin in nasal affections.

A remarkable case of traumatic tetanus was recently cured by the removal of compression from the radial nerve. A boy, aged 14, was admitted to Conrad Brunner's wards at Zürich, for a fracture of the left radius, which had occurred three weeks previously. The fourteenth day after the fracture, the child observed that he could not stretch the fingers of the left hand; his parents noticed that, when he walked, his body was bent forward. The symptoms became more and more marked; the child had bad nights, and was sent to the hospital. Symptoms of tetanus, risus, trismus, and emprosthotonos, were marked. On examining the patient, there was evidence of a fractured epiphysis of the radius badly reduced, and a bulky callus just below the articulation. It seemed evident that the tetanus resulted from compression of the radial nerve by the callus. The parts were exposed by incision, when it was found that there was pressure of the nerve by new formations attached to the callus. The compressed nerve was set free, and the prominent portion of the radius resected. The symptoms of tetanus slowly disappeared; the patient had morphine injections. Three weeks after the operation, the patient was cured.

Dr. M. L. Moreau publishes, in the *Alger Médical*, January and February, 1886, notes on a case of tetaniform symptoms cured by rest, sedatives, and electricity. The patient had trismus and opisthotonos, without any apparent reason; his intelligence was intact. He recovered in four days, during which period morphine and chloral were given in full doses, and the patient was kept thoroughly at rest, and was enveloped in cotton-wool. The patient had presented similar symptoms fourteen years previously, in consequence of injury to the scalp from a nail. On the present occasion, another equally insignificant reason was suggested. The patient was a neuropath, and in order to obtain relief from his condition, he covered his body with needle-puncture by using an instrument similar to a cupping apparatus. These recurring tetanic attacks indicated a constitutional predisposition which M. Moreau sought to explain by hysteria, but the symptoms were not sufficiently marked to justify this diagnosis, nor was there any evidence of poisoning by strychnine. A carefully kept register of the patient's temperature during the attacks would perhaps have furnished some data, but this was not done. The most probable hypothesis was that repeated cutaneous irritation, practised on a neurotic patient, provoked accidents of a tetaniform character.

At a recent meeting of the Paris Surgical Society, M. Poncet stated that the bacteria of granulations were studied in 1881 by Sattler. M. Poncet detected in an eye enucleated by M. Dehenne the presence of a micrococcus in the interior and exterior of the granular cells. This investigator also found it in the membrane of Descemet, and in the iris. M. Poncet considered it possible that the micrococci had penetrated into the anterior chamber in consequence of an incision, for iridectomy had evidently been performed. M. Poncet showed drawings representing the position of the micrococcus in the granulation. Sattler's statement that this micrococcus was analagous to that of gonorrhœa, M. Poncet considered to be erroneous. He declares that the former is much larger.

At a recent meeting of the Academy of Sciences, M. Pasteur read a communication from M. Duclaux on rancid butter. It is generally known that butter in contact with the air and light becomes rancid. All kinds of butter undergo this change, which alters its flavour, and renders it disagreeable to the palate, but does not render it unfit for culinary purposes. Butyrine is transformed into butyric acid—one of the fatty acids discovered by M. Chevreul. M. Duclaux believes this process to be purely chemical, and perfectly independent of micro

organisms. Butyrine absorbs oxygen from the air, and becomes butyric acid; contact with the air and sunlight is favourable to this change. Fungi sometimes appear, and hasten the process, but they are adventitious factors, and not essential to it.

There are one or two new facts concerning M. Pasteur's preventive treatment for hydrophobia which, we think, may be worth while noting. The rabbits to be inoculated are chloroformed during the operation of trephining and inoculation, which are effected on aseptic principles as much as possible. The wound is only slightly moistened with carbolic acid; if it were thoroughly washed out with this acid, the virus would be destroyed. The bottles in which the spinal cords are preserved are no longer closed at the lower tube by a tap, but by a piece of cotton-wool. M. Pasteur now only makes ten inoculations, instead of thirteen, as in the case of Meister, the first patient. The inoculations are made every two days; thus there is a day's interval after each inoculation. The first inoculation is made with a spinal cord that has been preserved fifteen days, the second with a cord fourteen days old, and so on. The last inoculation is made with a cord six days old. M. Pasteur inoculates from cords which have been preserved for only from one to five days, those cases where the wounds resulting from the bites are especially dangerous, either on account of the region they occupy, their number, or the death of tissue which is injured.

CORRESPONDENCE.

☞ To Correspondents. ☜

Our correspondents are reminded that prolixity is a great bar to publication; and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return, and hold over a great number of communications, chiefly by reason of their unnecessary length.

IMPROVEMENT OF THE RELATIONS OF CONSULTANTS AND PRACTITIONERS.

Sir,—Since the publication, in the British Medical Journal, of the programme of our Association, considerable progress has been made. We have received the adhesion, already, of upwards of sixty practitioners, a large proportion of whom are resident in the metropolis. Many of these gentlemen have accompanied the expression of their desire to join our Association with a further expression of their strong sense of the necessity of some action on the part of general practitioners to limit the existing abuses, and to prevent the confusion, ill-feeling, and damage which arises from the dubious position in this matter of a great proportion of hospital physicians and surgeons, so-called consultants.

If it were desired to sum up these mischiefs under two heads, it would be found that they include chiefly (1) the loss of patients from their direct appropriation, voluntary and involuntary, by the consultant; (2) the loss of patients in subsequent illnesses, owing to their being accepted by the consultant at a later period, without the intervention of the practitioner who first sent them to him; (3) the loss of the family or friends of the patients to whom such patients have subsequently recommended the consultant as their direct attendant, in lieu of the family attendant originally employed and recommended.

No doubt the second is the more abundant and frequent cause of damage; it is that injury which the consultant is most apt to inflict in his own interest with the least searching of conscience, for it is more frequently in virtue of acts of omission than of commission that such injury is caused. The fact is that, at present, consultants habitually consider that they have fulfilled all their duties to the general practitioner if they fulfil a certain line of etiquette at the particular moment, and in respect of the particular illness which has brought about the consultation. Some men are very rigid in this matter; for there is a well-known code of ethics laid down, which guides the well intentioned, and commands the respect, or simply the fears, of those who might otherwise be disposed to disregard it. But there is no law at present, and there can hardly be said to be any convention, as to the rules which consultants should observe with respect to patients who, being under treatment, come to consult them without being sent by the practitioners who are treating them, or who, in the course of their treatment, choose to consult hospital surgeons and physicians as family practitioners, although at the moment they have their ordinary medical man in attendance upon them. It is not certain what means are taken by consultants generally to ascertain the precise relation with the general practitioner at the moment of any patient who consults them; and it is quite certain that nothing is more common than for general practitioners to find that patients actually under their charge have recently been, or are, at the same time, getting the opinion of consultants. The inconveniences and injury which result are endless; and a large class of the younger consultants at least, but not of them alone, are habitually and constantly in competition with the general practitioner. Under these circumstances, it seems necessary that something should be done to arrest that undercurrent of distrust and suspicion with which general practitioners at present regard, to an increasing extent, the great body of consultants. One gentleman writes to us: "I shall be very glad if you will add my name as a member and supporter of the Association you are forming for the purpose of protecting general practitioners from the evil practices of consultants, and compelling them to act more in accordance with their true vocation."

Another writes; "To avoid the unpleasantness referred to in your letter, I make it a rule to call into consultation only 'tip-top men'"—a very inefficient though significant precaution.

Another says: "It is a great injustice that so many consultants are practically acting as ordinary practitioners. One of these gentlemen, I know, visits, under the guise of friendship, several patients in the neighbourhood of his private residence."

Another suggests that we should officially appeal to the secretary of one of the local societies, to bring the matter to the cognisance of the members of the local society. For these suggestions and communications we fell indebted. We desire to keep this matter under the notice of the members of the British Medical Association, at present, in their individual capacity, because the number of communications which we have already received indicates that we have not spoken a moment too soon, and that the feeling is one that requires in some way to be dealt with.

We ask for further communications from those who desire to aid in bringing about better relations between consultants and general practitioners. We wish to enrol more names, and we shall be glad of the particulars of specific instances of grievance, and of communications, whether of fact, illustration, or suggestion.—We are, sir, yours,

H. Walter Verdon, M.D., F.R.C.S.Eng., 410, Brixton Road, S.W.
W. Gibson Bott, L.R.C.S., M.R.C.S., 414, Clapham Road, S.W., Honorary Secretaries.

PHTHISICAL EMIGRANTS IN AUSTRALIA.

Sir,—During a four years' residence at this hospital, not a few cases of recently imported pulmonary phthisis have come under my notice; and I have been strongly impressed with the facts that advanced cases of phthisis are frequently sent out to the Australian colonies, often by slow sailing vessels, in the inferior classes with very inadequate means.

They usually suffer hardship on the voyage from vicissitudes of climate, rough weather, innutritious and badly cooked food; and, if surviving, land many of them no better for the voyage, without friends and with but scanty funds. Should the pulmonary lesion be trivial, they may and often do derive great benefit from continued residence in the cooler parts of South Australia; but, unfortunately, many a case arrives only to go from bad to worse, and dies far from home and friends, in one or other of our charitable institutions. I enclose notes of one such instance, and venture to suggest that, by again drawing the attention of the profession through the columns of your Journal to this matter, you may be the means of preventing much disappointment, misery, and premature death.—I am, sir, yours truly,

Ben. Poulton, M.D.
Adelaide Hospital, South Australia.

THE POSITION OF SHIP-SURGEON.

Sir,—As a member of the British Medical Association, I would ask you to give the following facts space in the Journal, as they have a direct bearing on the subject of the memorandum in the issue of May 1st.

I have been for the past three months employed as surgeon on board the Guion Line steamship *Arizona*, running between Liverpool and New York. Before the commencement of last voyage (May 15th), I considered it my duty to draw the attention of the manager to the want of proper hospital accommodation on board. There are four hospitals on the ship, two on the main deck, which are in the permanent steerage, and only separated by a thin wooden bulkhead from the rest of the steerage; they are, of course, not available in case it

becomes necessary to isolate cases of infectious diseases. The two other hospitals are on the upper deck—in the bows of the ship, under the turtle back; they can be made to look very presentable in port, but at sea they are always wet in bad weather, and only to be reached by going across an open deck space, at great personal risk. Anyone with experience of the North Atlantic trade, will realise how seldom they could be used as hospitals; in fact, for seven or eight months of the year they could not be used at all. I speak from an experience of over fifty voyages across the Atlantic. Some time ago, these hospitals were commonly used as dog-kennels, and, in one voyage, a dog belonging to a passenger was drowned in one of them; yet these hospitals, which were proved to be "not fit for a dog," were considered sufficient for one of the largest transatlantic steamers, carrying as she did, last voyage, 1,118 persons.

I also considered it necessary to point out to the Marine Superintendent of the Line, the complete absence of direct ventilation in one of the steerages. This space, which was of a cubic capacity of about 8,000 feet, was fitted for 90 passengers, giving about 89 cubic feet space per head. It derived its air supply through two bulkhead doors leading from another steerage. This air, already vitiated before it reached this steerage, had to find its way back by the same doors, as there was no outlet to cause an up-draught, and the ports can only be opened when the sea is quite smooth. I suggested that it could be ventilated by a wooden box shaft led from the nearest hatch, and connected with a wind-sail on deck, but the suggestion was not carried out; the result was, that the passengers who occupied this space lodged a numerously signed protest against the way they had been treated. I consider that this steerage was in a dangerously unsanitary condition. Before sailing, the manager told me I had no right to draw attention to any of these defects; that, if the Board of Trade officials passed the ship as fit for sea, it was all the Company required; and that he could not retain in the service a surgeon who made such complaints; and, on my return to Liverpool, I found that another man had been appointed to the ship. I may mention that, prior to May, 1885, I was for three years employed in other ships of the Guion Line; and during that time, or since I rejoined the service in February last, there has never been the slightest cause for complaint against me, professionally or otherwise.

Ship-surgeons have frequently to overlook neglects of sanitary precautions on passenger-ships, as they know that, if they bring the matter under the notice of the proper authorities, they will certainly lose their appointments; and, if they try to assert an authority in sanitary matters during a voyage, their directions are frequently overruled by the captain; and, until the appointments of surgeons in the emigration service are under Government control, a better state of things is not to be looked for.

I have reported these facts to the emigration office in Liverpool.—I am, sir, your obedient servant,

W. V. Barré, L.K.Q.C.P.I., L.R.C.S.I.

6, Bradford Terrace, Seacombe, Cheshire.

NOMENCLATURE FOR OPERATIONS UPON THE OVARIES.

Sir,—With the advance of surgery, and with the increasing variety of its operations, the necessity for additions of a distinctive and comprehensible character to our nomenclature becomes evident; and recent publications on ovarian surgery have disclosed the urgency for reformation of the nomenclature of this department.

"Gastrotomy," "gastrostomy," "colotomy," "colectomy," "enterotomy," "enterectomy," "cholecystotomy," "cholecystectomy" indicate most satisfactorily the nature of certain different operations upon the stomach, large and small intestine, and gall-bladder. "Laparotomy," a term originally used to denote a flank incision, is now extended to include almost any operation (particularly of an exploratory character) by which the abdominal cavity is opened. I think this word should never be employed except in its strict sense, and (in default of a better term) "abdominal section" should be used to denote exploratory incisions in the abdominal regions, and to include generally all operations by which the cavity is opened by incision.

With regard to operations upon the ovaries, Fallopian tubes, parovarian structures, and broad ligaments, the nomenclature is so various, and some of its terms so ambiguous, that all will concur in the advisability for the adoption of certain words which will indicate clearly particular operations, and those only.

When, for example, a notable ovariotomist makes several positive and conflicting statements, in different articles, as to what he understands, and as to what others understand by "ovariotomy," and when ovariotomy is defined by this surgeon at one time as indicating the removal of an ovary for any reason whatever, and at another time for the removal of an ovarian tumour only; when the same author states in one place that parovarian cysts are entirely different things from ovarian tumours, and that, for their successful removal, it is hardly ever necessary to remove the ovaries as well, but in another place publishes a long list of "ovariotomies," including a large percentage of operations upon parovarian cysts, and excluding a case where both tubes and ovaries are said to have been removed, it becomes high time for a settlement of the existing ovarian nomenclature. What is "ovariotomy?—I am, sir, yours faithfully,

75, Park Street, Grosvenor Square, W. Chas. E. Jennings.

THE REVIVAL OF OVARIOTOMY.

Sir,—Much against my will, and certainly for the very last time on this subject, I must ask you to give admission to a brief letter in reply to Sir Spencer Wells.

His charge is quite inoffensive, because I have heard him hurl it often against others; it seems to be his only weapon, and it was very ineffectual in the case of Dr. Clay. I have another and still more sufficient protection against it in that, from December 1870 to July 1881, I was on terms, first of friendship, and then of close and persistent intimacy, which extended even into close domestic association. The sudden and unexpected rupture of these relations I deeply regret. It occurred when Sir Spencer Wells suddenly, after these eleven years, discovered what a dreadful character I really was; but this discovery was not made until immediately after I had discovered the true history of ovariotomy. Other cause for quarrel than this we never had.

As to the incident of the dedication of my book to him, my diaries and my preserved correspondence again help me, and I find that Sir Spencer Wells's memory is defective. On a Sunday in November, 1876, which both he and I have deep cause to remember, I was Sir Spencer Wells's guest. I asked him to allow me to dedicate my book to him, and he gave his assent. In March, 1877, I forwarded a proof of my proposed dedication to him for his approval, with a request that he would alter anything he did not like, or improve what he thought might be changed for the better. He returned that proof to me with only the first five words left as they were originally. The two copies now lie before me for contrast as I write this letter.—I am, etc.,

Birmingham. Lawson Tait.

GRAHAM FUND.

Sir,—May I be permitted to occupy a few lines in your valuable Journal, to convey to the members of the profession, and others, who subscribed to the above fund, which is fresh in the memory of many, a few words in recognition of the valuable service they have done by kindly subscribing to it.

I am the son of the late Dr. A. F. Graham, and, at the time of my father's death, was a little more than a second-year student, and had only passed my Preliminary Examination. I have now to inform all those who interested themselves on behalf of the family, that, through their means, I have been enabled to pass the Primary Examination at the College of Surgeons, and also to obtain the diploma of the College of Physicians in Dublin, and so am now placed in a position to provide for the other members of the family—two sisters and one brother—all of whom are younger than I am. I am ever indebted to Dr. James Barr, of Liverpool, for the kindly interest he took in starting the fund, and his endeavours since to raise the amount by soliciting the benevolence of the profession. Allow me, through your columns, to express on behalf of my sisters, brother, and myself, our gratitude, and to say how thankful we feel for what has been done on our behalf.

I trust that now I may be able to progress satisfactorily, and be an honourable representative of the profession, and so give the satisfaction to those who kindly contributed, that their alms were not given in vain. Remaining ever indebted to the profession for the kindly feeling they have exhibited, I am, dear sir, yours faithfully,

Charles W. Graham, L.K.Q.C.P.

58, Everton Road, Liverpool.

THE LONDON MEDICAL SCHOOL.

Sir,—Allow me to correct a typographical error in the report of the concluding remarks I made at the meeting of the Metropolitan Counties Branch, on the question of degrees for London Medical Students which should read thus: "With such wealth of opportunity a great medical school could be soon properly organised and constituted, if placed under wise central guidance; and in attractiveness and efficiency would soon *excel* all others in the world as much as this vast metropolis eclipsed in magnitude all other cities."

At present, the London Medical School is *equal* to the greatest in

practical efficiency, but if supplemented by great scientific teaching institutions, as advocated by Dr. Broadbent, it would speedily surpass them all.—I remain, sir, your obedient servant,

WALTER DICKSON, M.D., Ex-President of the Metropolitan Counties Branch.

Fairfield, 32, Belvedere Road, Upper Norwood.

CERTIFICATES IN PSYCHOLOGICAL MEDICINE.

SIR,—With reference to your leading article on this subject in the JOURNAL of March 13th, all medical superintendents must congratulate the Association on the wise and proper step proposed in granting certificates. But, sir, I think that all medical superintendents should be entitled to receive such a certificate, or the position of old and respected men will be made insecure, and especially at a distance from England, by the possible arrival of a gentleman possessing the certificate of the Medico-Psychological Association, and informing the responsible authorities that the gentleman in office has not proper certificates.

Surely, sir, a medical superintendent of five years' experience should be entitled to recognition at the hands of the Association. I would propose, therefore, that all duly qualified and properly registered medical men, who shall produce satisfactory evidence of having acted as medical superintendent (of any asylum containing more than two hundred patients) for the space of five years, shall, on applying to the Secretary of the Medico-Psychological Association, be entitled to receive the certificate of the Association.

Trusting that the English medical superintendents will consider this matter, and not forget the position of their colonial brethren, I am, your obedient servant,

H. E. HACON, L.R.C.P.Lond., etc.
Medical Superintendent, Hospital for the Insane.

Sunnyside, Christchurch, N.Z.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

THE undermentioned appointments have been made at the Admiralty during the past week: J. A. M'ADAM, Surgeon, to the *Penguin*; Thomas M. SIBBALD, Surgeon, to the *Duke of Wellington*; Robert F. BOWIE, Surgeon, to the *Superb*; J. PICKTHORN, J. H. DAWE, and E. APTHORP, Surgeons, to the *Duke of Wellington*, additional, for disposal; M. A. LYDEN, to be Surgeon and Agent at Roundstone; R. F. B[illegible]E, Surgeon, to the *Victor Emmanuel*, additional, for disposal; V. G. THORPE, Surgeon, to the *Paluma*.

MEDICAL STAFF.

DEPUTY SURGEON-GENERAL HOYSTED, recently promoted, has been directed to return from Bengal to England.

Surgeon-Major J. R. RAHILLY and M. D. O'CONNELL, M.D., serving in the Bengal command, have been permitted to exchange places on the Indian roster of service.

Surgeons F. J. LAMBKIN and R. F. ADAMS, M.B., also serving in Bengal, are likewise allowed to change places on the Indian roster.

Brigade-Surgeon J. JAMIESON, M.D., serving in Madras, is appointed to officiate in the Administrative Medical Staff of the Army, with the honorary rank of Deputy Surgeon-General, *vice* Deputy Surgeon-General T. TAIRANT, M.D., on furlough.

THE INDIAN MEDICAL SERVICE.

Surgeon-Major D. WILKIE, M.B., Bengal Establishment, is appointed to officiate as Statistical Officer to the Government of India, in the Sanitary and Medical Departments, during the absence on deputation of Surgeon-Major A. Stephen, M.B.

Surgeon S. C. NANDI, M.B., Bengal Establishment, is appointed to the officiating medical charge of 40th Native Infantry, *vice* Surgeon F. D. C. Hawkins.

Surgeon D. FRAIN, Bengal Establishment, is appointed to the officiating medical charge of the 42nd Assam Light Infantry, *vice* Surgeon D. F. Barry, appointed Garrison Surgeon at Fort William.

Brigade-Surgeon W. H. MORGAN, Madras Establishment, has retired from the service, on a pension of £790 per annum; he dates as Assistant-Surgeon from August 4th, 1855. Mr. Morgan served during the Indian Mutiny, in 1858-59, and was at the affairs at Nianutpore, Temple, Nimree, and Bluary Fort in the Etewah District; he was also engaged in the operations in Shahabad, from December, 1858, to the following March, and in Bundelcund in November, 1859 (medal).

Surgeon-Major H. E. BOSWELL, M.D., Madras Establishment, has also retired on a similar pension, he having commenced his service on the same day as Mr. Morgan. Dr. Boswell likewise served during the Indian Mutiny, and was present at the relief of Lucknow and Cawnpore, and in the operations against the mutineers of the Gwalior Contingent.

The services of Surgeon-Major T. C. H. SPENCER and Surgeon J. SMYTH, M.D., both of the Madras Establishment, are placed at the disposal of the Public Department.

Surgeon K. C. SANYAL, Madras Establishment, is appointed to the officiating medical charge of the 12th Native Infantry.

Surgeon J. S. WILKINS, Bombay Establishment, in medical charge of the 8th Native Infantry, is ordered to proceed on service to Burmah.

Surgeon M. B. BRAGANZA, of the Bombay Establishment, is also ordered to Burmah on service.

Surgeon-General B. SIMMONS, M.D., of the Madras Establishment, has been awarded a good service pension.

The under-mentioned gentlemen have been granted leave of absence for the periods specified: Surgeon-Major J. J. MONTEATH, M.D., Bengal Establishment, for six months on medical certificate; Surgeon-Major A. B. SEAMAN, Bengal Establishment, for twelve months on medical certificate.

Surgeon M. W. TAYLOR, of the 1st Cumberland Volunteers, and G. E. NORTON, of the 4th Middlesex (West London) Volunteers, are granted the honorary rank of Surgeon-Major.

Acting-Surgeon C. W. DOYLE, M.B., of the 1st Volunteer Battalion of the Norfolk Regiment, has resigned his appointment, which dates from October 13th, 1883.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, June 24th, 1886.

MEDICAL ACTS AMENDMENT BILL.

[SPECIAL REPORT TO THE BRITISH MEDICAL JOURNAL.]

ON the motion of Sir LYON PLAYFAIR, the amendments made by the House of Lords were considered.

Sir LYON PLAYFAIR moved that they be agreed to.

Dr. TANNER: I cannot help calling the attention of the House to the fact that when this Bill was under discussion here, we took a division on the point whether the two Universities of Aberdeen and St. Andrew's should be treated collectively and have one member, or whether each of these universities should individually have a member; and the House came to the conclusion that they should have one member collectively. I must ask this House, therefore, to disagree with the amendment made by the House of Lords, giving each of these Universities a member on the Medical Council. I oppose the amendment on three grounds: first, because it gives an increase in the number of the representatives of and an undue influence to corporations. One of the main objects in framing and introducing this Bill was to as far as possible destroy the power of corporations, because it was practically antagonistic to everything that benefited medical education and everything that springs therefrom, and also because it was not to the benefit of the public. My second ground for opposing the amendment is, that I object on principle to the disproportionate representation on the council of any country. When we look to the representatives on the Medical Council, what do we see? In England you have had six persons nominated from time to time by Her Majesty with the advice of the Privy Council, and four of them are nominated for England, and one each for Scotland and Ireland. Passing to the corporations, we find that England has now eight members under this Bill, for the University of Durham and Victoria University have one representative each, instead of, as was originally proposed, one collectively. When this matter was under discussion in this House, we found that a number of gentlemen who were interested by many reasons in, and more or less connected with, these Universities and with their localities, carried the amendment, giving each a representative; and when they had carried that these Universities should be treated separately, they left the House, and in consequence of their absence, the House was able to prevent the Universities of Aberdeen and St. Andrew's from getting separate representation. To these two objections I will add the third, and that is, that I oppose this amendment because I have this night seen an emasculation of bills coming from the House of Lords.

Mr. CAMPBELL (Universities of Glasgow and Aberdeen): I must say that I entirely differ from the hon. member who has just spoken. I am of opinion that the House gave a right vote on May 31st, when it treated Durham and Victoria Universities to a separate representative each on the Medical Council; and that, unfortunately, when the House was much smaller, it made a mistake in not carrying out the principles which it had previously affirmed, and in refusing to do the same justice to the Universities of Aberdeen and St. Andrew's, as they did in the other case, especially when the cases of the Scotch Universities were much stronger. This mistake has been corrected in the other House, and I hope their lordships' amendment will be agreed to on the present occasion. It is needless to go again into the details as to the claims of the University of Aberdeen, which has one of the most efficient medical schools in the country, and a much larger number of medical students than the Victoria and Durham Universities put together. It would, therefore, be unfair that it should not be granted the privilege of having a separate representative on the Medical Council. The proposal that was affirmed by the vote of this House was, that Aberdeen and St. Andrew's Universities should collectively send a member to the Medical Council, but it should be remembered that these bodies have not the same kind of medical institution. Aberdeen has a medical school. The University of St. Andrew's—a most efficient university in other respects—has not a medical

school, but is only an examining body. It has a large number of medical graduates, and, therefore, may be considered to be a fit object to have a member on the Medical Council, but there is no reason for linking it to the medical school at Aberdeen, and giving them only joint representation. It has been said that at present, under the Medical Acts, the Universities are linked together in sending representatives to the Medical Council. That is the case. The Universities of St. Andrew's and Glasgow are linked together for the purpose, but that practice does not work satisfactorily. It is found to be exceedingly objectionable that a large school, such as the University of Glasgow, should not have the power to appoint a member of the Council, without reference to the University of St. Andrew's, which is on an entirely different footing with regard to medical education. The objection was raised upon the previous occasion, that what has now been done by the Lords' amendment would increase too much the representation of Universities on the Medical Council; but I beg to state that the University of St. Andrew's may be regarded as more representing medical corporations than universities, so that what the Lords have done keeps the proportion just as it is at present.

Sir Lyon PLAYFAIR: I sympathise very much with the remarks of the hon. member for county Cork (Dr. Tanner), because I think that the balance in the Bill, as I originally introduced it, was much the best. But the House, in its wisdom, detached Victoria University from Durham University, and it logically followed, as these Universities of St. Andrew's and Aberdeen were the only ones joined in the whole country, that it was necessary to separate them; and I supported that course. I am very sorry that there is one university less in Ireland. There are only three, and it happens that Scotland has four. The Government think we are obliged to agree to the Lords' amendment.

Mr. SEXTON (Sligo): I have a certain interest in this question, but it appears to me to be pre-eminently a Scotch question; and, in that case, I would appeal to my hon. friend not to press his objection.

All the Lords' amendments to the Bill were then agreed to.

MEDICO-LEGAL AND MEDICO-ETHICAL.

A BELGIAN COURT ON A MEDICAL CLAIM.

AN Antwerp Court of Justice, having to decide on a medical man's claim for attendance on a merchant, whose offer of 1,000 francs had been refused, made, according to *Le Scalpel*, some interesting declarations as to the state of the law in Belgium. Though the penal code forbids any revelation of the nature of a patient's disease in order to justify the medical man's claim for fees, the Court declared that a medical commission was incompetent to decide on the amount of attendance given, as well as on the pecuniary position of the patient; as to which latter question, the declaration of the defendant should usually be accepted. The judgment also pointed out that, if the Court were to ask advice from a committee of medical men, the defendant would have cause to complain that, amongst all the experts, none could be expected to represent him and his interests; and that, therefore, such a committee would not have the appearance of impartiality. Again, the tariff agreed to by the Antwerp medical practitioners of 1874 having been pleaded by the plaintiff, the Court remarked that it had never been accepted by the public, nor made use of by the majority of the practitioners themselves, and that most of these "understood that the dignity of the profession is not to be raised by arbitrary classifications and interested requirements;" besides which, this tariff was agreed to in 1874, a time of great prosperity; and it must not, therefore, be considered as applicable to the present time, when every kind of business is, and has been for a considerable period, in a seriously depressed condition. The judgment concludes by ordering the defendant to pay 1,000 francs, with interest, and the plaintiff's expenses.

INDIA AND THE COLONIES.

INDIA.

THE BOMBAY HOSPITALS.—In Surgeon-General Moore's Administration Report for 1885, we find some interesting matter concerning hospitals. In the Jamsetjee Jejeebhoy Hospital the obstetric hospital is improved, but it is "not what it should be." Dr. Moore is hopefully looking forward to the commencement of the new one to which Mr. Harkisondas Narotumdas has liberally contributed a lakh of rupees. He points out that there is a good opportunity for beneficial expenditure in a new ophthalmic hospital. "Too great credit," says Dr. Moore, "cannot be given to Surgeon-Major Arnott for his conduct of the obstetric institution in which various capital operations required for severe female complaints have been recently successfully performed. The ophthalmic surgeon, Surgeon-Major Maconachie, has attained a skill in his special department, which usually causes his wards to be full of patients." The Goculdas Hospital was found to be in excellent order, and, continues the Surgeon-General, "no praise of mine can add to the reputation Brigade-Surgeon Carter has achieved for himself, both as a scientific worker and as the administrator of a hospital." But a second surgeon is required. The position alone is sufficient to condemn the European General Hospital, for, we read, "on the one side is Mody Bay, the night-soil *depôt*, and localities from which the nuisances arise; and on the other are the railway premises, from which the noise of train-shunting goes on most of the night. The female wards are the worst part of this hospital, and the place below, where the probationer nurses have rooms, is unfit for the habitation of European ladies. The old woodwork of the barracks also swarms with bugs. A new European Hospital, worthy of Bombay, is certainly a desideratum, and I would deprecate further expenditure of money on these old buildings, for they can never be made into the requirements of a modern hospital. As regards the conduct of the work, I consider it in excellent hands while presided over by Surgeon-Major Hojel." The subject of a new site was considered the other day by a special committee, of whom Dr. Moore was one. A new site was recommended to the notice of Government, though, of course, the nature of the recommendation has not been allowed to transpire. The sooner the change is effected the better, and after this strongly worded report there can be no reason for delay.

HOSPITAL AND DISPENSARY MANAGEMENT.

NOTTINGHAM COUNTY LUNATIC ASYLUM.

THE Visiting Commissioners in Lunacy, while reporting favourably of the condition of this asylum, express the hope that the question of its removal to a more suitable situation may soon be taken into serious consideration. They remark that "the committee are probably, and not unnaturally, averse from doing much to improve the asylum, the removal of which to a more country site would seem to be inevitable. Every year, it is more and more surrounded by buildings, and becomes more and more unsuitable, by its position, for its purpose." This institution dates from 1810, when it was erected as the "General Lunatic Asylum."

In 1884, there were 82 patients admitted; the recoveries were 38, half of whom were discharged within six months of admission. The recovery-rate was 46.34 per cent. of the admissions. The death-rate was high, namely, 12.67 per cent. of the daily average number resident. Of the 45 deaths, 16 occurred within six months of admission, showing that their previous state of health must probably have been bad; 12 deaths were due to general paralysis, namely, 7 males and 5 females. The number of *post mortem* examinations made in 1884 is not stated.

"A determined attempt at suicide was made in March, by a patient who was well known to be suicidal. She cut her throat deeply, severing the windpipe, with a sharp carving-knife which she had concealed and taken to bed with her. The nurse, by whose wilful disobedience of rules and gross neglect of duties this attempt was permitted, was summarily dismissed. The patient made a good though tedious recovery from the effects of her wound." Another nurse was dismissed for harsh treatment of patients committed to her care.

Seclusion was occasionally resorted to; also restraint, for surgical reasons. Out of the total of over 350 patients, only about 10 of each sex go beyond the asylum-grounds. This is, no doubt, partly due to the inconvenient situation of the asylum. May it not also result, in part, from the nursing staff being inadequate? The proportion of male attendants is only 1 to 16 patients; of nurses, 1 to 14. Additional provision has been made for escape in case of fire. We hope the superintendent will be able, in future reports, to used the revised statistical tables; also to fill up the gaps in Table III. The percentage of deaths, on average numbers resident during the twenty-nine years from 1855 to 1884, was 12.7, which is certainly very high. In only seven out of the twenty-nine years was the death-rate less than 11 per cent. No doubt, this heavy mortality may be partly attributed to the large number of cases of general paralysis received in the

asylum; but no information as to the number of cases of this disease in the asylum is given in the imperfect form of table used.

In conclusion, we cannot refrain from quoting the last words of the committee's report. "The asylum and all the inmates have been regularly inspected by the committee; and to this, combined with the valuable services of the medical superintendent and other officers, the present satisfactory state of the asylum is due."

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

IRREGULAR AND ILLEGAL APPOINTMENT.

SIR,—My attention has been called to an article in your JOURNAL of May 29th last headed "An Irregular and Illegal Appointment of a Poor-law Medical Officer," in which you state that a board of guardians, not far from the metropolis, recently appointed a medical officer without advertising the particulars of the appointment in a local journal, "as required by the General Orders of the Local Government Board."

As this statement is altogether erroneous and misleading, I think it right to call your attention to the provisions of the order to which you refer. They are as follows.

"Article 156. No appointment to any of the offices specified in Article 153 shall be made under this Order, unless a notice that the question of making such appointment will be brought before the board has been given and entered on the minutes, at one of the two ordinary meetings of the board next preceding the meeting at which the appointment is made, or unless an advertisement, giving notice of the consideration of such appointment, shall have appeared in some public paper by the direction of the guardians at least seven days before the day on which such appointment is made."—Yours obediently,

CLERK TO GUARDIANS.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, June 19th, 5,066 births and 2,927 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had been 17.0 and 17.4 per 1,000 in the two preceding weeks, declined again during the week to 16.8. The rates in the several towns, ranged in order from the lowest, were as follow:—Birkenhead, 10.9; Sunderland, 11.9; Derby, 13.1; Brighton, 13.4; Nottingham, 14.6; Hull, 14.7; London, 14.9; Leicester, 16.1; Sheffield, 16.3; Norwich, 17.0; Bristol, 17.5; Leeds, 17.5; Huddersfield, 17.7; Birmingham, 17.8; Liverpool, 18.2; Salford, 18.3; Bradford, 18.5; Portsmouth, 19.1; Cardiff, 19.2; Wolverhampton, 20.2; Bolton, 20.7; Newcastle-upon-Tyne, 21.2; Manchester, 21.3; Halifax, 21.3; Plymouth, 21.8; Oldham, 22.0; Blackburn, 26.8; and the highest rate during the week, 39.6 in Preston. The death-rate in the twenty-seven provincial towns averaged 18.4 per 1,000, and exceeded by as much as 3.5 the rate recorded in London, which, as before stated, was only 14.9 per 1,000, and was lower than in any previous week since September last, when the rate was 13.8 per 1,000, and was the lowest on record. The 2,927 deaths registered in the twenty-eight towns during the week under notice included 293 which were referred to the principal zymotic diseases, against 278 and 265 in the two preceding weeks; of these, 89 resulted from measles, 60 from whooping-cough, 59 from diarrhœa, 35 from scarlet fever, 29 from "fever" (principally enteric), 21 from diphtheria, and not one from small-pox. These 293 deaths were equal to an annual rate of 1.7 per 1,000. The zymotic rate in London during the week under notice was equal to 1.5 per 1,000, while in the twenty-seven provincial towns it averaged 1.9, and ranged from 0.0 in Norwich, Derby, and Birkenhead, to 5.5 in Blackburn, 6.6 in Bolton, and 13.4 in Preston. The deaths referred to measles, which had been 95 and 89 in the two preceding weeks, were again 89 during the week, and showed the largest proportional fatality in Portsmouth, Blackburn, Bolton, and Preston. The fatal cases of whooping-cough, which had steadily declined in the six preceding weeks from 141 to 60, were again 60 during the week under notice, and caused the highest death rates in Oldham, Preston, and Wolverhampton. The 59 deaths from diarrhœa showed a further increase upon recent weekly numbers. The fatal cases of scarlet fever, which had been 29 and 23 in the two previous weeks, rose during the week to 35, of which 16 occurred in London. The deaths referred to different forms of fever, which had been 18 and 25 in the two previous weeks, were 29 during the week. The 21 fatal cases of diphtheria exceeded by 5 the number recorded in the preceding week, and included 16 in London, and 2 in Birmingham. No death from small-pox was registered during the week under notice, either in London, or in any of the twenty-seven provincial towns, but the death of a small-pox patient, admitted from Greenwich, was recorded in the Metropolitan Asylum Hospital Ship *Atlas*, situated outside Registration London. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 25 and 29 at the end of the two preceding weeks, declined to 21 on Saturday, June 19th; 2 new cases were admitted to these hospitals during the week under notice, against 4 and 9 in the two preceding weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.5 per 1,000 and was considerably below the average. The causes of 61, or 2.1 per cent. of the 2,927 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

IN the eight principal Scotch towns, having an estimated population of 1,288,977 persons, 877 births and 536 deaths were registered during the week ending Saturday, June 19th. The annual rate of mortality, which had been 20.9 per 1,000 in each of the two preceding weeks, rose again during the week under notice to 21.7, and exceeded by as much as 4.9 per 1,000 the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 17.3 in Paisley, 17.4 in Greenock, 18.0 in Perth, 19.2 in Leith, 20.4 in Dundee, 20.8 Aberdeen, 20.8 in Edinburgh, and 24.4 in Glasgow. The 536 deaths registered during the week in these Scotch towns included 18 which were referred to whooping-cough, 17 to measles, 8 to diarrhœa, 8 to scarlet fever, 5 to "fever," and not one either to small-pox or diphtheria; in all, 56 deaths resulted from these principal zymotic diseases, against 68 and 49 in the two preceding weeks. These 56 deaths were equal to an annual rate of 2.3 per 1,000, which exceeded by 0.6 the average zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Edinburgh, Dundee, and Leith. The deaths referred to whooping-cough, which had been 21 and 19 in the two preceding weeks, further declined to 18, of which 15 occurred in Glasgow, and 2 in Aberdeen. The fatal cases of measles, which, in the two previous weeks had been 19 and 10, rose again during the week under notice to 17, and included 8 in Edinburgh, and 7 in Leith. The 8 deaths referred to diarrhœal diseases were below the average; 4 occurred in Dundee. The fatal cases of scarlet fever, which had been 6 in each of the two preceding weeks, increased to 8, and included 4 in Glasgow and 2 in Dundee. The 5 deaths referred to fever exceeded by one the number in the previous week; 2 occurred in Glasgow and 2 in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 4.1 per 1,000, against 2.3 in London. As many as 73, or 14.0 per cent., of the 536 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

IN the week ending June 12th, 334 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 20.1 per 1,000. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 20.7; Belfast, 21.4; Cork, 18.8; Drogheda, 29.6; Dublin, 20.2; Dundalk, 8.7; Galway, 10.1; Kilkenny, 21.1; Limerick, 16.2; Lisburn, 19.3; Londonderry, 21.4; Lurgan, 35.9; Newry, 7.0; Sligo, 0.0; Waterford, 23.2; Wexford, 38.5. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 0.8 per 1,000, the rates varying from 0.0 in nine of the districts to 10.3 in Armagh; the 4 deaths from all causes registered in that district comprising 1 from diphtheria and 1 from diarrhœa. The 91 deaths from all causes registered in Belfast comprised 1 from typhus and 1 from enteric fever; 1 of the 2 deaths in Newry was caused by typhus; and the 12 deaths in Londonderry comprised 1 from enteric fever. In the Dublin Registration District, the deaths registered during the week amounted to 141. Thirteen deaths from zymotic diseases were registered in Dublin; they comprised 4 from whooping-cough, 2 from cerebro-spinal fever, 1 from diarrhœa, 2 from erysipelas, etc. Twenty-four deaths from diseases of the respiratory system were registered; they comprised 11 from bronchitis, and 6 from pneumonia. The deaths of 5 children under 5 years of age (including 4 infants under 1 year old) were ascribed to convulsions. Six deaths were caused by diseases of the brain and nervous system (exclusive of convulsions), and 18 by diseases of the circulatory system. Phthisis caused 23 deaths, mesenteric disease 3, and cancer 8. Six accidental deaths was registered. In 15 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

WEST SUSSEX COMBINED DISTRICT.—Dr. Charles Kelly's accounts of the public health in this district, for 1883 and 1884, present the usual characteristics of a healthy country district. The number of deaths registered for 1883 was 1,487, and was precisely the same, in spite of an increase of population, in 1884; the rate per 1,000 for the latter year was 14.3 per 1,000, as against 14.8 for 1883. There was a slight increase in the mortality from zymotic diseases in 1884, 143 deaths being due to these causes, as against 131 in the preceding year. Dr. Kelly calls attention to the order of prevalence of these diseases in his district during ten years, as being very different to that of the country generally. Diarrhœa in every case is first, followed in West Sussex by whooping-cough, diphtheria, scarlatina, measles, and enteric fever. Small-pox has hardly any effect on the death-rate. There was an epidemic of this disease in Midhurst Union during May and June of 1883, among a colony of rag-sorters, five cases proving fatal. There was but one case in 1884. Diphtheria caused 56 deaths in the two years, but the only serious outbreak was at Henfield. The only point common to the history of infection in each case, was the nature of the soil. Most of the cottages attacked were on stiff clay, and near a river or pond, and therefore in a damp situation. Enteric fever was at no time epidemic, though several cases appeared at Upper Beeding, during the summer and autumn of 1884. The water was found to be of good quality, and there was no evidence of the milk supply being affected. Various complaints were made as to the pollution of the river Arun, by effluent sewage from the Horsham sewage farm, and Dr. Kelly seems to have devoted a great deal of time and care in tracing the impurity to its source.

LOUTH RURAL DISTRICT.—Notwithstanding the low rate of wages and consequent agricultural depression, the public health for this district during 1885 has been fairly good. The labouring population is better housed than formerly, and the number of deaths from phthisis has therefore diminished of late years. Dr. Domenichetti

reports an epidemic of scarlatina in the parishes of Mablethorpe, Manby, and Grimoldby, which was attended with considerable fatality in the first named parish. It was due, not so much to any unsanitary conditions, inasmuch as all the usual measures recommended for its suppression were resorted to, as to a culpable disregard of proper precautions on the part of the infected families. Erysipelas, presumably of atmospheric origin, was more frequent than usual. Autumnal diarrhœa, on the other hand, has been less prevalent than for some years past, in connection with which it may be noted that the rainfall for the year was 0.74 below the average of twenty-one years. The deaths from all causes were 341, in the ratio of 14.73 per 1,300 as against 13 for the two previous years. This, however, compares favourably with the average death-rate of Lincolnshire, which is 15 per 1,000. There were 19 deaths from zymotic disease, 11 of which were from scarlatina, 3 from diarrhœa, 3 from diphtheria, and 2 from typhoid fever. The zymotic death-rate was 0.82, as against 0.95 in 1884, 1.28 in 1883, 0.47 in 1882, 0.63 in 1881, 1.8 in 1880, and 1.29 in 1879, showing a fairly progressive diminution. There were two fatal cases of typhoid fever, one imported from Colwich by a railway-porter, the other a boy at Cockerington. The infant mortality shows an improvement on previous years. Dr. Domenichetti states that the Public Health Act has been worked without any friction, but points out the inefficiency of the Act in respect of the exposure of persons from infected houses. He mentions the case of a girl sent to work amongst other young people close to a large public institution, when her brother was suffering from scarlatina. Objection was, of course, taken to such a proceeding, but with no effect. The authorities were powerless to take any further action in the matter, as the girl herself was not suffering from the disease. Dr. Domenichetti maintains that if it were practicable to assign in the different parishes a house to be occupied by a suitable person, who would take charge of the first case of scarlatina where means of isolation were inadequate, little would be heard of its ravages, for it would never spread under such circumstances. With regard to drainage, no new work has been undertaken by the authorities, but it is hoped that an improvement will soon be manifested in the imperfect mode of distribution of the sewage on the sewage farm at Mablethorpe.

DERBY.—Mr. Iliffe's eighth annual report, that for 1884, is an able record of another year's good sanitary work. The health of the borough was satisfactorily maintained during the year, the death-rate being 18.3 per 1000, or 1 higher than during 1883, when the death-rate was noteworthy as being the lowest on record. The zymotic death-rate was 2.6 per 1000. The distinguishing feature of the year was the serious outbreak of typhoid fever. No fewer than 344 cases, of which 317 occurred during the last quarter,—the period of the milk-epidemic,—came to the health officer's knowledge, and of these 46, or 13.3 per cent., proved fatal. About 6 cases of small-pox also occurred; and the details given by Mr. Iliffe concerning them go to prove, if a proof were needed, the great advantage which vaccinated and revaccinated persons have over the unvaccinated, as regards protection against this disease. One of the patients was unvaccinated, and had a severe attack, remaining for some days in a most precarious condition: he ultimately recovered, with, however, "one of the old-fashioned pitted skins." In another instance, in which the patient was an unvaccinated infant, nine weeks' old, who had caught the infection from its father, the remainder of the family, consisting of the mother and four children, all vaccinated, exhibited no illness, although they occupied the same ward as the sick child, and were in continual contact with the small-pox person. Scarlet-fever, of an extremely mild type, caused 319 cases of illness during the year, and of these cases 3.3 per cent., proved fatal. Measles began to be fatally prevalent in December, 1883, and continued increasing in severity; during the next three months as many as 513 cases were disclosed, of which 23 ended fatally. Five other deaths from measles occurred before the close of the year. It is satisfactory to observe that the absolute necessity of adequate hospital provision for infectious diseases has at last been recognised in Derby, and to learn that the question has come within a measurable distance of assuming a practical form. The necessity of a proper hospital has long been insisted upon by the medical officer of health, and the new building, if provided, cannot but prove a great boon to the 87,000 inhabitants of the borough, as well as an eventual economy to the rate-payers.

TANNATE of MERCURY.—The tannate of mercury contains as much as 50 per cent. of its weight of metallic mercury, which is set free on the addition of alkalies. The average dose of this salt is from four to six grains, but as much as ten grains have been given without the production of salivation. It is easily made into a pill with extract of liquorice, and has the advantage of not causing gastric derangement.

MEDICAL NEWS.

UNIVERSITY OF DURHAM.—At the examination for degrees in Medicine and Surgery in Easter Term, 1886, the following satisfied the examiners.

For the Degree of Doctor in Medicine for Practitioners of Fifteen Years Standing.—J. Bately, L.R.C.P., M.R.C.S., L.S.A.; G. Cleghorn, M.R.C.S., L.S.A.; E. Crossman, L.R.C.P., M.R.C.S., L.S.A.; E. Eustace, L.R.C.P.Ed., L.R.C.S.I.; J. E. Fishbourne, L.R.C.P.Ed., L.R.C.S.I.; W. Gowans, L.R.C.P., L.R.C.S.Ed.; J. P. Medermott, L.R.C.S.I., L.K.Q.C.P.I.; R. Patrick, L.R.C.P.Ed., M.R.C.S.; W. Perkins, M.R.C.S., L.S.A.; H. Reston, L.R.C.P., M.R.C.S., L.S.A.; T. Tinley, L.R.C.P.Ed., L.S.A.

For the Degree of Doctor in Medicine (Essay).—F. W. Cock, M.B., M.R.C.S., L.S.A.; W. R. Edwards, M.B., M.R.C.S.; J. I. Parsons, M.B., M.R.C.S.; G. H. Rodman, M.B., M.R.C.S., L.S.A.; J. V. Salvage, M.B., L.R.C.P., M.R.C.S.; W. B. Tomson, M.B.; C. A. Wigan, M.B., M.R.C.S.; J. P. B. Wills, M.B., M.R.C.S.

For the Degree of Master in Surgery.—H. S. Baumgartner, M.R.C.S., L.S.A., College of Medicine, Newcastle-upon-Tyne; G. N. Caley, L.R.C.P., M.R.C.S., St. Mary's Hospital; H. T. Platt, M.B., College of Medicine, Newcastle-upon-Tyne.

Final Examination for the Degree of Bachelor in Medicine. Second-class Honours in Order of Merit.—W. Rawes, M.R.C.S., London Hospital; J. T. James, F.R.C.S.Eng., Middlesex Hospital; G. N. Cayley, L.R.C.P., M.R.C.S., St. Mary's Hospital, and E. H. Young, L.R.C.P., M.R.C.S., L.S.A., University College (equal).

Pass-List in Alphabetical Order.—E. C. Arnold, M.R.C.S., St. George's Hospital; F. Bass, L.R.C.P., St. Bartholomew's Hospital; H. S. Baumgartner, M.R.C.S., L.S.A., College of Medicine, Newcastle-upon-Tyne; A. B. Blacker, M.R.C.S., L.S.A., St. Thomas's Hospital; E. T. Carlyon, L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; A. F. G. Codd, M.R.C.S., St. George's Hospital; R. Courteen, M.R.C.S., St. Bartholomew's Hospital; C. B. Cranstoun, St. Thomas's Hospital; H. W. Cross, College of Medicine, Newcastle-upon-Tyne; I. Davis, Middlesex Hospital; A. F. Dimmock, M.R.C.S., L.S.A., King's College; A. C. Dove, M.R.C.S., St. Bartholomew's Hospital; J. H. Garrett, University College; G. C. Hamilton, L.S.A., London Hospital; Arthur Hardwick, L.S.A., Westminster Hospital; E. L. Hickey, M.R.C.S., King's College; F. Jeffree, M.R.C.S., L.S.A., King's College; A. E. Larking, M.R.C.S., L.S.A., Guy's Hospital; C. W. Low, L.R.C.P., M.R.C.S., L.S.A., St. Bartholomew's Hospital; P. P. Manning, King's College; C. P. O'Connor, University College; H. B. W. Paige, College of Medicine, Newcastle-upon-Tyne; E. Phillips, M.R.C.S., Queen's College, Birmingham; William Race, College of Medicine, Newcastle-upon-Tyne; W. G. Richardson, College of Medicine, Newcastle-upon-Tyne; W. J. Ruddock, College of Medicine, Newcastle-upon-Tyne; W. J. Spoor, M.R.C.S., Middlesex Hospital; J. Straughan, College of Medicine, Newcastle-upon-Tyne; E. S. Sugden, St. Thomas's Hospital; B. G. Sumpter, College of Medicine, Newcastle-upon-Tyne; W. Turnbull, L.S.A., College of Medicine, Newcastle-upon-Tyne; J. Wilding, L.R.C.P., M.R.C.S., Westminster Hospital.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, June 24th, 1886.

Chick-Lucas, James Robb Goodman, M.R.C.S., Bellevue, Brading, Isle of Wight.
Edsell, George Alfred, The Grove, Beulah Hill, Upper Norwood.
Hemming, Claude Philip, Highfield, Bishop's Waltham.
Luff, Arthur Pearson, Denmark Villas, Ealing.
Michelmore, George, M.R.C.S., 49, Gloucester Street, S.W.
Permewan, William, Redruth, Cornwall.
Seville, Charles Frederick, Mossley, Manchester.
White, Francis Silva, M.R.C.S., Lexham Gardens, S.W.

MEDICAL VACANCIES.

The following vacancies are announced.

BARNWOOD HOUSE HOSPITAL FOR THE INSANE. Gloucester.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications to Dr. Needham.

BUCKS GENERAL INFIRMARY, Aylesbury.—Resident Surgeon and Apothecary. Salary, £80, first year, with board and lodging. Applications by July 6th to G. Fell, Esq., solicitor, Aylesbury.

CROYDON UNION.—Medical Officer. Salary, £50 per annum, with extra fees. Applications by July 5th to E. Platts, Esq.

EXAMINERS BY THE SOCIETY OF APOTHECARIES.—Applications by July 20th to J. R. Upton, Esq., Apothecaries' Hall.

HULL ROYAL INFIRMARY.—Honorary Physician. Applications by July 5th to the Chairman, Hull Royal Infirmary.

JERSEY GENERAL DISPENSARY.—Resident Visiting and Dispensing Medical Officer. Salary, £120, with furnished rooms, attendance, coals, and gas. Applications by July 7th to F. A. Hyne, Esq., 43, David Place, Jersey.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, Bloomsbury.—Junior House-Physician. Salary, £50 per annum, with board and apartments. Applications by July 8th to B. Burford Rawlings, Esq.

OWENS COLLEGE, Manchester.—Professor of Chemistry. Applications to the Council of the College, under cover, to the Registrar by August 31st.

ROYAL FREE HOSPITAL, Gray's Inn Road.—Senior Resident Medical Officer. Salary, £104 per annum, with board and residence. Applications by July 7th to J. S. Blyth, Esq.

ROYAL SEA-BATHING INFIRMARY, Margate.—Resident Surgeon. Salary, £100 per annum, with residence, board, and attendance. Applications by July 14th to J. T. Walker, Esq., Secretary.

ST. PANCRAS.—Dispenser. Salary, £100 per annum. Applications by July 15th to A. A. Millward, Esq.

ST. THOMAS'S HOSPITAL.—Surgeon. Applications by July 10th to A. Tritton, Esq.

TEWKESBURY UNION.—Medical Officer and Public Vaccinator for the Overbury District. Salary, £60 per annum, with extras. Applications by July 5th to H. A. Badham, Esq.

WEST RIDING ASYLUM, WAKEFIELD.—Resident Clinical Assistant. Board, apartments, etc. Applications immediately to the Medical Director at the Asylum.

WESTERN DISPENSARY, Rochester Row, Westminster, S.W.—Honorary Dentist. Applications by July 19th to the Secretary.

MEDICAL APPOINTMENTS.

AUDLAND, W. E., L.R.C.P.Lond., M.R.C.S., appointed House-Surgeon to the General Infirmary, Northampton, *vice* J. Oswald Lane, M.D.Cantab., resigned.

AIRD, C., M.B.Aberdeen, appointed Medical Officer to the East Riding Lunatic Asylum, *vice* G. T. Broatch, M.B.Edin., resigned.

ALDRIDGE, Norman E., M.B., C.M.Edin., appointed House-Surgeon to the Royal South Hants Infirmary, Southampton, *vice* John Griffin, M.B., resigned.

BENNETT, Frederick William, M.D.Lond., M.R.C.S.Eng., appointed Honorary Assistant-Physician to the Leicester Infirmary and Fever House.

BOXALL, Robert, M.D., M.R.C.P., appointed Visiting Physician to the General Lying-in Hospital, York Road.

BROADRICK, H. E., M.R.C.S.Eng., appointed Resident Clinical Assistant to East London Hospital for Children, *vice* A. H. Roberts, M.R.C.S.Eng., resigned.

ELLIS, William Henry, M.R.C.S., L.S.A., reappointed Medical Officer of Health to the Shipley Urban Sanitary Authority.

FLETCHER, F. A. C., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Kildwick District of the Skipton Union, *vice* R. A. Macnab, M.D., deceased.

FROST, W. Adams, F.R.C.S., appointed Ophthalmic Surgeon to the Victoria Hospital for Children, Chelsea.

HODGSON, Gerald, M.R.C.S.Eng., L.S.A., appointed Assistant House-Surgeon to the Sussex County Hospital, Brighton, *vice* F. J. Paley, M.B., etc., resigned.

JOHNSTON, Francis, M.B., C.M., Glasgow, appointed Senior House-Surgeon to the Liverpool Infirmary for Children, *vice* W. Stookes, M.B., C.M., Edin., resigned.

KEAN, T., L.R.C.P.Edin., appointed Medical Officer to the Galway Union, *vice* M. A. Lyden, L.R.C.P.Edin., resigned.

PENNY, William J., F.R.C.S.Eng., appointed Assistant-Surgeon to the Bristol General Hospital.

PENROSE, F. G., M.D., appointed Medical Registrar to the Hospital for Sick Children, Great Ormond Street, *vice* W. C. Chaffey, M.D., resigned.

RANDS, St. J. O., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the Northampton General Infirmary, *vice* W. E. Audland, L.R.C.P., M.R.C.S., appointed House-Surgeon.

RIGDEN, Alan, L.R.C.P.Lond., M.R.C.S.Eng., appointed Junior Assistant Medical Officer to the Salop and Montgomery Counties Asylum, *vice* P. M. Earle, L.R.C.P., L.R.C.S.Ed., resigned.

SUCKLING, C. W., M.D.Lond., M.R.C.P., appointed Consulting Physician to the Birmingham Orthopædic and Spinal Hospital.

WHITE, E., L.R.C.P.Lond., M.R.C.S.Eng., L.S.A.Lond., appointed Medical Officer of the No. 5 District of the Leeds Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

HOLBERTON.—On the 24th June, at East Molesey, Surrey, the wife of Henry N. Holberton, M.R.C.S., L.R.C.P., of a son.

NEVIN.—On June 28th, at Ballymoney, co. Antrim, the wife of James L. Nevin, L.R.C.P. and S.Edin., of a son.

MARRIAGES.

COOK—CORNWALL.—On June 24th, at St. James's Episcopal Church, Aberdeen, by the Rev. Angus M. Mackay, B.A., Incumbent, James Will. Cook, M.B., C.M., of Bury, Lancashire, to Jane Mackay, second daughter of J. R. Cornwall, Esq., of 2, Queen's Road, Aberdeen.

STURGE—SHERRIFF.—On the 1st July, at St. Andrew's Church, Westminster, by the Rev. Melvill Haslope, Wm. Allen Sturge, M.D., of Nice, France, to Julia, daughter of the late A. C. Sherriff, M.P. for Worcester.

HUDDERSFIELD INFIRMARY.—The Board of Management of the Huddersfield Infirmary have requested Messrs. H. Saxon Snell and Son to prepare designs for the enlargement of the building, and also a report as to the sanitary condition of the premises generally.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY. Obstetrical Society of London, 8 P.M. Specimens will be shown by Dr. Lusk, Mr. Lucas, and others. Papers—Dr. Herman: Case of Chronic Abscess of the Leathers. Dr. Champneys: Observations on the Uterine Canal. Mr. Doran: Pathology of the Fallopian Tube.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal West minster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St. Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

ANSWERS.

Cod-liver Oil and Maltine.

MR. J. N. BEACH (Maltine Manufacturing Company) writes: Your correspondent, "F. T. B.," in reference to your note of May 22nd, on a so-called "solution" of cod-liver oil in malt, asks whether the emulsifying powers of maltine are confined to cod-liver oil, or whether they apply to other oils. Now, while, of course, cod-liver oil or other fixed oil can be worked up into an emulsion with maltine, we, as proprietors of maltine, beg to state that the assertion that such an emulsion is in any sense a true solution of the oil in the malt-fluid, is an assertion that must not be laid at our door. We are most positively assured, on undoubted authority, that no fixed oil like cod-liver oil is truly soluble in any such aqueous liquids as malt-extract. We venture to think that the writer of your note of May 22nd was misled in stating that cod-liver oil forms "a true chemical solution" in malt-extract. The two may be mechanically mixed together, no doubt, and the mixture appears at first sight to be a clear single fluid. Even under the microscope, the two components cannot easily be distinguished. If, however, they could not be distinguished at all, it would not follow that, therefore, the mixture was a true solution. It would only follow either that a solution was before us, or that light was equally, or nearly equally, refracted by either fluid. The latter is, in fact, the case—for, with careful illumination, the oil and extract on the stage-slide can be seen to be distinct. Moreover, the addition of a little water, that is to say, such a dilution as must necessarily ensue when the mixture is taken as a medicine, causes such a difference in the action of the diluted extract on the illuminating rays, that the admixed oil is immediately seen floating about in globules as large as those of the fat in cow's milk. Cod-liver oil cannot, therefore, enter the stomach in solution in malt-extract. But, beyond that, cod-liver oil is not truly soluble in malt-extract, whether inside or outside the stomach, whether diluted or undiluted.

Professional Advertising.

M.D.—We have received communications from several correspondents with reference to an illustrated article which recently appeared in one of the metropolitan "comic" papers. The practitioner referred to appears to have succeeded in keeping within the four corners of the legal enactments in existence, and it is hardly probable that adverse criticism in these columns would turn him from the error of his ways.

DR. NELIGAN (Darlington).—The "Bacterium termo" is said to be a complete failure in the treatment of phthisis.

The late Mr. Thomas Turner.

MR. T. M. STONE writes that the late Mr. Thomas Turner, of Manchester, was born at Truro, on August 13th, 1793. The family came originally from Hertford. He died on Wednesday, December 17th, 1873, at his residence in Manchester, in his eighty-first year. Mr. Crewe will find an interesting memoir of this gentleman published by Messrs. Simpkin, Marshall, and Co. (London, 1875).

Spectacles for Hypermetropic Eyes.

"A MILITARY MEMBER" asks whether any member could recommend a light pair of spectacles, or *pince-nez*, to protect very prominent hypermetropic eyes from dust, glare, and wind, exposure to which causes constant inflammation of the conjunctiva. A pair of goggles answers well, but is too conspicuous for parade. The bridge of the nose is flattened. We assume that our correspondent knows what glasses he requires, and that the only doubt is as to the best kind of frame. Any of the leading working opticians would be able to make a suitable spectacle-frame, but it would probably be impossible to adapt a *pince-nez*.

NOTES, LETTERS, ETC.

Degrees for London Medical Students.

DR. RALPH RICHARDSON (South Kensington) writes: Sir Andrew Clark, in his description of the medical education at Edinburgh, has entirely omitted its special advantages. This consists in two extramural schools within three minutes' walk of the College buildings. In each, there is a lecturer on every branch of medicine. The rule is that a lecturer stops on the striking of the College clock, and the next lecture begins exactly five minutes after the hour. The result is that a student can attend the lectures of a professor in the College on one subject, and the lectures upon another subject, at either of the extramural schools.

In any system of patronage, some mistakes must be made. The faculty of teaching is not always the natural result of knowledge. But if the professor of anatomy do not teach his students, it is certain that a more able lecturer will be found to lecture in the extramural school. In fact, every student has the choice of three lecturers in each faculty, and can select which he prefers to attend.

All these lecturers are by this means—if he can teach at all—well paid; the professors from £1,000 to £2,000, the lecturers £300 to £500, with the prospect of a chair. The professors and lecturers, also, never change their chairs, or so rarely as not to be worth consideration. Also, it is not considered fair to the students to repeat their lectures, but to rewrite them in great measure each year. The professors of the theoretical subjects, also, do not practice; in fact, have no time for private practice, and some do not even attend the hospital as the professors of anatomy, chemistry, and physiology. As to examinations, the students are examined only upon the subjects they have been taught. As to the London University, the difficulty has been to find out what is wanted. About twenty years ago, I wanted one of my sons to pass the matriculation examination. I came up to London on purpose, and spent days in searching for a tutor or school for the purpose. At last, I was recommended to place him at one of the medical schools. I spoke to the principal and the tutor, and received assurances that the subjects were duly taught. All went well for the first term, but, on the second, I found my boy was required to attend lectures and classes whose subjects had no reference to the matriculation. I remonstrated, and was told that their education was far better than that required by the London University, but there were not sufficient men to form a class on that term. After three terms, he "went up," and was rejected. I sent him to a good college at Oxford, and he matriculated at once, having lost a year.

This letter is sufficiently long, otherwise I could mention that I positively know a case where a man passed all his subjects but one, and that one on which he was so strong that his tutor asserted he knew it as well as his examiner—no redress—"but may come up again in six months," idling during the meantime.

Maternal Impressions.

MR. HENRY A. FEATHERBY (St. George's Union Infirmary) writes: I read, with much pleasure, Mr. W. Anderson's paper on "Congenital Malformation of the Hands and Feet transmitted through Four Generations," and was much struck by the history of alarm produced, during early pregnancy, at the sight of a parcel of living lobsters. It will, I think, be interesting to Mr. Anderson and others of your readers to state that an exactly similar alleged maternal impression was adduced as the causation of the deformity in my case, namely, the fright at the sudden and unexpected sight of a basket of living cray-fish during pregnancy, which I omitted to mention in my report.

Papain in Dyspepsia.

DR. GEORGE HERSCHELL writes: Will you kindly do me the favour to insert the following, as it is the last time that I shall take the trouble to answer Dr. Martin?

As he simply contents himself with contradicting Professor Finkler's statements, the only question now is, Whose opinion is more worthy of credence? That of Dr. Finkler, Professor of Physiology to the University of Bonn, who has devoted *some years* to the study of papain; or that of Dr. Martin, whose knowledge of the drug is limited to some experiments made with a few samples, supplied, I believe, by Mr. Christy himself.

With regard to Dr. Martin's last letter, I am surprised that he appears to be ignorant of the fact, known to all those who have any knowledge of practical medicine, that pancreatin is always prescribed two or more hours after a meal, and accompanied with a sufficient dose of bicarbonate of soda to keep it from being destroyed in its passage through the stomach. The superiority of papain is that it does not require this alkali, as it is not destroyed by the degree of acidity in the contents of the stomach after stomach-digestion is complete. When Dr. Martin has had a little more practical experience in the treatment of disease, he will, perhaps, discover for himself the difference between the way drugs act in the laboratory, and in a complex organism like the human body.

The fact remains that, in the hands of practical men, papain has been, and is being, proved extremely useful in certain disorders of digestion, and no amount of reasons why it should not be so, advanced by scientific theorists like Dr. Martin, will alter the fact that it is.

Trinity College, Dublin.

A. B. writes: Being an old student of the medical school of Trinity College, Dublin, I occasionally run over to visit my old haunts, and see what is doing in the medical way at old Trinity. I was over the other day. It will interest the members of our Association, who are old students of Trinity, to know that great improvements and additions are being made in the medical school; a large and beautiful building is being erected, parallel with the museum, fronting into the College Park; the wall, which hemmed in the school from the College Park, will be taken down. I believe the building will cost about £10,000; there will be a new dissecting-room, lecture-rooms, and laboratories for chemistry and physiology; altogether, I believe it will be one of the most beautiful and complete schools in the United Kingdom, when finished.

Surgeons of Atlantic Steamships.

M. A. P. writes: On my return to England the other day, I was shown the memorandum with reference to the present position of the medical service of Atlantic steamships (BRITISH MEDICAL JOURNAL of May 1st). Will you allow space for a few words from one who has some little experience of the service?

A ship's surgeon ranks below, and his name on the passenger-list comes after, the purser. He who looks after the ship's accounts is reckoned of more importance than he who looks after its health. I was assured a short time since by an officer, that, in a well-known Atlantic Company, the surgeon was not allowed on the quarter-deck after the first day or two, when the ladies were supposed to have got over sea-sickness.

Once, having to complain of the unsanitary condition of a ship, before sending in my report, I showed it to the captain, who, during its reading, ejaculated, "You'll get yourself disliked;" "They'll take no notice of you;" and "It's no business of yours." The letter, however, was sent, and, I am glad to say, acted upon; but it might have been my dismissal from the service.

On the voyage out to New York, every unvaccinated steerage passenger, unless "protected"—that is, has had small-pox—must be vaccinated before he can land at Castle-garden; this means examining, it may be, a thousand people (not long ago, I examined nearly nine hundred), and they are not always free from pediculi, nor even clean. A fair fee should be allowed for each successful vaccination, and this would also be a sufficient safeguard against all slipshod inspections.

In most ships, the purser has the seating of the passengers at table; the tag-rag-and-bob-tail are generally, as a matter of course, placed at the surgeon's end.

Ship's surgeons may be divided into three classes, namely: 1. The young and inexperienced, who, after hard hospital-work, and examination-worry, feel the need of a sea-trip; 2. The desolate and the chronic tippler, who has found "a friend at court;" 3. Those who have a real liking for the sea, and find opportunities, the few days they are in port (Liverpool and New York, for instance), to visit the hospitals, striving to keep up in the ever onward march of progress of medicine and surgery, and who, perhaps, believing the power of the Press to be something more tangible than a will-o'-the-wisp, and in the righteousness of their cause, look hopefully forward to the good time coming.

Royal College of Surgeons of England.

THE following were the questions at the examination for diploma in Dental Surgery, on June 15th. *Anatomy and Physiology* (one question at least to be answered). Describe the tonsils, giving the structure of the mucous membrane, the character of the secretions, the nerve- and blood-supply, and the surgical relations. 2. Indicate the structures, and describe the mechanism by which the head is turned upon the vertebral column, laterally and horizontally. *Surgery and Pathology* (one question at least to be answered). 3. What nerves are affected in the disease known as "tic douloureux?" Give the symptoms, diagnosis, and treatment. 4. How is fistula of the parotid duct produced? Give the treatment. *Dental Anatomy and Physiology* (two questions at least to be answered). 1. Mention instances of teeth modified to serve as weapons for sexual combat. Describe the dentition of the Narwal. 2. Describe exactly the positions occupied by the six anterior upper (i) temporary, (ii) permanent teeth in their crypts. How are they ultimately enabled to stand in a regular arch? 3. If a tooth be disintegrated by mineral acids, what structures will the residue contain? Explain the origin of these resistant tissues. *Dental Surgery and Path*

ology (two questions at least to be answered). 1. What morbid conditions affect the roots of teeth? How far are they remediable, and by what means? 2. What appearances have led to the supposition that caries of the dentine is an inflammatory affection? What are the arguments to the contrary? 3. Mention the various modes of securing artificial dentures, discussing their advantages and disadvantages. What circumstances favour or impede atmospheric adhesion?

An Ancient Alchemist's Laboratory.

In connection with the meeting of the British Association which is to be held in Birmingham, there is to be an exhibition. Messrs. Southall Brothers and Barclay are desirous of representing an ancient alchemists' laboratory. They have received most generous help from Professor Redwood, Mr. Henry Irving, Mr. Lawson Tait, Messrs. Corbyn and Co., Messrs. Godfrey and Cooke, and others; and they will be greatly obliged to any gentlemen who possess old utensils, implements, fixtures, etc., if they will forward particulars in case they are disposed to lend them for the occasion. The exhibition will remain open for about six weeks, commencing in the latter part of August.

Unsatisfactory Inquests.

General Practitioner writes: Your correspondent, Mr. Fred. W. Lowndes, is certainly wrong in his views as to the legality of refusing a death-certificate, and communicating directly with the coroner.

The law requires the medical man to give a certificate of death in every case, "to the best of his knowledge and belief," and places upon the registrar the onus of accepting it, or referring the case to the coroner.

As I interpret the Act of Parliament, the medical man has no option whatever in the matter. It would be satisfactory to have some definite pronouncement on this point.

The Identity of Membranous Croup and Diphtheria.

Dr. Leslie Phillips (Birmingham) writes: The note of Dr. Wm. Mackie, in the Journal of June 19th, calls for comment. I must protest against the introduction into English medical nomenclature of the expression "membranous croup of the prepuce and glans penis." We certainly understand croup to be, in the language of the Committee of the Royal Medical and Chirurgical Society, "a clinical term, signifying laryngeal obstruction accompanied by membrane or not, diphtheritic or not."

In my case, the membrane was firmly adherent to the glans; it required forceps for its removal; this left an irregular bleeding surface, and the process was so painful that I twice gave chloroform before doing it. The presumption that virus was carried by the instruments from the trachea in the morning to the penis in the afternoon, is perfectly irresistible, as is also the conclusion that so-called membranous croup engrafted on a wound produces diphtheria of that wound. But even this evidence of inoculation is met with the supposition that urine can produce the mischief. That this is very special pleading is clear; for while circumcision is an exceedingly common operation, both in Hebrew and Gentile races, and while the condition which Dr. Mackie assigns as the cause of the diphtheritic condition is universally operative, the complication is so exceedingly rare, that I have been able to find, in medical literature, only one case previous to my own.

Erratum.

In the Journal of June 19th, page 1163, last line of first table in Mr. Roger Williams's article on Scirrhus of the Breast, *for* "In 8 cases, recurrence 10 to 11 years after operation," *read* "In 1 case, recurrence, etc."

The case of Dr. F. S. Ridley.

The following sums have been contributed and paid in to the "Ridley Fund."

	£	s.	d.
J. Pickett, London	2	2	0
H. A. Smith, Ealing	0	10	0

Contributions will be thankfully received by Dr. Edwin Moore, of Preston, or H. A. Smith, Esq., of Ealing. (For particulars of the case, see Journal of June 26th, page 1247.)

An Appeal.

Mr. W. F. Brook (Fareham, Hants) writes: Will you allow me, through the medium of your Journal, to bring before my medical brethren the following case of distress, and aid me in getting some help.

Francis Bawle, of Titchfield, Hants, aged 70, and his wife, first came under my notice in 1880, when I engaged him as my assistant to take charge of the Titchfield district in this union.

In 1882, I resigned the appointment, and he was elected my successor. About two years ago, he had a slight stroke, which has been followed by creeping paralysis. Three months ago, he lost the use of his lower limbs, to so great an extent that he was obliged to resign his appointment. He is now entirely without means or relations able to assist him, and has nothing but the union-house before him, unless something can be done. Owing to his having been so short a time in office, the guardians could only make him a grant of twenty-five guineas. He has been acting as assistant to various medical men for many years past, and I hope some of these gentlemen will see this appeal, and help me to start a fund for him. I shall be pleased to receive subscriptions, and acknowledge them through the Journal if you will allow me.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. C. E. Douglas, London; Mr. Macadam Gregor, London; Mr. F. R. Humphreys, London; A Member; Dr. C. W. Suckling, Birmingham; Mr. G. M. Smith, Clifton, Bristol; Mr. H. A. Fotherby, London; Dr William Stephenson, Aberdeen; Mr Lawson Tait, Birmingham; Dr. Poulton, Adelaide, South Australia; Dr. George Herschell, London; Mr. George Sturge, London; Mr. C. J. Lovell, London; Mr. R. W. Parker, London; Mr. Francis Johnston, Inverness; Dr. Wortin, Belfast; Dr John Eaton, Cleator Moor; Dr. J. J. Tay, London; Mr W. V. Barré, Seacombe, Cheshire; Dr H. W. Berg, New York; Dr. Kirkwall, Galway; Dr. Prosser James, London; Dr. A. G. Lavarello, Chepstow; Dr. W. S. Paget, Liverpool; Dr. C. J. Wills, London; Mr. H. D. Wildes, West Malling, Maidstone; Mr. Schramm, London; Mr. J. C. Neligan, Middleton-in-Teesdale; Dr. Macrae, Strathpeffer Spa, Dingwall; Dr. Savage, London; Mr. Timothy Holmes, London; Dr. Ralph Richardson, London; Mr. Guthrie N. Caley, London; Mr. N. H. Nixon, London; Dr. W. K. Haset, Hurstpierpoint; Mr. C. H. Watts Parkinson, Wimborne; Mr. J. F. Maclaren, Azamgarli, India; Dr. Tatham, Salford; Mr. F. H. Simmons, Liverpool; Mr. John J. Marshall, Hawkhurst; Our Paris Correspondent; Mr. William McCracken, Kirkcowan; Mr. G. F. Hodgson, Brighton; Mr. F. Treves, London; Dr. W. A. Elliston, Ipswich; Dr. G. W. Crowe, Worcester; Dr. Maxwell, Woolwich; Dr. H. Bruce Low, Helmsley; Mr. H. M. Fernie, Macclesfield; Messrs. A. Durant and Co., London; Mr. C. W. Graham, Liverpool; Mr. W. F. Brook, Fareham; Mr. D'Arcy B. Carter, Shipley; Mr. W. A. Chalmers, London; General Practitioner; Secretary Sanitary Institute, London; Mr. L. Humphry, Cambridge; Dr. J. Robert Black, Greenock; Dr. Neale, London; Dr. J. Reid, Stafford; Mr. William Hume, Edinburgh; Dr. Burges, Kettering; Dr. H. Tomkins, Leicester; Dr. de Chaumont, Southampton; Mr. G. Moseley, Hove, Brighton; Mr. Charles Gaine, Bath; Mr. F. R. Maynard, Newcastle-on-Tyne; Dr. Moorhead, Cootehill; Mr. Jabez Thomas, Swansea; Mr. W. W. Hardwicke, Dovercourt; Mr. A. Rigden, Bicton Heath; Mr. W. J. Penny, Bristol; Dr. Aldridge, Southampton; Mr. H. A. Smith, Ealing; Mr. W. E. Audland, Northampton; Messrs. J. F. Macfarlan and Co., Edinburgh; Dr. Hacon, Christchurch, New Zealand; Mr. J. Matthews, Waterloo, Liverpool; Dr. Graily Hewitt, London; Mr. J. A. Francis, Southsea; Dr. J. Broom, Clifton; Dr. Edwards, London; Messrs. Woollams and Co., London; Mr. W. Tyler, Cove, Tunbridge Wells; Mr. G. E. Williamson, Newcastle-on-Tyne; Dr. J. Weston Bull, West Chislehurst; Dr. M. Charteris, Glasgow; Dr. P. M. Rice, Galway; Mr. J. Q. J. Morrison, Birmingham; Mrs. Harrison, London; Mr. Palmer, Barton-under-Needwood; Dr. F. L. Watson, James Town, St. Helena; Miss Kate Thomas, London; Mr. Thomas Barclay, Birmingham; Dr. J. Mackenzie Booth, Aberdeen; Mr. C. H. Haycroft, Bow, Devon; Dr. Laffan, Cashel; The Editor of *Industries*, Manchester; The Secretary of the Royal Agricultural Hall, London, Dr. Ward Cousins, Southsea, etc.

BOOKS, ETC., RECEIVED.

Tonsillitis in Adolescents. Thesis for Degree of M.D. By C. Haig Brown, M.D., C.M. London: Bailliere, Tindall and Cox. 1886.

Report of the President of the Board of Health, containing the photographs of persons suffering from Variola Discreta, and an account of the cases. By J. Ashburton Thompson, M.D. Sydney: T. Richards. 1886.

On Disorders of Digestion, their Consequences, and Treatment. By T. Lauder Brunton, M.D. London: Macmillan and Co. 1886.

The Hygiene of the Vocal Organs; Practical Handbook for Singers and Speakers By Morell Mackenzie, M.D. London: Macmillan and Co. 1886.

John Leech's Pictures from the Collection of Mr. Punch, Part II. London: Bradbury, Agnew, and Co. 1886.

Memorials of the Craft of Surgery in England, from Materials compiled by John F. South. Edited by D'Arcy Power, with introduction by Sir James Paget, Bart. London, Paris, New York, and Melbourne: Cassell and Co. (Limited). 1886.

Chemistry of the Carbon Compounds, or Organic Chemistry. By Professor von Richter; authorised Translation by Edgar F. Smith. London: Henry Kimpton. 1886.

The Private Treatment of the Insane as single patients. By Edward East, M.R.C.S., L.S.A. London: J. and A. Churchill. 1886.

The Medical Digest. By Richard Neale, M.D. London: Smith and Co. 1886.

The Modern Treatment of Stone in the Bladder by Litholapaxy. By P. J. Freyer, M.A., M.D. London: J. and A. Churchill. 1886.

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Physician to, and Lecturer on Clinical Medicine at, St. Bartholomew's Hospital.

[*Continued from page 10.*]

3. I pass, next, to consider cases of valvular disease in the adult, due to strain, or to strain together with alcoholic intemperance and hard living in general, including cases of traumatic valvular disease. Of these, it may be said that they are naturally less likely to be void of serious symptoms than other forms of disease. They occur in men chiefly, and in those whose occupation is laborious, either as athletes, soldiers, or working men. It is often impossible here to separate exactly the influences due to strain alone, and to strain *plus* alcoholic intemperance and imprudent living. Hence, I take them together. Exception may be made in the cases of young boating men or amateur athletes, where the early symptoms are palpitation, with evidence of overdistension of the right heart, and of hypertrophy of the left ventricle. In the cases of young soldiers and marines, a certain number are annually discharged from the service from these causes; and the troubles are plainly induced, usually within a year or two of joining, by hard drill, heavy accoutrements, and tight clothing, together with much alcoholic excess and debauchery. And all these causes come to operate together on youths often ill-nourished, too young for the duties of fully grown and developed men, begun at the age of sixteen or seventeen years. If our recruits were taken at the age of nineteen, and suitably dressed, fewer of these cases would occur. These facts are familiar to military surgeons, but the authorities pay little heed to their reiterated remonstrances. Later on, in military life, the influence of syphilis comes in, and aneurysm results. Instead of meeting this grievous damage, Parliament yields to a sensational clamour; and withdraws the only protection from this scourge, hitherto extended to our troops, in the form of the Contagious Diseases Acts, and does so deliberately, in the face of all the opposition that can be raised by the profession at large, and by naval and military surgeons in particular. It is noteworthy that much less cardiac disease from strain occurs in the Royal Navy. The reason for this is, that seamen are suitably dressed for hard work, are trained gradually, and hardened by more wholesome and bracing surroundings.

It is important to follow up cases of early exposure to strain. With care and good treatment in the upper classes, no permanent injury results; but, if a living must be gained by labour, valvular disease progresses, and these cases are never after free from symptoms more or less grave. Well-fed country-bred youths withstand these evil influences better than town-bred lads. Hence the importance of securing recruits in the agricultural districts, and training them at country depôts. Again, the evils of cardiac strain are seen in young soldiers sent to the tropics to do the work of mature men. The officers may begin life in the tropics at the age of 20, or even earlier, with impunity, having no heavy labour; but facts in my possession show that, to get the best work out of men in the tropics, none should begin military or heavy duty there till the age of 23 or 24. Their prospects in the face of all tropical vicissitudes are then much brighter.

Cases to which I now allude have been well studied in the great centres of industry. Dr Clifford Allbutt, Surgeon-Major Myers, and Dr. Fothergill, have elucidated them. They are not such as to furnish examples for our purpose, since symptoms, usually serious, pertain to them from the date of the foundation of the mischief, and only disappear upon prompt and intelligent treatment. The changes are perhaps oftenest primarily in the muscular walls, and secondarily in the valves; but cases occur where the valves suffer in a general degenerative aortitis—a lesion significant of strain *plus* alcohol, and perhaps, sometimes, *plus* syphilis. It may be regarded as a premature senile change. With cessation of exertion, the latter may not supervene, and the hypertrophy may subside; but if no care be taken, valvular sclerosis sets in, and permanent lesion remains, demanding hypertrophy to maintain the circulation. It is in these cases that traumatic mischief may occur; an indurated valve gives way, and the most grave symptoms set in at once. In these cases, life is seldom prolonged, and death may occur in a few days. One case, however, lived for five years. It is probable that a healthy valve hardly ever ruptures; hence, in any given case, we may safely assume the pre-existence of damaged structure.[1] Men in middle life are the common subjects of this lesion, and the aortic valves rupture more frequently than the mitral curtains.

I may refer here to the well known and ingenious view of Dr. Balthazar Foster respecting recognition of ruptured non-coronary aortic cusp, and the prognosis which he founds thereon. I think myself that many more cases are required to furnish absolute proof of his opinions. The idea that the coronary arteries are filled mainly during aortic systole is not held by physiologists. And with respect to the conduction of aortic regurgitant murmurs, I may say that I regard it as the rule to find them well conducted down the sternum, and conveyed along with the blood-current back to the left apex. The intervening right ventricle prevents their being well heard between the xiphoid cartilage and the apex.

Instances in support of these facts may be found in the *Transactions* of the Pathological Society.

4. I take up, next, valvulitis in connection with renal disease, and as associated with general arterio-capillary fibrosis. This represents a large and increasingly recognised class of cases. The cardiac charges are dependent on, or associated with, chronic interstitial nephritis, and result from increased intra-arterial tension. The mitral valve and the aortic cusps both suffer; the former, after hypertrophy of the left ventricle has occurred, and the latter, after long subjection to increased impact of the column of blood upon them in diastole. Sclerosing changes set in and make progress; shrinking and insufficiency result in due time.

These are the cardiac manifestations of the gouty diathesis, and are often associated with granular, so-called gouty, kidneys.[2] For the most part, therefore, they are seen in, or after, middle life, but, in exceptional cases, are found at an earlier period, especially in cases of strong gouty inheritance. They are less often met with where there have been regular and honest attacks of gout, and where the patients have been prudent and well-advised as to their health and habits. There is evidence to prove that intemperance in food, as well as in alcoholics, may set up these changes, and exposure to cold is likewise answerable for them. Mental worries and grief seem to excite, and certainly to intensify, these states, as pointed out by Clifford Allbutt.

Such degenerative change often seems to be but a form of senile decay in certain persons, and life may go on to the tenth or twelfth climacteric period if care and easy circumstances be secured. Winter residence in mild climates adds much to the hopefulness with which such cases may be regarded in the well-to-do. Amongst the lower orders the prognosis is necessarily bad, yet the comfort and shelter of the modern union infirmary do much even for them, as a visit to such institutions abundantly proves. Amongst these patients are to be found many, chiefly men, carrying on active lives. One such, now under my care, is an active country parish priest, who conducts all his services without help. He has had aortic regurgitation for five years to my knowledge, without any cardiac symptoms. Hæmorrhage into his left eye, with detached retina, demanding removal of the eyeball, has had no warning for him, and, though aware of his precarious state, he means to die in harness. He is a very spare man, aged 70, and very abstemious in his habits.

The immunity from grave symptoms in these cases depends on the general constitutional state (the personal factors, as I term them), of which I shall speak when I presently sum up my remarks on the whole of the problem before us.

5. I refer, next, to cases of valvulitis in connection with anæmia. Not much is yet known about this. The subject is difficult, and the less *post mortem* fruits we gather, the better. Evidence is, however, accumulating to show that, amongst the results of anæmia, a measure of damage to the mitral and aortic valves occurs. The mischief probably ensues upon the dilative changes so common in the left ventricle in cases of grave anæmia. Undue tension in the valves leads up to sclerotic change. Dr. Goodhart has well-studied this subject (*Lancet*, March 27, 1880, p. 479). The pulse is often of high tension in

[1] [illegible] a case reported by Dr. Burney Yeo, in which rupture of an aortic valve occurred in a man, aged 45, as the result of a fall. There was history of chronic bronchitis and rheumatic pains, but the man had never been laid up. No immediate symptoms followed. (*Clin. Soc. Trans.*, vol. vii, p. 155, 1872.)

[2] "Gout has appeared to me to be the surest and most abiding condition of actual suffering and neurotic distress within the cardiac area, but it is rarely a demonstrative cause of static change in valves." Walshe.

anæmia as I have observed, though this is hardly as yet recognised; and if the blood-state be not soon remedied, the results of prolonged intra-arterial pressure fall upon the valves most involved. Early and active treatment is thus imperative; and I would here interpolate the remark that, in my experience, it is far too common to find anæmia treated very inadequately. Medication by chalybeates is played with in a trifling manner, and much unnecessary, and sometimes dangerous, delay in the recovery results. Dr. G. W. Balfour has called attention to this point.

Dr. Walshe tells me he has no experience of valvulitis induced by anæmia (spanæmia) pure and simple, but he recognises, as do all pathologists, grave changes in the nutrition of the cardiac walls in consequence. I am inclined to agree with Dr. Goodhart in believing that anæmia is a probable factor in some cases of mitral stenosis, and that it may account for the greater frequency of this lesion in the female. Prognosis here will depend upon the prompt and efficient treatment of the anæmia at an early stage, care being taken that the patient is allowed to rest, and to have her blood restored to normal corpuscular richness before she passes out of sight.

It is probable that animals are long the subject of cardiac valvular disease, without the supervention of serious symptoms. A Dandie Dinmont terrier of my own has had a loud mitral murmur for three years, and is, apparently, in no way the worse for it. An experienced veterinary surgeon informs me that he has known horses, the subject of valvular disease, to continue at work, being carefully tended, for three years; and Mr. Robertson, Principal of the Royal Veterinary College, tells me that he has known horses, so affected, able to do moderate work for twelve or eighteen months, without serious inconvenience, proofs of the lesion being afforded after death. He believes that, in many instances, they work for much longer periods. The cases are, moreover, seldom discovered before some important symptoms supervene. Horses and dogs are subject to rheumatism, and strain is an element in the production of valvulitis in both. Mr. Robertson has also known valvular disease to be well borne for lengthened periods in dogs.

6. I consider, lastly, and briefly, the subject of syphilis, in relation to hopeful cases of valvulitis. It is only of late that the whole question of visceral syphilis has been studied. Seventy-five years ago, Corvisart suspected that some valvular vegetations were of syphilitic nature. (*Op. cit.*, p. 217.) Recent observers have, however, found growths of this nature more certainly in the cardiac walls than on the valves. One case, shown as syphilitic valvulitis, affecting the aortic cusps, was brought forward by Dr. Leared (*Path. Soc. Trans.*, 1868), but Drs. Burdon Sanderson and Cayley, after examination, decided against this view. Walshe and Gowers think the matter is not yet proved. I have notes of a case in which gummatous growths were found in the left ventricle and septum of the auricles of a woman, aged 25, a prostitute, who had died suddenly. There were scars in the groin. (Edinburgh Royal Infirmary, June, 1862.) Lancereaux describes a case in a man, where there were thickenings in the mitral and tricuspid valves, but he allows that the valves and orifices commonly remain intact in syphilitic affections. (*Treatise on Syphilis*, New Syd. Soc., vol. i, p. 319.) I regard the following case as one, possibly, of cardiac syphiloma. A medical man, aged 26, came under my care for a cardiac murmur, which he could hear when he was excited, or held his mouth open. His personal and family history was good. There was no history of rheumatism. The murmur had been detected a year previously, in 1871. He was passed for life-insurance in 1870. A systolic murmur was audible in the aortic area, and up the carotids. There was no indication of hypertrophy. Dr. Walshe diagnosticated aortic stenosis. There was history of syphilis six years previously, followed by sore-throat and squamous rash. No mercury or iodide of potassium had been taken. I believed it probable that there was a gummatous growth about the aortic valves, or in the cardiac wall adjacent, and ordered iodide of potassium. He had very trifling symptoms, palpitation being worst after exertion, or a full meal. I heard no more of this case till some weeks since, when the patient wrote to say he had had no trouble with his heart since 1872 (fourteen years ago). He can still hear the murmur when in bed, or lying on the right side. He leads an active life in practice, much in the saddle. He was passed, without extra premium, at an insurance-office six years ago, in London. If this case be truly of syphilitic nature, it may afford a clue to the prognosis attaching to such lesion. The gumma may have disappeared, and some scar-tissue perhaps occupies its place. With the influence of syphilis on the production of aneurysm we are not now concerned. Dr. Goodhart is of opinion that aneurysm in women is commonly due to this cause.

To sum up the whole question we have been considering, and to bring this very imperfect sketch of the subject to a close, I may remark that a diligent search amongst cases of cardiac valvulitis appear to bring out the fact that a favourable prognosis, for many of them, may be given. Certain valvular lesions have their special perils, and these pertain to certain individuals more than to others. At some epochs of life, too, the prognosis is graver than at others. In each case, however, the great point is to determine the personal factors which promise longevity, or immunity from cardiac failure. As Corvisart put it: "C'est apres la constitution de l'individu, son genre de vie. . . . . qu'il pourra prononcer sur le terme fatal." (*Op. cit.*, p. 408.) And this question, indeed, meets us, I believe, in every case of disease we are called to treat. What does this malady mean in this individual? What will it do for him, and how will he bear it? The great law of compensation is now well understood to be the protecting agency in all these cases. So long as nutrition is well maintained, and a regular, prudent, and equable life is lived, so long will cardiac valvular lesions fail to give rise to serious symptoms. Dr. Semple has the credit of having called attention, thirty-six years ago, to the fact that many persons reached advanced age, although suffering from heart-disease, many of them being quite unconscious that they were the subjects of it. (*Op. cit.*, p. 104.) What we have to try to discover, are the conditions which render tolerable the lives of persons so suffering. The lesions of each valve affected require a special study. The question how far compensating changes behind the valves can be met, must be answered in the case of each valve, and in respect of the textural habit of each patient. Discrepancies occur in the opinions given as to the relative gravity of the different forms of valvular disease.

These are to be explained by the fact that certain cases, presenting the worst of these lesions, or combinations of them, are fortified against the evil issues of them by favourable personal factors. The prognosis for each case has to be made after careful consideration of the peculiarities and tendencies of the particular individual. The tendency to embolism in proliferative valvulitis must not be lost sight of in some cases, and the frequent association of anginal symptoms with aortic mischief must be duly considered. Difficulty in prognosis, in any given case of reflux, arises from the frequent inability to estimate its extent. Audibility of the second sound in the carotids is believed, I think with justice, to indicate that aortic regurgitation is not great. (Sibson and Broadbent.) A well marked "aortic" pulse, with visible pulsations in the arteries, may be taken as indicative of serious reflux. Byrom Bramwell (*Diseases of the Heart*, p. 518. Edinburgh: 1884) thinks the average prospect of life better in aortic reflux than in mitral lesions, and the risks of complications less. With most modern writers, he agrees in thinking the prospects better in cases of endocarditis, and in youth, than in those due to degenerative changes in more advanced life.

In aortic stenosis, we have seen that the prospects are not unfavourable in many instances. In mitral disease, evidence is forthcoming to show that, with good compensation, cases may go on favourably for many years. The worst combination is that of obstructive and regurgitant disease. This commonly indicates that the lesion is not stationary; and failure of power, in the cardiac walls, too often rapidly supervenes. These cases are never free from serious symptoms. A better prognosis attaches, therefore, to instances of valvular disease in which we meet with single murmurs, and, commonly, *quâ* murmur, the louder this is, the better the prognosis. As has been long taught, the elements of prognosis in all cases are to be found in the nutritive conditions of the cardiac walls rather than in those of the valves themselves; and as these are naturally better in youth than in advanced life, the prospects are, on the whole, better for the former than for the latter. We must not look beyond our clinical studies, in their widest sense, to find the elements of our prognosis. Large and varied experience in all ranks of life will alone enable the observer to form trustworthy opinions. Careful study of family histories, of the points respecting heredity in each case, and of the quality and resisting powers of the tissues of the individual, will furnish, not only the safest, but the sole means of prognostication. Nor may we ignore the place which rational therapeutics occupies in aiding our anticipations in any given case. This, for me, means more than mere drug-giving, though this is of high importance, and includes the aversion from the patient of all the malign influences that may beset him.

We may learn caution in these proceedings from the shrewdness of Peter Mere Latham, who wrote that, "Neither what we know of the

[1] There [illegible] the heart in the Museum of St. Bartholomew's Hospital, [illegible] ago. They are seen in the left ventricle, the small tags of the [illegible] at its attachment by the new growth.

pathology of valvular diseases, nor what we know of their clinical history, will allow us to set up absolute rules of judging what will be their consequences and events in all cases, or how far they can or cannot be postponed. (*Op. cit.*, p. 239.)

We may also take heed to the wisdom of Stokes as expressed in the following passage: "The practitioner should never forget that local diseases, themselves incurable, may co-exist with an excellent state of the health for a period indefinitely long." Inasmuch as we may now fairly claim to approach the study of heart-valve disease with fuller physiological knowledge, and more exact diagnostic method, than were available either in Latham's or Stokes's time, we may not unnaturally expect to begin a new, and, I would submit, a more hopeful chapter of prognostics in relation to it. To all, then, who will aid in this inquiry, I say "*Ausculta et perpende.*"

AN ADDRESS
ON
WORTHING: ITS CLIMATIC AND SANITARY CONDITIONS.

Delivered at the Annual Meeting of the South-Eastern Branch.

By WILLIAM J. HARRIS, M.R.C.S.Eng.,
Senior Medical Officer to the Worthing Infirmary: President of the Branch.

My few remarks will be principally confined to the rise and progress of this town, more especially since it came under the Public Health Act in 1853, giving you a short statement of its geology, meteorology, and climatology, together with an account of the drainage and water-supply, remarks on certain epidemics which have occurred, and also mentioning the benefits through which the place and neighbourhood seem to be of service to those who sojourn here either for pleasure or for health.

Aspect.—The town of Worthing is situated in latitude 50.49° N., and longitude 0.22° W. The situation of the town is as due south as possible, fully exposed to the direct rays of the sun; its height above the mean sea-level being but a very few feet. The South Downs, being somewhat about two miles to the north of the town, and running from east to west in a somewhat curved form, rising, too, to a height of from four to six hundred feet above the sea, tend to shelter the place considerably from the north and north-east winds. The plateau, too, upon which the town and the surrounding neighbourhood is situated, is really never hot in summer-time as many other places are; for, owing to the receding tide, a vast amount of evaporation takes place, and consequently a "sea-breeze" is developed every day, and possibly when least expected. This is usually quite local, and sometimes does not extend a mile or so inland.

Geology.—The ground upon which Worthing and other places along the coast westward of Brighton are built, is of recent formation, being composed of gravels, sands, and loam belonging to the post-pleiocene series. This portion of the county, called the "Sussex Levels," is distinguished by low cliffs and broad estuaries. The lower strata of land and sand, known as the "Woolwich Beds," is topped by the "chalk," which rises gradually into hills, known locally as the "Downs;" and especially prominent in this neighbourhood is Chanctonbury Ring, rising 814 feet above sea-level, about six miles north, and Cissbury, three miles north, 600 feet above the sea. Upon digging wells here, good water has been procured at from eighteen to twenty-five feet. There is found from four to ten feet of surface-soil, containing from two to three feet of good mould; the rest is loamy brick-earth, mixed more or less with rolled flint-stones. This may be the remains of an old beach, but no shells are found. Beneath this stratum lies the "marl," consisting of broken chalk and flints, in which water is found; but in most cases it is necessary to penetrate about seven or eight feet in order to get a proper supply.

Meteorology.—A complete series of meteorological observations have been recorded here for the last thirty-three years. The late Dr. Barker's records comprise the fifteen years 1853-1867, and my own for the following eighteen years 1868-1885. I am sorry to say that, during a portion of that period, the records have not been fully worked out, namely, 1875-1879 inclusive, but the mean atmospheric pressures and the mean temperatures which have been deduced by Mr. Buchan, of the Scottish Meteorological Society, for the eighteen years 1857-74—calculated on twenty-four years ending 1880—are sufficient at present for comparison with all the stations in the United Kingdom which are given in his tables ending 1880.

With the year 1880, however, the Royal Meteorological Society started their series of "Climatological Stations," the number of which, at the commencement of this year, was fifty-six. There is no doubt that, in the course of time, this series of stations will prove a valuable means for obtaining information as regards the climatic condition of towns and their surrounding neighbourhoods. In this branch I should like to see a few more stations, especially along the coast. Taking the map of the three counties, I find that Margate, Ramsgate, Tunbridge, Tunbridge Wells, Norwood, Addiscombe, Beddington, St. Leonards, and Worthing, are on the list. Eastbourne and Brighton report through the Registrar-General, and Dungeness—which has taken the place of Dover—is in direct telegraphic communication with the Meteorological Office.

The following are the mean readings of various instruments for a series of years; and for comparison sake I will take Bournemouth—or, as I believe, now Southbourne-on-Sea—where the observations have been more recently recorded by Dr. Compton. The mean yearly reading of the barometer reduced to 32 degrees at sea-level for eighteen years, 1857-74, and calculated on the mean of the twenty-four years ending 1880, is 29.972 inches. The mean yearly reading of the thermometer in the shade for the same period, and calculated at the same ratio, is 50.5; that at Southbourne is 50.1, at Bournemouth 50.3, and at Hastings 49.9. The mean annual rainfall for twenty-four years 1860-83 was 29.05 inches; that at Hastings for the same period 29.01 inches. For twenty years 1866-1885, as recorded by myself, the mean annual fall was 28.20 inches.

For determining the climate of any locality, the highest, lowest, and mean temperature must be ascertained, and the observations carried on for a considerable number of years. The relative humidity, the total rainfall, and number of wet days, together with the range of temperature, all have to be taken into consideration. The influence of ozone, as well, acts as a great factor, as, in its oxydising effects, it is a strong disinfectant of the atmosphere. On this coast, it is always fully and freely developed, especially with the winds off the sea, and principally from the south-west.

Drainage and Water-supply.—A new and complete system of drainage was commenced and carried out in the years 1854-55, after the town came under the Public Health Act. It was found, after some years, that this system had its defects, inasmuch as all the sewage gravitated to the north-east part of the town into a "sumpt" and a so-called sewage-well. From this well its contents were duly pumped into an out-fall sewer, which emptied itself into the sea about one and a half miles eastward of the town, just below the beach, and was left to be washed away by a stream of water emptying itself there as well.

About the year 1875 or 1876, it was determined by the Local Board that a new plan should be adopted, and this was finally brought into operation in the year 1877. It consists as follows. The whole of the drainage of the district finds its way to the north-east part of the town by gravitation. Thence it is conveyed by a new sewer across the park and through the brooklands direct to the sea for about a mile and two-thirds, passing through the beach in cast iron pipes down to low water mark of ordinary spring-tides. This main outlet sewer will retain the whole of the sewage between the tides, with the exception of storm waters; but such overflow is allowed for by three-eighteen inch pipes being placed to discharge the same into the brooks. This main outlet sewer is three feet six inches in diameter, and on it there are fourteen surface ventilators, varying from twelve to eighteen inches in diameter. Throughout the town in the various tributary sewers there are seventy-six ventilators on the surface of the streets—one eighteen-inch stack, one twelve-inch, and one six-inch, in connection with, and emptying into the chimney stack at the Works, and in various portions of the town there are twenty-six six-inch ventilating pipes up the sides and gables of houses, and other suitable positions. All new houses, and most of the old ones, now have their soil-pipes properly ventilated, and, as there is no trap at the bottom of any of them, a more free exit is given for the escape of gas from the sewer. In all houses, too, both the scullery, bath, and waste-pipes are totally disconnected from the drains.

The main sewer is regularly flushed at spring-tides by the sewage being penned up until low water by the "penstock" at the outlet being closed, and then quickly opened; the tributary sewers are regularly flushed by the flushing valves being worked in a similar way as the "penstock," and always at low water.

All closets now (and also most of the old ones) are provided with a distinct flushing apparatus, consisting of a "vacuum" water-waste

preventor applied to a "flush-out" closet after Doulton's plan, or National, or such like.

Water-supply.—This is obtained from the chalk through artesian wells of which there are two, one 70 feet deep, with a bore of 295 feet, and the other 100 feet deep, with a bore of between 300 and 400 feet. These wells were pumped for some years separately, and the water was lifted up into a large tank situated on the top of a tower over 100 feet high, and then distributed to the town at constant pressure. In the year 1880, a tunnel, 75 feet from the surface, was driven between the two wells, and the yield from both wells gave a supply equal to 12,000 gallons per hour. Owing, however, to the increase of the district, and the great drain upon the supply, irrespective of the waste which was continually going on, it was resolved, in the early part of 1885, to sink another well to the north-east, and run a tunnel from that point to the present one, and the result has justified the anticipations of the board. The yield now given is 20,000 gallons per hour from the tunnels and wells, and, instead of pumping both day and night, as used to be the case, 14 to 15 hours in the 24 at the outside, are all that is required. The quantity, too, per head has been reduced from 37 gallons to 22, owing to the waste having been detected and stopped, both by means of water-waste preventors to closets, and a proper supervision of all taps and fittings. The following is the analysis: The water is clear, inodorous, and of a pale greenish brown: it shows all the characteristics of a pure deep well water, and although somewhat hard, it is not too hard for drinking; it constitutes, in fact, a high class drinking-water. For general domestic purposes it would, however, be improved by softening. Appearance, clear; colour, very faintly greenish brown; smell, inodorous; deposit, very minute trace; nitrous acid, none; phosphoric acid, a trace; poisonous metals, none; hardness before boiling, 20° (Clark); oxygen absorbed from permanganate, 0.011 grains per gallon; total dry residue, 28.28 grains per gallon; colour of residue, very faintly yellowish; behaviour of on ignition, no blackening; chlorine (as chloride), 3.01 grains per gallon; nitric acid (as nitrate), 2.01 grains per gallon; ammonia, 0.0045 grains per gallon; albuminoid ammonia, 0.0000.

The Town Works and their Cost, 1853 to 1886.—With reference to the cost and outlay upon the various works just described, and which have been carried out since the adoption of the Public Health Act in 1853, it may be of interest to know the amount which has been expended upon the principal and permanent works. They are as follows: water-supply, £29,643 (1854-86); sewers, £25,346 (1855-86); sea-defences, £31,691 (1867-86); parade, £1,563 (1886); park, £1,353 (1880-86); sundry works, land improvements, plans, engineers' charges, etc., £5,728 (1853-86); giving a total of £95,324 paid out of Capital and Revenue Account. This may appear a large sum; but, spread over the period of thirty-three years, it averages an expenditure of about £2,890 *per annum*.

With the exception of the sea-defences, we can show a good deal for the money expended; but, unfortunately, this being an "eroding coast," the sea had no mercy on us for many years. Happily, now the whole system of sea-defences is in complete order, and, after a variety of trials and experiments in groyning—for they literally have been experiments—I believe now we have found out, for this identical part of the south coast, a system of groyning, which has given us the beach and sea frontage which we now possess. It has taken some seven or eight years to perfect it, and if the authorities, in the future, will only keep up the present system, I have every reason to believe the town will not suffer from the inundations which it was periodically liable to in years gone by. As a finish to the beach, the local authorities last year resolved on the laying down of an asphalt or tar-paving, from one end to the other of the parade, which has proved one of the most beneficial and useful improvements ever undertaken. Together with the erection of the shelter-sheds, visitors and invalids concur in their comfort being cared for. I am glad to say that the neighbouring district of West Worthing has this year followed our example in the prolongation of the asphalting in their district, and by the erection of two most convenient shelter-seats.

The park, too, at the north-east part of the town, was commenced in 1880, and, though some opposition was expressed against its formation in the first instance, yet all hostility soon ceased, and this last year an addition was made to it, which will prove eventually of great advantage to the neighbourhood where it is situated.

Public Mortuary.—The Local Board have, in the last few months, had erected on their grounds a special mortuary for the town, so much trouble having been caused at various times by bodies being cast up on the shore, and the difficulty being where to deposit them. The great trouble was where to find a site, as of course many objections were made to such a building being situated in a public street, or contiguous to other buildings. The total cost, I believe, was about £120, and will, I think, prove money well laid out.

Infirmary.—A new Infirmary, too, was commenced in 1886, and opened in the autumn of 1881. There we have a building built on an uniform plan, with all the offices and wards upon the ground-floor, situated in a large open space of ground directly south of the park, and with no chance of possibly ever being enclosed or blocked up by buildings on either side of it, or even due south of it. It is furnished with twenty beds and four cots, consisting of a male and female ward, a children's ward, accident and special wards, together with a good operating-room, and proper accommodation for out-patients. The staff consists of three honorary medical officers, a sister and nurses, dispenser, and the usual house accommodation. A proper mortuary exists, too, in the grounds of the institution.

Population.—For the census of 1881, 11,000 was the return over an area of 980 acres; at the present time, it is computed the population equals 12,000.

Mortality.—Since the reports issued annually by the medical officer of health, Dr. Kelly, the mean rate of mortality for ten years, 1875-84, has been 16.0 per 1,000 inclusive of visitors, and 14.5 exclusive of the same, and during that period the lowest rates have been 13.4 in 1883, and 12.4 in 1882 respectively.

Disease and Epidemics.—During the past twenty-five years in which I have been in practice here, the town unfortunately has suffered from various zymotic diseases, and of an epidemic form. To my knowledge small-pox broke out virulently in 1863, and again a few years later, and in both outbreaks the original cases were imported.

Scarlatina, too, used to be frequent, but of late years, except when imported by accident, no great trouble has been experienced in stamping it out.

From enteric fever we have suffered severely. The first outbreak occurred in the autumn of 1865, consequent upon a very heavy rainfall in October, whereby the drains being surcharged, and there being no proper outlet for the escape of the pent-up gas except through the street-ventilation on surface of ground, all houses in the higher parts of the town, together with many others besides, became impregnated with sewer gas, and thereby set up the origin of the fever. A lull occurred when the cold weather came on, at the end of December and during January; but, in February, 1866, a fresh recurrence of the fever occurred, and it was some weeks before the town was quite free from the disease. For some years, owing to the needful precautions taken, and a more general system of ventilation being adopted, the cause of enteric fever gradually subsided, though now and then sporadic cases cropped up. But, in the late summer and early autumn of 1880, another very curious outbreak occurred.

In the first instance, in the early part of September, the outbreak was due to sewer-gas and defective drainage, consequent upon the effect of a heavy rainfall (1.45 inch in rather more than an hour), and localised principally in one street at the western end of the town, when it turned out, upon careful examination, that there was no proper ventilation to relieve the closets, and where, too, the sink-pipes were found in direct communication with the drains, and placed within the houses. In the second instance, however, in the autumn of 1880, another outbreak occurred in various parts of the town, quite unconnected with the earlier one. Neither the drainage nor the water-supply of the various houses or tenements implicated could be found to be the *fons et origo mali*. The question of the milk-supply was then gone into, and after a most thorough and careful investigation by the committee appointed by the local board, together with the assistance of the medical officer of health for the district, Dr. Kelly, it was discovered that one dairy in particular used to pump from a certain well, drawing water therefrom for washing out the cans, and it was found, on examination, that there was a soakage through a defective drain into the well. The well was a shallow one, about 22 feet deep, situated in an old part of the town, and it turned out eventually there had been cases of enteric fever in the house adjoining, which had the joint use of the well. The whole of this outbreak was most elaborately worked out and fully reported upon by Dr. Kelly, which was duly published and issued in 1880.

I may mention, perhaps, that, within the last seven years, and more especially since the outbreak of 1880, the local board have made all efforts and endeavours to ward off any such outbreak again. Every house now built is duly ventilated, all closets have the flush-out and water-waste preventive system duly applied, and every endeavour is made when the opportunity occurs to run up 6-inch shafts to the tops of the highest houses and at the closed ends of the sewers. These are all properly and frequently flushed.

Measles and whooping-cough, of course, we must expect to suffer from at certain intervals; and, unfortunately, during the past winter,

these two diseases were very severe and fatal amongst a certain portion of the population.

Acute articular rheumatism is rare, and no cases of malaria are met with, as a rule, though, in days gone by, the neighbourhood of Lancing gave us cases of ague in its various forms.

The Benefit of the Place for Invalids.—There is no doubt in my own mind that the climate of Worthing is most fitted for those people somewhat advanced in years, who desire rest and an easy means of getting about. For children, too, of all ages up to puberty, the place is very well suited. Its free and open exposure to the rays of the sun; the soft balmy air from the sea, accompanied with a large and frequent supply of ozone; and the evaporation when the tide is out, thereby cooling the heated air of the summer, and tending to bring about a fresh breeze always some time throughout the day—all these are favourable for its position as a health-resort. Its perfectly level situation tends to recommend it to all those suffering from heart-disease; and the atmosphere appears to agree with most cases of chronic bronchitis and some cases of asthma. In the latter stage of phthisis, the atmosphere has a beneficial and soothing tendency; but, in the earlier stages, the climate, in my opinion, is too moist and relaxing. Cases, too, of whooping-cough do well here, especially if brought down in the later stage. Chronic rheumatism, and those suffering from chronic rheumatic arthritis, derive benefit as well by being able to be fairly exposed to the influences of the sea-air, and enabled thereby to take passive exercise in this free and open sunshine.

ILLUSTRATIONS OF EXCEPTIONAL SYMPTOMS AND EXAMPLES OF RARE FORMS OF DISEASE.

By JONATHAN HUTCHINSON, F.R.S., LL.D.,
Emeritus Professor of Surgery at the London Hospital.

(Continued from page 1212 of last volume.)

XIV. Recovery from Ascites, after Paracentesis, in a Young Man, the Subject of Disease of the Liver: Good Health Seventeen Years afterwards.

I saw, with Mr. Alfred Kennedy, at West Ham, in May, 1884, a case of very considerable interest in reference to prognosis. Our patient was a man, named G., now aged 35. The reason for my seeing him was that he had been recently injured in a railway accident, but the interest of his case belongs wholly to his former history. Seventeen years ago, when he was 18, he had a long illness which, he said, was diagnosed as "ascites, pleurisy, and diseased heart and liver." He was treated in St. Thomas's Hospital, under the care of Dr. Bristowe. Some scars under the umbilicus confirmed his statement that he was tapped more than once for ascites. The left side of his chest was decidedly contracted. Both legs were covered by dusky stains, as if he had formerly suffered from thrombotic purpura. His heart's action was very irregular. I could not detect any *bruit*, and there was no proof of hypertrophy, but the action was peculiar and jerky, possibly from adherent pericardium. I was told that, on some occasions, a murmur had been detected. His liver was still very much enlarged, its edge, thickened and bossy, could be very easily felt two inches below the ribs; it appeared to be equally enlarged in all parts. The man told us that he had enjoyed excellent health, in spite of the conditions mentioned, ever since his discharge from St. Thomas's Hospital. He had never had any return of the ascites or œdema of the legs. He had led an active life, and had only suffered from a little shortness of breath and palpitation, after making unusual exertion. He had been married for six years; he looked fairly healthy, but not robust. Since the railway accident, he had suffered from palpitation, with a tendency to faintness and to hysteria. There did not appear to be any definite explanation of his former illness, for he alleged that he had always led a temperate life.

Having forwarded the above narrative to my friend Dr. Bristowe, he was so very kind as to refer to the hospital records, write out the following notes, and permit their publication.

Dr. Bristowe's Notes.—"G. G., aged 20, came under my care in St. Thomas's Hospital, November 11th, 1869. The history he gave was to the effect that, two years previously, he had been laid up for three months in University College Hospital with pleurisy, from which he had recovered; that, three months later (eighteen months ago), he began to complain of swelling and tenderness in the epigastric region, and that, from that time, he had been gradually enlarging in the abdomen. He continued at work up to three weeks ago.

"On admission, he was pale and thin. The abdomen was large, containing so much fluid that only a very small area of resonance existed in front. There was no tenderness, and no definite enlargement of liver or tumour to be detected. The left side of the chest was much contracted, measuring, at the nipple-line, only 16½ inches in circumference (the right measuring 19). It was dull in its lower half, and the breath-sounds were feeble or absent; no cough; no signs of progressive disease; urine free from albumen; legs œdematous. In other respects he was healthy. The abdomen slowly increased in circumference (at level of navel) from 38 inches to 41, and, on January 6th, two months after admission, twenty-three pints of fluid were removed by paracentesis. He was relieved, but slowly refilled, until, on March 7th, twenty pints were removed. After this, he appeared to be filling again slowly, and he left the hospital on April 11th, still presenting some ascites; but his general health seemed good.

"I have no record of his occupation, or of his habits, or of any statement with respect to syphilis[1]; and I never detected clear evidence of disease of the liver. I have not recorded my diagnosis; but I suspect that I attributed his affections, first, effusion into the pleura, and then ascites, to tuberculosis. During the greater part of his residence in hospital, he was treated with quinine and iron. There was no disease of the heart."

XV. Simulation of Brachioplegia by Rheumatism.

When the patient to whose case the following statements refer entered my room, with his head bent forwards and his arms held stiffly by his sides, I certainly thought, as he did, that it was a case of incomplete paralysis of the upper extremities, probably consequent on an injury to the cervical spine; and it will be seen that the history which he gave was one which quite fitted with such a diagnosis. He said that his arms were powerless immediately after a fall from a swing, and that they had remained so ever since. On careful examination, however, I came to the conclusion that nothing had happened, excepting a severe contusion of the neck and shoulders, causing pain in motion, and that the enforced rest, subsequently, had induced rheumatic stiffening of both shoulder-joints. On careful inquiry, it appeared that at no time had there been any sensory paralysis. There had never been any numbness in the limbs, or "pins and needles." Although all the muscles were wasted and thin, none were especially so, excepting the deltoids. He could move all the joints of his forearms, hands, and fingers quite well. The deltoids were so wasted, that all the bony prominences were easily seen. Both shoulders were stiff, permitting only the very slightest degree of motion; in both, there had been much aching, especially about the insertion of the deltoid, as usual in cases of rheumatic disease of the joint.

I inquired whether there was any tendency to rheumatic gout in his family, and found that his father had had gout, and that he himself had suffered from lumbago. From the manner in which he held his head stiffly forwards, and from his complaint of pain in the back of the neck and shoulders, it seemed probable that rheumatic changes were in progress in the joints of the vertebræ, tending to the production of spondylitis deformans. It is possible that he may have had some fracture of the laminæ; but, whether this occurred or not, it is clear that there were never any real indications of injury to nerves. After the fall, he had much pain in his neck, and could not use his arms. He could walk, and was able to ride home, and walked upstairs, holding his arms across his chest and his head bent forwards. He was nearly two months in bed after the accident, with pain in the neck and arms. During that time, he lay almost constantly on his back in one position.

XVI. Neuralgia of the Scalp, probably of Gouty Origin: Detailed Description of the Pain.

A gentleman, possessed of some anatomical knowledge, and almost hypochondriacal in his tendency to self-observation, described to me the following symptoms. Early in the morning of March 2nd, he experienced over the middle of his left parietal bone a sharp explosion of lightning-like pain. It began exactly in the middle, and passed forwards nearly to the forehead, and backwards nearly to the occiput, being most intense in the centre. It radiated a little laterally, but not nearly so far as it went backwards and forwards, and it never crossed

[1] The notes, from which I quote, are in my own handwriting, and I believe that the absence of reference to these points means that I elicited nothing worthy of record, or that seemed to throw light on the nature of his case. My notes are difficult to read. On looking through them again, I find that, after each tapping, I examined the abdomen; that, after the first, I did not recognise hepatic enlargement; but that, after the second, I remarked that there was dulness for two inches below the right ribs, and that, in the scrobiculus, there was a distinct hard edge feeling like that of liver, but moving with the abdominal walls.—J. S. B.

the middle line. It did not run in straight lines, but spread out somewhat like a corusecation of sheet lightning. It was over in a few seconds, but quivered a little, not being absolutely momentary. After one explosion, another, and often a third or fourth, would follow in quick succession, and then he would be quite free for half an hour or an hour. The scalp was not in the least tender. The pain was quite bearable; in fact, at first it rather amused than hurt him; but, as the day went on, it became worse, and the explosions were attended by a feeling as if the left half of the head were being suddenly crushed. In the evening, the explosions were both more frequent and more prolonged. On some occasions, there was the suggestion of a pain passing into the cheek and lower jaw, involving, in fact, the whole left of the head; but, in these parts, its course could not be traced with accuracy. Neither in the upper nor in the lower jaw did it run along the course of known nerve-trunks. The bicuspid tooth of the lower jaw was aching a little all day; but it was a steady ache, attended with a feeling of general numb swelling about it, and with tenderness on pressure, which prevented eating, but without any explosions of severe pain. My friend became very nervous in the evening, feeling sure that he was about to be the victim of "tic-douloureux."

I found that, on the previous day, he drank a bottle of claret instead of his usual modicum of a third; that he had eaten much more liberally of meat than was his wont; and that, on the day on which his neuralgia began, he also felt his ankles and wrists puffy and aching; and, finally, that his urine began on that day to deposit uric acid freely. Knowing that he had for long been threatened with gout, I assured him that the neuralgia was gouty, and made him take a full dose of bicarbonate of potash at bedtime. On the next morning, both the toothache and the sheet-lightning pains in the head had ceased, and nothing remained but a very slight perception of general ache in that side of the head.

Although it is easy, in this instance, to feel confident as to the influences which were at work, and to say that the neuralgic shoots, and probably the tooth-ache also, were caused by a gouty state of the blood (lithæmia), yet it is more difficult to explain the local mechanism of the pain. The scalp-pain always began in one and the same spot, and that not one to which any anatomical peculiarities attach. Was it a periosteal pain, and due to changes (neuritis?) in some ganglia, or other peripheral nerve-organ? Such seems the most probable hypothesis.

I could sympathise much with my patient, having often experienced pain of a somewhat similar kind. From my own observations, I can quite confirm the accuracy of his distinction between pains which are like forked lightning, and those to which the comparison of sheet-lightning may be applied. The latter are less severe, as a rule, and always less momentary than the others. They spread over a wider area, and do not feel to run in such straight lines. Both of them differ from another kind of explosive pain, in which the shoots extend for equal distances around the centre of starting. This might be called the star-shaped pain, or bomb-shell explosion; but, if the latter term be used, it must clearly be understood that the pain denoted, although always radiating, is by no means always of any terrible degree of severity.

THE AIMS AND CLAIMS OF THE BRITISH MEDICAL TEMPERANCE ASSOCIATION.

An Abstract of a Paper read at the Tenth Annual Meeting of the Association.

By J. J. RIDGE, M.D., B.S., B.A.Lond., Honorary Secretary.

After reference to the great increase in the number of medical abstainers since the formation of the Association, many more being still unenrolled than the 341 who have already joined, Dr. Ridge proceeded:

"Our first aim is to form a rallying point for medical abstainers through the length and breadth of the land. We are constantly discovering in large cities, or in country towns and villages, medical men who are total abstainers, but whose fame as such is not known far beyond the neighbourhood in which they dwell. It is gratifying to all who are interested in the temperance cause to find so many of these solitary adherents, and a source of help and encouragement to them to learn that they are not alone, but are associated with an ever increasing number of their medical brethren. The Association makes such men acquainted with each other, and mutual sympathy strengthens individual zeal.

"The objects of the Association is thus very clearly stated in the constitution: "to advance the practice of total abstinence in and through the medical profession, and to promote investigation as to the action of alcohol in health and disease." We aim to stimulate the interest of medical practitioners in the subject of total abstinence. The future of the temperance movement depends on the adoption of right views of the position and action of alcohol on the human organism, both mind and body. What those views should be, ought to be decided by medical scientists. The effect of alcohol on body and mind is part of that physiology which is the "proper study" of the profession. The world waits for a clear and authoritative declaration. There has been too often given it hitherto the "uncertain sound" of contradictory statements, a display as confusing, and often amusing, to the public, as it is injurious and discreditable to us. Practical men have adopted total abstinence, temporarily or altogether, to enable them to accomplish feats of strength, skill, or endurance. Soldiers, engineers, labour-masters have enforced total abstinence on occasion for the purpose of attaining most easily the highest efficiency of their men, and have been delighted with the result. If the profession, or any members of it, set their faces against a principle thus practically tested and triumphant, it is high time that they realised that they are running their heads against a rock, and must suffer the inevitable consequences. It is necessary to declare that the highest development of health and strength, the soundest condition of mind and body, are only possible when intoxicating liquors are abstained from. The Association enables the profession to declare this in the best and most natural way, by showing that each member practices what he preaches.

For, after all, and very properly, the public will judge us more by what we do than by what we say. Our special knowledge involves a special duty. The medical abstainer is a living beacon, whose silent yet eloquent example influences many far beyond his ken, saving them from the alcoholic rocks and quicksands, on which some would otherwise be inevitably shipwrecked.

We advocate total abstinence because we are in earnest, and practical reformers, dealing with human nature as we find it. Our ultimate aim is the extinction of all the special evils which the action of alcohol is able to produce, and the diminution of all other vices, diseases, and troubles by how much they are now aggravated by alcohol. The method which commends itself to our common sense is ourselves to discontinue to drink alcoholic liquors, and to induce all whom we can influence likewise to abstain. Our end is attained in proportion as our means are adopted. A medical abstainer has more influence than any: "Truth, from his lips, prevails with double sway."

I need hardly remind medical men that the harm arising from the use of alcohol is not to be measured by the unsteadiness of the legs or the thickness of the speech. We are all aware that a great deal of perversion of function takes place before these occur. We know that it affects the brain, upon which it exerts a paralysing action, weakening first of all the highest powers of the mind, those which are least automatic, those which are most connected with the individual, or are the latest acquirements of the race. It produces progressive paralysis of the judgment on the sensory side, and of the will on the motor. It lengthens the time required for a voluntary effort; and, while reducing self-control (that is, temperance), leaves the lower reflex centres to act for a time more automatically; these reflex actions are, with larger doses, one by one weakened and extinguished—the most complex first, until at last only respiration and circulation remain, or may themselves be narcotised.

I am convinced that all will admit that this gradual paralysis of mental and moral control is of more importance than any paralysis of mere muscular power or co-ordination. Hence it is not desirable to practice any habit which can produce such results. This is a clear, safe, and easily understood practice, such as the profession should recommend for the moral elevation and physical development of the masses.

Some contend that medical men have no special concern with morals; but we are still men, bound to promote the good of others, and surely unable to repudiate our obligation, because we have special knowledge and greater influence. The fact that morality is affected by a material agent—alcohol—makes it peculiarly the province of the physician. We ought to let our fellow-creatures know that alcohol saps the foundation of morality, by rendering self-control more difficult, and at last impossible. Alcohol degrades a man, or a nation. It takes the individual back through the stages of youth and childhood, to the unconscious and merely animal condition of the new-born babe; and it has a greater effect on the young, and on those low in the scale of intelligence and general self-control. The same applies to nations; its power being more irresistible and destructive, the lower a nation is in the scale of civilisation. Physicians, then, ought to exert their

individual and associated influence to stay this plague, proclaiming that alcoholic liquors are injurious to the highest interests both of the individual and of the State.

As to alcohol as a medicine, our Association leaves every member perfectly untrammelled. Some of us use it often; others consider it dangerous, and so unjustifiable, to put such beverages into the hands of patients, and think it more scientific to administer it in the same way as we give other drugs. Others have little or no faith in it, and never awake a dormant appetite for drink, or implant in their patients that craving, or those ideas about alcohol, which may hereafter prove their ruin for time and eternity.

The recent revelations of Dr. Ogle, on the great mortality of medical men from the effects of alcohol, explode one assertion, namely, that education in physiology, and in the nature of alcoholic liquors, will obviate the evils of alcohol-drinking. Hence we are sure of our ground, that only total abstinence from any narcotic can prevent that narcotic from claiming its full tale of victims.

We ask medical men to reconsider their position in the light of ever-accumulating experience. We desire to see all promoting temperance, by recommending total abstinence from that which renders it more difficult, or, perhaps, impossible. We desire them to join our Association, in order to raise a powerful and united voice in favour of total abstinence. We welcome medical students as associates. Each must realise his responsibility, and act accordingly, resolving that "what one man can do" to stay the ravages of alcohol, that, God helping him, he will do.

ON THE VALUE OF BORIC ACID IN VARIOUS CONDITIONS OF THE MOUTH.

By A. D. MACGREGOR, M.B., Kirkcaldy.

Boric acid is now officinal, and justly so. It has long been used in various metallurgical and ceramic operations, and more recently its preservative power has been abundantly demonstrated. It is this antiseptic power which gives it its great therapeutic value. It is a very stable compound—one of the most stable of the acids; it is not volatile, and only exerts its action when in solution; fortunately, however, it is soluble in more than one menstruum. Up till now, its chief application has been in connection with modern surgery, where the boric ointment, lint, and lotions all hold a prominent place. There are spheres of usefulness for it, too, in medicine: and one of these is in diseases of the mouth. It is the benefit of its local action we usually wish to gain, for, though sometimes given internally—as in irritable conditions of the bladder—its topical antiseptic effect is more often desired. In connection with its local application in various diseased conditions of the mouth, its solubility in water and glycerine, its unirritating character, its comparatively innocuous nature, and its almost tastelessness, are greatly in its favour. More particularly is this the case in treating such conditions in children, whose oral cavities cause them so much annoyance. Speaking generally, boric acid will be found useful in all conditions of the mouth, fauces, pharynx, and nose, where there is any abrasion of the epithelium; whether it be used as a powder, gargle, mouth-wash, pigment, or confection. More definitely, I may say, it is not contra-indicated in any of the forms of *stomatitis*, though scarcely severe enough for the graver varities.

In *simple catarrhal stomatitis*, a mouth-wash, containing from 10 to 15 grains to the fluid ounce, speedily cures the condition, and exercises the same beneficial influence in the *ulcerative* form, though there in addition to the rinsing of the mouth, a local application in the form of the powder or pigment, should be made to the individual follicular ulcers. The powder simply consists of finely powdered boric acid, mixed in various proportions with starch; the pigment is a solution of boric acid in glycerine (1 in 4 or 5). In both cases, the addition of chlorate of potassium is advantageous; indeed, I usually combine it, but it is not essential.

Nothing I know of is at once so rapid and so efficient, in the treatment of *parasitic stomatitis* or *thrush*, as this remedy. The youngest children do not object to its application, and, occasionally, you have to caution against its too frequent use. The *oïdium albicans* quickly succumbs to its influence. I am well aware of the great value of nitrate of silver, in many of these conditions; but, I am also alive to its extremely disagreeable and persistent taste, and the dislike which precocious children at once take to it. For thrush in children, I especially recommend boric acid, either as a mouth-pigment or as a confection. Honey and sugar have both been condemned, as being inadmissible, in combination, for the treatment of thrush; but, so far as children are concerned, I must say I consider a confection (though made with honey), which has been impregnated with boric acid, gains more by its palatableness than it loses by the tendency of the saccharine matter to further the growth of the fungus. The boric acid at once does away with this tendency. Let the pigment be frequently painted with a brush over the patches, never omitting to do it after food has been taken; or, a little of the confection, simply allowed to dissolve in the mouth; and the days of the fungus will soon be ended. I have found boric acid, combined with its salt (borax), markedly beneficial. Borax alone, however, is not nearly so good.

In *pharyngitis*, and *relaxed conditions of the throat*, a gargle, containing boric acid and glycerine, with either tannic acid or alum in addition, ought not to be forgotten.

Let me allude to another condition, in which I have found combinations of this substance helpful and grateful to the patient. I refer to the condition in which we frequently find the mouth, tongue, and teeth in severe cases of typhoid fever. The mouth is hot; the lips dry, cracked, and glued to the sordes-covered teeth by inspissated mucus and saliva; the tongue dry, or even glazed and hard, brown or black, crusted with a fœtid fur. Under such circumstances, a pigment, containing boric acid (30 grains), chlorate of potassium (20 grains), lemon-juice (5 fluid drachms), and glycerine (3 fluid drachms), yields very comforting results. When the teeth are well rubbed with this, the sordes quickly and easily become detached; little harm will follow from the acid present. The boric acid attacks the masses of bacilli and bacteria; the chlorate of potassium cools and soothes the mucous membrane; the glycerine and lemon-juice moisten the parts, and aid the salivary secretion. I consider this application well worth a trial.

So much for the soft parts; a word in conclusion regarding the teeth. Few medical men, I suppose, have ever given a prescription for a tooth-powder (such a matter is beneath their notice), and the selection of the ingredients for the various powders and pastes in vogue for the purpose of beautifying and cleansing the teeth is left entirely in the hands of those who certainly should not know better than medical men. I have frequently trespassed on this debatable ground, and recommended a particular dentifrice. In view of the extremely important part the teeth play in the economy of life, I never hesitate occasionally to inquire as to the attention they receive.

A tooth-powder should possess certain characteristics; it should be antiseptic, cooling, agreeable to taste and smell, and have no injurious action on the teeth. After use, it should leave the teeth white, and a sensation of freshness and cleanliness in the mouth. As an antiseptic in this connection, nothing can displace boric acid. For years I have used the following powder, and can recommend it. Boric acid, finely powdered, 40 grs.; chlorate of potassium, ℥ss; powdered guiacum, 20 grs.; prepared chalk, ℥i; powdered carbonate of magnesia, to ℥i; otto of roses, half a drop. The boric acid in solution gets between the teeth and the edges of the gums, and there it discharges its antiseptic functions; the chlorate and guaiacum contribute their quota to the benefit of the gums and mucous membrane generally; the chalk is the insoluble powder to detach the particles of tartar which may be present, and the magnesia the more soluble soft powder which cannot harm the softest enamel.

It is only right to say that boroglyceride (Barff) can replace boric acid in almost all the forms of administration I have enumerated; it is efficacious, sightly, and pleasant to the taste.

A CASE OF PURPURA: WITH REMARKS

Read at a Meeting of the South-Eastern Branch.

By EDWARD MACKEY, M.D., M.R.C.P.,

Physician to the Alexandra Hospital for Children, and Assistant-Physician to the County Hospital at Brighton.

Idiopathic, as distinguished from symptomatic purpura, is still one of the "unknown quantities" in medicine, as little explained now as when Werlhof first described the "*morbus maculosus*" a hundred years ago (1785). Yet, clearly, the systemic fault must lie either in the blood or in the capillaries (including their nerve-supply), or in both; and this much may be said, that the tendency of modern opinion is to connect the malady with defect of nerve and vessel rather than of the effused fluid.

The same remark applies to *hæmophilia*, which, *quâ* hæmorrhage, is related to purpura, and in which there is no constant fault in the blood-composition; whilst, in *scorbutus*, such fault may be proved by analysis, and its causation, course, and treatment are markedly different.

Dr. Richardson, indeed, has described an "aqueous" and a

"saline," as well as a "vascular," form of purpura; but, in the great majority of recorded cases, no definite blood-change has been found; sometimes a slight excess, sometimes a deficiency, of solids; in Parkes's two cases, a minute increase in the iron; in others, slightly more or slightly less, or just normal, fibrine; but, in most, nothing abnormal until after direct anæmia had followed repeated hæmorrhage.[1]

On the other hand, the possibility, at least, of cutaneous bleeding from *nerve-disorder*, is evidenced by its occurrence in frogs after extirpation in them of sympathetic ganglia (Simon); and Nothnagel has shown, in rabbits, that hæmorrhage into the lungs resulted from certain lesions of the brain-cortex.

There is certainly room for further evidence on such subjects; and, if I record the following case as one probably *neurotic*, I acknowledge it open to the query, Why should nerve-shock in this boy be followed by capillary hæmorrhage, and yet be so seldom followed by it in others? And I can see no clearer answer than to the query why cold should cause, in one, pleurisy; in another, rheumatism or nephritis, etc. There are, however, on record several cases of purpura following severe fright.

Besides the interest of causation, there is a point worth noting in *diagnosis*—namely, the occurrence of localised swellings before hæmorrhage. Thus, when Dr. Whittle was first called (November 27th last), to a boy, aged 11 years, with pyrexia and wandering pains, the most marked symptom was a large, soft, elastic swelling over the splenic region. Next day, this had disappeared; but the forehead was œdematous. Later, the face and portions of the limbs were affected similarly with serous effusions, which were difficult to explain until purpuric patches were seen.

The boy was previously of average health, able to do the same as others of his age, but not robust, being thin and markedly "nervous." One of four children of a private coachman, he lived well in a decent house and street, and had been at day-school till shortly before his illness, which came on without apparent cause; it was only later that we found he had been crushed against a wall and much frightened, two days before the symptoms began; it is this which I reckon a *nerve-shock*, and a possible cause. It is noteworthy that the case, as it developed, presented phenomena which occur separately in some cases, and have then been held to indicate separate varieties—distinguished, for example, by pyrexia, or by pains in the joints, or by gastro-intestinal disorders, as well as by hæmorrhage from various parts; such symptoms, either together or in succession, all occurring in one case, imply a unity in the malady, though some of its manifestations may be sometimes absent.

When first seen, the temperature was 100° Fahr.; pulse, 140; respirations, 28. Three days later, there was epigastric pain; and, within a week, diarrhœa and vomiting, red furred tongue, and anorexia; hæmorrhagic spots appeared, at first mostly in the neighbourhood of joints which became painful, so that, for a day or two, the case might have been taken for acute rheumatism; whilst the general aspect, the headache, and nocturnal delirium, almost recalled a specific fever, though the temperature never rose above 100.5°.

On December 12th, he remained so ill that we admitted him to the Alexandra Children's Hospital. There were then numerous petechiæ and purpuric spots, the size of millet-seeds, about the hands, wrists, legs, and feet, and a large ecchymosis on one instep; the ankles and wrists were swollen. The bowels were open six times during the night (December 13th), black-clot being passed with one motion. There were severe abdominal pain and tympanites, warranting the supposition of peritoneal irritation (from hæmorrhage), if not of true peritonitis. The pulse still remained quick, generally at 120; there was no sponginess of gums.

Under bismuth and opium (with ergot), diarrhœa ceased on December 19th; but blood passed copiously in the urine. On the 21st, he was ordered infusion of digitalis, one drachm every four hours, and dry cupping over the loins.

December 24th. The urine still was almost black; pulse, 120; temperature, 100.2°. He was ordered gallic acid, in full doses.

December 28th. There were fresh purpuric spots. December 30th. Hæmaturia was still present. He was ordered iron-alum, two to four grains, thrice daily. January 2nd. The symptoms continuing, he was ordered tincture of hamamelis in three-minim doses, increasing next day to twenty minims thrice daily. This remedy seemed to act well, and, by January 6th, the urine was much lighter, and the spots less marked. By the 13th, there was marked improvement, and the dose was lessened to ten minims. The same night there occurred fresh and copious renal hæmorrhage. Half a grain of sclerotinic acid (Burrough's tabloid) was injected under the skin, twice with apparent good result, and no local bleeding, but proved too distressing to be continued in a nervous child. Twenty minim doses of tincture of hamamelis were again given. January 20th. The urine being still dark with blood, and fresh spots appearing, turpentine in five minim doses, thrice daily, was commenced; and, in two days, both symptoms were improved, and only on February 4th, after slight exertion, some fresh petechiæ occurred on the face and extremities. The dose was increased to eight minims, and improvement continuing, in a week's time, it was alternated with iron-alum. Again a slight relapse showed itself, and the dose of turpentine was increased to twelve minims.

After this, progress was only interrupted once by some spots and œdema on the first day of getting up, and these passed off on resting. Arsenic was substituted for iron (on Dr. Whittle's suggestion), and continued, with the turpentine, until his discharge, quite convalescent, in mid-April. There was no strangury at any time. I attribute much benefit to the twelve-minim doses of turpentine, and think that this should be recorded, for although not new, but equally noticed by Neligan, Richardson, etc., it has been recently undervalued by Immermann and others. Dr. Eustace Smith speaks well of two-drachm doses on alternate mornings, but they seem not so adapted as the smaller continued dose to such a case as this, where the tendency was to diarrhœa, with much abdominal pain. It is worth while to note the comparative inefficacy of acids, ergot, and digitalis, and the temporary effect of hamamelis; whilst iron, even in an astringent form, seemed rather to favour hæmorrhage in the early stages. I agree with those observers who consider arsenic a better remedy, and submit that, with turpentine, it will so far help us that we may fairly modify Dr. Bristowe's remark of some years ago: "The majority of patients (with purpura) get well in the course of a week or two without treatment: the severer cases are apt to go on from bad to worse, whatever treatment be adopted."

I desire to acknowledge the care and attention shown by Mr. Morgan, House-Surgeon, in the record and management of this case.

[1] Dr. Wilson [illegible] case of [illegible] of capillaries in a syphilitic [illegible] and, moreover, [illegible] the case [illegible] This, we [illegible] being weakened in contractile power by [illegible] Heft 3, 1885.)

OBSTETRIC MEMORANDA.

CORROSIVE SUBLIMATE AS AN ANTISEPTIC IN OBSTETRIC PRACTICE.

In connection with the use of corrosive sublimate as an antiseptic in obstetric practice, the following case may be interesting:—

I delivered Mrs. L., aged 35, primipara by embryulsia, on May 26th. There were some lacerations of the vagina and cervix. As she had rigors and a rising temperature, I gave her antipyritis, and washed out the uterus with perchloride of mercury (solution 1 in 1,000). In a week her symptoms had diminished, but the injections were continued. On June 5th, she was seized with severe pain in the hypogastrium, sickness, and diarrhœa. The motions were distinctly bloody. During the next three days, she passed black motions. After what occurred on the 5th, I stopped the injections, and, though she afterwards had a fluctuating temperature and abdominal pain, there was no further sickness nor hæmorrhage.

J. K. Murray, M.B., C.M., Kendal.

COMPLICATED CASE OF LABOUR: SPONTANEOUS DECAPITATION.

On the evening of June 13th, I was called to see Mrs. W., pregnant with her sixth child, as "something had come down," supposed to be the child's head, and she was having pains. She was in her fifth month of pregnancy. On examination, I found, not a child's head, but a large mass of the uterus, about the size of an orange, and in a firm state of contraction, protruding from the vagina. I was unable to find the os; and no discharge had come away, this mass having come down quite suddenly, and without any previous pain.

I replaced it with a little difficulty, and ordered some sedative medicine, which soothed the pains; and there was no return of the prolapse. She remained in bed, and felt nothing till the Wednesday following, when the pains returned. I felt that the os was in its proper place, and showed no signs of dilatation; and I gave her two one-grain opium pills, which stopped the pains. Next morning, I was called to her at 9, and found she had been having regular pains since 6; and, on examination, I found the os dilating, and the head of a

fœtus presenting. In about half an hour, I examined again, and found the os had quite changed in position, evidently having been pushed forward by a mass of contracted uterus about the size of a large plum. With difficulty I found the os, drew it backwards, and discovered an arm presenting, of which I distinctly could feel the hand. Having waited for another pain, I found much the same state of things as before; but, instead of an arm presenting, there was a leg, and the contracted piece of uterus posteriorly seemed larger. I hooked my finger round the leg, brought down the foot and the other also, but the fœtus remained quite firmly fixed. All this time the hard mass of contracted uterus could be felt posteriorly, and I then discovered that between the pains it did not disappear, though it seemed to be rather less in size. Several pains having passed without any further advancement of the labour, I introduced my hand into the vagina, and, on following up the body of the fœtus, came upon a ring-like constriction of the uterus fixed firmly about the neck of the child. This constriction was so dense, firm, and sharp at the same time, that I felt it had quite eaten into the substance of the neck of the fœtus, so much so that the spine was the only connecting link between the body and head. I tried to get my finger past this band, but in vain, and a pain coming on, I was surprised to find the body spontaneously born without the head. After the pain, I introduced my hand again, and found that I could get the point of my finger into the space in the narrow band, where apparently the neck of the fœtus had rested. The nurse pressed the uterus down from without, and with difficulty I forced the finger within the band; and, having got a second also within, it gradually gave way, and I got hold of the head, which was born without further difficulty, the placenta following with the same pain. The contracted mass near the os, which had never yet given way, then immediately disappeared, and the patient has made a very good recovery. The fœtus, of about five months, had been dead a little time, making it soft, and hence the constricting band of fibres had the more easily cut its neck.

WILLIAM BRYDON, M.B., C.M., Hawick.

SURGICAL MEMORANDA.

MANIPULATION OF THE SCAPULA IN DISLOCATIONS OF THE HUMERUS.

ALTHOUGH the method of reduction described by me under the above title in 1881 has served my purpose well in six cases of dislocation, it failed in a seventh, which I reduced last week.

Leaving the scapula to an assistant, for depression by means of a small roller towel, used stirrup-fashion, after Dr. Ryder's plan, I abducted and extended the arm again, and my assistant placed his fingers beneath the head of the humerus; then, using the arm as a lever of the first kind, I depressed it firmly and steadily, whilst keeping up extension; reduction was immediate. In this method, the fulcrum is formed by the capsular ligament; and, secondarily, by the assistant's fingers, whilst the weight or resistance is the edge of the glenoid cavity.

C. R. ILLINGWORTH.

OPERATION ON AN OLD SUBJECT.

ON June 16th, I saw, with Dr. Davson, a rather stout lady, in her 88th year, the subject of strangulated umbilical hernia. She had suffered from exomphalos for many years, but had generally been able to keep the protrusion back by a truss. The period during which the bowel had been strangulated could not be definitely ascertained, but the patient was in a state of great collapse, and was vomiting material of most distinctly fæcal odour. She was so ill, that it was impossible to temporise with ice and opium, and to expect a providential return of the mass. The part was tender, and taxis gave no relief. Chloroform was, therefore, administered, and, taxis having again proved unavailing, the tumour was washed, and an incision of a couple of inches made into its lower part. A large knuckle of dark and œdematous transverse colon was exposed, and an extremely tight strangulation was eased by the hernia-knife. The bowel being returned, the index-finger introduced into the abdominal cavity, detected an enormous mass of scirrhus in the left flank, which could also be made out by palpation over the side of the abdomen. Silk sutures were introduced, one of them passing through and approximating the recti abdominis, so as to obliterate the aperture. A dressing of wood-wool was applied under a binder.

Pain and sickness thenceforth ceased, and the wound healed by first intention. The bowels were kept confined till the eighth day, when a simple enema was given. The sutures were removed on the eighth day, and there has been, hitherto, no return of the exomphalos (the patient being still kept in bed).

I have never operated on so old a patient; and I should not be surprised if Professor Humphry found this brief clinical record worthy of a place in his album.

EDMUND OWEN, F.R.C.S., Surgeon to St. Mary's Hospital.

CLINICAL MEMORANDA.

ACUTE ŒDEMA OF THE LUNGS: DISEASE OF TRICUSPID VALVE.

I WAS called, on April 10th, to see K. G., aged 38. I found her vomiting in a most terrible manner, ejecting a thick foam, such as is formed by whipping up the white of an egg, and with it some clear reddish fluid. She was in a state of collapse, and unable to speak. On auscultation, some moist sounds were to be heard over the front and back. The case was diagnosed as one of acute œdema of the lungs.

She had been quite well, with the exception of a slight cough on the 9th and 10th, and had started to walk two and a half miles to a theatre after a hearty meal of beef-steak, etc., at 7 o'clock. She had walked to within a few yards of her destination, when she became suddenly unwell, and felt unable to proceed further. A friend got her some brandy, "as her lips were very blue." She walked a short distance to an omnibus, expectorating some blood-stained fluid on the way, and came straight home, arriving at about 8.30. A quarter of an hour later, she began to vomit, continuing to do so up to my arrival at 10 P.M., but did not bring up her supper.

It was evident that the vomiting would soon kill the patient. She could not swallow well, her mouth being full of this foam. The inhalation of a little chloroform was therefore tried. The vomiting ceased, and she was able to lie back in the bed; but, a few minutes later, her pulse suddenly collapsed. Two hypodermic injections of ether were given unsuccessfully, and the patient died at 10.50.

A *post mortem* examination was made sixty hours after death. Rigidity was absent. On opening the thorax, the right side of the chest appeared quite filled up with lung; the left rather less so. Gentle pressure on the lung caused foam, etc., to issue from the mouth. On section, some muco-purulent fluid could be squeezed out. The lungs floated in water; the heart was small and flabby; the tricuspid valve was atheromatous and incompetent; the liver was mottled and very soft; the stomach contained semi-digested food; the kidneys were normal; the spleen was enlarged; the brain was rather more ecchymosed than usual on section, and the ventricles contained rather more fluid than is usually found.

At the inquest, it came out that the patient had had rheumatic fever twice, and was subject to fainting fits. Seven to eight years before, she had had an attack of paralysis of the left side. The fluid vomited was serum, containing many white cells and some red. She was menstruating at the time of her death. The conjugate diameter of the pelvis was very small, but does not appear to have been detected in life. She was unmarried.

F. R. HUMPHREYS, Queen's Crescent, N.W.

THERAPEUTIC MEMORANDA.

THE TREATMENT OF INFANTILE PALSY BY GALVANISM.

IN many cases of infantile paralysis, far from doing good, galvanism, if persisted in, does infinite harm in the way of increasing the inevitable deformity. This occurs from the difficulty or practical impossibility of localising the effects of the galvanic current on the palsied muscles. To be of any use, electrical treatment must produce muscular contraction, affected, in the case of galvanism, by interruptions of the current. When a strong current is used, and this is generally necessary, the current diffuses and excites neighbouring muscles. These neighbouring muscles are frequently the physiological opponents of the affected ones, and the very ones of all others that it is undesirable to strengthen by unnecessary use or stimulation. To take an example: palsy of the peronei and anterior muscles of the leg is present; a strong galvanic current is used, and is needful to produce contraction of these wasting muscles; this current diffuses and causes contraction of the sural muscles, the result of which is to strengthen these, and to emphasise the drawing up of the heel by the tendo Achillis. In case the palsied muscles have lost their galvanic irritability, and do not respond at all to interruptions, the effect of galvanic treatment is altogether pernicious, as it can only help the opposing muscles to produce or increase deformity. A very short period of this treatment will increase the girth of a leg by half an

inch or more; this being due entirely to increase in size of the healthy muscles. The practical deductions from these observations, and the points—practically of no mean importance—are, firstly, that the weakest interrupted galvanic current which will produce contraction of the affected muscles should be used, with the desire to limit excitation to those muscles; and, secondly, that where no response is detectable, to immediately discontinue electrical treatment. It is necessary to exercise a little care in differentiating the reaction of the affected muscle from the jerk or contraction of healthy muscles, caused by the diffusion of the stimulus. I have found this to be best done by placing the forefinger of the disengaged hand on the tendon of the tested muscle. In fat children, it is easier to be certain in this way than by eye-observation.

LESLIE PHILLIPS, M.D.Brux., Birmingham.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

UNIVERSITY COLLEGE HOSPITAL.

AMPUTATION OF THE ARM AND SCAPULA, FOR OSSIFYING SARCOMA: RECOVERY.

(Under the care of Mr. CHRISTOPHER HEATH.)

FOR the following abstract of the notes of this case, kept by Messrs. Victor Horsley and Bilton Pollard, Surgical Registrars, we are indebted to the latter gentleman.

J. D., aged 16, was admitted on July 2nd, 1883, on account of a large sarcomatous tumour of the upper arm and shoulder. He stated that he had first noticed slight enlargement of the upper part of his right arm two years earlier, and that the swelling had increased gradually in size to within six months since, when its increase had been much more rapid. The only pain associated with the growth had been slight, and of a pricking character in the region of the shoulder. Two years before the commencement of the growth, the patient fell from a horse, and struck his right shoulder. Six months before admission to University College Hospital, he had been advised at St. George's Hospital to submit to amputation of the arm, but had declined.

The natural outlines of the right shoulder were obscured by a roughly pyramidal swelling, the base of which was situated at the axillary border of the scapula, and the apex at about the middle of the supra-condylar ridges of the humerus.



The posterior portion of the base gradually shelved off on to the scapula, whilst the anterior margin stopped abruptly on the front of the chest in the substance of the pectoralis major muscle. The anterior border of the acromial end of the clavicle, the outer border of the acromion, and the lower border of the spine of the scapula, were all continuous with the upper extremity of the growth.

The tumour had altogether abolished movements at the shoulder-joint, and attempts at movement, either of an active or a passive kind, caused the whole mass, including the scapula, to glide over the thorax. The skin over the tumour was much stretched, and, at the upper and posterior part, where it had a deep red colour, the corium was cracked and fissured in all directions. The whole growth, quite up to its growing margin, was intensely hard, and even at places, where, to the eye, it appeared smooth, it was covered by small bosses, about 1 centimètre in diameter; the intervening sulci were, apparently, filled with connective tissue and fat. Over the prominence on the anterior surface of the tumour there was a sense of fluctuation. Of the muscles of the arm only the lower thirds remained, and those of the forearm were rather flabby and wasted, but the grasp was still powerful. The right radial pulse was distinctly smaller than the left. The circumference of the growth over the most prominent parts was 24 inches. The lymphatic glands in the neighbourhood were not enlarged.

On July 4th, 1883, Mr. Heath commenced the removal of the mass of new growth by making an incision, as for an oval amputation at the shoulder-joint. He dissected up the skin from the back and front of the upper surface of the tumour, and then cut upon the position of the shoulder-joint, and removed the limb. The axillary artery was secured with catch-forceps directly it was divided. The shoulder-joint was quite healthy, but there was a large mass of growth fixed to the axillary border of the scapula. This was removed, along with the glenoid cavity, by sawing through the neck of the bone.

The growth being found, however, to invade the subscapularis and infraspinatus muscles, Mr. Heath proceeded to remove the scapula by prolonging the incision along the clavicle, which he divided at the junction of the outer with the middle third, and by carrying the lower border of the front flap round the inferior angle of the bone. The scapula was next drawn forwards by the fingers inserted behind the vertebral border; and the attachments of the trapezius, levator anguli scapulæ, rhomboid and serratus magnus muscles to the bone being successively divided, the scapula, with its special muscles and the new growth, was removed. There was free bleeding from the suprascapular and posterior scapular arteries, but they were quickly seized with forceps, and tied. All the vessels were tied with hemp ligatures. The arm-flap was shortened by the removal of the lower two-thirds, to which some of the growth was attached. The wound was syringed out with a solution of chloride of zinc (forty grains to the ounce), and mopped dry. The flaps were sutured with iron wire, and two large tubes were placed in the wound. A dressing of iodoform and salicylic wool was applied.

Towards the end of the operation, which lasted about forty-five minutes, the patient became collapsed. Ether was injected hypodermically, and an enema of brandy was given. The legs were elevated, and, when the patient could swallow, half-drachm doses of brandy were given every five minutes.



During the night after the operation, the patient slept fairly well; but at about 11 P.M. he was very sick. Two drachms of brandy were given every half-hour. There was considerable fever for a few days; but the patient took his nourishment well, and obtained comfortable sleep. The wound was dressed, in Mr. Heath's presence, on the second day after the operation. There was no inflammation about it; but there was a discharge of blood-stained, inoffensive pus. The wound was syringed out with a solution of chloride of zinc, and

dressed with salicylic wool. On the fourth day after the operation, the wound was dressed for the second time; and from that date the patient made an uninterrupted recovery. He sat up in an arm-chair for the first time on the twenty-third day after the operation, and was discharged with the wounds healed, except at one point, on August 31st (eight weeks after the operation).

The woodcuts, taken from photographs, show the appearances before and after the operation.

The part removed consisted of a large mass of osteo-sarcoma surrounding the upper end of the humerus, and firmly united to the scapula and clavicle. The growth extended down in front and on the outer side to the junction of the upper and middle thirds of the shaft. Posteriorly, the tumour extended to the junction of the lower and middle thirds. On either side, the growth was limited by an almost straight line joining the opposite points. On section, the upper third of the humerus was found almost entirely destroyed by the growth. The widest diameter of the growth was seven inches, opposite the point where the humerus had fractured obliquely through the surgical neck. The remainder of the upper third of the humerus was greatly roughened on its surface, which presented numerous ridges of new bone, as well as patches of new growth. The upper end of the middle third of the shaft of the humerus was widened, and the whole shaft was slightly curved forwards; otherwise the lower two-thirds of the shaft were fairly normal. The bones of the forearm and elbow-joint were normal. The muscles in front were infiltrated. The biceps tendon passed through the mass, and moved freely through it; the biceps itself was atrophied from disuse. The brachialis anticus was normal. Of the triceps behind, there remained but a few fibres over the lower fourth of the shaft.

The tumour everywhere presented the same appearance; here and there, especially at the margins, a pinkish white neoplasm was arranged in bands like fibrous tissue. The major part of this tissue contained numerous delicate ossific spicules radiating through the whole mass, usually apparently with a vessel as a centre.

The glenoid portion of the mass removed, consisted of the glenoid cavity, surrounded by the large mass of growth which filled up the axilla. Running through it were the nerve-trunks and great vessels. The growth extended backwards for a short distance, around the neck of the scapula especially. The bone itself appeared to be a little thicker than normal, but otherwise had a perfectly natural appearance. The growth extended a little way into the borders of the subscapularis and teres minor muscles, involving also slightly the infraspinatus. About seven and a half months later, the patient was readmitted to the hospital on account of a recurrence of the growth in the scar. The patient's general condition was very good. The growth was removed, and found to resemble the primary growth. It had a dark red colour, and was ossified in spicules nearly up to the growing margin. The patient was discharged three weeks after the operation. He remained quite well and free from recurrence till Christmas, 1885 (two and a half years after the first operation). About that time, he noticed a small lump in the front of the chest, and since that time the lump had steadily increased in size. On readmission to the hospital, May 8th, 1886, the growth, which measured three inches in diameter, was freely movable on the deeper parts, and the skin over it was healthy. The growth was removed, and in doing this, it was found to be situated in the pectoralis major muscle, but the anterior limit of the scar tissue was also implicated. The naked eye and microscopical structure entirely resembled that of the primary growth. No signs of recurrence in the internal organs could be detected, and the patient was in robust health. He made a rapid recovery, and was discharged to the convalescent home at Eastbourne in a month after the operation.

The patient returned from the convalescent home on July 8th; he was then perfectly well.

BEQUESTS AND DONATIONS.—Mr. Henry Christey, formerly of Beer Lane, Tower Hill, but latterly of Hastings, whose personal estate amounted to nearly £14,000 after bequeathing £250 to his brothers, and £50 each to his two sisters, has bequeathed the rest of his property to the London Hospital.—Mr. Richard Greaves has bequeathed £200 to the Warwick Provident Dispensary, and £200 to the Cottage Hospital.—The British Home for Incurables has received £300 under the will of Mrs. Litler (*née* Bellot).—The Rev. J. Wickes has given £100 to the Northampton General Infirmary, "in memory of a beloved mother."—The Royal Hospital for Children and Women has received £78 11s. 1d., the net proceeds of a concert on June 10th in support of "The Tulse Hill Cot," making a total of £364 16s. 10d.—The Northampton General Infirmary has received £50 under the will of Mr. William Henry Cooper, of Wellingborough.

REPORTS OF SOCIETIES.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

FRIDAY, JULY 2ND, 1886.

JONATHAN HUTCHINSON, F.R.S., F.R.C.S., President, in the Chair.

Monocular Iritis.—Dr. W. A. BRAILEY showed drawings from a case of monocular iritis in a child. The iris was discoloured, and projecting from it were several small greyish-white or pinkish white nodules; it was adherent at three points to the lens. In the corneal substance were several small greyish opacities. He considered that the disease was tubercular, though the aspect of the patient somewhat suggested congenital syphilis.—The PRESIDENT thought that it would be most interesting if the later history of the case could be traced. The enlargement of glands, which was present, was a point in favour of the diagnosis of tubercular disease.

Interstitial Keratitis.—Dr. BRAILEY also showed a case of interstitial keratitis, in which the left cornea had a somewhat peculiar aspect, and the suggestion was that it was of tubercular origin. The right cornea presented changes which were clearly of a syphilitic type. The left eye showed about a dozen small greyish white fairly defined nodules.

Pulsating Tumour of Orbit.—Mr. A. Q. SILCOCK showed a man with a large pulsating tumour of the orbit. The sight of both eyes had been destroyed by a charge of small-shot, some years earlier. Within two or three days after the accident, he heard a hissing noise in his head. A tumour, occupying the inner angle of the left orbit, and extending over the bridge of the nose, began to develop about twelve months after; pressure on the left carotid, which was enlarged, arrested the pulsation and *bruit* in the tumour. The tumour was not gaining rapidly in size. Mr. Silcock said he felt disposed to tie the carotid, but added that Mr. Hulke had advised resort to electrolysis.—Mr. ADAMS FROST said that the case reminded him of one which he brought before the Society in 1882 (*Oph. Soc. Trans.*, page 111). In that case, there had been an accident in childhood, accompanied by symptoms of fracture of the base of the skull. The pulsating tumour had appeared first in one orbit, and then in the other; and there could be no doubt that it was due to an arterio-venous communication within the cranium. He believed that, in the case shown, the lesion was of this nature. The fact that the tumour had not appeared until a year after the accident, although the noise in the head had been audible to the patient from the commencement, was more consistent with this view than with that of an intra-orbital lesion; the evidence of recorded cases also tended to show that aneurysmal varix of the cavernous sinus was almost always the primary lesion. As regards treatment, the extreme chronicity of these cases had to be borne in mind. The case he had mentioned had become no worse during the last four years, although the patient was employed in hard manual labour. There had been occasional exacerbations of pain and pulsation, but these had subsided with rest and digitalis. Even if the disease were entirely intra-orbital, electrolysis would surely be extremely dangerous; if there was any possibility of the tumour being of intracranial origin, it could not, of course, be entertained.—The PRESIDENT thought the case was an example of arterio-venous communication within the orbit. As the patient suffered little inconvenience, he was not inclined to advise any radical treatment; but if it were necessary to treat the condition, he would prefer to ligature the carotid to making injections or using electrolysis. As illustrating the comparatively slight inconvenience which tumours of this nature might cause, he mentioned the case of a woman, who had been under his care on account of a large cirsoid aneurysm of the scalp. He had ligatured the occipital and temporal arteries; but the growth did not materially diminish, and the woman left the hospital in a condition which differed little, if at all, from that in which she was when admitted. He had recently seen this patient again, after an interval of twenty years, and he had found that the tumour had not materially altered, nor seriously interfered with her comfort.

Double Chronic Glaucoma.—Dr. W. A. BRAILEY described a case of chronic glaucoma affecting both eyes in a man, aged 60. The man died of aortic aneurysm, which had existed for twelve years; vision had been failing for three years, but was never insufficient for ordinary purposes; tension in both eyes was increased (T + 1). No operation was performed. Microscopic examination after death showed cupping of the disc, and inflammation of the optic nerve, extending, in decreasing degree, through the chiasma to the optic tract. The iris was neither inflamed nor atrophied. The muscular elements of the ciliary body were inflamed. This case appeared to show that the inflammation and atrophy of the iris, commonly found in glaucoma,

were entirely secondary to the establishment of the tension; the same remark applied to the inflammation and atrophy of the ciliary body.

Corneal Changes in (?) Acquired Syphilis.—The history of a case of double symmetrical changes in the cornea of a man, aged 29, who had acquired syphilis eight years earlier, was contributed by Dr. M. J. SYMONS (Adelaide, South Australia). The patient had first noticed that his eyes were weak, and that there was a white film on them, seven weeks before he came under treatment. At the latter date, there were thinning, bulging, and opacity over limited areas, of both corneæ, without any disturbance of the epithelium. The iris was partially adherent in both eyes. The other tissues of the eye appeared to be healthy. Slight improvement was noted after treatment with iodide of potassium for a fortnight, but the patient then left the hospital.—The PRESIDENT said that the case was an example of corneal changes occurring in the tertiary period, but he felt no certainty that they were directly connected with acquired syphilis. He asked whether any member had ever seen corneal changes.—Mr. NETTLESHIP had seen a few cases of keratitis in acquired syphilis. A woman was now under his care with diffuse keratitis, closely resembling the keratitis of inherited syphilis; in another case, in a young woman, he had seen a similar keratitis in one eye.—Mr. MCHARDY could recall a couple of cases strictly analogous to Mr. Nettleship's cases; in both, he had examined other members of the family without discovering any evidence of inherited syphilis.—Mr. LANG had seen one patient, a married woman, aged 36, with typical interstitial keratitis, suffering from acquired syphilis; in this case, there was no evidence of congenital syphilis. He referred to a second case, in a man, of interstitial keratitis, which occurred twelve years after infection.—Dr. A. MONEY asked what was the latest age at which genuine interstitial keratitis of congenital syphilitic origin could occur; he had seen a case in a woman, aged 33, in whom the inherited syphilis was unquestionable.—Mr. JONATHAN HUTCHINSON said he had seen several cases as late as 36 years of age.—Mr. NETTLESHIP referred to cases between 30 and 40 years of age; and Mr. ADAMS FROST mentioned a case in a woman 39 years of age.

Nævus involving Eye.—Mr. SIMEON SNELL (Sheffield) sent a description of the case of a woman, aged 17, in whom a cutaneous nævus extended over the brow on the right side from the orbit for four inches, and involved also the upper eyelid. Vision in the right eye had always been imperfect, if not absent. The tension of the globe was increased ($+T_2$), and there was some pain, which was relieved by eserine. No reflex was obtainable from the fundus; the posterior part of the vitreous was occupied by a greyish flocculent substance; the pupil was dilated; at the inner and lower ciliary region was a staphyloma, and the surface was vascular, with deep tortuous vessels. In the circum-corneal region above was a purplish area, which extended upwards and backwards, and apparently involved the sclerotic. The eye was enucleated.—Dr. W. A. BRAILEY examined the eye after removal. The retina was detached, the optic disc hidden by a great thickening of the choroid; the muscular substance of the ciliary body was shrunken; the iris was inflamed and atrophied. The thickening of the choroid was due to the presence of numerous vascular channels.

Paralysis of External Recti.—A paper by Mr. W. J. CANT (Lincoln), on the case of a man, aged 63, suffering from double vision, headache, and complete paralysis of external recti muscles, with slight optic neuritis, stated that the urine was slightly albuminous. Under saline purgatives, and iodide of potassium, the recti muscles gained power, and double vision became less marked.—Dr. SEYMOUR SHARKEY supposed that it was meant to be inferred that the paralysis was connected with Bright's disease; the evidence, however, on the presence of that disease was slight; the ophthalmoscopic changes were those of optic neuritis; there might be an intracranial tumour.—The PRESIDENT suggested that the case was an example of ophthalmoplegia externa in an early stage, and Dr. A. MONEY that the paralysis was due to diphtheria, which would account for the albuminuria.

Annual Business.—The annual report of the Council, and the financial statement, was read by the Honorary Secretary (Dr. SHARKEY). It congratulated the Society on its continued and increasing success.—A motion by Mr. COWELL, with reference to the duration of offices, was referred to the Council. The PRESIDENT, in vacating the chair at the termination of his period of office, delivered a short address, in which he referred to the past work of the Society, and made suggestions for its future conduct.

Card Cases.—Mr. W. H. JESSOP: Drawing of a case of Leukæmic Retinitis (under the care of Dr. Andrews, in St. Bartholomew's Hospital).—Mr. MARCUS GUNN: Peculiar Congenital Deep Partial Excavation of the Optic Disc.—Mr. W. J. CANT (Lincoln): Drawings of Symmetrical Disease, probably Congenital, of the Fundus, in a child.

SOUTH INDIAN BRANCH.

CENTRAL MUSEUM, MADRAS, February 5th, 1886; the PRESIDENT in the Chair.

Popliteal Aneurysms.—A case of popliteal aneurysm, in a Hindu, aged 35, reported by Mr. T. J. MCGANN, of Mysore, was communicated by Dr. Allison. The patient was an intemperate man. He first noticed a swelling behind the left knee six months before admission, but a peculiar throbbing had been noticed in that situation two months earlier. The pain, as well as the dimensions of the swelling, were increased by the treatment to which he resorted, which consisted of violent friction, the application of irritating substances, and of the actual cautery. When admitted on November 26th, 1884, the swelling almost surrounded the knee; a smaller circumscribed swelling was detected behind the right knee. Both swellings were aneurysmal; that on the left side was diffused and painful, and the skin over it tense and hot. Digital pressure could not be borne long enough to effect a cure, and the femoral artery on the left side was tied on December 4th. All went well up to December 20th, when hæmorrhage from the ligatured vessel followed an attempt to walk; the loss of blood was rapid, but was finally arrested by pressure on the femoral artery; gangrene, however, subsequently occurred, and it was necessary to amputate the leg at the seat of ligature on January 9th. The patient made a rapid recovery. The sequel to a case reported by Mr. P. H. BENSON, of Mysore, was also communicated by Dr. Allison. the man was admitted on September 11th, on account of the increase in size of the aneurysm in the right popliteal space. The femoral artery was ligatured in two places beneath the sartorius muscle with silk, and divided; the ligatures came away on the eleventh day, and the patient made a good recovery. Carbolic dressings were used by the operators on both occasions.—Surgeon-Major BRANFOOT asked why pressure and flexion were not tried before the second operation, and why the wound was not completely closed, as the silk might have been left behind without danger.—Surgeon-Major DRAKE-BROCKMAN also thought pressure and flexion might have been tried; but Dr. RATTON felt that the treatment could not be criticised in the absence of the operator.

Femoral Aneurysm.—Surgeon J. MAITLAND showed a specimen of femoral aneurysm. The aneurysm, which occurred in a Hindu clerk, aged 50, had been noticed for a year before admission, and had been treated by the application of irritants. The patient was much exhausted; the right limb was œdematous, and the aneurysm extended from half an inch above Poupart's ligament downwards for six inches. After waiting for ten days, in the vain hope that the patient's general health would improve, the external iliac artery was tied with a silk ligature, the ends cut short, and the wound closed. Sanguineous discharge from the wound occurred on the eighth day, and, on the tenth day, hæmorrhage had become so free that the wound was opened up, and it was found that it proceeded from an opening in the sac, immediately beneath Poupart's ligament. The sac was laid open, a quantity of soft black clot turned out, and the superficial femoral tied below the aneurysm. The patient died of asthenia on the fourteenth day. At the necropsy, the tissues in front of the aneurysm were found to be greatly thickened; the aneurysm was diffused posteriorly, extending down the thigh on each side of the femur; the femoral vein and the crural nerve were pressed upon, and matted together with inflammatory deposit; at the point of ligature, the vessel showed no tendency to break down, and was completely occluded.

Adenoma of Mammæ.—Surgeon-Major BRANFOOT showed drawings and photographs of adenoma of both mammæ in a Hindu girl, aged 14. She was small, and had never menstruated. The mammæ had been enlarging for four months; both were hard and nodulated, but the left more so than the right. The nipples were small and flat; the transverse diameter of the right mamma was 9½ inches, of the left 10 inches.—Mr. DRAKE-BROCKMAN asked if there was any reason to suspect Hodgkin's disease.—Mr. BRANFOOT replied that there was no enlargement of lymphatic glands.

Ovariotomy and Hysterectomy.—Surgeon-Major BRANFOOT showed a patient, aged 25, who was admitted on November 10th, 1885, with a large ovarian cystoma. On December 1st, the abdomen was opened, and it was found that the uterus had been carried up out of the pelvis. Numerous omental, intestinal, and pelvic adhesions were also present. The connections between the tumour and the posterior wall of the uterus were so firm, that the broad ligaments were separated, the supravaginal cervix of the uterus secured with a Kœberle's *serre-nœud*, and the tumour and uterus removed together. In detaching the intestines, which were firmly matted together and adherent to the cyst, a rent, one inch and a half long, was made in the ileum. No escape of fæces occurred, as the gut was empty, and the rent was closed with

a fine carbolised silk continuous suture, the peritoneal surfaces being brought into contact. The tumour grew from the right ovary; the left ovary, which was atrophied, together with the dilated Fallopian, were removed. The abdomen was closed, no drainage-tube was used, and the patient was discharged well, on December 31st.—The PRESIDENT related a case of abdominal wound, where a large amount of gut protruded; though the intestines were exposed to the air for a long time, covered with dirt, and ruptured at one point; the patient recovered under the influence of opium.—Mr. BRANFOOT said his patient had only had a few doses of opium.

Cardiac Thrombosis.—Surgeon H. A. NAILER showed a specimen of cardiac thrombosis from a man who was seized with a fatal attack of dyspnœa a few days after operation for strangulated hernia.—Mr. BRANFOOT said that the question at issue was whether the clots were due to embolism or thrombosis.—Mr. MAITLAND, under whose care the patient had been, observed that the supposed predisposing causes of cardiac thrombosis were not present in this case. Sloughing of the scrotum had occurred, which showed that the patient was in a bad state of health.

Avulsion of Scrotum.—Dr. RATTON related a case in which the scrotum, together with the skin of the penis, were torn off by revolving rollers, leaving the penis, testicles, and the perinæum as far as the anus, denuded. There was little bleeding, and the testicles were not even tender. The wound showed a tendency to heal well under corrosive sublimate and boracic dressings. Dr. Ratton pointed out that the scrotum came away precisely in the lines of the incision employed for the removal of the elephantoid scrotum. The steps of the operation were, however, reversed; for, in the accident, the scrotum was first removed. He discussed the question whether there would be any advantage in performing the operation in this reversed method, but decided in the negative.—Mr. BRANFOOT recalled a somewhat similar case in Guy's Hospital, where the scrotum had been encircled by a knife, and the skin of the penis torn away, together with the scrotum. Fright would cause retraction of the testicles, which might thus escape injury.—Mr. DRAKE-BROCKMAN referred to the loose connection between the skin and the tough sheath of the penis and tunic of the testicle, as accounting for these injuries.—Mr. NAILER observed that, as the patient fell backwards, the weight of the body was the main force which caused the injury. The scrotum was not bruised.—Mr. J. SMYTH also commented on the way in which the scrotum had escaped injury.

Abscess of Larynx.—Surgeon H. A. NAILER showed a specimen of abscess of the larynx, caused by an impacted chicken-bone. The symptoms produced by the bone at first soon passed off; more than a month later, the man was admitted with urgent dyspnœa, and died, in spite of tracheotomy. An abscess was found behind and to the right of the larynx, exposing the cricoid cartilage, which was eroded. The bone was not found.—The PRESIDENT related the case of a phthisical girl under the care of Dr. Brinton, who suffered from dyspnœa, which she attributed to the lodgment of a chicken-bone. She died in a severe attack of dyspnœa, and a small bone was found in the aryteno-epiglottidean folds.—Mr. SMYTH and Mr. DRAKE-BROCKMAN also took part in the discussion.

SOUTHERN BRANCH.

WEDNESDAY, JUNE 16TH, 1886.

J. G. SINCLAIR COGHILL, M.D., President, in the Chair.

Ovarian Tumour.—Mr. LANGDON (Winchester) showed a large ovarian tumour.

Radical Cure of Hernia.—Dr. WARD COUSINS exhibited two patients, after operation for the radical cure of hernia. One patient was a man, aged 25, who had suffered from an irreducible rupture for years, and three times from strangulation.

Traumatic Stricture.—Dr. WARD COUSINS brought forward a patient who had received an extensive injury of the perinæum, followed by traumatic stricture, perineal fistula, and a large penile fistula, with much loss of tissue. The fistula was an inch in length. External urethrotomy, bladder drainage for six weeks, and two plastic operations, had been fortunately followed by complete recovery. The patient had previously been under treatment in two hospitals, and had undergone two plastic operations.

Encephalocele.—Dr. WARD COUSINS exhibited a large encephalocele. The tumour contained cerebral matter, and was 11 inches in circumference, and 8 inches in length. It protruded in the central line of the forehead. The cranial opening was circular, and about an inch and a quarter in diameter.

Incisor Tooth in Orbit.—Dr. WARD COUSINS showed incisor tooth removed from the orbit of a child, two years of age. It was very perfect in outline and structure. Mr. Tracey did not regard it as the product of a dentigerous cyst, but, as a specimen of a displaced tooth during an early stage of development.

Chronic Ulceration of Intestine.—Dr. WARD COUSINS showed a piece of intestine, the seat of chronic ulceration. In this case, sudden death occurred from perforation, caused by an abdominal injury by which old adhesions around the ulceration were ruptured. Extensive traces of old plastic peritonitis were found within the cavity. The patient had laboured for many years from large double and irreducible inguinal hernia.

Radical Cure of Hernia.—Dr. KINGSCOTE (Salisbury) read notes on two cases illustrative of some remarks on the treatment of the sac in the radical cure of hernia. CASE I.—Mrs. R., aged 43, suffered for many years from a left femoral reducible hernia. On November 9th, 1884, it became strangulated, and remained so for five days, when Dr. Kingscote operated. The tumour was about the size of a hen's egg, and the sac was non-adherent. He opened the latter to ascertain the state of the gut, and returned the knuckle of intestine. A few transverse stitches into the sac, to keep it applied to the floor of the wound, in the hope that granulation and cicatrisation would form an insuperable barrier to the recurrence of the hernia. This was done by means of stout carbolised catgut sutures (prepared to last a week), the ends of which were brought out at the most dependent part of the wound, and formed an excellent draining apparatus. The wound was dressed antiseptically three times, and, at the end of a fortnight, was quite healed. The patient was directed to keep a padded bandage constantly applied. A month before the report, there had been no return of the hernia. A hard and apparently fibrous mass occupied the seat of the wound. CASE II.—Miss ——, aged 54, had, on April 26th, all the symptoms of strangulated right femoral hernia. On April 30th, the operation was done as in the other case; but there was only a small tumour visible, about the size of a hazel-nut, and the sac was so adherent that it was at first doubtful whether it was a hernia or a swollen gland. The sac was opened, and the bowel returned. The former was then stitched up, after sufficient of it had been removed, and remained at the floor of the wound, held in position by its own adhesions to the crural ring. After two dressings, the wound was healed, and the patient left, with instructions to keep on the bandage and pad. As in the former case, a firm mass, blocking up the intestinal exit, formed. Whether it would prove eventually efficacious remained to be seen. Dr. Kingscote thought that sufficient attention had not been paid to the benefits which might accrue from the employment of the sac of herniæ as a means of keeping in check the encroachments of the gut. By causing the sac to adhere to the base of the wound, an internal pad was formed, which must prove a more effectual obstruction to the descent of intestine than any truss hitherto invented. In cases where the sac was adherent, the operation was much more simple than where the reverse was the case, as the chief difficulty was overcome; namely, that of keeping the sac applied to the base of the wound.

The Present Aspect of Hernial Surgery.—Dr. WARD COUSINS delivered a short address on this subject. The annual rate of mortality from hernia, and the percentage of deaths after operations for strangulation having been noticed, some reference was made to the widespread character of the affection, and the serious risks and inconveniences which attended it. He next mentioned the popular ignorance and gross neglect which, even at the present time, surrounded the subject of hernia, and related some cases of very large irreducible herniæ in which no kind of treatment had ever been adopted. Ignorance and carelessness were the chief factors in the production of all the dangerous accidents which befell the subjects of hernia. The recent changes in the surgical aspect of hernia were then considered. The present tendency of the profession was in the direction of marked progress. During the last few years, through the labours of John Wood, Spanton, Mitchell Banks, Alexander, and other surgeons, the surgical treatment had undergone considerable modification. The old-fashioned advice to the patient, "you are ruptured, and must wear a truss," was now giving place to more careful and scientific treatment. Dr. Ward Cousins observed that the progress of hernial surgery was moving in two directions; firstly, improvements in the palliative treatment; second, improvements in early treatment, and in the application of operative measures for radical cure. The mechanical appliances, both in form and manufacture, had remarkably improved during the last few years. Trusses were the most common of all surgical instruments, and they were produced with many new contrivances. He considered the best truss to be that which fitted the patient well, and effectually supported the rupture. The practical application of truss-treatment ought to pass wholly into the hands of the sur-

geon. The patient had to be taught the method of application, and the daily precautions essential to prevent a reappearance of the protrusion. He advocated a periodical examination of hernial patients. They ought to be instructed to submit themselves regularly for inspection to their own medical attendants. The poorer class of patients could present themselves for examination to the nearest hospital. He believed that, by such a method, the accidents and mortality of hernia would be greatly diminished. The palliative treatment of large or irreducible herniæ was now often associated with operative treatment, and thus the lives of many sufferers were rendered comparatively safe and comfortable. Large herniæ were now reduced to small ones, and in this way the difficulties of mechanical treatment were effectually removed. Irreducible herniæ were converted into reducible. Herniæ of this description were always attended with grave risk to life, for the sac was ever liable to be suddenly distended with a fresh protrusion. With modern antiseptic precautions, operative interference could be undertaken in many cases with very little risk, and for the purpose of anticipating the dangers of strangulation. In a large proportion of cases, infantile hernia could be radically cured by appropriate truss-treatment, under the supervision of the surgeon. The treatment demanded as much attention as a fracture of the leg or an injury of a joint. The treatment of infantile hernia required a great deal of patience, and the constant help of an intelligent nurse. The rupture should never be allowed to come down, and the treatment ought to be continued for at least eighteen months. The removal, as far as possible, of all disorders which caused straining, was also a very essential part of the management of such cases. He then referred to the air-cushion and washable belts, which he had very successfully employed. Some surgeons, he said, did not like his contrivance, but this was because they did not take the trouble to learn the method of application. When truss treatment failed in young children, the operation of radical cure was sure to succeed. He had operated in some very bad cases of double inguinal hernia, with excellent results. The operation should always be done on one side first; for the subsequent mechanical treatment often resulted in a complete cure on both sides. In conclusion, he advocated the practice of radical cure for all young persons. A successful operation removed the risks which surrounded the life of the patient. It rendered him eligible to enter upon many occupations from which he was before excluded. It removed the necessity and also the expense of life-long palliative treatment, and it greatly added to his personal comfort. The operation ought to be recommended in every case in which the health was favourable, and the constitution sound. There was a great future in this department of surgery. He believed that, in a few years, there would be a considerable reduction in the adult hernial population. By the improved mechanical treatment of the present day, and by early operation, much suffering would be prevented, and many lives saved from premature death. The profession was roused in the direction of progress, and the public were anxious more than ever to obtain the assistance of the surgeon. In a short time, parents would be as much concerned to obtain surgical aid for their children labouring under hernia, as they were now for club-foot or hare-lip.—A discussion followed, in which Dr. BROOKS and Mr. LANGDON took part.

REVIEWS AND NOTICES.

DIE ELEPHANTIASTISCHEN FORMEN. EINE UMFASSENDE DARSTELLUNG DER ANGEBORENEN UND ERWORBENEN ELEPHANTIASIS SOWIE ALLER VERWANDTEN LEIDEN. Bearbeitet und herausgegeben von Geh. Medicinalrath Dr. F. ESMARCH, Professor in Kiel; und Dr. Med. D. KULENKAMPFF, Praktischer Arzt in Bremen. Hamburg: Druck und Verlag von J. Richter. 1885.

(THE MANIFESTATIONS OF ELEPHANTIASIS. A Comprehensive Exposition of Congenital and Acquired Elephantiasis and Allied Conditions. By Professor ESMARCH, of Kiel; and Dr. KULENKAMPFF, of Bremen.)

THE publication of this work, which was announced so long as ten years ago, was delayed by the death of Dr. Leisrink, ESMARCH'S former assistant. His place was, fortunately, taken by Dr. KULENKAMPFF, and the work has at last been given to the profession. The book is one that is not likely to be translated; nevertheless, it is one which writers on Elephantiasis and on dermatological topics will for many years not be able to neglect. It is a monograph in which all the communications connected with hypertrophies of the skin, in ancient and modern literature, are discussed and subjected to intelligent criticism. It further contains reports of a great number of cases observed by the authors, and is illustrated by no fewer than twenty-eight plates, some of them executed in chromo-lithography, in addition to woodcuts scattered through the text.

In the latter are exemplified Elephantiasis of the Leg and Thigh, Elephantiasis in Lupus, Elephantiasis of the Scrotum and Leg, Elephantiasis Congenita Mollis (embryo), lymphatic papillary nodules, lymphatic network in the skin from a case of ulcerating lymphangioma, and angiofibroma of the face. The plates contain representations of Elephantiasis of the Feet, a coloured plate with Elephantiasis of the Thighs after erysipelas, Elephantiasis of the Leg, Elephantiasis of the Female Genitals, Elephantiasis of the Penis, Elephantiasis of the Scrotum, and Elephantiasis Congenita Teleangiectodes. There is a representation of a skin-tumour attached to the back of a woman, which was 2 feet 2 inches long, and 3 feet 4 inches in circumference. It hung by a pedicle, 16 inches in diameter, and embraced the whole region between the seventh cervical and the first lumbar vertebræ, as well as the shoulder-blade. The tumour appeared to consist simply of hypertrophic skin and fatty tissue.

The next plate shows, from a dissection, the vascular plexus which underlies the tumour; and another plate shows the venous plexus in the thorax in connection with these vessels. The following plate shows Waxy Elephantiasis Teleangiectodes. The same case is further illustrated in another plate showing the Elephantiasis Growth descending continuously from the labia, on the inner surface of the thighs, to the popliteal space. The case is still further illustrated in another plate showing, on a larger scale, the labia in the same patient, both labia being enormously enlarged.

Plate 13 illustrates a most remarkable case of Pachydermatocele, in which the loose skin hung over the humerus in terraces springing from the back of the head on the left side, and falling over the left shoulder and thorax, like the folds of a shawl. The next plate shows a case of Elephantiasis Growth from the Forehead and Upper Eyelids before and after an operation, which was performed by Billroth. Then comes an illustration of a case of Elephantiasis Congenita Fibromatodes. In this case, on the left side of the abdomen, there is a limited cauliflower-like growth of fibrous tissue, broadly papillated, and involving a considerable portion of the right side of the abdominal surface.

Following, in the next plate, there are two cases illustrative of the so-called Lappen Elephantiasis, Cutis Pendula, Pachydermatocele, or Dermatolysis. Then comes a plate illustrating Pachydermatocele with Nævi, followed by a plate in which the tissue in so-called Elephantiasis Neuromatodes (a huge tumour hanging from the back) is shown, both before and after an operation by Czerny, followed by a plate in which a dissection of the same tumour is illustrated, showing a plexus formation on the lumbar nerves, and a dissection of the border of the tumour. The next plate continues illustrations of the Elephantiasis, followed by a plate showing still another similar case, and also showing a dissection of the immensely enlarged and distorted nerves in the tumour. The next plate illustrates a case of Elephantiasis Lipomatosa Angiectodes, and a case of Nævus Maternus, with Neuroma. The succeeding plate shows a case of Elephantiasis Congenita Teleangiectodes, and a case of Congenital Lipoma of the hands, followed by a beautiful plate in chromo-lithography of a nerve-nævus, followed by another chromo-lithograph plate, showing nerve-nævus, and a Neuropathic Papilloma. The three following plates, one of them coloured, are taken up with illustrations of these neuropathic growths in the axilla of the same patient. (We may remark, in passing, that these so-called neuropathic papillomata appear to have a certain resemblance to cases that have recently been described in England under the name of lymphatic nævus.)

We have written enough to show the importance of this work; and if we have dwelt chiefly on the plates which illustrate it, it is because we consider that it is largely due to them that the book must become an indispensable addition to all large medical libraries. The text is full and clear; the pathology of these various affections is fully discussed, and the treatment, in so far as they are capable of treatment, is described. Professor Esmarch and Dr. Kulenkampff may be congratulated on having produced an enduring work, and on having advanced medical science by fixing a milestone from which progress in future may be measured. The publishers have no less to be congratulated on the success which has attended their efforts to do justice to the authors.

CREMATION.—The sixth cremation at Woking Cemetery took place on June 30th, and was most satisfactorily carried out. The body was that of a lady.

NOTES ON BOOKS.

Plain Facts about Infant Feeding and Management. By C. STENNETT REDMOND, L.K.Q.C.P.I., L.R.C.S.I. (London: Walter Scott. 1886.) Mr. Redmond hopes, by means of a popular treatise on the evils attending the administration of improper food to infants, to obviate some of the bad results which are recognised as depending on this cause. Such an object is very praiseworthy, but we are afraid he is rather sanguine in anticipating that his exhortations are likely to be productive of the good he desires. Mothers, at any rate in that section of the community wherein experience shows that these evils are most prevalent, are generally so pledged to certain practices that the advice of even the hospital physician or medical attendant i habitually disregarded. The author begins by giving a synopsis of the mortality-returns, showing to what a large extent infant life is sacrificed on the altar of preventable causes, and then proceeds to indicate the remedial measures to be adopted. An opportune condemnation is meted out to the practice of insuring infants' lives, which, he says, is "little less than a premium to infanticide." This question is, indeed, one which will have to be seriously considered in the near future, for professional opinion is tolerably unanimous as to the disastrous results of this system. The numerous mistakes committed by mothers are duly dealt with, and suitable rules laid down for their guidance.

Method of Case-Reporting for Clinical Clerks. By T. CHURTON, M.D., Physician to the Leeds General Infirmary, etc. (Leeds: Printed by McCorquodale and Co. 1886.)—Dr. CHURTON has drawn up a very complete outline for the observation and recording of cases at the bedside. The method of collecting data is arranged for the convenience of the patient. The facts being collected, it is then shown how they are to be thrown into physiological order in writing out a report of the case. This plan of working is very much to be commended, not only because it is most agreeable to the patient, but also because it trains the student, from his earliest days, to make rapid and definite observations in the way which, in private practice, he will find inevitable. The only criticism which seems called for is that it can hardly be necessary to record, in every case, the absence of symptoms referable to the long list of organs and functions enumerated by Dr. Churton; clinical records, which already tend to be greatly lengthened, would, under these circumstance, be invariably portentous. Dr. Churton's "method" appears to be the most thorough and scientific which has ever been drawn up.

Elementary Bandaging and Surgical Dressing, with Directions concerning the Immediate Treatment of Cases of Emergency for the use of Dressers and Nurses.—By WALTER PYE, F.R.C.S., Surgeon to St. Mary's Hospital, etc. (London: Trübner and Co., Ludgate Hill. 1886.)—This excellent little book is chiefly a re-issue of those portions of the author's well known and successful manual of surgical manipulations, entitled, *Surgical Handicraft*, which deal with bandaging, use of splints, and first aid in surgery. It has the advantage of being very complete, well illustrated, and entirely free from any sort of clap-trap. It is quite a model elementary pocket-manual, for the use of students, beginning their ward and patient work under the instruction of surgical nurses.

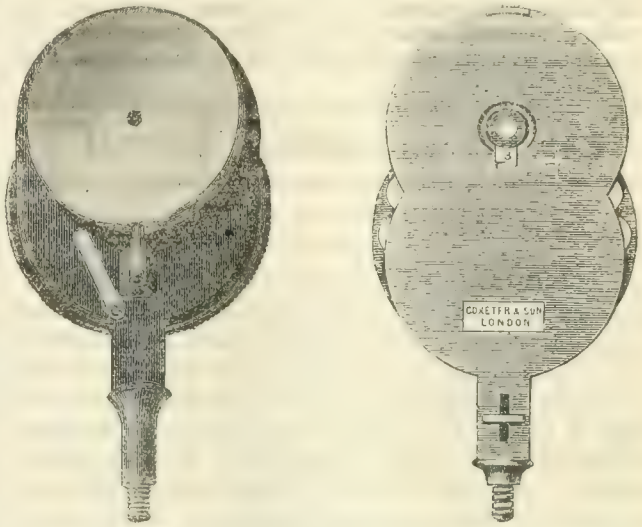
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

URINARY TEST-CASE AND UREOMETER.

PROFESSOR CHARTERIS, of the University of Glasgow, finding that a great obstacle to the clinical use of the old and well established liquid reagents for urinary testing is the difficulty of carrying them about, has had arranged a portable and compact test-case, which can be easily carried in the pocket, and which contains nitric acid and Fehling's solution in well-stoppered bottles, with the necessary testing tubes and heating apparatus. It is conveniently arranged, and inexpensive It is produced by Mr. Hume, 1, Lothian Street, Edinburgh. It is brought forward at an opportune moment, when the old-fashioned tests have been rehabilitated by a report of the Clinical Society, which we recently published.

A STUDENT'S OPHTHALMOSCOPE.

THE essentials of a student's ophthalmoscope are, that the instrument should be of simple construction, portable, strong, and cheap. A new ophthalmoscope, designed by Messrs. Coxeter, of Grafton Street, W., appears to fulfil all these conditions. The accompanying illustrations, which are of full size, will explain the general construc-



tion of the instrument. There are two sockets, into both of which the mirror fits; the one projects sufficiently far forward to permit the mirror to be placed obliquely for direct examination. A revolving disc carries eight lenses, five concave (D 1, 2, 3, 4, 6), and three convex (D 1, 2, 4). The value of the lens opposite the eye-hole is indicated by a number corresponding in colour with the + or −, which are engraved in white and red on the back of the instrument. The ophthalmoscope will be found very handy to use; it is light and easily manipulated, and can be quickly cleaned. There is a stop on the lenses, and only those who have tried to work with a stop-less ophthalmoscope can appreciate the value of this simple detail. The instrument is fully equal to fulfil all the demands of ordinary medical work; and, armed with it, the student need not fear to encounter any serious difficulties in acquiring the art of using the ophthalmoscope. The very moderate price of this pattern puts it within the reach of every student, and there is now no excuse for neglecting so important a part of medical education.

THE WEATHER OF THE WINTER 1885-86.—At a recent meeting of the Royal Meteorological Society, a paper by Mr. C. Harding, on the Severe Weather of the past winter, 1885-6, was read. The author showed that the whole winter was one of exceptional cold, not so much on account of any extremely low temperature experienced, as from the long period of frost, and the persistency with which low temperature continued. In the south-west of England, there was not a single week from the commencement of October to March 21st in which the temperature did not fall to the freezing point. In many parts of the British Islands, frost occurred in the shade on upwards of sixty nights between the beginning of January and the middle of March; and during the long frost which commenced in the middle of February and continued until March 17th the temperature fell below the freezing point in many places on more than thirty consecutive nights. At Great Berkhamsted, in Hertfordshire, frost occurred on the grass on seventy-three consecutive nights from January 5th to March 18th. The winter of 1885-86 was the only one in which there was skating on the water of the London Skating Club, in Regent's Park, in each of the four months December to March, since the formation of the club in 1830; and there are but four records of skating in March during the fifty-six years, and none so long as in the present year. With regard to the temperature of the water of the Thames at Deptford, it was shown that the total range from January 8th to March 20th was only 6°, whilst from March 1st to 19th the highest temperature was 36.5°, and the lowest 35°. The temperature of the soil at the depth of one foot was generally only about 2° in excess of the air over the whole of England, and from March 1st to 17th the earth was colder than usual by amounts varying from 6.3° at Lowestoft to 8.5° at Norwood.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 10th, 1886.

ABDOMINAL PALPATION IN OBSTETRICS.

ALTHOUGH the possibility of obtaining information as to the position of the fœtus *in utero*, by means of carefully conducted manipulation of the abdominal walls, is mentioned in most of the best text-books on obstetrics, its systematic use is neither advised in treatises nor taught in schools. That it should form no part of the usual practical instruction, is not difficult to understand. The whole system of imparting a knowledge of the subject in this country is, with one or two notable exceptions, so utterly imperfect and so absurdly inadequate, that the only matter for surprise is that the ultimate result should be as satisfactory as it is. With no obstetric wards in general hospitals, and in the absence of any facilities for profiting by the experience to be gained in special hospitals, it is indeed hard to suggest a means by which the end can be attained.

On the continent, generally, where a more liberal system exists practical obstetrics form a recognised and efficient part of the usual curriculum, and there, too, great stress is laid upon abdominal palpation as allowing a fairly accurate diagnosis, at a time and under circumstances which prohibit or prevent an useful vaginal examination. Even where this latter means is permissible, the valuable additional evidence to be obtained by palpation can only be disclaimed by those who have not been made conversant with its advantages. The subject is by no means new, so far as general ideas are concerned; but more recently Wigard, Mattei, Tarnier, etc., have given a remarkable stimulus to this method, and these ideas have since found an able exponent in Dr. Pinard, of the Lariboisière Hospital in Paris, who has systematised the method and brought it within the range of practical obstetrics.

Abdominal palpation, to yield practicable and reliable results, must of necessity be preceded by a competent knowledge of the ordinary and possible relations of the fœtus with the uterus and abdominal cavity. These must be thoroughly mastered, as well as the mechanism of labour in its bearing on the position of the fœtus.

The woman to be examined is placed on her back, with the head low and the legs flexed on the abdomen, the precaution having been taken to empty the bladder and rectum. The tumour will thus be rendered more prominent, and the parietes of the abdomen relaxed as much as possible. Notice should be taken of the thickness of the abdominal walls, as this may modify very considerably the sensation on manipulation. It is, moreover, desirable to employ this method before resorting to any other mode of examination, in order to have the mind free from any preconceived idea on the subject. The hands are then placed flat on the site of the tumour, and are pressed firmly in, so as to enable the observer to draw his own conclusions as to the size and the nature of the tumour. The most useful sign furnished by palpation is the *ballottement*, known in this country only as a sign obtainable by vaginal examination. This sensation of the rebound of a solid body floating in a liquid is as reliable and as easily obtained through the abdominal walls as *per vaginam*. At the same time, active movements on the part of the fœtus may be perceived, and the information so obtained may be controlled by means of the stethescope.

It is well to begin by ascertaining the position of the head, and whether or not it has cleared the brim. For this purpose, the hands are placed with the fingers together and pointing downwards on each side of the median line, and so that the tips of the fingers are just above the pubes. It may not be amiss to call attention here to the desirability of avoiding cold hands, as otherwise reflex contraction of the abdominal muscles will put a stop for a time to effective examination. These manœuvres should not be attended with discomfort (still less pain) to the woman, and the firm steady pressure necessary to the object in view can be employed without involving either. The hands being in position, they should be pressed down gently but firmly in the direction of the true pelvis, dipping behind the osseous arch. If the head be present and above the brim, it will easily be felt as a globular mass, readily movable, and offering on one side the characteristic sensation of a smooth hard surface, the forehead. If the head be engaged, that is, have passed the brim, the hands should be further pressed down, the woman meanwhile breathing deeply; and the head will then be detected, less readily movable or fixed, and the forehead will be felt at a higher level on the right (taking the first cranial position as an example). Having satisfied himself as to the situation of the head, the medical attendant should then examine the remaining part of the tumour. With the same gentle but firm pressure with the open hands, endeavours should be made to trace the plane of resistance, corresponding to the vertebral column, of the fœtus, which in a woman with fairly thin abdominal walls can be followed up without difficulty. This will be found to terminate superiorly in a smooth, rounded, semi-elastic, prominence which yields to pressure; and, continuing the examination, the small parts (knees and feet) may be felt on the right side, and active movements may be elicited. Should the preliminary search for the head behind the pubes not be successful or be unsatisfactory, particular attention should be directed to the superior extremity, with a view of ascertaining whether it be the head or the breech. There are several important signs on which reliance may be placed for this purpose. The peculiar and independent mobility of the head on the neck, together with a break in the plane of resistance, are, taken together, very significant. The *ballottement* is here obtained with the greatest ease, and the return shock of the head is altogether more prompt and distinct than the soft impingement of the whole body. Sometimes the head is more to the rear, or it may be hidden beneath the false ribs; and in this case it is necessary to effect some slight rotation of the fœtus before a satisfactory diagnosis can be made. The breech will generally be found in the iliac fossa of the opposite side to that of the head. When this state of things is discovered before the presenting part has become fixed, it is by no means a difficult task to effect version by external manipulation, so as to bring the head into the desired position over the entrance to the pelvis; and, when

this has been effected, a suitable belt will maintain it in place. A periodical examination is, however, desirable to make sure that no further change in position has taken place. This operation is now performed almost daily in foreign hospitals, and with the most satisfactory results.

In transverse positions of the fœtus, the shape of the tumour will at once be detected to be different from the normal. The head, which has not been detected in the usual position, should be searched for in one or other of the iliac fossæ; and as soon as the plane of resistance, and consequently, the exact position of the fœtus, have been made out, steps should be taken to rectify the malposition by the same means as in a case of breech-presentation; and the head, when brought down, should be fixed by means of the usual abdominal belt, especial care being directed to its retention there, until, by descent into the pelvis, its stability is ensured.

This procedure, as we have explained above, does not preclude the use of other sources of information; but in experienced and painstaking hands it may be made to furnish the means of diagnosis which would otherwise be altogether impossible. It is not too much to affirm that in the obstetric wards at the Lariboisière Hospital, the birth of a child by other than a cephalic presentation is never permitted to take place, if at the time of application the fœtus be still mobile and if the fixity be such as to render readjustment impossible. The fact of the malpresentation is known long before it could be ascertained by vaginal examination, and suitable precautions can be taken in consequence.

Although, at present, means are not available for teaching this and other details of practical obstetrics in a manner worthy at once of the subject and of the metropolis in which we live, sufficient skill can easily be acquired by the general practitioner, with a little perseverance, to enable him to derive much help in his work, and especially in the more difficult cases.

THE QUALITY OF OUT-PATIENT PRACTICE.

It has become a matter of common observation and remark that the out-patient department of general hospitals no longer offers the same scope for clinical research either for the physician or the student, as it did some years ago, when "specialisation" was less marked, and a man was permitted to deal with the organism as a whole, instead of restricting his field of vision to one particular organ or part of one. At present, the bulk of the patients coming under the care of the out-patient physician are dyspeptic or hypochondriacal, and, under these circumstances, it is not to be wondered at if the work becomes in the long run well nigh insupportable from its monotony. The throat-specialist seizes hold of the cases of throat-disease, and, under that heading, retains the treatment of patients suffering from diphtheria, aortic aneurysm, syphilis, and even phthisis, when accompanied by laryngeal symptoms. That "gentle-fingered genius, the gynæcologist," purloins another portion, which comprises almost every disease occurring in females; the aurist, the dermatologist, the oculist, the dentist, etc., each and all withdraw their quota from the crowd of patients, until only those whose ailment admits of no precise definition are left for the physician to examine and prescribe for. The evil is aggravated by a tendency to specialisation even among the physicians themselves—one gentleman acquires a preference for "nervous" cases, and forthwith all such cases gravitate to him, and so on, until by successive siftings nothing but the most uninviting cases remain to be adjudicated. The surgeons are a trifle better off, although even here the special hospitals have had a deleterious influence on the number and quality of the cases. Still, he gets an opportunity now and again of passing a catheter, and incising a boil, and he is, moreover, very careful to keep what cases do turn up under his own care.

Certain advantages doubtless attend the creation of special departments, but the result is ultimately to impair the value of the education given to students, who are very unlikely to attend all the branches with equal assiduity. Moreover, the physician himself is apt to lose the faculty of taking a broad grasp of his patient's ailments, and may come to treat Menière's disease with topical applications, and aphonia from aneurysmal pressure by means of laryngeal insufflations.

It is difficult to see what remedy can be brought to bear for a state of things for which, after all, the profession itself is responsible. There can probably be little doubt that the prestige of the profession has not been enhanced by this extreme specialisation, which is conducive to rivalry of such intensity, that the finer feelings become blunted. It is, however, a movement of evolution which it is useless to resist, and idle to deplore. We can only hope that the period of transition which accentuates its more disagreeable features, may soon give place to a more harmonious blending of the discordant atoms.

SANITARY PLUMBING.

The movement to promote the improvement of plumbers' work appears to be making considerable progress, and that, too, of a particularly sound kind. The ancient Guild of Plumbers sets an example worthy of the imitation of other City companies. It may boast, like them, that its roots extend back to distant centuries. But it can do more than this; it can point to a unique series of successful modern graftings upon the old trunk. The Company has been for some years past under a vigorous administration, which cultivates modern ideas, recognises new scientific truths, and regards recent experience. Thus it has acquired a recognised position among the members of the craft, and may claim prescriptive rights to regard beyond any which could attach merely to its ancient ordinances and obsolete powers. A recent meeting of the Plumbers' Company at Harrow saw the Master and Court supported not only by the *élite* of the plumbing trade (both masters and operatives), but also by the President and ex-President of the Royal Institute of British Architects, by many medical officers of health, Dr. Thorne Thorne (of the Local Government Board), Dr. Corfield, Professor Ray Lankester, Mr. Ernest Hart, Dr. Wynter Blyth, Mr. W. J. Dibden (the Chemist of the Metropolitan Board of Works), and numerous sanitarians and others whose professional co-operation and official sanction are of prime importance to the future progress of the movement. The Master's address was a well-reasoned and practical exposition of the policy of the Company. He said: "The Court of the Plumbers' Company have felt, from the very outset of the present movement, that, in order to effect its object and secure the efficiency of plumbing work in dwelling-houses, it is essential that sanitarians, architects, builders, and plumbers should unite in a common effort. The institutions of each are represented upon the General Council which is dealing with the matter, and the Plumbers' Company has done, is doing, and intends to do all in its power to bring the movement to a successful issue." He, moreover, reported the definite success of the scheme of registration

of plumbers, to which we have from time to time alluded. The words of the Master are worthy of notice. He said, "The plumbers of the United Kingdom (both masters and men) have given, not only their general adhesion to the scheme, but hundreds have already applied to be enrolled upon the Company's Register for Plumbers. Every applicant has to give some evidence of experience, and every application comes before a thoroughly representative, qualified, and impartial committee." This announcement was followed by one of corresponding importance from Mr. Philip Magnus, Director of the City and Guilds of London Institute for the Advancement of Technical Education, who expressed the hearty co-operation of that Institute with the Plumbers' Company, and gave some interesting information as to the formation of special classes for the technical instruction of plumbers. Mr. Magnus quoted, as evidence of progress, comparative returns for the Sessions 1885-86, showing that in the former session the total number of students learning the scientific principles underlying the craft of plumbing was 148 only, and in the latter session 329, while the number of students who submitted themselves for examination was 87 last session, and 210 in the present session. The Master, in concluding his address, said:—"Though our work is necessarily arduous, our programme is a very simple one, and our immediate objects may be classed under these three heads; 1, registration, so that the public and plumbers themselves may know who have, and who have not, given evidence of qualification. 2. The technical education of plumbers to compensate, as far as may be, for the falling off in the apprenticeship system. 3. The recognition by architects and the authorities of the necessity for more closely particularising and supervising plumbers' work, especially in new houses." The first and second of these objects may be said to have been already, in a measure, attained; but the attainment of the other remains dependent upon the voluntary action of architects and the sanitary authorities. It would, therefore, be over-sanguine to anticipate any considerable measure of progress without special legislation making the employment of qualified plumbers compulsory. Registration may, and we believe will, do something to prepare the way for that legislation. For one thing, it will, to a certain extent, determine the number of qualified plumbers in the trade, and it will also do something towards establishing a system of examinations by which to test the qualification of men desiring to enter the trade hereafter. But we can only look upon these things as tentative and preliminary to larger changes. Plumbers must be brought under official recognition and legal control analogous to that which prevails generally in the professions and crafts affecting the public health. The requisite legislation might readily be incorporated with a measure based on the lines of the Bill introduced last session by Dr. Farquharson, for the "Better Sanitation of Dwelling-houses;" or a short Bill might be introduced based on the Acts regulating the practice of apothecaries, dentists, etc., and constituting the Plumbers' Company the examining and certifying body; or the necessary powers might be provided by enlargement of the several local management and building Acts. These are, however, matters of detail which we need not at present discuss. The first consideration for all is obviously the necessity which exists for legislation to follow promptly upon, and extend the scope of, the voluntary progress which has been made by the enlightened action of the General Council on Plumbing and the Court of the Plumbers' Company.

THE total receipts of the Hospital Sunday Fund up to Tuesday evening were £28,500, being £5,000 more than was received during the corresponding period of last year.

THE degree of LL.D. has been conferred on Dr. Oliver Wendell Holmes by the University of Edinburgh. The ceremony of capping was performed, amidst loud cheers, by the Chancellor. Dr. Holmes briefly returned thanks.

IT is a rather curious comment on the recent letter of Sir Charles Warren with regard to the multiplicity of rabid dogs, that the Hydrophobia Commission is at present retarded in its investigations by the difficulty of obtaining a rabid dog with which to test the efficacy of the protection afforded by inoculation.

CARDS for a *conversazione* have been issued by the President and Council of the Students' Society of the Dental Hospital of London, to be held at the Marlborough Rooms, 307, Regent Street, on Tuesday, July 20th, 1886, at eight o'clock, on which occasion the distribution of prizes will be made.

THE French Minister of Commerce has suspended the order which interdicted the sale of red codfish. According to the researches of MM. Layet, Artigalas, and Feré, the red colour may be present in healthy cod. It is due to coloured vegetable organisms, collected in the interstices of the bundles of muscle-fibre of the superficial muscles of the fish.

REFORM OF THE UNIVERSITY OF LONDON.

A MEETING of Lord-Justice Fry's Committee of the Senate of the University of London, was held on July 7th. A prolonged discussion again took place, and the committee adjourned. The scheme approved by Convocation, at the instance of Mr. Magnus, cannot be formally taken into consideration by the committee until it has been referred to by the Senate.

THE MORTALITY AMONG THE TROOPS IN EGYPT.

WE learn, by a telegram from Cairo, that Colonel Grove has arrived at Cairo, under instructions from the War Office, to consult upon the subject of the withdrawal of the British troops from Assouan. He will make special inquiries respecting the recent disastrous mortality.

THE REPRESSION OF DRUNKENNESS.

THE Council of the Society for the Study and Cure of Inebriety had arranged for a Colonial and International Congress on Inebriety in London, during the current month, but the general election has made postponement desirable. The Congress will meet when Parliament sits. The President is Dr. Norman Kerr, and among the Vice-Presidents are the Archbishops of Canterbury and Armagh, Cardinal Manning, the Duke of Westminster, Sir Charles Tupper, Sir Arthur Blyth, Sir Saul Samuel, and other colonial representatives; Sir Douglas Maclagan, Sir George Burrows, Sir Spencer Wells, Sir G. H. Porter, Sir William Miller, and Mr. Ernest Hart.

POISONING BY ICE-CREAMS.

THE exact nature of the substance which produced the violent symptoms, in some cases fatal, of irritant poisoning in children who have eaten "ice-creams" purchased from the itinerant vendors, appears to be wrapped in mystery. Last year, a considerable number of cases occurred, and the first access of hot weather has furnished a fresh series. Investigation by a competent chemist is urgently called for, though it may be doubted whether any reliable results can be attained unless the police have orders in future to seize the incriminated materials as soon as the first cases occur. The most probable hypothesis is that the ingredients are not good, and have undergone some peculiar decomposition leading to the production of a poison of the nature of a ptomaine, before they are subjected to the freezing process

FRENCH CONGRESS OF SURGERY.

THE second session of the French Congress of Surgery is to be held at Paris this year, from October 18th to 24th. The opening meeting will be on Monday, October 18th, at 2 o'clock, in the large amphitheatre of the School of Medicine. Four sittings will be occupied with several questions, and at least three to various papers. Communications should be sent to the Secretary-General, Dr. Poz'i, 10, Place Vendôme, Paris, from July 1st to 15th, in order that they may be published before the opening of the Congress. Only those memoirs can be read the conclusions of which have thus been communicated and printed before the Congress, and no memoir will be published which has not been read. The special questions for discussion are: (1) Nature, Pathogenesis, and Treatment of Tetanus; (2) Nephrotomy and Nephrectomy; (3) Orthopædic Resections; (4) Operative Intervention in Irreducible Traumatic Dislocations.

NEW ZEALAND MEDICAL ASSOCIATION.

AT a meeting of delegates of the Medical Associations of Auckland Wellington, Otago, and Canterbury, convened at the Hospital, Dunedin, Dr. Hocken in the chair, it was unanimously decided to inaugurate a General Medical Association of the Colony of New Zealand, to be termed the "New Zealand Medical Association," and that the existing medical societies of Auckland, Wellington, Canterbury, and Otago, be constituted branches of the same. The following were the delegates present: Drs. De Zouche and Maunsell (Auckland), Dr. Collins (Wellington), Drs. Patrick and Hacon (Canterbury), Drs. Hocken and Copland (Otago). The objects of the Association are stated to be "the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession." It was proposed to appoint a council consisting of the President, Vice-Presidents, the Honorary Treasurer, and the Honorary Secretary of the four present existing Societies of Auckland, Wellington, Otago, and Canterbury. It was decided that the Committee of the New Zealand Medical Association should only deal with general questions, leaving local questions to be dealt with entirely by the local branches; and it was thought that there existed at present no necessity for a centre. Dr. Johnston, of Wellington, has been elected President of the Association.

STATE HONOURS TO THE MEDICAL PROFESSION.

AT the annual meeting of the Shropshire and Mid-Wales Branch of the British Medical Association, Mr. W. P. Brookes, of Wenlock, brought forward a resolution, proposing the adoption of a memorial to the Prime Minister to bestow higher State honours on the medical profession, and especially the distinction of a peerage. This Branch has an especial claim to be foremost in dealing with this subject, inasmuch as, in 1850, Mr. Brookes brought forward a like subject, by address and memorial, claiming for the medical officers of the army and navy the right to participate in the distinctions of the military Order of the Bath—a privilege, which, up to that time, had been denied them. A suitable memorial was adopted by the Association, at its eighteenth annual meeting at Hull, and forwarded to Lord John Russell, with a satisfactory result; military honours having, as the consequence of this address and memorial to Lord John Russell, since been granted to the medical officers of the army and navy. The memorial, which has now been proposed and adopted, is worded as follows:

"To the Right Hon. William Ewart Gladstone, M.P., First Lord of the Treasury.

"The humble memorial of the members of the Shropshire and Mid-Wales Branch of the British Medical Association, at their meeting at Shrewsbury, on Tuesday, June 29th, 1886, showeth that the medical profession has, for many years, rendered great services, civil as well as military, to the State—services which your memorialists believe have not been inferior to those of other professions. That your memorialists have long felt disappointed that the members of the medical profession have not enjoyed the privilege of participating in those high honours of the State which have been properly conferred upon the members of other professions, and upon other subjects of Her Majesty, distinguished for their talents or services, or noted for their wealth or attendant influences. Your memorialists, therefore, humbly pray that you will be pleased to advise Her Most Gracious Majesty to bestow upon such members of the medical profession, as she may deem worthy of the honour, the highly-prized distinction of the peerage; and they beg to assure you that such a mark of your consideration, and of Her Majesty's condescension and favour, would be welcomed most gratefully by your memorialists, and by the whole body of the profession. And your memorialists, as in duty bound, will ever pray.—Signed, on behalf of the members of the Shropshire and Mid-Wales Branch of the British Medical Association, by W. H. O. Sankey, M.D., President, and Edward Cureton, M.R.C.P.Ed., Honorary Secretary.

"Shrewsbury, June 29th, 1886."

The motion was supported by Mr. J. R. Humphreys, and seconded by Dr. Andrew, and unanimously adopted.

GENERAL MEDICAL COUNCIL.

THERE is already, naturally, some stir as to the election of direct representatives, in England, Scotland, and Ireland, on the General Medical Council. In Ireland, Dr. Laffan has intimated to us that he proposes to be a candidate for that division of the kingdom. The names are also mentioned of Dr. Jacob and Dr. Kidd; and we publish to-day a letter from Dr. Morris, of Spalding, a well known country practitioner, who announces himself as a candidate in England. Dr. Waters, of Chester, it will probably be felt, has a stronger claim to be among the first batch of representatives in England than any other man; but he has thus far declared that he will not allow himself to be nominated. We understand, however, that the election will not take place for some months to come—probably, not before January. The election will take place under rules which have yet to be drawn up by the Privy Council; and it would be clearly premature, under the circumstances, for the candidatures to be formally announced. No doubt, however, there will be a feeling that, among the newly-elected members, general practitioners should be fully represented.

THE SCEPTIC.

A CORRESPONDENT writes: The great opponent to all progress in therapeutics is the sceptic. He never loses an opportunity of stating that he does not believe in therapeutics, "if there be such a thing." He publishes a book on medicine, and ostentatiously leaves out all reference to treatment. He declares openly that he does not know of any disease or morbid condition which can be influenced in the slightest degree by drugs. He does not credit any statements as to the good effect of iron in anæmia, and scoffs at the idea of mercury being of the slightest practical value in the treatment of syphilis. He has a deeply rooted antipathy to phosphorus and arsenic, and considers anyone who prescribes them either a knave or a fool. In lecturing on the uses of such a drug as digitalis, he tells his audience that the dose of the infusion is from a teaspoonful to a bucketful; "it is all the same." When called upon to treat a case of poisoning, he advocates "expectant treatment," and is decidedly adverse to antidotes on principle. The sceptic is not, as a rule, well read; he is apt to think that every drug with which he is not familiar—and they are many—must needs be "an American quack remedy." The term "pharmacology" is not familiar to him, but he thinks it "has something to do with dispensing." By a curious coincidence, he is to be found on all hospital committees, and takes the greatest interest in the appointment of the lecturers on materia medica, preferring the candidate who knows least about it, on the ground that he will have no preconceived ideas. The sceptic probably commenced life as a pathologist, but, after a variable period of time, has lost faith even in that. Having thrown his medical studies aside, he devotes his energy and attention to recondite works on philosophy. He gradually develops a disbelief in any future, and is doubtful about the past. At his necropsy, in which he possibly regrets being incapacitated from taking part, a gumma is found in his brain, for which, years

before, he had declined to be treated. Such are the men and the minds who so persistently oppose all progress in therapeutics. Unfortunately, their influence, pending the fatal termination, is often extremely prejudicial to any advance, and acts as a damper to the more enterprising and restless spirits, who, imbued with the enthusiasm of their calling, seek to obviate the present imperfections in our means of diagnosis and treatment, and have the courage of their opinions. The most disastrous effect is thus produced on the minds of students, who are only too glad of an excuse to avoid the arid and difficult manipulations and study necessary to an intelligent comprehension of the facts at issue.

FEVER IN THE RHONDDA VALLEY.

A REPORT has recently appeared, in several leading newspapers, to the effect that "black fever" was raging in the Rhondda Valley; and that, in consequence, the inhabitants were in a state of panic. We are unable to verify this somewhat startling announcement; but we learn that scarlet fever has recently been very prevalent in some localities in the Rhondda Valley, especially at Ferndale, in the district of the Ystradyfodwg Local Board. From the report of the medical officer of health, which was read at a recent meeting of that authority, it appears that a large number of cases and twenty-four deaths, from scarlet fever, had occurred in the district, up to the middle of June, among a population of about 8,000; but that the epidemic was abating. Funerals and prayer-meetings are very popular in this locality; and it does not appear to have struck the good people of the district that these functions may, unless strict precautions be taken, become the means of scattering infection broadcast. Isolation of the sick—the most effectual means of preventing the spread of infectious disease—does not appear to be held at its proper value, and reckless exposure to infection seems to be general. Of necessity, proper isolation is not always, or even usually, practicable in the average cottage; and, in the present instance, the sanitary authorities in the neighbourhood have not made any hospital provision for their districts. It is to be hoped that these recent experiences, which do not stand alone, will induce the several sanitary authorities to provide the valuable protection for their districts, which a small well-managed hospital, with proper disinfecting apparatus, would afford. In some cases, economy, with efficiency, might be secured by a combination of two or more adjoining authorities for this purpose. "Prevention is better than cure;" and immediate isolation of the earliest cases of infectious disease is surely better, and less expensive, than having to attempt to stem the torrent of an epidemic in full career.

THE MEDICAL STUDENT.

THE Belgian police were reported, a day or two since, to have made a "ghastly discovery," which appeared to warrant the supposition that a crime had been committed on the lines laid down by Wainwright, in England, and improved upon by Billoir, in France. Since, however, it is stated to be only a "ghastly joke" by medical students. If that be the true version of the affair, it is sincerely to be hoped that a salutary lesson will be meted out to those frolicsome youths who trifle thus with other people's feelings. It is, however, to be feared that the verdict of "the medical student again," is sometimes arrived at with too much alacrity, and, in the absence of that absolute certainty which alone should determine an explanation involving the cessation of further inquiry. A positive injustice, involving a whole class, is not unfrequently committed by the publication of the designation "medical student," as applied to any rowdy nondescript who appears in the police-court, and who is not called upon to furnish any proof of his connection with a medical school. In years gone by, rowdyism was condoned by magistrates, when the offender could plead either that he was intoxicated or that he was a medical student. We are pleased to note that, at present, a change has come o'er the spirit of the dream. Drunkenness has come to be considered an aggravation of disorderly conduct, rather than a palliative, and to plead the professional nature of one's studies as an excuse for misconduct, is about as great a blunder as could be committed—for the magistrate is now inclined to consider that misconduct is all the more reprehensible on the part of people who ought to know better. There are, it is true, occasional instances of organised outbreaks on the part of students: such, for example, as the annual scene at the Criterion, on the evening of Lord Mayor's Day; but the more conspicuous of the rioters are generally secured, and sharply dealt with by the district magistrate, and the heavy pecuniary penalties of late years have tended to discourage that form of amusement. Hospital authorities, too, have very properly taken the matter in hand, and the conviction of a student for drunkenness and disorderly conduct, inevitably adds to his rustication or even expulsion, the latter being equal to a fine of over £100, since no fees are returned, not to speak of the disrepute which such expulsion must involve for the delinquent. The general tone of the mass of students is yearly improving; the rising generation of students are too much preoccupied by the constantly-increasing requirements of the examining boards, to have more spare energy left than can easily be disposed of at football or cricket. The great wave of temperance, too, may be credited with a large share in the reform. Habits of alcoholic abuse are, no doubt, still lamentably common among the students of our London schools; but they are far less than in years gone by. There is every reason to hope that the civilizing influences which have wrought so wonderful a change in the habits and customs of society in this matter, will ultimately extend to the would-be Bohemian student. Bohemianism is at a discount now-a-days, and, assuredly, now that artists and poets can dress like other people, and talk like other people, we can dispense with the man-savage, labelled though he be as a "medical." We are no advocate for a sedateness of demeanour that would better befit a young ladies' seminary, but Sawbones is dead, and his disciples will find themselves heavily handicapped in the struggle for existence, if they persist in emulating his amusing but ungracious behaviour.

INTERNATIONAL CONGRESS OF CLIMATOLOGY AND HYDROLOGY AT BIARRITZ.

THE Committee of Organisation of this Congress, which, as already announced, is arranged to commence on October 1st, at Biarritz, under the auspices of the Biarritz Association, has published a list of the excursions into the Pyrenees and adjacent parts, which have been organised for the benefit of the members of the Congress. These excursions, which are spread out over the month of October, and are upwards of thirty in number, comprise visits to St. Sebastien, Cambo, Arcachon, the principal thermal and sanitary stations of the district, including Pau, Cauterets, Bagnères-de-Bigorre, Luchon, Toulouse, Tarascon, Béziers, and Montpellier, and places of interest such as Perpignan, Saint-Girons, Montréjeau, etc. Membership, the fee for which is fixed at 10s., confers the right to travel on the French railways at a reduction of 50 per cent., with option as to the itinerary to be followed, and entitles the member to join all or any of the above excursions. Any information on the subject may be obtained from the English delegate of the Central Committee, Dr. Vintras, Physician to the French Hospital, 19A, Hanover Square, W.

SANITARY INSTITUTE CONGRESS.

THE arrangements for the forthcoming Congress of the Sanitary Institute, to be held at York, from September 1st to September 25th, are already far advanced. There will be a reception of members of the congress by the Mayor, on Tuesday, at 12.30 P.M., and a public luncheon at 1 P.M. The Exhibition will be opened by the Mayor at 3 o'clock, and the first general meeting will be held in the Museum Lecture Hall, at 8 P.M. of the same day. As usual, a large part of the proceedings will be devoted to the consideration of subjects relating to hygiene. Professor de Chaumont is announced to open the section of "Sanitary Science and Preventive Medicine," by an address on this subject on Wednesday, September 22nd, following which there will be numerous papers read, and discussions will follow. Later in the day from 2 till 5 o'clock, there will be a Conference of Medical Officers of,

Health, and a *conversazione* in the evening. Congress tickets will be issued, entitling the holder to admission to all the meetings, addresses, *conversazione*, and the exhibition, at half-a-guinea each. All particulars as to travelling arrangements, hotel, and lodging accommodation, may be obtained on application to the Honorary Local Secretaries, 13, New Street, York. Professor de Chaumont, it should be stated, is the President of the section of Sanitary Science and Preventive Medicine, not President of the Congress, as stated in our issue of last week.

TOILERS AMONG THE DEAD.

At a recent meeting of the Academy of Medicine, M. Brouardel made known some curious and interesting facts concerning the dead body of a girl, aged 22, which was discovered in a cellar under a heap of straw. The body had lain there about a year, and was in a perfect state of mummification. One of the limbs was shown at the meeting; it was thoroughly dessicated; the tissues were hardened, and gave a sound when struck. MM. Brouardel and Andouard attribute this mummification to the dryness of the soil on which the dead body had been placed; but the most important factors were five different species of acarina which deposited the *débris* of the envelopes of their eggs and carapace among the dust that covered the dried tissues of the body. M. Mégnin has proved that, by studying the generations of acarina which have been at work on a dead body, the date of death can be ascertained. This entomologist, by examining the *débris* of acarina in a child's corpse, ascertained that death occurred two years previously; and a judicial inquiry confirmed this statement. M. Brouardel described the order of succession of the different species of acarina which worked on the dead body of the young girl, also the work of destruction accomplished by each separate species: the gentles (larvæ of flies), *dermestes*, *sarcophagus*, *lutieus*, and *lucina cadaverina*. One species absorbs the fluids, another consumes the fatty acids. When a species has finished its work, it dies on the dead body, or is devoured by a succeeding species. Each generation in summer-time lives from six weeks to two months. In a recent case of murder, M. Mégnin established with precision the exact date of the burial of the human remains discovered in the garden. Among the remains, a particular kind of ant was observed, which is never found in soil recently disturbed; also the *débris* of acarina, known as *Œsophagus echinococcus*, which also furnished a chronological indication; portions of a bulb of a lily furnished further proof. Two years must have elapsed in order that the bulb should undergo the alterations it presented. M. Brouardel dwelt on the value of these entomological data in reference to medical jurisprudence.

THE VOLUNTEER MEDICAL STAFF CORPS FANCY DRESS BALL.

The officers and men of this corps gave their first ball at Kensington Town Hall on July 2nd. A number of distinguished patronesses lent their names and active assistance to further the interests of the corps. The Princess Louise, the Countesses Galloway and Cowper, the Lady Hillenden, the Ladies Adderley, Fayrer, Hanbury, Hunter, Kennett-Barrington, Morris, and a large number of the wives of well-known hospital surgeons, secured by their patronage a large attendance. All present declared the ball most enjoyable, and the financial success is likely to benefit to a considerable extent the funds of the corps. Fancy dress and uniform were the order of the evening. The hall was beautifully decorated with appropriate devices, and the fancy dresses were in most instances novel and pretty. A number of the Hungarian dresses, worn by stall-holders at the Hungarian Bazaar in the early part of the week, were to be seen. A group of girls in Newhaven fishwife dresses, stall-holders at the London Scottish Bazaar, also lent a novelty to the scene. A fair sprinkling of kilts, men attired in court dress, or as Chinamen, Albanians, Hungarians, sailors, cricketers, and many other quaint costumes, made the ball both interesting and pretty. The ladies who most contributed to render the ball a success were Lady Hunter, Mrs. Bloxam, Mrs. Bruce, Mrs. Cantlie, Mrs. Furley, Mrs. Malcolm Morris, Mrs. Norton, Mrs. Platt, and Mrs. Willett. The corps is to be congratulated on this, the first venture, the more especially as it is intended that the ball should be held annually.

BEER FOR HOSPITAL SERVANTS.

The advocates of total abstinence from alcoholic drinks seem to be unable to refrain from injuring their cause by an excess of zeal. Nobody, of course, has any serious right to complain because a gentleman, actuated by most excellent motives, thinks fit to pour his cellar of wine down the drains. Believing that so good a deed would shine like a bright candle in this naughty world, this libation was made with due pomp and circumstances, and the desired publicity was obtained. Unfortunately, in explaining his motives, the gentleman in question was led into making an entirely erroneous statement with regard to the destination of wine presented to the hospitals. It was stated that the Secretary of the Middlesex Hospital had admitted that sixty per cent. of the wine given to that hospital was drunk by the officials and servants; what had been actually said was, that of the total expenditure on alcoholic beverages, sixty per cent. was for patients, and forty per cent. for officials and servants. In 1884 the actual figures were, for patients, £328 10s. 9d.; for officials and servants, £218 13s. 10d. Wine presented to the hospital is not consumed by anybody but patients. If these figures be examined, it will be seen that the expenditure on alcoholic beverages for the use of the officials of the hospital was rather less than twelve shillings a day; during 1884 the average number of persons thus employed was 103, so that the expenditure on alcoholic beverages was rather less than three-halfpence a day per head. This is a considerably smaller sum than is allowed to domestic servants as "beer money;" and, to found a charge of waste of public money on such slender grounds, will appear to most people a striking example of excess of zeal.

THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

At the meeting of the Ophthalmological Society of the United Kingdom on July 2nd, Mr. Jonathan Hutchinson, who has held the office of President for the last three years, resigned the chair to Mr. Hulke, who will preside over the fortunes of this vigorous young Society during the next two or three years. Mr. Hutchinson, in taking his leave, glanced back over the work done during his tenure of office, and expressed a decided opinion that the result of the experiment made this session in collecting material with regard to exophthalmic goitre had been so successful as to encourage repetition. As an instance of the class of subjects which might be taken up, he instanced tobacco-amblyopia, about which uncertainties existed which could be converted into certainties at a meeting of the Society, held after the attention of members had been directed to certain points for a year or two. His own experience led him to suspect that tobacco-amblyopia did not relapse, and that some cases recovered without giving up the use of tobacco. These two doubts, as well as the question whether neglected cases ever progress to absolute blindness, could well be settled by the Society; a similar service might be performed with regard to amblyopia potatorum. Two other suggestions Mr. Hutchinson made with regard to the conduct of the business of the Society, and both will be heartily endorsed by the majority of persons who frequent medical societies or consult their *Transactions;* one was that an energetic Committee should be created to arrange the subjects to be brought forward, so that the order of papers should not be left to chance; the other suggestion was that the after-history of cases should be followed up and published in a supplement to the *Transactions*. The Pathological Society acted upon this suggestion a few years ago, with the result that a very valuable addition to the annual volume was produced. The following were elected as officers and Council for the year 1886-87. The gentlemen whose names are marked with an asterisk (*) were not in the Council, or hold the same office, during the preceding year. *President*

Whitaker Hulke, F.R.S. *Vice-Presidents*: *Jonathan Hutchinson, F.R.S.; George Johnson, M.D., F.R.S.; *E. Nettleship; Thomas Reid, M.D. (Glasgow); D. Argyll Robertson, M.D. (Edinburgh); T. Sympson (Lincoln). *Treasurer*: William M. Ord, M.D. *Secretaries*: Seymour J. Sharkey, M.B.; *Robert Marcus Gunn. *Other Members of Council*: John Abercrombie, M.D.; *W. A. Brailey, M.D.; Sidney Coupland, M.D.; Walter Edmunds; *H. E. Juler; *William Lang; *J. B. Lawford, M.D.; A. Stanford Morton; *P. H. Mules, M.D. (Manchester); Simeon Snell (Sheffield); J. B. Story (Dublin); John Tweedy. *Librarian*: W. Adams Frost.

OBSTETRICAL SOCIETY OF LONDON.

At the final meeting of this society, before the summer vacation, on Wednesday, July 7th, Dr. Daly exhibited a substance expelled from the uterus five weeks after labour. The patient, who had borne several children, had a natural labour; the placenta was apparently expelled entire, there was no *post partum* hæmorrhage, and the uterus firmly contracted. She objected to having injections of antiseptic solutions, saying that she had fared excellently, without injections of any kind, during all her previous confinements. Five weeks after labour she came for medical advice, for an intensely fœtid odour, which proceeded from the vagina. A mass was removed from the fundus of the uterus, and the patient recovered. The general opinion of the meeting was that the mass was not a fragment of retained placenta, but a sloughing submucous fibroid. Dr. Champneys noted that the process of detachment, even when the fibroid felt at first as though subperitoneal, took, on an average, about thirty-five days. Mr. Alban Doran exhibited a series of malformations of the Fallopian tube. There was some discussion as to the frequency of secondary fimbriated orifices; on this point, Richard, Hyrtl, Winckel, and Hennig, as well as other authorities, are at variance. Mr. Doran had not found that the condition was very common. Dr. Lewers had had the fortune to come across a great number of specimens. Dr. Galabin exhibited a section of myxo-fibroma of the cervix uteri from a young girl, and a retro-peritoneal tumour of uncertain nature. Dr. Griffith showed a myxo-carcinoma of the ovary, apparently secondary. Two papers, by Drs. Herman and Champneys, which will be duly reported, evoked very active discussion on diverticula of the urethra, and on the uterine *bruit*.

ON VAGINAL EXTIRPATION OF THE UTERUS.

Dr. Brennecke, in the *Zeitschrift für Geburtshulfe und Gynakologie*, vol. xii, part i, states that he has removed the entire uterus through the vagina for cancer eighteen times, without a single death. His first principle is to make the parts as accessible to the surgeon's hand as possible throughout the operation. For this purpose, he has devised a special uterine clamp-forceps, which takes up little room, and grasps the tender and friable uterine tissue firmly yet safely. He takes special precautions against hæmorrhage. He carefully cuts through the upper reflexion of the vagina, in front and behind, with a short bladed knife, shaped like Kuchenmeister's, and separates the cervix from the loose surrounding cellular tissue. Then he isolates the denser tissue on the sides of the cervix, bearing the uterine artery and its branches. The operator then grasps the uterine appendages. Each appendage is ligatured by means of a strong S-shaped needle, resembling that devised by Olthausen, which introduces the thread with comparative facility. The uterus is then strongly retroflexed, and pressed closely against the posterior wall of the vagina; by this manipulation the vesico-uterine fold of peritoneum is most readily separated without injury to the bladder. An elastic ligature is then applied to the broad ligaments, and they are cut through. Dr. Brennecke neither drains Douglas's pouch, nor applies any sutures to its denuded serous surfaces. An iodoform-glycerine plug sufficiently protects against discharge from septic changes. After six or seven days the plug is removed, and the vagina is simply irrigated. Dr. Brennecke prefers total extirpation to amputation of the cervix and supravaginal extirpation for other incurable uterine diseases, in preference to abdominal section or oöphorectomy. His monograph is of great importance, and his method of operating can only be thoroughly understood by a perusal of the same. It need hardly be added that statistics of after histories are even more important in this case than after ovariotomy and myomotomy. The most dexterous operator might, physically speaking, cut away a cancerous growth, the limits of which are tangible, if not visible, on a breast, removing an infinitely small area of healthy tissue around the growth. We know that he does not do so, but cuts very freely, and is able to use the knife boldly, thanks to the anatomical relations of the breast. In the case of the uterus, the greatest dexterity may fail to remove all the cancerous tissue, especially if it have spread to the connective tissue round the cervix, and cutting freely is out of the question; nor can the finger always detect the extension of the disease. This must never be forgotten when any operation on a cancerous uterus is contemplated.

SAMARITAN FREE HOSPITAL.

On Thursday, June 24th, a meeting in support of this hospital, was held at Chesterfield House, Mayfair, by kind permission of Sir A. and Lady Bass. We have already explained the object of the meeting, which was to promote the efforts which are being made to raise a sufficient sum of money to erect a new hospital on a plot of land in the Marylebone Road. The Bishop of London presided, supported by many distinguished persons. Sir Spencer Wells and the greater part of the staff were present. Sir H. Selwin-Ibbetson moved, "that this meeting, in consideration of the great services rendered by the Samaritan Free Hospital, strongly commends its enlargement and removal to the liberal support of the public." In doing so, he said he was one of those who had benefited by its services, one dear to him having been successfully operated upon. No branch of medical science had grown so much as that with which this hospital was connected. He felt sure that if the hospital were sufficiently known to the general public, funds would be forthcoming to enable them to extend its good work. The Rev. J. R. Diggle, Chairman of the School Board, objected to State intervention on behalf of hospitals, and supported the resolution, which was carried. Subscriptions in connection with the meeting, amounting to £1,218, in addition to the sum of £1,831, bringing up the amount to £3,050, were announced.

SCOTLAND.

EDINBURGH UNIVERSITY.

The final examination for the degrees of M.B. and C.M., for which over 270 candidates entered their names, is now nearly over, and three lists of successful candidates from the first three batches have been published in the local papers. Judging from the numbers who have passed as compared with the numbers who appeared, the rejections are certainly not less than in previous years. The official list will appear in the Journal after graduation-day. The second professional examination also takes place this month, and by a new arrangement the first professional examination also. Thus the examiners, professorial and extra, will have plenty of work to do.

SERIOUS OUTBREAK OF TYPHOID FEVER.

The Board of Supervision for Scotland is actively engaged in connection with the serious outbreak of typhoid fever at Ferryden, and last Sunday Dr. Littlejohn inspected the condition and sanitary arrangements in the village. The epidemic shows, meanwhile, no evidence of abatement. On Monday there were three persons buried who had died from the fever. Twenty-nine patients have been admitted to the Infirmary, but as there are nearly 150 cases in the village, it has been proposed to erect a temporary abode for many of them in the Good Templar Hall. Necessarily a great amount of distress prevails, and if matters do not improve speedily, the destitution will necessitate

special steps being taken for its relief. A special supply of milk has been obtained from the Dundee Creamery. It is reported that several fishermen from Ferryden, who had gone North for the herring fishing, are returning ill with the disease, and indeed three of these have arrived.

COOMBE LECTURES TO TEACHERS.

THE course of lectures given by the Coombe Trust to teachers, was concluded on Saturday by the Coombe lecturer, Dr. Andrew Wilson; it was on the Nervous System. The course has been highly successful, and so important do the trustees consider the subject of teaching teachers' physiology, that Dr. Mitchell, one of the trustees, stated that the courses would be continued.

POST-GRADUATE COURSE OF STUDY IN EDINBURGH.

WE are requested to state that the suggestion has been frequently made, to the teachers in the Edinburgh Medical School, that the institution of a post-graduate course would be both acceptable and of great utility; and in consequence of this suggestion, a conference was lately held of representatives of all the medical institutions in Edinburgh to consider the subject. The result of this meeting was, that most of those present expressed their willingness to join in, and to further such a scheme, provided that there really appeared to be a general desire on the part of practitioners of medicine that course should be inaugurated. Further, it was remitted to a small committee, consisting of the Presidents of the Colleges of Physicians and Surgeons, the Dean of the Faculty of Medicine in the University, with Professor Chiene and Dr. Muirhead as secretaries, to endeavour to ascertain the views of practitioners on the subject, and to make arrangements for a tentative course this autumn, to be held during the last week of September and the first fortnight of October. Gentleman who feel disposed to join this course are requested to communicate with either of the Secretaries (Charlotte Square, Edinburgh) before the end of July, in order that definite arrangements may be made.

POST-GRADUATE COURSES IN GLASGOW.

A MEETING was held in the Glasgow Faculty Hall, on June 30th, to consider the desirability of instituting post-graduate courses. There was a fair attendance of Glasgow teachers. Mr. Henry E. Clark occupied the chair, and Dr. John Macintyre acted as secretary. A motion was proposed that post-graduate courses of lectures were desirable, and if that motion had been carried, it was intended to propose further, that those who desired to lecture should be formed into a committee to make the necessary arrangements. The discussion, however, assumed a very desultory character, and it was evident that some of the older teachers were not very favourably disposed towards the scheme. The meeting was informed that eighteen members of the profession had intimated their willingness to give a course of lectures, and the seeming impossibility o obtaining teaching material and listeners was urged as a strong reason against any organised attempt being made in the proposed direction. None urged these objections more strongly than Professor Macleod, while Professor Gairdner, who viewed the proposals with favour, was equally emphatic in expressing the view that the courses ought to be under the control of some committee, who might be able to prevent any tendency to lower their character or purposes. In the end it was decided, in the meantime, to leave the instituting of any courses of lectures to the private enterprise of those who might wish to teach, the question of establishing some organisation being left over till it was seen how far any private attempts would be successful. A small committee was, however, appointed to further consider the subject, and to ascertain whether the directors of the infirmaries would be disposed to lend any aid they might be able to afford, if any regula scheme of post-graduate lectures were arranged for.

PARLIAMENTARY ELECTION FOR GLASGOW AND ABERDEEN UNIVERSITIES.

JAMES A. CAMPBELL, Esq., LL.D., of Stracathro, was returned unopposed as Member of Parliament for Glasgow and Aberdeen Universities, on July 2nd. The election took place in the Bute Hall of Glasgow University. Principal Caird, having read the writ, called for nominations. Professor McKendrick said that, as a graduate of the University of Aberdeen, he had been requested by several friends, representing various shades of political opinion, to perform the agreeable office of proposing that Dr. James A. Campbell be re-elected to represent the constituency in Parliament. He expressed his firm belief that the views put forward generally by Dr. Campbell in his address, were those entertained by a large majority of the constituency; but he urged Dr. Campbell's re-election on other grounds, because, after the present whirlwind of political excitement had passed away, many other questions would arise, which did not come within the sphere of party politics, and in which the members of a university constituency took a deep interest—such questions as those relating to education, to university reform, and to ecclesiastical differences. If a profound knowledge of university affairs, eminent services already rendered to the University, great Parliamentary experience, an intelligent interest in all questions relating to education, a philanthropy wide and deep, and the possession of those social and personal qualities that command esteem and respect—if these were what they looked for in one fitted to represent the constituency in Parliament, he thought it would be difficult to find anyone more eligible than Dr. Campbell. Whilst in general politics he himself was a member of the Liberal party, he had the greatest pleasure on this occasion in nominating Dr. Campbell for the office. The nomination was seconded by Dr. Andrew Fergus. There being no other nomination, Dr. Campbell was declared duly elected. Dr. Campbell asked leave to return thanks for his unopposed re-election. He thought it significant that, at the present time, no one had thought it necessary to protest against their member in the late Parliament having given his vote against the policy of the Government. He had been very happy to give his support to the passing of the Medical Acts Amendment Bill, a Bill satisfactory to the universities and corporations, and to the medical profession generally. He was also happy to assist in remedying one defect of the Bill, as introduced, which was prejudicial to the status of the Medical School of Aberdeen. He would never forget that he was not sent to Parliament to be a partisan, but to represent universities, where members of different parties had been kind enough to give him their united support. At the same time, they did not wish him to be a colourless member. He had never concealed his political opinions, and everyone knew on which side of the House he intended to sit.

IRELAND.

THE death is reported of Dr. Patrick Howard Murray, of Strokestown, after a short illness. The deceased succumbed after two days' illness from an attack of blood-poisoning.

HEALTH OF BELFAST.

THE report of Dr. Browne, Medical Superintendent Officer of Health, for June, shows that, in consequence of the inclemency of the weather, the diseases of the respiratory organs had prevailed, being equal to a high death-rate of 10.5. As in previous months, there has been an immunity from the principal zymotic diseases.

CORK UNION.

AT a recent meeting of the guardians, a report was received from Dr. O'Farrell, Local Government Board Inspector, in reference to the unsatisfactory nature of the dispensary accommodation in Liberty Street. He states that the Cork Central Dispensary, although a comparatively new building, is structurally defective, and altogether unsuited

for the requirements of the number of patients who attend it. Among other defects, the medical officers' consulting rooms are ill-ventilated closets, about 9 by 9, so small as not to admit couches, or any satisfactory arrangement for the proper examination of patients. One of the consulting rooms was built over a sewer, and the effluvia from it was so offensive, that the room has been closed for the past year, thus interfering with the medical officer's hours of attendances. The porter, it appears, also not unfrequently acts as dentist, a practice so objectionable, that its very mention carries its own condemnation. After a short discussion, the report was referred to the Dispensary Committee for their consideration.

THE LABOURERS' ACT: DROGHEDA UNION.

THE medical officers of the Drogheda Union have agreed to take a fee of 5s. per house inspected under this Act, a sum not at all exorbitant, and lower than that paid for in other unions for performing similar duties. The guardians, however, after several meetings, have refused this reduced amount, and have offered 2s. 6d. per house. This being so, litigation must ensue, as the medical officers of the Union seem determined to enforce their just claims for a reasonable remuneration.

THE CHOLERA.

[FROM OUR OWN CORRESPONDENT.]

THE CHOLERA IN ITALY.

CHOLERA, it is stated, continues to ravage the small towns and villages in the province of Brindisi. This frightful mortality is explained by the absence of proper sanitary arrangements in the houses, and the use of open cesspools, into which the rubbish of these localities is cast. The Minister of Agriculture, Signor Grimaldi, who is inspecting the infected localities, has ordered lime to be thrown into these cesspools; but the insufficiency of this measure is obvious. The returns for the twenty-four hours ending July 7th show that, at Venice, there were two cases and one death; and, in the province of Brindisi, 189 cases and seventy-one deaths, including eight cases and five deaths in the town of Brindisi, seventy cases and twenty-six deaths at Latiano, thirty-two cases and four deaths at San Vito, and seventy-six cases and thirty-four deaths at Francavilla Fontana.

GUY'S HOSPITAL MEDICAL SCHOOL.

THE annual distribution of the prizes of Guy's Hospital Medical School took place on the afternoon of Friday, July 2nd. The President gave them away. The ceremony took place in a marquee, erected in one of the large quadrangles of the old building. The authorities of the school have thus inaugurated a change from an evening *conversazione* in October, to an afternoon reception, in order that past students and others connected with the hospital may see it in its working garb. A distinguished and numerous company were present, who, after the distribution, visited the spacious wards and grounds. The school-buildings and famous museums were thrown open. During the past year the Guy's students have fully maintained their high position, both in work and sports. Thus, about a quarter of the successful candidates at the medical examinations of the London University came from Guy's. Whilst at the intermediate honours examination, 1st for the best place was attained by Guy's men. At the final examination for the Fellowship of the College of Surgeons, all the candidates from Guy's passed. In sports, also, Guy's men hold the first position, for they are the holders of the Rugby, Association and Cricket Inter-Hospital Challenge Cups.

All these subjects naturally formed the subject-matter of the various speeches made by the Dean of the School, Dr. J. Taylor; the President; Mr. H. Hicks Gardiner, the Treasurer; Mr. E. Lushington, Dr. Pavy, and Mr. Bryant. In the evening of the same day, the Guy's Hospital Biennial Festival took place at the Holborn Restaurant. Considerably over 300 gentlemen were present, and the proceedings throughout were of a most enthusiastic nature. Mr. Arthur E. Durham presided, and was supported by most of the members of the Consulting Staff of the Hospital, the Treasurer, Sir J. Fayrer, Mr. E. Lush, ex-Judge, and the acting medical and surgical staff, and very many past and present students of the school. The usual loyal and patriotic toasts were duly proposed by the Chairman; as was also that of "Prosperity to Guy's Hospital," which was responded to by the Treasurer, and that of "Prosperity to the School of Medicine and Surgery attached to Guy's Hospital," for which Dr. Pavy replied. In proposing this toast, Mr. Durham dwelt, amidst the plaudits of the company, upon the high honours attained by Guy's men at the chief competitive examinations at the University of London and elsewhere. The toast of "The Consulting Staff" was proposed in feeling terms by Mr. Bryant, and responded to by Dr. Wilks, who went on to propose the health of "The Chairman." He remarked upon his good heartedness and known liberality, and thought that, for these qualities, possibly even more than for his surgical skill, he was such a general favourite. Dr. Moxon, in giving the toast of "The Past and Present Students" of the School, remarked that he disliked the name "past," liked that of "old," but thought the attribute "perpetual" was best of all. He noted that the man who made himself the most necessary to sick folk was, in the end, the most successful of practitioners. Mr. Lund replied for the past students; and stated that he thought one of the causes of the success of Guy's was, that the members of the staff were so accessible to the students. Mr. Harsant and Mr. J. H. Sellick replied for the present students. The health of the Secretary, Mr. Davies-Colley, to whom much of the success of the gathering was due, was proposed by the Chairman, and duly acknowledged by Mr. Colley; after which the guests dispersed. The musical portion of the entertainment, which was excellent, was provided over by Messrs. Goodwin and Tabb.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held at the College on Thursday, the 8th instant. The minutes of the last meeting were read and confirmed. The members of Council elected last week at the annual election were admitted. Mr. Savory was re-elected President for the ensuing year, and Mr. Jonathan Hutchinson and Sir Joseph Lister were elected Vice-Presidents. Reports were received from the various annual committees of last year. The several annual committees were elected for the ensuing year. A report from Mr. John Marshall, as representative of the College on the General Medical Council, was read, and ordered to be entered on the minutes. The best thanks of the Council were given to Mr. Marshall for his services to the College at the meeting of the General Medical Council.

RESECTION OF THE RIB FOR GANGRENE OF THE LUNG AND EMPYEMA.—Dr. K. Snellen, of Zeist, in Holland, having a case of pneumonia, which was followed by gangrene of the lung and empyema, aspirated, deferring opening up the cavity of the pleura for a few days. A fluctuating tumour being detected at the spot where the aspirator had been introduced, resection of the sixth rib, by the subperiosteal method, was performed, four centimètres being excised. When the pleural cavity was opened, an immense stream of extremely offensive fluid came away. The cavity was washed out, through a male silver catheter, with a 3 per cent. solution of boracic acid, and, afterwards, with a 1 per cent. solution of chloride of zinc, the wound being covered with Lister's dressing. For the next two days, the patient's condition was very much improved, but, on the third day after the operation, the temperature rose to 104.2° Fahr., and erysipelas of the face set in, which extended over the head and neck, the patient succumbing on the eighth day after the operation. It seems uncertain whether the gangrene was the direct cause of this erysipelas. The writer is disposed to think that, in these cases, it is better not to resect very early, but to aspirate first, so as to relieve pressure on the lung, and then, after waiting a short time for the patient's condition to improve, to evacuate and wash out the cavity. German literature on this subject is scanty. Schneider, of Königsberg, had a successful case of resection of the rib for gangrene, but the latter was of traumatic origin, being due to a gunshot-wound, and, therefore, was less likely to be associated with so unhealthy a constitutional state as the present case, which was due to pneumonia. Dr. Snellen also suggests the practicability of repeated aspirations.

LOCAL NUISANCES.—The apathy of many vestries in respect to unsanitary conditions prevailing in their midst has often been dwelt upon in our columns, but the facts brought before a meeting of the Newington vestry on Tuesday, July 6th, show their sins, in some cases, to be that of commission as well as that of omission. Mr. J. J. Addison, a resident in Penrose Street, Walworth Road, complained of the disgraceful condition of the vestry's *depôt*, which is situated at the back of his house. He described the effluvium as being so foul that neither himself nor his neighbours could remain in the garden.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

ALTERATION OF DATE OF MEETING.

A MEETING of the Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 21st instant, at 2 o'clock in the afternoon, instead of on the 14th, as previously announced.

July 2nd, 1886. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETING FOR 1886. ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 161A, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research, in furtherance of which the grant was made.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

The inquiry on Acute Rheumatism is now closed, as the printing of the Tables is completed.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

General inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE have been issued. A report will be made to the Section of Therapeutics at the annual meeting.

PROGNOSIS IN HEART-VALVE DISEASE, based on an examination of cases in which the lesion has existed for an unusual length of time without producing serious symptoms; THE EXTREME DURATION OF INFECTIOUSNESS IN INFECTIOUS DISEASES. The Committee has proposed these two subjects for future inquiry, and has referred them to the Branches of the Association, in accordance with its regulations, with a view to preliminary discussion during the present year. Arrangements have also been entered into with the Section of Medicine of the Annual Meeting of 1886 to hold a discussion upon "Cases in which Disease of the Heart-Valves has been known to exist for upwards of five years without causing serious symptoms;" and with the Section of Public Health to hold a discussion on "The Duration of Infectiousness." The former discussion will be opened by Sir Andrew Clark, Bart., the latter by Dr. Arthur Ransome. The inquiry-papers, to be subsequently issued, will be based upon the information afforded in these Branch and general discussions.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161A, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

OXFORD AND DISTRICT BRANCH.—The annual meeting will take place at Oxford on Wednesday, July 14th. Members who wish to read papers or show cases of interest are requested to inform one of the Honorary Secretaries on or before July 11th. Members who wish to dine must send their names to one of the Honorary Secretaries, on or before July 13th. Dr. DARMSTHIR, 93, High Street, and Mr. MORGAN, 42, Broad Street, Oxford, Honorary Secretaries.

NORTH WALES BRANCH.—The annual meeting will be held at the Queen's Hotel, Blaenau Festiniog, on Tuesday, July 20th, at 12.30 P.M. Papers and contributions have been promised by Lawson Tait, F.R.C.S.; E. Imlach, M.D.; John Roberts, M.D.; E. T. Davies, M.D.; A. Emrys-Jones, M.D.; John Richards, M.R.C.S.; Robert Jones, M.R.C.S.; D. M. Williams, M.R.C.S.; C. E. Steele, M.R.C.S.; in addition to the Presidential Address by T. Eyton Jones, M.D.—W. JONES-MORRIS, Honorary Secretary.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—The annual meeting of the Branch will be held at 198, Union Street, Aberdeen, on Saturday, July 17th, 1886, at 1 P.M. Hospital visit and demonstrations, 11 A.M. Business: 1. Minutes, etc.; 2. Ballot for admission of new member; 3. Council's Report and Treasurer's Balance-sheet; 4. President's address; 5. Election of President-elect for the ensuing year; 6. Election of Honorary Secretaries and Treasurer; 7. Election of Members of Council; 8. Selection of place of next June meeting. Dinner in the Imperial Hotel, Stirling Street, at 3 P.M.; price, exclusive of wine, 5s. per head. —ROBERT JOHN GARDEN, J. MACKENZIE BOOTH, Honorary Secretaries.

NORTH OF ENGLAND BRANCH.—The annual meeting will be held at South Shields on Thursday, July 29th.—DAVID DRUMMOND, Honorary Secretary.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ANNUAL MEETING.

THE annual meeting of the Birmingham and Midland Counties Branch was held at the Medical Institute, Birmingham, on Tuesday, June 29th; Sir JAMES SAWYER, M.D., President, in the chair.

Report of Council.—The following report was read and adopted.

During the past session, six ordinary general meetings of the Branch have been held, at each of which the average attendance was, approximately, thirty-one. Your Council are indebted to the following members for papers and communications, which compare very favourably with those of previous years, both as regards their numbers and their value; namely, Mr. Gilbert Barling, Mr. T. H. Bartleet, Mr. T. F. Chavasse, Dr. Foxwell, Mr. Sampson Gamgee, Mr. Jordan Lloyd, Dr. E. Malins, Mr. Bennett May, Dr. Edwin Rickards, Mr. G. Smith, and Mr. Lawson Tait. Their thanks are also due to the following members for exhibition of living cases or morbid specimens; namely, Mr. H. L. Browne, Dr. A. H. Carter, Mr. T. F. Chavasse, Mr. W. F. Haslam, Mr. Vincent Jackson, Mr. Jordan Lloyd, Dr. R. Saundby, Dr. Savage, Mr. Lawson Tait, Dr. T. E. Underhill, and Mr. Wood White.

A special meeting of the Branch was also held on April 8th last, at the request of the Collective Investigation Committee, when Dr. (now Sir) Dyce Duckworth, of London, introduced a discussion on "Prognosis in Valvular Diseases of the Heart," in a very able and interesting address.

The present number of members is 357, representing an increase of twelve over the list for the previous session. To our deep regret, we have to record the deaths of Mr. J. M. Archer, Dr. T. P. Heslop, Mr. J. J. Horton, Dr. James Russell, and the Rev. Dr. W. J. Welch. Resignations have been received from Dr. G. F. Bodington and Dr. H. J. Young. On the other hand, no less than nineteen new members have been added to our roll since the last annual meeting.

Mr. H. R. Ker having brought forward a resolution at the meeting in March, calling in question the advantage of further grants towards the work of the Collective Investigation Committee, it was decided that it could be more conveniently discussed at the annual meeting of the Branch. Accordingly, it appears on the *agenda* for the present occasion.

Your Council take this opportunity of expressing their pleasure and satisfaction at the honour conferred by Her Majesty upon our

President (Sir James Sawyer), and, through him, upon the Branch generally, by granting him the dignity of knighthood.

In March last, Dr. Alfred H. Carter resigned the office of Honorary Secretary to the Branch, which he has held for four years past. The Council desire to express their regret that Dr. Carter is prevented by increasing professional engagements from continuing in this office, and also to bear their testimony to the urbanity and business-like habits which he has always displayed in conducting the affairs of the Branch.

In conclusion, the Council wish to congratulate members on the general prosperity of the Branch, and trust that, as an organisation which claims to represent the active work and thought of the medical profession in Birmingham and the surrounding neighbourhood, it may long continue to flourish and increase.

The following reports were also presented and approved.

Report of the Pathological and Clinical Section.—The Secretaries report that six meetings have been held during the past session, alternately at 3 and 8 P.M. The average attendance of members—eighteen—has equalled that of previous years, and has been the same for the afternoon and evening meetings. The system of exhibiting "card-specimens," introduced at the beginning of the session, has been found to work satisfactorily. The interest of the meetings has been well sustained by the exhibition of rare and interesting pathological specimens, and by the reports of instructive clinical cases. The following gentlemen have contributed: Drs. Foxwell, Malins, L. Phillips, Savage, Saundby, Simon, C. C. Smith, Suckling, A. S. Underhill, and Stacey Wilson; Messrs. Barling, Coulson Bull, Langley Browne, A. F. Clay, H. Eales, Haslam, Ker, Jordan Lloyd, Bennett May, J. McCarthy, Lloyd Owen, Priestley Smith, J. W. Taylor, Lawson Tait, and W. White.

Report of the Local Committee for Collective Investigation.—During the last year, the applications for forms to be filled up have been extremely few. Of those issued without application, none have been returned, so that no idea can be formed as to whether they were utilised or not. On April 8th, a special meeting of the Branch was held for the discussion of Prognosis in Heart-Valve Lesions, when an interesting paper was read by Sir Dyce Duckworth, who attended at the request of the Central Committee for Collective Investigation. At the request of the International Committee for Collective Investigation, an inquiry-form on Rickets, Acute Rheumatism, Chorea, Cancer, and Urinary Calculus, was sent to the registered practitioners in this district. Eighty of these forms were returned filled up.

The Financial Statement was read and adopted.

Officers.—The following were elected: *President*: S. H. Agar, L.K.Q.C.P. *President-elect*: Lawson Tait, Esq. *Treasurer*: A. Oakes, Esq. *Secretaries*: R. Saundby, M.D.; Jordan Lloyd, Esq.

Votes of Thanks were given to the retiring officers.

Collective Investigation.—A resolution by Mr. H. R. KER, remitting the question of collective investigation to the careful consideration of the Council, was unanimously agreed to.

President's Address.—The PRESIDENT (Dr. Agar) then delivered his inaugural address, on some social questions in connection with nervous disease.

SOUTH-WESTERN BRANCH: ANNUAL MEETING.

THE annual meeting of the South-Western Branch was held at Torquay, on Monday, June 21st, under the presidency of Dr. WILLIAM POWELL, of Torquay. The meeting was numerously attended.

Before the meeting, the members were hospitably entertained to luncheon by Dr. Powell, at his residence, Hill Garden, and breaks were also provided by him, of which many availed themselves for drives round Torquay and the neighbourhood.

By kind permission of the Torquay Natural History Society, the annual meeting was held in their Museum Hall, at 2 o'clock.

President's Address.—A letter having been read from the retiring President, Mr. E. SHARP, of Truro, regretting his inability to be present, Dr. POWELL took the chair, and, after thanking the Branch for the honour which it had conferred upon him by electing him as President, proceeded to deliver a short address, the object of which was to bring under the notice of the meeting some of the advantages claimed for Torquay as a health-resort. Attention was directed to the system of drainage and sanitation, which is the most perfect that science can devise; the water-supply being of the purest character, and derived from a moorland stream sixteen miles distant; and the sewage being conducted out of the bay by a high level sewer, discharging itself into the tidal currents of the Channel. There is also a perfectly arranged sanitary hospital about a mile from the town for the reception and isolation of all cases of infectious disease that may occur in the district. In regard to the climate of Torquay, Dr. Powell pointed out that its distinctive characters are: equability of temperature and the softness of the air, along with comparative dryness from the town being built on limestone rock, and being situated between two rivers—the Dart on one side, the Teign on the other. As further features rendering Torquay a desirable health-resort, he mentioned the wide area over which protection from cold winds extends, the fact of the summers being comparatively cool, the varied elevations that are available from the sea-level up to nearly 500 feet, the facilities for yachting and sea-fishing, and the near proximity of Dartmoor, with its bracing moorland air. Dr. Powell pointed out that perhaps the greatest advantage, as regards invalids and delicate people, arose from the climate and situation permitting an amount of outdoor exercise that was impossible in less favoured localities; and, in conclusion, said that, for a large section of invalids, there was no better climate in the British Isles than that of Torquay, and that its perfect system of sanitation gave it a decided advantage over many foreign health-resorts.

On the motion of Mr. SWAIN (Plymouth), seconded by Mr. CARLYON (Redruth), a cordial vote of thanks was awarded to Dr. Powell for his interesting address.

Report of Council.—The Honorary Secretary (Dr. DEAS) then read the report of the Council for the past year. The Branch at present includes 190 members, and eight new members have joined. The Council expressed their satisfaction at the passing, largely through the efforts of the Association, of the Medical Acts Amendment Bill; and while regretting that the Bill for amending the Lunacy Laws had been, from political exigencies, withdrawn after passing the House of Lords, trusted that it would become law at no distant date. Owing largely to the representations of the Parliamentary Bills Committee of the Association, provisions were introduced into this Bill affording medical men much needed protection against vexatious actions for granting certificates of insanity.

On the motion of Mr. W. POLLARD (Torquay), seconded by Mr. HARRIS (Exeter), the report of the Council was approved and adopted.

Next Annual Meeting.—It was decided, on the motion of Mr. POLLARD, seconded by Mr. CARLYON (Redruth) that the next annual meeting be held at Plymouth, and that Mr. Paul Swain be the President-elect.

Council.—On the motion of Dr. DEAN, seconded by Dr. HENDERSON (Exeter), the following six members were elected on the Council: M. H. Bulteel (Stonehouse), R. H. Hughes, M.B. (Plymouth), R. H. Perks, M.D. (Devonport), J. E. Square (Plymouth), P. Swain (Plymouth), C. Whipple (Plymouth).

Secretary.—Dr. Deas (Exeter) was re-elected as Honorary Secretary, and also as representative member both on the Council of the Association and the Parliamentary Bills Committee.

A communication was read from the East Anglian Branch (Essex District) enclosing copy of the resolution passed by that Branch on January 27th last, with reference to the formation of a Medical Defence Fund.

Medical Defence Fund.—On the motion of Dr. HENDERSON (Exeter), seconded by Mr. NOURSE (Exeter) a resolution was adopted in favour of the formation of a medical Defence Fund in connection with the British Medical Association, so as to afford, when needed, legal advice and assistance to members in connection with the false and groundless charges to which medical men may, at any time, become exposed.

Payment of Representatives on Council.—A letter was considered from the East York and North Lincoln Branch advocating the payment, by the Association, of the travelling expenses of the representatives of the Branches on General Council, and soliciting the opinion of the Branch on the merits of the case.

Dr. STEELE (Babbacombe) moved: That the reasonable expenses of representative members should be paid by the Association.

Some discussion took place, but ultimately an amendment, proposed by Mr. KARKEEK (Torquay): "That the subject be deferred till next meeting," was carried by a large majority. The general opinion of those present seemed against the proposal.

Meetings of the Branch.—The HONORARY SECRETARY moved that Rule 4 of the Branch Rules be altered so as to read as follows. "4. In addition to the annual meeting, intermediate meetings of the Branch shall be held at such places, and at such times, as may be determined by the Council, or upon a requisition to the Secretary, signed by not less than four members residing in any town or its neighbourhood, provided that such meetings shall not be held oftener than once in three months, nor twice in succession at the same place."

This was seconded by Mr. HARRIS (Exeter), and unanimously adopted.

Papers, etc.—The following papers, etc., were read:

1. Two Cases of Ovariotomy with exceptionally Low Temperatures: Mr. J. D. Harris (Exeter).
2. Notes on a Case of Poisoning by Carbolic Acid: Mr. W. E. C. Nourse (Exeter).
3. A Case illustrating the Mechanical Treatment of Cleft Palate: Mr. J. M. Ackland (Exeter).
4. A Rare Form of Skin-Disease: Mr. E. J. Domville (Exeter).

Papers by Dr. Henderson (Exeter), Mr. J. E. Square (Plymouth), and Dr. F. Hichens (Redruth), were postponed for want of time.

The Annual Dinner was held at the Royal Hotel at six o'clock, and was attended by most of the members present.

SOUTHERN BRANCH: ANNUAL MEETING.

THE thirteenth annual meeting was held at the India Arms Hotel, Gosport, on Wednesday, June 16th. Eighty members were present, and the chair was occupied by Dr. SINCLAIR COGHILL, the President.

Officers and Council. The following gentlemen were elected officers of the Branch for the ensuing year. *Vice-Presidents*: F. S. B. De Chaumont, M.D., F.R.S.; H. B. Norman, F.R.C.S. *Members of Council*: W. H. Axford, M.B.; F. R. F. Darke, Esq.; G. A. K. Lake, M.D.; J. Neal, M.D.; R. Eaton Power, Esq.; R. Shiels, Esq. *Representatives on the Council of the Association*: J. Ward Cousins, M.D.; T. W. Trend, M.D. *Representative on the Parliamentary Bills Committee*: D. Nicolson, M.D. *Honorary Secretary and Treasurer*: J. Ward Cousins, M.D.

Communications.—The following communications were made.

1. Mr. T. C. Langdon (Winchester) exhibited a large Ovarian Tumour, successfully removed at the Royal Hants County Hospital.

2. Dr. Ward Cousins exhibited (*a*) two patients after operation for Radical Cure of Hernia; (*b*) a man who had been the subject of Traumatic Structure; (*c*) a large Encephalocele; (*d*) an Incisor Tooth removed from the Orbit of a Child; (*e*) a piece of Intestine, the seat of Chronic Ulceration.

3. Mr. Kingscote (Salisbury) read notes of two cases, illustrative of the Treatment of the Sac in the Radical Cure of Hernia.

4. Dr. Ward Cousins gave a short address on the Present Aspect of Hernial Surgery.

New President.—DR. SINCLAIR COGHILL introduced Dr. J. R. Kealy, the President elect, and resigned the chair.

Medical Defence Fund.—The PRESIDENT read a communication from the East Anglian Branch, respecting the formation of a Medical Defence Fund, in connection with the British Medical Association. After some discussion, the following resolution, proposed by Dr. AXFORD, and seconded by Dr. GROVES, was unanimously agreed to: "That this meeting, having considered the circumstances forwarded by the East Anglian Branch, is of opinion that the Council of the Association should consider the case of any member against whom legal proceedings are undertaken for alleged unprofessional conduct, and should have the power to use the funds of the Association for his defence."

Payment of Expenses of Representatives in Council.—The PRESIDENT read, also, a communication from the East York and North Lincoln Branch, respecting the payment of the travelling expenses of the representatives of the Branches on the Council.—After a few remarks from Mr. LANGDON and Dr. TREND, the matter was allowed to drop.

President's Address.—The PRESIDENT delivered an address on the History of Gosport and its surroundings.

Visit to Haslar Hospital.—During the afternoon the members visited Haslar Hospital, and were very kindly conducted over the establishment by Inspector-General Dick and the officers of the medical staff.

The Annual Dinner, at the India Arms Hotel, Gosport, terminated the proceedings of the day.

The Meeting in 1877 is to be held at Southampton, and Sir T. Longmore, K.C.B., F.R.C.S., is the President-elect.

ABERDEEN, BANFF, AND KINCARDINE BRANCH: SUMMER MEETING.

THE summer meeting of this Branch was held in the Gordon Arms Hotel, Huntly, on Thursday, June 10th, at 3.30 P.M.; Professor OGSTON in the chair.

New Members.—Dr. Mayer, Buxburn, and Dr. A. J. Stuart, Strathdon, were ballotted for and admitted as members of the Branch.

Medical Indenture.—Professor DYCE DAVIDSON exhibited a very curious document, being a medical apprentice indenture of 1776, showing the peculiar obligations and relationship of the then medical apprentice to his master, and intimated that the document would be placed in the Museum of the Aberdeen Medico-Chirurgical Society.

Case of Webbed Hand.—Dr. J. OSBERT WILSON (Huntly) showed a case of webbed hand, occurring in a boy, aged 1, the sixth child of the family. The other children were all well formed, the only peculiarity being that the eldest girl is left-handed. There was no history of maternal impressions; nor did the parents know of any deformity occurring in any ancestor on either side. In this case, the right hand was completely webbed or clubbed, a slight notch only existing between the middle and ring fingers; and the nails of the index and middle fingers were fused into one of gigantic size. As far as could be made out, all the bones and joints were perfect, and the movements free. No other deformity existed, except a slight drooping of the left upper eyelid.

Articles used by the Gauchos. Dr MACKENZIE DAVIDSON showed several articles used by the Gauchos of South America, namely, the maté cup, made from a gourd, and the pipe ending in a strainer, used for the consumption of Paraguayian tea; also the poncho, or mantle with an aperture, through which the head is thrust; and the embroidered waist-band worn by the Gauchos.

Excursion and Dinner.—In the forenoon, an omnibus excursion to Rothiemay, *viâ* Cairnie and Ruthven, was largely attended. After the meeting, the members dined together in the Gordon Arms Hotel, under the presidency of Professor Ogston.

SHROPSHIRE AND MID-WALES BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch took place at the Salop Infirmary, on Tuesday, June 29th, at 2 P.M.

The retiring President, Mr. J. D. HARRIES, took the chair, and introduced his successor, Dr. W. H. O. SANKEY, who briefly proposed a vote of thanks to the past President.

Officers and Council.—The following members were elected to fill the undermentioned offices for the ensuing year. *President-Elect*: W. Eddowes, Esq. (Shrewsbury). *Secretary and Treasurer*: E. Cureton, Esq. *Representative on the Council of Association*: A Strange, M.D. *Council*: E. Andrew, M.D.; W. B. Davies, Esq.; W. Eddowes, Esq., S. T. Gwynn, M.D.; J. D. Harries, Esq.; J. R. Humphreys, Esq.; G. H. Keyworth, Esq.; E. Robinson, Esq.; H. J. Rope, Esq.; W. H. O. Sankey, M.D.; A. Strange, M.D.; R. W. O. Withers, Esq. (*Auditor*).

Report of Council.—The following report was read.

"Your Council beg to submit the following report of the proceedings and progress of the Branch during the past year. One half-yearly meeting has taken place, on February 23rd, with a fair average attendance of members; and there can be no doubt that the regular and punctual attendance of its members is the most important of all in the successful working of the Branch. The total number of members still keeps up to the average, and at the present time amounts to ninety-four. During the past year, there have been two resignations; while, on the other hand, three new members have been elected. In conclusion, your Council wish to revert to the satisfactory state of the finances, a balance of £21 4s. 8d. being in the hands of the Treasurer, and they would remind members that, on two previous occasions, the Branch has unanimously voted a sum of money for benevolent purposes."

The report was adopted, and a sum of five guineas voted to the Royal Medical Benevolent College, and a similar sum to the British Medical Benevolent Fund.

New Members.—The following gentlemen were elected members of the Branch. C. A. P. Osborn (Church Stretton, Salop); W. A. Smyth (Ketley Bank, Wellington).

President's Address.—The PRESIDENT delivered an interesting address, chiefly turning upon the various changes that have taken place in the medical profession and in medical practice generally during the past fifty years. The address was acknowledged by a cordial vote of thanks.

State Honours and the Medical Profession.—Mr. W. P. BROOKES (Much Wenlock) brought this subject under the notice of the meeting. He said that it must be a matter of surprise to the public that, in Great Britain, a barrier, still deemed impassable, should so long have existed between the medical and other learned professions, shutting out the former from a participation in those higher honours of the State, of which distinguished men, who have served their country, were justly proud. He was convinced that there did not exist any unwillingness, on the part of the Governments of the present day, to recognise and reward properly the services of the medical profession; but their hesitation arose solely from the influence of "precedent," an obstacle which they had sometimes succeeded in overcoming when urged by public opinion, well founded and properly represented, as in the case of the granting of the military instead of the Civil

Order of the Bath to the surgeons of the army and navy, by Her Majesty, on the recommendation of Lord John Russell, then Prime Minister, and in compliance with the memorial of the Provincial Medical and Surgical Association, assembled at Hull in August, 1850. When a victory had been gained in a great battle upon the issue of which the welfare of the nation depended, the military commanders had never been forgotten. They were always rewarded by their Sovereign with honours appropriate to their respective positions and services, oftentimes with the peerage. After the dangerous illness and subsequent recovery of the Prince of Wales, with the universal joy there was mingled, naturally, in the medical profession, a feeling of pride as well as thankfulness, that a victory had been gained by medical science over disease; in a patient, too, in whom were centred the affection and anxious hopes, not of a family circle only, but of millions of Her Majesty's subjects. It was a victory more important to the nation than many a one gained upon the battlefield. To the surprise and disappointment, however, of the medical profession, although Dr. Gull was properly rewarded with a baronetcy, Sir William Jenner, already a baronet, and whose equally distinguished services had been of inestimable value to the nation, was merely complimented by the decoration of a K.C.B., instead of being promoted to the peerage, as he so well deserved. It was, doubtless, a strict adherence to precedent which alone limited the prerogative, and stayed the hand of the Queen, who, as all her subjects knew, had a kind and generous heart, which appreciated warmly and gratefully, the skill and devotion of her medical attendants. He wished that the public were better acquainted with the benefits conferred by the medical profession on the nation, as ably set forth by Dr. Richard Quain in his Harveian Oration of October, 1885, and in his speech at the Army Medical School at Netley in February last. It seemed, however, that, notwithstanding all the important and valuable results of medical science, the highest honours of the State might be, and were properly, conferred upon eminent statesmen, churchmen, soldiers, lawyers, poets, and millionaires, but not upon medical men, however great their talents or signal their services to the State. He was assured that a representation of the grievance of the medical profession in this matter would have the careful consideration of the Goverment, and be followed by its redress. He proposed the adoption of a memorial to the Prime Minister, praying that he "will be pleased to advise Her Most Gracious Majesty to bestow upon such members of the medical profession as she may deem worthy of the honour, the highly prized distinction of the peerage;" and assuring him that "such a mark of your consideration, and of Her Majesty's condescension and favour, would be welcomed most gratefully by your memorialists, and by the whole body of the profession."

Mr. J. R. HUMPHREYS (Shrewsbury) said that other memorials of a similar nature had gone up to Goverment from this branch. It was a disgrace that the Church, Law, the Army and Navy were represented in the House of Lords, but the medical profession was excluded. None would shed a greater lustre upon the House of Lords than Sir William Jenner; all had heard of his work in medicine; again, he was not only Her Majesty's physician, but in many cases her private adviser. Again, were other men, who had done much to benefit mankind and elevate the position of British medicine and surgery, not fit to be in the House of Peers? He thought it was a reflection upon them. It was only by memorialising the Prime Minister that this great object was to be achieved. A "precedent" must be made by some one. Abroad, medical men were ennobled if they deserved it. He seconded the adoption of the memorial.

Dr. ANDREW (Shrewsbury) supported the motion. Nobility was not connected with wealth in every instance, and poverty should not be a barrier to the reception of a peerage. The medical man who should receive a peerage would confer an honour upon the medical profession.

The memorial was adopted unanimously.

Papers.—The following papers were read:

1. Dr. ANDREW: A Case of Nævoid Growth from the Nose.

2. Dr. WIGGLESWORTH: A case of Raynaud's Disease (Spontaneous Gangrene).

3. Dr. EDGWORTH: Five Cases of Placenta Prævia.

4. Mr. R. H. RUSSELL: Practical Remarks on Inflammation in Joints.

Dinner.—The members dined together at the Lion Hotel, when the usual loyal and other toasts were proposed and duly honoured.

SCHOOL OF PHYSIC IN IRELAND.—Dr. Walter G. Smith, King's Professor of Materia Medica and Therapeutics, has awarded the following prizes at the close of the summer session. First Prize: R. Heard, 62 per cent.; Second Prize: E. Coffey, 50 per cent.

EAST YORK AND NORTH LINCOLN BRANCH: ANNUAL MEETING.

THE thirtieth annual meeting of this Branch was held at the Infirmary, Hull, on May 26th, when there were present forty-seven members.

The retiring President, Mr. CRAVEN, having resigned the chair to the new President, Dr. MACLEOD, the latter made a few remarks, complimenting Mr. Craven on the way in which he had presided over the Branch during the past year.

The Council of the Branch.—Mr. SISSONS proposed a resolution, of which he had given notice, with reference to the constitution of the Council of the Branch. This, after an addition was made to it, was carried. Another resolution of Mr. Sisson's was lost.

Officers and Council.—The following were elected. *President:* M. D. Macleod, M.B. *President-elect:* H. Thompson, Esq. *Ex-President:* R. M. Craven, Esq. *Vice-Presidents:* J. F. Nicholson, M.D.; E. O. Daly, M.D. *Secretary:* E. P. Hardey, Esq. *Representatives on the Council of the Association:* J. Dix, Esq. *Representative on Parliamentary Bills Committee:* A. Macmillan, M.D. *Other Members of Council:* W. C. Appleton, Esq.; T. A. Baldwin, M.D.; T. M. Evans, Esq.; R. Hagyard, Esq.; E. H. Howlett, Esq.; W. C. Rockliffe, M.D.: W. H. Sissons, Esq.; and W. Stephenson, Esq.

Report of the Representative of the Branch.—Mr. DIX gave an account of his attendance at the Council. He spoke of his action at Cardiff with regard to the payment of the travelling expenses of the representatives by the Association, and also as to the recent action of this Branch on the same question. He criticised the proposed expenditure of the funds of the Association on a "Home for the Association." The cost of printing the JOURNAL he held to be excessive, and he considered a great saving might be effected if certain things were omitted which were of no particular interest. He also objected to the introduction of politics into the JOURNAL.

A vote of thanks to Mr. Dix for his services was carried.

New Members.—Dr. Barter, Mr. G. Todd, Dr. Koch, Mr. J. Stothard, and Dr. Fisher, were elected.

President's Address.—The PRESIDENT read an address on "Puerperal Insanity." At the conclusion, a vote of thanks was unanimously accorded to the President.

Fibrous Stricture of the Pylorus: Gastrostomy: Dilatation of the Pyloric Orifice.—Mr. HAGYARD read this case, which was of extreme interest, and was entirely successful. It will be published *in extenso*.

A Case of Littre's Hernia.—Dr. PIGEON read the notes of this case. The patient was aged 70, and was extremely fat. Her symptoms at first were those of acute catarrhal gastritis, and later those of strangulated hernia. The case terminated fatally; her age, the prostration, and her general obesity contraindicated laparotomy. At the necropsy, a small femoral hernia was found, and, fourteen inches above the cæcum, a small knuckle of ileum was engaged in the crural canal, from which it could be easily disengaged, only three-fourths of the circumference having descended. The bowel was congested, but not ulcerated or adherent. The obstruction had been caused either by the abrupt bending of the bowel, or by paralysis of the walls when part of the circumference was involved.

Collection of Urinary Calculi.—Mr. CRAVEN exhibited these. They comprised his own, and those of the late Dr. King, and the late Mr. Fielding.

Several other papers of interest had to be postponed.

Dinner.—The members dined together in the evening.

PERCHLORIDE OF MERCURY AS A PARASITICIDE AND DISINFECTANT.—Dr. Delbastaille indicates, in *Les Annales de la Société Medico-chirugicale de Liège*, a method of destroying insects in houses, which is also suitable for disinfecting rooms recently inhabited by patients suffering from infectious diseases. The windows of the infected room are closely shut; 50 to 60 grammes of corrosive sublimate are then put on a receptacle, and heated in the infected room, which must immediately be left, and the door shut. The sublimate volatilizes rapidly, coming in contact with the fire, and the room remains filled with vapours for three or four hours. On re-entering the room at the end of that time, care must be taken that the nose and mouth are covered with a handkerchief; the windows should then be opened, and the door shut, the room is then left to air for several hours. Afterwards, the windows and door are shut again in order that the mercurial vapours which still remain may not prove injurious. Sulphur is used for volatilization according to the ordinary method. It has never been remarked that this method of disinfecting has ever proved injurious either to the person who disinfected, or to those living in the room. After having been thoroughly cleaned and aired, the disinfected room may again be occupied.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

THE fifty-fourth Annual Meeting of the British Medical Association will be held at Brighton, on August 10th, 11th, 12th, and 13th, 1886.

President: W. T. Edwards, M.D., F.R.C.S., Physician to the Glamorgan and Monmouth Infirmary, Cardiff.

President-elect: Withers Moore, M.D., F.R.C.P., Senior Physician to the Sussex County Hospital, Brighton.

President of the Council: Balthazar Foster, M.D., F.R.C.P., Professor of Medicine in Queen's College and Physician to the General Hospital, Birmingham.

Treasurer: C. Macnamara, F.R.C.S., Surgeon to the Westminster Hospital, London.

An Address in Medicine will be delivered by Surgeon-General John S. Billings, M.D., United States Army Medical Department, Washington.

An Address in Surgery will be delivered by Frederick Abell Humphry, F.R.C.S., Surgeon to the Sussex County Hospital.

An Address in Public Medicine will be given by E. D. Mapother, M.D., Consulting Medical Officer to the City of Dublin.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

MEDICINE.—*President,* W. H. Broadbent, M.D. *Vice-Presidents,* Frederick Bagshawe, M.D., Hastings; Joseph Ewart, M.D., Brighton. *Honorary Secretaries,* Francis Warner, M.D., 24, Harley Street, London; Henry Seymour Branfoot, M.B., 42, Norfolk Square, Brighton.

SURGERY.—*President,* John Eric Erichsen, F.R.C.S., F.R.S., London. *Vice-Presidents,* Frederick William Jowers, M.R.C.S., Brighton; John Ward Cousins, F.R.C.S., Southsea. *Honorary Secretaries,* William Johnson Walsham, F.R.C.S., 27, Weymouth Street, London; Willoughby Furner, F.R.C.S., 2, Brunswick Place, Brighton.

OBSTETRIC MEDICINE.—*President,* Alfred Meadows, M.D., London. *Vice-Presidents,* Constantine Holman, M.D., Reigate; Frederick W. Salzmann, M.R.C.S., Brighton. *Honorary Secretaries,* Charles J. Wright, M.R.C.S., Lynton Villa, Virginia Road, Leeds; Alban Doran, F.R.C.S., 9, Granville Place, W.

PUBLIC MEDICINE.—*President,* Richard Patrick B. Taaffe, M.D., Brighton. *Vice-Presidents,* Sir Charles Alexander Cameron, M.K.Q.C.P., Dublin; Charles Kelly, M.D., Worthing. *Honorary Secretaries,* W. Brown, F.R.C.S., Carlisle; William Joseph Tyson, M.D., Folkestone.

PSYCHOLOGY.—*President,* Thomas Smith Clouston, M.D., Edinburgh. *Vice-Presidents,* Charles A. Lockhart Robertson, M.D., Brighton; Joseph Raymond Gasquet, M.B., Brighton. *Honorary Secretaries,* Charles Spencer Waller Cobbold, M.D., Earlswood Asylum, Redhill; James M. Moody, M.R.C.S., Surrey County Asylum, Canehill, Purley.

PATHOLOGY.—*President,* Julius Dreschfeld, M.D., Manchester. *Vice-Presidents,* James Frederick Goodhart, M.D., London; Heneage Gibbes, M.D., London. *Honorary Secretaries,* John E. Ranking, M.D., Mount Ephraim Road, Tunbridge Wells; John Caldwell Uhthoff, M.D., 9, Brunswick Place, Brighton.

THERAPEUTICS AND PHARMACOLOGY.—*President,* Thomas Lauder Brunton, M.D., F.R.S., London. *Vice-Presidents,* John Mitchell Bruce, M.D., London; Edward Mackey, M.D., Brighton. *Honorary Secretaries,* Cornelius William Suckling, M.D., 108, Newhall Street, Birmingham; John Theodore Cash, M.D., Drumearn, Earlsfield Road, Wandsworth Common, S.W.

OPHTHALMOLOGY.—*President,* Chas. Oldham, F.R.C.S., Brighton. *Vice-Presidents,* Louis Tosswill, M.B., Exeter; George Anderson Critchett, F.R.C.S.Edin., London. *Honorary Secretaries,* Frank Henry Hodges, F.R.C.S.Edin., 17, Horse Fair Street, Leicester; Arthur Nicholson, M.D., 98, Montpellier Road, Brighton.

OTOLOGY.—*President,* G. F. Hodgson, M.R.C.S., Brighton. *Vice-Presidents,* Alphonso Elkin Cumberbatch, F.R.C.S., London; Edward Cresswell Baber, M.B., Brighton. *Honorary Secretaries,* Henry Albert Reeves, F.R.C.S.Edin., 78, Grosvenor Street, W., London; Patrick William Maxwell, M.D.Edin., 16, Warrington Place, Dublin.

Honorary Local Secretaries: Thomas Jenner Verrall, M.R.C.S., 95, Western Road, Brighton; Alfred Scott, L.R.C.P., German Place, Brighton.

TUESDAY, AUGUST 10TH, 1886.

2 P.M. Meeting of 1885-6 Council.
3 P.M. General Meeting. Report of Council and other business. Adjourn at 5 P.M.
8 P.M.—General Meeting. President's Address, and any business adjourned from meeting at 3 o'clock.

WEDNESDAY, AUGUST 11TH, 1886.

9.30 A.M.—Meeting of 1886-87 Council.
11.0 A.M.—Second General Meeting. Address in Medicine.
2 to 5 P.M.—Sectional Meetings.
8 P.M.—A *Conversazione.*

THURSDAY, AUGUST 12TH, 1886.

9.30 A.M.—Meeting of Council.
11 A.M.—Third General Meeting. Address in Surgery.
2 to 5 P.M.—Sectional Meetings.
6.30 P.M.—Public Dinner.

FRIDAY, AUGUST 13TH, 1886.

10 A.M.—Address in Public Medicine.
11 A.M.—Sectional Meetings.
4 P.M.—Concluding General Meeting.
8 P.M.—Reception.

SATURDAY, AUGUST 14TH, 1886.

Excursions.

The following discussions and papers are promised up to the present time. Members desirous of reading papers, or joining in the discussions, are earnestly requested to communicate, without delay, with the Secretaries of the respective Sections.

SECTION A.—MEDICINE.

The following subjects have been chosen for special discussion.

1. Cases in which Disease of the Valves of the Heart has been known to exist for upwards of five years, without causing Serious Symptoms. Introduced by Sir Andrew Clark, M.D., F.R.C.P., F.R.S., London. The following gentlemen have promised to take part in the discussion: Drs. Gairdner, Clifford Allbutt, B. Foster, Douglas Powell, Sir Dyce Duckworth, M. Bruce, Burney Yeo, Skerritt, Byrom Bramwell, Saundby, Sansom, Tyson, Thomas, S. Mackenzie, D. J. Leech, and Oliver.

2. On the Effects produced by Gall-stones, with particular reference to some Rarer Points in their Symptomatology. Introduced by W. Ord, M.D., F.R.C.P., London. The following gentlemen have promised to take part in the discussion: Drs. Byrom Bramwell, Clifford Allbutt, B. Foster, Pavy, Shingleton Smith, Saundby, Sir Peter Eade, M.D., and Ralfe.

The President of the Section will deliver his Address on August 12th.

The following papers are promised.

CHURTON, T., M.D. Two Cases of Non-diabetic Acetonuria.
COUTTS, J. A., M.B. Latter Effects of Rickets.
CULLIMORE, D., M.D. Tropical Hepatic Abscess.
CROCKER, H. Radcliffe, M.D. A New Treatment for obstinately recurring Eczema.
DRYSDALE, C. R., M.D. The Treatment of Phthisis.
DUCKWORTH, Sir Dyce, M.D. Inadequate Treatment of Anæmia.
EARDLEY-WILMOT, R., M.B. A Case of Gall-stones.
EYLANDT, J. E., M.D. (Reval). Treatment of Diphtheria.
GAMGEE, A., M.D. On Compressed and Rarefied Air.
HALL, F. de Havilland, M.D. Meningitis as a complication of Pneumonia.
HANDFORD, H., M.D. Menstruation and Phthisis.
MANTLE, A., M.D. Etiology of Rheumatism considered from a Bacterial Point of View.
MOXON, W., M.D. Effects of Turpentine, Ergot, and Water, on Albuminuria.
MYRTLE, A. S., M.D. Chronic Inflammation of Mucous Membrane of Pyloric end of Stomach, Duodenum, Common Gall-duct, and Bladder, their Symptoms and Treatment by Harrogate Waters.
OLIVER, T., M.D. On the Relationship of Urea to certain Diseased Processes.
PLAYFAIR, W. S., M.D. Some observations on what is called Neurasthenia.
RALFE, C. H., M.D. Functional Albuminuria.
SAVAGE, George H., M.D. Mental Symptoms with Locomotor Ataxy.
STRAHAN, J., M.D. Intestinal Ulcers and their Treatment, more especially by Arsenic.
WHITE, W. Hale, M.D. Inexplicable Pyrexia.
WHITTLE, E. G., M.D. Melancholia and Insomnia in the Sane. Treatment.

SECTION B.—SURGERY.

Sir Henry Thompson will open a discussion on Suprapubic Lithotomy. The following gentlemen will take part in the discussion: Messrs. W. Cadge, Reginald Harrison, Professor Humphry, Berkeley Hill, T. R. Jessop, Greig Smith, W. Pye, Barwell, Bruce Clarke, Edward Lund, Walter Whitehead, and J. Ward Cousins.

The following papers are promised.

HARLEY, George, M.D., F.R.S. Hepatic Phlebotomy and Puncture in Hypertrophic Congestions of the Liver.
IMLACH, Francis, M.D., Liverpool. A Case of Renal Hydatids.
TAIT, Lawson, Esq. Surgical Treatment of Diseases of the Liver.
THORNTON, J. K., Esq.
WILLETT, A., Esq., and MEREDITH, W. A., Esq. Cholecystotomy.

Messrs. Macnamara, Morris, Bellamy, Jessop, and Professor Gastin, of Georgia, will take part in the discussion.

HORSLEY, Victor, M.B. A paper, illustrated by Photographs illuminated by the Lime-light, in connection with the Advances in the Surgery of the Central Nervous System.

Mr. E. Bellamy and Dr. Hughes Bennett will join in the discussion.

ADAMS, W., Esq. On the Treatment of Congenital Displacement, the so-called Congenital Dislocation of the Hip-Joint, by long-continued Recumbency and Extension.

ANDERSON, W., Esq. On Treatment of Aneurysm by Galvano-Puncture, illustrated by cases.

BENTON, S., Esq. Fistula in Ano of the Horse-Shoe Shape.

CLARKE, Bruce, Esq., and STEAVENSON, W. E., M.D. The Employment of Electricity in the Treatment of Diseases of the Urinary Organs.

COUSINS, J. Ward, M.D. A new Mouth-gag with Throat-Guard.

FITCH, Simon, M.D. (Nova Scotia). The Dome-Trocar and associated Instruments in Paracentesis, Aspiration, Transfusion, Ovariotomy, and Tunnelling the Prostate.

HARRISON, Reginald, Esq. On the Treatment of Urethral Stricture by Internal and External Urethrotomy combined.

JESSETT, F. B., Esq. Surgical Treatment of certain Tumours of the Neck.

KEETLEY, C. B., Esq. Further Remarks on the Radical Cure of Hernia by Injections into the Inguinal Canal.

OWEN, Edward, Esq. Psoas Abscess: when and where to evacuate it.

PYE, W., Esq. A Case of Multiple Papillomæ of the Bladder, removed by the Suprapubic Operation.

SMITH, Noble, Esq. On Obscure Disease of the Spinal Column.

STARTIN, James, Esq. The Surgical Treatment of Acne and Lupus.

SYMONDS, Charters J., M.D. The Treatment of Malignant Stricture of the Œsophagus by Tubage.

SYMPSON, Thomas, Esq. A Case of Myositis Ossificans.

WHITEHEAD, Walter, Esq. Three Hundred Consecutive Cases of Hæmorrhoids cured by Excision.

SECTION C.—OBSTETRIC MEDICINE.

The President will deliver a short address.

The following two special discussions will take place.

1. The Alternatives to Craniotomy. This discussion will be introduced by Dr. Robert Barnes; and Professor Porro, Dr. Halliday Croom, Dr. E. T. Davies, Liverpool, Dr. Walter, Manchester, Mr. Greig Smith, Clifton, and others, will be among the speakers.

2. On Removal of the Uterine Appendages. Papers will be read by Dr. Savage, Birmingham; Dr. More Madden, Dublin; and others; and Dr. Bantock; Dr. E. T. Davies, Dr. G. Elder, Nottingham, and Dr. Imlach, Liverpool; Dr. Walter, Manchester; Mr. Lawson Tait, Birmingham; Mr. Vincent Jackson, Sheffield, and others, will take part in the discussion.

The following papers are promised.

AVELING, J. H., M.D. A Case of Extra-uterine Gestation arrested by Electricity.

BALLANTYNE, J. W., M.B., Edinburgh, Sphygmographic Tracings in Labour and the Puerperium.

BARNES, Fancourt, M.D. On Perinæorrhaphy.

BEVERLEY, Michael, M.D., Norwich. Cases of Laceration of Os Uteri treated by Emmet's operation; Three Cases of Procidentia Uteri treated by Emmet's operation.

BLACK, J. Gordon, M.D., Harrogate. The Use of Stem-Pessaries.

BRAITHWAITE, J., M.D. On a Mode of Treating certain Cases of Amenorrhœa.

EDIS, A. W., M.D. Cases illustrating the Difficulties of Diagnosis in Gynæcological Practice.

ELDER, G., M.D. A Case of Vesico-vaginal Fistula.

EMMET, T. C., M.D., New York. On certain mooted points in Gynæcology.

GRIGG, W. C., M.D. On the Antiseptic Use of Bichloride of Mercury in Obstetric Practice.

HANDFIELD-JONES, M., M.B. Scanty Secretion of Liquor Amnii in the Early Months of Pregnancy, and its Bearing on Diagnosis.

HART, D. Berry, M.D. Successful Case of Abdominal Section for Ruptured Fallopian Tube Fœtation, with Microscopic Examination of the part of the tube removed.

HEWITT, W. M. Graily, M.D. The Early History and Etiology of Uterine Flexions and Displacements.

KINKEAD, R. J., M.D., Galway. Craniotomy and Cæsarean Section.

LUSK, W. T., M.D. (New York). The Proper Moment for the Performance of Gastrotomy in Abdominal Pregnancy.

ROUTH, C. H. F., M.D. On some Points of Difficulty as affecting Medical Men in Cases of Hysteria with Erotic Symptoms.

WALTER, W., M.D. A Case of Uterine Myoma causing obstruction of the Bowels, treated by the Removal of the Appendages.

SECTION D.—PUBLIC MEDICINE.

The general subjects for discussion are the following.

1. Scarlet Fever; its Causation, and the best Sanitary Measures for Dealing with the Disease as it exists among Urban Populations. Dr. Ewart, of Brighton, will open this discussion. Dr. W. Squire will take part.

2. On the Duration of Infectiousness in the following Infectious Diseases: Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. Dr. A. Ransome, of Manchester, will open this discussion. Dr. E. W. Hope, of Liverpool, and Dr. W. Squire, will take part.

3. Diphtheria in Rural Districts: (*a*) Causation; (*b*) Influence of Soil upon the Disease. Dr. C. Kelly will open this discussion.

4. Reports of Water Analyses: the best Method of Stating these so as to secure one Uniform Plan. Dr. Whitelegge will open this discussion.

Dr. Edgar Crookshank will exhibit the various apparatus employed in a Bacteriological laboratory, and give demonstrations of cultivations, microscopic preparations, and photographs of bacteria.

The following papers are promised.

ASHBY, H., M.D. On the Duration of Infectiveness in Scarlet Fever.

CARPENTER, A., M.D. The Causation of, and on the Quarantine which is necessary to be observed in, Scarlatina.

DRYSDALE, C. R., M.D. 1. On Animal Vaccination. 2. Sewage Pollution by the Thamas.

EVATT, Surgeon-Major G. J. H. On the Medical Department of an Army Corps in War, with proposal for a more efficient Volunteer Medical Organisation.

HANDFORD, H., M.D., Nottingham. Death-rate of Enteric Fever.

KERR, Norman, M.D. On Hydrophobia, and its Prevention.

PAGET, C. E., Esq. The Influence of Acute, supposed Simple, Sore-Throat in the Spread of Diphtheria.

PRINGLE, Surgeon-Major R., M.D. 1. The Advantages and Disadvantages of Human and Animal Lymph compared. 2. State Vaccination, with special reference to the Compulsory Clauses in the Vaccination Acts.

SEATON, E., M.D. A paper on Scarlet Fever.

SQUIRE, W., M.D. On the Influence of Increased Means of Isolation upon the Prevalence of Scarlet Fever in London.

TATHAM, J., M.D. Scarlet Fever, and the best Means for its Prevention amongst Urban Populations.

VACHER, F., Esq. Duration of Infectiousness in the Exanthemata and Allied Diseases.

WHITELEGGE, B. A., M.D. Reports of Water Analyses.

SECTION E.—PSYCHOLOGY.

The President, Dr. T. S. Clouston, will deliver an address on the Relationship of Bodily and Psychical Pain.

The following papers are promised.

CLARKE, A. Campbell, M.B. Glasgow. Experimental Dietetics in Lunacy Practice. A Record of Investigation and Results.

GILL, Stanley A., Esq., B.A. The Use and Abuse of Seclusion.

SAVAGE, G. H., M.D. On Alternations of Neuroses.

SHUTTLEWORTH, G. E., M.D. The Relation of Marriages of Consanguinity to Mental Unsoundness.

THOMSON, D. G., M.D. On the Separate Care and Medical Treatment of Recent Cases of Insanity, either in Existing Asylums, or in Lunatic Hospitals to be Established for that Special Purpose.

TUKE, D. Hack, M.D. On the Alleged Increase of Insanity.

The President will introduce a discussion as to How the Medical Spirit can best be kept up in Asylums for the Insane.

Discussions will also be invited upon Degradation of Habits and Feelings in Relationship to Mental Disease, and other subjects. The Secretaries will be glad to receive communications from members willing to read papers or to take part in the discussions.

SECTION F.—PATHOLOGY.

The following subjects have been chosen for special discussion.

1. Peripheral Neuritis. Opened by papers by Dr. Ross (Manchester), and Dr. Buzzard (London). Mr. Watson Cheyne, Professor Charcot, Drs. Clifford Allbutt, Hadden, Poore, Drummond, Saundby, Maguire, and Whittle, will take part in the discussion.

2. Aneurysm. Introductory paper by Timothy Holmes, F.R.C.S. Messrs. Barwell, Bryant, Savory, H. Morris, C. J. Symonds, Watson Cheyne, R. Maguire, and E. Lund, will take part in the discussion.

3. The Etiology and Pathology of Pneumonia. Introductory papers by Dr. Octavius Sturges and Dr. R. Douglas Powell. Dr. Churton, Dr. R. Maguire, Sir Andrew Clark, Dr. Duckworth, and Dr. Hollis will take part in the discussion.

The following papers are promised.

BARWELL, R., Esq. On Aneurysm.

CHEYNE, Watson, M.B. On Cholera.

CHURTON, T., M.D. The Pathology of the Adrenals.

CROCKER, Radcliffe, Esq. The Anatomy of the Early Stage of Keloid, and will show drawings of different types of Leprosy.

GLYNN, T. R., M.B. (Liverpool). Six Cases of Ulcerative Endocarditis.

GREVES, E. Hyla, M.D., Liverpool, will show a Rare Form of Cerebral Tumour, and give an account of the same.

HOLLIS, W. A., M.D. Pulmonary Tuberculosis, associated with Heart-Disease.

MAGUIRE, Robert, M.D. On Albuminuria in Diabetes.

RAKE, B. N., M.D., (Government Medical Officer, Trinidad). 1. An Inquiry into the Distribution of the Leprosy Bacillus. 2. Experiments on the Communicability of Leprosy to Animals.

SYMONDS, C. J., Esq. The Formation of Aneurysms in Acute Arteritis.

YOUNG, Professor A. N., Manchester. On Traumatic Malignancy.

SECTION G.—THERAPEUTICS AND PHARMACOLOGY.

An Introductory Presidential Address will be given by Dr. T. Lauder Brunton, F.R.S.

The following subjects have been selected for special discussions.

1. Antipyretics; to be opened by Dr. Carter, of Liverpool.

2. Analgesics; to be opened by Dr. Spender, of Bath.

3. Action of Drugs in Albuminuria; to be opened by Dr. Saundby, of Birmingham.

The following papers are promised.

BRUCE, Mitchell, M.D. Morphine in Diabetes.

DRYSDALE, Charles R., M.D. Mercury as an Antidote in Syphilis.

GRANVILLE, Mortimer, M.D. The Relief of Pain by Mechanical Vibration or Percussion.
HANDFORD, H., M.D., Nottingham. The Pathology of a rare form of Skin-disease affecting the Sebaceous Follicles.
JESSOP, W. H., M.B. On the Therapeutic Effects of Cocaine in Ophthalmic Practice.
MACKEY, E., M.D. Resorcin in Gastric and Cutaneous Disorders.
MACKENZIE, Stephen, M.D. On the Value of Cannabis Indica in a Certain Class of Headaches.
ST. GEORGE, George, Esq., Lisburn. Experiments with Manaca in the Treatment of Rheumatism.
STONE, W. H., M.D., will show the apparatus exhibited by him on the occasion of his Lumleian Lectures.
STRAHAN, J., M.D. An Unrecorded Danger from Continued Large Doses of Iron.

SECTION H.—OPHTHALMOLOGY.

Mr. Jonathan Hutchinson will open a discussion on the Different Forms of Choroiditis, in relation to their several Causes.

Mr. Anderson Critchett will open a discussion on Episcleritis.

An improved Electric Refraction Ophthalmoscope will be shown by Mr. Henry Juler.

The following papers are promised.

ABBOTT, G., Esq. The Use of Styles in the Treatment of Epiphora.
ANDREW, Edwyn, M.D. Ophthalmic Hints.
BARRETT, J. W., Esq., and LANG, W., Esq. On the Causation of Phlyctænula, Ophthalmia and Sycosis.
BROWN, Edgar, Esq.
CRITCHETT, G. Anderson, Esq. On Dislocation of the Lens.
FROST, W. Adams, Esq. What is the best Method of Dealing with a Lost Eye?
GLASCOTT, C. E., M.D. On Sarcoma of the Choroid, followed by Amblyopic Symptoms in the Sound Eye.
GREENWAY, Henry, Esq. Use of Ice and Carbolic Acid in the Treatment of Inflammation of the Eyes and Eyelids.
HARTRIDGE, Gustavus, Esq. Strabismus and its Treatment in Young Children.
HEWETSON, H. B., Esq. The Treatment of Interstitial Keratitis by Operation, without Constitutional Remedies.
HIGGENS, Charles, Esq.
JOHNSON, L. L., Esq. Paper, and Demonstration of several new Ophthalmic Instruments.
LEE, Charles T., Esq. The Extraction of Soft Cataract by Irrigation.
SNELL, Simeon, Esq. Paper.
TAYLOR, Charles Bell, M.D. 1. Is it Desirable, in Certain Cases, to Substitute Resection of the Optic Nerve for Ablation of the Eye-ball? 2. On a Method of Treating Epiphora without Slitting the Punctum Lacrymale.

A limited number of beds in the Sussex Eye Hospital, Brighton, will be devoted to the reception of cases of interest to be shown at the meetings of the Ophthalmological Section of the British Medical Association at Brighton. Gentlemen wishing to secure beds for such cases are requested to apply, as soon as possible, to Mr. Arthur Nicholson, 98, Montpellier Road, Honorary Secretary of the Section.

SECTION I.—OTOLOGY.

The following papers are promised.

BABER, E. C., Esq. On Examination of the Nasal Cavities from the Front (illustrated with Diagrams).
BARR, T., M.D. 1. On the Varieties, with Appearance, of the Tympanic Membrane compatible with Good Hearing. 2. On the Value of Rinne's Test, in the Diagnosis of Disease of the Nervous Structures of the Ear.
CUMBERBATCH, A. E., M.B. Aural Vertigo.
ELLIS, Richard, Esq. Labyrinthian Hæmorrhage, with Exhibition of Patient.
MACDONALD, Greville, M.D. The Functions of the Nose in Health and Disease.
PRITCHARD, Urban, M.D. Counter-irritation in the Treatment of Ear-disease.
WOAKES, E., M.D. Diagramatic Scheme, showing relations between Aural and Nasal Diseases.
WOLSTON, Walter, M.D. Nasal Polypi, their Radical Extirpation and Cure by Electro-cautery, with illustrative cases.

Discussion to be opened by Spencer Watson, Esq. : On the Complications of Nasal Polypi.

Members desirous of reading papers are particularly requested to communicate without delay, with the Secretaries of Sections, that the arrangements may be as complete as possible prior to the meeting.

ANNUAL MUSEUM.

THE twentieth annual museum will, by permission of the Town Council, be located in the Corn Exchange, a large hall, communicating with the Dome, and having a separate entrance in Church Road.

It will be open to the profession from August 9th to August 15th, and will be classified in three sections.

SECTION A.—Foods, drugs, hygienic and sanitary appliances. A specialty will be made of all kinds of prepared, peptonised, and other compound nutrients. (Honorary Secretary, Dr. Mackey, 1, Brunswick Road, Hove, Brighton.)

SECTION B.—New books, instruments, and appliances—medical and surgical; galvanic and other batteries and apparatus. (Honorary Secretary, Dr. Whittle, 65, Dyke Road, Brighton.)

SECTION C.—Anatomical and pathological specimens, diagrams, casts, or models; microscopes and microscopical preparations. (Honorary Secretary, D. W. Giffard, Esq., 5, Pavilion Parade, Old Steine Brighton.)

A name and description, printed, if possible, must be attached to each exhibit, which should be sent to the Corn Exchange, Brighton (to the care of the Secretaries of the respective sections), between Monday, August 2nd, and Saturday, August 7th. Ample counter space will be provided, and, so far as possible, equal facilities will be given to every exhibitor.

A description, for insertion in the Museum Catalogue, should be forwarded to the private address of the respective Secretaries, at least one month before the meeting, that is, by July 10th.

CATALOGUE.—The catalogue will be provided gratis, but advertisements will be charged at the usual rate, namely, one page, £1; half-page, 12s. 6d.; quarter-page, 7s. 6d.

TO EXHIBITORS.—The expenses of carriage and of removal to be borne by the exhibitor. The Committee will exercise every reasonable care as to objects entrusted to them, but will not be responsible for risk or accident.

Members intending to visit Brighton during the meeting are requested to send in their names, stating if accompanied by ladies, as soon as possible, to T. Jenner Verrall, M.R.C.S., 95, Western Road Brighton, Honorary Secretary to the Local Executive Committee.

NOTICES OF MOTION.

Dr. WARD COUSINS hereby gives notice that he will move the following addition to, and alteration of, the By-laws; namely,

Page 17, By-laws. Addition to "d," second line, after the word "member," add "of a Branch within the limits of the United Kingdom of Great Britain and Ireland."

Addition to "d."—"No person shall be eligible as a representative member of a Colonial or Indian Branch unless, at the time of his election, he shall be a recognised member of the Branch, and shall have resided within the area of the Branch for at least twelve months prior to his election. The election of Crown, Colonial, and Indian members of the Council shall be annual, and shall be subject to the same by-laws as the election of other representative members."

May 6th, 1886. FRANCIS FOWKE, *General Secretary.*

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Nocard on the Tuberculosis of Birds. Miliary Abscesses of the Kidney in Typhoid Fever.—A New Ophthalmic Sign indicating Lesions of Nutrition of the deep Organs of the Eye.—Suicides in France.—Impure Digitaline.—Abstinence and Urinary Toxicity.

AT a recent meeting of the Central Veterinary Society, M. Nocard made a communication, entitled, Experimental Researches on the Tuberculosis of Birds; Artificial Cultivation of the Bacillus. He stated that all birds, living in contiguity with human beings, were liable to contract a bacilliary tuberculosis. The question to be decided was, whether this bacillus were the same as that which attacked mammalia, and clinical observation answered the question in the affirmative. M. Nocard had met with four poultry yards infected with tuberculosis, where the epidemic could only be accounted for in one way, and that way was contact, either direct or indirect, with persons in the last stage of phthisis. In a fifth instance of tuberculosis in a poultry-yard, the element of contagion must have existed in the excrement of tuberculous cows which was devoured by the birds. Experiments proved that inoculation or ingestion of tuberculous products taken from mammalia, rendered birds tuberculous. In tuberculosis produced by tuberculous products of animal origin, the distribution of visible lesions, and the morphology of the bacilli, are identical with those observed in cases of natural tuberculosis. Reciprocally, tuberculosis in birds was transmitted to mammals. M. Nocard cited a great number of animals—rabbits, guinea-pigs, and kids—which had died from serious lesions in the anterior chamber of the eye or the peritoneum, after inoculation with the products taken from fowls, or tuberculous pheasants. Generally, the development of the malady was slow, covering a period of three to five months; but, with guinea-pigs, a series of inoculations with tuberculous products from birds appeared to augment the virulence of the disease, death occurring in a progressively shorter time. M. Nocard had succeeded in cultivating the bacillus tuberculosis of birds on gelatinised serum. He showed to the Society specimens of the fifth, sixth, seventh, and eighth cultivations, which greatly resembled those made in Koch's laboratory. It was with some difficulty that he had made these cultures, although he carefully followed Koch's very precise indications. Cultivation upon pure serum was not followed by any results; on the contrary, the culture only succeeded when the bacillus was introduced,

with most minute precautions, into a serum, which was gelatinised after the addition of one per cent. of peptone, 0.25 per cent. of cane sugar, and 0.25 per cent. of bay-salt. As Koch had indicated, the culture was very slowly effected, and did not commence until the fifteenth day, requiring five or six weeks in a stove, at 38 degrees (cent.), in order to acquire its full development. After the fourth culture, the bacillus was transported into pure serum; it grew and developed, presenting identical characteristics, but the process was more slowly effected. M. Nocard did not employ the same method as Koch to collect the blood which was to serve him for serum; after having burned the skin, he punctured the jugular vein with a trocar, which had been passed through a flame; then he inserted into the cannula of the trocar the extremity of a glass tube, having the same diameter; this conducted the blood into a vase, ready to receive it. As everything which was used had previously been sterilised by heat, the blood passed directly from the vein into the receptacle, without being brought into contact with impure air. The vessel was placed, when full, in a refrigerator, until the coagulum contracted, then the serum was drawn from it with a sterilised pipette, in order to pass it into the testing-tubes for gelatinisation. Thus the tedious processes of sterilisation of the serum, and its concentration by evaporation, were avoided, and, what was of paramount importance, clear serum, was obtained of a pale yellow colour, with a very slight green fluorescence. M. Nocard showed beautiful specimens of liquid or gelatinised serum; even the peptone tubes were perfectly transparent.

M. Gallois's work on miliary abscesses of the kidney and typhoid fever, published by Delahaye and Lecrosnier (Paris, 1885), treats of the above complication in typhoid fever, which he has studied from a clinical, histological, and pathological aspect. He observed that they were not special to typhoid fever, but rather resulted from secondary septicæmia proceeding from an internal cause. The renal lesions presented the character of suppurative periglomerulitis, doubtless caused by the migration of bacteria through Bowman's capsule and through their accumulation in the neighbouring connective tissue. The mechanism of this diapedesis was similar to that which Cohnheim observed in the case of leucocytes. This renal lesion could not be diagnosed, but the secondary septicæmia that occurred, if carefully observed, might indicate its existence. In such a case, M. Gallois administered antiseptic intestinal solutions of carbolic acid, or of salicylic acid with an equal weight of borax, which made it soluble in water. This treatment lowered the temperature, and was especially useful when quinine was not tolerated.

M. Giraud-Teulon, at a recent meeting of the Académie de Medicine, read a note upon a new ophthalmoscopic sign of the lesions of nutrition of the deep organs of the eye. This sign consisted in the fact that venous blood, instead of presenting its usual red brown tint, assumed that of arterial blood. According to M. Giraud-Teulon, this indication was observed in four kinds of morbid conditions; in modified nutrition of the retina or its dependencies (trophic trouble), in modified special sensitiveness of the ocular apparatus, in alterations of the mobility of the organ, and, lastly, in morbid conditions associated with general illnesses which may be possible factors in producing the observed phenomena.

Suicides continue to increase in France. The real and proportional numbers doubled in thirty years; the department of the Seine supplies more than a sixth. Among the 7,572 persons who committed suicide in 1884, nearly eight-tenths were men. These statistics demonstrate that the proportion of male suicides are 32 to 100,000, and women 8 to 100,000; 169 persons committed suicide whose ages were unknown. The increase of suicide is parallel with advancing age; the maximum number of suicides are committed by persons who have reached the age of 60; 36 per cent. of the suicides were committed by bachelors, 47 per cent. were married men, 17 per cent. were widowers. The social condition and family of 324 persons who committed suicide is unknown. With regard to professions, the cases are divided into six classes; 32 per cent. of the suicides are committed by labourers, 58 per cent. by different kinds of working men, 12 per cent. by tradesmen, masters, and clerks, 13 per cent. by persons possessing property or receiving an income from a profession, 6 per cent. by domestic servants, 9 per cent. by persons without any known profession. In the town-centres, there are 27 suicides among 100,000 inhabitants; in urban parishes, 16 per 100,000. The effect of seasons on suicide can be appreciated by the following statistics: January, February, and March, 24 per cent.; April, May, June, 29 per cent.; July, August, September, 27 per cent.; October, November, December, 20 per cent. Hanging is the death most frequently chosen—44 per cent.; next comes drowning, 27 per cent.; shooting, 12 per cent.; suffocation with charcoal, 8 per cent.; jumping from a high place, 2 per cent.; poisoning, 2 per cent.

M. Brouardel's communication to the Academy of Medicine on April 20th, on the impurity of different kinds of digitaline currently sold, is a further proof that medical men, in their prescriptions, should specify the digitaline which they wish used. Homolle's and Quereune's digitaline is pure, and is prepared either in the form of granules or solution. The new *Codex* directs that the above digitaline should always be furnished unless another kind is specified in the prescription.

At a recent meeting of the Académie des Sciences, M. Charles Bouchard stated that abstinence increased urinary toxicity by one-half. This increase, it would seem, ought to be attributed to a superabundance of organic matter not sufficiently oxidised. Muscular work in the open air suppressed from 30 per cent. of the total urinary toxical properties of the urine passed in twenty-four hours. These variations also seemed to depend upon the greater or lesser intensity of oxidations. When the subject to be experimented upon was under the influence of compressed air, a greater quantity of oxygen was evidently in contact. This, as M. Bouchard believed, diminished the toxical effect of the urine.

In the JOURNAL of July 3rd, page 48, column 1, lines 14 to 16, the sentence, "The" to "inoculation" should read thus: "The inoculations are made every day; thus there is an interval of twenty-four hours after each inoculation."

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

Hospital Extension in Manchester.—Hall of Residence for Medical Students.—Victoria University. British Association Meeting.

THE new wing which has recently been added to the Royal Salford Hospital, and to which reference was made in the BRITISH MEDICAL JOURNAL some time ago, is now completed, and will before long be ready for occupation. The new out-patient rooms are almost ready, and when they are in occupation, the alterations necessary to convert the old out-patient rooms into wards and other offices will be proceeded with. The furnishing of the new wards will be commenced at once, and, if the funds at the disposal of the committee are sufficient, they may be expected to be ready for occupation in a month or two. The hospital, when complete, will contain upwards of 120 beds; this increased accommodation is urgently needed, as the hospital stands in a densely populated district, and patients have, hitherto, had to be refused admission for want of room. The out-patient department of the Hospital for Consumption and Diseases of the Throat has recently been removed from its old and somewhat cramped quarters, in a private house in St. John's Street, to new and commodious buildings recently erected in Byrom Street, a change which must be welcomed to both staff and out-patients, inasmuch as during the last year or two, the number of out-patients attracted to this charity has largely increased. The hospital where the in-patients are received, at Bowden, has also had additional accommodation provided, in the shape of two new wards. The premises recently vacated by the Eye Hospital, in St. John Street, where the in-patients were removed to the new buildings in Oxford Road, are still partly in use for out-patients, but the old wards have now been emptied of their furniture, and are, I believe, to be let as consulting rooms for medical men.

I hear that a hall of residence for medical students, in connection with the Owens College, is about to be established. Funds have already been subscribed in part, and efforts are being made to raise the sum of £10,000, in order to start it satisfactorily on a secure basis. A commodious house, the one occupied by the late Mr. Crompton Potter, which stands in its own grounds, and faces Oxford Road, in the vicinity of the College, has been secured, and there is every probability of its being in active operation before long. Two halls of residence, namely, Dalton Hall and Hulme Hall, are already in existence: the one founded by the Society of Friends, and the other in connection with the Church of England; but these are more especially arranged for the accommodation of arts and science students, while the one in process of being established will be intended for medical students, and the warden will, doubtless, be a medical man who can supervise the students' work, and afford them substantial help. It is believed by the promoters that this hall of residence will supply a long-felt want, and will be the means of attracting students to Victoria University.

At the June examinations of the Victoria University in arts and science, which have been recently concluded, seventeen students matriculated in arts with the intention of proceeding to the medical degrees. The medical examinations take place this month.

Preparations are in active progress for the meeting of the British

Association to be held in this city next year, under the presidency of Sir Henry Roscoe; the medical profession are represented on the General Committee by the Secretaries, Professors A. H. Young and A. M Marshall, and by representatives sent from each of the medical societies.

CORRESPONDENCE.

☞ To Correspondents. ☜

Our correspondents are reminded that prolixity is a great bar to publication; and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return, and hold over a great number of communications, chiefly by reason of their unnecessary length.

CONSULTANTS AND PRACTITIONERS.

Sir,—Would it not be much better if the honorary secretaries of this movement secured a more expressive title? For is not a "consultant" a "practitioner," or what is a "consultant?" Last year, a medical man appeared before Mr. Justice Hawkins to give evidence. He described himself as a "consultant" from London. The judge refused to accept his definition of a "consultant," and ruled that, when two or more members of the same profession meet to consider a case, then a "consultation" takes place, and that those called in to take part in it are "consultants." It is hardly necessary to point out that a consultation cannot take place between a medical practitioner and one of the non-medical public. He is a very hard-up medical man who would consult with a quack, medical student, or unqualified practitioner. Mr. Hawkins had also, some time ago, to threaten a medical man for contempt of court, if he persisted in telling the jury the differences between "abortions," "miscarriages," "premature labours," and such like. The judge ruled that any labour occurring before full time was "premature," and that was sufficient. For these and other reasons, I think our terms, as applied to different medical men, should be more accurate. A medical man who sits in a room for a number of hours daily, giving advice or treatment, is not a "consultant"—at least, in the estimation of his brethren. If we must have distinctions other than those of physicians, surgeons, and physician-accoucheurs, is not the term "specialist" the best to use. Medical men have often themselves to blame for this confusion of terms, for do they not repeatedly tell their patients to see them "at their consulting-room," or write "hours of consultation" at the head of their prescription-paper. In such cases, would it not be better to use the term "office," as is done in America? An American asks, "Have you much office-work?" We say, "Have you much consultation-work?" Which term is more explicit? Might not medical men teach the patients to come for "advice"—not for "consultation." One never hears a person saying he has "consulted" his solicitor; he has sought his "advice."

The honorary secretaries also speak of "family attendants." Now I for one object to be a "medical attendant." I am happy to say I know some medical friends who act as the medical advisers to a family, but in all these cases the nurse is the attendant. Whoever hears of people referring to the parson, with his good salary, as "their clerical attendant," or to the solicitor as "their legal attendant?" However, if medical men prefer to bedaub and prostitute themselves by using names which convey to the outside public very inferior associations, then let them suffer from well merited contempt.

Drs. Verdon and Bott have set themselves a difficult task; for one who tries to cure our inside social ills, must have an uphill battle. The whole struggle between the general practitioner and consultant is one of bread. Specialists, like other folks, must make their bread-and-butter, or else "go out." In order to be fairly successful in their efforts, they must, like other men, be fairly dishonest. If he be called in by friends, to consult with the usual medical adviser, he must necessarily try to find out what points of difference exist between the friends and their medical man. Then, if he is a fairly dishonest man, and wishes to be a successful consultant, he will strongly back up the relatives. This seems to me the key-note of success in the practice of "consulting," in so far as the bread question is concerned; and who can ignore it? Relatives rightly demand a consultation, for one of two reasons—either that they consider a mistake has been made in the diagnosis, or in the treatment. It must be very trying for an unknown medical man to go into a family, and there and then agree with the other medical man, and finally to pocket his two guineas—that is, "to do nothing at all, except take his fee," to use the expressive language of the one who forced the consultation. I deeply sympathise with the practitioner who is called into a consultation. It is so difficult for him not to do "something," and that something generally a mean thing. A short time ago, one medical man met another at Liverpool, in consultation. The medical man called in, added syrup of lemon to a previous prescription of bromide and water. The patient recovered. This, and many such cases, makes one feel that there is no genuine worth in the customary consultation. I have often thought that, instead of having a consultation, it would be much better if the patient called in any other medical man whom he may fancy, and that the result of this be given, some time after, to the usual medical adviser. If the latter can not approve of the suggestions, let him resign the case. I say this, having derived good help from medical men who have given chloroform, performed an operation, or helped in a confinement case.

If each doctor of medicine will only act honourably with those families whom he advises; and if he will only keep abreast of the requirements of his calling, which will not give him much trouble; if he will not overvisit or overcharge his patients, and at the same time let them see he is independent of their yearly contribution of a few shillings; then his patients will, if not at once, in the long run, respect him. For it is sad to see how some men sink their well-founded opinions, and swallow, with a semblance of assimilation, the ideas of other doctors and relatives. If he will be an honest man, he should cut his connection with the patients, and will not—like a medical Judas—accept the five or ten pieces of silver as a balm to his wounded feelings.

It must, in any settlement of this question, be agreed that that class of men who act as "consultants" cannot, at the same time, be "general practitioners." Let each man have office work, if it so please him; but if this *soi-disant* "consultant," who treats the family next door, meet his professional brother at a neighbouring house, he will in the long run oust him, more especially if the "consultation" end in some little disagreement. The *placebo* practitioner must take up the running, and so he may; only let him not extend his family practice by being "a consultant!"

There is great room for improvement in the manly and honourable branches of the profession—almost more in these, than in the scientific portion. I think it is rather like the kettle calling the pan black, when the general practitioner begins to lecture his high-toned brother, the "consultant." Put thine own house in order; and then, when this is accomplished, ask the others "to do likewise." But what about keeping the unqualified assistant, unless you believe he is safer, and will kill fewer people than yourself; of taking commissions from the chemist; of giving advice for "nothing," and, at the same time, charging "the advice, nothing! but the medicine, two-and-sixpence!" No wonder that people drink medicine, and resent advice. All these "tricks of the trade" may be owing to the mean methods pursued by many hospital physicians when trying to soothe "suffering humanity" *plus* pushing their business. But both are contemptible, and should be suppressed.—I am, sir, yours truly,

Liverpool. Robert Rentoul, M.D., M.R.C.S.

Sir,—In my presidential address to the Bath and Bristol Branch of the Association, I discussed the difficulty between consultants and general practitioners, which is now the subject of correspondence in your Journal, and endeavoured to prove that neither the consultants nor the public are to blame for the friction so often arising, but that it is the necessary consequence of the absence of distinction between the two classes of practitioners. I will not repeat the arguments I then used, but will call the attention of those who are now discussing the question to my address, published in the Journal for July 14th, 1883, and ask them to consider whether consultants are not unjustly censured for what they cannot help.—I am, sir, yours, etc.,

Hambrook, near Bristol. Edward Crossman.

SIR SPENCER WELLS AND MR. LAWSON TAIT.

Sir,—Under the title of "The Revival of Ovariotomy," you have published a number of letters, some of which appear designed to attack Sir Spencer Wells. You have held the balance with your usual fairness, in admitting letters impartially; but, with few exceptions, Sir Spencer Wells's admirers have remained silent, relying, doubtless, on the admitted strength of his high position.

I ask the favour of a little of your precious space to express some reflections as a consulting surgeon of many years' standing, who, though not a gynæcologist, has watched ovariotomy and its practitioners for well nigh forty years. Admitting the statements in Mr. Tait's letter, published in last Saturday's British Medical Journal, here is the state of things it reveals. That gentleman says that he enjoyed the intimate friendship of Sir Spencer Wells from 1870 to

1881. Since that date, differences have arisen between them, and now Mr. Tait is not above adducing, in his defence, an incident of the most intimate confidence while their friendship was unbroken. Unhappily, other intimate friends of to-day may quarrel to-morrow; but what will be the relations of private life, if confidences between professional men are to be broken, without authority, by one who tries to damage an antagonist in a quarrel of his own seeking?

When Spencer Wells took up ovariotomy, the profession had very little or no confidence in ovariotomists. It was admitted that some of them were bold and skilful operators; but surgery is something more than bold skilfulness. Some of the published results were very brilliant, but a very strong suspicion prevailed that tragedies were suppressed. Dash and dexterity, whatever may be the case to-day, were not always combined with judgment and truth. I perfectly remember Spencer Wells's first ovariotomies. With his advent, the scene changed. He was accurate, painstaking, and prudent—a loyal colleague, a lover and speaker of the truth. His statistics may possibly be inferior to those of other surgeons. The fact remains that Spencer Wells's character and mode of procedure, in matters not less important than surgical details, won the confidence of the profession, and placed ovariotomy on the high platform of scientific surgery.—Yours truly,

A HOSPITAL SURGEON.

SIR,—Mr. Tait desires to drop the subject; I am glad of it. In his letter to you announcing this determination, he refers to a letter of mine addressed to him some years ago, in terms which require from me some notice. I remember very well the circumstances which induced me to write to him, under the impression that he had not been fairly treated. I can call to mind nothing in regard to it for regret, but Mr. Tait's use of it. I did not anticipate evil from a friendly and confidential expression of opinion to the above effect; and, therefore, kept no copy.—Yours obediently,

HENRY SAVAGE.

THE GENERAL MEDICAL COUNCIL.

SIR,—Will you allow me briefly to state that it is my intention to become a candidate for the direct representation on the "General Council" of "the Registering Medical Practitioners Resident in England," under the "Medical Act, 1886."

I base my claims upon having done so much for the Fellows and Members of the College of Surgeons in 1869-70, in being mainly instrumental in causing the Council to recognise more freely the rights of the Fellows and Members; and from having been in active practice as a general practitioner for the past forty-five years; and from having done the profession "some service" in a variety of ways, both directly and indirectly; and should the "general practitioner" do me the honour to elect me, I shall consider it a great compliment, and a reward for the great pains and trouble I have taken on behalf of my profession.—I remain, your obedient servant,

EDWIN MORRIS, M.D., F.R.C.S., etc., a Registering General Practitioner.

Spalding.

INDIRECT BULLET-FRACTURES.

SIR,—In the interesting paper on Indirect Bullet-fractures, in the JOURNAL of June 12th (page 1106), Dr. Kirker, R.N., has described a specimen of "fractured and fissured femur from gunshot," in the Haslar Museum. Dr. Kirker's description puts beyond doubt the correctness of his statement that the fissures, in the specimen alluded to, are immediately connected with the injury done by the bullet—are, indeed, a proximate and direct part of it; the fissure, running from the place of impact of the projectile towards the longer fissure, sufficiently proves the fact. A similar condition is plainly seen to exist in the three specimens figured at page 723 of the Surgical volume, Part 3rd, of the *Medical and Surgical History of the War of the Rebellion*, to which Dr. Kirker refers; in all the three illustrations, the remote transverse fracture is shown to be directly connected with the spot where the bullet struck by more or less fissuring of the intervening portion of the bone.

I think I first made use of the term "indirectly produced fissure of bone from gunshot" in the following sentence: "A peculiar kind of fissured fracture, after gunshot injury, has been met with, in which fissuring has occurred at some distance from the point of impact of the projectile, with an interval of sound bone between the seat of direct fracture and the indirectly produced fissure." (Holmes's *System of Surgery*, 1883, vol. i, p. 543.) I did not contemplate the application of the term to such a gunshot injury as Dr. Kirker has described, or to the remote transverse or oblique fractures, communicating with a point of impact of a bullet by intervening fissures, which occurred during the United States' war. Exceptional and interesting as such lesions are, I restricted the term to the kind of fracture first brought to notice, as far as I am aware, by Dr. Fischer, in his *Kriegs-Chirurgische Erfahrungen* (Plate 5, Fig. 29), in which there is no connection, by fissure or otherwise, between the fissured fracture and the point of impact of the projectile—in which the secondary lesion is, not only more or less distant from the part where the projectile has struck the bone, but where there is an intervening portion of sound bone between the two. There are at least two specimens of such indirect fissuring from gunshot in the Museum at Netley; one in a flat bone, the other in a long bone. It is only in a fracture of this kind that, in my opinion, the expression seems appropriate; for it is only under these conditions, whatever the explanation of the production of the remote lesion may be, that it can be regarded as indirectly produced. Dr. Kirker remarks that, "in most of the specimens of indirect bullet-fractures, fissures are seen to connect the direct with the indirect injury; but, in some, this connection is not evident. I am fully persuaded, however, that, visible or invisible, connecting fissures always exist." It will be seen that, in my opinion, when such fissures connect part of a bone struck by a bullet, with mischief at a part further off, the latter, however near or remote, is hardly entitled to be called an indirect lesion; but, in cases where no such direct connection can be discovered, the fracture may rightly be classified as an "indirect gunshot fracture." In the specimen of which a drawing is shown by Dr. Fischer, I feel well assured that, if the remote fissured fracture had been connected with the fracture which directly resulted from the stroke of the projectile, it could not have escaped discovery by so expert a surgical pathologist as Dr. Fischer, especially as he was searching for it after maceration of the preparation. I have not been able to trace any such connection in the specimens in the Netley Museum.

The occurrence of indirect fissures, such as I have alluded to, seems to be very rare; but may be more frequent than suspected, as the periosteum is probably intact over them; and, even in cases of amputation, or on examination of bones under other circumstances, such capillary-clefts may easily escape notice, unless specially looked for. A knowledge that such a lesion occasionally exists possesses practical value; for inflammatory changes may take place in the direction of an indirect fissure, such as often occur after ordinary fissuring of bone, the true cause of which, without the knowledge, may remain unsuspected.—I am, sir, yours truly,

THOMAS LONGMORE.

Netley.

INDIA AND THE COLONIES.

INDIA.

MEDICAL WORK AMONG THE GONDS.—The report of "Four Months' Medical Mission Work among the Gonds of the Central Provinces of India" is an interesting record of camping work undertaken during the cold season of 1885-6, by Mr. W. Johnson, L.R.C.P., etc., who sought to complete a six months' sojourn among this race, with the object of testing the possibility of establishing permanently a medical mission in that part of the Church Missionary Society's sphere of work. Mr. Johnson was persuaded by what he saw during his stay, not only of the feasibility of the proposal, but of the great value which the people would derive from a medical mission, that would carry medical and surgical help into their villages, far beyond the itinerant native medical men who stroll about from village to village. There is, he says, no other medical and surgical assistance for the bulk of the people, except the Government vaccination-staff, which go out yearly to those parts where their services are required. A timidity, springing from their extreme ignorance of European methods of treatment, brings with it an indisposition to leave their villages; and comparatively very few, we are told, go into the Government hospital and dispensary at Mandla. Example, however, acts very powerfully among them; and, when two or three have undergone treatment, others speedily follow, sometimes showing a blind confidence, unattended with any of those scruples and anxious inquiries which are met with among Europeans. Amongst the Gonds, all the defects of caste and religion which follow the Hindoo character are almost unknown. As many medicines and instruments as could be taken by two men in a medicine-chest, says Mr. Johnson, were taken into all the villages that lay in our way during the day's march; the sick were called together, and each treated according to the requirements of the case. Altogether, a total of 330 medical and 184 surgical cases were treated. Mr. Johnson was struck with the number of epileptic cases (fourteen),

but in no case could he obtain decided evidence as to causation. Among the surgical cases, 113 were ophthalmic. Of the fifty-two extractions with iridectomy, the results were as follows: good, 26; moderate sight, 13; some sight restored, 4; result not known, 4; cases of suppuration and destruction of sight, 7. There were 8 operations for entropion, a very common disease among the Gonds, though no single case of ectropion was met with. All the eye-operations were necessarily performed under the commonest conditions, an operation-table being out of the question. For the operations on the eyeball itself, eucaine was used, and found most satisfactory when used in antiseptic solutions. Mr. Johnson arrives at the conclusion that a hospital of some kind in a central place is a necessity. Of the evangelical work, he adds: "Beyond their indifference, a firm belief in spirits, and a blind unthinking adherence to the ways of their ancestors, and their utterly unlettered condition, there is little else of opposition or impediment to Christian teaching." No charge for medicines of any kind was made in the case of the bulk of the people, who are poor and industrious.

THE MEDICAL SERVICES.—A special army circular notifies that the appointment to administrative grade of a medical officer who entered the service prior to January 13th, 1860, and who is disqualified by age from serving the full term of five years, is limited to those officers who will be able to complete upwards of three years' service in that grade, and will then be sanctioned only on exceptional and special grounds, and exclusively in the interests of the public service. With reference to a recent notification regarding the withdrawal of rank and privileges of deputy surgeons-general hitherto conferred on officers of the Indian Medical Service holding the appointments of Sanitary Commissioners, the Government have sanctioned, as compensation to the Indian Medical Service, an annual grant of four extra pensions of £100 *per annum* each to senior officers of the department, in proportion of two for Bengal, and one each for Madras and Bombay services. These extra pensions will be offered yearly in rotation to surgeons-general, deputy surgeons-general, and all brigade-surgeons; but under no circumstances will an extra pension be given to a surgeon-general or a deputy surgeon-general until he has completed three years' actual service in the grade, excluding all leave except privilege-leave, and then only when, from failing health or other unforeseen causes, he may be unable to complete his full service. Should the full number of pensions not be accepted in any one official year, the balance will lapse, and will not be offered during the following year. Applications for the above pensions should be submitted to the surgeons-general with Governments of India, Madras, or Bombay respectively, on or before September 1st for the current year, and on April 1st for each succeeding year.

THE Government of India has, we hear, decided that, in all provinces for which a separate Sanitary Commissioner is sanctioned, the sanitary department will remain distinct from, and not subordinate to, the medical department. In the selection for such posts, the knowledge and experience of the sanitary officer will be specially considered.

MEDICO-LEGAL AND MEDICO-ETHICAL.

QUALIFIED ASSISTANTS AND HOLIDAYS.

SIR,—As an acknowledged authority on medico-ethical matters, might I ask your advice in the circumstances below referred to.

I am a qualified out-door assistant to a medical man here, and am at present in sole charge of the practice. My principal has gone away for an indefinite period. I have signed the usual bond "not to set up, etc., nor absent myself without leave," etc. In the document just mentioned, no reference is made to the "customary annual holiday health trip," and, therefore, I should like you to say if, in your opinion, I am entitled to claim such a holiday as a matter of right; and, if it is so, what length of absence could I reasonably claim?—Believe me, faithfully yours,

A YOUNG SUBSCRIBER.

*** Under the circumstances stated in our correspondent's letter, we do not understand that he has any "claim as a matter of right" on his principal for any holiday. He has voluntarily entered into a compact not to absent himself from his employer's service without leave, and, therefore, has put himself out of court altogether. If he need a holiday now, and it be not conceded to him as a matter of good feeling, he can only get one by engaging and paying for the services of a *locum tenens*, and even that would be a breach of his contract. The next time he accepts a similar appointment, he will probably be more careful as to the stipulations he makes.

SWANSEA PROVIDENT DISPENSARY.

M.R.C.S. (SWANSEA).—The handbill in question purports to be the advertisement of an institution open only to those unable to pay ordinary medical fees, and if care be taken that this condition is insisted on, and the facts as to the means of members carefully examined and verified, a principal objection to such institutions is avoided. The publication of the names of the medical gentlemen connected with it, on the same bill, with exceedingly low terms of membership, and special quoted terms for "attendance in confinements," and "vaccination," is, however, clearly irregular. Members, if sought at all in this manner, should be attracted by the principles of the institution, and the names of the medical officers should not be paraded for the purpose of inducing persons to join. Such a course would be at once condemned if pursued by an individual practitioner, and it is obvious that connection with a semi-public institution does not justify a breach of a wholesome and honourable understanding as to advertising and publishing special or any rates of fees.

NEW PRACTICE.

M.B.—Our correspondent's definition of "new practice," namely, "that it meant those patients obtained by the newcomer whose names were not originally upon the books," is, to our mind, a fair and just interpretation, and should, in our opinion, have been the guiding principle in the case in question.

In regard to "the length of notice that M.B. is legally bound to give" his principal, we are of opinion that, in the absence of any written or mutually understood agreement, such should be determined by the monthly payment of salary.

In any future professional arrangement with a medical practitioner, with the view to partnership, "M.B." will do well to have every essential detail clearly defined, and expressed in a written and stamped agreement; and, as a professional safeguard, to submit the draft thereof to a medical friend practically conversant with such matters, and, subsequently, for legal security, to his solicitor.

THE ETHICS OF EMERGENCY.

WE notice a material discrepancy in the respective statements (as furnished to us in copy) of Mrs. G. and Mr. H., from which it may be inferred that the allegation against the latter has been unduly magnified. It is, we believe, clearly understood that it is the plain duty of any and every practitioner, a duty emphasised, moreover, by the dictates of humanity, that, in the absence of the family medical attendant, every effort should be made by the practitioner present, or at hand, to alleviate, as far as may be, the sufferings of a sick or injured person in cases of emergency.

LOCUM TENENS AND MIDWIFERY CASES.

SIR,—In consequence of a long illness of my brother's, I was called to take charge of his practice, which is a large one in the town of W. Summoned one evening to a labour case, I found a shoulder presenting. Taking everything into consideration, I thought it advisable to send for a friend to give chloroform before turning. Unfortunately, he was not at home, and the husband fetched Dr. —, a well known enemy of my brother. Ignoring my presence and request, he at once proceeded to turn. This he accomplished after much difficulty, and the child, though born alive, did not survive five minutes. On my persisting that I would have nothing to do with the case, he said I was acting most unprofessionally, and that I was a young man who did not know any better. Requesting him not to quarrel there, I withdrew, thinking it the only dignified course left me. Kindly inform me if I acted rightly.—I am, etc.,

L. S. A.

*** L. S. A. should, we think, have communicated with the gentleman for whom he was acting, and ascertained his wishes, and those of the patient or her family.

NOTIFICATIONS BY PRACTITIONERS IN NEWSPAPERS.

SIR,—I have a number of patients who come to consult me from a considerable distance. Would it be contrary to medical etiquette to notify my intended absence from home during the month of August, in one or two newspapers which they are likely to read? I may add that this is done by many Irish medical men to save their patients loss of time and expense.—I am, sir, yours faithfully,

F.R.C.P.E.

*** The practice in question is evidently objectionable. If notice of going away may be given by advertisement, then also notice of coming back, and then of residence and hours of attendance, or of change. All such advertisin is obviously out of professional order.

C. J. K. P.—There must, we should think, have been some misunderstanding There can be no doubt of the right of a patient to change his or her medical attendant at the close of an illness, and, under the circumstances stated, there could be no right of interference.

IN reference to a communication we have received from Mr. Ashenden, of Hastings, we should doubt if he could be made liable for the claim to which he refers; but, as in these cases everything turns on the exact language of the correspondence between the parties, and which is not before us, we refrain from expressing a more decided opinion.

WE cannot see what "Inquirer" has to complain of. He is house-surgeon to a hospital, and is remunerated for what he calls the trouble of looking after the patients, either by his salary (if his office is a paid one), or by the experience he thereby acquires, and this is the contract which he made with the authorities of the hospital when he accepted the appointment. The police-surgeon is summoned by the magistrates, who seem to have found that he was able to give evidence which would satisfy the ends of justice, and he is paid for his loss of time by the usual fees. It is a matter entirely for the discretion of the magistrates what medical man they choose to summon, or to listen to when summoned, and one with which neither "Inquirer" nor the editor of the BRITISH MEDICAL JOURNAL can interfere.

A YOUNG MEMBER (Ireland) will do better not to intervene to attack a professional brother on a matter in which he cannot know all the facts, but may easily be misled by hearsay evidence. If he take heed to his own ways, he will fulfil the highest duty to himself and his neighbours. The part of public prosecutor is no part of his duties, and it would ill become him to stir up ill-feeling and strife.

NAVAL AND MILITARY MEDICAL SERVICES.

The tenure of office of Surgeon-Major Evatt, as Medical Officer of the Royal Military Academy, Woolwich, will expire on July 23rd, 1886, and Surgeon-Major Maxham has been nominated as Dr. Evatt's successor. Under existing arrangements, it is understood that Dr. Evatt will embark for foreign service in India in September next.

THE RANK OF VOLUNTEER SURGEONS.

SIR,—1. I think that when a Volunteer surgeon-major retires, after twenty years' service, he should be granted the honorary rank of brigade-surgeon. It would be a just boon to an officer who has so long served the State.

2. I also think if a medical officer joins the Volunteers, it should be as "acting surgeon," until he passes an elementary examination in military ambulance, and such-like duties. This examination passed, he should then be made "surgeon."

3. I think, also, that there should be a regular examination for "surgeon-major" of Volunteers. If such an examination were established, officers passing it should be made surgeon-major after twelve years' service, as in the Army.

Finally, could not the Volunteer surgeons be relieved of the unserviceable cocked-hat, so useless as a head-dress? It forms now no part of the dress of the Executive Army medical officers, and it might well be abolished for Volunteers.

Yours, PHILO-VOLUNTEER.

THE ARMY MEDICAL DEPARTMENT ANNUAL DINNER.

SIR,—In the absence of any medical corps journal, may I make the following suggestion in your columns.

I propose that, on the day of the annual dinner of the Army Medical Department, some gifted speaker, like Sir Thomas Longmore, should, in the afternoon, give as a lecture a summary of the events of the preceding year, noticing the Army Medical Services' doings during the year, and taking note of the special services or deaths of our brother officers. Such an oration would be an annual commemoration, and would attract certain of us together, and if the lecture was printed, it would be a record of the history of the department for the year. For example, this year, 1886, the speaker could have summarised the Egyptian campaign of the Nile and Suakin; the death of Lewis, the gallant death of Heath, in Burmah; the sad death of the gentle Turner; the loss of Conolly; the death-wound of Lane, in the Square at Hasheen; all these afford scope for very interesting treatment.

Such an oration, occupying but a short time in the afternoon on the dinner day, would be a kind of landmark for the department; and, although few attended to hear it, it could be put into a printed form and so circulated.—Yours, etc., COMMEMORATOR.

THE VOLUNTEER MEDICAL SERVICE.

THERE has been recently raised a considerable interest in the development of the medical department of the Volunteer army. Much has been done in London and in other populous centres; even in country parts, the movement has attained large proportions. An instance of this occurred at Redcar on Saturday last, when the 2nd Volunteer Battalion of the Yorkshire Regiment was inspected after a week under canvas. This battalion, which is 600 strong, is largely recruited from the rural districts, although the headquarters are stationed at Scarborough. The medical department consists of 3 surgeons and 41 non-commissioned officers and men, most of whom wear on their right arm the red cross brassard, received after examination. The surgeon in command is Dr. J. W. Taylor, of Scarborough, to whose great zeal and energy this detachment owes its extraordinary development and efficiency. To make it up to the full strength of a bearer company, twenty more recruits are required, and these are waiting to be enrolled so soon as permission can be obtained. So far as we know, this is the first bearer-company which has as yet been formed in the North of England. It is unique, inasmuch as it is formed out of the regimental bearers by permission of the colonel of the regiment.

It is a matter of regret that it has not received recognition as yet by the War Office. At one of the recent inspections, for example, the bearer-company marched past in rear of the battalion, and afterwards took part in what is known as "the attack." By a previous arrangement, several men fell out during the march over [illegible] received in action. Considerable consternation was at first created among the crowd of onlookers by this realistic representation of the actual war and its consequences. A large number of persons assembled near the collecting station to which "the wounded" were carried, and great interest was displayed during the unloading of the stretchers. Colonel Barret, the inspecting officer, also rode up to this point and watched this operation, after which he questioned the bearers as to their duties, and complimented several of the non-commissioned officers upon their knowledge and ability. He afterwards inspected the whole bearer company, which went through the stretcher drill and other movements in response to his request. He also presented certificates of proficiency to those bearers who had passed the examination since last inspection. The company possesses the usual equipment of stretchers, water bottles, [illegible], haversacks, field companions, signalling flags, etc. We commend the [illegible] efficiency to Volunteer surgeons beyond the borders of North Yorkshire.

THE NAVY.

THE following appointments have been made at the Admiralty during the past week: T. M. [illegible], Surgeon, to the *Duke of Wellington*; CHARLES HARRISON, Surgeon and Agent, to Castletown, Berehaven; THOMAS DESLOE, M.D., Surgeon, to the [illegible]; E. C. WARD, M.D., Surgeon, to the *Alecto*; JEROME BARRY, M.D., Surgeon, to the [illegible]; H. W. D. WALSH, Surgeon, to the Bermuda Hospital; M. J. M'CARTHY, Surgeon, to Ha[illegible]; Koog Hospital; SAMUEL KEAYS, Surgeon, to Plymouth Hospital; W. C. SMITH, Surgeon, to the [illegible].

MEDICAL STAFF.

SURGEON-MAJOR E. A. FERRIS (Assistant-Surgeon, October 14th, 1868; Surgeon, March 1st, 1880; Surgeon-Major, June 14th, 1873), has retired on temporary half-pay. Dr. Ferris served in the Ashantee War of 1873-74. He was Sanitary Officer from December 17th, 1873. He volunteered and was present at the capture and destruction of Adubiassie, the capture of Borbarassie, the battle of Amoaful, the advanced guard engagements of February 2nd and 3rd, the battle of Ordashu and the capture of Coomassie (several times mentioned in despatches; medal with clasp). He was also engaged in the operations in the Malay Peninsula in 1875-76, and with the South ern Afghanistan Field Force in 1878-79.

Brigade-Surgeons W. TEMPLE, M.B., V.C., and J. A. SCOTT, have been appointed Honorary Surgeons to the Governor-General of India.

The under-mentioned Surgeons, serving in the Madras Command, have been directed to do duty with the Burmah Field Force at Mandalay: D. R. HAMILTON, M.B., doing duty at the Station Hospital, Madras; W. H. BEAN, doing duty at the Station Hospital, Madras; W. H. BEAN, doing duty at the Station Hospital, Bangalore; S. L. DEEBLE, doing duty at the Station Hospital, Secunderabad; P. C. H. GORDON, doing duty at the Station Hospital, Belgaum.

THE INDIAN MEDICAL SERVICE.

THE services of Surgeon J. F. MACLAREN, Bengal Establishment, are placed temporarily at the disposal of the Government of the North West Provinces and Oude.

The services of Surgeon-Major H. E. BUSTEED, M.D., Madras Establishment, having been replaced at the disposal of the Government of Madras, in view to his retirement from the public service, and Surgeon-Major J. SCULLY, of the Bengal Establishment, having been appointed as Assay Master, Calcutta Mint, Surgeon-Major Busteed made over, and Surgeon-Major Scully received charge of, that appointment on May 28th.

Surgeon-Major T. C. H. SPENCER, Madras Establishment, is appointed Civil Surgeon of Cochin, *vice* Brigade-Surgeon W. H. MORGAN.

Surgeon J. SMYTH, M.D., Madras Establishment, is appointed Civil-Surgeon and Superintendent of the Gaol, Vizagapatam.

Surgeon C. M. THOMPSON, M.B., Madras Establishment, Secretary to the Surgeon-General with the Government of Madras, is allowed special leave for six months on urgent private affairs.

Surgeon M. J. KELAWALA, Madras Establishment, on relief at Secunderabad, is ordered to do duty with the Burmah Field force at Mandalay.

Surgeon H. A. EBDEN, M.D., late of the Bengal Medical Establishment H.E.I.C.S., died on June 14th, at Haughley, Rondebosch, near Cape Town, aged 82. Dr. Ebden's commission bore date October 17th, 1861.

Surgeon W. HATCHELL, 3rd Battalion Connaught Rangers (late the South Mayo Militia), has been granted the honorary rank of Surgeon-Major.

Surgeon and Honorary Surgeon-Major C. B. MOODY, of the 1st Volunteer Battalion of the Lincolnshire Regiment (formerly the 1st Lincoln Volunteers), has resigned his appointment, with permission to retain his rank and uniform. His commission dates from March 18th, 1869.

Acting-Surgeon J. H. JENKINS, of the 2nd Volunteer Battalion of the Duke of Cornwall's Light Infantry (late the 2nd Cornwall Volunteers), has resigned his appointment, which he joined June 14th, 1884.

Mr. JAMES TURTON is appointed Acting Surgeon to the 1st Sussex Rifle Volunteers.

HOSPITAL AND DISPENSARY MANAGEMENT.

SUSSEX COUNTY LUNATIC ASYLUM, HAYWARD'S HEATH.

THE asylum was so full towards the end of 1885, that the committee were compelled to give notice to the non-contributing borough of Hastings to remove its patients, 49 in number. During 1885, 39 other vacancies were made by the transfer of chronic harmless cases to workhouses, or to the care of relatives. Dr. Williams's words on the removal of chronic lunatics to workhouses deserve to be quoted on account of their practical value, especially at the present time, when, through the operation of the four-shilling grant, and other causes, many asylums are full to overflowing. He says, "There is no doubt that, had more of the workhouse imbecile wards been properly fitted up and arranged for such cases, many such chronic lunatics now filling up the beds in the asylum, to the exclusion of more urgent cases, might be moved to the workhouses. The medical superintendent has frequently urged the attention of the union authorities to this question, and ventures again to do so, as he is convinced, from large experience, that it is the simplest and least expensive way of dealing with the yearly increase in the number of lunatics. Carried out to the limited extent to which it has been, it has so far saved the county the expense of the erection of a second asylum, and might continue to do so, if the various unions, *pro ratâ*, made accommodation in their various houses for a certain number of chronic lunatics. The great success that has attended the experiment in Brighton, where there are as many as 150 imbeciles accommodated in the workhouse, shows how feasible the scheme is."

The average numbers resident during 1885 were 359 males and 480 females, total 839. Of the 210 admissions, 15 were private patients, and "many more could have been admitted had there been available space, as application is being constantly made for the reception of such cases." This is an additional reason, and one that appeals to the tenderest point of the ratepayer (his pocket), for the removal of chronic cases to workhouses, so as to make more room for paying patients. The recovery-rate, calculated on the admissions, was 34.3 per cent.; the death-rate was 8.58 per cent. of the average number

resident. In 41 out of the 72 deaths, *post mortem* examinations were made; perhaps in future it will be found possible to increase the proportion.

It is melancholy to find that, out of the 850 patients in the asylum, only 16 males and 49 females had the slightest prospect of recovery. Dr. Williams reports that changes are still frequent amongst the attendants and nurses, "though wages, leave of absence, accommodation, and privileges generally, are all greater than formerly;" he regards this as largely due to the duties being much more arduous than formerly, owing to the large increase in the number of violent and dangerous patients. He has prepared a pamphlet, containing plain hints on the management of the insane, a copy of which is supplied to each attendant and nurse. Might not this, with advantage, be supplemented by a course of lectures by one of the medical officers?

The statistical tables are the most complete, and free from error, that have come under our notice for a considerable time. That correctness should be the exception, is surely not creditable.

OBITUARY.

GEORGE OGILVIE-FORBES, M.D.

Dr. Ogilvie, or, as he was more familiarly known to the past generation of students at the University of Aberdeen, Dr. Ogilvie-Forbes, died at his residence, Boyndlie, near Fraserburg, on June 25th, aged 66. Professor Ogilvie-Forbes was formerly Lecturer on Physiology in Aberdeen, and at the fusion of the colleges in 1860, he was appointed Professor of the Institutes of Medicine, an office which he held until he retired, through ill-health, in 1877, when he was succeeded by Professor Stirling (who has recently been appointed to a similar chair in Owens College, Manchester). Dr. Forbes has been in failing health for some time, and, although he attended the meeting of the British Association, in Aberdeen, in 1885, it was only too apparent to his friends that his health was very unsatisfactory. It continued so in spite of a visit to the more genial clime of the sunny South of France. Dr. Forbes was secretary to the Medical Faculty for a considerable number of years, and took an active part in connection with University affairs, after the fusion of the colleges in Aberdeen. His lectures showed the bent of his mind, which ever tended to take a wide view of the principles of physiology, as manifested in the whole organic kingdom. He published *The Master Builders*, and *The Genetic Cycle*, while he had a strong leaning to zoological pursuits. After his retirement from his chair, he resided on his estate, and lived the life of a county gentleman, taking an active part in the business of his county. He was highly esteemed as a neighbour, while his unassuming manner made him a favourite with all who knew him. His mind had a strongly religious bias, and, in all his work and life, he bore the character of a Christian gentleman "nearing the white flower of a blameless life." His death will be regretted by many generations of students of medicine of Aberdeen.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

MR. SIMPSON AND THE BIRMINGHAM GUARDIANS.

Sir,—I am requested to inform you that, at a Council meeting of the Poor-Law Medical Officers' Association, held on Thursday, July 1st, it was resolved that a memorial should be forwarded to the Local Government Board, asking for a reconsideration of Mr. A. B. Simpson's case, in reference to the late Poor-law inquiry held at the Birmingham Workhouse, when Mr. Simpson was called upon to resign, through offending certain of the guardians, by not obeying a verbal order conveyed to him by the Chairman of the Visiting Committee, which practice, if carried out, the Council considers, would lead to confusion and disaster.—I am, yours truly,

J. Wickham Barnes, Honorary Secretary.

3, Bolt Court, Fleet Street.

IRREGULAR AND ILLEGAL APPOINTMENT.

Sir,—The letter of "Clerk to Guardians," in the Journal of July 3rd, p. 32, goes to prove that, though the letter of the law was adhered to, the spirit of the law was clearly evaded in the above.

It does not justify, however, the insufficient notice, and the hurried way in which the appointment was made, the more marked, as a similar vacancy, a few weeks before, had been advertised in the usual way.

The misrepresentations by which the *ex-officio* guardian carried his point, led to the comment by one of the guardians, not present, that it was "a very smart trick," and it was remarked that "the appointment was obtained under false pretences," with the commentary that "when a man obtains goods under false pretences, he stands a chance of imprisonment; but when he obtains an appointment for a friend in this way, he does so with impunity."—I am, etc.,

Your Correspondent.

HEALTH OF ENGLISH TOWNS.

In the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 6,132 births and 2,957 deaths were registered during the week ending Saturday, June 26th. The annual rate of mortality, which had been 17.4 and 16.8 per 1,000 in the two preceding weeks, rose again during the week under notice to 17.0. The rates in the several towns, ranged in order from the lowest, were as follow:—Cardiff, 12.4; Brighton, 12.6; Sheffield, 12.9; Norwich, 13.6; Leicester, 13.8; Bristol, 14.4; Hull, 14.4; London, 15.4; Birmingham, 16.1; Sunderland, 16.0; Bradford, 16.6; Derby, 17.6; Plymouth, 17.7; Liverpool, 18.0; Nottingham, 18.7; Leeds, 19.1; Birkenhead, 19.7; Huddersfield, 20.0; Wolverhampton, 20.2; Manchester 20.5; Blackburn, 20.5; Oldham, 20.8; Newcastle-upon-Tyne, 20.9; Halifax, 22.7; Portsmouth, 23.7; Salford, 24.5; Bolton, 24.9; and the highest rate during the week, 37.1 in Preston. In the twenty-seven provincial towns, the death-rate averaged 18.3 per 1,000, and exceeded by 2.9 the rate recorded in London, which, as before stated, did not exceed 15.4 per 1,000. The 2,957 deaths registered in the twenty-eight towns during the week under notice included 96 which were referred to measles, 83 to diarrhœa, 56 to whooping-cough, 32 to "fever" (principally enteric), 24 to scarlet fever, 21 to diphtheria, and not 1 to small-pox; in all, 312 deaths resulted from these principal zymotic diseases, against 265 and 293 in the two preceding weeks. The zymotic death-rate was equal to 1.8 per 1,000. In London the zymotic rate was 1.8, and corresponded with the mean rate in the twenty-seven provincial towns, among which it ranged from 0.0 in Halifax, and 0.5 in Leeds and in Cardiff, to 4.7 in Bolton, 5.0 in Portsmouth, and 9.8 in Preston. The fatal cases of measles, which had been 89 in each of the two preceding weeks, rose during the week to 96, and caused the highest death-rates in Portsmouth, Bolton, and Preston. The 83 deaths referred to diarrhœal diseases, showed a further marked increase upon recent weekly numbers; these diseases were proportionally most fatal in Derby and Salford. The fatal cases of whooping-cough, which had been 60 in each of the two previous weeks, declined during the week under notice to 56, and caused the highest death-rates in Manchester and Preston. The 32 deaths from fever showed a slight further increase upon the numbers returned in the three previous weeks; this disease was proportionally most fatal in Portsmouth. The fatal cases of scarlet fever, which had been 23 and 35 in the two preceding weeks, declined during the week under notice to 24, of which 7 occurred in London, and 3 in Salford. The 21 deaths referred to diphtheria corresponded with the number in the previous week, and included 14 in London, 2 in Birmingham, and 2 in Wolverhampton. No fatal case of small-pox occurred during the week under notice, either in London, or in any of the twenty-seven provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 29 and 21 at the end of the two preceding weeks, had further declined to 12 on Saturday, June 26th; 1 new case was admitted to these hospitals during the week, against 9 and 2 in the two preceding weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.4 per 1,000, and was below the average. The causes of 73, or 2.5 per cent. of the 2,957 deaths registered during the week in the twenty-eight towns, were not certified, either by registered medical practitioners or by coroners.

During the week ending Saturday, July 3rd, 5,609 births and 3,064 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had been 16.8 and 17.0 per 1,000 in the two preceding weeks, further rose during the week under notice to 17.6. The rates in the several towns, ranged in order from the lowest, were as follow:—Salford, 13.3; Derby, 14.2; Sunderland, 14.7; Leicester, 15.7; Brighton, 15.7; London, 15.8; Birmingham, 15.9; Sheffield, 16.8; Birkenhead, 17.0; Bristol, 17.2; Huddersfield, 17.7; Bradford, 17.8; Liverpool, 18.2; Hull, 18.3; Nottingham, 18.7; Leeds, 19.4; Wolverhampton, 20.2; Bolton, 20.2; Norwich, 20.4; Portsmouth, 20.7; Cardiff, 20.7; Oldham, 20.8; Newcastle-upon-Tyne, 21.9; Blackburn, 22.7; Halifax, 23.3; Plymouth, 25.9; Manchester, 26.9; and the highest rate during the week, 30.4 in Preston. The death-rate in the twenty-seven provincial towns averaged 19.1 per 1,000, and exceeded by 3.3 the rate recorded in London, which, as before stated, was only 15.8 per 1,000. The 3,064 deaths registered in the twenty-eight towns during the week under notice included 333 which were referred to the principal zymotic diseases, against numbers increasing from 263 to 312 in the three preceding weeks; of these, 115 resulted from measles, 86 from diarrhœa, 67 from whooping-cough, 30 from "fever" (principally enteric), 20 from scarlet fever, 15 from diphtheria, and not one from small-pox. These 333 deaths were equal to an annual rate of 1.9 per 1,000. The zymotic death-rate in London during the week under notice was equal to 1.8, while it averaged 2.0 per 1,000, in the twenty-seven provincial towns, and ranged from 0.0 in Wolverhampton, in Derby, and in Sunderland, to 5.2 in Bolton, 5.7 in Portsmouth, and 9.3 in Preston. The deaths referred to measles, which had been 89 and 96 in the two preceding weeks, further rose to 115 during the week, and showed the largest proportional fatality in Portsmouth, Bolton, and Preston. The fatal cases of diarrhœa, which in the six previous weeks had steadily increased from 27 to 83, further rose to 86, and caused the highest death-rates in Leeds and Blackburn. The deaths referred to whooping-cough, which had been 60 and 56 in the two preceding weeks, rose again during the week under notice to 67, and showed the highest proportional fatality in Manchester and Salford. The 32 fatal cases of "fever" were within 2 of the number in the previous week; this disease caused the highest death-rates in Portsmouth and Birkenhead. The deaths referred to scarlet fever, which had been 35 and 24 in the two preceding weeks, further declined during the week under notice to 20. The 15 fatal cases of diphtheria showed a decline of 5 from the number in the preceding week, and included 9 in London, 3 in Liverpool, and 2 in Nottingham. No death from small-pox was registered during the week under notice, either in London, or in any of the twenty-seven large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 29, 21, and 12 at the end of the three preceding weeks, had further declined to 10 on Saturday, July 3rd; 2 new cases were admitted to these hospitals during the week, against 9, 2, and 1 in the three previous weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.5 per 1,000,

and was slightly below the average. The causes of 68, or 2.2 per cent. of the 3,064 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, June 26th, 955 births and 498 deaths were registered in the eight principal Scotch towns, having an estimated population of 1,283,977 persons. The annual rate of mortality, which had been 20.9 and 21.7 per 1,000 in the two preceding weeks, declined again to 20.2 during the week under notice, but exceeded by 3.2 per 1,000 the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 12.5 in Greenock, 16.4 in Perth, 17.4 in Dundee, 18.2 in Paisley, 19.0 in Aberdeen, 20.0 in Leith, 20.8 in Edinburgh, and 22.5 in Glasgow. The 498 deaths registered during the week under notice in these towns included 65 which were referred to the principal zymotic diseases, against 49 and 56 in the two preceding weeks; of these, 21 resulted from whooping-cough, 20 from measles, 11 from diarrhœa, 7 from scarlet fever, 6 from "fever," and not one either from small-pox or diphtheria. These 65 deaths were equal to an annual rate of 2.6 per 1,000, which exceeded the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Glasgow, Edinburgh, and Leith. The fatal cases of whooping-cough, which had declined from 21 to 18 in the three preceding weeks, rose again to 21, of which 16 occurred in Glasgow, 3 in Aberdeen, and 2 in Edinburgh. The deaths referred to measles, which had been 10 and 17 in the two previous weeks, further rose during the week under notice to 20, and included 11 in Edinburgh, 6 in Leith, and 3 in Glasgow. The 11 fatal cases of diarrhœa exceeded the numbers in recent weeks. The deaths from scarlet fever, which had been 6 and 8 in the two previous weeks, were 7 during the week under notice, of which 6 occurred in Glasgow. The 6 fatal cases of fever showed a slight further increase upon the recent weekly numbers, and included 5 in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 3.6 per 1,000, against 2.4 in London. The causes of 82, or 16.0 per cent., of the 498 deaths registered during the week in these Scotch towns were uncertified.

In the eight principal Scotch towns, having an estimated population of 1,283,977 persons, 897 births and 514 deaths were registered during the week ending Saturday, July 3rd. The annual rate of mortality, which had been 21.7 and 20.2 per 1,000 in the two preceding weeks, rose again during the week under notice to 20.8, and exceeded by 3.2 per 1,000 the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 11.7 in Aberdeen, 13.1 in Dundee, 18.1 in Greenock, 19.6 in Edinburgh, 23.0 in Perth, 24.1 in Glasgow, 25.9 in Leith, and 31.2 in Paisley. The 514 deaths registered during the week in these Scotch towns included 16 which were referred to diarrhœa, 15 to measles, 10 to scarlet fever, 10 to whooping-cough, 4 to diphtheria, 4 to "fever," and not one to small-pox; in all, 59 deaths resulted from these principal zymotic diseases, against 56 and 65 in the two preceding weeks. These 59 deaths were equal to an annual rate of 2.0 per 1,000, which slightly exceeded the average zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Aberdeen, Glasgow, and Leith. The 16 deaths referred to diarrhœal diseases showed a further increase upon recent weekly numbers, and included 7 in Glasgow, and 4 in Edinburgh. The fatal cases of measles, which had risen from 10 to 20 in the three preceding weeks, declined during the week under notice to 15, of which 6 occurred in Leith, and 5 in Edinburgh. The 10 deaths from scarlet fever exceeded by three the number returned in the previous week, and included 9 in Glasgow. The fatal cases of whooping-cough, which had been 18 and 21 in the two preceding weeks, declined to 10, of which 8 were recorded in Glasgow. The 4 deaths referred to diphtheria included 2 in Glasgow. The 4 fatal cases of fever showed a decline of 2 from the number in the preceding week. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 3.3 per 1,000, against 2.5 in London. The causes of 72, or as many as 14.0 per cent., of the 514 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

In the week ending June 19th, the number of deaths registered in the sixteen principal town districts of Ireland, was 363. The average annual death-rate represented by the deaths registered was 21.9 per 1,000. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 10.3; Belfast, 23.5; Cork, 20.8; Drogheda, 33.8; Dublin, 21.3; Dundalk, 17.5; Galway, 13.4; Kilkenny, 4.2; Limerick, 25.6; Lisburn, 24.2; Londonderry, 24.2; Lurgan, 30.8; Newry, 17.6; Sligo, 4.8; Waterford, 23.2; Wexford, 38.5. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1.2 per 1,000, the rates varying from 0.0 in nine of the districts, to 4.8 in Lisburn; the 5 deaths from all causes registered in that district comprising 1 from enteric fever. The 100 deaths from all causes, registered in Belfast, comprised 6 from diarrhœa, but none from any other of the principal zymotic diseases. Two of the 10 deaths registered in Waterford were caused by diarrhœa. In the Dublin Registration District, the deaths registered during the week amounted to 155. Twelve deaths from zymotic diseases were registered in Dublin; they comprised 1 from scarlet fever, 2 from typhus, 1 from whooping-cough, 2 from cerebro-spinal fever, 2 from diarrhœa, etc. Twenty-seven deaths from diseases of the respiratory system were registered; they comprised 11 from bronchitis, 6 from pneumonia, and 2 from croup. The deaths of 12 children under 5 years of age (including 8 infants under 1 year old) were ascribed to convulsions. Four deaths were caused by apoplexy, 1 by epilepsy, 7 by other diseases of the brain and nervous system (exclusive of convulsions), and 8 by diseases of the circulatory system. Phthisis caused 25 deaths, mesenteric disease, 6; and cancer, 5. Seven deaths from accidents or negligence, 1 homicide, and 1 suicide, were registered. In fourteen instances, the cause of death was "uncertified," there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

It appears from the statistics published in the Registrar-General's return for the week ending June 12th, that the annual death-rate recently averaged 25.4 per 1,000 in the chief European towns; it was 27.8 in Bombay, and 33.7 in Madras. Measles caused 1 death in Bombay and 12 in Madras, and small-pox one death in each city; "fever" showed the greatest mortality in Madras. According to the most recently received weekly returns, the annual death-rate averaged 27.6 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded by no less than 10.2 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 35.6, and somewhat exceeded the rate in the previous week; the 631 deaths included 67 from diarrhœal diseases, 37 from measles, and 34 from scarlet fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 18.9, the rates ranging from 18.3 in Christiania to 19.2 in Stockholm; diphtheria and croup caused 5 deaths in Copenhagen and 4 in Christiania. In Paris, the death-rate was equal to 23.7, showing a considerable further decline from the rates in recent weeks, although it exceeded by 7.6 the rate that prevailed during the same week in London; the deaths included 27 from measles, 22 from diphtheria and croup, 14 from typhoid fever, and 6 from small-pox. The 145 deaths in Brussels, of which 4 resulted from diphtheria and croup, gave a rate of 17.3. The rate in Geneva was 25.9, and the deaths included 3 fatal cases of whooping-cough. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 22.0, the highest rate being 23.1 in Amsterdam; measles caused 6 deaths in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 30.5, and ranged from 25.1 in Berlin and 26.1 in Dresden, to 37.2 and 44.7 in Buda-Pesth and Breslau. Small-pox caused 17 deaths in Buda-Pesth, 4 in Prague, and 3 in Vienna; diphtheria and "fever" showed the largest mortality in Buda-Pesth, and diarrhœal diseases were exceedingly fatal in Breslau and Munich. The death-rate was equal to 23.7 in Turin, and 37.5 in Venice; the 105 deaths in Venice included 23 from cholera and 3 from enteric fever. In Alexandria the death-rate was 49.2, and in Cairo 47.2; the 218 deaths in Alexandria included 46 from diarrhœal diseases and 12 from measles; in Cairo, of the 268 deaths, 117 resulted from diarrhœal diseases, 18 from typhoid fever, and 2 from small-pox. In four of the largest American cities, the mean recorded death-rate was but 21.6, the rates ranging from 19.8 in Baltimore, to 24.0 in New York. Diphtheria showed fatal prevalence in New York, Brooklyn, and Philadelphia; and 10 deaths from typhoid fever were also reported in the last mentioned city.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Doncaster Combined District.—The districts under the charge of Dr. Mitchell Wilson present a wide field for useful labour, and the reports for 1884 certainly go to show that systematic sanitary work has made favourable progress in it. Dr. Wilson gives the general and zymotic death-rates for each district, those for Goole being highest, at 20.0 and 4.2 per 1,000 respectively. This is mainly accounted for by the prevalence of diarrhœa and measles in this town, at least half the deaths from zymotic diseases being attributable to the first-named cause. There was also an epidemic of measles in Selby, and Dr. Wilson uses the occasion to inveigh against the thoughtlessness of mothers, in too early exposing their children after an attack. The danger to others of infection, and to the children themselves of lung-affections, is incalculable; and Dr. Wilson thinks that an enormous amount of suffering might be prevented by a more reasonable treatment during convalescence. Enteric fever was present in most of the districts; and, in the outbreak at Allerton, the polluted state of the river had a distinct connection with the cases of fever. A case of diphtheria, imported into Kippax, was the origin of a widespread epidemic, which was fostered by the unsanitary conditions of the town. Dr. Wilson again advocates the provision of a hospital for the treatment of infectious diseases, urging the benefits that would accrue from isolation and more efficient nursing. The water-supply of the districts demanded a large share of attention. The excessive drought of the summer and autumn added considerably to the difficulties in this respect, but the impure condition of the water in some of the wells was the main factor in the increased work of the sanitary department. In the Selby and Goole rural districts, much of the drinking-water was seriously contaminated; out of twenty samples presented for analysis, seventeen were reported as absolutely unsafe and dangerous. Dr. Wilson has been unremitting in his endeavours to remedy the evils; and the number of wells cleansed and deepened, and new ones constructed on sanitary principles, promise well for the future health of the inhabitants.

Calcutta.—Naturally, the chief interest in the sanitary reports of the metropolis of India is the mortality from cholera. To some extent, the investigation of the phenomena of this disease, as manifested at Calcutta, has been disturbed by the frequent changes of health-officer which appear to be inevitable in all Indian appointments. Dr. J. O'Brien, who had charge of the Calcutta Health Department during the greater part of 1884 and 1885, seems, however, to have done his utmost to make the best use possible of all the available facts about the occurrences of cholera in the city. The general death-rate of 1884 corresponded very closely with the decennial average—that is, 30.5 per 1,000, against 30.4; and this, notwithstanding a severe epidemic of cholera during the months of March, April, and May. Small-pox also prevailed to an unusual extent, and swelled the total of the year by 478 deaths, against 73 in the preceding year. The high mortality was confined to the first two quarters of the year, and was counterbalanced by the saving of life under the head of fevers and bowel complaints, as compared with other years. Dr. O'Brien found that the general climatic conditions favourable to cholera tended to diminish the prevalence of other diseases. The remarkable effect of

season on mortality, and the purifying influence which falling rain exerts, can be gathered from the following comparison. In March, April, and May—hot weather months—4,433 people died; in the three rainy months that succeeded them, there were but little more than half that number of deaths. In the corresponding months of the year 1885, a similar state of things prevailed; but there was a satisfactory decrease in the mortality, even of the most fatal months. The history of cholera in Calcutta for a series of years demonstrates the fact, that a few heavy falls of rain in April and May cause a rapid and certain diminution in mortality. The actual quantity of rain in the season does not appear to make much difference. The essential point is, that there should be continuous downpour. In a table showing the mortality from small-pox for fifty-two years, Dr. O'Brien shows that it breaks out, more or less severely, every four or five years. There was a serious outbreak in 1878; so that of 1883 and 1884 was not unexpected, and preventive measures were vigorously resorted to. It is satisfactory to note that the disease did not attain anything like the proportions of previous epidemics; and, up to September, 1885, there was a gradual decline in the mortality. It was found that 74 per cent. of the deaths were those of unvaccinated emigrants, who had dwelt in the town for less than a year. The total number of vaccine operations performed in 1884 was almost double the average of the four preceding years; but no efficient means have at present been devised for securing the protection of the temporary residents who throng the city. The drainage has still to be perfected, and the supply of more water to the town is very necessary, though much improvement is reported in this respect.

Epping Rural District.—Mr. Trevor Fowler has had the painful necessity of showing that his local authority yields to the dictates of hygiene only when taught their value by a heavy bill of sickness and death. In one part of the district, diphtheria caused 11 deaths during the past year; and Mr. Fowler records that the water-supply for parts of the diphtheria-invaded area was derived solely from absolutely putrid ponds. It is perhaps a cause for congratulation that the sanitary authority have at last, after repeated warnings, supplied water in adequate amount to the inhabitants of these parts of their district. They have, moreover, been stirred to carry out elsewhere other much needed reforms in drainage and water-supply. There were, it appears, 372 deaths altogether, among a population of 22,208, in this district last year. The death-rate was 16.7 per 1,000. Of births, there were 663, and the birth-rate was 29.8. The seven principal zymotic diseases carried off 57 persons; of the latter, 1 succumbed to small-pox, 14 to measles, 2 to scarlet fever, 11 to diphtheria, 13 to whooping-cough, 3 to fever, and 13 to diarrhœa and dysentery. The rate of infantile mortality, measured by the proportion of deaths under one year to births registered, was equal to 125.9 per 1,000. Mr. Fowler appends to his report a statement, made by the inspector of nuisances, as to the kind and number of nuisances reported and corrected. It is refreshing to read of the abolition of conditions revolting to the senses, of corrections in water-supply and drainage, of cleansing of houses, and of other numerous effacements of conditions injurious to health. Mr. Fowler's report augurs well for the future; and we may feel confident that a more favourable return for the district will be forthcoming next year.

Belper Rural District.—Steady improvement in the sanitary condition of this district has, Dr. Allen reports, been effected during late years. There has also been a steady fall of death-rate. Dr. Allen naturally places these two facts in the relation of cause and effect. In the year ending December 31st, 1879, the death-rate was 17.5; in the year 1880, the rate was 16.3. In 1881, it receded to 15.2; in 1882, it went down to 14; to be followed, in 1883, by a slight increase of 0.9; while for the year ending December 31st, 1884, it reached a still lower figure (13.7), and is less than in any year since Dr. Allen was appointed medical officer. Last year, however, the infantile mortality "was very excessive," considerably more than a third of the whole number of deaths having occured in the first five years of life. Dr. Allen refers much of this to "a wilful waste" of life, owing to the ignorant use of "cordial," or to "improper feeding of infants." The zymotic-rate was 1.8 per 1,000, the result chiefly of whooping-cough, which is credited with 16 deaths. In connection with the cases of zymotic disease, it deserves notice that the sanitary authority still remain unmoved to take measures for supplying their district with an efficient disinfecting apparatus, or with means for isolation of infectious cases. It appears that much of the sanitary work is carried on by separate parochial committees. The committee at Holbrook looks with indifference on "forty per cent. of infantile deaths," the rate which obtained at that place last year; and Dr. Allen receives, in answer to his plaint for sanitary reform, the words: "It is impious, and fighting against the Almighty." In the other parishes, moreover, sanitary requirements are frequently not detected, or not remedied, until mischief has been done; for the oft-told tale appears in this report—the tale of typhoid fever in persons taking sewage-polluted water, and erysipelatous sore-throat in persons living around a filthy environment. Good work is, doubtless, being done; much is, doubtless, still wanted.

MEDICAL NEWS.

Royal University of Ireland: Spring Examinations in the Faculty of Medicine, 1886.—The following candidates have been adjudged by the Senate to have passed the prescribed examinations respectively.

Second Examination in Medicine.—Exhibitions: First Class, £40: D. J. Coffey, Catholic University School of Medicine; Second Class, £20: D. C. Smiley, Belfast. Honours: First Class: D. J. Coffey, Catholic University School of Medicine; Second Class: D. C. Smiley, Belfast; H. Smith, Galway. Upper Pass: J. H. Corcoran, Cork; S. R. Haworth, Belfast; G. J. Pierse, Galway; C. Porter, Cork; E. Tierney, Catholic University School of Medicine. Pass: A. C. Burrows, Belfast; T. Callaghan, Cork; W. Downes, Catholic University School of Medicine; W. Ekin, Belfast; J. M. Fagan, Carmichael College; J. F. Fagan, Carmichael College; J. E. P. Gannon, School of Physic, Trinity College; M. J. P. Geary, Catholic University School of Medicine; W. R. Gore, Royal College of Surgeons, and School of Physic, Trinity College; J. Hamilton, Galway; W. Healy, Carmichael College; P. Jennings, Cork; G. Love, Belfast; J. M'Elwee, Galway; J. M'Mordie, Belfast; S. M'Nair, Belfast; J. P. Maynard, Cork; H. T. N. Merrick, School of Physic, Trinity College; W. J. Molloy, Royal College of Surgeons and School of Physic, Trinity College; P. J. Murphy, Catholic University Medical School; R. J. B. Sealy, Cork. In subjects necessary to complete the Second Examination in Medicine: M. J. P. Dempsey, School of Physic, Trinity College; F. D. Holmes, Belfast; C. E. Shaw, Belfast.

Degree of M.B.—Honours: First Class: J. Bradley, Cork; Second Class: J. L. Livingston, Belfast and Galway; J. Donelan, School of Physic, Trinity College. Upper Pass: C. Bradley, Cork; G. Browne, Belfast; J. Chambers, Belfast; G. Frend, Cork; R. B. Gorsuch, Cork; R. W. Nixon, Cork; R. H. Wagner, Cork. Pass: J. J. Attridge, Cork; F. C. Browne-Webber, Catholic University School of Medicine; J. K. Close, Belfast; E. Curtin, Cork; S. H. Dunlop, Belfast; G. F. W. Ewens, King's College Hospital, London; E. B. Hazleton, Belfast, and Carmichael College; G. A. Junk, Belfast; T. A. B. Kane, Belfast; L. Lyttle, Belfast; W. E. MacFeeters, Galway; W. Milligan, Galway, and Anderson's College, Glasgow; W. N. Murphy, Cork; A. T. Nash, Cork; J. O'Connor, Cork; C. O'Neill, Belfast; W. J. Richardson, Belfast; M. J. Robinson, Belfast and Cork; J. T. Shaw, Belfast; A. E. Thomson, Belfast; J. J. Tobin, Catholic University School of Medicine; F. E. Townsend, Cork; G. R. Young, Belfast.

Degree of M.Ch.—Honours: First Class: J. F. Eagleton, M.D., Galway, and Catholic University School of Medicine; Second Class: S. Moore, M.D., Belfast; J. Donelan, School of Physic, Trinity College. Pass: C. Bradley, Cork; J. Bradley, Cork; J. Chambers, Belfast; J. K. Close, Belfast; E. Curtin, Cork; S. H. Dunlop, Belfast; R. English, M.D., Belfast; J. Flynn, M.B., Catholic University School of Medicine; B. Forde, Catholic University School of Medicine; G. Frend, Cork; R. M. Griffin, M.B., Ledwich School of Medicine; M. H. Hannigan, M.D., St. Thomas's Hospital, London; D. Lee, M.B., Cork; J. L. Livingston, Belfast and Galway; W. E. MacFeeters, Galway; J. Menary, Belfast; W. N. Murphy, Cork; R. W. Nixon, Cork; J. W. Oliver, M.D., Belfast; C. O'Neill, Belfast; W. R. Orr, M.D., Belfast; W. J. Richardson, Belfast; A. S. Thompson, M.D., Belfast; A. E. Thomson, Belfast; F. E. Townsend, Cork; R. H. Wagner, Cork; G. R. Young, Belfast.

Degree of Master of Obstetrics.—Honours: First Class: C. Bradley, Cork; Second Class: J. L. Livingston, Belfast and Galway. Pass: J. J. Attridge, Cork; J. Bradley, Cork; G. Browne, Belfast; J. K. Close, Belfast; E. Curtin, Cork; G. Frend, Cork; R. B. Gorsuch, Cork; D. Lee, M.B., Cork; W. Milligan, Galway, and Anderson's College, Glasgow; S. Moore, M.D., Belfast; R. W. Nixon, Cork; J. W. Oliver, M.D., Belfast; C. O'Neill, Belfast; W. R. Orr, M.D., Belfast; R. H. Wagner, Cork.

University of Dublin. At the Summer Commencements for Trinity Term, held on Thursday, July 1st, 1886, in the Examination Hall of Trinity College, the undermentioned Licences and Degrees in Medicine and Surgery were conferred by the University Caput, in the presence of the Senate, namely:

Licentiate in Surgery.—J. O'Connor.

Licentiates in Medicine.—J. O'Connor, P. C. Ryan.

Bachelors in Surgery.—E. A. C. Baylor, W. J. Crofton, M. J. Eustace, J. C. Ferguson, K. Frazer, W. Y. Mac Mahon, J. Murray, W. N. Nevill, S. Simpson, R. H. Smyth, R. H. Todd, G. A. Wade, H. Woods.

Bachelors in Medicine.—G. H. H. Bagot, E. A. C. Baylor, E. Carrigan, W. J. Crofton, W. L'Estrange Eames, M. J. Eustace, J. C. Ferguson, K. Frazer, J. W. Golden, J. Murray, W. N. Nevill, S. Simpson, R. H. Smyth, B. Soady, R. H. Todd, G. A. Wade, H. Woods.

Doctors in Medicine.—W. Beatty, G. Cowen, B. D. Dickson, J. S. Fenton, K. Frazer, R. H. Todd.

Society of Apothecaries of London. The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, July 1st, 1886.

Gregory, Alfred John, 13, Clifton Road, St. John's, S.E.
Mackonochie, William, 72, Traverse Street, Parr, St. Helen's, Lancashire.
Stabb, Ewen Carthew, 14, Vincent Square, Westminster.

MEDICAL VACANCIES.

The following vacancies are announced.

ASHFORD FRIENDLY SOCIETIES AND PUBLIC MEDICAL ASSOCIATION.—Medical Officer. Salary, £150 per annum, with residence. Applications by July 17th to the Honorary Secretary, 5, West Street, Ashford, Kent.

BARNWOOD HOUSE HOSPITAL FOR THE INSANE. Gloucester.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications to Dr. Needham.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House-Surgeon. Salary, £140 per annum. Applications by July 27th to the Assistant Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park.—Resident Clinical Assistant. Gratuity of £20 at close of term of office. Applications by July 15th to the Secretary, at 24, Finsbury Square, E.C.

CRAIGLOCKHART POOR-HOUSE, Edinburgh.—Resident Medical Officer. Salary, £80 per annum. Applications by August 14th to the Visiting Medical Officer.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board and lodging. Applications by August 4th to the Secretary.

DARLINGTON HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £100 per annum, with board. Applications to the Honorary Secretaries, Union Street Chambers, Darlington.

EXAMINERS BY THE SOCIETY OF APOTHECARIES.—Applications by July 20th to J. R. Upton, Esq., Apothecaries' Hall.

KING'S COLLEGE HOSPITAL.—Assistant-Physician and Assistant-Surgeon. Applications to J. W. Cunningham, Esq., King's College, London.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—Assistant House-Surgeon. Board and lodging. Applications to C. W. Carver, Esq.

MITFORD AND LAUNDITCH UNION, Norfolk.—Medical Officer and Public Vaccinator for the Fransham District. Salary, £55 per annum, and fees about £30. Applications by July 26th to W. M. Barton, Esq., East Dereham, Norfolk.

NORTH RIDING OF YORKSHIRE LUNATIC ASYLYM, Clifton, York.—Resident Clinical Assistant. Apartments, board, washing, etc. Applications to the Medical Superintendent.

OWENS COLLEGE, Manchester.—Professor of Chemistry. Applications to the Council of the College, under cover, to the Registrar by August 31st.

PARSONSTOWN UNION.—Medical Officer. Kellyon Dispensary. Salary, £97 10s. per annum and fees. Application to Mr. Edward Dooly, Honorary Secretary. Election on July 12th.

ROYAL FREE HOSPITAL, Gray's Inn Road.—Junior Resident Medical Officer. Board and residence. Applications by July 21st to the Secretary.

ROYAL SEA-BATHING INFIRMARY, Margate.—Resident Surgeon. Salary, £100 per annum, with residence, board, and attendance. Applications by July 14th to J. T. Walker, Esq., Secretary.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street.—Honorary Physician. Applications by July 26th to the Secretary.

ST. PANCRAS.—Dispenser. Salary, £100 per annum. Applications by July 15th to A. A. Millward, Esq.

ST. THOMAS'S HOSPITAL.—Surgeon. Applications by July 10th to A. Tritton, Esq.

ST. THOMAS'S HOSPITAL.—Dental Surgeon. Applications by July 10th to A. Tritton, Esq.

WESTERN DISPENSARY, Rochester Row, Westminster, S.W.—Honorary Dentist. Applications by July 19th to the Secretary.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Surgeon. Board, lodging, and attendance. Applications by July 22nd to the Secretary.

WEST RIDING ASYLUM, WAKEFIELD.—Resident Clinical Assistant. Board, apartments, etc. Applications immediately to the Medical Director at the Asylum.

MEDICAL APPOINTMENTS.

BEAN, C. E., M.R.C.S.Eng., appointed Surgeon to the Devon and Cornwall Ear and Throat Hospital.

CARTER, R. W., M.R.C.S., L.S.A., appointed Surgeon to the Weymouth and Dorset County Royal Eye Infirmary, *vice* Dr. R. P. Simpson, resigned.

CHARLTON, Clifton, M.B., C.M.Edin., late Ambulance-Surgeon, appointed Assistant House-Surgeon to the Northern Hospital, Liverpool, *vice* A. Fisher, M.R.C.S., L.R.C.P., promoted.

CLARKE, J. Michell, M.A., M.B.Cantab., appointed Assistant Physician to the Bristol General Hospital.

CROSSMAN, Edward, M.D., appointed Medical Officer of Health to the Barton Regis (Bristol) Sanitary Authority, *vice* David Davies, M.R.C.S.Eng., L.S.A., resigned.

FISHER, Alfred, M.R.C.S., L.R.C.P., late Assistant House-Surgeon, appointed Senior House-Surgeon to the Northern Hospital, Liverpool, *vice* F. Johnston, M.B., C.M., resigned.

GOUGH, J. H., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Wolverhampton and Staffordshire General Hospital, *vice* J. W. Batterham, M.B., resigned.

GRIFFITHS, John, M.B., C.M., appointed Assistant Physician to the Royal South Hants Infirmary, *vice* J. L. Thomas, M.D., appointed Physician.

GRINSON, Dr. W. G., appointed Medical Officer and Public Vaccinator to the Braintree Union, *vice* A. H. Fraser, L.R.C.P.Edin., L.R.C.S.Edin., resigned.

HERN, J. M.D.Edin., M.R.C.S., appointed Ophthalmic Surgeon to the Darlington Hospital.

HOLLOWAY, W. G., M.B.Cantab., F.R.C.S., appointed House-Physician to the Lying-in Hospital, York Road, Lambeth, *vice* Dr. C. O. Fowler, resigned.

JACKSON, G., F.R.C.S.Eng., appointed Surgeon to the Devon and Cornwall Ear and Throat Hospital.

KERSHAW, J. G., M.A., M.B.Oxon., appointed Senior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, *vice* C. J. Macalister, M.B., resigned.

LEIGH, J. D., appointed Resident House-Surgeon and Dispenser to the Ripon Dispensary, *vice* G. F. Edwards, resigned.

MALDEN, F. J., M.B., M.R.C.S., appointed House-Surgeon to the Dorset County Hospital, *vice* W. H. C. Macartney, L.R.C.S., resigned.

MURRAY, R. W., L.R.C.P., M.R.C.S., appointed Junior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, *vice* H. C. Bury, M.B., resigned.

PALEY, F. J., M.B., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Sussex County Hospital, Brighton, *vice* R. Black, M.D., resigned.

SANTI, P. R. W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident Assistant to the Wolverhampton and Staffordshire General Hospital, *vice* C. E. Ashton, M.R.C.S.Eng., resigned.

WHITELOCK, R. H. Anglin, M.B.Edin., M.R.C.S., appointed Indoor House-Surgeon to the Glasgow Maternity Hospital, *vice* J. Richards, M.B. and C.M.Edin. resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

CROOKSHANK.—On June 30th, at Yaldham, Kent, the wife of Edgar M. Crookshank, Esq., M.B.Lond., of a daughter.

LAMB.—On July 3rd, at Moira House, Arnold, Notts, the wife of William Lamb, M.D., of a son.

YOUNG.—On July 5th, at Oakbank, Redhill, the wife of David Young, M.D., of Rome, of a son.

MARRIAGES.

BLUMER—SPRIGGS.—On June 23rd, at Grace Church, Utica, New York, by the Rev. S. Hanson Coxe, D.D., assisted by the Rev. Charles Olmstead, George Alder Blumer, M.D., L.R.C.P.Edin., of the State Lunatic Asylum, Utica, New York, second son of L. Blumer, M.D., of Sunderland, to Helen, only daughter of the Hon. J. Thomas Spriggs, Member of Congress, of Utica, New York.

JONES—WHITTAKER.—On June 30th, at the parish church, Menai Bridge, by the Rev. W. C. Edwards, M.A., Rector, William Francis Jones, M.R.C.S.Lond., L.R.C.P., and L.M., of Bulkeley Square, Menai Bridge, to Mary, widow of the late Edwin Whittaker, Esq., Min-y-don, Menai Bridge.

INGROWING TOE-NAIL.—For ingrowing toe-nail, M. Lucas-Championnière recommends washing the toe with a 5 per cent. solution of carbolic acid. Local anæsthesia is produced, the nail is removed by avulsion, and the rim of the bed of the nail is excised. Carbolic acid is again used, and a salicylic cotton-wool dressing impregnated with vaseline, containing a fifth of boric acid, is applied; it is then powdered over with iodoform, and enveloped in salicylic cotton-wool, which is again enveloped in ordinary cotton-wool, and finally bandaged. After an interval of three weeks, there is cicatrisation, and the dressing is removed.

ADULTERATION IN FRANCE.—The Special Commission of Control, during a visit to the Paris Municipal Laboratory, examined the processes used in analysing milk, butter, oil, coffee, and pepper. M. Girard showed the Commission an apparatus, which, if slightly modified, will enable milk-dealers to ascertain to what extent the milk with which they are supplied is adulterated. The Commission studied the adulteration of olive-oil with American cotton-oil. The adulteration of olive-oil has, to a great extent, caused the cultivation of olive-trees to be given up, and, at the same time, is very prejudicial to one of the most interesting branches of agricultural industry in France. Steeping of dried coffee, and the fraudulent manner in which the bruised berries are worked up and coloured in Holland, as well as the adulteration of pepper by means of pulverised olive-kernels, cause an annual loss of five million francs to the Treasury. The Commission also examined potato-starch, which went by the deceptive name of American tapioca, and which was offered as a substitute for genuine tapioca.

MEASUREMENTS OF BODY-SURFACES.—According to some measurements made by P. Putilov, of Omsk, the surface of a man's head is 27 times as large as that of an average fœtus at term, while the trunk and upper and lower limbs have respectively 7.5, 7, and 10.8 times the superficial area in the adult that they have in the infant. The mucous membrane of the respiratory apparatus appears to increase much more than that of the œsophagus; the former measuring 13.5 times as much in the adult as in the infant, while the latter only measures 4.7 times as much. The stomach is 50 times, and the small and large intestine 18 and 22 times as large. The internal surface of the digestive canal is given as 1,200 square centimètres in the baby, and 18,300 square centimètres in the adult; and the surface of the liver is 199 and 774.5 square centimètres in the two bodies respectively, that of the adult being 3.9 times that of the baby.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St. Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

SAL MINERALIS.

H. C. writes: Samples of an aperient saline in powders, ready for dispensing, were sent round by a wholesale firm some months ago. I remember the name of the preparation, but forget that of the firm. Will any member kindly inform me?

MEAT EXTRACTS AND CONCENTRATED FOODS; THEIR ANALYSES AND RELATIVE VALUES.

MR. KNIGHT asks: Where shall I be able to obtain any information as to the names of makers (and their addresses) of concentrated and preserved foods and vegetables, such as could be used by an army in the field? Where could analysis of such preparations be obtained from, if existent, or any reliable information as to their merits? I have tried by letter several of the leading purveyors, but they are exceedingly shy of making anything but very general statements as to the merits of their preparations? Is there any published list of this class of foodstuff; if so, what? or any account of their having been used? I have thoroughly searched the Army Medical Department Blue-books with negative results.

*** A list of articles, with their analysis, will be found in the *Analyst* for April, 1885. These are chiefly the meat extracts, fluid beef, beef peptonoids, etc. The analyses are by Stutzer. In the appendix to the evidence in the report of the committee on the outbreak of scurvy in 1875-6, will be found analyses by Professors Frankland, Attfield, and De Chaumont. Meinert's *Armee Med.-Volksernährung* also contains information on the subject. Dr. Letheby's book on *Food* may also be consulted. A list of a few of the articles may also be found in Parke's *Hygiene*, first edition, page 273. No complete list, so far as we know, exists.

BITES OF FLIES AND GNATS.

F. A. asks for suggestion as to a preventative for the bites of flies and gnats, especially the horse-flies of Switzerland.

DOES ONE ATTACK OF MEASLES PROTECT FROM FUTURE ATTACKS?

F. A. A. SMITH (Portsea) writes: Most text-books on medicine state that a second attack is very rare. This is certainly not my experience.

In 1884, we had a severe epidemic of measles. I attended 160 cases, and was frequently told by mothers that their children had had measles before. I did not pay much attention to these statements at the time, but now we have another epidemic, and I am at present attending several children who were under my care in 1884 suffering from the same disease. I am told that one child, who is now suffering from measles, has already had the disease three times, and I have no hesitation in believing the statement, especially as I have attended this child twice in the same fever. I am quite at one with Dr. Sykes, our late medical officer of health, when he insists upon the advisability of having all cases of measles reported equally with other cases of infectious diseases.

GOVERNMENT APPOINTMENT IN INDIA.

MEMBER asks to be informed to whom he should apply for a Government medical appointment in India, the salary given, etc. Having been advised to go to that country for the benefit of his health, he would like to have something definite to do on reaching there. Any information will be gratefully received.

EFFECT OF MORPHINE.

A. Q. (Isle of Man) asks for an opinion as to the following case.

A young woman, aged about 25, pale but healthy, had acute neuralgia of the face, for which she had a quarter of a grain of morphine injected hypodermically (three minims of Tarnier's permanent solution of morphine with atropine). She began to sleep, and became comatose, with stertorous respiration. What he wishes to know is, how did so small a dose produce such effects, and what would be the right treatment?

WHEN TO GIVE ERGOT.

M.D. asks: Is it commendable to administer ergot in a primipara before the os is fully dilated, but with membranes intact, because the pains are failing? Supposing ergot to be given in such a case, how long should the obstetrician wait before effecting delivery by the forceps, so as to ensure the birth of a living child? In other words, how long does ergot take to asphyxiate the child, after having aroused strong and continuous pains? Should any difference be made between primiparæ and pluriparæ?

In the case from which these questions arise, the obstetrician administered ergot at the time stated; the child was born asphyxiated four hours afterwards. The head had been allowed to remain arrested on the perinæum for the last two hours.

VACATION LECTURES.

A SUBSCRIBER (Dublin) asks: Would you have the goodness to inform me, is there a probability that a course of lectures on practical physiology will be given at any of the medical schools or universities this recess?

M.B., C.M., asks: If I am bitten by a sound and healthy mastiff, and the dog afterwards goes mad, am I liable to hydrophobia in future?

*** Surely not, if the dog were at the time healthy, and not incubating hydrophobia.

D. C. asks for some information as to the best place to send, for the winter, a young child, who suffers from frequent attacks of gastric catarrh and bronchial catarrh. There is not any tubercular deposit. What are the best works to consult on the question of climate, etc.?

ANSWERS.

COLOUR-BLINDNESS.

J. MATTHEWS: A very complete summary of the whole subject is to be found in the *Dictionary of Practical Surgery* (Smith, Elder, and Co., 1886) Vol. i, article Colour-Blindness, by Bradley. Swanzy's *Handbook of Diseases of the Eye* (Lewis, London, 1884), and Nettleship's *Students' Guide to Diseases of the Eye* (Churchill, 1884), give good brief descriptions of the practical methods used, with, in the case of each book, samples of the colours employed in testing, and of those for which these are liable to be mistaken. A cheaper, though, perhaps, not more

intelligible—account of the whole subject is to be found in Joy Jeffrie's book, *Colour-blindness, its Dangers and Detection*, published in Boston, U.S.A., some years ago.

DR. WIMBERLEY (Coventry) will probably get what he desires by writing to the Secretary of the College.

INCOME-TAX.

MR. A. DUNCAN (Glasgow). See BRITISH MEDICAL JOURNAL, January 30th, p. 229; March 2nd, p. 398; and May 1st, p. 848.

NOTES, LETTERS, ETC.

AN APPEAL.

SIR,—Referring to my appeal in the JOURNAL of June 26th (which allow me to thank you for inserting), I regret to say that it has not been responded to in a manner in which I hoped it would have been. I sincerely trust that those of your subscribers who have overlooked this appeal will kindly respond thereto. Up to the present time, I have received the following liberal sums.

	£	s.	d.		£	s.	d.
Sir Prescott Hewett, Bart. ..	5	5	0	Dr. S. O. Habershon ..	1	1	0
R. Fitzroy Benham, Esq. ..	5	5	0	Dr. T. Lauder Brunton ..	1	1	0
Sir J. Lister, Bart.	5	0	0	Sigma	1	0	0
Thomas Smith, Esq. ..	5	0	0	Dr. Ewart	0	10	0
Sir James Paget, Bart. ..	3	3	0	E. I. (Newcastle)	0	10	0
H. Stear, Esq.	2	2	0	Lady Estcourt	0	5	0
Sir Andrew Clark, Bart. ..	1	1	0	H. A. Latimer, Esq.	0	5	0

I am, dear sir, yours faithfully,
R. FITZROY BENHAM.
Abercorn House, Baron's Court, S.W.

*** The following were the facts of the case. The case is that of the widow of a medical man, who died a few years ago, without making any provision for his wife and four little children. She has used her utmost endeavours up to the present time, and worked very hard to provide for the welfare of her family, who are all dependent upon her support. She is now very much out of health, from continued anxiety and the many privations she has had to endure, and for the present is unable to pursue her previous occupations; in fact, is reduced to selling the few things she has gathered together, for present maintenance.

DR. CHURTON'S proposal will be duly considered.

WHETHER the door-plate be inscribed A.B., M.D., or Dr. A.B., is a matter of taste; both are correct, the latter the more usual.

THE CASE OF DR. J. S. RIDLEY.

THE following support has been made towards the "Ridley Fund" during the past week:

	£	s.	d.
Sir James Paget, London	3	3	0
H. Stear, Esq., Saffron Walden ..	2	2	0
H. A. Latimer, Esq., Swansea	0	5	0
"F. S."	0	2	6

Further contributions will be gratefully received by—faithfully yours,
Ealing, W. H. A. SMITH.

P.S.—For case, see JOURNAL, June 26th, p. 1247.

CAN COD-LIVER OIL BE DISSOLVED?

MESSRS. BURROUGHS, WELLCOME, & Co. (Snow Hill, London, E.C.) write: With regard to the correspondence in your columns on the above question, we would refer all those who are interested in the subject to an exhaustive paper read by Professor E. Godwin Clayton, F.C.S., at the Society of Public Analysts, June 30th, 1886, and published in the August number of the *Analyst*, page 140. All the points are there scientifically and duly considered. In this paper, Mr. Clayton says:

"It appears to be established, beyond all doubt ..... that the extract (Kepler's) is a solvent for the oil.

"The results obtained led to further experiments, made with the view of ascertaining whether other fixed oils are miscible with malt-extract. It is sufficient to say shortly that ..... it was found possible to make admixtures of the extract with sperm-oil, seal-oil, train-oil, castor-oil, and olive-oil, which resembled, to some extent, in their behaviour, the preparation previously described. As these experiments were made on quite a small scale, however, I do not care to attach much importance to them. I hope to repeat them upon a large scale, and *with proper mixing apparatus*.

"The fact that malt-extract and cod-liver oil are miscible is certainly curious and interesting; it is also, I venture to think, of some importance from a medical point of view; for if the nauseous oil can be given in a state of actual solution it so pleasant and nutritious a menstruum as malt-extract, the difficulties attending its administration to some persons, and its assimilation by others, would necessarily be diminished."

Again, he says: "It is clear that the oil is in a different physical condition before the addition of water from that in which it is sure to be after such addition. What can the former condition be but one of solution, seeing that the oil is instantaneously thrown out as a visible precipitate, precisely as it is separated, on the addition of water, from solution in ether, benzene, and other similar menstrua."

Dr. Dupré, Ph.D., F.R.S., F.C.S., Government Analyst, who participated in the discussion which followed the paper, stated that he had experimented with this solution, and, among other tests, had exposed it to a high heat for a considerable time, but without its exhibiting the slightest signs of separation.

MORPHINE AND APOMORPHINE.

MESSRS. J. F. MACFARLAN AND CO. (Edinburgh) write: In your JOURNAL of June 26th, we observe a paragraph headed "Spontaneous Transformation of Morphine into Apomorphine," which we consider misleading, in so far as it implies, or might be taken to imply, that morphine in solution, and at a temperature that under ordinary conditions, would alone maintain it, will, after a time, be converted either wholly or partially, into apomorphine. We have made many experiments to ascertain whether this is the case, and all our experience goes to show that morphine in solution, if free from oxidation, may be kept, under ordinary conditions, for several years without loss or its value; and that we have never found any change in any old samples of solutions of morphine muriate, even after having exposed them to a temperature of 200° Fahr. for several days.

COMMUNICATIONS, LETTERS, etc., have been received from:
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BOOKS, ETC., RECEIVED.

The Medical Manual: a Record and Review of the Year's Progress in Medicine, Surgery, and General Science, and the Practitioner's Index for 1886. Bristol: J. Wright and Co. London: W. Mack. 1886.

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Manual of Differential Medical Diagnosis. New York and London: G. P. Putnam's Sons. 1886.

The Elements of Squad, Company, and Battalion Drill necessary before commencing stretcher-bearer exercise. By J. Buckley, Quartermaster Medical Staff. Aldershot: J. May. 1886.

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ABSTRACT REPORTS
TO THE
SCIENTIFIC GRANTS COMMITTEE
OF THE
BRITISH MEDICAL ASSOCIATION.

REPORT ON CAPILLARY EMBOLISM OF BRAIN AND SPINAL CORD, EXPERIMENTALLY STUDIED; ITS RELATIONS TO THE VARIOUS FORMS OF CHOREA.

By ANGEL MONEY, M.D., M.R.C.P.,
Fellow of University College, London; Assistant Physician to the Hospital for Sick Children, Great Ormond Street, and to the Victoria Park Chest Hospital.
(From the Physiological Laboratory, University College, London.)

It will save space and needless repetition if I summarise under three headings the main facts that have resulted from my further investigation on monkeys. The three headings are clinical, anatomical, and pathological effects of capillary embolism of the brain and spinal cord.

For information as to the method of production of the artificial embolism, I refer to my contribution on the subject published in the *Medico-Chirurgical Transactions*, vol. lxviii, 1885, which also contains an account of my previous investigations.

Clinical Results: Monkeys.—Thirteen experiments have been performed on monkeys. In all cases, the artificial emboli were injected into the common carotid artery in the direction of the blood-stream. The particulate liquid consisted of a tea-spoonful of starch (potato) to half an ounce of distilled water. The dose injected varied from one to seven minims, partly according to the size of the animal. Three times only was one minim injected. The animals remained perfectly well; no disorder of movement could be detected; they were watched for a period of three months, then killed.

Twice three minims of the same solution were injected; no spontaneous movements were observed; decided hemiplegia of cerebral type was observed immediately after the recovery of the animal from the anæsthetic; this hemiplegia tended slowly to disappear. The hemiplegia having apparently completely passed away, the animals were killed at the end of three months.

Three times a dose of five to seven minims was injected. Hemi-plegia resulted that did not absolutely pass away by the end of three months, when the animals were killed; no spontaneous movements were observed.

In one monkey, the right common carotid was simply ligatured without producing any effect. The fourth day after this operation, the left common carotid was utilised, and an injection of starch made upwards; right hemiplegia resulted. The next day, a "fit" of clonic spasms was observed in the right forearm, consisting of rapid supination, flexion, pronation, and extension; this lasted fifteen seconds. It was never repeated to my knowledge. This animal was evidently suffering cerebrally from the double ligature, and I believe that the poor supply of blood to the anterior part of the brain was the chief cause of the "fit." The animal ultimately recovered completely, and was killed at the end of three months.

In another monkey, a dose of three minims was injected upwards into the right common carotid, with the result of causing a moderate degree of hemiplegia; this had notably disappeared at the end of seven weeks, when I simply ligatured the opposite common carotid. The animal was practically as well and as strong immediately after this second ligature as he was before. He remained well for six weeks, and was then killed. No spontaneous movements were observed.

In one monkey, I injected a weak solution (five minims) of mustard up the right common carotid artery. The animal was somewhat collapsed for an hour after the operation. There was distinct hemiplegia, which had completely disappeared at the end of four weeks. This animal remained well for three months, and was then sold.

The last monkey to which I have to allude, is one in which I injected up the right common carotid five minims of a suspension of pure carbonate of lime in water. The immediate effect was collapse, with hemiplegia and rigidity of the left side; the other limbs also were somewhat rigid. The animal died at the end of twelve hours.

These are the chief clinical results concerned in the question relating to the attempted production of choreiform movements from cerebral embolism. I have notes of other symptoms produced, but, as they do not directly bear on the investigation undertaken, I reserve their publication for the present.

Anatomical Signs due to Cerebral Embolism.—In the monkeys in whom one minim was injected, careful microscopic examination of the brain failed to detect any starch-granules, and no morbid appearances could be detected in the brain. It is unlikely that the whole of the starch passed into the capillaries of the external carotid, and we must suppose that the few that lodged in the capillaries of the middle cerebral artery must have become absorbed. Iodine solution was used to stain any starch-granules that might have been present in the brain. The brain was examined with scrupulous care and fulness.

With the medium dose, the chief anatomical signs discovered were slight atrophy of the convolutions affected. Microscopically, slight areas of softening were discovered, but, even here, most of the softened products appear to have been absorbed. In a few places, the capillaries could still be seen to be blocked with starch-granules that readily stained black with iodine solution. Particles of starch, apparently due to segmentation, were to be found within large inflammatory corpuscles—corpuscles of Gluge.

With the large doses, there was noted extensive atrophy of some convolutions, but not of the motor ones; the convolutions that suffered chiefly were the supramarginal and angular. Sections of this softened atrophied area showed the usual products of softening: myelin-globules, fragments of cerebral tissue and nerve-cells, large granular corpuscles, many, if not most, of which contained in their interior fragments of starch-granules, which readily blackened with iodine solution; here, in still greater abundance, minute arterioles were blocked with the starch granules.

It seems clear, then, that chronic inflammatory changes are set up by the starch-granules lodged in the capillaries and arterioles; that the starch-granules become broken up and ingested by the large inflammatory corpuscles; that starch may, partially at all events, remain chemically unaltered for a period of three months in the monkey's brain.

[The bulk of the starch injected lodged in the convolutions about the posterior end of the horizontal branch of the fissure of Sylvius; some of it went to the white matter lying beneath the "motor" and "sensory" convolutions; some was distributed to the "motor" convolutions themselves. The basal ganglia always contained a slight amount of artificial emboli; and, lastly, a little of the starch always passed to the opposite cerebral hemisphere, along the anterior cerebral, by way of the communicating artery.]

Another interesting point that will serve as a subject for future investigation, is the production of minute hæmorrhages as the result of starch-embolism. This event happens only, I believe, when minute arterioles are blocked; the appearance seen reminds one of the capillary extravasations met with around tubercular inflammatory disease of the meninges, and with the similar appearances that obtain in cases of thrombosis of the straight or superior longitudinal sinus.

Physio-pathology.—My investigations have thus been productive of much clinical and anatomical information, concerning the effects of embolism of the capillaries of the brain and spinal cord.

I shall now discuss the burning question of the investigation—that is, the light that may have been thrown on the relation of chorea to embolism. At the outset, I regard it as of the utmost importance that the case be plainly and judicially stated. This cannot be the case without due recognition of the existence of many forms of "chorea." We must use the word "chorea;" but it would be better if it could be dispensed with altogether. I think it would be very conducive to clearness and lucidity if the term were altogether discarded. We ought to speak of "spontaneous movements," or simply "movements," and regard this term as the precise opposite of "paralysis," or "want of movement."

It is obvious that "movements" may originate as the result of nervous discharges, originating in the brain, spinal cord, nerves, and muscles—four chief seats in which the cause of movements may exist. It is generally conceded, and I shall not contest the point, that the movements of "chorea"—and I use the term here as including every phenomenon that has ever been designated by the name—must originate in the central nervous system, brain, or spinal cord.

I may here enumerate the various forms of "chorea."

1 Human chorea = series of different movements at different intervals.
- General chorea.
- Hemichorea.
- Other varieties might, I think, be made with advantage. (See later on.)

2. Canine chorea = repetition of a single movement at fairly regular intervals (Hughlings Jackson, Gowers, Onimus, Horsley, H. C. Wood, and others).

3. Chorea of "cat" and "cow," described by Anacker = simple rhythmical jerkings. In the cat, the movements were limited to the head and neck and eyes (horizontal nystagmus); they came on whilst the cat was suckling, and ceased after the completion of suckling.

Chauveau has observed "chorea" in the female puppy; in one case, there was paralysis and atrophy of the right foreleg, which was followed by chorea. In another case, the extensors of the fore-limb were paralysed, and the flexors were the seat of chorea. It is clear, then, that (1) simple clonic spasm, (2) rhythmical movements, and (3) a series of different movements, have all been named chorea.

4. *Experimental "Chorea."*—I have observed, in the cat, a series of different movements at different intervals (*vide Medico-Chirurgical Transactions*, vol. lxviii) which must be regarded as closely imitating the human form of chorea.

An explanation is needed if, as I hold, human chorea is of cerebral origin, why my experiments do not support the spinal-cord theory. No doubt, there is a representation of movements in the spinal cord of all mammalia and vertebrata; the degree of representation varies in each genus and possibly species. If these facts be remembered, it is obvious that a "series of different movements, at different intervals," may certainly occur from abnormal action of the spinal cord alone. Even when such series of different movements, at different intervals, is dependent on cerebral irritation, it is plain that this must act through the agency of the spinal cord; but how, is another matter. Whether the motor cells of the spinal cord merely act as conductors or not, we cannot say. The subject is one full of interest, and of the greatest physiological importance (see Mr. Victor Horsley's Brown Lectures for December, 1885, *Lancet*, vol. i, 1886, p. 54). From the circumstance that the number of fibres in the anterior nerve-roots corresponds in frogs, at all events (Birge quoted by Gowers), to the number of nerve-cells in each segment of the spinal cord, it seems most probable that every cerebral motor impulse must pass through a motor nerve-cell of the spinal cord. Whichever way we regard the physiology of the spinal cord and cerebral motor elements, it may easily be understood how lesions of different parts of the motor apparatus may give rise to similar effects.

In experimental chorea, as well as, I believe, in canine chorea, we have another element which aids in the diagnosis of the seat of the lesion. This consists in exaggeration of the reflex actions of those parts in which the movements are manifested.

Another consideration I should like to bring forward. Stimulation of a limited area of the cerebral motor apparatus may give rise to more extensive movement than would result from stimulation of an equally limited area of the strictly spinal motor apparatus. We may obtain a "series of different movements occurring at different intervals," by a comparatively less extensive lesion of the cerebral motor elements than would be required to produce the series from the motor region of the spinal cord. This is well illustrated, I believe, by my experimental results in cats. (See *Med.-Chir. Trans.*)

In these animals, the movements were restricted to the upper half of the body; the reflex actions were excessive over the same area, and starch-granules (artificial emboli) were found only in the brain and upper half of the spinal cord. Now, as no movements result when the starch-granules simply go to the brain, I concluded that the limited movements were the effect of embolism of the upper half of the spinal cord.

Further facts support this view. My experiments show that a very large amount of embolism of the spinal cord of the cervical and brachial regions causes absolute paralysis, with loss of reflex actions. This may be regarded as the opposite extreme to that degree of embolism that causes choreiform movements. Intermediate stages also exist, in which there are very few spontaneous movements, with slight exaggeration of the reflex actions and paresis of the flexor muscles, with paralysis of the extensors of the fore limbs. This affords an illustration of Dr. Ferrier's well known generalisation, that the extensors and abductors are weaker than flexors and adductors; for the same amount of embolism that paralyses the extensors merely weakens the stronger flexors, and at the same time makes them more irritable—a condition, in short, of irritable weakness. In this intermediate condition, I found that frequent rapid tapping of one fore limb, about the carpus, gives rise to the following suggestive series of phenomena. At first, the taps merely cause local contractions; as the tapping goes on, the contractions spread upwards, involving more and more of the tapped limb; finally, as the tapping is prolonged, the contractions reach the shoulder, and actually spread to the opposite shoulder, and so down the opposite fore-limb. Further, it is remarkable to note that, when the percussion is left off, the contractions continue for three or four seconds; in short, by this method, I was able to induce spontaneous movements. These observations support the contention of Dr. Broadbent (British Medical Journal, 1869) that "chorea" is half-way to paralysis.

Now it will be asked, what do my experiments prove concerning the relation of chorea to embolism? At first sight, it seems obvious that my results lend no support to Dr. Hughlings Jackson and others who locate the lesion of chorea in the brain, whether basal ganglia or convolutions. The results do not support, but they do not refute their views, and for the following reasons. It may be that some other factor is necessary besides embolism of the cerebral motor apparatus: in other words, embolism of this region may merely predispose to "movements." What the other factor may be is difficult to determine, but suggestions are forthcoming. The motor cells of the spinal cord of monkeys may not be in a sufficiently irritable state for "movements" to appear, when the motor portion of the brain is the seat of embolism.

If embolism of brain be a common cause of chorea at that age, and in that sex, that is most liable to the disease, it is conceivable that the period of second dentition in the female sex may be associated with an increased excitability of the spinal cord which renders possible the occurrence of "movements" when embolism takes place in the cerebral motor apparatus. The impulses arising from the embolised cerebral motor area may not be strong enough to discharge the energy of the motor cells of the spinal cord, unless these latter be in a condition of unusual excitability. The only way absolutely to overthrow Dr. Hughlings Jackson's position would be to perform experimental embolism of the cerebral motor area of human females about the age of 7.

Another reason why my results do not disprove the embolic theory is, possibly, because the embolism has not affected some particular part of the brain. In cases of pre- and post-hemiplegic chorea, the lesion has been found somewhere in the neighbourhood of the posterior part of the posterior limb of the internal capsule; a region supplied by perforating arteries coming off the posterior cerebral artery. It would be difficult to be certain of causing embolism of this region by injecting the artificial emboli up the common carotid; for the bulk of the injection goes along the larger vessels, that is, middle and anterior cerebral; the communicating artery with the posterior cerebral being long and narrow. On the other hand, if chorea be dependent on embolism of the region in question, it would seem that the emboli ought rather to get there by way of the vertebral arteries—a route which is fraught with danger from the circumstance that vessels supplying vital centres would have to be passed; and, further, we are not generally supposed to understand that emboli prefer the vertebral or subclavian to the common carotid artery.

If we take what I may call an impartial view of the case, we must, indeed, consider that the *tendency* of my results is to conflict with Dr. Hughlings Jackson's view. Again, taking the general aspect of my results on embolism of the spinal cord, it must be admitted that it lends support to those who consider that the lesion in chorea is spinal in situation; and, further, if Dr. Hughlings Jackson favoured the spinal theory, then assuredly the embolic view receives undoubted confirmation. But, here again, the difficulty of understanding why the emboli should go to the spinal cord has to be met. We may, of course, assert that the minute emboli are widespread, though effective in the production of movements only in the spinal cord. My experimental results would not conflict with such a view. It is clear, too, that a certain small amount of embolism of the brain may be produced without any perceptible symptomatic effects.

That embolism of the muscles and nerve-trunks does not give rise to contractions of muscles, has been conclusively proved by my experiments, for I have several times injected the starch solution only in the distal direction of the arteries of the limbs, without observing any effects.

Concluding Remarks.—My general impression, after a study of chorea clinically, as well as of the facts of experimentation, is, I must confess, not in favour of the view that embolism is *the* cause of chorea. On the other hand, I do not go with Dr. Sturges in thinking that chorea is a purely "functional" disease. My tendency is to regard a large number of cases of chorea as due to a rheumatic localisation in the motor nervous centres. In children, I have several times seen chorea in association with severe heart-disease, rheumatic nodules, slight arthritis, and some kind of erythema. I have seen them all present in the course of one attack of rheumatism, and also in varied sequence. I think "rheumatism" in children might be considered as consisting of multiple lesions of a transitory localised limited kind. Suppose we regard the essential lesion of rheumatism to be an "erythema," and that it

affects, not only skin, but fibrous tissue; the nodules of rheumatism might be looked upon as an "erythema" of the subcutaneous fibrous tissue; their longer duration might be explained by the difficulty that an "erythema" of fibrous tissue would have in disappearing, especially when we consider that the rheumatic nodules most generally occur on parts that are subjected to frequent irritation. The inflammation of cardiac valves is of a similar nodular and transitory nature with the nodules (*vide* Dr. T. Barlow, BRITISH MEDICAL JOURNAL, vol. ii, 1884). May we not have a similar transitory (I use this term as opposed to permanent) erythema or slight inflammation of the connective tissues in parts of the motor area of the brain and spinal cord? The connective tissues are most abundant in the neighbourhood of vessels, and so Dr. Dickinson's and Dr. Bastian's observations would not conflict with this view.

In making these suggestions, it is only right to recognise that all the lesions of rheumatism, except, I believe, the rheumatic nodules, have been regarded as of embolic origin. I remember Mr. Marcus Beck asking me whether the nodules were of embolic origin. The exceedingly valuable summary of Dr. Dickinson, in the first volume of the *Lancet*, 1886, also supports the opposite view to that held by Dr. Hughlings Jackson.

I may best express my present attitude, with regard to the subject, by the following propositions.

1. Human chorea is generally and mainly of cerebral origin, though a few cases may be of purely spinal source.
2. The commonest lesion causing chorea is a "rheumatic" affection of the circumvascular connective tissues of the motor apparatus of the brain and cord.
3. Embolism may be a cause of chorea, in rare instances.
4. Chorea may be set up by "fright," when the lesion is probably a molecular disturbance of the cerebro-spinal motor apparatus.

REPORT ON EXPERIMENTS AND OBSERVATIONS RELATING TO THE PROCESS OF FATIGUE AND RECOVERY.

By AUGUSTUS WALLER, M.D.,

Lecturer on Physiology at St. Mary's Hospital; Research Scholar of the British Medical Association.

THE inquiry upon which I have been engaged during the last two years relating to the process of fatigue and recovery, has been, up to this time, chiefly directed to the motor apparatus—muscle, nerve, and nerve-centre. Of the many problems that arose in its course, some have proved to be simple, and susceptible of definite answer by easy methods, others have proved to be complex, and, though possibly answerable at a sufficient expenditure of time, have not appeared to me to justify such expenditure in the presence of more pressing questions. The scope of my investigation has been shaped in consequence, and has extended itself in certain directions, while it has been withdrawn from others.

Methods.—Fatigue of any excitable tissue is manifested in a diminished capacity for action consequent upon repeated action, and its manifestation in the motor apparatus is discoverable by two signs—1, diminished muscular action; 2, electromotive change accompanying action. I have made use of both these signs, each for its special purpose.

With regard to the first, it may be employed in three ways—(*a*) observation of increase in the minimum exciting stimulus; (*b*) observation of decrease in the maximum contraction of a lightly weighted muscle; (*c*) observation of decrease in the maximum weight that can be raised at all.

These three methods are applicable to different aspects of the problem; generally their indications are concurrent; for example, a fatigued muscle is (*a*) less excitable, (*b*) shortens less, (*c*) can do less work; indeed, this concurrence is, more or less, expressly admitted to be always the case; it is not superfluous, therefore, to call attention to the fact that the rule admits of frequent exception, and that a fatigued muscle may be more excitable when it can shorten less. This is to be borne in mind in the clinical examination of muscular excitability, and both signs (namely, degree of excitability, and degree of maximum contraction), should be separately noted when comparing muscle on the normal with muscle on the supposed abnormal side. Observation of the maximal weight that can be raised at all, implies the use of a dynamometer, and is chiefly applicable clinically. The dynamometer, as usually applied, is of use only to determine coarse differences between the two sides of the body. For my purposes, namely, to follow the course of fatigue, it was necessary to obtain the record of consecutive muscular efforts, and, for this purpose, I devised a simple form of dynamograph. The ordinary Salter's dynamometer lends itself readily to this, and, modified to this purpose, would, I think, be of clinical value for obtaining readily the record of successive muscular efforts, or of sustained efforts. With regard to the second class of signs, namely, electromotive changes, they are of two kinds: (*a*) current of injury; (*b*) current of action.

The principles which permit the application of these tests are, 1, that any two uninjured points of a living muscle, or any two points of a dead muscle, give no current through a galvanometer; 2, that an injured and an uninjured point of a living muscle give a current from the latter to the former through the galvanometer, from the former to the latter in the tissue. This current is the sign of activity at the injured zone, and the electromotive force is a rough indication of the degree of such activity. The tissue gives a current similar to that of a Daniel cell; the injured spot is the seat of greatest action, the positive element analogous to the zinc which, in the Daniel cell, is the seat of greatest action. 3. That, if such a muscle connected with a galvanometer by an injured and an uninjured point be tetanised, a current is indicated opposed to the previous current (neg. var.) depending upon the greatest activity of the uninjured, in comparison with the injured, part.

With regard to the practical application of these theoretical considerations, I may say at once that the galvanometric investigation of fatigue in voluntary muscle does not yield advantages in proportion to the technical difficulties and sources of error. On the other hand, it is indispensable for the examination of nerve. I made many trials on muscle, and I did not find results to justify their continuance. Using, for the purpose, the photo-galvanometric method described in my report last year, I obtained records of the decline of injury currents and of the diminishing magnitude of successive action currents; these records, however, did not encourage me to pursue the method in this direction, and I have since used it only as a rough and auxiliary test of muscular tissue activity. The attempt had, however, certain useful consequences. It led me to compare nerve and muscle of warm and of cold-blooded animals; it led me to compare with each other various kinds of muscle—voluntary, involuntary, and cardiac; and it has thus provoked an investigation of cardiac muscle on warm-blooded animals which has given definite results; incidentally, it also induced me to employ a new form of galvanograph, which is applicable to clinical use.

The galvanograph, described last year, requires the aid of photography, and is a delicate instrument; that I am now referring to is a comparatively coarse instrument, and gives an accurate record of current strength upon a smoked surface; it presents the additional advantage of being dead beat. The instrument is that of Dr. d'Arsonval,[1] and, briefly described, consists of a coil suspended in a powerful magnetic field, between two opposed horse-shoe magnets. Currents to be measured pass through the coil, and cause a deviation proportionate with their strength; these are recorded on a slowly revolving cylinder by means of a light pen fixed to the coil.

To conclude the description of methods and instruments employed, I may refer to the Lippmann electrometer, which presents great advantages when the difficulties which its employment first presents are overcome. It may, like the galvanometer, be simply observed or employed as a photographic instrument. Its convenience as an instrument of research is very great, but the technical difficulties are such as to prohibit its use as a clinical instrument. Hitherto, I have employed it chiefly in the investigation of cardiac muscle, and have not yet utilised it systematically for voluntary muscle and nerve.

RESULTS.—The leading idea at the outset of my investigation was to ascertain and compare with known data the course and mode of incidence of fatigue. In addition, I had in view to bring into evidence the similarity of the process of fatigue with the decline at death, or that caused by intoxication of tissue. Finally, I proposed to observe the less determinate and less controllable converse process of recovery. It was necessary that I should apply, as far as possible, the "méthode isolatrice," and seek to determine the part played by nerve-centre, nerve-channel, and muscle respectively.

The answers to these problems, as far as I have yet reached them, may be summarised as follows.

1. *The junction between nerve and muscle is the point at which conduction is first interrupted when nerve and muscle are provoked to excessive action by excitation of nerve.* Briefly stated, the proof of this lies in the fact that, by separate excitation of nerve and of muscle,

[1] The method has been used for other purposes by Dr. d'Arsonval, and I am indebted to him for the idea of applying it to medical use.

each may be shown to be active at a time when excitation of nerve remains without effect on muscle. The interruption is, therefore, at an intermediate organ.

2. *At death, the junction between nerve and muscle is the point at which conduction is first interrupted.* The proof of this is similar to the proof in the preceding case. Nerve and muscle may each be shown to be excitable (the former by the galvanometer, the latter by direct observation) at a time when excitation remains without effect on the muscle.

3. *After nerve-section, the junction between nerve and muscle (motor end plate) is the point at which conduction is first interrupted.*—The proof is similar to that above stated. I have formulated these statements in identical terms; I add to them the statement of the well known fact that, after intoxication by poisons of the curare group, the junction between nerve and muscle is the point at which conduction is interrupted, in order to bring into relief the generalisation that the organ of intermediation between nerve and muscle is the weak link in the neuro-muscular chain in fatigue, at death, in degeneration, in curare intoxication.

In the series of proofs above mentioned, I was constrained to make a reserve, which must still be made. Under statements 2 and 3, I stated that the possibility of mistaking an electrotonic current for a current of action had not been excluded.

With regard to cut nerves, I have made no further experiments; and, thinking that the exclusion of doubt in the case of dead nerves would cover both cases, I have made further experiments on these, with the result that the doubt has been much diminished.[2] As discussion of the differences between electrotonic currents and true currents of action would exceed the limits of the present report, it will be sufficient to say that I adopted all known precautions for the exclusion of electrotonic variations, and may, therefore, consider that true negative variations were under observation.

Starting from the consideration that the interruption of conduction is liable to take place at the junction between nerve and muscle, Dr. Reid, working with me, has ascertained that, in the path between brain and muscle, the spinal cord is a weak link, liable to fail, and interrupt conduction when excessive action is provoked by electrical stimulation above. Anatomical considerations and physiological measurements of time lead to the view that each fibre from the brain to the periphery has, in the spinal cord, a single cell of interruption ("motor" cell of anterior cornu), and that there are no direct or uninterrupted nerve-fibres between brain or muscle. As the result of exhaustive stimulation of motor channels from brain to cord, followed by stimulation of motor channels from nerve to muscle, it is found that the latter is effective after the former has been exhausted; the result is exactly similar to that obtained by direct muscular excitation subsequent to exhaustive stimulation of motor nerve, and the conclusion to be drawn is similar, namely, that the obstacle to conduction, or functional block, is caused at the junction between the two channels, namely, at the spinal "motor" cell, when excessive action is provoked from above. To this may be added a second conclusion, namely, that, under such circumstances, failure occurs at the spinal cord sooner than at the peripheral junction of nerve with muscle.

These experimental results are in agreement with the statement made in my first report, to the effect that "fatigue, commencing first in the central nervous system, is protective from peripheral fatigue;" and confirms the view that the incidence of fatigue is normally in diminishing gravity from centre to periphery—greatest at centre, least at periphery, intermediate at intermediate points. (I refer, of course, to fatigue of ganglionic tissue, and have no experimental justification for extending the statement to conductor channels). Experiments on man have likewise supported this view. I have shown (1) that human muscle, in its normal relations, can with difficulty be made to show signs of fatigue by direct electrical excitation; (2) that, on the other hand, signs of fatigue are quickly evidenced in a similar series of voluntary efforts; (3) that even when these signs of fatigue are most pronounced, no evidence of direct muscular fatigue is obtainable by direct muscular excitation.

It has been along the lines indicated by these considerations that my experiments have been pursued. They have been numerous and various, but the detailed account of points which have proved doubtful, or of experiments which have proved inconclusive, or apparently contradictory, cannot be well placed in this report. I shall confine myself to the enumeration of the topics upon which my attention has been, and is, directed, briefly indicating, under each heading, how far the investigation has reached, and what results have been obtained. I hope, during the ensuing year, to discuss in detail the experimental evidence of these several topics. With regard to one of these—that relating to cardiac muscle—this has been done.

1. *The comparison of direct with indirect exhaustibility* presented itself as one of the subjects for examination, when the supposed action of the motor end plate was under consideration. Experiments by simultaneous maximal tetanisation of two nerve-muscle preparations, the electrodes being applied to the nerve of one (indirect), and to the muscle of the other (direct), show, as a rule, that indirect fails more rapidly than direct action, a result which is, in all probability, to be attributed to failure by fatigue at the junction between nerve and muscle. The same conclusion is indicated by alternate tetanisation, direct and indirect, of the single nerve-muscle preparation; the contractions effected by the latter diminish more rapidly, and fail sooner, than those effected by the former mode of stimulation.

Electrical stimulation applied directly to muscle cannot be regarded as purely direct to the muscle, but, on account of intramuscular nerves, is partly direct, partly indirect. I therefore made experiments on the comparative exhaustibility (1) of curarised and uncurarised muscle, (2) of normal muscle with muscle deprived of nerves by degeneration after nerve-section. The result showed that uncurarised muscle is more rapidly exhausted by direct stimulation than curarised, and agrees with the previous result, to the effect that neuro-muscular fatigue is more rapidly developed than purely muscular fatigue. These considerations led me to recognise, also, that a maximal stimulus to nerve or to normal muscle gives rise to a greater muscular contraction than a maximal stimulus applied to curarised muscle. On the other hand, I found, in a series of experiments, that muscle, the nerves of which have degenerated, is more rapidly exhausted than normal muscle, when both are subjected to direct tetanisation. Acting on the supposition that fatigue at peripheral points on the course of the nerve itself might possibly constitute an obstacle to conduction from central points, I made experiments by alternate tetanisation of two points in the course of a motor nerve, with the result that a nerve may remain directly excitable at a point where it has become incapable of transmitting impulses excited above.

2. *Veratria. Strychnine.*—In my report last year, I gave an account of experiments relating to the action of (1) veratria on muscle, (2) strychnine on the spinal cord, by which it was shown that, in each case, the characteristic modification caused by the drug is effaced by repeated action, while it is restored during a subsequent interval of repose. I had occasion to repeat and verify these observations, those relating to the action of strychnine especially. One of the characteristic effects of strychnine on spinal action, namely, the great prolongation of reflex time, invited me to a closer examination into the intimate mechanism of the reflex process. The experiments will shortly be published *in extenso*.

3. *Experiments on man* have also been made (1) to determine the normal time of transmission of crossed reflex action, for comparison with the results obtained in the above-mentioned experiments made on the normal and strychninised frog, the result being to show that this time is less than $\frac{1}{50}$ sec.; (2) to obtain data from which to construct the fatigue curve of voluntary action. For this purpose, the dynamograph has been used, and the results hitherto obtained go to show that the decline is not a straight line, but a line concave to the abscissa. I require, however, a larger number of data before I shall feel justified in formulating definite conclusions. (3) To ascertain more precisely the alterations of resistance of the human body to electrical currents, and to ascertain the relations of these alterations to changes of excitability. Observations of this nature have been much facilitated by the galvanograph referred to at the commencement of this paper, and I hope shortly to publish an account of results obtained.

4. *The comparison of cardiac with voluntary muscle* unavoidably led me outside the path which I first attempted to follow. I wished to determine whether the signs of fatigue and recovery of cardiac muscle are similar to those of ordinary muscle, and, as an early step, took observations of the course and decline of the normal beat, both of the frog's and of the mammalian heart, subsequently examining the quiescent organ by electrical stimulation, with reference to (1) extent of contraction, (2) duration of contraction, (3) duration of period of latent stimulation. Irregularities in excitability rendered these experiments fruitless as regards the purpose in view: namely, to ascertain the curve of decline of natural or artificial activity; but the observations led to quite unexpected results as regards the comparison of the excised mammalian with the excised frog's heart. These first results were such as to call for further experiments, which finally led me into a prolonged investigation of the mode of decline of the ex-

[2] If the conclusions as to [illegible] be accepted, there remains no doubt; but I do not accept them as [illegible] were obtained by means of a telephone, which affords no information as to the direction of currents.

cised mammalian heart. This investigation was undertaken in conjunction with Dr. Reid; and its results (some of which have been shown before the Physiological Society) are consigned in a paper which is in the hands of the Scientific Grants Committee. I will not here anticipate upon the publication of these results beyond stating the chief points studied and the methods adopted.

The investigation of electromotive changes in cardiac muscle, as compared with skeletal muscle and nerve, was our point of departure, and the observations by which we were led to further experiments were—(1) the fact that electromotive changes indicative of action were seen to outlast visible contractions, and (2) that the contractions of the excised heart of mammalia may, in the course of their decline, far exceed in duration that which has been hitherto considered characteristic of cold-blooded animals. We were thus led (1) to investigate the wave of contraction by mechanical methods, (2) the electrical variations which are its concomitants; this we did for the spontaneous and for the excited beat. Our experiments were made on the excised hearts of recently decapitated animals. The contraction was studied in its mechanical aspect by means of a double myograph; in its electrical aspect, by means of the galvanometer and the capillary electrometer. We have extended our observations from the excised to the heart *in situ*, and to that of man. Both methods and results obtained to this date are offered to criticism in the paper which, it is hoped, will shortly be published.

REPORT ON SOME OF THE COMPOUNDS OF HÆMATIN: NAMELY, THE HYDROCHLORATE, HYDRIODATE, AND HYDROBROMATE.[1]

By VINCENT D. HARRIS, M.D., F.R.C.P.,
Demonstrator of Physiology at St. Bartholomew's Hospital, etc.

Originally, it was intended to undertake some researches into the nature and relations of oxy-hæmoglobin, especially into the exact relation which exists between the proteid and non-proteid substances into which it can be split up; but it soon appeared expedient to limit one's field of operations, as the subject was found to be such a wide one, and the time necessary for successfully performing each experiment very great. It was determined, therefore, rather to investigate the properties and compounds of hæmatin alone. The following is a short report upon this subject.

Oxy-hæmoglobin is a body which chemists agree to be a definite chemical substance, although the molecule is a very complex one. The formula is still a matter of doubt, since the one which has been generally received up till quite lately is now disputed. The substance can be split up into hæmatin and a proteid residue.

The formula of hæmatin may be stated to be $C_{68}H_{70}N_8F_2O_{10}$, that is, supposing the old formula of oxy-hæmoglobin be accepted. Hæmatin itself, when pure, does not appear to be capable of crystallisation, or at any rate most observers have been unable to obtain it pure in a crystalline form.

The best known compound of hæmatin is hæmin; hæmin being, it is believed, due to a direct union of hæmatin with hydrochloric acid, thus: $C_{68}H_{70}N_8F_2O_{10}2Hcl$. The importance of the compound is due to the ease with which it can be prepared from even minute quantities of blood, constituting the most delicate test for blood which is known. It is not certain that the compound is such as is above stated, but considerable evidence has been brought forward on the point. Assuming, however, that it is correct to believe that hydrochloric acid combines directly with hæmatin to form a definite compound, it might be surmised that the acids closely related to hydrochloric would have similar affinities, and that we should be able to form, in a manner similar to that employed for the purpose of forming hæmin, hydriodate, hydrobromate, and hydrocyanate of hæmatin. I believe that there is no doubt that the two former compounds may be easily obtained, but I have been unable to satisfy myself of the existence of the last. That hydriodic acid may form a compound with hæmatin has been granted by former observers (Gamgee, *Physiological Chemistry*, vol. i, p. 109, and M. Cazeneuve[2] has succeeded in obtaining not only a compound with hydriodic acid, but a compound with hydrobromic acid also.

The method adopted by the last named experimenter was to suspend pure hæmatin, recently precipitated, in ether; to pass through the liquid a current of hydriodic acid gas; next, to agitate the liquid with distilled water and to separate out crystals of the new compound by gentle evaporation. Hydrobromate of hæmatin was obtained in a manner somewhat similar—namely, by treating recently prepared hæmatin with ether acidulated with hydrobromic acid. "The crystals of hydrobromate of hæmatin are insoluble in water, alcohol, or ether; soluble in acidulated alcohol or ether; soluble in alkaline liquids. On treating the alkaline solution with acetic acid, hæmatin is precipitated; and it is possible to prove the presence of hydrobromate of ammonium in the liquid by the ordinary reactions." The above method is the only one of obtaining these salts which has been, as far as I am aware, attempted.

When first I endeavoured to form these compounds, I was quite unaware of the previous experiments of M. Cazeneuve, and so did not attempt the formation of these bodies according to his method. I was, however, able to produce crystals of hydriodate and hydrobromate of hæmatin, according to another method, with considerable ease. This method is based upon that usually adopted for the formation of hæmin. Thus, if a small quantity of dried blood be finely powdered, and mixed thoroughly with a minute quantity of common salt (NaCl) upon a glass-slide, and glacial acetic acid be added, on the application of moderate heat to dryness, a large number of dark brown rhombic crystals of hæmin will be found on subjecting the slide to microscopic examination.

So, we may prepare the allied compounds, hydriodate and hydrobromate of hæmatin, in a similar manner, by substituting for the sodium chloride very minute quantities of sodium or potassium iodide, or bromide, respectively; and, on heating with glacial acetic acid, the crystals of the acid compounds may be obtained. The crystals of the hydriodide, obtained in this way, differ little in appearance from the hydrochlorate; but are more acicular, somewhat darker, and the ends are more apt to be broken. The corresponding bromine salt is very similar in appearance.

It should not be forgotten, however, that dried blood will give crystals of hæmin, or of something very similar to them, if sodium-chloride be omitted from their preparation. This has, no doubt, given rise to the belief, held by Thudichum and others (Gamgee, p. 116), that hæmin does not contain chlorine, but is merely crystalline acid-hæmatin. The fact, however, that dried blood contains sodium-chloride, is sufficient to do away with the sequence of such a conclusion, as the contained salt, although in minute quantity, is yet sufficient to produce the free hydrochloric acid required in the formation of hæmin, especially as, up to a certain point, the addition of sodium-chloride will increase the number of crystals formed, as well as the ease of their formation. In the production, according to the above described method, of hydriodate and hydrobromate, one endeavoured to eliminate two possible sources of fallacy. It might be suggested—firstly, that the crystals formed might have been hæmin-crystals proper, the iodide or bromide not having entered at all into combination, since the dried blood contains, as above mentioned, minute traces of sodium-chloride; or, secondly, that the salts, whatever they were, might really have, merely by acting catalytically, determined the crystallisation of the acid hæmatin, without entering into combination at all.

As regards the first suggestion, it should be stated that the ease with which large numbers of crystals were obtained when one of the salts Nacl, Kl, or K Br was present, was much greater than if one of the salts had not been added, and that one was able to obtain comparatively few crystals without one of the salts; but, in addition, numerous experiments were made with carefully prepared and pure hæmoglobin-crystals from rats' blood, and others with hæmoglobin from guinea-pigs' blood. Thus (*a*) some dried hæmoglobin was placed on a clean slide, a cover-glass placed over it, and the interval between the cover-glass and the slide was filled up with glacial acetic acid by means of a capillary pipette; the mixture was then gently heated to dryness, and no crystals of any sort were obtained. This was repeated many times, and only in one case, when there was a considerable quantity of hæmoglobin used in a watch-glass, did any crystals appear. In that case, a very few crystals were certainly seen, indicating either that the hæmoglobin was not absolutely pure, or that a minute quantity of salt had been accidentally introduced. (*b*) Some hæmoglobin, prepared in the same manner, was slightly damped with a small drop of dilute saline solution (.75 per cent. sodium-choride), and treated in the same way with glacial acetic acid. Abundant crystals of hæmin were found after the mixture had been gradually evaporated over a spirit-lamp.

[1] The grant was made in 1884, but, as it was desired to repeat some experiments before sending in a report, the grant was renewed in 1885. A short account of some preliminary experiments appeared in the *Journal of Physiology*, No. 4. vol. v.

[2] The original report of his observations I have been unable to find. This account is from the French translation of Hoppe-Seyler.

c. Experiments were next made in a manner similar to *b*, but instead of sodium chloride, potassium iodide was used, with the speedy and certain production of iodide crystals, and, in like manner (*d*), with potasssium bromide, with formation of bromide compound.

Next, as regards the second possible source of fallacy, that the salts acted catalytically. If this had been the case, it would be highly probable that other salts would also have a similar effect in determining the crystallisation. The result of my experiments on this point have negatived any such possibility. The before-mentioned M. Cazeneuve was unable to obtain crystals with hydrofluoric, hydrocyanic, sulphuric, tartaric, citric, oxalic, and other acids, and my own observations, made quite independently, and without knowledge that the investigation had been previously undertaken, confirm his statements.

The next step was to obtain the compounds in large amount, so as to be able to subject them to spectroscopic and other examination. This was a much more difficult operation. In the first place, it became necessary to obtain hæmatin as pure as possible. In order to prepare this substance, nearly every method described in the various text-books of physiological chemistry, etc., was tried. Doubtless, in the hands of the original experimenters, the methods have been successful, but I confess that, according to my experience, after trying them, they appear, almost without exception, to be uncertain and tedious.

In the *Journal of Physiology*, vol. vi, No. 2, however, McMunn describes a new method, certainly much simpler and more efficacious, in my opinion, than those hitherto described. Following his directions, therefore, a very large amount of clot from the blood of two bullocks, was carefully extracted with pure rectified spirit, containing about 6 per cent. of pure redistilled sulphuric acid, and the extract was filtered. This solution was then diluted with distilled water to twice its bulk, and shaken up with pure chloroform, the chloroform becoming at once of a deep reddish brown colour, and separating from the cloudy residue which contains the proteids and other foreign matters, by subsiding to the bottom of the vessel. The chloroform solution of acid hæmatin was then readily removed by means of a separating funnel, and filtered. It was then washed several times until almost free from acid, and a portion of the solution was then allowed to evaporate in the incubator at 40° Cent., and the residue is a dark brown pigment, which is almost pure hæmatin. McMunn believes that it is not entirely pure, as its solubility differs from that of hæmatin as usually described, and the readiness with which it allows itself to be reduced with ammonium sulphide, shows that some proteid is clinging to it. Therefore, still following his method, another portion of the chloroform solution was allowed to stand, and the granular deposit which separated was examined. It did not, however, appear to me to be crystalline, as described by McMunn, but amorphous. With these pigments, namely, the impure hæmatin and the pure hæmatin which had separated from the chloroform solution, attempts were made to procure crystalline hæmin and its allies, with varying success. The compounds appeared to form in all cases, but often without the characteristic appearance of the crystals. The impure hæmatin formed crystals certainly better than the pure. The method adopted in each case was to add some crystals of common salt or of iodide or bromide of potassium, to the hæmatin, in chloroform solution, and then an excess of glacial acetic acid; to raise almost to boiling for a few minutes; and then, on cooling, a bluish black deposit, which was formed was the impure compound of hydrochlorate, hydriodate, or hydrobromate respectively. On washing with water, alcohol, and ether, they may be freed from the adhering salts, and other possible impurities.

All of these salts are very insoluble in ordinary menstrua. Hæmin being (Gamgee, *loc. cit.*, p. 116) insoluble in water, alcohol, ether, chloroform, and in cold dilute acetic and hydrochloric acids; it is, however, soluble in caustic alkalies, etc. The allied compounds appear to exhibit similar solubilities. On contrasting two solutions, one of hæmin and the other of the iodine compound, in diluted caustic alkali, and examining with a differential spectroscope, it was impossible to discover any difference in their absorption spectra. They both exhibited a broad, but somewhat indefinite absorption form, and including the extreme right of the red, almost to the green, or, to put it according to some definite scale, and taking that adopted in Gamgee's book, extending from 61 to 57. It will be noticed that this band corresponds very nearly with that of alkaline hæmatin in alkaline solution, and it is certainly a question as to whether the band described is the band of hæmin or its allies, or whether it does not indicate that the compounds have been broken up, when apparently only dissolved in the alkaline-solution, just as they are broken up by acids, etc. There seems considerable probability in this view, but it is only fair to add that Mr. Lapraick, F.C.S., who has worked at the spectrum of hæmin with much care, holds that the absorption band is that of the new compound, and not of alkaline hæmatin. As it appears likely that each of those who have worked at this subject find a method of preparing hæmin in quantity which they prefer above all others, one may be allowed to add what, in our hands, we have found an easy and sure way of preparing hæmin, which, we believe, has not been hitherto described.

A clot of blood, entirely free from serum, is carefully extracted with pure rectified spirit, to which pure redistilled sulphuric acid has been added to the extent of 4 or 5 per cent. The solution is then set aside and filtered, and to it rather more than its own bulk of distilled water is added; and the solution, which becomes at once cloudy, is thoroughly shaken. To it is added half its bulk of pure ether, of specific gravity .717, and the etherial solution of acid hæmatin is separated by decantation. To the etherial solution is added a very small quantity—about one-hundredth—of solid sodium-chloride, and half its bulk of glacial acetic acid. Evaporation is done at a low temperature, until the whole of the ether has been removed. The solution is then briskly boiled for two to five minutes, and set aside to cool. When dry, the deposit, which is almost pure hæmin, may be washed in water, then in alcohol, and finally in ether.

In forming either of these compounds—namely, the hydrochlorate, the hydriodate, and the hydrobromate—it seemed to be certainly best to allow the gas which it is wished to combine with hæmatin, to come into contact therewith in a nascent state; and so, in the above methods, it has been found certainly more satisfactory to use the salt together with the glacial acid, rather than to follow Cazeneuve and lead the gas into ether containing hæmatin in suspension.

It will be seen from the above that there is distinct evidence—1, that the iodine and bromine salts of hæmatin allied to hæmin exist as crystalline bodies; 2, that they may be prepared directly from blood, from hæmoglobin, or from slightly acid hæmatin; 3, that, in physical and spectroscopic properties, they very closely resemble hæmin; 4, that there is no evidence at present of the existence of compounds of hæmatin with other acids.

It is of interest to add, in conclusion, that in no case were crystals obtained from acid solutions of hæmatin alone, without the addition of one of the salts mentioned above, casting additional improbability upon the idea that hæmin is merely crystalline acid-hæmatin.

This does not correspond with the experience of McMunn (*loc. cit.*), who found crystals closely resembling hæmin in solutions of impure acid hæmatin. He believes that it shows that hydrochloric acid is not necessary for the formation of crystals bearing a strong resemblance to those of hæmin.

REPORT ON
GLUTEN AND THE PROTEIDS OF FLOUR.

By SIDNEY MARTIN, M.D.Lond., B.Sc., M.R.C.P.,
Fellow of University College, London (from the Physiological Laboratory, University College).

THE object of the research, which has occupied me for the last two years, has been the investigation of the proteid bodies occurring in the cereals, wheat, rye, and barley. In this report, however, I will confine my remarks to wheaten flour, leaving the discussion of the other cereals to the full description of my results, which will be published shortly.

The utility of such an investigation as the present is obvious, when it is considered that, since 1872, but little has been published on the subject; and Ritthausen's results, published at that date, have not been accepted by everyone.

The experiments now recorded refer only to the best Hungarian flour—a flour rich in gluten, and, in the language of scientific agriculturists, "highly elaborated."

The preparation of gluten from flour by washing with water is a familiar operation, but, unless performed *secundum artem*, it may fail. The best way to get the most gluten is to make the flour into a thick sticky mass with water, at a temperature of about 30° C.; then to place the mass in a muslin bag, and begin the washing in the warm water very carefully. After a few minutes, the process may be rapidly completed under a tap with running water. If a large quantity of water be quickly added to flour, very little gluten can be separated; and if the temperature of the water be low (2° C.), no gluten is obtained except where the warm hands have held the muslin bag.

[2] "The solution of hæmin in hydrochloric acid giving no characteristic spectrum." T. Burdon Sanderson, *Handbook for the Physiological Laboratory*, p. 187, 20.

These results are suggestive, but I must postpone their discussion for the time.

I have analysed the gluten obtained in the manner described above, and investigated the water used in washing the flour.

1. The water is found to contain two proteids, a globulin, and an albumose (which was at one time called vegetable peptone); also dextrine and the soluble salts of the flour.

2. *Gluten.*—It is necessary to premise my remarks on the results I have obtained with the statement that Ritthausen had described gluten as consisting of two groups of proteid bodies, which could be separated by treating it with 80 per cent. alcohol. The part soluble in alcohol consisted of three proteids—gliadin (vegetable gelatin), mucedin (vegetable mucin), and gluten-fibrin. The part insoluble in alcohol was gluten-casein. Ritthausen, however, has not described reactions peculiar to these bodies sufficiently distinctive to warrant him in considering them as different; the bodies soluble in alcohol varying chiefly in their different degrees of solubility. Solubility, however, is not the only character which must be considered in determining the distinctiveness of proteid bodies. The following scheme shows what, according to our present knowledge, is required to be known before the position and relations of a proteid body can be settled.

The proteid must be tested as to its—

1. *Solubility* in (*a*) distilled water, cold or boiling; (*b*) saline solutions, from 2 to 15 per cent. Na Cl.

2. *Precipitation* (1) in a coagulated form from solution, by heat and the salts of most heavy metals; (2) in an uncoagulated form by saturation with neutral salts in acid or neutral media. The salts used are ammonium sulphate, sodium chloride, magnesium sulphate, and sodio-magnesium sulphate; (3) in an uncoagulated form by a large excess of alcohol, and subsequent coagulation by the reagent.

3. The formation of *albuminates* (derived albumens) by the action of dilute acids and alkalis (0.2 per cent.); as tested by the solubility of the proteid in these reagents, and their subsequent complete precipitation by neutralisation and re-solution on adding more acid or alkali.

4. The formation of a *true peptone*, by digestion with pepsin or trypsin, and the nutritive value of such peptone.

This method of study was applied to the investigation of gluten. Gluten, after washing in running water for some hours, and then in distilled water, has the following properties:—

Solubility.—It is quite insoluble in cold distilled water, and in 10 to 15 per cent. Na Cl solution. It partly dissolves in alcohol (76 to 80 per cent.), and in boiling distilled water. Both these extracts contain one and the same body. The body dissolved by alcohol was insoluble in cold, but soluble in boiling, distilled water, being precipitated on cooling. It was soluble in dilute acids and alkalis, and gave, with copper sulphate and potash, the violet pink reaction common to albumoses and peptones. The body extracted from gluten by boiling water gave the same reactions. These reactions indicate that the body belongs to the class of albumoses, the vegetable varieties of which I have called phytalbumoses, and have discussed elsewhere.[1] It, however differs from the ordinary albumose, in being insoluble in cold water, or in saline solutions; it may, therefore, be called *Insoluble Phytalbumose.*

This insoluble albumose corresponds to the three bodies described by Ritthausen—gliadin, mucedin, and gluten-fibrin; and, having carefully repeated his experiments by exactly his methods, I have failed to find evidence of the presence of any other proteid body than this insoluble albumose in the alcoholic extract of gluten. This is by no means an unimportant point, since if the gliadin and mucedin reacted like the animal varieties (and their name suggests such reactions), their presence would detract from the nutritive value of the proteids of gluten; for gelatin and mucin do not sustain the body-weight when given as foods. The insoluble albumose is but a variety of native proteid, and is readily changed into a true peptone.

The residue of gluten, after extraction with alcohol, is uncoagulated proteid, if the alcohol has not been allowed to act on it for too long a period. It gives the other reactions of gluten mentioned below. It may be called "gluten-fibrin."

2. *Action of Heat on Gluten.*—Boiling-water, besides dissolving out the insoluble albuminose, coagulates the residue—gluten-fibrin.

3. *Formation of Albuminates from Gluten.* — Gluten dissolves almost completely in dilute acid (0.2 per cent. HCl), and dilute alkali (0.2 per cent. KHO), leaving a small residue of fat. The solution gives a copious precipitate on neutralisation; but the supernatant liquid still contains a quantity of proteid, which is the dissolved insoluble albumose. The whole of the dissolved gluten-fibrin is re-precipitated by neutralisation—that is, it is wholly converted into an albuminate.

4. Gluten-fibrin and the insoluble albumose are readily digested by pepsin and trypsin, yielding a true peptone.

The correctness of the hypothesis that gluten is an artificial product formed by the action of water on the proteids in flour, can be determined by a comparison of the composition of gluten with the composition of the proteids in flour. The results obtained in this direction I can, in this report, only state briefly.

Does flour contain gluten-fibrin? Does it contain insoluble phytalbumose? The first question cannot be answered directly; the second is answered by extracting flour with 76 to 80 per cent. alcohol. This ought to contain the insoluble albumose if it were present as such in the flour, but it does not contain it; it extracts only fat. On the other hand, insoluble albumose is extracted in quantity by alcohol if the flour be first treated with water, and the water removed by filtration. Insoluble albumose is not present, therefore, as such, in flour.

Before proceeding to mention its precursor, it will be well to state that 10 to 15 per cent. Na Cl solution extracts from flour a large quantity of globulin and of albumose. This globulin is of the myosin type, coagulating between 55° and 60° Cent., and precipitated by saturation with sodium chloride and magnesium sulphate. Both the globulin and albumose are present in a much smaller quantity in the watery extract of flour. The direction of the evidence is to show that the insoluble albumose is formed from the soluble. Moreover, I think that the globulin is transformed into the gluten-fibrin, for I have been able to obtain from the globulin in solution a body having the same reactions as the gluten-fibrin. What I consider, therefore, to be the process of the formation of gluten may be stated in the following scheme:

$$\text{Gluten} = \begin{cases} \text{Gluten-fibrin—} & \text{precursor, globulin} \\ \text{Insoluble albumose—} & \text{,, soluble albumose.} \end{cases}$$

As to the real nature of this transformation, whether it is of the nature of a ferment-coagulation (as in blood-fibrin) or not, I am at present uncertain. The amount of gluten obtained from flour at different temperatures seems to indicate a solution of the problem.

[1] The Nature of Papain, and its Action on Vegetable Proteid, *Journ. Phys.*, vol. vi. See also a paper by Mr. J. R. Green, in *Proc. Roy. Soc.*, 1886: Proteid Substances in Latex of Plants.

REPORT ON THE FATE OF EXTRAVASATED BLOOD: AN EXPERIMENTAL RESEARCH.

By WILLIAM HUNTER, M.B.Edin.,
From the Pathological Laboratory, Leipsig.

The object of research was primarily to determine the share taken by the liver, the spleen, and the bone marrow, in the disposal of extravasated blood. The method of research was the transfusion of large quantities of blood into the peritoneal cavity, the blood being, in all cases, derived from an animal of the same species. The animals used were the rabbit and dog.

I. *Local Fate.*—The part taken by cells in the local changes going on around extravasated blood is of the greatest importance; the cells being of two kinds—those of leucocyte, and those of connective tissue origin.

2. The formation of blood-pigment from the red blood-corpuscles is mainly a "cellular" process, being effected through the agency of cells, either by enclosure of the corpuscles bodily within them, or by disintegration of the red corpuscles and then enclosure of their fragments.

3. In the process of so-called "organisation" of blood-clot, both varieties of cells play an important part; but, while both leucocytes and connective tissue-cells are concerned in the disintegration of the red corpuscles, the former, in addition, effecting the removal of the *débris* from the seat of extravasation, the connective tissue cells alone are concerned in the process of formation of fibrous tissue by which ultimately the clot becomes replaced.

II. *Absorption.*—4. The absorption of extravasated blood applies not only to the serum of the blood, but also to the great majority of the red corpuscles which remain unentangled amidst coagula or the surrounding tissues.

5. This absorption is extremely rapid, both from the subcutaneous tissues, but especially from the larger serous cavities.

6. In the case of the peritoneal cavity, the absorption of the serum and red blood-corpuscles is effected almost entirely through the lymphatics of the diaphragm.

7. Under such circumstances, the increase in the number of corpuscles within the circulation is observable one hour after injection, and steadily rises till it reaches a maximum about the second or third day, the time varying according to the quantity injected.

8. Extravasation *per se* does not affect the vitality of the red blood-corpuscles; if absorbed back into the circulation within a day or two, they continue to live as before.

9. Their longest duration of life under such circumstances (in the rabbit) varies from two to four weeks, this duration applying naturally to only a few of them.

10. The probable life-duration of the red blood-corpuscle in man is about three weeks.

III. *Ultimate Fate of the absorbed Blood-corpuscles.*—11. The three great seats of blood-destruction within the body, under pathological as under physiological conditions, are: The liver, the spleen, and the bone-marrow.

12. The nature of the process of destruction in the liver, differs essentially from that in the spleen and bone-marrow.

13. In the latter, the process of blood-destruction is mainly a cellular one, comparable in all respects with, although much more rapid and complete than, the similar processes taking place locally at the seat of extravasation: in the former, the destruction is much more rapid than in the spleen and bone-marrow.

14. After increased destruction of blood-corpuscles within the body, the local evidences obtainable are—in the case of the liver, increased richness of its substance in iron and the presence of granules containing free iron within the liver-cells; in the case of the spleen and bone-marrow, increase in the amount of pigment containing free iron found within these organs.

15. In health, a definite relation is maintained between the amount of blood-destruction which takes place in the liver on the one hand, and in the spleen and bone-marrow on the other.

16. Any disturbance of this relation on the part of the liver is of much greater consequence than on the part of the spleen or bone-marrow.

17. The former is, in all probability, the pathological change which lies at the root of progressive pernicious anæmia; as the latter is the probable cause of the anæmia of leucocythæmia.

18. The rapidity with which blood-corpuscles introduced into the circulation become destroyed is very great, a number equivalent to about 4 or 5 per cent. of the animal's own blood being destroyed daily.

19. The small quantity of blood transfusible into the organism in the case of man is therefore entirely removed from the body in a few days at most, probably not longer than three or four.

20. Transfusion of blood in the human subject, in cases of pernicious anæmia, with the object of increasing the number of corpuscles, is devoid of all physiological basis, and is simply adding fuel to the flame, since the fault in this disease is not one of defective formation of blood-corpuscles, but one of excessive destruction of those already present.

REPORT ON
HÆMOGLOBIN AND METHÆMOGLOBIN CRYSTALS

By W. D. HALLIBURTON, M.D., B.Sc., M.R.C.P.,
Assistant Professor of Physiology, University College London.
(From the Physiological Laboratory, University College, London.)

THE hæmoglobin crystals that can be obtained from the blood of various animals have been described as occurring in no less than five of the six crystallographic systems. Subsequent observers have shown that this number can be reduced to two; the blood-crystals of most animals belong to the rhombic, and in three rodent animals the crystals have been described as belonging to the hexagonal system.

The research, of which the following is an abstract, and for which the necessary funds were furnished by a grant from the British Medical Association, was originally undertaken at the suggestion of Professor E. Ray Lankester. It was directed to determine: first, whether the six-sided crystals of these rodents really belonged to the hexagonal system; and secondly, if possible, to find an explanation of this difference in crystalline form, while in its other chief properties hæmoglobin is universally the same.

Incidentally, I have also examined the hæmoglobin crystals of some animals in which no observations have hitherto been published. My friend, Mr. Bedford, kindly kept for me tubes of the blood of these animals obtained immediately after death at the Zoological Gardens. I was thus enabled to observe the hæmoglobin crystals of the opossum, kangaroo, *belideus breviceps* (a marsupial), seal, bear, *hydroneys leucogaster* (white bellied beaver rat), common water rat; and *sus leucomystax* (white whiskered swine); in all of these the crystals followed the usual rule, and were rhombic prisms.

The following gives, briefly, the results obtained from experiments performed in the investigation of the two points mentioned above.

The three animals, in which the hæmoglobin is stated to crystallise in six-sided plates by previous observers, are the mouse, hamster, and squirrel.

Hamster's blood has not been examined in this research; the crystalline form of mouse's hæmoglobin was found to be rhombic needles; and observations on squirrel's hæmoglobin showed that it crystallised in six-sided plates.

The animals, the blood of which has been chiefly used in the following experiments, are the rat and guinea-pig as types of animals whose hæmoglobin crystals are rhombic prisms and tetrahedra respectively, and the squirrel as the type of those in whom the crystals obtained are six-sided.

Examination by polarised light of the squirrel's crystals shewed that they remained dark in all positions when placed between crossed Nicols, in the dark field of the polarising microscope. This is in favour of their being true hexagons which belong to the optical divisions of crystals known as uniaxal, instead of their being rhombic plates with "hexagonal habit" (such as copper-glance crystals in the mineral kingdom), or twins composed of three adjacent parallelograms or six triangles, which crystals are optically biaxal. Examination of the crystals in convergent polarised light yielded negative results; on account of their small size and extreme tenuity they showed neither rings nor cross. The diagnostic shape of these interference figures could not on this account be used as a confirmatory test as to which optical divisions of crystals they belonged.

Experiments were then instituted to determine whether the difference in crystalline form be due to some agency in the blood external to the hæmoglobin, or to some property inherent in the hæmoglobin itself. Crystallising the hæmoglobin of one animal from the serum of another yielded negative results; squirrel's hæmoglobin remained hexagonal, rat's and guinea pig's rhombic prisms and tetrahedra respectively, whatever the serum in which they had been dissolved. A similar result followed crystallisation from a fluid consisting of serum *plus* the dissolved stromata of the corpuscles of some other animal. This was obtained by adding to the blood one-sixteenth of its volume of ether, and letting it stand; crystals of hæmoglobin form and are filtered off; and the ether is then evaporated from the filtrate which consists of serum with the stromata of the corpuscles dissolved in it. So far, these experiments show that the difference of crystalline form is due to some inherent quality of the hæmoglobin itself.

Another set of experiments was performed, with the object of breaking down the hexagonal constitution of the hæmoglobin of squirrel's blood. The first method tried was driving off the water of crystallisation; and, on adding water again, to watch the crystals that formed. This method was impracticable, for a temperature sufficient to drive off the water of crystallisation, even in a Torricellian vacuum, was also sufficient to so decompose the hæmoglobin that no crystals could be subsequently obtained from it.

The next method adopted was to convert the hæmoglobin into methæmoglobin, then by reducing agents to form once more hæmoglobin, and to obtain crystals of this. So far, however, the reducing agents used have hindered the formation of crystals.

The third and simplest method was to repeatedly recrystallise the hæmoglobin, when it was found that the crystals formed were no longer six-sided, but a mixture of rhombic needles and tetrahedra. The reverse experiment of mixing together the blood of the rat and guinea-pig, or of solutions of the pure hæmoglobin of those animals, and examining the crystals that formed, showed that they were in shape rhombic crystals with hexagonal habit, no needles or tetrahedra being present.

It, therefore, seems evident that the difference in crystalline form is either a case of dimorphism, or, more probably, dependent on the varying amount of water of crystallisation present (Hoppe-Seyler), or, in other words, that different hydrates of oxyhæmoglobin exist. This would account, also, for the different solubilities of the hæmoglobin of different animals. The reason, however, why hæmoglobin should unite with different amounts of water does not as yet appear, but some of the above experiments show that hæmoglobin will crystallise in a form other than that in which it usually does. The crucial experiment as to whether the water of crystallisation in these cases is different, has not as yet been tried.

In connection with the methæmoglobin experiments mentioned above, it may be mentioned that a simple method of preparing methæmoglobin crystals is to shake a few cubic centimètres of defibrinated blood with a few drops of nitrite of amyl in a test-tube for about a minute. A drop of the mahogany-coloured liquid so formed, placed on a slide, and covered, yields in a few seconds an abundant crop of crystals. In the guinea-pig, these are tetrahedra; in the squirrel and rat, they have the same form, namely, a mixture of hexagons, which are dark between crossed Nicols, and rhombic prisms, the former greatly predominating.

A NOTE ON LANOLIN.

By PROFESSOR OSCAR LIEBREICH,
University of Berlin.

In my Observations on the Practical Use of Lanolin (JOURNAL, February 13th), I have given a series of prescriptions for the application of lanolin. The lanolin-fat which I had then at my disposal contained the not readily fusible cholesterine-ethers, which oppose a certain resistance when rubbed in on the skin. Therefore, I had proposed to add 10 per cent. of fat to the ointments. The lanolinum purissimum now produced has exactly the consistency which is necessary for ointments; it does not require the addition of fat. I believe this innovation of importance, because it overcomes the just objection that the ointments decompose when kept for some time. In this way I have preserved unguentum diachylon for a good while, without decomposition.

Even for massage, this lanolinum purissimum is very well qualified. Dr. Ever, from Berlin, directed the attention to the fact that, in applying vaseline and petroleum-fats, or ordinary glycerine-fats, the subsequent washing with soap, and even with warm water, which is necessary when using these substances, is hurtful. Especially with rheumatic affections, great care is required not to irritate the skin by water after the massage, which might delay the cure, or even give occasion to new rheumatic affections. In applying lanolin, it is only required to wipe the rubbed places of the skin by a dry cloth, thus preventing it from greasing the parts.

As I have seen by the experiments of Professor Smith (BRITISH MEDICAL JOURNAL, No. 1328, June 12th, 1886), that also in England favourable results have been obtained by using lanolin, I hasten to bring the above-mentioned facts to notice, in order that the recipes indicated by me may now be prescribed and applied without fat.

SURGICAL MEMORANDA.

IMPERFORATE RECTUM IN AN INFANT: LITTRE'S OPERATION.

ON March 16th, I was shown a very small, weakly, male child, three days old, whose bowels had not acted since birth. There was no sign of an anus, only a slight depression where it ought to have been. The following morning, I tried to find the gut through an opening in the perinæum, but failed; and, on the evening of the second day afterwards (the parents having, in the meantime, refused to have anything further done), the child being still alive, but the abdomen greatly swollen and discoloured, I made an artificial anus in the left groin by Littre's method. On opening the peritoneum, a loop of small intestine first presented, which was pushed back, and the large one felt for, and hooked up with the finger, and fixed to the wound by Amussat's process. With the exception of a little trouble in keeping the angles of the wound together, through the movements of the child and clumsy handling on the part of the mother, the whole healed without any particular drawback—the perinæal wound in a few days. The anus acted perfectly, and the child got on well; until, towards the end of April, when it caught whooping-cough, and died, May 1st, in a fit. On April 19th, the perinæal wound was noticed to be opening, and fæcal matter coming through; and from that day the bowels acted regularly through it, and the natural anus became more formed and drawn up.

At the *post mortem* examination, the opening in the groin was found to be in the sigmoid flexure; the bowel was firmly united to the skin, and everything completely healed. In the perinæum, the gut was within half an inch of the surface, continuous with the opening, and the natural anus almost completely formed.

This case, and others recently published, suggest two practical points: first, to do Littre's operation first, and restore the natural anus, if practicable, afterwards; secondly, to use harelip pins in the angles of the wound, to prevent the stitches from cutting out through the movements of the abdominal walls.

T. HALL REDWOOD, M.A., M.D., Rhymney.

THERAPEUTIC MEMORANDA.

TREATMENT OF A FORM OF DIARRHŒA IN CHILDREN.

THERE is a form of diarrhœa in children, usually occurring after weaning, and from that period to four or five years of age, which is characterised by the most horrible offensiveness of the motions. This is so marked, that it is generally at once mentioned by the parents. It is commonly met with in summer, but is not strictly what is known as infantile diarrhœa, in which disease the stools are sour, but not necessarily fœtid. Probably this form of diarrhœa differs from the diarrhœa of younger infants, in being caused by the growth of the ordinary bacteria of putrefaction. It is not amenable to treatment by any astringent, nor has any alteration of diet much effect upon it.

It may, however, be successfully treated by disinfecting the bowel contents by means of salicylate of iron, as in the following prescription, which is suitable for a child two years of age. Sulphate of iron ℈i; salicylate of soda ℈i; glycerine ℥iij; water to three ounces. The iron and the salicylate should be dissolved separately, and the solutions mixed. The colour is darker than port wine, and the taste not unpleasant. One teaspoonful must be given every hour, until the stools become well blackened, which happens in about twenty-four hours; or a larger dose may be administered at longer intervals. The medicine should then be given every three or four hours, and occasionally a small dose of castor-oil, to clear the bowels well out, and to get the secondary constipating effect of the oil.

I have employed this mode of treatment for many years. It was one result of a long series of microscopic observations upon the action of reagents upon the bacteria found in putrefying animal fluids, which I read before the Leeds and West Riding Medico-Chirurgical Society eleven years ago. The addition of the salicylic acid to the iron I made more recently.

In hospital practice, and amongst the poor, it is not so successful as it would be if it were possible to remove the child from the family living room, the air of which is usually very impure, and is made worse by the smells incidental to cooking, and the presence of a sink.

JAMES BRAITHWAITE, M.D., Leeds.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The annual general meeting of this Association will be held in the rooms of the Medical Society, 11, Chandos Street, Cavendish Square, London, on Monday, August 9th, under the Presidency of G. H. Savage, M.D. The meeting of the Council will be held at 10.30 A.M.; the general meeting, morning, 11 A.M.; afternoon, 2 P.M. *Agenda:* Morning meeting: 1. Dr. Eames will resign the chair; 2. Reading of the minutes of last annual meeting; 3. Statement of accounts; 4. Election of officers and council; 5. Fixing the place of next annual meeting; 6. Election of new members; 7. Election of honorary and corresponding members; 8. Reports of Committees, etc. Afternoon meeting: The President's address. *To be proposed as Honorary Members:* M. Théophile Roussel, M.D., Paris, Sénateur; Dr. Ramaer, Haarlem, Inspector of Asylums; Dr. Godding, Medical Superintendent of the Government Hospital for the Insane, Washington. *As Corresponding Members:* M. Jules Morel, M.D., Ghent; M. Victor Parant, M.D., Toulouse. The Association dinner will take plate at "The Ship," Greenwich, at 7 P.M. The following gentlemen have been proposed as officers and other members of council of the Association for the year 1886-87. *President-Elect:* F. Needham, M.D. *Treasurer:* John H. Paul, M.D. *Editors of Journal:* D. Hack Tuke, M.D., G. H. Savage, M.D. *Auditors:* J. T. Hingston, M.R.C.S., H. Hayes Newington, M.R.C.P. *Honorary Secretaries: for Ireland:* E. M. Courtenay, M.B. *For Scotland:* J. Rutherford, M.D. *General:* H. Rayner, M.D. *Members of Council:* S. Mitchell, M.D., H. T. Pringle, M.D., G. E. Shuttleworth, M.D., H. Sutherland, M.D. *The Retiring Members of Council are:* T. Aitken, H. R. Ley, J. T. Hingston, and H. F. Winslow.

SUTURE OF TENDONS.—M. Peyrot, at a recent meeting of the Paris Surgical Society, read notes of a case of suture under the following circumstances. The tendon of one of the extensor muscles of the hand was cut. M. Peyrot sutured the upper extremity with a fragment of tendon removed from a dog. The fragment did not exfoliate, and the normal movements of the hand were partially regained.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ST. MARY'S HOSPITAL.

CASES ILLUSTRATING THE USES OF URETHAN.

(Under the care of Sir E. H. SIEVEKING.)

[Reported by Mr. C. C. MANIFOLD.]

URETHAN was given in twelve cases, of varied nature, in all of which sleeplessness was a prevailing feature. According to the period of time over which the administration of the drug was extended, these cases may be grouped under three headings.

Group 1. Administration long-continued. CASE I.—M. T., a woman, aged 33, in the fourth month of pregnancy, was admitted on March 7th, suffering from rheumatic fever. For a week previously, she had suffered greatly from loss of sleep, owing to pain in the joints affected. On March 8th, twenty grains of urethan were ordered; she had been very restless before taking it, but fell asleep within twenty minutes after, and had a good night's rest; on the following three nights, she took no urethan; she slept fairly well the first two nights, but, on the third, she had very little sleep; on the following night, as she was complaining of pain in the joints, and was very restless, twenty grains of urethan were given; she fell asleep very quickly, and slept well. At about this time, her temperature went up, and pain in the joints became worse; with the exception of five nights, urethan was given every night, in doses of twenty grains, from March 12th to the end of the month; she nearly always obtained sleep within a short time after taking it, and in spite of the pain she suffered; twice, however, a second dose had to be given, when the first had not been effectual in producing sleep. On March 27th, three doses were given during the night, as the first two were ineffectual; she then speedily fell asleep. On three of the five nights that she passed without taking any urethan, she was able to obtain sleep early in the evening, though she complained that she did not sleep so well all through the night as on the nights she had taken it; on the other two nights, though feeling restless and wakeful, she went without it from some objection on her part; and, on both these nights, slept very badly, not nearly so well as on other nights on which she suffered more pain, and had taken the urethan. Though the drug was given regularly for so long a time, it never seemed to have any bad effects; on some mornings, she felt drowsy, and had a slight headache, but on others she felt quite as usual. On the morning following the night that three doses were given, she felt specially drowsy and very heavy.

CASE II.—R., a man, aged 29, admitted on March 2nd, with pleurisy and bronchitis, had been suffering from sleeplessness for some time, and was in a good deal of pain. On March 4th, fifteen grains of urethan were ordered. Pain soon became easier, and he quickly fell asleep, and slept well all night. The following night he passed without taking any, but he had very little sleep; so, on the night after, fifteen grains were again given, and he slept well; the next two nights he slept well, without taking any urethan. On March 9th, he had a blister ordered; and, as he was very uneasy, fifteen grains of urethan were given, but without effect; in an hour's time, the dose was repeated, and, soon after this, he fell asleep. On March 14th, another blister was applied, and pain kept him awake, the blister smarting severely. Urethan was again given twice; but though after the second dose he obtained some sleep, he had rather a bad night's rest. In this case, urethan seemed to cause heaviness and a drowsy feeling on the following morning. On two mornings (March 5th and 15th), he had a great feeling of nausea; he was, however, taking regularly a mixture containing ipecacuanha, which might account for this, otherwise no unpleasant symptoms were noticed.

CASE III.—Mary F., aged 11, admitted on March 17th, with phthisis, had suffered for a long time from want of sleep, greatly due to cough, which used to bring on dyspnœa and pain in the side. For the first two or three nights after admission, she was given paraldehyde, but did not derive much benefit from it; she seemed rather fanciful, and complained of its disagreeing with her. Another night she was ordered morphine, after which she slept well; but it did not agree with her. On March 13th, urethran was first given. She went to sleep soon after taking it; and, though she woke up several times coughing, she had altogether a better night's rest than usual, though not so good as on the night she took the morphine. The next night she had a morphine-injection, and slept soundly. On March 16th, urethan was ordered again, as on the previous night she had taken nothing, and had passed a very bad night. She fell asleep quickly, and slept well. From this time till the end of March urethan was given nearly every night; it always succeeded admirably in producing sleep within half an hour of taking it. She very rarely had to take a second dose; and, if so, it always had the effect of relieving pain and causing sleep. On the nights she passed without taking any, she found she obtained much less sleep. Usually, the next morning after taking it, she felt drowsy and heavy, which feeling passed off soon. She said she felt rather as if she had been indulging too freely in alcohol on the previous night; otherwise, no bad effects were noticed.

Group 2. Occasional Administration. CASE I.—A. P., a female, aged 40, was admitted, suffering from mitral and tricuspid incompetence, with liver greatly enlarged, great pain, and sleeplessness. For two nights she took paraldehyde to relieve the latter, but without much effect. On March 4th, she was given fifteen grains of urethan. She fell asleep very quickly, and slept fairly well—waking, however, several times, but suffered less pain, and altogether passed a better night than usual. On the next night, the dose was repeated; she did not sleep so well, but the ward was disturbed during the night.

CASE II.—M. H., a woman, aged 50, admitted for bronchitis, had suffered from want of sleep for some time previous to admission. She slept very badly on the first two nights after, chiefly on account of constant fits of coughing. Fifteen grains of urethan were given to her on the third night; she fell asleep soon after taking it, and slept soundly till the morning. It was not found necessary to order it again.

CASE III.—Edward P., aged 28, admitted for aortic stenosis and incompetence, had been sleeping very badly for several nights, owing to præcordial uneasiness. Fifteen grains of urethan were ordered on the next night, if required. He was awake till 1 A.M., when the urethan was given; he fell asleep, and slept well.

CASE IV.—C. P., a man, aged 34, suffering from chronic lobar pneumonia, complained, about the eighth week of his illness, of not sleeping well. He was ordered fifteen grains of urethan. He slept well after taking it. There was no occasion to repeat it.

CASE V.—A. B., a man, aged 32, under treatment for aortic incompetence, with angina pectoris, suffered from sleeplessness a good deal. He was ordered twenty grains of urethan on nights that he was unable to obtain sleep. It was given twice; but on each night, after falling asleep, he was awakened by an attack of angina, and did not sleep well afterwards.

CASE VI.—E. M., a woman, aged 40, under treatment for dyspepsia and hysteria, complained of want of sleep. She was ordered bromide of potassium; but as, on the third night, she still kept awake, fifteen grains of urethan were given, and she quickly fell asleep. Next night, urethan alone was given, and with a very good effect.

CASE VII.—Eliza H., aged 38, suffering from exophthalmic goitre, complained of sleeplessness. She was ordered fifteen grains of urethan; she slept well after taking it, better than she had for some time previously. It was not found necessary to repeat it.

Group 3. Rapidly Repeated Doses. CASE I.—Eliza N., aged 44, under treatment for abdominal cancer, had suffered greatly from loss of sleep for two months, on account of most intense pain. Morphine was given for several nights, but always produced severe vomiting, whether given by the mouth or hypodermically. Urethan was then ordered in doses of fifteen grains every hour, till sleep should be obtained. The first dose was given at five in the evening, and was repeated six times at intervals of an hour before she fell asleep, though pain seemed to be slightly relieved. After the fourth dose, she vomited and retched a great deal. At about eleven she fell asleep, and slept till one, when she woke in great pain. Urethan was again repeated three times, but not till the third dose did she fall asleep, when she slept for about two hours. She had altogether rather more sleep than usual, but not so much as on the nights she had taken morphine. Next morning she complained of frontal headache and great nausea, vomited, and retched violently. During the attacks of vomiting, she was prostrated, but, in the intervals, quite recovered her energy, and did not appear to be any the worse. The pulse was full, soft, and 62. For several nights after she took no sleeping draught, but, on the fourth night, she took thirty grains of urethan in a single dose. She had been in great pain all night, and did not take it till 3 A.M. She said the pain became easier, and fell asleep soon after till 6 A.M. No unpleasant symptoms were noticed next day.

Case II.—Stephen B., aged 42, under treatment for cirrhosis of liver, had suffered greatly from want of sleep. Urethan was ordered in doses of fifteen grains every hour till sleep should be obtained. Four doses were given before he fell asleep. He woke again very soon after, and was given another dose, when he again fell asleep, but not for very long. He was in great pain most of the night; he vomited a number of times. This he was often in the habit of doing before admission, and was especially liable to it when, as was the case this night, he slept in the recumbent position, it being usually his habit to sleep sitting up in a chair, to avoid sickness. Next morning he vomited several times, but he very often used to vomit in the morning, though, on this occasion, it was rather more severe than usual, and there was greater nausea. The pulse was full, strong, and 76.

On the whole, in these cases the drug was found to produce sleep without causing bad symptoms or injuriously affecting the secretions.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, July 7th, 1886.

J. B. Potter, M.D., President, in the Chair.

Specimens.—The following specimens were shown. 1. Dr. Daly: Growth removed from Uterus after delivery. 2. Mr. Doran: Malformations of the Fallopian tubes. 3. Dr. Galabin: Growth removed from Cervix Uteri of a girl only 17 years old. 4. Dr. W. S. A. Griffith: Portions of Ovaries resembling Cystic Chorion.

Case of Simultaneous Removal of Ovarian Tumour and Fibro-Myoma of Uterus.—Mr. Knowsley Thornton gave details of the fatal termination of this case, from which the specimens which he showed at the previous meeting were removed.

A Case of Chronic Abscess of the Female Urethra.—This contribution was read by Dr. Herman. The patient, aged 47, had suffered for four years from dysuria, and about two years from dyspareunia, and irritability of bladder, these symptoms gradually increasing in severity during this time. There was a tender swelling between the urethra and the vagina, which burst into the urethra, pus being discharged. Examination with the finger through the dilated urethra, eight days afterwards, showed that the cavity was then about the size of half a walnut, with a soft, ragged friable wall. Its interior was cauterised with nitrate of silver, and it soon contracted and disappeared. Four months afterwards the patient continued quite well. The author thought that there were two possible explanations of the origin of the abscess. 1. That it was the result of chronic congestion of the urethra, such as that described by Sir C. M. Clarke. 2. That it was a suppurating cyst. Abscess from either of these causes was rare. He quoted three cases that he had been able to find recorded. He gave reasons for thinking that the abscess in his case was probably not a suppurated cyst, and that the case was therefore to be classed with those of congestion of the urethra described by Sir C. Clarke and Dr. West.—Dr. Daly said that, in a case of congestion of the female urethra, which had resisted all treatment, the patient being for months confined to bed, and suffering intense pain, he applied iodoform every day along the entire course of the urethra, and obtained a rapid cure. The application was made by filling the groove of a director with iodoform, and when the director was well in the urethra, reversing the direction of the groove. He had to thank Dr. Herman for the suggestion.—Dr. Matthews Duncan had seen many abscesses in the recto-vaginal septum, but he remembered none in the urethro-vaginal septum. Chronic urethritis he had often seen, and also some cases of urethrocele.—Dr. Gervis, though surprised at the statement in Dr. Herman's paper, as to the rarity of the condition described, could certainly only at the moment recall one case. In this the symptoms had been painful micturition without evidence of cystitis and of pain, and swelling and tenderness referred to the vagina. On examination, an abscess was found in the anterior vaginal wall, in association with the urethra; and, the same evening, probably as a result of the examination, which included the passage of a sound into the bladder, it burst into the urethra, and the patient made a good recovery.—Mr. Knowsley Thornton had seen a few cases of the kind. He would raise the question as to whether the condition described by Sir C. Clarke was the same as that for which Dr. Emmet, of New York, had invented a special operation. If so, the condition must be much more common in America than in this country.—Dr. Wylie, of New York, said that the condition for which Emmet's operation was chiefly used, was prolapse of the mucous membrane of the urethra in elderly females.—Mr. Doran referred to an interesting case of a diverticulum in the female urethra, described by Santesson, of Stockholm, and published in the *London Medical Record*, March, 1885. The symptoms were very puzzling until the parts had been explored.—Drs. Galabin and M. Handfield Jones also made remarks, and Dr. Herman replied.

Observations on the Uterine Bruit.—The author, Dr. Champneys, recorded a series of observations on this point, some of which had been already noted in this country, others abroad, and some were related, it was believed, for the first time. The first series included forty-six nearly continuous observations, made at the General Lying-in Hospital, regarding: (1) The Position of the Maximum Intensity before Labour; (2) After the Expulsion of the Placenta; (3) The Presence of Pulsating Arteries felt by the Vagina, and the effect produced on the *Bruit* by their Compression. The *bruit* was heard on the left side in thirty-three cases, and on the right side in one case. It was heard after the expulsion of the placenta in five cases. In all cases when heard after the expulsion of the placenta, its point of greatest intensity had sunk down after delivery. In five cases, a pulsating artery was felt in the vagina, pressure on it affected the *bruit* in one case only. The preponderance of left-sided over right-sided *bruits*, confirmed the view that the *bruit* was produced in the arteries as they reached the uterus, or soon after, for the left cornu of the uterus was anterior to the right (dextral torsion). One observation concerned a case of placenta prævia, in which the *bruit* and the placenta were on the left side. The author analysed Rapin's and Rolter's papers, the latter of which concerned the relation between a uterine *bruit* which was heard, and a thrill which was felt. The author recorded two cases in illustration of the same point, and one instance in which the same observation was made in the case of a fibroid tumour of the uterus, and one in which the necropsy seemed to show that a uterine *bruit* was situated in a large sinus, running over the surface of a fibroid tumour.—Dr. Gervis asked why Dr. Champneys adopted the term "palpable *bruit*" to express the perception of a localised pulsation, and also whether, in the course of his observations, he had found corroborative evidence of Dr. Hick's suggestions as to the effect of the uterine contractions on the characters of the *souffle*.—Dr. Herman thought that the variations in loudness of the murmur, to which Dr. Gervis had referred, were of much importance in its identification. There was no kind of abdominal enlargement in which a murmur, having rhythmical variations in loudness, was heard, excepting that produced by uterine tumours. The presence of such a murmur showed that the tumour was uterine, but did not give any further information as to its nature. The murmur might be, as a rule, louder, and the variations more marked in pregnancy than in fibroids, but he had heard murmurs over some fibroids louder than those on some cases of pregnancy. The murmur was not to be relied upon for the diagnosis between fibroid and pregnancy.—Dr. John Phillips asked if Dr. Champneys had any experience in vaginal stethescopy, and if so, whether it was corroborative of the hypogastric signs. He was aware that there was naturally a certain feeling of aversion to this method of diagnosis, but thought that, if any facts of scientific value could be thus obtained, it might be permissible, or even advisable.—Dr. A. Routh asked how long the uterine *souffle* persisted (1) after labour; (2) after the death of the fœtus in utero. He had seen a case at Charing Cross Hospital where labour had to be induced for uncontrollable vomiting, in which vaginal stethoscopy proved the *souffle* to exist two or three weeks after the presumed death of the fœtus, which was mummified, the *souffle* being inaudible over the abdomen. He had frequently heard the *souffle* through the vagina over the cervix uteri, when it was inaudible over the abdomen; and, so far as his experience went, he had found that, whenever the *souffle* of a pregnant uterus was audible over an abdominal area, it was also audible over the cervix uteri *per vaginam*. In one case of the *souffle* being heard in the abdomen over the site of a uterine fibroid, it was not audible over the cervix uteri. If this distinction of the area of diffusion of the *souffle* of pregnancy and of that of a uterine tumour be trustworthy, it would serve as a material aid in differential diagnosis.—Dr. W. S. A. Griffith thought that the dextro torsion of the uterus, which only occurred to a very limited extent, was by itself insufficient to explain the frequent absence of the uterine *souffle* on the right side. Some other explanation was wanted, which applied equally to the cases in which it was absent on both sides. The great cause of the *bruit* was almost certainly the passage of blood suddenly from a small into a larger channel at the junction of the uterine arteries and sinuses.—Drs. Galabin and M. Handfield Jones also made remarks.—Dr. Champneys, in reply, said that the subject was so large, that he had not attempted a complete study of it. In this sense, his observations were confessedly imperfect. By palpable uterine *bruit*, he meant a *bruit* which was also palpable as a thrill. He was inclined to agree

with Dr. Herman that marked rising in pitch was characteristic of the *souffle* in pregnant uterus rather than in fibroid. He had not used the vaginal stethoscope, as the gain was very questionable, and the objections obvious. He had never observed dicrotism in the *souffle*. The *souffle* was often musical, the various notes forming a sort of chord, and this pointed to their being produced by many vibrating bodies. He could not answer the question as to the exact length of time that the *souffle* was audible after delivery, without referring to his hospital-notes. The entrance of blood from a small into a large cavity was probably the chief cause of the *souffle*, but there were many other sufficient causes, such as the sudden curves in the arteries, the quality of the blood, etc. To eliminate these was difficult.

SOUTH INDIAN BRANCH.

FRIDAY, MARCH 5TH, 1886.

Surgeon-Major J. J. L. RATTON, M.D., in the Chair.

Paralysis of Vocal Cords.—Dr. J. SMYTH related the history of a patient, a Hindu, aged 35, who was admitted on December 25th, 1885, on account of orthopnœa, dysphagia, and emaciation with cyanosis. Difficulty in swallowing had existed for six years, dyspnœa for about nine months. There was slight œdema of the neck and lower extremities; the veins of the arm and the long thoracic veins were prominent. The dyspnœa was distinctly laryngeal and inspiratory; expiration was free. With the laryngscope it was seen that during rest the cords were in apposition, except along their posterior two-thirds; that during inspiration, after the first third of the act, the cords came completely together, and that the width of the aperture of the glottis never exceeded $\frac{1}{12}$ inch. The right pulse was fuller than the left; the dyspnœa became so distressing on the evening of admission, that it was necessary to perform tracheotomy, which was followed by immediate relief. Dysphagia and regurgitation of food persisted, but the patient's health became, in other respects, much improved. Dr. Smyth considered that the diagnosis lay between aneurysm of the transverse, or descending parts of the aortic arch, and enlarged bronchial glands; the former hypothesis appeared to be negatived by the absence of the physical signs of aneurysm which, as the paralysis was bilateral, must have affected the transverse part, or the beginning of the descending part of the arch, and would probably have produced dulness and pressure on the trachea. There was a history of repeated cough, with expectoration and fever, and he considered that most probably the bronchial glands were enlarged.—Dr. RATTON asked whether the possible existence of an abscess had been considered.—Mr. MAITLAND suggested that chloride of calcium, which had been largely used by Dr. Warburton Begbie in the treatment of glandular enlargements, should be administered.—Mr. NAILER suggested that the paralysis might not be secondary to enlargement of glands, but primary and due to syphilis.

Naso-pharyngeal Polypus.—Dr. RATTON described two operations which he had recently performed for large naso-pharyngeal polypi. In the first case he performed Rougé's operation, in which the upper lip is reflected so as to expose the anterior nares; the tumour was then pushed back into the pharynx, the pedicle snipped through, and hæmorrhage checked with perchloride of iron. The wound having healed, the patient left the hospital on the eighth day. In the second case, in which the nasal cavities were not dilated, but the soft palate was pressed forward, the soft palate was divided, the polypus was pulled to one side by a ligature passed through it. The tumour, which grew from the periosteum, was then detached with a guarded blunt-pointed bistoury, and hæmorrhage checked by direct pressure with a sponge. The patient, a boy, aged 12, was discharged in six days. Dr. Ratton pointed out that one or other of the operations described greatly facilitated the removal of naso-pharyngeal polypi.

ACADEMY OF MEDICINE IN IRELAND:

SURGICAL SECTION.

FRIDAY, MAY 21ST, 1886.

Sir CHARLES A. CAMERON, M.D., President, in the Chair.

A Case of Ununited Fracture of the Humerus and a Method of Treatment thereof by Metal Screw-Taps.—Mr. HENRY FITZGIBBON exhibited a brace fitted with drills and screw-taps for the fixation of resected bones, and reported the case which he had successfully operated upon by this method. Mr. T. was admitted into the City of Dublin Hospital, March 13th, 1885, with comminuted fracture of humerus, which would not unite. An operation was performed on November 26th, by means of screw-taps and wire suture, which were removed on the twenty-first day after operation. The patient was exhibited to the Academy with firm union and a useful arm on April 16th. Mr. Fitzgibbon attributed the non-union to the pressure of the comminuted fragment being displaced inwards, so as to cause pressure upon the brachial vessels, depriving the lower fragment of sufficient blood-supply.—Mr. BENNETT admitted that in this case the union was perfect not only as regarded junction of the bones, but also in their apposition and the line of direction of the humerus, so that there was little or no deformity. In mechanical detail, Mr. Fitzgibbon's method offered some advantages; but iron pegs were preferable to silver, as being rigid and efficient, while the silver were flexible.—Mr. WHEELER, having seen the patient before, during, and since the operation, mentioned the result of his observation. In his own practice he observed a noteworthy point which he had not seen recorded in the books; namely, that in fracture of the humerus, where there was much mobility, if the bone united, a great mass of callus was thrown out, and that was always on the inner side.—Mr. O'GRADY said that ununited fractures varied so much in their conditions that no one line of treatment could be laid down. He had used ivory pegs till it was suggested that the pigs from which the material was obtained might have had tuberculosis, and thenceforward he used the plain iron pegs, which were driven by means of the common Archimedean drill with an up and down movement. His drill was that which the late Mr. Hutton once possessed. In the after-treatment he adopted the strictest antiseptic procedure, cleanliness and rest, but without the newly-developed paraphernalia.—Mr. CORLEY said that there were already nineteen different methods for the treatment of ununited fracture, the large number suggesting that none of them could be regarded as perfect. Mr. Fitzgibbons formed the twentieth, which he hoped would be perfect. He approved of the ordinary Archimedean drill.—Mr. M'ARDLE mentioned the advantage of using a steel gimlet, with a thread the size of the screw, as giving a hold, and obviating the detritus which Mr. Fitzgibbon's instrument produced. He had used ivory screws, which became loosened sufficiently to draw out.—Mr. TOBIN considered that it was an interesting question to determine how long would the screw bite in the bone, seeing that it ultimately loosened.—Mr. FRANKS, about a year and a half ago, had himself treated a case of ununited fracture of the humerus. The fracture passed through the neck of the bone below the attachment of the capsular ligament. The case had been wrongly diagnosed as a dislocation, and put into splints. At the end of six weeks, it was sent up from the country to him. He found the lower fragment projecting underneath the skin, which was so extremely thin, that he feared the slightest movement would send the bone through it. Having decided to remove part of the bone, he exposed it by an incision from the shoulder, and he then removed about two inches of the lower fragment. From the upper one, he could take nothing, because it was bound by the capsular ligament. He scraped the bone to revivify it; then, with an ordinary bradawl, he drilled two holes through the head of the bone, passing through the capsular ligament, and two the other way, through the lower fragment, and inserted two tolerably thick silver wires, joining and twisting them. Six months afterwards he removed the wires, which, but for the irritation they caused, he would have let remain. He used more antiseptic precautions than cleanliness and rest. He preferred passing the wires through, and thus joining the ununited bones as a simpler method than using screws. The less the surgeon trusted to complicated methods, and the more he used his fingers, the better.

Electrolysis for the Treatment of Urethral Stricture.—Mr. P. J. HAYES read a paper on the treatment of urethral stricture by electrolysis, the comparatively novel method practised by Drs. Robert Newman, of New York, and S. T. Anderson, of Bloomington. He gave the details of three cases, in which he had himself adopted the method with encouraging results. He strongly advocated the trial of electrolysis, even for the most complicated forms of stricture. It did not at all interfere with the subsequent employment of other measures, minor or serious. Electrolysis was best adapted for the treatment of annular strictures rather limited in length. Having ascertained the situation of the stricture, the tip or exposed metal bulb of an electrode ought, if possible, to be lodged within it; or, if this was impracticable, the tip must be in close contact with the anterior face of the stricture. Then a small galvanic battery was connected by its negative pole with the urethral electrode, whilst the positive might be attached either to a moist sponge electrode, or, better still, to a thin metal plate covered with moistened chamois-leather. The positive electrode would be advantageously applied either to the patient's perinæum, or against the inner side of one thigh. As to the strength of the current to be employed, the patient's own sensations would prove the best guide. The current should be perceived, but it ought not to be pushed to cause pain, nor should the surgeon attempt more than it was needful to effect

at each sitting, using only mild currents, and manipulating the electrode with gentleness, and never pushing it through the stricture, as it accomplished more by being allowed to remain in the stricture than by being caused to quickly traverse it. The sittings might be repeated every ten days, if desired. Cauterising would be produced when strong currents were employed; but, with mild currents, the gradual breaking up of fibroid tissue was effected by a combination of chemical decomposition and vital absorption until but a thin lamella of cicatricial tissue remained to mark the seat of the stricture.—The PRESIDENT, Mr. FITZGIBBON, Mr. TOBIN, Mr. BENNETT, Mr. CORLEY, and Mr. WHEELER, took part in the discussion; and Mr. HAYES replied.

REVIEWS AND NOTICES.

VON ZIEMSSEN'S HANDBOOK OF GENERAL THERAPEUTICS, Vol. v. GENERAL ORTHOPÆDICS, GYMNASTICS, AND MASSAGE; by Professor Dr. FRIEDRICH BUSCH, of Berlin; translated by NOBLE SMITH, F.R.C.S.Ed. HYDRO-THERAPEUTICS; by Dr. W. WINTERNITZ, of Kaltenlentgehen, near Vienna; translated by F. W. ELSNER, Medical Officer to the Peninsular and Oriental Steamship Company, London. London: Smith, Elder, and Co. 1886.

THE first part of this volume, dealing with Orthopædics, Gymnastics, and Massage, commences with a review of gymnastics in the past, from the Olympian games of the Greeks down to the more modern gymnastics of the French, German, and Swedish schools. Considerable attention is said to have been paid to "massage" since 1870; but, as a method of treatment, it may fairly claim a more venerable antiquity, seeing that formal directions were given for its employment many centuries before the Christian era. The author's selection of words to express the male and female operators cannot be altogether approved, either in English or French. "Rebouteur" in French, and "bone-setter" in English, are equivalent expressions, and both convey a meaning quite distinct from that of "masseur." We doubt, too, whether the designation "dames blanches" would be understood except in hydropathic establishments. Again, "shampooing," a word of Indian origin, has nothing, strictly speaking, in common with massage, of which Martial sings:

> Percurrit agili corpus arte tractatrix
> Manumque doctam spargit omnibus membris,

these being the very movements which have since been developed into a special cure by Swedish medical gymnasts.

Due credit is given to Dr. Mezger, of Amsterdam, for his able advocacy of the system, but the directions which follow for anointing the hands prior to the massage are distinctly at variance with the plan advocated by him, according to which the hand used should be soft and dry. The *modus operandi* of employing the various kinds of massage, the *effleurage*, the *pétrissage*, etc., are briefly alluded to, with cautions as to their indiscriminate use.

Of the value of systematic gymnastic exercise in promoting the health and vigour of the race, no doubt can be entertained, and the importance attached to it for military purposes cannot easily be overrated. Its practice in schools is, of course, liable to be accompanied by accidents of more or less gravity, but these must be accepted as an unavoidable risk. *Nil prodest quod non lædere possit idem.*

Orthopædics, taken in the widest sense, is a description of the nature of deformities of the human body, and also the means of redressing them. Such deformities may be brought about by defective formation, or from the effect of weight or traction. In some cases, the mechanism is tolerably simple, while in others it baffles our ingenuity to account for. As a general rule, deformities resulting from defects in first formation are not curable, but all congenital deformities do not arise from this source, and the common congenital club-foot is a good example of an exception.

Deformities of the vertebral column naturally take up a large share of the author's attention. The principal varieties, lordosis, scoliosis, etc., are carefully gone into, and their treatment, by mechanical means and otherwise, is exhaustively discussed. The pernicious effects of certain positions, amusements, and occupations are explained, and "cure by prevention" raised to the dignity of an art. It is obviously of extreme importance that the influence of certain manners or customs, in accentuating any pre-existing disposition to deformity, should be understood, and, consequently, avoided. The nursing of babies, or the carriage of weighty articles habitually on one side, may, like the attitude of violin-playing, start or favour the development of spinal curvature. In their earlier stages, these deformities are peculiarly amenable to treatment by means of proper muscular exercise, excepting, of course, the cases due to intrinsic destructive disease of the vertebræ themselves. A series of woodcuts are furnished to illustrate the plan to be followed in exercising particular muscles, or groups of muscles. The practice of tenotomy, as advocated by Jules Guérin, meets with scant sympathy at the author's hands; and the reasons for its condemnation appear conclusive. The use of the wedge-shaped pieces of cork, worn by girls for the purpose of looking "coquettish," has, on the other hand, been attended with considerable benefit in incipient curvatures, by raising the side of the pelvis corresponding to the convexity of the lumbar curve.

The indications given for the employment of various orthopædic apparatus, in the treatment of spinal curvatures, are very complete; and will be found extremely useful by practitioners called upon to exercise their patience and skill in remedying these distressing distortions. The careful enunciation of the principles which should guide us in their treatment will, moreover, enable the practical surgeon to devise suitable apparatus for particular cases; and this is the more important, since it is obvious that no hard-and-fast rules can be applicable to the varying conditions which may present themselves.

The value of gymnastics and massage, in the treatment of other than orthopædic complaints, is separately considered, and their efficacy, in the relief of certain classes of muscular and joint pains, when judiciously combined, is evidently very great. Lumbago, sciatica, and muscular spasm, together with stiffness and limitation of the movements of joints, and even stuttering and chorea, are all said to be, more or less, amenable to this form of treatment, which has the merit of being always at hand. The beneficial effect of certain exercises, especially rowing with sliding-seats, in the chronic lung-affections, is alluded to; wherever available, it offers a pleasant means of improving the health.

The treatise on Hydro-therapeutics, by Dr. W. WINTERNITZ, covers to some extent the same ground as that in Vol. 4, by Professor Leichtenstern, on Balneotherapeutics, although from a somewhat different point of view. The bibliographical index which precedes the volume and contains references to the literature on the subject, from the time of Hippocrates down to our own day, extends over upwards of thirty-four pages, and serves to show how much this question of "water cure" has occupied men's minds in the past. Public feeling has alternated between unbounded faith and the most uncompromising contempt. The success of the movement, in many instances, was probably due to the peculiar qualities of the promoter or promoters; and, when their influence was withdrawn, the practice fell into disrepute. The discredit, which at other times was the lot of this system of treatment, was largely owing to the fact that it was *exploité* by men whose ignorance of medicine and diagnosis in particular was only equalled by their self-confidence, and science and common sense were only too frequently foreign to its advocacy and its employment. It is a curious fact that during the middle ages—and indeed in our own times to some extent—progress was effected by reverting to plans of treatment long discarded. The only glimpses of rational treatment of disease during the "dark ages," were when some bold spirit broke away from the idle speculations which then occupied the time, and absorbed the energy of the Faculty, and followed the teaching of Hippocrates in its simplicity. Of this teaching, the use of water, internally and externally, formed an essential part. The change was generally welcomed, until on the principle of the *reductio ad absurdum*, it was made to authorise the administration of five pounds of iced water every three hours to the unhappy sufferer, and analogous excesses.

The history of this department is very conscientiously gone into, and is replete with interest. When we see so illustrious a person as Boerhave, gravely declaring *hoc remedium non proponitur nisi in desperatis casibus*, we can only wonder why he came to this conclusion. During the eighteenth century, hydrotherapy made serious strides, it became generally recognised as suitable for "carrying off the tough and sticky humours which take up their abode in the capillaries." On the strength of this revival of popularity a number of individuals, for the most part "humbugging charlatans," as the author, or rather the translator styles them, contrived to obtain notoriety, and one of them —Priessnitz—died worth several millions (of francs?). While in England the utility of cold in the treatment of certain diseases was gradually recognised, and Chapman's spinal ice-bags were introduced, the renowned dermatologist Hebra formulates an emphatic disapproval of these "aquatic sports," as he terms them.

The physiological and therapeutical effects of warm and cold baths, etc., are discussed with an evident desire to place the subject once for all on a scientific basis. Their influence on the circulation, and on nutrition generally, together with the variations of sensibility and reflex nervous phenomena produced by their use under different cir-

cumstances, are thoroughly explained, so far as our present knowledge permits. The benefit to be derived from the more local application of heat and cold is also dealt with. On the whole, the work is a valuable contribution to the study of this department of therapeutics. The translations are well up to the high standard which has hitherto obtained.

This volume, like the others of the same series, is remarkable for its fulness of information, and freshness of treatment. Each volume is complete in itself. The series form a library of invaluable aid to the practitioner, and which has no rival in British literature.

NOTES ON BOOKS.

The Elements of Squad, Company, and Battalion Drill, necessary before commencing Stretcher Exercise, etc. By J. Buckley, Q.M., Medical Staff. (May, Aldershot.)—This is a convenient little handbook, designed principally for the use of young army-surgeons on joining the training depôt at Aldershot, but equally calculated to be of service to all medical officers, whether of the regular or volunteer forces, who desire to become thoroughly educated in Bearer Company drill. In addition to the particular subject of instruction mentioned in the title, the manual contains information on a variety of topics with which it is essential for all surgeons to be acquainted who have to discharge duties in military hospitals, and especially for those who are placed in authority over the subordinate assistants of the Medical Staff Corps. The principal points to be attended to when courts of inquiry are ordered, questions of military law and discipline such as surgeons may have to deal with, and numerous duties which devolve on medical officers while serving with troops, as well in peace time as on active service, outside their strictly professional functions, and which are, therefore, not to be found in the *Code of Medical Regulations of the Army*, are given in a concise form in this little book. We have no doubt it will prove of service for purposes of reference to all surgeons who are engaged in the duties of bearer companies, or other military medical establishments.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

PAPER SPOONS FOR EYE-DROPS.

Most instruments used for placing drops on the eye have their disadvantages. They cost money, the hairs from brushes may be left behind, quills and glass-droppers are dangerous in inexperienced hands, bits of rag are dirty, etc. I have been, for many years, in the habit of directing patients to make their own droppers, by simply cutting a piece of clean paper in the form of a little spoon. These spoons are made in a few seconds, and are costless. A clean spoon may be used every time that drops are used. Being made of soft paper, no harm can be done to the eye.

F. A. A. Smith, M.D., C.M., 4, Anchorgate Terrace, Portsea.

A MIDWIFERY SATCHEL FOR THE SADDLE.

Perhaps a description of a leather case for midwifery instruments and bottles, which I have recently had made for myself, will be of use to some country practitioners who do most of their work on horseback.

The case is made of the best pigskin, and is 15 inches long by 11 inches in circumference; the ends are oval, and it is closed by three straps, and attached to the front of the off side of the saddle by two encircling bands of leather. The contents are as follows: One 3-ounce bottle of chloroform; two 1-ounce bottles (containing ergot and turpentine); one half-ounce bottle of Boujean's solution of ergotin, for subcutaneous injection; a small bottle of Savory and Moore's gelatine discs of morphine; a hypodermic syringe, in case; a pair of probe-pointed scissors; a book of curved needles, with stout silk sutures, a Higginson's syringe, with vaginal pipe; a gum elastic catheter; and a pair of Simpson's long forceps. All the instruments and bottles fit in perfectly, and can be taken out for use as quickly as from the ordinary obstetric bag.

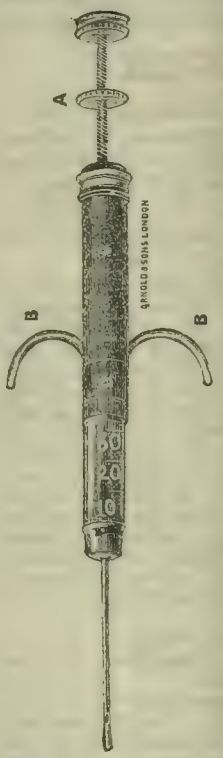
The case was made for me by Mr. Bowden, saddler, Melbourne, near Market Harborough, who is willing to take orders for similar satchels. It is not at all in the way when riding.

George D. Mackintosh, Hallaton, Uppingham.

A PROBE-POINTED SYRINGE FOR THE RADICAL CURE OF HERNIA BY INJECTION.

By C. B. Keetley, F.R.C.S., Senior Surgeon to the West London Hospital.

In my paper on the Radical Cure of Hernia by Injections into the Inguinal Canal, published in the Journal, vol. ii, 1885, page 543, the procedure, after the preliminary incision, was described as follows.



A probe is thrust into the inguinal canal, and a cannula threaded over the probe. The latter is then withdrawn, and the nozzle of a silver-mounted syringe is fixed into the cannula. In this way, the injection is passed into the canal. This plan is easy enough, and can be carried out with appliances already in the possession of most surgeons. But I have sometimes found a little difficulty in withdrawing the cannula and syringe without pulling them apart, as there is only one hand at liberty for the manœuvre. Should the accident in question happen, a portion of the injected fluid inevitably escapes. I therefore recently informed Mr. John Arnold that I wanted a syringe endowed with the following characters: 1, a probe-pointed nozzle; 2, the nozzle to be removable for cleaning purposes, and to be fixed and water-tight when replaced; 3, no screws nor screw-threads, nor angles capable of harbouring dust or dirt; 4, the syringe to be made of glass, graduated in minims, and silver-mounted; 5, a spiral spring to enable the syringe to charge itself automatically.

Mr. Arnold has accordingly produced a pretty little instrument, with all these required features. The nozzle fits to the body of the syringe by means of a bayonet-joint. The whole can be cleaned, aspecticised, and dried with the greatest facility.

With this instrument, the probe and cannula are, of course, superfluous, the probe-pointed nozzle of the syringe being thrust straight on into the canal. I have found it convenient to bend the nozzle to an angle of 30° with the axis of the syringe. With the little screw marked A in the illustration, the exact quantity of injection can be limited.

Guy's Hospital.—The following are the names of the Medallists and Prizemen for the present year, 1886. The Treasurer's Gold Medal for Clinical Medicine: John Wychenford Washbourn; the Treasurer's Gold Medal for Clinical Surgery: Frédéric François Burghard; Gurney Hoare Prize for Clinical Study: Richard Moody-Ward, £25; Beaney Prize for Pathology: John Wychenford Washbourn, £31 10s.; Mackenzie Bacon Prize for Ophthalmoscopy: Sidney Wacher, £10 10s.; Mackenzie Bacon Prize for Nervous Diseases: Edward Wilberforce Goodall, £15; the Burdett Prize for Hygiene: William Henry Bowes, £10; Sands Cox Scholarship: Alfred Parkin, £15; Michael Harris Prize for Anatomy: Alfred Parkin, Robert Devereux Mothersole, equal, prize divided. Fourth Year's Students: Frédéric François Burghard, first prize, £25; Francis Stanhope Hawkins, second prize, £10; Arthur Henry Williams, certificate; Robley Henry John Browne, certificate; William Frederic Clarke, certificate. Third Year's Students: Arthur Edward Poolman, first prize, £25; Ernest Henry Starling, second prize, £10.

Presentation.—Mr. David Davies, the late medical officer of health for the Bristol urban sanitary district, has been publicly presented with a silver salver at a meeting at the offices of the urban sanitary authority, at which the Mayor presided. It bears the following inscription: "Presented to David Davies, M.R.C.S.Eng., L.S.A.Lond., late Medical Officer to the Urban Sanitary Authority of the city and county of Bristol, by magistrates, members of the Town Council, and persons officially connected with him, on his retirement from that office after twenty-one years' service to the city, in which his skill and diligence in the discharge of his important duties have been eminently successful. June, 1886."

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 17th, 1886.

SELF-HELP IN THE MEDICAL PROFESSION.

IT is a relief to turn from the incessant and piteous appeals for charity from medical men who have known better days, and for their unprovided orphans and widows, to the record of the continuing success of the institution which was set on foot less than two years and a half ago, for enabling medical men to make due provision, by moderate annual payments, against periods of sickness, continued disablement, or unforeseen accident. Until this institution was established, no such provision existed for our own or any other profession. It is, therefore, perhaps not remarkable that, in the absence of such machinery, men in the receipt of moderate incomes do not find themselves sufficiently able to put by, or to invest regularly, small annual sums, which by the valuable machinery of association, suffice to guard them against the worst accidents of sickness and disablement. Happily that effort has been successful. The machinery by which it is carried on is, except for the secretarial officer, wholly unpaid, and the whole benefits of accruing surplus are to the credit of the assured, there being no shares or shareholders, no paid agencies, no commmissions, and no directors' fees. The Medical Sickness, Annuity, and Life-Assurance Society, concerning which we publish elsewhere a brief note of the proceedings of its last monthly meeting, is already established on so secure a basis, that no further acquisitions to its members are necesasry to ensure to it a stable success, and to its members not only a promised return, but also the probability of a fair surplus in future years. This it may be hoped will be chiefly used for the purpose of extending the benefits of an institution which it is desirable should be ultimately almost coextensive with the whole number of practising medical men. The rich and prosperous will not stand in need of it; but, as this is not a charitable institution, they, in common with those whom fortune may not favour in the future, will be equally justified in availing themselves of its resources in proportion to their contributions. It provides for periods of sickness and accident, and of temporary or permanent disablement, as well as pensions in old age, and assurance after death. There is no stigma, but, on the contrary, credit, to every man for taking part in a mutual association which has in it nothing of an eleemosynary character, but which is yet so beneficent in its influences, so valuable in its provisions, and so likely to cut at the root of the disastrous calamities which are now so common among medical men, and which lead to much suffering and much begging, and continuous appeals. The total funds of the Society, accumulated in two years and a half, now amount to over £11,000. It is highly gratifying to be able to announce that the management has been so economical as to have amounted to not more than 5 per cent. of the premium income. While, moreover, in view of the intended economy of management, of which the means were carefully provided in the first instance, only 10 per cent. was calculated as the probable expenditure, as against, say, thirty allowed by the Registrar in other Friendly Societies, such as the "Royal Liver;" only half of this expenditure has been incurred. The accumulated saving to the credit of the Society, in this fund alone, amounts already to £1,000. The addition to reserves, during the past year, has amounted to nearly £5,000. At the next annual meeting, which will be held during the meeting of the British Medical Association, at Brighton, in the Town Hall, on Wednesday, August 11th, at 10 A.M., a proposal will be made for still further increasing the benefits of the Society, by adding a fresh table, calculated on the basis which would allow from 50 to 75 per cent. of the annuity premiums to be returned to the representatives of the subscribers to the annuity fund, in the event of death occurring prior to the age of 65.

It is interesting to note that, while the management of this fund has, by its efficiency and economy, been thus far successful on the calculated rates laid down by Mr. Neison in two other societies, which, encouraged by the success of this Association, and in imitation of it, have recently been started with like objects, outside the medical profession, it has been found necessary to impose rates of payment considerably in excess of those adopted by the Medical Sickness Society. Never, perhaps, have the advantages of mutual association, and of the brotherly willingness of medical men to carry on such a society on the principles of mutual help and by unpaid agencies, been more triumphantly successful than in this instance. We anticipate that, as the benefits of this Society become more fully known, and its constitution and operations more thoroughly investigated, it will take a larger hold upon all the members of the profession, and will ultimately become one of the most important, as it is already one of the most valuable and beneficent of the medical institutions, founded by and for the profession in Great Britain. It is satisfactory to add that the success and soundness of the operations of this Society have attracted considerable attention abroad, and that communications have recently been received from France and other countries, from eminent medical men, who propose to make it a basis and model for imitation.

EVOLUTION IN PATHOLOGY.

IT needs no foresight to see that pronounced significance will ere long be attributed to the Darwinian aspects of pathology. There has, perhaps, been some tardiness in applying the all-embracing principles of evolution to phenomena, which fall within the special cognisance of the pathologist; but progress in this direction has been made, and, though slow, it has been sure.

Already in this connection several lines of thought have been taken up; and, carefully followed, they promise results of the greatest interest. Many have been recently recorded in this JOURNAL. It has been suggested that enchondromata of the limbs of man and of many animals are growths homologous with structures which always exist in the selachian fin, and that many other so-called abnormal developments may be regarded as instances of reversion. Darwinism teaches that the developmental history of the individual is an abbreviated history of the development of the race to which the individual

belongs; and the above suggestion concerning the homology of certain enchondromata is one which arises out of a consideration of the supposed ancestral history of man. Regard, too, must be paid to the inter-reactions of incident forces and living things, for such inter-reactions are largely operative in the production of varieties. There are, in fact, two sets of factors—heredity and environment—concerned in the coming into being of new forms of life. And in the coming into being of new diseases, Sir James Paget has pointed out how these factors are to be considered. There is, again, the matter of correlation (correlation of structures and association of functions), to which Darwin drew special attention; and it seems that a knowledge of it, also, is of profound importance, as serving to throw light upon facts of every-day clinical experience.

Another Darwinian line of thought has been forcibly presented by Dr. Aitken. It has for many years been maintained that close genealogical, or, at any rate, gradational, relation exists between the *materies morbi* of remittent, that of intermittent, and that of enteric, fever; again, between that of enteric fever and that of typhus; between, also, that of enteric fever, and that of scarlet fever, and between that of scarlet fever and that of diphtheria. Dr. Aitken has been ably advocating extension of careful observation upon these and such like relations. Those who believe in the germ-theory as applicable to most infectious, contagious, and miasmatic diseases, and, at the same time, adhere to the creed of the evolutionist, see no reason for supposing that pathogenic micro-organisms form an exception to laws which are applicable, it would seem, throughout Nature. And, though sceptical concerning many of the explanations which have been advanced in this connection, we may yet allow that some amount of truth lies behind; and this despite the fact that the conversion of bacillis subtilis into bacillus anthracis in the laboratory has been abundantly refuted.

Some incline to a view taken long ago, a view expressed in the statement that, as results of overcrowding, typhus is begotten of man, glanders of the horse, and pip of poultry; and the observation of Sir Thomas Watson, concerning the conversion of a so-called simple inflammation into a contagious inflammation, has been referred to as affording corroboration of such a view. In this sense evolution has been regarded as having had to do with the coming into being of some forms of infectious and contagious virus, and as affording explanation for certain intergradational reactions of such forms of virus upon the animal body. It deserves notice, however, in connection with arguments bearing upon this subject, and drawn from the so-called *de novo* origin of certain infectious diseases, that several micro-organisms, capable of producing infectious and contagious disease (for example, erysipelas and anthrax) can live and multiply outside the animal body, and yet produce their peculiar effects when reintroduced. And again, there is the question of degree of insusceptibility (that which is associated with age, that which is acquired and that which is inherited) which must be fully allowed for. It has been suggested that small-pox may have originated in a tropical lichen; but while our knowledge of disease in lower animals is as limited as it still is—and in the case of variola there is doubtless much yet to learn concerning it, for instance in the camel, in the goat, and possibly, too, in a wide range of animals; and variola may have existed in animals now extinct—we may well hesitate before accepting such speculation.

Dr. Aitken says: "Facts are in request which will illustrate the natural history of cases rather than mere opinions;" and in this remark he does but repeat what has very frequently been said of late years. In some, indeed in large, degree response is, we think, being made to these appeals, for we read in the records of work (upon pathological subjects) now in progress, the attentive observation of men trained in each of the sciences, as well as of men deeply experienced in the science and art of medicine and surgery. The mystery of life is yet unsolved, but there is ample cause for taking a bright view of the biological revelations likely to be made even in the near future.

THE PROPHYLAXIS OF PHTHISIS.

In spite of improved methods of treatment, phthisis remains one of the most formidable, as it is one of the most frequent maladies, which the practitioner is called upon to treat. Much, no doubt, has been done by way of therapeutic advance, less in the line of specific remedies and novel methods of treatment, than by a clearer recognition of those dietetic, hygienic, and climatic conditions by the sedulous observance of which phthisis can alone be successfully combated. Yet the fully developed disease is only exceptionally cured, and in a great majority of cases we fail to accomplish more than its temporary arrest. It becomes, therefore, a most urgent question whether prophylactic treatment affords a more hopeful sphere for encountering the national scourge, and whether in this, as in so many instances, prevention may not be easy where cure is most difficult.

The prophylactic measures to be adopted in cases of threatened phthisis are fortunately well understood, if too often difficult of application. A healthy dwelling on a dry soil and with spacious sleeping apartments, perfect cleanliness, efficient ventilation, abundance of sunshine and fresh air, a life of vigorous activity, and a liberal and varied dietary—these seem to be the essential conditions. They are possible to the rich, difficult to persons of moderate incomes, impracticable in a large degree, unhappily, to the poor. Yet the greatest poverty does not altogther preclude some approach to these desirable expedients. Cleanliness is, luckily, cheap; fresh air is cheaper still; the most wholesome and nourishing articles of food are by no means generally high-priced; out-door occupations are in many cases as possible to the poor as avocations and trades which demand constant confinement in a vitiated atmosphere. Thus, all classes might more or less efficiently adopt prophylactic measures against phthisis, if only it could be clearly understood in what cases such measures were demanded.

This leads us to the second and much more difficult problem; namely, what are the indications for the prophylaxis of phthisis? The disease is too often described as incipient when it is really fully developed. When failure of strength, loss of flesh, cough and commencing pyrexia are associated with signs of apical mischief, it is folly to talk of prophylactic treatment. We might as well discuss the advisability of prophylaxis during the incubative period of fevers. We must go further back and consider two questions; namely, what classes of persons are predisposed to phthisis? and, secondly, are there signs which can be considered, in strictness, premonitory of the disease, rather than indicative of it?

The first question at once suggests the great importance of the hereditary factor. That phthisis is strongly hereditary is as thoroughly recognised by the laity as by the profession, although we are still without absolute certainty as to the proportion of cases in which it is

due to ancestral taint. Different calculations give proportions varying from 30 to 80 per cent., but the exact figure is unimportant compared with the recognition of the general and indisputable fact that children of a phthisical stock run a very grave risk of sooner or later falling victims of the disease. Hence such children form the first great class for prophylactic treatment. Their early training demands great care. The dietetic and hygienic measures already briefly indicated should be perseveringly adopted; residence among the mountains or by the sea-side, or sea-voyages, should be tried when possible; severe study should be interdicted, and easy open-air employments should, as far as possible, be selected. That great success attends such measures is undoubted. Cases are on record where the development of the disease has been prevented by such means in families of strongly tubercular diathesis, and the lesson has been emphasised by the fact that the neglect of these measures in later life has been followed by the speedy development of the family malady.

Still more urgent is the call for prophylactic treatment in the case of children of an infected stock who show symptoms of delicacy, or become the subjects of acute pulmonary disease. A little loss of flesh or debility at the age of rapid growth is a matter of small concern in the children of healthy parents; but, if the tendency to phthisis exist, these signs may indicate its approaching onset. A retarded recovery from pneumonia in a child does not necessarily excite much alarm; but, if the family be tubercular, the gravity of the prognosis is seriously increased.

The second question opens up a problem of the greatest importance, which has hardly received the attention which it merits. Most of the so-called premonitory signs of phthisis really indicate that the disease has already made good its footing. Fever, wasting, and night-sweats all indicate systemic infection, and are evidences of the disturbance of the organism by a disease that is no longer premonitory, but in active progress. How far hæmorrhage is premonitory, is a question. Undoubtedly, cases of hæmoptysis occur in persons whose general health is apparently unimpaired; and, while some of these cases become tubercular, others recover from the hæmorrhage and regain perfect health. In several cases which have come under our notice, the first symptom remarked by the patient was a sudden and unaccountable failure of appetite, with digestive derangement. As the practitioner's acquaintance with phthisis widens, we think he will be more and more inclined to keep a very jealous eye on all disorders of nutrition in cases in which he apprehends the development of phthisis. A much larger number of patients, however, date the commencement of the disease either from an obscure failure of strength and energy or from catching cold. Suppression of the cutaneous function has been regarded by some as a cause, by others as an early symptom, of phthisis.

In such facts, however obscure, we have sufficient data for the adoption of measures which are full of hope for future generations. Phthisis can be successfully encountered only in its early stage; and it is much to be desired that the public should become thoroughly conversant with its earliest premonitions, in order that cases may come at once under medical supervision, instead of procrastinating until palliation is necessarily substituted for cure.

MEASLES are so prevalent at Sheffield that the authorities will not admit any more cases into the Borough Hospital.

Dr. CORDES, of Geneva, has been nominated one of the surgeons to the Maternity Hospital at that town.

PRINCESS CHRISTIAN visited the North London or University College Hospital last week, and, after inspecting several wards, expressed her entire satisfaction with the whole of the arrangements.

THE report made by the Academy of Medicine on the consumption of alcohol in France is not encouraging. Since the law of 1880, which abolished licences, drinking shops have enormously increased. A Committee of the Academy has suggested, as a remedy, that alcohol should be made a State monopoly.

DEGREES FOR LONDON STUDENTS.

THE delegates appointed by the Royal Colleges of Physicians and Surgeons to report on a scheme for obtaining the power to grant degrees in medicine held a meeting on July 12th, at Lincoln's Inn Fields. We understand that a variety of proposals were brought forward, and were ordered to be printed, to facilitate further consideration.

IMPORTATION OF RAGS FROM ITALY.

ON July 3rd, the Local Government Board issued an order providing that, between that date and November 1st next, "no rags from Italy shall be delivered overside, except for the purpose of export, nor landed in any port or place in England or Wales." This step has been taken in view of the existence of cholera in Italy.

UNCERTIFIED MIDWIVES.

AN illustration of the deplorable amount of ignorance prevalent among a large class of people, who take upon themselves the duties of midwives with little or no qualification for the task, was strikingly shown last week on the body of an infant who died within a few hours of its birth. It was stated in the course of the evidence that the infant, which was born at half-past five in the morning, "squealed" a little. The midwife placed it in a warm bath. Finding that it showed but little signs of life, the midwife placed it in a cold bath. Having taken it out, she recommended the grandmother to take it in a blanket to a medical man. This she refused to do, and the child died. The coroner justly observed that, had the parents wished to have the child killed, no more effectual course could possibly have been adopted. The father, recalled, said he had had three children, all of whom had died in childhood. The jury returned a verdict of death from natural causes.

COLONIAL LEGISLATION FOR THE HABITUAL DRUNKARD.

IN his address as Chairman at the British and Colonial Temperance Congress at the Prince's Hall on Wednesday, Dr. Norman Kerr stated that, in Canada, South Australia, Victoria, and New Zealand, the habitual drunkard could be placed under care and treatment and restraint against his will. In this respect, the colonies were far ahead of the mother country. Colonial legislation was permanent, and not temporary, as at home.

COLONIAL AND INTERNATIONAL CONGRESS ON INEBRIETY.

THE Council of the Society for the Study and Cure of Inebriety, taking advantage of the presence in London of so many representatives of the colonies and of other nations at the Indian and Colonial Exhibition, had arranged for a Colonial and International Congress on Inebriety, with special reference to legislation for habitual drunkards, to be held in London during the current month. The dissolution of Parliament and the general election, however, have rendered it advisable to postpone the Congress till Parliament meets again, as it is important to secure the presence of as many legislators as possible. Papers are expected from Count de Marstorf, President of the Austrian Society, Professor Binz, of Bonn, Dr. Magnan, of Paris, Dr. Moeller, of Brussels, Dr. Joseph Parrish and Dr. T. D. Crothers, of the

American Association, Dr. Simon Fitch, of Halifax, Nova Scotia, Rev. Dr. de Colleville, and others, beside a report of a special inquiry by the President into Colonial Legislation for the Inebriate. It is intended to have a dinner without intoxicants during the proceedings, and the Committee of the Homes for Inebriates Association have invited the members to visit the Dalrymple Home for Inebriates at Rickmansworth. Full particulars will be duly announced, and communications may be made to C. H. Bishop, Honorary Secretary, 42, Grove Road, London, N.W.

DIEULAFOY ON BRIGHT'S DISEASE WITHOUT ALBUMINURIA.

In a paper recently read before the Société Médicale des Hôpitaux (Paris), the author has described several cases of Bright's disease without albuminuria. The first patient was a woman, whose symptoms seemed to point to gastric ulcer. She had violent pain in the epigastrium and hæmatemesis; she also complained of constant headache, and was losing flesh gradually; the urine never contained any albumen; slight epileptiform attacks were followed by coma and death. At the *post mortem* examination, the kidneys were found enlarged, and the microscope revealed the usual lesions of mixed nephritis. In the second case, the most characteristic symptom was a paroxysmal dyspnœa, which could not be explained by any lesion of the heart or lungs; there was a frequent desire to micturate, and the patient also complained of headache; the urine was scanty, but contained no albumen, except on the day which preceded the death; the necropsy showed that there was a well-marked inflammation of the interstitial tissue of the kidneys. Several other cases of a similar description have been observed by Dieulafoy, who concludes that the urine sometimes remains quite free from albumen in Bright's disease; this is especially the case when the lesions are more advanced in the vessels than in the glandular substance of the kidneys.

ANTI-VACCINATION.

The statistics for the last six months for Leicester, which were issued recently, show that, out of 2,500 children born, only a small proportion were vaccinated—the total vaccinations being 300. It is stated that, since the suspension of the prosecutions, very few children have been vaccinated, and the authorities decline to apply further coercion, on the ground of it being evident that the great bulk of the population are determined to resist the enforcement of vaccination. The results achieved by this appeal to reason of the investigations of the Royal Commission in Germany are so satisfactory, that it would seem that a similar Royal Commission in this country might be of use in determining the moot questions, and producing the most modern evidence as to the benefits of vaccination, in a form which would carry conviction, and allay the fears and doubts which have been instilled into the minds of large sections of the population. The machinery by which isolation is carried out in Leicester, and single cases of small-pox dealt with, is worth official investigation and record. We cannot but regard that population as in a situation of great danger; but this appears to be mitigated by the local system of report and isolation of fresh cases.

LANOLIN AS A BASIS FOR OINTMENTS.

In a preliminary note in the *Russkaia Meditzina*, No. 12, 1886, p. 207, quoted in the *London Medical Record*, Dr. L. K. Pavlovsky, of Kharkov, writes that his experiments with Liebreich's lanolin (first in Russia) enable him to arrive at the following conclusions. 1. Narcotic extracts, when combined with lanolin, are absorbed by the skin "quite satisfactorily," their pain-relieving action being obtained "with an almost perfect certainty." The dose used was only twice as large as that for internal use. 2. Hydrochlorate of quinine is absorbed also very easily. This statement is based on four cases of intermittent fever in children, where lanolin and quinine inunctions rapidly gave the effects desired. 3. When a lanolin ointment, with iodide of potassium is rubbed in, iodine appears in the urine not sooner than two, four, or six hours after inunction, while Lassar obtained iodine from the urine about three minutes after friction. 4. In children, lanolin is better absorbed than in adults. 5. Washing the skin with ether considerably facilitates the absorption of lanolin ointments. 6. In general, lanolin is a substance which promises to supersede all other constituents for ointments, and even, in certain cases, to render superfluous the internal use of drugs.

YELLOW FEVER IN RIO DE JANEIRO.

During the first twenty weeks of the present year, nearly 1,400 deaths from yellow fever occurred in Rio de Janeiro. In 1885, the total mortality for the year from this disease was 234; in 1884, it was about 620; and, in 1883, it was 1,330. Thus it will be seen that the recent epidemic of yellow fever has been much more severe than those of recent years. Typhus and other fevers figure in the death-returns, but not to an exceptional extent. The population of Rio is about 350,000.

QUARANTINE.

A striking instance of the vexatious quarantine restrictions, which prevail in some countries, is afforded by a correspondence, recently presented to Parliament by the Foreign Office, relating to the brigantine *Maggie*, of London, which was called upon, on its arrival at Fayal, to undergo a quarantine of five days, but allowed to discharge her cargo in a lazaretto, the Portuguese authorities having declared Great Britain "suspected" of cholera. Having proceeded to Terceira, the officials there, regardless of the quarantine she had already undergone at Fayal, refused to allow her pratique, and the vessel was relegated to Lisbon. The Foreign Office, recognising the importance of the case, and supporting the owners' claim for £100 for the loss sustained, opened communications with the Portugese Government, through Mr. Petre, Her Majesty's Minister at Lisbon; but no reply was vouchsafed for eighteen months, when the Portugese Government expressed their opinion that the stringent measures adopted did not constitute any violation of the law, and refused to admit the claim. A contemporary, in calling attention to the above facts, justly observes: "Putting aside the absurdity of imposing quarantine at all against a country where no vestige of cholera has existed for years, one can hardly realise that, in these days, a civilised and enlightened people should allow their sanitary precautions to be carried out in such a slipshod and haphazard manner. Still less can they be justified in refusing a most moderate and reasonable claim for compensation, for the loss involved on a vessel of a friendly State, brought about by the action of one of their own officials, which they tacitly admit they are unable to defend."

MEDICAL EDUCATION IN CHINA.

The attempts which have hitherto been made to promote medical education in China have failed, in consequence of the inability of natives to acquire a sufficient mastery of English; these difficulties, however, it is hoped, have at last been surmounted, due largely to the persistent energy of Dr. Myers. About two years and a half ago, through the kindness of some officials in Hong Kong, the matter was laid before the boys at the Central School, and two of the senior scholars, named Chan Chun-kai and Li Tsun-fan, volunteered to go to Formosa, and enter upon the course of study prescribed. The following is the scheme: the subjects for study—anatomy, physiology, elementary surgery, and inorganic chemistry—forming the topics of the first professional examination. No candidate is allowed to present himself unless he produces a certificate from a legally qualified medical man of having studied these subjects for the full period of two years. The examination to be held at either Hong Kong or Shanghai, before a board of the most eminent men within reach. After having passed this, the candidate returns to the hospital, and studies for a further term of two years the following subjects: practice of medicine, mid-

wifery, clinical medicine and clinical surgery, including operative surgery, use of instruments, medical and surgical, and bandaging, with materia medica and pharmacy. Having obtained a certificate to this effect, and also one of his identity with the candidate who passed the first examination, he would be entitled to present himself before a similar board in either Hong Kong or Shanghai, accordingly as either port had been selected for the first professional. Should he be found proficient, he will then be entitled to receive a certificate of competency or diploma from the hospital setting forth these facts in English, Latin, and Chinese. In accordance with this scheme, Dr. Myers recently brought down the two students, who underwent the examination with the following results: Li Tsun-fan obtained 72.6 per cent., and Chan Chun-kai 70.5 per cent. of possible marks. The presentation by His Excellency, the acting governor, of certificates granted to the two successful candidates for the first professional examination for the licence from the David Manson memorial hospital, took place on May 28th at the Central School.

SENILE CHANGES IN THE CEREBRAL CORTEX.

THE structure of the nervous system possesses feeble powers of regeneration, as contrasted with the other tissues of the body. The minute changes which occur in its substance are, therefore, interesting and important. Of these changes, but little, as yet, is definitely known, though the recent investigations of Dr. Kostjurin have brought to light some new facts, especially with regard to the degenerations occurring in old age. This observer has found that, in most of the cortices of the brains of people between 65 and 88 years of age, there is degeneration of the nerve-cells, nerve-fibres, and vessels. In the nerve-cells, the change is shown by fat and pigment taking the place of the protoplasm. The nerve-fibres degenerate simultaneously with the cells. The vessels show either thickening of the adventitia, or a certain amount of atheroma. In one case of chronic meningitis, hyaloid bodies were found in the lumen of the capillaries, arterioles, and large arteries. The presence of such bodies is not, in man, a normal appearance of old age; but they are observed in the bodies of dogs. Though these results are interesting, as adding to our knowledge of morbid anatomy, they would have derived greater importance if the described changes could be connected with any loss or impairment of the psychical functions of the brain. This great gap in our knowledge has yet to be filled.

CALCULUS IN WOMEN.

DR. WEDENSKY, of Moscow, where stone prevails, has published in the *Vratch* some interesting statistical records of vesical calculus in women, as well as the results of his own experience. He notes that Hugenberger, after having examined 40,000 women for various diseases, did not come across a single case of stone. Winckel observed one case in 2,500 female patients. Sir Henry Thompson's statistics are well known in this country. Between 1808 and 1841, Bassoff, of Moscow, treated 2,989 cases of calculus, only 75 occurring in women. In the same city, Klin, between 1822 and 1860, had 1,792 cases, 4 being females. Twenty-five out of Mamonoff's 700 cases were women. Dr. Wedensky himself observed 980 cases in the Marien Hospital; 27 of these occurred in women. Thus, about 2 per cent. of cases of urinary calculus appeared in patients of the female sex. Lastly, the same surgeon has operated 29 times on females. In 3 cases, the stone was removed by dilatation of the urethra, and all recovered. Dr. Wedensky prefers this method, done gradually on Simon's principle, when the stone is small. In 13, he performed lithotripsy; 2 of these cases died. He considers this operation by far the best method of treatment for large calculi, and, if the surgeon object to it, he recommends suprapubic lithotomy. In 3, Dr. Wedensky made a vesico-vaginal section, 1 dying. He objects to this plan, as being liable to leave a fistula. In 10 cases, he performed lateral section, losing 3. He now rejects this operation entirely, as it leaves a troublesome and permanent cicatrix.

VAGINAL EXTIRPATION OF THE UTERUS IN MOSCOW.

ACCORDING to a communication by Dr. Sergei S. Zaiaïtzky, vaginal extirpation of the womb for cancer has been performed by five Moscow surgeons forty times (*Russkaia Meditzina*, No. 4, 1886, and *Vratch*, No. 2, 1886); to wit, eighteen times by Professor A. N. Solovioff, sixteen times by the author, thrice by Dr. H. A. Löwenstein, twice by Professor N. V. Sklivosovsky, and once by Professor V. F. Snegireff. Discussing his own cases, the author states that he lost seven out of sixteen patients, one of whom died from collapse in consequence of hæmorrhage, four from septic peritonitis, and two from septic pelvic cellulitis. Of the remaining nine patients, one died about three months, and another a year, after the operation, from return of the disease; and a third died subsequently from dysentery. In two cases, posterior adhesive peritonitis, and in one, dermoid cyst of an ovary, were also present. The operation lasted from fifty to ninety minutes, and was performed after Professor Schroeder's method, somewhat modified. A T-shaped drainage-tube was invariably introduced for six days, the vaginal wound being left unsutured. On the whole, Dr. Zaiaïtzky feels dissatisfied with his results; nevertheless, he prefers vaginal extirpation of the womb to a high incision, since the former is safer and easier than the latter.

SALICYLATE OF CUCAINE IN ASTHMA.

A COMPARATIVELY new method of treatment in asthma nervosum has lately been tried by Professor Mosler, of Greifswald. It is now well known that cucaine has not only a local action on the sensory nerve-endings, but also a central one, which, at first stimulating to the nerve-centres, may, if the drug be pushed, become sedative or even narcotic. By this peripheral or central effect, it may, therefore, act in such spasmodic diseases as asthma. Early last year, Beschorner published two cases of this disease which were much benefited by cucaine. In three cases, Professor Mosler has obtained excellent results. All these cases occurred in young people of twenty-three to twenty-five years of age, and were uncomplicated by any organic heart or lung-disease. The drug was given subcutaneously, in doses of 0.4 gramme, at the commencement of the attack. The first patient, who had a bad family history as regards lung-disease, and in whom the asthma had lasted eleven years, was relieved after the third injection; two more doses caused abeyance of the attacks (which occurred previously every day) for a fortnight, when the patient was lost sight of. In the second and third cases, the treatment was more rapid in cutting short the attacks, which in the end were postponed for the three or four weeks during which the patients continued under observation. The injections caused, in one case, a slight sense of faintness and the appearance of dark spots before the eyes; but these symptoms soon vanished. It is, of course, impossible to draw from these cases any conclusion as to the permanent benefit of the treatment. Extended experience will perhaps show that the drug is only a palliative. It is in the hope of inducing other practitioners to try the treatment that Professor Mosler has published the results of his cases.

THE INFLUENCE OF LIGHT ON MICRO-ORGANISMS.

DR. ARTHUR DOWNES, medical officer of health to the Chelmsford Combined Sanitary Districts, published, in 1877 and 1878, the result of some observations, made in collaboration with Mr. Blunt, which showed that the rays at the violet end of the solar spectrum had a hostile influence on the organisms of putrefaction and decay. This influence was found to be due to a superoxidation of the micro-organisms; and it was also ascertained that a soluble ferment, such as the invert-diastase of sugar, was destroyed by sunlight in the presence of oxygen, but not in a vacuum or in a neutral atmosphere. In a paper read before the Royal Society on January 14th, 1886, Dr. Downes reviewed evidence confirming these observations, since adduced by Tyndall, Pringsheim, Schloesing and Muntz, Warrington, and others; and dwelt especially on Professor Duclaux's recent researches, which

showed that spore-forming bacilli are far more resistent than micrococci, which die when exposed to the sun for eight days in the dry, or for forty days in the moist state. Dr. Downes stated that he had found a peculiar bacterium resembling the Asco-bacteria (that is, forming a pellicle) most resistent to the influence of sunlight; he controverted the objection raised by Dr. Jamieson, of Melbourne, that the effects were due to heat, by showing that diffused daylight produced similar, though less marked, results. It is interesting to note that it was found in the earlier series of experiments that, in sunlight, a solution of oxalic acid is oxidised, water and carbonic acid being formed.

BRITISH MEDICAL BENEVOLENT FUND.

THE jubilee festival of the British Medical Benevolent Fund was held at the Holborn Restaurant, on the evening of July 8th, Sir James Paget presiding. About two hundred gentlemen were present, including Cardinal Manning, the Bishops of London, and Peterborough, Sir Trevor Lawrence, M.P.; Sir T. Crawford, Sir Prescott Hewett, Lord Crewe, Sir Joseph Lister, the Dean of Gloucester, Sir E. Saunders, Sir E. Sieveking, Dr. Quain, Sir J. Fayrer, Dr. M. Duncan, and Dr. Chadwick. Dr. Temple and Cardinal Manning spoke of the valuable work accomplished by the medical profession within the walls of the London hospitals, and it was stated by the latter, that of all the professions there was none which manifested more unwearied labour and self-denial towards the poor and the suffering than the medical profession. Sir T. Crawford replied to the toast of the Army, Navy, and Reserve Forces, and Sir Joseph Lister acknowledged that of the Medical Profession, submitted by the Dean of Gloucester. The Chairman, in proposing the toast of the evening, "Success to the British Medical Fund," commented upon the prosperity which had attended the fund since the small beginning fifty years ago. In the first five years of its duration the fund gave away on an average £75 a year. This year he hoped the donations and annuities would amount to fifty times that sum. They had commenced the year with one donation of £1,000. The remaining toasts included "The Chairman," proposed by Dr. Broadbent, the treasurer, who remarked that £3,500 was a moderate estimate of the results of their Jubilee Festival; "The Honorary Local Secretaries," given by Dr. Hare; and "The President and Executive of the Fund," submitted by Dr. Quain.

THE ART OF NURSING.

MISS MANSON, the Matron of St. Bartholomew's Hospital, concluded on Wednesday a course of three lectures for the National Health Society, 44, Berners Street, on the Art of Nursing, with practical illustrations. The lectures were given at the house of the Hon. Mrs. Jeune, Wimpole Street, W., and have been well attended throughout. The two final lectures were intended only for women, and were wholly practical. The first lecture is probably the most accurate historical account of the rise and development of nursing which has ever been written. Miss Manson commenced by tracing the gradual progress made in healing and attending the sick, from the earliest times of which we have record. The growth of nursing, as an art, from century to century; the founding of hospitals and lazar-houses; and the formation of societies, brotherhoods, and nursing knighthoods, were next explained. Miss Manson pointed out that the hospitals of the Middle-ages, on the high roads to Rome and to the East, were less refuges for the sick than resting-places for pilgrims, until, pilgrimages becoming more rare, and taverns more plentiful, these hospices became either veritable hostelries, or else hospitals for the sick. A great advance was made in nursing, when St. Vincent de Paul founded the Order of Sisters of Mercy, whose labours among the poor and suffering in towns, hospitals, and, indeed, wherever their ministrations were needed, lasted for many years; though the terrible state of the French hospitals in the eighteenth century points to the decadence of the nursing communities throughout Europe. A brief summary of the history of St. Bartholomew's Hospital, since its foundation in 1123 by Henry II's jester or minstrel Rahere, formed an amusing fund of information concerning the arrangements for the medical staff and their duties. The fame of the miracles wrought by the combined effects of the relics of the saint and the chirurgeon's skill, was shown by the following incident of the treatment patients received. "One," according to an old manuscript, "was a woman whose tongue could not be contained within her mouth. Rahere touched it with relics, and painted it with holy water, and within an hour it went back between her teeth." "Although," added Miss Manson, "we are not informed how long it stayed there." The key-note of Miss Manson's lecture was the womanliness of nursing as a profession. In nursing, the best and keenest sympathies are awakened towards the suffering; and many sick children, "whose only inheritance is too often disease," "whose lives are sad realities of pain, without the bright surroundings that gladdened one's own youth, may perhaps know no other span of motherhood." All these are nurses' children, and, though "there are necessarily tares among the wheat," the patience, charity, and compassion that are aroused in any woman worthy the name and calling of nurse, tend to develop the best and highest qualities in her nature. The true womanly feeling, the happiness of expression, and keen perception of all that could interest and attract her hearers, were as great a charm as Miss Manson's clearness and distinctness of delivery. The lectures were in every way a great success, and reflect credit on the National Health Society, which made all the arrangements for their delivery.

THE SCHOOLMASTER ABROAD.

THE management of epidemic outbreaks in schools is always a matter of difficulty, and a source of much anxiety to the responsible officers; it has been supposed, however, that a few principles for our guidance in these difficulties had been established. It is, for instance, generally considered wise to isolate suspicious cases with the utmost promptitude; to inform the parents of the sick boy that he is ill; to inform the parents of other boys that cases of communicable illness have occurred in the school; and, as a rule, not to interfere with the exercise of private judgment if parents wish to withdraw their children temporarily from the infected school. There was, not long ago, a rhyme prevalent in Oxford about a famous pedagogue who was supposed to exclaim "There is no knowledge but I know it," all doubts being set at rest by the further statement that "What I know not is not knowledge." Omniscience is a common foible with head-masters, and it is, of course, very annoying to the omniscient to have their dicta called in question. Parents, however, have their feelings, as a profound philosopher has remarked, and are naturally alarmed when they accidentally learn that diphtheria is prevalent in a school; alarm gives place to indignation when applications for further information are passed over in silence, and when parents are told, on personal application, that, if a boy is withdrawn from the infected area, he can never be received back into the school. The letter from Mr. Carritt, published in the *Times*, and the general corroboration of his statement afforded by a series of letters from anxious parents, appear to prove that, at the Charterhouse School at Godalming, every one of the simple principles above referred to are violated. The head-master admits that, "During the last two months, we have had two cases of diphtheria, and seven other cases of throat-ailment with diphtheritic tendency;" and that one boy has died. Mr. Carritt states that several, if not all, of the boys who had this disorder were allowed to remain in the masters' homes, in the ordinary beds among the other boys, and not removed to the infirmary; and that no intimation had been conveyed to parents of any such disorder existing in the school when the boys were allowed to go home. No doubt diphtheria is difficult to diagnose; still the occurrence of two cases of undoubted diphtheria, and of seven other cases of "throat-ailment with diphtheritic tendency," ought to have satisfied the medical officer that he had to deal with a distinct epidemic. No doubt the medical officer (who is said to be the son of the head master) made representations in the proper quarter, but the head master appears to have paid so

little attention to elementary principles of hygiene, as to have neglected to take the necessary precautions, and to be unaware that nine cases of diphtheria among 700 persons in two months is a very serious state of affairs. The occurrence of so many cases of diphtheria in a public institution appears to call for an inquiry by the Local Government Board into the arrrngement of the school-houses and master's house at Godalming. There is reason to suppose that there are very grave defects in the drainage and other sanitary arrangements, which ought to be set right before the commencement of the next term. It is for the governing body to investigate the dictatorial conduct of the head master, and to render the medical officer's position more independent of pedagogical control.

THE GENERAL HOSPITALS AND DIPHTHERIA.

WE regret to hear that a lady who had entered at Guy's Hospital, in order to learn nursing, about a fortnight ago, died on July 13th, of diphtheria, contracted in the course of her new duties. The number of cases of diphtheria admitted into Guy's Hospital during the last few weeks has been considerable. There is, in fact, a small epidemic of the disease in London, and the Registrar-General had to record fourteen deaths from this cause within the metropolitan area in the week ending July 10th. The deplorable occurrence at Guy's Hospital brings into prominence a difficulty which all the general hospitals have to encounter. It is impossible to turn away cases of diphtheria, which continually apply, needing urgent treatment. Many children are brought to hospitals almost suffocated and in need of tracheotomy. Humanity demands that these children should be taken into hospital, and the necessary operation performed, because there is no place to which they can be referred, though the hospital authorities know that by placing cases of diphtheria in a ward with other patients, even though these be adults, considerable risk is run, not only by other patients, but by the nurses and all concerned—a risk which might be greatly minimised if such cases could be treated in hospitals specially designed for the treatment of infectious diseases. As the law is at present interpreted, the Metropolitan Asylums Board is not empowered to take cases of diphtheria into its hospitals, though it is willing and able to do so if permission be granted. All that is wanted is an order by the Local Government Board. If the Secretary of that Board would ask the advice of the Medical Department as to the advisability of including diphtheria in the list of infectious diseases with which the Metropolitan Asylums Board is empowered to deal, there cannot be much doubt as to the nature of the reply which would be given.

SCOTLAND.

ROYAL MATERNITY HOSPITAL.

THE arrangements for the autumn months in the Royal Maternity and Simpson Memorial Hospital, Edinburgh, are, that Dr. J. Halliday Croom succeeds Dr. Keiller as physician in attendance; Dr. D. Berry Hart will act as assistant-physician. The resident surgeons, Messrs. W. Gloag Galletley, M.B. and C.M., and G. L. Somerville, M.A., M.B., and C.M., whose term of office has expired, will be succeeded by Mr. J. A. Armitage, M.A., and Mr. Henry Harvey Littlejohn, M.A., both of whom will graduate M.B. and C.M. on August 1st.

PRECAUTIONS AGAINST CHOLERA AT SCOTTISH PORTS.

IMPORTANT regulations with regard to the importation of rags from Italy have been sent by the Board of Supervision to local authorities of districts in Scotland in which there is a harbour. These regulations are, that no rags from Italy shall be delivered overside, except for the purpose of export, nor landed in any port or place in Scotland; that, if any rags shall be so delivered or landed in contravention of the order, they shall, unless forthwith exported, be destroyed by the person having control over them, with such precautions as may be directed by the medical officer of health of the local authority within whose district they may be found; and that it shall be the duty of the local authority to take proceedings against masters of ships, consignees, or other persons having control over any rags who wilfully contravene the regulations which are to be in force in the present instance until August 6th, 1886.

SCARLET FEVER AT BEITH.

THE outbreak of scarlet fever at Beith has proved most intractable; and, owing to its alarming prevalence, the School Board has been necessitated to close the public schools till August 9th.

FORFARSHIRE MEDICAL ASSOCIATION.

THE twenty-ninth annual meeting of the Forfarshire Medical Association was held last week at Montrose Asylum, Dr. Howden in the chair. The following office-bearers were appointed: *President:* Dr. Lawrence, Brechin; *Vice-Presidents:* Dr. John Mackie, jun., Brechin, and Dr. Greig, Dundee; *Secretary:* Dr. Stalker, Dundee; *Treasurer:* Dr. Reid, Dundee. An interesting and instructive paper on Hospital Sanitary Arrangements, illustrated by diagrams, was read by Dr. Howden; after which, the members were entertained to dinner by the directors of the asylum.

POST-GRADUATE COURSES IN GLASGOW.

A SERIES of lectures and demonstrations are arranged to be held during the ensuing autumn. Professor Gairdner, Dr. Joseph Coats, and Dr. David Newman, together, will give a series of lectures and demonstrations, which will be held in the Western Infirmary, will be made as practical as possible, and illustrated by cases, museum specimens, and diagrams. The subjects to be taken up are as follows:—Professor Gairdner will lecture on Diseases of the Abdomen, which are somewhat loosely grouped by the Registrar-General under the designation of Tabes Mesenterica; Dr. Coats will take up the subject of Phthisis Pulmonalis in certain of its aspects, with reference especially to its etiology and coincident lesions in other organs; Dr. Newman will discuss some of the Affections of the Kidney, for which surgical treatment may be required, with special reference to their pathology and diagnosis. The first two lectures will be delivered at the Western Infirmary, on Friday, October 1st, at 1 P.M., and at a quarter past two respectively. The course will be continued every Tuesday and Friday, until October 19th, two lectures being delivered at each meeting. A syllabus of the course will be published, and may be had on application to Messrs. James MacLehose and Sons, 61, St. Vincent Street, Glasgow, from whom, also, tickets for the joint course may be bought price a guinea and a half.

HOSPITAL FOR MUSSELBURGH.

IT has been felt for some time that there should be some hospital accommodation at Musselburgh; and, on Tuesday, plans for the proposed hospital were submitted to the Town Council, in which, by suitable alterations being made in a disused bottle-works, a hospital of ten beds could be provided for the sum of £250. At the same meeting, objection to the site for the proposed hospital was intimated on the part of General Hope, Pinkil; but, while so doing, he made a most equitable and generous offer, namely, that he would take over the old bottle-works himself, and aid them to procure another site. Further, that, if these conditions were accepted, Mrs. Hope would advance £700 at 2½ per cent. to assist in building and furnishing a hospital, this sum to become the absolute property of the hospital on the death of herself and her husband. The Council resolved, after discussion, to meet General Hope with a view to change of site.

PRESENTATION.—At the annual dinner of the West Kent Medico-Chirurgical Society, recently given at the Holborn Restaurant, the Treasurer, Dr. Prior Purvis, of Blackheath, was presented by the members with a handsome drawing-room clock and two elegant vases.

IRELAND.

JERVIS STREET HOSPITAL.

THE Board of Governors of the above hospital held a special meeting on Saturday last for the purpose of electing a surgeon. Mr. F. Conway Dwyer, M.B., late resident surgeon to the Mater Misericordiæ Hospital, was unanimously elected.

CHARGE AGAINST A DISPENSARY MEDICAL OFFICER.

DR. O'FARRELL, Local Government Board Inspector, held an inquiry last week at Kilmeaden, County Waterford, into charges of neglect made against Dr. Enright, one of the medical officers of the union. The evidence given was to the effect that, in April last, a visiting ticket was issued for Dr. Enright to attend a boy named Fitzgerald. The medical officer, on visiting his patient, found him very feverish, in a semi-conscious state, and suffering from some affection of the brain. It was alleged that, having ordered a dose of castor-oil, the medical man promised to call the next day, but he did not do so, and when another medical man was summoned, he pronounced the case hopeless, the child dying a couple of days afterwards. Dr. Enright admitted in evidence that, although the child was dangerously ill when he saw it, still he did not pay a second visit, because he understood from the child's father that Dr. Stephenson, of Tramone, would visit the child. The evidence will be submitted to the Local Government Board.

A CONJOINT EXAMINING BOARD FOR IRELAND.

ANOTHER and, this time, we hope, a successful attempt, is being made to effect an amalgamation for examining and licensing purposes between the King and Queen's College of Physicians in Ireland and the Royal College of Surgeons in Ireland. A combined committee of both bodies was, on the initiative of the College of Physicians, lately appointed to consider a scheme for the establishment of a conjoint examining board, on similar principles to that now established in England between the Royal College of Physicians of London and the Royal College of Surgeons of England. It is stated that at first, the Irish College of Surgeons desired to have the Apothecaries' Hall of Ireland included in the scheme, on the ground that, if it were not, that body might be granted assistant examiners by the Medical Council, and thus be competent to grant a complete qualification; and it was also given out that, if the College of Physicians did not agree to this arrangement, the College of Surgeons itself would join with the Apothecaries' Hall, for the purpose of conducting qualifying examinations in medicine, surgery, and midwifery. The College of Physicians, however, held its ground, and refused to enter into any combination with the Apothecaries' Hall, not alone from "considerations of mere sentiment and professional *amour propre*," as was stated, but from much more important reasons, which evidently had weight with the Council of the College of Surgeons. As a result, that body has agreed to the principle of the establishment of a combination with the College of Physicians. The report of the combined committee was brought before the College of Physicians last Monday, and unanimously adopted. It is based on the same lines as those which have been found to work satisfactorily between the sister Colleges in England, and which will, we hope, work harmoniously in Ireland also.

BELFAST MEDICAL STUDENTS' ASSOCIATION.

THE inaugural meeting of the Belfast Medical Students' Association—a society having for its object the promotion of the professional training of medical students—was held on Tuesday week, July 6th, at Queen's College, when there was a large attendance of students, and a goodly number of medical men present. The chair was taken by the Rev. President Porter, who spoke of the benefits such an institution afforded by promoting mutual association, stimulating individual effort, and bringing out a knowledge of individual deficiencies. Dr. H. O. Neill (president of the Association), Dr. Lindsay, Dr. Byers, Dr. Esler, and Dr. Robinson, also addressed the meeting, which closed by a vote of thanks to the chairman. The following is a list of officers:—*President:* Henry O'Neill, M.D.; *Vice-Presidents:* T. R. Wheeler, M.D., and J. A. Lindsay, M.D.; *Secretary:* W. Weatherup, B.A.; *Treasurer:* F. D. Holmes, B.A.

THE MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

AT the quarterly meeting of the General Committee of this Association, held at 38, Wimpole Street, on Wednesday, July 14th, Mr. Ernest Hart in the chair, the draft annual report was presented, with the balance-sheet for the year 1885-6; and, on the motion of Sir T. Spencer Wells, Bart., seconded by Dr. Rabagliati (Bradford), they were received and adopted. The auditor's report was most satisfactory. The accounts showed reserves invested amounting to nearly £12,000; a membership of nearly 700; costs of management of less than one-half the estimated amount; and a sound state of all the departments of the fund. It was stated that profits were accruing in all the departments of the Society, which were the sole property of the members; there being no shareholders, and no paid directorate. It was arranged that the annual meeting of the Society should be held during the forthcoming meeting of the British Medical Association at Brighton; and, meantime, the report and full particulars are obtainable from Mr. Radley, Secretary, 26, Wynne Road, Brixton.

MORTALITY AMONGST THE TROOPS AT ASSOUAN.

IT is notified that the Private Secretary of the War Minister has been sent to Cairo to inquire into the causes of the mortality among the troops at Assouan. We, of course, know nothing of this gentleman's qualifications for such an inquiry. We could have wished that some one not officially connected with the War Office had been associated with the War Office official—some one whose opinion on questions of sanitation would have carried weight with the public, and who has no interest in hiding whatever fault in the administration at Assouan the inquiry may bring to light. We are not without authentic information on the subject from trustworthy sources of information.

Enteric fever has been the chief cause of mortality; and at Assouan, as in every other tropical and sub-tropical climate, the victims have been young soldiers—boy-soldiers—whose age is nominally 23, but whose real age, as both military and medical officers on the spot know, is from one and a half to two years younger. Youth is the predisposing, foul water the exciting, cause. This last fact, unless we are much deceived, will come out prominently, if the inquiry is honestly conducted by properly qualified inquirers. We trust that some member of Parliament, of weight and influence, will move for the production of the reports of the medical officers on the spot. In no other way will the real facts be arrived at. In justice to the medical staff also, the publication of the reports is very desirable. Past experience points to this: if it be possible to shift the blame from the shoulders of those in military command to the Health Department of the Army, it will certainly be done. No report drawn up by a War Office official, without the official reports of the chief of the medical staff on the spot, ought to satisfy the public.

BRIGHTON MEETING, 1886.

As the time of this meeting approaches, we are able to give a fairly complete list of the entertainments and excursions, although some details are necessarily still unsettled.

The Mayor of Brighton proposes to welcome the Association on Tuesday, August 10th, by entertaining to luncheon, at the Royal Pavilion, the Council of the Association and some of our more distinguished visitors.

The President's address will occupy the evening of that day.

On Wednesday, Sir Julian Goldsmid will give a Garden Party at St. Anne's Well, Brighton, from 4 to 6.30 P.M.; and, in the evening, the President of the Association and the members of the South-Eastern Branch a *conversazione* at the Pavilion.

The Public Dinner takes place on Thursday, as usual, in the Dome.

On Friday evening, the Mayor will give a Ball at the Royal Pavilion.

By kind permission of E. J. Booth, Esq., his unique collection of British Birds, mounted with all their natural surroundings, will be open to members and their friends each day from 11 to 5.

Tickets for the Aquarium will be issued at the Reception Rooms. By the kindness of the Directors of the East and West Piers, members will be allowed free admission.

A steamer has been engaged to take members and their friends a short trip, from the West Pier, from 4 to 6 each afternoon. Preference will be given to those members who are accompanied by ladies.

All possible provision will be made for the comfort of ladies, and a special sitting-room at the Pavilion (with attendance) will be devoted to their use.

Ladies will be admitted, free of charge, to the balcony of the Dome during the dessert of the Public Dinner. Refreshments will be provided. Tickets will be obtainable at the Reception Room, and preference will be given to those whose friends are attending the Dinner.

Excursions.

On Saturday, August 14th, the following excursions will take place.

1. *Arundel Castle and Chichester.*—By kind permission of His Grace the Duke of Norfolk, K.G., who will entertain to luncheon members and their friends to the number of 200, the fine old castle of Arundel, with its beautiful park, will be thrown open. In the afternoon the party will proceed to Chichester, where they will be entertained by the resident members to tea in the Council Chamber, and every facility will be afforded by the Dean for viewing the cathedral. The journeys will be made by special train, but the times are not yet fixed. Number limited to 200.

2. *Eastbourne, Beachy Head, and Pevensey.*—The party will travel by special train, and reach Eastbourne sufficiently early to enable visitors to see the town, the old church, and the waterworks before lunch, which will take place at 1 o'clock, after which, excursions will be made to the cliff at Beachy Head, and to the old ruins of Pevensey Castle. The Eastbourne members, by whom the invitation is issued, are prepared to entertain 100 visitors.

3. *Isle of Wight.*—The Executive Committee have engaged a steamer to go to the Isle of Wight (Ryde), where they will provide lunch. The start will be about 8 A.M., and Ryde will be reached in four hours. Four hours will be spent on the island, and the return to Brighton effected by about 8 P.M. Number limited to 200.

4. The members resident at Tunbridge Wells invite 150 visitors, but the details of this excursion are not yet complete.

5. *Hastings, St. Leonards, Battle Abbey, and Normanhurst.*—Special trains from Brighton to Warrior Square Station, St. Leonards (times of departure and arrival not yet fixed). The station is close to the Royal Concert Hall, where visitors will assemble. Time will be afforded for seeing objects of interest in the town, including the building in process of erection for the new hospital. Luncheon will take place at the Royal Concert Hall at 1.30 o'clock. At 2.30, carriages will be in readiness to convey the visitors to Battle Abbey, which will be specially open for inspection by the kind permission of His Grace the Duke of Cleveland, K.G. Thomas H. Cole, Esq., M.A. (author of the *Ambiguities of Hastings*) has kindly consented to accompany the party and describe the Abbey and battlefield. The carriages will then proceed to Normanhurst, the seat of Sir Thomas Brassey, K.C.B., where Lady Brassey kindly invites members and friends to tea. The return journey will be made in time to allow of visitors leaving Hastings and St. Leonards by special train, arriving the mail at 9.15, which goes through Brighton to London Bridge, or, if preferred, the 8.17 train can be taken from Battle to London Bridge, Cannon Street, or Charing Cross.

6. *Tunbridge Wells.*—Members leaving Brighton by special train, will be met at Tunbridge Wells Station with drags and carriages. Drives of about fourteen miles will then be taken through some of the loveliest scenery in Kent, either to Penshurst, or to Eridge and Bayham. Luncheon will be provided on their return, at the Pump Room, Tunbridge Wells. The buildings and grounds at the Spa will be thrown open, and tea will be provided there between 4 and 6 o'clock.

Places of Interest to Visitors to Tunbridge Wells.—The Wells, from which the town derives its name, are situated beneath a neat structure, at the entrance to the Royal Parade. The waters are chalybeate, and are highly recommended as a tonic. Their efficacy is supposed to have been first discovered about the year 1603. The Royal Parade is the fashionable rendezvous for the company; near the centre is the orchestra, in which, during the season, an excellent band performs daily. The Tunbridge ware manufactories are places of considerable interest, and are generally open to visitors during business hours, on purchases being made. The baths, which are well fitted, are in the Calverley Road, and consist of Turkish, shower, sponge, and plunge baths. There is also an extensive bath establishment at the Bishop's Down Hydropathic Spa. The High Rocks, about a mile and a-half distant, are objects of great interest, some of them being 70 feet in height. The Bell Rock and Warning Rock are especially worthy of notice. The Toad Rock, Parson's Rock, Loaf Rock, and Lion Rock are on the beautiful Rusthall Common, about one mile from the Royal Parade. Harrison's Rocks, situated at Hamsell, five miles distant, are also interesting. The Eridge Rocks (three miles) are secluded, and very pretty. They are, by kind permission of the Marquess of Abergavenny, open every Thursday during May, and the four following months, from 10 A.M. till 7 P.M. Bayham Abbey (six miles), formerly a monastery, but now in ruins, is rich in interest, and may be viewed on Tuesdays and Fridays. Brambletye House (thirteen miles), built in the times of James I., and now an ivy-covered ruin, is open daily. Penshurst Place, an ancient mansion of imposing appearance, noted for its valuable paintings and fine baronial hall, is the property of Lord de L'Isle, through whose kindness it is open to visitors during certain hours on Mondays, Wednesdays, and Saturdays.

Annual Museum of the Association.

There is reason to believe that the annual museum this year will be one of the best yet held. The room (Corn Exchange) is well adapted for the purpose, and is readily accessible. Applications for space from a large number of eminent firms have been received. The department of drugs and foods will be well represented, and several interesting sanitary improvements will be on view. A series of interesting pathological specimens under the microscope will be shown by Dr. Heneage Gibbes. Other morbid specimens have not been so easy to procure; gentlemen willing to exhibit anatomical or pathological specimens are therefore requested to communicate at once with the Museum Secretary.

THE SANITARY INSTITUTE OF GREAT BRITAIN.

At the tenth anniversary meeting of this institute, held at the Royal Institution, Albemarle Street, on Thursday, July 8th, under the presidency of Sir R. Rawlinson, Dr. T. Whiteside Hime, medical officer of health, Bradford, delivered an address, entitled "Pasteur and Preventive Inoculation against Zymotic Diseases." He said that his object was to show the connection between the various investigations in which Pasteur had been engaged, and that his anti-rabic method was the logical outcome of previous investigation, and not a novel and unprecedented discovery. Pasteur's earliest investigations, he observed, were purely chemical, but he soon deflected to the study of micro-organisms. The study of fermentation was the starting point whence his pathological researches sprung. He first proved that the process of alcoholic fermentation is the effect of the vital action of the ferment, as distinguished from chemical and contact theories. While engaged in this work, he completely shattered the theory of spontaneous generation, and showed that fermentation could not occur, and that no putrefaction could occur in a sterilised fluid if only pure air—that is, free from living organic matter—be admitted. He, like many predecessors, was struck with the great analogy between certain diseases and the process of fermentation. In both, after the introduction of the ferment (disease), there was a period of latency, then the action came to maturity, with multiplication of the inoculated matter (virus or ferment), resulting in such a change in the inoculated mass that it would not again permit of inoculation—that is, it became "protected." This was illustrated by the detailed history of inoculation for small-pox and alcoholic fermentation. It was in investigating fowl-cholera that Pasteur first proved the microbic origin of a disease, discovered how to attenuate the microbe, and showed that it could be cultivated in tubes, apart from the body of the animal in

which the disease originated. Subsequently, Pasteur showed that an epidemic, infectious, and contagious disease of silk-worms, was due to a microbe, and pointed out how, by picking out infected eggs, and destroying them, the disease could be stopped. Could the same be done for the diseases of higher animals? This he proved could be done in the case of anthrax, a destructive disease of cattle on the Continent, little known in this country. He showed that the blood of an animal suffering from anthrax always contained certain bacilli never found in healthy blood; that if blood containing them were inoculated, it gave the disease, while blood without them did not; and he discovered how to attenuate the virus so that animals could be protected against the most intense virus for a time. The protection thus afforded had been proved by experiments on a very large scale, and statistics supplied by 200 veterinary surgeons, who employed it, proved that the mortality among cattle from anthrax had been reduced from 120 per 1,000 to 5 per 1,000. Pasteur had also discovered protection against pig-typhoid and other diseases. He began the study of rabies in 1879, when practically nothing was known of the disease except that all must die who once developed the fatal symptoms. In 1881, a dog which he had experimented with recovered, so that he had an opportunity of testing whether it was "protected" against a further inoculation. In 1882, he had already proved that there was only one certain and effective way of inoculating the disease; namely, in the brain; 100 per cent. of animals thus inoculated would become rabid. In 1884, he could show that the virus, after passing through apes, becomes weaker, but, after passing through a series of rabbits, became stronger, and the period of inoculation shorter. These were capital points. Having obtained a virus with a shorter period of inoculation than that of the dog, the problem to consider was, Could it be attenuated so as to be inoculated without fatal effects? Because, if so, by inoculating a virus with short inoculative period, it would be possible to anticipate the effect of the long-period virus of the dog after a person had been bitten, and thus protect him. The problem was identical with that of vaccination against small-pox. If a person be infected with small-pox on Monday, and be vaccinated on that day, Tuesday, or Wednesday, the vaccination would take effect quicker than the small-pox, and save the patient. Pasteur found that if the spinal cord of a rabbit, which had died of rabies, were kept in dry, warm air, it grew weaker every day. On July 4th, 1885, a boy was brought to him badly bitten by a mad dog. His state was so desperate that it was considered justifiable to give him the only chance of safety—namely, inoculation with attenuated virus, increasing the strength each day. This was done with triumphant success. The degree of virulence of the matter used was tested on rabbits, and it was found that though the matter used in the earlier inoculations did not infect, that used on the last five days infected and killed all the rabbits. Therefore it is clear the boy was protected against the strong fatal virus in the later inoculations by the earlier and weaker inoculations. With regard to dogs, the protection afforded by Pasteur's method had been proved beyond a doubt by a Government Commission. While 14 out of 19 dogs provided by the Commission died rabid, not one of the 23 dogs previously protected by Pasteur became infected at all. Up to July 1st, 1,474 persons had been treated by Pasteur, of whom 48 had been bitten by wolves, with 7 deaths, and 1,426 by dogs, with 4 deaths. Of 113 cases bitten by animals, proved by experiment to be rabid, only one died; and of 936 cases bitten by animals proved by clinical history to be rabid, only three died—1.04 per cent. But the most favourable statistics of rabies give at least 16 per cent. of deaths. Of those bitten in the face and hands by animals proved mad only 1.8 per cent. died, as compared with 88 per cent., the proportion given by Brouardel for such wounds. Undoubtedly, the greater proportion of those treated were now entirely free from risk, not through the use of the cautery, but by inoculation. The cautery has been proved most inefficacious and uncertain. That the material used really contains rabic virus is proved by the fact that when dogs are inoculated with it unattenuated they always become rabid, either dumb or raving mad. The greater virulence of the wolf-bites is due to the greater extent of the injuries and of the quantity of poison absorbed. The dog bites are usually not so severe. Dr. Hime ended with a warm eulogy on Pasteur's generosity and self-sacrifice, in giving freely the fruits of his life's work to all comers without charge. He had not patented his process, but freely imparted full information to all who desired to learn, and gave them the virus to work with. It was a merciful and fortunate thing Pasteur was not an Englishman, as had he been so, his great work could never have been carried on. Experimental pathology had been killed in this country, and those who shuddered at it here had to run over to the Continent to receive the benefits of Pasteur's treatment.

A cordial vote of thanks was proposed to Dr. Hime by Professor CORFIELD, and seconded by Dr. M'KELLER.

Sir R. RAWLINSON expressed himself thoroughly convinced by the unanswerable and eloquent address of Dr. Hime.

The medals and certificates awarded to successful exhibitors at the exhibition held at Leicester in 1885 were then presented.

In the evening, the anniversary dinner of the Institute was held at the Holborn Restaurant, under the presidency of Captain Douglas Galton, among those present being Mr. E. Chadwick, Sir R. Rawlinson, Sir W. Guyer Hunter, M.P., Professor Selwyn, Mr. J. Bosisto, Dr. Buller, Dr. A. Carpenter, Dr. North, Dr. T. W. Hime, and Major Flower.

In returning thanks for the toast of "Success to the Sanitary Institute," the CHAIRMAN said that it endeavoured to educate the community in sanitary science. It held its annual congresses and exhibitions, at which all the sanitary inventions of the day were displayed. By the arrangements the Institute had made for obtaining a careful judging, the exhibition had established a standard, and it was the only exhibition which had ever created a really valuable standard for the exhibits sent to it. It was not merely in congresses and exhibitions that the Sanitary Institute had devoted itself to the education of the community; but one of the most important matters which had been done in recent years, was the publication, by these means, of Dr. Farr's works. The Institute also felt that the value of the works of Mr. John Simon would be greatly increased if they could be collected and published together as the Institute intended to do. The Sanitary Institute had it also in contemplation to increase its usefulness by uniting with the Parkes Museum, and he hoped the final arrangements with that object would soon be completed.

THE CHOLERA.

[FROM OUR OWN CORRESPONDENT.]

THE cholera returns, for the twenty-four hours ending July 14th, report 115 cases and 36 deaths in the province of Brindisi, being a decrease of 32 cases and 12 deaths, as compared with the preceding day.

Wednesday's figures include 11 cases and 3 deaths in the town of Brindisi, 44 cases and 17 deaths at Francavilla Fontana, 25 cases and 10 deaths at Latiano, and 20 cases and one death at San Vito.

Three cases and two deaths are reported from Codigoro.

From noon on Tuesday until the same hour on Wednesday, three fresh cases of cholera and one death are reported to have occurred in Trieste; and six fresh cases of cholera and three deaths at Fiume.

A CORRESPONDENT writes from Naples to a contemporary, under date of July 6th:—"An order to this effect has just been issued by the Government: All vessels bound for Sardinia, Sicily, and the neighbouring islands, and all ports commencing from the Cape of Santa Maria di Leuca and on the Mediterranean, arriving from the Austrian-Hungarian coast, will be subject to a *contumacio* of seven days, beginning from the 5th of July. Italy is menaced not only on her own shores, but on those of Austria-Hungary, and equally strict regulations are being enforced with regard to each country. Unhappily, cholera is on the increase on the Adriatic coast; and two members of the Government have gone to Lecce, *en route* to Latiano, where the pestilence is committing great ravages. A correspondent writes from Brindisi on July 3rd as follows: 'We had yesterday eighteen cases and eight deaths. The cholera is on the increase.' For the neighbouring Latiano, however, the state of things is downright alarming; in that place there is a kind of anarchy. Almost all have fled; there is a want of almost everything. Yesterday, there was a demand for four gravediggers. This morning, three of your courageous medical men have gone to Latiano. The Minister of the Interior appealed to the medical men of Naples for assistance, and the appeal has been complied with. Some delegates of public security have been sent, to be at the orders of the Syndics; and, what is of equal importance, supplies of all kinds have been forwarded to wretchedly provided places in need of everything. With the exception of the zone indicated by the bulletins, the public health is good. That zone embraces Venice, Brindisi, Latiano, Oria, Francavilla, Fontana, San Viti dei Normanni, and other smaller places. At Venice, the disease is capricious. At one time, it was said to be disappearing, and then it reappeared. And the heat is intense. At Latiano, there have been as many cases daily as 105, and 32 deaths; at Francavilla Fontana, 44 cases and 18 deaths daily; at San Viti dei Normanni, 26 cases and 7 deaths daily; while at Brindisi, which was declared some time ago to be 'clean,' by report there had been 18 cases and 9 deaths. Codigoro, too, cre

anxiety, as there had been 11 cases and 2 deaths. The Government is adopting judicious measures, applicable not only to the infected districts, but to the country at large. 'In consequence,' says an official notice, 'of the sanitary conditions—not too good—of Venetia and Emelia, the Minister of War has decided for this year to suspend the grand manœuvres, which were to have taken place in the Romagna.' Again, the Minister of Public Instruction, having regard to the sanitary condition of the elementary schools, has recommended the reduction of the *oratio* by one hour, beginning from July 5th. This is a sad picture of the prospects of some parts, at least, of Italy for the summer, which is now setting in with great intensity. Naples is, however, quite free of the terrible malady, though vague reports have been in circulation. There is nothing easier than to get up a panic. I stated some time ago that an 'Italian Society for Emigration and Colonisation' was projected, and was in the course of formation. Another meeting was held here this week, which was well attended by the commercial class, and by men of property. A letter was read from the Minister of Agriculture and Commerce, praising and encouraging the formation of the society. He added that the Italian Press in South America had taken up the case warmly; while, in the Northern States, negotiations had been entered into for the concession of land on which to form Italian factories. A committee was formed of men of note, and many shares were subscribed for."

COLLECTIVE INVESTIGATION COMMITTEE.

LIST OF RETURNS RECEIVED DURING THE MONTH OF JUNE, 1886.

Bath and Bristol Branch: Intemperance, H. C. Hopkins (2).
Border Counties Branch: Intemperance, J. P. Balbirnie, R. Walker, M.D. (2).
East Anglian Branch: Intemperance, H. Hart.
Lancashire and Cheshire Branch: Liverpool District: X, J. H. Wilson.
Metropolitan Counties Branch: I (3), II, IV, IV A, Maurice Davies, M.D.; X, E. G. Corrie Jackson, F.R.C.S.; Intemperance, W. Newman, M.D., F. J. Allan, M.D. (3), J. Roche Lynch, A. Ogier Ward, M.B., W. Keen, M.D. (2); Hamamelis, W. C. Grigg, M.D., C. Godson, M.D., Percy Boulton, M.D., W. Murrell, M.D., Mitchell Bruce, M.D.; Terebene, J. F. Goodhart, M.D., W. Sedgwick, M.D., W. L. Heath, M.B., Stephen Mackenzie, M.D., William Ewart, M.D., R. W. Burnet, M.D.
Midland Counties Branch: Lincoln District: Intemperance, C. Harrison, M.D.
North of Ireland Branch: Intemperance, W. Bernard.
Reading Branch: Intemperance, R. Rice.
Shropshire and Mid-Wales Branch: XIII, F. H. Thompson.
South-Eastern Branch: East Kent District: X, J. W. Hayward (3); Terebene, Hamamelis, G. S. Mahomed; Intemperance, J. P. Wills. West Surrey District: Intemperance, H. B. Cullen Burry (2).
South Midland Branch: Intemperance, W. Odell, F.R.C.S. (3).
South Wales Branch; Intemperance, T. Hall Redwood, M.D. (2), J. Garrett Horder, H. Lloyd Williams.
South-Western Branch: North Devon District: Intemperance, Harold Swaie, M.B.
Southern Branch: Wilts District: Intemperance, J. Lardner Green (2).
Staffordshire Branch: Intemperance, J. T. Hartill, S. Johnson, M.D.
West Somerset Branch: I, R. J. Clement; Intemperance, C. P. Coombs (2).
Yorkshire Branch: Intemperance, Arthur Jackson, T. Smailes (4), Norman Porritt.

The Committee beg also to acknowledge (July 9th) the receipt, since their last acknowledgment on June 19th, of the following replies to the International Inquiry into the geographical distribution of certain diseases.

Metropolitan Counties Branch, 3.
Midland Counties Branch: Derby District, 70.

The Secretary to the International Committee begs also to acknowledge (July 9th) the receipt, since his last acknowledgment on June 19th, of the following returns to the same inquiry from members of the profession, not being members of the Association:

Metropolitan Counties, 2.
England, Wales, and the Channel Islands, 2.
Scotland, 2.

The Secretary to the Collective Investigation Committee will feel obliged if any contributors who do not find their returns included in this list will communicate with him at once.

DIFFERENT PREPARATIONS OF THALLIN IN ENTERIC FEVER.—Dr. Mayrhofer, during an epidemic of enteric fever occurring in a Bavarian regiment, employed thallin in three different forms—namely, the sulphate, the tannate, and the tartrate; and obtained highly satisfactory results from them all. He gave the drug according to Ehrlich's continuous system, the doses being generally 0.2 gramme, repeated when the temperature rose. From 1.0 to 2.0 grammes were given *per diem*. The total quantity required varied from 8 grammes in mild cases to 26 grammes in severe cases with relapses. After using the medicine, a profuse perspiration occurred, which invariably appeared to improve the patient's condition. No unpleasant effects were ever observed. There were altogether eighty-eight cases, of which three (that is, 3.4 per cent.) died. It was not possible to say that one of the three preparations presented any marked differences in its action from the other two.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

ALTERATION OF DATE OF MEETING.

A MEETING of the Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 21st instant, at 2 o'clock in the afternoon, instead of on the 14th, as previously announced.

Tuesday, July 20th, 1886.—Trust Funds Subcommittee, 3.30 P.M.—Scientific Grants Committee, 4.30 P.M.—Premises Subcommittee, 6.0 P.M.—Committee on Branch Organisation 6.45 P.M. *Wednesday, July 21st*, 1886.—Medical Reform Committee, 10.30 A.M.—Journal and Finance Committee, 11.0 A.M.

July 2nd, 1886. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETING FOR 1886.

ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 161A, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research, in furtherance of which the grant was made.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

The inquiry on Acute Rheumatism is now closed, as the printing of the Tables is completed.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

General inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE have been issued. A report will be made to the Section of Therapeutics at the annual meeting.

PROGNOSIS IN HEART-VALVE DISEASE, based on an examination of cases in which the lesion has existed for an unusual length of time

without producing serious symptoms; THE EXTREME DURATION OF INFECTIOUSNESS IN INFECTIOUS DISEASES. The Committee has proposed these two subjects for future inquiry, and has referred them to the Branches of the Association, in accordance with its regulations, with a view to preliminary discussion during the present year. Arrangements have also been entered into with the Section of Medicine of the Annual Meeting of 1886 to hold a discussion upon "Cases in which Disease of the Heart-Valves has been known to exist for upwards of five years without causing serious symptoms;" and with the Section of Public Health to hold a discussion on "The Duration of Infectiousness." The former discussion will be opened by Sir Andrew Clark, Bart., the latter by Dr. Arthur Ransome. The inquiry-papers, to be subsequently issued, will be based upon the information afforded in these Branch and general discussions.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—The annual meeting will be held at the Beach Hotel, Minehead, on Friday, the 30th instant, at 5 o'clock. T. J. Ollerhead, Esq., President-elect, will take the chair on its being vacated by Mr. Sincock. Business: Minutes; Report of Council; Treasurer's Report; Election of Officers; Place of Meeting and President-elect for 1887. President's Address. Papers and communications. Dinner at the Beach Hotel at 6.30; 5s. 6d. a head, exclusive of wine.—W. M. KELLY, M.D., Honorary Secretary.

NORTH OF ENGLAND BRANCH.—The annual meeting will be held at South Shields on Thursday, July 29th.—DAVID DRUMMOND, Honorary Secretary.

NORTH WALES BRANCH.—The thirty-seventh annual meeting will be held at the Advanced School, Blaenau, Festiniog (opposite the Queen's Hotel), on Tuesday, July 20th, at 12.30 P.M. After the meeting, the members and guests will dine together at 4.45 P.M., at the Queen's Hotel; tickets, inclusive of wine, 10s. each. Members arriving by the 10.40 A.M. (Great Western) train, and by the 11.35 (London and North-Western) train, will have time, before the meeting, to view the Welsh Slate Quarries (Lord Palmerston's), and Dr. Roberts has kindly undertaken to have conveyances in readiness to drive there. Dr. Roberts will also be very glad to entertain the members to light refreshment, prior to the meeting, at his residence, Isallt. It is hoped that the business of the meeting will be concluded so that the members may avail themselves of a trip on the Festiniog (Toy) Railway, to Tan-y-bwlch, to see the famous Vale of Festiniog, by the 3.40 P.M. train, returning in time for the dinner at 4.40. After the usual routine business, the President will deliver his Address, and the following papers and communications will be read. On Tumours of the Kidney: Lawson Tait, F.R.C.S. Observations on the Abuse of Purgative Medicines: John Roberts, M.D., Chester. A Case of Compression of the Bowel: John Richards, M.R.C.S., Bangor. On the Common Diseases of the Cervix Uteri: Francis Imlach, M.D., Liverpool. Hints on the Application of Ophthalmic Remedies: A. Emrys-Jones, Manchester. A Case of so-called Peritoneal Dropsy: E. T. Davies, M.D., Liverpool. History of two Obscure Cases: D. M. Williams, Liverpool. A demonstration on the application of Thomas's Hip, Knee, and Ankle Splints will be given by Robert Jones, M.R.C.S., Liverpool. Pathological Specimens will be exhibited by C. E. Steele, M.R.C.S., Liverpool.—W. JONES-MORRIS, Honorary Secretary, Portmadoc.—July 14th, 1886.

CAMBRIDGE AND HUNTINGDON AND EAST ANGLIAN BRANCHES.

A CONJOINT meeting of these Branches was held at the Town Hall, Ipswich, on Friday, July 9th, 1886. President, W. A. ELLISTON, M.D.

The Council of each Branch met at 12 noon, for the transaction of business.

EAST ANGLIAN BRANCH.

Report of Council.—Two successful meetings have been held during the year in the Essex district; one at Braintree, in the autumn, and the other at Brentwood Asylum, on January 27th, 1886; Dr. Elliston presiding at both. At the latter meeting, the Association were most hospitably entertained by Dr. Amsden. The Council are pleased to report a great accession of new members, with happily but few deaths. The Council trusts the Medical Benevolent Fund will receive the support it deserves. An extra effort in its jubilee year is commendable, and they sincerely trust it will meet with continued support from the Branch. The Council recommend that the next annual meeting be held in Norfolk.

New Members.—Dr. Rolla Rouse, M.D.Lond.; Dr. Barton, Norwich; Sir Hugh Beevor, Bart, M.B, Norwich; Dr. S. Hamill, Burnham Westgate; H. Chester Nance, F.R.C.S., Norfolk and Norwich Hospital; and Mr. J. H. Stacey, Norwich, were elected members of the Branch and of the Association. Carried *nem. con.*

Representatives on Council.—Mr. T. W. Crosse, F.R.C.S. and Dr. Elliston, were re-elected.

Branch Council.—Was re-elected.

Medical Defence Fund.—A resolution was proposed by Dr. HOLDEN and carried unanimously, approving of the resolution of the Essex District, recommending the Council of the Association to take some practical steps to secure the establishment of a fund.

Payment of Travelling Expenses of Representatives to Council by the Association.—A letter was read from the East York and North Lincoln Branch, asking the opinion of the East Anglian upon the subject. It was resolved: "That, in the opinion of this Branch, the travelling expenses of all members of the Council should be paid by the Association."

The members adjourned to luncheon, and at 2 P.M., a conjoint meeting was held.

Dr. LATHAM moved, and Dr. DURRANT seconded: "That each Branch Council be requested to consider and report upon the desirability of an amalgamation of the two Branches into a large Branch."

The PRESIDENT delivered an address upon "Modern Researches in Sanitation."

Professor HUMPHRY, F.R.S., moved, and Dr. GRANVILLE BANTOCK seconded, a vote of thanks to the President.

Papers.—The following papers were read.

1. G. M. Humphry, M.D., F.R.S.: On the Recuperative Power of Old Age.
2. M. Beverley, M.D. (Norwich): Gynæcological Notes on Emmet's Operation for Laceration of Cervix Uteri and for Prolapsus Uteri.
3. Mr. J. L. Currie (Ipswich): 1. Short Notes of Four Cases of Lithotrity at One Sitting. 2. One Interesting Case of Lithotomy.
4. Mr. Alan Reeve Manly (East Rudham): A New Lithotrite.
5. Dr. Isambard Owen: Remarks upon Collective Investigation.
6. Mr. J. R. Clouting (Thetford): A Pathological Specimen.
7. Mr. R. F. Symmons (Colchester): A Pathological Specimen.

Previous to a departure for a river trip on the Orwell, at the invitation of Mrs. Elliston and the President,

Dr. J. E. TAYLOR, F.L.S., F.G.S., gave a brief address upon the remarkable forest-bed beneath the estuary of the Orwell, extending almost from Ipswich to Harwich.

Dinner.—The members subsequently dined together at the Town Hall, the President in the chair, supported by the Mayor of Ipswich, the High Steward (Lord Gwydyr), Lord John Hervey, Sir Hugh Beevor, M.B., the Head Master of Ipswich School, Professor Humphry, Professor Latham, Dr. Durrant, Dr. Chevallier, Dr. Benham, Mr. G. C. Edwards, Brigade-Surgeon Smith, M.D., Colchester Camp, Dr. Granville Bantock (London), Mr. Oliver Fowler, of Cirencester. About forty-eight members dined.

BATH AND BRISTOL BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch took place at the Mineral Water Hospital, Bath, on Thursday, June 24th.

President for the ensuing Year.—The retiring President, Mr. E. C. BOARD, having made a few remarks, resigned the chair to Mr. C. GAINE, who delivered an able address.

Vote of Thanks.—A vote of thanks to Mr. C. Gaine, for his interesting and valuable address, was moved by Dr. SPENCER, seconded by Dr. BRABAZON, and carried unanimously.

Report of Council.—Mr. R. J. H. SCOTT, Honorary Secretary for Bath, read the following report.

Your Council regrets that this year the number of members attached to the Branch is eight less than last year. Six deaths have to be deplored; thirteen resignations have taken place, chiefly due to change of residence, and to the formation of new Branches nearer and more accessible to the members; fourteen new members have been elected; and there are at present 242 members belonging to the Branch.

Prominent among those whose loss we have to regret by death is Mr. W. Michell Clarke. Mr. Clarke was, eleven years ago, President of the Branch, and had been a member of the Council for many years, and took a deep interest in all that related to the well-being of the Branch. He was a most regular attendant at the ordinary meetings, and read several valuable papers; he was also a frequent and fluent speaker on many subjects; and, from his large experience and common sense, his remarks were always listened to with interest by the members. By the death of Mr. Michell Clarke, the members of the Council have lost an agreeable and useful colleague, and the Branch a most valuable member, and the neighbourhood one of its soundest and most successful practitioners. Mr. Clarke, who was educated at St. Bartholomew's Hospital, came to Bristol as house-surgeon to the Bristol General Hospital, at which institution he was afterwards surgeon, and finally consulting surgeon. He was also at one time lecturer on medical jurisprudence at the Bristol Medical School. In his dealings with his professional brethren, and with those who placed themselves under his professional care, Mr. Clarke was honourable and straightforward. He died unexpectedly, in the midst of hard w

and left many outside his own family who will long mourn his loss. We have also to record the death of Mr. William John Church, who was a native of Bath, and for about fifty years practised his profession in this city. He was a kind and good man, and, as a medical man, was much esteemed by his patients, and respected by his professional brethren. He was a member of the Provincial Medical and Surgical Association, now the British Medical Association, from its earliest days; and from June, 1862, to June, 1863, he filled the presidential chair of the Bath and Bristol Branch. Mr. Church retired from practice about fourteen years ago, and went to reside at Rodwell, near Weymouth, where he died in February last, at the ripe age of 86.

There are four other members whom we have lost by death, namely: J. T. Bridgeman, of Berkley; J. K. Lewis, M.B., of Bishopston; J. Purette, of Bristol; and B. J. Schofield, of Bath.

Papers.—Seventeen papers were read at the ordinary meetings, which gave rise to several interesting discussions, and which have been already mentioned in the reports of the ordinary meetings.

Finance.—The financial state of the Branch is very satisfactory, showing a balance in hand of £15 3s. Your Council, therefore, recommend a grant of £5 5s. to the Medical Benevolent Fund.

Local Council.—The following gentlemen have been reported by the scrutineers as elected members of the Branch Council:—*For Bath:* R. S. Fowler, Esq.; A. W. Fox, M.B.; H. Hensley, M.D.; A. B. Brabazon, M.D. *For Bristol:* F. P. Lansdown, Esq.; J. G. Swayne, M.D.; N. C. Dobson, Esq.; J. G. Davey, M.D.; C. H. Collins, Esq.

It was proposed by Surgeon-General W. B. BEATSON, and seconded by Mr. CARR: "That the report now read be adopted, and entered on the minutes."

President-Elect.—Mr. A. PRICHARD proposed, and Dr. SPENDER seconded: "That Dr. G. F. Burder be the President-elect." This was carried by acclamation.

Vote of Thanks to the Retiring President.—It was proposed by Dr. GOODRIDGE, and seconded by Mr. LANSDOWN: "That the best thanks of the Branch are due, and are hereby tendered, to Mr. E. C. Board for his able conduct in the chair during the past year." This was carried unanimously.

Vote of Thanks to the Council and Honorary Secretaries.—The following resolution was proposed by Dr. BEATSON, and seconded by Mr. CARR: "That the thanks of the Branch are due to the Council and Secretaries for their services during the past year, and that the Secretaries be requested to continue in office."

Representatives of the Branch on the General Council.—Dr. BURDER proposed, Mr. R. S. FOWLER seconded, and it was carried unanimously: "That Mr. F. Mason, of Bath, and Dr. Markham Skerritt, of Clifton, be the Representatives of the Branch on the General Council for the ensuing year."

Notices of Motion.—Dr. SPENCER gave notice, "That, at the next general, special, or annual meeting, he shall move that the present rule for the election of members on the Local Council be altered in such a manner as he will then bring before the Branch."

Exhibition of Patients at Meetings.—Dr. GOODRIDGE moved, and Dr. SPENCER seconded: "That, in future, all patients shown at the ordinary meetings be exhibited as "card cases."—The suggestion was favourably discussed by Mr. Mason, Dr. Burden, Mr. Fowler, and Dr. B. Fox.

A Vote of Thanks to the committee of the Mineral Water Hospital, was proposed by Mr. MASON, seconded by Mr. T. B. GOSS, and carried unanimously.

Dinner.—The members afterwards dined together at the Royal Pump-room Hotel.

LANCASHIRE AND CHESHIRE BRANCH: ANNUAL MEETING.

THE fiftieth annual meeting of this Branch was held at the Town Hall, Lancaster, on Wednesday, July 7th, at 2 P.M.

Dr. BARRON, the retiring President, having taken the chair, introduced Dr. HARKER, the new President, who delivered his introductory address, taking for his subject the Study of Nature as the foundation of Medical Thought and Practice. At the conclusion of the address, a hearty vote of thanks was passed to Dr. Harker, on motion of Dr. WATKIN, seconded by Dr. MONKS.

Report of Council.—Dr. GLASCOTT, the Honorary Secretary, read the following report of Council.

Your Council has once more the pleasure of reporting that the condition of the Branch is in every respect satisfactory. The financial condition of the Branch is, as stated in the balance-sheet, very good, the cash in hand at the close of the year being £180 14s. 5d.—an increase of £53 1s. 8d. over the amount in the Treasurer's hands the year before. This result has been obtained by carefully looking after the payment of overdue subscriptions, and restricting as much as possible, compatible with efficient working, the general expenses of the Branch.

It has to be expressed with deep regret that death has thinned our ranks considerably during the past year, eighteen members having died since we last met. Our strength has also been lessened by forty members having resigned membership or left the district. The gaps caused by deaths and resignations have in some measure been filled up by the election of fifty-five new members, leaving us a total number of 906 on the roll of the Branch (a net loss of three).

During the past year, a subcommittee was appointed to inquire into the necessity of forming a Defence Association in connection with the British Medical Association. The report of the subcommittee will be submitted for your consideration to-day, and you will be asked to take steps to bring the scheme under the notice of the Council of the Association.

A committee was also appointed to investigate into charges of unprofessional conduct against one of your members. After a careful investigation at repeated sittings of the Committee, the charge of unwarrantable assumption of a surgical title was fully proved, and the Committee reported the matter to your Council. After a full discussion of the whole case, it was resolved to administer a severe official reprimand to the delinquent, and to give him full notice that, if he should again be guilty of similar misconduct, the Council would at once proceed to expel him from the Branch.

In the month of December, an intermediate meeting of the Branch was held at Ashton-under-Lyne, at which papers were read, and communications of high scientific interest were made. The attendance of members was not up to the average, but no doubt that was mainly due to the inclemency of the weather then prevailing.

Your Council would wish to direct your attention to the fact that hereafter, in consequence of a resolution passed at the last annual meeting, held at Southport, members of Council and representatives on the Council of the Association may be nominated at an annual meeting by members then present striking out any name or names, and substituting the names of other members for those struck out, care being taken to preserve the exact number of names on the ballot-papers.

It is hoped, by strict economy of the funds of the Branch, in a few years to be able to have at our disposal a sum to meet the expenses of more frequent intermediate meetings, and thus having to tax the generosity of our entertainers more lightly, we would be enabled to have Branch meetings at shorter intervals in the smaller towns in Lancashire and Cheshire, where the number of members is too small to justify them at present in organising such a meeting.

Your Council has to announce the reception of a cordial invitation to hold our next annual meeting at Stockport. This invitation will be placed formally before you for acceptance during the course of the meeting.

Although not in every respect calculated to meet the full requirements of the profession, and not satisfying its aspirations and hopes, your Council may venture to make congratulatory reference to the passing of the Medical Acts Amendment Bill by the late Parliament. The passing of this Bill being largely due to the unwearied exertions of a member and past President of this Branch, Dr. Edward Waters, Chairman of the Medical Reform Committee of the Council of the Association.

In conclusion, your Council desires to express, at this the jubilee meeting, a confident hope that this Branch will continue to sustain the *esprit* and solidarity of the profession with its usual wont, and do all in its power to maintain its proud position as the premier Branch of the parent Association.

Dr. BARRON moved the adoption of the Report, which was seconded by Dr. FARRAR, and carried.

President-Elect.—Dr. SMITH (Woodley) proposed, Mr. LUND (Manchester) seconded, and it was unanimously resolved, that Dr. Ball, of Heaton Norris, be elected president-elect for the coming year.

Vice-Presidents.—On the motion of Dr. HARKER, seconded by Dr. SHUTTLEWORTH, Dr. Dreschfeld (Manchester) and Dr. Edwin Rayner (Stockport) were unanimously elected vice-presidents.

Honorary Secretary.—On the motion of Dr. HARKER, seconded by Dr. WATERS, and supported by Dr. BARRON, Dr. Glascott was re-elected honorary secretary.

Representatives in the Council of the Association.—The following were elected as representatives in the Council of the Association: George B. Barron, M.D., Southport; Alexander Davidson, M.D., Liverpool; Charles E. Glascott, M.D., Manchester (General Secre-

tary); James Hardie, Esq., Manchester; James Taylor, Esq., Chester (Local Secretary).

Council of the Branch.—The following were elected: W. Alexander, M.D., Liverpool: H. Ashby, M.D., Manchester; F. J. Bailey, Liverpool; W. Bale, Heaton Norris; J. Barr, M.D., Liverpool; William Berry, Wigan; S. Buckley, M.B., Manchester; J. E. Burton, Liverpool; J. S. Bury, M.D., Manchester; A. F. H. Cameron, Liverpool; W. Carter, M.D., Liverpool; C. J. Cullingworth, M.D., Manchester; W. M. Campbell, M.D., Liverpool; J. Corns, M.D., Oldham; T. B. Eames, Stoneclough; J. Farrar, Morecambe; H. M. Fernie, Macclesfield; W. H. Fitzpatrick, M.D., Liverpool; J. E. Garner, M.B., Preston (Local Secretary); T. R. Glynn, M.D., Liverpool; A. Godson, M.B., Cheadle; W. Hall, Junr., Lancaster (Local Secretary); R. Harrison, Liverpool; A. R. Hopper, Liverpool; De Vere Hunt, Bolton (Local Secretary); Leslie Jones, M.D., Manchester; T. Jones, M.B., Manchester; J. Lambert, M.D., Birkenhead; D. J. Leech, M.D., Manchester; D. Little, M.D., Manchester; E. Lund, Manchester; W. Y. Martin, Walkden; E. D. McNicol, Southport; E. H. Monks, Southport; F. T. Paul, Liverpool; Chauncey Puzey, Liverpool; C. J. Renshaw, M.D., Ashton-on-Mersey; D. Lloyd Roberts, M.D., Manchester; J. Ross, M.D., Manchester; G. E. Shuttleworth, M.D., Lancaster; Starkey T. Smith, M.B., Warrington; F. Southam, Manchester; C. E. Steele, Liverpool (Local Secretary); G. Thomson, M.D., Oldham; C. Thorp, Todmorden; F. Vacher, Birkenhead; E. Waters, M.D., Chester; J. W. Watkins, M.D., Newton-le-Willows; F. P. Weaver, M.D., Frodsham; G. A. Woods, Southport.

The following report of the Medical Defence Committee was read.

To the President and Council of the Lancashire and Cheshire Branch of the British Medical Association.

GENTLEMEN,—In accordance with the resolution passed at the intermediate meeting of your Branch held at Ashton-under-Lyne, on December 16th, 1885, your subcommittee then appointed have met; and, having discussed the question of medical defence, have agreed to present the following recommendations for consideration at the annual meeting of the Branch.

1. That it is desirable that a medical defence society should be formed, which should take advantage of the organisation, and be strengthened by the moral support of the British Medical Association, without rendering that Association liable for any of its actions or liabilities.

2. That the Society should provide legal advice, free of charge, for all members who may be prosecuted, or sued for any action done in connection with their work as medical practitioners, subject to the approval of the executive committee.

3. That such Society be governed by an executive committee, and by branch subcommittees.

4. That the executive committee consist of the President of the British Medical Association *ex officio*, of one delegate from each Branch, and also an extra delegate from each Branch for every one hundred members of the Defence Society, who are members of that Branch. This committee should manage all questions of finance, and should consider the report of the branch subcommittees on cases brought before them, and should decide as to the course to be pursued.

5. Each branch subcommittee should consist of three members, appointed by the council of the branch; they should make preliminary investigations into all cases brought under the notice of the Society, and should report to the executive committee; each subcommittee to report on such cases as occur in its own branch district only.

6. That the subscription be 2s. 6d. per annum, and that the entrance fee be 5s.

7. That a solicitor should be appointed at a fixed salary to undertake all the legal work of the Society free of cost, excepting costs out of pocket and counsel's fees.

8. Your subcommittee suggests that, if you approve of their recommendations, you should appoint a deputation to wait upon the President of the British Medical Association without delay, with the view of bringing the scheme under the notice of the Council of the Association.

On the motion of Dr. BARRON, seconded by Dr. MARTIN, the report was received, and the following resolution carried. Resolved: That a meeting of representatives of the various Branches of the Association interested in the question be held at Brighton, to consider some scheme of medical defence in connection with the British Medical Association, and to discuss the recommendations of the report just read (copy enclosed), or modification thereof, in order to bring the matter before the members of the Association; that a notice of such meeting be advertised in the JOURNAL each week prior to the annual meeting, inviting representatives of each Branch to be present. And, further, that this Branch be represented at that meeting by Dr. Harker, president of the Branch; Dr. Barron, ex-president; Dr. Armstrong; Dr. Martin; and Dr. Glascott, honorary secretary.

Annual Meeting, 1887.—Dr. BALL laid before the meeting a cordial invitation to the Branch to hold their next annual meeting at Stockport. On the motion of Dr. WATKINS, seconded by Dr. RAYNE, and carried unanimously, it was resolved to accept the invitation.

The following medical and surgical communications were read:

Dr. Stewart: Provident Dispensaries.

Dr. Farrar showed Gerrard's Urcometer, and gave a practical demonstration of its action.

Mr. Christopher Johnson: Sanitary Reform a Hundred Years ago.

Dr. Griffith: Tobacco-Amblyopia in Women.

Dr. Walter showed an Unusual Form of Uterine Polypus.

Dr. Rayne: General Peritonitis as an early and prominent feature in Glanders.

Mr. Southam: Case of Tumour of the Bladder removed by Suprapubic Cystotomy.

Dinner.—Thirty-nine members and two visitors, Dr. Ballard and Dr. Page, dined together after the meeting at the King's Arms Hotel.

During the afternoon, members had an opportunity of visiting the Royal Albert Asylum, the County Asylum, Williamson Park, and of driving round by the Crook of Lune.

NORTHERN COUNTIES (SCOTLAND) BRANCH: ANNUAL MEETING.

THE annual meeting was held at Elgin on Wednesday, July 7th; Dr. BRUCE, of Dingwall, in the chair.

Papers.—The following papers were read:

1. A Case of Abdominal Section for Tait's Disease of the Fallopian Tubes, performed in Inverness by the late Dr. Angus Macdonald. This paper was read by Dr. Milne Chapman.

2. Cases of Asthma: Dr. F. Fox, Strathpeffer.

Travelling Expenses of Representatives of Branches.—A proposal by the East York and Lincoln Branch, that the travelling expenses of the representatives of Branches in the General Council, should be defrayed by the Association, was unanimously approved of.

Collective Investigation.—Reports on Collective Investigation were given in by the Secretaries, Dr. C. Grant and Dr. G. H. Mackay.

Officers for the Ensuing Year.—Dr. Craig, Glen-Urquhart, was elected President for 1886-7; and Dr. G. Petrie-Hay, Forres, President-elect. Dr. Ogilvie Grant was appointed representative to the Medical Council.

The meeting adjourned, to meet at Strathpeffer early in June, 1887.

GLASGOW AND WEST OF SCOTLAND BRANCH.

A MEETING of this Branch was held at Paisley, on July 2nd.

Excursion.—Members living in Glasgow and its vicinity left the city by train at 2 P.M., and were joined at Paisley station by the local members, and by a number of local and county practitioners, not actually members of the Branch. Under the guidance of the President-elect, Dr. D. FRASER, of Paisley, the company drove to Paisley Abbey, the beauties of which were pointed out and eloquently described by the Rev. Mr. Gentles, incumbent of the Abbey Church. Then a considerable time was very well spent in visiting the well-known thread works of Messrs. Coats, to inspect which the Branch had special permission. Thence the members drove to the Burgh Asylum, in which Dr. Fraser, its physician, acted as guide; and afterwards to the museum and observatory, where the Rev. Mr. Henderson, Curator, exhibited and explained the uses of many of the astronomical instruments.

Travelling Expenses of Representatives of Branches.—The Branch then met for business in the George A. Clark Hall, the President, Professor JAMES MORTON, in the chair. The minutes of last meeting having been read and approved, the report of the Council regarding payments of travelling expenses of the Branch's representative on the Council in London, was read, discussed, and, on the motion of Dr. JOSEPH COATS, seconded by Dr. THOMAS LAFRAIK, adopted. The recommendations embodied in the report were: first, that a small sum, equal to the average annual surplus, should be paid yearly to the Branch's representative, out of the ordinary funds of the Branch; and secondly, that a strong representation should be made to the General Council, urging the payment, by the General Association, of the travelling expenses of the Branch representatives. If this were found to be too great a drain on the general funds of the Association, it was suggested that, "in the meantime the railway expenses of representatives living at a certain distance from London should be defrayed. An arrangement by which the first-class fare should be paid for all representatives living at a further distance than two hours by express train from London, would seem to be an equitable one."

The President's Address.—This address, on a subject with which his name is identified, namely, Spina Bifida, was unavoidably held over till a future meeting.

Dinner.—The company, to the number of thirty-two, then sat down to an excellent dinner, in the George Hotel. After the usual toasts had been duly honoured, the special thanks of the meeting were given to Dr. Fraser, who had organised and carried out so successfully the details of the Branch's excursion to Paisley.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

THE fifty-fourth Annual Meeting of the British Medical Association will be held at Brighton, on August 10th, 11th, 12th, and 13th, 1886.

President: W. T. Edwards, M.D., F.R.C.S., Physician to the Glamorgan and Monmouth Infirmary, Cardiff.

President-elect: Withers Moore, M.D., F.R.C.P., Senior Physician to the Sussex County Hospital, Brighton.

President of the Council: Balthazar Foster, M.D., F.R.C.P., Professor of Medicine in Queen's College and Physician to the General Hospital, Birmingham.

Treasurer: C. Macnamara, F.R.C.S., Surgeon to the Westminster Hospital, London.

An Address in Medicine will be delivered by Surgeon-Major John S. Billings, Surgeon, United States Army Medical Department, Washington.

An Address in Surgery will be delivered by Frederick Abell Humphry, F.R.C.S., Surgeon to the Sussex County Hospital.

An Address in Public Medicine will be given by E. D. Mapother, M.D., Consulting Medical Officer to the City of Dublin.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

MEDICINE.—*President*, W. H. Broadbent, M.D. *Vice-Presidents*, Frederick Bagshawe, M.D., Hastings; Joseph Ewart, M.D., Brighton. *Honorary Secretaries*, Francis Warner, M.D., 24, Harley Street, London; Henry Seymour Branfoot, M.B., 42, Norfolk Square, Brighton.

SURGERY.—*President*, John Eric Erichsen, F.R.C.S., F.R.S., London. *Vice-Presidents*, Frederick William Jowers, M.R.C.S., Brighton; John Ward Cousins, F.R.C.S., Southsea. *Honorary Secretaries*, William Johnson Walsham, F.R.C.S., 27, Weymouth Street, London; Willoughby Furner, F.R.C.S., 2, Brunswick Place, Brighton.

OBSTETRIC MEDICINE.—*President*, Alfred Meadows, M.D., London. *Vice-Presidents*, Constantine Holman, M.D., Reigate; Frederick W. Salzmann, M.R.C.S., Brighton. *Honorary Secretaries*, Charles J. Wright, M.R.C.S., Lynton Villa, Virginia Road, Leeds; Alban Doran, F.R.C.S., 9, Granville Place, W.

PUBLIC MEDICINE.—*President*, Richard Patrick B. Taaffe, M.D., Brighton. *Vice-Presidents*, Sir Charles Alexander Cameron, M.K.Q.C.P., Dublin; Charles Kelly, M.D., Worthing. *Honorary Secretaries*, W. Brown, F.R.C.S., Carlisle; William Joseph Tyson, M.D., Folkestone.

PSYCHOLOGY.—*President*, Thomas Smith Clouston, M.D., Edinburgh. *Vice-Presidents*, Charles A. Lockhart Robertson, M.D., Brighton; Joseph Raymond Gasquet, M.B., Brighton. *Honorary Secretaries*, Charles Spencer Waller Cobbold, M.D., Earlswood Asylum, Redhill; James M. Moody, M.R.C.S., Surrey County Asylum, Canehill, Purley.

PATHOLOGY.—*President*, Julius Dreschfeld, M.D., Manchester. *Vice-Presidents*, James Frederick Goodhart, M.D., London; Heneage Gibbes, M.D., London. *Honorary Secretaries*, John E. Ranking, M.D., Mount Ephraim Road, Tunbridge Wells; John Caldwell Uhthoff, M.D., 9, Brunswick Place, Brighton.

THERAPEUTICS AND PHARMACOLOGY.—*President*, Thomas Lauder Brunton, M.D., F.R.S., London. *Vice-Presidents*, John Mitchell Bruce, M.D., London; Edward Mackey, M.D., Brighton. *Honorary Secretaries*, Cornelius William Suckling, M.D., 108, Newhall Street, Birmingham; John Theodore Cash, M.D., Drumearn, Earlsfield Road, Wandsworth Common, S.W.

OPHTHALMOLOGY.—*President*, Chas. Oldham, F.R.C.S., Brighton. *Vice-Presidents*, Louis Tosswill, M.B., Exeter; George Anderson Critchett, F.R.C.S.Edin., London. *Honorary Secretaries*, Frank Henry Hodges, F.R.C.S.Edin., 17, Horse Fair Street, Leicester; Arthur Nicholson, M.D., 98, Montpellier Road, Brighton.

OTOLOGY.—*President*, G. F. Hodgson, M.R.C.S., Brighton. *Vice-Presidents*, Alphonso Elkin Cumberbatch, F.R.C.S., London; Edward Cresswell Baber, M.B., Brighton. *Honorary Secretaries*, Henry Albert Reeves, F.R.C.S.Edin., 78, Grosvenor Street, W., London; Patrick William Maxwell, M.D.Edin., 16, Warrington Place, Dublin.

[a] *Honorary Local Secretaries:* Thomas Jenner Verrall, M.R.C.S., 95, Western Road, Brighton; Alfred Scott, L.R.C.P., German Place, Brighton.

TUESDAY, AUGUST 10TH, 1886.

2 P.M.—Meeting of 1885-6 Council.
3 P.M.—General Meeting. Report of Council and other business. Adjourn at 5 P.M.
8 P.M.—General Meeting. President's Address, and any business adjourned from meeting at 3 o'clock.

WEDNESDAY, AUGUST 11TH, 1886.

9.30 A.M.—Meeting of 1886-87 Council.
11.0 A.M.—Second General Meeting. Address in Medicine.
2 to 5 P.M.—Sectional Meetings.
8 P.M.—A *Conversazione*.

THURSDAY, AUGUST 12TH, 1886.

9.30 A.M.—Meeting of Council.
11 A.M.—Third General Meeting. Address in Surgery.
2 to 5 P.M.—Sectional Meetings.
6.30 P.M.—Public Dinner.

FRIDAY, AUGUST 13TH, 1886.

10 A.M.—Address in Public Medicine.
11 A.M.—Sectional Meetings.
4 P.M.—Concluding General Meeting.
8 P.M.—Reception.

SATURDAY, AUGUST 14TH, 1886.

Excursions.

The following discussions and papers are promised up to the present time. Members desirous of reading papers, or joining in the discussions, are earnestly requested to communicate, without delay, with the Secretaries of the respective Sections.

SECTION A.—MEDICINE.

The following subjects have been chosen for special discussion.

1. Cases in which Disease of the Valves of the Heart has been known to exist for upwards of five years, without causing Serious Symptoms. Introduced by Sir Andrew Clark, M.D., F.R.C.P., F.R.S., London. The following gentlemen have promised to take part in the discussion: Drs. Gairdner, Clifford Allbutt, B. Foster, Douglas Powell, Sir Dyce Duckworth, M. Bruce, Burney Yeo, Skerritt, Saundby, Sansom, Tyson, Thomas, S. Mackenzie, D. J. Leech, Bernard O'Connor, S. Bristowe, and Oliver.

2. On the Effects produced by Gall-stones, with particular reference to some Rarer Points in their Symptomatology. Introduced by W. Ord, M.D., F.R.C.P., London. The following gentlemen have promised to take part in the discussion: Drs. Clifford Allbutt, B. Foster, Pavy, Shingleton Smith, Saundby, Sir Peter Eade, M.D., S. Bristowe, and Ralfe.

Dr. Radcliffe Crocker will give a Demonstration in the Removal of Hairs by Electrolysis.

The President of the Section will deliver his Address on August 12th.

The following papers are promised.

CHURTON, T., M.D. Two Cases of Non-diabetic Acetonuria.
COUTTS, J. A., M.B. Latter Effects of Rickets.
CULLIMORE, D., M.D. Tropical Hepatic Abscess.
CROCKER, H. Radcliffe, M.D. A New Treatment for obstinately recurring Eczema.
DRYSDALE, C. R., M.D. The Treatment of Phthisis.
DUCKWORTH, Sir Dyce, M.D. Inadequate Treatment of Anæmia.
EARDLEY-WILMOT, R., M.B. A Case of Gall-stones.
EYLANDT, J. E., M.D. (Reval). Treatment of Diphtheria.
GAMGEE, A., M.D. On Compressed and Rarefied Air.
HALL, F. de Havilland, M.D. Meningitis as a complication of Pneumonia.
HANDFORD, H., M.D. Menstruation and Phthisis.
MANTLE, A., M.D. Etiology of Rheumatism considered from a Bacterial Point of View.
MOXON, W., M.D. Effects of Turpentine, Ergot, and Water, on Albuminuria.
MYRTLE, A. S., M.D. Chronic Inflammation of Mucous Membrane of Pyloric end of Stomach, Duodenum, Common Gall-duct, and Bladder, their Symptoms and Treatment by Harrogate Waters.
OLIVER, T., M.D. On the Relationship of Urea to certain Diseased Processes.
PLAYFAIR, W. S., M.D. Some Observations on what is called Neurasthenia.
RALFE, C. H., M.D. Functional Albuminuria.
RENDALL, Stanley, M.D. Therapeutical Action of the Waters of Aix-les-Bains.
SAVAGE, George H., M.D. Mental Symptoms with Locomotor Ataxy.
STRAHAN, J., M.D. Intestinal Ulcers and their Treatment, more especially by Arsenic.
WEST, Samuel, M.D. Hæmaturia in Granular Kidney.
WHITE, W. Hale, M.D. Inexplicable Pyrexia.
WHITTLE, E. G., M.D. Melancholia and Insomnia in the Sane. Treatment.

SECTION B.—SURGERY.

Sir Henry Thompson will open a discussion on Suprapubic Lithotomy. The following gentlemen will take part in the discussion: Messrs. W. Cadge, Reginald Harrison, Professor Humphry, Berkeley Hill, T. R. Jessop, Greig Smith, W. Pye, Barwell, Bruce Clarke, Edward Lund, Walter Whitehead, and J. Ward Cousins.

The following papers are promised.

HARLEY, George, M.D., F.R.S. Hepatic Phlebotomy and Puncture in Hypertrophic Congestions of the Liver.
IMLACH, Francis, M.D., Liverpool. A Case of Renal Hydatids.
TAIT, Lawson, Esq. Surgical Treatment of Diseases of the Liver.

THORNTON, J. K., Esq.
WILLETT, A., Esq., and MEREDITH, W. A., Esq. Cholecystotomy.

Messrs. Macnamara, Morris, Bellamy, Jessop, and Professor Gastin, of Georgia, will take part in the discussion.

HORSLEY, Victor, M.B. A paper, illustrated by Photographs illuminated by the Lime-light, in connection with the Advances in the Surgery of the Central Nervous System.

Mr. E. Bellamy and Dr. Hughes Bennett will join in the discussion.

ADAMS, W., Esq. On the Treatment of Congenital Displacement, the so-called Congenital Dislocation of the Hip-Joint, by long-continued Recumbency and Extension.
ANDERSON, W., Esq. On Treatment of Aneurysm by Galvano-Puncture, illustrated by cases.
BENTON, S., Esq. Fistula in Ano of the Horse-Shoe Shape.
CLARKE, Bruce, Esq., and STEAVENSON, W. E., M.D. The Employment of Electricity in the Treatment of Diseases of the Urinary Organs.
COUSINS, J. Ward, M.D. A new Mouth-gag with Throat-Guard.
FITCH, Simon, M.D. (Nova Scotia). The Dome-Trocar and associated Instruments in Paracentesis, Aspiration, Transfusion, Ovariotomy, and Tunnelling the enlarged Prostate.
HARRISON, Reginald, Esq. On the Treatment of Urethral Stricture by Internal and External Urethrotomy combined.
JESSETT, F. B., Esq. Surgical Treatment of certain Tumours of the Neck.
KEETLEY, C. B., Esq. Further Remarks on the Radical Cure of Hernia by Injections into the Inguinal Canal.
OWEN, Edmund, Esq. Psoas Abscess: when and where to evacuate it.
PYE, W., Esq. A Case of Multiple Papilloma of the Bladder, removed by the Suprapubic Operation.
SMITH, Noble, Esq. On Obscure Disease of the Spinal Column.
STARTIN, James, Esq. The Surgical Treatment of Acne and Lupus.
SYMONDS, Charters J., M.D. The Treatment of Malignant Stricture of the Œsophagus by Tubage.
SYMPSON, Thomas, Esq. A Case of Myositis Ossificans.
WHITEHEAD, Walter, Esq. Three Hundred Consecutive Cases of Hæmorrhoids cured by Excision.

SECTION C.—OBSTETRIC MEDICINE.

The President will deliver a short address.

The following two special discussions will take place.

1. The Alternatives to Craniotomy. This discussion will be introduced by Dr. Robert Barnes; and Professor Porro, Dr. Halliday Croom, Dr. E. T. Davies, Liverpool; Dr. Walter, Manchester; Mr. Greig Smith, Clifton, and others, will be among the speakers.

2. On Removal of the Uterine Appendages. Papers will be read by Dr. Savage, Birmingham; Dr. More Madden, Dublin; and others; and Dr. Bantock; Dr. E. T. Davies, Dr. G. Elder, Nottingham, and Dr. Imlach, Liverpool; Dr. Walter, Manchester; Mr. Lawson Tait, Birmingham; Mr. Vincent Jackson, Wolverhampton, and others, will take part in the discussion.

The following papers are promised.

AVELING, J. H., M.D. A Case of Extra-uterine Gestation arrested by Electricity.
BALLANTYNE, J. W., M.B., Edinburgh, Sphygmographic Tracings in Labour and the Puerperium.
BARNES, Fancourt, M.D. On Perinæorrhaphy.
BEVERLEY, Michael, M.D., Norwich. Cases of Laceration of Os Uteri treated by Emmet's operation; Three Cases of Procidentia Uteri treated by Emmet's operation.
BLACK, J. Gordon, M.D., Harrogate. The Use of Stem-Pessaries.
BRAITHWAITE, J., M.D. On a Mode of Treating certain Cases of Amenorrhœa.
DOLAN, T. M., M.D. Obstetric Appearances with Observations.
EDIS, A. W., M.D. Cases illustrating the Difficulties of Diagnosis in Gynæcological Practice.
ELDER, G., M.D. A Case of Vesico-vaginal Fistula.
EMMET, T. C., M.D., New York. On certain mooted points in Gynæcology.
GRIGG, W. C., M.D. On the Antiseptic Use of Bichloride of Mercury in Obstetric Practice.
HANDFIELD-JONES, M., M.B. Scanty Secretion of Liquor Amnii in the Early Months of Pregnancy, and its Bearing on Diagnosis.
HART, D. Berry, M.D. Successful Case of Abdominal Section for Ruptured Fallopian Tube Fœtation, with Microscopic Examination of the part of the tube removed.
HEWITT, W. M. Graily, M.D. The Early History and Etiology of Uterine Flexions and Displacements.
KIRWAN, R. J., M.D., Galway. Craniotomy and Cæsarean Section.
LUSK, W. T., M.D. (New York). The Proper Moment for the Performance of Gastrotomy in Abdominal Pregnancy.
ROUTH, C. H. F., M.D. On some Points of Difficulty as affecting Medical Men in Cases of Hysteria with Erotic Symptoms.
WATSON, W., M.D. A Case of Uterine Myoma causing obstruction of the Bowels, treated by the Removal of the Appendages.

SECTION D.—PUBLIC MEDICINE.

The general subjects for discussion are the following.

1. Scarlet Fever; its Causation, and the best Sanitary Measures for Dealing with the Disease as it exists among Urban Populations. Dr. Ewart, of Brighton, will open this discussion. Dr. W. Squire will take part.

2. On the Duration of Infectiousness in the following Infectious Diseases: Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. Dr. A. Ransome, of Manchester, will open this discussion. Dr. E. W. Hope, of Liverpool; Dr. T. F. Pearse, Haslemere; and Dr. W. Squire, will take part.

3. Diphtheria in Rural Districts: (*a*) Causation; (*b*) Influence of Soil upon the Disease. Dr. C. Kelly will open this discussion.

4. Reports of Water Analyses: the best Method of Stating these so as to secure one Uniform Plan. Dr. Whitelegge will open this discussion.

Dr. Edgar Crookshank will exhibit the various apparatus employed in a Bacteriological laboratory, and give demonstrations of cultivations, microscopic preparations, and photographs of bacteria.

The following papers are promised.

ASHBY, H., M.D. On the Duration of Infectiveness in Scarlet Fever.
BAOSHAWE, F., M.D., St. Leonards. Circular Wards in Hospital Construction.
CARPENTER, A., M.D. The Causation of, and on the Quarantine which is necessary to be observed in, Scarlatina.
CORNISH, W., Surgeon-General. On an Outbreak of Cholera amongst British Emigrants proceeding from London to Queensland in the steamship *Doruncia* during November and December, 1885.
DRYSDALE, C. R., M.D. 1. On Animal Vaccination. 2. Sewage Pollution by the Thames.
EVATT, Surgeon-Major G. J. H. On the Medical Department of an Army Corps in War, with proposal for a more efficient Volunteer Medical Organisation.
HANDFORD, H., M.D., Nottingham. Death-rate of Enteric Fever.
KERR, Norman, M.D. On Hydrophobia, and its Prevention.
PAGET, C. E., Esq. The Influence of Acute, supposed Simple, Sore-Throat in the Spread of Diphtheria.
PEARSE, T. F., M.D., Haslemere. On the Periods of Incubation of the principal Exanthemata.
PRINGLE, Surgeon-Major R., M.D. 1. The Advantages and Disadvantages of Human and Animal Lymph compared. 2. State Vaccination, with special reference to the Compulsory Clauses in the Vaccination Acts.
SEATON, E., M.D. A paper on Scarlet Fever.
SQUIRE, W., M.D. On the Influence of Increased Means of Isolation upon the Prevalence of Scarlet Fever in London.
TATHAM, J., M.D. Scarlet Fever, and the best Means for its Prevention amongst Urban Populations.
TAYLOR, Michael, W., M.D., London, formerly Penrith. Diphtheria in Connection with Damp and Mould.
VACHER, F., Esq. Duration of Infectiousness in the Exanthemata and Allied Diseases.
WHITELEGGE, B. A., M.D. Reports of Water Analyses.

SECTION E.—PSYCHOLOGY.

The President, Dr. T. S. Clouston, will deliver an address on the Relationship of Bodily and Psychical Pain.

The following papers are promised.

CLARKE, A. Campbell, M.B.Glasgow. Experimental Dietetics in Lunacy Practice. A Record of Investigation and Results.
GILL, Stanley A., Esq., B.A. The Use and Abuse of Seclusion.
SAVAGE, G. H., M.D. On Alternations of Neuroses.
SHUTTLEWORTH, G. E., M.D. The Relation of Marriages of Consanguinity to Mental Unsoundness.
THOMSON, D. G., M.D. On the Separate Care and Medical Treatment of Recent Cases of Insanity, either in Existing Asylums, or in Lunatic Hospitals to be Established for that Special Purpose.
TUKE, D. Hack, M.D. On the Alleged Increase of Insanity.

The President will introduce a discussion as to How the Medical Spirit can best be kept up in Asylums for the Insane.

Discussions will also be invited upon Degradation of Habits and Feelings in Relationship to Mental Disease, and other subjects. The Secretaries will be glad to receive communications from members willing to read papers or to take part in the discussions.

SECTION F.—PATHOLOGY.

The following subjects have been chosen for special discussion.

1. Peripheral Neuritis. Opened by papers by Dr. Ross (Manchester), and Dr. Buzzard (London). Mr. Watson Cheyne, Professor Charcot, Drs. Clifford Allbutt, Hadden, Poore, Drummond, Saundby, Maguire, and Whittle, will take part in the discussion.

2. Aneurysm. Introductory paper by Timothy Holmes, F.R.C.S. Messrs. Barwell, Bryant, Savory, H. Morris, C. J. Symonds, Watson Cheyne, R. Maguire, and E. Lund, will take part in the discussion.

3. The Etiology and Pathology of Pneumonia. Introductory papers by Dr. Octavius Sturges and Dr. R. Douglas Powell. Dr. Churton, Dr. R. Maguire, Sir Andrew Clark, Dr. Duckworth, and Dr. Hollis will take part in the discussion.

Dr. Heneage Gibbes will show, in the Museum in connection with the Pathological Section, a series of Microscopical Specimens of Carcinoma and Sarcoma, also a number of Photographs of Normal and Morbid Histology and Bacterium, and Photographs showing Diseased Conditions, life size.

The following papers are promised.

BARWELL, R., Esq. On Aneurysm.
CHEYNE, Watson, M.B. On Cholera.
CHURTON, T., M.D. The Pathology of the Adrenals.
CROCKER, Radcliffe, Esq. The Anatomy of the Early Stage of Keloid, and will show drawings of different types of Leprosy.
GLYNN, T. R., M.B. (Liverpool). Six Cases of Ulcerative Endocarditis.
GREVES, E. Hyla, M.D., Liverpool, will show a Rare Form of Cerebral Tumour, and give an account of the same.
HOLLIS, W. A., M.D. Pulmonary Tuberculosis, associated with Heart-Disease.
MAGUIRE, Robert, M.D. On Albuminuria in Diabetes.

RAKE, B. N., M.D., (Government Medical Officer, Trinidad). 1. An Inquiry into the Distribution of the Leprosy Bacillus. 2. Experiments on the Communicability of Leprosy to Animals.
SYMONDS, C. J., Esq. The Formation of Aneurysms in Acute Arteritis.
YOUNG, Professor A. N., Manchester. On Traumatic Malignancy.

SECTION G.—THERAPEUTICS AND PHARMACOLOGY.

An Introductory Presidential Address will be given by Dr. T. Lauder Brunton, F.R.S.

The following subjects have been selected for special discussions.

1. Antipyretics; to be opened by Dr. Carter, of Liverpool.
2. Analgesics; to be opened by Dr. Spender, of Bath.
3. Action of Drugs in Albuminuria; to be opened by Dr. Saundby, of Birmingham.

The following papers are promised.

BRUCE, Mitchell, M.D. Morphine in Diabetes.
DRYSDALE, Charles R., M.D. Mercury as an Antidote in Syphilis.
GRANVILLE, Mortimer, M.D. The Relief of Pain by Mechanical Vibration or Percussion.
HANDFORD, H., M.D., Nottingham. The Pathology of a rare form of Skin-disease affecting the Sebaceous Follicles.
JESSOP, W. H., M.B. On the Therapeutic Effects of Cucaine in Ophthalmic Practice.
MACKEY, E., M.D. Resorcin in Gastric and Cutaneous Disorders.
MACKENZIE, Stephen, M.D. On the Value of Cannabis Indica in a Certain Class of Headaches.
ST. GEORGE, George, Esq., Lisburn. Experiments with Manaca in the Treatment of Rheumatism.
STONE, W. H., M.D., will show the apparatus exhibited by him on the occasion of his Lumleian Lectures.
STRAHAN, J., M.D. An Unrecorded Danger from Continued Large Doses of Iron.

SECTION H.—OPHTHALMOLOGY.

Mr. Jonathan Hutchinson will open a discussion on the Different Forms of Choroiditis, in relation to their several Causes.

Mr. Anderson Critchett will open a discussion on Episcleritis.

An improved Electric Refraction Ophthalmoscope will be shown by Mr. Henry Juler.

The following papers are promised.

ABBOTT, G., Esq. The Use of Styles in the Treatment of Epiphora.
ANDREW, Edwyn, M.D. Ophthalmic Hints.
BARRETT, J. W., Esq., and LANG, W., Esq. On the Causation of Phlyctænula, Ophthalmia and Sycosis.
BROWN, Edgar, Esq.
CRITCHETT, G. Anderson, Esq. On Dislocation of the Lens.
FROST, W. Adams, Esq. What is the best Method of Dealing with a Lost Eye?
GLASCOTT, C. E., M.D. On Sarcoma of the Choroid, followed by Amblyopic Symptoms in the Sound Eye.
GREENWAY, Henry, Esq. Use of Ice and Carbolic Acid in the Treatment of Injuries and Inflammation of the Eyes and Eyelids.
HARTRIDGE, Gustavus, Esq. Strabismus and its Treatment in Young Children.
HEWETSON, H. B., Esq. The Treatment of Interstitial Keratitis by Operation, without Constitutional Remedies.
HIGGENS, Charles, Esq.
JOHNSON, L. L., Esq. Paper, and Demonstration of several new Ophthalmic Instruments.
LEE, Charles T., Esq. The Extraction of Soft Cataract by Irrigation.
SNELL, Simeon, Esq. Paper.
TAYLOR, Charles Bell, M.D. 1. Is it Desirable, in Certain Cases, to Substitute Resection of the Optic Nerve for Ablation of the Eye-ball? 2. On a Method of Treating Epiphora without Slitting the Punctum Lacrymale.

A limited number of beds in the Sussex Eye Hospital, Brighton, will be devoted to the reception of cases of interest to be shown at the meetings of the Ophthalmological Section of the British Medical Association at Brighton. Gentlemen wishing to secure beds for such cases are requested to apply, as soon as possible, to Mr. Arthur Nicholson, 98, Montpellier Road, Honorary Secretary of the Section.

SECTION I.—OTOLOGY.

The following papers are promised.

BABER, E. C., Esq. On Examination of the Nasal Cavities from the Front (illustrated with Diagrams).
BARR, T., M.D. 1. On the Varieties, with Appearance, of the Tympanic Membrane compatible with Good Hearing. 2. On the Value of Rinne's Test, in the Diagnosis of Disease of the Nervous Structures of the Ear.
CUMBERBATCH, A. E., M.B. Aural Vertigo.
DELSTANCHE, Dr. C., Brussels. 1. Case of a Revolver-Bullet in the Ear. 2. Foreign Bodies in the Substance of the Lobule. (In French.)
ELLIS, Richard, Esq. Labyrinthian Hæmorrhage, with Exhibition of Patient.
MACDONALD, Greville, M.D. The Functions of the Nose in Health and Disease.
PRITCHARD, Urban, M.D. Counter-irritation in the Treatment of Ear-disease.
SYMINGTON, J., M.B., Edinburgh. The Anatomy of the Ear in the Child.
WOAKES, E., M.D. Diagramatic Scheme, showing relations between Aural and Nasal Diseases.
WOLSTON, Walter, M.D. Nasal Polypi, their Radical Extirpation and Cure by Electro-cautery, with illustrative cases.

Discussion to be opened by Spencer Watson, Esq.: On the Complications of Nasal Polypi.

Members desirous of reading papers are particularly requested to communicate without delay, with the Secretaries of Sections, that the arrangements may be as complete as possible prior to the meeting.

ANNUAL MUSEUM.

THE twentieth annual museum will, by permission of the Town Council, be located in the Corn Exchange, a large hall, communicating with the Dome, and having a separate entrance in Church Road.

It will be open to the profession from August 9th to August 15th, and will be classified in three sections.

SECTION A.—Foods, drugs, hygienic and sanitary appliances. A specialty will be made of all kinds of prepared, peptonised, and other compound nutrients. (Honorary Secretary, Dr. Mackey, 1, Brunswick Road, Hove, Brighton.)

SECTION B.—New books, instruments, and appliances—medical and surgical; galvanic and other batteries and apparatus. (Honorary Secretary, Dr. Whittle, 65, Dyke Road, Brighton.)

SECTION C.—Anatomical and pathological specimens, diagrams, casts, or models; microscopes and microscopical preparations. (Honorary Secretary, D. W. Giffard, Esq., 5, Pavilion Parade, Old Steine, Brighton.)

A name and description, printed, if possible, must be attached to each exhibit, which should be sent to the Corn Exchange, Brighton (to the care of the Secretaries of the respective sections), between Monday, August 2nd, and Saturday, August 7th. Ample counter space will be provided, and, so far as possible, equal facilities will be given to every exhibitor.

A description, for insertion in the Museum Catalogue, should be forwarded to the private address of the respective Secretaries, at least one month before the meeting, that is, by July 10th.

TO EXHIBITORS.—The expenses of carriage and of removal to be borne by the exhibitor. The Committee will exercise every reasonable care as to objects entrusted to them, but will not be responsible for risk or accident.

NOTICES OF MOTION.

Dr. WARD COUSINS hereby gives notice that he will move the following addition to, and alteration of, the By-laws; namely,

Page 17, By-laws. Addition to "d," second line, after the word "member," add "of a Branch within the limits of the United Kingdom of Great Britain and Ireland."

Addition to "d."—"No person shall be eligible as a representative member of a Colonial or Indian Branch unless, at the time of his election, he shall be a recognised member of the Branch, and shall have resided within the area of the Branch for at least twelve months prior to his election. The election of Colonial and Indian members of the Council shall be annual, and shall be subject to the same by-laws as the election of other representative members."

Mr. John Dix hereby gives notice that, at the Annual Meeting, he intends to submit a proposition not involving an alteration of a By-law on the subject of the payment of travelling expenses of the Representatives of Branches to the meetings of the Council.

A motion will be introduced by the Shropshire and Mid-Wales Branch on the subject of State Honours to the Medical Profession.

May 6th, 1886. FRANCIS FOWKE, *General Secretary.*

THE attendance of all members of the Association interested in the question of the formation of a Medical Defence Association, in connection with the British Medical Association, is requested at a meeting to be held at Brighton during the meeting of the Association in August; the place, day, and hour of meeting, will be announced in the daily journal.

On behalf of the Council of the Lancashire and Cheshire Branch, CHARLES E. GLASCOTT, Honorary Secretary.

MEDICAL WOMEN FOR INDIA.—The second annual report of this fund shows that, during the twelve months, there were 5,998 new patients at the dispensary, and a total attendance of 27,429. This number would have been much larger, but for the lack of funds with which to purchase drugs, and the want of more medical officers, from which cause, it is stated, frequently more than half the patients have to be sent away. Dr. Edith Pechey, in her report, calls attention to the relationship which is to be traced between certain diseases and the special customs prevalent among particular races. The prevalence amongst Hindoo women of rickets and scrofula is ascribed to their custom of early marriage, and the demands made by maternity at an age when the bones and tissues are not fully developed. The *purdah* system amongst the Mussulman women, and the unsanitary conditions that prevail among the Parsees, where lying-in women are secluded for lengthened periods in the most unhealthy and dampest parts of the dwelling, are, she observes, causes of life-long mischief. Attention is also called to the great mortality amongst children in Bombay from the custom, common with some of the lower orders, of giving opium. Dr. Ellaby has taken up her abode in the temporary hospital at Khetwaddy; and the careful nursing and attention which, it is stated, the patients receive at this hospital, is ascribed to this fact.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

The Influence of Anæsthetics on Living Tissues.—Mammary Neuralgia.—Acetate of Copper in Pulmonary Diseases.—The Influence of Fat on Nutrition.—The Influence of Chloroform on the Production of Animal Heat.—Experimental Physiology.—A Night-Service for the Supply of Drugs.—The Municipal Night-Refuge.—The Preservation of Meat.

At a recent meeting of the Academy of Sciences, M. Marey presented a work by M. Raphael Dubois, concerning the action of anæsthetics on living tissues. Claude Bernard believed that it produced coagulation. M. Dubois' researches led him to suppose that it caused dehydration, the tissues being dehydrated by the substitution of the anæsthetic vapour for water. When plants were exposed to the action of ether or chloroform-vapour, water escaped from their surface, which evidently injured their vitality. M. Dubois considered that this fact explained why seed which was rendered moist, and then submitted to etherisation, did not germinate, whereas dry seed submitted to the same influence was not sterilised in this manner.

At a recent meeting of the Paris Surgical Society, M. Routier read notes on a case of intense mammary neuralgia. The patient was 22 years of age; a small tumour, the size of a nut, was removed, and the pains completely disappeared. On microscopic examination, the tumour presented the characteristics of an adenoma.

M. Luton communicated to the Academy of Medicine a memoir on the therapeutic use of acetate of copper, principally in pulmonary tuberculosis. He prescribed this salt in a daily dose of 1 centigramme, which was mixed with 25 milligrammes of extract of opium. In this form it was perfectly tolerated by the patient, and produced sleep. The pills were taken in the evening. Under the influence of acetate of copper, M. Luton had seen cough, expectoration, high evening fever, and nocturnal perspirations diminish. At the same time, the stethoscopic signs revealed an amelioration of the pulmonary lesions, but the appetite did not improve. M. Luton thinks that the hectic fever of phthisis had given place to a continuous fever of an infectious nature. He also considered this action to be parasitic and specific; but his colleague, M. Poncer, regarded the salt as a tonic and stimulant.

MM. Debove and Flamand have studied the influence of fat on nutrition. The person who was experimented upon was for some time fed on an unvarying diet, until his weight and the weight of urea excreted in twenty-four hours were both stationary. At that period, 3 kilogrammes 575 grammes of fat were absorbed, then the primary form of diet was adopted. Two such experiments were made, and both persons fed on fatty substances increased in weight, and more urea was excreted.

M. D'Arsonval, at a recent meeting of the Biological Society, made a statement with regard to the production of heat in animals under chloroform. When the chloroform was first administered, the galvanometer, which marked 100 in the normal condition, went up from 115 to 120 and 135 during the period of agitation, afterwards going down to 100, and falling to 45 when the animal was quite unconscious. Thus, its animal heat was reduced to one-half during the time that it was submitted to the influence of chloroform.

At a meeting of the Academy of Sciences, M. Brown-Séquard spoke of the result of his researches for measuring the rapidity with which sensation and volition might be transmitted to the nerve-centres. M. Brown-Séquard stated that the rapidity was less in the spinal cord than in the nerves. At M. Brown-Séquard's request, M. d'Arsonval had just constructed an apparatus, with the aid of which the rapidity of transmission could be measured easily, and with great precision. The subject of the experiment was placed in a galvanic circle; and, when one pole was put into contact with any part of the body, the current acted upon a needle, which ran round the divisions of a dial. The divisions were two hundred in number, and the needle took one second to describe the circle; each division represented $\frac{1}{200}$ of a second. As soon as the subject received the shock, he pressed an India-rubber bulb which he held in his hand, and the current was then interrupted, the needle stopped, and on the dial could be seen how much time had elapsed between the instant when the shock was felt, and the contraction of the muscle. The space passed over was represented by the distance from the point on the surface of the body to the spinal cord, from the latter point to the brain; and, finally, from the brain to the contracted muscle. M. d'Arsonval's apparatus would be of great use to medical men in the treatment of most diseases, but especially in nervous affections.

The Municipal Council has adopted M. Georges Berry's report on establishing a night service for the supply of drugs. It will be organised immediately. The sick who desire to procure the medicines prescribed by the medical officers to the night service, must apply to the police office, when a policeman, supplied with an order from the head office, will conduct them into a *maison de secours*. If the medicines prescribed be not there, or if the sick persons be not registered at the police office, they will be sent to one of the chemists who are officially police-service chemists. The patients who are able to pay will be charged cost price, besides giving one franc and a half extra for the trouble of being attended at night. A loan of 3,000 francs (£120) will be made for the night service for drugs.

At a recent meeting of the Municipal Council M. Cattioux showed that the new municipal night-refuge had proved a great success. In March, the refuge in the Rue de la Bucherie received 1,104 persons, who passed 3,720 nights there, and, in April, 1,085 new persons. Out of the 1,104 men who boarded during the month of March, 1,006 were French, and 91 foreigners (Belgians, Swiss, and Italians); 126 were Parisians by birth, or persons who have inhabited Paris ever since their birth; 424 inhabited Paris for less than a month, and 228 for a period varying from ten to thirty years.

M. le Comte d'Adhémar recently submitted to the Academy of Sciences a method which he has discovered of preserving raw meat when exposed to the air. The process consists of destroying, by means of a certain gas, all germs of putrefaction which are met with in the deeper parts of the tissues. The meat retains all its nutritious qualities, and the taste and colour of it are unchanged. By this means, meat can be preserved, and remains good for one or two months; if a slight dryness occur, it is merely due to the evaporation of the moisture.

SWITZERLAND.

[FROM OUR OWN CORRESPONDENT.]

Meeting of Central Medical Union at Zurich.—Geneva Meeting of Swiss Naturalists' Society.—On Chronic Phthisis.—Salol, a New Anti-rheumatic.—Aspiration of Diphtheritic Membranes.—Tracheotomy for Hæmoptysis.—Laparotomy in Purulent Peritonitis.—The Treatment of Toothache.—Female Inaugural Works in 1885.

The Zurich Congress of the Swiss Central Medical Union, which took place on May 29th, proved successful in all respects, and was, as usual, animated with that cordial spirit which presents a characteristic feature of our professional brethren living in the wholesome atmosphere of Switzerland. From the first part of an official report of the meeting (*Correspond. Blatt. für Schweizer. Aerzte*, No. 12, 1886), we gather that the series of scientific communications was opened by Professor Gaule, of Zurich (successor to the late Dr. Luchsinger), who recorded the results of his experimental researches into the action of antipyrin on the animal cell. The drug manifests a powerful influence on cells, especially on those of the liver. It invariably brings about a temporary diminution of nuclein, the decrease being parallel with the action of antipyrin. Professor Goll demonstrated various apparatus for electric illumination of systemic cavities. Dr. Hermann Mueller showed a man, aged 32, with congenital insufficiency of the pulmonary artery. Of 50,000 patients examined, this form of cardiac affection was found only in 10, the whole number of cases of various valvular lesions being 485.

The sixty-ninth annual meeting of the Swiss Naturalists' Society (*Schweizerische Naturforschende Gesellschaft*) will be held at Geneva, on August 9th and 12th. The Société Médicale de la Suisse Romande resolved upon simultaneously holding their annual meeting, and reopening a medical section of the above-mentioned Association. Their example will be followed by the Medical Societies of German-speaking cantons.

Dr. H. Schnyder, of Lucerne, publishes in the *Corresp. Blatt. für Schw. Aerzte*, Nos. 10, 11, and 12, 1885, a detailed analysis of 3,461 cases of chronic pulmonary phthisis, which came under his observation during nine years' practice at Bad Weissenburg, in the Canton Berne. According to the author, Koch's bacillus does not constitute the main etiological or pathogenic agent of endemic phthisis. In the beginning of the affection, the microbe "has no other significance than that of an accidental concurrent phenomenon; later on, when its colonies find their way into the circulation, the micro-organisms may become a cause or a vehicle of miliary tuberculous infection." The most important etiological factor is heredity.

Dr. Hermann Sahli, lecturer to the University of Berne, draws at-

tention to a substitute for salicylate of soda, bearing the name of "salol." This compound (which was first prepared and studied by Professor Nencki, of Berne, about three years ago) is salicylic phenol-ether, or salicylate of phenol. It remains intact in the stomach; but, on passing into the duodenum, and coming into contact with pancreatic ferments, it splits in phenol (40 per cent.), and salicylic acid (60 per cent.). Salol is a colourless, crystalline body, with a slight aromatic odour, but almost tasteless (being insoluble in water). The author gives it in powder, or in compressed tablets, in two-gramme doses to an adult, or in half-gramme doses to a child aged 6, repeating the dose three, or, rarely, four times a day in the former case, and four to six times in the latter. The drug possesses both the anti-rheumatic and antipyretic action, and was most successfully administered, by Dr. Sahli, in numerous cases of acute, subacute, and chronic rheumatism, as well as in cases of rheumatic neuralgia, erythema nodosum and multiforme, nettle-rash, peliosis, phthisis, etc. No unpleasant accessory effects, except occasional noises in the ears, were observed to follow the doses mentioned above. Salol is free from all the drawbacks of salicylate of soda, such as unpleasant taste, disturbing action on the gastric mucous membrane, etc.

To prevent any possibility of self-infection during the aspiration of diphtheritic membranes from a wound in tracheotomy, Dr. Garré, of Basle, suggests plugging the oral end of the catheter with a small, loosely fitted piece of cotton-wool. A still better plan is to employ a catheter, to the oral end of which there is attached a short piece of India-rubber tubing (about 7 centimètres long) and a short glass tube, which is narrowed at one spot or another, and loosely plugged beyond the latter with a small cotton-wool stopper.

Dr. Lucius Spengler furnishes details of the case of a phthisical seamstress, aged 34, who was brought to Professor O. Wyss's clinic in Zurich, with acute anæmia caused by profuse hæmoptysis, and in whom, about four weeks later, within ten minutes after a fresh severe hæmorrhage, tracheotomy was performed. About 50 cubic centimètres of arterial blood were then aspirated (with a catheter) through the wound. The procedure at once relieved the urgent inspiratory dyspnœa and deep cyanosis, and removed the unconscious state (all of which symptoms were ascribed solely to the presence of considerable quantities of blood in the bronchi and trachea). Four days later, however, the woman died from purulent mediastinitis, starting from the tracheal wound. Dr. Spengler has been able to find in literature only a single similar instance of tracheotomy for hæmoptysis (Bertz's *Memorabilien*, 1869, vol. xiv).

At a meeting of the Zurich Medical Society, Professor Kroenlein reported three cases of laparotomy for acute diffuse purulent peritonitis. One of his patients, a lad aged 17, with perforation of the vermiform appendix, died from collapse two days after the operation. Another, a man aged 61, with perforation of the small bowel and extreme collapse, survived only a few hours. But the third patient, aged 18, made a satisfactory recovery, though his state at the time of the operation was extremely grave.

Dr. V. Gsell-Feltz, of St. Gallen, warmly recommends, in toothache from dental caries, the application of cotton wool soaked in an oily fluid obtained by melting together 5 grammes of camphor, 5 grammes of chloral, and 1 gramme of cucaine. Relief is complete and lasting.

According to the *Correspondenz Blatt für Schweizer Aerzte*, in 1885, there were published forty inaugural works in the four Swiss universities (four in Basle, twenty-four in Berne, six in Geneva, and six in Zurich). Eight of them were written by women.

LONDON TEMPERANCE HOSPITAL.—From the thirteenth annual report of the London Temperance Hospital, we gather that the number of in-patients received during the official year was 624, the total number treated 672. The number of deaths was 41, giving a rate of mortality of 6.7 per cent. The number of out-patients receiving advice and medicine during the year was 3,252. The patients are encouraged to pay a small sum for their medicine, but, in cases where this would be a hardship, it is not required. The principal events in the year have been the opening of two wards in the new wing of the hospital, thereby offering accommodation for an increased number of patients, and an enlargement of the out-patient rooms. It is stated that the work of the hospital has so much increased, that the medical officers have been compelled to seek additional help. This has been afforded by Dr. Ridge, who has arranged to resume active duty. Alcohol was given in one case during the year; in no other instance was it deemed advisable to prescribe it. There was a deficit on the building-fund of nearly £5,000.

THE Stoke-upon-Trent Guardians have, upon the recommendation of the Finance Committee, increased the salary of Dr. J. G. U. West, medical officer of the workhouse, from £140 to £175 *per annum*.

CORRESPONDENCE.

☞ TO CORRESPONDENTS. ☜

OUR correspondents are reminded that prolixity is a great bar to publication; and, with the constant pressure upon every department of the JOURNAL, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return, and hold over a great number of communications, chiefly by reason of their unnecessary length.

URIC ACID, UREA, AND ACIDITY OF THE URINE IN GOUT.

SIR,—At the suggestion of Professor Latham I have, since May 14th last, been using Haycraft's method for the determination of uric acid, communicated to the profession in an article which appeared in your columns, December 12th, 1885. I find it more manageable and accurate than any with which I was positively acquainted. To any one who may be interested in the subject I shall be pleased to show the process. Meanwhile, I am anxious to ask students of the urinary excretions in health and disease—or in physiological order and disorder—whether the facts they are collecting tend in the same direction as those which are falling under my own observation, in regard to the inter-relations of uric acid, urea, and acidity.

To avoid making too great a demand on your space, I will table only fifty determinations made quite recently, and omitting other particulars not essential to the points I wish to emphasise, submit the following data.

Acidity (by the phenol-phthalein process, in parts per 1,000 calculated as Oxalic Acid).	Uric Acid (by Haycraft's process, grs. per oz.)	Urea (by hypobromite process, grs. per oz.).	Acidity (by the phenol-phthalein process, in parts per 1,000 calculated as Oxalic Acid).	Uric Acid (by Haycraft's process, grs. per oz.).	Urea (by hypobromite process, grs. per oz.).
1.260	.4116	6.	4.725	.4263	9.5
1.575	.4116	9.5	4.725	.2940	9.5
1.890	.2352	5.5	4.725	.3381	10.
2.016	.3528	11.	4.725	.5292	11.
2.205	.4704	9.	4.725	.4998	12.
2.205	.4263	10.	4.725	.5439	13.5
3.150	.3087	7.5	5.040	.5145	10.
3.150	.3528	7.	5.040	.5439	10.5
3.150	.3292	8.5	5.040	.5880	14.5
3.150	.4851	10.	5.040	.6174	12.
3.150	.4851	11.	5.040	.5586	13.5
3.150	.7350	11.5	5.040	.3695	14.
3.465	.3969	7.	5.040	.4704	16.
3.465	.3528	9.	5.353	.4704	11.
3.465	.4557	11.	5.670	.3528	14.
3.780	.5880	9.5	5.985	.6468	10.5
3.780	.4998	10.	6.300	.7056	15.
3.780	.5586	10.5	6.615	.6615	13.5
3.780	.4998	11.	6.930	.4851	15.
3.780	.5880	12.	6.930	.6468	17.
4.095	.4116	9.	7.245	.4990	15.
4.095	.4116	14.	7.560	.5586	16.5
4.095	.5586	15.	7.560	.4557	16.5
4.410	.4998	12.	8.190	.6027	13.5
4.725	.6027	8.	8.190	.6909	19.

The results recorded are here arranged in order of acidity, the most acid being at the bottom. In my experience, the normal of acidity is commonly estimated too low. Anything below 4,000 may, I think, be regarded as natural until the mean of a series of observations extending over a fairly long period has enabled the practitioner to fix upon a special degree of acidity as the normal in any individual case.

Looking generally at the figures given above, it will be noted that the acidity rises with the urea; and the uric acid follows—but less constantly than the urea—on the acidity; although, of course, not in any way directly dependent upon it. The particular points to which I wish at this moment to call attention quite tentatively are the following.

1. There is nothing to support the hypothesis that the urea and the uric acid in the urine are complementary. On the contrary, the two generally increase or diminish together.

2. Very acid urine is likely to contain a considerable proportion of urea, and is only a little less likely to contain a good deal of uric acid; but the converse is not true. There may be a large proportion of uric acid in urine which is not abnormal, as in the instance (twelfth on the above list) in which, with an acidity of only 3.150, there was

.7350 of a grain of uric acid per ounce of the fluid; the low degree of acidity being dependent on the fact that urea was only present in the proportion of 11.5 grains per ounce. Parkes's estimate of 3½ grains per pound of the body-weight as the normal for twenty-four hours is, I think, too small for the average of feeders; just as the estimate of six to nine grains of uric acid in all for twenty-four hours is too small. This last should be little, if at all, below twenty grains.

The determinative instances alone would, of course, be too few to form the bases of any general inferences; but they form a fair sample of the results obtained in a large number of cases of gout now under treatment, by the method I proposed in the BRITISH MEDICAL JOURNAL some years ago, and which certainly produces better effects than any other of which I am cognisant. The iodine seems to break up the molecule of urate in the blood, and to ensure very rapid elimination of uric acid by the kidney, with speedy relief of pain, reduction of fever, and generally quick recovery.—Yours faithfully,

14, Hanover Square. J. MORTIMER GRANVILLE.

THE TESTS FOR ALBUMEN IN URINE.

SIR,—I am surprised to find that the Albumen Test Committee of the Clinical Society, and the author of the leading article in the JOURNAL of June 26th, in speaking of the extreme delicacy of the potassio-mercuric iodide-test, make no mention of the fact that this reagent, with acetic or citric acid, without which it fails to indicate the presence of albumen, causes, in all normal urines, an opalescence which cannot be distinguished from that which is given by a minute trace of albumen. This unquestionable fact renders the test in question not only useless, but dangerously misleading. The only use that I now make of this test is to demonstrate to those who are unaware of its action the opalescence which it causes in every normal urine.

And now that I am writing, I may, perhaps, be allowed to say that I differ from the committee as to the best mode of using picric acid in testing urines which contain only a minute trace of albumen.

First, as I understand, they recommend the combination of acetic or citric with picric acid; but this is quite unnecessary, except when the urine is so highly alkaline, that an equal volume of a saturated solution of picric acid is insufficient to acidulate it. Then it is a well known fact that, while picric acid alone gives no opalescence with mucin, acetic and citric acid, both, coagulate mucin; and when acetic or citric acid is combined with picric acid in urine-testing, the yellow picric acid renders the mucin opalescence more conspicuous, and so might mislead an unpractised observer into the belief that a trace of albumen is present.

The slight mucin opalescence, however, which a mixture of acetic or citric with picric acid often causes in normal urine, may be certainly distinguished from albumen by the fact that, while the mucin opalescence is not in the slightest degree increased by heat, a slight albuminous opalescence is always apparently doubled when the specimen is heated to near the boiling point. And this leads me on to remark further that I differ from the committee in their suggestion that the picric acid solution should be rendered specifically heavier by the mixture with strong brine, so that, like nitric acid, it may be made to rest below the column of liquid.

Introduced in this way, the supplementary boiling test is less readily applicable. On the other hand, the low specific gravity of the unmixed picric acid solution facilitates its application in a mode which renders it at once the most delicate and absolutely trustworthy test for a minute trace of albumen that we possess. The following is the method to which I refer. Into a test-tube about six inches long is poured a four-inch column of urine; and upon this, the tube being somewhat inclined, is gently poured an inch column of picric acid solution. The result is a diffusion of the reagent through the upper half of the column of urine, when, if albumen is present, an immediate opalescence occurs, more visible when looked at with a dark background, the opaque yellow mixture above contrasting with the transparent unmixed urine below. The application of heat to the upper stratum at once increases the opalescence. So constant and decided is the effect of heat thus applied, that when, from the small amount of albumen present, the opalescence resulting from the mixture of the picric acid with the cold urine appears somewhat doubtful, the subsequent heating greatly increases the opalescence, and places the presence of albumen beyond all doubt. By the application of heat to the upper part alone, we may obtain three distinct layers in the column of liquid: 1, below, the unmixed transparent urine; 2, next above this, a slightly opalescent layer of picric acid and cold urine; 3, at the top of the column, a layer which has been rendered more decidedly opalescent by the application of heat to the mixture of urine with picric acid. Additional value attaches to the use of picric acid from the fact that, by its means, together with Esbach's graduated tubes, the actual amount of albumen may be ascertained with great ease and accuracy. On this method, there is an interesting paper by Dr. Veale in the BRITISH MEDICAL JOURNAL of May 10th, 1884; and in the *Lancet*, July 10th last, there is a short paper on the same subject by myself, and another by Dr. Sidney Coupland, in which reference is made to Esbach's method.

Mr. E. Cetti, 36, Brooke Street, Holborn, now supplies Esbach's tubes, with printed directions for their use, at a cost of two shillings each.—I am, etc., GEORGE JOHNSON.

11, Savile Row.

CONSULTANTS AND PRACTITIONERS.

SIR,—Dr. Robert Rentoul, in his letter which was published in your last impression, has many complaints to make and objections to offer with respect to our Association, but there is not one which we venture to suggest has in any way approached the subject of our contention, namely, the present unsatisfactory relationship which exists between consultants and general practitioners. We have no desire to enter upon a discussion of "terms," and the various interpretations it is possible to put upon them.

The fact of a medical man appropriating to himself the title of consultant in a court of law, and being snubbed by the judge, is an argument in no way affecting us any more than that of a hard up medical man who would consult a quack, a medical student, or an unqualified practitioner.

Your correspondent has a somewhat original method of dealing with the term "medical attendant," which leads us to infer that his sense of humour is certainly in excess of his practical acquaintance with accepted professional terms; for, if such were not the case, we should have our hospital reports thus—"Mr. —— advised excision, which was performed by Nurse ——, who was in attendance."

We are fully alive to the difficulties of our task, and are in accord with Dr. Rentoul when he says this struggle is one of bread; but we fail to see where, in order to be successful, the consultant need to be "fairly dishonest." The theory as to the "first" duty of a consultant when called in is also an original one, unless the object is to supplant the family attendant, as it would scarcely require a F. or M.R.C.P. to find out the differences of opinion which existed between the patient's friends and the medical man in charge. The idea is as novel as it is absurd, unless, as we have said before, the object is to supplant.

We rejoice to see that Dr. Rentoul admits "there is room for improvement in the manly and honourable branches of the profession"; but when he accuses the general practitioner of lecturing his high toned brother, the consultant, and advises him to put his own house in order, we can only come to one conclusion, that, what with originality of ideas, and humourous verbosity, he has failed to grasp the question as it stands, and would advise him to seek a little information from his friends, digest it thoroughly, and then let the profession know the result.—Faithfully yours,

H. WALTER VERDON,
W. GIBSON BOTT,

Honorary Secretaries of the Association of General Practitioners.

414, Clapham Road.

SIR,—Without strictly defining what is a consultant and what a practitioner, I think both parties are agreed as to the general application of these titles. On the one hand, there is no publicly known consultant who is not a general practitioner, and, on the other hand, there is no general practitioner who would not act as a consultant. The so-called consultants of London, and other large towns, are general practitioners of medicine or surgery, as the case may be, to the richer classes of society, and are consultants to those practitioners who send them their patients for further advice. There are hardships and grievances on both sides. The leading men can, of course, take care of themselves, but the younger aspirants to "consulting" practice complain, and naturally, of the almost uniform fee usual among this branch of the profession. If a great man will accept the same fee which the young physician is forced to content himself with, the public will naturally seek the great man's advice, and leave the young one in the lurch. Just as there is a sliding scale for the rich and poor, so there should be varying fees according as men rise on the ladder of fame. The highest "consultant" might charge five guineas or upwards, and leave the younger one to get his guinea from those who feel able or inclined to pay no more. Intermediate fees might be charged by others, according as they gauge their intermediate positions. There would be no loss of income, but less work to the

renowned, and probably brighter prospects for the younger men. It is time that the profession as a body gained more from the general public.

The question of "pure consultants" deserves further consideration. It was argued, just recently, that if a physician took the same position in the medical profession as that of a barrister in the legal profession, he would become somewhat dependent to the general practitioner, as the barrister was thought, but wrongly, to be to the solicitor. Just as the barrister, however, who has made a name, would not profit by taking the business of a solicitor, so, I maintain, a physician of repute would gain rather than lose by giving up general practice, and taking to the position of a "pure consultant," like his brother in the law. In the same way, the great physicians' fees, which are now comparatively minute, would approximate the substantial fees of a barrister. It is not suggested that this system should be taken up by the young physician, but the status of a "pure consultant" might advantageously be adopted, as men find themselves in a position to do so. At the commencement of a career, it produces the well-known and frequent condition of the briefless barrister. This question might be pursued further, but the great argument in its favour depends upon the easy mind which a general practitioner would secure by only sending his patients to the "pure consultant."

This is, in reality, the kernel of the whole dispute. Just as so frequently occurs amongst general practitioners, when the second called in for further advice in a serious case gets the patient in a subsequent illness, so general practitioners often lose patients in exactly the same way to so-called consultants to whom they have sent them for further advice. You can no more blame the so-called consultants for seeing the patient in a subsequent illness than you can the general practitioner's neighbour, who does the same. This grievance, however, would be remedied by having "pure consultants."

What general practitioners do complain of, and often with justice, is that so-called consultants do not content themselves with giving the advice first sought, but retain or wean the patient from the care of the general practitioner. A consultant has no right to see the patient a second time while under the care of and without the knowledge of the first adviser. The ill-feeling arises from the known professional code not being strictly carried out.

The conclusions arrived at upon this question are: the desirability of having "pure consultants," or the adoption of higher fees, based upon a sliding scale, by the "consulting general practitioners" (physicians and surgeons).—I am, sir, yours, etc.,

Haslemere, Surrey. T. FREDERICK PEARSE, M.D.

SIR,—In view of the proposed formation of an association for the improvement of the relations between consultants and practitioners, I think that we general practitioners, before proceeding to regulate the conduct and practice of others, should submit ourselves to a gentle process of introspection, and endeavour to see ourselves as others see us.

In these days, when there is not the gulf between the general practitioner and consultant as formerly, owing to the evolution of the present educated practitioner from the apothecary of old, it is more difficult to draw a hard and fast line between the so-called consultants and the general practitioners; the latter frequently announce themselves as physicians through the medium of door-plates, thus perplexing patients, whose sole idea of a consultant is expressed by the term physician; besides this, general practitioners do not refuse to become consultants when called upon to do so; so that, after all, it is their patients and their fads and fancies that we have to contend with, who often care not two straws whether their medical man is a general practitioner, a consultant, or even a notorious charlatan, provided they get what they require from him; and it seems to me that the more proficient a man is in the different branches of his profession, and the better he can handle and appreciate his patients according to their amount of education, peculiarities of character and position in society, the less chance there will be of their deserting him.

In the matter of consultations, I have always found it best to be frank and straightforward with patients, being ready to meet anyone they choose, although, as a rule, if they have confidence in one (and patients who have not are scarcely worth having), they leave it to me to suggest the man who is in all respects most suitable for the case, and thus men of shady principles and practice can be easily avoided.

In a practice of about twenty years, I have met many men of eminence in consultation, and have always been treated with the utmost courtesy and consideration; and, so far from losing patients, I have even been introduced by consultants to new ones.

One great mistake made by some general practitioners is that of being upon too close an intimacy with patients; the latter regard their medical man, for a time, as all but infallible; but, sooner or later, they discover his weak points, or take exception to his fees, being unable to discriminate between the social and professional visits, and eventually migrate to some other practitioner, consultant, or otherwise, much to their former medical man's mortification and disgust.—Yours truly, ALLEN FENNINGS, M.D. (Durham).

72, Ladbroke Grove, W.

SIR,—The question of consultants and practitioners having been brought prominently to the front in your valuable JOURNAL, I, a general practitioner, have to express my thanks to those gentleman who have brought it forward. I think it is a matter that requires the serious consideration of the profession. I have, unfortunately experienced the treatment that has been strongly commented upon during my earlier years of practice. Practitioners meeting me in consultation from a neighbouring town, and afterwards taking the patients, have undermined the confidence of the patient by word or deed.

After once experiencing this, I refused ever after to meet the same practitioner, and to my injury at the time. Continuing to carry out my determination, it has now settled into a channel that gives me no trouble; my patients leave me to choose any gentleman I wish when it is necessary to have a consultation. I select someone I can trust. Many young practitioners feel compelled by force of circumstances, and in not having confidence in themselves, to meet those they would rather not meet; and probably, instead of losing their patients directly, do so indirectly.

It is to be hoped that this degenerate practice may be arrested, as it will not lead to that elevation and improved position in society of the future, if etiquette has to be abolished.—Yours truly,

A COUNTRY PRACTITIONER.

EXAMINATIONS IN PHYSIOLOGY.

SIR,—If I attempt to criticise the examinations of the royal colleges, it is with the utmost diffidence, and because I am myself somewhat concerned in the matter. It has been considered advisable to hold an examination in elementary physiology which a student may present himself for at the end of his first winter session. This is in addition to the ordinary examination in that subject taken during the second or third year. I am not sure that it is advisable for a student to study physiology at all during his first year, but I am certain that he is not in a position to study those parts of it on which the colleges insist.

One may state, without fear of contradiction, that nine-tenths of the ordinary college students (thanks to our present school training), know next to nothing of science when they commence their studies. The words "atom," "osmosis," "protoplasm," "cell," "tissue," have no meaning to them; they are suddenly brought into a new and wonderful field of knowledge. I have known even good students say, on looking back on their career, that their first year of study was spent in groping in the dark.

According to the present system, a youth of 17 or 18 years of age commences the study of chemistry, physics, and anatomy, all of which subjects are new to him; but (and here, it seems to me, lies the mistake) he has at the same time to work at physiology, an acquaintance with even the elements of which is not to be acquired without a knowledge of the three other subjects. He is, in fact, making the roof, while, at the same time, he is learning how to plan a basement. As may be expected, his work is "cram," and "cram" of the worst kind. He has to learn the chemical changes which food undergoes in the course of digestion, and the chemical changes in the blood and air during respiration, while he is struggling with elementary chemistry and physics. He is asked the composition of the gastric juice or the bile, no word of which has any significance in his mind. It is bad enough when students, having to master a subject, learn it without grasping, or trying to grasp, its principles.

A great responsibility hangs, however, on the shoulders of those who give students a subject, the principles of which, do their best, they are not in a position to grasp.

A student of average ability has little difficulty in passing the examination—for the subject, as taken by the examiners, might easily be committed to memory. This is not the point, however, for no science is taught merely as an exercise for the memory, but rather to increase the power of observation and reasoning. If, then, the view I take is correct, the first year's student is wasting his time, and he had much better devote it to a more thorough grasp of physics and chemistry.

If, however, physiology should remain a subject for the first year of

study, it would be possible to select parts of this science which could be learnt with little prejudice to his mental training. I know, by experience, that students in their first year can be taught the histology of the simple tissues, and this I give them thoroughly, never recurring to the subject again. They may be taught muscular mechanisms; for example, the movements of the alimentary canal, the larynx, respiration, and the course of the blood. They may be taught development, too, in its mere outlines, and this will assist the student with his anatomy. These subjects they can learn and understand. I hope the time is not far off when physiology shall be removed altogether to the second year of the curriculum, and its place taken in the first year by elementary biology, for at present the time of a physiologist is largely taken up with the explanation of elementary biological principles. It seems strange, indeed, that in the country which has produced Darwin, Wallace, Huxley, and Spencer, the greater number of systematic students of human physiology should be trained in ignorance of the antecedents of man, and unacquainted with such terms as "evolution" and "natural selection."—Yours truly,

JOHN B. HAYCRAFT.

Physiological Department, Mason College, Birmingham.

MEDICAL DEGREES FOR LONDON STUDENTS.

SIR,—By the time this letter reaches your hands, another academical year will be drawing to its close; and yet the question of how to provide a fair degree in Medicine for the students of the London schools seems little nearer its solution than it was a year ago. Until some way of granting a degree, equivalent to those of the Scotch and Irish Universities, is arrived at, I see nothing for it but to advise freshmen, who purpose matriculating next October, to go to Cambridge or Edinburgh. At either School, they will obtain what London denies them; and they can, in some measure, make up for the want of practical experience of their professsion by spending an extra year at a London hospital, prior to obtaining a house-surgeoncy in the country.

Unless English students take some such course, it seems that the authorities of the London schools will not understand that their own interests are, in a large measure, identified with those of their students.—Faithfully yours,

SHIRLEY DEAKIN, F.R.C.S.Eng.,
Bunnu, Punjab. Surgeon-Major, I.M.S.

THE TREATMENT OF HYDROPHOBIA.

SIR,—My attention has been drawn to a notice of Dr. Hime's report on the so-called Pasteur discoveries, wherein it is stated that no man of standing has made any objection to that method. That may be true, but I happen to know that some medical men of undeniable standing have that particular method very much under consideration; and I maintain that the Pasteur success is not yet proven. I think I have a fair claim to be interested in the whole matter, when I state that I was bitten on the hand by an African negro, half an hour previous to his death, only one of the teeth-indentures showing blood, however.

My cases occurred between 1872-75, and I took care that they should be seen and verified by my medical brethren. From seizure to death, three to five days. They were constantly under observation. I found that fluid, when darkened, could be taken in forced gulps, but not from a glass vessel; it could be taken from a cup where the contents were unnoticed until raised. Blindfolding only caused general resistance. Then I tried porter, and gratitude was expressed for temporary ease. In conclusion, I cannot help thinking that herein we have the key to the eventual satisfactory treatment of the disease, and I only regret that I am not a sufficiently practical physiologist to decide how such experience may be best applied.—I remain, your obedient servant,

HENRY DALTON, M.D., C.M.Edin.

Harrogate, Yorks.

*** Although Dr. Dalton is of opinion that the efficacy of Pasteur's treatment is still unproven, he does not contradict Dr. Hime's statements. Dr. Dalton's observations are very interesting, as indicating a means of lessening the sufferings of patients who are dying of hydrophobia, but we fail to see that he gives any indication of a method for averting the onset of the disease, or preventing a fatal termination.

SCARLET FEVER AND SMALL-POX.

SIR,—If further research confirm the probable suggestion that scarlet fever may be communicated from the cow, and that milk is a suitable medium wherein the germs may mature and produce this formidable disease, when swallowed, may not vaccinia be, in like manner, the source of small-pox poison, communicated in the same way and by the same means, that is, by admixture with the milk, by cultivation therein, and by subsequent ingestion? And, if so, may we not as reasonably anticipate the extinction of variola as of scarlatina?

In both cases, the udder of the cow is the source of the infecting matter. Transference, by inoculation, to the human subject may, in each instance, minimise the virulence of the poison; whereas cultivation in a suitable medium may intensify it. The two instances seem to be theoretically parallel; whether they are so in fact is another question, but one which is, perhaps, worth the consideration of those who have the means of subjecting it to a practical test.—Yours, etc.

F. LE GROS CLARK.

BARBADOES AS A SANATORIUM.

SIR,—I am glad to see that your reviewer, in his note on the Rev. J. H. Sutton Moxly's book entitled *A West Indian Sanatorium and Guide to Barbadoes* (JOURNAL, July 3rd), has expressed a decided scepticism—at least I read that between the lines—as to the suitability of the island for a health-resort. I know Barbadoes personally, and I have lived in Bridgetown; and I must say that they are the last places in the world that I know in which a healthy man, much less an invalid, should make his abode. I need not speak of the excessive heat and the extreme mental and physical depression induced by it; and, when I say that the population of Bridgetown consists of a swarm of the most offensive negroes in the West Indies, the invalid who knows the negro by experience elsewhere will shun Barbadoes as he would shun a pestilence. The town is unbearably hot; there is scarcely an interesting or pretty piece of scenery in the whole island, though the scenery is, of course, novel, when looked at for the first time. As for yellow fever, which Mr. Moxly dismisses so lightly, it will be at once clear to the invalid that a country liable to so dreadful a visitation as "yellow jack" is a country to be avoided in the search for health. To catch a steamer and escape may look all very well in print, but our yellow enemy has intercepted many a runaway before to-day, and chased many a vessel, as its passengers know to their cost. The fact is, that Barbadoes can only be considered a health-resort for those with whom fever—not necessarily yellow fever, but ordinary fever induced by exposure to the sun and by miasmatic causes—has played havoc on the northern mainland of South America. The sea-bathing it affords, and the trade-winds that blow over the island, render life there preferable to an enervating existence on the mud-swamps of Demerara, or in the malarious forest-covered country beyond. To those whose system is broken down with fever, and who cannot return to Europe, Barbadoes is reputed the best sanatorium the West Indies offer; but a native of these islands, who sought health in Barbadoes, would, in my opinion, be going out of the way to find it. The advantages of Madeira, in respect of climate, beautiful scenery, society, and cost, are as incomparably ahead of Barbadoes as living in the West End with a good income is incomparable to living in Whitechapel with no income at all.—I am, sir, yours truly,

A TRAVELLER.

THE TREATMENT OF SHIP-SURGEONS.

SIR,—There appears in the JOURNAL, from time to time, letters from ship-surgeons, chiefly in the Atlantic service, complaining of the treatment which they have received at the hands of the managers of the Company; of the lack of proper hospital accommodation; and of their social position on board. I think it would be as well for those who have served as a ship-surgeon to place on record a statement of the treatment which they themselves have received, so that fresh-comers may know what to expect from a given Line, and so by degrees shun those where a bad state of things exists, and by this means bring that company to a better management.

I was in the *Union*, South African Line; and, during the whole time, was treated with the utmost consideration and courtesy by the captain and the officers, as well as by the Medical Superintendent and the heads of the departments at Southampton; the hospital accommodation was excellent; the drugs and appliances ample and of good quality; and any suggestion I made was listened to by the captain with attention.

As regards the social position, it depends on the man himself; if he behaves in a pleasant, unostentatious manner, he will be treated as befits his position; but if neglectful of his duties and curt in his manner, he will sooner find his level than on shore. For a capable gentlemanly man, I can conceive no life more pleasant than surgeon on a first-class mail-boat.—I remain, yours truly,

Wendover, Tring. A. E. ODLING, M.R.C.S., L.S.A.

NAVAL AND MILITARY MEDICAL SERVICES.

TRANSPORT OF FIELD-HOSPITALS BY RAILWAY.—General Davout, Commandant of the 14th French Army Corps, has recently ordered a trial to be made of mobilising some of the field-hospitals under his command, and transporting them by railway. The experiments were conducted on June 26th, at the railway station at Lyons, and included the conveyance by train of the mules, waggons for the carriage of the sick and stores, and the whole of the medical and surgical equipment of the field-hospitals. The operations were conducted under the immediate direction of Médecin Inspecteur Vèdrènes, chief of the medical service of the military district in which the 14th Army Corps is stationed. We are not aware that any similar trial has been attempted in England.

FOREIGN SERVICE AND EXCHANGES

SIR,—You will be doing the Medical Department a great benefit by publishing the general satisfaction felt at the recent order, notifying that "medical officers would not be permitted to extend their tour of foreign service by exchange after they had once given in their names for return home." Great advantage was taken of the previous regulations. To complete this feeling of satisfaction, all that is now required is to insist that those officers exchanging to remain out, shall not be permitted to hold on to their appointments, to the detriment of others. Great heart-burning has been caused by the fact that some, holding staff, field, and other appointments, avoid active service, urgent calls in other divisions, and the like; while others undergoing their tour, with every wish to fulfil the same to the satisfaction of all, are hustled about most unfairly. Let those exchanging take the place of the exchangee.—I am, etc., JUSTICE.

Calcutta.

UNIFORM OF VOLUNTEER SURGEONS.

W. GIBB, Surgeon, 2nd P.H.R.S., Coupar Angus, writes for information on the following question: I have a uniform which I wore in one corps, consisting of belt the same as surgeons in the regular service. All my buttons are stamped "Medical Staff," and I have an undress staff cap. I can get no definite information from officers of the regiment to which I now belong, as to whether any or all of these articles of dress will serve me again; and, on writing to the Horse Guards, one only gets snubbed. There does not appear any definite order in the regulations, and I was under the impression that as all surgeons in the regular army wear the same belts, etc., we volunteer surgeons ought to do the same, and in fact my uniform was got through the medical staff two years ago, with that intention. Of course I require the same cloth, etc., as the regiment I am now in.

*** The following are the latest regulations regarding the dress to be worn by medical officers of volunteer corps. They are to wear the uniform of their respective corps, with the following exceptions: the cocked hat and plume, sword-belt, pouch-belt, and field-pouch, are to be the same as for officers of the Army Medical Department of corresponding rank, silver being substituted for gold, and gold for silver, in the lace and ornaments on the belts and pouches. In corps in which the officers wear silver lace, the lace, buttons, and the bullions of the tassels of the cocked hat are to be in silver; in other corps the loop and button are to be in bronze, and the bullion tassels in black. The buttons are to be of the regiment pattern, as is also to be the waist-plate or clasp. The badge on the field-pouch is to be the same as the badge on the dress-pouch. Those medical officers who have the cocked-hats, belts, and pouches, of former patterns, are permitted to wear them until they require to be replaced.

The uniform of the Volunteer Medical Staff Corps is blue, with facings of black velvet, like the uniform of the Army Medical Staff.

ARMY-SURGEONS IN PRIVATE PRACTICE.

RETIRED writes: If the statements contained in your leading article of July 3rd are as represented by the civil practitioner, I do not think it speaks well for the tone of the unified department. Officially, of course, the Director-General could only quote and support the regulations on the point. My experience of colonial practitioner is that a great many of them are unregistered, and some of them not qualified for registration. In the instances referred to, it should have been stated whether the three foreign practitioners were or were not registered. Medical officers of the army must be registered, and have to pay their quota for the privilege of the protection (?) afforded by such registration before they can be enrolled in the ranks of the noble calling. I am quite at a loss to understand how any reasonable individual can for one moment imagine that, because a surgeon selects to serve in the army, he should be debarred the rights of ordinary citizenship, either at home, or in any of Her Majesty's colonial possessions.

THE NAVY.

THE following appointments have been made at the Admiralty during the past week: H. F. NORBURY, C.B., Fleet-Surgeon, to the *Impregnable;* R. H. MORE, M.D., Fleet-Surgeon, to Plymouth Hospital; P. C. HOSKYN, Surgeon and Agent at Kilkee; JAMES L. SMITH, Surgeon, to the *Starling;* H. W. MACNAMARA, Surgeon, to the *Surprise.*

MEDICAL STAFF.

SURGEON-MAJOR C. S. CLOSE, who is serving in the Bombay Command, has leave of absence to Poona till October 31st, on private affairs.

Surgeon S. L. DEBELLE, serving in the Madras Command, is directed to do duty at the Station Hospital at Secunderabad.

THE INDIAN MEDICAL SERVICE.

THE services of Surgeon-Major J. L. CORNAT, M.D., Bengal Establishment, are permanently placed at the disposal of the Government of the North-West Provinces and Oude.

The services of Surgeon G. A. EMERSON, Bengal Establishment, Medical Officer 9th Cavalry, and of Surgeon F. D. C. HAWKINS, officiating in medical charge of the 40th Native Infantry, are temporarily placed at the disposal of the Government of the North-West Provinces and Oude.

Surgeon W. A. SYKES, Bengal Establishment, has been appointed to the civil medical charge of Chunar.

Surgeon P. J. FREYER, M.D., Bengal Establishment, Civil Surgeon of Mussoorie, has been appointed to hold charge of the current duties of the office of Deputy Sanitary Commissioner, 1st Circle, during the absence, on privilege leave, of Surgeon T. H. Sweeny.

Surgeon-Major E. MAIR, Bengal Establishment, Superintendent of the Central Prison, has been transferred from Benares to Bareilly.

Surgeon-Major R. JAMESON, M.D., Bengal Establishment, Superintendent of the Central Prison, has been transferred from Meerut to Benares.

Surgeon-Major S. L. DOBIE, Madras Establishment, having returned from Suakin, is directed to rejoin the 4th Light Cavalry.

Surgeon W. F. THOMAS, Madras Establishment, is appointed to the permanent medical charge of the 17th Native Infantry.

Surgeon H. M. HAKIM, Madras Establishment, is appointed to the officiating medical charge of the 27th Native Infantry.

The services of Surgeon F. F. MACCARTIE, Bombay Establishment, Health Officer of the Port of Bombay, are placed at the disposal of the Government of India in the Department of Finance and Commerce, from the date on which his services are no longer required in the Sanitary Department.

Surgeon A. W. F. STREET, Bombay Establishment, in medical charge of the 5th Cavalry, and Acting Deputy Sanitary Commissioner Sind Registration District, is appointed to the medical charge of the 2nd Lancers, *vice* Surgeon-Major A. Barry, M.D., appointed Superintendent of Matheran.

Surgeon K. H. MISTRI, Bombay Establishment, officiating Medical Officer of the 6th Cavalry, is appointed to the medical charge of the 5th Cavalry (Jacob ka Risala), *vice* Surgeon Street.

Surgeon S. T. AVETOOM, Bombay Establishment, on being relieved of the officiating medical charge of the 23rd Light Infantry, will proceed to Quetta, and assume the officiating medical charge of the 6th Bombay Cavalry, *vice* Surgeon Mistri, appointed to the medical charge of the 5th Bombay Cavalry.

Surgeon-Major I. B. LYON and Surgeon A. MILNE, M.B., of the Bombay Establishment, respectively delivered over and received charge of the office of Professor of Chemistry and Medical Jurisprudence in the Grant Medical College on May 14th. They also respectively delivered over and received charge of the office of Professor of Chemistry in the Elphinstone College on the same day.

Deputy Surgeon-General H. COOK, M.D., and Brigade-Surgeon H. V. CARTER, M.D., Bombay Establishment, respectively delivered over and received charge of the office of Principal Professor of Medicine and Clinical Medicine and Hygiene, Grant Medical College, on May 19th.

Surgeon-Major J. ARNOTT, M.D., and Surgeon D. N. PARAKH, Bombay Establishment, respectively delivered over and received charge of the office of Professor of Midwifery, Grant Medical College, on May 30th.

The undermentioned gentlemen have obtained leave of absence for the periods specified: Surgeon-Major W. R. HOOPER, Bengal Establishment, for six months in extension on medical certificate; Surgeon-Major J. DUNCAN, M.D., Bengal Establishment, Medical Officer 1st Punjab Infantry, leave to Dalhousie till October 1st on medical certificate; Surgeon-Major J. P. STRATTON, Bombay Establishment, till December 8th on private affairs, to remain in India.

Surgeon-Major E. B. GARDNER, of the Bengal Establishment, Civil Surgeon of Bareilly, was killed by a fall from his horse at Bareilly on June 11th. Mr. Gardner entered the Indian Medical Service March 31st, 1865, and attained the rank of Surgeon-Major twelve years thereafter. He has no war record.

The undermentioned Surgeons of Volunteers have been granted the honorary rank of Surgeon-Major: A. SCLANDERS, M.D., 1st Inverness Artillery; CLEMENT DUKES, M.D., 2nd Volunteer Battalion of the Royal Warwickshire Regiment (formerly the 2nd Warwick Volunteers); JOHN H. CASSAN, Volunteer Medical Staff Corps.

The following have resigned their commissions: Acting Surgeon M. H. GRATTAN, 1st Volunteer Battalion of the Essex Regiment (late the 1st Essex), who joined January 31st, 1883; Surgeon WILLOUGHBY FURNER, 1st Sussex Volunteers, who joined October 1st, 1877, but commission dated June 28th, 1876; Surgeon W. S. BATTEN, of the 2nd Volunteer Battalion of the Worcestershire Regiment (formerly the 2nd Worcester), who joined April 25th, 1885; and Honorary Assistant-Surgeon S. RODEN, M.D., of the same corps, who joined July 24th, 1860.

Acting Surgeon D. W. GIFFARD, of the 1st Sussex Volunteers, and Acting Surgeon E. N. CARLESS, of the 2nd Wiltshire, are promoted to be Surgeons in their respective corps.

INDIA AND THE COLONIES.

INDIA.

FIVE surgeons of the Medical Staff, and one of the Indian Medical Department, on the Madras Establishment, have been ordered to Mandalay for urgent duty with the Burmah Field Force.

The Secretary of State has sanctioned the extension to medical officers who entered the service before January 13th, 1860, and are compulsorily retired at 58 years of age, of the privilege already en-

joyed by those of the same standing similarly retiring at 55 years of age, of receiving the next higher pension to that to which they would have been entitled under the scale in force before 1881, when such next higher pension is more than that for which they have qualified under present regulations.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL LIBEL CASES.

A further action for libel is that of Stewart *v.* Roydhouse and another, which came before the Supreme Court of Dunedin, New Zealand, on March 24th and following days, a case the hearing of which occupied the court no less than four days. The action arose out of certain comments published by the *Wellington Free Press*, relative to the professional conduct of Dr. Stewart in his capacity as a member of the medical staff of the Christchurch Hospital, in his conduct of an operation performed on a patient suffering from hernia, who died on the third day after the operation. The article in question was headed "Extraordinary Hospital Scandal," "Revolting Disclosures," "Manslaughter or worse," etc.; and, after speaking of "certain alleged irregularities and misdoings at the Christchurch Hospital," alluded to a case of hernia, treated by Dr. Stewart in this hospital, when the patient, it was stated, "was operated upon quite improperly, and under a complete misunderstanding of the nature of this malady, with fatal results;" making a charge of incompetence and criminal neglect. The article further stated that a correspondence had long been going on between the Colonial Secretary and Dr. Nedwill, a leading practitioner in Christchurch, and for many years a member of the hospital board, concerning certain alleged irregularities and misdoings at the Christchurch Hospital. The plaintiff's claim was that of £2,000 damages. The defendants admitted the publication of the article, considered the plaintiff to be guilty of negligence in holding no consultation prior to the operation, and held to the opinion "that, generally, the operation was conducted in a non-surgical and unskilful manner." It was stated, in the course of inquiry, that Dr. Stewart had not previously performed an operation for hernia, which is almost unknown in New Zealand, but had prepared himself for the operation by reading up literature on the subject. Dr. Mickle and a number of medical men, who were examined at great length, considered Dr. Stewart to be a very competent surgeon. In the course of cross-examination, reference was made to the different methods of treatment; and Dr. Prins stated that Dr. Stewart consulted with him on the matter prior to the operation; and, in the course of conversation, he referred Dr. Stewart to Annandale's work, 1880, and the literature on the subject which appeared in the BRITISH MEDICAL JOURNAL. The jury not being able to agree, it was decided to take the verdict of nine, who decided in favour of the plaintiff—damages, one shilling. Accompanying the verdict was a suggestion that the Government should insist upon a rigid inquiry into the management of the Christchurch Hospital.

A CONSULTATION DISPUTE.

G.—Although we have no doubt that Mr. B.'s course of procedure during the examination of the lady patient, and ere the nature of the case had been privately discussed in consultation by the respective practitioners, and the line of treatment mutually agreed upon, was irregular (though silently assented to by G.), and his subsequent action in forwarding the note and "annexed prescription" to the patient in place of the practitioner in attendance, ethically reprehensible, we cannot conceal from ourselves that G.'s feeling of anger paralysed his judgment, and, instead of simply and courteously soliciting an explanation from the consultant, Mr. B., impelled him to indite a denunciatory note, the tone of which is to be regretted. While medico-ethically right in his view of Mr. B.'s irregular professional conduct in the case, we are of opinion that our correspondent was injudicious and wrong in his mode of giving expression thereto. We deem it right to add that, from our point of view, no exception can be taken to the husband's conduct in the matter, which appears to have been straightforward throughout, and dictated by a clear lay perception of the true ethics of the case.

AGREEMENTS.

A MEMBER writes:—A. and B. are partners, practising in a colliery district; C. is an unqualified assistant, managing a branch practice for eight years. C. misbehaves himself about January 25. The principals A. and B., after remonstrating with him for the fault, make him sign an agreement on January 27th, promising him increased salary, with the condition that he should not practice or be an assistant to any other medical man in the district on leaving A. and B. On January 30th, C. was notified to leave the service at a month's notice, and, on the same day, was paid off his increased salary by the agreement, and compelled to leave the house and the service. The agreement was dated February 11th, that is, a fortnight after dismissal. Can the agreement be enforced? Should A. and B. refuse to C. a copy of it, and what steps should C. take to have one? Answers to two questions will oblige. A MEMBER.

* * Under the circumstances stated, the agreement would probably be held to be a sham and therefore not enforceable. It would, however, be difficult to convince a Court that the agreement was brought about under such circumstances, and A. and B. would be certain to deny C.'s statements. C. cannot demand a copy of the agreement until an action is commenced. When that happens, he can get an order for the inspection of any documents in the possession of his opponents.

MR. G. F. R. PIZEY.—We have given lists frequently in past numbers. By writing to the registrars of the respective universities and colleges which grant such diplomas, our correspondent will obtain lists of the books recommended for study.

HOSPITAL AND DISPENSARY MANAGEMENT.

ABERGAVENNY LUNATIC ASYLUM FOR THE COUNTIES OF MONMOUTH, BRECON, AND RADNOR.

THE Commissioners in Lunacy reported very favourably upon the condition of this asylum, at their visit on April 18th, 1885.

During the year the farm-house, which had afforded accommodation for 12 patients, having become almost uninhabitable, was rebuilt to accommodate 18 patients. The cost of its erection was only £487; all the labouring work was executed by patients. The provision in case of fire was considerably added to, by the fixing of a large number of internal and external hydrants.

At the end of 1885, there was vacant accommodation in the asylum for 86 patients, and, omitting private and out-county cases, for 166. The average number resident was 755. The admissions in 1885 were 154, as compared with 229 in 1884. Fifty-six patients were discharged recovered, being at the rate of 36.3 per cent. of the admissions. The death-rate was 10.3 per cent. of the average number resident; this is about the same as the average death-rate has been since the opening of the asylum. *Post mortem* examinations were made in every case in which permission could be obtained from the friends. Six of the 78 deaths were due to general paralysis, 10 to phthisis pulmonalis, and 13 to pneumonia. Two deaths are attributed to "melancholia," and six to "mania;" these conditions should, perhaps, scarcely be considered as immediate causes of death.

The weekly charge per head at this asylum is very low, being only 7s. 3½d. We are glad to see that the dietary includes milk, instead of beer.

Perhaps, in future reports, Dr. Glendinning may be able to add to the value of Table IIA, by including the whole period during which the asylum has been open; at present, the table only covers half that period. The total recovery-rate for the whole period, given in Table III, ought to tally with that in Table IVA.

It is somewhat surprising to find the names of no fewer than 32 private patients printed at full length in the Maintenance Account. We hope that it is merely by oversight that the invariable practice of the Commissioners in Lunacy has not been followed, namely, to indicate all patients by their initials only.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.

THE work of this institution is reported to have been, during the last half year, of a satisfactory character. The total number of in-patients during that time was 1,127, of which 811 were discharged as improved, 272 remaining on the books; 6 deaths are reported to have occurred, 2 of which were of patients suffering from extensive diseases of the heart. Of the 79 patients received during the half year, 48 were discharged as improved. Of 461 post-cards received from patients during this time, 327 are reported to have left the hospital improved; which, considering the chronic nature of the cases, is regarded as a satisfactory record; 249 patients were received during the six months under the powers of the governors of the Cotton Districts Convalescent Fund, and 47 of these patients remained on the books at the end of the half year. This is a most beneficial addition to the work of the hospital, enlarging the area of its benefits to a very important class of sufferers. Of the 1,127 in-patients treated, 961 were of strictly rheumatic character; 668 were of what may be called rheumatism proper; 145 of rheumatoid arthritis, 44 of lumbago, 179 of sciatica, and no fewer than 108, or one-ninth, of the rheumatic cases were complicated with heart-disease. One feature of this institution is stated to be that rheumatic invalids may derive advantage from its treatment during the winter and spring months.

ROYAL LUNATIC ASYLUM, MONTROSE.

IN their reports on the condition of this asylum from May, 1884, to May, 1885, the Commissioners in Lunacy and the medical superintendent draw special attention to the high mortality from phthisis

pulmonalis, to which disease were due no fewer than 24 out of the 53 deaths occurring during the year. In 10 out of these 24 cases, well marked symptoms of phthisis had been detected on admission; and it is not improbable that the disease existed in yet other cases, in which its detection was impossible in consequence of the resistance of the patient to thorough examination. But, after making due allowance for these causes, Dr. Howden goes on to say, "There remains, undoubtedly, too high a percentage of deaths from phthisis; and I am inclined to attribute it in part to the overcrowding of the house, and to the effects of infection on persons predisposed to phthisis sleeping in the same dormitories as those already suffering from it. Recent advances in medical science leave, I think, no room for doubt that phthisis is frequently propagated by infection; and in view of this, and of the fact that our death-rate from phthisis has been annually increasing for some years, and that a large number of our patients are phthisical on admission, the erection of a hospital where such cases would be segregated and treated so as to lessen the risk to others, becomes increasingly important." It would be interesting to learn from Dr. Howden whether typical cases of phthisical mania frequently occur in his asylum. It is satisfactory to find that, during the year, every effort was made to relieve overcrowding by the removal of suitable chronic cases to their homes, or to the lunatic wards of poor-houses, 41 cases being thus removed. The average number of patients resident was 526, namely, 240 men and 286 women; 48 patients recovered, that is, 38.4 per cent. of the admissions. The mortality was 10.07 per cent. of the average number resident. This is certainly too high, especially as no deaths were due to general paralysis. About 45 patients are on parole beyond the asylum-grounds, in addition to 80 on parole within the grounds. How many English asylums, we wonder, can challenge comparison in this respect?

We cannot help fearing that Dr. Howden is too sanguine in regarding 102 out of the 125 admissions as curable—unless, indeed, it be the possibility rather than the probability of cure which is implied. Out of the 125 admissions, 30 were discharged recovered during the year. It is surely more than doubtful whether an equal number of the 95 remaining will recover; so that it would seem that a large proportion of the 102 will remain uncured.

We are glad to see Table Ia among the statistical tables. In the next report we hope the superintendent may be able to include Table IIa for, at least, the last twenty years. Tables VI, VII, VIII, and IX, should be completed by the addition of columns dealing with "patients remaining in the asylum."

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

DISTRICT POOR-LAW MEDICAL OFFICERS AND EXTRA MEDICAL FEES.

We learn from our contemporary, the *Sussex Daily News* of July 7th, that, on the preceding day, at the fortnightly meeting of the Steyning Board of Guardians, the clerk (Mr. E. Cripps), stated that he had received Mr. Medcalf's claim for extras for the past quarter, and, finding that, in two instances, he had attended without previously obtaining an order from the relieving officer, he had struck both items out of his account. Mr. Medcalf was present for the purpose of explaining why he had put them in, and who stated that one of the cases he was called to, that of a Mrs. Parker, was in receipt of relief for her family for that time. He was sent for as it was a case of urgency, and, as such, he attended without any order, the woman being in labour. The other case was different. He had been called to a woman in the middle of the night, by the name of Gent, who was very ill. He went, although no order was brought. If his claim for attendance was to be repudiated, he desired instructions from the Board as to what he was to do in similar cases; was he to refuse to attend until an order had been obtained? During the interval the patient might die. He thought it was rather hard if he was not to be paid for the services he rendered. Mr. Jones thought if the medical officer waited till the order arrived, and the patient died, he would be liable to be brought up for manslaughter. Mr. Medcalf said he did not anticipate this, but he would be liable to censure from the Coroner and the public.

A lengthened discussion then took place as to whether Mr. Medcalf's claim should be recognised or not, some of the Board arguing against such payment, on the ground that they were the custodians of the ratepayers' money; whilst some contended that it would be hard on Mr. Medcalf if, after giving his services in cases of urgency, he were to be refused payment by the Board, which was the only body that could be looked to for any recognition of such services. Ultimately, after a considerable wrangle—in which, we are pleased to note, all parties gave much credit to Mr. Medcalf for his prompt and humane attendance on the sick poor of his district—a sort of compromise was come to. Payment was made in the one case—that of urgent midwifery; and refused in the other, which was one of ordinary illness, as it was held that then the party might be made to pay something through the County Court to the medical officer. It will, doubtless, be thought by some a harsh rule to lay down; but, seeing the very unjust way in which district medical officers are treated by some boards of guardians, we seriously advise these gentlemen to make a stand, and resolutely refuse to attend to any call, however urgent it may appear to be, until an order for such attendance be given; and we would remind all poor-law medical officers that it has been officially decided that it is competent for an overseer, or his assistant, to grant an order in cases of urgency; and that all fees thus arising are recoverable against the board of guardians by process in the County Court, if such claims be ignored. An overseer is generally accessible without much difficulty in almost every parish.

MR. A. B. SIMPSON AND THE BIRMINGHAM GUARDIANS.

SIR,—May I be permitted to mention, through your columns, that the Midland centre of the Medical Defence Union is actively engaging itself in preparing a petition against the authorities' decision in this matter, which it is hoped will be signed by all the medical practitioners and chief ratepayers of the district.

I hope to forward you a copy of the petition in due course.—I am, sir, obediently yours, CHARLES F. RIDEAL, General Secretary.

The Medical Defence Union (Limited by Guarantee),
17, Bedford Row, W.C.

VACCINATION.

SIR,—A statement was made to me recently, in a controversy as to the benefits of vaccination, by an antivaccinationist, that several of the nurses at the Small-pox Hospital at Fulham had contracted the disease, although they had been vaccinated. Can you, or any of your correspondents, give me any information on the point, as I was not able to say Yes or No.—Yours obediently,

MUNICEPS.

*** After inquiry, we learn that no nurse at the Small-pox Hospital at Fulham has contracted small-pox since the institution was first opened.

J. L.—We would advise our correspondent to write to the board, and respectfully object to the lowering of the fee, alleging, as his ground for so doing, that, as it had been shown by the result of recent proceedings in the law courts that a medical gentleman, whether a parochial medical officer or not, runs a certain risk of pecuniary liability if he has, even unwittingly, committed a clerical error in filling in a lunacy certificate; and as the determination of the insanity, or otherwise, of a particular party requires much care and judgment rightly to determine, that any fee less than a guinea would not be a sufficient honorarium for such exceptional, troublesome, and highly skilled opinion. If it be practicable, such remonstrance would be more effective if our correspondent could induce his colleagues to sign a joint document.

HEALTH OF ENGLISH TOWNS.

In the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,733 births and 3,213 deaths were registered during the week ending Saturday, July 10th. The annual rate of mortality, which had increased in the three preceding weeks from 16.8 to 17.6 per 1,000, further rose during the week under notice to 18.4. The rates in the several towns, ranged in order from the lowest, were as follow:—Wolverhampton, 11.7; Huddersfield, 11.8; Brighton, 12.6; Sunderland, 13.1; Birkenhead, 14.2; Leicester, 14.6; Birmingham, 15.0; Sheffield, 15.1; Hull, 15.3; Plymouth, 15.7; Derby, 16.5; Bolton, 16.9; Newcastle-upon-Tyne, 17.8; Liverpool, 18.2; Bristol, 18.4; Nottingham, 18.5; Halifax, 18.7; Oldham, 18.8; Bradford, 19.0; London, 19.4; Leeds, 19.5; Manchester, 20.1; Norwich, 20.4; Portsmouth, 20.7; Cardiff, 22.3; Blackburn, 23.7; and the highest rate during the week, 25.2 in Preston. In the twenty-seven provincial towns, the death-rate averaged 17.7 per 1,000, and was 1.7 below the rate recorded in London, which, as before stated, was 19.4 per 1,000. The 3,213 deaths registered in the twenty-eight towns during the week under notice included 225 which were referred to diarrhœa, 116 to measles, 58 to whooping-cough, 33 to scarlet fever, 27 to "fever" (principally enteric), 18 to diphtheria, and not one to small-pox; in all, 477 deaths resulted from these principal zymotic diseases, against numbers steadily increasing from 263 to 333 in the four preceding weeks. The zymotic death-rate was equal to 2.7 per 1,000. In London the zymotic rate was as high as 3.6 per 1,000, and exceeded by 1.6 the mean rate in the twenty-seven provincial towns, among which it ranged from 0.0 in Halifax and in Huddersfield, and 0.5 in Hull, to 3.8 in Bolton, 4.6 in Portsmouth, and 6.2 in Preston. The fatal cases of diarrhœa, which had steadily increased from 27 to 86 in the seven preceding weeks, further rose, under the influence of the warm weather, to 225, and caused the highest death-rates in Salford, London, and Wolverhampton. The deaths referred to measles, which had been 96 and 115 in the two previous weeks, were 116 during the week under notice; this disease was proportionally most fatal in Portsmouth, Bolton, and Preston. The 58 fatal cases of whooping-cough showed a decline of 9 from the number in the previous week. The deaths referred to scarlet fever, which had declined in the three preceding weeks from 35 to 20, rose again during the week to 33. The 27 fatal cases of "fever" showed a slight further decline from the numbers returned in the two previous weeks, and caused the highest death-rates in Portsmouth and Cardiff. The 18 deaths from diphtheria exceeded by 3 the

number returned in the preceding week, and included 14 in London. No fatal case of small-pox occurred during the week under notice, either in London, or in any of the twenty-seven large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had declined in the four preceding weeks from 29 to 10, further fell to 8 on Saturday, July 10th; 3 new cases were admitted during the week, against 1 and 2 in the two preceding weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.4 per 1,000, and was below the average. The causes of 81, or 2.5 per cent. of the 3,213 deaths registered during the week in the twenty-eight towns, were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, July 10th, 862 births and 471 deaths were registered in the eight principal Scotch towns, having an estimated population of 1,283,977 persons. The annual rate of mortality, which had been 20.2 and 20.8 in the two preceding weeks, declined to 19.7 during the week under notice, and slightly exceeded the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 14.7 in Dundee, 16.7 in Greenock, 17.1 in Aberdeen, 18.5 in Leith, 18.8 in Glasgow, 20.4 in Edinburgh, 28.6 in Paisley, and 29.5 in Perth. The 471 deaths registered during the week under notice in these towns included 63 which were referred to the principal zymotic diseases, against 85 and 59 in the two preceding weeks; of these, 24 resulted from diarrhœal diseases, 17 from whooping-cough, 11 from measles, 7 from scarlet fever, 2 from diphtheria, 2 from "fever," and not one from small-pox. These 63 deaths were equal to an annual rate of 2.6 per 1,000, which was slightly below the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Dundee, Glasgow, and Edinburgh. The deaths referred to diarrhœal diseases, which had risen from 7 to 16 in the four preceding weeks, further increased to 24, of which 7 occurred in Glasgow, 7 in Dundee, and 5 in Edinburgh. The fatal cases of whooping-cough, which had been 21 and 10 in the two previous weeks, rose again during the week under notice to 17, and included 14 in Glasgow, and 2 in Edinburgh. The 11 fatal cases of measles showed a further decline from the numbers returned in the two previous weeks; 8 occurred in Edinburgh. The deaths referred to scarlet fever, which had been 7 and 10 in the two preceding weeks, declined again to 7, and included 4 in Glasgow and 3 in Edinburgh. The 2 fatal cases of fever showed a further decline from recent weekly numbers, and were both returned in Glasgow. The 2 deaths from diphtheria occurred in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 3.3 per 1,000, against 2.4 in London. The causes of 61, or nearly 13 per cent., of the 471 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

In the week ending June 26th, 357 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered, was 21.5 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 10.3; Belfast, 20.5; Cork, 22.1; Drogheda, 12.7; Dublin, 24.1; Dundalk, 4.4; Galway, 23.5; Kilkenny, 25.4; Limerick, 20.2; Lisburn, 14.5; Londonderry, 23.2; Lurgan, 20.5; Newry, 21.1; Sligo, 0.0; Waterford, 20.8; Wexford, 17.1. The deaths from the principal zymotic diseases in the sixteen districts, were equal to an annual rate of 1.6 per 1,000, the rates varying from 0.0 in nine of the districts, to 8.9 in Londonderry; the 13 deaths from all causes registered in that district comprising 1 each from typhus, whooping-cough, diphtheria, enteric fever, and diarrhœa. The 87 deaths from all causes registered in Belfast, comprised 1 from enteric fever, and 4 from diarrhœa; among the 34 deaths in Cork were 3 from diphtheria. In the Dublin Registration District, the deaths registered during the week amounted to 167. Thirteen deaths from zymotic diseases were registered in Dublin; they comprised 3 from scarlet fever, 3 from whooping-cough, 1 from diphtheria, 1 from cerebro-spinal fever, 2 from enteric fever, 1 from diarrhœa, etc. Twenty-nine deaths from diseases of the respiratory system were registered; they comprised 15 from bronchitis, and 9 from pneumonia. The deaths of 11 children under 5 years of age (including 9 infants under 1 year old) were ascribed to convulsions. Three deaths were caused by apoplexy, 12 by other diseases of the brain and nervous system (exclusive of convulsions), and 13 by diseases of the circulatory system. Phthisis caused 22 deaths, mesenteric disease 5, and cancer 4. Six accidental deaths were registered. In 26 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending July 3rd, 337 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 20.3 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 10.3; Belfast, 22.0; Cork, 20.1; Drogheda, 4.2; Dublin, 21.3; Dundalk, 17.5; Galway, 23.5; Kilkenny, 8.5; Limerick, 12.1; Lisburn, 43.3; Londonderry, 8.9; Lurgan, 35.9; Newry, 10.5; Sligo, 9.6; Waterford, 25.5; Wexford, 12.8. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1.7 per 1,000, the rates varying from 0.0 in eleven of the districts to 2.7 in Limerick; the 9 deaths from all causes registered in that district comprising 1 from whooping-cough and 1 from diarrhœa. Among the 96 deaths from all causes registered in Belfast were 2 from simple continued and ill-defined fever, 3 from enteric fever, and 5 from diarrhœa; and the 31 deaths in Cork comprised 1 from each of the following diseases, namely: scarlatina, typhus, and enteric fever. In the Dublin Registration District, the deaths registered during the week amounted to 155. Fourteen deaths from zymotic diseases were registered in Dublin; they comprised 1 from scarlet fever, 1 from typhus, 4 from whooping-cough, 3 from enteric fever, 3 from diarrhœa, etc. There were but 14 deaths from diseases of the respiratory system registered in Dublin; they comprised 5 from bronchitis, and 4 from pneumonia. The deaths of 20 children (including 16 infants under 1 year old) were ascribed to convulsions. Three deaths were caused by apoplexy, 9 by other diseases of the brain and nervous system (exclusive of convulsions), and 11 by diseases of the circulatory system. Phthisis caused 24 deaths, mesenteric disease 3, and cancer 5. Two accidental deaths, one case of homicide, and one case of suicide were registered. In 21 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

It appears from statistics published in the Registrar-General's return for the week ending June 19, that the annual death-rate was recently equal to 24.3 per 1,000 in Bombay, and 31.9 in Madras. "Fever" and diarrhœal diseases showed the largest proportional fatality in Madras. According to the most recently received weekly returns, the annual death-rate averaged 27.2 per 1,000 persons estimated to be living in twenty-two of the largest European cities, and exceeded by no less than 10.4 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 32.8, and showed a further decline from still higher rates in previous weeks; the 584 deaths included 33 from measles, 25 from "fever," 17 from scarlet fever, and 6 from small-pox. In three other northern cities—Copenhagen, Christiania, and Stockholm—the death-rate averaged 22.9, and ranged from 17.5 in Christiania, to 25.1 in Copenhagen; diphtheria and croup caused 6 deaths in Christiania, 5 in Copenhagen, and 2 in Stockholm; diarrhœal diseases showed a considerable increase of mortality in Copenhagen and Stockholm. In Paris, the death-rate showed a further decline to 20.7, but exceeded the rate in London by 5.8; the deaths included 26 from measles, 20 from diphtheria and croup, 6 from typhoid fever, and 2 from small-pox. The 175 deaths in Brussels, of which 19 resulted from diarrhœal diseases, and 2 from small-pox, gave a rate of 20.9. The rate in Geneva was 23.8, and no zymotic death was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 22.5, the several rates being 18.0 in the Hague, 23.3 in Amsterdam, and 23.6 in Rotterdam; the 167 deaths in Amsterdam included 8 from measles, and 7 from diphtheria and croup. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 29.5, and ranged from 23.9 in Trieste, and 25.2 in Vienna, to 34.7 in Breslau, and 35.5 in Buda-Pesth. Small-pox caused 8 deaths in Buda-Pesth, and 5 in Prague; diphtheria and croup caused the greatest mortality in Hamburg, and the high death-rate in Breslau was in great measure due to the fatality of diarrhœal diseases. The mean death-rate in three of the principal Italian cities was 32.4, the rates being 24.6 in Rome, 28.9 in Turin, and 59.7 in Venice; small-pox caused 10 deaths in Rome and 2 in Venice, and typhoid fever 5 in Turin. The fatal cases of cholera in Venice, which had been 39, 42, and 23 in the three preceding weeks, rose to 85 in the last week of May. The death-rate was equal to 46.1 in Cairo, and to 51.2 in Alexandria; typhoid fever caused 34 deaths in Cairo, and the 227 deaths in Alexandria included 57 from diarrhœal diseases, and 13 from whooping-cough. In four of the largest American cities, the mean recorded death-rate was 20.5, the rates ranging from 16.3 in Philadelphia, to 24.1 in New York. Diphtheria and croup caused considerable mortality in New York, Brooklyn, and Philadelphia; 11 deaths from typhoid fever were returned in Philadelphia.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bacup District.—Zymotic diseases were much more prevalent and fatal in this district during 1884 than in the following year, the death-rate representing 2.6 per 1,000, as compared with 1.02 in 1885. This excess was principally due to measles, which destroyed 16 lives out of a total of about 500 cases in that year. Practically, the disease (which was originally imported from a distant town) did not become epidemic until September, when a large number of children were attacked, reducing the school-attendance in a marked degree. The infection was principally spread by the social intercourse of children visiting playmates suffering or recovering, by neighbours visiting infected houses, and by mothers who work at the mills taking their children to infected houses to be nursed during the day. In the majority of instances, the disease was of such a mild form that medical attendance was not sought, and the sixteen deaths that occurred were, almost without exception, in cases complicated with croup, bronchitis, and pneumonia. In speaking of the influence of schools in spreading infection, Mr. Brown states that the closing of the day-schools, in the centre of the borough, had a most salutary effect in teaching the people that measles was a highly infectious disease, and one requiring rigid isolation. A curious feature in connection with the prevalence of scarlatina was, that half the total number of cases (22) occurred in persons aged from 10 to 43 years. There were two deaths from this disease in 1885. But two deaths were registered from rheumatic fever in 1884, against 6 in 1885, and there were 30 deaths in each year from heart-disease; and Mr. Brown estimates that from 20 to 24 of these were the result of rheumatic fever. Chest-affections claimed an undue share of the mortality; no fewer than 120 and 123 deaths respectively being referred to bronchitis, pneumonia, and pleurisy. The general death-rate for 1884 was estimated at 19.84 per 1,000; and for 1885, it was 17.91.

Birkenhead.—Mr. Vacher gives a very careful report of the vital statistics of this borough for 1884. Particulars as to the births and deaths are conveniently arranged in tabular form, great pains having been taken to ascertain the corrected rates. In 1883, the birth-rate was 35.45, and the death-rate 19.95; in 1884, the rates were respectively 38.06 and 19.46, comparing favourably with those of the previous year. The zymotic death-rate for 1884 (2.2 per 1,000) was less than the mean of the six preceding years. There were no fewer than seven distinct outbreaks of small-pox in the first five months of the year. In all these instances, with one exception, the precautions taken prevented the spread of the disease. In that case, the three persons to whom the disease was communicated, were evidently infected before the appearance of the disease in the subject infecting them. At the beginning of September, there were no cases known to the authority, but the disease reappeared in several parts of the town

almost simultaneously at the end of the month, probably imported from Liverpool, where it was then epidemic. With regard to the protection afforded by vaccination, Mr. Vacher records that of the 87 cases in persons known to be vaccinated, 3 were fatal; and of 21 persons not vaccinated, 8 died, that is, 38.0 per cent. Measles, scarlet fever, whooping-cough, and diphtheria were all less fatal than in recent years, though measles was very prevalent, 600 cases being notified. Mr. Vacher calls attention to the fact that an increasing proportion of the death causes were entered in the register on doubtful testimony, and a large number of the uncertified deaths were those of mere infants. A wide field of conjecture is opened up as to the cause of this increase; for so manifold are the facilities for obtaining medical aid in Birkenhead, that no one can plead poverty as an excuse for neglect to children in this respect. The ordinary sanitary work received unremitting attention. Several necessary reforms advocated by Mr. Vacher are in abeyance, through the indifference of the local authorities, notably the regulation of lodging-houses by means of a "night-inspector," and the improvement of unhealthy houses.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners on July 5th, and, when eligible, will be admitted to the pass-examination, namely:

N. S. Fraser, J. G. Gillespie, C. H. Bedford, T. Luson, and G. T. Smith, students of Edinburgh University; R. A. Baylis, of St. Thomas's Hospital; H. E. B. Dickson, of Yorkshire College, Leeds; E. G. H. Williams, of Charing Cross Hospital; E. R. Joatts, and G. J. Knagg, of Dublin; G. W. Crookes, of Sheffield; H. H. Phipps, of University College Hospital; L. W. Lettig, of Pennsylvania; J. Buchanan, and R. O. Willis, of Glasgow; T. G. G. Symons, of Middlesex Hospital; J. C. Wight, of Melbourne University.

Passed in Anatomy only.

H. Robinson, of Yorkshire College, Leeds; J. K. Murray, of Dublin.

Passed in Physiology.

J. T. Harty, of Cork; J. F. de Sylva, of Madras and Edinburgh; P. E Davies, of Liverpool; P. M. Tomes, of Middlesex Hospital.

Twelve candidates were referred for three months, and seven for six months.

Passed on July 6th in Anatomy and Physiology.

E. Hale, of Liverpool; C. J. Shields, C. H. Mollison, and C. G. Kent, of Melbourne University; T. T. Daniels, of Owens College, Manchester; F. Harris, of Yorkshire College, Leeds; T. Bertram, of Kingston, Canada; S. J. Pritchett, of Birmingham; W. Janson, of Toronto; A. J. Hall, of Sheffield and Cambridge; J. Pearson, of Aberdeen and Sheffield.

Passed in Physiology only.

F. W. A. Stott, of Owens College, Manchester.

Three candidates were referred for three months, and three for six months.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Physiology only at a meeting of the Board of Examiners on July 7th, and, when eligible, will be admitted to the pass-examination, namely:

A. J. Horton, of Birmingham; W. T. Parry, of Toronto; J. T. Bradley, and T. F. Clemson, of Owens College, Manchester; J. H. B. Allen, of McGill College, Montreal; A. B. Cox, of Sydney and Edinburgh Universities; W. H. Thompson, of Yorkshire College, Leeds; A. J. Howlin, of Sheffield.

Passed in Anatomy only.

H. T. Wightman, and S. F. Barber, of Sheffield; G. J. Wortersz, of Ceylon and Edinburgh University; J. H. Lister, of Yorkshire College, Leeds; R. J. Simons, H. F. Parsons, W. L. A. La Croix, of Bristol; F. A. Foy, of Aberdeen University; A. Budd, and J. Naylor, of St. Bartholomew's Hospital.

Four candidates were referred for three months, and six for six months.

Passed in Anatomy and Physiology on July 9th.

A. L. Morris, and A. Parkin, of Guy's Hospital; J. L. Thomas, of St. Bartholomew's Hospital; A. McL. Cato, of Westminster Hospital; G. H. Bristow, and R. W. Cooker, of St. Thomas's Hospital; P. R. Dodwell, of University College; H. E. Jones, and S. P. Snook, of London Hospital; B. H. Andrew, of King's College.

Passed in Anatomy only.

A. Crompton, of St. Bartholomew's Hospital; J. P. Clowes, of St. Thomas's Hospital; T F.Ricketts, of Guy's Hospital.

Passed in Physiology only.

F. A. Field, and H. B. Cardew, of St. Bartholomew's Hospital; W. E. Roth, and W. F. Manners, of St. Thomas's Hospital; K. F. T. Buée, and P. S. B. Wetherall, of University College; L. L. Preston, and P. T. Lunn, of Middlesex Hospital.

Twelve candidates were referred for three months, and six for six months.

Passed in Anatomy only on July 12th.

F. H. Haines, H. E. Blaker, and C. H. Miles, of University College; A. E. Howse, of King's College; D. C. Dunstan, and F. J. Lauder, of London Hospital; F. H. Lowe, of St. Bartholomew's Hospital; R. F. Hiley, of Cambridge and St. Thomas's Hospital J. Robinson, of Leeds (Yorkshire College); F. S. D. Hegg, of St. George's Hospital; D. J. Aaron, of London and Madras.

Passed in Physiology only.

H. P. Johnson, and T. H. Dickson, of Cambridge University; H. H. Sales, of Leeds; S. Yeoman, of Cambridge and St. Thomas's Hospital; C. J. Paterson, L. M. Stocken, R. A. Cleveland, A. P. Walters, R. E. Greenwood, and E. D. Kell, of University College; W. M. Keal, and W. T. P. Evans, of St. Bartholomew's Hospital; J. W. Emmet, of Guy's Hospital; C. A. P. Truman, R. F. Newton, C. W. Shaw, St. George's Hospital; E. D. Rees, and A. B. Harman, of King's College; H. Fraser, St. Thomas's Hospital; J. Harrison, J. Griffith, of St. Mary's Hospital.

Twenty-five candidates were referred for three months, and thirteen for six months.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At a special examination for the Licence in Medicine of the College, held on Monday and Tuesday, June 28th and 29th, 1886, the following candidate was successful.

Henry Harkin, M.D., Univ. M'Gill College, Montreal.

The undermentioned Licentiates in Medicine of the College, having complied with the by-laws relating to Membership, pursuant to the provisions of the supplemental charter of December 12th, 1878, have been duly admitted Members of the College.

Otto Galgey, Lic. Med., 1871, St. Lucia, West Indies; William J. R. Rainsford, Lic. Med., 1874, A. M. S.

At the Quarterly First or Previous Professional Examination, held on Monday, Tuesday, and Wednesday, July 5th, 6th, and 7th, 1886, the following candidates were successful.

Andrew Davidson, Sarah Gray, Jessie Hunter, Lillie Agnes Hester Jenkins, Mrs. Caroline Keith, Florence Fanny Sorby, Lilian Trewby.

At the usual Monthly Examination for the Licences of the College, held on Monday, July 5th, 1886, and following days, the undermentioned candidates passed.

For the Licences to Practice Medicine and Midwifery.—R. H. Cox, Dundalk; J. E. J. Duffy, Strokestown, co. Roscommon; M. J. Geary, Clonmel, co. Tipperary; G. Goodman, Skibbereen, co. Cork; J. B. McBride, Newry; C. R. Moloney, Sologhead, co. Tipperary; J. E. Nally, Balla, Mayo; W. Porritt, Huddersfield; C. A. Ridal, Sheffield; W. L. Ross, London; J. C. Sellars, Dundalk; E. E. Smith, Hyde, Cheshire; W. F. Stritch, Clonlara, co. Clare; T. Williams, Londonderry; R. J. Wood, M.D., Vict. Univ., Toronto; D. T. Wylie, Moy, co. Tyrone; E. Yeates, Melrose, Poray, co. Wicklow.

For the Licence to Practice Medicine only.—P. T. Bolger, Tullow, co. Carlow; J. M. Brinck, Helsingborg, Sweden; F. W. Burnett, Leeds; C. J. Counihan, Limerick; J. T. D. Crinion, Dublin; J. Evans, M.D., Trin. Coll. Univ., Toronto; V. E. A. Fenton, Easkey, co. Sligo; J. E. Foster, Aston, Birmingham; S. A. Long, Dundrum, co. Dublin; P. McDermott, Georgetown, Demarara; F. J. MacGuire, Dromod, co. Roscommon; W. K. MacRoberts, Hamilton, Victoria, Australia; P. T. Morressy, Tipperary; E. M. Power, Dublin; H. N. Pullan, Harrogate, Yorkshire; J. Rafter, Bootle; A. J. S. Roe, Cheltenham; C. Scatchard, Tadcaster, Yorkshire; J. H. Stewart, Dublin; C. P. Tennant, Murles, co. Tipperary; P. J. W. Ternau, Warrenpoint, co. Down; F. W. Thornton, Huddersfield; T. F. Wade, Dublin; J. T. Yoakley, Dublin.

For the Licence to Practice Midwifery only.—H. M. Brabazon, M.B., Univ. Dubl., Mullingar, co. Westmeath; W. N. Murphy, M.D., R.U.I., Sunday's Well, Cork.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Court of Examiners, the undernamed gentlemen passed their final examinations for the Letters Testimonial; and, having taken the declaration and signed the roll, were admitted Licentiates of the College.

O. Burkitt, C. J. Counihan, J. D. O'Dowd Egan, F. E. Gahagan, T. H. Hannigan, G. Luke, D. M. Lindsay, J. J. O'Connell, E. P. Pooley, G. Woods, W. Swan, and J. J. Myers.

Thirty-two candidates entered for examination. Two withdrew, two were absent, and sixteen were stopped.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, July 8th, 1886.

Agnew, Edward Dalton, Soho Square, W.C.
Armstrong, William, Limefield, Kersal, Manchester.
Blake, William Henry, Brondesbury Villas, Kilburn, N.W.
Drinkwater, Charles, Memorial Cottage Hospital, Mildmay, N.
Smith, Percival, Hanley Road, Crouch Hill, N.

MEDICAL VACANCIES.

The following vacancies are announced.

ASHFORD FRIENDLY SOCIETIES AND PUBLIC MEDICAL ASSOCIATION.—Medical Officer. Salary, £150 per annum, with residence. Applications by July 17th to the Honorary Secretary, 5, West Street, Ashford, Kent.

BARNWOOD HOUSE HOSPITAL FOR THE INSANE. Gloucester.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications to Dr. Needham.

BRADFORD INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum, with board, residence, and washing. Applications, endorsed "Junior House-Surgeon," by July 26th, to the Secretary.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House-Surgeon. Salary, £140 per annum. Applications by July 27th to the Assistant Secretary.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road.—House-Surgeon. Rooms, gas, and firing. Applications, by July 31st, to the Secretary.

CRAIGLOCKHART POOR-HOUSE, Edinburgh.—Resident Medical Officer. Salary, £80 per annum. Applications by August 14th to the Visiting Medical Officer.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board and lodging. Applications by August 4th to the Secretary.

DARLINGTON HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £100 per annum, with board. Applications to the Honorary Secretaries, Union Street Chambers, Darlington.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," by July 31st, to J. Taylor, Esq.

EXAMINERS BY THE SOCIETY OF APOTHECARIES.—Applications by July 20th to J. R. Upton, Esq., Apothecaries' Hall.

HALIFAX INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications, by July 27th, to J. Hodgson Wright, Esq.

KIDDERMINSTER UNION.—Medical Officer. Salary, £70 per annum and vaccination fees. Applications, by July 19th, to Mr. F. Burcher.

KING'S COLLEGE HOSPITAL.—Assistant-Physician and Assistant-Surgeon. Applications to J. W. Cunningham, Esq., King's College, London.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—Assistant House-Surgeon. Board and lodging. Applications to C. W. Carver, Esq.

MITFORD AND LAUNDITCH UNION, Norfolk.—Medical Officer and Public Vaccinator for the Fransham District. Salary, £55 per annum, and fees about £50. Applications by July 26th to W. M. Barton, Esq., East Dereham, Norfolk.

NORTH RIDING OF YORKSHIRE LUNATIC ASYLYM, Clifton, York.—Resident Clinical Assistant. Apartments, board, washing, etc. Applications to the Medical Superintendent.

OWENS COLLEGE, Manchester.—Professor of Chemistry. Applications to the Council of the College, under cover, to the Registrar by August 31st.

ROYAL FREE HOSPITAL, Gray's Inn Road.—Junior Resident Medical Officer. Board and residence. Applications by July 21st to the Secretary.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street.—Honorary Physician. Applications by July 26th to the Secretary.

ST. PANCRAS NORTHERN DISPENSARY.—Honorary Surgeon. Applications by July 24th to the Committee.

WESTERN DISPENSARY, Rochester Row, Westminster, S.W.—Honorary Dentist. Applications by July 19th to the Secretary.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Surgeon. Board, lodging, and attendance. Applications by July 22nd to the Secretary.

WEST RIDING ASYLUM, WAKEFIELD.—Resident Clinical Assistant. Board, apartments, etc. Applications immediately to the Medical Director at the Asylum.

MEDICAL APPOINTMENTS.

BARRITT, G. Lacy, M.R.C.S., L.R.C.P.Lond., appointed Honorary Surgeon to the Johnson Hospital, Spalding, and Medical Officer of Health for the Spalding District, *vice* C. K. Morris, resigned.

BRODRICK, H. Edward, M.R.C.S.Eng., appointed Resident Clinical Assistant to the East London Hospital for Children and Dispensary for Women.

CAMPBELL, Harry, M.D., B.S.Lond., M.R.C.P., appointed Assisant-Physician to the North-West London Hospital.

COTES, C. E. H., B.A., M.B., B.S.Cambs., F.R.C.S.Eng., appointed Surgeon to the Dispensary at Well Street of the Seamen's Hospital Society, *vice* E. M. Little, L.R.C.P., resigned.

MILLS, B. Langley, M.D., Surgeon Medical Staff, appointed to the medical charge of the camp of the Scottish National Artillery Association at Barry.

OGLE, Arthur W., M.R.C.S., L.R.C.P., L.S.A., appointed House-Physician to the Middlesex Hospital.

PERRY, E. Cooper, M.A., M.B.Cantab., M.R.C.S.Eng., appointed House-Surgeon to the London Hospital.

PURDON, Richard J., M.D., M.Ch.R.U.I., appointed Visiting Physician to the Belfast District Lunatic Asylum, *vice* Henry MacCormac, deceased.

SCOTT, W. Sawers, M.B., C.M., appointed Resident House-Surgeon to the Clinical Hospital, Manchester.

WARE, George Stephen, M.R.C.S., L.R.C.P., L.S.A., appointed Obstetric House-Physician to the Middlesex Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

JOYNT.—On June 15th, 1886, at Marine Gardens, Hanover Street, Kingston, Jamaica, the wife of Surgeon-Major H. W. Joynt, Army Medical Staff, of a son.

KINNEIR.—On July 5th, at Gordon House, Horsham, the wife of F. W. E. Kinneir, M.R.C.S., L.S.A., of a daughter.

POWELL.—On July 3rd, at the Borough Asylum, Nottingham, the wife of Evan Powell, of a son.

DEATH.

DAVEY.—[illegible] at 3, Redland Park Villas, Bristol, Maria A., wife of James Geo. Davey, M.D.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

Nævi.

ENQUIRENS asks the best and least painful means of eradicating small nævi, whether on the scalp or elsewhere, leaving out of account direct operative interference.

Feeding Bottles.

TENEX, F.R.C.S., asks where he shall find, in the many little guides or hints to mothers, the best account of feeding bottles, with regard to use, cleanliness, etc.

Nitrous Oxide.

M.D., LL.B., asks: 1. Is it proper to administer nitrous oxide gas in cases where the heart's action is (*a*) irregular, (*b*) weak, (*c*) in mitral insufficiency? 2. Excluding above conditions, is it practically safe for a short operation, such as extraction of a tooth?

ANSWERS.

E. W. W. (Munich) should apply to the Secretary of the Lock Hospital, 91, Dean Street, Soho.

ISHMAEL should communicate with Mr. Miller, Registrar of the General Medical Council, 299, Oxford Street, W.

Effect of Morphine.

M.D., LL.B., writes: One-quarter of a grain of morphine is a large dose to commence with. "A. Q." will find one-sixth sufficient in most cases, and this quantity may be subsequently increased, if necessary. Some persons are very susceptible to the action of the drug, even in small doses. In my own practice, the hypodermic injection of one-sixth of a grain has occasionally produced unpleasantly strong effects.

Sal Mineralis.

IN reply to "H. C.," Dr. Spencer Smyth and other correspondents inform us that sal mineralis is prepared by H. T. Kirby and Co., Limited, 14, Newman Street, London, W.

SIGMA (Napier, New Zealand).—Mr. Trimmer is still Secretary of the Royal College of Surgeons of England, and his information is the best that could be had. The qualifications of L.R.C.P.Edin. and L.S.A.Lond. ought, however, in our opinion, to be considered sufficient.

Bites of Flies and Gnats.

M. F. BUSH, M.R.C.S.E., L.S.A., recommends the Dalmatian Insect Killer for fleas, flies, gnats, bugs, and cockroaches.

DR. V. POULAIN, Fulham Road, thinks that F. A. will find the following useful: Oil of elder, ½ drachm; oil of cloves, 2½ drachms; carbolic acid, ½ drachm; eau de Cologne, 3 ounces; dilute alcohol, 2 ounces. To be sprinkled on sheets or pillows.

When to give Ergot.

A CORRESPONDENT writes: The specific action of ergot is to produce powerful contractions of the uterus, and to lessen the interval between each pain. But it is in these intervals that aeration of fœtal blood takes place in the placental capillaries, and, therefore, ergot interferes seriously with fœtal circulation. Hence, it ought not to be given before the os is fully dilated, nor even then unless there be reason to suppose that delivery will take place within two hours at the latest.

IN reply to "M.D.," J. CROCKER, M.R.C.S., of Bingley, writes: It is not "commendable to administer ergot in a primipara before the os is fully dilated, but with membranes intact, because the pains are failing." The failing of the pains may be from nervous exhaustion, which rest and a short sleep would remove, therefore, a small dose of morphine may be given, and further time allowed. If the os, though not fully dilated, be soft and dilatable, ergot may be given. The child may become asphyxiated in less than two hours from ergot, which prompt use of forceps might prevent. If the head "remain arrested on the perinæum" half an hour, forceps would be indicated without waiting two hours, as stated by "M.D.;" indeed, careful and timely application of forceps might save both child and perinæum. The "difference made between primi- and pluriparæ" should be on the side of patience and time in respect to the former. A wide experience confirms the truth of these statements.

*** We have received several letters of a similar character from other correspondents.

T. WALLACE.—We know of no such institution or other place where such accommodation can be obtained.

Unprofessional Conduct.

C. H. MILBURN, M.B. (Hull).—It is needless to say that the distribution of cards like those which you send us is a grossly unprofessional act. Those who do such things are persons who cannot or will not understand what the term "unprofessional" means, and are, therefore, beneath censure.

Government Appointment in India.

SURGEON, INDIAN MEDICAL SERVICE, writes: "Member" should apply to the Surgeon-General with the Government of India, Surgeon-General Simpson-, Indian Medical Service, for an appointment in the Uncovenanted Medical Serf vice. All appointments to this are made on his nomination. Conditions o service, pay, pensions, etc., may, I think, be had on application to the India Office, Whitehall, London.

The Medical Act, 1886.

R. F. W.—This Act comes into operation on "the first of June, 1887, or such other day in June, 1887, as may be appointed by the Privy Council."

NOTES, LETTERS, ETC.

WILLIAM DONOVAN, L.R.C.P.Ed., Birmingham, writes: May I ask the general practitioners to keep "an open mind" on the representation of the profession on the Medical Council? The corporations and the Crown are represented by hospital physicians and surgeons. The profession, containing nineteen-twentieths of general practitioners, will do well to see that its three representatives do represent the majority, and not fads and cliques.

The Case of Dr. J. S. Ridley.

THE following additional support has been made towards the "Ridley Fund."

	£	s.	d.
"W. M. B."	2	2	0
K. (Taunton)	1	0	0
Anon.	0	5	0

This fund is sadly in need of encouragement and help. It is proposed to give one of the deceased's daughters (13) at least another year's tuition, and I should like to hand over a balance to the widow. Review the life (JOURNAL, June 26th, page 1247), see the work done, observe the irony of fate, consider the merits of the case, and try and help us.—Yours faithfully, H. A. SMITH.

Burnham Lodge, Ealing, W.

The Case of Mr. F. Rawle.

MR. W. F. BROOK (Fareham, Hants) writes concerning this case, particulars of which were published in the JOURNAL, July 3rd, page 56: The following contributions have been received by me in aid of Mr. F. Rawle, of Titchfield, and I trust more will follow.

	£	s.	d.
H. Stear, Esq.	2	2	0
Captain Turner-Irton	1	0	0
Bovill Smith, Esq.	1	1	0
G. H. Case, Esq.	1	0	0

Can Cod-liver Oil be Dissolved?

THE MALTINE MANUFACTURING COMPANY (LIMITED) write: In reply to the letter with the above heading, relating to the statement that cod-liver oil can be dissolved in malt-extract, we answer emphatically, No. We wish it could be. To dissolve cod-liver oil in such a menstruum would be greatly to the advantage of the public, and the medical profession, and to ourselves as manufacturers. But it cannot be done; oils refuse to dissolve in such aqueous fluids. If Mr. Clayton or Dr. Dupré, who seems to support Mr. Clayton, will examine a thin film of the mixture under the microscope with a quarter-inch or an eighth object-glass, and carefully moderated illumination, they will see the globules of oil mixed with the aqueous extract. We have consulted the best authorities, and are prepared to sustain our assertions.

Membranous Croup and Diphtheria.

DR. W. J. MACKIE (Freshwater) writes: In deference to Dr. Leslie Phillips, and to avoid the introduction of a dispute about words into a question of pathological fact, I have much pleasure in substituting the term "croupous membrane" for "membranous croup" of the glans penis, etc. It is obvious, from my paper, that the expression so obnoxious to Dr. Phillips is employed in its pathological, rather than in its clinical, significance; and I err in good company in my objection to limit the use of the word "croup" to its popular and unscientific application to a group of subjective symptoms, depending for its origin on varying disturbances of the nutrition of the mucous membrane and muscles of the larynx. The most powerful excuse for this practice, which Dr. Phillips seems to defend, is that it is a convenient cloak to a halting diagnosis.

As long as the word "croup" possesses its present pathological meaning, there is ample precedent for its employment in the sense in which I used it; and as soon as it ceases to indicate a definite pathology, much better exclude it from the medico-surgical vocabulary. Is it not quite as scientific to refer to catarrhal laryngitis, diphtheritic laryngitis, croupous laryngitis, as to designate the three conditions croup?

I shall add, briefly, that the presumption is, no doubt, justifiable (though not irresistible) "that virus was carried by the instruments from the trachea in the morning to the penis in the afternoon" in Dr. Phillips's case, but this only suggests that diphtheritic laryngitis was mistaken for croupous laryngitis.

The chief objection I see to the suggestion of Mr. Whitehouse is, that the superficial gangrene to which he refers I understand as replacing the original tissue; whereas, in my case, the yellowish white membrane, with elevated margins, was distinctly superimposed on the slightly abraded surface of the mucous membrane. It seems to me quite possible that the difference observed in my patient, or in membranous croup of the larynx, from Billroth's urinary diphtheria, may result from the difference in form or prolongation of application of a non-specific irritant.

Spontaneous Evolution.

CHARLES TERRY, M.R.C.S.Eng., L.S.A., Newport Pagnell, writes: On June 30th, I was sent for to see Mrs. D. I had previously attended her in ten labours, in none of which she had gone beyond the sixth month, generally miscarrying about the third. I found her in labour, within a week of her full time. The pains were strong, the membranes ruptured, the os well dilated, and the shoulder presenting, well down. I accordingly gave her a full dose of opium, and endeavoured to turn; owing, however, to the rigid state of the fibres of the upper portion of the uterus, I was unable to reach a foot without using more force than I deemed safe. I accordingly removed my arm, which was followed by the expulsion of the child's hand. I drove home to get chloroform to relax the uterine fibres; and, on my return about an hour later on, I found the child was born; the breech, according to the nurse's account, having been first expelled. In this case, unlike that of Mr. Addison reported in the JOURNAL of July 3rd, the child was born dead, and was a fair ordinary size.

Papain in Dyspepsia.

DR. E. HAUGHTON writes: It is most desirable that the questions raised by Drs. Herschell and Martin should be gone into more fully in the interests of medical science. I was in great hopes that papain might have been found a good substitute for pancreatine, which is at present rather a monopoly in this country; but I regret to say that, as yet, I have not been able to satisfy myself of its superiority. The preparation to which Dr. Finkler's name is attached is very expensive, and its advocates do not point out why its composition should be supposed to be so very different from Christy's, or that imported by other houses. With regard to the supposition that pancreatine must always be given a long time after a meal, or in combination with an alkali, in order to escape destruction in the stomach, I am sure that there is an error in this statement, as I have repeatedly prescribed De Hoghton and Co.'s "peptic digestive powders" (which are principally composed of pancreatine and diastase), and can guarantee that they have a marked influence on the digestion of food when taken with the meals themselves, and that they also have a cholagogue action, which may sometimes be detected in the stools, even on the day following that on which they are taken. It is evident from this that laboratory theories will have to be modified by clinical experience.

Terebene as a Generator of Ozone.

Mr. C. T. Kingzett writes: In the Journal of May 29th, there is a memorandum by Dr. McAldowie relative to terebene as a generator of ozone, in which he seeks to account for the therapeutic action of terebene upon the assumption that it generates ozone as a product of the oxidation which it is supposed to undergo by contact with the air. Will you permit me to call attention to the fact that the atmospheric oxidation of turpentine and terebene is not attended by the formation of ozone? My investigations have established the fact that, when turpentine is exposed to the air, it absorbs oxygen, and there is produced an organic peroxide, which I have termed camphoric peroxide; and it is this substance which, upon coming into contact with water, produces peroxide of hydrogen—a substance which, in its general reactions, resembles ozone, as does also the camphoric peroxide, which give rise to its production in the manner I have stated.

Many years ago I proved that undergoes this particular oxidation much less readily than ordinary turpentine; so that, so far as its therapeutic properties are dependent upon the products of the process which I have described, it is and must be an inferior agent to ordinary turpentine. I may further mention that "Sanitas" oil is air-oxydised oil of turpentine, which is saturated with the camphoric peroxide above referred to; and that "Sanitas" fluid is the aqueous solution which results from the action of water upon the oxidised oil.

It may interest Dr. McAldowie to learn that the paraffin hydrocarbons do not undergo the oxidation to which I have made reference, but that all hydrocarbons which contain a terpene are subject to it; such, for instance, as the oils of turpentine, eucalyptus, carraway, juniper, lemon, orange, etc. A full description of the chemistry of this subject is given in my *Nature's Hygiene*, 2nd edition, published by Messrs. Baillière, Tindall, and Cox.

Phthisis and the Chinese Race.

A. I. Garland, L.R.C.P.E., M.R.C.S.E., Oamaru, New Zealand, writes: In the Journal of March 20th, I notice, in the account of the meeting of the Southern Branch, Dr. Isambard Owen, in opening a discussion on the etiology of phthisis, is reported to have referred to the "immunity of the Peruvian Indians and the Chinese." I may inform him that a Chinaman, aged 47, was recently admitted to the hospital here under my care, in the last stage of phthisis, from which he died in a little more than a week; nor is this the only case that I have seen amongst the Chinese in New Zealand.

Dislocations of the Shoulder.

Dr. C. R. Illingworth writes: With your permission, I will reply to Mr. Miall's declaration. In my letter claiming priority, I show that abduction was suggested by me in 1881, as part of a method I had successfully used. It is absurd to deny the priority for the simple reason that the abduction was only a part of the method. I still consider the whole process necessary; namely, scapular depression, abduction, extension, and upward pressure or tilting of the head of the humerus. Abduction is mentioned in both communications, so that, in the event of abduction alone being considered by the profession to be the one thing needful in shoulder-dislocations—a contingency which is not within my expectation—I have a prior claim to its suggestion, at any rate, within recent times. And yet Mr. Miall thinks my claim to priority "scarcely borne out by facts." Mr. Miall speaks of the depression of the scapula as being "mysterious." Dr. Ryder has effectually dispelled any mystery there may have been, by a roller towel and his foot. But, although the depression process is "mysterious," Mr. Miall still thinks it "a proposal of no value." Such a combination of doubt and dogma is, to say the least, peculiar. Besides, in the present unsettled state of the question, and notwithstanding the recent iconoclastic utterances of Mr. Clement Lucas, dogmatic assertions are ill-timed.

My remarks about "steadying the scapula" were written more with the intention of directing attention to my method than anything else. That I attached little or no importance to mere steadying, may be gathered from the closing sentence of my letter: "*possibly* the scapula may be as successfully steadied with the foot, although the depressing power over it will thus be lost." (The italics do not occur in the original.) That abduction was considered an essential part may be gathered from my original communication in 1881, where I speak of the lower edge of the glenoid cavity "gliding over the rounded head of the humerus." It must of necessity glide more readily over it when the articular surface is placed more or less in a direction parallel to the surface of the cavity, as in abduction, than when placed at right angles, as in adduction. These details I left to the common sense of your readers to fill in, but Mr. Miall's letter has compelled me to enter into them.

In conclusion, I have only to say that the remarks of Mr. Clement Lucas are, in my opinion, to be deprecated, as tending to perpetuate the usually accepted and dangerous axillary methods. If the voice of the profession is for abduction in place of parallel traction, let men of position and influence utter no uncertain sound in support of it, be its origin ancient, modern, or primeval.

Maternal Impressions Affecting Fœtus.

Mr. W. Brydon (Hawick) writes:—I was lately called to a patient, as she was losing a large quantity of blood. I found, on examination, a large mass of placenta protruding through the os uteri. The pains were regular and strong, and each caused a further loss of blood. In a few minutes the entire placenta came away, and the hæmorrhage almost ceased. I then brought down the legs of the fœtus. It was only 7½ months old, and dead. The head was fixed upon the shoulders without any appearance of a neck; and on asking the patient, who knew nothing of the state of the fœtus, if she had seen any deformed person whose deformity had fixed itself in her mind during her pregnancy, she told me that, when she was about two months pregnant, some one had shown her a "doctor's book," as she called it, and one of the illustrations was that of a child, which looked as if it had no neck. She had thought a great deal about that illustration, and, ever since seeing it, had felt certain that something was wrong with her.

COMMUNICATIONS, LETTERS, etc., have been received from:

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BOOKS, ETC., RECEIVED.

On Cancerous Affections of the Skin. By G. Thin, M.D. London: J. and A. Churchill. 1886.

On Some Forms of Paralysis from Peripheral Neuritis: Harveian Lectures for 1885. By Thomas Buzzard, M.D. London: J. and A. Churchill. 1886.

General Index to the Year-Book of Pharmacy for the years 1864 to 1885 inclusive. London: J. and A. Churchill. 1886.

The Chemistry of Wheat, Flour, and Bread, and Technology of Breadmaking. By Wm. Jago, F.C.S., F.I.C. Brighton: Wm. Jago. 1886.

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CLINICAL LECTURE
ON
RECTAL FISTULA AND HÆMORRHOIDS.

Delivered at the Westminster Hospital.

By RICHARD DAVY, M.B., F.R.S.E.,
Surgeon to the Hospital.

GENTLEMEN,—We have had, lately, numerous cases of rectal disease in our male and female wards; but, as the subjects of rectal fistula and hæmorrhoids are sufficient for one lecture, permit me to introduce typical specimens of each disease:—1, rectal fistulæ; 2, external hæmorrhoids; 3, internal hæmorrhoids.

1. *Rectal Fistula.*—The young delicate man in Mark Ward, H. H., aged 26, single, is suffering from three fistulæ, namely, one buccal fistula, one incomplete, and a third complete rectal fistula. His buccal fistula was set up by the extraction of three molar teeth at one sitting (one in the right upper, two in the right lower jaw); abscess followed, and a sinus two months afterwards, through which a piece of the inferior maxilla passed. Then his rectum gave inconvenience; he noticed a moisture at the anus, pain in defæcation, and general lassitude, compelling him to leave off his office work. He has been operated on, and is now quite well; strangely enough, his mother has also been operated on by myself at Westminster for rectal fistulæ a few weeks after her son's admission. She is also quite sound now.

There is necessity for surgeons to be more accurate in their naming these common affections. For example, the name "fistula in ano" is wrong. The anus is but a line; and fistulæ are either on the rectal or the perineal side of this line, so I shall teach you that abscesses in this quarter may be perineal, ischio-rectal, sacral or rectal, and are rightly so named according to their respective situations and aperture; that "fistula in recto" is a term only applicable when one of these abscesses opens into the rectum, in addition to a second opening on the perineal side; and that "fistula in ano" is but rarely, if ever, really seen.

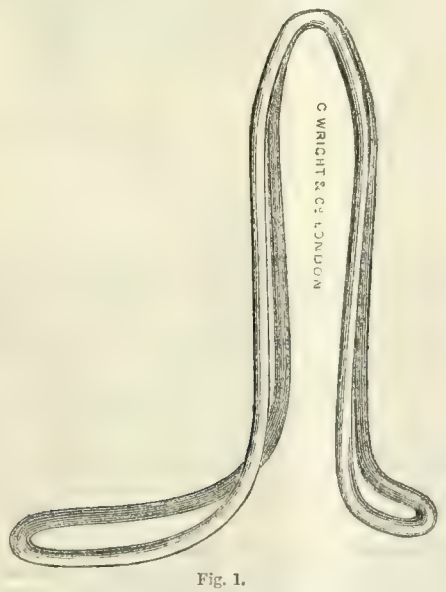


Fig. 1.

It is quite the exception for me, in hospital practice, to examine a patient (supposed to have rectal disease) unless he be under the influence of an anæsthetic. Any such examination, without sleep, is ineffectual, and the necessary examination and operation are conveniently linked, to the great relief of the patient, and to the satisfaction of the surgeon. Therefore, preparatory to a careful examination, order the rectum to be thoroughly cleaned with warm soap and water, and then place him at once on the operating table; these remarks apply equally to abscess, fistula, or hæmorrhoids. In trivial cases, cucaine may act well as a local anæsthetic, but, in most cases, a general anæsthetic is better, as giving more scope for an extended operation in time and space, and mitigating very much the unpleasantness to the patient, whose feelings must be hurt at the necessary exposure.

The posture of your patient must next engage your attention. Let him lie on the back, with his nates all but overhanging the edge of the table, and his wrists and ankles linked by leathern straps and buckles. It is extremely easy to elevate any perinæum by two assistants using the legs as levers, working towards the armpits. This plan is especially useful in private, where your client's perinæum is not unfrequently eclipsed by a feather-bed; and, as the surgeon economises time, secures a full view, and has full scope for instrumental manipulation by his attention to these details, do not omit to lay stress on such suitable posture. In external hæmorrhoids, decubitus on the left side, at the edge of the bed, may suffice for examination after the operation has been performed.

The next point to be attended to is the speculum. I have used my own wire speculum (Fig. 1) for ten years, and, practically, I cannot wish for a better one; it is clean and roomy, giving the maximum of view of the vault of the rectum with the minimum of space occupied, and allowing a probe, or forceps, or knife, or scissors to pass easily between its bars.

Before use, you can warm and oil it; after use, place it into a can of boiling water, and it is ready, then, to be at once wiped clean and dry. Its cost is only five shillings; this, and the other instruments mentioned in this lecture, have been made for me by Messrs. Wright and Co., 108, New Bond Street.

You will pass the speculum carefully and gently, and, in a case of fistula in recto, you are now to clear up the doubt (if any exist) as to the fistulous track being complete or incomplete (that is, whether the perineal sinus communicates or not with the rectum).

My old and illustrious teacher, the late Professor Syme, used to emphasise the fact that many of the so-called fistulæ in recto did not communicate with the rectum, but were only true fistulæ after the surgeon's probe had pushed through and ruptured the mucous membrane of the rectum. Feeling sure that Mr. Syme would not have made such a statement without good reason, I have repeatedly made use of the following practical operative procedure; and am prepared to corroborate his testimony by a proof of fact. If you take one of my hydrocele syringes with a pointed glass-nozzle (Fig. 2), and fill it with milk, and

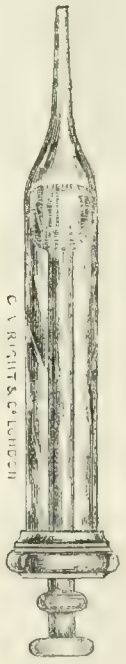


Fig. 2.

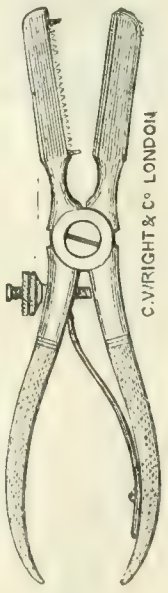


Fig. 3.

insert the same nozzle into the perineal wound (your eyes being fixed on the mucous membrane of the rectum, seen through the speculum), and inject slowly the milk, you will find one of the two following circumstances happen: (1) the milk will run through the rectum out at the anus as a white stream; or (2) you can see the white injection through the transparent membrane bulging into the rectum, or insinuating itself on its subjacent track along the rectal wall. This demonstration

has been frequently given by me on rectal patients in this theatre, and appears conclusive and indisputable.

The complete division of the sinus or fistula and the sphincter recti muscles is the only operative treatment required; and the necessary instruments are a grooved probe and sharp-pointed bistoury. You need not use the speculum in all cases; but, should you do so, the steps of the operation can be traced with exactitude by the senses of sight and touch; the speculum permitting much scope for both. After the operation, be scrupulously cleanly in your treatment; and, if the patient suffer pain, splint his bowel with opium; and use an enema of warm water prior to a natural motion. Cod-liver oil and steel are good drugs in these cases; but I attach more importance to a good nutritious bland diet, and rest in bed until cicatrisation is completed. In cases where the healing process is slow, one touch of the platinum-cautery (flash of fire) stimulates the parts, and promotes contraction.

External Hæmorrhoids.—Often the redundancies of skin around the anus are due to syphilitic hypertrophy, or to simple inflammatory thickening, or really have, for their nucleus, a distended and misshapen hæmorrhoidal vein; such exaggerations become more exaggerated after injury or excess, and then give acute pain to the patient. Rest in bed, cleanliness, temperance, and enemata will often suffice; but, should operative measures be decided upon, you may with safety cut off all such superfluities outside the circle of the anus, and treat the wounds as ordinary superficial sores. In any suspiciously vascular tumour, make use of the ligature (as any nævus would be treated in any other position of the body), and so effect insurance against hæmorrhage. Cleanliness really more suggests this method than any real danger to the patient; for, so far as my experience goes, hæmorrhage is alone to be feared when occurring within the intestine. Here let me insist on the peculiarity of the circlet of veins around the rectum (these hæmorrhoidal veins), from an anatomical, pathological, and therapeutic point of view. Anatomy teaches us that these venous junctions, situated at a dependent and unsupported portion of our bodies, and readily affected by heat, cold, or exposure, eventually fall into the general venous and portal venous circulating main streams. Hence, any sluggishness in flow may be accentuated by the general or portal conditions; and the duplicate conditions of a sedentary life with portal obstruction, double the chances of an intemperate sluggard being a victim to piles, by reason of this venous trysting place being markedly influenced by both causes. Moreover, in treatment, temperance, regulated exercise, and the recumbent posture (according to discretion), illustrate really mechanical aids, and permit easy explanation of success through the study of anatomy. Should any external hæmorrhoid be very vascular, or suggestive of giving trouble by primary or secondary bleeding, you may prefer adopting the usual treatment for internal hæmorrhoids to the ligature; and this leads me on to describe the method usually adopted by operating surgeons at the Westminster Hospital.

Treatment of Internal Hæmorrhoids.—In Cooper's *Surgical Dictionary*, you can read how, in 1828, the use of the cautery was deemed old-fashioned and obsolete; now, in 1885, the cautery is, beyond others, our therapeutic agent. The present introduction of clamping the piles, and burning them off, is due to the late Mr. Cusack, of Dublin; his instrument has been improved by Mr. Henry Smith, of King's College Hospital; and the clamp which you know I am fond of using (Fig. 3) is a modification of my own. What you require in any clamp are, 1, firmness of grip; 2, quick action; 3, a non-conducting medium placed between hot platinum knife and your patient's skin. You will find that these conditions are complied with in my instrument.

M. Paquelin's benzoline cautery has superseded the clumsy, dirty, and primitive hot irons. This cautery is before you, and needs no special description now.

In using the clamp, first clean the surface of the piles, which descend on slight provocation, and, so far as practicable, hold your instrument in a line radiating from the anus, and grip a convenient mass, and not too much at once; by so doing, you will be less liable to injure long tracks of the sphincter recti muscles, and you emphasise the benefit of the cautery. Some surgeons consider that the blades of the clamp must be parallel, and that bleeding is apt to result at the end of the mass caught by blades which are not parallel. I cannot remember one single instance where this accident has happened to myself, for I have never yet been introduced to an internal hæmorrhoid so indurated as to resist the great power and purchase of my clamp-handles. Fixity of tenure is absolutely secured by the clamp, therefore the fault of not securing the pile rests rather with the surgeon than with the instrument. Occasionally, in cases complicated with ulceration of mucous membrane, a distinct artery can be noticed bleeding *per saltum*. The first case that I saw of this nature occurred in the practice of that good British surgeon, John Hilton, at Guy's Hospital; he tied the vessel, and the hæmorrhage naturally stopped. You must do the same, and you must not be too proud to examine the vessel on which your patient (so suffering) has been sitting; for the arterial splash and colour on the white china are easily recognisable; and thus the real nature of the disease is painted in its true colour, and prints its own mark. After all the hæmorrhoids have been carefully removed, inject about one ounce of sweet oil into the rectum; and, should oozing be free, plug the rectum. Practically, a sponge covered with oiled silk, and compressed by a strong pair of bone-forceps, is the best means for gaining security from hæmorrhage; and a piece of string attached to both prevents any inconvenience from retention of the sponge in the rectum.

I have been in the habit of condemning the digital application of sponges as almost useless, for not sufficient expansile force is exercised on the capacious rectal wall; whereas the use of the compression and leverage by the bone-forceps allows the sponge to be readily introduced into the rectum, and its expansion follows upon the gentle removal of the blades, one finger preventing any protrusion of the sponge during the withdrawal of the bone-forceps. This most useful pair of pincers is now before you on the table.

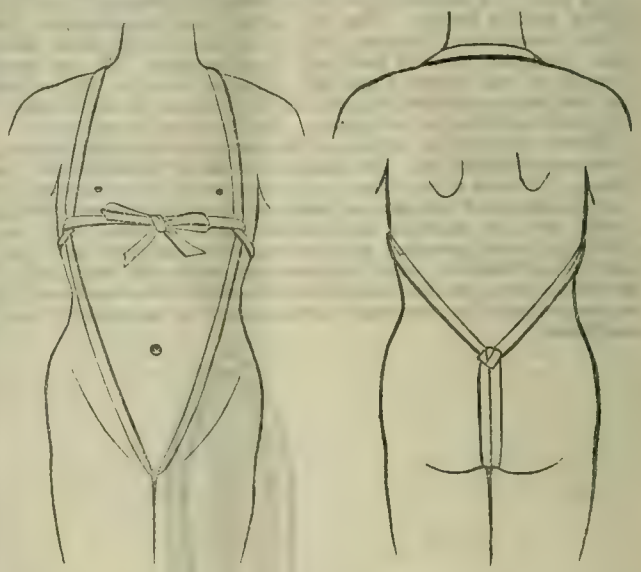


Fig. 4.

Lastly, your patient requires a bandage to support his perinæum, and to allay straining. (Fig. 4.) I will now show you how to put on a capital bandage for this and other operations, requiring a T-bandage; it is simple and efficient, applicable for hernia, varicocele, prolapsed rectum, ruptured perinæum, etc. The surgeon only requires an ordinary broad bandage; and by arranging it in the manner shown in the woodcuts (anterior and posterior view), an efficient and comfortable support is given. The shoulder strain is in the right place, and no pressure is caused over the abdomen; its security also renders the bandage available for varying surgical dressings. I have never liked the ordinary T-bandage, for it causes most uncomfortable pressure on the abdominal wall; and, if really efficient, tends to compress the very system of veins which, I have told you, require favour and relief from congestion.

The after-treatment consists in good nutritious non-stimulating diet, rest in bed, the moderate use of opium, and retention of fæces, so as to avoid the action of that complicated group of muscles necessary for the act. I have often had my patients pass two or even three weeks without any action of the bowels; and, although to the general patient this confinement seems very dreadful, any ill effect can be readily overcome eventually by a warm soap and-water-wash. The sponge is usually expelled or withdrawn on the succeeding or second day, and recovery is complete in about one month from the day of operation.

In concluding this lecture, let me give you my own opinion on the very great value of male attendants as nurses in these cases of hæmorrhoids in men, or in any case of operation on or near the generative or perineal portion of a man's body. Surgeons are not sufficiently explicit on this point; for such cases need constant cleansing

and occasional lifting; and, excellent as women nurses may be as subalterns in easy forms of general surgery, or in cases of their own sex or children, yet commend me to the trained and disciplined service of a male attendant, as my non-commissioned officer in operations, such as I have now brought before you.

CLINICAL LECTURE
ON
THE TREATMENT OF DETACHMENT OF THE RETINA.

By SIMEON SNELL, M.R.C.S.Eng.,
Ophthalmic Surgeon to the Sheffield General Infirmary, and Lecturer on Ophthalmic Surgery at the Sheffield School of Medicine.

The lecturer commenced with a brief reference to the causes and nature of detached retina, and to its diagnosis, and proceeded:

Detachment of the retina has always been held to belong to the class of cases for which remedial measures can do but little, and this, despite much vaunted new drugs and surgical procedures. The cases, however, which you have seen in our clinique, and some of which I bring before you in more detail to-day, will, I doubt not, have convinced you that, at all events in some cases, our art is able to accomplish a good deal. It is to the methods that may be pursued for the treatment of this affection, that I ask your attention; and let me bring now before you some briefly, and others more at length.

Rest in bed, in the recumbent position, and in a darkened room, is a desirable proceeding; and, at the same time, a compressive bandage may be applied over the affected eye. To this may be added the application of the artificial leech to the temple, and the internal use of iodide of potassium. The object of all treatment is the restoration of the detached retina to its proper position, and a great means towards this end would be accomplished if the subretinal fluid could be absorbed. In this way much was hoped from jaborandi, and, shortly after it came into vogue, its alkaloid pilocarpine was extensively used, and was favourably spoken of by some writers. It was used in our wards some time since, in a good number of cases, with, however, a doubtful beneficial result. We looked in vain for the excellent successes of which others had spoken, but, in most instances, it certainly did no good; and it is questionable whether, in other hands, it occupies now a prominent place as a curative agent. Its use, moreover, is not pleasant to the patient. No one can, perhaps, deny that, in some cases, benefit has resulted from one or other of the methods of treatment just referred to; but, generally speaking, if any, it has been slight and transient, and the disease has soon become again, if temporarily checked, progressive.

Let us pass now to the surgical or operative side of the question. Many years since, Gräfe passed a needle through the sclerotic, and punctured the retina. In this way, he hoped the underlying fluid would escape into the vitreous chamber. Sir William Bowman improved on this method by employing two needles.

These methods, however, looking at the subject from the manner in which other collections of fluid are treated, were hardly what were required. If there be fluid in the pleura, the chest-wall is tapped, and the liquid evacuated; and the same in other parts. Why could not such a procedure be adopted in the case of subretinal fluid? Sichel is said to have punctured the sclerotic as long ago as 1859 to let the serous fluid out, and Gräfe, of Halle, has recently adopted such a procedure extensively. The credit of introducing these measures undoubtedly belongs to those just mentioned; but Dr. Wolfe, of Glasgow, has also practised a scleral incision, and has recorded some very successful cases. Gräfe performs his operation by telling the patient to look well upwards, and then, seizing with forceps a fold of conjunctiva in front of the equator, he punctures the sclerotic between the inferior and external recti muscles, and the fluid escapes. De Wecker has sought, it may be mentioned, to accomplish the evacuation of the subretinal fluid, and the re-application of the membrane to its proper place, by the insertion of a fine gold thread seton in the sclerotic. I have never felt disposed to make use of this method.

In a large number of cases I have, however, punctured the sclerotic, and have adopted the plan already referred to, as well as one in which the knife was entered under the conjunctiva, some little distance in front of the selected point for puncture of the sclerotic. In this way, the latter was made subconjunctivally.

Dr. Wolfe proposed that the conjunctiva should be separated in front of the region of sclerotic where it was intended to incise it, and it was thus laid bare. He claims considerable success for his operations. It has been contended that there is little difference between the procedure he advocates and that adopted by Gräfe. In practice there is, I believe, a considerable difference in favour of proceeding in the way Dr. Wolfe suggests. This, at all events, is my opinion, after experience with both methods.

In Gräfe's, the fluid escapes underneath the conjunctiva, and, besides remaining there for absorption, there would very possibly in some cases be a limit to which drainage would take place, with semi-resistant structures over and around the scleral puncture. In Wolfe's the sclerotic is bared, and the fluid readily drains away. I may mention also that, ever since using the electro-magnet for searching the vitreous body, I have been familiar with the advantage of dissecting up a flap of conjunctiva, to bare the sclerotic at the selected point for incision. Sclerotic wounds heal well. The conjunctiva may be united by a suture, but this is sometimes unnecessary.

Let me now draw your attention to cases which have been under treatment, and which you have had the opportunity of observing from time to time.

Case I.—You will remember William C. A., policeman, aged 43. He first came under notice on December 1st last. Ten weeks before, on closing the left eye, he discovered that the sight of the right eye was very defective. On examination, we found a distinct detachment of the retina on the outer and lower side; it did not reach to within a little distance of the optic papilla, but it extended from the more baggy portion in a less defined manner. V. = $\frac{1}{2}\frac{2}{0}\frac{0}{0}$, and there was no improvement with + or − glasses. Tension was normal, and the vitreous humour was clear. The only assignable cause was that in the discharge of his duty he had been in sundry disturbances, and received blows on the head from stones. He was ordered iodide of potassium, and a few days later he was made an in-patient. Rest in bed, with compressive bandage in addition, was prescribed.

On December 21st, no appreciable improvement had, up to this date, taken place, and it was determined to puncture the sclerotic. For this purpose, cucaine was instilled, and the conjunctiva was separated up to a point between the external and inferior recti, nearer the latter than the former, and towards the equator. This place was selected because it was there that there was the greatest collection of fluid. After bleeding had ceased, the sclerotic was incised with a Gräfe's cataract-knife, at the equator, and the direction was meridional. Not merely a puncture was made, but the knife was allowed to cut its way for a little distance, making, perhaps, a wound as long as two widths of the knife; the wound was kept open by turning the knife on its axis; some amount of fluid, but less than had been anticipated, escaped. He was placed in bed, and the eyes covered with a bandage, and the after-treatment pursued which will be referred to in detail further on. Slight improvement followed the operation. There was still some detachment at the outer side; it had nearly gone below where the puncture had been, and the greatest bulging was on the upper and outer part. On February 8th, 1886, the sclerotic was again punctured, and, this time, the site selected was between the superior and external recti—nearer the latter. A large quantity of fluid escaped. He was kept in bed a week. The detachment became very much less. On February 22nd, there was still a little detachment, but it was very decidedly less since the operation. The field of vision had improved, and, as he said, he had recovered the power of seeing towards his nose. V. = $\frac{2}{1}\frac{0}{0}\frac{0}{0}$. March 2nd, V. = $\frac{2}{2}\frac{0}{0}$; he read Jager 16.

He is here to-day. He speaks of a great improvement in his condition by the operations. I am indebted to Mr. Bishop for recording the notes of this case.

Case II.—The other patient you have also seen many times, both in the wards and in the out-patient room. He tells us that, on February 5th, he found, on accidentally covering the right eye, that the left was very dim. He came under our observation on the 12th, and the manner in which he described his visual defect at once attracted attention. He could not see, he said, anything towards his nose. Examination disclosed a large detachment involving all the outer half of the retina, reaching close to the optic disc. Its inner edge was somewhat oblique from above downwards, and the detachment formed a bag which moved freely, and evidently contained a large quantity of fluid. He could see objects, fingers faintly, by turning the eye outwards. The field of vision, roughly taken, showed it to be wanting entirely on the nasal side, and contracted above and below.

He was urged to enter the infirmary with a view to operation. This he declined to do at once, but was made an in-patient on the 15th.

Previously to operating on this case, and in accordance with our custom, he was carefully examined with the ophthalmoscope, in order to ascertain the point at which the retina appeared the most baggy, and thus to select the situation for incising the sclerotic. As the result of the examination, the conjunctiva was dissected up a little distance in front of a point between the superior and external recti; and here towards the equator, after bleeding had ceased, the sclerotic was incised with a Gräfe's knife, in a similar manner to the previous case. Cocaine was instilled. A large quantity of deep straw-coloured fluid escaped, followed by a little of slight syrupy consistence. The importance of selecting for puncture a position which will be dependent is evident, but if other reasons render this unadvisable, it will be well, perhaps, to act as we did, both with this patient and the previous one, at his second operation, namely, to alter the position of the patient. For this reason, after the puncture in this instance, the patient's head was turned over the couch, to facilitate the drainage away of the fluid.

The conjunctival wound was closed by a single suture. He was confined in bed, with eyes bandaged, for a week; they were uncovered on the third day, and closed again, and on the fourth the stitch was removed. At the end of the week, an ophthalmoscopic examination was made, and the gratifying discovery was made that no detachment was visible, and that a good reflex was obtainable from all parts; the vitreous humour was a little turbid. He was kept an in-patient for several days later. His field of vision (Fig. 1) taken on March

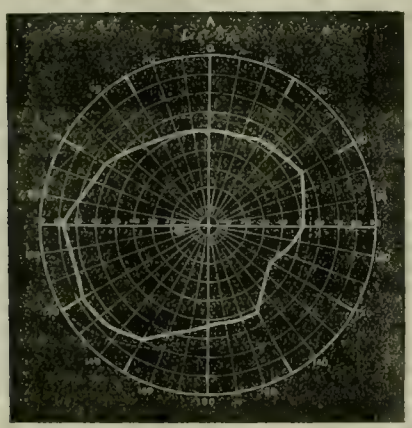


Fig. 1.

12th, shows how the retina has been restored to its place, and resumed its function. V = $\frac{20}{20}$, and he reads Jager 16 at ten inches, and sight is improving; the vitreous humour is becoming less cloudy.

Case III.—One more case I will briefly relate. It has occurred quite recently in my private practice. I mention the case, because it is an excellent example of the good that may, in some cases, be achieved. On February 26th, a patient, aged about 40, was sent to me by my friend Mr. W. M. Jones, of Wath. It appeared that, about ten days before, he had noticed the vision of the right eye defective. A few days later he consulted Mr. Jones, who detected a detachment of the retina, and advised his coming to me. In the meantime, vision became rapidly worse, and on the occasion of his visit to me, the most he could see, and that only below and outwards, were large objects; fingers were made out very faintly. The ophthalmoscope disclosed that the retina was very extensively detached. It took a diffused form, and was present in most parts, except that the inner part was freest; below, the detachment was greatest. An attempt was made to map out the field of vision with the perimeter, but this was found impossible. It was only below and outwards that the white traveller was visible, and then not in such a way that a field could be traced. He was highly myopic; the left eye, with—13 D, had normal vision. There was no history of injury, nor had the eyes been used excessively of late. I told the patient that I could only confirm the diagnosis his medical attendant had formed, and also his opinion as to the gravity of the case. I mentioned the propriety of puncturing the sclerotic, and strongly urged that, if the operation were to have a chance of doing good, it should be resorted to with as little delay as possible. He consented to Mr. Jones and myself meeting at his house the next morning, with a view to operation. In the meantime, after his journey home, he promised to keep himself absolutely quiet. He expressed himself as sure that vision was becoming so rapidly worse that the little remaining would, if left alone, soon be abolished.

February 27th. Mr. Jones and myself met, and, after careful ophthalmoscopic examination, arrived at the conclusion that the point at which the fluid would be most readily reached would be below, on the inner side of the inferior rectus, and nearer to this than to the internal rectus. Accordingly, after the instillation of cocaine, the conjunctiva was separated up as in the previous cases, and the sclerotic incised towards the equator with a Gräfe's knife. A quantity of fluid escaped, and the patient stated immediately that he saw better. The conjunctival wound was closed by a single suture. Mr. Jones kept him in bed a week, and only allowed him to get about by degrees after. I was informed that his progress was "uninterruptedly good," but he did not come to Sheffield to see me until March 20th. The patient was then full of the benefit he had received from the operation. He read Jager 16, and could tell the time by his watch. The vitreous humour was clear, and the detachment had disappeared; there was one point below, at the periphery, where there was a very trifling portion. The diagram (Fig. 2) shows the condition of field of

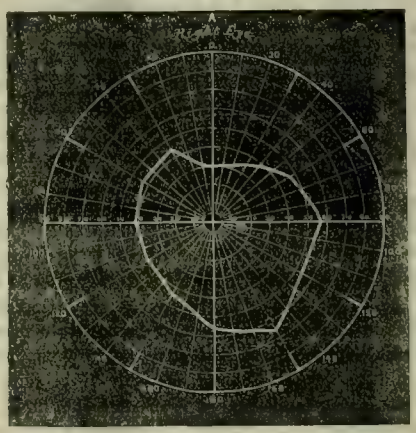


Fig. 2.

vision at this date. He had been at his work for a week, and was in every way conscious of improved vision. Later, I have heard he continues as well or better.

The cases I have brought under your notice are instances which have received great benefit from the line of treatment pursued. The last case is a specially brilliant one. I have at different times incised the sclerotic in a large number of cases for retinal detachment, and I do not wish you to get the impression that all the cases have been improved in a degree corresponding to those you have recently seen. Many have, however, been distinctly improved. Just recently I saw a lady, and the benefit obtained twelve months ago remained equally marked at the present time. The procedure is not one attended with serious risk. My results have, I believe, been better since adopting the plan of dissecting up the conjunctiva, and incising the sclerotic more freely than occurred in those cases in which the sclerotic was simply punctured through the conjunctiva. Certain features in a case greatly conduce to success. The more recent the detachment, the more likely is the retina to resume its proper position. Those cases also in which the fluid is collected chiefly into a distinct bag, are I believe more favourable for treatment than those in which the fluid is collected in isolated portions here and there. In the latter class, it seems to me that one collection may be tapped without perhaps interfering with the others. The two classes of cases may be divided, as cysts are divided, into unilocular and multilocular.

Rest in bed, subsequently to the operation, for several days is essential; and as much bodily rest as the patient is enabled to take after this is likewise of value.

Dr. W. R. Huggard has passed the Swiss Federal Examination, with a view to practice at Davos Platz. This examination has, we understand, not previously been passed by any Englishman.

Dr. W. Orange the Superintendent of the Broadmoor Criminal Lunatic Asylum, has been nominated a Companion of the Bath.

CLINICAL LECTURES
ON THE UTERINE NEUROSES.

Delivered at University College Hospital.

By GRAILY HEWITT, M.D., F.R.C.P.,
Professor of Obstetric Medicine, University College; Obstetric Physician to the Hospital.

Lecture II.

I propose in the next place to read brief particulars of other cases of severe uterine sickness which have fallen under my notice.

Case III.—This was a case of severe retroflexion of the uterus, probably of some years' duration. Intense sickness set in after unusual fatigue in walking, and, after two weeks' continuance, the patient was considered to be in danger of dying from exhaustion. The sickness lessened when treatment to reduce the uterus to its proper position was commenced. She had also suffered from severe hysterical attacks.

Case IV.—A young lady, aged 20, of active temperament, was affected with violent sickness of ten months' duration. Severe sickness set in soon after a leap from a height. The uterus was found much congested, and acutely anteflexed. Cure followed in three weeks after replacement of the uterus by the use of the sound and pessary. The weight lost before treatment was five stone.

Case V.—This was a severe case of vomiting (seen with Dr. Wilson Fox) in a young lady, so reduced by vomiting as to be in a very dangerous state. The uterus was entirely wanting in tone, falling forwards and to one side. She had great pain in the groin. The sickness disappeared when the uterus was steadied by a pessary.

Case VI.—A lady, aged 25, had been ill for over three years, suffering first from ulcers of the legs, then severe vomiting, flatus, and obstruction to the action of the bowels. She was thought to be "hysterical." The catamenia were rarely present. Her condition was one of extreme emaciation and feebleness. The uterus was found very soft, anteflexed, and displaced to one side a little. There was improvement at first, but the sickness returned in a few days. A pessary was applied. Improvement was very slow, but in a month the sickness left her. The patient's condition was most critical for about ten days, during which, strength was sustained by nutritive enemata.

Case VII.—A lady, aged 35, who had had several miscarriages and two children, suffered from very troublesome sickness, also frequent escape of puriform fluid from vagina during the last three months. The uterus was anteverted. A cradle-pessary was employed. Relief of sickness followed at once.

Case VIII.—Miss ——, aged 26, had scarlet fever eight years ago, since which she had been liable to "hysterical" fits. She had had almost incessant sickness for two years—sickness occasionally before that. The uterus was much "relaxed" and anteflexed.

Case IX.—Miss ——, aged 29, had a fright when 18. The catamenia were profuse at first. At the age of 20, she began to have great pain at the periods; also sickness. About the same time, she began to have sickness every morning. The periods were now acutely painful, and accompanied by severe sickness. The uterus was acutely sensitive, large, much anteflexed. The sound was not used.

Case X.—Miss —— was always delicate. Her catamenia began at 12; they were always painful; in the last few months, scanty. For the last three years she had had occasional sickness; for the last four months sickness after every meal. She had frequent faintings and hysterical symptoms; diarrhœa now and then. Emaciation and prostration were extreme. The uterus was acutely anteflexed. Sims's operation of incision was performed in this case, and subsequently a cradle-pessary was employed. The improvement was slow; but the patient was ultimately completely restored to health, and continues well now, fifteen years after being first seen.

Case XI.—Miss ——, aged 27, had incessant sickness for three months, and great prostration. Marked relief followed the use of a cradle-pessary; but great difficulty was encountered in dealing with the general feebleness, and from other causes. The characteristic of the case was the extreme softness of the uterus. The patient was ultimately much relieved, and strength fairly restored.

Case XII.—Miss ——, aged 19, was seen first thirteen years ago. She had fever at the age of 15, and had never been well since. The catamenia were generally postponed a little; they had been painful the last two years. For two years she had had sickness, almost incessant; it almost always occurred on lying down—a very curious feature in the case. The appetite was good. Two or three days a week she had sickness or nausea all day. The uterus was large and anteflexed, but there was not much anteversion. This patient was treated with but partial success, notwithstanding rest and careful attention. The sickness was not cured; she left London, and became too ill to return for further treatment. She finally died, I believe, of tuberculosis. It is possible that the stem-treatment would have suited this case.

Case XIII.—Miss ——, at the age of 40, had treatment for anteflexion of the uterus. A cradle-pessary was used with great relief. Four years later she applied again. She had hysterical symptoms, severe nausea, and semi-starvation as the result. The uterus was again found anteflexed. A cradle-pessary was applied; the symptoms were at once relieved.

Case XIV.—Mrs. ——, aged 28, with no children, had always had dysmenorrhœa. Formerly, she was treated, as was stated, for "doubled" uterus. Latterly, she had had more dysmenorrhœa, and seven attacks of sickness after the periods. The uterus was large and swollen; the use of the sound was difficult. There was much anteflexion of the uterus, and the organ was very low down. Partial benefit resulted from treatment. This patient became, later on, affected with tuberculosis, to which she succumbed.

Case XV.—Miss ——, aged 28, had her first illness three years ago—bronchitis. Since then, she had had most severe sickness and headaches, very bad at periods, but rarely absent more than two weeks. She was much emaciated. The uterus was extremely soft, anteflexed. Careful feeding and the use of the cradle-pessary were followed by a good result two years afterwards.

Case XVI.—Miss ——, aged 27, of active habit, four months ago had measles, on recovering from which she took a walk. Then began severe sickness, gradually more and more intense. She rejected all food but oysters. She could not walk without support. Her medical attendant said the uterus was displaced. I found acute anteflexion. There was pain in the left groin, as if the leg were separated from the body. I advised the use of a cradle-pessary.

Case XVII.—Miss ——, aged 39, formerly used to walk very much. Eighteen years ago she began to have severe headaches. For two years she was unable to walk. Her spine being found affected with lateral curvature, she had worn a spinal support for one year. She had miserable health; exertion was always followed by sickness. The uterus was very soft, anteflexed, pushed down. Her periods were regular. A cradle-pessary was employed; and I suggested careful dietary. Cure was slow, but satisfactory.

Case XVIII.—Miss ——, aged 30, two years previously had great exertion in nursing a relative. Since then, severe sickness had followed all attempts to take food, with much retching and straining. The uterus was acutely anteflexed, and rotated posteriorly. A peculiarly shaped cradle-pessary effected a cure of the sickness for a considerable time; it then recurred, and was again relieved in the same way. Four years later there was recurrence of symptoms after a great exertion, when it was found that a fibroid had become developed in the anterior uterine wall.

Case XIX.—Miss ——, aged 53, seven years ago, after lifting a great weight, felt very ill. Two years ago she began to have severe long continued sickness, considered to be due to disease of the stomach. No relief was obtained, and she was sent to me. The sickness was severe. There was always dysmenorrhœa, worse since the sickness began. In the last three months, she had had four attacks of insensibility, lasting twenty-four hours on one occasion. The uterus was exceedingly low down, anteflexed; its size was considerably increased. There was great tenderness over the right ovarian region. She was treated by a cradle-pessary. In a short time, relief followed. The patient has continued comparatively well, with occasional slight relapses since that time.

General History of Uterine Sickness.—Uterine sickness is a malady which may present itself in all degrees. In its slightest degree, it is present only at certain times of the day, especially on rising in the morning. In more marked instances, it is liable to follow the taking of food at any hour of the day; and, in the most severe cases of all, it is impossible for the patient to retain anything on the stomach, even small quantities of liquid exciting most painful and protracted retching; and this condition may last so long as either to kill the patient, or by its long continuance, even in cases which are eventually relieved, to produce a fearful prostration, and so profound a shock to the nutrition of the whole system, that the constitution is almost irretrievably damaged.

The matters vomited consist of food at first, but mucus in considerable quantity, and bile, are ejected after a time in severe cases; in some few instances, the effect of the continual retching is that hæmor-

rhage occurs, and blood is vomited. In a case which I saw some time ago with Dr Wilson Fox, this symptom had suggested the presence of ulcer of the stomach, but the further events of the case clearly demonstrated the uterine origin of the malady.

Uterine sickness is not unfrequently very severe in cases of dysmenorrhœa, and is, indeed, a distinct part of the dysmenorrhœa present under these circumstances. When so associated with the menstrual period, its uterine origin is more obvious. But it would appear, from observation of cases under my notice, that uterine sickness occurring at non-menstrual periods is more common than it has been generally supposed to be, and that many cases of obstinate and severe sickness are consequently attributed to other causes when the uterus is really at fault.

Taking all cases of uterine disease, my case-books show that marked sickness occurs in 11 to 14 per cent. of all cases of uterine disease applying for relief. It must be pointed out that severe uterine sickness is a symptom which is not one of very common occurrence. In a minor degree, it is not unfrequent. Presence of this severe form of reflex irritation implies, in all probability, a diseased condition, not only of the uterus, but of the nerve-centres; and the reason why it is more intense in some cases than in others is doubtless dependent on the nerve-centres being excessively excitable in some instances, while they are less so in others. This supposition is confirmed by the clinical history of cases.

Secondary Starvation.—The continual presence of this reflex symptom, uterine vomiting, has one effect to which very prominent attention must be directed. I mean the starvation which it induces and brings about. When the food is constantly brought up and rejected, it is of but little advantage to the patient. The condition is practically the same as if no food at all were given. One of the patients had lost 5 stone in weight. Unless in the very severe cases, however, sometimes the food remains long enough in the stomach for something to be extracted for nutrition purposes, or the rejection is not complete, and the starvation is, therefore, in less degree. But in these cases, the actual amount retained is so far below the daily requirement, that a chronic starvation ensues, and a certain, but gradual, diminution in weight occurs from week to week. This feature of the case is often not at first recognised. Further, there is the influence of the repugnance to food, nausea at the idea of taking food, which is a symptom in many cases. This prevents the patient even trying to help herself, and the attempts to take nourishment are finally almost given up. This state of things grows on the patient, so to speak. At first the sickness is only occasional; the nausea and slight occasional sickness go on, perhaps, for six months or a year before the condition is considered grave. Then the symptoms become more intense, medical advice is sought, and the patient is discovered to be extremely emaciated, the natural result of the long-continued deficiency in regard to absorbed nutriment.

The chronic starvation, initiated by uterine vomiting and nausea, becomes a very serious affair when prolonged, ultimately so sapping the foundations of life that, even when the symptom itself has been to some extent relieved, the weakness remains. A weakness so produced and so protracted is, I believe, a not unfrequent cause of tuberculosis. I know, at all events, of two cases, included in the foregoing series, in which the patients finally succumbed to this disease, concerning whose previous history, as regards the presence of uterine vomiting, I was well acquainted.

The diagnosis of the presence of uterine vomiting is usually not difficult, though in some cases circumstances do not attract attention to the uterus as the actual cause. The stomach, the liver, the gall-bladder, and bile-ducts, the intestines, the nerve-centres, etc., may be at fault, and the possible causes of vomiting are almost too numerous to recapitulate in this place. The diagnosis of uterine-vomiting requires a careful exclusion, therefore, of many possible diseases, an exclusion not always very easy to substantiate. One of the most common cases met with in practice is the confounding of uterine sickness with "biliousness," as it is termed. I have frequently been informed by the patient that she suffers much from "bilious attacks," which have been traced on inquiry to the uterus. I am in fairness obliged to state that, in one long-standing troublesome case, where the patient had suffered from troublesome sickness, with no particular sign of liver or biliary disease, a large biliary calculus was subsequently evacuated from the bowel. What adds to the diagnostic difficulty of cases of uterine sickness is the fact that, in some cases, the uterus itself may be found devoid of unusual sensibility to the touch, and that the patient makes no complaint directing attention to this organ particularly. In many cases, there is a complaint of pain referred to the uterus, severe pain in the groin, or in the lower part of the back; but I have before me several very severe cases, where it was not imagined by those who had seen the cases before that the sickness was due to the uterus at all. It rarely happens, however, that the uterine functions are carried on in a normal manner; in these cases, menstruation is either irregular or very painful, or menstruation is accompanied by special exacerbation of the vomiting, and it is obvious enough that there is uterine disturbance of some kind present.

In connection with the question of the diagnosis of uterine vomiting, should be mentioned a curious case, related by Dr. Bristowe, of what he terms "hysterical vomiting in a girl, aged 14, in which it was found that the vomiting was due to regurgitation from the œsophagus, and was cured by passing a tube into the stomach. Dr. Bristowe considers there was a spasmodic condition of the œsophagus present in this case, the food never entering the stomach at all (*Lancet*, June 20th, 1885, page 1115).

In one of the cases I have related, the patient eventually died of tubercular meningitis. It is possible that the sickness in this particular case was in part, at all events, due to the commencing tuberculosis. But, in this case, the sickness had been present for a long time, and it is probable that the cerebral complication was of comparatively short duration.

With reference to the precise pathology of uterine sickness, a good deal has been incidentally stated. I purpose to postpone any further remarks on the subject until we have considered the clinical features of another series of cases—the hysterical phenomena associated, more or less, with convulsive attacks. The pathology of the two classes of cases is, I believe, closely allied, and, indeed, we have frequent instances in which the two sets of reflex phenomena are observed together in the same individual.

ILLUSTRATIONS OF EXCEPTIONAL SYMPTOMS AND EXAMPLES OF RARE FORMS OF DISEASE.

By JONATHAN HUTCHINSON, F.R.S., LL.D.,
Emeritus Professor of Surgery at the London Hospital.

[*Continued from page 62.*]

XVII. Coffee-Stain Patches on one Shin, distinctly Lupoid in Character and probably Syphilitic: on the other Shin similar Patches, but not Yellow.

A gentleman, whom I had treated for syphilis many years ago, consulted me, in February, 1885, for an ulcer on his tongue, which he supposed to be a reminder of his disease. I found, far back, a small epitheliomatous ulcer, which had apparently not been preceded by syphilitic changes. I inquired as to any other symptoms, and he assured me that he had never suffered anything since my treatment; but, after a little thought, added "I have some yellow patches on my legs." I found, on the front of his left shin a group of yellow spots, covering a space half as large as the palm, and placed very near to each other. They were very conspicuous by their colour, but scarcely raised, and only scaly in the slightest possible degree. On careful inspection with a lens, it was quite certain that the disease spread serpiginously, and left thin scars where it receded. It was therefore clearly a lupous process, and probably it was consequent on his syphilis, though located by bruising of the part. On the opposite leg he had a similar group of scars, leaving patches; but, curiously enough, they were not in the least yellow, but rather livid and dusky. Those on the left shin were almost a bright yellow, brighter than the common coffee-stain.

I use the term coffee-stain as applicable to certain yellow patches which are often seen on the legs. All observers must be familiar with them, but I am not aware that they have ever been described. Patients who have had syphilis often show them, and seek advice in consequence, but they may be seen also in those who have never had that disease. They differ in some cases in tint from lemon-yellow to deep brown. In some instances, mostly syphilitic, they leave exceedingly thin scars.

XVIII.—Case of Eczema-Erysipelas: Recurrent Attacks on Face.

Certainly one of the most important cases, as illustrating the relationships of this affection, which I have ever seen, was that of a gentleman, who was brought to me in 1885 by Dr. Macpherson, of Mildmay Park. Mr. D. G. P., was a collector, aged 42, a nervous man, liable to dyspepsia; but, by dint of his out-of-door occupations, maintaining usually fair health. Ten years ago he had a sharp attack of erysipelas of the face and head, caused, as he thought, by going through the Thames Subway when in a perspiration. After

this, nothing occurred for six years, when he sprained an ankle, used arnica, and had an attack of erysipelas of his leg. A year later, he sprained the other ankle, avoided arnica, and yet had erysipelas. For this attack he was treated by steel, and "the steel caused eczema." He had a troublesome attack of eczema of the scrotum and thighs, which lasted for months, and which, indeed, had scarcely even yet quite left the groins and popliteal spaces. This persistence must, I think, be held to be conclusive as to the eczema kinship of this dermatitis, as the transitoriness of the others allied them with erysipelas. We now come to another phase of his ailments. He took to bicycling, and used to perspire profusely in his rides. In October, 1883, after a ride in a sharp wind, he had an attack of swelling of the face (erysipelas), which laid him up for a fortnight; and, ever since then, he had had attacks every six months or so. On one occasion, leaving a hot dinner-room, and going across the street in an east wind, brought it on. Several times, riding in a hansom cab had done it, and now and then, he thought, stomach disturbance from taking wine, etc., was the exciting cause. The attacks were ushered in by "a rushing to the head," and "feeling of fulness and flushing." "Then it seizes my eyes, and the lids are swollen up till I cannot see out." Dr. Macpherson, who had attended him through four or five attacks, told me there was not usually much redness, but chiefly great œdema.

The temperature was never materially increased. The eruption never showed any tendency to spread over the scalp, and usually began to subside after a few days, leaving the skin feeling stiff, and covered with branny desquamation. No vesicles had ever been observed. The attacks always laid the patient up for a fortnight or three weeks, and of late his susceptibility had been such that he had scarcely been to business for two months.

As regards treatment, the prophylactic power of arsenic seemed to have been fairly tried. He had taken it for eighteen months, and the attacks had of late increased, both in severity and frequency. Formerly, the attacks had occurred in spring and autumn, and this was the first time that one had happened during winter.

XIX.—Injury to Lower Epiphysis of Humerus: State of the Parts Twenty Months afterwards.

A little girl, aged 4, daughter of the Reverend G. P., of the Chinese Mission, was brought to me twenty months after her accident. It was not known precisely of what kind her violence had been, since it had occurred under the charge of a nurse-girl, who only admitted that she had fallen. The elbow was bruised and swollen for some time. She was treated by plaster-of-Paris case, and subsequently by a hinged splint. When brought to me, the elbow could not be bent quite to a right angle, nor could it be straightened. It admitted, however, of being flexed within a limited extent. Pronation and supination were quite free. The arm was strong, and the child could use it for almost anything, but could not get it to its mouth. It appeared probable that the injury had been complicated. The head of the radius projected strongly, as if almost, though not quite, free from the external condyle. The finger could be placed in the outer two-thirds of the cup of the radius; still it certainly had not wholly left the condyle. The distance between the ulna and radius was much increased, and, no doubt, the orbicular ligament was completely torn. The inner condyle was lost; the inner side of the ulna being on the same plane, or nearly so, as the inner edge of the humerus. Then there was some thickening on the front of the humerus in this position, making it seem possible that the epicondyle had been broken off and displaced forwards. The thickening in front of the lower part of the humerus was, however, not nearly so great as is usual in separation of the whole lower epiphysis. Under an anæsthetic, I bent the elbow up to an angle of 45°, and made it very nearly straight. I advised that we should trust to time and to systematic and vigorous movements of the joint, and have little doubt that, in the course of a few years, its use will be almost perfect.

In the case of a boy, aged 10, whom I saw at the College of Surgeons (1885), it was very remarkable how rapidly full freedom of all motion had been restored. It was, I think, only nine weeks since the accident, yet there was not the slightest swelling, and he could flex and extend almost perfectly, and pronation and supination were equally free. The external condyle, together with the trochlea for the radius, was visibly displaced, and was very conspicuous. Some who examined it thought that it was still movable. The internal condyle was almost, if not quite, in due relation with the olecranon, but there was some thickening of the humerus, and the olecranon did not seem to project so much as usual. My impression was that the end of the shaft was displaced a little backwards, but I had not an opportunity for forming a deliberate opinion. Everyone agreed that there had been fracture and displacement of the external condyle, but, as to other details, there was much difference of views. The wonder was that there could be such displacement, with yet perfect motions.

XX. Node on Tibia, without Syphilis, and without Pain.

Mr. Weller, of Wanstead, sent to me in October, 1883, a case of osseous node on the tibia, which appeared to be identical with the splint of horses. Nothing whatever as to specific antecedents could be made out, and the lump was absolutely painless. It had never given its possessor any annoyance; it had been present several years, but, unless he got it knocked, he should not, he said, have known it was there. The patient was a tall slender-boned man, and the node, which was as big as the vertical half of a small egg, was very hard. The patient, a Mr. S., aged 39, was engaged as a clerk in the docks, and was liable to have his shins knocked occasionally, but he did not remember any special accident. The node had been so conspicuous two years ago, that a surgeon, to whom he showed it, suggested that he must have had his leg broken; it was, however, still bigger now.

XXI. Morphœa, taking the Arrangement of Zoster on Chest and Arm: Twenty Years' Duration: Recent Single Patch on Back.

Miss C. A., aged 36, consulted me on March 19th, 1885, for an eruption which she had had for twenty years. She well remembered its beginning, she said, on the inner side of the right forearm, during her last year at school. It prevented her from going without sleeves, and it also, she thought, was attended by muscular weakness, and spoiled her piano-playing. After it had been some years on the forearm, other patches appeared on the side of the right half of the chest, between the spine and the mamma, and above the latter. I found in the regions mentioned large brown stains, and groups of stains, placed exactly like those of herpes, in a sloping line downwards and forwards on the chest, and another long group of stains down the inner side of the upper arm and forearm. The breast on that side was not so full as the other, and there was a little appearance of wasting in the ulnar muscles of the forearm. I could not, however, appreciate any definite wasting in the muscles of the hand supplied by the ulnar nerve. In the middle of some of the brown stains there was a white area. The affected skin was a little harsh and rough, but there was not now any material induration. None of these patches were, Miss A. believed, less than ten or fifteen years old. A new patch had, however, formed within the last eight months on her back. This was an oval patch, as big as a crown-piece, thick, white, and brawny in its middle, gradually fading off, and surrounded, at its extreme periphery, by a faint violet zone. This was most characteristic of the early stage of morphœa. It itched a little. Miss A. was in good health, but had a very feeble circulation. Her hands were a little puffy, and everywhere of a deep dull brick-red colour, or almost livid.

The case illustrates, almost better than any other that I ever saw, the affinity of morphœa with herpes zoster. Probably, several of the intercostal nerves were affected; and, not only the intercosto-humeral, but some twigs of the internal cutaneous, possibly some of the ulnar. Neither herpes zoster nor morphœa usually keeps with exactitude to the known distribution of named nerves. It is interesting to note that, after so long an interval as twenty years, a fresh patch had formed on the back. The same happened in the case of M. This new patch was not on the same side of the trunk, but it was over the middle line to so small an extent, that it must be allowed to be possible that an erratic twig from the right supplied it. The conditions presented by the patches on the chest and arm suggested that they had all come out together—all were in the same advanced stage of retrogression. Miss A. was, however, confident in her statement, that those on the breast came five years after those on the arm.

It is very exceptional for morphœa to occur in the same person more than once. When it does so, the interval is almost always a long one, that is, several years. The second outbreak is usually on a very limited scale. I never saw a severe or extensive second attack, but I have seen three or four in which small patches appeared, as just said, after long intervals. As a rule, we may assure our patients that the deformities produced by the original outbreak will be the sum and end of their troubles, and that no recurrence is likely to happen. In the above case, three outbreaks, with long intervals, would appear to have occurred. In this feature of very exceptional recurrence we have another point in which morphœa and herpes have points in common.

Mr. G. T. A. Staff, L.K.Q.C.P., M.R.C.S.E., has been placed on the Commission of the Peace for the Borough of St. Ives.

A CASE OF EXCISION OF THE PYLORUS: DEATH IN FOUR DAYS.

By JOSEPH COATS, M.D., AND A. ERNEST MAYLARD, B.S.

H. K., a carpenter, aged 47, was admitted to the Western Infirmary, Glasgow, under the care of Dr. Joseph Coats, on February 10th, 1886. He complained of great weakness, emaciation, pain, and frequent vomiting. The history went back for a period of two years, during which time these symptoms had been more or less present, although, latterly, the frequency of the vomiting had rather diminished. The emaciation, on admission, was very great; and, in spite of treatment, he still lost flesh, his weight falling from 7 st. 4 lbs. to 7 st. 1½ lbs. in a week. A very obvious tumour was discovered on palpation of the abdomen, and it was also discovered, by palpation and percussion, that the stomach was moderately dilated. The tumour was somewhat in the form of a cylinder, placed transversely, two inches above, and slightly to the left of, the umbilicus. Examined day after day, it was obvious that the tumour shifted its position, being sometimes further to the left than at other times. It was, at all times, somewhat freely movable from above downwards.

There could be little doubt that this was a case of cancer of the pyloric region of the stomach, and that the affected portion of the stomach was practically free from adhesions. It occurred to Dr. Coats, therefore, that if excision of the pylorus is a justifiable operation, this was a favourable case for it.

The case was mentioned incidentally to Mr. Maylard, and he came to see the patient. Chloroform having been administered, a much more perfect examination could be made through the lax abdominal wall, and a firm cylindrical tumour could be felt, having a long diameter of scarcely four inches. The tumour could be grasped, and moved freely upwards and downwards.

The apparent feasibility of the operation having been decided on, the man and his wife were spoken to, as fairly as possible. It was stated that the patient had cancer of the stomach, and that a very serious operation might be performed, but that the prospects of success were not great; he might not long survive the operation, and, if he did, the disease might return. The matter having been impartially put before them, they were left to decide, and they determined to have the operation performed.

Operation.—On Thursday, March 11th, the operation was performed by Mr. Maylard at the Glasgow Training Home for Nurses. The evening previous to the operation, the patient's stomach was washed out, and the opportunity taken of inflating the organ by blowing through the injection-tube. In this way, a better idea was obtained of the extent of dilatation. The anæsthetic was in charge of Dr. Lindsay Steven. A slightly oblique incision was carried across the abdomen, about one inch above the umbilicus, to the extent of five inches. The peritoneal cavity having been opened, the tumour was at once come down upon, free from all superficial, and apparently from all deep, adhesions. Enlarged glands could be felt in the gastro-hepatic omentum, and a few in the region of the duodenum; there was, however, no matting together of the parts. The small omentum was first detached from the upper border of the part to be removed, and, the fingers thus admitted into the cavity of the omentum, separation of the great omentum from the lower border was easily effected. The tumour being now free, was, with the neighbouring part of the stomach and duodenum, drawn out of the abdomen, and a flat sponge inserted beneath the parts thus exposed. Three Lembert's sutures were passed through the duodenum and stomach, along the inferior border, to fix the position of the parts after removal of the pylorus, and to act as a guide also in cutting. While it was easy to be practically certain of being beyond the limits of the tumour-growth on the duodenal side, it was by no means so with the stomach. Here, there appeared rather a gradual thinning away of the tumour than any sudden cessation. With a pair of scissors, the stomach-walls were divided, from the lesser curvature downwards, and the remaining part of the stomach—that to be returned—was taken charge of by Dr. Hector Cameron, who kindly assisted throughout the operation. Seventeen Lembert's stitches were now passed as "occlusion sutures," an opening being left at the lower part, sufficient in size for the attachment of the duodenum. The tumour was now easily and rapidly separated from the duodenum. The three Lembert stitches first passed were tightened, and thus the lower part of the duodenum was approximated to the lower part of the stomach. A continuous suture was passed from inside, extending to about the posterior third of the circumference of the canal, and embracing the muscular and serous layers. To fix the mucous membrane of the stomach and duodenum over this, three superficial sutures were passed. From this point, onwards, and completing occlusion, Lembert sutures were employed. In all, about forty sutures were used, exclusive of the continuous one. The enlarged lymphatic glands, in the gastro-hepatic omentum, were now removed. Throughout the operation, which occupied three and a half hours, the patient never gave any cause for very grave anxiety. In every respect, the strictest antiseptic precautions were observed.

After Operation.—For the first thirty hours, the patient appeared to be doing well. He suffered from flatulency, which gradually subsided. For twelve hours, he was fed solely by enemata; but, at the end of this time, a teaspoonful of milk with ice was given by the mouth every hour, increased later to double the quantity, with a little brandy. On the evening of the second day, vomiting commenced and continued, completely exhausting the man, who died exactly four days after the operation.

Necropsy.—The abdomen only was examined. The stomach and intestines were found greatly distended with gas. The abdominal parietal wound was healing well, and attached by slight adhesion to the parts beneath. There was no general peritonitis; no indication of any escape of the contents of the stomach. Fibrine existed on the anterior surface of the stomach, extending back for two inches from the visceral incision, but none existed on the duodenum. On removing the parts operated upon, adhesion existed between the visceral wound and the underlying tissue. The stomach, with the part of the bowel removed, were found to contain nearly a pint and a half of bile-stained fluid, with no characteristic smell. There was no leakage of this fluid through the sutured visceral wound; no stitches could be seen, except the posterior continuous one, and here slight traction allowed separation of the edges. This was distinctly the weak part, union elsewhere being quite firm. The index-finger could be easily passed through the new pylorus, between the bowel and the stomach. The parts, when laid out in position, had a very normal appearance.

Nature of Tumour.—The part removed at the operation measured two and a half inches along the upper border, and four inches along the lower. The walls of the canal were uniformly enlarged, and the pylorus admitted the passage of an ordinary lead-pencil. There was no ulceration of the mucous membrane. To the naked eye, the tumour had apparently the characters of colloid carcinoma; but, microscopically, was found to be scirrhous, very rich in cells. Sections were made of the stomach, in the immediate neighbourhood of the part removed; but, beyond an increase in the number of small cells between the secreting tubules, there was nothing which could be definitely stated as tumour. The muscular coat was much thickened towards the tumour, and this, no doubt, led to the difficulty, at the time of operation, of determining the limits of the growth.

REMARKS.—This case, although unsuccessful, is not without some points of interest. The operation of pylorectomy is still *sub judice*, and failures, as much as successes, should be accurately reported. It is with these feelings that we have recorded as concisely as possible, and, we hope, sufficiently clearly, the details of the case. Prior to operation, the dimensions and mobility of the tumour were pretty accurately ascertained. The enlarged glands, however—one of which was equal in size to a large hazel nut—could not be felt. Existing, as it and others did, in the gastro-hepatic omentum, and so extending up to the transverse fissure of the liver, they were really protected beneath the latter organ, and so effectually precluded from being detected by palpation.

With few modifications, the method of the operation was much as advised by Wölfler (*Ueber die ausgeführten Resectionen des carcinomatösen Pylorus*). As regards sutures, the least satisfactory was the posterior continuous one. While coaptation of the wound edges had been efficient, union was not firm, very slight traction being sufficient —*post mortem*—to cause separation.

The actual cause of death is difficult to determine. The almost uninterrupted vomiting, which carried off the patient, did not appear until thirty hours after the operation, and could not, therefore, be atttributed to the anæsthetic. The only obvious pathological conditions were, as above stated, the great distension of the stomach and intestines and the limited patch of peritonitis, as shown by the fibrine on the surface of the stomach, to the extent of two inches from the seat of union.

MEDICAL MAGISTRATE.—Dr. John Mitchell, of Barnard Castle, has been placed on the Commission of the Peace for the North Riding of Yorkshire.

ON THE PROGNOSIS OF SECONDARY SYMPTOMS AND CONDITIONS OF EXOPHTHALMIC GOITRE.

By W. HALE WHITE, M.D.,
Assistant-Physician to Guy's Hospital.

I HAVE collected together the following twelve cases of exophthalmic goitre, with a view of discovering what becomes of them after they leave the hospital. Wherever possible, I have visited the patients at their own homes; when that has not been possible, I have written to them.

It will be seen that five, of the twelve who have been in the hospital recently, are still alive. Sophie S. is cured of her Graves's disease, but she is hysterical, and says she suffers from gastric ulcer. She will not allow that she is well, so that it is difficult to say when she recovered, but she was certainly ill eight years. Jane A. is quite well, after three years' illness. Ellen H. I have not seen, but she seems well from what I can hear by writing. Alice M. G. is much better, being able to get about her work; but still has all the three cardinal symptoms. Ellen E. is well, excepting for a slight thyroid enlargement. She considers that she has been well four years, so that the illness would not have lasted more than two. From so few cases, it is difficult to draw any conclusions; but it would appear that, if a case be going to recover, the time in which it will do so averages about four or five years from the onset of symptoms.

Seven of the twelve are dead. Two died suddenly, for which no efficient cause was found on *post mortem* examination; one died from mitral regurgitation; one from a large axillary abscess, and probable blood-poisoning; one from gastric ulcer; one from consumption; and the friends did not know the cause of death in the seventh. The average duration of life, after the first appearance of symptoms, was 3¾ years; but this is probably only partially accurate, as the patients cannot always say when the disease began.

It will thus be seen that exophthalmic goitre is by no means a harmless malady; but, of the eleven who died, the death can only be attributed to Graves's disease in two—namely, those which died suddenly; for sudden death is always cardiac; and, as the patients had suffered from palpitation, it is only fair to assume that the same cause as set up the palpitation, in some way was the reason of the sudden death. In the mitral regurgitant case, the mitral disease seemed more related to the antecedent rheumatic fever than the exophthalmic goitre.

With regard to the treatment, Jane A., who did best of all the cases, had no treatment; Alice M. benefitted considerably from the local application of iced water; Ellen E. was treated with the continuous current, with a good result; Ellen H. did well on iron, digitalis, and belladonna; and Sophie S.'s account of her treatment, after leaving the hospital, is hardly trustworthy. It is noteworthy that the case which died of consumption was, as regards her Graves's disease, much improved by the application of the continuous current. Iron and digitalis are apparently useless, and there is not sufficient evidence to show the value of belladonna; but two of the successful cases took it whilst under treatment by other means, so, perhaps, it had some share in their recovery. The lesson to be learnt from these figures is, that the prognosis of Graves's disease is bad, for the patients are partly liable to death from sudden syncope, and also seem more likely to die from other causes, apparently unconnected with exophthalmic goitre; and, of those who do not die, many do not completely lose the disease. The best treatment would appear to be the continuous galvanic current and iced water. It was for this prognosis that I collected the cases; but they may be also utilised to show a few other points.

First, is the great preponderance of females, for there has only been one male case during the whole time we have had the twelve females. As regards neurotic tendencies, some patients are hysterical, one nervous, and two are liable to neuralgia; in many cases, no doubt, these points were not asked, for it may be taken that the usually stated association with neurotic tendencies is true; four cases, at least, had menstrual irregularities, and one patient stated that the exophthalmos was greater during the periods. The temperature was slightly raised in some cases (it was so in one in which the report does not mention the fact), and the pulse is accelerated out of proportion to the rise of temperature. The palpitation is usually the first symptom to appear (in two cases, it had existed all the patient's life); the enlarged thyroid and exophthalmos come second in order in about equal proportions, the exophthalmos being last rather more frequently than the other; as a rule, all these symptoms come on within a few weeks of each other. The case of Alice M. G. is especially interesting, for I learn that the two sisters referred to also have exophthalmic goitre. Although it is not so well brought out as it should be in these abstracts, several of the patients suffer from wasting. In some cases, the eye is painful; but whether that is due to the conjunctivitis, or to the tension of the lids caused by the protrusion, is not stated.

I have grouped all the above facts together, because they are all known to be frequent accompaniments of exophthalmic goitre; but the second group of conditions to which I would direct attention is that of the lymphatic system. Four of the twelve cases died within the hospital; one of these four died from heart-disease, and, of the remaining three, all suffered from some affection of the lymphatic system; thus, in Charlotte S., the thymus was persistent, and Peyer's patches were particularly well marked; in Mary M., the thymus was enlarged and persistent, Peyer's patches and the solitary follicles of the whole intestine were much swollen, injected, and very prominent, and the intestine itself was considerably injected; in Eliza T., Peyer's patches at the lower part of the ileum were of a dark livid character, contrasting most strongly with the surrounding intestine, which was injected. Hitherto, sufficient notice has not been taken of this peculiar lymphatic condition and persistent thymus. At present, we know too little of the pathology of Graves's disease to be able to estimate the value of this condition, but as at Guy's Hospital we have often seen it, it would be well if other observers would see if they can confirm or disprove the observation. In connection with this part of the subject, it is to be noted that two patients had enlarged tonsils.

None of the necropsies on exophthalmic goitre mentioned here throw any light on the pathology of the disease, but all the evidence that is slowly accumulating is going to show that the lesion is central; this is the more probable, as the disease is often associated with mental disorder. With regard to the changes that have been stated to be present in the sympathetic system, anyone may easily convince himself that they do not exist solely in exophthalmic goitre; for, if the sympathetic be examined in a large number of cases, taken quite irrespectively of the cause of death, these changes will be found more frequently present than absent.

Among my five living cases, not one shows any symptoms of myxœdema or thyroid atrophy; this is important, for it has been suggested that the thyroid atrophy is preceded by hypertrophy; if that be so, exophthalmic goitre does not represent the hypertrophic stage.

Appended are the cases, for the use of which I am indebted to several of my colleagues.

CASE I.—Jane A., aged 21, was admitted December, 1880, under Dr. Moxon. The family history was unimportant. Fifteen months ago, her friends noticed the prominence of her eyes, which were sometimes painful; soon afterwards, palpitation was noticed, and soon after that the enlargement of the neck. She was regular, and said that the exophthalmos was increased during the menstrual periods. On admission, there were enlargement of the thyroid exophthalmos, and increased pulsatile cardiac area; hæmic murmur; pulse 84, small, irregular. She remained in hospital only a few days. In April, 1886, I saw this patient; the eyes were hardly prominent. She said she was not troubled with her heart, and that she had no shortness of breath. She considers that she was well two years after leaving the hospital, and attributes her recovery somewhat to going to live at Hendon (she formerly lived in London). The thyroid gland could be felt, but would certainly pass for healthy. There was no palpitation, no murmur, and the heart was regular. She still suffered from neuralgia; no menstrual irregularities. She is unmarried; she has had no treatment.

CASE II.—Ellen H., aged 32, was admitted, under Dr. Habershon, October, 1877. Her family history was unimportant. Four months ago, her attention was called to her prominent eyes and large neck. Two months ago, she began to suffer from palpitation. She had had iron, which she said had benefited her. On admission, she had exophthalmos, with feeling of tension in the eyes. The thyroid body was large, but non-pulsatile; largest at night. There was a large area of cardiac pulsation, with loud hæmic murmur; pulse 124. She was treated with iron and digitalis and belladonna, and improved considerably. She was sent out in two months, with directions to continue to take belladonna. Since leaving the hospital, this patient has continued her work as a domestic nurse. She is better, and is at present in Holland.

CASE III.—Alice M. G., aged 13, had two sisters who had enlarged thyroids; one had a quick pulse. There was no nervous, phthisical, or rheumatic family history. Three years ago, enlarged pulsating neck and exophthalmos were noticed; they increased till now. On admission, there was much exophthalmos; the optic discs were healthy, and

the thyroid body was enlarged considerably, pulsating with a systolic murmur in it. All the vessels of the neck pulsated. There was a very large area of cardiac pulsation, with hæmic basic *bruit*; pulse regular, 136, dicrotic. She was treated with frequent doses of belladonna and ice-water coils over the thyroid gland and heart. She improved very much, and all the three symptoms were much diminished. During the greater part of her stay in the hospital, the temperature was elevated, averaging about 100 or 101; this fell before she went out, which she did in two months. In April, 1886, I saw this patient. The eyes were less prominent; the right was hardly noticeable, the left slightly so. She was much stronger and better, and only had palpitation when she hurried; but there was a loud apical systolic murmur; no dyspnœa. The thyroid could still be seen to be enlarged. She did not suffer from neuralgia. There were no menstrual troubles, excepting that she said that occasionally she vomited blood at the menstrual period, and, when this was so, there were no menses, and she was not anæmic. She still lives at Greenwich, and has taken no medicine.

CASE IV.—Sophia S., aged 34, was admitted, under Dr. Pye-Smith, August, 1877. She was in Clinical Ward for exophthalmic goitre in 1869. Two years before that date, the neck began to swell, and six months afterwards, the exophthalmos was discovered, and then dyspnœa and palpitation. On neither of her admissions at the hospital was she at all benefited by treatment. There is nothing noteworthy about the case. In May, 1886, I saw this patient; the exophthalmos was hardly noticeable, but the patient said it varied. The thyroid would now pass for healthy. She said the palpitation was worse; the heart was regular, and there was no murmur. She complained of pain in the back and dyspnœa, but there was but little doubt that she exaggerated her troubles. She said the doctors had told her that she had gastric ulcer. She has always suffered from menstrual irregularities; now she has enlarged tonsils.

CASE V.—Ellen E., aged 20, was admitted, under Dr. Fagge, June 1880. Her family history was unimportant. In October, 1879, she first noticed thyroid enlargement; she had had exophthalmos for five months. On admission, there were considerable thyroid enlargement and exophthalmos; no excessive cardiac pulsation. Pulse quick and regular; she had amenorrhœa; for some time she was treated first with digitalis and then with ergot, but without any benefit. Then she was treated with the continuous current, as was the other patient, except that it was applied also over the eyelids. Under this treatment for three weeks and a half, the three prominent symptoms decidedly diminished. In May, 1886, I saw this patient, and found that the exophthalmos had so decreased as to be hardly observable; there was no palpitation, but the pulse was 144; this might, however, be due to the excitement of the examination. The thyroid was a little larger than normal. She said she was excitable, but she did not suffer from menstrual irregularities or dyspnœa. There was no Graefe's symptom. She considered that she had been well about four years.

CASE VI.—Emily P., aged 47, was admitted under Dr. Moxon in 1884. She had had rheumatic fever. She came in for dropsy and heart-disease. There was a moderate amount of exophthalmos. She died from her cardiac symptoms. At the *post mortem* examination, no exophthalmos was visible. The thyroid was very much enlarged; on section, it looked normal. There were a thick mitral valve, hypertrophy and dilatation of the right side of the heart, cirrhosis of the liver, and œdema of the lungs.

CASE VII.—Charlotte S., aged 20, was admitted, under Dr. Goodhart, in 1882, with the three usual symptoms of exophthalmic goitre; the palpitation had come on twelve months ago, the exophthalmos two months ago. On admission, a large thyroid body, with a murmur over it, was detected; there was also a hæmic murmur. The patient was up and about the ward, when one day, whilst another patient was having the electric current applied, she asked to be allowed to try it; and, on the current passing, she fell back dead, laughing and talking only an instant before she died. At the *post mortem* examination, the thymus was found to be persistent. The thyroid was much enlarged, extending back behind the œsophagus, so as to leave only a quarter of an inch between the two lobes; on section, it appeared healthy. Both cardiac ventricles were dilated. The cardiac muscle and valves were normal. Peyer's patches were particularly well marked.

CASE VIII.—Kate R., aged 27, was admitted in March, 1881, under Dr. Taylor. One sister died of phthisis. Five years ago, she first noticed prominence of her eyes, and enlargement of the thyroid body, with a drumming in the ears. Soon afterwards, palpitation came on. All the symptoms were worse during excitement. On admission, the thyroid body was much enlarged and pulsating, with a murmur over it. There was considerable exophthalmos. The optic discs were healthy. There was a large pulsatile cardiac area; no murmur. She had amenorrhœa, and was wasted and anæmic. She was treated for a short time with digitalis, but afterwards with a mixture containing fluoric acid, quinine, and iron. She left the hospital in two months, the condition being unaltered. I have heard from her friends that this patient died on October 7th, 1882; but I cannot find out from what disease.

CASE IX.—Clara G., aged 24, was admitted in 1882. She married at 16; had had no mental trouble. Her mother died of phthisis; one sister had chorea; there was no family history of exophthalmic goitre. Fifteen months ago, she began to suffer from palpitation of the heart. A year ago, swelling in the neck was observed. She had recently suffered from attacks of loss of speech and epistaxis. On admission, there were much exophthalmos, slight inequality of the pupils, injection of the conjunctivæ, and Graefe's symptom; the sight was good; the eyes were said to vary in size. The thyroid body was very much enlarged; the isthmus was distinctly visible; there was a loud rasping systolic murmur over the thyroid. The pulsatile cardiac area was very extensive. There was a venous hum. Pulse 152. She had amenorrhœa; was not pregnant. She was very nervous and hysterical. The optic discs were normal. She was treated with ten-minim doses of tincture of belladonna thrice daily; and the continuous current was applied, the negative pole being placed over the fifth cervical vertebra, and the positive was moved about over the sterno-mastoid muscle. She remained in five weeks, and left with the exophthalmos and pulsation all much diminished. I visited this patient's friends, and found that she died of "consumption" on November 28th, 1882. After leaving the hospital, the exophthalmos diminished, but the enlarged thyroid body and palpitation remained the same. She drank largely.

CASE X.—Annie E. E. was admitted April, 1877, under Dr. Moxon. Her family-history was unimportant. She had always suffered from palpitation. For some time past, the swelling of the neck and protrusion of the eyes had been noticed. There was much thyroid enlargement and exophthalmos, the left eye being more prominent than the right. There was a large pulsating cardiac area, with pulmonary systolic murmur. Pulse 160. She was treated with digitalis; but left the hospital, after a month's stay, unimproved. I have seen this patient's friends, and they state that she died, in 1884, from "gastric ulcer." The exophthalmos and palpitation increased; the goitre remained the same till three weeks before death, when it disappeared altogether. She suffered much from neuralgia and menstrual irregularities.

CASE XI.—Eliza T., aged 22, was admitted, under Dr. Wilks, November, 1876. Her family-history was unimportant. The patient had always been delicate, nervous, and a sufferer from palpitation. She seemed to become stronger at puberty. Three months ago, she had a severe cold; very soon after this, the thyroid enlarged, became pulsatile, and exophthalmos appeared. About a month ago, these symptoms became worse, diarrhœa came on, and the patient began to lose flesh. On admission, she had much exophthalmos and a large thyroid, pulsatile, with murmur over it. There were crepitation and a basic systolic murmur. Pulse 120; temperature 102.4°. She was treated with digitalis and iron. After a few days' rest, she became better; but soon got into a stationary condition, with a temperature about 100° and pulse about 120. After she had been in the hospital four months, a large axillary abscess developed; it was opened, but she sank and died. At the *post mortem* examination, the orbits appeared quite normal; there was no marked excess of fat. The heart weighed 10 ounces and was healthy. There was a considerable amount of double basic broncho-pneumonia. The whole of the intestine was intensely injected, and the Peyer's patches at the lower part of the ileum were of a dark livid character, contrasting most strongly with the injected intestine. There was nothing noteworthy in the abscess in the axilla. Dr. Goodhart, who made the *post mortem* examination, was inclined to look upon the case as one of blood-poisoning, accidentally complicating exophthalmic goitre.

CASE XII.—Mary M., aged 21, was admitted, under Dr. Fagge, in July, 1880. Her family-history was unimportant. She had bronchitis two years ago. Three months ago, the thyroid body began to swell; exophthalmos appeared. These had increased rapidly, and so also had her great weakness. On admission, there were much exophthalmos and thyroid enlargement, and an enlarged pulsatile cardiac area. Pulse 112, very irregular. Ergot was injected into the gland. After she had been in three weeks, she died quite suddenly. At the *post mortem* examination, it was noticed that the thymus was enlarged and persistent; it was fully four inches long. The thyroid body was much enlarged. The heart weighed nine ounces, and seemed normal. The tonsils were flabby, large, and succulent. Peyer's patches and the solitary follicles of the whole intestine were much swollen, in-

jected, and very prominent; the intestine itself was considerably injected.

THE TREATMENT OF FRACTURES OF THE PATELLA.

By FREDERICK TREVES, F.R.C.S.,
Surgeon to, and Lecturer on Anatomy at, the London Hospital.

THERE are few fractures upon the treatment of which more ingenuity has been expended than upon fractures of the patella. Every period of surgical activity has added to the number of curative appliances at the disposal of the surgeon. Within the last few years, certain operative procedures have been devised for the treatment of this lesion that, although they have been extolled by many, have not been accepted by all, and have certainly not passed into the undisturbed territory of routine practice.

From these facts, it is to be inferred that the methods for dealing with this common injury are not yet entirely satisfactory, and that the discussion of the subject is not yet closed. There are certain cases where the fracture is transverse, and where the fibrous expansions by the side of the bone are untorn, that present so little disturbance of parts, that the mere securing of the limb upon a straight back splint is a fairly sufficient treatment. It must be owned also that, in examples of this lesion of a less uncomplicated character, satisfactory results are obtained by the various combinations of splints and strapping that are very generally in use. The employment also of Malgaigne's hooks applied to felt discs, moulded over the two fragments, has met with a certain success. Of these various measures, however, it may be said that their use requires constant care, that the results obtained in cases of apparently equal severity are not uniform, and that, in not a few instances, they prove more or less inefficient.

The operative measures recently introduced are thus thrust into notice. The first of these is that known as Lister's operation. Here the knee-joint is opened, and its contents evacuated, the broken surfaces are well bared, and the fragments united by a wire inserted through drilled holes. To ensure the success of this operation, the knee-joint must be carefully drained. One great point in its favour is that it allows the surgeon to get rid of certain real or supposed obstacles to sound union—the fibrous fragments that may find their way between the bone ends, the effusion in the joint, and the blood-clot.

The objections to the measure are these. The operation is somewhat extensive, and not without risk; an anæsthetic is required; one median suture is employed, and, where the fracture is irregular, that alone may not serve to maintain true contact. In some cases, this treatment has failed. I have employed it in one instance only. The patient was a muscular man, engaged as a mill-stone maker. All the ordinary means to secure apposition failed. With the suture (that was retained) perfect contact was brought about, and the parts healed without disturbance, and without rise of temperature. Two years have now elapsed, and the man, although engaged in very laborious work, has what is, apparently, a normal patella, and full use of the knee-joint.

In the second operation, no skin incision is made, and the joint is not drained. By means of a long curved needle in a handle, a silver wire is passed through the joint under the fragments, and is so adjusted that, when the two free ends are twisted together over a pad on the skin, the broken bones are drawn into contact. In this measure an anæsthetic has to be employed; a wire seton is carried through the articulation, the fragments are held together in one line only, and, in irregular fractures, this may not serve to maintain the most perfect position. This plan appears to have met with substantial success in the hands of several surgeons, and it would be premature to criticise it until more data are forthcoming.

The mode of treatment that I would propose, and that, I think, is the most satisfactory, is one that I have now adopted in all cases admitted into my wards at the London Hospital during the past twelve months. It consists, simply, in the employment of Malgaigne's hooks in the manner in which they were originally intended to be applied.

Theoretically, it is difficult to conceive a better means of bringing the fragments of a broken patella together. Upon simple mechanical grounds, the hooks can certainly claim an advantage over the single median wire. The points of the hooks are sufficiently wide apart to secure a good and even hold of the bones. The fragments are rigidly held, and are forced together in a horizontal plane. Any yielding on the part of the bones or the instrument can be met, if necessary, by a daily screwing together of the hooks to an extent to compensate for that yielding. A faulty application, in the first instance, can be rectified without difficulty at any subsequent period, an advantage that the wire does not possess. Since a wider hold is obtained of the fragments, Malgaigne's hooks can be used in examples of irregular fracture, and even in certain cases of starred fracture. The hooks, when once applied, require little or no attention, and the whole apparatus is of the simplest character.

Malgaigne's instrument has met with little favour, and the use of it was practically abandoned within a short time of its introduction. Its failure depended simply upon this. The points of the hooks excited suppuration, and, as the upper pair of hooks is probably always passed through the synovial membrane, that suppuration often spread to the joint, and led to the most calamitous results. Apart from this, the inflammation excited about the punctures was an abiding source of discomfort, even if it kept beyond the limits of the joint. These causes of failure have been removed by antiseptic surgery, and with their disappearance must vanish the chief objections to this, the most perfect mechanical appliance for adjusting the fragments of a broken knee-cap.

The other advantages of this mode of treatment may be briefly stated. No anæsthetic is required; the maintenance of the apparatus causes no inconvenience, and, before the hooks are inserted, the fluid in the joint can be conveniently evacuated.

The following is the method that I adopt. The limb is secured upon an ordinary straight back-splint, so as to keep the knee fully extended. The splint has a foot-piece, which prevents any shifting, and is secured to the limb by straps and buckles. Neither in this nor in any other fracture do I use plaister for the purpose of securing splints. Straps of fine webbing hold well to the limb, and can be adjusted, tightened, or loosened, as often as required. The lavish use of plaister in some compound fractures of the lower limb has much to answer for. The knee, after being washed, is well purified by carbolic acid. The position of the patella is carefully marked out in pencil on the skin, and the sites for the points of the hooks indicated. It is important that the hooks should enter the bone at equal distances from the median line. Four punctures are now made with a sharp tenotome at the points at which the hooks are to enter. In each case, the instrument should be passed down to the bone. The two upper punctures will open the synovial cavity, and through them the fluid in the joint is very easily evacuated. The two lower punctures are without the joint. As soon as all fluid has escaped, the hooks are applied. They should be scrupulously clean, and highly polished, and should be kept in carbolic water while the punctures are being made. The two parts of the apparatus must be separated, and each portion applied by itself. It is not until the hooks have acquired a good hold of the bones that the two segments of the instrument should be screwed together. It is better to apply the lower hooks first. When well fixed, they must be kept firmly in position by an assistant. There is often difficulty in inserting the upper hooks. Finally, the two segments are screwed together, so that the fragments of the patella are brought into close contact. There is a disposition for the upper end of the apparatus to "ride" a little. This is corrected by passing a tape over the upper hooks and under the knee, and fixing it by a leaden clamp. This tape can be tightened, if necessary, from time to time.

I have always performed this little operation under the carbolic spray. In no case has an anæsthetic been administered, and no patient has complained that the pain of the proceeding was other than could be well borne. After the hooks are secured, the spray is discontinued, and the four punctures are well covered with iodoform. It is advisable to see that the screw of the apparatus is protected from the powder, and kept well oiled, so that the hooks may be readily moved if occasion should arise. The limb is now placed upon an inclined plane, to which the splint is lightly secured.

One matter remains. I think it very important that the limb—or, at least, the knee—should be kept always fully exposed to the air. In all cases of wound or ulcer of the lower extremity, and in all cases of compound fracture of that part, I make it a rule that the damaged region be kept open to the air, or, at least, never covered by the bed-clothes. It is notorious that wounds and ulcers of the lower limb do not heal so readily as do like lesions of the arm and forearm. This can hardly be explained by the condition of the circulation in the two parts. Any adverse influence in this direction can, to a great extent, be met by supporting the leg upon an inclined plane, and so giving to the venous circulation the assistance of gravitation. The real cause of the differences in the progress and character of the healing is more probably to be ascribed to the atmosphere in which the

lower extremity is kept. The limb is covered by the bed-clothes. It lies in a close, confined, and heated atmosphere. That atmosphere, moreover, is apt to become noxious from time to time, when the bed-pan is used, and under other circumstances. If there be truth in the principles that underlie antiseptic surgery, then the ill-healing of wounds of the lower extremity can be in part, at least, explained.

Since I have made a practice of keeping all open wounds of this part exposed, I have had reason to be convinced that their healing has been hastened. The non-injured part can be kept warm in the winter by cotton-wool, but I have heard of no complaint under this head.

In the case of the patella, the apparatus is always exposed to view, and the hooks are not liable to be displaced by the bed-clothes or cradle.

With regard to after-consequences, in the cases so far treated, there has been no rise of temperature, no complaint of pain, no suppuration about the punctures, no trouble in the joint. I have removed the hooks at the end of six weeks. In one case (in order to test the question of long retention of the hooks), they were maintained in position for eight weeks without any inconvenience. The union, in each instance, appeared to be firm and secure, and the interval between the fragments was not readily made out.

The treatment has not yet been adopted in a sufficiently large number of cases, or extended over a sufficiently long time, to test its ultimate value, but its immediate effects appear to justify a comparatively early notice of the matter.

SALPINGECTOMY: WOUND OF BLADDER: RECOVERY.

By JAMES MURPHY, M.A., M.D.,
Surgeon to the Sunderland Infirmary.

Dora W., aged 24, unmarried, was placed under chloroform at the Sunderland Infirmary, for the removal of a pyosalpinx of each side. On August 8th, 1885, no catheter was passed, as recommended by Dr. Keith; and I made the usual ovariotomy-incision through the skin and muscles, commencing an inch below the umbilicus, and terminating an inch and a half above the hair on the pubis. On reaching what appeared to be the peritoneum, I picked up a small portion of it, and nicked it through, when about fifteen ounces of clear urine escaped; and, on introducing my finger through the wound, I found I had cut into the bladder, owing to its being adherent to and reflected right in front of nearly the whole tumour. Scarcely had I done this, than the breathing, which had suddenly become stertorous, ceased altogether, and the radial pulse could not be felt. The tongue was at once forcibly drawn out by a Kœberlé's forceps, the head and shoulders lowered over the end of the table, and artificial respiration produced; but it was some minutes before natural respiration was resumed, and radial pulsation returned.

The position of affairs was not a pleasant one: a patient *in articulo mortis* from chloroform; a wound in the bladder; and, behind, two tumours, which could be felt firmly and immovably fixed in the pelvis; and I am not sure that it would have been imprudent surgery to have contented myself with closing the vesical and abdominal wounds, as I had not then opened the peritoneum. But one is loath to leave an operation unfinished; so I had ether substituted for chloroform, and at once closed the opening in the bladder by a continuous suture of fine catgut, the stitches being very close together, and the edges of the bladder slightly inverted. I then cut through the peritoneum higher up, and found two smooth and similar tumours, about the size and shape of small cocoa-nuts. On plunging the trocar into the left one, thin pus shot out through the tubing, and the tumour collapsed. The opening was quickly closed with a Nélaton's cyst-forceps, and I proceeded to enucleate the tumour, which was a matter of much difficulty; as, except for a space the size of a florin round the opening, it was adherent round its whole surface to pelvis, omentum, intestines, uterus, and bladder. No pedicle could be found; but all bleeding points were rapidly seized by Kœberlé's forceps, and afterwards secured by fine carbolised catgut. The tumour on the right side was not quite so adherent, and was removed without emptying its contents, a sort of pedicle being secured with carbolised silk. All bleeding points having been tied, the peritoneal toilet was carefully performed, and the abdominal wound closed; a drainage-tube, with India-rubber sheeting and sponge, after Keith, being used. The operation, which lasted an hour and twenty minutes, was performed with thorough Listerian precautions, including the spray playing freely over the wound.

The patient was then placed in bed, a soft red silk No. 12 catheter having been introduced, which was attached to a piece of tubing, passed underneath the patient's thigh, guarded from pressure by a firm pad of lint on each side, and of sufficient length to reach to within a couple of feet of a tray placed on the floor, and arrangements were made for a sister to watch this constantly, night and day, as long as necessary, with instructions to at once ring for the house-surgeon, should the urine cease flowing.

The patient rallied fairly well, but had widely dilated pupils, and a very anxious and jaundiced aspect, with constant vomiting for several hours. She soon complained of severe pain in the epigastric region, which was relieved by a hypodermic injection of morphine; and at 10 P.M., eleven hours after the operation, the vomiting had almost ceased, she was nearly free from pain, and had passed two ounces of urine tinged with red blood and a few small clots; her temperature was under 100°. At 2 A.M., matters were about the same. She had passed an ounce of urine, but had not slept. At 7 A.M., she looked much better, had slept a few hours; the pain and sickness were gone. The urine was more free from blood, its quantity was an ounce; temperature 100.4°. She had four injections of beef-tea during the night, each measuring an ounce, and had sipped a few teaspoonfuls of very hot water; no flatus was passed. About two ounces of red serum were removed from the drainage-tube, under the spray, which was always used when the wound was exposed. During the day, August 9th, all went on well. In the first twenty-four hours she passed eight ounces of urine, which towards evening was of natural colour and free from blood; and at night her temperature was 101.4°, and she had passed flatus freely. An ounce of serum was removed from the drainage-tube.

August 10th, morning temperature, 100°; evening temperature, 101.6°. The urine passed in twenty-four hours was ten ounces; it was clear, and straw-coloured. She vomited once. There was severe pain in the epigastric region, at noon, relieved by hypodermic injection of morphine. There was only a teaspoonful of clear serum in the drainage-tube, which was itself now removed.

All promised well up to August 18th, when, in the afternoon, while feeling remarkably well and free from pain, she told the sister something was trickling down her legs, and on my being telephoned for, I removed the dressings, and found that the portion of the wound where the drainage-tube lay had opened, and a large quantity of dark, grumous, aseptic blood, in appearance like menstrual fluid, was freely welling up through it. I removed as much as I could; but, as it continued to flow, I placed a large pad of absorbent iodoform wool over it, and secured it with a gauze bandage. There had not been, nor was there then, or subsequently, a rise in temperature or pulse, which was quiet and steady. This flow continued for three days, necessitating frequent change of dressing, and then it was followed by a small discharge of serum, which continued to a very slight amount till the following March. The small fistula then closed and remained closed.

On September 5th the catheter, which had given no trouble the whole time, was removed, and introduced frequently for the few following days, and the patient left the hospital shortly afterwards quite strong and well; she resumed her work as dressmaker, and is now in perfect health, and has never had the slightest urinary trouble. For this result I am very largely indebted to our house-surgeons, Messrs. Maitland and Maling, as also to sisters May, Carry, and Kathleen, as it would have been unattainable but for their constant and devoted care and attention in the after treatment.

Oral Instruction of the Deaf and Dumb.—The success of the system of oral instruction of the deaf and dumb, pursued under the direction of Mr. Van Praagh, at his institution in Fitzroy Square, was strikingly shown on the occasion of the annual distribution of prizes, when classes of pupils—all deaf mutes—were examined in various subjects with the greatest success. This institution consists of a school and training college for teachers; and between sixty and seventy day pupils, male and female, are now receiving instruction. The system of teaching rigidly excludes the finger-alphabet and all artificial signs, the scholars being taught to speak intelligibly, as well as to understand the spoken language of others, by means of lip-reading. This system enables them to take their place among the working members of society. The children, too, either reside at home with their parents and guardians, or are boarded out with private families selected by the director. The training of teachers has been one of the main objects of the Association, and they have been able to supply fully qualified teachers to the London School Board and other public bodies.

ABSTRACT OF A PAPER ON DEFORMITY OF THE FEET DUE TO PERFORATING ULCERS.

Read before the Sheffield Medico-Chirurgical Society.

By CHARLES ATKIN, F.R.C.S.Eng., L.R.C.P.Lond.,
Demonstrator of Anatomy, Sheffield School of Medicine.

The subject which I bring before you this evening is not one frequently discussed, and has, as far as I am aware, not been previously brought before this Society. It is that of perforating ulcer of the feet, combined with deformity of the toes from bone- and joint-lesions. The case before you is a patient of Mr. Jackson's at the Infirmary, who has kindly afforded me this opportunity of reading a short summary of notes which I took at the time.

J. H., aged 51, labourer, married, sober, has never had syphilis. An ulcer formed on the inside of the big toe of the left foot six years ago, and has since never remained healed for long. Two years ago, an ulcer perforated through to the dorsum between the third and fourth metatarsal bones of the same foot. About the same time, a fluctuating swelling was opened on the dorsum of the right foot, over the little toe, and, after discharging for a fortnight, completely healed. Six months later, a sore appeared on the inside of the right big toe, and, shortly afterwards, one under the little toe of the left foot. When he was first seen, the ordinary symptoms of locomotor ataxy were absent, though he had complained of "shooting pains and numbness" for years. The annexed woodcuts show very fairly the curious deformity of the toes, especially of the right foot, where



Right. Left



Right. Left.

the first and fifth toes are remarkably shortened and distorted. The same condition obtains in the left foot, where also the dorsal scar over the third metaphalangeal joint is to be seen. His condition is, shortly, as follows: ataxic gait; loss of reflexes; Argyll-Robertson pupil; fœtid sweating; numbness and coldness of feet; giddiness even in bed; gastric pain on lying down; numbness of forearms, and cracks and chaps on the hands; tight feeling across the insteps, and sensation of feet deficient; nails hypertrophied; increased growth of hair; optic discs pale; narrowing of field for green and red; edentulous condition of jaws. The big toe of the left foot is flexed on to the dorsum, and is shortened by loss of the base of the first phalanx. The third toe is also flexed on to the dorsum, and firmly ankylosed at its junction with the metatarsal bone. In the right foot, the second phalanx of the big toe moves freely on the metatarsal bone, the first phalanx being entirely wanting. In the fifth toe, also, the proximal phalanx has disappeared, the whole digit moving easily in all directions, and being only restrained by the skin. Some of the joints of the other toes are in a state of subluxation. In no instance has "dead bone" ever come away, nor is there any evidence of such being present.

This case shows that ulceration may be a premonitory symptom of locomotor ataxy, though this fact is not usually alluded to in our text-books on medicine. Charcot[1] does not mention it, nor is it included among the prodromata in Hilton Fagge's[2] recent work. Lockhart Clarke, and Brown-Séquard, in Quain's *Dictionary*, and Holmes's *System*, both overlook it.

Syphilis, it is important to note, is denied; and there is no evidence of heredity, as seen in some cases by Biggs[3] and Wilkes[4] of Salisbury. The hands, though not ulcerated at present, are far from being in a healthy condition; palmar ulcerations have been recorded by Hancock[5] and Nélaton.[6]

The question of pain is interesting, as showing how different accounts are given of the disease; thus, in the last edition of Holmes's *Surgery*, p. 918, "severe pain" is noted; whilst, in the last edition of Erichsen's *Surgery*, by Marcus Beck, the complaint is announced to be "painless." Nor are these contradictory statements to be reconciled on the theory that the amount of pain depends on the quantity of exercise taken. H.'s pain is distinctly increased when easterly winds prevail, and generally in cold damp weather.

When ulceration of the sole of the foot is met with, several various conditions have to be taken into consideration. Is it simply a suppurating corn, or one associated with nerve-lesions, central or peripheral? Is it necrosis of the metatarsus, or disease of the metatarso-phalangeal joint? Is it a suppurating bunion under a hammer-toe, hollow claw-foot, or paralytic talipes? Is it tubercular disease of the foot? or is it one of those Asiatic diseases, such as mycetoma or anæsthetic leprosy?

Nélaton, who originally described the condition under consideration this evening, regarded it as a local disease distinct from tabes. Messrs. Savory and Butlin[7] have endorsed this view, and have attributed the lesions to congenital absence of the thin nerve-fibres of sensation, and of trophicism, or to an increase and thickening of the perineurium. Others, in turn, have considered it due to scrofula allied to phthisis, to syphilis, to atheroma, or allied to plantar psoriasis, or leprosy. Some, such as Callender[8] and Erichsen[9] have simply regarded it as a suppurating corn, the pus of which travelled upwards to the dorsum of the foot, in the direction of the least resistance.

Whether the cases which have been described without nerve-symptoms, have remained so to the end, is a point of great moment. The majority of typical perforating ulcers, which have recently been described, have had undoubted connection with nerve-lesions, central or peripheral. When cases occur, such as the one which Duplay and Morat quote, where a hydatid cyst was found compressing the sciatic nerve, the fact, that primary lesion of the peripheral nerves can cause perforating ulcer, must be considered as almost proved. Peripheral nerve-changes are known to cause other skin-affections, such as "Paget's glossy skin." As for establishing an invariable association with locomotor ataxy, the same difficulty obtains, as in the case of Charcot's joint-disease, of attempting to father a doubtful condition on a disease which itself is far from being properly understood.

The occurrence of bony ankylosis in the third toe of the above case, may be considered as a proof of the reparative power of the parts, under certain conditions, and tends to disprove the theory that the limb is simply diminished in vitality.

The co-existence of glycosuria with perforating ulcer has been noted in several instances. Thus, Kirmisson[10] quotes seven cases; and a fatal one, recorded by Heusner[11] had it also. Bouchard[12] has noted loss of tendon-reflex in diabetics. Nutritive degenerations of the skin

1 *Maladies du Système Nerveux*, 1880.
2 Fagge's *Medicine*, 1886, vol. i, p. 4[illegible].
3 *Lancet*, vol. xii, 1876, p. 7[illegible].
4 *Surgery of the Foot*, p. 37, *et seq.*
5 *Op. cit.*
6 *Gaz. des Hôpitaux*, Jan. 10th, 1852.
7 *Med. Chir. Trans.*, vol. lxii.
8 *Clinical Society*, April 12th, 1878.
9 *Surgery*, 7th edition, 1879.
10 *Archives Générales de Médecine*, Jan., 1[illegible].
11 *Deutsches. Med. Woch.*, No. 16, April 16th, 1885.
12 *Gaz. des Hopitaux*, No. 112, 1884.

are well known to occur in diabetes, as well as grosser surgical lesions, such as boils, carbuncles, sloughing, and gangrene.

The curious shortening of the feet, in these cases, has been strangely overlooked. It is not noted in Holmes's *System*, or in the works of Erichsen, Holmes, Bryant, Keetley, or Pepper. At first, I thought it had never been described; but, with the aid of Dr. Neale's valuable book, I found that Mr. Biggs and Mr. S. Jones[13] had both noted cases. Mr. Edmund Owen, during the discussion on Messrs. Savory and Butlin's paper, also described two cases of deformity of the toes. Mr. Sydney Jones designated the shortening of the feet, in his case, as symmetrical; but evidently did not consider the ulceration in any way peculiar, as no mention is made of it. Mr. Biggs afterwards wrote, in the *Lancet*, that these cases are not uncommon in Wiltshire and Dorsetshire; and referred to a mother and son under his observation. This is doubly interesting, as females are rarely affected. Dr. Ogston[14], Mr. Treves[15], and Mr. Morrant Baker[16], have also noted these ulcers in women. The shortening usually seems to occur from disintegration of the metatarso-phalangeal joint, the ulcers often being to the side, and not at the seat of most pressure. How does the shortening come about? Is the bone gradually ulcerated away, the detritus exuding in the form of sanious pus, or has the dead bone to be removed by operation for healing to take place? Mr. Biggs says he has never seen a sequestrum; on the other hand, bone (? dead bone) has been removed in these cases by Vésignie, Wilks, S. Jones, Ogston, and Heusner. Whether the bone was dead, or only bare and ulcerated, the authors do not with certainty say; and yet, the question is an important one as to the starting-point of the disease. In the case you have seen to-night, I would submit another element in the shortening of, for example, the little toe of the right foot—that it is due to interstitial absorption; for it is impossible that a whole phalanx, and a half of another, could come away as detritus, in the short time of two weeks, during which the incised wound discharged; and there is no plantar scar to account for a possible outlet in that direction. Hill also distinctly states that the toe has gradually become smaller and shorter since the wound healed. Had there been no wound at all, one would have felt tempted to consider this analogous to those cases of *pied tabétique*, described by Charcot and Féré.[17]

That recovery can take place without any dead bone coming away is evident from a study of the case before you, and of the two cases of Charcot's joint-disease reported by me in the *Medical Chronicle* for April of last year. Both these latter exhibited scars on the soles of the feet, and gave a typical account of perforating ulcer without any history of sequestra. All these cases also show that the disease, in some instances, undergoes spontaneous cure. This is important, as such serious and radical operations have been advocated and practised for its relief. Neither of the two cases above mentioned are bedfast, or incapacitated from taking moderate exercise; therefore, it is not simply "enforced rest" which has preserved the feet from further ulceration.

The fact, then, that spontaneous recovery may take place encourages us to persevere in local treatment, such as has been specially recommended by Mr. Treves,[18] and not to hurriedly resort to operative measures, which, however slight, such as the removal of the big toe, are by no means devoid of danger, witness the case recorded by Mr. M. Baker, where death occurred on the twelfth day.

Of course, the operative treatment depends, in great measure, on the theory of causation held in each individual case. If one agree with Mr. Erichsen that it is simply a suppurating corn, free incision is indicated. Mr. Bryant, doubting all nerve-causation, simply backs up Mr. Hancock, and would remove all dead bone. Messrs. Savory and Butlin, believing in local nerve-disturbances, would amputate above the anæsthetic region, as partial operations have been proved to be perfectly useless. If the disease be recognised as a premonitory symptom of locomotor ataxy, local treatment, combined with the internal administration of iodide of potassium, or nitrate of silver, is surely indicated.

As the pathology is thus as imperfectly understood as the treatment is unsatisfactory, I think every one who meets with a case is in duty bound to put on record a faithful account of the concomitant symptoms and progress of the case, so that, in time, a more definite idea of the disease may be found.

[13] *Pathological Society*, November 7th, 1876.
[14] *Lancet*, vol. ii, 1879, p. 14.
[15] *Lancet*, October, 1882, p. 653.
[16] *Clin. Soc. Trans.*, vol. xviii.
[17] *Le Progrès Méd.*, No. 51, 1885.
[18] *Lancet*, November 20th, 1886.

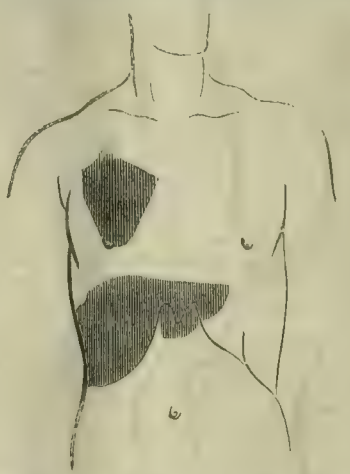
A new Medical and Surgical Society has just been formed at Pavia, owing to the initiative of Dr. Guzzoni degli Encarini.

DISPLACEMENT OF THE HEART OCCASIONED BY TRACTION.

By ALEXANDER M. McALDOWIE, M.D., Stoke-on-Trent.

It is not, as a rule, difficult to discover the cause of displacements of the heart, which are due to disease. The following cases are rather remarkable in this respect, as both patients denied having suffered at any time from any acute or severe malady that could in any way account for the changes in position of the heart which physical examination revealed. As neither cirrhosis of the lung nor emphysema was detected in either case, I am inclined to think that both were due to retraction of the right lung, the result of a pre-existing attack of chronic or subacute pleurisy, in which the symptoms had been latent, or not severe enough to interfere with the pursuit of their ordinary avocation.

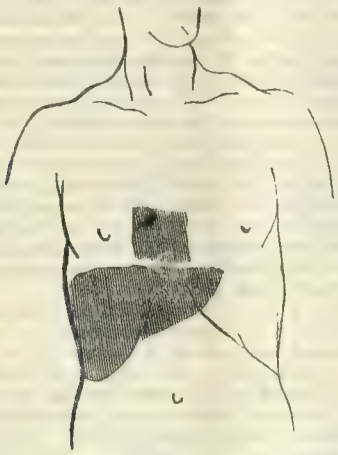
Case I.—Samuel B., aged 48, a tailor, came to me complaining of pains and beating in the right mammary region, and a bulging on the right side of the chest. He had suffered, for the past five years, from lancinating pains in the right mammary region, shooting to the back and the right shoulder. These began insidiously without any known cause, and had been gradually growing worse. The pains were generally worst during the afternoon; easy when lying down; aggravated by exertion. Previously to the onset of the malady, the patient had always been healthy; he never had any severe nor acute illness. There was no cough, dyspnœa, nor dysphagia. The patient was ill-nourished; there was no cachexia. A circumscribed bulging was seen on the right side of the chest over the mammary region. There was visible pulsation in the third right interspace to the inner side of the nipple-line. On percussion over the right side, absolute dulness extended from the lower border of the second rib downwards in the nipple-line for four and a half inches (see diagram). Transverse



Samuel B.—Area of Cardiac and Hepatic Dulness.

dulness extended from the right border of the sternum outwards for five inches, at the level of the third rib. All the other regions of the chest were quite resonant on percussion, including the left inframammary region (where the normal cardiac dulness could not be detected) and the space between the above-mentioned dulness and the hepatic dulness. The heart's impulse could be felt over the bulging on the right side, most strongly marked to the outside and a little below the nipple. The impulse was strong, and was quite different from the heaving, or uniform distension, which is characteristic of aneurysm. No impulse nor apex-beat could be felt in the normal situation. Both sounds of the heart were normal in character; the first was heard, but rather faint and distant, over the inner part of the area of dulness, transmitted over as far as the left border of the sternum; the second was heard, very loud and distinct, over the whole of the dull area, fading away towards the right and the left. No *bruit* could be heard in any part of the chest. The lung-sounds were normal. The respiratory murmur was audible over the usual position of the heart. Pulse 88, small, regular, equal at both wrists. The pupils were equal, eyesight good. Nothing abnormal could be detected in any other part of the body. The patient remained under observation nearly two months; no change was noticed in his condition.

Case II.—Henry R., aged 32, potter, had suffered from debility, palpitation, and pains in the chest for several years. The symptoms came on after he had been employed in some heavy work. He had been troubled with cough for several months. Expectoration was muco-purulent, occasionally streaked with blood. He had lost flesh lately; no night-sweats. He never had rheumatic nor scarlet fever, nor any severe illness. The patient was pale and ill-nourished. The impulse of the heart was felt to the right of the sternum in the fourth and fifth interspaces. On percussion, the cardiac dulness was found to extend transversely from the left border of the sternum to about an inch within the right nipple-line at the level of the third interspace (see diagram). Over this area the heart-sounds were heard, sharp and



Henry R.—Area of Cardiac and Hepatic Dulness.

valvular; both sounded exactly alike. At the base, the first sound was faintly heard, the second was also rather feeble. Pulse 120, feeble. There was no dulness over the lungs; the respiratory sounds were harsh on both sides. Temperature normal. Nothing abnormal was detected in other parts of the body.

RECURRING FIBROID OF THE SKIN.

By H. T. BATCHELOR, M.R.C.S., L.R.C.P., L.S.A.,
Queenstown, Cape Colony.

The following notes will be of interest if read by the light of a recent publication by Mr. Jonathan Hutchinson. Mr. Hutchinson there states, that, he has "never seen the recurring fibroid of the skin, on the upper extremities, on the head, nor, with one doubtful exception, on the upper part of the trunk." Supposing my diagnosis to be correct, the case I am about to relate will be one of recurring fibroid of the skin of the neck.

The patient, an elderly, spare man, with iron-grey hair, and dry skin, requested me to remove a small tumour from behind the ear. He told me it had been cut out by another medical practitioner twice within four months. The tumour was not large, not much bigger than a hazel nut, and my note of the operation runs, "removal of tumour from behind the ear, and two wart-like growths below it." The operation was done without an anæsthetic, and it appeared to me to be the simplest thing possible, to cut it out, in such a way that it would not return. The growth was distinctly in the skin; it could be taken up between the fingers of one hand as easily as a marble could be picked up, and it was felt to have no deep attachments. The removal was effected March 31st, 1885.

This man came back to me on June 2nd, 1885, when I again cut it out. He returned, November 8th, 1885, when it was removed for the last time by me. I have two of these growths in spirit. Each time the man presented himself the growth was larger. The measurements of the last are one inch and a quarter by length and breadth, irregularly round, and five-eighths of an inch in thickness. The last time I exposed the muscular structure of the sterno-mastoid in getting below it, and its situation corresponded with the apex of the mastoid process, and it invaded the posterior surface of the lobe of the ear. It began as a pimple, which the patient was in the habit of picking. He lived very much exposed to the heat of the sun, and wind and dust, in following his occupation. When last I saw him he was dressing it with an ointment, which had been recommended to him, as good for cancers, and its surface was ulcerated, fungating and bleeding. After removal, it generally healed up quickly, and began again in the scar. The last time it began to grow from the centre of the wound, as a sprout, before healing was complete.

It caused little or no pain, and there was no enlargement of glands. It will be remarked then, that a small tumour situated in the skin, freely movable, was five times removed by two different surgeons during the space of eighteen months; and that, at first, it was about the size of a marble, and at the last time only measured one and a quarter inches in diameter; the position of the tumour being on the neck, just behind and below the ear.

After these ineffectual efforts on my part, I began to grow faint-hearted, and concluded that nothing short of amputation of the head would meet the case. The man himself also displayed an unwillingness to be "cut about" or "hacked about" any more, and as I did not feel justified in suggesting the major operation, the case stands thus:—he has his tumour and I cannot rid him of it.

ON THE MANAGEMENT OF INCOMPLETE ABORTION.

Read at the conjoint meeting of the East and West Sussex Districts of the South-Eastern Branch.

By ARTHUR W. EDIS, M.D.Lond., F.R.C.P.,
Obstetric Physician to the Middlesex Hospital; Physician to the Chelsea Hospital for Women, etc.

The subject of incomplete abortion, or imperfect expulsion of the whole of the ovum, cannot fail to prove of interest to all who have to deal with the emergencies of general practice. The risk to the patient, whether from primary hæmorrhage or from septicæmia, is often very great; a fatal issue is by no means unfrequent, and even where this does not result, the general health may become seriously affected from the prolonged hæmorrhage, septic absorption, or uterine disorder ensuing in consequence. Apart from this, the anxiety experienced by the practitioner—the risk of his reputation suffering, even should he escape prosecution for malpraxis—renders the subject one of unusual importance, and, therefore, well worthy of consideration.

The consequences of incomplete abortion are far more serious than at first might be imagined. Many a young life has been prematurely cut short, the hopes of maternity blighted, or prolonged uterine trouble induced, in consequence of an early miscarriage, within a few months of the commencement of married life, not having been properly managed.

It will be beyond the scope of the present communication to allude even to the causation, symptoms, diagnosis, prophylaxis, or treatment of abortion generally. My remarks will be confined solely to the management of incomplete abortion, where the ovisac has ruptured, the embryo been expelled only in part—the placenta, either entire or in fragments, being retained in utero, and giving rise to hæmorrhage or septicæmia in consequence.

The principle of early and complete evacuation of the contents of the uterus, where the vitality of the ovum has been destroyed, and abortion is inevitable, although generally accepted by everyone competent to give an opinion, is yet too often neglected in actual practice, and leads to the most calamitous results. The following cases will illustrate this.

M. T., aged 27, single. When first seen in consultation with her medical man, who had only been called in a few days previously, I found her lying in bed, on her back, with the knees drawn up, the abdomen tympanitic, very tender on the least pressure. The pulse was 144, very feeble; temperature 103.2° Fahr. The tongue was thickly coated, red at the edges, and inclined to be dry. She was delirous at times, but could be roused to answer questions. There was persistent fœtid diarrhœa, constant sickness, and much pain complained of all over the abdomen. On vaginal examination, a sanious sanguineous discharge was found exuding from the os uteri, which was somewhat patulous. The uterus was enlarged, fairly mobile, retroverted. Thus far, no history had been obtained explaining her symptoms. Seeing that the patient was in a most critical condition, evidently suffering from septic peritonitis, I elicited from her paramour that she had had a miscarriage, procured some ten days previously by a midwife. She had missed two periods, and came up to town for the purpose of being set right. Two days afterwards, she had severe pain and profuse hæmorrhage, but I could get no well-marked history of any substance having passed. She became very feverish, and was compelled to keep in bed. It was not until nearly a week after this that a medical man was called in, and then he was told nothing beyond that she was losing blood.

The patient was too ill to bear much interference. The uterine

cavity was thoroughly irrigated with iodised water, quinine and opium administered, and every effort made to rally the patient; but she sank and died within twelve hours of my seeing her.

There can be no question that retained products of conception, decomposing within the uterus, had given rise to septic peritonitis. Had these been removed, and the case properly treated from the outset, the issue would, in all probability, have been different. One can but regret that skilled assistance had not been rendered until the patient's condition precluded any active treatment from being adopted.

In nulliparæ, where, after cessation of the catamenia for one or more periods, and the ordinary signs and symptoms of pregnancy exist, pain and hæmorrhage occur, showing abortion to be inevitable, our object should be to favour the expulsion of the ovum with as little delay as possible. The insertion of a carbolised sponge-tent into the cervix uteri, for a few hours, will not only serve to check the hæmorrhage, if this be at all profuse, but also to dilate the cervix, and so facilitate the expulsion of the ovum entire. It is in these cases, owing to the undeveloped or undilatable condition of the cervix, more especially where ergot has been too freely administered, that the ovisac becomes ruptured, the embryo expelled, and the chorionic villi or placenta retained.

Mere plugging the vagina with the intention of arresting hæmorrhage from the uterus is both unscientific as well as unsatisfactory, and should never be resorted to unless in severe emergencies, where either the practitioner has not the instruments at hand, or does not possess the requisite manipulative skill for passing a sponge-tent into the cervix uteri.

In such cases, small pieces of sponge wrung out of iodised or carbolised water, or other antiseptic solution, are preferable to the ordinary cotton-wool or strips of linen usually employed, in that the former tend to expand, and so fill up the vagina when moistened, whereas the latter shrink, and allow the hæmorrhage to continue. A vaginal tampon, in any case, should never be left in for more than a few hours without being removed.

In the event of a sponge-tent having been inserted into the cervix uteri, and the hæmorrhage arrested for the time being, the question will arise, How long shall this be left in before making efforts to empty the uterus? This will depend somewhat upon the time of the day or night when the practitioner has passed the tent, the amount of hæmorrhage which has already occurred, and other considerations. Owing to the extreme nervousness of the patient, her intolerance of any digital interference, the limited capacity of the vagina, or inability to depress the uterus by conjoined manipulation, owing to the patient holding herself so rigidly, the administration of an anæsthetic will generally be found requisite. This should invariably be entrusted to some competent assistant, and not left to the discretion of some unqualified friend or nurse. The operator is thus free to direct his attention solely to the evacuation of the uterus, which must be done systematically and thoroughly, not partially and imperfectly, as this increases the risk of hæmorrhage and septicæmia. The time selected, therefore, may be regulated somewhat by the practitioner's convenience; if the tent be inserted late at night, opium may be given to allay pain and secure rest, and the operation fixed for the following morning.

A sponge-tent should never be left in above twelve hours, and when removed, iodised or carbolised water should be freely injected into the vagina before attempting any further manipulation. If the cervix be already sufficiently patulous to admit the finger, or hæmorrhage is not an urgent symptom, the insertion into the cervix uteri of a sponge-tent is uncalled for.

Having first seen that the bladder is empty, the patient should be placed close to the edge of the bed, in the dorsal or left lateral decubitus, as may seem most convenient to the individual practitioner. With one hand pressed over the lower abdomen, the fundus uteri is then depressed, so as to enable the forefinger of the other hand to pass entirely into the uterus, when, if possible, the whole of the remaining ovum is swept out of the uterus. If this cannot be accomplished, the portion of placenta within reach must first be detached and removed; the uterus then generally contracts sufficiently to bring the remainder of the placenta within reach, when the finger is again employed to sweep it out, or scrape it off from the uterine wall.

Firm pressure should be employed from above, and the finger should not be withdrawn until the uterus is felt to contract, so as to avoid the formation of clots in the interior.

It is well to inject hot iodised water at 110° or 120° Fahr. through a metal tube or elastic catheter into the uterine cavity, to wash out any placental *débris*, and also to check further hæmorrhage, should this be troublesome. A binder should then be applied to the abdomen, as after ordinary labour, ergot administered, and the usual precautions taken to promote convalescence.

In practice, it will, however, often be found difficult, if not impossible, to determine whether the whole of the placenta has been expelled, and it is in these cases that danger arises, whether from recurrence of hæmorrhage, or from symptoms of septic absorption. If any doubt exist, it is better to explore carefully the cavity of the uterus. Denman long ago pointed out the fact that, where any portion of the placenta remains *in utero*, the cervix does not contract thoroughly, but remains more or less patulous. If symptoms of septicæmia have already declared themselves, it may be unwise to insert a sponge-tent. If any difficulty be experienced in passing the finger sufficiently far up into the uterus to allow of placental *débris* being removed, the ovum forceps will here prove of much service. Having inserted them well into the uterus, the handles are separated gently, and any projecting portion of placenta seized and removed, the operation being repeated in a different direction until the whole of the contents have been secured. Where the uterus remains unusually bulky, hæmorrhage recurs on the patient rising, or persists unduly long after the supposed miscarriage, or where the lochia are distinctly offensive in character, we may be pretty certain that the uterus is not yet empty. In place of contenting ourselves with the administration of ergot, our plain duty is to explore the cavity of the uterus. Instances have been recorded where portions of placenta have been extracted many months, and even years, after the miscarriage happened, no effort having been made to remove the cause, the symptom alone being treated.

The narration of a case of this nature may prove of interest as exemplifying practically the treatment indicated.

M. C., aged 40, had been married three years, up to which time she enjoyed most excellent health. She had a miscarriage six months after marriage, at the end of the second month from which she recovered perfectly. Six months later a second miscarriage took place, and since then she had never been thoroughly well. The periods, at first, were rather prolonged, but not irregular. About Christmas, 1884, serious hæmorrhage took place, and since that date hæmorrhage had been more or less constant, absent for a week or two, then suddenly beginning again. In November, 1885, she stated that she was subject to bursts of hæmorrhage every two or three days, with watery discharge in the intervals. There was no pain at any time of any moment.

On examination, the uterus was found to be bulky, fairly normal in position, mobile, the uterine sound passing upwards and forwards three inches. The cervical canal was somewhat granular, and there was much glairy mucous discharge, but not offensive. The cervix uteri was dilated by means of laminaria tents. Ether was administered, and the interior of the uterus explored. Several portions of hypertrophied mucous membrane were scraped off with the curette, together with some small nodular masses. Linimentum iodi was freely applied to the uterine cavity, which was then syringed out, and ergot administered every four hours. There was no return of hæmorrhage after this until about a fortnight subsequently, when the regular catamenial period came on, and lasted six days. The patient left for the country a month after her admission. Two months later, the husband wrote to me, saying, "There has not been the slightest hæmorrhage of any kind so far, nor has there been any return of the period." There can be little doubt, I think, that the removal of some placental *débris*, together with some hypertrophied mucous membrane, constituting the so-called fungous endometritis, served effectually to arrest hæmorrhage, and thus cure the patient.

In some cases, where the placenta is very adherent, and cannot readily be removed by the fingers or forceps, the blunt curette may be employed to scrape the surface, so as to remove all *débris*. This method is more often indicated in those cases where a portion of the placenta has been retained for many weeks or months after the incomplete miscarriage has taken place, and where a species of fungous or villous endometritis has been set up.

Syringing out the cavity of the uterus with hot iodised or carbolised water, at 110° to 120° Fahr., so as to remove all *débris*, where removal has been difficult, or where hæmorrhage is free, often proves of much service in lessening the risk of septicæmia. This may be repeated morning and evening for some few days, if deemed requisite. Swabbing out the cavity of the uterus with liq. ferri perchlor. or linimentum iodi, where the discharge has been very offensive, or the placenta very decomposed, is indicated in some cases, but should not be resorted to as a routine-practice.

It is of great importance to keep the patient quiet in bed for at least a week or ten days, apply a binder firmly to the abdomen, as after ordinary labour, and resort to vaginal injections. If the lochia be-

come in the least unpleasant or offensive, intra-uterine injections should be employed. Ergot and cinchona may be administered, with advantage, in most cases.

The administration of ergot is not an unmixed blessing. Where uterine action has already set in, ergot intensifies this action unquestionably; but if only a portion of the ovum be expelled, ergot tends to produce such an amount of contraction of the cervix uteri as to preclude further attempts at removal of the remainder. We may have to wait several hours until the influence of the ergot has passed off, before being able to insert the fingers or forceps to complete the delivery of the placenta. If hæmorrhage be severe, ergot is, of course, indicated, and must be given; but, when the hæmorrhage has ceased, it may be well to refrain from further administration of the drug until complete removal of the placenta has been effected, when its employment may again be persisted in. Where we have reason to believe that the whole of the placenta has not been expelled, and the hæmorrhage continues, or recurs on the least exertion, and ergot fails in enabling the uterus to throw off the retained portion, its employment should be discontinued, and proper means adopted to extract the remainder of the placenta.

I have seen instances where ergot had been given freely and continuously for several successive weeks or months, without the desired effect being produced. This illustrates the abuse, not the rational use, of the drug, and cannot be too strongly condemned.

It is with the hope of directing special attention to the absolute necessity of removing all placental *débris*, in these cases of incomplete abortion, that I have thought it worth while to occupy your time and attention on this occasion, and if I have succeeded in this, my object will have been fulfilled.

BATH AND AIX-LES-BAINS.

By E. J. TILT, M.D.,
Past President of the Obstetrical Society of London.

RETURNING the other day, with a patient, from Aix-les-Bains, I came across a leading article on Balneology, in a recent number of our JOURNAL, and my attention was arrested by the following passage.

"England possesses several springs of undoubted value, but, for some reason or other, they are less highly esteemed than water from foreign sources."

It struck me that, with regard to Bath, the reason was the bad system of management that has hitherto prevailed there. Bath has not the beautiful climate of Aix-les-Bains, its high temperature, and permanent sunshine. The waters of Aix-les-Bains are more efficiently mineralised, very much more abundant, and of a higher temperature than those of Bath, and their natural high pressure facilitates douching. Nevertheless, of the two thousand English who went to Aix-les-Bains last season for gout, rheumatism, and neuralgia, one thousand might have been as well cured at Bath, if the same system was followed there as at Aix-les-Bains. After deriving benefit from Bath waters some twelve years ago, I did my best ("Why We Go to Foreign Watering Places," *Lancet*, October 24th, 1874) to urge the medical men to change the wretched system of administration that had been handed down to them, but without being successful. I hear, however, with pleasure, that at last there is a great improvement in the working of the Bath waters, that Aix-les-Bains is being imitated as far as possible; so I again venture to make a few remarks on both these remarkable watering places.

From time immemorial the summer has been the season for treatment at Aix-les-Bains, and although the temperature be high, and reliably so, still patients are ever reminded by medical men and attendants to avoid catching cold after the douches.

One of the most experienced practitioners at Aix, Dr. Macé, told me that when the weather turns chilly, he did not like to begin the use of hot vapour douches—douches Bertholet. Such being the case, what can be thought of, I hope I may say, the old plan of telling patients suffering from chronic gout, rheumatism, and neuralgia, to come to Bath in the autumn, when the cold, wet, and windy weather has set in? It should be now extensively and persistently advertised, by the proper authorities, that the Bath season for *treatment* begins in June, and continues during the months of July, August, and September.

Dr. Tunstall, who wrote a good book about Bath, incidentally mentions that the baths and douches did much more good to the inmates of the hospitals who went to bed immediately after taking baths or douches, than to the rich patients who dressed and went home as they liked. If, in the warm climate of Aix, patients are carefully wrapped up in blankets and quickly taken home, and put to bed to sweat for an hour or so, with the aid of some warm drink, it is absolutely necessary to do the same in the uncertain climate of Bath; with gouty, rheumatic and neuralgic patients after they have been shampooed and douched at the baths. Aix-les-Bains belongs to the State; the buildings have been well planned, and on a handsome scale. The Bath waters belong to the corporation, have been managed by a committee of retired tradesmen, so the buildings are scattered, and their construction defective. About 1868 the corporation might have built a suitable establishment, but they preferred to let the land to a joint-stock hotel company, in one wing of which hotel, the corporation built a suite of baths at a cost of £12,000.

What I will call the bathing unit at Aix, consists of a large square lofty room fitted up with the requisite furniture for douching, etc. This room is entered on one side by two small closets, called dressing-rooms, placed side by side. A patient leaves his clothes in one dressing-room, and while he is being manipulated for twenty minutes, another is undressing in the adjoining room, and is ready to enter the bath-room as soon as it is vacant. The saving of time effected by this arrangement will be seen at once.

The Bath bathing unit, judging by the baths constructed by the corporation in the hotel I have spoken of, consists of a fine bathing-room, a large dressing-room, and a water-closet—a water-closet for every patient, as if the Bath water was more purgative than that of Carlsbad. Possibly, something can be done to rectify the defective construction of the buildings.

I was at Bath during the whole of August and part of September, 1874, for an indolent knee swelling, so I was at the Queen's baths every day for six weeks. There were not many bathers, but I certainly saw a dozen very bad cases of chronic gout and rheumatism, men that could with difficulty be got into the building. There was, however, no medical man to look after them; indeed, I never saw the face of a medical man at the Queen's baths during my six weeks' attendance.

At Aix-les-Bains, the medical men live at the Etablissement from 8 to 11 A.M. They see their patients as they come, move about in the passages to ascertain how they are getting on, so as to continue or modify the treatment. The Bath medical men should imitate this mode of practice, if they want to rival the success of Aix-les-Bains; doing their best that the bulk of the bathing may be done between the hours of 7 and 1 o'clock.

I have had to say so much in praise of Aix, that I trust its medical men will not mind my stating that they do not pay sufficient attention to the diet of their patients. There is this difficulty about the dieting of patients at a watering place: that they are in a minority, compared to relatives and friends that accompany them, and who require the best of living as they are in perfect health. It is customary at Aix to board at one of the many excellent hotels. The breakfast is tea or coffee, with bread and butter, and is governed by the time of the bath, which it should precede; lunch is at 12 o'clock, and dinner at 6 o'clock, and of the usual table d'hote type.

With regard to the lunch, I will describe what I used to sit down to at the Hotel Château Durieux, a most comfortable hotel, with a first-rate cook. First came omelette, or eggs done up in some other way, then fish, boiled, fried, and sometimes a salmon *mayonnaise*. There followed two stews of mutton, veal, or chicken, with rich sauces and, lastly, broiled steak or cutlets. Cheese and strawberries concluded the repast. A gouty friend, who was stopping at the Europe, asked me whether this was the kind of food for a man who was undergoing an elaborate treatment for gout.

Some dozen acquaintances under different Aix medical men, for gout or rheumatism, assured me they had not been told what to choose out of the different dishes I have enumerated; and, at my hotel, I was amazed to see patients who described themselves as having been martyrs to gout, eat heartily of almost everything, both at lunch and at dinner. The previous shampooing and douching accounts for good appetite and better digestion; but I am convinced that this promiscuous high feeding greatly diminishes the amount of good that might follow the full treatment of chronic gout, rheumatism, and neuralgia at Aix-les-Bains.

To like to get the most for our money is a national characteristic; and, as the wine is included in the board, few order better wine. We used to sit down about 80 to meals at the Hotel Château Durieux, and only two or three ordered other wine. This is decidedly to the advantage of the patients I have had in view, provided they do not take too much of the wine, and take it mixed with water or Vals water; but I have seen patients, who for years had been suffering from gout, take more than a bottle a day of this second-rate decidedly acid *vin ordinaire*, day after day. Those who think of sending patients to Aix-les Bains should carefully advise them as to diet and wine.

A CONTRIBUTION TOWARD THE NATURAL HISTORY OF ROTHELN.

By REGINALD JOHN RYLE, M.A., M.B.Oxon.

In the chapter on Rotheln contained in his fine work on *Medicine*, the late Dr. Fagge urges the discrepancies of statement which occur, even in modern writings, "concerning the supposed third exanthem" as an argument against the view that the disease is distinct from measles. He points out that Trousseau insists on the absence of catarrh during the prodromal stage, while Thomas insists on its presence; that Thomas makes the duration of this stage (if not absent altogether) two to twelve hours, and Trousseau one to four days; that Trousseau and Vogel make the rash give rise to intense itching, while Thomas declares this to be seldom the case.

The following condensed record of two cases, in which, in spite of considerable differences in the symptoms, there could be no reasonable doubt that the patients were sufferers from the same disease, may be of interest as showing that the force of objections based on such discrepancies may easily be overrated.

Case I.—On February 24th, I was called to see a young lady who had that afternoon found a rash upon her skin. There was a clear history of a previous attack of measles some years ago. Before February 24th, there had been no recent headache, sore-throat, or coryza. The patient had spent the day in sight-seeing, denied any sense of illness whatever, and was only anxious for medical advice from a fear that the rash "might mean something infectious." When first seen at 11 P.M., the rash referred to was found to be most abundantly developed over the prominent parts of the cheeks. The forehead was less thickly covered, and the region nearest the roots of the hair almost free from it. The rash consisted of small spots, distinctly raised, and with but little surrounding areola. They were nowhere confluent, of a pale rose colour, with the intervening skin generally clear, only somewhat flushed where spots were most abundant. There was no fulness about the eyelids, and a complete absence of the blotchy, puffy appearance of measles. The spots were very numerous about the neck and shoulders, and more thinly scattered about the arms. There was diffused redness of the soft palate and pillars of the fauces, and little or no enlargement of the tonsils. There was a slightly enlarged gland each side at the angle of the jaw. The glands in the posterior triangle and the suboccipital glands were enlarged on each side. The pulse was 80, and the temperature 99.4°. After two or three days, during which the temperature was normal, and no sign of ill-health showed itself, the patient began to experience some soreness of throat, together with a frequent hacking cough. These symptoms lasted a few days only. The glands in the neck became slightly tender, and then subsided, and in ten days from the appearance of the rash were no longer recognisable. No desquamation was seen at any time.

Case II.—The elder sister of the above was said not to have had measles. On February 24th, this patient was living with her sister, and had, in fact, been sharing her bed. That night, however, she slept elsewhere, and next day left the house for a visit to some friends at a distance. On March 11th, she returned to her sister's lodgings. Both on this day and the next she felt unwell, and complained of slight sore-throat and headache. On March 14th, she noticed some lumps at the sides of the neck; and, on March 16th, a rash appeared on her face, which closely resembled the rash which her sister had had. On this day (March 14th), the temperature was 100°, and the tongue clean. Moreover, the patient had now no coryza, sore-throat, headache, or sense of illness. For the next five or six days there was some tenderness of the glands in the neck, a troublesome sense of itching and pricking in the skin, and a slight dry cough. The temperature generally was about 99°. At the end of this period, however, the temperature rose, the patient felt languid and chilly, the cough became incessant, though unaccompanied by any expectoration, and the throat became very sore. Thus, on March 24th, the palate, tonsils, and pillars of the fauces were bright red and swollen; the gums, also, were red, and the teeth tender to bite upon. The tongue was red at the tip, and much furred posteriorly. The patient could only swallow with difficulty, and complained of headache, sleeplessness, and pains all over. In addition to the chain of enlarged cervical glands and suboccipital glands, there was found to be an enlarged and somewhat tender gland in each axilla. Some desquamation was seen, for the first time, about the upper lip and sides of the nose; and, at the same time, a fresh rash was developed upon the neck, chest, and shoulders. This rash was a pale rose-coloured blush, distributed in irregular patches, of varying shape and size, with smaller areas of normal skin here and there mixed with it. There were also soreness of the eyes and photophobia, but no reddening of the conjunctiva. The temperature was 102.4°. With the above symptoms, the case was not unlike one of scarlatina; but such a diagnosis would, of course, not have been compatible with the previous course of the illness, nor with the already present desquamation, nor, perhaps, with the comparatively low temperature accompanying the severe sore-throat. The condition of the throat was at its worst about March 24th, and by March 27th the severer symptoms were subsiding. The progress of the recovery was somewhat delayed by a slight attack of pleurisy on the right side, which first showed itself when the sore-throat was beginning to subside, and which occasioned a slight rise of temperature for some days after the fauces had resumed their normal state.

Remarks.—It will be remarked that there was a history of previous measles in the first of these two cases, but not in the second. Accordingly, it may be suggested that the disease was, in reality, measles in both cases, and that the greater severity of the attack in the second case was due to the lack of protection by a previous infection. But to this view there are two objections. In the first place, all the most significant and characteristic features of measles were no less conspicuously absent from the unprotected second case than they were from the first, and the circumstances which made the illness a severe one in the second case were not among the more typical features of measles. In the second place, both cases—and the second no less than the first—had certain characters unlike those of measles. Thus, in each case, there was a rash which differed from that of measles in its colour, its local distribution, and other characters; in each case, the affection of the lymphatic glands was remarkable for (*a*) its early appearance (unconnected with the condition of the throat); (*b*) the site of the glands attacked, the suboccipital and glands of the posterior triangle being especially involved; (*c*) the symmetrical character of the glandular affection; and, in each case, the first substantial complaint of sore-throat came when the rash had almost gone.

In short, the clinical history of these two cases, in the main, resembles that which Dr. Tonge Smith gave in the *Lancet* for 1884, as representing his experience at the London Fever Hospital of 156 cases, which were diagnosed as cases of rötheln.

If then we may regard the cases as examples of rötheln, it is interesting to note the points in which their clinical histories differ, for they are among the "discrepancies" referred to in Dr. Fagge's criticism.

1. The first patient denied even the slightest malaise up to the time when the rash first appeared, while the second suffered from four or five days of "prodromal" illness, at the end of an incubation-period of about a fortnight.

2. The first experienced no sense of irritation of the skin, while the second made complaint of itching and pricking for several days after the rash first disappeared.

3. In the first case the sore-throat was of the mildest type, while in the second it resembled the sore-throat of a patient with scarlatina in its appearance and severity.

4. In the first case there was no noticeable desquamation, while in the second it was obvious enough to be noticed both by the patient and her friends.

ST. KILDA: ITS INHABITANTS AND THE DISEASES PECULIAR TO THEM.

By C. R. MACDONALD, M.D., Beith, Ayrshire.

Situated in the lonely expanse of the North Atlantic, about sixty miles west of Harris, is the small rocky island of St. Kilda. Until within the last few years, very little was generally known regarding the natives of this remote islet. Except when a smack went once or twice a year with the factor to collect the rents for the proprietor, Macleod of Macleod, of Skye, or when a yacht might on a rare occasion visit the island, the inhabitants had no communication with the outer world. For the last few summers, however, several trips were made to it by steamers from Glasgow, but, from its almost inaccessible nature no vessel ventures near it during the winter months. The only spot where a landing can be effected is in a small bay on the south-east of the island, but should the wind blow in this direction any boat attempting to reach the shore would be dashed to pieces on the rocks.

St. Kilda is between two and three miles in length, and about two miles at its broadest part. The highest point on the island is 1,220

eet above the level of the sea. With the exception of the bay mentioned, its rugged coast consists of lofty crags and gigantic cliffs, which form the home of countless numbers of wild fowl. These birds are of the greatest importance to the natives. The flesh and eggs of the fowl constitute their chief sustenance, while, with the feathers, they partly pay their rents, and barter for goods when the factor makes his annual visits. The birds which make these wild rocks their habitat are the fulmar petrel (*fulmarus glacialis*), guillemot (*uria troile*), razor-bill (*chenalopex lorda*), puffin (*fraterculu arctica*), and shag (*graculus cristatus*). The latter is not used for food. Boreray an adjacent rocky islet, is crowded with solan geese, although there are none on the main island.

There are a number of land birds on St. Kilda, such as the starling, snipe, and others. All the rocks are igneous. The soil is light, and the natives burn dried turf for fuel. There is no system of drainage. There is no tree or shrub on the island, but the hillsides are covered with short grass on which sheep and a small-sized breed of cattle graze.

On patches of arable land, oats, barley, potatoes, and a few cabbages and turnips grow. The only other domestic animals are dogs and cats. Formerly, they had small ponies, but the breed has become extinct. To feed the enormous number of the winged tribes of this island, the supply of fish in the surrounding sea must be very abundant. The wingless bipeds, however, are not such successful fishers. Probably their boats are not sufficiently large for such a coast, and, besides, they have no means of trading with the outer world, so that the ling and cod they catch, except a few used by themselves, are salted and stored up for the factor. Like that of the Outer Hebrides, the climate of St. Kilda, though humid, is not cold in winter, and snow is seldom seen there; but, for a considerable part of the year, the island is frequently enshrouded in mists, and exposed to severe storms.

The population of St. Kilda is between seventy and eighty. There is no authentic account to enlighten us how or when it became inhabited. From the fact that even tradition is almost silent on this point, it must have been peopled at a very remote date. The natives are Celtic, and speak only the Gaelic language. With the exception of the scanty remarks by Dean Monro, who visited St. Kilda about 1549, the earliest reliable account we have of this island is by Martin, who visited it in the end of the seventeenth century. Martin appears to have been an educated native of one of the Western Isles, who devoted his time to Hebridean research. After visiting St. Kilda, he writes:

"The inhabitants are about two hundred in number, and are well proportioned. They speak the Irish language only; their habit is much like that used in the adjacent isles, but coarser. They are not subject to many diseases; they contract a cough as often as any strangers land or stay for any time among them, and it continues for some eight or ten days; they say the very infants on the breast are infected by it. The men are stronger than the inhabitants of the opposite western isles; they feed much on fowl, especially the solan geese, puffin, and fulmar, eating no salt with them. This is believed to be the cause of a leprosy that is broken out among them of late. One of them, that had become corpulent, and had his throat almost shut up, being advised by me to take salt with his meat, to exercise himself more in the fields than he had done of late, to forbear eating of fat fowl, and the fat pudding called "giben," and to eat sorrel, was very much concerned because all this was very disagreeable, and my advising him to eat sorrel was perfectly a surprise to him; but when I bid him consider how the fat fulmar eat this plant, he was at last disposed to take my advice, and by this means alone, in a few days after, his voice was much clearer, his appetite recovered, and he was in a fair way of recovery. Twelve of these lepers died the year after of this distemper, and were in the same condition with this man."

It is needless to say that Martin's advice regarding salt would be unnecessary at the present time, as the factor supplies them with that essential commodity. The pudding called "giben," to which Martin refers, is made with the fat of a young solan goose put into an old dried stomach of another fowl, with oatmeal, and boiled.

The leprosy here mentioned, of which there is now no trace on St. Kilda, was probably the lepra tuberculosa, identical with the leprosy of Iceland described by Sir Henry Holland, that of the Faroe and Shetland Islands described by Dr. Edmonston and others, and that still met with in Norway, where, according to the recent researches of M. Leloir, there are from 1,500 to 1,800 lepers. It is decreasing, however, as, in 1856, the number of lepers in Norway was 2,867. The disappearance of leprosy from the British Isles is generally supposed to be due to the drainage and greater cultivation of the soil. This, however, would not account for its ceasing in St. Kilda. As to the cough contracted "as often as any strangers land or stay for any time among them," we shall notice further on.

The inhabitants all live in a village at the head of the bay on the south-east of the island, where they are well protected from the prevailing winds by a precipitous semicircular ridge of high hills, which forms, as it were, a huge wall all around them, except towards the bay, to which their houses face. The village consists of sixteen detached cottages in a straight row. Besides these, there are the church and manse, a house where the midwife resides, and another house, close to the shore, which is used by the factor as a store when he visits the island. These cottages are snugly built with stone and lime, and roofed with zinc. They were built upwards of twenty years ago by the proprietor. The previous dwellings were miserable-looking huts, the walls about five feet thick, built of loose stones packed with turf, and thatched with straw. Each house has two rooms, which are scantily furnished, while the walls do not appear to have been white-washed since they were built. With all their virtues, I must say that their houses are not models of cleanliness. The deposit of carbon from the peat-reek on the ceilings and walls is very considerable, while the epidermis of some of the old people I examined did not afford less proof of their being strangers to the use of the bath. From the situation of the houses, it is probable that they must be more or less damp in winter.

The food of the St. Kildeans consists of the flesh and eggs of wild fowl, mutton, fish, potatoes, oatmeal-cakes, porridge, and milk. They likewise use tea and sugar. The women are extremely fond of sugar and sweets. The men have a keen relish for tobacco, especially that strong, coarse twist, a supply of which they expect from every stranger who visits the island; while the fair sex look as eagerly for their allotment of sweets. As for fruit, they seldom or never see any. There is an abundant supply of good spring water. The natives are very temperate in their habits; and, although they generally keep a little whiskey in their houses, drunkenness is entirely unknown among them. They are all well clad. From their own wool they spin and weave cloth. Except on Sundays and other rare occasions they never wear boots or shoes.

Since Martin visited St. Kilda the population has much decreased. We are told that, in 1730, an epidemic of small-pox broke out in the island, and left only between thirty and forty individuals, chiefly children. These increased to a population of eighty-eight in 1759. The infection of small-pox was brought from Harris. Since that time the population has been gradually decreasing. The chief cause of this is trismus neonatorum, which carries off the majority of the infants. The number of infants that die of this affection is variously stated; but, from what I could learn, fully 50 per cent. of the children born in the island die within a few days from their birth.

Many theories have been brought forward to account for trismus neonatorum. Impurity of the atmosphere has been pointed out as a cause. There is no doubt that in Ireland this appeared to have a connection with the disease, as manifested in the records of the Dublin Lying-in Hospital, where, in the beginning of the present century, the deaths from it were about 18 per cent. of the children born there. This condition of things immediately improved in a very marked degree when means were adopted for the efficient ventilation of the hospital, and in a few years the disease almost disappeared. Dirt, with defective ventilation, would likewise appear to be a cause of the disease in Iceland, and in other countries where it is common. These unsanitary conditions, however, do not altogether account for it in St. Kilda. In the first place, St. Kilda has been inhabited probably a thousand years—at any rate, several centuries. As Martin makes no reference to this affection when he visited St. Kilda in the end of the seventeenth century, we infer that it was unknown then; so that trismus has evidently been in St. Kilda not much over a hundred years.

We know that the sanitary condition of the people was not better when Martin visited them than it is at the present time. Before the present cottages were built, about twenty-five years ago, the old hut of the St. Kildean was quite a different dwelling. The only decent aperture in it was the door, through which an average-sized man could not pass without almost doubling himself. The fireplace was a flat stone in the middle of the floor, while a small hole in the middle of the roof permitted of the exit of an insignificant portion of the peat-reek. To complete this arrangement, the whole year's cattle-manure was collected in the hut in which they lived, until the floor rose several feet above its level. This was, no doubt, the state of matters when Martin visited the island, for he says: "Their beds are commonly made in the walls of their houses; and they lie on straw, but never on feathers or down, though they have them in greater plenty than

all the Western Isles besides. The reason for making their bedroom in the walls of their houses is to make room for their cows, which they take in during the winter and spring."

In the present houses, although there is still room for improvement, there are no cows kept, the doors and windows are sufficiently large to allow a constant interchange of the air within and without, and the smoke is conveyed out by chimneys. With all this progress in sanitary matters, the infant mortality is not decreasing. We may, therefore, conclude that the disease is not due to deficient ventilation, at least in St. Kilda. Another cause mentioned is filth irritating the wound left by the falling off of the funis, giving rise directly to septicæmia, or first producing inflammation of the umbilical vessels, resulting in blood-poisoning and trismus. It cannot be denied that this condition of the umbilical vessels has been noticed in some instances where the children died of convulsions: but, in the majority of cases in which phlebitis of the umbilical vein was found, death had resulted from other diseases. Dr. Milaner, of Prague, who recorded the results of forty-six cases of fatal inflammation of the umbilical vessels in children born in the lying-in hospital in that city, states that convulsions occurred only in five of the number (West's *Diseases of Infancy and Childhood*, 6th). As to the uncleanly habits of the St. Kildeans, I do not believe they are worse than the greater number of the natives of the Outer Hebrides in this respect, and their dwellings are immensely superior to many places we find in the slums of our large cities. We must, therefore, look for some other cause than the irritation of the navel by dirt to explain trismus in St. Kilda.

The late M. Parrot, of Paris, maintained that this disease was entirely due to changes in the urine, which were brought about by artificial feeding. Trismus, in his opinion, was a form of uræmic convulsions. In St. Kilda, the infants are not put to the breast for the first week, but cow's milk and water, with a little sugar, are administered till they are allowed to suck their mother. This cannot account for the disease, as we find infants are fed on the same principle in other places without any apparent bad results. Moreover, the mortality in the Dublin Hospital could not be due to artificial feeding, as the infants were all suckled by the mothers.

The late Dr. Marion Sims, in the *American Journal of the Medical Sciences*, in 1846, and further discussed in 1848, enunciated the theory that trismus nascentium was due to a displacement of the cranial bones. In the same journal for January, 1884, Dr. Hartigan, of Washington, revives this doctrine, while he rejects all the theories that others have brought forward to explain the etiology of infantile trismus. He maintains that the true pathology is a malposition of the cranial bones, generally an inward displacement of the occipital bone. The displacement of the bones, he says, is normal at birth; but, when it continues for any length of time, it gives rise to this disease by its undue pressure upon the medulla oblongata and its nerves. While granting that these displacements may occasionally exist to such an extent as to give rise to trismus, yet the frequency with which the disease is met in some parts, while it is unknown in other places, would naturally lead us to seek some other explanation as to its causation.

I shall now briefly enumerate the various theories of the natives, and of others who visited St. Kilda, regarding this disease. The majority of the natives believe that the intrusion of Kjaw is a curse which hangs over St. Kilda, and, consequently, when an opportunity occurs the mothers go to Harris to be confined. This, however, does not seem to have much preventive against the usual calamity. Some have suggested that it is a wise provision of Providence to prevent the overcrowding of the inhabitants upon a small island where the food-supply is limited; while some assert that it is caused by the mothers eating too much of the flesh of the fowl. Others, including Mr. Sand, a gentleman who lived some months on the island and wrote an interesting small book on it, believe that the infants are [illegible] Lastly, it is the opinion of others that trismus results from too long-continued intermarrying for a long period.

Without pretending to know the pathology of this disease, I am of the opinion that consanguinity we must look on as the most likely predisposing cause of trismus in St. Kilda. After several centuries of intermarriage we find that, in 1764, the inhabitants were nearly all related by small pox. In less than other thirty years, this reduced number was more than halved itself. We then hear of the same infant mortality for the first time in a work published by Macaulay in 1764. It is true that the injurious results usually attributed to consanguineous marriages have not manifested themselves in St. Kilda. There are no cases of deaf-mutism; insanity and idiocy are unknown; and cases of scrofulosity have been extremely rare. Nay, the natives, considering their isolated condition, are a most intelligent people. But we must not lose sight of the fact that the mental tension to which we are daily exposed is absent to the natives of St. Kilda. From year to year, life in this lonely isle maintains its constant, quiet, peaceful uniformity. It thus appears to me that the deteriorating effects of consanguinity have in St. Kilda assumed an unusual phase, predisposing the newly-born infants to a hyperæsthesia of the nerve-centres, which may be excited by deficient ventilation, dirt, improper feeding, or other cause. Why this condition should remain only during the first few days of the infant's life, we can no more explain than we can account for its existence. In other places—for example, in the Dublin Hospital before its unsanitary condition was rectified—deficient ventilation may only have been a secondary cause. Some remote cause may have predisposed the disease by those inmates of the lying-in hospital. The great mortality of the infants from lock-jaw in the small island of Westmannoe, off the coast of Iceland, is probably due to the same cause as in St. Kilda. Its frequency in hot climates has been attributed to sudden alternations of temperature, but to whatever degree this may constitute a factor of the disease in tropical climates, it certainly can have no influence in the causation of the disease in St. Kilda.

There is another disease which, in its mode of attack, is peculiar to the people of St. Kilda. The natives call it *cnatan-na-gall*, or strangers' cold. This is the cough to which Martin refers, and which has been vouched for by the Rev. Kenneth Macaulay, who was a missionary for some years on the island, and by every person who has resided for any length of time in St. Kilda, including the Rev. John Mackay, their present pastor and law-giver. When any stranger lands there, the natives almost immediately contract an affection of the nature of influenza. It appears that there is no difference whether the stranger has a cough or is free from any bronchial affection at the time. Like their ancestors, the present inhabitants fully believe in this mode of contagion of the "strangers' cold." Their faith in it goes so far that some of them allege they feel in the presence of strangers a sense of oppression about the chest. I fancy this must be more imaginary than real. Be that as it may, there is no doubt as to the sequence. The symptoms of this disease are, I am told, the following. Some of the natives, as I have mentioned, feel at once symptoms which are premonitory of the affection. As a rule, the invasion is sudden, but, in some cases, it is gradual. The patient complains of a feeling of tightness, oppression, or soreness in the chest; lassitude; in some cases pains in the back and limbs, with general discomfort and lowness of spirits. In severe cases there is marked fever, with great prostration. Sooner or later a cough sets in, which for the first day or two is dry; then clear viscid expectoration appears, getting soon muco-purulent. In a few days, these unpleasant symptoms usually disappear, except the cough, which in some cases lasts for weeks. In mild cases the patient merely suffers from a cough for a few days. The minister of St. Kilda, who has been eighteen years on the island, bears strong testimony to this "strangers' cold." He told me that it generally passes over all the natives, although he escapes, and occasionally a few of them are confined with it to bed for several days; but all the cases, as far as I could learn, terminate in recovery. The natives likewise believe that a boat from some parts, such as Glasgow or Liverpool, will bring a more severe form of the "cold" than one from the Hebrides.

Although they invariably suffer from this affection when the first boat goes to the island every year, or when there is a long interval between the arrival of boats, still they do not now all suffer when strangers go there within short periods. Mr. Sand, who resided in St. Kilda in 1875 and 1876, states that on the arrival of the factor's smack every one of the natives was seized with this affection; and the next strangers that landed on the island were a number of Austrian sailors from their wrecked vessel, when all the natives again suffered without exception. When I visited St. Kilda in June last year, I noticed that almost every person on the island was suffering from a cough. This cough, I was told, they contracted from a party on board a steamer which was there a few days previously. I examined the chest of a few of them, and I could hear the moist *râles* of bronchial catarrh in one or two of the worst cases. I asked the minister if he could in any way account for this affection. He told me that he had no doubt as to its cause. The air in St. Kilda, he said, was so pure, and as the natives were unaccustomed to inhale any impurities from their atmosphere, they were liable to be attacked in this way whenever people from other parts, where the air is more or less polluted, visited St. Kilda. Although works on germ-theories and micro-organisms have never figured in the St. Kilda minister's library, yet I do not think that his theory of the cause of this disease is far from being correct. It is very probable that the atmosphere in St. Kilda is free from a number of disease-causing organisms, which

are rife in other parts, where the inhabitants are more or less inured to them. In this way, it is possible that these agents of disease are innocuous unless a chill, damp, or other condition inimical to health predisposes the individual to their attack. Not so in St. Kilda. This inoculation of the inhabitants does not take place, consequently they suffer as a rule when they are exposed to their influence. Is it not also possible that consanguinity may be a factor in the predisposition of this disease as well as of the infantile affection?

As far as I could learn, there never has been a *bonâ fide* case of phthisis pulmonalis. Some people were said to have died of "caitheabh," which, in their language, means a wasting; but, considering their ages and other circumstances, I am led to believe that chronic bronchitis was the cause of death, and not phthisis. As to the other diseases existing there, I can fully confirm what Dr. Acheson, R.N., of H.M.S. *Jackal*, states in his notes of a visit to St. Kilda, which appeared recently.

As no medical man has stayed longer on the island than during the short periods boats usually anchor in its somewhat unsafe bay, all our information regarding the trismus neonatorum and the "strangers' cold," must still be considered unsatisfactory. The accounts we have, however, of the diseases which are peculiar to the natives of St. Kilda, are sufficient to show that here is a field where scientific observations might throw much light on some obscure points in the etiology and pathology of disease; while, from an ethnological, as well as from a medical point of view, this small community, isolated for many centuries from the outer world, forms a subject for much interesting study.

SATURNINE GOUT, AND ITS DISTINGUISHING MARKS.

By G. LORIMER, M.A., M.D.Edin., Buxton.

Lead-impregnation is a predisposing cause of gout. In gout so caused, two morbid influences must be considered: 1. Lead-impregnation, with the blood-changes and cachexia which it induces; 2. Gout, with its complications and tendency to tissue-degeneration. It is proposed to inquire if their mixture affects the course of the latter, and confers upon it any special distinguishing characters.

It may be premised that, in the initial stages in some cases, no deviation from the appearances of ordinary gout is observed; that the course and character of the disease may be affected by the relative predominance of one or other morbid state; and further, that there s no one and special sign which marks saturnine gout as a distinct morbid entity. The appearances observed in the fully developed and more advanced stages are such as *à priori* might be expected to occur, but, taken in the aggregate, constitute a group of distinguishing marks.

The conclusions arrived at are based upon an analysis of 107 cases of gout due to plumbism, which have occurred in the writer's experience, and the subsequent remarks constitute a record of facts so observed.

Briefly to summarise, the distinctive marks are as follows.

1. *Age.*—The first attack of gout due to lead-impregnation occurs at an earlier age than when independent of it. Of 107 cases, the first attack occurred prior to 35 in 70 cases; and, in the remaining 37 cases, occurred for the first time between the ages of 35 and 65. This contrasts with the history of non-saturnine gout; for the first attack of the latter usually occurs from 35 to 40, while acquired gout is frequently a disease of later life.

2. *Hereditary Tendency.*—In saturnine gout, the influence of direct hereditary predisposition is less marked. Of 107 cases, it was noted in 9; and, even admitting that deductions drawn from negative proofs are only partially conclusive evidence of its absence, still, this percentage contrasts with non-saturnine gout, where hereditary predisposition is found to occur in at least 50 per cent. When hereditary tendency includes the arthritic group of diseases, the predisposition is increased from 9 to 30 per cent.

3. *Anæmia.*—In gout, the blood-corpuscles undergo no change in number and quality. The anæmia of saturnine gout results from the lead-cachexia, and is probably due to the action of lead on the blood. The red corpuscles are diminished in number, the white sometimes increased, and the red colouring matter is reduced. Anæmia was noted in 75 cases; in the remaining 32 cases, it was less marked or absent. The anæmia of saturnine gout not only contrasts with the sanguineous arthritic diathesis, but affects and modifies the type and progress of the disease.

4. *Asthenic Type of Arthritis.*—From the early age at which saturnine gout occurs, when functional activity is more vigorous, asthenic and acute type of arthritis might be expected to prevail. In the early attacks in many cases, and in subsequent attacks in a minority of cases, the arthritis assumes this type; but, in the majority of cases, the type of arthritis is athenic or adynamic. The local and constitutional phenomena are less intense, but more persistent, lingering, and obstinate, and show a tendency to pass insidiously into a chronic form. The asthenic type of arthritis appears due to impaired vital activity, resulting from the cachexia, and to organic renal changes which subsequently arise.

5. *Albuminuria.*—The experiments of Ollivier, denied by Rosenstein, but repeated with affirmative results by Charcot and Gumbolt, show that albuminuria occurs in lead-impregnation. On the other hand, Dr. Garrod has found that in gout, especially in its chronic form, albuminuria is present in 26.5 per cent. of cases. *A fortiori*, it follows that, in saturnine gout, albuminuria would occur more frequently. In the 107 cases, it was present in 89, either as an intermittent or permanent condition. In 18 cases it was not noted. In the early history it may be absent, in subsequent stages it may be intermittent, but it may be doubted whether it is ever entirely absent during the whole progress of the disease. A daily examination of the urine has, in the writer's experience, seldom failed to discover its presence, and there is no sign in saturnine gout more constant, certain, and characteristic. Further, the specific gravity of the urine is diminished, averaging 1012. The quantity of uric acid is decreased, and, in the final stages of the disease, is absent altogether.

6. *Arterial Thickening and Degeneration.*—This condition, noted in sixty-nine cases, consists of a sclerosis of the arterial coats, along with atheromatous changes. It is, in fact, a premature ageing of the arterial system. *a*. It may be due to the action of lead, which causes contraction of the muscular walls of the arteries, and raises arterial tension. *b*. It may be connected with the renal changes which arise in saturnine arthritis. *c*. It may depend on the condition of the blood in gout, which gives rise to increased arterial tension, and predisposes to atheroma. Cardiac hypertrophy is observed in saturnine gout, especially at the advanced period of the disease. The arterial changes, however, may occur independently of the cardiac. Pericarditis has been noted by Charcot and Gumbolt. One instance only was noted by the writer in the cases referred to.

7. *Cutaneous manifestations* of gout are seldom present in saturnine arthritis. Of 107 cases, one was associated with psoriasis and one with eczema, and in the latter instance there was a hereditary history of gout, contrasting with non-saturnine gout, where eczema occurs in 18 per cent. of cases.

The blue line upon the gums, due to formation of lead-sulphide, was noted in eighty-seven cases. It is a sign which may indicate the cause of the gouty phenomena.

Gouty affections of the eyes were of infrequent occurrence. One case of iritis was noted. Exception, however, may be made to neuro-retinitis, in the causation of which gout and plumbism appear both to participate.

Joints affected in Saturnine Gout.—In twenty-eight cases, the joints of the feet were involved, in seven of which the great toe only was implicated. In twenty cases, the joints of the hands. In thirty-four cases, the joints of the hands and feet were both affected. In the remaining twenty-five, the knees also were implicated, in four of which the elbows also were affected. In twenty-three cases, tophaceous deposits were noted on the helix of the ear. Gout associated with lead-impregnation, however, seems to attack the kidneys. Gout associated with alcoholic excess generally attacks the joints. Lancéreaux has observed that, in saturnine gout, uratic deposits are less abundant, and with this opinion the writer's experience is in some measure in harmony. It is, however, a question of degree, not of kind. Their presence is conclusive evidence of gout.

The experience of some observers is that rheumatism, and not gout, is associated with plumbism, and the difference is ascribed to the absence of previous habits of alcoholic intemperance. The explanation is incomplete. Gout may supersede rheumatism. The writer has observed more than one instance in which the question of alcoholic intemperance might be dismissed, where plumbism was originally associated with rheumatism, and in which uratic deposits occurring twelve years subsequently, showed unequivocally the gouty character of the disease. Such cases seem to lend some countenance to the doctrine of a "basic arthritic diathesis," out of which are evolved, under special causes, the several arthritic diseases.

How far saturnine gout may be due to the action of lead on the pneumogastric nerves, leading to imperfect metabolism, and on the trophic centres of the joints in the spinal cord, are subjects at present in the region of conjecture.

A CASE OF FÆCAL IMPACTION IN AN INFANT FIVE MONTHS OLD.

By A. MARMADUKE SHEILD, M.B., F.R.C.S.

The child was first seen by me on March 15th, 1886, and this history obtained. The mother, being unable to nurse, hand-feeding was resorted to at the end of the second month. Cow's milk, sweetened, and diluted with water, was at first given, but this was stated to have caused sickness, and was discontinued. A patent farinaceous food was next employed, slightly mixed with milk; and this, it was related, was "kept down" by the infant, who seemed to improve for a time; but soon new troubles arose. For the last six weeks the bowels had been very confined; small motions, "like pebbles," of a clay colour and very offensive, passing with much pain and difficulty. For the last week, the child had vomited incessantly, both after feeding and at other times, and had wasted rapidly. Moreover, blood and mucus passed from the bowel, mixed with liquid fæces, described by the attendant as "bloody diarrhœa." The infant had been ruptured from birth; and the nurse stated that the protrusion was returned with difficulty. Occasionally the lower bowel had been noticed to prolapse. The case had been treated with manipulations of the belly, and castor-oil. The former had increased the pain and distress; the latter remedy was at once rejected. Enemata of warm water had been administered, but hardly in a very thorough manner. Several attacks of syncope occurred in the last two days, during which the surface was cold, covered with moist sweat, dissolution seeming, to those present, inevitable.

The child was a small, delicate, female infant, and lay quietly in the nurse's lap. It was very pale; the cheeks were sunken, the eyelids closed, and it was apathetic to the approach of relatives or strangers. The extremities were cold and dusky, the temperature about 98°, and the pulse very weak. At times its face was contorted, and it drew up its limbs, and feebly screamed out with pain, again relapsing into its pristine condition of quiet apathy. The mouth was hot and dry; the belly was tumid, hard, painful, resistant. In the left lumbar region was a hard irregular swelling, ill defined, and difficult of limitation and determination, on account of the resistance of the abdominal walls. There was a small reducible umbilical hernia. The motions were now inspected on a napkin; they had been passed that morning, and consisted of altered blood and mucus, mingled with fæcal material, have a very foul odour as of putrid flesh. On introducing a finger into the rectum, a hard mass, of the size of a small orange, was felt about two inches up the bowel. This was obviously fæcal, and, on pushing it up, it was easy to ascertain by bimanual examination, with one hand on the belly, that other swellings or masses moved upwards with it. The lowest mass, by the aid of oil, was dislodged with the finger; it was of the consistence of baked putty, and was full of farinaceous material and clots of milk, giving an acid reaction. Nothing like an intussusception or polypus could be felt.

The child was ordered enemata of olive and castor oil night and morning, and the belly was to be gently kneaded, and rubbed with aloes liniment. The diet was restricted to small quantities of strained veal-broth given at frequent intervals, with a few drops of brandy.

On March 16th, nothing had passed from the bowel, the enemata returning unstained. Sickness had been severe, and several attacks of syncope had occurred in the night. The belly was hard and resistant.

On examining the rectum, it was quite loaded with hard, fæcal masses, an exact imitation, indeed, on a small scale, of a similar condition in the adult. These were dislodged, and brought away by the finger. They were quite hard, and seemed not affected by the oil enemata. A mixture, containing small doses of hydrocyanic acid with an alkali and carminative, was prescribed. The broth and brandy were ordered to be given every half hour in quantities of a drachm of the former to three drops of the latter.

On March 18th, there was slight improvement, for the child had been less sick, and appeared less pinched and collapsed. The rectum was cleared again to-day. The motions were softer, but still devoid of bile, white in colour, covered with blood, and very offensive. There was a marked improvement in the condition of the belly. The irregular swelling in the left lumbar region had disappeared. The quantity of broth was increased, and the brandy diminished. Peptonised milk, prepared according to the formula of Sir William Roberts, was added to the dietary, with thirty drops of cod-liver oil thrice daily.

On March 20th, there was manifest improvement. The child looked comparatively well; it laughed, and took notice. The enemata had been persevered in, had brought away some fæcal lumps, and but little blood. The diet seemed to suit the child admirably. A small mercurial was ordered every other night, and minute doses of podophyllin dissolved in rectified spirit were given on sugar.

On March 22nd, the improvement was maintained, but the bowels were still obstinate. The motions had lost the offensive odour, and now contained bile. The child could only take small quantities of food at a time. The hydrocyanic acid mixture was omitted.

On March 25th, Dr. Day saw the case in consultation. He attributed the obstinate constipation to a deficiency of intestinal secretion, combined with torpidity of action. He advised a continuation of the treatment and dietary, and recommended in addition a carminative mixture.

After this, as there was no question of any obstruction of the bowel, the case passed from under my immediate notice. I hear, from time to time, that the child continues to improve; raw meat has been added to its dietary with advantage; it takes the peptonised milk freely. The bowels are still obstinate, and the enemata cannot be quite dispensed with. It is now gaining flesh and strength daily.

Remarks.—Although instances of severe and dangerous constipation are occasionally met with in infants reared by hand, it is not often that the accumulations of fæcal material cause such symptoms as were observable in the present case. The vomiting, constipation, and the passage of blood mixed with mucus, taken into consideration with the altered contour of the belly, sufficiently suggested the possibility of intussusception, and it was only by repeated examination, and the further progress of the case, that this conclusion was negatived. When the obstruction became complete, spurious diarrhœa was observed, a symptom of the highest importance in connection with the diagnosis of fæcal impaction.

The great importance of inspecting the motions and examining the rectum in some cases of intestinal derangement receives, from this case, due illustration, and the beneficial influence and action of enemata are well exemplified. The surmise is rational, that torpidity of the coats of the larger bowel, deficient secretion, and dry farinaceous food, all tended to produce fæcal accumulation, and the offensive sanguineous discharge was sufficiently suggestive of a fretting of the mucous membrane by the contents of the gut. Purgatives given by the mouth in so small and delicate an infant would doubtless have been rejected, or further irritated an already sensitive stomach, and, perhaps, would have endangered the integrity of a bowel, the coats of which were ulcerated, by causing it to fruitlessly contract upon hard immovable masses. But, in the further progress of the case, the small doses of biliary purgatives seemed to act with benefit, in restoring the colour and normal odour of the evacuations.

Attention must be drawn to the importance of giving nourishment only in minute quantities; and often, in cases of vomiting and malnutrition, a drachm or two of milk retained by the stomach does more to sustain strength than an ounce which causes vomiting. This practice is exemplified and lauded by William Hunter, but it is difficult to make nurses and friends estimate its weight and advantage. The attacks of syncope were doubtless caused by the severe colicky abdominal pains exhausting a weakly anæmic infant, whose blood was impoverished by the unsuitable starchy food which had been administered to it.

The whole case furnishes additional evidence, if such were needed, of the bad consequences that may arise from improper feeding of infants, and how well and rapidly they may recover from a serious condition when the digestive functions are restored to activity and regularity.

Carmichael College of Medicine, Dublin.—The following scholarships and prizes were awarded at the above College at the termination of the session 1885-86. Carmichael Scholarship: C. W. R. Healey. Mayne Scholarship: Thomas E. Dunne. First Year's Students: Anatomy: R. Hardiman, M. E. Staunton, H. H. Bernard. Chemistry: G. C. Menneer, J. H. Pim, R. H. Dreaper. Special Prize: R. I. MacWhinney. Botany and Zoology: H. H. Bernard. Second Year's Students: Anatomy: L. H. Ford, G. Penrose, C. D'Alton. Dissections: C. W. R. Healey, C. D'Alton. Physiology: G. Penrose. Histology: G. Penrose. Practical Chemistry: C. Strangman. Materia Medica: G. Jackson Smith. Third Year's Students: Anatomy: J. J. Behane, S. M. Cox. Dissections: J. J. M'Naboe, J. J. Behane. Medical Jurisprudence: A. Rowland, V. E. Ludlow. Practice of Medicine: J. G. Lough. Surgery: S. M. Cox. Fourth Years' Students: Midwifery: E. Corcoran.

ON THE EXTREME DURATION OF INFECTIOUSNESS IN MEASLES, MUMPS, SMALL-POX, SCARLATINA, AND DIPHTHERIA.

Abstract of a Paper read before the East Kent District of the South Eastern Branch.

By THOS. F. RAVEN, L.R.C.P., etc.

Those who have made a study of the natural history of infectious diseases, have established the truth of these conclusions:—that diseases preceded by a long incubation are, generally, characterised by well-defined illness, progressing by well marked stages to crisis, and so ending; that they are followed by insignificant sequelæ, and that the infection is usually short in its duration. A short incubation period, on the other hand, has been shown to precede, as a rule, a sudden sharp illness, running either a short or a long course, with a long continued infective power, having sequelæ of a definite and important character, and being often prolonged by relapses. So it may be regarded as an axiom that duration of incubation and duration of infection bear an inverse ratio to each other. Again, it is laid down and accepted that, when the incubation of a disease is long, the infection (even the most powerful infection) is developed early in the course of the malady, and that it ceases early; that, when the incubation period is short, the disease does not, as a rule, exhibit its infective power so soon, but that there is a time, even after the complaint is declared, when the danger of communication is but small. The rule, then, is, long incubation, early short-lived infection; short incubation, late and long infection; and, if exceptions prove the rule, then undoubtedly this is a rule, for the variations from it are numerous.

These variations from the standard may be well exemplified by the course of vaccinia. Although the progress of the vaccine vesicle has a remarkable regularity, yet deviation from the recognised period of incubation, and, from the usual course and duration of events, is not unfrequent even among infants vaccinated from the same source and under similar conditions.

Applying this rule, then, to the first of these diseases to be discussed, we find that Measles, having a long and fairly uniform incubation period of twelve days or a fortnight, develops its infection early—even early in the stage of invasion—and that the infection, thus early active, early disappears. According to a code of rules issued by the medical officers of schools, a pupil is allowed to rejoin his fellows in three weeks from the date of the measles rash. Dr. William Squire also states that the duration of personal infection is limited to three weeks after the appearance of the rash, provided all desquamation and catarrh have ceased. The early infection of measles points to the strong probability that catarrh is the principal source of danger to others; and it is not necessary to occupy time with proofs of what, probably, everybody will admit.

The catarrh being thus intensely infectious, even at an early stage, possibly at a later period it may still be dangerous. Therefore, when, after measles, catarrh from any mucous surface persists, it is wise to consider the possibility of its being a source of communication of the disease. But, granted the cessation of catarrh, and the disappearance of rash and desquamation, I am inclined to think, from general experience, but not speaking from any definite data, that the danger of infection is over. Three weeks from the appearance of the rash seems to me to be, in ordinary cases, an unnecessarily long time to keep a child in quarantine. From the initiatory fever to the cessation of desquamation, the disease very often runs its course in a fortnight, and it is doubted by some whether the stage of desquamation is one of infection at all.

But a curious freak which measles occasionally plays, may serve to prolong the infection. I have seen the two prominent symptoms—catarrh and rash—quite disconnected. I have recently had under observation a little boy who, ten days or a fortnight after exposure to the infection of measles, showed what were thought to be the early symptoms of the disease; but nothing besides catarrh appeared, and he was soon quite well again. A few days later, however, a well-marked rash, limited to the arms and legs, showed itself. The child seemed scarcely ill, and there was no catarrh whatever. This limitation of the rash led me to examine it with care before I could pronounce it to be the eruption of measles; but the distinctive raspberry colour, and the typical grouping of the spots into crescentic patches, left no doubt as to its nature. Once previously I have witnessed this curious course of the disease. It may be that what is described and accepted as *rubeola sine catarrho* is of this nature, the early catarrh having been overlooked or forgotten before the appearance of the eruption. If so, *rubeola post catarrhum* would be a more exact term by which to designate it.

Mumps has also a long incubation period. It may last from fourteen to twenty-one days, or, as the longest perid on record, twenty-two days; and, following the rule of infectious diseases already alluded to, mumps is very early infectious. So soon is the infection felt, that the removal of a case, although effected as soon as ever the disease is even suspected, rarely saves a family or a school from the spread of the disease. Mumps, also, like measles, is not communicable for long. According to authorities, the quarantine necessary is three weeks from the commencement of glandular swelling, provided the glands have resumed their natural size and condition. It will, perhaps, be possible to ascertain whether, independently of all glandular swelling and hardness, mumps is an infectious disease; also, when metastasis occurs to another organ, as the testis or mamma, whether the duration of the infection is thereby prolonged; and if, when abscess forms, the stage of discharge is one fraught with danger to others.

The incubation period of Small-pox is, perhaps, more definitely established and more uniform than that of any other acute disease—certainly than that of any of the diseases under notice. It is a long period of twelve days, and, although exceptions are sometimes met with, it is but little liable to variation. In some respects, small-pox follows the same rule as measles, in so far as having a long incubation period, the infection is early active. According to Marson, whose experience was immense, small-pox is communicable from the moment that the initiatory fever begins. He says: "It may be given by the breath of the patient before the eruption appears on the surface of the body." The termination of the infection in small-pox is definite. So soon as the crusts, scabs, and scales have separated, and have left a smooth surface, the fear of infection is over. My own experience fully coincides with this statement. During a severe and extensive epidemic of small-pox, I adhered strictly to this view; and in no instance did the disease obtain a fresh hold from any patient who was discharged from hospital, however short his sojourn there might have been. There is, however, a source of fallacy here, which is worth mention. It must be remembered that, when small-pox is rife, most people (especially the antivaccinators) make haste to protect themselves by vaccination. Hence, although the progress of the disease may be arrested, as happened in the epidemic to which I have alluded, it is possible that this desirable end is attained simply because there are no persons at hand susceptible of the disease. I have said that the termination of infection in small-pox is definite; but it does not follow that the period of infection is short. In this particular, small-pox breaks away from the rule of "long incubation—early short infection." The incubation is long, the infection is early developed; but it cannot be said that the infection is short-lived. I am well aware that, in many cases of small-pox, crusts and scabs and scales are soon detached, and the patient at liberty. But these are, generally, cases of small-pox occurring in vaccinated persons. True, unmodified small-pox, occurring in unvaccinated persons, is, as I take it, the disease which we are considering, and in such cases, when they do get well, the crusts and scabs adhere sometimes for a surprisingly long time; and as it is known that the crusts of small-pox, even when detached from the body, have the power of disseminating the disease, it is quite certain that any one, with a crust or scab or scale still adhering to his skin, is capable of communicating the disease. Independently of the pustular eruption, and of the crusts resulting from it, I have found small-pox to exert a powerful infection from those frightful examples, of the malignant form, where no pustular rash appears, but where hæmorrhage occurs in the skin, and blood pours from almost every outlet of the body.

I come now to two diseases in which the incubation period is variable and doubtful, namely, Scarlatina and Diphtheria. Scarlatina is said to have, generally, a short, often a variable, period of incubation. The occasional rapidity of its development is unquestionable, and sometimes quite surprising. I have seen a child exhibit the rash after twelve hours' exposure to infection. I have been told, on excellent authority, of a child who went into a shop where there was an intense scarlatina poison present. The child was sick on the spot, and went home ill, the disease developing from that moment. And if the incubation period varies so remarkably in this direction, it is reasonable to suppose that it may present as great a divergence on the opposite side. The scarlatina that develops itself with great suddenness after a surgical operation, or which comes on rapidly after excitement or change of air, may spring from a latent poison in the system suddenly called into activity by shock or by excitement. It

is, however, generally agreed that the incubation, as a rule, is short, and, accordingly, the infection does not become active very early. This has been abundantly clear to me on many occasions.. Over and over again I have caused patients, with the rash of scarlatina well developed, to be removed from crowded lodging-houses, schools, and private families, without the occurrence of a second case; but if the infection does not soon become active, there is no doubt that it long persists. The rule generally observed with regard to scarlet fever is that, when six weeks have elapsed since the appearance of the rash, and provided that there be no desquamation in progress, and that discharges from the nostrils have ceased, quarantine may be discontinued.

Desquamation of the cuticle is looked upon as a fertile source of danger: not only that separation of fine powder from the surface which appears shortly after the disappearance of the rash, and which is believed to possess the poison of the disease in its most concentrated form, but also that late desquamation which especially affects the hands and feet, and which occurs not only once, but is sometimes repeated after the skin has regained its natural smoothness. Great stress, I say, is laid upon the peeling of the skin; but I have never heard any fear expressed in reference to desquamation originating in other parts of the body. Scarlatinal nephritis is often a lengthened, or may even become a chronic affection; and it may fairly be assumed that the desquamation of epithelium from the kidneys and bladder may be a process of the disease capable of conveying infection. So long as the epithelial scales are suspended in the urine, there may be no risk of infection from their presence; but should the urine containing them escape among the sheets, or be spilt on a carpet or on a floor, so soon as it has dried, and the epithelial scales have become freed from their menstruum, a danger of infection may at once be set up. Or the infective material may hang about drains or in cesspools, and exert its influence long after the epidemic by which it was engendered has disappeared. (Hence the importance of employing an earth-system for all excreta in scarlet fever.) And, occasionally, I believe, a hidden source of danger does thus exist, and of this I will give an example.

Some time ago, I was called to see a young lady who was said to be suffering from anæmia and febrile disturbance of some indefinite kind. I found that her urine was loaded with albumen, and microscopic examination revealed large quantities of epithelium and blood. The desquamation was so marked that inquiry was at once made as to whether she had recently suffered from scarlet fever, or any other acute disease, but no history of this could be obtained. There could, however, be little doubt as to the nature of the girl's nephritis, when it was found that one of her sisters had recently had scarlet fever, and that she also was suffering from desquamative nephritis; and this opinion was strengthened into certainty when I found that her two other sisters, neither of whom had shown any signs of illness recently, were also throwing off epithelium and blood from the kidneys. The mother and the one brother were the only members of the family who were free from albuminuria, and this was explained by their having had scarlet fever some years previously. I ascertained, many months afterwards, that albuminuria still persisted in the case of the girl who was first placed under my care; and that, with the other three cases, the affection had proved very tedious. Dr. Wm. Squire has recorded a case where, after sixty-six days from the appearance of the rash, and long after all signs of illness had disappeared, scarlet fever was communicated; and, as no mention is made in this case of the state of the urine, it occurs to me, as a possibility, that the infection might have been effected in the way that I have suggested.

Not only is desquamation of the skin a source of danger during convalescence, but the discharges from the nostrils, in severe cases, are believed to be highly infectious, and are to be as carefully observed as desquamation itself. As to the purulent discharge from the ears, which sometimes follows a sloughing throat in scarlet fever, it seems difficult to assign an exact limit to its power of conveying infection.

Diphtheria is the last disease of the category to the infection of which I have to advert. And here I am met at once by the question, What is diphtheria? When we find, on the one hand, physicians who draw distinctions between diphtheria, croupous pharyngitis, membranous sore-throat, follicular tonsillitis, and exudative catarrh of the tonsils; and when we know that, on the other hand, there are authorities who pronounce all sore-throats with exudation to be diphtheritic (but who are rather puzzled by follicular tonsillitis); and when, thirdly, we ascertain that diphtheria may occur without inflammation of or deposit upon any mucous membrane whatever, it is not clear what the evidences are upon which a diagnosis of this disease is to be founded. For my own part, as to this point, I confess to some agnosticism, with an inclination to characterise all sore-throats with exudation (with the exception of follicular tonsillitis, dissociated from known cases of diphtheria), as diphtheritic; and this makes a good working hypothesis. But I throw out this hint that we may, as far as possible, prevent any conclusions that we may come to from being vitiated by imputed false diagnosis. The incubation-period of diphtheria, according to the authority of Mr. Shirley Murphy, is unknown. However short it may occasionally be proved to be, it is sometimes, undoubtedly, of long duration. I have myself seen a child, removed from home in order to avoid the infection, remain free from the disease for a week. Dr. Isambard Owen has instanced a remarkable example of the occasional long duration of diphtheria-incubation in the case of a man who, having imbibed the poison of the disease on shore, went to sea, and the resulting illness was not felt until several weeks later.

The personal infection of diphtheria would seem to be actively exerted on those who are in close attendance upon victims of the disease, whereas its influence does not commonly spread to others in the same certain way as does the infection of measles, small-pox and other zymotic diseases. Undoubtedly diphtheria is often seen affecting many members of a household in quick succession, but in such epidemics I have hitherto found that there are general conditions existing to give origin to the disease, and that it is not often easy to prove its personal communication. It is worthy of note that the last generation of practitioners did not regard "croup" as a communicable disease. Sir Thomas Watson, in describing membranous laryngitis, a disease which he allows to be very fatal, distinctly says that, "the croup is not contagious."

As to the persistence of the infection of diphtheria, it would appear to be generally held that its duration is not great. The medical officers of Schools Association have determined that a patient, convalescent from diphtheria, may be considered harmless in three weeks from the date of symptoms, provided there be no longer any sore throat, or discharge from mucous surface, or albuminuria. Under certain circumstances, however, the infection may be indefinitely prolonged.

Dr. Astley Gresswell has recently drawn attention to what he designates "chronic diphtheria." As his communication to the Epidemiological Society has been so lately before the public, it is not necessary to say more than that he has submitted a theory, with substantial proofs to support it, that diphtheria, under certain conditions (chiefly the conditions of unwholesome surroundings) may become a chronic disease, and capable, from time to time, of diffusing the infection.

If, during the sequelæ of other diseases, infection is still active, it is reasonable to suppose that a patient suffering from diphtheritic paralysis, but otherwise well, may infect others. A suggestive case in point has occurred within my own knowledge. A family of children had diphtheria in London. All were affected except one boy. The family came to the seaside, and after many weeks the boy who had escaped, and who had been sent away from home, was allowed to join his brothers and sisters, one of whom was suffering from diphtheritic paralysis. Before he had been many days with his family, this boy had an attack of sore throat, with exudation upon the fauces. It was not severe, nor by any means a typical case of diphtheria, but the exudation was enough to make me very suspicious of its nature.

At the time when Dr. Russell Reynolds's *System of Medicine* was published, one of the distinguished writers in that work stated that the closest correspondence in the laws of infection exists in scarlatina and diphtheria. To this positive and comprehensive dictum (which Dr. William Squire seems to have endorsed) I am not altogether able to subscribe. Although I believe that the same poison may give rise both to scarlet fever and diphtheria; and though I am satisfied that I have seen diphtheria resulting from contact with scarlet fever—the analogy, or even the occasional identity of the two diseases being thus forcibly suggested—yet facts which have come under my own notice are arguments too strong to allow of my accepting this declaration.

I have repeatedly seen a single case of diphtheria occur in a house containing several children, where it has been impossible to establish any effectual isolation of the sick child, or to carry out any efficient disinfection, without the spread of the disease to any of the others. I will mention, in particular, an instance where, among a family of nine ill-fed, ill-clothed children, inheriting delicacy and disease from a phthisical parent, and crowded together in a small, badly built cottage, a case of diphtheria occurred. The conditions present were all favourable to the spread of the disease. The affected child died in a week with extension of the diphtheritic membrane to the larynx, but not another case occurred among the rest of the family. Would or could this have happened had the disease been scarlatina? Other examples of the same kind I could cite, but not, perhaps, so emphatic.

I am not disputing the communicability of diphtheria, but I do not believe that, in point of intensity, it can bear comparison with that of scarlet fever. I am disinclined, also, to allow that in either the incubation period, or the duration of its late infection, any close correspondence has been proved to exist in scarlet fever and diphtheria. The reasons for this opinion, which I submit with deference, may be gathered from what I have already written in this article.

The mutual influence of intercurrent infectious diseases is a matter which, I think, it is well not to lose sight of. The remarkable association of measles with whooping-cough is well known, and, when these two diseases are contracted together, they exhibit a mutual interference in their development and progress, one or the other being delayed in its course. In this way, measles may obviously become a disease of prolonged infective properties, and, in like manner, it is possible that some of the other diseases to which attention has been directed may be altered in their course, and protracted in their infection period.

THERAPEUTIC MEMORANDA.

CARBOLIC ACID IN THE TREATMENT OF WHOOPING-COUGH.

Mr. W. F. Cory has recently recommended carbolic acid internally in the treatment of whooping-cough. Since then, I have used the glycerine of carbolic acid with great success among my out-patients at the Children's Hospital. I had previously prescribed alum, belladonna, the bromides, ipecacuanha, the salts of zinc, croton chloral-hydrate, hydrocyanic acid, etc., in different cases, but never with any very satisfactory results. I have notes of twenty-three cases treated with glycerine of carbolic acid. Half a minim in peppermint-water is sufficient for a child a year old, the dose increasing with the age. In twenty cases, relief was quickly given; the general condition of the patients was at once improved, and the number and severity of the paroxysms of coughing diminished. None of these cases attended more than a fortnight, while the usual length of attendance is certainly twice as long. In three cases, the carbolic acid failed to give relief. There was no doubt as to the nature of the illness in these cases, for in all the characteristic cough was heard, or ulceration of the frænum present.

I have observed ulceration of the frænum to be present in 50 per cent. of cases of whooping-cough, and that its presence is pathognomonic of the disease. I believe carbolic acid almost deserves to be called a specific for pertussis.

C. W. Suckling, M.D.Lond., Birmingham.

A NEW CURDLING FLUID.

Whey is frequently of much use in acute diarrhœa or vomiting in infants, or, when used for diluting milk, it forms a food which agrees well when other milk-foods fail. It has one disadvantage, however, namely, that it is not easy to prepare, unless some reliable curdling ferment is at hand. Calves' stomach can rarely be obtained, either in town or country, when wanted, as it generally is, in a hurry; and, moreover, unless used quite fresh, it is apt to set up lactic fermentation in the whey. Essence of rennet, when made with brine, is quite unsuitable for preparing infants' food; and the sweet essences of rennet, as I can testify from experience, are not reliable, some specimens proving quite inert. Under these circumstances, it may be well to state that Mr. Benger has recently prepared an exceedingly active and reliable curdling-fluid, which I have put to some crucial tests, and believe it will be found very useful in preparing whey, and will supersede the use of rennet, or any of the essences. For the preparation of white wine whey, it will be found far better to prepare the whey first, using some of Benger's curdling-fluid, and then adding some alcohol in the form of sherry, or, still better, brandy. It must be within the experience of many that some sherries fail to curdle the milk in the usual way; some of the inferior acid sherries being the best for curdling the milk, but the worst for the patient.

Henry Ashby, Manchester.

SURGICAL MEMORANDA.

COMPOUND DISLOCATION OF TIBIA.

James S., aged 11, on May 15th, caught his left foot in the wheel of a cart, and had it severely wrenched. On examination, the lower end of the tibia was found cleanly dislocated, and sticking out of a wound, about three inches long, over the edge of the boot. Chloroform was given, and the bone and the wound well washed with a five per cent. carbolic lotion, the bone reduced, and the wound sewn up, with the exception of the lower angle left open for drainage. It was then dressed antiseptically. In a few days, a large slough came away, formed of the bruised tissues, and the bare tibia was exposed; but this gradually became covered with periosteum, and the wound filled up with granulations, and is now healed; he has perfect motion at the ankle-joint. The highest temperature was 102°.

T. G. Parrott, L.R.C.P.Lond., Bournemouth.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

SALOP INFIRMARY, SHREWSBURY.

STRICTURE OF SMALL INTESTINE: ABDOMINAL SECTION: RECOVERY, WITH ARTIFICIAL ANUS.

(Under the care of Dr. Cureton and Mr. Eddowes.)

[Reported by Mr. R. Hamilton Russell, House-Surgeon.]

S. B., aged 46, was admitted on June 20th, 1885, for constipation, steadily increasing during six months. Fourteen days before admission, she was seized somewhat suddenly with abdominal pain, which had persisted ever since. For twelve days there had been no action of the bowels without enemata; complete constipation had existed for five days. There was no history of syphilis, tubercle, or cancer. The motions had never contained blood. She had lost flesh slightly. She had always been healthy, and was the mother of several children.

She was a spare florid woman; her face was pinched and anxious; the tongue was moist and coated; the pulse was 90, and of fair quality. There was no pain; the abdomen was distended, but soft and free from tenderness; the walls were very thin, and moving coils of small intestine were plainly seen; urine was of specific gravity 1030, high-coloured, and scanty, but contained no albumen.

For five days after admission, unavailing efforts were made to procure an action of the bowels; opium, long-tube enemata, aspiration of flatus, and castor-oil, being all tried in turn.

On June 25th, the symptoms being unchanged, Mr. Eddowes opened the abdomen in the median line by an incision 4 inches long between the umbilicus and pubes. A small quantity of peritoneal fluid mixed with lymph escaped, and the abdominal contents appeared congested. A stricture of the small intestine was soon found, forming a complete obstruction, impermeable even to flatus. It was decided, after some deliberation, to make an artificial anus, which was formed at the lower extremity of the abdominal wound, about 2 inches from the pubes. the bowel, when opened, at once giving vent to liquid fæcal material, which continued to flow without intermission for some hours. No dressing was applied to the wound, which was brought together by deep and superficial silk sutures.

The operation was followed by a great sense of relief, and but slight reactionary disturbance. The temperature and pulse became normal at the end of a week. The deep stitches were removed after four days, at which period fæcal material was seen to be oozing up through the lips of the wound in its lower part, causing that portion to open up, but producing no worse result than a somewhat protracted convalescence. She left the hospital, wearing an elastic support, in six weeks.

In January, 1886, seven months after the operation, she came to show herself. Her health was perfect, she had gained considerably in weight, and was able to go about her household work as before. The bowels acted very regularly every morning; the motion was generally formed, and in this case she had very good control, but she was unable to control liquid motions and flatus. On introducing the finger, it was felt to be distinctly grasped by a sphincter. It is worth noting that, according to her statement, none of her neighbours or relations, with the exception of her husband, are aware of her condition.

Hospital Sunday.—The Lord Mayor has received, at the request of the Prince of Wales, through Sir P. Cunliffe-Owen, a cheque for £100 for the Hospital Sunday Fund, being the amount received up to the present time in Dr. James Aveling's "mechanical begging boxes" at the Colonial and Indian Exhibition.

LEPER ASYLUM, TRINIDAD.

ANÆSTHETIC LEPROSY: ACUTE MANIA: FACIAL CARBUNCLE: THROMBOSIS OF OPHTHALMIC VEINS AND CEREBRAL SINUSES: PYÆMIA: NECROPSY.

(Under the care of Dr. BEAVEN RAKE.)

J. H., aged 26, a negro born in Trinidad, was admitted on November 22nd, 1883. He had been affected with anæsthetic leprosy for some years, and had been admitted to, and discharged from, the asylum several times. There was insanity in his family. He was a well-made man, six feet high, and his leprosy was not sufficiently severe to prevent his working in the Asylum grounds. His medical sheet contained no note till August 16th, 1884, when it was found necessary to transfer him to the Colonial Lunatic Asylum, as he was the subject of violent maniacal attacks, during which he threatened the other patients. He was sent back from the Lunatic Asylum, relieved, on June 24th, 1885. His leprosy was about the same. He still had attacks of maniacal excitement, especially at night, and said he had to be constantly at work to distract his attention.

On July 23rd, 1885, it was noted that the last phalanx of the right middle finger had dropped, in consequence of gangrene. The right little toe was also ulcerated. He said his feet felt as if they would burst.

On August 14th, both ears were found to have circular ulcers over the helices and anti-helices. There was a localised brawny infiltration of the left cheek. Thick pus escaped on making a crucial incision. He said that he felt spirits running to his ears, and that he had been rubbing his ears to dispel the spirits. Two days before, he had put his head into an oven, for the same purpose. One night he had got up, and fell into the gutter outside the ward, striking his head.

On August 15th, the brawny infiltration had involved the whole left side of the face, and had also extended to behind the left ear. There was but little discharge from the incised carbuncle. The left upper eyelid was œdematous. Two superficial incisions were made below the ear, but only blood escaped. On August 18th he was unconscious. The eyeballs were very prominent, and the eyelids œdematous and gaping. The breathing was stertorous. He died at 6 P.M.

The necropsy was made thirteen hours after death. There was old distortion and recent ulceration of the hands and feet. Both ears were ulcerated, the cartilages being exposed. The corneæ were exposed and prominent. On cutting into the left cheek, the subcutaneous tissue was found to be burrowed by pus in all directions. On opening the orbits, the ophthalmic veins were found distended with clot. The cavernous sinuses were filled with clots and sanious pus. The thrombosis involved also the lateral and superior petrosal sinuses, and there was a yellow clot in the superior longitudinal sinus. There was yellow lymph on the surface of the pons and cerebellum, and much pigment on the base of the brain. The hemispheres and ganglia were normal on section. At the bases of both lungs were several infarcts about the size of filberts, breaking down into pus. The spleen weighed seventeen ounces; there was a little lymph on its peritoneal covering. The coils of intestine showed slight injection where they had folded on themselves, or lain in contact with other coils. The other viscera were healthy. Staining with magenta showed no leprous bacilli in the nervous system or viscera.

REMARKS BY DR. BEAVEN RAKE.—The occurrence of insanity in leprosy is not very uncommon. I have at present under my care two anæsthetic lepers who are demented, and several other cases have occurred at the asylum. A pathological relation between nerve-lepra and mental disease is thus suggested, but I am unable to trace it. In this case, the sequence of events was interesting. The carbuncle and diffuse inflammation would appear either to be due to violence inflicted on himself as the result of his delusions, or to have some more intimate connection with the leprosy. In the BRITISH MEDICAL JOURNAL for September 19th, 1885 (p. 545), I described two cases of acute abscess occurring in anæsthetic leprosy, and necessitating amputation of the arm in each case; and I have now under my care another anæsthetic leper who has lately recovered from a large carbuncle in the middle of the back. In none of these patients have I found the bacillus lepræ. Such cases are suggestive of another pathological link between leprosy and diffuse suppuration, founded on the trophic theory, but, of course, many more observations are required. It must be remarked that the lesions above referred to are quite distinct from the gangrene so common in anæsthetic leprosy; in this latter complication, I have not yet found death from pyæmia. Dissolution is then usually gradual, from exhaustion, and the necropsy shows few or no lesions.

SUNDERLAND INFIRMARY.

TWO CASES OF CHARCOT'S JOINT-DISEASE.

(Under the care of JAMES MURPHY, M.A., M.D., Hon. Surgeon to the Infirmary.)

CASE I.—John D., aged 43, married, a sailor, was admitted on March 2nd, 1886. He stated that his mother had been ten years in a lunatic asylum; he had lived temperately; he had had suppurating buboes twenty years earlier, but had otherwise enjoyed good health up to nine years previous to admission; at that date, in pulling on a heavy sea-boot, he heard three distinct cracks, "like reports of a pistol," go off in his left knee; but noticed nothing further for three days, when the joint was much swollen and numb, but free from pain; it seemed to get less in size at night for a time, but never disappeared, and he thought that it had continued the same size ever since. He continued his work for fourteen months; but, owing to the weakness of his knee, it was a matter of some difficulty, and had done no work for seven years.

He was a well-nourished muscular man, with slight acne of the face; he had "Argyll-Robertson" pupils, but could stand steadily till he closed his eyes, when he tottered; he walked with a slight but distinct ataxic gait. The patellar reflex was quite lost. The urine was normal; he gave no history of lightning pains or gastric crises.

His left knee was enormously enlarged. The tibia and fibula were completely dislocated backwards and upwards behind the condyles of the femur, which were much enlarged, and appeared as if in three distinct pieces, each piece being movable to a slight degree; the tissues all round were much thickened, but there was little fluid in the joint, which was free from pain, and admitted of movements in all directions backwards, forwards (slightly), and freely to each side, so that, when he rested upon it, the knee tends inwards and touches its fellow, as in knock-knee; still, in spite of this arthritis, the limb was fairly useful, and he could walk at a pretty good pace; his great difficulty was to counteract the flail-like mobility of the joint; for this he was fitted with a light steel support, which gave him much comfort; and he left the infirmary on May 18th, 1886.

CASE II.—J. L., aged 54, married, a blacksmith, was admitted on May 18th, 1886. He had had scarlet fever in infancy. No history of syphilis was obtained; but he had formerly been a heavy drinker. Six weeks before admission, while walking, he heard a crack in his left knee, and noticed that it was much swollen, though free from pain; the joint had continued *in statu quo* since.

He was a very spare man, and looked ten years older than he was. He complained of lightning pains, worse at night, in the left knee and ankle. The pupils, small and equal in size, did not react to light, but could accommodate for near objects. There were no gastric crises. The urine was normal. The patellar reflex was lost. The gait was very markedly ataxic, and he fell at once on closing his eyes. His left knee was considerably swollen, and contained a large quantity of fluid; in shape, it resembled a case of synovitis, but there was no increased heat, no pain, and the mobility of the joint was much increased, especially laterally, so that, when he stood, the leg bent outwards as if he were bow-legged; still he could walk with it. There was no dislocation, and no osteophytes or dendritic outgrowths of cartilage could be detected.

REMARKS BY DR. MURPHY.—These cases illustrate very well the arthropathy of ataxy, first described by Charcot eighteen years ago. In the first case, the ataxic symptoms were slight, but the joint lesion marked to an extreme degree. In the second, the opposite conditions were present, namely, marked ataxic symptoms, with but slight affection of the joint; but in both we have the suddenness of the swelling, the absence of pyrexia and pain, the greater increased mobility, the hydrarthrosis, and yet the power of using the limb to a considerable extent. In the first case, it appears to have come on early in the disease; it had now continued for nine years, and the patient had not felt his health to be materially changed during that period. In the second, the patient has probably had locomotor ataxy for some years, although he was not aware of it.

For the opportunity of studying Case I, Dr. Murphy is indebted to the kindness of his friend, Dr. Coatsworth Watson, and for Case II to his friend, Dr. E. F. Flynn.

QUARANTINE.—A telegram from Lloyd's agent at Malta under date of July 15th, states that vessels from Austro-Hungarian ports will not be admitted.

PRESENTATION.—J. Oswald Lane, M.D.Cantab., etc., has been presented with a clock, pencil-case, etc., by the nurses and pupils of the Northampton Infirmary, on his resigning the post of House-Surgeon to that institution, which he has held more than four years.

REPORTS OF SOCIETIES.

SOUTH INDIAN BRANCH.

FRIDAY, APRIL 2ND, 1886.

The VICE-PRESIDENT took the Chair at the Central Museum, Madras.

Orbital Aneurysm.—Mr. DRAKE-BROCKMAN exhibited a patient, aged 30, who had applied on account of proptosis of four months duration. The left eyeball protruded beyond the palpebral fissure so as to project half an inch beyond the vertical line of the orbit; the lower lid was everted, and its conjunctiva hypertrophied. The cornea was healthy; the pupil measured 3.5 millimètres, and was stationary, but normal in structure. Movements of the eyeball, which were limited in all directions, were quite absent, both upwards and outwards, and downwards and outwards. The optic disc was highly congested; the choroidal vessels were enlarged on the outer side, and the retinal veins were tortuous and full. Immediately below the supraorbital notch was a firm pulsating swelling, over which a loud aneurysmal *bruit* could be heard. Under the action of iodide of potassium internally, and the local application of an iced pad, the proptosis and conjunctival congestion greatly decreased, the pulsation became less, and the movements of the eyeball freer. Coloured drawings of the fundus oculi, made on January 18th and on March 30th, showed that, in spite of this improvement, there was increased obstruction to the blood-current, and a great liability to hæmorrhage.—Mr. MAITLAND said that the fact that the *bruit* was continuous, pointed to the tumour being an arterio-venous aneurysm. Of sixty-four cases of orbital aneurysm in which the operation of ligature of the carotid had been performed, twenty-three were cured, fourteen died; in ten the operation was a complete failure, and in seventeen loss of sight was permanent. There seemed no prospect of spontaneous cure in this case, and he therefore recommended compression, and, if that failed, ligature of the carotid.—Mr. DRAKE-BROCKMAN, in reply, said that he thought there was a true aneurysm of the ophthalmic artery. There was no history of injury.

Paralysis of Cranial Nerve.—A native soldier, aged 41, who had paralysis of a large number of cranial nerves, was also shown by Mr. DRAKE-BROCKMAN. The tongue was protruded to the right; the angle of the mouth was drawn to the right; there was ptosis on the right side, and anæsthesia in the area supplied by the first, second, and third divisions of the fifth nerve. The pupil on the right side was dilated (6 millimètres) and motionless; vision on that side was impaired (6-12ths), as were also the senses of smell and taste. The right optic disc was much congested, in the left very slightly. Temporary improvement occurred under the use of mercurials, followed by iodide of potassium, pilocarpine, and galvanism; an attack of ulcerative keratitis supervened, and the patient's condition was not materially better than when admitted; he was, therefore, recommended for a pension. Mr. Drake-Brockman considered that the existence of syphilis was disproved; that there was some intracranial ossific lesion.

Melanotic Sarcoma.—Mr. MAITLAND showed microscopical sections from a tumour removed from the sole of the foot of a Hindu, aged 75. The growth, on section, was seen to be perfectly black, and of soft consistence; its structure was alveolar, and it was apparently an alveolar melanotic sarcoma.

Acute Yellow Atrophy.—Mr. BRANFOOT showed the liver from a case of acute yellow atrophy of the liver. The organ weighed only 26 ozs. The patient was a woman in whom jaundice appeared on the second day after delivery, and died on the following day.

Vesicular Disease of Chorion.—Mr. BRANFOOT showed a specimen of vesicular disease of the chorion, in a woman, aged 22, who had a number of condylomatous growths about the anus. The placenta was fairly formed, but no trace of an ovum could be discovered.

Intra-uterine Peritonitis.—Mr. BRANFOOT showed specimens from a case of obstruction of the bowels, in an infant. There were firm organised adhesions in the right iliac fossa; and the rectum, sigmoid flexure, colon, and cæcum were undilated. The coils of the ileum and part of the jejunum were matted together, and undilated. There was no history or evidence of syphilis, but the adhesions were evidently due to fœtal peritonitis.

ARTIFICIAL CUCAINE.—Herr Merck, of Darmstadt, has succeeded in preparing an artificial cucaine, which possesses all the properties of the natural product. The process consists in treating benzoic ecgonine with iodide of methyl and a certain quantity of methylic alcohol, at 100° C. By these means, benzoic methyl-ecgonine is obtained, and this substance is cucaine.

NOTES ON BOOKS.

Double Congenital Displacement of the Hip. By BUCKMINSTER BROWN, M.D., Boston, U.S.A. 1885.—This is an account of a case treated by the author, with a remarkably successful result. A young child was brought to Dr. Brown for treatment at the end of 1882, and subjected to prolonged and constant mechanical extension, and passive movement of the head of the femur against the pelvis, in the natural position. The muscles gradually gave way, and allowed the femora to be permanently retained *in situ*, and, after eighteen months of this treatment, the heads of the bows were found to be firmly located in their new position, and could not be displaced upwards by forced manual pressure. The patient was not allowed to get up until another six months had elapsed, and then she moved about on a machine, which supported her by the perineum and armpits. This support was gradually lessened, until, eleven months later, she could walk alone. Subsequently, the patient perfectly recovered, and could walk and run like other children. This result, although it involved a very prolonged treatment, must be considered very satisfactory, but we doubt if it could be depended on in all cases. However, Dr. Brown is certainly to be congratulated upon the success which he has achieved.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A TRAVELLING AND NURSERY CONVENIENCE.

THE Travelling and Nursery Convenience, of which Messrs. James Allen and Son, 21 and 23, Marylebone Lane, are the manufacturers and patentees, will, we believe, most efficiently supply a want which has often been felt by parents and nurses having the charge of young children, and by invalids when travelling long distances by road, rail, or sea. In outward appearance it is made exactly to resemble an ordinary travelling box of japanned oak, so much so that its real nature could not possibly be suspected. It has the advantages of portability, absolute security, and cheapness. Its use will be no less appreciated in the home-nursery and during temporary residence in hotels or apartments. It can be opened for use in an instant; when closed, it is hermetically sealed by means of an elastic waterproof-pad, of special construction; and it may be inverted or let fall on the ground without the slightest risk of breakage or escape of the contents. There are no loose parts which require removal, or which can shift about or be mislaid, yet it can be instantaneously taken to pieces when necessary for the purpose of cleaning. It is made in any required size.

McKESSON AND ROBBINS' ANHYDROUS CRYSTALS OF CUCAINE HYDROCHLORATE.

WE have received a sample of Messrs. McKesson and Robbins' anhydrous crystals of cucaine hydrochlorate. This preparation, which differs in appearance from the ordinary crystallised salt, gains in weight on exposure to the air, from absorption of moisture, the opposite taking place with the usual acicular crystals. Hence, a nominally 5 per cent. solution of the anhydrous crystals is in reality notably stronger than a solution of similar strength, prepared with other crystals. As the price is the same, there is an evident economy in employing the former. This preparation may be obtained in small phials, each containing one gramme.

A MEDICAL STAFF BALL was recently given by the members of the medical staff stationed at Alexandria, to which a large number of the principal inhabitants of the city were invited. The former premises of the Mohamed Ali Club had been profusely decorated for the occasion, and the preparations throughout betokened an event of no ordinary occurrence. Among the hosts were Brigade-Surgeon Ramsbotham, Surgeons-Major Gore, L'Estrange, and Clery, and others; while among the guests were His Excellency Osman Pasha Orphi, Governor of Alexandria; their Highnesses Prince Omar and Prince Said; Surgeon-General O'Nial, C.B., and Officers of the Medical Staff, Cairo; Deputy Surgeon-General Fox and Officers of the Medical Staff; Dr. Lewin; Dr. and Mrs. Mackie; Dr. and Mrs. Zancarol, etc.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 24th, 1886.

THE USE AND ABUSE OF TEA.

A FRENCH observer has recently tabulated the evil results which, in many cases, follow the excessive use of what is now the favourite beverage of Teutonic and Sclavonic nations. The list is a formidable enumeration of neurotic and dyspeptic affections, which are not the less worthy of attention because they are mainly functional disorders, tending to the embittering of existence rather than the shortening of life. English clinical teachers are somewhat divided on this question. Some make light of the alleged evils of tea-drinking, and regard the prohibition of tea as, in many cases, merely a professional fad. Others teach that the mischief, of which they admit the existence, is due less to excessive use of tea than to the omission from the regular dietary of the really nutritive and sustaining elements. A third class regard tea-drinking as an evil almost comparable to alcoholism.

Tea has won its way to favour among civilised nations mainly, it would seem, as an agreeable nervine stimulant. As Sir William Roberts points out, in his interesting lectures upon dietetics, a craving for nerve-stimulation is one of the most marked characteristics of advanced civilisation, although savage man is by no means devoid of this universal human instinct. The stimulants in common use are tea, coffee, tobacco, and alcohol—not to mention such agents as opium or *haschish*, which are perhaps less stimulant than narcotic. Of this group, tea and coffee are the favourites, as they suit the taste of both sexes; and their beneficial effects undoubtedly far outweigh the evils which occasionally spring from their abuse.

Tea is an agreeable cerebral stimulant, quickening intellectual operations, removing headache and fatigue, and promoting cheerfulness and a sense of well-being. It is known to all English-speaking peoples as the "cup that cheers but not inebriates;" and it has long been a favourite with students, literary men, and others engaged chiefly in brain-work. Tea is also a mild sudorific, and is largely consumed in hot countries, especially our Australian colonies, where it is found to exercise a cooling influence, after the preliminary effect due to the imbibition of a hot fluid has passed off. The influence of tea upon the digestive tract has not been so definitely made out; but the most recent observations seem to show that, while it somewhat retards primary digestion, it aids the absorption and metabolism of the food-elements. From such physiological facts, it is clear that tea is chiefly of service during or after physical or intellectual effort, and at the time when absorption of the products of primary digestion is in process. It cannot too strongly be asserted that tea is not in any exact sense a true food, and that its nutritive value, in itself, is practically naught.

As might be conjectured from the nature of the physiological action of tea, the effects of its abuse fall chiefly on the nervous and digestive systems. Nervous irritability, palpitation, insomnia, and sense of brain-fatigue are among the most prominent of the neurotic symptoms; and, although it is unquestionable that these symptoms are often etiologically connected with other sources of nervous disturbance as well as tea-drinking, it is not less clear that they are greatly aggravated by the excessive use of tea. The digestive symptoms are impairment of the appetite, pain and flatulence during the process of digestion, and defective intestinal action—the symptoms, in fact, of one of the varieties of atonic dyspepsia. How far these symptoms are due to the thein contained in tea, and how far to its tannin, is a question. Sir William Roberts has shown that the most rapid infusion does not prevent the dissolving out of a large proportion of the tannin, and we are disposed to conjecture that the digestive symptoms may to a large degree be safely attributed, not to any chemical action, but to the same cause which produces the neurotic disturbance, namely, the thein.

The sufferers from excessive tea-drinking may be grouped into three classes.

First, there is the large class of pure brain-workers, who speedily discover that, while alcohol is pernicious to them, tea affords the stimulus which they desire. They indulge in it without fear of mischief, and often to an unlimited extent. Dr. Johnson's tea-drinking was proverbial, and many distinguished writers could tell a similar tale. After a time, the neurotic symptoms enumerated above begin to make their appearance, and, in many cases, do much to impair temper, and to limit the capacity for sustained intellectual effort.

Secondly, there is the large class of women of the better classes who, beginning with afternoon tea, often end by using their favourite stimulant in the intervals between all the meals of the day, and as often as the humour takes them. The result is that appetite becomes impaired, and the prostration due to insufficient nourishment is combated with more potations of the ever welcome stimulant, until the vicious circle is well established.

Thirdly, in all our large manufacturing towns there are numbers of factory-operatives, especially women, who, finding it difficult to provide a cheap and appetising mid-day meal, fly to the teapot, and do a large amount of severe physical labour on this miserable dietary. It is most important to impress upon this class, who are usually profoundly ignorant of everything concerning health and diet, that tea is not a food, and that the delusive sense of satisfaction which it bestows is a dangerous snare.

In addition to the above classes, there is a small group of persons to whom tea seems a positive poison. We know that idiosyncrasy accounts for the most extraordinary departures from the normal rule in matters of diet or the action of medicine; and the number of persons whose idiosyncrasy includes an intolerance of tea is considerable enough to make the subject worthy of professional attention.

Sufferers from the abuse of tea should abstain from its use, and substitute either coffee or cocoa. It will be found that many of those who are unfavourably affected by tea are equally susceptible to the action of coffee, but this is by no means universally true, and the substitution can often be made with decided advantage. Cocoa suits almost all cases, and, whatever may be its deficiencies on the score of

palatability, it is a genuine food, and its modern preparations are becoming more and more elegant and pleasing to the taste.

CIVIL HOSPITALS IN INDIA.

We have before us the annual report of the Civil Hospitals and Dispensaries in the Presidency of Madras and the Punjab, the first for 1884, the second for 1885.

In both, as usual, there is a review of the reports by the respective Governments to which they are addressed. On more occasions than one we have had to notice, with disapproval, the tone of small fault-finding and want of appreciation of the work done in the hospitals and dispensaries of India by the medical service. We think it will be a good thing when the Civil servants of the various Presidencies are made to understand that if there is one part of Indian administration that has given satisfaction to the population, and done more to reconcile the people to foreign rule, it is the medical. It is impossible to glance, even in the most superficial way, over the reports of the work done in the Civil hospitals and dispensaries of India without having this truth forced upon us. Of this, however, Mr. W. Wilson, who "for the Chief Secretary" signs, and we suppose wrote the review of the report on the Madras hospitals before us, has not the faintest notion. Wherever it is impossible to state or insinuate a fault, Mr. W. Wilson does not omit the opportunity, but we look in vain for a word of sympathy or of appreciation of the enormous amount of medical and surgical work he passes under review. It is recorded in this report that the vast number of 58,247 surgical operations were performed in the year under notice. Of these, 3,358 were major operations. Mr. W. Wilson, on the part of his Government, expresses the opinion that the increase in the number of major operations was hardly to the extent to be wished. Why, what a glutton in operative surgery this Mr. W. Wilson is! 58,247 surgical operations in one year does not satisfy him. Will Mr. W. Wilson be surprised when told, as we venture to tell him, that we in Europe do not estimate the progress of modern surgery by the number of surgical operations? In the Madras Presidency there are now 299 native hospitals and dispensaries under the care of 36 commissioned medical officers, 111 apothecaries, 105 hospital assistants, 43 pensioned and private medical practitioners, and 4 medical missionaries. In the year under notice, cholera prevailed in most parts of the Presidency. Out of 14,558 cases of this disease treated in the dispensaries, 5,735 proved fatal.

We note with pleasure that the review prefixed to the Punjab Report by Mr. W. M. Young, the Secretary to the Punjab Government, is written in a much fairer and more courteous spirit than the one noticed above, and that it concludes with a cordial expression of thanks on the part of Sir Charles Aitchison, the Lieutenant-Governor of the Province, for the long and faithful service rendered in this department by Deputy Surgeon-General A. M. Dallas, Inspector-General of Civil Hospitals, and of the valuable advice which he has ever afforded to himself and his predecessors.

One of the most interesting parts of this Report is the progress being made in the number of lying-in hospitals and the number of women using them, amounting in all to 539, as against 393 in the previous year. No less than 344 cases were treated in the lying-in hospital at Amritsar. A lady doctor (Elizabeth Bielby) is now established in a permanent lying-in hospital at Lahore; this lady also gives instruction in practical midwifery to the female students of the Lahore medical school. It is expected that a lady doctor from England, with two trained European nurses, will open a lying-in hospital at Simla this season, in connection with the Ripon Hospital. It is proposed, also, to open a separate hospital for women at Delhi, as part of the "Dufferin Hospital" project. The enormous mortality among women in child-bed in India from the ignorance of the native midwives is lamentable, and the amount of suffering following the simplest and most remediable accidents of child-birth is so great, that we must rejoice over the dawn of a better day for India in this important branch of medical aid.

THE ADVANCE OF PATHOLOGICAL PHOTOGRAPHY.

In an article on Photography in Pathology, which appeared in the Journal of January 23rd, page 162, we noticed the advance of the faithful representation of pathological specimens by the art, and we may add the science of photography, for the two must be combined to produce an effect which can in any way be called successful. In that article it was observed that the specimens were taken when immersed in water. We do not know how far this practice has been tried in this country, but we have recently received some very successful photographs, both macroscopic and microscopic, taken by Dr. Heneage Gibbes. The macroscopic photographs represent specimens of mitral disease and pericarditis. We have seen many good hand-productions of hospital artists, who always were able to command their price, but there have been none who can touch the beautiful and truthful delineations which Dr. Gibbes has laid before us. They give an impression as though the actual specimens were laid out on paper before us; and, with the exception of a slight tint in various parts, which, like the references of figures, assist to show different points of pathological interest, the whole is absolutely accurate and untouched. The photographs are taken by a method which is permanent, and will not fade. Many are familiar with the artistic photograps of Frank Miles in black and white; these are printed by the platinotype process, and the same process which Dr. Gibbes has used. The microscopic photographs are equally good; one, representing striped muscular tissue, is perfect, and speaks well alike for the artist and the object glass. Many years ago this was considered a test for low power, but here the serrations are very clear. The Pacinian corpuscle is equally good; the epithelial cells from the stomach of the newt, which resemble the trumpet-shaped vorticella, is admirably taken. These are photographed with medium powers. Some of the photographs, taken with the higher powers, are equally successful; such as those of the comma-bacillus of cholera, but those of encephaloid cancer, have not come out so well. There are, however, great difficulties in attempting to photograph collections of cancer cells. Many of these specimens, from which the photographs are taken, have been prepared by Dr. Heneage Gibbes by his most approved method. Since the article on Photography in Pathology, we have learnt that the Autotype Company have a new mechanical process for printing permanent photographs in various coloured pigments. A perfect system of representing pathological specimens, as seen under the microscope, by photography, is much to be desired, and it seems that such a system will very shortly be perfected.

It is announced that Mr. C. Sherrington, M.B., of Cambridge University, and Dr. Rolla E. Rouse, M.D., of London University, have proceeded to Italy, at the request of the Royal Society and the Scientific Research Committee of the British Medical Association, to investigate the causes of cholera.

ABNORMAL DEVELOPMENT OF THE MALE BREAST.

MR. J. H. MORGAN'S interesting paper on "Cases of Painful Mamma in Young Girls," published in the JOURNAL of October 17th, 1885, will remind the reader of the frequent cases of a similar tenderness in the rudimentary mammary gland of youths at puberty, often attributed to a blow, when unilateral, but frequently attacking both glands at the same time. This leads on to the anomaly, sometimes termed gynæcomastia, where a permanent enlargement of the mammary gland or glands exists in a male. Dr. Wenzel Gruber, of St. Petersburg, classifies this anomaly into three classes; first, gynæcomastia, with normal development of the male organs; secondly, gynæcomastia, with malformations of those organs; and, thirdly, spurious gynæcomastia, where the mamma is simply a mass of fat, or the seat of a new growth. Dr. Wagner, of Ribnitz, described a case of gynæcomastia, in the August number of Virchow's *Archiv*. The patient was a tall slender young man, from Stralsund, aged 21. His complexion was dark, his brow prominent, the hair of his head was dark and strong, his beard weak. His voice was deep, and his health excellent. The genitals were well developed, and he cohabited with his wife. When sixteen years old, the right breast became enlarged, apparently from frequent pressure from a rope. It was never tender except when pressed hard, and never inflamed; the patient applied to Dr. Wagner on account of some trifling accident, and then that physician had an opportunity of examining the breast. The left breast was normal, the right measured four and a half inches in diameter, and the glandular substance could be distinctly felt. The areola was wider than on the left side, and the nipple more prominent, no milky fluid exuded from it on pressure. Dr. Wagner states that 272 cases of gynæcomastia were collected by Schuchardt, and published in the thirty-first volume of von Langenbeck's *Archiv für klinische Chirurgie*. Nélaton, Leisrink, and Bryant, note that the enlarged gland is often painful; in a case described by the latter surgeon (*Lancet*, vol. i, 1868) the gland was inflamed. Wagner, of Lemberg, describes a case where the right upper extremity, especially the hand, was hypertrophied, the enlargement of the right breast consisting of an overgrowth of cellular tissue. In other instances, the enlargement was due to the same cause, or to fat, and not to any development of mammary glandular tissue. Labbé has observed the escape of a milky fluid from the nipple in gynæcomastia. J. C. A. Mayer and Wenzel Gruber have observed that the mammary glands tend to hypertrophy after castration; and C. Weber, as well as other writers, has found that in gynæcomastia the subject is frequently effeminate in mind and body. Many of the recorded cases were strumous. In Dr. Wagner's case, however, the patient was healthy and masculine, and the affection was perfectly localised, and unaccompanied by any physiological or psychological abnormality.

M. BROWN-SÉQUARD has been elected Member of the French Academy of Sciences.

THE Library of the Royal Medical and Chirurgical Society will be closed during the month of August.

THE Library and Museum of the College of Surgeons will be closed on Tuesday and Wednesday, July 27th and 28th, for the purposes of the First Examination of the Examining Board in England.

AT a Special Committee meeting of the Halifax Infirmary, held on the 16th instant, a resolution was passed, expressing the deep sense of the meeting of the great services rendered to the charity by Dr. Alexander, during his forty-eight years' connection with the institution; and expressing the hope that he may long enjoy his well-earned repose, and continue for many years to act as consulting physician.

THE *Madrid Medical Journal* of July 7th reports that Miss Dolores Lleonart-y-Casanovas, daughter of Dr. Andrew Lleonart, has just obtained, by unanimity of votes, her M.D. degree at the Barcelona University, after passing a brilliant examination. Miss Lleonart commenced her studies at the age of 8, got her B.A. degree at 13, carried off seven prizes and the highest marks in every examination, and now, at 19, her full degree in medicine and surgery. It would seem that ladies mature early in Spain.

THE MODE OF VOTING FOR THE GENERAL MEDICAL COUNCIL.

A CORRESPONDENT raises the question whether the election of the direct representatives of the profession on the General Medical Council will be by secret ballot, or by open voting paper. We understand that there is very little doubt but that the election will be by open voting, that is to say, by voting papers signed and verified, as in parliamentary elections in universities.

THE REFORM OF THE UNIVERSITY OF LONDON.

WE mentioned some time ago that we had reason to believe that Lord Justice Fry's Committee of the Senate had accepted the principle that it was desirable to give to teachers in certain colleges and teaching institutions a position in the University. We understand that, at a recent meeting, it was resolved that the list of colleges to be thus associated should be chosen jointly by the Senate and Convocation. This recognition of the right of Convocation to have a voice in selecting the elements of the new governing body will, doubtless, give great satisfaction, and will go a long way towards gaining the support of that body to the scheme. After the constitution of the Council of Education, it would probably be proposed to delegate this function of Convocation to the new body, which, it is rumoured, will be nominated, not by Convocation, but by the associated colleges alone.

TEACHING UNIVERSITY FOR LONDON.

MR. F. C. MONTAGU, Secretary to the Association for Promoting a Teaching University for London, states that the Councils of King's College and of University College have formally expressed their general approval of the objects of the Association. He announces that the Council of King's College last month passed a resolution to this effect—reserving, of course, their judgment upon the details of the scheme for carrying out these objects, which had been laid before them by the Executive Committee. The Council of University College, on the 10th instant, he says, adopted a similar resolution, specifically approving of the objects of the Association: (1) the organisation of University teaching in and for London in the form of a teaching University, with the usual faculties; (2) the association of examinations with teaching, and the direction of both by the same authorities; (3) the conferring of a substantive voice in the government of the University upon those engaged in the work of teaching and examination; (4) the adoption of existing institutions in London of University rank as the basis or component parts of the University, to be either partially or completely incorporated, with the minimum of internal change; and (5) an alliance between the University and such professional societies or corporations as the Royal College of Physicians of London and the Royal College of Surgeons of England. Mr. Montagu observes, that he need hardly explain the importance of such resolutions adopted by the governing bodies of the two most important teaching institutions in the capital. No other bodies, he considers, could be better qualified to express an opinion upon the subject, and he regards it as

highly satisfactory to this Association to know that their views respecting the proper objects of University reform in London have been approved by such competent judges. These resolutions, he concludes by saying, place beyond question the reality and importance of that want which the Association is endeavouring to supply.

DEATHS FROM PRIVATION.

A RETURN of the number of deaths in the metropolitan area for the past year, on which coroners' juries have returned a verdict of "death from starvation," or "death accelerated by privation," was issued recently, in compliance with a resolution of the House of Commons, on the motion of Mr. John Talbot. The return gives a total of 37 deaths resulting from starvation or disease accelerated by want of food; and of these, 14 were in the Central Division of Middlesex, 18 in the Eastern Division, 1 in the Western Division, 2 in the Greenwich Division of Kent, 1 in the Newington Division of Surrey, 1 in the Camberwell Division of the same county, and none either in the City and Liberty of Westminster, the City of London, and Borough of Southwark, the Liberty of the Duchy of Lancaster, the Tower of London, or the verge of the Royal Palaces.

VACATION COURSES IN BERLIN.

THE next vacation courses of lectures and demonstrations for medical men will begin in Berlin on September 27th, and will terminate at the end of October. The programme just issued is very extensive (see *Berliner Klin. Wochensch.*, No. 28). Seven courses are announced in Pathological Anatomy, including Dr. Israel's course of Pathological Histology, and Dr. Wolff's practical course on the Methods of Bacterial Investigation; three in Physiology; one in Materia Medica (Dr. Lewin); no fewer than twelve in Internal Medicine, including courses by Drs. Fränkel, Litten, Guttmann, and Fürbringer; and three courses on Children's Diseases by Drs. Baginsky, Ehrenhaus, and Klein; four in Psychiatry and Diseases of the Brain; four in Diseases of the Nervous System, including Electro-Therapeutical courses by Drs. Remak and Eulenburg; four in Surgery; three on Diseases of the Eye; three on Diseases of the Ears; three in Laryngology; six in Gynæcology; four in Dermatology and Syphilis; and five in Forensic Medicine and Hygiene. All communications should be addressed to Herr Anders, 33 I, Dorotheenstrasse, Berlin.

A PLEA FOR THE JUNIOR CONSULTANT.

A CORRESPONDENT writes us: As juniors at the bar are being slowly starved out, so it appears that the fate of junior consultants is being sealed; and the reasons for this fact appear to us to be three-fold. First, the low consulting fees of the leaders of the profession; next, the increasing ability of the general practitioner; and, lastly, his own disability to take general work. On the surgical side, perhaps, this is not so painfully evident, as assisting at operations, giving anæsthetics, and taking charge of chronic cases, bring some grist to the mill; but these opportunities are rarer on the medical side. The remedy seems to us to be easy of adoption. The higher consultants should take higher fees only, say, three guineas; that would, perhaps, slightly decrease the number of patients, but would permit more time to be given to individual cases, without decreasing the professional income. Again, we would remove any restriction on the junior members of the consulting ranks, such a restriction, for instance, as the M.R.C.P., which should be insisted on only when election to the full staff of a hospital takes place. Unless something be done, it will happen that no one will be able to take up the career of a consultant, unless furnished with sufficient funds to withstand the little income and much out-go of the first fifteen or twenty years. In a more limited way, this has always been the case, but the future will find, unless steps of some kind be taken, that only the comparatively rich—and by no means always the best men—will recruit the ranks of our hospital physicians and surgeons. A leading barrister will only look at a brief if it is marked with a large sum. A leading light in the medical profession will cheerfully see a patient for two guineas—sometimes for one—and, in raising his fee, he will raise his position, while permitting to exist that very necessary class, the junior consultants.

SMOKE-ABATEMENT ON THE THAMES.

A FURTHER instance of the good work done by the Smoke-Abatement Institution towards lessening one of our great social discomforts and unhealthy conditions, namely, those arising from the needless production of smoke, has been recently afforded. The Council of this Society has for some time watched with regret the failure of the smoke acts as regards steamers and tugs on the Thames, and have been in correspondence with the Home Secretary calling attention to the great and needless production of smoke on the river. A short time since, the Thompson furnace was brought to the notice of the Council; and the engineer of the institution, Mr. D. K. Clark, C.E., was instructed to make a series of scientific tests of the apparatus. His report being favourable, the Council arranged a trial trip. The tug *Alexandra*, fitted with the furnace, ran from Temple Pier to Richmond, lay there two hours, and then returned to Westminster. During the whole of the run, no products of combustion were visible at the top of the funnel except for about one minute each time the furnace was stoked, when a little pale smoke was emitted. After the two hours' stay at Richmond, when the fires had been allowed to get low, they were both stoked simultaneously with coal-dust, which produced smoke for nearly two minutes, but not of a dark shade. The owners of the tug, Messrs. Tough and Henderson, state that, besides the practical abolition of smoke, there is a saving of from 20 to 25 per cent. in the quantity of fuel burnt, and that inferior coal can be used. During the trip, the *Richmond*, the sister tug to the *Alexandra*, was more than once passed, burning identical coal in an ordinary furnace, and she appeared to be almost continuously emitting considerable volumes of black smoke.

THE LONDON TEMPERANCE HOSPITAL.

ON Saturday morning last, about forty or fifty of the delegates to the British and Colonial Temperance Congress were entertained at breakfast at the London Temperance Hospital, Hampstead Road, by the Board of Management of that institution. Mr. T. Cash, the Chairman of the Board, presided, and gave an interesting description of the hospital and its work. He said that three times only in the thirteen years during which the hospital had been in operation had the medical officers considered it necessary to administer alcohol to any of the patients. The cost of the present hospital, including that of the site and the out-patients' department, had been about £53,000. The report for 1884 stated that, in ten years and a half, fifty-three cases of typhoid fever had been admitted as in-patients, all of whom had been treated without the administration of alcohol in any form. Five deaths had occurred among the fifty-three cases. Twenty of the patients had been registered as abstainers, and thirty-three as non-abstainers. Of the five patients who died, four were registered as non-abstainers; one as "abstainer six months." The medical staff have also nearly prepared a series of special tables showing the results of the treatment without the use of alcohol of a number of acute diseases, including acute rheumatism, pneumonia, bronchitis and delirium tremens. All the speeches made by the delegates, including the Hon. Reuben Ayliff (Cape Colony), the Rev. D. V. Lucas (Montreal), Mr. G. R. Parkin (New Brunswick), Mr. N. T. Collins, (New South Wales), Dr. Covernton (Ontario), Mr. W. Hutchinson (Victoria), and others, made mention of the hearty welcome the speakers had received in England, and of the great pleasure it gave them to visit this country. They also gave interesting details of the temperance work being done in their respective colonies, and hoped that the London Temperance Hospital might be a pioneer of several similar institutions throughout the British Colonial Empire. Dr. J. Edmunds gave an interesting account of the hospital and its construction. Surgeon-Major Pringle testified to the advantages of teetotalism in India; and

the Rev. S. D. Stubbs, Mr. J. H. Raper, the Rev. Dawson Burns, Mr. J. Taylor, and Mr. R. Rae also took part in the proceedings. The company then inspected the hospital under the guidance of Dr. R. J. Lee, Dr. J. J. Ridge, and Mr. A. P. Gould, three of the medical officers.

LEAD-POISONING FROM SERVICE-PIPES.

THE case of Milnes *v.* the Mayor, etc., of Huddersfield, which last week came before the Lord Chancellor, the Earl of Selborne, and five other Lord Justices, in the House of Lords, was an appeal from an order of the Court of Appeal, affirming a judgment of Mr. Justice Matthew in favour of the respondents, and is not without some sanitary interest. The facts as stated, it may be remembered, were that Mr. Milnes, the appellant, a solicitor at Huddersfield, brought an action against the Huddersfield corporation for injuries to his health sustained from alleged impure and unwholesome water supplied by them. The case was tried before Mr. Justice Matthew and a jury at Leeds, and resulted in a verdict for the plaintiff for £2,000, but the question of liability was reserved for further consideration. The Corporation were empowered by a special Act, incorporating the Waterworks Clauses Act of 1874, to supply water for domestic use within the limits and from the sources described in their Act. It was proved that the water, which was pure and wholesome in the mains of the Corporation, was supplied to the appellant; but, on its passage through the service-pipes, it was contaminated by the lead, and the appellant, using the water, suffered from lead-poisoning. By by-laws made under the Act, the Corporation prescribed that the material used for service-pipes might be either lead or cast-iron, and leaden service-pipes were, upon the application of the landlord and the appellant, laid down by the Corporation from their mains to the house at the landlord and appellant's expense; the pipes, when laid, belong to the consumers of the water so supplied. Mr. Justice Matthew held that the appellant had no cause of action, and his judgment was affirmed by the Court of Appeal, which held in effect that the Corporation had performed their statutory duty when the mains were charged with pure and wholesome water; and that they were not answerable for the contamination of water arising from the nature or condition of the service-pipes which belonged to the consumers, hence the present appeal. The case having been argued at some length, judgment was delivered. Lords Blackburn, Bramwell, Halsbury, and Ashburne delivered judgment, setting out their reasons for coming to the conclusion that the judgment of the court below should be affirmed. The Earl of Selborne and Lord Watson dissented. The Lord Chancellor, not having heard the arguments, took no part in the judgment. The result was that the appeal was dismissed with costs.

DIPHTHERIA AT THE CHARTERHOUSE SCHOOL.

THE recent discussion with regard to the hygienic arrangements at the Charterhouse School, at Godalming has already had one good effect; it will be seen by a letter from Dr. C. Haig-Brown, the medical officer, printed in another column, that the head-master is in communication with the Local Government, and that there is, therefore, every prospect that an exhaustive inquiry into the cause of the recent epidemic will be held. We have obtained copies of printed recommendations for dealing with infectious cases, drawn up by Dr. C. Haig-Brown, in 1884, and circulated among the house-masters of the school. These documents show that, as we anticipated, Dr. C. Haig-Brown was fully alive to the necessity for isolating all doubtful cases, and of exercising the most scrupulous care in disinfecting the cubicles, studies, clothes, and books of every boy proved to have been suffering from an infectious disease. We have ascertained that there is accommodation in the sanatorium (which is divided into two parts) for thirty patients; one part, which contains seventeen beds, is reserved for infectious cases, three of the beds being specially set apart for cases of scarlatina, and used for nothing else; the remaining thirteen beds, in the second sanatorium, are used for ordinary or for infectious cases, as may be necessary. In addition to this, each master's-house is provided with one sick-room, many with two, in which ordinary ailments are treated. A cab is provided for the sole purpose of removing infected patients and their clothes to the sanatorium, and a man is specially employed to remove all the articles belonging to the boy for disinfection. An elaborate table shows the length of time during which infection persists, and minute directions are given as to the precautions to be taken before a boy is allowed to mix with the other boys, or to return home. Indeed, the rules drawn up, and the recommendations made by the medical officer, appear to cover every danger, and might serve as a model upon which such rules might be drawn up for other schools. Unfortunately, it is, to a considerable extent, left to the judgment of the house-masters to obey these excellent regulations or not, as may appear good in their eyes, and there seems to be some masters who consider themselves better able to decide on the nature and gravity of a case of illness than the medical officer. The rules to which we have referred are endorsed as "approved by the head-master," and, that being so, common sense would appear to dictate that the medical officer is the proper official to decide what cases come within the scope of their operation.

CHOLERA-PROSPECTS IN PARIS.

A PARIS correspondent telegraphs: "In consequence of the exceptional heat, and the increased consumption of spring water, the municipal reservoirs in which it is stored are well nigh empty. The Municipality is, therefore, obliged to discontinue its supplies to several arrondisements. The water which is to be given instead will be taken from the Seine above Ivry." This information is justly disquieting. It may, and certainly should, be remembered that the last outbreak of cholera in Paris was traced to the temporary distribution of contaminated water under similar circumstances. The inhabitants of Paris should protest; and, meantime, visitors should be on their guard. The last epidemics, not only in Paris, but in London, Geneva, and Naples, were distinctly traceable to the water-supply.

CAMBRIDGE MEDICAL GRADUATES' CLUB.

THE annual meeting and dinner of the Cambridge Medical Graduates' Club was held at Caius College, Cambridge, on Saturday last, July 17th. Sir George Paget, K.C.B., a vice-president of the club, occupied the chair. Among the guests present at the dinner were the several professors of those collateral branches of science most closely connected with the study of medicine, namely, Professor Newton, of comparative anatomy; Professor MacAlister, of human anatomy; Professor Dewar, of natural experimental philosophy; and Professor Roy, of pathology. The Fellows of Caius College then in residence were also present as guests of the club, together with Mr. T. Pridgin Teale, of Leeds. The principal speakers were the Chairman, Professor Humphry, Mr. Timothy Holmes, and Mr. Teale. It was announced during the evening that the club was in a most prosperous condition, having now close upon 200 members.

HATS AND HYGIENE.

THE subject of hats as things of beauty—or ugliness—has been oft made the theme for eulogy or condemnation; and their influence from a sanitary point of view has not been altogether overlooked. There is, however, much to be said in defence of the much maligned silk hat, the analogy of which in shape and shade to certain common objects has caused it to be compared, in England, to a "chimney-pot;" in America, to a "stove-pipe;" and in France, to a "tuyau de poêle." The hat, be its shape, colour, and dimensions what they may, is a part of our attire, and has, therefore, with our other garments, certain duties to perform, as intervening between ourselves and the ambient atmosphere. The degree to which any particular form of hat complies with the requirements laid down for clothing

generally may be accepted as the criterion of its eligibility as a "tile"—an expression which, by the way, is etymologically irreproachable, although, like the hat in question, it may be open to criticism as a matter of taste. A hat ought, of course, to be as light as is compatible with stability; but, obvious as this is, it is a point in which many, probably the majority of hats, contravene the laws of comfort and capillary health. The interference with the circulation which results from compression of the blood-vessels between the hard sharp rim of a hat and the unyielding skull, together with the maintenance of an abnormal and undesirable temperature confined to a particular area, may reasonably be charged with contributing largely to the *calvitium* of people of the better class, whose obsequious attention to rules of fashion and etiquette obliges them to wear the hat in fashion, irrespective of considerations of ease or suitability. Next to being light, it is essential that the material of which a hat is constructed should be such as to interpose a non-conducting barrier to shelter the head from the frivolous changes of an inconstant climate; and this object is admirably attained by hats in which a thick layer of air affords the protection of its poor conductivity against cold or heat. Here, as elsewhere, ventilation should be provided for; and hatters have introduced various modifications, all more or less inefficient, for this purpose. The importation of the French habit of doffing the hat on every conceivable occasion has unintentionally done much to minimise the evils which might have been superadded from this source. So far, then, the orthodox silk hat complies with these conditions to an extent which varies according to the maker. But even its most ardent admirer would hesitate to call it a "thing of beauty," and the mutability of its fabric precludes it, alas! from ever being a "joy for ever." All the advantages pertaining to the use of the "tall" hat, may be secured both better and cheaper in the form of its straw analogue which, at any rate for summer wear, is, from its convenience and comfort, a standing protest against the arbitrary caprice of fashion, which condemns urban residents of any position at all to wear a structure which is ruined by rain, carried away by wind, and cumbersome anywhere. Part of the bliss attending exile from town is the luxury of unfettered freedom in the matter of head-covering. So far we have spoken of the male headdress, and it may confidently be anticipated that if reasons of health and comfort are ignored by men, the ladies are not likely to make their observance a speciality. Indeed, the headdress of the average female, in any rank of society, is less a protection against the elements than a means of self-decoration, and a potent agent in that struggle of "natural selection," described by Darwin as influencing the females of many animals. In the case of a shower or a tempest, willingly would the lady remove her headgear, and bear on her unprotected head the blows of the elements, on the principle of the negro who took such particular care of his new hat on the ground that his hat was his own, while his head was his master's. The female is already handicapped by the illegitimate arrangement of her hair, which she trains to grow in exactly the opposite direction to that suggested by nature, and places it in a bundle on the head, so as to interfere with growth and nutrition to an extent that the vilest of men's hats could not rival. It is, probably, idle to hope for any reform in this direction, and the hygienist must e'en wail in the wilderness of indifference with which society fences him round, with the *mens conscia recti* for his only reward.

EMBRYOTOMY CONSIDERED MEDICO-THEOLOGICALLY.

THERE has been recently quite a commotion in medico-theologica circles in the United States in reference to the legitimacy of the operation of craniotomy in cases where it is impossible to conclude labour by natural means, that is, in cases involving the destruction of the life of the fœtus, since no objection has ever been made to the operation where the child is known to be already dead. The subject excited grave discussion and much angry feeling during the last century, and even earlier in Catholic countries; and, owing to the then predominant influence of the clergy, the decision was against the operation. That decision, however, has long since become obsolete, and nowhere is embryotomy more readily practised at the present time than in France. There exists in all countries a growing indisposition on the part of obstetricians to be governed by any other than scientific reasons, and to sacrifice, if necessary, that life which appears to have the least chance of survival. Papal authority has repeatedly declared itself more recently against the taking of infant life, even when its continuance jeopardised that of the mother. It is interesting to compare this view with that which obtains in the Jewish world. In a long discussion which took place in the *American Israelite*, it was stated that (Mishna *Oholoth* vii, 6), "in case of a dangerous parturition, it is justifiable to kill the infant in order to save the mother, inasmuch as her life precedes that of the child. The operation is not permissible after the child is partially born, as, in the latter case, the maxim applies that one human life is not to be set aside on account of another." The latter view is that more in accordance with scientific deductions, but has the demerit of stopping short at a restriction which is not intelligible from a physiological point of view, and of creating a distinction which does not repose on a material or moral difference. If it be justifiable to destroy life at one period of labour, it is difficult to understand why it should be improper at another, the danger to the mother being the same. Altogether, the discussion is interesting rather from a philosophical than from a practical standpoint; but the fact that it has excited so much interest, and led to so much earnest argument in the past, only serves to emphasise the responsibility of the accoucheur in deciding on the proper course to adopt. There is no reason, however, to doubt that every necessary safeguard exists in the reluctance which any medical man must experience in the performance of what, at best, must be to him a painful duty. In the exercise of this supreme function, he must be content with the guidance of a knowledge of general laws bearing on the subject, and leave the metaphysical side of the question to those who are not called upon in the exercise of their profession to apply their precepts to practice.

BACILLI IN OLD MUSEUM SPECIMENS.

IN the thirty-third volume of the *Transactions of the Pathological Society*, Mr. F. S. Eve describes the microscopic appearances of a renal tumour among the Hunterian specimens in the Museum of the Royal College of Surgeons. Not only could he recognise the minute histology of the morbid growth, but he also was able to detect striped muscular fibres, precisely as seen in a recent specimen, which was exhibited by Mr. Eve at a meeting of the Society. The Hunterian specimen must have been over ninety years old. Mr. Eve's discovery was of considerable importance, for it showed, as has since been proved, that the great stores of tumours in large pathological museums might still be utilised for the purposes of pathological research. Dr. Vincent Harris has recently shown that not only morbid histology, but what has been termed bacteriology, may be studied in old museum-specimens. To the twenty-first volume of the *St. Bartholomew's Hospital Reports*, recently published, Dr. Harris has contributed a memoir on the Presence of the Tubercle-Bacillus on Old Specimens of Diseased Lung. The author has examined specimens of diseased lung in the Museum of St. Bartholomew's Hospital, selecting a dozen of the oldest and most typical specimens. Of these, nearly all were contributed to the museum previously to the year 1846, and several were prepared, it is believed, by the late Dr. Farre in 1812. The search for bacilli was, in almost every case, successful. A description of the microscopic character of each specimen is published, showing that characteristic colonies of micro-organisms could readily be detected. The bacilli were observed in three of the chief forms of wasting lung-disease, namely, in isolated or miliary tubercles, in caseous masses, and in fibroid thickenings, as well as in thickened pluræ. "The finding of the bacilli in a single case of sufficiently old diseased lung," Dr. Harris observes, "would be enough, one would suppose, to render it very probable that the relationship between the bacilli and the diseased

processes of tubercle is no new one, or, in other words, that bacillar phthisis is no new disease." The staining which was found to be most successful was the Ehrlich-Weigert method. It would be interesting, indeed important, to ascertain whether bacteria might not maintain their vitality for a short time in a spirit-specimen. Alcohol does not always penetrate dense structures with rapidity, and the induration which it produces in the tissues might protect the bacilli from its action for a long period. As long as the germs remained untouched, the specimen would be unsafe to handle without precautions.

TREATMENT OF INFECTIVE MAMMITIS IN COWS.

OUR Paris correspondent writes: Last year, M. Nocard was consulted by a dairyman who had all his cows ill with mammitis. After they had been a little time in his cowhouse, one, two, or three teats presented the symptoms of the disease. All treatment failed. M. Nocard discovered a microbe in the milk drawn from the diseased teats. He cultivated these organisms, and found that borax rendered his cultivation-fluids sterile. He directed that the diseased teats should be washed and injected with solution of borax. This was done, and the mammitis disappeared.

ABNORMAL POSITIONS OF THE DESCENDED TESTICLE.

AFTER some unusual clinical experience of misplaced testicles, Dr. Englisch, of Vienna, has written a communication in the *Wiener Klinik* on this subject. He divides cases of the abnormality into three classes. In ectopia scroto-femoralis, the testicle lies, at a variable distance from the external abdominal ring, in the fold of skin between the thigh and the scrotum. It is perfectly movable, and the scrotum is small and ill-developed on the affected side. This is the commonest form of displaced testicle, and is often overlooked. In ectopia perinæalis, the testis lies under the skin of the perinæum, about an inch and a half from the anus. When this condition is due to violence, the scrotum is empty on the affected side, but, when congenital, that pouch is ill developed. The testis slips back at once into its abnormal position, if it be pushed forward. In ectopia cruralis, a rare condition, the testicle lies in the saphenous opening, and inguinal femoral hernia generally exists. In some remarkable instances, a testicle, after having lain in its normal position, has been displaced, slipping up the inguinal canal into the abdominal cavity, and has afterwards escaped into the crural canal, constituting a form of femoral hernia. It has also been known to descend primarily into that canal. In a commoner form of crural ectopia, the testicle escapes from the external ring, but misses the scrotum, and passes on to the inner and upper part of Scarpa's triangle, pushing a layer of spermatic fascia in front of it. The scroto-femoral and perineal varieties are caused, Dr. Englisch believes, by delay in the descent of the testicle. The scrotum is then imperfectly developed, so that it is too small to receive the testicle when thoroughly down. Ectopia cruralis is probably due to the same causes as predispose to femoral enterocele or epiplocele. Diagnosis of all these forms is easy, except when hernia exists. None of these displacements cause much inconvenience, and operations for dislodging the testicle, and pushing it into its natural place, are unsatisfactory, owing to want of room in the scrotum. The testicle is, as a rule, functionally perfect. Dr. Englisch advocates, in crural hernia of the testicle, reduction of the hernia, and an operation to bring the gland through the inguinal canal, and to replace it in the scrotum; but this operation has never, it appears, been attempted, and, if feasible in its first two steps, would probably fail in the third, through ill-development of the scrotum. Removal of a displaced testicle may be needed in cases of repeated orchitis, malignant disease, or even in some forms of hernia. Dr. Englisch also makes some observations on what he terms inversion of the testis, as seen in cases where the vas deferens and spermatic vessels, with the epididymis, lie in front of the testicle. This condition is, as may well be understood, of great importance in relation to operations for the relief or cure of hydrocele. The relations of the vas deferens, a structure readily traced by the fingers, will determine the presence of "inversion" in a suspected case. The pathology of misplaced testicle may be elucidated by certain observations recorded by Dr. Bramann (*Archiv für Anat. und Phys.*, Anatom. Abtheil., 1884). He found that the gubernaculum testis was never attached to any part of the scrotum, but was inserted into the spine of the os pubis and the aponeurosis of the external oblique. He found the scrotum well formed, but filled with connective tissue, early in fœtal life; and the spermatic fascia formed part of the scrotal wall long before the testicle reached the external ring.

URETHAN AS A PHYSIOLOGICAL ANTIDOTE TO STRYCHNINE.

SOME very interesting observations have quite recently been made by Professor Coze on the subject of the physiological effects of urethan, and more particularly on its antagonism to those of strychnine. The first point is its extreme tolerance when injected subcutaneously, or into the peritoneal cavity. Eight to ten grains so injected did not set up any local irritation in the frog, nor did thirty grains in the guinea-pig. No symptoms of gastric irritation were produced by from 80 to 100 grains given by the mouth in rabbits. The effect of the drug on the blood appears to consist in an increase of the amount of oxygen (4 per cent.); and the nervous exhaustion which follows its use may, perhaps, be attributable to the greater difficulty with which the blood parts with its oxygen in favour of the nervous system. Its influence on the tetanus of strychnine-poisoning was shown in the following manner. A frog weighing just under an ounce was injected with $\frac{1}{750}$ of a grain of sulphate of strychnine (the minimum fatal dose being $\frac{1}{1500}$ of a grain, according to Falck); and as soon as tetanus declared itself, five grains of urethan were injected. Four minutes later, the tetanus ceased, and the muscles became completely relaxed. The next day, to the professor's astonishment, the animal was all right again. This experiment was repeated many times, with larger and smaller doses of urethan; the effects were not so lasting with doses of less than five grains, but, if the tetanus returned, it could be almost instantly arrested by a further injection. A mixture of strychnine and urethan injected together gave rise to no tetanic symptoms, but rather to muscular relaxation. On the guinea-pig, the effects obtained were the same, this animal being somewhat less amenable to the action of strychnine, one-eightieth of a grain of the drug was injected simultaneously into two guinea-pigs. A quarter of an hour later, both the animals being tetanised, one of them was injected (into the peritoneal cavity) with 15 grains of urethan; the convulsions ceased; the respiration coming down first to 72 and then to 40 per minute. The other animal, the check experiment, succumbed in twenty minutes to the effects of the strychnine. For a rabbit weighing two and a half pounds, the minimum fatal dose of strychnine is $\frac{1}{120}$ of a grain. Accordingly, to one weighing three pounds, successive injections were administered, amounting to one-fortieth of a grain of the sulphate of strychnine, rapidly followed by a violent attack of spasm; the animal leaped and fell down breathless, and in a state bordering on asphyxia. Fifty grains of urethan were then promptly introduced into the stomach, after a few artificial respirations. In the course of a few minutes, the tetanic rigidity began to lessen, first in the hinder part of the body, respiration became deeper, and the animal fell into a quiet sleep. Two hours later, the rabbit raised its head without any convulsion, and gradually recovered. The next day, the only symptom was a little weakness in the hinder legs; and, on the next day but one, the animal had to all appearances completely recovered. The contrary experiment was also made, the urethanised animal being injected with one-fiftieth of a grain of sulphate of strychnine, without the production of tetanus. All the experiments were repeated a certain number of times, but always with the same result. In other experiments, he administered a mixture of fifty grains of urethan with one-fiftieth of a grain of strychnine, and no spasm or rigidity followed. He pushed the strychnine to one-fifth of a grain without any apparent effect; and even with

a quarter of a grain, although a few spasms manifested themselves, the animal did not die. On a dog weighing 25 pounds, one fifth of a grain of strychnine was counteracted with 75 grains of urethan, and in twenty minutes the animal got up, and walked away with some difficulty. The next day, he was all right again. Dr. Coze suggests that clinical use should be made of the drug in conditions attended with convulsions, and more especially in cases of tetanus.

SCOTLAND.

THE EDINBURGH FEVER HOSPITAL AND ITS VISITING PHYSICIAN.

THERE is at present a deadlock as regards the appointment of a visiting physician to the Edinburgh Municipal Fever Hospital; and, as the hospital has now been in full work for a considerable time, if this deadlock continue much longer, and there be no complaints as to the manner in which affairs are at present conducted, the public may possibly ask what necessity exists for the appointment of a visiting-physician. Another point of vast importance to the numerous students of medicine in Edinburgh Medical School and to the general public, is the absence of some comprehensive scheme whereby instruction in fever may be given in a clinical course. At present, what blocks the way to any appointment was stated plainly by Dr. Littlejohn, on Tuesday, to a meeting of the Public Health Committee of Edinburgh Town Council, namely, that he had been unable to get any suitable physician to undertake the duties for the sum of one hundred guineas as offered by the committee, and he was still of opinion that the advice he formerly gave, that two hundred guineas should be the salary, should be followed. He considered that it was of importance that the gentleman to be appointed should be one who, from his position in the medical profession and experience, should command the confidence of the ratepayers. It was utterly impossible for a Fellow of the Royal College of Physicians to accept the responsible duties of the position at the salary suggested by the committee. The committee resolved that Dr. Littlejohn should memorialise the Town Council to the same effect.

ARBROATH INFIRMARY.

AT the annual meeting of the subscribers to the Arbroath Infirmary held on Monday, the report submitted by the directors showed that the number of patients admitted during the past year was 214, an increase of 50 as compared with the previous year's number, 164. Of the 214 admitted, 140 were cured or recovered, 15 died, and 19 remained in the wards. The number of out-patients treated in the dispensary department by the staff was 254, which was a considerable increase on the numbers of the previous year. The income for the year, together with a balance from the previous year, was more than the expenditure by £117. The endowment-fund of the institution nearly reaches £10,000 now. The meeting approved of the reports of the directors, treasurer, and medical officers.

IRELAND.

CAVAN WATER-SUPPLY.

THIS scheme, it is expected, will shortly be put into operation, at an estimated cost of £2,700.

THE LABOURERS' ACT.

DR. MATTHEWS, of Cavan, has refused to inspect and report on labourers' cottages at a less fee than ten shillings for each house, much to the consternation of the guardians, who only wish to allow five shillings each.

ST. PATRICK'S HOSPITAL, DUBLIN.

AN enjoyable garden-party was given on Saturday last to the patients of St. Patrick's Hospital, James Street, Dublin, by Dr. Malony, the Resident Superintendent. In addition to the hundred patients, about forty visitors were present. Refreshments were served in a spacious marquee. A military band was in attendance, and in the evening the nurses, attendants, and some of the patients joined in a dance in one of the large halls, no effort being spared to render the evening most pleasurable. Within the last eighteen months, the Board of Governors have expended on this hospital nearly £2,000, in perfecting the sanitary arrangements of the house, renovating the wards, and adding new machinery in the laundry, etc.

THE EXPENSES OF LUNATICS IN DISTRICT ASYLUMS.

AT a meeting of the Grand Jury of the county and town of Drogheda recently, the following resolutions were adopted:—"That the Grand Jury of the county and town of Drogheda, find that there has been for some time past, and are at present, patients in Richmond Lunatic Asylum, chargeable to them, who have means available for their maintenance, and for whom no contribution is made by their friends or relatives; that by the 38th and 39th Vict., cap. 67, sec. 16, the duty of taking proceedings for the recovery of amount due for maintenance in such cases is cast on the resident medical superintendent, or other asylum officer; that the asylum authorities have been called on to take proceedings in some cases, and have been furnished by our secretary with the necessary information. They having declined to take proceedings, our secretary be instructed to communicate the facts to the Lord Lieutenant and Lord Chancellor, as they may direct." "That our secretary be authorised by this Grand Jury, at Summer Assizes, to write to the resident medical superintendent of Richmond Lunatic Asylum, requesting him to delegate his authority to him, to proceed against the representatives of parties possessed of means, and now confined in Richmond Asylum as lunatics or idiots; and, further, that our secretary be empowered by this Grand Jury to employ a solicitor should he think proper."

CORK UNION: ACCOMMODATION FOR LUNATICS.

THE Board of Guardians of the Cork Union, about two months since, sent a memorial to His Excellency, the Lord Lieutenant, complaining of the want of accommodation in the Cork Workhouse and in the Cork Lunatic Asylum for pauper lunatics, and urged on His Excellency to exercise the powers vested in him by the 14th section of the 8th and 9th Vic., cap. 107, to direct and order the enlargement or extension of the Cork Lunatic Asylum. What the guardians complain of is the want of room for the lunatics, both in the workhouse, and in the asylum; and the guardians, with a desire to afford sleeping accommodation for their lunatics, are about to expend £500 in the erection and furnishing of additional buildings for the purpose. This improvement will not, however, affect the accommodation in the asylum, the extension of which is the great object the guardians have in view in bringing the subject again under the notice of His Excellency, as that institution is the proper place for the reception of lunatic paupers, as expressly indicated by the Act of Parliament referred to. The intention of Parliament is thus clearly defined, and the guardians have again urged upon His Excellency the necessity of having the intentions of the Act carried into effect by directing the enlargement of the Cork Lunatic Asylum, so that the pauper lunatics may receive the benefit of the improved system of management and treatment specially intended for them, and for which no board of guardians can make adequate provision in the workhouse.

RATHDOWN UNION: CLASSIFICATION OF INMATES.

MR. ROBINSON, Local Government Board Inspector, in a recent report, draws attention to the classification of inmates in this workhouse as being very imperfect. Although all the wards of the hospital are not occupied, there are sick inmates distributed through the dormitories in the main building, and in one ward on the female side he found old women, another with children, and two boys were occupying the same bed. It is a subject of regret that the guardians have

not seen their way to recognise any classification on the female side of the house. There appears also to be no responsible officer in charge of the male lunatic wards; and it has been found that the pauper assistants in this department are not to be relied on, and the appointment of a permanent assistant is advisable.

DEATH OF DR. MOXON.

We regret to have to announce the sudden death of this distinguished physician. Dr. Moxon, after a hard day's work on Wednesday, including an oral examination at the College of Physicians, prior to returning to his house at Highgate, went to his consulting rooms in Finsbury Circus, where he was engaged for some time in correspondence. As he failed to return home at his usual hour before midnight, messengers were despatched to Finsbury about two o'clock on Thursday morning, and Dr. Moxon was found to have been dead for some time, lying in his consulting room. The cause of death is at present unknown, but it is supposed to have been due either to apoplexy or to heart-disease. The event has caused a distressing gloom over Guy's Hospital, which will, no doubt, extend to the entire medical profession. Further particulars will be published in the next number of the JOURNAL.

THE INFLUENCE OF PURE TEREBENE ON FERMENTATION.

In a lecture recently delivered at the Westminister Hospital, Dr. Murrell referred to the power exerted by pure terebene, in arresting fermentation, and gave the details of some experiments which he had made. He took two beakers of the same size and shape, and, in each of them, placed 265 cubic centimètres of water and a little hay. To one of them he added half a cubic centimètre of pure terebene. Both beakers were covered with glass plates, and placed in a warm chamber, at 36° C. (96.8 Fahr.). Two days later, the test-beaker was examined, and the fluid was found to be swarming with moving particles, so minute that they could with difficulty be seen with a Zeiss D. The other beaker smelt strongly of the pure terebene, but nothing moving could be detected when examined with the same lens. On the ninth day from the commencement of the observation, the hay-infusion was turbid; a film had formed on the surface, and the fluid was distinctly offensive. Under the Zeiss D, numerous monads were seen, with large numbers of moving organisms. The other beaker was clear; there was no film on the surface; the slight sweet smell of pure terebene was still perceptible, and moving organisms and monads were absent. On the eleventh day, the temperature of the warm chamber was somewhat higher, having risen to 40° C. (104° Fahr.). The specimens being again examined under the Zeiss and a Ross's one-eighth power, the field of number 1 was found to be covered with moving organisms, but in number 2, nothing was to be seen on most careful examination. The test was a rough one; but it is clear that a 2 per cent. solution of pure terebene will arrest fermentation in a hay-infusion. On a subsequent occasion, the experiment was repeated with 1 part in 1,000 of pure terebene, the infusion being kept this time at a temperature of 20° C. (68° Fahr.). In fifty-one hours, the test-solution, examined with a one-twelfth Ross's objective, was found to contain hay-bacilli in large quantities in motion, also numerous paramœcia. The solution containing terebene (number 2) was not absolutely free from moving organisms, but they were fewer and less developed, and no paramœcia were found. At the expiration of seventy-five hours, number 1 was seen to be swarming with paramœcia and hay-bacilli breaking up into spores; number 2 contained only a few moving organisms, and no paramœcia. Two days later, number 2 was swarming with paramœcia, whilst they had all disappeared from number 1. The influence of pure terebene on paramœcia was demonstrated in another way. A specimen of hay-infusion swarming with paramœcia was put under the microscope, and examined with Ross's one-twelfth-inch. Several large specimens being under observation, a drop of pure terebene was placed at the edge of the cover-glass, and drawn through with blotting-paper. The paramœcia were at first but little affected, but after a time their movements almost ceased, although their cilia could still be seen languidly beating. A drop of water was then drawn through, and almost immediately the paramœcia became as active in their movements as ever.

Pure terebene was found to have the power of arresting or preventing the fermentation of yeast. Two small bottles, of identical size and shape, were filled with a mixture of saccharine urine, and yeast. To one bottle was added pure terebene, in the proportion of 1 in 450. The bottles were inverted in the ordinary way, in a flat vessel containing water, and were placed in the warm chamber. In forty-eight hours fermentation had taken place in one bottle and all the fluid had been driven out, while the bottle to which terebene had been added, remained full. On the third day, a few small bubbles of gas appeared in it, and on the seventeenth day it contained only about one-fourth of gas. The effect of pure terebene in this experiment was very marked. On another occasion two bottles were taken, each holding 6½ ounces. In each was placed half an ounce of cane-sugar syrup mixed with a little yeast. One was filled with water; the other with water containing 1 in 1,000 of pure terebene; and both were inverted in shallow dishes containing water, and placed in a warm chamber. The bottles were observed day by day for six days, and the carbonic acid gas was found to accumulate twice as quickly in the former as in the latter. On another occasion, two specimens were treated in a similar manner; and at the expiration of fifty-one hours, both were examined microscopically. There was not much difference in the character of the torulæ, but those in the bottle containing terebene were less developed.

Pure terebene undoubtedly exerts an influence on lactic acid fermentation. Two beakers were taken, each containing 250 cubic centimètres of fresh milk. To one of them was added 5 cubic centimètres of pure terebene; and both were placed in the warm chamber, at a temperature of 42° Cent. (107.6 Fahr.). At the expiration of twenty hours, they were examined. The milk in one was found to be curdled, and strongly acid. That in the beaker containing terebene had a slight film on the surface, but was quite fresh, and was neutral in reaction. It was sweet and pleasant to the taste, except for the smell of pure terebene. The greater part of the pure terebene was found floating at the top. Twenty-three hours later, this milk was curdled, and had a strong acid reaction.

Dr. Murrell stated that these observations were made in the Physiological Laboratory of the Westminster Hospital, in December, 1880, and led to a trial of the drug in cases of irregular fermentation in the stomach—acidity, flatulence, etc.; and its subsequent introduction as a remedy for winter-cough.

THE CHOLERA.

ITALY.

From Saturday, July 17th, till Wednesday, July 21st, the following are the reported cholera returns from Italy:—Brindisi, 28 cases and 11 deaths; at Francavilla Fontana, 66 cases and 15 deaths; at Latiano, 37 cases and 14 deaths; at San Vito, 20 cases and 3 deaths; at Oria, 2 cases; at San Donaci, 4 cases and 2 deaths; at Venice, 2 cases and 2 deaths; at Codigoro, 10 cases and 2 deaths; at Erchie, 2 cases and 1 death; at Ostuni, 5 cases and 1 death.

AUSTRIA.

From Austria, the returns from Sunday, July 18th, till Wednesday, July 21st, are:—Trieste, 13 cases and 5 deaths; at Fiume, 14 cases and 6 deaths.

MEDICAL MAGISTRATE.—The name of Dr. Robert Gee, 5, Abercromby Square, Liverpool, has been placed upon the Commission of the Peace for the City of Liverpool.

PRESENTATION.—Surgeon-Major Purvis, of Greenwich, who has conducted ambulance-classes in connection with the 2nd Volunteer Battalion (the Queen's Own) Royal West Kent Regiment, has been presented by the members with an elegant walking stick. Dr. Purvis, in returning thanks, drew attention to the fact that, of the twenty-four members of the class, no fewer than twenty passed the examination.

WILD BEASTS AND SNAKES IN INDIA.—During the past year, wild beasts and snakes have been unusually destructive to human life in the Central Provinces of India, there having been an increase of 262 in the number of persons killed, as compared with the preceding year. Of wild beasts, tigers, of course, were the most destructive, their victims numbering 110, against 98 in 1884, while the number of tigers killed was only 221, against 260. The deaths from snake-bite last year amounted to 1,066, against 797 in 1884, while only 1,997 snakes were killed, as compared with 2,378. In an official note on the subject, it is observed that there has been a "satisfactory increase" in the number of wild animals destroyed; but this increase is due to the larger number of bears, wolves, and hyenas destroyed.

MORTALITY AMONG THE TROOPS AT ASSOUAN.

Reports from the Egyptian Frontier Field Force, to June 18th, show that the total number of British soldiers then in hospital at Assouan was 257, and during the week the deaths had been 27. One of these was an officer, and of the remainder 20 men died from sunstroke or heat, 5 from enteric fever, and one from dysentery; there were 80 cases of enteric fever, 38 of other fevers, and 26 of dysentery remaining in hospital. In all, 10 per cent. of the troops were sick, exclusive of those invalided. The Director-General of the Medical Department, Sir T. Crawford, K.C.B., commenting upon the report, says that the main causes of the sickness are the heat and the insufficient protection from it, and the youth of the troops, who are probably in a depressed and enervated condition from the effects of climate, and monotony of life and food. The Director-General thinks that if the men cannot be moved out of Upper Egypt during the hot season, they should be well hutted and protected by thick roofs and walls, and deep verandahs. He further recommends that punkahs should be adapted to the huts; that not less than from 600 to 800 cubic space should be allowed, and that only seasoned troops and men over 22 years of age should be kept at Assouan. Ice should be largely used for all troops, healthy and sick, and the more the men are spread out the better. The soil should be kept scrupulously clean, and the potable water, boiled or condensed, taken from midstream. The troops should be exposed to the direct rays of the sun as little as possible, and be amply supplied with fresh succulent vegetables and fruits, rice, etc. They should have coffee and biscuit served out in the early morning, and an evening meal. Beer and spirits are condemned, and claret, light wines, cool effervescent drinks and lemonade recommended. The supply of cold tea should be unlimited. Finally, Sir T. Crawford remarks that all camps occupied become foul unless some extraordinary sanitary works are carried out; and the site of encampment on Tagora height, being one of Nubian limestone and granite, with a thin layer of sand of varying depth, is likely to be very hot, and open to difficulties in the way of sanitation. Whether there is any better site in the vicinity should, the Director-General thinks, be ascertained. Orders have been sent by the War Office to General Stephenson, commanding in Egypt, to take steps at once, and incur the necessary expense to carry out these recommendations, if they have not been attended to already.

EXAMINATIONS FROM A CANDIDATE'S POINT OF VIEW.

In the following table of statistics, the symbol *** is employed to represent a class of men whose diagnostic difference from other practitioners is their having made it a distinctive feature in their life's work to advance medicine, to make its science more accurate, and the exercise of its art more skilful, and to spread the knowledge of it. The *differentia* is clearly dichotomous, and must be especially convincing to the educationalist. They are the leaders, we others are the led; we are the taught, they the "teachers," who, in gorgeous Eastern phrase, are destined, in a future golden age of civilisation, to "shine as the brightness of the firmament as the stars for ever and ever." (Is the twilight dawn of this golden age visible on the horizon?) They are the "*élite*," for they are elected by their fellows; they not only get an honest living themselves, but they help others to do the same. They all shed some light and some guidance, but of various grades of brilliancy—some are blazing suns, some tiny twinklers—yet those were tiny twinklers which conducted Columbus across the Atlantic and Vasco di Gama round the Cape. And so the last appointed demonstrator may, perchance, be helping forward a John Hunter of the future.

We may have the less fear of adopting this basis of classification, seeing that, in application, it includes all other liberal and rational bases. Suppose one assign honour as to men of mark to those who habitually render most service to their country by attending most patients. Indubitably, one would single out the staffs of recognised schools; for the staffs of the recognised schools in London attend, among them, a matter of 2,000 annually per head. Now, suppose for an instant, that each of the practitioners on the *Register* attended that number, the sum of sick would be fifty millions; and every man, woman, and child in the United Kingdom must be in the medical man's hands at least once in twelve months—which is absurd.

Adopt the Horatian maxim, "*Principibus placuisse viris non ultima laus est*"—the attendants of the rich and great are almost without exception school-teachers. Make specialism a distinction—all the known specialists are, or have been, attached to school-staffs.

To these members of school-staffs must be added about twenty individuals who, though not lecturers or clinical instructors, may be called teachers of the teachers, being cited by them as "authorities," and spreading knowledge by their researches and pens. Some of these have been decorated with titles in recognition of their eminent services to the country, but the most useful have not.

Again, there cannot be omitted from the catalogue a few members of the Medical Council whose names are not among the school-teachers, who yet constitute a body certainly ministerial to education.

There is no difficulty, by aid of the *Register* and the *Medical Directory*, in making a list of living registered practitioners, who may be included in one or other of these three classes. And an equally easy, though long, task is the counting up the graduates and diplomates of each licensing body; and thus the percentage of *** in the whole numbers who have passed the several examinations is readily presented in a tabular form as follows.

Examining Bodies, as per *Medical Register* and *Medical Directory* of 1885.	Passed by each.	***	Percentage of *** in whole.	Numbers of aforesaid *** on Staff of University School of which they are Graduates.
Queen's University of Ireland ..	1,792	21	1.1	
University of Aberdeen	1,155	22	1.9	3
,, ,, St. Andrew's ..	1,039	23	2.3	—
,, ,, Glasgow	1,352	33	2.3	24
,, ,, Edinburgh	2,575	118	4.6	35
Average in the ten British Universities	See below.	See below.	5.2	See below
University of Durham	206	12	5.8	6
,, ,, Dublin	751	81	10.8	7
,, ,, London	1,021	134	13.1	—
,, ,, Cambridge	227	55	25.7	11
,, ,, Oxford	108	35	32.4	—
Total in ten British Universities..	10,226	534	5.2	86
Registered practitioners holding degrees from foreign Universities only	51[1]	10[1]	—	
Registered practitioners with diplomas from "other bodies" ..	14,981	202	1.3	
In practice before 1858, or otherwise entitled to registration without diploma in 1885.. ..	63		—	
Total of registered practitioners..	25,321	744	2.9	—

The best licensing bodies are those which attract the best students. The best students are the men who leave their mark on the profession afterwards. Their distinction lies not in the brilliancy of their examination, for "the years which follow in a man's life are truest testimony;" and it is certain that, by this success in after-days, one may pick out those who have been the most diligent and intelligent students, such as we want to multiply. The having been the vessel which conveyed these men into the profession, is a credit to the examining board they have patronised. Of course, it did not, in any sense, manufacture the goods; but it has done its duty in safely importing them. And a shrewd estimate of the good qualities of a ship may be formed from the value of the merchandise entrusted to it; for people do not embark gold and diamonds in crazy bottoms. Just so the industrious and intelligent student, who has a very good notion of taking care of himself, will not risk his precious brains, but will take them to the best examination. He accounts those the best examinations where he has fullest opportunity of bringing out that which is in him, and where that which is in him will be weighed most fairly against that which is not in him. He will, as a rule, prefer those which he can visit beforehand, and so see what he has to expect, when his turn comes; and where his friends can come to hear him examined and see all fair. He will prefer those into which the elements of chance enters the least, and which his acquaintances do not boast of passing by good luck, but by steady perseverance. The better students make their choice (where they have a choice) on these and similar grounds.

Of course, examinations conducted by a teaching university will be the most sought by its own pupils; and perhaps a university does not do its duty all round unless it have a school of medicine so far complete as circumstances allow. But this does not appear to affect to any recognisable extent the comparative estimate formed by indus-

[1] These numbers of 51 and 10 are necessarily imperfect. Many possessed of foreign qualifications have not registered them. For instance, of the 10 persons of mark, only 3 have registered them, though they are appended to the names in the *Medical Directory*; and an unknown number have not recorded them in the pages of that periodical, or have withdrawn them in 1885.

trious students of the merits of the examinations. Thus, we see that St. Andrew's, which has no school, passes the same proportion of the best students as Glasgow, which has a large one; and other licensing authorities, non-educational so far as medical instruction is concerned, rank, one the highest, and the other the lowest, in the percentage of men of mark who honour them by becoming graduates.

Nor do the large numbers of the graduates unfavourably affect the proportion of the more intelligent and diligent students who have sought some universities. For example, while Edinburgh shows nearly double the number of ordinary graduates to those hailing from Glasgow, it yet has also double the percentage of distinguished men. London and St. Andrew's pass just about the same number of graduates, yet of these last only 2.3 per cent., and of the former 13.1 per cent., occupy posts of honour. It is difficult to avoid the conclusion that the percentage column in the above table really indicates the comparative estimation in which the several examinations are held by the best students, whose interests are deeply concerned in the selection of the one they should honour by their approval. C.

BRIGHTON MEETING, 1886.

The Work of the Sections.

A glance at the programme of the fifty-fourth annual meeting of the Association is sufficient to show the reader that the work in the Sections promises to be unusually active. In the Medicine Section, two discussions are promised. The first, introduced by Sir Andrew Clark, will refer to the important question of Long-standing Valvular Lesions of the Heart unattended by Serious Symptoms. The second, introduced by Dr. Ord, will involve the subject of Gall-stones, especially with regard to their symptoms and effects. Original papers on other subjects of interest are also announced, and several distinguished physicians will take part in the discussions. Arrangements have also been made for some practical demonstrations, including one by Dr. Radcliffe Crocker on the Destruction of Hairs by Electrolysis.

In the Section of Surgery, Sir Henry Thompson will introduce a discussion on Suprapubic Lithotomy; Messrs. Willett and Meredith will open a second discussion on Cholecystotomy; and Mr. Victor Horsley will lead a third, on the Advances in the Surgery of the Central Nervous System, a subject on which he can speak authoritatively. Among the original contributions, we may note one by Dr. Harley on the Treatment of Certain Diseases of the Liver, hitherto left entirely to the care of the physician, by puncture and abstraction of blood; and others on hepatic surgery will be forthcoming.

A large selection of papers will be read in the Obstetric Medicine Section. The proceedings there will chiefly resolve themselves into three discussions. Two are announced as such, being named in the programme "The Alternatives to Craniotomy," introduced by Dr. Robert Barnes; and on "Removal of the Uterine Appendages;" and they include numerous questions of the highest importance and interest as subjects of debate amongst obstetricians and gynæcologists. The third day of the meeting of this Section will most probably be devoted, more or less, to a discussion on Extra-uterine Pregnancy, based upon contributions on that subject to be read by Drs. Lusk, Aveling, and Berry Hart. There is a large number of papers on other subjects, besides those selected for discussion; and it is hoped that as many of them as possible will be actually read before the Section. It is satisfactory to find that two distinguished American authorities, Drs. Lusk and Emmet, will not only be present, but will also read papers.

The general subjects for discussion in the Public Medicine Section, four in number, are all of a practical character, and will probably give rise to suggestive debates. Dr. Ewart, of Brighton, will open the discussion on the Causation of Scarlet Fever and the Sanitary Measures necessary for dealing with the disease in large towns. Dr. Ransome, of Manchester, will set going a debate on the Duration of the Infectiousness of Scarlatina, Small-pox, Measles, Mumps, and Diphtheria; and Drs. Vacher and Pearse will read two papers on the same subject. Dr. C. Kelly, of Worthing, one of the Vice-Presidents of the Section, will introduce a discussion on the Causes of Diphtheria in Rural Districts, and the Influence of Soil on the Disease. Mr. C. E. Paget's paper on the Relation of Supposed Simple Sore Throat to the Spread of Diphtheria, and Dr. Taylor's on the Association of Diphtheria to Damp and Soil, will both come within the range of this discussion. The fourth general subject for discussion will bear upon the necessity for a Uniform Plan in Reports of Water Analysis. This debate will be opened by Dr. Whitelegge, of Nottingham. Among the original contributions, Dr. Norman Kerr's paper on Hydrophobia, and several on questions relating to Vaccination, are likely to excite great interest. Surgeon-General Cornish and Surgeon-Major Evatt, will read Monographs, the former's relating to an Outbreak of Cholera, the latter's to the Medical Department of Army Corps on Active Service, and to the subject of Volunteer Medical Organisation, so much debated in our columns devoted to the Naval and Military Medical Services. We understand that so good a number and quality of contributions has not been seen in this section for six years.

It is anticipated that a discussion of great interest will take place, in the Section of Psychology, as to the various ways in which the true medical spirit can best be cultivated and preserved in asylums for the insane. The President, Dr. T. S. Clouston, has undertaken to introduce the subject, and hopes to give concreteness and vitality to his remarks by exhibiting a large plan of a proposed "Hospital and Admission Block," to be built in connection with an ordinary county asylum. In such a building, medical thought and medical action would necessarily be of the first importance. All new nurses would be trained in it, and the spirit of the administration would be largely medical. Dr. D. G. Thomson's paper, "On the Separate Care and Medical Treatment of Recent Cases of Insanity, either in Existing Asylums, or in Lunatic Hospitals to be established for that Special Purpose," will be most appropriate to this discussion, which will certainly call forth speeches of great value from many of the leading members of the speciality. The President will deliver an address on "The Relationship of Bodily and Physical Pain." Discussions on other subjects will be promoted, as far as time will permit.

It is satisfactory to find that there is every prospect that the Pathological Section will be well supported. Several distinguished senior physicians and surgeons from London and provincial hospitals will take part in the discussions on "Peripheral Neuritis," "Aneurysm," and "The Etiology and Pathology of Pneumonia." The first will be opened by Mr. Ross, of Manchester, and Dr. Buzzard; the second by Mr. Timothy Holmes; and the third by Drs. Octavius Sturges and Douglas Powell. The original independent contributions all promise to be good scientific monographs. We are glad to see that Dr. Bevan Rake, of Trinidad, will forward two papers on questions relating to leprosy, for every effort on the part of colonial government-surgeons to make use of the advantages which they enjoy for investigating diseases more or less unknown in the British Isles, is much to be commended.

Dr. Brunton will deliver an address in the Section of Therapeutics and Pharmacology; and discussions on Antipyretics, Analgesics, and the Action of Drugs in Albuminuria, will be introduced by Dr. Carter, of Liverpool, Dr. Spender, of Bath, and Dr. Saundby, of Birmingham, respectively. Several papers on new drugs and therapeutical procedures are andounced.

The Section of Ophthalmology is distinguished by an excellent arrangement, by which a limited number of beds will be set apart in the Sussex Eye Hospital for the reception of interesting cases of eye-disease, which are to be shown at the Section. Mr. Jonathan Hutchinson will lead a discussion on Choroiditis, and Mr. Anderson Critchett will open a debate on Episcleritis. A large number of papers are promised. It was at one time feared that the frequent meetings of the new and successful Ophthalmological Society would gradually diminish the interest felt in this Section; but the liberal response to the yearly appeals for papers has proved this fear to be groundless.

In the Otology Section, which includes diseases of the nasal fossæ, several papers will be read on diseases of those cavities, and on the means of exploring them; and Mr. Spencer Watson will open a discussion on the Complications of Nasal Polypi. Some independent papers on important subjects, purely otological in nature, are promised.

Thus, independently of the addresses and museum, the purely cientific work of the annual meeting of 1886 promises to be very satisfactory.

Excursions.

In view of the fact that our meeting this year is to be held at a coast-town, and that excursions by sea are becoming a very popular summer recreation, perhaps it may be well to draw attention to the various coasting steamers trading near to and passing Brighton. We are indebted to a correspondent for the following details.

On Thursday, August 5th, a steamer of the Clyde Shipping Company (21, Carlton Place, Glasgow) sails from Glasgow, calls at Waterford, August 7th; Plymouth, August 9th; Southampton, August 10th; and passes Brighton the same evening on her way to London. Cabin-fare, 30s.; return, 50s. On Saturday, August 7th, the *Faithful*, or other steamer (Powell and Co., 21, Water Street, Liverpool), will sail from Liverpool, call at Falmouth, August 9th; Plymouth, August 9th; Southampton, August 10th; and pass Brighton the same evening on her way to London. Fare, 25s., chief cabin.

On Saturday, August 7th, one of the British and Irish Steam Packet Company's steamers will leave Dublin (company's office, North Wall, Dublin), call at Falmouth, August 9th; Plymouth, August 9th; Southampton, August 10th; Portsmouth, August 10th; and will pass Brighton the same evening on her way to London. Fare, 22s. 6d.; return, 33s. 9d.; chief cabin.

On Saturday, August 7th, a steamer of the City of Cork Steam Packet Company (High Street Chambers, Cork) will leave Cork, call at Plymouth and Southampton, and pass Brighton on Tuesday, the 10th, on her way to London. Fare, 20s.; return, 30s.

If sufficient inducement offered, perhaps the owners of some of these steamers might be persuaded to allow their vessels to call off Brighton to land passengers (as there is deep water close in shore at Brighton), provided the local committee of our Association would make arrangements for a boat to meet the vessels off Brighton, and take the passengers ashore. If such arrangements could not be made, passengers could land at Southampton or Portsmouth, and take the train to Brighton.

Speaking from personal experience, there is nothing more enjoyable or more invigorating than a three or four days' coast-trip in fine summer weather, and I would strongly advise the inexperienced to try it—the cost is merely nominal, and the effect far superior to either blue pill, podophyllin, or nux vomica.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1886. ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 161A, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research, in furtherance of which the grant was made.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

The inquiry on Acute Rheumatism is now closed, as the printing of the Tables is completed.

THE ETIOLOGY OF PHTHISIS.—**Continuation of inquiry.** The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

General inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE have been issued. A report will be made to the Section of Therapeutics at the annual meeting.

PROGNOSIS IN HEART-VALVE DISEASE, based on an examination of cases in which the lesion has existed for an unusual length of time without producing serious symptoms; THE EXTREME DURATION OF INFECTIOUSNESS IN INFECTIOUS DISEASES. The Committee has proposed these two subjects for future inquiry, and has referred them to the Branches of the Association, in accordance with its regulations, with a view to preliminary discussion during the present year. Arrangements have also been entered into with the Section of Medicine of the Annual Meeting of 1886 to hold a discussion upon "Cases in which Disease of the Heart-Valves has been known to exist for upwards of five years without causing serious symptoms;" and with the Section of Public Health to hold a discussion on "The Duration of Infectiousness." The former discussion will be opened by Sir Andrew Clark, Bart., the latter by Dr. Arthur Ransome. The inquiry-papers, to be subsequently issued, will be based upon the information afforded in these Branch and general discussions.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—The annual meeting will be held at the Beach Hotel, Minehead, on Friday, the 30th instant, at 5 o'clock. T. J. Ollerhead, Esq., President-elect, will take the chair on its being vacated by Mr. Sincock. Business: Minutes; Report of Council; Treasurer's Report; Election of Officers; Place of Meeting and President-elect for 1887. President's Address. Papers and communications. Dinner at the Beach Hotel at 6.30; 5s. 6d. a head, exclusive of wine.—W. M. KELLY, M.D., Honorary Secretary.

NORTH OF ENGLAND BRANCH.—The annual meeting will be held at South Shields on Thursday, July 29th.—DAVID DRUMMOND, Honorary Secretary.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.—Ordinary meeting, Bugle Hotel, Newport, Thursday, July 29th, 1886, at 4 P.M.: David Lloyd, Esq., President, in the chair. Proposed new member, W. J. Mackie, M.D. Brussels. Agenda: 1. Uterine Polypus removed, by J. Groves, M.B. 2. Notes, with Temperature Chart, of a case of Pelvic Abscess obstructing the Sigmoid Flexure, by W. E. Green, Esq. 3. And any other business. Gentlemen who are desirous of introducing patients, exhibiting pathological specimens, or making communications, are requested to signify their intention at once to the Honorary Secretary. Dinner at 6 P.M.; charge 6s., exclusive of wine.—W. E. GREEN, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Infirmary, Cardiff, on July 8th; George A. Brown, Esq., President, in the chair; afterwards H. N. Davies, Esq., President-elect. There were forty-three members present.

Vote of Thanks to Retiring President.—The President having resigned the chair to the President-elect, a cordial vote of thanks was unanimously passed to Mr. George Arthur Brown, for his courteous and able conduct as president during the past year.

Report of Council.—The minutes of the previous meeting having been read and confirmed, the following Report of Council was received and adopted.

The Council of the South Wales and Monmouthshire Branch presents you with its sixteenth annual report.

The past year will be chiefly remembered as the one in which the annual meeting of the Association was held for the first time in Cardiff, a meeting which was acknowledged to be one of the most successful and enjoyable ever held by the Association. We think you may be fairly congratulated on that success.

Since our last annual meeting at Swansea, two ordinary meetings have been held, one at Tredegar and the other at Carmarthen, which meetings, under the genial presidency of Mr. G. A. Brown, have been most successful, and several interesting papers have been read, followed by animated and useful discussions.

At the Carmarthen meeting, a resolution was unanimously passed in favour of establishing a Medical Defence Fund in connection with the Association.

The number of members of the Branch is now over 200, which gives you the privilege of electing two representatives on the General Council instead of one.

The accounts show a balance in hand of £27 4s. 2d.; £33 6s. has been forwarded to the Medical Benevolent Fund.

The autumn meeting will be held at Merthyr, and the spring meeting next year at Neath. The next annual meeting will be held at Swansea.

President elect.—Mr. J. A. Rawlings, of Swansea, was unanimously elected President-elect.

Members of Council.—Messrs. Webster, Cresswell, Hall, and T. W. Parry, were declared elected by the scrutineers.

Honorary Secretaries.—Drs. Sheen and D. A. Davies were unanimously re-elected.

Representative in the General Council.—Dr. Sheen was unanimously re-elected.

New Member.—Mr. R. Nelson Jones, Swansea Infirmary, was elected a member of the Branch.

President's Address.—The President then delivered an interesting address, for which a cordial vote of thanks was unanimously passed to him.

Papers, etc.—Mr. Parry (Ferndale) read notes on two successful cases of ovariotomy, and showed patients and specimens.

Dr. Isambard Owen (London) introduced a discussion by reading a paper on the Duration of Infectiousness in Infectious Diseases. Messrs. Parry, Brown, J. W. Davies, Sheen, and Rawlings, took part in the discussion, after which Dr. Owen replied. Warm thanks were expressed to Dr. Owen for taking the trouble to come such a long distance, and for his excellent paper.

Travelling Expenses of Representatives of Branches.—Dr. Sheen read a circular letter from the East York and North Lincoln Branch in favour of payment of the travelling expenses of representatives on the General Council by the Association, and moved the following resolution, which was seconded by Mr. G. A. Brown:

"We are of opinion that it is not at present desirable that the Association should pay the travelling expenses of Branch representatives on the General Council; but would suggest that power should be given to any Branch desiring to do so to elect as its representative a member of the Association who need not necessarily be a member of the Branch he represents."

Whereupon the following amendment was moved by Mr. Fry, and seconded by Mr. Rawlings:

"That this Branch is of opinion that the expenses of the representatives on Council should be paid by the Association."

The amendment was lost, and the resolution, on being put, was carried.

Cases.—A case was shown by the President, in which a New Lower Eye-lid had been successfully formed by a Plastic Operation.

Dr. Sheen showed a patient suffering from Syphilitic Disease of the Face resembling Lupus.

The members afterwards dined together at the Angel Hotel.

OXFORD AND DISTRICT BRANCH: ANNUAL MEETING.

THE annual meeting was held at the Radcliffe Infirmary on July 14th, when Dr. GRAY, as President for the following twelve months, took the chair.

Vote of Thanks to Retiring President.—After a cordial vote of thanks had been passed to the retiring President, Sir H. W. Acland, K.C.B., Mr. H. H. Parry, Dr. Hutchinson, and Mr. Wilson were elected on the Branch Council, in the place of the three retiring members.

Representative on Council.—Mr. A. Winkfield was elected as the representative of the Branch on the Council of the Association.

President-Elect and Officers.—Mr. T. H. Cheatle, M.R.C.S., was chosen as President-elect. The other officers were re-elected.

New Members.—Mr. James Neil, Mr. Edward Hyde, and Mr. Richard Rice were elected members of the Association and Branch.

Papers, etc.—Dr. Darbishire read a paper on Milk Scarlatina, giving an account of the recent investigations instituted by the Local Government Board, and carried out by Mr. Power, Dr. Klein, and Dr. Cameron.

Mr. Symonds showed a case of Head-Injury, in which the brain-substance was injured, and drained with good result.

Mr. Sankey showed a very interesting specimen of the Stomach of a Man, who had committed suicide by eating butter of antimony.

The meeting was adjourned.

MONTROSE LUNATIC ASYLUM.—The Board of Management of the Montrose Lunatic Asylum lately obtained plans from several architects for the erection of a detached infirmary. These were submitted for report to Messrs. H. Savon Snell and Son, who selected as the best those signed respectively "Lucidus Ordo," "Space," and "Good Samaritan." Ultimately, it was determined to request the authors of "Good Samaritan" and "Space" to send in revised designs; and the design by Mr. Sydney Mitchell, of Edinburgh, has been selected for execution.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

THE fifty-fourth Annual Meeting of the British Medical Association will be held at Brighton, on August 10th, 11th, 12th, and 13th, 1886.

President: W. T. Edwards, M.D., F.R.C.S., Physician to the Glamorgan and Monmouth Infirmary, Cardiff.

President-elect: Withers Moore, M.D., F.R.C.P., Senior Physician to the Sussex County Hospital, Brighton.

President of the Council: Balthazar Foster, M.D., F.R.C.P., Professor of Medicine in Queen's College and Physician to the General Hospital, Birmingham.

Treasurer: C. Macnamara, F.R.C.S., Surgeon to the Westminster Hospital, London.

An Address in Medicine will be delivered by Surgeon-Major John S. Billings, Surgeon, United States Army Medical Department, Washington.

An Address in Surgery will be delivered by Frederick Abell Humphry, F.R.C.S., Surgeon to the Sussex County Hospital.

An Address in Public Medicine will be given by E. D. Mapother, M.D., Consulting Medical Officer to the City of Dublin.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

MEDICINE.—*President*, W. H. Broadbent, M.D. *Vice-Presidents*, Frederick Bagshawe, M.D., Hastings; Joseph Ewart, M.D., Brighton. *Honorary Secretaries*, Francis Warner, M.D., 24, Harley Street, London; Henry Seymour Branfoot, M.B., 42, Norfolk Square, Brighton.

SURGERY.—*President*, John Eric Erichsen, F.R.C.S., F.R.S., London. *Vice-Presidents*, Frederick William Jowers, M.R.C.S., Brighton; John Ward Cousins, F.R.C.S., Southsea. *Honorary Secretaries*, William Johnson Walsham, F.R.C.S., 27, Weymouth Street, London; Willoughby Furner, F.R.C.S., 2, Brunswick Place, Brighton.

OBSTETRIC MEDICINE.—*President*, Alfred Meadows, M.D., London. *Vice-Presidents*, Constantine Holman, M.D., Reigate; Frederick W. Salzmann, M.R.C.S., Brighton. *Honorary Secretaries*, Charles J. Wright, M.R.C.S., Lynton Villa, Virginia Road, Leeds; Alban Doran, F.R.C.S., 9, Granville Place, W.

PUBLIC MEDICINE.—*President*, Richard Patrick B. Taaffe, M.D., Brighton. *Vice-Presidents*, Sir Charles Alexander Cameron, M.K.Q.C.P., Dublin; Charles Kelly, M.D., Worthing. *Honorary Secretaries*, W. Brown, F.R.C.S., Carlisle; William Joseph Tyson, M.D., Folkestone.

PSYCHOLOGY.—*President*, Thomas Smith Clouston, M.D., Edinburgh. *Vice-Presidents*, Charles A. Lockhart Robertson, M.D., Brighton; Joseph Raymond Gasquet, M.B., Brighton. *Honorary Secretaries*, Charles Spencer Waller Cobbold, M.D., Earlswood Asylum, Redhill; James M. Moody, M.R.C.S., Surrey County Asylum, Canehill, Purley.

PATHOLOGY.—*President*, Julius Dreschfeld, M.D., Manchester. *Vice-Presidents*, James Frederick Goodhart, M.D., London; Hencage Gibbes, M.D., London. *Honorary Secretaries*, John E. Ranking, M.D., Mount Ephraim Road, Tunbridge Wells; John Caldwell Uhthoff, M.D., 9, Brunswick Place, Brighton.

THERAPEUTICS AND PHARMACOLOGY.—*President*, Thomas Lauder Brunton, M.D., F.R.S., London. *Vice-Presidents*, John Mitchell Bruce, M.D., London; Edward Mackey, M.D., Brighton. *Honorary Secretaries*, Cornelius William Suckling, M.D., 108, Newhall Street, Birmingham; John Theodore Cash, M.D., Drumearn, Earlsfield Road, Wandsworth Common, S.W.

OPHTHALMOLOGY.—*President*, Chas. Oldham, F.R.C.S., Brighton. *Vice-Presidents*, Louis Tosswill, M.B., Exeter; George Anderson Critchett, F.R.C.S. Edin., London. *Honorary Secretaries*, Frank Henry Hodges, F.R.C.S. Edin., 17, Horse Fair Street, Leicester; Arthur Nicholson, M.D., 98, Montpellier Road, Brighton.

OTOLOGY.—*President*, G. F. Hodgson, M.R.C.S., Brighton. *Vice-Presidents*, Alphonso Elkin Cumberbatch, F.R.C.S., London; Edward Cresswell Baber, M.B., Brighton. *Honorary Secretaries*, Henry Albert Reeves, F.R.C.S. Edin., 78, Grosvenor Street, W., London; Patrick William Maxwell, M.D. Edin., 16, Warrington Place, Dublin.

Honorary Local Secretaries: Thomas Jenner Verrall, M.R.C.S., 95, Western Road, Brighton; Alfred Scott, L.R.C.P., German Place, Brighton.

TUESDAY, AUGUST 10TH, 1886.

2 P.M.—Meeting of 1885-6 Council.
3 P.M.—General Meeting. Report of Council and other business. Adjourn at 5 P.M.
8 P.M.—General Meeting. President's Address, and any business adjourned from meeting at 3 o'clock.

WEDNESDAY, AUGUST 11TH, 1886.

9.30 A.M.—Meeting of 1886-7 Council.
11.0 A.M.—Second General Meeting. Address in Medicine.
2 to 5 P.M.—Sectional Meetings.
8 P.M.—A *Conversazione*.

THURSDAY, AUGUST 12TH, 1886.

9.30 A.M.—Meeting of Council.
11 A.M.—Third General Meeting. Address in Surgery. Presentation of Gold Medal for distinguished merit; and Stewart and Middlemore Prizes.
2 to 5 P.M.—Sectional Meetings.
6.30 P.M.—Public Dinner.

FRIDAY, AUGUST 13TH, 1886.

10 A.M.—Address in Public Medicine.
11 A.M.—Sectional Meetings.
4 P.M.—Concluding General Meeting.
8 P.M.—Reception.

SATURDAY, AUGUST 14TH, 1886.

Excursions.

The general meetings will be held in the Dome, and the Sections and Committees will meet in the Pavilion.

The entrance-hall to the Pavilion will be fitted up as a Reception-Room, and will be opened at 12 o'clock noon on Monday, August 9th, and on the following day at 9 o'clock in the forenoon, and will remain open until 6 o'clock in the afternoon of each day, for the issue of tickets to members, and for supplying all necessary information.

*** *It is particularly requested that gentlemen on their arrival will at once proceed to the Reception-Room, and* (1) *enter name and address, and obtain tickets and programme;* (2) *inquire for letters and telegrams;* (3) *consult the list of lodgings and hotels, etc.*

The following discussions and papers are promised up to the present time. Members desirous of reading papers, or joining in the discussions, are earnestly requested to communicate, without delay, with the Secretaries of the respective Sections.

SECTION A.—MEDICINE.

The following subjects have been chosen for special discussion.

1. Cases in which Disease of the Valves of the Heart has been known to exist for upwards of five years, without causing Serious Symptoms. Introduced by Sir Andrew Clark, M.D., F.R.C.P., F.R.S., London. The following gentlemen have promised to take part in the discussion: Drs. Gairdner, Clifford Allbutt, B. Foster, Douglas Powell, Sir Dyce Duckworth, M. Bruce, Burney Yeo, Skerritt, Saundby, Sansom, Tyson, Thomas, S. Mackenzie, D. J. Leech, Bernard O'Connor, S. Bristowe, and Oliver.

2. On the Effects produced by Gall-stones, with particular reference to some Rarer Points in their Symptomatology. Introduced by W. Ord, M.D., F.R.C.P., London. The following gentlemen have promised to take part in the discussion: Drs. Clifford Allbutt, B. Foster, Pavy, Shingleton Smith, Saundby, Sir Peter Eade, M.D., S. Bristowe, R. Eardley-Wilmot, M.B., and Ralfe.

Dr. Radcliffe Crocker will give a Demonstration in the Removal of Hairs by Electrolysis.

The President of the Section will deliver his Address on August 12th.

The following papers are promised.

CHURTON, T., M.D. Two Cases of Non-diabetic Acetonuria.
COUTTS, J. A., M.B. Latter Effects of Rickets.
CULLIMORE, D., M.D. Tropical Hepatic Abscess.
CROCKER, H. Radcliffe, M.D. A New Treatment for obstinately recurring Eczema
DRYSDALE, C. R., M.D. The Treatment of Phthisis.
DUCKWORTH, Sir Dyce, M.D. Inadequate Treatment of Anæmia.
EYLANDT, J. E., M.D. (Reval). Treatment of Diphtheria.
GAMGEE, A., M.D. On Compressed and Rarefied Air.
HALL, F. de Havilland, M.D. Meningitis as a complication of Pneumonia.
HANDFORD, H., M.D. Menstruation and Phthisis.
KIRK, Robert, M.D. On Urine which darkens with Alkalies occurring in three Members of the same family, and will show Crystals of an Acid obtained from the Urine in these Cases. 2. On so-called Peptone in the Urine.
MANTLE, A., M.D. Etiology of Rheumatism considered from a Bacterial Point of View.
MCVAIL, D. C., M.B. The Physical conditions that underlie the Thoracic Percussion Sounds.
MOXON, W., M.D. Effects of Turpentine, Ergot, and Water, on Albuminuria.
MYRTLE, A. S., M.D. Chronic Inflammation of Mucous Membrane of Pyloric end of Stomach, Duodenum, Common Gall-duct, and Bladder, their Symptoms and Treatment by Harrogate Waters.
OLIVER, T., M.D. On the Relationship of Urea to certain Diseased Processes.
PLAYFAIR, W. S., M.D. Some observations on what is called Neurasthenia.
RALFE, C. H., M.D. Functional Albuminuria.
RENDALL, Stanley, M.D. Therapeutical Action of the Waters of Aix-les-Bains.
SAVAGE, George H., M.D. Mental Symptoms with Locomotor Ataxy.
STRAHAN, J., M.D. Intestinal Ulcers and their Treatment, more especially by Arsenic
WEST, Samuel, M.D. Hæmaturia in Granular Kidney.
WHITE, W. Hale, M.D. Inexplicable Pyrexia.
WHITTLE, E. G., M.D. Melancholia and Insomnia in the Sane. Treatment.

SECTION B.—SURGERY.

The President will deliver the address on Wednesday 11th, at 2 P.M.

Sir Henry Thompson will open a discussion on Suprapubic Lithotomy. The following gentlemen will take part in the discussion: Messrs. W. Cadge, Reginald Harrison, Professor Humphry, Berkeley Hill, T. R. Jessop, Greig Smith, W. Pye, Barwell, Bruce Clarke, Edward Lund, Walter Whitehead, Jacobson, and J. Ward Cousins.

The following papers are promised.

HARLEY, George, M.D., F.R.S. Hepatic Phlebotomy and Puncture in Hypertrophic Congestions of the Liver.
IMLACH, Francis, M.D., Liverpool. A Case of Renal Hydatids.
TAIT, Lawson, Esq. Surgical Treatment of Diseases of the Liver.

Mr. Jennings will take part in the discussion.

THORNTON, J. K., Esq. The Surgery of the Liver.
WILLETT, A., Esq., and MEREDITH, W. A., Esq. Cholecystotomy.

Messrs. Macnamara, Morris, Bellamy, Jessop, and Professor Gastin, of Georgia, will take part in the discussion.

HORSLEY, Victor, M.B. A paper, illustrated by Photographs illuminated by the Lime-light, in connection with the Advances in the Surgery of the Central Nervous System.

Mr. E. Bellamy and Dr. Hughes Bennett will join in the discussion.

ADAMS, W., Esq. On the Treatment of Congenital Displacement, the so-called Congenital Dislocation of the Hip-Joint, by long-continued Recumbency and Extension; and will show his New Extension Couch
ANDERSON, W., Esq. On Treatment of Aneurysm by Galvano-Puncture, illustrated by cases.
BENTON, S., Esq. Fistula in Ano of the Horse-Shoe Shape.
CARTER, Jas. F., Esq., F.R.C.S.Edin. On the Accessory Organs of Generation in the Male.
CLARKE, Bruce, Esq., and STEAVENSON, W. E., M.D. The Employment of Electricity in the Treatment of Diseases of the Urinary Organs.
COUSINS, J. Ward, M.D. A new Mouth-gag with Throat-Guard.
DEMPSEY, Alexander, M.D., A case of Orbital Aneurism.
FAGAN, —, Esq. Notes on Gunshot Wounds.
FITCH, Simon, M.D. (Nova Scotia). The Dome-Trocar and associated Instruments in Paracentesis, Aspiration, Transfusion, Ovariotomy, and Tunnelling the enlarged Prostate.
HARRISON, Reginald, Esq. On the Treatment of Urethral Stricture by Internal and External Urethrotomy combined.
JACKSON, T. Vincent, Fsq. Will speak on Supra-pubic Lithotomy.
JESSETT, F. B., Esq. Surgical Treatment of certain Tumours of the Neck.
KEETLEY, C. B., Esq. Further Remarks on the Radical Cure of Hernia by Injections into the Inguinal Canal.
KIRK, Robert, M.D., Glasgow, will show his Vapour-Pressure Injector, and read Notes of Cases treated by it.
MARSH, —, Esq. A Case of Abscess of the Liver, opened by free Incision.
OWEN, Edmund, Esq. Psoas Abscess: when and where to evacuate it.
PYE, W., Esq. A Case of Multiple Papilloma of the Bladder, removed by the Suprapubic Operation. 2. Two Cases of Suprapubic Cystotomy.
ROBERTS, —, M.D., New York. On the Diagnosis and Mechanical Operative Treatment of Knock-knee, and Bow-leg deformity; at the same time making a demonstration of the Cutting qualities of his Electro-Osteotome.
SMITH, Noble, Esq. On Obscure Disease of the Spinal Column.
STARTIN, James, Esq. The Surgical Treatment of Acne and Lupus.
SYMONDS, Charters J., M.D. The Treatment of Malignant Stricture of the Œsophagus by Tubage.
SYMPSON, Thomas, Esq. A Case of Myositis Ossificans.
WALSHAM, W. J., Esq. Cases of Abscess of the Liver opened by free Incision.
WHITEHEAD, Walter, Esq. Three Hundred Consecutive Cases of Hæmorrhoids cured by Excision.

SECTION C.—OBSTETRIC MEDICINE.

The President will deliver a short address.

The following two special discussions will take place.

1. The Alternatives to Craniotomy. This discussion will be introduced by Dr. Robert Barnes; and Professor Porro, Dr. Halliday Croom, Dr. E. T. Davies, Liverpool; Dr. Walter, Manchester; Mr. Greig Smith, Clifton, and others, will be among the speakers.

2. On Removal of the Uterine Appendages. Papers will be read by Dr. Savage, Birmingham; Dr. More Madden, Dublin; and others; and Dr. Bantock; Dr. E. T. Davies, Dr. G. Elder, Nottingham, and Dr. Imlach, Liverpool; Dr. Walter, Manchester; Mr. Lawson Tait, Birmingham; Mr. Vincent Jackson, Wolverhampton, and others, will take part in the discussion.

The following papers are promised.

AVELING, J. H., M.D. A Case of Extra-uterine Gestation arrested by Electricity.
HALLANTYNE, J. W., M.B., Edinburgh, Sphygmographic Tracings in Labour and the Puerperium.
BARNES, Fancourt, M.D. On Perinæorrhaphy.
BEVERLEY, Michael, M.D., Norwich. Cases of Laceration of Os Uteri treated by Emmet's operation; Three Cases of Procidentia Uteri treated by Emmet's operation.
BLACK, J. Gordon, M.D., Harrogate. The Use of Stem-Pessaries.
BRAITHWAITE, J., M.D. A Method of Treating certain Cases of Amenorrhœa, and Scanty Menstruation.
DOLAN, T. M., M.D. Obstetric Experiences with Observations.
EDIS, A. W., M.D. Cases illustrating the Difficulties of Diagnosis in Gynæcological Practice.

ELDER, G., M.D. A Case of Vesico-vaginal Fistula.
EMMET, T. C., M.D., New York. On certain mooted points in Gynæcology.
GRIGG, W. C., M.D. On the Antiseptic Use of Bichloride of Mercury in Obstetric Practice.
HANDFIELD-JONES, M., M.B. Scanty Secretion of Liquor Amnii in the Early Months of Pregnancy, and its Bearing on Diagnosis.
HART, D. Berry, M.D. Successful Case of Abdominal Section for Ruptured Fallopian Tube Fœtation, with Microscopic Examination of the part of the tube removed.
HEWITT, W. M. Grailly, M.D. The Early History and Etiology of Uterine Flexions and Displacements.
KINKEAD, R. J., M.D., Galway. Craniotomy and Cæsarean Section.
LUSK, W. T., M.D. (New York). The Proper Moment for the Performance of Gastrotomy in Abdominal Pregnancy.
ROUTH, C. H. F., M.D. On some Points of Difficulty as affecting Medical Men in Cases of Hysteria with Erotic Symptoms.
WALTER, W., M.D. A Case of Uterine Myoma causing obstruction of the Bowels treated by the Removal of the Appendages.

SECTION D.—PUBLIC MEDICINE.

The general subjects for discussion are the following.

1. Scarlet Fever; its Causation, and the best Sanitary Measures for Dealing with the Disease as it exists among Urban Populations. Dr. Ewart, of Brighton, will open this discussion. Dr. W. Squire will take part.

2. On the Duration of Infectiousness in the following Infectious Diseases: Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. Dr. A. Ransome, of Manchester, will open this discussion. Dr. E. W. Hope, of Liverpool; Dr. T. F. Pearse, Haslemere; and Dr. W. Squire, will take part.

3. Diphtheria in Rural Districts: (*a*) Causation; (*b*) Influence of Soil upon the Disease. Dr. C. Kelly will open this discussion.

4. Reports of Water Analyses: the best Method of Stating these so as to secure one Uniform Plan. Dr. Whitelegge will open this discussion.

Dr. Edgar Crookshank will exhibit the various apparatus employed in a Bacteriological laboratory, and give demonstrations of cultivations, microscopic preparations, and photographs of bacteria.

The following papers are promised.

ASHBY, H., M.D. On the Duration of Infectiveness in Scarlet Fever.
BOOLBYER, P., M.B., Nottingham. Scarlet Fever in relation with the disturbance of Impure Subsoil and the Construction of Sewers.
CARPENTER, A., M.D. The Causation of, and on the Quarantine which is necessary to be observed in, Scarlatina.
CORNISH, W., Surgeon-General. On an Outbreak of Cholera amongst British Emigrants proceeding from London to Queensland in the steamship *Dorunela* during November and December, 1885.
DRYSDALE, C. R., M.D. 1. On Animal Vaccination. 2. Sewage Pollution of the Thames.
EVATT, Surgeon-Major G. J. H. On the Medical Department of an Army Corps in War, with proposal for a more efficient Volunteer Medical Organisation.
HANDFORD, H., M.D., Nottingham. Death-rate of Enteric Fever.
KERR, Norman, M.D. On Hydrophobia, and its Prevention.
PAGET, C. E., Esq. The Influence of Acute, supposed Simple, Sore-Throat in the Spread of Diphtheria.
PEARSE, T. F., M.D., Haslemere. On the Periods of Incubation of the principal Exanthemata.
PRINGLE, Surgeon-Major R., M.D. 1. The Advantages and Disadvantages of Human and Animal Lymph compared. 2. State Vaccination, with special reference to the Compulsory Clauses in the Vaccination Acts.
SEATON, E., M.D. A paper on Scarlet Fever.
SQUIRE, W., M.D. On the Influence of Increased Means of Isolation upon the Prevalence of Scarlet Fever in London.
TATHAM, J., M.D. Scarlet Fever, and the best Means for its Prevention amongst Urban Populations.
TAYLOR, Michael, W., M.D., London, formerly Penrith. Diphtheria in Connection with Damp and Mould.
VACHER, F., Esq. Duration of Infectiousness in the Exanthemata and Allied Diseases.
WHITELEGGE, B. A., M.D. Reports of Water Analyses.

SECTION E.—PSYCHOLOGY.

The President, Dr. T. S. Clouston, will deliver an address on the Relationship of Bodily and Psychical Pain.

The following papers are promised.

CLARKE, A. Campbell, M.B. Glasgow. Experimental Dietetics in Lunacy Practice. A Record of Investigation and Results.
GILL, Stanley A., Esq., B.A. The Use and Abuse of Seclusion.
SAVAGE, G. H., M.D. On Alternations of Neuroses.
SHUTTLEWORTH, G. E., M.D. The Relation of Marriages of Consanguinity to Mental Unsoundness.
THOMSON, D. G., M.D. On the Separate Care and Medical Treatment of Recent Cases of Insanity, either in Existing Asylums, or in Lunatic Hospitals to be Established for that Special Purpose.
TUKE, D. Hack, M.D. On the Alleged Increase of Insanity.

The President will introduce a discussion as to How the Medical Spirit can best be kept up in Asylums for the Insane.

Discussions will also be invited upon Degradation of Habits and Feelings in Relationship to Mental Disease, and other subjects. The Secretaries will be glad to receive communications from members willing to read papers or to take part in the discussions.

SECTION F.—PATHOLOGY.

The following subjects have been chosen for special discussion.

1. Peripheral Neuritis. Opened by papers by Dr. Ross (Manchester), and Dr. Buzzard (London). Mr. Watson Cheyne, Professor Charcot, Drs. Clifford Allbutt, Hadden, Poore, Drummond, Saundby, Maguire, and Whittle, will take part in the discussion.

2. Aneurysm. Introductory paper by Timothy Holmes, F.R.C.S. Messrs. Barwell, Bryant, Savory, H. Morris, C. J. Symonds, Watson Cheyne, R. Maguire, and E. Lund, will take part in the discussion.

3. The Etiology and Pathology of Pneumonia. Introductory papers by Dr. Octavius Sturges and Dr. R. Douglas Powell. Dr. Churton, Dr. R. Maguire, Sir Andrew Clark, Dr. Duckworth, and Dr. Hollis will take part in the discussion.

Dr. Heneage Gibbes will show, in the Museum in connection with the Pathological Section, a series of Microscopical Specimens of Carcinoma and Sarcoma, also a number of Photographs of Normal and Morbid Histology and Bacterium, and Photographs showing Diseased Conditions, life size.

The following papers are promised.

ASHBY, —, M.D. The Pathology of Nephritis following Scarlet Fever.
BARWELL, R., Esq. On Aneurysm.
CHEYNE, Watson, M.B. On Cholera.
CHURTON, T., M.D. The Pathology of the Adrenals.
CROCKER, Radcliffe, Esq. The Anatomy of the Early Stage of Keloid, and will show drawings of different types of Leprosy.
GLYNN, T. R., M.B. (Liverpool). Six Cases of Ulcerative Endocarditis.
GREVES, E. Hyla, M.D., Liverpool, will show a Rare Form of Cerebral Tumour, and give an account of the same.
HOLLIS, W. A., M.D. Pulmonary Tuberculosis, associated with Heart-Disease.
MAGUIRE, Robert, M.D. On Albuminuria in Diabetes.
RAKE, B. N., M.D., (Government Medical Officer, Trinidad). 1. An Inquiry into the Distribution of the Leprosy Bacillus. 2. Experiments on the Communicability of Leprosy to Animals.
SYMONDS, C. J., Esq. The Formation of Aneurysms in Acute Arteritis.
YOUNG, Professor A. N., Manchester. On Traumatic Malignancy.

SECTION G.—THERAPEUTICS AND PHARMACOLOGY.

An Introductory Presidential Address will be given by Dr. T. Lauder Brunton, F.R.S.

The following subjects have been selected for special discussions.

1. Antipyretics; to be opened by Dr. Carter, of Liverpool.

2. Analgesics; to be opened by Dr. Spender, of Bath; Dr. Brown Sequard will join in the discussion.

3. Action of Drugs in Albuminuria; to be opened by Dr. Saundby, of Birmingham.

The following papers are promised.

BRUCE, Mitchell, M.D. Morphine in Diabetes.
DRYSDALE, Charles R., M.D. Mercury as an Antidote in Syphilis.
GRANVILLE, Mortimer, M.D. The Relief of Pain by Mechanical Vibration or Percussion.
HANDFORD, H., M.D., Nottingham. The Pathology of a rare form of Skin-disease affecting the Sebaceous Follicles.
JAMES, Prosser, M.D. On Local Anæsthetics.
JESSOP, W. H., M.B. On the Therapeutic Effects of Cucaine in Ophthalmic Practice.
LIEBREICH, Professor (Berlin). Lanolin: a new Fatty Substance; its Physical Properties and Therapeutical Uses.
MACKEY, E., M.D. Resorcin in Gastric and Cutaneous Disorders.
MACKENZIE, Stephen, M.D. On the Value of Cannabis Indica in a Certain Class of Headaches.
SHOEMAKER, John, M.D. (of Philadelphia). Hamamelis Virginica.
ST. GEORGE, George, Esq., Lisburn. Experiments with Manaca in the Treatment of Rheumatism.
STONE, W. H., M.D., will show the apparatus exhibited by him on the occasion of his Lumleian Lectures.
STRAHAN, J., M.D. An Unrecorded Danger from Continued Large Doses of Iron.

SECTION H.—OPHTHALMOLOGY.

Mr. Jonathan Hutchinson will open a discussion on the Different Forms of Choroiditis, in relation to their several Causes.

Mr. Anderson Critchett will open a discussion on Episcleritis.

An improved Electric Refraction Ophthalmoscope will be shown by Mr. Henry Juler.

The following papers are promised.

ABBOTT, G., Esq. The Use of Styles in the Treatment of Epiphora.
ANDREW, Edwyn, M.D. Ophthalmic Hints.
BARRETT, J. W., Esq., and LANG, W., Esq. On the Causation of Phlyctænula, Ophthalmia and Sycosis.
BROWN, Edgar, Esq.
CRITCHETT, G. Anderson, Esq. On Dislocation of the Lens.
FROST, W. Adams, Esq. What is the best Method of Dealing with a Lost Eye?
GLASCOTT, C. E., M.D. On Sarcoma of the Choroid, followed by Amblyopic Symptoms in the Sound Eye.
GREENWAY, Henry, Esq. Use of Ice and Carbolic Acid in the Treatment of Injuries and Inflammation of the Eyes and Eyelids.
HARTRIDGE, Gustavus, Esq. Strabismus and its Treatment in Young Children.
HEWETSON, H. B., Esq. The Treatment of Interstitial Keratitis by Operation, without Constitutional Remedies.
HIGGENS, Charles, Esq.
JOHNSON, L. L., Esq. Paper, and Demonstration of several new Ophthalmic Instruments.
LEE, Charles T., Esq. The Extraction of Soft Cataract by Irrigation.
SNELL, Simeon, Esq. Paper.
TAYLOR, Charles Bell, M.D. 1. Is it Desirable, in Certain Cases, to Substitute Resection of the Optic Nerve for Ablation of the Eye-ball? 2. On a Method of Treating Epiphora without Slitting the Punctum Lacrymale.

A limited number of beds in the Sussex Eye Hospital, Brighton, will be devoted to the reception of cases of interest to be shown at the meetings of the Ophthalmological Section of the British Medical Association at Brighton. Gentlemen wishing to secure beds for such cases are requested to apply, as soon as possible, to Mr. Arthur Nicholson, 98, Montpellier Road, Honorary Secretary of the Section.

Section I.—Otology.

The following papers are promised.

Baber, E. C., Esq. On Examination of the Nasal Cavities from the Front (illustrated with Diagrams).
Barr, T., M.D. 1. On the Varieties, with Appearance, of the Tympanic Membrane compatible with Good Hearing. 2. On the Value of Rinne's Test, in the Diagnosis of Disease of the Nervous Structures of the Ear.
Cumberbatch, A. E., M.B. Aural Vertigo.
Delstanche, Dr. C., Brussels. 1. Case of a Revolver-Bullet in the Ear. 2. Foreign Bodies in the Substance of the Lobule. (In French.)
Ellis, Richard, Esq. Labyrinthian Hæmorrhage, with Exhibition of Patient.
MacDonald, Greville, M.D. The Functions of the Nose in Health and Disease.
Pritchard, Urban, M.D. Counter-irritation in the Treatment of Ear-disease.
Symington, J., M.B., Edinburgh. The Anatomy of the Ear in the Child.
Woakes, E., M.D. Diagramatic Scheme, showing relations between Aural and Nasal Diseases.
Wolston, Walter, M.D. Nasal Polypi, their Radical Extirpation and Cure by Electro-cautery, with illustrative cases.

Discussion to be opened by Spencer Watson, Esq. : On the Complications of Nasal Polypi.

Members desirous of reading papers are particularly requested to communicate without delay, with the Secretaries of Sections, that the arrangements may be as complete as possible prior to the meeting.

Annual Museum.

The twentieth annual museum will, by permission of the Town Council, be located in the Corn Exchange, a large hall, communicating with the Dome, and having a separate entrance in Church Road.

It will be open to the profession from August 9th to August 15th, and will be classified in three sections.

Section A.—Foods, drugs, hygienic and sanitary appliances. A specialty will be made of all kinds of prepared, peptonised, and other compound nutrients. (Honorary Secretary, Dr. Mackey, 1, Brunswick Road, Hove, Brighton.)

Section B.—New books, instruments, and appliances—medical and surgical; galvanic and other batteries and apparatus. (Honorary Secretary, Dr. Whittle, 65, Dyke Road, Brighton.)

Section C.—Anatomical and pathological specimens, diagrams, casts, or models; microscopes and microscopical preparations. (Honorary Secretary, D. W. Giffard, Esq., 5, Pavilion Parade, Old Steine, Brighton.)

A name and description, printed, if possible, must be attached to each exhibit, which should be sent to the Corn Exchange, Brighton (to the care of the Secretaries of the respective sections), between Monday, August 2nd, and Saturday, August 7th. Ample counter space will be provided, and, so far as possible, equal facilities will be given to every exhibitor.

A description, for insertion in the Museum Catalogue, should be forwarded to the private address of the respective Secretaries, at least one month before the meeting, that is, by July 10th.

To Exhibitors.—The expenses of carriage and of removal to be borne by the exhibitor. The Committee will exercise every reasonable care as to objects entrusted to them, but will not be responsible for risk or accident.

Notices of Motion.

Dr. Ward Cousins hereby gives notice that he will move the following addition to, and alteration of, the By-laws; namely,

Page 17, By-laws. Addition to "d," second line, after the word "member,' add "of a Branch within the limits of the United Kingdom of Great Britain and Ireland."

Addition to "d."—"No person shall be eligible as a representative member of a Colonial or Indian Branch unless, at the time of his election, he shall be a recognised member of the Branch, and shall have resided within the area of the Branch for at least twelve months prior to his election. The election of Colonial and Indian members of the Council shall be annual, and shall be subject to the same by-laws as the election of other representative members."

Mr. John Dix hereby gives notice that, at the Annual Meeting, he intends to submit a proposition not involving an alteration of a By-law on the subject of the payment of travelling expenses of the Representatives of Branches to the meetings of the Council.

A motion will be introduced by the Shropshire and Mid-Wales Branch on the subject of State Honours to the Medical Profession.

May 6th, 1886. Francis Fowke, *General Secretary.*

The attendance of all members of the Association interested in the question of the formation of a Medical Defence Association, in connection with the British Medical Association, is requested at a meeting to be held at Brighton during the meeting of the Association in August; the place, day, and hour of meeting, will be announced in the daily journal.

On behalf of the Council of the Lancashire and Cheshire Branch, Charles E. Glascott, Honorary Secretary.

SPECIAL CORRESPONDENCE.

PARIS.

[from our own correspondent.]

A Fungus developed in the Human Saliva.—Bacteria as Factors in the Formation of Foreign Bodies and Calculi.—Arloing's Apparatus for measuring the total quantity of Carbonic Acid exhaled by Small Animals.—The Influence of Drugs on Nurslings when administered to their Nurses.—A New Antiseptic Stockpot.

M. Galippe made known the following facts at a recent meeting of the Paris Academy of Medicine. After having purified saliva by means of Pasteur's filter, M. Galippe observed, at the lower extremity of the filter, which was not in contact with the fluid, a fungus composed of tubes and spores of mycelium. Following the advice of Professor Cornu, M. Galippe cultivated this fungus in the cells of Van Tieghem, and observed that the fungus was neither an *Aspergillus* nor a *Penicillium.* This fungus, which had neither been described nor represented, belongs to the Moniliæ family. M. Galippe proposed to give it the name of *Monilia sputicola.* M. Charcot repeated these statements at the Academy of Sciences, in the name of M. Galippe.

At the Paris Biological Society, M. Galippe stated that he had examined synovial vegetations removed from a knee. He observed bacteria in them the same as he had in vesical calculi. He had succeeded in isolating and cultivating them. This investigator was, therefore, confirmed in his belief that crystallisations occurring in the human economy were developed through the agency of germs, which were, therefore, pathogenic parasites of the foreign bodies of the animal economy, whatever might be the chemical composition of these bodies, and wherever they might be found.

It is often necessary to determine what are the modifications which the combustion of carbon undergoes in healthy and unhealthy animals. These modifications can only be studied by means of a prolonged observation, in order to be perfectly certain that no momentary disturbance takes place in consequence of manipulation, or in arranging the instrument. It is, therefore, essential that the animal be shut up in a closed area, where it can breathe in a normal manner. M. Arloing's apparatus consists of two sections: one is composed of the breathing chamber, and the apparatus necessary for supplying it with a given volume of air free from carbonic acid, submitted to a pressure equal to the atmosphere; the other is a combination of different apparatus, which extract a certain quantity of the air exhaled from the total mass, and pass it through tubes containing potash, for the absorption of the carbonic acid which it contains.

Fehling has recently, by experiment, studied the effects on nurslings of certain drugs given to the women who suckled them. When doses varying from two to three grammes of salicylate of soda were administered to the nurse, every time that a child was suckled within an hour after the administration of the dose the salicylate appeared in its urine. After an interval of twenty-four hours there remained no trace of the drug. When the child was suckled too soon after the medicine had been taken, the salicylate could not be found in its urine. Elimination was completed at the same time in the mother and the child. With iodide of potassium the results were the same. The milk, when analysed, gave the characteristic reaction. In the infant, elimination lasted seventy-two hours, in the mother forty-four. After twenty-four hours, the milk still contained iodide of potassium. With ferrocyanide of potassium, reaction was very pronounced in the maternal urine, but absent in the child's. Prolonged applications of iodoform upon vaginal and vulvar wounds of women in parturition, after prolonged use, generally resulted in iodine being found in the milk and urine of the mother, but not always in the urine of the infant. The child was never indisposed, even when iodoform was used to dry up the umbilical cord. There was only a small quantity of mercury transmitted through the milk of a nursing mother, and its presence was not constant. It appeared that the food of wet nurses—even acid fruit-juices and vinegar—had no influence on their nurslings. Thornhill had stated that he observed prolonged sleep occur to children after administering to their wet nurse such nar-

cotics as tincture of opium in doses of from 20 to 25 drops. Fehling observed neither prolonged sleep nor constipation in the children. Hydrochlorate of morphine or chloral, in tolerably strong doses, did not affect the sucklings.

Subcutaneous injections of moderately strong solutions of sulphate of atropine produced very pronounced symptoms in the mother, and dilatation of the pupil in the infant, which disappeared in twenty-four hours. This substance should, therefore, be employed in very feeble doses. In a very great majority of cases, the milk of a woman attacked with fever had no influence upon the nursling. In those rare cases, when the temperature reaches 104°, the variations in the child's temperature were identical with those of the mother. In some instances, children had died of intestinal catarrh, where the mother's milk could be the only cause of the affection. Bumm has observed, in a case of inflamed breast, the passage of the micrococcus from the milk into the digestive apparatus of the child.

M. Schribaux, director of the laboratory for the trial of seeds at the National Agricultural Institute, has invented an antiseptic *marmite*, or stockpot, which he exhibited at the late session of the French Agricultural Society. This plan, based upon M. Pasteur's ideas concerning the propagation of ferments, is arranged so as to prevent the fermentation of fluids that are capable of becoming putrescent. The fluid to be preserved is enclosed in the *marmite* after having been boiled; M. Schribaux has been able to preserve meat-soup in it for nearly a month. The glass retorts in which M. Pasteur preserves liquid during an indefinite time without their altering, are not entirely closed, and have a canal of communication between the outer air and the substance enclosed in them. The neck of these retorts is terminated by a tube, which is open at the extremity, through which the air can penetrate freely; but this tube has a tortuous form, with notches arranged, so as to prevent any particles of dust being brought in with the air, the dust being caught on the notches which it encounters. The last process consists in boiling the liquid in the retort, so as to fill the tube with the vapour of the contents, and thus kill any germs which might be enclosed; the exterior air re-enters gradually as the vapour condenses, but the passage of the grains of dust is arrested as before explained, and therefore fermentation is prevented. The currents of air which are possible in consequence of the changes of atmospheric pressure are barely perceptible in the interior of the retort, and cannot introduce any new ferment. M. Schribaux's invention is composed of a cylindrical vessel of stone or metal, where, instead of a draining-out tube, the rim or edge is constructed on the same principle as the outlet of M. Pasteur's retort. The exterior air, by this arrangement, cannot penetrate into the pan covered with its lid, except by following the waving outlines formed by the apposed edges of the pot and its lid, and thus leaves in its passage, as in the case of the glass retorts, all the ferments which might accompany it. It is possible thus to keep in their normal condition various fluids and articles of food, which are capable of being boiled, without undergoing any alteration. These substances are preserved in the same vessel in which they are boiled. This preliminary operation is necessary in order to purify the volume of air which should rest in permanent connection with the fluid to be preserved. M. Schribaux has succeeded in preserving for a very long time fluids eminently capable of becoming putrescent, and has thus realised a very interesting application of the theory of ferments. His *marmite* will most likely render signal service in domestic economy, notably when it is necessary to preserve soup or other eatables for some time.

CORRESPONDENCE.

☞ To Correspondents. ☜

Our correspondents are reminded that prolixity is a great bar to publication; and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return, and hold over a great number of communications, chiefly by reason of their unnecessary length.

GENERAL COUNCIL: DIRECT REPRESENTATIVES OF THE PROFESSION.

Sir,—In the annotation on the above subject in the Journal of July 10th, it is stated that the election of the (direct) "representatives" will probably not take place before next January. Clause 8 (8) of the Medical Act, 1886, requires that the first election of representatives of the profession shall be completed by the 30th of November next. The presumption, of course, is that the "regulations to be made by the Privy Council" respecting the conduct of such election [Clause 8 (4)] will be framed and published prior to the month of November.

While taking a certain amount of interest in this matter, by reason of the fact that, from many different quarters, I have received invitations to allow myself to be put in nomination as a candidate, I quite agree with your remark that the formal announcement at the present moment of any candidate is premature.—I am, sir, yours, etc.,

Bernard O'Connor, M.D.

*** The Act directs that the returning officer shall issue his precept, not later than the week ending November 15th, to the Branch Councils, requiring the Councils to cause the proper number of representatives to be elected. The elections must be held within twenty-one days after the receipt of the precept. The elections, therefore, must be completed by December 6th; but, if the Privy Council appoint an earlier date for the issue of the precepts, the elections may be complete earlier. The elected representatives do not in any case come into office before January 1st, 1887; so that, as the regulations to be drafted by the Privy Council involve details of a somewhat complicated nature, there is no reason to suppose that the elections will be held much before the termination of the statutory period.

CONSULTANTS AND PRACTITIONERS.

Sir,—Who will not desire to be a general practitioner, when he will be able to go to bed every night with the knowledge that his valuable patients are all effectually sealed to him, so that, without their permission and intervention, the patient can never hope for a better opinion, not even from another general practitioner round the corner? Instead of dealing with generalities, those who impeach consultants would do better to state model cases of misconduct on their part, and then to give the reasons for their disapproval of such conduct.

I believe that general practitioners complain mostly of those who, like myself, are credited with a wonderful power of curing diseases of women, and I will relate some of the instances in which we are pretty sure to be abused, although we think we do right, premising that I have only in view cases of chronic inflammation of the sexual organs, which owe their distressing persistence to bad constitution and bad treatment.

A general practitioner has had one of these cases in hand for a year or more; he notices signs of dissatisfaction, so he proposes a consultation, and brings me the patient. I do my best to strengthen his position with his client, and to teach him what he may not know. They return a month or so afterwards, the patient about the same or worse. In a few weeks, the patient returns, this time alone or with a friend. She tells me she has lost all faith in Mr. X. for the treatment of internal disease; that he always hurts her when he makes an examination; that she cannot afford to fee two doctors, and she wants me to attend her. After a long discussion, I offer to do so, if she brings me a letter from the general practitioner asking me to attend her. I see nothing more of the patient, who goes to some other consultant; but the general practitioner couples my name with consultations dangerous. If a patient comes to me alone, and I find out that she is being treated by a general practitioner, I can only, of course, attend her in conjunction with him; but what if the patient has tried the general practitioner for a long time, and found him wanting? Occasionally a patient tells me she has been, off and on, under Mr. X. for internal disease for over two years without getting well; that she has lost faith in him, and will not see him in consultation with me; that she has settled with him, and has not seen him for many months. She sometimes adds that it is not only the man she objects to, but the system—a system entailing too frequent visits, and their annoying uncertainty, so that she never knows that she can call a day her own.

I do not admit that the general practitioner has a vested interest in such a patient. She has given him a long trial, and, having found him wanting, she has a right to try another practitioner and another system, and I forthwith accept her as a patient. When, however, the general practitioner hears that I am attending his old patient, he may take a different view of my conduct; if so, let him plainly say what I ought to have done. There are still many country practitioners who are at a loss how to treat chronic inflammation of the sexual organs in women of bad constitution, and, when one of them has attended such a case for a year or two, with little or no improvement, he at last perceives unmistakable signs of family rebellion arising against him. He sees distinctly that if he does not soon send his patient to some great man in town, she will transfer herself to some rival general practitioner in the neighbourhood. This would be followed by the discussion of so interesting a bit of news at all tea-tables within a

radius of ten miles. It would be there settled that Mr. Smith was very clever, but knew nothing about disease of the womb; that he has been attending poor dear Mrs. —— twice a week for two years, without doing her a bit of good, whereas Mr. Jones had already done wonders for her, although he had only attended her for a month. No wonder if, under such circumstances, Mr. Smith is most anxious to transfer the responsibilities of so troublesome a case to the shoulders of a London consultant. After stopping six weeks in town, the patient returns to her home, and Mr. Smith can follow out quietly the treatment recommended by the London man, until he judges it right to send her again to town. Should the patient recover under this joint guidance, Mr. Smith gets part of the credit; should the case be unsatisfactory, the London medical man gets all the blame. I therefore maintain that, where it is a question of chronic sexual disease, we generally confer an immense benefit on a country general practitioner by keeping his patient in town once, or oftener, for some weeks.

A patient comes to me of her own accord. I find uterine disease, but she cannot stop in town. I ask for the general practitioner's name, but it is refused. I am told she would rather remain without treatment than be attended by the village medical man, who drinks, and would talk about her complaint at the village inn. During the course of a long practice, I have met with three cases of this description, all coming from very secluded parts of the kingdom, and I did not scruple to attend them, without any reference to the general practitioner, who attended the family for other complaints.

GYNÆCOLOGIST

SIR,—Every one who writes on this question seems to forget that it has three sides, namely, that of the consultant, the practitioner, and the patient. There is no need exhaustively to consider these, as the main features of each view must present themselves to the mind of any one on the least reflection; but I would like to protest against the view expressed, on behalf of us general practitioners, that we have anything approaching a proprietary right in patients. The fuss made about the loss of one is unworthy of us; and, if we had less jealousy of each other, and more respect for the independence of the patient in his right of selection, there would be but little ground for these wordy contests. I hold that, if a patient of mine likes to place himself under the care of a consultant, I have no great ground of complaint, so long as the consultant does not gain his confidence by discrediting me, vaunting himself, lowering his fees, or any other unworthy device. Acts of this kind do, of course, occur; but it is not fair to stigmatise a whole class on account of them. They are equally repudiated by practitioners and consultants, who justly say they cannot be responsible for individual acts. With the patient I have no real fault to find, as his right to change his adviser every day cannot be disputed, if he duly discharges the account—an important point of etiquette!

What right have we to throw difficulties in the way of patients who at heart wish to dispense with us, and seek the care of another? I heard a medical man assign, as one reason for his annual holiday, that it afforded an opportunity to his patients to change, if they wished it, with less scruple than they would feel if he were at home. This was a liberal-minded man, who respected the independence of others as he valued his own. Instead of growling at a professional brother at each secession of a patient, we should congratulate him on his good fortune, and closely examine ourselves in search of those faults in our attendance, by which we have, perhaps, justly forfeited the confidence of the patient. The search will rarely be fruitless.—Yours truly,

Brighton. ED. GEO. WHITTLE, M.D.Lond.

DIPHTHERIA AT THE CHARTERHOUSE SCHOOL.

SIR,—In consequence of your notice this week, and for the benefit of those among your readers who are interested, I think it well to acquaint you with the details of all cases of sore-throat which have occurred at Charterhouse since the present term commenced, on May 14th. They permit of division into three series.

1. From May 14th to June 10th, four cases of sore-throat came before me for treatment; one, a catarrhal pharyngitis; three, subacute tonsillitis, occurring in different houses, and attended with no complication.

2. On June 10th, I was called upon to see a case in one of the eleven boarding-houses, which I immediately diagnosed as diphtheria. Two days later, a case of undoubted diphtheria (the boy occupying the next cubicle to the first) occurred in the same house; and, within two more days, I saw eight other sore-throats elsewhere, which had no local manifestation of diphtheria save congestion (that is, no membrane), but all their owners had albuminuria. The simple fact of sore-throat being associated with albuminuria was sufficiently striking, and the persistence of the albumen for several days, with a sub-febrile temperature, taken together with the presence of two marked cases of diphtheria in another part of the school, left no room for doubt as to the nature of the eight sore-throats. These occurred in three separate houses: five in one, two in another, one in a third. As yet, no case has developed any of the paralytic phenomena which are apt to supervene upon diphtheria.

3. Since June 14th, I have seen nine cases of sore-throat, one being acute tonsillitis, four mild tonsillitis, and four simple pharyngitis. None has been associated with albuminuria, only three with any rise of temperature, and their distribution has not been specially localised.

It is unnecessary for me to say how the cases of diphtheria were managed; this has been clearly enough brought to light by the recent correspondence in the *Times*, notably in the letters of Dr. Bristowe and Mr. Noble Smith. Suffice it to say, that every case, occurring between June 10th and 14th, was called diphtheria, and its immediate removal from the boarding-house recommended; that the heavy responsibility which he was taking upon himself was impressed upon each house-master concerned; that each was urged to acquaint the friends of his sick pupils with the nature of their illness; and that it was advised to stop the general "exeat" on June 26th.

But I am anxious to explain that I never employ the term "diphtheritic sore-throat;" I have long discarded it as a dissimulation; all sore-throats are diphtheria or not diphtheria. And so deeply am I impressed with the feeling that an exceedingly mild sore-throat may be the means of conveying diphtheria that, at Charterhouse, I am in the habit of advising the isolation of every case of sore-throat, whatever its species. Hitherto, my powers have been limited to giving advice; I am in hopes that the recent stir will secure, for the future, its acceptance by those few house-masters whose wisdom has led them to act in opposition to it.

Inasmuch as the Head-master is in communication with the Local Government Board, there is no present need for publicly discussing the etiology of the outbreak.

In conclusion, allow me to express through your columns my sense of deep gratitude to those medical friends who have felt it necessary to support me by their testimony on the present occasion.—Yours faithfully,

C. HAIG BROWN, M.D.,
Medical Officer at Charterhouse School.

NOMENCLATURE FOR OPERATIONS UPON THE OVARY.

SIR,—If Mr. Charles E. Jennings's letter were a serious inquiry, it would be deserving of a serious answer; but it is perfectly clear, if we trace recent incidents closely, that Mr. Jennings's intention is rather to be the cat's-paw of one notable ovariotomist for the disadvantage of another. If Mr. Jennings will seriously set himself to work to unravel the difficulties which encumber this question, he will do a real service; but he must bear in mind that the whole question is not yet ten years old; and that, with every succeeding advance, fresh difficulties in division and in nomenclature have arisen, and must, necessarily, arise; and a position, which was perfectly consistent and compatible with the information at our disposal in 1879, is perfectly irreconcilable with our knowledge in 1886. It is, therefore, perfectly ridiculous for him to allude to conflicting statements in different articles, if these articles are removed in date by any considerable time.

The question, "What is ovariotomy?" is one which, at the present moment, it is perfectly impossible to give a definite and scientific answer to. This is clearly indicated in the writings of Schrœder; for, between the small cystic ovary, which we find so frequently associated with myomatous tumours of the uterus, up to the enormous cystic tumours of the ovary which exceed 100lbs. in weight, there are infinite and endless gradations. One distinguished German authority has adopted a hard-and-fast line of a diameter of six inches; beyond which, on the one side, he classes everything as ovariotomy, and everything below as removal of the uterine appendages. But, as many of these tumours have to be tapped before they are removed, it is perfectly clear that we could not accept even this hard-and-fast line as a distinction.

As another example, and that quoted by Mr. Jennings, we might cite the cases of parovarian tumour. It is perfectly clear that, in its clinical, its surgical, and its pathological aspects, it is altogether a different thing from an ovarian tumour; and yet, these cases are persistently classed together, in lists of cases, in a way which renders any protest upon the proceeding impossible and futile. The only proper way is to publish every case of abdominal section, which is performed by each operator, in consecutive order of time; and to indicate in the columns, as closely as possible, the condition for which the operation

was performed. Then, as different classifiers have different views, they are perfectly at liberty to select each case from each list, and place it how they like.

Finally, let me point out that we have not yet been able to settle even what constitutes an abdominal section. A hard-and-fast line has been attempted, in this direction, by one notable ovariotomist, to the effect that an abdominal section is an operation where the peritoneal cavity is opened. But, some of the cases which are the most serious, and almost the most fatal of all the varieties of abdominal operations, are those in which the peritoneum is never opened. In certain operations of the kidney, the peritoneum is never opened, and in others it is. Are we to include a nephrectomy, sometimes, as an abdominal section; and, at other times, as not? A colotomy may be an abdominal section at one time, by this definition, and, at other times, it might not be so. The fact is that Mr. Jennings is only at the fringe of the question; and the sooner he sets to work to seriously study it, the better for him, and the better for surgery.—I am, etc.,

F.R.C.S.

TANNATE OF MERCURY.

SIR,—In the JOURNAL of July 3rd, p. 53, is a paragraph on "Tannate of Mercury," in which the average dose is stated to be from 4 to 6 grains.

When acting as house-surgeon at Guy's Hospital, I treated all cases of syphilis at the out-patient department with this drug, in order to test its efficacy. An account of my cases appeared in the *Medical Times and Gazette* for December, 1885. I found the average dose to be 1½ grains three times a day, taken one hour before meals. This was sufficient, in most cases, to subdue symptoms. One patient, a flute-player, even at this dose, was unable to blow his flute, on account of sponginess of the gums. Strong healthy men could take two grains. It is by far the best preparation of mercury for specific treatment.—Yours, etc.,

J. INGLIS PARSONS, M.D.,
Assistant-Physician to Chelsea Hospital for Women.

90, Redcliffe Gardens, South Kensington.

INDIA AND THE COLONIES.

INDIA.

FEMALE MEDICAL AID IN INDIA.—The National Association for Supplying Medical Aid to the Women of India is engaged in a great and good work, and with what result will be best seen from the following facts, which we are glad to be able to quote. In Calcutta, the Countess of Dufferin's Dispensary for Women contains promise of great success. The confidence of the native ladies in Calcutta has, we learn, been completely gained by Mrs. Van Ingen and Mrs. Amir Ali, the ladies in charge; and the attendance at the dispensary during the past two months has increased by leaps and bounds. The dispensary is the first-fruit in Calcutta of the Bengal Branch of the Association. The Bengal Government proposes handing over to that Branch, on August 1st, the management of the Surnomoye hostel, which, it is anticipated, will by that date be both ready for occupation and provided with an efficient staff. At Durbhungha, the Countess of Dufferin, on March 31st, laid the first stone of the Female Hospital being built at the sole cost of the Maharajah of the district. The North-Western Provinces and Oudh Branch of the Association are establishing a female hospital at Allahabad. At Agra, the female medical school shows signs of great vitality; the number of students is rapidly increasing, and enlarged accommodation is being provided to meet the demands. At Lahore, Miss Bielby's work has, it is reported, met with so much success that another lady doctor is needed for her assistance; but, through a lack of funds, this want cannot at present be supplied. At Delhi, it is hoped that a lady doctor may shortly be appointed to the charge of the female ward in the New Municipal Hospital. Numerous inquiries, it is stated, have been received from other parts of the Punjab for lady doctors and trained midwives to instruct classes. The Rewah Durbar has decided to establish a midwifery class; and, in Ulwar, a lady doctor, Miss Smith, is reported to be working with increasing popularity, and to have the cordial support of the Maharajah. Arrangements are being made for Miss Stewart, of Madras, to proceed to Bhopal, and practise there. At Rangoon, classes are to be opened for the instruction of midwives and nurses. At Calcutta and other female hospitals and dispensaries, the instructions of the Association are that the greatest precautions shall be taken in respect of the privileges of purdah women. The conditions on which the Queen and the Viceroy medals will be awarded will, it is expected, be shortly known; the delay has arisen from a desire to insure an equally high standard throughout India. This Association, from which so much good work has sprung, is greatly in need of funds, and it is to be hoped that these will be soon forthcoming. Scholarships are being established, and the Association may be regarded as now firmly established, the success of which will increase as it becomes more and more a national undertaking.

THE CALCUTTA MEDICAL COLLEGE.—The Calcutta Medical College will award, during the session now commenced, eleven scholarships to lady-students, of the value of fifteen rupees per month; first, to those candidates who are selected by Sir Walter de Souza; second, according to their position in the University entrance and preliminary examinations, preference being given to those who have passed the entrance examination. A lady-student who has passed the University F.A. examination will be enrolled, and pay fees as a matriculated student, and will get a special scholarship of twenty rupees *per mensem*. Lady-students who have not passed the F.A., but have passed the University entrance examination or a special preliminary examination in English history, geography, and arithmetic, will get their tuition and residence free. On passing the final test and honour examination, they will receive college-certificates, qualifying them for employment as licentiates in medicine, surgery, and midwifery. Female-students who have not passed the entrance or a special test examination, but who read and write Bengali, will be admitted into the Eden Hospital as pupil dhals, of whom eight will receive six rupees *per mensem*, and the remainder will be taught free. After twelve months' tuition and bed-practice, if found proficient, they will obtain a certificate qualifying them to practise midwifery.

THE death is announced of J. N. Fonseca, at Goa, on June 19th. Dr. Fonseca graduated at the Goa Medical College, 1859, and established himself as a medical practitioner in Bombay, where he enjoyed a large practice; and in 1883, he retired to his native country with a moderate fortune. He was a leading member of the Portuguese community, the author of the *History and Archæology of Goa*, in English, and of many works in Portuguese, and was the founder and president of the *Sociadade dos Amigos das Letras*. He was recently elected a Fellow of the Royal Asiatic Society of Great Britain and Ireland; was President of the Dabul Church Committee, and a great advocate for the extinction of castes among Goanese Christians. By his death, the Portuguese community has lost a valuable friend.

MEDICO-LEGAL AND MEDICO-ETHICAL.

CERTIFICATES FOR PAUPER LUNATICS.

M.B.M.A. WRITES: Would you kindly inform me, in your next issue, what magistrates are competent to sign the certificate committing a pauper-lunatic to a county asylum?

We had occasion to send a pauper to the county asylum, and a county magistrate, not being easily available, a borough magistrate signed the paper. The asylum authorities refused the patient admittance, objecting to the magistrate's signature, and directed the relieving officer to obtain the signature of a county or city magistrate, notwithstanding that in the margin of their official form they have printed "county, city, or borough" magistrate. Clergymen's signatures are, I believe, not now received.

* * The order committing a pauper-lunatic to a county asylum must be signed either by a justice of the county or borough in which the parish, in which the lunatic is, is situate; or by an officiating clergyman and relieving officer (or overseer) of the said parish. Whether the refusal to admit the patient in the case mentioned by "M.B.M.A." was right or not depends entirely on where the patient's parish was situate, in county or borough, and what the arrangements of the borough with regard to the county asylum and lunatic patients. "M.B.M.A." does not state these fundamental facts.

MEDICAL ETIQUETTE.

ALPHA, in reference to his letter and our annotation, published in the JOURNAL of May 22nd, page 1006, writes: I agree with the decision in this case, but it is not my case. I received no such intimation; and so far from having ceased to attend, I had a visit noted for an early day the following week.

The husband states that I pronounced her much better, and even added something complimentary of her looks, from which it was (erroneously and forgetful of my former prognosis) concluded that I thereupon struck her off my sick-list; hence, when the sickness returned, he thought himself at liberty to send for a professional accoucheur, whom she insisted on having. He admitted having done this with much reluctance and some misgiving regarding its propriety, and offered to apologise if I could show he was wrong.

He had mentioned the fact of having called in "Beta" in a letter to me about another matter, and, in my reply, I had merely said, "I think you will be sorry to learn that you have committed a gross breach of professional etiquette," so there was no angry recrimination. You see it is not a matter of our bread and butter out here, and many would as soon never see a private patient; and this is close on my feeling on the point, most patients being more trouble than they are worth, even with handsome fees.

If our correspondent had carefully perused the printed literal copy of his first inculpatory note, on which our comments in the JOURNAL of May

22nd were necessarily based, and compared with his later version of the incidents therein referred to, he could not, we think, have failed to see that they differ [illegible]; and, moreover, agreeing as he does with our decision on the case as then presented to us, he will scarcely feel surprised at our disinclination to comment on the statement in his last communication, further than simply to express an opinion that, assuming it to correctly represent the facts of the case, he is fully entitled to an apology, and the customary fee from the husband of the lady in question.

P. P.—It is not generally considered dignified to hang diplomas, etc., in the consultation room; it is a matter of individual taste.

OBITUARY.

JAMES A. EAMES, M.D., F.R.C.S.I.

DR. EAMES, resident medical superintendent of the Eglinton Lunatic Asylum, Cork, died on last Saturday, July 17th. The deceased had been suffering from a carbuncle on his neck, and only a few days before his death was his condition considered alarming. He was formerly an assistant-surgeon in the Army, and served throughout the Crimean war; and, on his return to Ireland, became connected with the Letterkenny Lunatic Asylum. He was next appointed to Donegal Asylum; and, about twelve years since, to the Eglinton Asylum, where, under his careful management, it has become a model establishment for the treatment of the insane. Dr. Eames was a graduate in medicine of the University of St. Andrew's, and obtained the Fellowship of the Irish College of Surgeons in 1865. The deceased was President of the Medico-Psychological Association of Great Britain, and a member of the British Medical Association.

FRANCIS SLAUGHTER ROGERS, M.R.C.S.L., L.A.C.

MR. FRANCIS SLAUGHTER ROGERS, died at Westmeon, Petersfield, Hants, on the morning of July 18th, having reached, within a few weeks, the age of 75 years. Mr. Rogers was the seventh child of the late George Vining Rogers, of Westmeon, Hants, who carried on an extensive general practice in the same village and surroundings for upwards of forty years, and who succeeded, solely by his professional exertions, in bringing up, educating, and putting out in the world, the unusually large number of thirteen sons and three daughters, one of the said sons being well known in the political and scientific world as Professor Thorold Rogers, late M.P. for Bermondsey, whilst the other, Dr. Joseph Rogers, of London, has exerted himself in the advocacy of Sanitary, Poor-law, Medical, and other reforms for a long period of years.

The subject of our notice was educated at the Webb Street School of Medicine, under the brothers Grainger and the late Dr. Robert Lee, at the time when students had the run of St. Thomas's and Guy's Hospital conjointly, of the advantages derived from which he did not fail to avail himself.

Mr. Rogers joined his father in practice in the year 1835; and, in the year 1841, succeeded to the whole of it. He was far above the average of provincial general practitioners, being a man of varied acquirements. He was singularly successful in obtaining and securing the confidence of his patients; a bold and skilful operator; whilst he hardly, if ever, made an error in the diagnosis of disease.

He was twice married; his second wife, who survives him, is the sister of Dr. John Goldsmith, of Worthing.

By his death, a practice continued, until recently, in the same family and locality for upwards of 120 years has come to an end; as there are no successors to it, it has passed into the hands of strangers.

NAVAL AND MILITARY MEDICAL SERVICES.

THE VOLUNTEER MEDICAL SERVICE.

SOUTH WALES BORDERER is glad to find that volunteer surgeons are beginning to take some interest in the service, and thinks that it should be assimilated as nearly as possible to the regular Army Medical Staff. "Philo-Volunteer" (JOURNAL, July 10th, p. 92) is reasonable in his proposal; but our correspondent hopes that a definite rule will be observed by all surgeons taking charge of volunteer battalions. He was himself one of the first to raise and train an efficient bearer-company; his regiment is between 700 and 800 strong, and goes into camp at the end of the month, in company with two other regiments, forming a brigade, the first of its kind, he believes, in the western district. Our correspondent suggests that when a surgeon has had charge of a battalion for a fixed time, he should be called upon to undergo an examination on general professional knowledge and the requirements set down in the *Manual for the Medical Staff Corps*. He should also have the advantage of about a month's training at Aldershot, or other military centre, at the expense of the State, and have an opportunity, at the end of the training period, of being examined practically in military surgery and ambulance-work in all its branches, so as to qualify him to be of real use and capable of good service when called upon at home or abroad.

Most volunteer surgeons prefer to wear the uniform of their corps, but perhaps it would be as well to have a Red Cross badge in front of the helmet, or in the cross-belt, etc.

Our correspondent cannot understand how Dr. Taylor, of Scarborough, is allowed to have in training forty-one officers and men, yet still seems to expect to be allowed to enrol a larger number. Our correspondent's regiment is nearly 800 strong, and he is obliged to put up with sixteen men and a sergeant, that is, two men per company. He is not allowed any greater number, and has been informed that such is the established rule of the service. Should larger numbers be allowed to join, there must be some special allowance of pay, as it is anything but trifling to properly equip, teach, train, and keep in good efficient order, a company of sixteen men, even with help from regimental funds.

HONORARY BRIGADE-SURGEON, Army Medical Staff (Retired List) writes: May I be permitted to say a few words, not in any way meant unkindly, in reply to "Philo-Volunteer's" suggestion in the JOURNAL of July 10th. It will, I fancy, be thought by most of the profession that twenty years as a volunteer surgeon can scarcely be considered "as an equivalent" to twenty years' service in the Army Medical Staff. The present step of honorary rank, granted to medical officers on retirement after long foreign service (with, probably, three or four campaigns thrown in), is not of much value; but, such as it is, will they be considered unreasonable if some are inclined to say (with all due respect to our volunteer brethren) that carrying out "Philo-Volunteer's" suggestion would not add to its value?

THE LATE SURGEON TURNER.

SURGEON R. P. BOND, 2, Queen's Villas, Cheltenham, sends the names of the following subscribers to the memorial of the late Surgeon C. P. Turner, Army Medical Staff: Surgeons-Major W. F. Burnett, W. A. Catherwood; Surgeons G. D. Bourke, R. Hasebleu. A previous list of subscribers was published in the JOURNAL, June 12th, p. 1144.

PAY OF BRITISH ARMY SURGEONS IN INDIA.

ONE WHO SPEAKS FROM BITTER EXPERIENCE writes: I am glad to see that in some recent issues of the BRITISH MEDICAL JOURNAL, attention has been called to the pay of the junior army surgeon in India. The young surgeon is induced to enter the service under the fond delusion that he is to receive pay at the rate of £200 *per annum*, with the allowances of a staff-captain, which, altogether, amounts to nearly £300 *per annum*. This he undoubtedly receives during the few months he is allowed to remain at home, but, on arriving in India (usually within his first year of service), he finds that, though he continues to wear the badges of rank of a captain, according to the Indian Army Regulations, he ranks with a lieutenant for the first six years of his service, and draws the allowances of that rank only. These, together with his pay, amount to 317 rupees 8 annas per month (value of exchange being 1s. 5½d. the rupee). This is 132 rupees 8 annas less than the pay of a regimental captain, 82 rupees 8 annas less than that of a junior veterinary surgeon, and actually 7 rupees 8 annas less than the pay of a young subaltern on becoming a probationer for the Indian Staff Corps. But this gross injustice fades into insignificance to what follows. After the surgeon attains five years' service at home, after this period of service, his pay is augmented by £50 *per annum* (equivalent to 58 rupees 5 annas per month), while, in India, he gets the overwhelming addition of 18 rupees 4 annas per month, being at a loss of 40 rupees 1 anna for the privilege of serving in that unhealthy climate. Nor is this all. At home, when travelling on duty, the surgeon receives an allowance of 10s. per day; while, in India, not only does he receive no such allowance, but has to provide himself with tents and transport for his baggage.

Again, though the nature of his duties always necessitate his being mounted, he is not allowed horse-allowance, except when actually marching with troops, though (I suppose as a sort of grim joke) the dress-regulations authorise him to wear spurs.

I hope you will find space to publish these few facts, if only in justice to intending candidates, who, I am sure, are about to enter the service, as many have done before, under false impressions.

THE NAVY.

THE following appointments have been made at the Admiralty during the past week: F. M. PUDDICOMBE, Surgeon, to the *Asia*; W. W. PRYN, Surgeon, to the *Indus*, additional; G. E. KENNEDY, Surgeon, to the *Medina*; J. J. M'DONNELL, Surgeon, to the *Malabar*; J. E. WEBB, Surgeon, to the *Spey*; M. H. ATOCK, Surgeon, to the *Tees*; E. A. SPILLAR, Surgeon, to Haslar Hospital, for temporary service.

Inspector-General of Hospitals THOMAS ROSS JAMESON, M.D., died at Lympstone, Devon, on July 6th.

MEDICAL STAFF.

SURGEON-MAJOR W. J. CAMPBELL, serving in the Madras Command, doing duty at the station hospital, Belgaum, is ordered to do duty with the Burmah Field Force at Mandalay.

Surgeon C. H. SWAYNE, doing duty at the station hospital at Bellavy, in the Madras command, is directed to do duty at the station hospital at Balgaum.

Surgeon M. O'C. DRURY is transferred from general duty Mhow Circle, Bombay, to general duty, Burmah.

Surgeon S. J. W. HAYMAN is brought on the strength of Her Majesty's British forces in Bombay, with effect from June 16th, the date of his arrival from England.

THE INDIAN MEDICAL SERVICE.

THE undermentioned gentlemen, whose retirement we announced some weeks since, have been granted a step of honorary rank:—Brigade-Surgeon W. H. MORGAN, Madras Establishment; Brigade-Surgeon H. R. L. M'DOUGALL, M.D., Bombay Establishment; Surgeon-Major H. E. BUSTEED, M.D., Madras Establishment; and Surgeon-Major J. KELLY, Bengal Establishment.

The services of Surgeon G. BOMFORD, M.D., Bengal Establishment, are temporarily placed at the disposal of the Government of Bengal.

Surgeon A. T. L. PATCH, M.B., Madras Establishment, is directed to officiate as

Medical Officer to the 1st Cavalry Hyderabad Contingent, *vice* Brigade-Surgeon G. D. Riddell.

Surgeon S. F. BIGGER, M.B., Bengal Establishment, is appointed Medical Officer to the 3rd Punjab Cavalry, *vice* J. G. Hancock, transferred to the 5th Punjab Cavalry.

Surgeon J. G. HANCOCK, Bengal Establishment, is appointed Medical Officer to the 5th Punjab Cavalry, *vice* Surgeon-Major C. P. Costello, appointed Medical Storekeeper at Mecan Meer.

Surgeon-Major T. MOLONEY, M.D., Bengal Establishment, and Surgeon-Major R. BOUSTEAD, Bombay Establishment, have each received an extension of leave for six months on medical certificate.

Surgeon D. F. DYMOTT, M.B., Madras Establishment, Resident Surgeon at the General Hospital, is appointed to act as Secretary to the Surgeon-General with the Government of Madras, during the absence on leave of Surgeon C. M. Thompson, M.B.

Surgeon H. A. F. NAILER, M.B., Madras Establishment, Civil Surgeon of Chingleput, is directed to act as Resident Surgeon-General of Hospitals during the employment of Surgeon D. F. Dymott on other duty.

Surgeon H. THOMSON, M.B., Madras Establishment, doing duty at Bangalore, is ordered to do duty with the Burmah Field Force at Mandalay.

Surgeon J. A. BURTON, Madras Establishment, is ordered to do general duty under the orders of the Deputy Surgeon-General, Her Majesty's Forces in the eastern district, on relief of the officiating medical charge of the 22nd Native Infantry.

Surgeon A. J. O'HARA, Madras Establishment, is directed to do duty under the orders of the Principal Medical Officer, Burmah Field Force, Mandalay.

Surgeon A. W. F. STREET, Bombay Establishment, is appointed to act as Health Officer of the Port of Bombay, during the absence of Surgeon F. F. MacCartie, M.B., or till further orders.

Surgeon C. J. SARKIES, M.B., Bombay Establishment, is ordered to officiate in medical charge of the 14th Native Infantry, during the absence of Surgeon J. E. Ferguson, on furlough, or till further orders.

Surgeon-Major T. B. W. P. JOHNSTON, Bombay Establishment, who was transferred to the half-pay list on January 19th of last year, has now retired from the service, which he entered November 7th, 1854. He was in the Persian war of 1856-57, and was at the capture of Bushire and the bombardment of Mohummerah. Medal with clasp.

Brigade-Surgeon J. C. MORICE, Bengal Establishment, is appointed to the permanent medical charge of the newly organised 2nd Battalion of the 4th Goorkhas.

Surgeon R. B. ERSKINE, of the 1st Ayr and Galloway Artillery Volunteers, and Surgeon B. N. EARLE, of the 1st Volunteer Battalion of the Hampshire Regiment (formerly the 1st Hampshire Volunteers), have been granted the honorary rank of Surgeons-Major.

Surgeon and Honorary Surgeon-Major C. H. HIGGINS, M.D., of the 1st Cheshire Volunteers, has resigned his appointment, with permission to retain his rank and uniform. His commission dates from June 20th, 1864.

Acting-Surgeon C. W. PARKINSON, 1st Dorset Volunteers, is promoted to be Surgeon.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month :—

		From	To
Surgeon-Major	R. De B. Riordan	Cork	Fermoy.
,,	R. W. Hare, M.B.	—	Chatham.
,,	J. F. Beattie, M.D.	Egypt	London.
,,	W. P. Smith	—	Dublin.
,,	W. A. Catherwood, M.D.	Egypt	Netley.
,,	W. H. M'Namara, M.D.	Egypt	Dublin.
,,	A. L. Brown	Egypt	Portsmouth.
,,	F. A. L'Estrange	Egypt	Dublin.
,,	R. H. Quill, M.B.	Chatham	Devonport.
,,	R. W. Mapleton, M.B.	—	Aldershot.
Surgeon	H. Scott, M.B.	Curragh	Aldershot.
,,	G. H. Le Mottee	Chatham	Aldershot.
,,	J. P. Hunt, M.D.	Egypt	Sheerness.
,,	A. C. J. B. Lund, M.B.	Egypt	York.
,,	C. Quarry	Egypt	Devonport.
,,	A. S. W. Young	Newport	C. of Good Hope.
,,	J. G. S. Lewis	—	Kingston-on-T.
,,	H. Martin, M.B.	Sunderland	York.
,,	A. O. Geoghegan, M.D.	Gosport	Portsmouth.
,,	A. Hewett	York	Sunderland.
,,	F. B. Maclean	Devonport	Trowbridge.
,,	E. O. Malward	Bengal	Portsmouth.
,,	J. H. Nicholas	Devonport	Newport.
,,	G. T. Trewman, M.B.	Egypt	Gosport.
,,	G. S. O'Grady	Honduras	Dublin.
,,	H. J. Barratt	Bermuda	Colchester.
,,	L. E. Anderson	Egypt	Netley.
,,	J. R. Mallins	Egypt	Portsmouth.
,,	H. Cocks, M.B.	Halifax	York.
,,	H. H. Brown, M.B.	Berwick	York.
Quartermaster	D. O'Connor	Egypt	Portsmouth.
,,	D. M'Intyre	Cyprus	Netley.

NURSING THE SICK-POOR.—At the second annual meeting of the South London District Nursing Association for Nursing the Sick-Poor, held on Saturday afternoon at the Nurses' Home, Marmion Road, Battersea, the Rev. Canon Clarke in the chair, it was stated in the annual report that the patients attended during the year were 377, the number of visits exceeding 10,000, the Association having proved a great boon to the suffering poor in at least 300 cases, where skilled nursing was a necessity. Funds were greatly needed in order to increase the staff of nurses.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE METROPOLITAN ASYLUMS BOARD.

AT the ordinary fortnightly meeting of the Metropolitan Asylums Board, held on Saturday last, an important question, relating to the class of imbecile children to be admitted into the Board's institutions, was brought up in a letter from the Local Government Board, enclosing a communication addressed to the Central Authority by the guardians of the parish of St. Mary, Lambeth. Attention was drawn in the letter to the order of the Local Government Board, which was for "such harmless persons of the chronic or imbecile class as could be lawfully retained in a workhouse, but no dangerous or curable persons, such as would, under the statutes in that behalf, require to be sent to a lunatic asylum, shall be admitted." The guardians were of opinion that the Board of Managers or the Asylums Committee had not the right of refusing admission to any patient coming within this definition, notwithstanding that the patient might be epileptic or not able-bodied, as long as the number of patients in the asylum was less than the number which, under the Local Government Board's certificate, might be received therein. Certain imbecile children, epileptic and not able-bodied, seen by the Commissioner in Lunacy in the Lambeth Infirmary, were noticed by him as patients who ought to be sent to Darenth Asylum. Communications were enclosed from the Darenth authorities, offering to take patients if they were able-bodied, not epileptic, and above five years of age; and that, where these conditions were not complied with, the children would be sent back. The correspondence was referred to the Darenth Committee for consideration and report.

The report of the Lunacy Commissioners upon a visit to the Caterham Asylum was forwarded by the Local Government Board. The Commissioners remarked that the form of certificate received with the patients on admission continued to give as meagre details and as insufficient information of the form of mental disorder as in previous years, and the case-books did not furnish many useful notes respecting the state of the patients after they had resided a short time in the asylum. The staff of attendants was decidedly small, when the large number of epileptic patients was considered. The Commissioners stated that they were much perplexed when asked by what authority patients were detained against their will. The wants of the 120 patients professing the Roman Catholic religion were not sufficiently considered, and the contrast as compared with the Church of England services was very great and striking. The returns as to fever and small-pox patients dealt with by the Board during the fortnight were read by Mr. Jebb. The fever-returns showed that, at the Eastern Hospital, 28 patients had been admitted, 3 had died, and 25 had been discharged, while 116 patient remained under treatment, of whom 100 were scarlet fever cases, 13 enteric, and 3 patients were suffering from other diseases. At the Western Hospital, 10 patients had been admitted, 11 had been discharged, and 68 remained under treatment, of whom 61 were scarlet fever patients, and 7 enteric.

At the South-Western Hospital, 5 patients had been admitted, 2 had died, and 6 had been discharged, while 15 scarlet fever patients remained under treatment.

At the South-Eastern Hospital, 5 patients had been admitted, 5 had been discharged, and 23 scarlet fever, 2 typhus, and 10 enteric fever patients remained under treatment. The total figures showed that 48 patients had been admitted, as against 39 in the previous fortnight; 5 had died, as against 3; and 47 had been discharged, as against 25; while 235 patients remained under treatment, as against 240. There were 249 beds available, and 948 in reserve. The small-pox returns showed that, in all, 5 patients had been admitted direct from parishes and unions to the hospital-ships lying in the Thames at Long Reach; 1 had died, 5 had been discharged, and 9 remained under treatment.

The figures, as compared with those of the preceding fortnight, showed a decrease of one in the number remaining under treatment.

The CHAIRMAN said that, as regarded the small-pox cases, the figures were the lowest since the spring of 1875.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, July 17th, 5,929 births and 3,426 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had risen from 16.8 to 18.4 per 1,000 in the four preceding weeks, further rose during the

week under notice to 19.7. The rates in the several towns, ranged in order from the lowest, were as follow:—Brighton, 12.1; Huddersfield, 13.0; Hull, 13.9; Derby, 14.2; Plymouth, 14.3; Birkenhead, 14.8; Leeds, 14.9; Halifax, 15.3; Birmingham, 16.2; Sunderland, 16.8; Wolverhampton, 17.0; Sheffield, 17.8; Bristol, 18.4; Nottingham, 18.7; Norwich, 18.7; Liverpool, 18.9; Leicester, 19.1; Portsmouth, 19.1; Oldham, 19.6; Bolton, 19.7; Salford, 20.3; Bradford, 20.5; London, 21.1; Cardiff, 21.8; Newcastle-upon-Tyne, 21.9; Blackburn, 22.7; Preston, 24.7; and the highest rate during the week, 24.8 in Manchester. The death-rate in the twenty-seven provincial towns averaged only 18.4 per 1,000, and was 2.7 below the rate recorded in London, which, as before stated, was 21.1 per 1,000. The 3,426 deaths registered in the twenty-eight towns during the week under notice included 654 which were referred to the principal zymotic diseases, against numbers steadily increasing from 263 to 474 in the five preceding weeks; of these, 413 resulted from diarrhœa, 93 from measles, 50 from whooping-cough, 41 from scarlet fever, 39 from "fever" (principally enteric), 17 from diphtheria, and one from small-pox. These 654 deaths were equal to an annual rate of 3.8 per 1,000. The zymotic death-rate in London during the week under notice was equal to 5.4 (of which 4.0 was due to diarrhœa), while in the twenty-seven provincial towns it averaged only 2.4, and ranged from 0.0 in Wolverhampton and in Halifax, to 4.5 in Blackburn, 4.9 in Leicester, and 8.2 in Preston. The deaths referred to diarrhœal diseases, which had increased in the eight preceding weeks from 27 to 222, further rose, under the influence of the warm weather, to 413, and showed the largest proportional fatality in Bradford, Leicester, and London. The fatal cases of measles, which had risen from 89 to 116 in the four previous weeks, declined again during the week to 93, and caused the highest death-rates in Blackburn, Bolton, and Preston. The deaths referred to whooping-cough, which had been 57 and 68 in the two preceding weeks, declined to 50 during the week under notice, and showed the highest proportional fatality in Preston. The 41 fatal cases of scarlet fever showed a further increase upon the numbers recorded in recent weeks; this disease caused the highest death-rates in Salford and Oldham. The deaths referred to different forms of fever, which had been 31, 30, and 27 in the three preceding weeks, rose again during the week under notice to 39, and showed the highest proportional fatality in Portsmouth, Plymouth, and Cardiff. Of the 17 fatal cases of diphtheria registered in the twenty-eight towns, 14 occurred in London. A death from small-pox was recorded in Liverpool, but not one either in London, or in any other of the twenty-eight large towns, although the death of a London resident from this disease was registered in the Metropolitan Asylum Hospital ship *Atlas* situated outside Registration London. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had declined from 29 to 8 during the three preceding weeks, was 10 on Saturday, July 17th; 3 new cases were admitted to these hospitals during the week, against 2 and 3 in the two previous weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.1 per 1,000, and was below the average. The causes of 60, or 1.8 per cent. of the 3,426 deaths registered during the week in the twenty-eight towns, were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns, having an estimated population of 1,283,977 persons, 836 births and 475 deaths were registered during the week ending Saturday, July 17th. The annual rate of mortality, which had been 20.8 and 19.7 per 1,000 in the two preceding weeks, further declined during the week under notice to 19.2, and was slightly below the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 8.2 in Perth, 13.9 in Greenock, 16.4 in Dundee, 17.6 in Aberdeen, 18.2 in Edinburgh, 20.7 in Leith, 21.7 in Glasgow, and 23.4 in Paisley. The 475 deaths registered during the week under notice in these towns included 27 which were referred to diarrhœa, 18 to whooping-cough, 10 to measles, 7 to scarlet fever, 4 to "fever," 1 to diphtheria, and not one to small-pox; in all, 67 deaths resulted from these principal zymotic diseases, against 59 and 63 in the two preceding weeks. These 67 deaths were equal to an annual rate of 2.8 per 1,000, which was 1.0 below the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Leith, Paisley, and Glasgow. The deaths referred to diarrhœal diseases, which had increased from 7 to 24 in the four preceding weeks, further rose last week to 27, and included 14 in Glasgow, 6 in Dundee, and 4 in Paisley. The fatal cases of whooping-cough, which had been 10 and 17 in the two previous weeks, were 18 during the week under notice, of which 14 occurred in Glasgow, and 3 in Edinburgh. The 10 deaths referred to measles showed a further decline from recent weekly numbers, and included 5 in Edinburgh, and 3 in Leith. The 7 fatal cases of scarlet fever corresponded with those returned in the preceding week, and included 5 in Glasgow. The 4 deaths referred to different forms of fever showed an increase of 2 upon the number recorded in the previous week. The fatal case of diphtheria occurred in Dundee. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 3.1 per 1,000, against 2.1 in London. The causes of 59, or more than 12 per cent., of the 475 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF FOREIGN CITIES.

It appears, from statistics published in the Registrar-General's return for the week ending June 26th, that the annual death-rate was recently equal to 24.6 per 1,000 in Bombay, and 33.2 in Madras. Measles caused 24 deaths in Bombay and 10 in Madras; and "fever" mortality showed the usual excess in each of these Indian cities. According to the most recently received weekly returns, the annual death-rate averaged 25.6 per 1,000 persons estimated to be living in twenty of the largest European cities, and exceeded by no less than 8.6 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 29.3, but showed a further decline from the higher rates in recent weeks; the 521 deaths included 41 from measles, 22 from scarlet fever, 9 from "fever," and 4 from small-pox. In three other northern cities—Copenhagen, Christiania, and Stockholm—the death-rate averaged only 20.2, and ranged from 18.7 in Christiania, to 21.1 in Copenhagen; the 47 deaths in Christiania included 5 from scarlet-fever and 4 from diphtheria; and in Copenhagen 14 deaths resulted from diarrhœal diseases. In Paris, the death-rate was 21.4, and exceeded the rate that prevailed in London by 6.0; the deaths included 28 from diphtheria and croup, 25 from measles, and 10 from typhoid fever. The 173 deaths in Brussels, of which 5 resulted from diphtheria and croup, 3 from small-pox and 3 from "fever," gave a rate of 20.7. In Geneva the rate did not exceed 15.1. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean rate was 18.2, and the rates ranged from 14.2 in the Hague, to 19.5 in Rotterdam; measles caused 4 deaths in Amsterdam and 2 in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 27.8, and ranged from 23.1 in Vienna and 24.2 in Berlin, to 33.1 in Munich and 38.1 in Buda-Pesth. Small-pox caused 12 deaths in Buda-Pesth, and 6 in Prague; diphtheria showed the largest mortality in Buda-Pesth and Hamburg. In Venice (the only Italian city furnishing a return) 216 deaths were reported in the week ending June 5th, being equal to a rate of 77.2; the deaths included 134 from cholera, and 4 from typhoid fever. The death-rate was equal to 48.9 in Alexandria, and 45.2 in Cairo; typhoid fever caused 24 deaths in Cairo and 5 in Alexandria, and 99 were referred to diarrhœal diseases in Cairo and 56 in Alexandria. In four of the largest American cities, the mean recorded death-rate was 21.0, the rates ranging from 18.4 in Baltimore, to 24.4 in New York. Diphtheria and scarlet fever caused considerable mortality in New York, Brooklyn, and Philadelphia; 10 deaths from typhoid fever were returned in Philadelphia.

It appears from statistics published in the Registrar-General's return for the week ending July 3rd, that the annual death-rate was recently equal to 28.3 in Bombay and 32.8 in Madras. Measles caused 28 deaths in Bombay, and 8 in Madras; and the mortality from "fever" also showed the largest excess in Bombay. According to the most recently received weekly returns, the annual death-rate averaged 26.6 per 1,000 persons estimated to be living in twenty-two of the largest European cities, and exceeded by no less than 9.0 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 33.9, and showed an increase upon the rates in recent weeks; the 603 deaths included 81 from diarrhœal diseases, 31 from measles, and 21 from "fever." In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 20.7, and ranged from 20.0 in Stockholm, to 21.0 in Christiania; diphtheria and croup caused 11 deaths in Christiania, 3 in Stockholm, and 2 in Copenhagen. In Paris, the death-rate was equal to 21.6, showing a further slight increase upon the rates in recent weeks, and exceeded by 5.8 the rate that prevailed in London; the deaths included 23 from whooping-cough, 13 from typhoid fever, and 6 from small-pox. The 186 deaths in Brussels, of which 29 were due to diarrhœal diseases, and 1 to small-pox, gave a rate of 22.2. The rate in Geneva did not exceed 14.4. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 21.5, the several rates ranging from 19.5 in the Hague, to 22.7 in Amsterdam; 7 deaths from diphtheria and croup occurred in Amsterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 29.6, and ranged from 24.6 in Vienna, and 25.0 in Dresden, to 36.2 in Buda-Pesth, 36.8 in Breslau, and 46.7 in Prague. Small-pox caused 16 deaths in Buda-Pesth, and 3 in Prague; diphtheria mortality has somewhat generally declined in these cities, while the fatality of diarrhœal diseases showed a marked increase. The mean death-rate in three of the principal Italian cities was 28.5, the rate being 24.6 in Rome, 25.5 in Turin, and 46.4 in Venice. Small-pox caused 8, and typhoid fever 5, deaths in Rome. The fatal cases of cholera in Venice, which had been 85 and 134 in the two preceding weeks, declined to 64 in the week-ending June 12th. The death-rate was equal to 48.5 in Alexandria, and 44.1 in Cairo; diarrhœal diseases caused 60 deaths in Alexandria, and 113 in Cairo; 3 deaths from small-pox occurred in Alexandria, and 18 from typhoid fever in Cairo. In four of the largest American cities, the mean recorded death-rate was 19.8, the rate ranging from 17.1 in Philadelphia, to 22.2 in New York. Diphtheria showed more or less fatal prevalence in each of these American cities, and typhoid fever caused 6 deaths in Philadelphia.

It appears from statistics published in the Registrar-General's return for the week ending July 10th, that the annual death-rate recently averaged 26.9 per 1,000 in the three principal Indian cities; it was 23.7 in Bombay, 25.5 in Calcutta, and 29.0 in Madras. Cholera caused 32 deaths in Calcutta, diarrhœal diseases 40 in Madras, and measles 18 in Bombay; the greatest mortality from "fever" was reported in Bombay. According to the most recently received weekly returns, the annual death-rate averaged 26.2 per 1,000 persons estimated to be living in twenty-two of the largest European cities, and exceeded by no less than 7.8 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 32.4, and showed a decline from still higher rates in previous weeks; the 576 deaths included 26 from measles, 20 from scarlet fever, 10 from "fever," and 5 from small-pox. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 19.3, and ranged from 17.0 in Stockholm, to 20.9 in Copenhagen; diphtheria and croup caused 6 deaths in Christiania and 3 in Copenhagen, and scarlet fever 3 both in Stockholm and Christiania. In Paris, the death-rate was equal to 22.5, and exceeded the rate that prevailed in London by 3.1; the deaths included 31 from measles, 21 from diphtheria, 17 from scarlet fever, 12 from typhoid fever, and 4 from small-pox. The 176 deaths in Brussels, of which 22 resulted from diarrhœal diseases, gave a rate of 21.3. The rate in Geneva did not exceed 16.6, and no fatal case of zymotic disease was recorded. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 20.2, the several rates being 16.7 in Rotterdam, 19.6 in the Hague, and 22.2 in Amsterdam; diphtheria and croup caused 8 deaths in Amsterdam, and 3 fatal cases of measles occurred in the same city. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 28.5, and ranged from 22.0 in Dresden and 25.7 in Vienna, to 32.8 in Prague and 35.1 in Buda-Pesth. Small-pox caused 6 deaths in Buda-Pesth, and 3 in Vienna; diphtheria showed the greatest mortality in Hamburg and Prague; diarrhœa caused 229 of the 696 deaths in Berlin; and 2 fatal cases of cholera occurred in Trieste. The mean death-rate in three of the principal Italian cities was 26.6, the rates ranging from 24.2 in Rome to 37.5 in Venice; small-pox caused 6 deaths in Rome and 4 in Turin; and the fatal cases of cholera in Venice, which had been 85, 134, and 64 in the three preceding weeks, further declined to 43 in the week ending June 19th. The death-rate was 49.7 in Cairo, and 50.5 in Alexandria. Diarrhœal diseases caused 308 deaths in Cairo and 61 in Alexandria, typhoid fever 24 in Cairo and 3 in Alexandria, and whooping-cough 17 in Cairo and 16 in Alexandria. In four of the largest American cities, the recorded death-rate averaged only 20.4, and ranging from 17.3 in Philadelphia to 23.0 in New York. Diphtheria, including croup, caused considerable mortality in New York and Brooklyn; 8 deaths from typhoid fever occurred in Philadelphia, and 11 from measles in Baltimore.

It appears from statistics published in the Registrar-General's return for the week ending July 17th, that the annual death-rate recently averaged 27.0 per 1,000 in the three principal Indian cities; it was 20.2 in Calcutta, 25.6 in Bombay, and 30.8 in Madras. Cholera caused 20 deaths in Calcutta, and diarrhœal diseases 32 in Bombay and 47 in Madras; the mortality from "fever" showed the largest excess in Bombay. According to the most recently received weekly returns, the annual death-rate averaged 26.3 per 1,000 persons estimated to be

living in twenty of the largest European cities, and exceeded by no less than 6.6 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 31.1, and showed a further decline from the higher rates in previous weeks; the 553 deaths included 116 from diarrhœal diseases, 28 from measles, 17 from typhoid fever, and 5 from small-pox. In three other northern cities—Copenhagen, Christiania, and Stockholm—the death-rate averaged only 20.9, and ranged from 14.7 in Christiania, to 26.4 in Copenhagen; diphtheria and croup caused 8 deaths in Copenhagen, and 6 in Christiania, and diarrhœal diseases 9 in Stockholm. In Paris, the death-rate was equal to 22.4, showing a further decline from the rates in recent weeks, but exceeding the rate in London by 1.3; the deaths included 37 from measles, 18 from diphtheria and croup, 16 from typhoid fever, and 4 from small-pox. The 178 deaths in Brussels, of which 7 resulted from diphtheria and croup, gave a rate of 23.6. The rate in Geneva was 25.2, but no fatal case of zymotic disease was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was only 19.3, the rates ranging from 18.4 in Amsterdam to 20.6 in the Hague; measles and whooping-cough showed some prevalence in Amsterdam and Rotterdam, and diphtheria caused 2 deaths in the Hague. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 29.5, and ranged from 24.4 and 25.6 in Dresden and Vienna, to 34.9 in Buda-Pesth and 35.8 in Prague. Small-pox caused 13 deaths in Buda-Pesth, and 2 both in Vienna and Prague; diphtheria showed fatal prevalence in most of these German towns, and in Buda-Pesth 14 deaths from scarlet fever and 7 from "fever" were reported; 234 of the 756 deaths in Berlin resulted from diarrhœal diseases. The death-rate was equal to 26.5 in Rome, and to 25.7 in Venice; the deaths in Rome included 12 from small-pox, and 17 from diarrhœal diseases, and the 72 in Venice (in the week ending June 26th) 9 from cholera. The death-rate was equal to 53.4 in Alexandria, and 62.0 in Cairo; diarrhœal diseases, typhoid fever, and whooping-cough showed fatal prevalence in each of these cities, and in great measure caused the high death-rates. In four of the largest American cities, the mean recorded death-rate was 21.8, the rates ranging from 19.0 in Brooklyn, to 25.5 in Baltimore. Diphtheria showed considerable mortality in each of these American cities, and infantile cholera caused 23 deaths in Philadelphia, and 39 in Baltimore.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

HACKNEY.—Dr. J. W. Tripe commences his report for 1884 with a lengthy article on the epidemic of small-pox during that year. His remarks on the incidence of the disease, in relation to the position of the Homerton Hospital, confirm much of what has been written by the health officers of other parts of the metropolis, as to the dissemination of small-pox by the hospitals of the Metropolitan Asylums Board. The course of the disease at each epidemic period has been similar; attacking chiefly the inhabitants of the half mile radius round the hospital, with local outbreaks in other places of considerable severity. Dr. Tripe criticises adversely the present management and arrangement of fever hospitals. He is decidedly of opinion that the presence of the hospital in his district has exerted an injurious effect on its public health. The present wards are too large, and the incessant carrying to and fro of small-pox patients (as many as 224 having been moved in one week in May), must, he thinks, have a hurtful influence. The total number of small-pox cases reported during the epidemic was 1,333. The first occurred in October, 1883, and there was an increase of cases, in each month except February, until May, when the epidemic was at its height. The chief force of the outbreak was spent upon Hackney and Bethnal Green. The corrected death-rate for the district, for 1884, was 18.0 per 1,000; the zymotic proportion of deaths being equal to a rate of 3.99 per 1,000, or much above the mean for 1882 and 1883. Diphtheria, whooping-cough and diarrhœa were unusually fatal, and there were 80 deaths from typhoid fever, against an average of 52 for the preceding ten years. There did not appear to be any special cause for the excess; enquiry was made in every case, and no unusual amount of bad drainage, or of contact with the sick, was ascertained. The deaths at the age period of 5—15 show a large increase, for which unvaccinated cases of small-pox are chiefly responsible.

JARROW.—In Dr. Campbell Munro's opinion, the depression of trade in this borough during 1884, with the consequent distress among the working-classes, had an appreciable effect upon the mortality statistics of the year. In 1885, though the depression remained, it apparently had no such effect. The birth-rate in both years was exceptionally high; and, consequently, that section of the community which is least able to resist the hardships and privations that prevailed, was largely augmented. The general death-rate was 22.1 per 1,000 in 1885 as compared with 23.5 during the previous year; and the zymotic mortality was at the rate of 3.82 per 1,000 during 1884, as compared with 4.4 in 1885. During 1884, diarrhœa was exceptionally prevalent in Jarrow. Believing that, whatever the etiology of disease may be, the most practically efficient factor in its causation is the ignorance and carelessness of mothers as to the proper methods of feeding infants, Dr. Munro prepared a handbill on the Management and Feeding of Infants, and a copy of this handbill has, of late, been handed by the registrar to the person registering a birth in the borough. The need for a proper permanent hospital for infectious diseases has been obvious for several years past, and has been urged on the corporation by Dr. Munro. The question seems now to be in a fair way of being satisfactorily settled. As regards measles, which was excessively prevalent in 1885, a serious difficulty in the way of any attempt at the control of an epidemic lies in the apathy with which the mothers generally regard the incidence of that disease, and their failure to recognise it as a disease attended by serious mortality, and as one which, when not fatal, is liable to leave behind it life-long consequences, in the form of pulmonary susceptibility and glandular affections. Judicious school-closing is considered, by Dr. Munro, as a very effective measure.

BEDFORD URBAN AND RURAL DISTRICT.—Dr. C. E. Prior has the supervision of the public health in both these districts, and good work seems to have been carried on under his guidance. During the past two years, diphtheria has been very prevalent and troublesome, both in town and country, and an investigation was instituted by the Local Government Board in 1884. The mortality from this disease was slightly diminished in 1885, but it was rather more generally distributed. Dr. Prior thinks the disease has been fostered in the district, either by mild or unrecognised cases, and the consequent want of isolation and proper disinfection of houses and garments. Small-pox made its appearance several times, but there was only one death. Measles was almost entirely absent from both districts in 1884, but it was peculiarly fatal the following year, and the deaths registered were more numerous than in any year since 1870. Scarlatina was rife in several parishes, and a severe outbreak occurred among the female children at the workhouse, but the mortality was slight. The maintenance of a good water-supply engaged constant attention, and, to meet the growing requirements of the town, the area of supply was greatly extended. Dr. Prior hopes to procure for the joint use of the urban and rural districts, a thoroughly efficient system of disinfection, which, with prompt isolation, he considers the most effectual means of limiting the prevalence of diphtheria. He calls attention to the fact that, in *no one case* was there a return of the disease in the house or chamber that had been disinfected. From all causes, the death-rates of the urban district for the two years were respectively 15.05 and 17.88, the increase in 1885 being due to an extensive visitation of measles and whooping-cough. In the rural district, the rates were 16.0 and 18.5 per 1,000.

BLACKPOOL.—Mr. Welch has compiled a good and practical report, and is able to show a gradual and marked decrease in the general mortality, and also in that from preventable and infectious sickness. The total number of deaths was 311, equivalent to a death-rate of 17.2 per 1,000. Of these, 37 were deaths of visitors; and, deducting these, the corrected death-rate would be 15.19. The excessive infant mortality was the most noticeable feature of the year's mortality, as it was in the previous year. In 1885, however, the excess was not, as in 1884, due to diarrhœa, but to chest-affections, and also to convulsive and wasting diseases—these classes accounting for 61 out of a total of 86 deaths under one year. Mr. Welch thinks the prevention of these diseases must be sought in the improved education and intelligence of the general community, and points out the necessity for better care in the rearing of children. The decrease in the mortality from zymotic disease amounted to 50 per cent. Mr. Welch comments upon the partiality of typhoid fever and epidemic diarrhœa for particular parts of the town, especially those most built upon, and populated by the poorer classes. This companionship is clearly shown by a map, on which are marked the fatal cases of infantile diarrhœa, and the notified cases of enteric fever, during the five years 1880 to 1885 inclusive. Measles, scarlet fever, and whooping-cough were prevalent during the year. Two cases of small-pox were notified; but, by means of strict precautionary measures, its spread was prevented. The sanatorium was of some service in the work of isolation; but the impossibility of isolating two kinds of disease at the same time would render it quite inadequate in the event of any serious epidemic. Mr. Welch favours the idea of reckoning tubercular pulmonary consumption among preventable diseases, its exciting cause having been shown to be capable of isolation and artificial cultivation. There were 17 deaths from this cause, the exact average of the preceding seven years. Appended to the report are tables of the sickness and mortality, maps showing the incidence of disease on particular districts, and charts representing the fluctuations in the death-rates.

HARWICH.—Mr. W. W. Hardwicke is able to report a general decrease in the mortality of the district during the year 1885. The deaths numbered 125 against 128 in 1884, and against an average of four years of 129. The death-rate of 15.92 is satisfactorily below the average, the mortality from zymotic diseases being specially low. Mr. Hardwicke compares it with various other seaside resorts on the eastern and south-eastern coast, and finds the Harwich and Dovercourt zymotic death-rate to be one of the lowest on the list. There were only two deaths from zymotic causes, one from scarlet fever, and

the other from whooping-cough. There was an increase in the deaths among children from wasting and convulsive diseases. This is attributed, in some measure, to parental neglect, but principally to overcrowding and want of fresh air and ventilation. Mr. Hardwicke waxes eloquent on the origin and the deodorising power of "Sanitas," and advocates its use as a disinfectant. The question of a more adequate water-supply for the borough has been settled, and the laying of the mains is being carried out.

HOSPITAL AND DISPENSARY MANAGEMENT.

CITY OF LONDON LUNATIC ASYLUM, STONE, NEAR DARTFORD.

On December 31st, 1885, there were in this asylum 412 patients, namely, 180 males and 232 females, a net increase of 23 patients during the year. In the course of 1885, the accommodation for males was considerably enlarged, by the erection of a block containing eleven single rooms, and dormitory accommodation for twenty-four beds. The need for a similar extension, on the female side, is clear, from the following passage from Dr. Jepson's report: "There are at the present time but eight vacant beds on the female side, while the floor-space is wholly inadequate to the number of patients who have to occupy it; this fact is painfully conspicuous on wet days, when the patients are prevented from taking out-door exercise; the crowding is then inconvenient, and gives rise to much excitement and quarrelling among those who are of the more impulsive and intractable class. The Commissioners in Lunacy, at their visit on December 19th, expressed, in their report, a hope that increased accommodation for females would soon be provided." There were admitted, during 1885, forty-six males and thirty-three females; the recoveries were twenty-eight in number—that is, 35.4 per cent. of the admissions. The death-rate was very low, being only 3.48 per cent. of the average numbers resident. For the whole period the asylum has been open, the average annual mortality has been only 5.5 per cent. of the average resident population. *Post mortem* examinations were made in twelve out of fourteen cases of death. Two deaths were due to general paralysis, and five to "other diseases of brain." Would it not have been better to specify these diseases? Beer still forms part of the dietary; each patient has a half-pint at dinner, and all employed in the field, workshops, or laundry, have extra half-pints at 11 A.M. and 7 P.M. Attendants and nurses have two pints of beer daily, an allowance which we cannot but think inordinately large.

Coming to the statistical tables, we note the absence of Table IIA; the preparation of this would not involve very much labour, considering that the total number of admissions has been only 1,500. Tables VI, VIII, IX, and XI, are incomplete, containing no information concerning patients remaining in the asylum. Many of the tables seem to have been insufficiently revised; for instance, in four tables, the numbers admitted are (correctly) given as 46 and 33, in four others the figures are 46 and 32, while, in Table X, we find the admissions given as, males 32, females 26. In Table III, the recovery-rates for 1885, for males, females, and total, are given as 44.74, 36.6, and 41.17 per cent. respectively; the correct figures are 37, 33.3, and 35.4 per cent.

WONFORD HOUSE LUNATIC HOSPITAL.

From the report for 1885, it seems clear that the high state of efficiency reached by this institution under the superintendence of Dr. Rees Philipps is well maintained under his successor, Dr. Deas. The most important event during the year was the opening of Plantation House, a new branch establishment at Dawlish, which cannot fail to add greatly to the efficiency of the hospital, and the comfort of the patients. Since April 21st, when this house was opened, it has been constantly occupied by from 10 to 15 patients; during the summer and autumn, over 70 of the patients were sent here for periods varying from a few days to two or three months. It is scarcely possible to over-rate the value of such a provision as this, affording, as it does, not only opportunity for giving all the patients change of air, but also for the removal of convalescents from the often painful associations of an actual asylum.

Among other important improvements completed during 1885, we note the remodelling of the drainage and sanitary arrangements, and additions and alterations in the ladies' division of the hospital. At the end of the year, there were 133 patients remaining in Wonford House; six of these were on the free list, and sixty-six were received at rates not covering the actual cost of maintenance, the deficiency representing a sum of no less than £2,900 *per annum*.

The admissions during the year were twenty-nine, which is the smallest number received for several years. Dr. Deas attributes the decrease "partly to depression of trade, etc., and partly to the growing reluctance of medical men, under the present state of the law, to run the risks involved in giving certificates."

The number of recoveries was very satisfactory, being at the rate of 52 per cent. of the admissions. The death-rate was 5.8 per cent. of the average number resident.

Dr. Deas reports that "the system of lady nurses is being gradually extended, there being three such now on the staff. There is no doubt that much good can be done by ladies, possessed of the requisite tact and sympathy, in this sort of work, and, as opportunity offers, further additions to the staff will be made."

We are glad to hear that beer is no longer included in the dietary of attendants and nurses, a money equivalent being substituted.

The absence of Table IIA from the statistical report is not surprising, considering that the hospital was opened in 1801; we hope, however, that Dr. Deas will be able to have this most valuable table prepared, for at least a portion of the eighty-four years. It would be as well to intimate in Table III that the recovery-rate is calculated on admissions, exclusive of transfers.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on July 19th.

E. Morris, L.S.A., West Kensington Park, student of St. Bartholomew's Hospital; E. S. Sugden, M.B.Durham, Battersea Park Road, of St. Thomas's Hospital; A. J. Gregory, L.S.A., St. John's, S.E., of London Hospital; C. Drinkwater, L.S.A., Mildmay Park, N., of King's College; G. T. Rawnsley, L.S.A., Russell Square, W.C., of Guy's Hospital; C. P. O'Connor, M.B.Durham, March, of University College; W. H. Brazil, L.S.A., Bolton, of Manchester; H. T. Bewley, M.B.Trin.Coll.Dublin, Booterstown, co. Dublin, of Dublin; C. P. Kennard, M.B.Edin., Highworth, J. W. Smith, M.B.Edin., Lancaster, and N. S. Fraser, M.B.Edin., St. John's, Newfoundland, of Edinburgh University; W. Vost, M.B.Glasgow, of Glasgow University; F. G. Finlay, M.D.McGill, Montreal, of McGill College.

Six candidates were referred for three months, three for six months, two for nine months, and one for one year.

Admitted Members on July 20th.

F. S. White, L.S.A., Lexham Gardens, J. J. Lister, L.S.A., Leytonstone, P. Edwards, L.S.A., Grafton Street West, W.C., of University College; T. J. Jones, M.B.Edin., Ross, Herefordshire, G. A. Sutherland, M.B.Edin., Aberdeen, R. Jardine, M.B.Edin., New Brunswick, of Edinburgh University; W. J. Ruddock, M.B.Durham, Newcastle-on-Tyne, J. E. Coad, M.B.Durham, York, of Newcastle-on-Tyne, H. E. Hackett, L.R.C.P.Lond., of Manchester, C. F. Fenton, L.R.C.P.Lond., Romford, of London Hospital; R. Dawson, M.D.McGill, St. George's Club, W., of McGill University; L. A. Taylor, of Birmingham, D. Marquis, M.B.Glasgow, Marchmont Street, W.C., of Glasgow University.

Seven candidates were referred for three months, and seven for six months.

Admitted Members on July 21st.

P. P. Manning, M.B.Durham, Hammersmith, M. P. Holt, L.S.A., Putney, A. Lindow, L.S.A., Wolverton, F. A. Brice, L.S.A., Paignton, South Devon, of King's College; W. H. W. Elliott, L.S.A., Chislehurst, E. Deane, L.R.C.P. Lond., Trinity Square, of Guy's Hospital; H. J. Pocock, L.R.C.P.Lond., of Bristol; A. H. Gault, L.R.C.P.Lond., Stockport, of Manchester; B. B. Grayfoot, L.R.C.P.Edin., Barbadoes, of Edinburgh University; A. F. Duke, Folkestone, of St. George's Hospital; R. H. Fenton, L.R.C.P.Lond., King's County, co. Dublin; J. F. Vincent, L.R.C.P.Lond., Melbourne, of London Hospital; G. F. Hentsch, L.R.C.P.Lond., Bedford Row, W., of Charing Cross Hospital.

Two candidates were referred for three months, six for six months, and one for nine months.

University of Dublin.—At the Trinity Term Examination for the Degree of Bachelor of Medicine (M.B.), held on Monday and Tuesday, June 14th and 15th, 1886, the successful candidates were arranged in order of merit as follows:

G. A. Wade, R. L. McAdam, J. Murray, J. C. Ferguson, H. Woods, J. W. O'Brien and R. H. Smyth, equal; W. N. Neville, W. J. Crofton, G. H. Bagot, W. L. E. Eames, T. G. Alexander and P. C. Ryan, equal; E. Carrigan, B. Soady and J. W. Goldon, equal; H. Disney and J. O'Connor, equal.

At the Trinity Term Examination for the degree of Bachelor of Surgery (B.Ch.), held on Monday and Tuesday, June 21st and 22nd, 1886, the successful candidates passed in the following order of merit:

G. A. Wade, J. Murray, W. J. Crofton, M. J. Eustace, J. C. Ferguson, R. H. Smyth, S. E. Bouchier-Hayes and K. Fraser, equal; W. N. Neville and J. W. O'Brien, equal; H. Woods, W. V. MacMahon, J. O'Connor, E. A. C. Bayley, S. Simpson.

Surgical Travelling Prize.—R. G. Patteson.
Scholarship in Anatomy and Institutes of Medicine.—H. C. Drury.
Scholarship in Chemistry, Physics, Botany, and Comparative Anatomy.—A. R. Parson.

ROYAL UNIVERSITY OF IRELAND: FIRST EXAMINATION IN MEDICINE.—The Examiners have recommended that the following be adjudged to have passed the examination.

J. Ambrose, Queen's College, Cork; I. Banks, Queen's College, Cork; J. F. Barrett, Ledwich School of Medicine; H. H. Bernard, Carmichael College of Medicine; J. Boyd, Carmichael College of Medicine; R. K. Brown, Queen's College, Belfast; N. J. Comerford, Catholic University School of Medicine; F. Convery; F. A. Craig, Queen's College, Belfast; R. Creighton, Royal College of Science, Dublin; *J. E. W. Cruise, University College, Dublin; S. L. M. A. E. de la Roche, Ledwich School of Medicine; A. J. Dowling, University College, Dublin; F. J. Dunne, Royal College of Science, Dublin; *T. H. Foley, Queen's College, Galway; S. Gawn, Queen's College, Belfast; E. J. Gilleran, Ledwich School of Medicine; R. Hardiman, Carmichael College of Medicine, and College of Science; W. Hartland, Queen's College, Cork; H. Hayes, Queen's College, Cork; J. Hennessy, Queen's College, Cork; D. Jamison, Queen's College, Belfast; *T. Jones, Queen's College, Cork; T. F. Joyce, Catholic University School of Medicine; R. J. Keane, Queen's College, Cork; P. R. Keary, Carmichael College of Medicine; J. Lane, Queen's College, Cork; D. A. Leahy, Queen's College, Cork; J. C. Lynd, Queen's College, Belfast; J. P. Lyons, Catholic University School of Medicine; A. McAfee, Queen's Colleges, Belfast and Galway; A. W. S. McComiskey, Ledwich School of Medicine; W. C. McCullough, Queen's College, Belfast; *J. McLiesh, Queen's College, Belfast; *J. McNamara, Catholic University School of Medicine; *M. J. Mahony, Carmichael College, Dublin; J. Malone, Catholic University School of Medicine; J. S. Martin, Queen's College, Belfast; H. C. Mooney, Carmichael College of Medicine; H. J. Moore, Catholic University School of Medicine; W. O'Gorman, Catholic University School of Medicine; J. A. O'Leary, Queen's College, Cork; *W. V. A. Raleigh, University College, Dublin; A. G. Robb, Queen's College, Belfast; J. V. Snowdon, Catholic University School of Medicine; *J. R. Steen, Royal College of Surgeons; W. A. Storey, Queen's College, Belfast; J. Taylor, Queen's College, Belfast; L. Wheeler, Queen's College, Belfast; J. Young, of "Kilworth," Queen's College, Cork.

Those marked with an asterisk (*) in the foregoing list will be allowed to present themselves at the further examination for Honours.

The Examiners have recommended that the following candidates should be adjudged to have passed in the subjects necessary to complete the First and Second Examinations in Medicine.

W. J. Fox, Queen's College, Galway; C. E. Steele, private study.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, July 15th, 1886.

Brice, Frederick Augustus, Croft Lodge, Paignton, South Devon.
Compton, William Henry, Brighton Road, Avenue, Southampton.
Hicks, Edward Harman, Connaught Road, Folkestone.
Holt, Maurice Percy Cue, 19, Upper Parkfield, Putney.
Jones, John Owen, Malvern House, Dolgelly.
Jones, Sydney Harold, George Street, Hanover Square.
Lindow, Albert, Wolverton, Bucks.
Payne, Wm. Arthur, M.R.C.S., Pentre Uchaf, Oswestry.
Solly, Ernest, Heathfield, Congleton.

MEDICAL VACANCIES.

The following vacancies are announced.

ANCOATS HOSPITAL, Manchester.—Junior House-Surgeon. Salary, £60 per annum, with board, residence, etc. Applications by July 31st to the Secretary.

AXBRIDGE UNION.—Medical Officer. Salary, £60 per annum, and Extras. Applications by July 26th to W. Reece, Esq.

BARNWOOD HOUSE HOSPITAL FOR THE INSANE. Gloucester.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications to Dr. Needham.

BLOFIELD UNION.—Medical Officer. Salary, £87 per annum, and fees. Applications by July 31st to H. H. Cole, Esq., 67, London Street, Norwich.

BRADFORD INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum, with board, residence, and washing. Applications, endorsed "Junior House-Surgeon," by July 26th, to the Secretary.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House-Surgeon. Salary, £140 per annum. Applications by July 27th to the Assistant Secretary.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road.—House-Surgeon. Rooms, gas, and firing. Applications, by July 31st, to the Secretary.

CRAIGLOCKHART POOR-HOUSE, Edinburgh.—Resident Medical Officer. Salary, £80 per annum. Applications by August 14th to the Visiting Medical Officer.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board and lodging. Applications by August 4th to the Secretary.

DARLINGTON HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £100 per annum, with board. Applications to the Honorary Secretaries, Union Street, Darlington.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," by July 31st, to J. Taylor, Esq.

DURHAM COUNTY ASYLUM, Sedgefield, Ferryhill.—Junior Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent.

HALIFAX INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications, by July 27th, to J. Hodgson Wright, Esq.

HOLLINGBOURNE UNION.—Medical Officer. Salary, £40 per annum, and fees. Applications by July 27th to G. Hern, Esq., 36, Earl Street, Maidstone.

KING'S COLLEGE HOSPITAL.—Assistant-Physician and Assistant-Surgeon. Applications to J. W. Cunningham, Esq., King's College, London.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—Assistant House-Surgeon. Board and lodging. Applications to C. W. Carver, Esq.

MITFORD AND LAUNDITCH UNION, Norfolk.—Medical Officer and Public Vaccinator for the Fransham District. Salary, £55 per annum, and fees about £30. Applications by July 26th to W. M. Barton, Esq., East Dereham, Norfolk.

NORTH RIDING OF YORKSHIRE LUNATIC ASYLYM, Clifton, York.—Resident Clinical Assistant. Apartments, board, washing, etc. Applications to the Medical Superintendent.

OWENS COLLEGE, Manchester.—Professor of Chemistry. Applications to the Council of the College, under cover, to the Registrar by August 31st.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Member of the Court of Examiners. Applications by August 4th to E. Trimmer, Esq.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Junior Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications by August 3rd to the Honorary Secretary to the Medical Staff.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street.—Honorary Physician. Applications by July 26th to the Secretary.

ST. MARY'S HOSPITAL, Paddington.—Administrator of Anæsthetics. Applications by August 7th to the Secretary.

ST. PANCRAS NORTHERN DISPENSARY.—Honorary Surgeon. Applications by July 24th to the Committee.

UNIVERSITY COLLEGE, Bristol.—Medical Tutor. Salary, £100. Applications by August 6th to Dr. E. M. Skerritt, Dean.

WEST RIDING ASYLUM, WAKEFIELD.—Resident Clinical Assistant. Board, apartments, etc. Applications immediately to the Medical Director at the Asylum.

MEDICAL APPOINTMENTS.

EINDLOSS, Edmund Frederick, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer to Deptford West District, *vice* C. H. Leftwich, resigned.

BRITTON, Thomas, M.D., M.R.C.S., L.S.A., S.Sc.Cert.Camb., appointed Honorary Consulting Physician to the Halifax Infirmary, on his resignation as Honorary Physician.

BRITTON, Thomas, M.D., M.R.C.S., L.S.A., S.Sc.Cert.Camb., appointed Honorary Medical Officer to the Harrogate Bath Hospital, *vice* Dr. Somerville, deceased.

COLYER, J. F., appointed Assistant Dental House-Surgeon to the London Dental Hospital, *vice* C. F. Rilot, L.D.S.Eng.

CORCORAN, J., M.D., appointed Medical Officer to the Killyon Dispensary, Parsonstown Union, *vice* C. B. Storey, M.D., resigned.

COWIE, A. M., M.B.Aberdeen, appointed Resident Clinical Assistant to the City of London Hospital for Diseases of the Chest, Victoria Park.

CROWTHER, G. D., L.R.C.P., L.R.C.S.Ed., L.S.A.Lond., appointed Honorary Medical Officer to the Halifax Infirmary.

FOWLER, C. O., M.R.C.S.Eng., L.S.A., appointed Medical Officer to the No. 2 District of the Croydon Union, *vice* M. Jackson, M.D., resigned.

GRANT, Ogilvie, M.D., appointed Medical Officer of Health for Inverness.

HARSANT, J. G., M.B., B.S.Lond., appointed Resident Medical Officer to the City of London Hospital for Diseases of the Chest, Victoria Park.

HEWITT, Frederic, B.A., M.D.Cantab., appointed Instructor in Anæsthetics at the London Hospital.

JACK, Robert M., M.B., C.M., appointed Medical Officer to No. 1 District, Warrington Union, *vice* G. W. Joseph, resigned.

MACKELLAR, A. O., appointed Surgeon to St. Thomas's Hospital, *vice* F. Mason, F.R.C.S., deceased.

MATHESON, L., L.D.S.Eng., appointed Assistant Dental Surgeon to the London Dental Hospital, *vice* A. S. Underwood, promoted.

PRESTON, H. T., M.D., appointed Medical Officer to the Kidderminster Union, *vice* J. Spofforth, M.R.C.S.Eng., resigned.

RILOT, C. F., L.D.S.Eng., appointed Dental House-Surgeon to the London Dental Hospital, *vice* H. L. Williams, resigned.

STEDMAN, F. D., M.R.C.S., L.S.A., appointed Junior House-Physician to the National Hospital for the Paralysed, Queen Square, Bloomsbury.

STEPHENSON, Sydney H. A., M.B.Edin., appointed Clinical Assistant to the Royal Westminster Ophthalmic Hospital, King William Street, Strand, London.

THOMAS, W. J., M.B. and C.M.Edin., appointed Senior House-Surgeon to the Halifax Infirmary, *vice* G. D. Crowther, appointed Honorary Medical Officer.

TRUMAN, C. E., M.A., appointed Dental Surgeon to the St. Thomas's Hospital, *vice* W. G. Ranger, M.R.C.S.Eng., resigned.

WITHERS, J. S., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health for the district of Sale, Cheshire.

BEQUESTS AND DONATIONS.—The Norfolk and Norwich Hospital has received £3,510 under the will of Mr. R. H. Vade Walpole.—Mr. George Stuckey Lean has given £500 to the Royal United Hospital, Bath, "In Memoriam."—Mr. Calvert Toulmin, of Inverness Terrace, Hyde Park, bequeathed £100 each to the Hospital for Sick Children, the Royal Hospital for Incurables, and the British Home for Incurables.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30 Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

CAN any of my brother members give me any information respecting the climate of Madeira, and its suitability for delicate children? D. C.

A MEMBER OF THE BRITISH MEDICAL ASSOCIATION asks for names of some of the best hydropathic establishments in Wales.

MULLEIN OR VERBASCUM IN PHTHISIS.

T. C. D. asks if any of our readers will kindly inform him the best mode of administration, the dose, and where he can obtain mullein.

* In the JOURNAL, February 9th, 1884, Dr. Quinlan states that mullein can be had in Dublin from John Evans, 49, Dawson Street. It can also be bought in Covent Garden, London. Verbuscum thapsus must be purchased; its leaves are very thick, mucilaginous, and woolly. The other species of verbascum are of little value. Three ounces of the green leaves must be boiled for ten minutes in a pint of new milk. The decoction is then strained, slightly sweetened with lump-sugar, and drunk warm two or three times daily.

RENAL IRRITATION FROM PURE TEREBENE.

G. A. H. WRITES: I write to ask my professional brethren whether they have ever noticed severe nephralgia and other evidences of renal irritation follow the use of "pure terebene"? I have lately had, under my care, a case of bronchiectasis, in which I tried all the stock remedies, such as creasote, eucalyptol, iodine, phenol, iodoform, tar, sandal wood oil, and, lastly, "pure terebene," to try and diminish the secretion, and lessen the almost gangrenous odour of the sputa. I think I may safely say that they all practically failed to accomplish what I intended, even though the doses were pushed. "Pure terebene" was the last experimented with, and when my patient was taking about twenty to twenty-five minims four or five times during the twenty-four hours, he suddenly developed most intense nephralgia, and the urine became scanty, high coloured, and distinctly albuminous. There had been traces of albumen before, but it was distinctly increased at this time. There was no reason to suspect renal "colic" due to other causes. The terebene was omitted, and gradually the symptoms subsided. After the lapse of three weeks, "pure terebene" was again begun to be taken, and, as the doses were increased to the same quantity as before, a repetition of the nephralgic symptoms occurred, but less marked than before, and gradually a tolerance was established. Ordinary turpentine, it is well known, will produce symptoms of renal irritation; may it not be possible that its isomeric brother, "pure terebene," also will occasionally produce somewhat similar symptoms?

ANSWERS.

H. M. S.—Dr. Cullingworth's little book for nurses, or Miss Lücke's *Lectures to Nurses*, may be placed with advantage in the hands of your infirmary attendants.

A CASE OF CHRONIC RHEUMATIC ARTHRITIS.

W. W. DAVID.—Some of the best places are the following, arranged according to their distance from Wales: Bath, Aix-la-Chapelle, Wiesbaden, Wildbad; but there are numberless other places. The selection must be made according to the circumstances of the patient.

WHEN TO GIVE ERGOT.

MR. W. H. DAY (Norwich) writes: I venture to assert that time has not so much to do with the injurious effects of ergot upon the fœtus as the violence of its action. Here is a case in point, to which I could add very many. The patient was in her second pregnancy; the pains had lasted for twenty-four hours. The os was small, but dilatable; the pelvis sufficiently capacious. The patient appeared tired and irritable. At 8 A.M. I gave half a drachm of ergot in infusion; the pains shortly supervened. The dose was repeated at twelve, and the child was born at 1.30 P.M., breathing well, five and a half hours after first dose, one hour and a half after the second.

The usual mistake in administering ergot is in giving too heavy a dose. A moderate dose, and repeated, rarely does any harm.

NOTES, LETTERS, ETC.

MEMBRANOUS CROUP AND DIPHTHERIA.

DR. LESLIE PHILLIPS (Birmingham) writes: Dr. Mackie states the whole point of the controversy, and states it well. He says "that diphtheritic laryngitis was mistaken for croupous laryngitis." I am happy to find we are in agreement, for that is exactly my contention. In my paper, I wrote, "To call this a case of diphtheria, occurring suddenly in the night, is to give it the name, I believe, properly belonging to it."

FEMALES AND WOMEN.

MR. G. E. WILLIAMSON (Newcastle-on-Tyne) writes: How is it you have allowed the Ingleby lecturer to write in the JOURNAL: "On some Functional Disorders of Females?" Surely it would have been kind to tell him that "female" is not synonymous with woman or girl, and that it is only used in that sense by the illiterate and the vulgar. Seeing the title, I read the article, expecting it to be a study in comparative physiology.

Johnson says: "Female, a she, one of the sex which brings young; not male." His example is from Leviticus: "If ye offer it of the herd, whether it be male or female, he shall offer it without blemish." A different example, in which also the word is correctly used, is: "The ascetic rule of St. Basil, which the monks follow, is very severe; no female, not even a cow or a hen, is permitted to approach the Holy Hill (Mount Athos)."

I saw in one of our local newspapers, a short time since, an account of "a female found dead in a ditch." I have myself found females dead in a ditch, but never a woman. It is, however, unnecessary for me to multiply examples, as I know you will agree with me that the title of the lecture contains an excellent example of the wrong use of the word.

Railway Lavatories.

Dr. Walter Fergus writes:—A few days ago I was called to see a young lady who complained of sore-throat and a feeling of general malaise. The only cause of this attack appeared to be that, having occasion to use a closet, in the ladies' room at a railway station, she felt overpowered by the horrible stench that was present, not only in the closet, but also in the waiting-room. She described the smell as being most abominable. The attendant said that the drains were out of order. I wrote to the chairman of the railway, who at once courteously promised immediate attention to the matter. I may say that this particular waiting room was not the only one complained of, although it was the worst.

There can be no question of the possibility of serious illness resulting from this state of things. It would be well if a rigid supervision of closets and urinals at railway stations were enforced. Ladies' rooms, being of a private character, are more apt to be in fault than the public closets and urinals.

Mode of Treating Ingrowing Toe-nails without Operation.

Dr. F. A. A. Smith (Portsea) writes: Nails are formed by the successive growth of new cells at the root, and under the surface of the body of the nails. I find that by frequently pressing back the skin at the root of the nails, forming thus a fairly deep *cul de sac*, one source of cell-supply is cut off, and the nails grow quite thin and soft; if, at the same time, they be cut or notched in the median line they tend to grow towards the part of least resistance, that is, the centre In time, all pain and discomfort in walking may be relieved by following this plan.

Hospital Sunday and Hospital Expenditure.

Dr. George Sturge (Sydenham Hill Road, S.E.) writes: The recurrence of Hospital Sunday, the acknowledged deficiency in the support of hospitals; the report that, in some hospitals, beds are closed for want of funds, and that, at King's College Hospital, there are twenty-eight beds closed for this cause, naturally calls for inquiry whether there is not some cause for this state of things.

I have been examining the reports of the King's College and the Westminster Hospitals; they have about the same number of beds, and nearly the same number of in-patients, yet in some points they differ greatly. Thus at King's College, £231 17s. is spent in wine, and £81 19s. 6d. on beer, making a total of £313 16s. 6d.; at Westminster, £142 11s. 2d. is spent in wine, and £61 2s. 9d. on beer, making a total of £203 13s. 11d. This shows that King's College alcoholic drinks cost £110 2s. 7d. more than Westminster Hospital.

Taking the cost of alcohol at these two hospitals as my guide for the year 1885 and estimating the eighty-seven hospitals in the London district, on an average, to have seventy-five beds each, and to spend a similar sum in proportion on their patients and medical staff, I calculate the total cost of alcohol is £10,000.

I find it difficult to make an exact statistical account, the hospital accounts are not made in a similar form; and some hospital-reports do not furnish the details. Most hospitals keep no separate account between patients and medical staff. There is no doubt that, in some hospitals, more alcohol is used by the medical staff than by the patients.

In the year 1884, the Secretary of the Middlesex Hospital stated the alcoholic drink for their medical staff cost £21s; and, as far as I can make out, the cost for the medical staff at the London Hospital was about £400; although 68 nurses take milk instead of beer.

Unless some change takes place in the management, when it becomes generally known that about £10,000 is spent on alcohol in the London hospitals in the year, and that a large portion of this is consumed by the medical staff, it is not unlikely some subscribers may hesitate to continue their subscriptions, especially as they become acquainted with the great experiment conducted during the last twelve years at the Temperance Hospital, where no alcohol is used, and where medical practice is successfully conducted, and cures effected with a very low rate of mortality.

With regard to the medical staff, I am an advocate for their being well nourished, and am satisfied, if all the medical staff avoided all intoxicating drinks, it would be to their own advantage, and also the advantage of their patients. In accordance with the opinion of Sir H. Thompson, that nineteen out of twenty persons would be better without alcohol, I believe it would also be profitable to enquire the reason why the London hospitals are much more expensively managed than some of those at Manchester, Chester, Birmingham, and Sunderland.

Unsatisfactory Inquests.

Probus writes: Nothing human is quite satisfactory nor removed from plausible criticism; but the English mode of inquiry into the cause of unexpected death, or of death by violence, is, in its type, a process so prompt, reasonable, and safe, that, during more than a thousand years, it has continued in public favour. A method of substituting a coroner's jury would be appointment of a district medical inspector to inspect, and, if thought necessary, to examine the internal organs of the dead body; but it is obvious the public would not be, nor should be, satisfied to make over to an individual power to stop, by single testimony, the process of the necessary inquiry.

Your correspondent says "Coroners should be paid by salary," a statement which shows a curious want of information on the subject of which he writes, seeing that by salary has, during many years, been the established mode of paying coroners; but with that mode has come also the criticism that inquests are now less frequent than they should be, whereas, when coroners were paid for each holding, some inquests were offensive obtrusions, and by them an essentially good law was occasionally burlesqued. Concurrent with the Government [illegible] coroners, the [illegible] is required to be given each in his district [illegible] suddenly, suspiciously, or by violence. On this information, the coroner orders an inquest, or thereby declines it; in the latter event, [illegible] thereby above mentioned. My experience is that [illegible] of a few, frequently withheld lest in any they could readily avoid a death obviously occurring from natural causes, and so selfishly [illegible] process of a formal inquiry. "Uniformity" of [illegible] medical practitioner is [illegible] an infant's dead body at its mother's side; [illegible] the Levite passes on. A report is made to the [illegible] and the medical man, probably gets a guinea [illegible] by one idea inquiry into the cause of death. [illegible] medical man, [illegible] inspects the bones, [illegible] the one, incompetent of a certificate, gets a guinea without deserving it; the other, deserving two guineas, gives a certificate and gets none, unless the coroner should, as he may, hold an inquest for the purposes of pointing out to the public an unsuspected cause of death. In older children, an analogous cause of sudden death may occur. A lumbricoid, or more than one, may get into the larynx, and quickly destroy life. How could you have uniformity of inquest when one medical man, in such a case, discovers the cause of death and certifies, whilst another is ignorant of it, and therefore does not certify, though the cause in both cases be equal?

I have only just now observed this discussion on inquests; and as to the statement of your correspondent, that coroners dread medical men, would say, that if they do, it can only be in view of the pitiable lack of pathological knowledge medical men often show before the public. Coroners are open to criticism as are other public officers; but much is written in regard of them to which it is not necessary to reply.

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BOOKS, ETC., RECEIVED.

The Diseases of the Prostate; their Pathology and Treatment. By Sir Henry Thompson. Sixth edition. London: J. and A. Churchill. 1886.

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REPORTS

TO THE

SCIENTIFIC GRANTS COMMITTEE

OF THE

BRITISH MEDICAL ASSOCIATION.

REPORT ON A STUDY OF CERTAIN OF THE CONDITIONS OF INFECTION.

By W. WATSON CHEYNE, M.B., F.R.C.S.,
Assistant-Surgeon to King's College Hospital; Research Scholar of the British Medical Association.

In a debate at the International Medical Congress in 1881, on "The Causes of Failure in obtaining Primary Union in Operation-Wounds, etc." (*Transactions of the International Medical Congress*, vol. ii, p. 345, *et seq.*, 1881), Sir Joseph Lister referred to experiments which he had been carrying on with regard to the putrefaction of blood. He found that, when he drew blood from the jugular vein of an ox into sterilised vessels, with antiseptic precautions, and allowed it to coagulate, the addition of even eight drops of tap-water failed to set up putrefaction, although the vessels were kept for several days at the temperature of the body, and yet, as we know, tap-water contains a considerable number of bacteria. The same result was obtained if, instead of tap-water, a small quantity of much diluted putrid blood was used; while the same quantity of the same dilution of putrid blood quickly gave rise to putrefaction in blood previously altered by dilution with an equal part of purified water. And not only did putrefaction not occur in the first instance, but, so far as he was able to ascertain, there was no development of micro-organisms. And yet inoculation of blood with a mere trace of the same undiluted putrid blood set up putrefaction. Whatever be the explanation of these results, the fact seems to be that a single putrefactive bacterium will not set up putrefaction in blood obtained under the afore-mentioned conditions, but that a certain number acting together—in other words, a certain dose—is necessary. This result, so surprising and so much at variance with our experience with the ordinary artificial cultivating materials, has led me to the study of the behaviour of bacteria in the living body, more especially of the relation of the dose of a virus to infective diseases of animals. I do not here enter into the relation of non-pathogenic bacteria to the animal body. I have previously pointed out (*Antiseptic Surgery*), that non-pathogenic bacteria are very quickly destroyed when injected into the blood-stream; and an exhaustive paper on the fate of bacteria in the living organism has just been published by Flügge and Wyssokowitch in the first number of the *Archiv für Hygiène*.

In the following paper, I can only give a preliminary account of what I have been doing; the amount of labour involved in this research being so great that I have not yet been able to follow out all the branches for investigation which have been opened up.

At first sight, one might be inclined to think that, in the case of a self-multiplying virus, such as a bacterium, the number of bacteria originally introduced would not affect the ultimate result, but that the bacteria would go on growing in the system, with the same result in the end, whether there were one or 10,000 to start with, the only difference being that the end would be longer in being reached in the former case than in the latter. Nevertheless, it has been recorded, in the case of several pathogenic bacteria, that a considerable dose is required to produce a fatal result; and Ogston, Kocher, and others, in writing of the relation of simple abscess to septicæmia and pyæmia, have spoken of it as mainly a question of dose. Koch, also, in his work on *Wundinfections-krankheiten*, has pointed out, in reference to a disease which he terms "pyæmia in rabbits," that the $\frac{1}{10000}$ of a drop of the infective blood did not cause death, but he seems inclined to think that this might be due to the absence of bacteria from the small quantity injected rather than to their presence in numbers too small to produce the disease. Other facts are scattered throughout the literature on bacteria which will be referred to below, but the matter has not been thoroughly worked out as yet.

My first experiments on this matter were done with a bacterium which I accidentally found in an abscess in a guinea-pig. During my investigations on cholera, in the spring of 1885, I injected several guinea-pigs subcutaneously with various materials, among others with saliva. During the summer, I found that one of these animals had an abscess at the seat of injection; and I therefore killed the animal, and made cultivations from the abscess, which I found to contain only this one kind of organism. I have since met with the same organism in a slough from the cheek of a child. On making some preliminary experiments with this bacterium, I came to the conclusion that it was well adapted for testing this question of dose, and therefore went into the matter pretty fully. The organism was new to me; but, when I went to Berlin, I found that it had been previously described by Hauser, under the name of "Proteus vulgaris," in his book on *Ueber Fäulniss-Bacterien*. He has not, however, gone at all fully into its effects on animals.

I.—Proteus Vulgaris.

This organism presents striking peculiarities in its form and mode of growth, which have been well described and pourtrayed by Hauser in the work referred to. It belongs to the class of bacilli, but it varies very much in size and appearance, according to the medium and conditions under which it grows.

It grows rapidly in nutrient jelly, causing liquefaction of the gelatine. In test-tube cultivations, the fluid jelly, which is at first turbid, becomes by-and-by more or less clear in the middle, with a deposit of flocculi at the bottom, and a slight turbidity at the top. If a drop of an old fluid cultivation be examined microscopically, it is found to contain chiefly small short bacilli; some so short that they might have been formerly termed large oval micrococci, and others somewhat longer and rod-shaped. Grown in meat infusion, at the body temperature, the small oval forms greatly predominate. If, however, a cultivation in nutrient jelly be examined a few hours after it has been inoculated, quite a different appearance will be seen; in addition to a few of the smaller forms, numerous threads, some of great length, are present. These differences in size and form are best seen when the cultivation is made by pouring out the nutrient jelly on a sterilised glass-plate, and, when solidification has occurred, drawing an infected needle rapidly over the surface. Growth occurs along the track of the needle, and quickly spreads over the surface of the jelly. In a few hours, small, transparent, irregular colonies are seen on the surface; and these, when examined microscopically, are found to consist of large bacilli. As these colonies get older, they become denser in the centre, and the bacilli shorter, while, at the circumference, very long threads are seen projecting outwards into the gelatine. After a time, the appearance is very peculiar; the line of the needle is quite liquid, and contains mainly the short bacilli; but, from the margins of the track, and spreading over the still solid gelatine, are groups of bacilli, arranged in various forms; besides groups which are in direct continuity with the track, there are many others which are scattered over the surface of the jelly, often for a considerable distance, and apparently unconnected with the main mass. As a rule, the most distant groups contain only a few large and, it may be, wavy bacilli (1 to 6); while those nearer the track are made up of a large number. These groups are constantly varying in shape from the incessant movement of the bacilli which compose them; and the groups also alter their position as a whole, swimming in the thin layer of fluid on the surface of the jelly or along tracks which they make for themselves. This migration of the colonies is only seen to any marked extent in jelly containing 5 per cent. of gelatine. In plate-cultivations, the colonies are, as a rule, at first globular; but very soon the bacilli are seen to shoot into the gelatine, forming loops, and these loops often run out for a long distance into the jelly and are twisted, giving rise to what Hauser terms "spirulina forms." Liquefaction occurs rapidly and, as the jelly becomes liquid, these peculiar forms disappear. There are many other points of interest about the mode of growth and forms of this organism; but, as they have already been fully described by Hauser, in the work referred to, I need not enter into further detail, and will at once pass on to the description of my experiments on the pathogenic action of this organism.

In September and October, 1885, I made a few preliminary experiments with this bacterium on guinea-pigs, intending to study some points in connection with the pathology of abscess, but neither by inoculation (scratching the skin and rubbing in the cultivation, as in vaccination) nor by subcutaneous injection of considerable quantities was any effect, either local or general, produced. In one case, I injected $\frac{1}{10}$ of a cubic centimètre of a cultivation in nutrient jelly into the right pleural cavity of a guinea-pig. The animal died in twenty hours and both pleural cavities were found to contain fluid, both lungs were covered with flakes of lymph and there was some infiltration of the lungs themselves.

On testing rabbits, I found that, while inoculation did not cause

any effect, injection of quantities varying from $\frac{1}{10}$ to $\frac{3}{10}$ c. cm. caused death. The result was the same with mice.

At the end of December, 1885, I determined to test the question of dose, beginning with this bacterium; and, as I met with results which puzzled me at first, it may be well if I describe my earlier experiments in detail.

EXPERIMENT I, December 30th, 1885.—To-day I inoculated a flask of meat-infusion with proteus vulgaris, and placed it in an incubator kept at the body-temperature.

December 31st.—The fluid was quite turbid, and, as I found by further cultivation in nutrient jelly, contained only the proteus. I took some sterilised distilled water, and made the following dilutions.

α. 500 minims of water + 5 minims of the cultivation = $\frac{1}{100}$ dilution.

β. 1,000 minims of water + 1 minim of the cultivation = $\frac{1}{1000}$ dilution.

γ. 500 minims of water + 5 minims of α = $\frac{1}{100000}$ dilution.

With this cultivation and the dilutions I injected five rabbits, as follows:

	Result.
R. 1. $\frac{3}{10}$ c. cm. of γ injected subcutaneously = $\frac{1}{3333}$ c. cm. of pure culture.	No effect.
R. 2. $\frac{3}{10}$ c. cm. of β injected subcutaneously = $\frac{3}{1000}$ c. cm. of pure culture.	,,
R. 3. $\frac{3}{10}$ c. cm. of α injected subcutaneously = $\frac{1}{333}$ c. cm. of pure culture.	,,
As control were injected.	
R. 4. $\frac{1}{10}$ c. cm. of pure cultivation injected subcutaneously.	No immediate effect. An abscess formed ultimately.
R. 5. $\frac{3}{10}$ c. cm. of pure cultivation injected subcutaneously.	,, ,, ,,

This result surprised me exceedingly, because, although I did not know what would happen in the case of the first three animals, I had little doubt but that the two control ones would die within twenty-four hours, as had happened in my previous experiments. Various possibilities suggested themselves, of which the chief was: Had the cultivation become impure or lost its virulence as the result of cultivation for some months? The result of the cultivation in nutrient jelly showed that it was quite pure, but it was possible that it had lost its virulence. To test this point, I took an old jelly-tube, inoculated on September 22nd, 1885, and also the jelly-tube from which the flask had been inoculated on December 30th, 1885, and performed the following experiment.

EXPERIMENT II, January 6th, 1886.—From the old tube were injected:

	Result.
R. 6. (a new Angora rabbit) $\frac{3}{10}$ c. cm. of the liquid jelly; and	Died in about twenty hours.
R. 4. (of the previous experiment) $\frac{3}{10}$ c. cm.	No apparent effect. (An abscess formed later at the seat of injection.)

From the second tube were injected:

R. 7. (a new Angora rabbit) $\frac{3}{10}$ c. cm. of the liquid jelly; and	Died in about twenty-eight hours.
R. 5. (of the previous experiment) $\frac{3}{10}$ c. cm. of the liquid jelly.	No apparent effect. (An abscess developed later at the seat of injection.)

This experiment showed that the bacteria had not lost their virulence, and also that the two rabbits of the first experiment were immune against their fatal action; at least, that was the conclusion I drew at the time; and, though it turned out to be right, subsequent facts showed that there might have been another explanation of the result. Remembering also that these two rabbits (R. 4 and R. 5) had been some weeks previously inoculated with these bacteria without apparent effect, I thought it probable that this apparently innocuous inoculation caused the immunity, and that that was the explanation of the result of the first experiment. Acting on that supposition, I performed an experiment similar to the first with animals newly obtained. (The supposition that simple inoculation could protect rabbits from the subsequent injection of a fatal dose of these bacteria turned out, on further investigation, to be erroneous.)

EXPERIMENT III, January 11th, 1886.—On January 9th, 1886, I inoculated a flask of meat-infusion, and placed it in the incubator. Development occurred. The following dilutions were then made on January 11th, 1886.

α. 1 part of the cultivation + 3 parts of sterilised water = ¼ dilution.

β. 1 part of the cultivation + 9 parts of sterilised water = $\frac{1}{10}$ dilution.

The following animals were then injected under the skin.

	Result.
R. 8. $\frac{3}{10}$ c. cm. of β injected subcutaneously = $\frac{3}{100}$ c. cm. of undiluted cultivation.	No immediate effect. A small abscess formed.
R. 9. $\frac{3}{10}$ c. cm. of α injected = $\frac{3}{40}$ c. cm. of undiluted cultivation.	No immediate effect. An abscess formed.
R. 10. $\frac{3}{10}$ c. cm. of α injected = $\frac{1}{8}$ c. cm. of undiluted cultivation.	No immediate effect. Died on April 7th, 1886, with a large abscess at the seat of injection.

Here, again, was a perplexing result. As I have mentioned, I had found that $\frac{1}{10}$ c. cm. of a cultivation was sufficient to cause death, and yet in this case double that amount was not fatal. I naturally at once thought that the admixture of the cultivation with water had in some way or other impaired the vitality of the bacteria. I had refrained from performing the proper control-experiment of injecting a fatal quantity of the undiluted cultivation from the desire to operate on as few animals as possible, but this research has impressed on me very strongly the necessity of controlling one's experiments in every possible manner, the saving both of pain and of life being ultimately greater. In this case, therefore, I found it necessary to test the point whether the admixture with water affected the virulence of the bacteria.

EXPERIMENT IV, January 14th, 1886.—A flask of meat-infusion was inoculated on January 12th, 1886, and placed in the incubator. On January 14th, 1886, the following dilutions were made.

α 1 part of the cultivation + 3 parts boiled water.

β A flask of meat-infusion inoculated on January 9th, 1886, was boiled in the steaming apparatus for a long time on January 13th, 1886, so as to destroy all the bacteria. (That all the bacteria were destroyed was shown by the fact that tubes inoculated with this boiled material remained sterile.)

1 part of the meat-cultivation + 3 parts of this boiled cultivation.

The following rabbits were injected.

	Result.
R. 11. $\frac{3}{10}$ c. cm. of α injected = $\frac{2}{10}$ c. cm. of undiluted cultivation.	No immediate effect. The animal, however, lost flesh, and died on April 2nd, 1886, with a very extensive abscess in the back.
R. 12. $\frac{3}{10}$ c. cm. of β injected = $\frac{3}{10}$ c. cm. of undiluted cultivation.	Found dead on the morning of January 16th, 1886.
R. 13. $\frac{3}{10}$ c. cm. of the undiluted cultivation.	Was somewhat ill next day, but recovered, and an abscess afterwards formed.

Leaving out the result in R. 12, which was sufficiently puzzling at the time, but which will be afterwards discussed, this experiment shows that it was not the dilution of the cultivation in Experiment III that was the explanation of the result, for the same negative effect was obtained when the cultivation was undiluted. But why did not R. 13 die, when I had previously found, as, for example, in Experiment II, that that quantity of the culture was fatal? The only conclusion I could come to was that, for some reason or other, these bacteria were not so virulent when growing in meat-infusion as when growing in nutrient jelly, for all my former fatal results followed the injection of jelly-cultivations. I therefore proceeded to test this idea in the following experiment.

EXPERIMENT V, January 18th, 1886.—Three materials were used.

α A flask of meat-infusion inoculated on January 15th, 1886.

β A tube of nutrient jelly inoculated on January 6th, 1886.

γ A mixture consisting of 1 part of β + 3 parts of sterilised water.

	Result.
Into R. 14. $\frac{3}{10}$ c. cm. of α were injected.	Lived. Abscess formed.
Into R. 15. $\frac{3}{10}$ c. cm. of β were injected.	,, ,, ,,
Into R. 16. $\frac{3}{10}$ c. cm. of γ = $\frac{3}{10}$ c. cm. of β were injected.	,, ,, ,,

Here, again, was a perplexing result. When I performed the experiment, I confidently expected that R. 15 would die, and that R. 14 would live, while I was not sure what the result in R. 16 would be; for I did not know whether or not admixture with water might interfere with the action of the bacteria. In all my previous injections of cultivations in nutrient jelly, death had resulted from smaller doses than that injected into R. 15, and yet, in this instance, the animal lived. That the

bacteria were alive, and in full vigour, was shown by the cultivations made from the tube and the flask previous to the performance of the experiment. The question was, therefore, to find out in what way this experiment differed from the former experiments performed with the jelly cultivations. I should say here that, in most cases and always in the later experiments, the place selected for injection was the back, a little to one side of the middle line. Now, on thinking the matter over very carefully, the only difference that I could think of between the earlier and the later experiments was this: in the earlier experiments, I was wont to thrust the needle into the back without paying any special attention whether it went into the substance of the back or only into the subcutaneous cellular tissue. But when I came to inject considerable amounts, I found great difficulty in introducing them unless the point of the needle was only in the subcutaneous tissue and therefore, in the later experiments, I was very careful that the needle should not go through the fascia, or into the muscles of the back. It therefore became necessary to ascertain whether the difference in result was due to the difference in the seat of injection, and with this view, I performed the following preliminary experiment.

EXPERIMENT VI, January 21st, 1886.—The same tube of nutrient jelly as was used in Experiment V was again employed and the following animals were injected from it.

	Result.
R. 17. $\frac{2}{10}$ c. cm., injected subcutaneously.	Lived till January 26th, 1886, when it fell out of the cage and broke its back. It was, therefore killed, and a flat abscess found beneath the skin, at the seat of injection.
R. 18. $\frac{2}{10}$ c. cm. injected into muscles of back.	Found dead on the morning of January 23rd, 1886.

The result of this experiment seemed to show that the idea of different effects, according to differences in the seat of injection, might be correct, and I therefore determined to repeat the experiment on a larger scale.

EXPERIMENT VII, January 25th, 1886.—A tube of nutrient jelly was inoculated on January 16th, 1886, and having become quite fluid, was used for the following experiment.

	Result.
R. 10. $\frac{2}{10}$ c. cm. injected subcutaneously.	Lived. Killed with anthrax on February 13th, 1886, and then a large subcutaneous abscess was found.
R. 20. $\frac{2}{10}$ c. cm. injected into dorsal muscles.	Died on the morning of January 26th, 1886.
R. 21. $\frac{1}{10}$ c. cm. injected into dorsal muscles.	Died on the morning of January 26th, 1886.
R. 22. $\frac{1}{2}$ c. c.m. injected into dorsal muscles.	Died on the afternoon of January 26th, 1886.

At the same time I injected some of the former animals, to see if they were protected.

	Result.
R. 3. (injected twice previously; namely, on December 30th, 1885, and on January 14th, 1886) $\frac{2}{10}$ c. cm. injected into dorsal muscles.	None of these animals died, but in all an abscess formed at the seat of injection.
R. 8. (injected on January 11th, 1886) $\frac{2}{10}$ c. cm. into dorsal muscles.	
R. 11. (injected on January 14th, 1886) $\frac{2}{10}$ c. c.m. into dorsal muscles.	
R. 15. (injected on January 18th, 1886) $\frac{2}{10}$ c. cm. into dorsal muscles.	

This experiment showed decisively that the fatal effect depended on the site of the injection, and also that a previous non-fatal injection protected the animal from the subsequent effect of what would otherwise have led to a fatal result.

Having thus apparently arrived at the explanation of my previous difficulties, I again took up the question of dose, in the following experiment.

EXPERIMENT VIII, January 29th, 1886.—Having no jelly cultivation in which growth had occurred to a sufficient extent, I used a cultivation in meat infusion, inoculated on January 16th, 1886. Although the result of Experiment IV had led me to think that the bacteria, when grown in the infusion, might be less virulent than the jelly cultivations, nevertheless, as the result of the subsequent experiments, the explanation might have been merely that the injection was made subcutaneously and not into the muscles.

The following dilutions were made.

α 1 part of the cultivation + 3 parts boiled distilled water.

β 1 part of the cultivation + 7 parts boiled distilled water.

The following animals were injected, the injection being in all cases made into the substance of the lumbar muscles.

	Result.
R. 23. $\frac{1}{10}$ c. cm. of β = $\frac{1}{80}$ c. cm. of the undiluted cultivation.	No effect. Killed on February 22nd, 1886. A very faint whitish streak along the track of needle.
R. 24. $\frac{2}{10}$ c. cm. of β = $\frac{2}{80}$ c. cm. of the undiluted cultivation.	No immediate effect. A small abscess formed at seat of injection.
R. 25. $\frac{3}{10}$ c. cm. of β = about $\frac{3}{80}$ c. cm. of the undiluted cultivation.	No immediate effect. A small abscess formed at seat of injection.
R. 26. $\frac{1}{10}$ c. cm. of α = $\frac{1}{40}$ c. cm. of the undiluted cultivation.	No effect. Abscess formed.
R. 27. $\frac{1}{10}$ c. cm. of α = $\frac{2}{40}$ c. cm. of the undiluted cultivation.	No immediate effect. Killed on March 2nd, 1886. Large abscess at seat of injection.
R. 28. $\frac{1}{10}$ c. cm. of undiluted cultivation.	No immediate effect. Killed with anthrax on February 18th, 1886. Large abscess at seat of injection.

Again, the result did not turn out as I expected; for previous experiments led me to expect that R. 28 and probably also R. 27 would die. The former idea of less virulence of meat-infusion cultivations than of jelly cultivations was thus proved to be correct. Further experiments have confirmed this view.

These are the chief difficulties which I have met with in connection with this bacterium. By keeping in mind its protective action, the feebler effect of meat-infusion cultivations than of jelly cultivations, and the importance of the site of injection, the results in the subsequent experiments have been almost absolutely constant. The chief diversity which I found was in two experiments performed in Berlin, where a larger dose was necessary to kill the animals than I had found to be the case here.

In these two experiments, $\frac{2}{10}$ c. cm. of a jelly-cultivation killed the animals in about thirty-six hours, but $\frac{1}{10}$ c. cm., which I have invariably found fatal here in the case of medium sized rabbits, did not kill in either experiment. These animals were therefore, for some reason or other, more resistant than those operated on in London, but I had not time to work out the reason. Possibly there may be some slight racial difference which accounts for the result. In one or two instances, where large animals have been used, I have also found that a larger dose was required. Thinking that there might be some relation between dose and body-weight, I have always weighed the animals used, but I have not as yet made out any such relation. Probably the larger and healthier animals can resist better than the others.

It is unnecessary to go into details with regard to the further experiments which I have performed, and I shall content myself with indicating the points of interest which have arisen in connection with this organism, and the facts which I have made out with regard to it.

When death results rapidly from the injection of a fatal dose of proteus vulgaris, it takes place in from twenty-four to thirty-six hours. In such an animal, the *post mortem* appearances are not very marked. There is usually intense congestion of the muscles at and near the seat of injection, sometimes extending over the whole length of the erector spinæ on that side. In the internal organs, there is no noticeable change. If microscopical examination of the affected muscle be made, the bacteria are seen to be spreading rapidly along the lymphatics of the muscle. They do not stain by Gram's method. Microscopical examination of the blood of the heart generally shows the presence of a few bacilli, about one in a field, and bacilli are generally found on cultivation from the blood of the heart. Sections of the internal organs show a bacillus here and there in the blood-vessels, but in all cases they are very few in number. The bacteria, as seen in the blood, are short and oval, and might almost be looked on as large oval micrococci. Hence we cannot regard death as due to development of bacteria in the blood. It must depend on absorption of poisonous products from the muscle in which the bacilli are actively multiplying.

When the dose is large, and yet not sufficient to cause death, or when the injection is made into the cellular tissue, I have not been able to find bacilli in the blood, although I have several

times examined it, both by the microscope and by cultivation, during the first thirty-six hours.

Where the conditions are such that death of the animal does not occur rapidly after the injection, an abscess may form. The bacilli, as before mentioned, spread along the lymphatics of the muscle, and apparently very soon cause death of the muscle in their immediate vicinity. Beyond the area of the bacteric invasion, leucocytes begin to accumulate, and ultimately a layer of granulation tissue is formed all around. Suppuration occurs along this layer, so that, on a section through the affected muscle, a narrow line of pus is seen to surround a central mass of muscle. This pus increases in amount, and the abscess extends, while the central piece of muscle remains as a necrotic mass in the interior of the abscess. Such an abscess may go on increasing in size to a great extent, destroying completely the lumbar muscles, and laying bare the spinous processes and laminæ of the vertebræ. After a time, the pus becomes inspissated, and there is deposit of calcareous salts in it. As a rule, where the abscess is very large, the animals lose flesh, and ultimately die in from six to eight weeks after the injection.

In the first few days after the injection, the rod shape is well marked in the organisms; but, as time goes on, they become smaller and smaller, till, after two or three weeks, one would think, on microscopical examination of sections, that one had to do with masses of micrococci. Of course the explanation of this might be that micrococci were introduced at the same time as the bacilli, and Hauser says that from these abscesses he has not only got cultivations of the proteus, but also of micrococci. I have in several instances killed animals after about three weeks, and made plate and other cultivations from the abscess, but have in all cases obtained pure cultivations of the bacilli, although, on microscopical examination of sections, I might have thought that micrococci were present. If, however, cover glass preparations are made, it is seen that the organisms, though small, are distinctly rod-shaped, and often stain badly, except at one or two points, so that, when seen in masses, they would naturally look like groups of micrococci.

As regards the question of dose, I have previously indicated that $\frac{1}{10}$ c. cm. injected into the muscular tissue, was a fatal dose, indeed $\frac{1}{50}$ c. cm. almost invariably killed, though some animals survived it; $\frac{1}{10}$ c. cm. always caused an extensive abscess, of which the animals usually died in six to eight weeks. Doses of less than $\frac{1}{100}$ c. cm. did not produce any effect. We have thus three results, according to the dose employed. A small dose (below $\frac{1}{50}$ c. cm.) produced no effect. From $\frac{1}{250}$ c. cm. to $\frac{1}{10}$ c. cm. caused abscesses. Above $\frac{1}{10}$ c. cm. caused death in twenty-four to thirty-six hours. Further, the size of the abscess depended apparently also on the dose, $\frac{1}{100}$ c. cm. causing only a slight trace of pus, which disappears, while $\frac{1}{10}$ causes a large and spreading abscess, ultimately resulting in the death of the animal; and the intermediate doses produce intermediate effects. On several occasions I have diluted the cultivation considerably, and made plate-cultivations from this diluted material, in order to ascertain the number of bacteria present by counting the number of colonies which developed. The result is, that I found that on an average 1 c. cm. of the jelly cultivations contained 4,500,000,000 bacteria. Thus, doses up to 9,000,000 produced no effect; from 9,000,000 up to 112,500,000 caused abscesses, and above 225,000,000 caused death.

It is difficult to understand the influence of dose in producing these effects, but the following seems to me to be a fair supposition. Rabbits are not very susceptible to the action of this bacterium; in other words, in the struggle for existence between the bacteria and the cells, which follows the introduction of this bacterium, the victory will, in most cases, remain with the cells, and the bacteria will disappear. If, however, along with the bacteria, a large quantity of their products are introduced, these products interfere with the action of the cells, and enable the bacteria to gain a foothold. If a large number of bacteria are introduced at one place, they grow for a time till attacked by the cells, and each produces a small quantity of poisonous material. Where the number of bacteria is very large, this material destroys the tissues in the neighbourhood, and enables the bacteria to spread over a large area before the layer of cells formed around them is able to form a barrier against their progress. The extent to which they spread—in other words, the size of the abscess which results—must, therefore, depend firstly on the number of bacteria and the quantity of products introduced in the first instance; and, secondly, on the vitality of the animal. It may be that a very large number of organisms is introduced in the first instance, producing such an amount of poison as to kill the animal in a few hours. That the products do help the spread of the organism in the body is shown by the fact referred to in Experiment IV (β), which I have confirmed several times since. Instead of diluting with distilled water, I diluted with a boiled cultivation in meat infusion of the same organisms, with the result that $\frac{1}{10}$ c. cm., which otherwise has in no instance proved of itself to be a fatal dose, killed the animals within forty-eight hours. On the other hand, the results were not due merely to direct chemical poisoning, because 1 c. cm. of the same boiled cultivation produced no effect when injected into another rabbit, and also because death did not take place sufficiently rapidly. The increased quantity of the products introduced enabled the bacteria to act over a larger area, and to produce a larger quantity of their poison. Hauser attributes all the results of the injection of this bacterium into animals merely to chemical poisoning, but he had not come across the facts which I have previously indicated, and his injections were mostly made into the jugular vein and abdominal cavity, large quantities of the cultivation being used. His results, as well as my own, undoubtedly show that a chemical poison of considerable virulence is formed by these bacteria, but there can be no doubt, also, that these bacteria themselves are truly pathogenic for rabbits under proper conditions.

The facts previously alluded to, as to the importance of the seat of injection, have been amply confirmed by repeated experiments. Why the organism should act more virulently, as the result of injection into muscular-tissue, than after injection into the subcutaneous cellular-tissue, it is very difficult to say. As the result of some observations made with chicken-cholera on guinea-pigs, I thought it might be due to some free communication between the lymphatics of the lumbar muscles and the peritoneal cavity, allowing the bacteria to enter and develop in the peritoneum; but I have never seen any peritonitis, nor indeed any bacilli, in the peritoneum; further, death occurred too rapidly and also followed injection into the muscles of the thigh, as well as into the lumbar muscles. It seems to me that, possibly, in the muscular tissue, there may exist some material which is easily broken up, yields large quantities of the poison formed by these bacteria, and that thus the death of the animals is caused; but these are matters which require further investigation.

It also seems undoubted that, when grown in meat-infusion, these organisms act less actively than when grown in the nutrient jelly. I have not yet worked out the explanation of this; it may be that the absence of peptone and gelatine from the meat-infusion diminishes markedly the necessary amount of products, or there may be a real loss of virulence in the organism. I rather incline to the latter view. If there is a change in the virulence of the organisms, it is not permanent, because jelly cultivations inoculated directly from the meat-infusion cultures act as virulently as other jelly cultivations.

An interesting point was the protective action of this organism. Small doses sufficient to produce abscess, injections into the cellular-tissue and injection of cultivations in meat-infusion, left the animal, for some time at least, protected from the fatal action of large doses of jelly-cultivations into the muscles; while still smaller doses, or simple inoculation, did not do so. But, although protection was afforded against the fatal result, there was no protection against the abscess-formation. I have, in several instances, injected large doses of jelly-cultivations into the muscles of these protected animals, at intervals of three or four days, and in each case abscess followed the injection, nor could I be certain that the last abscess was smaller than the first.

It now became necessary to ascertain how far other forms of pathogenic organisms followed the above rules, and as I had no opportunity of performing the experiments in this country from want of laboratory accommodation, I accepted an invitation from Dr. Koch to go over to Berlin to carry on the work in his laboratory.

II.—Bacillus Anthracis.

As the anthrax bacillus in cultivation grows to long threads or chains of bacilli, and also forms spores, I found it necessary to use the blood of animals which had died of the disease, in order to get the individual bacilli isolated and free from spores. On March 25th, 1886, a guinea-pig was inoculated with anthrax; the animal died on the morning of the 27th, and was kept in the ice safe till the afternoon. The lungs and heart were then removed, cut into small pieces and thoroughly shaken up with 50 c. cm. of meat-infusion in a sterilised vessel. The mixture was then strained through gauze. By means of a specially constructed syringe $\frac{1}{200}$ c. cm. of this mixture was dried on a cover glass, stained, and the number of bacteria present counted. As a result, I came to the conclusion that there were, in round numbers, 10,000 anthrax bacilli per $\frac{1}{200}$ c. cm. In order to get a mixture containing one bacillus per $\frac{1}{10}$ c. cm., I diluted this fluid as follows.

α. 1 c. cm. of the mixture + 19 c. cm. meat infusion.
β. 1 c. cm. of α + 19 „ „
γ. 1 c. cm. of β + 24 „ „

δ. 1 c. cm. of γ + 1 c. cm. meat infusion, giving probably 46 bacilli per $\frac{1}{10}$ c. cm.

ϵ. 1 c. cm. of γ + 2 c. cm. meat infusion, giving probably 30 bacilli per $\frac{1}{10}$ c. cm.

ζ. 1 c. cm. of γ + 4 c. cm. meat infusion, giving probably 18 bacilli per $\frac{1}{10}$ c. cm.

η. 1 c. cm. of γ + 91 c. cm. meat infusion, giving probably 1 bacillus per $\frac{1}{10}$ c. cm.

θ. 1 c. cm. of η + 9 c. cm. meat infusion giving probably 1 bacillus per c. cm.

In order to be quite certain how many bacilli were present in these mixtures I made plate cultivations at the time, and four days later I counted the colonies of anthrax-bacilli which developed, with the following result: $\frac{1}{10}$ c. cm. was diffused in the gelatine on each plate.

2 plates made from ϵ gave an average of 35 bacilli per $\frac{1}{10}$ c. cm.

2 plates made from δ gave an average of 49 bacilli per $\frac{1}{10}$ c. cm.

2 plates made from γ gave an average of 101 bacilli per $\frac{1}{10}$ c. cm.

It is thus evident that the numbers assumed by calculation to be present, and those present in reality, were practically identical, and that $\frac{1}{10}$ c. cm. of η, or 1 c. cm. of θ, would contain as nearly as possible 1 bacillus each, if the bacilli were equally distributed throughout the fluid.

Guinea-pigs were employed for the experiments, as being the animals most susceptible to anthrax.

Experiment, March 27th, 1886.	*Result.*
G.P. 1. 1 c. cm. of θ, injected subcutaneously = 1 bacillus.	March 30th, 1886. Found dead of anthrax this morning.
G.P. 2. 1 c. cm. of θ, injected subcutaneously = 1 bacillus.	No effect.
G.P. 3. $\frac{1}{2}$ c. cm. of η injected subcutaneously = 6 bacilli.	March 30th, 1886. Found dead this morning of anthrax. Lived about 60 hours.
G.P. 4. $\frac{1}{10}$ c. cm. of ζ injected subcutaneously = 20 bacilli.	March 30th, 1886. Found dead this morning of anthrax. Lived about 60 hours.
G.P. 5. $\frac{1}{10}$ c. cm. of ϵ injected subcutaneously = 35 bacilli.	March 29th, 1886. Died this evening of anthrax.
G.P. 6 $\frac{1}{10}$ c. cm. of δ injected subcutaneously = 50 bacilli.	March 29th, 1886. Died this evening of anthrax.
G.P. 7 $\frac{1}{10}$ c. cm. of γ injected subcutaneously = 100 bacilli.	March 29th, 1886. Died of anthrax this morning.

This experiment shows that, without doubt, one anthrax bacillus will kill a guinea-pig. It was hardly to be expected that every c. cm. of θ would contain a bacillus, and accordingly only one out of the two animals injected with this mixture developed anthrax. It is true that one may have got two, or even three, bacilli; but, on the other hand, it may only have got one, and there can be no reasonable doubt but that one is sufficient.

While this is the case with animals extremely susceptible to anthrax, it does not follow that it is the case with all animals, and, therefore, I determined to experiment on less susceptible animals. It seems that large rabbits do not take the disease so readily as guinea-pigs, and, therefore, I performed several experiments with large rabbits.

Unfortunately, my earlier experiments did not prove anything, for, instead of diluting the anthrax blood with meat-infusion, I diluted with distilled water, not knowing at that time the fact that, when anthrax bacilli are mixed with distilled water, they very quickly swell up and die. Hence my cultivations made to ascertain how many bacilli were injected remained sterile, and the animals were unaffected. These experiments are being repeated, and the results obtained, if free from error, seem to show that one bacillus will not kill large rabbits. As to this, however, I will not yet be positive.

Chauveau (*Comptes Rendus*, 1880) found that in the case of Algerian sheep, a considerable quantity of the bacilli was necessary to cause death, and that the animals which had received small quantities were, to a considerable extent, protected from a subsequent fatal dose. I may summarise the four experiments on which these conclusions are founded.

Experiment I showed that inoculation of anthrax material by punctures (as in vaccination) killed European sheep, but did not harm the three Algerian sheep experimented with.

Experiment II.—Four sheep employed. The materials used were the juice from a gland of an animal which died of anthrax, and a cultivation of the bacilli. Into two animals a small quantity of the gland-juice was injected, and, into the others, five minims of the culture. None of the animals died. The three sheep of the first experiment were also treated in the same way and recovered.

Experiment III.—Four sheep and four lambs used. Two culture liquids were employed, containing large numbers of bacteria and spores. To one of these was added the juice from the gland of an anthracic animal; this juice contained numerous bacteria. Into each of the four sheep five to six minims were injected in two places. Into each of the four lambs four minims were injected. With the exception of one lamb, all the animals were ill, and one of the sheep died. The animals of Experiment II were also injected. Three of them were slightly ill, and one died.

Experiment IV.—Sixteen sheep used. The material employed was a culture-fluid, full of spores, and very active juice from the glands of an anthracic animal. Into half of the animals one c. cm. of this mixture was injected. Into the other half, less than .5 c. cm. was introduced. Of the first half five died; of the second half, only one. All the other animals were very ill, but recovered.

III.—Bacillus of Mouse Septicæmia (Koch).

This bacillus, which is closely allied to, if not identical with the bacillus of swine-plague (Loeffler, Schütz, etc.), was first described by Koch, in his work on *Wundinfectionskrankheiten*, and his experiments have shown that very small quantities of the infective blood produce the disease.

Experiment, March 31st, 1886.—A jelly cultivation inoculated on March 24th, 1886, was liquified in the incubator, and added to a quantity of meat-infusion.

The following dilutions were made.

α	$\frac{1}{2}$ c. cm. of the mixture	+ $9\frac{1}{2}$ c. cm.	infusion.
β	$\frac{1}{2}$ c. cm. of α	+ $9\frac{1}{2}$,,	,,
γ	$\frac{1}{2}$ c. cm. of β	+ 12 ,,	,,
δ	$\frac{1}{2}$ c. cm. of γ	− $\frac{1}{2}$,,	,,
ϵ	$\frac{1}{2}$ c. cm. ,,	+ 1 ,,	,,
ζ	$\frac{1}{2}$ c. cm. ,,	+ 2 ,,	,,
η	$\frac{1}{2}$ c. cm. of ζ	17 ,,	,,

Plate cultivations, containing $\frac{1}{10}$ c. cm. each, were made from ζ, ϵ, δ, and γ.

In those from ζ, an average of 45 colonies developed.
In those from ϵ ,, 80 ,, ,,
In those from δ ,, 122 ,, ,,
In those from γ ,, 250 ,, ,,

The following mice were injected.

	Results.
M. 1. $\frac{1}{10}$ c. cm. of η subcutaneously = 1 bacillus.	Lived.
M. 2. $\frac{1}{10}$ c. cm. of η subcutaneously = 1 bacillus.	April 2nd, 1886. Died in the evening, of mouse-septicæmia.
M. 3. $\frac{1}{10}$ c. cm. of ζ subcutaneously = 45 bacilli.	April 2nd, 1886. Died in the afternoon, of mouse-septicæmia.
M. 4. $\frac{1}{10}$ c. cm. of ζ subcutaneously = 45 bacilli.	April 2nd, 1886. Died in the afternoon, of mouse-septicæmia.
M. 5. $\frac{1}{10}$ c. cm. of ϵ subcutaneously = 80 bacilli.	April 2nd, 1886. Died about noon, of mouse-septicæmia.
M. 6. $\frac{1}{10}$ c. cm. of ϵ subcutaneously = 80 bacilli.	April 2nd, 1886. Died about noon, of mouse-septicæmia.
M. 7. $\frac{1}{10}$ c. cm. of δ subcutaneously = 120 bacilli.	April 2nd, 1886. Died about noon, of mouse-septicæmia.
M. 8. $\frac{1}{10}$ c. cm. of γ subcutaneously = 240 bacilli.	April 2nd, 1886. Died this morning, of mouse-septicæmia.
M. 9. $\frac{1}{10}$ c. cm. of β subcutaneously = 2,880 bacilli.	April 2nd, 1886. Died this morning, of mouse-septicæmia.
M. 10. $\frac{1}{10}$ c. cm. of α subcutaneously = 57,000 bacilli.	April 2nd, 1886. Found dead this morning, died of mouse-septicæmia.

Here, again, one bacillus is evidently sufficient to kill a mouse. I have not yet fully tested the effects of this organism on less susceptible animals, such as rabbits, but it would no doubt be very important to do so. In one instance I injected 4 c. cm. of a liquefied jelly cultivation into the cellular tissue at the base of the ear of one rabbit. The result was that the animal was ill for a few days, and there was swelling and redness of the ear, but this passed off and the animal recovered.

IV.—Bacillus of Chicken-Cholera.

Rabbits being highly susceptible to this disease, I employed them in the first experiment. On April 1st, 1886, a rabbit was inoculated with a cultivation of the chicken-cholera bacillus. The animal died in nineteen hours (on April 2nd, 1886), and immediately after death some of the blood from the heart and pieces of the lungs were shaken up with meat infusion, as in the case of anthrax. After straining the fluid, I made an attempt to estimate the number of bacilli, in the manner described under anthrax; but, owing to the smaller size of the organism, I did not feel so sure of the result, and therefore took

it for granted that they were at least as numerous as the anthrax-bacilli, and made the following dilutions:

α 1 c. cm. of the mixture + 19 c. cm. meat-infusion.
β 1 c. cm. of α + 19 c. cm. meat-infusion.
γ 1 c. cm. of β + 24 c. cm. meat-infusion.
δ 1 c. cm. of γ + 1 c. cm. meat-infusion.
ϵ 1 ,, ,, + 2 ,, ,,
ζ 1 ,, ,, + 4 ,, ,,

I also made plate-cultivations from δ, γ, β, $\frac{1}{10}$ c. cm. from each. As the result:

δ was found to contain 25 bacilli per $\frac{1}{10}$ c. cm.
γ ,, ,, 52 ,, ,,
β ,, ,, 1200 ,, ,,

The following rabbits were then injected.

EXPERIMENT I, April 2nd, 1886.

	Result.
R. 1. $\frac{1}{10}$ c. cm. of ζ subcutaneously = 10 bacilli.	April 4th, 1886. Found dead this morning. Died of chicken-cholera.
R. 2. $\frac{1}{10}$ c. cm. of ϵ subcutaneously = 17 bacilli.	April 3rd, 1886. Died this afternoon, of chicken-cholera.
R. 3. $\frac{1}{10}$ c. cm. of ϵ subcutaneously = 17 bacilli.	April 3rd, 1886. Died this afternoon, of chicken-cholera.
R. 4. $\frac{1}{5}$ c. cm. of δ subcutaneously = 25 bacilli.	April 3rd, 1886. Died this evening, of chicken-cholera.
R. 5. $\frac{1}{10}$ c. cm. of γ subcutaneously = 50 bacilli.	April 3rd, 1886. Died at noon to-day, of chicken-cholera.

In this experiment, ten bacilli was the smallest number injected, but, as there seems to be no doubt that one would have been equally efficacious, I did not think it necessary to repeat it.

As guinea-pigs are not nearly so susceptible to the action of this organism, I tested the question of dose on them also. According to the general belief, this bacillus does not kill guinea-pigs; but Pasteur mentions that it may do so occasionally, and that, when it does not do so, it may produce an abscess. As I did not expect that these bacteria would kill guinea-pigs, I injected a large quantity in the first instance, as follows, using the same mixture as that employed for the rabbits.

	Result.
April 2nd, 1886. G. P. 1. 5 c. cm. of the original mixture into the abdominal cavity = 25,000,000 bacilli.	April 3rd, 1886. Died this morning. A few bacilli in the blood, but only very few. Peritoneum red, and covered in places with flakes of lymph. In this lymph were innumerable small bacilli.
G. P. 2. 5 c. cm. of the original mixture subcutaneously over the abdomen = 25,000,000 bacilli.	April 3rd, 1886. Died this morning. Œdema of the subcutaneous cellular tissue over the abdomen, and a considerable number of bacilli in the blood.
G. P. 3. 3 c. cm. of the original mixture into the back (part went into the muscles) = 15,000,000 bacilli.	April 3rd, 1886. Died this morning. Œdema and inflammation at the seat of injection. Muscle quite soft. A few bacilli in blood.

I did not expect that such a comparatively small number of bacilli (as compared, for example, with the numbers of Proteus Vulgaris) would have caused death, otherwise I would have used still less. It became necessary, therefore, to go into this matter a little more fully.

On April 3rd, 1886, a mixture was made with the blood and lungs of R. 5., in the manner previously described; and, as I had not time to perform the experiment the same evening, the flask was put in the ice-safe till next day.

EXPERIMENT II, April 4th, 1886.—The number of bacteria present was ascertained in the usual manner by plate-cultivations.

	Result.
G. P. 4. $\frac{1}{2}$ c. cm. of the mixture injected subcutaneously into back = 1,800,000 bacilli.	April 5th, 1886. Died this forenoon. A good many bacilli in the blood.
G. P. 5. $\frac{1}{2}$ c. cm. of the mixture injected into the muscles of the back = 1,800,000 bacilli.	April 5th, 1886. Died to-day. A few bacilli in blood.

It was thus evident that still smaller doses must be tried, and, therefore, I made a mixture in the usual manner from the blood and lungs of G. P. 4, and used it for the following experiment, estimating the number of bacilli by plate-cultivations.

EXPERIMENT III, April 5th, 1886.

	Result.
G. P. 6. $\frac{1}{10}$ c. cm. of the mixture injected subcutaneously into back = 320,000 bacilli.	April 7th, 1886. Found dead this morning. A good many bacilli in the blood. Suppuration commencing at the seat of injection.
G. P. 7. $\frac{1}{10}$ c. cm. of the mixture into muscles of back = 320,000 bacilli.	April 7th, 1886. Found dead this morning. Comparatively few bacilli in the blood. Suppuration at the seat of injection.
G. P. 8. $\frac{1}{2}$ c. cm. of the mixture into the muscles of the back = 1,600,000 bacilli.	April 6th, 1886. Died this morning. A few bacilli in the blood.

EXPERIMENT IV, April 7th, 1886.—Further experiment with a mixture made from the blood and lungs of G. P. 6. Two dilutions were made.

α 1 c. cm. of the mixture + 9 c. cm. meat-infusion.
β 1 c. cm. of α + 9 c. cm. meat-infusion.

And the numbers were estimated by further dilution and plate-cultivation.

	Result.
G. P. 9. $\frac{1}{10}$ c. cm. of β injected subcutaneously = 15,000 bacilli (in round numbers).	April 17th, 1886. Died to-day as result of another experiment (see Experiment V). Quite a small abscess, about the size of a bean, at the seat of injection.
G. P. 10. $\frac{1}{2}$ c. cm. of β injected subcutaneously over the upper part of the left side of the abdomen = 75,000 bacilli.	April 16th, 1886. Died to-day. The skin over the seat of injection has died, and beneath the slough is a largish yellow patch. Inguinal and axillary glands on the same side enlarged. No peritonitis. Very few bacteria in blood taken from inferior vena cava. On opening the thorax, there is marked pleurisy on both sides, but chiefly on the left, with effusion of a large quantity of lymph containing multitudes of bacilli. Left lung solid.
G. P. 11. $\frac{1}{10}$ c. cm. of α injected subcutaneously over the abdomen = 150,000 bacilli.	April 20th, 1886. Died to-day, as the result of another experiment (see Experiment V). A small abscess at the seat of injection, with a piece of necrosed tissue in the interior.

As the result of this experiment, we seem to have reached the lower limit of the fatal dose in Experiment III, that is, it lies somewhere between 150,000 bacilli and 320,000, and I should think nearer the latter dose than the former; but we find now, as in the case of Proteus, that the smaller dose causes suppuration without death. That G. P. 10 died does not imply that the dose was sufficient to kill it. There was probably some close connection between the lymphatics at the seat of injection and those of the pleura, enabling the bacilli to spread into the pleural cavity, and set up the fatal pleurisy.

It remained to ascertain the effect of still smaller doses, and also whether the animals which survived in the foregoing experiment were protected from the fatal dose.

EXPERIMENT V, April 16th, 1886.—Yesterday, a rabbit was inoculated with chicken-cholera, and died this morning. The usual mixture made, and the following dilutions.

α 1 c. cm. of the mixture + 19 c. cm. meat-infusion.
β 1 c. cm. of α + 24 c. cm. meat-infusion.

The numbers estimated by plate-cultivations.

	Result.
G. P. 12. $\frac{1}{10}$ c. cm. of β subcutaneously over abdomen = 2,500 bacilli.	No effect.
G. P. 13. $\frac{3}{10}$ c. cm. of β subcutaneously over abdomen = 7,500 bacilli.	No effect.
G. P. 14. $\frac{6}{10}$ c. cm. of β subcutaneously over abdomen = 20,000 bacilli.	A small abscess formed, burst, and healed. Abscess about the size of a bean.
G. P. 15. $\frac{1}{10}$ c. cm. of α subcutaneously over the abdomen = 62,000 bacilli.	An abscess formed, and burst, and the animal died on April 29th, 1886. I could find no sufficient reason to account for death. No bacilli in blood.

G. P. 16. ½ c. cm. of *a* subcutaneously over the abdomen = 310,000 bacilli.	An abscess formed and burst, but healed up. The animal, however, became gradually thinner, and died on May 17th, 1886. No apparent cause of death. No bacilli in blood or organs.
G. P. 17. ½ c. cm. of the mixture subcutaneously over abdomen = 6,750,000 bacilli.	April 19th, 1886. Died to-day; bacilli in blood; commencing suppuration at the seat of injection. Pericarditis.

To test protection of G. P. 9. and G. P. 11.

	Result.
G. P. 9. ½ c. cm. of mixture into back = 6,750,000 bacilli.	April 17th, 1886. Died to-day; a few bacilli in the blood. A considerable quantity of fluid in the peritoneal cavity, containing numerous bacilli.
G. P. 11. ½ c. cm. of mixture into back = 6,750,000 bacilli.	April 20th, 1886. Died this morning. Peritonitis; lymph full of bacteria. Commencing suppuration at the seat of the last injection.

The results of these experiments correspond, in some respects, with those of Hauser's bacillus; namely, 1, there is a fatal dose, probably from 300,000 bacilli, and upwards, the exact quantity varying, of course, with the resisting power of the animal; 2, there is an intermediate limit (between 10,000 and 300,000 bacilli) where an abscess results after injection; and, 3, there is a lower limit (below 10,000) where no effect follows the introduction of the bacilli. I cannot, however, say that the protective effect is similar, for both the animals which resisted the medium dose died after injection of a larger quantity. I obtained an impression from this and the following set of experiments with rabbit septicæmia, that continued cultivation in the guinea-pig increased the virulence of this organism for that animal, but my experiments are not sufficiently numerous to enable me to assert this.

There are several points of interest in connection with this organism which deserve to be worked out. I shall merely indicate two of these.

In the first place, I was told (though I have not yet been able to find the passage) that Pasteur has found that the organisms in the abscesses in guinea-pigs diminished in virulence, and that the inoculation of the pus from such abscesses protected fowls from the fatal disease. I performed two experiments to test this point, but the matter must be further followed.

Experiment A.	*Result.*
Hen 1, was inoculated from the abscess in guinea-pig 11, which contained numerous chicken-cholera bacilli.	The animal was apparently unaffected.
Hen 2, was inoculated as a control from a jelly-cultivation of chicken-cholera.	Died next day of chicken-cholera.
Experiment B.	
Hen 1 was, nine days later, inoculated from a jelly-cultivation of chicken-cholera.	Was ill, but recovered.

The second point of interest was the relation between this organism and that known as the bacillus of rabbit-septicæmia, but I shall leave three facts which I have to mention on that subject till after I have described my experiments with rabbit-septicæmia.

V.—Bacillus of Rabbit Septicæmia.

As Koch and Gaffky, in experiments with regard to the virulence of diluted blood from septicæmic rabbits, carried the dilution to such an extent that there can be no doubt that the very smallest number of these organisms was used with success, I had no hesitation in assuming that one bacillus would kill a rabbit, and, therefore, did not think it necessary to repeat the experiments. I have, however, tested its action on guinea-pigs, though not as yet so completely as in the case of chicken-cholera.

Experiment I, April 9th, 1886.—On April 7th, 1886, a rabbit was inoculated from a cultivation of rabbit-septicæmia, and was found dead on the morning of April 9th, 1886. A mixture in meat-infusion was made with the blood and pieces of the lung in the usual manner, and the following dilution was performed.

a 1 c. cm. of the mixture + 9 c. cm. meat-infusion.

By further dilution and plate-cultivation the numbers employed were estimated.

	Result.
G. P. 1. $\frac{1}{10}$ c. cm. of *a* injected subcutaneously over the abdomen = 500,000 bacilli.	Did not die as the result of this injection, but was killed afterwards (Experiment IV), when an abscess was found at the seat of the first injection.
G. P. 2. $\frac{1}{10}$ c. cm. of the mixture injected subcutaneously over the abdomen = 5,000,000 bacilli.	April 10th, 1886. Died to-day. A few bacilli in the blood of the heart. A large amount of fluid, full of bacilli, in the peritoneal cavity.
G. P. 3. 1 c. cm. of the mixture injected subcutaneously over the abdomen = 50,000,000 bacilli.	April 11th, 1886. Died to-day. Very few bacilli in the blood. Commencing suppuration at the seat of injection. A little tenacious material in the peritoneal cavity containing bacilli, but no distinct peritonitis.

Experiment II, April 10th, 1886.—A mixture made with the blood and peritoneal fluid from G. P. 2.

	Result.
G. P. 4. 2 c. cm. of this mixture into the dorsal muscles = 150,000,000 bacilli.	April 11th, 1886. Died to-day. A few bacilli in the blood. A very little fluid in the peritoneum, containing some bacilli. Muscle at seat of injection very red and soft.
G. P. 5. 1 c. cm. of the mixture into the dorsal muscles = 75,000,000 bacilli.	April 11th, 1886. Died to-day. A few bacilli in the blood. A good deal of peritoneal fluid, containing very large numbers of bacilli, but no peritonitis.
G. P. 6. $\frac{1}{10}$ c. cm. of the mixture into the dorsal muscles = 7,500,000 bacilli.	April 11th, 1886. Died to-day. A few bacilli in the blood. Muscle at seat of injection red and soft. A considerable quantity of peritoneal fluid containing bacilli.

The presence of bacilli in the peritoneal cavity, after injection into the dorsal muscles, led me to think that there might possibly be a close connection between their lymphatics and the peritoneum, and that the animals died rather as the result of the local development of the organisms in the abdominal cavity than from their action on the general system. Hence I tested this in the following two experiments.

Experiment III, April 12th, 1886.—A mixture was made on April 11th, 1886, with the blood and peritoneal fluid of G. P.'s 5 and 6, and was kept in the ice safe during the night. One dilution was made.

a 1 c. cm. of the mixture + 13 c. cm. meat-infusion.

	Result.
G. P. 7. $\frac{1}{10}$ c. cm. of *a* into muscles of back = 100,000 bacilli.	April 13th, 1886. Found dead this morning. A considerable number of bacilli in blood.
G. P. 8. 1 c. cm. of the mixture into the muscles of the right leg = 14,000,000 bacilli.	April 13th, 1886. Died this morning. Not very many bacteria in the blood.
G. P. 9. $\frac{2}{3}$ c. cm. of the mixture into the muscles of the back = 9,000,000 bacilli.	April 13th, 1886. Died this morning. A few bacteria in the blood.

Experiment IV, April 18th, 1886.—A rabbit was inoculated on April 17th, 1886, from a cultivation of rabbit-septicæmia, and died next day. A mixture, made as usual from the blood, was diluted once.

a 1 c. cm. of the mixture + 9 c. cm. of meat-infusion.

	Result.
G. P. 10. $\frac{1}{10}$ c. cm. of *a* into muscles of leg = 300,000 bacilli.	April 19th, 1886. Died this morning. Large numbers of bacilli in the blood.
G. P. 11. $\frac{1}{10}$ c. cm. of *a* into muscles of back = 300,000 bacilli.	April 19th, 1886. Died this morning. Bacilli in the blood; none in the peritoneum.

To test whether G. P. 1 was protected, it was also injected.

G. P. 1. 1 c. cm. of the mixture subcutaneously into right leg = 30,000,000 bacilli.	April 19th, 1856. Died this morning with the usual appearances.

These are all the experiments which I have as yet done with the bacilli of rabbit-septicæmia in reference to the question of dose; and, so far as they go, the facts seem to correspond to those made out with regard to chicken-cholera, except that the fatal dose seems to be somewhat less in the case of rabbit-septicæmia. As regards the identity of

the two organisms, I inoculated a fowl (II. 1) from a cultivation of this organism, and the animal seemed drowsy and out of sorts for some days, but completely recovered. Nine days later, I inoculated it with chicken-cholera. The fowl died next day of chicken-cholera. Thus the inoculation of rabbit-septicæmia did not protect it against chicken-cholera. This experiment must be repeated in order to make sure that there is no mistake; but if the same result is again obtained, it strengthens the idea that these two organisms are not identical. There is another point in which a slight difference may be observed; namely, when inoculated on mice, the organisms found in the blood of the animal which died from chicken-cholera, as a rule, form much longer chains than in the case of rabbit-septicæmia.

I think also that the local effect on guinea-pigs differs somewhat in the two cases: the abscess in the case of chicken-cholera seemed to be more defined than in the case of rabbit-septicæmia, but this appearance may, of course, have been due to causes other than differences in the two organisms. As regards their microscopical appearance, and their mode of growth in nutrient jelly, it is impossible to distinguish between the two.

VI.—Staphylococcus Pyogenes Aureus.

This is the organism most frequently found in the pus of acute abscesses, and it was important to test the question of dose in connection with it in reference to Ogston's views. I have not, however, completed the observations on this organism.

Experiment I, April 9th, 1886.—A tube of nutrient-jelly was used which had been inoculated on March 29th, 1886, and in which more than half the material had become fluid as the result of the growth. It was placed in the incubator before use, so as to liquefy the whole of it. As rabbits and mice seem to be the animals most susceptible to the action of this organism, they were used for the following experiments.

	Result.
R. 1. $\frac{1}{10}$ c. cm. of the cultivation injected subcutaneously = 225,000,000 micrococci.	The animal did not seem to be affected by the injection, and was, therefore killed on April 28th, 1886, when a small circumscribed abscess, about the size of a walnut, containing creamy pus, was found at the seat of injection. Nothing wrong with the internal organs.
R. 2. $\frac{1}{2}$ c. cm. of the cultivation subcutaneously = 1,125,000,000 micrococci.	April 11th, 1886. Found dead this morning. Muscle at seat of injection much reddened. No micrococci found in the blood, either by microscopical examination or by cultivation.
R. 3. 1 c. cm. of the cultivation subcutaneously = 2,250,000,000 micrococci.	April 10th, 1886. Died this morning. Same appearances as in R. 2.
Mouse 1. $\frac{1}{10}$ c. cm. of the 10-times diluted cultivation subcutaneously = 22,500,000 micrococci.	A small abscess formed, which burst and healed.
M. 2. $\frac{1}{10}$ c. cm. of the cultivation subcutaneously = 225,000,000 micrococci.	An abscess formed.
M. 3. $\frac{1}{2}$ c. cm. of the cultivation subcutaneously = 1,125,000,000 micrococci.	April 10th, 1886. Died to-day. No bacteria found in the blood.

Experiment II. June 15th, 1886.—A cultivation in jelly of May 27th, 1886, was completely liquefied, and used as before. The numbers in this case were not estimated, but probably they were about the same as in the previous experiment.

R. 4. $\frac{1}{10}$ c. cm. of the 10-times diluted cultivation subcutaneously	An abscess formed.
R. 5. $\frac{1}{10}$ c. cm. of the cultivation into the muscles of the back.	June 17th, 1886. Found dead this morning. No bacteria found in blood or internal organs.
R. 6. $\frac{1}{10}$ c. cm. of the cultivation into the dorsal muscles.	The same as with R. 5.

So far as these two experiments go, we find the same rule hold good as in the case of proteus and chicken-cholera, namely, a very large dose kills, a smaller produces an abscess. I have still to ascertain the effect of quite a small dose, but the probability is, I think, that it will be *nil*. Here again, as in proteus, the animals die apparently as the result of absorption from the local disease, and not from multiplication of organisms in the blood or internal organs. The local appearances are, however, different from those caused by proteus. In that case, I have described how a central piece of necrosed tissue is formed; here nothing of the kind occurs, and the pus is much more creamy and, so to speak, normal in appearance than it is after the injection of proteus vulgaris.

VII.—Staphylococcus Pyogenes Albus.

This organism is also very frequently found in the pus of acute abscesses. Only one experiment was done, and the result was very similar to that with aureus.

Experiment I, April 18th, 1886.—A cultivation of March 29th, 1886, was used, but my attempt to estimate the numbers present failed, owing to the large number of colonies which developed. We may, perhaps, assume that the numbers were very much the same as in Experiment I, with S. P. Aureus.

	Result.
R. 1. $\frac{1}{10}$ c. cm. of the cultivation injected into the dorsal muscles.	Remained well; killed on April 28th, 1886. Large abscess, about the size of a small Tangerine orange in the dorsal muscles.
R. 2. $\frac{1}{2}$ c. cm. into dorsal muscles.	April 19th, 1886. Died this morning; œdema at seat of injection. No micrococci in the blood.
R. 3. 1 c. cm. subcutaneously into leg.	April 20th, 1886. Found dead this morning.

I also performed some experiments with staphylococcus pyogenes citreus, but it apparently produced neither local nor general effects on rabbits. I have also tried the micrococcus of erysipelas on rabbits, but I have as yet nothing sufficiently definite to communicate with regard to it.

VIII.—Sternberg's Micrococcus.

This is an organism which was found by Dr. Sternberg in his saliva, and which he considered to be the same as that described by Pasteur in his first communication on a microbe found in the saliva of a child who had died of rabies. Hence, he has given it the name of "Micrococcus Pasteurianus," but, as it is by no means certain that it is the same as Pasteur's organisms, it is, perhaps, better to speak of it as "Sternberg's micrococcus." It has been found in the saliva of other people besides Sternberg, and is closely allied to, if not identical with, the organism found by Fränkel in the great majority of cases of pneumonia. It is not, however, the same as Friedländer's pneumococcus, as has been supposed by several writers, nor does it, indeed, resemble the latter organism in any way. It is very peculiar in several respects, but more especially in the rapidity with which it apparently loses its virulence when cultivated outside the body. The blood of rabbits which have died of this organism is very virulent, a small quantity being sufficient to set up the disease in a fresh animal, but when grown in meat-infusion, Agar-Agar, etc., it rapidly (in three or four days unless re-inoculated into fresh material) loses its virulence, and the dose necessary to cause death increases as the cultivation becomes older. When it does not cause death, it may produce a slight local effect, and such animals are apparently protected from a subsequent inoculation with virulent material. The animals often do not die for three or four days after the injection, and generally exhibit nervous symptoms, sometimes ending in paraplegia. Rabbits and mice are susceptible to the action of this organism.

As this organism grows extremely slowly in jelly kept at the ordinary temperature, and as it also varies in virulence, I made no attempt to estimate the exact numbers injected in the two experiments which I performed. The organisms used were obtained in Koch's laboratory from Dr. Sternberg's saliva, and had been re-inoculated from rabbit to rabbit during the whole of last winter.

Experiment I, April 12th, 1886.—On April 9th, 1886, a tube of meat-infusion was inoculated from the blood of a rabbit which had just died of Sternberg's micrococcus, and was placed in the incubator.

	Result.
R. 1. $\frac{1}{10}$ c. cm. of this cultivation were injected into the dorsal muscles. (By microscopical examination, I calculated that about 900,000 chains, containing 8 to 10 cocci in each, were introduced.)	April 15th, 1886. Found dead this morning. Micrococci in blood. A small whitish streak in the muscle at the seat of injection.

R. 2. ½ c. cm. into dorsal muscles = probably 500,000 chains.	April 16th, 1886. Found dead this morning. Micrococci in blood; a little lymph in the abdomen, containing large numbers of organisms. The surface of the fascia, at the seat of injection, covered with a thin layer of pus, but only a whitish trace in the muscle.
R. 3. $\frac{1}{10}$ c. cm. into dorsal muscles = probably, 100,000 chains.	April 16th, 1886. Found dead this morning. Appearances similar to those in R. 2.

This cultivation was not quite so virulent to mice; for, while one died in two days, as the result of the injection of ½ c. cm., the other had only a small abscess from $\frac{1}{10}$ c. cm.

EXPERIMENT II, April 19th, 1886.

	Result.
R. 4. 1½ c. cm. of a meat-cultivation inoculated on April 9th, 1886, injected into the dorsal muscles.	No effect at all.

The organisms had thus completely lost their virulence in ten days.

EXPERIMENT III, April 20th, 1886.—A jelly cultivation, inoculated on April 16th, 1886, from an Agar-Agar cultivation two days old. The jelly cultivation was kept for two days in the cold, and then for two days in the incubator.

	Result.
R. 5. 1 c. cm. into dorsal muscles.	April 21st, 1886. Died to-day. Numerous bacilli in blood.

EXPERIMENT IV, April 23rd, 1886.—On April 21st, 1886, a tube of meat-infusion was inoculated from the blood of R. 5, and was kept for two days in the incubator. One dilution was made of 1 c. cm. of the cultivation + 9 c. cm. meat-infusion.

	Result.
R. 6. $\frac{1}{10}$ c. cm. of the dilution into dorsal muscles.	No effect, local or general.
R. 7. $\frac{1}{10}$ c. cm. of the cultivation into dorsal muscles.	This animal became ill, and ultimately paralysed in its hinder extremities. Killed on January 30th, 1886. No abscess at seat of injection. No organisms in the blood or organs.
R. 8. ½ c. cm. of the cultivation subcutaneously.	April 26th, 1886. Found dead this morning. Numerous micrococci in the blood and organs. No trace of the injection.

These experiments again show the influence of the dose, a large dose causing death, and a small dose producing no effect. As to its local effect, it apparently tends to produce slight suppuration in the subcutaneous tissue; but in none of the cases where the injection was made into the muscles could more than a narrow whitish track be observed.

This organism evidently fully deserves thorough study, and opens up an interesting field for inquiry in one direction at least, namely, Will a large dose of partially attenuated organisms produce effects not obtained by a small dose? Owing to its rapid loss of virulence, I have not been able to do more with it up to the present time.

IX.—The Tetanus Bacillus.

A bacillus which set up tetanic symptoms when injected into mice and rabbits was obtained by Flügge and Nicolaier from earth; and lately Rosenbach has found apparently the same bacillus in the slough in a wound of a man who died of tetanus. When introduced beneath the skin over one of the limbs of a rabbit, that limb becomes, after about twenty-four hours, rigid and extended. As time goes on, the affected part, and ultimately the whole body, is thrown into a violent tetanic spasm on the slightest shock, and the animals generally die in a state of episthotonos. As this subject is being investigated by Flügge and Rosenbach, I have not gone into it beyond performing one experiment with a cultivation kindly given to me by Dr. Rosenbach. The organism is an anaërobe, and can only be cultivated with difficulty; and hence I have not been able to estimate by cultivation the numbers used, but I have been able to do so fairly accurately by microscopical observation.[1] The mode of introducing the organism was that followed by Rosenbach. A few cotton threads are sterilised, impregnated with the cultivation, and introduced into a little pouch made in the subcutaneous tissue over one of the extremities. By taking threads of equal size, about equal quantities would be used, and it was easy to estimate the amount of fluid, and consequently the number of bacteria, taken up by each thread.

EXPERIMENT I, April 17th, 1886.

	Result.
R. 1. Twelve threads used = about 42,000 bacilli.	Developed very marked symptoms, and was found dead on April 19th, 1886, in a state of opisthotonos.
R. 2. Six threads used = about 21,000 bacilli.	The usual symptoms developed, and the animal was found dead on April 20th, 1886.
R. 3. Three threads used = about 10,500 bacilli.	On the 19th, a little rigidity of the limb was noticeable. On the 20th, this condition had extended, and there were now tetanic spasms on disturbing the animal. On the 21st, the animal was worse, the slightest movement setting up spasms. It was therefore killed.
R. 4. One thread used = about 3,500 bacilli.	Very similar to R. 3, though the symptoms developed somewhat more slowly. Found dead on April 22nd, 1886.
R. 5. One drop of water was mixed with 1 drop of the cultivation, and half a thread was dipped in this = about 875 bacilli.	No effect followed.

Here again the rapidity of the course of the disease depended on the number of bacteria introduced, and a point was reached where no effect was produced. It is interesting to note that the bacilli do not seem to spread over the whole body, but remain more or less localised, while after a time the tetanic spasms affect all the muscles of the body.

X.—Micrococcus Tetragenus.

This is an organism discovered by Koch and Gaffky in tubercular cavities in the lung. It kills mice and guinea-pigs when inoculated, growing in the blood in large numbers like other septicæmic organisms.

EXPERIMENT I, April 7th, 1886.—Yesterday I inoculated a tube of meat-infusion, and put it in the incubator. To-day the fluid was quite turbid from the development of this organism. The following dilutions were made.

α 1 c. cm. of the cultivation + 19 c. cm. meat-infusion.
β 1 c. cm. of α + 19 c. cm. meat-infusion.
γ ,, β + 24 ,, ,,
δ ,, γ + 1 ,, ,,
ϵ $\frac{1}{10}$ c. cm. of γ + 5 ,, ,,

Plate-cultivations were made to ascertain the numbers present.

	Result.
G. P. 1. $\frac{1}{10}$ c. cm. ϵ subcutaneously = possibly 1 micrococcus, probably none.	None.
G. P. 2. ½ c. cm. ϵ subcutaneously = 2 micrococci.	April 17th, 1886. Died to-day. Large abscess at the seat of injection full of micrococcus tetragenus. No organisms in the blood or organs. No sufficient cause of death.
G. P. 3. $\frac{1}{10}$ c. cm. of δ = 35 micrococci.	April 28th, 1886. Found dead this morning. Large abscess at the seat of injection, containing micrococcus tetragenus. No organisms in the blood or internal organs.
G. P. 4. $\frac{1}{10}$ c. cm. of γ = 85 micrococci.	An abscess formed and burst, but the animal lived.

I performed a second experiment with a cultivation in nutrient jelly, nine days old, on four guinea-pigs, which received 800, 1,200, 1,800, and 2,400,000 organisms respectively. None of these animals died, but all developed abscesses.

This result was not what I expected. It has been stated, and I have myself performed the experiment, that inoculation of guinea-pigs with this organism was generally followed by death of the animals in from six to ten days, and that their blood-vessels contained large numbers of

[1] In addition to the tetanus-bacillus, there was another bacillus present in these cultivations. The tetanus-bacillus forms large spores at one end of the rod, and, in estimating the numbers used, I have only reckoned as tetanus organisms bacilli containing a spore at one end, and the free spores.

these organisms. I therefore fully expected that this would be the case here, but, on the contrary, though in one case large numbers were used, this result did not occur. Those who have worked much with this organism, remark on the uncertainty of the result, and hence there is evidently something in connection with its mode of infection which must be inquired into. It may possibly depend on the seat of infection; in most cases inoculation has been used, that is, making a small cutaneous wound and rubbing in the organisms. Here the organisms were injected into the subcutaneous tissue. Perhaps they gain access to the blood more easily through the skin, and are quickly shut off by a layer of inflammatory material when introduced into the subcutaneous tissue. Leaving the explanation for future investigation, I may, however, point out that one or two of these micrococci are sufficient to set up an abscess in the guinea-pig.

Those are all the bacteria which I have myself tested, but, in the literature of this subject, there are two instances which have been investigated, to which I may refer.

XI.—Charbon Symptomatique: Rauschbrand.

This is a disease which generally affects young cattle, and which is characterised by the formation of an irregular tumour in the subcutaneous tissue, which crepitates, and rapidly extends. There is high fever, and death generally results. It has been investigated by MM. Arloing, Cornevin and Thomas (Du Charbon bactèrien: Arselin: Paris, 1883). They found that the occurrence of the disease was dependent on the site of injection and the dose of virus used, and that immunity followed injection of small doses, or injection into an unsuitable place. The following are the chief facts observed by them.

Injection of a very small quantity of the virus into the loose connective tissue of any part of the body produces a temporary illness, and protects the animals.

Injection of a moderate quantity into the scanty connective tissue of the tail produces a slight affection, and confers immunity. Very large doses, however, may cause death. A moderate quantity injected into the cellular tissue in other parts of the body causes death.

Injection into the veins does not kill, but confers immunity, and the same result follows injection into the respiratory tract.

XII.—Rabies.

In his researches on rabies, Pasteur has found that very small quantities of the affected spinal cords did not set up the disease; that thus a definite dose was required, but that the animals inoculated with a small dose were not protected.

Conclusions.—I do not propose in this preliminary report to enter at length into all the conclusions which might be drawn from these experiments, because the research is not yet concluded; but I may refer to one or two of the results. From the experiments on guinea-pigs with the bacillus-anthracis, on mice with the bacillus of mouse-septicæmia, and on rabbits with the bacilli of chicken-cholera and rabbit-septicæmia, we see that, in the case of animals highly susceptible to a disease, the minutest possible dose of the virus (1 bacillus) is capable of producing it. On the other hand, from the experiments on rabbits with proteus vulgaris, with staphylococcus pyogenes aureus and albus, and with the tetanus-bacillus, on cattle with charbon symptomatique, and on dogs with rabies, we see that, when the animals are not so susceptible to the disease in question, a certain, and often a considerable, dose of the virus is necessary to produce a fatal result. And further, we see from the experiments on Algerian sheep with anthrax, and on guinea-pigs with rabbit-septicæmia and chicken-cholera, that, even with these highly pathogenic organisms, a certain dose is necessary in the case of animals less susceptible to the disease; and in the case of mouse-septicæmia and rabbits, a very large dose failed to cause a fatal result. In these cases it seems that the resisting-power of an animal to a disease may often be overcome by the introduction of a large dose of the virus. I think we may venture to express the facts in the form of a law, as follows.

The pathogenic dose of a virus varies inversely with the predisposition of the animal to the disease in question. The greater the predisposition to the disease, the less is the quantity required, and conversely, the less the predisposition, the larger is the dose required, till ultimately a point is reached where no amount of the virus will produce an effect.

Another point which will be observed, and which is noticeable especially in the case of proteus vulgaris, is that the severity of the local affection often stands in direct relation to the amount of virus introduced, and we may, I think, safely accept the following as a second law regulating infection.

In animals not very susceptible to a disease, the severity of the affection varies directly within certain limits with the amount of the virus introduced. This follows from the results of the experiments with proteus on rabbits, with chicken-cholera and rabbit septicæmia on guinea-pigs, with anthrax on Algerian sheep, with charbon symptomatique and rabies. In all those which I have investigated, I found three stages according to the dose injected; a stage where, with a small dose, no apparent effect was produced; an intermediate stage, where a local affection resulted, the extent of the local affection depending to a great extent on the dose of the virus; and a stage where, with a large dose, death followed. Of course this law does not apply to cases where the animals are very susceptible to a disease, as, for example, to those instances where one bacillus can produce a fatal result. It is only where a certain number is required to produce any effect that the severity of the disease may depend on the quantity introduced. Nor does it necessarily follow that the same dose will produce the same effect in all the individuals of the same species. Here the question of predisposition, and accordingly the first law, comes into play. With like predisposition, and the other conditions equal, the same effect would be produced by the same doses, but where the predisposition and other conditions vary, the effects of the same dose will also vary. In the same individual, however, the severity of the affection will, within certain limits, vary directly with the initial dose.

Again, from a study of the length of time before symptoms or fatal result followed the injection, we may formulate a third law, namely, that, *up to a certain point, the length of the incubation-period varies inversely with the amount of virus introduced.* The limit of invariability in the length of the incubation-period is, however, not very great, and it is only when very small doses are employed that any relation to the dose can be observed.

Then, again, we find that, in several instances, a small dose protects the animal from the fatal effect of a larger dose, but this is evidently not a universal law.

A fifth point of importance which these investigations have brought prominently into notice is the site of infection, the effect of the virus depending, in some cases, on the point where it enters the body.

The bearing of these facts on the spread of epidemic diseases, and on the course and severity of infective diseases in man will be evident to all; but the precise state of matters in regard to man, can only be ascertained after further investigation, based on the facts made out with regard to the lower animals.

I may refer to one or two instances on which the foregoing facts may throw light. As I said at the commencement of this paper, Ogston some time ago asserted that the difference between simple acute inflammation, and pyæmia and septicæmia, was, in the main, a question of dose, a supposition which, at the time, I was not at all inclined to accept; for, in the first place, Ogston's researches by no means proved that it was the same organisms which were present in simple abscess as in pyæmia; and, in the second place, I knew no facts to favour the idea that different effects followed different doses of a self-multiplying virus. Rosenbach's researches, however, have shown that the organisms found in pyæmia are the same as those often present in acute suppurations; and the results of this research, establishing a difference in the effect according to the dose of the virus, strengthens Ogston's views very much.

Take again the example of anthrax in man. In some cases, it is a purely local affection, and the patient recovers; in others, it is a fatal blood-disease, as in many cases of woolsorters' disease. These different effects may depend on differences in virulence of the bacilli, but they may also depend on the dose introduced, and the predisposition of the patient to the disease. We do not know the average susceptibility of man to the bacillus anthracis; it may be that, in all cases, a certain dose is required to produce the disease. If that is the case, then the law comes into play that the severity of the affection varies directly with the amount of the virus introduced, and the question whether a local or a general effect would follow the introduction of the anthrax poison, would depend on the amount of virus introduced. On the other hand, it may be that human beings vary immensely in their susceptibility to this disease when, of course, the dose might be the same in the two instances, and the effect depend on the predisposition of the patient to the disease in accordance with the first law.

In the same way in epidemics, the occurrence of severe cases among mild ones may depend on differences in predisposition to the disease, but may also, with similar predisposition, depend on difference in dose. Nor must we forget the possible effect of a small dose in lessening the predisposition of the patient to a disease, or, indeed, in abolishing the predisposition altogether.

The action of these laws in the spread and virulence of epidemics,

will also be evident. I may illustrate their action in the case of cholera, although I have not investigated the cholera bacillus from this point of view, and, therefore, these speculations may be erroneous. Nevertheless, they will serve to illustrate the point. I will start by assuming that, in the case of cholera, a certain dose is necessary to produce the typical disease; that one cholera bacillus, even if it gained entrance to the intestine, would not be sufficient. Nor is this assumption at all improbable when one takes into consideration the mode of outbreak and spread of this disease. Now, let us suppose a quantity of the cholera-virus to be introduced into a particular locality, what happens? It is deposited on the soil, in water, etc., and, according to the conditions in which the bacillus finds itself, it grows or it does not. If it is deposited in a place where the sanitary conditions are good —in other words, where the conditions are adverse to its growth—it either dies out or it grows slowly and with difficulty. If it grows at all, it may be that small numbers, or small doses, find their way into the intestines of some of the inhabitants, through the food, drink, etc.; but these quantities being small, would be insufficient to cause the virulent disease, and would either produce no effect at all or only a mild diarrhœa. Hence we find that, in places where the sanitary conditions are good, cholera does not spread at all; or, on the other hand, along with attacks of virulent cholera in the neighbourhood, there may be, in these places, only an extra number of cases of mild diarrhœa. And, for ought we know, this mild attack may be sufficient to protect the patient, for a time at least, against a stronger dose. On the other hand, take the case where cholera is introduced into a locality where the conditions are favourable to the growth of the bacillus outside the body. The bacilli increase rapidly under the favourable conditions; and hence large doses may be taken in, and very soon an outbreak of the virulent disease results. Again, it is often observed that, after the introduction of cholera into a certain locality, an interval elapses before the general outbreak of the disease in which, besides isolated cases of the virulent affection, there are a number of cases of mild or severe diarrhœa. May not this to some extent depend on the comparatively slow growth and diffusion of the bacilli, so that in the beginning of the epidemic only small doses are as a rule taken, these doses being insufficient to cause the virulent affection, but sufficient to cause a slight illness, which may protect the individuals at least temporarily from the fatal effects of larger doses? After a time the bacilli will have spread to such an extent that large numbers are swallowed, and produce the typical affection in predisposed individuals. May not such a view help to reconcile the observations on the relation of cholera to particular soils and regions, with the fact that the virus must be introduced from without, and with what can hardly now be regarded as other than the fact, the causal connection between Koch's cholera bacillus and Asiatic cholera?

There is one other point to which I may refer, namely, to protective inoculation, more especially with reference to Pasteur's inoculation of animals for anthrax. Whatever be the explanation of the mode of action of protective inoculation, the fact may be expressed by saying that it lessens or abolishes the predisposition of the animal to the disease in question. There can be no doubt, from the experimental work which has been done on this subject, that, according to the strength of the vaccinating material and the mode of vaccination, there are all degrees between complete protection and no protection at all. And, as we have seen, when the predisposition of the animal is lessened, the pathogenic dose must be increased. Now an important question, and one which has been much debated, is this: Are Pasteur's inoculations of sheep for anthrax of any practical value? This is a question which has been answered in the negative by several eminent observers, and yet the statistics of Pasteur's inoculations are so striking, that I think one must admit that they do good. There can be no doubt from Koch's researches that, in the process of protecting sheep *absolutely* from anthrax, a large number must die; and as, after Pasteur's method, very few die, the protection of his animals cannot be absolute. Pasteur, admitting that, asserted that the natural process of infection was not so virulent as the artificial inoculation. Koch showed, however, that, while animals protected by Pasteur's method did not succumb after artificial inoculation, a certain proportion of them died if fed with anthrax-spores. And yet, in anthracic districts, of the flocks inoculated by Pasteur's method, fewer individuals die from anthrax than before protection. Now is there no way out of this dilemma? I think the preceding experiments show us a way. There can be no doubt that Pasteur's inoculations, while not protecting the animals absolutely, greatly lessen the predisposition of the animals to the disease; and hence, according to our first law, a very much larger dose is necessary to kill them than before. The whole question is, then, whether they get this large dose while feeding on infected pasture. I believe that the explanation of the facts is, that they do not usually do so—that they are sufficiently protected to resist the small dose which, without this protection, would prove fatal. Hence the inoculations are really of value. Koch's experiments, from which he concluded that the natural infection was more virulent than the artificial, do not now seem to me to bear that interpretation. He experimented on sheep already partially protected, and administered enormous numbers of spores by the mouth, and there seems little doubt that a much larger dose was given by the mouth than subcutaneously, and I would therefore suggest that the intestinal dose was sufficient to overcome the resisting-power of the animal, while the other was not. This is a point which could be easily determined experimentally by anyone who has the opportunity of doing so. I have taken this instance as illustrating the light thrown by the foregoing experiments on the subject of protective inoculation, and must leave the reader to apply them to protection in the case of man.

In this research, I have only dealt with acute affections. How far these results are applicable to the severity of chronic diseases, and to their local or general distribution in the body, I must leave for future investigation.

REPORT ON
THE NATURE OF THE RELATIONSHIP OF UREA FORMATION TO BILE SECRETION.

By D. NOEL PATON, M.D., B.Sc., M.R.C.P.E.,
Biological Fellow of the University of Edinburgh. (From the Physiological Laboratory of the University of Edinburgh).

In a previous paper, published in this JOURNAL (Vol. i, 1886; pages 377 and 433), I endeavoured to demonstrate that a direct relationship existed between urea formation and bile secretion. It is now necessary to inquire into the manner in which these two processes are thus connected. In investigating this subject, we must remember that the bile constituents and urea are produced in the liver, and that our attention, therefore, must be directed to changes occurring in this gland.

The chief functions of the liver are the formation of glycogen, and the secretion of bile, and the latter of these functions may be divided into two elements: the production of bile acids, and the elimination of the effete blood-pigment as bilirubin. I shall endeavour to show that urea formation is connected with the latter of these, the excretion of effete hæmoglobin.

That blood-pigment is converted into bilirubin, and excreted by the liver as such, is clearly demonstrated by the work of Frerichs, of Städeler, of Kühne, of M. Hermann, and others.

Tarchanoff was, perhaps, the first (*Pflüger's Arch.*, Bd. ix, pp. 53 and 187) to connect this production of bilirubin with an increased flow of bile. After injecting 100 cubic centimètres of a dilute solution of hæmoglobin into the veins of a dog, with a biliary fistula, he observed an immediate and enormous rise in the amount of bile, and in the quantity of bile-pigments excreted. A similar rise was observed after the injection of distilled water, which set free hæmoglobin, by dissolving the blood-corpuscles. He observes that, while the bile pigments were greatly increased, the bile acids were diminished in amount.

Stadelmann (*Arch. f. Exp. Pathol.*, Bd. xv p. 337) records a similar series of experiments in which he injected hæmoglobin in much larger quantities, and in much more concentrated solution—20 to 40 grammes in a 20 per cent. solution. He observed that the bile first became thick and viscid, and that its rate of excretion diminished, the percentage amount of bile-pigments being enormously increased. This initial fall was followed in a few hours by a great increase. Obviously, the results of these experiments are to be explained by the large quantity of hæmoglobin used and the concentration of the solution in which it was injected. By the increase in the solid constituents of the bile, its passage along the bile-ducts was markedly impeded, and it was only upon a more fluid bile being produced that it escaped freely, and allowed the increased secretion to manifest itself.

In Tarchanoff's experiments, on the other hand, the hæmoglobin reached the liver in a dilute solution, and in moderate amount, so that no blocking of the bile passages by the viscid bile occurred. Such methods of injecting hæmoglobin in solution are by no means satisfactory, since the altered condition of the specific gravity of the blood and the changes in the circulation possibly induced, tend to vitiate the results obtained.

Employing the method of injecting into the blood some powerful hæmolytic agent, such as toluylendiamin, Afanassiew (*Ztsch. f. Clin. Med.*, Bd. vi. H. 4) has shown that the bile secretion is greatly increased; and in a paper published in *Pflüger's Archiv.*, Bd. xxx, he concludes that, since the results of his experiments with toluylendiamin indicate that the bile formation is increased through the enormous destruction of red blood-corpuscles, the idea must be entertained that, under normal conditions, the destruction of red blood-corpuscles, naturally within strict physiological limits, affords a stimulus to the secretion of bile.

Paschkis (*Wiener Med. Jahrb.*, 1884, S. 293) has further shown that these well known blood-corpuscle destroying agents, the salts of the bile acids, are exceeding powerful cholagogues. All evidence on the subject, therefore, goes to show that the destruction of blood-corpuscles, and the consequent setting free of hæmoglobin in the blood, does lead to a great increase in the secretion of bile.

That urea formation also is connected with destruction of blood-corpuscles was first suggested by Führer and H. Ludwig (*Vierordts. Arch.*, Bd. xiv. S. 307) while Addison, in 1864 (*Brit. Med. Jour.*, vol. i, p. 202), reasoning from different data, came to the same conclusion. The arguments of these authors are somewhat fallacious, and the facts upon which their theory is founded are capable of various interpretation.

More recently, Meissner (*Ztsch. f. rat. Med.*, Bd. xxxi, S. 234) adduces very strong evidence for the production of a great part of the urea in the liver from blood-pigment. It is impossible to discuss fully this long and ably reasoned paper, but one or two of his arguments must be here enumerated.

"No tissue of the body functionates so long as the blood—to the last moment of life. The urea excretion during starvation also keeps up in like proportion. Now, fresh corpuscles must be constantly manufactured up to the last moment of life, and, when food no longer supplies the material, the muscles and fat are then used. That during the period of inanition blood-corpuscles are being destroyed is shown by the fact (Bidder and Schmidt) that a not inconsiderable amount of bile is formed up to the time of death, and it is no longer doubtful that the biliary colouring matter is derived from the hæmoglobin. On the other hand, the blood-corpuscles do not diminish much during starvation, since Voit found that in a cat the blood lost only 4.8 grammes of fixed substances, a much smaller loss than is sustained by any other tissue in the body. Panum also found a relatively small reduction of the quantity of blood, and no diminution in the corpuscles during starvation. The lymph-stream also persists till death, and in the lymph-system blood-corpuscles are formed. The chief argument for his theory of the formation of urea, he considers to be its appearance in the liver, and the relation of the formation and destruction of blood-corpuscles to the liver—the former very doubtful, the latter certain—the liver being the only organ of the body where a copious destruction of the blood-corpuscles can be detected. The fact which before all other supports this destruction in the liver, is the separation of bile-pigments which are derived from the hæmoglobin. David has shown that it is undoubted that destruction of blood-corpuscles occurs in the liver, whilst he entirely denies their formation in this organ."

Meissner's arguments are of no small value, being founded on well-established facts, such as the connection of the bile secretion with blood destruction on the one hand, and with urea excretion on the other; and on the formation in the liver of both bile and urea.

That hæmocytes really are broken down in the liver has been, since the appearance of David's paper, definitely shown by Nicolaides (*Arch. de Physiologie*, T. x, p. 531, 1882), who found a very marked diminution in the number of corpuscles in the portal vein—a diminution which, during active digestion, was frequently as great as from 1,000,000 to 2,000,000. In four observations made on fasting animals this difference was found to be much smaller.

In investigating this connection between urea formation and excretion of hæmoglobin as bilirubin by the liver, two methods are open to us. We may either directly inject hæmoglobin and study its effect on the urea excretion, or we may destroy blood-corpuscles within the body of the animal by the administration of drugs which have outside the body been proved to have a hæmolytic action. I have adopted the latter method.

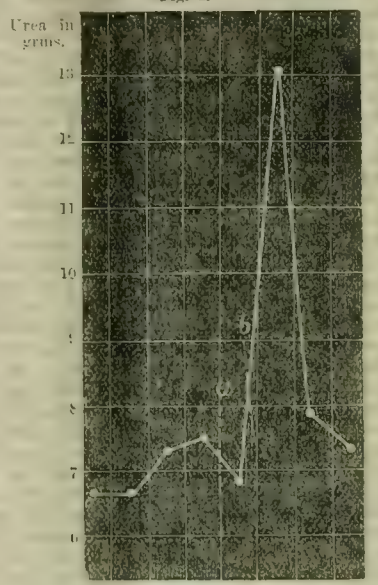
For the purpose of breaking down corpuscles, I have employed pyrogallic acid and toluylendiamin, and the salts of the bile acids, the direct destructive influence of which on hæmocytes has been long well known.

In these experiments, healthy dogs in a state of nitrogenous balance were used, and a detailed account of the method of observation will be found in the *Journal of Anatomy and Physiology*, vol. xx, p. 268.

EXPERIMENT I.—A healthy setter bitch, weighing 14.96 kilos., had been kept upon a diet of porridge and milk till the urea excretion became constant. Pyrogallic acid was then administered by the mouth. Its influence on the urea excretion is shown in the accompanying table, and in Fig. 1.

Day of Experiment.	Urine in c.cs.	Sp. G.	Urea in grms.	Remarks.
1	765	1011	6.734	Weight of dog=14.96 kilos.
2	765	1010	6.734	Diet, oatmeal=113 grms.
3	885	1009	7.863	milk, . 320 c. cs.
4	855	1009	7.463	
5	810	1009	6.966	1 grm. pyrogallic acid.
6	975	1012	13.182	1.5 grm. ,, ,,
7	780	1009	7.956	
8	835	1009	7.480	
9	835	1009	7.480	

Fig. 1.



Experiment I.—Influence of pyrogallic acid on excretion of urea. 1 grm. given at *a*, and 1.5 grm. at *b*.

EXPERIMENT II.—In the second experiment, I employed the mixed salts of the bile-acids—the ordinary "crystalline bile" derived from ox-bile. This was given by the mouth, and hence only acted when exhibited in large doses, since, as we know, much of these acids is decomposed in the intestines, and, therefore, only a small part is absorbed unchanged, and in a form capable of destroying corpuscles.

The same dog was used, and the conditions of the experiment were precisely similar to those in Experiment I.

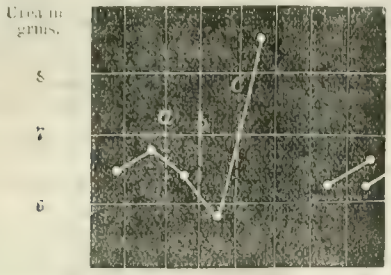
Day.	Urine in c.cs.	Sp. G.	Urea in grms.	Remarks.
1	650	1019	6.500	Weight of dog=14.96 kilos.
2	750	1009	6.060	Diet as in previous experiment.
3	660	1009	6.468	2 grms. crystalline bile.
4	580	1010	5.742	2.5 ,, ,, ,,
5	600	1014	8.640	6 ,, ,, ,,
6	380	1015	—	
	considerable quantity lost			
7	800	1008	6.656	
8	765	1011	6.734	
9	765	1010	6.734	

These experiments show that the action of these hæmolytic agents is accompanied by an increased production of urea.

But more than this is required to establish the fact that this increase is solely and purely due to the destruction of blood-corpuscles. We must be able to show a definite relationship between

the number of corpuscles destroyed, that is, the amount of hæmoglobin to be excreted, and the urea produced. I have accordingly undertaken the following experiments, in which the urea was daily estimated and the hæmocytes daily enumerated before and after the administration of some hæmolytic agent, in order that a calculation might be made of the increase in the production of urea on the one hand, and the amount of hæmoglobin liberated on the other.

Fig. 2.



Experiment II.—Influence of salts of bile-acid on urea excretion. 2 grm. given at *a*, 2.5 grm. at *b*, and 3 grm. at *c*.

In enumerating the corpuscles, I have employed Gowers' hæmocytometer, using a 0.75 per cent. salt-solution for the necessary dilution of the blood, and taking care to make the enumerations as nearly as possible the same hour each day—at the end of each experimental day in the table.

This method is wonderfully accurate, but since the object has been to ascertain the total number of hæmocytes destroyed, the increased production of blood-corpuscles which probably follows any increased destruction, just as it follows any hæmorrhage, must tend to vitiate the results obtained. During the first day or two of the increased destruction, this increased production will make itself less felt than after some time, when the economy has had time to attempt to re-establish the normal condition, and our attention must, therefore, be directed to the early days of each experiment.

In determining from the number of corpuscles destroyed per c. mm. the total destruction of corpuscles—or rather the total liberation of hæmoglobin in the body—it is necessary to be able to calculate the amount of hæmoglobin in the animal at the commencement of the experiment. By the use of Welcker's method, it has been shown that the blood of the dog is about one-thirteenth of the body-weight. While Preyer, in his work (*Ueber die Blutkrystalle*), states that the blood contains about 13.8 per cent. of hæmoglobin. Thus, knowing the weight of the dog, it is easy to calculate approximately the total amount of hæmoglobin in its body.

It has been long known that the hæmoglobin molecule readily splits into hæmatin and a globulin, but Hoppe Seyler has shown that it is more probable that, in the animal-body, a substance which he has termed hæmochromogen, and which has a percentage, composition almost identical with hæmatin is produced. This substance has probably the following composition: $C_{34} H_{36} N_4 Fe O_4$, while the hæmoglobin-molecule may be represented by the formula

$$C_{680} H_{960} N_{154} O_{179} S_3 Fe$$

Now, since the hæmochromogen contains all the iron of the hæmoglobin, it is obvious that one molecule of the latter substance must yield one molecule of the former; that this is really the decomposition which occurs, is further shown by the fact that the residue has a percentage composition corresponding to that of an albumin.

	Hæmoglobin.		Hæmochromogen.		Residue.	Per Cent. Composition of Residue.
C	680	—	34	=	646	53.5
H	960	—	36	=	924	7.28
N	154	—	4	=	150	10.07
O	179	—	5	=	174	21.8
S	3	—	—	=	3	0.75
Fe	1	—	1	=	—	—
						100.00

Expressing this gravimetrically, we see that 13,332 grms. of hæmoglobin will correspond to 12,296 grms. of the residue, containing 2,100 grms. of N.

Now, if all the nitrogen is excreted as urea, we should have from each 13,332 grms. of hæmoglobin, 4,506.4 grms. of urea, seeing that urea contains 46.6 per cent. of nitrogen; that is, each grm. of urea will correspond to nearly 3 grms. of hæmoglobin.

Various attempts have been made to represent the disintegration of the hæmoglobin molecule in the liver; and, in my paper in the *Journal of Anatomy and Physiology*, I based my calculations upon the formula given by Charles (BRITISH MEDICAL JOURNAL, 1885, vol. i, p. 820).

$$2 (C_{680} H_{960} N_{154} Fe S_3 O_{179}) + 501 O + 182 H_2O = H_2SO_4 + Fe_2O_3 +$$

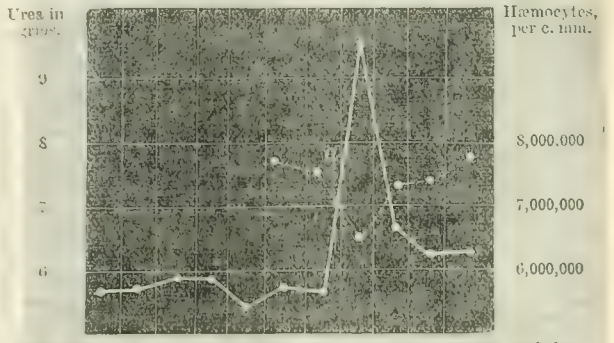
	C.	H.	N.	O.
2 Bilirubin	64	72	8	12
150 Urea	150	600	300	150
5 Glycogen	960	1,600	—	800
25 Carbonic acid	26	—		52
	1,200	2,272	308	1,014

As far as the production of urea from hæmoglobin is concerned, this formula gives results corresponding to those arrived at from the present method of calculation.

EXPERIMENT III. *Pyrogallic Acid.*—In this experiment, a large black retriever, weighing 15.43 kilos., was used. The diet and details of the experiment are given in the accompanying table and figure 3:

Day of Exp.	Urine in c.cs.	Urea in grms.	Hæmocytes per c. mm. of blood.	Weight in kilos.	Remarks.
1	500	5.800			*Inet.* Oatmeal, 169.8 grms, as
2	500	5.800			porridge.
3	565	5.998			Milk, 320 c.cs.
4	565	5.998			
5	400	5.450			
6	475	5.643		15.43	
7	495	5.643	7,460,000		2 grms. of pyrogallic acid, urine dark in colour, no albumen.
8	660	9.483	6,615,000		
9	485	6.617	7,275,000		Urine still dark.
10	475	6.220	7,270,000		
11	475	6.220	7,270,000	15.42	

Fig. 3.



Experiment III. Influence of pyrogallic acid on urea excretion and the number of hæmocytes. 2 grms. administered at *a*.

Before the administration of the drug, the corpuscles were 7,460,000 per c. cm.; but at the end of the second day, after the administration of pyrogallic acid, they fell to 6,615,000. Now, the blood of a dog is about $\frac{1}{13}$ of its weight; therefore, in this case, the dog had 1186.3 grms. of blood. The hæmoglobin, according to Preyer, is in the dog 13.8 per cent. of the weight of the blood—in this case probably a little less, as the corpuscles did not reach the usual number, about 7,800,000 to 8,000,000, which would make the percentage about 13.4 instead of 13.8—and the weight of the hæmoglobin 129 grms.

Now, under the administration of the drug, the corpuscles fell from 7,460,000 to 6,615,000, so 15 grms. of hæmoglobin must be set free; and since 3 grms. of hæmoglobin equal 1 grm. of urea, this will equal 5.0 grms. of urea, an amount corresponding very closely to the actual increase from the average daily excretion—5.722 to 9.483—4.761 grms.

EXPERIMENT IV. *Pyrogallic Acid.* For seven days before the administration of the drug, the dog, a healthy setter bitch, had passed, on an average, 7.679 grms. of urea per diem. The corpuscles at the end

of the sixth and seventh day were 7,866,000, and 7,850,000, being an average of 7,860,000 per c.mm. The weight of the dog was 13.607 kilos. Calculating from Welcker's results, we see that the blood weighed 1,047 grms., which will, according to Preyer, contain 144.348 —say 144 grms. of hæmoglobin.

On the eighth day, 2 grms. of pyrogallic acid were given, and another 1.5 grm. were administered on the ninth day.

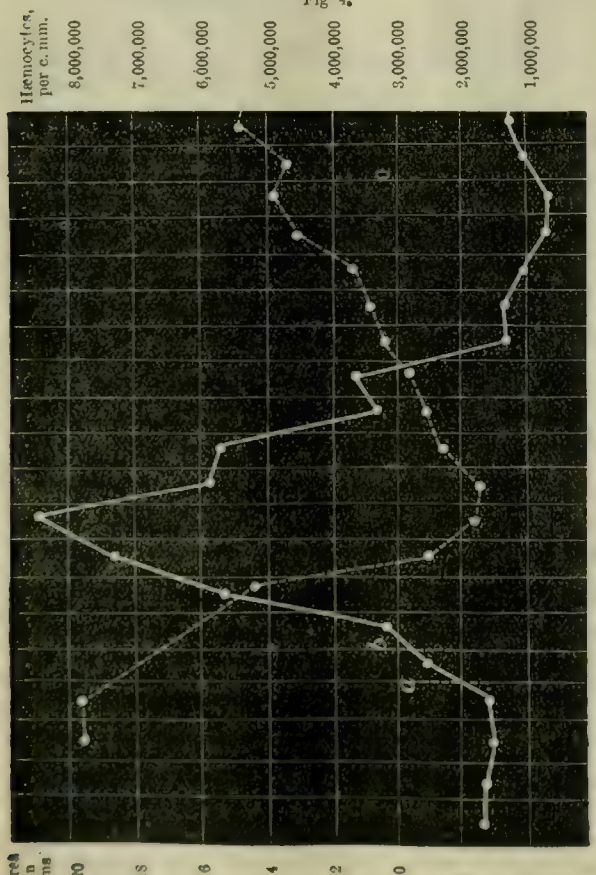
At the end of the tenth day, the corpuscles had fallen to 5,190,000 per c.mm., indicating a destruction of 2,670,000 per c.mm. Calculating from the above data, we find that this indicates a liberation of 48.9 grms. of hæmoglobin. And as we have already seen that 3 grms. of hæmoglobin are equivalent to 1 grm. of urea, we should expect to find, if all the hæmoglobin was excreted as bilirubin, urea, etc., an increase of 16.3 grms. of urea above the normal. But a considerable part of the hæmoglobin escaped the action of the liver, and was excreted in the urine as such. Accordingly, we find a rise of only 11.855 grms. of urea above the normal.

During the next twenty-four hours, the corpuscles fell to 2,604,000 per c.mm., indicating a further liberation of 40 grms. of hæmoglobin, corresponding to 13.3 grms. of urea. But the urine still contained blood-pigment, and we find an increase of only 10.855 grms. of urea.

Next day, the corpuscles fell from 2,604,000 to 1,876,000, which represents the liberation of 11.2 grms. of hæmoglobin, yielding 3.7 grms. of urea. In reality, the urea in the urine was 13.4 grms. above the normal. Such an excess does not, however, tell against the formation of urea from hæmoglobin, since at this period of the experiment the increased production of blood-corpuscles tended to mask the increased destruction. This is rendered evident by the appearance at this time of numerous microcytes in the blood.

Taken over this whole period, we find that the actual excess in urea-formation was 35.11 grms., or only 1.81 grms. above the amount calculated from the fall in the corpuscles.

Fig 4.



Experiment IV.—Influence of pyrogallic acid on urea excretion and on number of hæmocytes. 2 grms. given at *a*, and 1.5 grms. given at *b*.

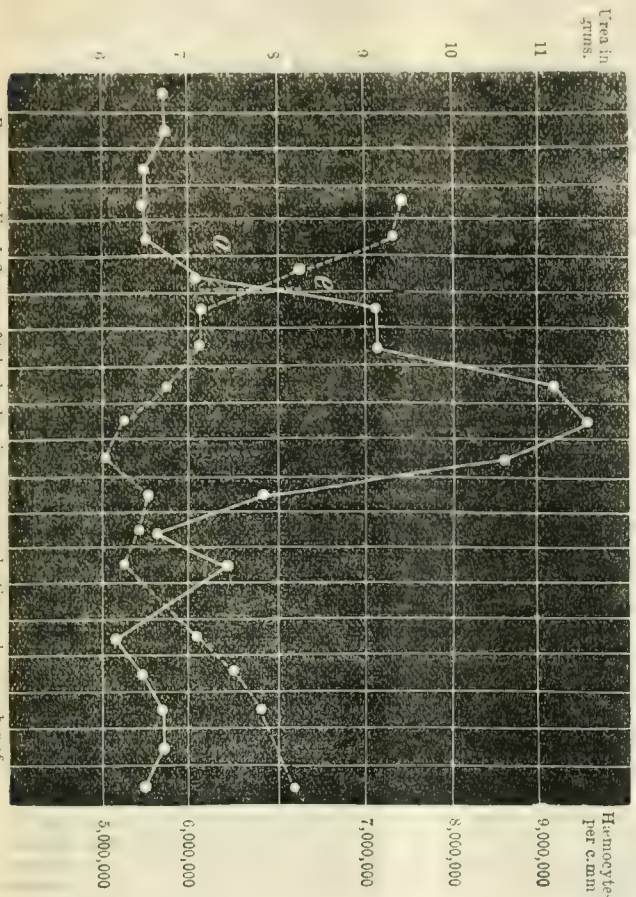
EXPERIMENT V. *Toluylendiamin.*—For this experiment, an old black retriever bitch, weighing 15.876 kilos., was used. The subjoined table and Fig. 5 show the influence of toluylendiamin on the urea-production and on the number of blood-corpuscles. On the sixth day of the experiment, 0.4 grm. of the drug was administered, while 0.3 grm. was given on the following day. On the seventh day, the dog was distinctly jaundiced, and the urine was of a dark port-wine colour, and contained bile-acids and pigments. On the eighth day, the jaundice was more marked and general, but, by the ninth day, it had somewhat diminished. Throughout the experiment, the dog seemed perfectly well, and took its food greedily. Calculating as in the former experiments, we find that a dog of this weight has 1,221 grms. of blood and 168 grms. of hæmoglobin. Between the fifth and the eleventh day, the corpuscles fell from 8,390,000 to 5,060,000—a fall of 39.69 per cent. Thus, throughout the body, 66.7 grms. of hæmoglobin must have been set free, and, supposing this to be entirely broken up into urea, bilirubin, etc., we should expect to find a formation of 22.3 grms. of urea above the normal.

Day of Exper.	Urine in c.cs.	Sp. G.	Urea in grms.	Hæmocytes per c.mm.	Weight in kilos.	Remarks.
1	660	1011	7.820	—	13.607	
2	660	1011	7.820	—	—	
3	700	1009	7.280	—	—	
4	750	1009	8.050	—	—	
5	680	1010	7.338	—	—	
6	720	1010	7.920	7,866,000	—	
7	620	1011	7.068	7,850,000	—	
8	720	1013	9.144	—	—	2 grm. pyrogallic acid.
9	560	1015	10.168	7,520,000	—	1.5 grm. pyrogallic acid. Urine dark, some albumin. No bile pigments.
10	675	1018	15.580	5,195,000	—	Urine contains abundant albumin and hæmoglobin. No corpuscles, no bile pigments.
11	380	1034	18.534	2,604,000	—	Urine contains much hæmoglobin, but no corpuscles. Dog takes food, but is markedly icteric.
12	680	1033	21.312	1,876,000	—	Urine bloody. Dog is dull. Vomited matter richly bile-stained; jaundice less marked.
13	360	1032	15.954	1,800,000	13,100	Urine contains much less alb., and is free from hæmoglobin. Dog took 650 c.cs. of milk.
14	300	1032	15.960	2,330,000	—	Urine gives a faint reaction of bile acids. Dog takes food well.
15	600	1014	10.520	2,546,000	—	Urine contains no blood, and a mere trace of albumin, with light tawny port wine colour.
16	570	1016	11.351	2,893,000	13,321	
17	530	1010	6.523	3,290,000	—	Urine free from albumin.
18	570	1010	6.615	3,456,000		
19	530	1011	6.042	3,630,000		
20	510	1014	6.646	4,616,000		
21	600	1011	5.360	4,935,000		
22	500	1013	6.090	4,400,000		
23	580	1012	6.460	5,606,000		

Before the administration of the drug, 6.645 grms. of urea were daily excreted, and, during the six days following its administration, the production of urea in excess of the normal was 18.588. On the seventh day, 1.251 grm. of urea in excess of the normal were excreted, making in all 19.839, only 2.461 grm. less than the amount calculated from the disintegration of hæmocytes.

Day of Exp.	Urine in c.cs.	Sp. G.	Urea in Grms.	Hæmocytes per c.mm.	Remarks.
1	525	1013	6.741	..	Weight on 5th=15.87 kilos.
2	525	1013	6.741	..	
3	520	1013	6.554	..	Diet—Oatmeal=170 grms.
4	460	1014	6.596	8,500,000	Milk, 320 c. c.
5	460	1014	6.596	8,390,000	
6	500	1015	7.070	7,320,000	0.4 grm. Toluylendiamin.
7	490	1018	9.156	6,185,000	0.3 grm. Toluylendiamin.
8	490	1018	9.156	6,165,000	
9	400	1018	11.280	5,870,000	
10	580	1015	11.600	5,250,000	
11	620	1014	10.626	5,060,000	
12	470	1016	7.896	5,510,000	
13	520	1013	6.635	5,410,000	
14	480	1015	7.566	5,280,000	
15	..	..	..	..	
16	580	1013	6.158	6,030,000	
17	400	1015	6.560	6,525,000	
18	500	1014	6.726	6,690,000	
19	500	1014	6.726	..	
20	600	1012	6.500	7,170,000	

Fig. 5.



This experiment is specially valuable, because the disturbing influence of increased production of hæmocytes does not appear to have obscured the extent of destruction as in Experiment IV. It was only some days after the destruction of corpuscles had reached its greatest extent that increased production became fairly established. This is probably to be accounted for by the fact that an older dog was used in this experiment.

An important point demonstrated by this experiment, and by Experiment IV, is the fact that anæmia does not increase the production of urea. Although the number of corpuscles remained low, the urea rapidly returned to the normal amount.

The remarkably close relationship between the number of corpuscles destroyed, that is, the amount of hæmaglobin excreted, and the increase in the quantity of urea produced under the influence of these drugs, leaves no doubt that urea, like the bile pigments, is actually derived from the decomposition of effete hæmaglobin.

Direct Action on the Hæmocytes of Drugs, Increasing Urea Production and Bile Secretion.

To show that the direct relationship, which I have already shown to exist between urea formation and bile secretion under the influence of various cholagogues, is due to the increased disintegration of hæmocytes, it is necessary to investigate the direct action of these drugs upon the red blood-corpuscles.

Observations outside the body are absolutely essential, since changes produced in the corpuscles after the introduction of these drugs into the living body are not necessarily due to the indirect action. Specially important is the demonstration of these changes in such a research as the present, where, from the increased secretion of bile induced, the possible action of bile acids and their salts must be carefully excluded. My object has been merely to ascertain if the drugs above mentioned have any hæmolytic action, and I have not considered it expedient to describe at length the various changes which occur in the course of the disintegration of hæmocytes—a line of histological research which would, I believe, throw some important light on the minute structure of the red blood-corpuscle. In such a research, various precautions are necessary. In the first place, the solution employed must have a neutral reaction, since any degree of acidity or alkalinity tends to destroy the corpuscles. Secondly, it is necessary to employ solution of the same specific gravity as the blood-serum (1025), or to use such a solvent as a 0.75 per cent. salt solution in which corpuscles remain unchanged. This salt solution is especially useful where dilute solutions of the reagent have to be employed.

The action of these substances has been studied not only on the mammalian, but also on the amphibian, blood; but since their action on the latter is precisely similar to their influence on the former, I have not deemed it necessary here to describe it in detail, and have confined myself entirely to the changes observed in the human blood. The mode of experiment was as follows:—A drop of the solution was placed on the finger, which was pricked through this. The blood was mixed with the solution, and the mixture was transferred to a shallow cell, covered and at once examined, usually under a Zeiss F lens.

Salicylate of Soda.

On the action of salicylic acid and salicylate of soda on the red blood-corpuscles outside the body, several observations are already recorded.

Chirone (*Il Movemento med. e. chir.*, 11-12 maggio) states that the toxic action of this drug depends upon its destructive action upon the hæmocytes.

Cotton (*Lyon Méd.*, t. 50, 557) shows that, with a 3 per cent. solution, the red corpuscles become globular, and that the hæmoglobin is decomposed.

Prideaux (*Practitioner*, Sept., 1878, p. 171) states that it has no influence upon the hæmocytes, but that the movements of the leucocytes are diminished.

Thiersch (*Volkmann's Klin. Vorträge*, Nos. 84 and 85, p. 657) finds that salicylic acid destroys the red blood-corpuscles.

Prudden (*American Medical Journal* for 1882, p. 64) describes very carefully the influence of salicylic acid dissolved in a 0.5 per cent. salt solution upon the hæmocytes. He finds that a solution containing 1 part in 500 causes a rapid disintegration of the corpuscles, but that in more dilute solutions it acts merely like other dilute acids. He also notices that it acts more rapidly upon the corpuscles of the frog than upon the mammalian corpuscles.

A. Outside the body.

Solutions of different strengths were employed, but, with the stronger solutions, disintegration of the corpuscles occurred so rapidly that it was impossible to study the various changes. A 1 per cent. solution in 0.75 per cent. salt solution may be employed with advantage.

On allowing a drop of this solution to mix with a drop of blood, the following changes occur:

1. Large blunt crenations appear round the periphery of the disc.
2. These crenations become sharper and longer, and the corpuscles shrink in size and assume a spherical form.
3. The spines next become more numerous, entirely covering the surface of the corpuscle, at the same time they become shorter.
4. The spines finally disappear, leaving a small highly refracting deeply pigmented sphere.
5. The hæmocyte now slowly increases in size, becomes paler, and, on close examination, it is seen to be granular—the granules appearing to be in an active state of motion within the hæmocyte.
6. The granules become more and more apparent, and grow larger and larger, and seem to collect the pigment around them, so that we have a colourless cell with a thin layer of pigment under the membrane and masses of pigment throughout the cell.
7. The pigment is gradually dissolved out—colouring the blood-serum, and leaves within the cell colourless masses of the intracellular stroma.
8. These masses become less and less distinct, and, finally, an almost homogeneous, colourless, transparent, spherical shadow is left, which requires for its detection very careful focussing.

Different corpuscles are seen to have a very different resisting power in regard to the action of salicylate of soda. Some corpuscles break down at once, while others hold out for long after the majority have been reduced to shadows.

B. In the living body.

Experiment A.—A female, aged 15, and weighing 40.8 kilos., who was suffering from favus, but who was otherwise healthy, was employed in this and in the next experiment. The diet was as nearly as possible uniform, and, at 12.30 each day, the number of hæmocytes per c.mm. was estimated with Gower's hæmocytometer.

Between 2 P.M. on April 7th and 10 P.M. on April 8th, 13 grms. of salicylate of soda were administrated in 20-grain doses. On the morning of the 8th, well marked symptoms were induced. The accompanying table shows that, under the influence of salicylate of soda, a fall of 300,000 per c.mm. occurred in the number of corpuscles:

Date. 1885.	No. of Hæmocytes per c. mm.	Remarks.
April 5th	4,825,000	—
,, 6th	4,900,000	—
,, 7th	4,870,000	13 grms. salicylate of soda.
,, 8th	4,870,000	
,, 9th	4,570,000	—
,, 10th	4,650,000	—
,, 11th	4,720,000	—
,, 12th	—	—
,, 13th	4,740,000	—

Experiment B.—The same individual was used as in Experiment A, and the experiment was in every way, with the exception of the doses given, exactly the same as the last. The administration of the drug was commenced at 12 noon on the 28th. On the evening of the 29th, well marked symptoms were induced.

The following results were obtained:

Date.	No. of Hæmocytes per c. mm.	Remarks.
April 27th	4,850,000	—
,, 28th	4,850,000	—
,, 29th	4,695,000	7.2 grms. of sod. sal. in 24 hours.
,, 30th	—	7.2 grms. of sod. sal. in 24 hours.
May 1st	4,625,000	—
,, 2nd	4,060,000	—
,, 3rd	4,720,000	Faint traces of salic. in urine.
,, 5th	4,750,000	—

Experiment C.—A setter bitch, weighing 11.80 kilos., and recovering from the anæmia induced by the administration of pyrogallic acid, was used. The diet was fixed.

Date	No. of Hæmocytes per c. mm.	Remarks.
May 14th	5,400,000	—
,, 15th	5,320,000	6 grms. salicylate of soda.
,, 16th	5,000,000	6 grms. salicylate of soda.
,, 17th	4,555,000	—
,, 18th	5,105,000	—

These three experiments, yielding results so entirely uniform, clearly show that in the mammalian body the administration of even comparatively moderate doses of salicylate of soda is followed by a considerable destruction of blood-corpuscles.

Benzoate of Soda.

The benzoates, like the salicylates, belong to the carbolic acid group of pharmacological substances, most of which, as indicated by Harnack (*Arzneimittellehre*, p. 288), exert a destructive influence on the blood-corpuscles. I have been unable, however, to find any experiments on the direct action of the benzoates in the blood.

When a 5.5 per cent. solution of benzoate of soda (specific gravity 1025) is mixed with a drop of human blood, the following changes occur in the corpuscles:—

1. Some assume a globular form, and become larger and paler.

2. A great number are enlarged and paler with a faintish more or less crenated outline. Their form becomes irregular, varying from almost spherical to fusiform.

3. The largest number become somewhat reduced in size, lose their bi-concave form, appear bounded by a strong dark border, and are markedly crenated. When a number of these are together a curious oscillatory movement may be seen, closely resembling Brownian movement.

If such a preparation be placed for some time in a warm moist chamber, a large number of the corpuscles are converted into shadows, while all stages between such shadows and the small crenated corpuscles may be studied. Under the cover-glass these changes go on much more slowly than without it. In this respect benzoate of soda appears to resemble toluylendiamin, which according to Afanassiew (*loc. cit.*) requires the free ingress of air to the preparation to enable it to exert its destructive influence upon the hæmocytes.

In all these observations check experiments, with blood mixed with 0.75 per cent. salt solution, showed no destruction of corpuscles.

Benzoate of soda is therefore undoubtedly a hæmolytic agent, but not of such power as the salicylate.

Colchicine.

I can find no observations on the direct action of colchicine on the blood-corpuscles. Schroff (*Lehrbuch der Pharmacologie*, p. 615) describes the condition of animals poisoned with colchicine as follows:—

"Am constanten fand sich Enteritis bisweilen Gastritis und immer ein dickes, peschwarzes, theerartiges, schmieriges Blut, das die Höhlen des linken Herzens und die obere und utere Hohlader bis in ihre Verzweigungen, die dem Hirn, der Leber und der Niere angehoren erfüllte."

All subsequent writers have merely quoted this observation of Schroff.

a. Outside the Body.—A 5 per cent. solution of perfectly neutral colchicine dissolved in 0.75 per cent. salt solution was used.

The following changes may be observed:—

1. The corpuscles become cupped, a convexity taking the place of the concavity on one side.

2. The lips of the cup approach one another and become irregular.

3. The corpuscles become spherical, some small and dark, others larger and paler.

4. The large pale hæmocytes become shadows simply by losing their colouring matter.

Some of the smaller ones enlarge and throw out processes: these processes are either (1) long transparent filiform vibrating tails, sometimes markedly articulated, almost moniliform, at other times with no apparent joints, but always with a somewhat club-shaped head; or (2) round, clear, and spherical. Both forms are to be seen in the one corpuscle. These processes often break off and cause a granular appearance of the serum in which the corpuscles float, at other times they remain attached.

5. The pigment slowly dissolves out till only a layer inside the cell membrane is left.

6. This in turn, too, disappears, and nothing is left but a shadow, often with processes attached.

b. Within the Body.—The method of enumerating the corpuscles per c.mm., employed in my experiments on the action of salicylate of soda upon the blood in the living mammal, was unsuited for the investigation of the blood-changes induced by such a drug as colchicine, which by its well-known cathartic action causes a concentration of the blood, as shown by Malassez.

Another method of experiment had to be adopted.

A large male cat received no food for twenty-four hours. At 11 o'clock on May 5th, 0.1 grm. of colchicine, procured from Messrs. Hopkin and Williams, London, dissolved in about 20 c.cs. of water was administered. During the afternoon, the cat had several mucous evacuations of the bowels, and vomited some glairy matter. In the evening it was dull; it died on the morning of the 6th. The thorax was opened, and some blood taken from the right auricle was at once examined; this contained a very large number of shadow-corpuscles arranged in groups. Blood taken from the femoral vein, and from the lower part of the vena cava, also showed the presence of these shadows, but not in such large numbers as in the heart. The right side of the heart was full of fluid blood of a very dark colour, which coagulated on being placed in a glass vessel. This experiment clearly shows that colchicine within the animal body destroys the red blood-corpuscles.

Perchloride of Mercury.

On the action of the salts of mercury on the hæmocytes outside the body, I can find only one investigation. This is by Polotebnow (Virchow's *Arch.*, Bd. xxxi, s. 35), who employed a solution of albuminate of mercury, 1 c.mm. of which contained from 0.014 to 0.015 grm. of perchloride of mercury. As a result of his investigations, he concludes that:

1. Under the influence of concentrated solution of albuminate of mercury, the blood-corpuscles, after their round form is once altered, have lost the capacity to resume their original shape, either through a loss of the elasticity of their membrane or in consequence of some other cause.

2. In a solution of albuminate of mercury, the corpuscles are very quickly destroyed, the rapidity being in proportion to the amount of mercury present, and being also more rapid when the blood is shaken up with air, or when the temperature is raised for thirty or forty minutes to 37° or 38° C.

3. Under the influence of mercury, the corpuscles quickly lose their pigment, and the more concentrated the solution the more rapidly does this take place.

4. The absorbent power of the blood for oxygen is also diminished.

Of the many investigations on the action of mercury on the blood-corpuscles in the living body, I can find only one of any scientific

value. The majority have been made on syphilitic patients with small doses of the drug extending over a lengthened period, so that as direct evidence of the action of the drug on the corpuscles they are of no value.

Wilbowchewitch (*Arch. de Physiologie*, t. 1, p. 530) records four experiments made upon rabbits, which clearly show that, under large doses of perchloride of mercury, a very marked diminution in the number of blood-corpuscles per c.mm. occurs. The following table gives the results of his fourth experiment.

Date.	Hæmocytes per c.mm.	Weight of Rabbit.
May 5th ..	4,480,000 ..	2.120 kilos.
0.001 grm. of perchloride of mercury given daily hypodermically from 5th onwards.		
May 8th ..	4,200,000 ..	2.010 kilos.
,, 9th ..	4,000,000 ..	1.900 ,,
,, 11th ..	4,000,000 ..	1.800 ,,
Diarrhœa occurred on the 12th, and the corpuscles rose to—		
May 12th ..	5,202,400 ..	1.870 ,,
The treatment was stopped till the diarrhœa ceased, and was then continued.		
May 15th ..	3,363,800 ..	1.736 kilos.
,, 16th ..	3,200,000 ..	1.676 ,,
The dose was progressively increased.		
,, 17th ..	3,140.000 ..	1.660 ,,
,, 18th ..	3,000,000 ..	1.650 ,,
,, 19th ..	2,900,000 ..	1.500 ,,
,, 20th ..	2,800,000 ..	1.460 ,,
,, 21st ..	2,700,000 ..	1.444 ,,
,, 22nd ..	Animal died. ..	—

Such experiments are only of value when taken along with observations in the hæmolytic action of mercury outside the body, since without such observations it would not be fair to conclude that any increased destruction, and not merely a diminished production, had occurred.

The chief difficulty in the way of studying the action of mercury upon the blood-corpuscles outside the body, is that nearly all the salts of this metal cause coagulation of albumin. The mercuric potassic iodide in dilute solution has not this action, and I have, therefore, employed it in the following observations.

I had previously ascertained, from a number of experiments, that the iodide of potassium has absolutely no action on the red corpuscles, and that the chloride of potassium is also inert.

I therefore consider it a fair deduction that any action which the mercuric potassic iodide may exert is due to the mercury it contains.

A solution composed of 1 grm. of mercuric chloride, 3 grms. of potassic iodide, and 60 c.c. of water, was prepared, and was diluted with 60 c.c. of a 0.75 per cent. salt-solution, as its action without this dilution was so rapid as to prevent any observations on the nature of the changes induced.

When this solution is added to a drop of blood, the hæmocytes are seen to swell up, and to lose their bi-concave form, while the pigment disappears, leaving the cell-membrane enclosing the intranuclear network. Very frequently, the membrane collapses, and the corpuscle is represented by a shrivelled shadow.

It would thus seem that the influence of these drugs on bile-secretion and urea-formation may be explained by their destructive influence on red blood-corpuscles, hæmoglobin being set free and excreted by the liver as already described. Such a direct influence on the blood-corpuscles is rendered all the more probable by their absorption into the very slow hepatic blood-stream, and also through their probable re-entrance into the liver, after excretion in the bile, through the entero-hepatic circulation.

From these observations, I would conclude:

1. That the destruction of blood-corpuscles must be considered as a powerful stimulant to the secretion of bile, the liver having as one of its functions the elimination from the system of effete hæmoglobin.

2. That urea-production, also, is increased by the destruction of blood-corpuscles.

3. That bile-secretion and urea-formation bear a direct relationship to one another, and that this relationship is due to the dependence of both upon destruction of hæmocytes.

4. That the cholagogue action of salicylate of soda, of benzoate of soda, of colchicine, of perchloride of mercury, of pyrogallic acid, and of toluylendiamin, as well as their influence in increasing the production of urea, is due, in great measure at least, to their direct hæmolytic action.

The connection of urea-production with the destruction of hæmocytes naturally suggests the question, How much of the total urea produced in the animal body in its normal condition is derived from effete hæmoglobin? This question I hope to discuss in a future paper.

THERAPEUTIC MEMORANDA.

CARBOLIC ACID IN THE TREATMENT OF WHOOPING-COUGH.

In view of his memorandum in the JOURNAL of July 24th, Dr. Suckling will feel interested in the following paragraph contributed by me to the *Edinburgh Medical Journal* of June, 1881, Article VII.

"On an extended trial, I find carbolic acid, in doses of one-fourth minim to a child of six months, one-half minim for a year, and one minim for two years and upwards to be the best remedy for whooping-cough. The whoop goes, the vomiting ceases, the paroxysms are modified in intensity and frequency. This result I believe to arise from a similar action to that of creasote on the motor fibres of the vagus to the stomach, and from a lowering of the vitality of specific germ of whooping-cough. This points to the antiseptic treatment of the zymotic diseases generally." These doses were large, and required to be watched. I now give smaller quantities. Glycerine is my solvent, but in greater proportion than in the glycerine of carbolic acid (*B. P.*).

Again, in these columns for June 7th, 1884, and in a letter on "New" Researches on Infection and Disinfection, I wrote:—"Accordingly, I prescribe carbolic acid for whooping-cough internally, and also, in bad cases, by sprinkling of the solution about the room."

I mostly prescribe that mode of treatment still, but I think the word "almost" to be a wise reservation on the part of Dr. Suckling when he says; "I believe carbolic acid almost deserves to be called a specific for pertussis." In the majority of cases, no treatment is required beyond prevention of exposure to cold or windy weather. My own children have recently recovered from the disease under very little more than this careful expectancy. I may, somewhat irrelevantly, add that when strength and appetite fail, and much vomiting is present in the earlier period, I have found very great benefit to be derived from the administration of four or five dessert-spoonfuls of Barff and Wire's kreochyle, or liquid meat, daily.

ARCHIBALD D. MACDONALD, M.D. Edin., Liverpool.

A NEW CURDLING FLUID.

JUDGING from Dr. Ashby's note in the JOURNAL, July 24th, he appears to be quite unacquainted with the existence of rennet powder, or he would have hardly found much difficulty in preparing as much whey as he may want, in the most satisfactory manner possible, and at the smallest possible cost. As rennet powder is now largely used in the manufacture of cheese in many of the best dairies, there can be no question of its being free from the objections to which Dr. Ashby alludes. If he, or any other reader of this note, should have any difficulty in obtaining rennet powder, a post-card to the manager of the Model Dairy here will furnish them with a supply sufficient for curdling several gallons of milk for a few pence.

F. T. BOND, M.D., Gloucester.

TREATMENT OF A FORM OF DIARRHŒA IN CHILDREN.

IN the JOURNAL of July 87th, Dr. Braithwaite, under the above heading, describes a method of treatment which he has found to be effectual in this disease.

If the form of diarrhœa to which Dr. Braithwaite refers be characterised by motions not only extremely offensive, but also very watery and frequent, I think he will find a form of treatment I have used for the last six or seven years quite as effectual, and much more palatable for the little ones, than what he has been accustomed to use and now recommends. It is to give the liquor hydrargyri perchlor. in from five to ten minim doses, every hour or two, according to the age of the patient and the severity of the attack.

I have never found this fail, and it is usually effectual in the course of twelve hours or less. It probably acts in the same manner as does Dr. Braithwaite's mixture, by disinfecting the bowel; and we know what a very powerful germicide perchloride of mercury is; hence, I think, its great utility.

WM. W. MILLARD, M.B., George Place, Edinburgh.

SURGICAL MEMORANDA.

INTERNAL HÆMORRHOIDS.

To save time and trouble when operating for internal piles, I have found the following simple instrument very useful for their protrusion. It consists of a piece of hard wood, shaped something like the

plug of a female speculum. The shoulder should be slightly cupped inside. When oiled, it is easily inserted into the rectum, and, on withdrawal, causes all internal piles to protrude.

F. A. A. Smith, M.D., C.M., 4, Anchorgate Terrace, Portsea.

REPORTS OF SOCIETIES.

BORDER COUNTIES BRANCH.

Friday, June 25th, 1886.

Cornelius S. Hall, M.R.C.S., President, in the Chair.

Intussusception.—Dr. Welby I'Anson read notes of a case of Intussusception, and showed the portion of bowel removed by operation. The patient was a delicate little boy, two years of age. On February 5th, 1886, he passed a quantity of blood, and, soon after, began to strain frequently at stool, passing nothing but blood and mucus. Two doses of castor-oil were administered by the parents, but were rejected by the stomach. When first seen, on the evening of the 6th, he was vomiting frequently, and constantly attempting to defæcate. The abdomen was soft, not distended, and free from tenderness, and there was some fulness in the right loin. The rectum was empty, and an enema brought away nothing but blood. He was given full doses of belladonna; a poultice was applied to the abdomen; food was restricted to barley-water and milk; and aperients were forbidden. On the 7th, the symptoms continued; but the abdomen was now considerably distended, and a distinctly elongated tumour could be felt on the right side. The vomit was fæcal, pulse very rapid, and temperature subnormal. Under chloroform, reduction of the obstruction by insufflation of air was attempted, but proved a failure. Accordingly, the abdomen was opened in the middle line by an incision, two inches in length, between the umbilicus and pubes. Clear serum escaped, and a coil of brightly injected bowel showed itself. The intussusception was found on the right side, and extended from the cæcum to the centre of the transverse colon. It was all reduced by manipulation, except about two inches. As this portion was also very livid and friable, and tore with even gentle traction, it was excised, and an artificial anus formed. After the operation, opium was given, and the diet restricted to iced-water and barley-water. Flatus passed through the wound on the next day, and a solid motion on February 9th. Vomiting was troublesome for several days, but ceased when nutrient enemata were substituted for feeding by the mouth, while the general condition of the patient improved greatly. At midnight, however, of February 12th, he began to fail. Diarrhœa set in, and he died on the 14th, exactly a week after the operation.—In the discussion which followed, Drs. Lockie, Irwin, and Ablett took part.

Specimens, etc.—Dr. J. R. Irwin showed the following specimens and patient: 1. Oblique fracture of femur extending 8½ inches from the trochanter major towards the inner condyle, caused by falling downstairs. The patient was a female, aged 72. Death was due to acute bronchitis, six weeks after the accident. 2. Aneurysm of the ascending aorta, showing aneurysmal sac, containing a large semi-organised clot, the hypertrophied heart, and the right bronchus, where it was pressed upon by the aneurysm. The wall of the sac contained numerous calcareous deposits. The patient was a male, aged 40. There was no history of syphilis. The patient believed that the disease was caused by straining when lifting heavy weights. 3. A patient with favus, the disease extending over the whole of the scalp and the greater part of the body. Mr. Irwin also read notes on a case of cystic sarcoma of the ovary. Patient, E. S., female, aged 42, was unmarried. When first seen, two months before death, she was greatly emaciated, and complained of pain in the abdomen. There was tenderness on pressure over the uterus. On vaginal examination, the uterus was found to be displaced towards the right side, and a large tumour almost filled the pelvis. The rectum was free as far up as the finger could reach, but there was complete obstruction of the bowel for six weeks before death. There was no discharge from the vagina. There was constant sickness. The abdomen became enlarged, through ascites. She was tapped, and a gallon and a half of fluid was drawn off. She gradually sank, and died on October 22nd, 1885. At the *post mortem* examination, the body presented an extreme degree of emaciation. The abdomen was opened from the umbilicus to the pubes. Numerous enlarged glands were found in the abdomen. The pelvis was filled with a tumour, the upper part of which was cystic. The left ovary was much enlarged; everything in the pelvis was matted together, and the bowel at the sigmoid flexure was firmly bound down to the bone by adhesive bands, so that nothing could pass through it.

Intussusception.—Dr. Lockie showed a striking example of intussusception, through the ilio-cæcal valve, from a child.

STAFFORDSHIRE BRANCH.

Thursday, May 27th, 1886.

J. T. Hartill, M.R.C.S., President, in the Chair.

Permanent Closure of the Orbital Cavity.—Dr. Edwyn Andrew (Shrewsbury) exhibited a man on whom he had performed his operation for permanently closing the orbital cavity, after excision of the eyeball, by removing all the ocular and palpebral mucous membrane, the cartilages, and edges of the lids, and allowing the cut surfaces to unite. He pointed out the great advantages of this operation for the artisan class; no dirty discharging socket was left, and it rendered the person quite independent of the weather, or of the dirty surroundings of his occupation, enabled him to dispense with a shade, or any other covering, and saved the expense of an artificial eye, which, if not frequently renewed, became a great evil. He mentioned also that this was one of many cases which showed that the fear of a lacrymal fistula from such an operation was quite erroneous, for probably the lacrymal gland, not being stimulated to action, wasted away.

Congenital Deformity of Forearms.—Dr. Evans showed a boy, aged 16, with congenitally deformed forearms. The right forearm and elbow were ankylosed and semiflexed at an angle of 120°, and the forearm was in a position midway between supination and pronation. The head of the radius appeared to be dislocated forwards; the radius measured four and a half inches, and was non-rotatory; the ulna was six inches long. The wrist-joint was normal, but the hand was a little abducted. The left forearm and elbow were movable; the ulna measured three and three-quarter inches in length; the radius, about two inches long, did not appear to reach the humerus. No supinatory or pronatory movements were possible. The patient had also genu valgum in both legs.

Myeloid Sarcoma of Head of Tibia.—Dr. Evans exhibited a myeloid sarcoma occupying the upper end of the tibia. Microscopic specimens of the growth were shown.

Calculus in Kidney.—Dr. W. G. Lowe exhibited an uric acid calculus of irregular shape, occupying and moulded to the pelvis and calices of the left kidney of a young man, aged 26, who died from acute tuberculosis. During life, the only symptom complained of was severe pain in the left lumbar region. There was no blood, pus, or albumen in the urine; but the patient, when 7 years old, had passed a small calculus by the urethra. The affected kidney was much smaller than the right, and its structure was pale and anæmic. The calices were dilated.

Congenital Fatty Tumour.—Mr. Vincent Jackson showed a boy, aged 2, from whom, last March, he removed from the left loin a large congenital fatty tumour weighing six ounces. The circumference of the tumour was thirteen inches, and its longest diameter six inches. A photograph of the patient before operation was on view.

Vesico-vaginal Fistula: Rupture of the Perinæum and Extensive Division of the Recto-vaginal Wall.—Mr. Vincent Jackson showed an unmarried girl, aged 18, who was admitted into the hospital a month after being confined of a still-born male child at full term. She was attended by a midwife; and, after being in labour for twenty-four hours, she was seen by a medical man, who delivered her by the aid of the forceps. Her height was 4 feet 8½ inches. She was completely restored from a very wretched and uncomfortable condition by three operations. Two were required to close the large transverse vesical aperture, and one to restore the perinæum and reunite the unusually long recto-vaginal fissure.

Perinæal Median Cystotomy.—Mr. Vincent Jackson showed a little boy, aged 5 years, who was admitted into hospital for stone in the bladder. Upon examination, the calculus was found to be small. A small staff, grooved upon the convexity, was passed into the bladder, and the stone was felt. The lower limbs being held in the lithotomy position, the forefinger of the left hand was inserted into the rectum, its point being placed upon the groove of the staff near to the neck of the bladder. A scalpel, edge upwards, held in the right hand, was inserted in the middle line of the perinæum, above the anus, and pushed on until its point reached, and was stopped by, the grooved staff, the urethra having been incised for a short distance, the knife was withdrawn, cutting upwards for half or three-quarters of an inch. A director was now passed through the wound into the groove of the staff, and along it into the bladder, and, the left forefinger having been removed from the rectum, the left hand held it securely. The staff was now withdrawn, and along the director a slender pair of lithotomy forceps was conducted into the bladder, and, the director being removed, the stone was at once grasped,

and instantly brought away; it weighed twenty-six grains, and was composed of uric acid. In twenty-one days the wound was soundly healed. Mr. Jackson stated that the operation which he had described, although performed for the removal of a stone from the bladder was to be considered as a cystotomy rather than as a lithotomy; it was easy, simple, and safe. The linear cicatrix resulting from the operation barely measured half an inch, and an operation which could be performed in a few seconds was that which appeared to him to be preferable to all others for the removal of small vesical calculi from boys and male infants (see JOURNAL, April 3, p. 660).

Tubercular Ulcer of Tongue.—Mr. VINCENT JACKSON exhibited a married woman, aged 37, admitted with tubercular ulcer of point of the tongue. No enlarged glands were detected, but the apices of both lungs were phthisical. Local remedies proving valueless, about an inch of the front portion of the organ was sliced away, and the mucous membrane of the upper and lower surfaces was stitched together by several points of very fine silk suture at close intervals. The recovery was rapid, and the relief complete.

Multilocular Ovarian Cyst.—Mr. VINCENT JACKSON showed a large multilocular ovarian tumour containing much solid and semi-solid matter, recently removed from a married woman, aged 24. An unusually large incision was required before the tumour could be liberated, and lifted out of the abdomen; and great care was necessary in washing out of the peritoneal cavity a large quantity of gelatinous fluid which unavoidably flowed into it. Recovery was rapid, as, within nineteen days, the patient was discharged from the Women's Surgical Infirmary.

Badly Made Trusses: Large Strangulated Femoral Hernia: Successful Herniotomy and Radical Cure.—Mr. VINCENT JACKSON, in showing some improperly made trusses, narrated the following case. A woman, aged 44, stated that, when 23 years of age, whilst laughing heartily, she felt something come into her right groin. By degrees, a swelling appeared, and a truss was applied; but from this period, in spite of every kind of instrumental support, the hernia gradually increased until it reached very large proportions. As a rule, a night's rest had enabled her to return the hernia; but twenty hours before Mr. Jackson saw the patient, symptoms of strangulation commenced. The hernia was seen to be very large, occupying almost the upper half of the left thigh. It felt very tense, and seemed to contain fluid, intestine, and omentum, as was verified upon the operating-table. The tumour being freely laid open, much red serum flowed away, and the huge coils of congested small intestine were reduced, although the neck of the sac was freely incised, and stretched to its utmost extent. The omentum was carefully overhauled, but, as it was much changed in appearance, being puckered, thickened, and altered in colour, the whole was first secured by tying it at various points with carbolised silk, and then cutting it away. The sponge which had been placed over the intestines being removed, the neck of the sack was stitched together. Poupart's ligament and the fascia forming the outer edge of the saphenous opening were carefully approximated. As much of the sac as possible having been cut and torn away, the edges of the wound were united with sutures and drainage-tubes; and the dressings having been applied, the patient was removed to bed. The lady made an excellent recovery, and, although a light truss was directed to be worn, the cure was complete. The piece of omentum removed weighed one pound and a half.

Papers.—The following papers were read. Dr. MCALDOWIE: "Paralysis of the Arm from Lesions of the Nerve-Trunks." Dr. W. G. LOWE: "Two Cases of Diabetic Coma in Young Children;" and "A Case of Death from Diabetes Insipidus." Mr. VINCENT JACKSON: "An Analysis of 101 Cases of Osteotomy."

PRESENTATION.—Dr. H. M. Tuckwell has been presented with a gold minute repeater watch and a presentation volume, containing an address and the names of the 73 subscribers, being medical men of Oxford and the surrounding district, and a few of his old teachers and friends at St. Bartholomew's Hospital. The address is as follows:—"We, the undersigned medical men, desire to convey to Dr. Tuckwell an expression of the regard we have for him, as a physician whose generous and straightforward conduct has done much to elevate the tone of our profession. We wish to express our sincere regret at his retirement from practice, and more especially for the ailment which has necessitated his doing so. We beg his acceptance of this watch, as a token of our esteem and sympathy."

MEDICAL MAGISTRATE.—Dr. Ryan has been appointed a justice of the peace for County Tipperary.

REVIEWS AND NOTICES.

SANITARY SYSTEMS, SHOWING HOW THE DEAD SHOULD BE DISPOSED OF BY NATIONS WHO STUDY THE HEALTH AND COMMERCIAL INTERESTS OF THEIR PEOPLES. By Colonel T. MARTIN. Guernsey: Frederick Guerin, 25, High Street. 1886.

WE have before us a work by Colonel T. MARTIN, published at Poonah in 1864, entitled *Cinerator for Use of Brahmins, etc.*; and it will thus be seen that he is no new convert to the necessity for reform in respect of final disposal of the dead. In the work alluded to, sketches were given, showing not only how easily a cremation could be performed, but how a multiplicity of cremations could be carried out at the same time by the use of one furnace.

It was certainly the most practical article on cremation ever written with an especial meaning, as regards the furtherance of the rite in India upon such an improved system, as would render the present crude systems of cremation altogether obsolete. He showed how the castes could be separated, even in this last ritual; and, taking it altogether, that work was an earnest forecast of the present one.

His present pamphlet is certainly worth perusal, inasmuch as he has clenched the various arguments in favour of cremation, and against inhumation; and it is just such a work as might have been expected from so enthusiastic a reformer. In this volume, Colonel Martin has issued no plans, nor were indeed any necessary, after the useful ones given in volume 2 of the *Transactions* of the Cremation Society of England, published by Smith, Elder, and Co. There can be no doubt but that a reform is greatly wanted in the performance of cremation in India, and we are continually receiving communications, urging the establishment of some scientific system of incineration, so as to lessen the customary horrors of the burning ghauts. Cases have before now occurred in England where an Indian rajah has sought in vain for the means of cremating his wife, and, until lately, so high placed a subject could not be accommodated with what he is held to consider as perfect consummation. The pamphlet is calculated to do considerable good, and we would recommend Colonel Martin to circulate it largely in the land where he has spent so much of his life.

NOTES ON BOOKS.

Burial Reform and Disposal of the Dead. By F. W. LOWNDES, M.R.C.S. (Liverpool: A. Holden. 1886.)—This is a very reasonable paper upon the disadvantages of burial of the dead, as now practised in and around Liverpool, and must be decidedly interesting to sanitarians in that neighbourhood. His conclusions are eminently satisfactory, and he begins these by saying that "Cremation should be permissible; absolute proof being required that the death has been natural, or that an inquest has been held." This formula of procedure is that entertained by every advocate of cremation, and is more or less generally accepted as the correct procedure, even by those who have not as yet the courage of their own opinions.

Lewis's Medical Pocket Vocabulary. (London: H. K. Lewis. 1886.)—This is a small 32mo volume of 213 pages, containing a list of the medical terms more commonly in use. To the medical student, and as a book of reference for the general reader, this pocket volume will serve a useful purpose at times and places when a larger and more bulky work would be inaccessible. The volume is clearly printed, and neatly and strongly bound in leather.

HEBBURN.—During the year 1885, there were 570 births and 269 deaths within this township, being a decrease of 15 births and an increase of 34 deaths as compared with 1884. The birth-rate was thus 36.77 per 1,000, and there was a slight decrease in the infant mortality as compared with this return. Mr. W. J. Sweet draws a comparison in all his mortality statistics with those of fifty large towns of England, showing that, in spite of a slight increase, the death-rates are still below the average. The general rate was 17.35, against 19.6 per 1,000, and the zymotic rate was 2.2 against 2.3 per 1,000. The information afforded as to zymotic diseases is statistical only. Measles, scarlet fever, and whooping-cough, were more or less prevalent during the year, causing respectively 18, 10, and 6 deaths. There was but one fatal case of diarrhœa. Mr. Sweet reiterates his opinion as to the desirableness of having a special inspector for school-attendance, who should be empowered to give certificates, if necessary, to the School Board.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ACORN COCOA.

DR. C. HASENCLEVER, Assistant-Physician to the Augusta Hospital in Berlin, has published in the *Deut. Med. Wochenschrift* an interesting report on the successful treatment of the chronic diarrhœa of children by a new preparation of cocoa, consisting essentially of pure cocoa deprived of a large part of its fatty matter, and combined with *a soluble extract of roasted acorns free from cellulose;* a slight addition of roasted flour and of sugar is made to the cocoa in preparing the cocoa-powder, in order to ensure the necessary conditions of a perfect beverage. It was employed for several months in a long series of cases (97 in number), being those of diarrhœa, mostly combined with vomiting. The children varied in age from seven months up to nine years. They were, for the most part, in a miserable condition from neglected diarrhœa. Seventeen cases were complicated with rachitis, and others of the children were suffering from chronic chest-affections. Many of the children had been fed upon milk, and a great variety of infant foods, and the results reported are in the highest degree successful, the improvement being, in most instances, very quickly perceptible, and most of the children being cured within eight days. In order to make the observations conclusive, no other food or medicine was allowed during the time of treatment than this, the acorn-cocoa, that is, cocoa prepared, as stated, with soluble extract of acorn. It was given either by the bottle or spoon. The formula for the preparation of the cocoa was furnished by Professor Oscar Liebreich and Dr. Michaelis.

This acorn-cocoa has a pleasant flavour, like that of chocolate; and the preparation was readily taken from the commencement, and continuously for any length of time, this being probably due to the slight astringent flavour of the cocoa. Of chocolate or cocoa alone, children will sometimes tire; but it was stated that the cocoa prepared in this way never palled upon the palate; and it is pointed out that tea and coffee, which are the only other beverages of which no one seems to tire, contain, in addition to the same alkaloid as that which is found in cocoa, a slight astringent, which the soluble acorn-extract furnishes. The great nutritive value of the cocoa, compared with tea and coffee, gives it obvious advantages.

Several adult cases of diarrhœa and chronic gastric catarrh were similarly treated with great success by the acorn-cocoa. Dr. Hasenclever observes that it has not yet been ascertained whether the valuable properties of this cocoa are due solely to its astringent influence or to its anti-fermentative character; but the careful observations made leave no doubt that the acorn-cocoa completely answers its purpose both as a remedy and as a food in the treatment of chronic diarrhœa, and especially that of infants. Dr. von Hossling reports, in the *Münchener Medicinische Wochenschrift*, a trial, in twenty-nine cases in the out-patient department of the Children's Hospital at Munich, of the same food, and with equally good effects. It seemed to have a remarkably good result in rapidly improving the condition of the children and their state of nutrition; and also in arresting the diarrhœa of phthisical patients. As a suitable food for children having a tendency to chronic diarrhœa, it is a great desideratum; and the result of these successful observations in Munich and Berlin has been to bring this acorn-cocoa into extensive use in Germany, both as a beverage for children and for adults. Our own experience is very favourable to it.

The name, perhaps, is not altogether well chosen, since the beverage is essentially cocoa, with the addition only of a given quantity of the soluble extract of acorns. It promises to be a valuable addition to the range of dietetic articles, useful both in daily life and for the specific purposes indicated. It is manufactured by Messrs. Stollwerck (Cologne), and is introduced into this country by Messrs. Kuhner, Hendschel and Co., 145, Cannon Street, E.C.

BEQUESTS AND DONATIONS. — Mrs. Hames, of Rotherby, bequeathed £100 to the Northampton General Infirmary, and £100 to the Leicester Infirmary. — Messrs. N. M. Rothschild and Sons have given £100 to the North-Eastern Hospital for Children. — Mr. Robert Loder has given £100 to the Charing Cross Hospital.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 31st, 1886.

HONOURS FROM THE ASSOCIATION.

THE meeting at Brighton will be brightened with some very agreeable incidents, of which we publish the announcement elsewhere. The highest honour which it is in the power of the Association to bestow is its Gold Medal for Distinguished Merit. No honours can be more valued by a professional man than those which are conferred on him by his peers. They are the best, the most severe, and most critical judges; their unanimous award of an honour of which they have justly been very chary, cannot but be deeply appreciated. It must be to Dr. Waters a source of unfeigned satisfaction that his long self-sacrificing and devoted labours on behalf of the cause of medical reform have been at length crowned with a large measure of success, and that the Council of the British Medical Association have responded to an unanimous resolution of the Medical Reform Committee, ascribing to Dr. Waters the chief merit of this success, by voting to him the blue riband of the profession. There are only two instances in which the Association has conferred that distinction. The first recipient of this honour was Mr. Henry Naunton Davies, L.R.C.P.Lond., of Pontypridd, who displayed heroic conduct in the Tynewydd Colliery accident in April, 1877; and, through his act of bravery, the Association were prompted to found "a medal to be bestowed for distinguished merit." The second was Surgeon-Major J. H. Reynolds, M.B., V.C., on whom the medal was conferred in 1879, in consideration of his bravery under fire, and humanity to the wounded at Rorke's Drift, during the Zulu campaign.

Few can have any idea of the sacrifices of energy, time, patience, and money which Dr. Waters has made to fulfil the trust which the Association laid upon him, and to carry the burden which it annually renewed. It needed unfaltering perseverance, unshaken trust, and an ever present sense of duty to persevere, year after year, in the long journeys, the continued interviews, the reasoning, the negotiations, the varied strain connected with each renewed effort, and ending, year after year, in the most vexatious disappointments and unexpected failures. The cheery courage, the loyal determination, the good-tempered patience, and the intelligent diplomacy, have at length been rewarded by a success snatched amid circumstances of great difficulty and uncertainty. Dr. Waters has fully realised the conditions of high, arduous, and disinterested service to the profession; and his merit is, at least, as signal as the manner of its recognition.

At this meeting, also, will be presented the Stewart Prize, which has been awarded to Dr. Cory, for the story of whose extraordinary self-sacrifice in the investigation of a dark problem connected with

the practice of vaccination against small-pox we have already more than once expressed the profound admiration which all must feel The Middlemore Prize, for which essays of unusual excellence have been sent, will be awarded to Mr. Berry and Mr. Adams Frost, whose essays stand in the first rank, and are found to be of equal merit.

Finally, it will be noticed that a beginning has been made of what may well become, in future years, an interesting portrait-gallery of medical worthies by the presentation to the Council of a portrait of its President, Dr. Foster, who has, on many occasions, deserved well of the Association and the profession, and has yet before him the prospect of a distinguished public career. The Association will probably before long have secured the more permanent home which has been resolved on. A gallery of the portraits of its Presidents and leading Councillors will be the natural ornament of such a home. There are so many great names connected with it in its public offices and annual meetings, that a gallery might quickly be accumulated of presented portraits in one or other form, of which the contemporary interest would be great, but which would grow in value as the years roll on, and would have, in later years, historic value.

MEDICAL OFFICERS OF SCHOOLS: THEIR DUTIES AND USES.

HYGIENE is often spoken of as though it were one of the youngest departments of Sociology, whereas it is, perhaps, older than medicine; it guided the Jewish law-giver in many of his enactments, and was an ordinary part of higher education in Greece and Rome. The ancients, indeed, considered that the knowledge of the general principles of hygiene was a part of polite learning, and provided that youth should receive instruction from physicians in the methods of preserving health, avoiding disease, and training the body to endure fatigue. Mr. Walter Pater, in his pleasing story, *Marius*, has well indicated how Æsculapius came to typify that perfection of bodily health, in the absence of which mental operations cannot be performed at the greatest advantage; Æsculapius was worshipped, not out of a cowardly dread of disease, but of a manly love of health. If the letter signed "Head-Master," recently published in the *Times*] can be taken as fairly representing the general standard of knowledge and opinion among head-masters, we must have fallen very far behind; in the eyes of this enlightened pedagogue, to seek to avoid infection is to exhibit a cowardice which is "worse than death." If an epidemic disease enter a school, let us take no precautions for preventing its spread, lest we frighten the boys, and so create a panic; let us make believe that there is no danger, and by crying out loudly enough "Peace! peace!" let us endeavour to hide the awkward fact that there is no peace, but a deadly enemy in our midst. This is a very familiar kind of argument, though we had supposed it characteristic only of the vestry-mind, in its operations so charmingly like the mind of the simple ostrich of the desert, which thinks to elude pursuers by cunningly concealing its head. If there is an epidemic, hush it up for fear of frightening the people; there is nothing so demoralising as fear. *O Sancta Simplicitas!*

The strange attitude taken up by the Head-Master of the Charterhouse School at Godalming in face of an epidemic of diphtheria in his school shows that he, to some extent, shares the ostrich-like tendency so boldly proclaimed by the other Head-Master. The medical officer of the school, in a letter published in these columns last week, says that he has long discarded as a dissimulation the phrase "diphtheritic sore-throat," yet we have the Head-Master of the school writing to the *Times* that, "during the last two months, we have had two cases of diphtheria, and seven other cases of throat-ailment with diphtheritic tendency." The medical officer says that he felt no doubt as to the nature of the cases; the] hesitation, therefore, in calling the disease by its right name, arose in some other quarter. The most disquieting part of the whole story has been the discovery that a certain—happily small—proportion of masters, even at the public schools, consider themselves competent to override the opinion of the medical officer, and set aside his advice. The medical officer at Charterhouse was only able to recommend the removal of the sick boys to the sanatorium, and to impress on each house-master the serious responsibility he would undertake if he rejected the recommendation. It is almost incredible that men of education, aware that they have no special medical training, can have the temerity to depend on their own untrained judgment in opposition to the skilled opinion of a specialist retained for the very purpose of giving advice on such points; yet we fear that if the history of the recent epidemic could be fully exposed, it would be found that there were house-masters who deliberately refused to accept the diagnosis of the medical officer. It seems, at least, clear, from the admissions made by Mr. Girdlestone, one of the house-masters, in his letter to the *Times*, that he did not allow the sick boys to be removed to the sanatorium. Moreover, all boys not actually ill were allowed to return to their homes for a short holiday, contrary to the advice of the medical officer.

The unfortunate events at Charterhouse involve a matter of principle in the hygienic management of schools, which is of great practical importance, and one which has been fully dealt with in the excellent *Code of Rules for the Prevention of Infectious and Contagious Diseases in Schools*, issued under the authority of the Medical Officers of Schools' Association (see p. 234). In that *Code* it is laid down that the medical officer ought to have undivided medical responsibility, with full control over the entrance into the school of boys known to have recently had any illness, or to have been exposed to infection, and of all the arrangements for isolation and disinfection, with power to act immediately if any sanitary measures be urgently needed. He ought to be directly responsible to the governing body, which, for this purpose, may be taken, in every case, to include the Head-Master. His duty, with regard to infectious diseases, is twofold: to prevent their introduction into the school, and to prevent their distribution by the boys on their return home. To the former end, the *Code* recommends that every boy, on returning to school, should be required to produce a certificate stating whether he has suffered from or been exposed to any infectious malady; that the first cases of infectious disease should be immediately conveyed in an ambulance-cab to the school-infirmary and there isolated; that cases of infectious illness occurring in the families of the masters, should be reported to the medical officer and isolated; and that the matrons, during the prevalence of an epidemic, should be privately warned to report every case, of even slightest indisposition, to the medical officer. With the latter object, it is recommended that if, at the end of a term, any infectious disease exist in the school, notice to that effect should be sent to all the parents, stating the nature of the disease and the period of incubation; further, if a serious outbreak occur, the parents of all boys ought equally to be informed. "If a large outbreak of scarlet fever were to occur, or two malignant cases in quick succession; a malignant type of measles; an outbreak of typhoid fever, or of

diphtheria; then the first step to be taken is to give notice to the parents of the facts, and thus to give them the opportunity of removing their children, if they wish to do so." This paragraph in the *Code* exactly covers the case raised at the Charterhouse; it was because a parent claimed the right to remove his son temporarily from the school on account of an outbreak of diphtheria, of the existence of which he had not been officially informed, that the boy was, practically, expelled.

The case demonstrates the necessity for a definite code of rules in each school for dealing with emergencies of this kind, sanctioned by the governing body, and strictly defining the powers and duties of the medical officer. An excellent series of rules were in existence at Charterhouse, and had been "approved by the Head-Master;" the house-masters, however, do not appear to have considered themselves bound by these rules, and, in fact, have set them at nought. Great anxiety has naturally been caused in many parental bosoms by the discovery of so serious a defect in school-organisation; a little common sense, and a reasonable devolution of authority, would suffice to allay this anxiety, and prevent the recurrence of such a paper-war as has recently raged about Charterhouse. Let the medical officers of our great public schools be elected by, or responsible to, the governing body; let the governing body formally adopt a code of rules such as that issued by the Medical Officers of Schools Association; let the medical officer have final authority in determining what cases come within the scope of the rules; then the system will work itself, and we shall hear no more of these unfortunate misunderstandings.

THE VALUE OF THE BIOLOGICAL TEST FOR POTABLE WATERS.

GREAT expectations were raised five years ago by the announcement that, in the application of Koch's pure or gelatin-peptone culture of micro-organisms to potable waters, we had discovered a means of giving numerical expression to the fitness—or at least the probable fitness—of any given water for drinking purposes. Some saw in bacterioscopic examination a valuable aid to, or corrective of, the inferences, too often uncertain, drawn from the chemical analysis of the water, but not a few over-sanguine microscopists fancied that, in the future, biological would entirely supersede chemical methods in all but exceptional cases, or special inquiries.

Its advocates did not, indeed, claim for it that it could enable them to distinguish between pathogenic and innocent bacilli, but they did believe that the pathogenic belonging almost exclusively to the class whose colonies have the property of liquefying the gelatine in which they grow, the number of these, as tested by gelatine, would point to the greater or less probability or possibility of the presence of disease-germs among them; to say nothing of the indications afforded by those known to be associated with putrescence.

Koch found in each cubic centimètre of distilled water four to six colonies, in sewage 38,000,000, in the effluent from the irrigation-fields 87,000, in river-water, before treatment at the Stralau water-works 125,000, and in the same after filtration 120 only. Further and periodical examinations of these and other waters seemed to establish the reputation of the new process on a firm basis, and quite recently Dr. Percy Frankland had conducted and reported to the Local Government Board the result of regular examinations of the London waters. We publish at page 223 a paragraph referring to some of the scientific conclusions embodied in the Report.

But, in a paper read on April 16th last, before the Society of Medical Officers of Health, Professor Bischof gave an account of observations of his which tended greatly to discredit this method, if not to deprive it of all value. When he and Dr. P. Frankland examined samples taken at the same times and places, there was a remarkable uniformity in their several results, not only as to the order in which they arranged the respective waters, but in the actual numbers of liquefying and non-liquefying colonies observed.

But, as Professor Bischof points out, constant results can only be obtained when all conditions and circumstances are absolutely the same; and, as this can never be predicated with certainty, any inferences drawn from the number of colonies of total or of liquefying colonies are null and void; for the development of bacteria depends not so much on the nature of the particular species as on its surroundings, the most important conditions or factors being temperature and time—in other words, storage; while the presence or absence of light influences different species, favourably or otherwise.

The New River Company's water, for example, which, when taken from the main, would very properly have been pronounced excellent, contained, after six days' standing in sterilised and closed flasks, no fewer than seventeen times as many colony-yielding germs as water taken fresh from the Thames at London Bridge; while samples of the former, to which one per cent. of enteric stools had been added, gave, after six days' standing, fewer colonies than those which had not been polluted, doubtless from the fact that the enormous proliferation which occurred in the first few days had exhausted the pabulum, just as in the process of putrefaction and self-purification which used to be observed in the water with which the casks of ocean-going ships were formerly charged.

Again, as was insisted on by Dr. Klein, not only have we at present no means of distinguishing pathogenic from other organisms, but they do not all belong to the liquefying class, and not a few require several days to effect any visible change in the gelatin.

Some, again, will not develop at all in gelatin, and some will not do so in the presence of other forms; while, lastly, there is the difficulty with the microscopes in general use in bacterioscopy of taking in the entire field of examination. But while fully admitting the force of these objections, and the importance of recognising the fallacies incident to observations made without due regard thereto, we fail to see that the biological method has been proved worthless.

The conditions existing in a closed flask are not comparable to those of the water in a running stream or in a reservoir, where it is undergoing constant renewal. The manifest relation subsisting between the total number of colonies and the purity of a water, as shown by chemical analysis, and a consideration of its source and history, to which systematic observations in Berlin and elsewhere have as yet shown no material exception, are not invalidated by experiments performed under special, we might almost say, unnatural conditions.

Though it will never supersede chemical analysis, it may serve to supply information which chemistry alone cannot furnish; just as analysis is insufficient for the absolute condemnation or approval of a water without a knowledge of its source and previous history.

In water-examination, as in the clinical study of disease, no single facts will suffice, and no conclusions must be allowed which are not based on a comparison of all ascertainable phenomena and circumstances with one another.

POSITION OF BRIGADE-SURGEONS, ARMY MEDICAL SERVICE, IN INDIA.

A movement on the part of brigade-surgeons of the Medical Staff Corps serving in India, for recognition of their rank on the part of the Government of India, is now in progress. It is alleged that, as the matter stands, the rank brings with it duties and responsibilities far in excess of those of surgeons-major when in charge of regiments under the old regulations. They are now always posted to the head-quarters of a division, and hold charge of the station-hospital, frequently in two or more sections, and they perform duties formerly divided among several senior officers. In addition to this, they have to carry on the duties of the deputy surgeon-general during his absence on duty, and when absent on privilege-leave up to three months, without additional pay or allowances, doing, also, their own work. The only recognition of the rank of brigade-surgeon in India seems to be permission to wear a different uniform from that of a surgeon-major.

The Government of India have, over and over again, asserted their right to regulate the pay and allowances of medical officers of the British Service serving in India, irrespective of any warrants dealing with the rank and pay of the same officers when at home. This is a regulation which cuts both ways, sometimes to the advantage, at others to the disadvantage, of the officers. When the pay-regulations for the medical department in India were promulgated, promotion to the administrative rank was quicker by five years than it is now. Consequently, surgeons-major are now in this position, they have to serve from twenty years' service to over thirty, with but one small increment of pay—thirty-seven rupees *per mensem* after twenty-five years' service.

The position of brigade-surgeon is attained not by any means as a matter of course. On the contrary, it is one of selection in the strictest sense of the term; only about 25 per cent. of the grade of surgeon-major attain to it at all. There must first be evidence of physical fitness to serve in any climate; favourable reports both from medical and military superiors; foreign service of, as a minimum, eight years; and last, not least, a strict examination.

All this being so, we think, on the part of the Indian Government, there ought to be some substantial recognition of the fact. The Government get the advantage of superior qualification for posts of responsibility and importance, and it is only right and reasonable that the advantage should not be one-sided. At the same time, we think the Indian Government have a right to place a limit on the number of brigade-surgeons sent to India. Let their remuneration be more in proportion to work and responsibility than it is now, but they have a perfect right to regulate the number of brigade-surgeons in receipt of extra emoluments. We think, if it became the practice to send brigade-surgeons in excess of service-requirements, the wrong at present done to them would be shifted to the finances of India.

There is a good precedent for this act of justice. The majors of artillery, when promoted from the rank of captain, were all granted majors' pay, the grant being even made retrospective. The BRITISH MEDICAL JOURNAL has never been the advocate of unreasonable demands on the part of the medical officers of the public services, or the organ of grievance-mongers; all the more, when it speaks as the organ of 12,000 members of the profession, and asks for justice to deserving officers who serve the State in positions of great usefulness and responsibility, its voice should be listened to.

IT is intended to establish a professorship of the Chemistry of Food in the University of Berlin. The holder of the chair is to have the rank of Extraordinary Professor.

"THE Effects of Tobacco on the Health of Men of Letters, and its Influence on the Future of French Literature," is the theme to be discussed in a series of essays, for the best of which the French Society for the Prevention of the Abuse of Tobacco offers a prize of 1,000 francs.

WE are asked to state that Mr. Sherrington, in his expedition to Italy to investigate the causes of cholera, to which we referred last week, has had the assistance of the Association for the Promotion of Medicine by Research.

NEWS comes from Japan that the cholera epidemic there becomes more and more intense. Strangers, and the Japanese in good circumstances, are not suffering much from its attacks, but the poor native population is almost decimated.

A PAIR OF CENTENARIANS.

THERE has recently died in St. Petersburg Madame Goruli, a contemporary of the Empress Catherine II, and a lady of the court of the Emperor Paul I. She is stated to have been 114 years old. Among those who attended her funeral was her sister, who had attained the age of 113, but who was still so robust as to be able to follow the bier on foot.

ST. GEORGE'S HOSPITAL.

CONSIDERABLE additions are being made to the school-buildings of St. George's Hospital, chiefly for the purpose of providing the necessary laboratories, and for the teaching of physiology in accordance with the increased requirements of the present day. This department has been placed under the superintendence of Dr. Delépine.

WORCESTER INFIRMARY.

AN anonymous donor has just presented to the Worcester Infirmary £5,000 on condition that his name shall not be divulged during his life. He had made a will bequeathing this sum to the institution at his death, but, on second thoughts, decided to hand over the amount while living, by which step he saved the infirmary from the heavy duty which would otherwise be levied on the bequest. The amount is to be invested in Consols, and the proceeds to go annually to the infirmary, which is to be enlarged.

MUSEUM CATALOGUES.

WE have frequently urged that every anatomical and pathological museum should be provided with a good catalogue. The College of Surgeons, St. Bartholomew's, St. George's, the Middlesex, and one or two other hospitals already possess these requisites. It is satisfactory to learn that Mr. Shattock is preparing a catalogue of the museum at St. Thomas's Hospital. We trust that, as at the College of Surgeons and St. Bartholomew's, a yearly list of addenda will henceforward be published, in some form, a practice which keeps the catalogue constantly up to date, with comparatively little trouble or expense.

PASTEURISM IN AMERICA.

THE first application by an independent experimenter of M. Pasteur's method of inoculation for rabies has been made in America. A "Pasteur Institute" was organised in New York some months ago; and, according to a report in the *Philadelphia Medical Times*, the first inoculation was made by Dr. Valentine Mott, junior; the patient was a boy who had been bitten by a dog apparently rabid; the bites were inflicted, it is said, on a part of the person usually covered by clothes, but whether through clothes or not in this instance is not specifically stated. The first inoculation was made within a few days after the infliction of the bite.

JUBILEE OF THE UNIVERSITY OF LONDON.

A DEPUTATION of the Convocation of the University of London waited on the Senate at its last meeting, in order to lay before it the proposal for celebrating the jubilee of the University. The Senate, we understand, listened with great attention to the representations of the deputation, and there was a general feeling that the event ought not to be allowed to pass without some notice. Probably some date about May or June next year will be selected for the celebration.

REFORM OF THE UNIVERSITY OF LONDON.

WE believe that, as was anticipated, the report drawn up by the committee over which Mr. Magnus presided, and adopted by Convocation of the University of London on June 28th, has been referred by the Senate to Lord Justice Fry's Committee, which already has an alternative scheme of reform under consideration.

WIT AND WISDOM.

THE late Dr. Moxon had a mind which habitually saw the humorous side of all things; every event and every statement seemed to be present to his mind in two aspects, and many of his sayings would be well worth preserving. His description of some of the aspects of the teetotal movement as "intemperate abstinence," and his definition of syphilis as "a fever diluted with time," are instances in point. As a teacher of materia medica, the shafts of his satire were frequently directed against inert drugs and obsolete formulæ; of elm-bark, for instance, he vouchsafed no further informatiou than that the wood was "good for making coffins." His grave discussion of the motto of Guy's Hospital, "Dare quam accipere," whether it had not reference to the stock mixtures, not only raised laughter at the time, but served a useful purpose by drawing attention to the fact that some of these old-fashioned remedies were horribly nauseous, and probably not very active.

ECHINOCOCCUS IN THE ARM.

DR. NOLTE describes, in a recent number of the *Allgemeine Med. Central. Zeitung*, the case of a woman who, in April last, consulted him on account of a swelling in the inner bicipital furrow of the left arm. It had been present three years; it was small and painless, and grew steadily, but until lately did not prevent her from performing hard field-labour. She took no notice of it, and did not seek medical advice until it became troublesome. When seen, it had the size and shape of a goose's egg, and felt hard and distended; there was no fluctuation or murmur; the tumour was quite painless. At the lower part was a small opening, from which fluid escaped. The arm having been carefully cleansed, an incision was made under strict antiseptic precautions, when there escaped about fifty echinococcus-cysts, varying in size from a pea to a walnut. The wound healed soon, and recovery was complete.

MAD DOGS.

THE Commissioner of Police has issued a notice to the police force with reference to the various statements recently published, conveying the impression that the majority of the dogs killed in the streets of London by the police are in a healthy condition, and not subject to disease or rabies. The following return of dogs killed by the police during the week ending July 10th, with the opinion of a veterinary surgeon as to the condition of the animals at the time they were killed, is given as an example of the cases dealt with: Number suffering from rabies, 5; number suffering from epilepsy, 7; number suffering from fits, 2; number suffering from convulsions, 1; healthy (ferocious when killed), 1; not examined, 1; total, 17. This is the greatest number killed in any one week since July 1st, 1885. Much stress has been laid on the fact that during last year only 60 dogs were found rabid at the Dogs' Home, and upon this has been based the supposition that the 365 dogs killed by the police in the streets were not mad. That this is an erroneous conclusion can be readily comprehended, when it is understood that the police captured over 25,000 dogs during the year 1885; 365 of these showed signs of rabies at the time, and were killed in the places where they were found, while 60, which did not appear to be mad at the time, developed signs of madness after arrival at the Dogs' Home, and were then killed.

CATERHAM ASYLUM FOR IMBECILES.

THE customary annual visit of inspection was made by the Metropolitan Asylums Board on Saturday last to this, one of the important institutions under its charge. Built upon the block-system, with a separate administrative block, and standing upon a site, on which farming operations are carried out, of 184 acres, it affords accommodation for 2,050 patients. This asylum is under the superintendence of Dr. G. Stanley Elliot, and deals with that large class of chronic harmless lunatics who were formerly sent to lunatic asylums, or were maintained in dull workhouse-wards without any amelioration of their wretched condition. These patients both require and receive very careful treatment, and are necessarily costly to maintain. Where possible, the inmates are usefully employed in suitable work, benefiting themselves, and lessening the burden of cost falling upon the ratepayers. Many of the women are engaged in domestic labour and in making clothing, while some of the men are employed in various trades, and work at farming. Since this institution has been founded, there have been nearly 6,000 patients dealt with; and of these, 312 who were considered permanently disabled by mental infirmity have been discharged recovered, and 347 relieved. The cost for food and clothing for each patient is but sevenpence per day, this cost being paid by the parishes from which the patients are sent, the whole establishment charges for officers, etc., being paid by the metropolis as a whole, the richer parishes assisting to pay the cost of the poorer. Attention was drawn to the various improvements made in the shape of fire-escape bridges from block to block, useful on ordinary occasions as airing-courts; and every detail of the management of the institution was closely inspected, the body of visitors at the close expressing cordial satisfaction at the result of the visit.

PRELIMINARY SCIENCE CLASSES FOR MEDICAL STUDENTS.

THE professors of the Faculty of Science of University College, as stated in our advertisement columns, have made arrangements for issuing a composition ticket for one year's study suited to the requirements of candidates for the preliminary scientific examination of the University of London. It is perhaps necessary to point out to those concerned in medical education in London, that the Faculty of Science of University College is quite independent of the Medical Faculty and hospital attached to that institution. There is no reason whatever why students who attend the course of instruction given in the Faculty of Science should be considered as in any way pledged to proceed subsequently to attend the medical classes which are conducted by a distinct branch or faculty. It is open to any student to take his preliminary science instruction, during one academical year, under the guidance of and personal supervision of Professors Williamson, Ray Lankester, Oliver, and Carey Foster, and then to choose the hospital to which he will proceed for distinctly medical studies. No doubt some of these students will decide to remain at University College, but we may feel assured that there is no attempt made to pledge the student to take such a step, and that it is the wish of the authorities of the College that its Science Faculty, which is provided with laboratories, museums, and teaching appliances, which are more extensive and complete than any in London, should serve as a preliminary training school for students of all the London hospitals. With this object in view, University College is prepared to issue the composition-ticket for its preliminary science curriculum to the authorities of the Hospital Medical Schools, who will be able to supply them to their own students, and make such arragements with the recipient of the ticket as may ensure his adhesion to the school from which he temporarily migrates for a year's study. The advantage of thorough

teaching by first-class authorities in the various branches of science of which the university requires a knowledge from candidates at the preliminary scientific examination cannot be disputed. If it is worth doing a thing at all, it is worth doing it well; and the scheme of lectures and laboratory teaching carried out by the professors of the Faculty of Science of University College is thorough and complete to a degree which no other institution in London can claim for its science-teaching. The laboratories of comparative anatomy, of chemistry, and of physics, at University College, are not simply class-rooms roughly prepared for the purpose of giving the minimum of practical instruction to examination students. They are provided with the best appliances for that purpose, but are also simultaneously occupied by students who carry on original investigations under the direction of the several professors, and add to knowledge by their researches, whilst the professors themselves are men who have devoted their lives to the advancement of the various branches of science which they undertake to teach. It can hardly be doubted that the intellectual atmosphere of such laboratories and lecture-rooms must have a beneficial effect on the student, and render the course of study for the Preliminary Scientific Examination a pleasure, and a permanent gain to his mental power, instead of an annoyance and an unprofitable drudgery.

THE LONDON CONVALESCENT HOSPITAL.

ACTIVE steps are being taken to carry out this scheme (inaugurated at a Mansion House meeting last year), which is a comprehensive measure, dealing completely with the want which is very generally felt for an increase of accommodation for the convalescent poor and working classes of London and its suburban neighbourhood. A special feature of the movement is, that ample provision will be made for a very large class of patients at present wholly unprovided for; that is to say, for those who, recovering from sickness or accident, still need a continuance of medical or surgical aid. The administration of the hospital will be carried on with the practical assistance of gentlemen of the medical profession connected with the leading London hospitals, who have already taken a prominent part in the deliberations of the Council. The Council is composed of a large number of the influential clergy, medical men, and laity of London, and is under the direction of Earl Cowper as Chairman, Sir Spencer Wells as Vice-Chairman, and Sir J. Risdon Bennett as Chairman of the Executive Committee. An essential principle in the constitution of the institution is, that every encouragement should be given to the working classes to assist themselves as far as they are able; and, consequently, as a general rule, a small weekly payment will be exacted from the patients. On the other hand, careful provision has been made for the free admission of those who, from extreme poverty, are entirely unable to help themselves. Before making any public appeal for funds, it has been thought better to secure the support of such among the wealthy and influential who might be found to approve the scheme; and already very liberal donations have been promised from the following, among others: Richard Benyon, Esq.; Duke of Northumberland; Earl of Dartmouth; Earl Cowper; Earl Brownlow; Wilberforce Bryant, Esq.; Samuel Morley, Esq.; R. C. L. Bevan, Esq.; Messrs. Gilbey and Co.; T. Clutterbuck, Esq.; Messrs. Sedgewick and Co.; T. G. Barclay, Esq.; F. D. Mocatta, Esq.; and the Earl of Cawdor.

THE CREMATION SOCIETY OF ENGLAND.

THE Cremation Society of England have issued a statement, in which they congratulate its friends on the steady progress which the Society is making in this country. Ten years ago, they observe, the possibility of practising cremation here was scarcely entertained. The subject was then nothing more than interesting matter for speculation, a dream of the sanitarian and the chemist, perhaps to be realised at some distant period. Five years ago, the practice was supposed to require additional sanction from the law, and probably to involve any person concerned with it in liability to heavy penalties. It is only now two years since the Society undertook the first cremation of a human body, being satisfied that the legal difficulties had been removed. The process was well accomplished, and there could be no doubt that, with a little modification, the operation might be rendered perfect. Since that time, five other bodies, six in all, have been cremated at their crematorium at Woking, and it is, perhaps, scarcely possible to accomplish the act with better results than have been lately achieved. As now performed, there is no sign of anything which can offend the senses, and everything is conducted in private with propriety and decorum. Complete guarantees are taken that the person to be cremated has died from natural causes. Finally, it is with much satisfaction that the Council is able to report on the increasing favour with which cremation is regarded in various parts of the Continent. Important communications have been received from foreign societies in relation to this matter. We may add that a Bill to authorise the establishment of sites for apparatus for the purpose of cremation has been introduced by Mr. Creed in the Legislative Council of New South Wales, and read a first time. The arrangements of the Municipal Council of Paris for cremation are approaching completion.

THE BRAIN OF GAMBETTA.

M. DUVAL (Director of the Laboratory of Anthropology) has recently given to the Society of Anthropology at Paris a detailed description of the external configuration of the brain of Gambetta. He draws special attention to the fact that the cortical structure in the neighbourhood of Broca's convolution has become markedly augmented. Usually this part of the brain assumes the form of an M, the two vertical limbs or sulci enclosing a small valve-like portion in the shape of a V. In the brain of Gambetta, however, as has been noted in other cases as well, this V-shaped portion has become doubled on itself, and assumed the form of a W instead of a V. When we recall the fact that Broca, in his memoirs, attributes to this part of the cerebral cortex (left or right sided, according as the individual is right or left handed) the function of articulate language, the unusual development of this convolution in Gambetta and others, confirms, to a certain extent, this opinion now generally accepted. Gambetta was a great orator, his memory for words being most remarkable. He had acquired a rapid and most exact method of expressing his ideas. It is, therefore, somewhat admissible to associate his great oratorical power with this increased growth of cortical tissue in the neighbourhood of Broca's convolution.

FLIES IN SUMMER.

A SANITARY contemporary relates a very pretty little story about the employment of flies as sanitary inspectors, or rather inspectors of nuisances. In one of the rooms of a house, offensive odours were detected, but their exact source could not be located. Before proceeding to take up the entire floor for the purpose of ascertaining the *fons et origo fœtoris*, it occurred to someone present to try the effect of introducing a couple of blue-bottle flies from the neighbouring stables. These sagacious insects, whose olfactory apparatus is apparently specially developed for stinks, soon settled upon one of the cracks in the floor, and, when the boards were raised at this point, a rat was discovered in an advanced state of decomposition. We are willing to admit that the suggestion reflected at least as much credit upon the person who made it, as upon the flies, who merely followed their animal instincts in preparing for a banquet, but when we have said this we have said all. No one would venture to maintain that this one solitary useful feature is a sufficient justification for the existence of the myriads of flies which, for the last week or two, have made the manufacture of adhesive fly-papers one of the few branches of industry exempt from the general depression which weighs like an incubus on commercial enterprise. The prevalence of flies, and the consequent intense discomfort of urban residents, shows a disposition to occur

periodically, without its being possible to ascertain the occult laws which preside over the exercise of their extraordinary reproductive powers. We are, to some extent, worse off than the Egyptians of old; for whereas their plague of lice occurred once for all (vestiges of it may, it is true, still be found in their descendants), our plague of flies shows an unfortunate tendency to recur. They are, doubtless, endemic in certain quarters of London, notably in the immediate neighbourhood of parish dust-heaps, slaughter-houses, and sewage-farms, but just now they are ubiquitous and universal. The man with the fly-papers is looked for with more anxiety than the tax- or rent-collector, a fact which nothing short of the extreme discomfort implied by their company can explain. Like the wind, we know not whence they come, although, thanks to our advanced state of civilisation, we are enabled to state, with some degree of certainty, whither a good many of them go. Still, enough remain to make life a burden, and if some, or even one, of those erudite and painstaking gentlemen who write learned and interesting treatises on earth-worms and blackbeetles, would devote their attention to the genesis of flies, they or he would confer a boon on suffering humanity which would amply compensate for any lack of scientific interest in his researches and their results. If the development of these restless insects be any indication of faulty hygienic arrangements, then there must be something intensely rotten in the state of Denmark—or, rather, England—to account for so abnormal a proliferation. The wonderful procreative powers of the herring or the rabbit sink into a contemptible insignificance beside those of this insect. Let us, then, be up and doing; and since everything is done in this country by means of associations, let one be formed for their extermination. Doubtless, some gentleman with the happiness of his fellow-beings at heart, will consent to receive subscriptions for this purpose.

THE LUNACY LAW.

We have received from a correspondent a communication which illustrates very forcibly the feeling prevalent among medical men with respect to their position under the Lunacy Amendment Act. He says: "We had the greatest difficulty to get a gentleman removed to a private asylum, owing to the refusal of medical men of substance to sign the necessary certificates. Notice was actually given to the parish authorities. The parish medical officer saw the case; but, on the following day, a gentleman from a neighbouring town kindly consented to fill up the form." This difficulty, we fear, is one which is more likely to increase than diminish as the law at present stands; and it is much to be hoped that the Lunacy Acts Amendment Bill, which has so far progressed, may be perfected and passed as soon as possible.

UNFORTUNATE GUY'S.

Guy's Hospital seems to have been for the last few years under an unlucky star. Rarely has it happened to a great medical school to lose in three successive sessions three of its leading members; and hard indeed has been the fate of Guy's to be deprived, by premature and unforeseen death, of three such men as Hilton Fagge, Mahomed, and Moxon.

THE COLOUR OF THE EYE.

The *Pall Mall Gazette* is exercising itself as to the best colour of the eye for rifle-shooting. Arguing from a general impression that the best rifle shots have blue eyes, it concludes that eyes with bluish or greyish irides are less subject to the effects of mirage than those of darker colour. It is scarcely necessary to say that such a conclusion has not, so far, been verified by scientific observation. Assuming it to be the fact that light-eyed people are better shots, this cannot reside in their greater immunity from refractive errors, since we may say certainly that no such immunity exists, for the blue-eyed Germans are, as is well known, the most subject to myopia of all nations. The matter then rests for the present in doubt, unless we may assume that people of Saxon and Scandinavian blood excel in rifle-shooting in the same way, and for the same reasons, as in all other out-door exercises involving skill and nerve.

CLIMATE AND PHENOLOGY.

The importance of studying climate from a sanitary point of view, and the difficulty attending it, should make medical men ready to consider any new method which promises to simplify and improve the old ones. Observations made by means of meteorological instruments demand an amount of time, skill, and patience which few persons possess; and, at best, such observations are liable to many sources of errors, from the instruments getting out of order, or being placed under unsuitable conditions; while, to the majority of persons, the work is irksome, and wanting in passing interest. Moreover, the interpretation of such observations is often difficult and unsatisfactory, as differences of climate, especially those which affect health, are often due to subtle combinations of sunshine, rain, wind, and soil, which instruments cannot record, nor figures represent, and which are only truly declared by the various phases of living organisms. Thus vegetables sum up and embody the meteorological and geological conditions to which they are exposed; and they show, also, the limits of those conditions which are consistent with their survival; hence plants and trees may be looked on as natural registering "weather-glasses," of different degress of sensibility, and by the systematic observations of some of their phases—such as leafing, blossoming, and fruiting—we may read on them the climatic conditions to which they have been subjected. Observations of this kind, usually called phenological (from the same root as phenomenon), have been made, in a more or less systematic manner, for many years past, on the continent and in this country. The Royal Meteorological Society has a standing committee which devotes its attention to the subject; and, last year, Dr. H. Hoffmann, of Giessen, published a pamphlet showing the results of his forty years' study, and gave a chart based on observations which he had collected from about 2,000 stations in Europe (200 of which were in the British Isles), from which we can see at a glance the value of phenology as a means for differentiating climates. By the publication of a method of calculating accumulated temperatures by the Meteorological Society, the hitherto empirical phenological method has been reduced to a scientific form, and the gap between the physical and biological methods bridged over. Some extensive data obtained by both methods during the past twenty years have been co-ordinated and published recently, to serve as a standard with which to compare local variations of climate (*A Day-Book of Meteorology and Phenology*). This step in advance is based on the assertion of De Candolle and other French botanists that the stationary point, or what might be termed the zero, of vegetation is at 6° C. (about 42° Fahr.), and that all growth and development is the result of temperatures above this point, which accumulates, so to speak, in plants exposed to its influence. Hence each phase of plant-life corresponds to a definite amount of heat, and in fact represents, like the needle in a registering thermometer, the total amount of heat to which it has been exposed. A similar condition no doubt holds good with respect to the rainfall; and, seeing that heat and moisture are the two most important elements in the formation of climates, we see the advantages which phenological observations offer, and the ease and certainty with which they can be adopted. Phenology is by no means a branch of botany, as only a small number of common and ubiquitous trees and plants are necessary, and the observations may be extended to the appearance of insects and of migratory birds. It is obvious, however, that the larger the number of observations, the more certain will be the results; and persons who possess the time and sufficient knowledge to identify the 112 objects included in the scheme of the Meteorological Society should adopt it; but busy people and beginners who possess little scientific knowledge will find Dr. Hoffmann's limited scheme, comprising thirty-three common plants and trees, sufficient. This scheme has the further advantag

of being in use on the Continent, with the climate of which English medical men are more interested, and (to their little credit) are better acquainted than with their own. It is difficult to imagine a more delightful way of working out useful scientific results than by recording the opening of leaves and flowers, and the ripening of fruits; and we think phenologists should have no difficulty in obtaining disciples, especially among country medical practitioners.

THE VITALITY OF PATHOGENIC MICRO-ORGANISMS IN WATER.

THE study of micro-organisms in water is receiving a continually increasing measure of attention, since the impulse which was given to this and all other branches of bacteriology by Koch's now well known method of gelatin-plate cultivation. For several years past, a large number of observations have been made, both in this country and on the Continent, upon the relative abundance of micro-organisms in natural waters of different origin, and upon their removal by various agencies, both natural and artificial. These researches have resulted in the accumulation of a large amount of information concerning the value of filtration and other processes of water-purification; thus the monthly examinations of the London water-supply made by Dr. Percy Frankland, and published in Sir Francis Bolton's reports to the Local Government Board, show that the river-waters, in the process of storage and filtration, have the micro-organisms which they contain reduced on an average by 95 per cent. before reaching the consumer, and a similar reduction has been observed in the case of the Berlin water-supply, which is periodically examined under the superintendence of Dr. Koch. The biological examination of water has hitherto only in very exceptional cases resulted in the identification of pathogenic forms; nor is there much prospect of such forms being discovered, owing to the enormous preponderance of non-pathogenic organisms which must almost invariably exist. This fact, fully discussed in a leading article this week, does not, however, in any way diminish the hygienic value of the results referred to above, as, especially in the case of mechanical processes of purification, there can be no doubt that pathogenic micro-organisms are subject to precisely the same influences as the non-pathogenic. The inquiry into the bacteriology of water has not, however, been allowed to rest here; and, since pathogenic organisms are not under ordinary circumstances to be found in water, they have, for purposes of experiment, to be introduced into this medium in such quantity that they can be readily detected by plate-cultivation; and then their subsequent fate, under varying conditions of temperature, etc., can be observed by the same method of examination. In a letter which we publish this week, Dr. Percy Frankland calls attention to the results which have been already obtained in connection with this subject, and which show that, new as is this field of research, a large number of important facts have already been collected by various investigators. The results which have been obtained show that different organisms are endowed with very different capacities for enduring the conditions afforded by waters of various kinds; nor is it surprising to learn that the greatest contrast is presented by the different forms of one and the same organism, as, for example, the bacilli of anthrax and its spores. Just as in their resistance to antiseptics, to temperature, and to dessication, so in their endurance in water the spores exhibit a vitality far greater than that which is possessed by the bacilli. Thus we learn that Dr. Meade Bolton has shown that the spores of anthrax remained alive in distilled water for upwards of ninety days, and in polluted well-water for nearly a year, whilst, when bacilli alone were introduced into some kinds of potable water, they perished in the course of a few days. Koch's "comma-bacillus," again, may survive for some days in potable water of the best quality, and, in sewage, it would appear to find an excellent culture medium. This organism, moreover, seems capable of adapting itself to the aqueous medium, for Dr. Percy Frankland informs us that, when introduced into water, a large proportion of the bacilli are generally destroyed, but the remaining ones then undergo multiplication, and Dr. Wolffhügel has found that when these adapted organisms are further transplanted into fresh water, they do not undergo this preliminary reduction in their number, but commence multiplication at once. These results clearly show how some zymotic diseases may be communicated by potable water of even the best quality, more especially if the micro-organisms, which are the cause of the disease, are capable of forming spores, but even in the absence of such spores. This power of adaptation to a particular medium greatly extends the possibilities of vital activity for organisms which are not known to produce spores. We are glad to see that this important field of research is not likely to remain fallow, but is being cultivated by zealous investigators both at home and abroad.

SCOTLAND.

THE VISITING PHYSICIAN, EDINBURGH FEVER HOSPITAL.

IN last week's JOURNAL there was a notice of the deadlock that had occurred as to the appointment of a visiting physician to the Municipal Fever Hospital, owing to the inadequate salary offered by the Town Council. We are glad to be able to say that the difficulty has now been removed, as, at a meeting of the Town Council held on Tuesday, in response to the memorial of Dr. Littlejohn on the subject, the Council agreed to give £200 a year; so that the appointment, which lies with the medical officer of health, will doubtless soon be made. During the discussion, one of the Councillors raised the subject of teaching in the fever-wards, but from what passed it will evidently be some little time before this subject has matured sufficiently for settlement.

HANDSOME DONATIONS TO MEDICAL CHARITIES BY THE EDINBURGH FOOTBALL ASSOCIATION.

A MOST admirable form of aiding deserving medical charities was last year noticed in the JOURNAL, namely, the money drawn at the matches at football in competition for the Rosebery Charity Cup. This year we are very pleased to see that £278 has been realised, and has been distributed to the various medical charities in Edinburgh. Lord Rosebery, through his secretary, acknowledged the receipt of the letter from Mr. Watt, secretary of the Edinburgh Football Association, which informed him of the allocation of the money, and cordially approved of the same, rejoicing that the scheme had been so successful. As an incentive to similar efforts elsewhere, we append a list of the charities which have benefited by the scheme, and the sum given to each: Royal Infirmary, £105; Royal Hospital for Sick Children, £50; Longmore Hospital for Incurables, £25; Maternity Hospital, £10; Blind Asylum School, £10; Leith Hospital, £10; Royal Dispensary, Cowgatehead Dispensary, Fountainbridge Dispensary, and New Town Dispensary, each £8; Deaf and Dumb Institution, and Institution for Relief of Incurables at their own homes, each £8; Dental Hospital, Little Sisters of the Poor, Society of St. Vincent de Paul, and Eye and Ear Hospital, each £5. During the four years since the institution of the Rosebery Charity Cup, no less than £897 has been distributed in the above admirable manner.

IRELAND.

DEATH OF DR. MCWHA.

THIS gentleman, who was formerly resident surgeon of Belfast Union Workhouse, has been accidentally drowned at Cachir, in India, whilst on a shooting expedition in that locality with some friends. The deceased, while a resident in Belfast, took a great interest in athletics, and, on his leaving that town in May last, he was the recipient of two handsome presentations by the two principal athletic bodies with which he had been connected.

DR. TERENCE B. BRODIE.

DR. BRODIE, of Spiddal, co. Galway, who recently killed his wife, has been examined by two medical practitioners, and they are both thoroughly of opinion that the prisoner is quite incapable of pleading or understanding proceedings in a public court, suffering, as he does, from insanity, produced by intemperance.

THE LATE DR. EAMES OF THE CORK LUNATIC ASYLUM.

A COMMITTEE of the governors of the Cork Lunatic Asylum has been appointed to draw up a vote of condolence with Mrs. Eames and other members of her family in her recent bereavement. It is also intended that a committee be formed to inaugurate and set on foot a testimonial to the memory of the deceased gentleman.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AT the ordinary Comitia, held on Thursday, July 29th, Sir W. JENNER presiding, the following gentlemen were admitted to the Membership:—W. Collier, M.D. Camb.; W. Gay, M.B. Edin.; F. L. Miner, M.D. McGill; and G. D. Pidcock, M.B. Camb.

The licence of the College was granted to seventy-seven gentlemen who had passed the required examinations.

A letter was received from the Society of Apothecaries, pointing out that if the Society were not admitted into the union now effected between the Royal Colleges for examination purposes, it would be able by the new Medical Act to enter into some other combination with a view to giving a complete licence to practice, and that a competition would thus result which would be injurious to the public and to the profession. On the motion of the Registrar, the letter was referred to a Committee to be nominated by the Presidents of the two colleges, such Committee to report to the Colleges in October next.

A letter was received from the Secretary of the General Medical Council, announcing the intention of the Council to form a reference library of documents and books on all subjects connected with medical education, registration, and legal standing in this and in foreign countries, such library to be open to all registered practitioners, and asking the assistance of the College in this project.

The College seal was ordered to be affixed to a formal indenture of agreement between the two Royal Colleges, regulating the future joint management of the Examination Hall.

The following officers were appointed for the ensuing year:—

Censors: Drs. Handfield Jones, Dickinson, Bristowe, and Andrew.
Treasurer: Sir Dyce Duckworth.
Librarian: Dr. Munk.
Registrar: Sir Henry Pitman.
Assistant-Registrar: Dr. Edward Liveing.
Curators of Museum: Drs. Wegg, Beale, Bastian, and Curnow.
Finance Committee: Drs. Hare and Wood, and Sir E. Sieveking.
Examiners:—
(1) *Chemistry:* Drs. Stevenson, Bernays, Russell, and Dupré, and Mr. W. Foster, F.C.S.
(2) *Materia Medica:* Drs. Bruce, Taylor, Murrell, Lees, and Tirard.
(3) *Elementary Physiology:* Drs. Ewart and Harris.
(4) *Physiology:* Drs. Allchin and Wooldridge, and Professor Schäfer.
(5) *Osteology and Anatomy:* Dr. James Anderson and Mr. Henry Morris, F.R.C.S.
(6) *Medicine:* Drs. Beale, Stone, Sturges, Sutton, Cheadle, Pye-Smith, Whipham, Duckworth, Bastian, and Cayley.
(7) *Midwifery:* Drs. Priestley, Gervis, Galabin, and Black.
(8) *Surgery:* G. Pollock, F.R.C.S., Sir W. Mac Cormac, F.R.C.S., W. Morrant Baker, F.R.C.S., and Marcus Beck, F.R.C.S.
(9) *Hygiene:* Drs. Stevenson, Corfield, Ballard, and Thorne Thorne.

Sir DYCE DUCKWORTH moved that the best thanks of the College be presented to Dr. Allchin, the retiring Assistant-Registrar, for the ability, zeal, and urbanity which he has displayed in the discharge of the duties of this office during the last three years. This was seconded by the Registrar in terms of warm commendation, and was carried by acclamation.

Dr. ALLCHIN expressed his thanks, and his regret in resigning office.

MEDICAL MAGISTRATE.—Dr. William Mack, of Airdrie, has been placed on the commission of the peace for Lanarkshire.

BRITISH MEDICAL ASSOCIATION.

COUNCIL MEETING.

MEDAL FOR DISTINGUISHED MERIT, AND THE PORTRAIT OF THE PRESIDENT OF COUNCIL.

AT a numerously attended meeting of the Council, held in Exeter Hall, Strand, on Wednesday, May 21st, 1886, Dr. FOSTER, President of the Council, in the chair,

The minutes of the Medical Reform Committee (Dr. Chadwick in the chair) of the same date contained the following resolution, namely,

"That this Committee cannot conclude the labours of this session, in which the Medical Amendments Act of 1886 has been obtained, and the principles of direct representation and of complete qualification of medical candidates for registration have been successfully affirmed, without expressing its appreciation of the self-sacrificing and devoted labour, and able effort, which Dr. Waters, Chairman of this Committee, has for a long series of years placed at the service of the profession. It offers to him its hearty congratulations, and its thanks for the courtesy and distinguished ability with which he has conducted its work, and presided over its meetings. It desires that this resolution be submitted to the Council, together with an expression of the opinion of the Committee that it hopes that the Council will consider the best means of affording signal public recognition of the consistent and continuous services of Dr. Waters to the Association, and to the profession, in securing this measure of medical reform."

The minutes were approved.

Dr. FOSTER, the President of the Council, said: I think we all shall feel very great pleasure in carrying out in some form the suggestion contained in this resolution. Dr. Waters, as you know, has for many years laboured in the most unremitting and self-sacrificing manner on the Medical Reform Committee. No personal advantage of his own, no private engagement, no pecuniary sacrifice has been too great for him to make in his labour for the general good of the profession, as embodied in the particular Bills before Parliament. At last, after some twenty odd efforts, we have obtained the passage of an Act which, although not precisely everything we may desire, certainly is a great stride in the right direction, and we owe this success in a very large measure to Dr. Waters. This Council is scarcely in a position to start a public recognition for any of its members who deserve well of it, but we have one method in which we can reward distinguished services. We created, some years ago, a kind of order of merit, which we have conferred on different members of the profession from time to time. We instituted a medal for distinguished merit of three grades, gold, silver, and bronze which should be given under certain conditions. I propose to you to give a gold medal to Dr. Waters. I think we can practically carry out the proposal, and confirm it at the next meeting at Brighton; and I would move, therefore, "That the gold medal for distinguished merit of the British Medical Association be awarded to Dr. Waters for his long-continued, self-denying, and able services in the cause of medical reform."

Dr. BARTOLOMÉ: Perhaps you will allow me to second this most sincerely. I do it, not for the sake of hearing my own voice or tiring you with platitudes on the merits of the question, on which you are as well qualified as I am, and perhaps better, to form an opinion; but I could not sit still, and not assist in performing this act of common justice to Dr. Waters. You are all aware how consistent and persistent he has been in his labours. Without further preface—not to trouble you—I beg to second the motion.

The ballot was then taken.

Dr. BRIDGWATER: As this ballot is being collected, may I rise to make a few observations which are more or less personal? and, inasmuch as they affect you, Sir, in the chair, I may be excused much verbosity, and simply say that, when your portrait was being taken, as one who has learned to value and admire your services in the position you hold, without reflecting on those who have gone before you, or those that may follow after, I had one of the proof prints sent to me. It is so good a one, and does such credit to yourself, that I have had it framed, and it will be my pleasure to-day to have it presented to this Council, to have it hung up in the room wherever we meet, that it may be handed down to future years, as long as those things will last, as a proof that at least one thoroughly appreciated the services you have rendered.

The PRESIDENT: I am exceedingly gratified by the very kind compliment paid to me by Dr. Bridgwater; I am really very much obliged to him. I wish we could have the likenesses of all my predecessors. If we can possibly get them, I hope that they may be hung in the council-room, when we have a council-

room of our own, as I hope we shall in a short time. I am very much indebted to you personally for your kind expressions, Dr. Bridgwater.

Mr. VINCENT JACKSON: I suppose some resolution will have to be passed accepting this gift. I have the greatest pleasure in moving that the engraving be accepted. My object is to thank Dr. Bridgwater, first of all, for the thought which induced him to do as he has done, and, secondly, for carrying it out, and presenting to this Council a gift for which all of us, I am quite sure, will thank him most cordially. I do trust that we shall be able to obtain the portraits, either in oil or other form, of all the past Presidents of this Council. I think the least we can do for them is to arrange that their likenesses should hang upon the walls of the chamber.

The thanks of the Council to Dr. Bridgwater for his gift were carried.

The PRESIDENT: I will declare the ballot now. The resolution approving of the medal to Dr. Waters is carried by more than the necessary three-fourths—indeed, with only one dissentient. I will take the responsibility of seeing this carried into effect at the meeting of the Association at Brighton, and of having it conferred on the second or third day of the meeting. Dr. Waters, I hope the form in which we have suggested this is agreeable to yourself.

Dr. E. WATERS: I cannot allow this action, on the part of the Council, to pass without a very few words of acknowledgment. I will not make them long, because the meeting has already been one of undue length. There are certain events in life which, as it were, crown the past days of existence. One of those days was, when I was made Senior President of the Medical Society of Edinburgh, by an almost unanimous vote; another when I received the gold medal from the University when I graduated. I thought then it was impossible that happier times were in store for me. The next period was when I was president of the Lancashire and Cheshire Branch of the British Medical Association; and, subsequently, President of the British Medical Association. I really thought there was no moment of my life which could transcend in pleasure those which I then enjoyed; but I am sure you will accept it as no idle word when I say that the vote of this afternoon transcends everything I had previously looked forward to, and I will only say I thank you most heartily for an honour which I never dreamed of. I can hardly conclude without saying that, in the many past officers of this Association, in the Treasurers and Presidents of Council whom I have seen giving themselves heart and soul to the welfare of the Association, I have had before me an example to struggle on, even under desponding circumstances which I could not disregard, and it is in that spirit, often disappointed, that I have fought this battle to the last. I do feel, as the Lord President of the Privy Council and the Clerk of the Privy Council feel, that the welfare and future of the profession will now largely rest with the direct representatives of the medical profession in the Medical Council, a free and independent body, having no special interests to conserve, and that they have a great work before them. I beg again sincerely to thank you.

STEWART AND MIDDLEMORE PRIZES.

THE Council of the Association, on Wednesday last, had the reports of the adjudicators of the Stewart and Middlemore Prizes under their consideration. Dr. Buchanan, Dr. Grainger Stewart, and Dr. Walter Dickson, were appointed to adjudicate upon the Stewart Prize of fifty guineas. Dr. Argyll Robertson and Mr. Edward Nettleship were appointed to adjudicate upon the Middlemore Prize, also of fifty guineas. It will be remembered that the Stewart Prize is the result of a sum of money left by the late Dr. A. P. Stewart for the best work in epidemiology, to be given every third year; the Middlemore Prize is the result of a sum of money given by Mr. Richard Middlemore, of Birmingham, for the best essay on the advances of the science of ophthalmology for the past three years. There were five long essays sent in for competition of the Middlemore Prize, bearing the mottoes: (1) "Ars longa, vita brevis;" (2) "Nichts neues;" (3) "Gradatim vincimus progredere ne regredere;" (4) "Sorte sua contentus;" (5) "Sperare temere est."

The reports of the adjudicators are as follows.

REPORTS.

Report as to the award of the Stewart Prize by the adjudicators appointed by the Council of the British Medical Association, April, 1886. To the Council of the British Medical Association.

MR. PRESIDENT AND GENTLEMEN.—We beg leave to report that we have given careful consideration to a great amount of valuable and important work already done, or now being done, by recent investigators on epidemiological subjects, both at home and abroad, some of which, still *sub judice*, gives promise of great results.

We have come to the conclusion that recognition and reward are eminently due to Dr. Robert Cory, of London, for his scientific research into the communicability of syphilis in vaccination. Using his own person as the only available subject for experiment, he succeeded, first, in disproving the thesis formerly held, that syphilis could not be communicated in the operations of vaccination, unless the blood of the syphilitic vaccinifer was inserted along with the vaccine-lymph; and, secondly, by the chancres resulting at the places of operation, he showed that the syphilis which he communicated to himself had the well-known immediate characters of the primary disease, nowise consisting, as popular imagination had conceived, of some subsequent disease of skin or organs, apart from direct and positive manifestations at the places of insertion. We regard the security which should accompany the act of vaccination as being distinctly enhanced, and the operation itself as deserving, in even higher measure than before, the confidence of the public, through the knowledge which has been gained by Dr. Cory's researches. In this estimate, we find ourselves in accord with a weighty committee (consisting of Drs. Ballard, Bristowe and Humphry, and Mr. Jonathan Hutchinson) that, on behalf of the Government, investigated Dr. Cory's results in the year 1883, and we think that the name of Dr. Stewart, the revered founder of the prize, may well be associated with Dr. Cory's self-sacrifice and devotion to the interests of the public. We are, therefore, unanimously agreed in recommending the claims of Dr. Robert Cory for this prize to the favourable consideration of the Council.—We have the honour to be, Mr. President and gentlemen, your most obedient servants,

WALTER DICKSON.
GEORGE BUCHANAN.
T. GRAINGER STEWART.

July 17th, 1886.

The adjudicators in the Middlemore Prize beg to report to the Council of the British Medical Association, that five essays have been submitted to them in competition for the prize, all of which gave evidence of much thought and painstaking research into the ophthalmic literature of the past three years. There were, however, two essays of exceptional merit, which the adjudicators had no difficulty in selecting as superior to the others, and in all respects worthy of the prize. The respective merits of these two appear to them so equally balanced, that they have decided to recommend that these essays should be considered of equal merit, and that the Middlemore Prize should be divided equally between their authors.

These essays bear the inscriptions:

"Ars longa, vita brevis,"

and

"Nichts neues."

D. ARGYLL ROBERTSON.
E. NETTLESHIP.

The Middlemore Prize will be accordingly divided between Mr. Berry and Mr. Frost.

It was resolved to invite Dr. Robert Cory, Mr. John Berry, and Mr. Adams Frost, to receive the prizes at the annual meeting at Brighton, which will be presented at the general meeting of members to be held on Thursday, August 12th, immediately after the delivery of the address in Surgery.

A cordial vote of thanks was passed to the adjudicators who had taken so much trouble in the matter.

The unsuccessful essays bearing the mottoes, (3) "Gradatim vincimus progredere ne regredere," (4) "Sorte sua contentus," (5) "Sperare temere est," can be had on application at the office, the envelopes containing the mottoes being unopened.

BRIGHTON MEETING, 1886.

THE WORK OF THE SECTIONS.

THE arrangements for the bacteriological exhibition to be given by Mr. Edgar Crookshank, in the Public Medicine Section, are rapidly approaching completion. The demonstrations promise to form a very considerable additional attraction to the general programme, more especially as the relation of micro-organisms to disease constitutes a subject of universal interest.

The exhibition and demonstrations will be held in the spacious building of the School of Science and Art, close to the Pavilion, and the rooms will be open from 10 to 1 on August 10th, 11th, 12th, and 13th.

In Room A, there will be a display of bacteriological apparatus. A

complete set of apparatus, as used in Germany, will be supplied by Becker and Co., of Maiden Lane. Sterilisers, incubators, and various apparatus of English make, will be shown by Messrs. Griffin and Son, of Covent Garden. Microtomes and histological apparatus will be exhibited by Messrs. R. and J. Beck, and the list will be completed with apparatus and materials lent by Mr. Crookshank.

In Room B, there will be a demonstration of some sixty cultivations of micro-organisms in various media. In this room especially, Dr. Penrose will assist in the preparation and demonstration of the cultivations.

In Room C there will be a demonstration of preparations of bacteria, and of other micro-organisms of pathological interest under about fifty microscopes. In addition to assistance from private sources, the latter will be supplied by the following makers:—Mr. C. Baker, of High Holborn, with immersion objectives by Zeiss, Reichert and Seitz; Messrs. Swift and Son, who will also show their new lamp for high power work; Messrs. R. and J. Beck, and Messrs. Powell and Lealand.

In Room D, photo-micrographic apparatus, and a large collection of photographs of bacteria, and other micro-organisms taken by Mr. Crookshank, will be on view. The photo-micrographs comprise silver, ferro-prussiate, platinotype, and Eastman bromide paper prints, autotype reproductions in special colours, original negatives, transparencies, and enlargements.

PHOTOMICROGRAPHY.

SINCE the last article which appeared on photography in pathology, our attention has been called to some most successful photographs of bacteria by Dr. Edgar M. Crookshank, taken with the highest powers. Those of the comma bacillus of cholera, bacillus of anthrax, Friedlander's pneumococcus, and spirillum termo are exceedingly well defined. Many of these are magnified as much as 2500 diameters, but all can be readily recognised from the clearness with which they are photographed. Dr. Crookshank has given a great deal of time to the subject, and we warmly congratulate him upon his success. Dr. Crookshank also shows the various bacilli printed by the Autotype Company, in the same colour as the objects are stained with (a plan first introduced by this JOURNAL in 1876), thus giving a most natural and faithful effect. Many of these photographs were taken with a 25th oil-immersion lens of Powell and Lealand.

THE CHOLERA.

ITALY.

THE cholera is reported to be spreading through all the villages and towns of the level country of North-Eastern Italy, between Udine and Bologna; but, except in a very few villages, it does not appear to be of a seriously epidemic character, and does not excite grave panic. It is no longer reported at Venice, but has appeared in Padua, Vicenza, Lonigo, Udine, Treviso, Ferrara, Verona, Ravenna, and Bologna, and in the province of Mantua, as well as at Trieste and Fuime, but apparently more gravely in the villages than in the city of precautionary measures by the authorities. At Arcola, according to a correspondent, the authorities have done absolutely nothing, and the spread of the malady is alarming. The cholera-epidemic, writes a Naples correspondent, is rapidly decreasing in the district of Latiano, but is spreading near Taranto. At a place called Mesague, there were disturbances because the Syndic prohibited the celebration of the feast of the Madonna del Carmine, the patron saint. At Naples, the same festival was celebrated with the usual fireworks, whole streets being hung with decorations, and there were extensive illuminations, probably out of gratitude that the city has not been visited by the disease.

The following are the reported cholera returns from July 22nd to July 27th inclusive:—Brindisi, 13 cases, 7 deaths; Francavilla Fontana, 29 cases, 10 deaths; Latiano, 8 cases, 7 deaths; Ostuni, 2 cases, 1 death; Codigoro, 22 cases, 4 deaths; Massafiscaglia, 40 cases, 22 deaths; Comacchio, 3 cases, 2 deaths; Trieste, 13 cases, 5 deaths; Fiume, 9 cases, 4 deaths; Bologna, 10 cases, 5 deaths; Ferrara, 4 cases, 2 deaths; San Vito dei Normani, 9 cases, 2 deaths; Manduria, 29 cases, 5 deaths; Lago Santo, 4 cases, 3 deaths. Several cases, 2 of which proved fatal, are announced from Porto Maggiore Copparo, and Piere di Cento.

VISCOUNT LEWISHAM has been re-elected President of the West Bromwich Hospital for the ensuing year.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1886.

ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary*.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 161A, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research, in furtherance of which the grant was made.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

The inquiry on Acute Rheumatism is now closed, as the printing of the Tables is completed.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

General inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE have been issued. A report will be made to the Section of Therapeutics at the annual meeting.

PROGNOSIS IN HEART-VALVE DISEASE, based on an examination of cases in which the lesion has existed for an unusual length of time without produci erious symptoms; THE EXTREME DURATION OF INFECTIOUSNESS IN INFECTIOUS DISEASES. The Committee has proposed these two subjects for future inquiry, and has referred them to the Branches of the Association, in accordance with its regulations, with a view to preliminary discussion during the present year. Arrangements have also been entered into with the Section of Medicine of the Annual Meeting of 1886 to hold a discussion upon "Cases in which Disease of the Heart-Valves has been known to exist for upwards of five years without causing serious symptoms;" and with the Section of Public Health to hold a discussion on "The Duration of Infectiousness." The former discussion will be opened by Sir Andrew Clark, Bart., the latter by Dr. Arthur Ransome. The inquiry-papers, to be subsequently issued, will be based upon the information afforded in these Branch and general discussions.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BORDER COUNTIES BRANCH: ANNUAL MEETING.

THE nineteenth annual meeting was held at Whitehaven, on Friday, June 25th, under the presidency of Mr. C. S. HALL, Carlisle. Sixteen members and two visitors were present.

New Member.—John Keay, M.B., C.M., Dumfries, was elected a member of the Branch.

Letters.—Letters from the Chairman of the Parliamentary Bills Committee, and from the General Board of Lunacy for Scotland, were read.

Payment of Expenses.—The President introduced the subject of the payment by the Association of the travelling expenses of the representatives of the Branches in the General Council, and invited an expression of opinion from those present. After a short discussion, four hands were held up in favour, and none against, the proposal.

Defence Fund.—The President intimated that, in reply to a circular issued on March 31st as to subscription to a Medical Defence Fund, twenty-three members agreed to join.

Report of Council.—In making the usual annual report, the Council is gratified that, during the past year, the Branch has continued to maintain its position.

Since the last annual meeting, the Branch has had to deplore the loss of five of its members by death, namely: J. L. Milligan, of Thornhill; W. Anderson, of Whithorn; R. Inman, of Sedbergh; J. Gilchrist, of Dumfries; and W. B. Page, of Carlisle. Six members have left the district, eleven new members have been elected during the past year, and the roll now comprises 119 members.

The income of the Branch has been £22 0s. 8d., namely, by balance from 1884, £7 7s. 8d., and by subscriptions, £14 13s. The expenditure was £15 3s. 6d. The balance at the bank on January 6th, 1886, was £6 17s. 2d.

Ordinary meetings were held during the year at Carlisle, Maryport, and Dumfries, and an extra winter meeting in Carlisle. All meetings were well attended: at the annual meeting at Carlisle, 25 members and 3 visitors were present; at Maryport, 11 members and 4 visitors; at the extra meeting in Carlisle, 18 members and 4 visitors; and at Dumfries, in the spring, 14 members and 6 visitors.

A discussion on Brain-Surgery, introduced by Dr. Thomson, of Dumfries, formed the principal subject at the Dumfries meeting. The number of papers read, not including Mr. Hall's presidential address, was 14. The number of patients shown was nine, and of morbid and other specimens there were 10.

The Council notes with satisfaction that the excellent paper read by Dr. Douie, of Carlisle, on the Compulsory Notification of Infectious Diseases, led to an important practical result. It was the first indication that the profession in Carlisle had of the intention of the Corporation of Carlisle to introduce compulsory notification clauses in their new Corporation Bill, and, by pointing out the strong professional and general objections among the members of the profession in Carlisle to such clauses, it initiated an opposition which ultimately led to their withdrawal.

At the Maryport meeting in October, a misunderstanding between two members of the Branch at Workington was referred by mutual agreement to the Council for arbitration. The Council had the matter under consideration at several meetings, and devoted much time to it. They received a statement of complaint from Dr. Lowe against Dr. Hodgson, but the latter failed to send in any counter-statement, such as he agreed to at Maryport. The Council, therefore, finally came to this resolution, "That, in the opinion of the Council, no practical good could result from an expression of opinion on their part, founded on a one-sided statement, and they regret they do not see their way to any further action in the matter."

President-elect.—Dr. McLeod, Hawick, was unanimously elected President-elect.

Election of Council.—The retiring members of Council, Mr. Brown, Drs. Lockie and Mitchell, were replaced by Dr. Black, Keswick, Dr. Tiffen, Wigton, and Mr. Hall, Carlisle; the remaining councillors whose term had not expired being re-elected.

Secretary.—The Secretary and Treasurer was re-elected.

Representative on Council.—Dr. Barnes was elected to represent the Branch on the Council of the Association.

Parliamentary Bills Committee.—Dr. Tiffen was elected to serve on the Parliamentary Bills Committee.

Retiring President, etc.—Mr. C. S. Hall, Carlisle, received a vote of thanks for his conduct in the chair, as President of the Branch, during the past year, and was appointed Vice-President for life.

Auditors.—Drs. Lockie and Maclaren were appointed auditors.

Meetings for Year.—It was decided to hold three meetings during the year: the first at Keswick, in October; the second at Carlisle, in the spring (an evening meeting); and the third, the annual, to be subsequently fixed by the Council.

Presidential Address.—Dr. EATON, Cleator Moor, then delivered his Presidential Address, and received a vote of thanks, proposed by Dr. CALDERWOOD.

Dr. Eaton's Presidential Address was entitled "A Brief Glance at the Chief Points of our knowledge of the Nature and Causes of Disease." An abstract of the Address will shortly appear in the JOURNAL.

Dinner.—The members and several visitors afterwards dined together at the Grand Hotel.

ABERDEEN, BANFF, AND KINCARDINE BRANCH: ANNUAL MEETING.

THE annual meeting of the Branch was held in 198, Union Street, Aberdeen, on Saturday, July 17th, 1886, at 1 o'clock P.M. Professor OGSTON, the retiring, and, afterwards, Dr. URQUHART, the new President, being in the chair.

New Member.—Dr. Theodore Thomson, medical officer of health, Aberdeen, was balloted for, and unanimously elected a member of the Branch.

Council's Report.—The report of the Branch Council for 1885 was read, and ran as follows: "The Council have again a favourable report to submit to the members of the Branch. During the year 1885, although various changes in the membership have taken place, the numerical strength exceeds that of previous years, presently standing at 108. We have to record the loss by death of one of our oldest members, Dr. Mellis, of Fraserburgh, and, by change of residence, of Dr. Frank Ogston, Dr. Simpson, and Professor Stirling. The papers, cases, and exhibits for the year have been numerous and unusually interesting. The attendance of members at the meetings has improved, and the Council hope that a further increase will be attained in the ensuing year. The country meeting continues to retain its popularity; that of this season, held at Huntly, having been one of the most successful in the history of the Branch. The finances of the Branch are also in a satisfactory condition, the balance in the Treasurer's hands, as may be seen in the accompanying balance-sheet, showing an increase over that of the preceding year."

On the motion of Dr. OGSTON, the Council's report and Treasurer's balance-sheet were unanimously adopted.

Dr. URQUHART, the new President of the Branch, having taken the chair, after thanking the members heartily for the honour they had done him, remarked on the work done by the Branch, and on the means of increasing its efficiency; and he concluded by proposing Dr. Smith, of Kinnairdy, as the President-elect for the year. This was unanimously carried.

Election of Hon. Secretaries and Treasurer.—The Honorary Secretaries and Treasurer were re-elected for the ensuing year.

New Members of Council for 1886.—In terms of Rule VIII, the following three town and three country members were elected to act along with the *ex officio* members of Council, namely, Drs. John Gordon, F. Maitland Moir, and J. C. Ogilvie Will, Aberdeen; and Dr. Maver, Baxburn; Dr. Manson, Banff; and Dr. J. Osbert Wilson, Huntly.

Place of next Summer Meeting.—On the motion of Dr. MOIR and Dr. GORDON, Cullen was chosen as the place of the June meeting in 1887.

A hearty vote of thanks to the retiring President, Professor Ogston, brought the meeting to a close.

Hospital Demonstrations and Annual Dinner.—During the forenoon, special demonstrations on the Methods of Treatment of Club-foot were given by Professor Ogston at the Infirmary; and, in the afternoon, the members dined together in the Imperial Hotel, under the presidency of Dr. Urquhart.

STAFFORDSHIRE BRANCH: GENERAL MEETING.

THE third general meeting of this session was held at the Medical Institute, Cleveland Road, Wolverhampton, on Thursday, May 27th, 1886. Present: Mr. J. T. HARTILL, President, in the chair, and twenty members.

Communications.—Mr. Vincent Jackson read letters from the Association of Members of the Royal College of Surgeons of England, from Surgeon-Major Evatt, and from the East York and North Lincoln Branch.

New Members.—The following members of the Association were balloted for as members of the Branch: Dr. Evans, Wolverhampton, and Staffordshire General Hospital; Dr. Ross S. Steel, Gnosall.

Cases, etc.—A large number of cases were brought forward, and are reported in the JOURNAL.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

THE fifty-fourth Annual Meeting of the British Medical Association will be held at Brighton, on August 10th, 11th, 12th, and 13th, 1886.

President: W. T. Edwards, M.D., F.R.C.S., Physician to the Glamorgan and Monmouth Infirmary, Cardiff.

President-elect: Withers Moore, M.D., F.R.C.P., Senior Physician to the Sussex County Hospital, Brighton.

President of the Council: Balthazar Foster, M.D., F.R.C.P., Professor of Medicine in Queen's College and Physician to the General Hospital, Birmingham.

Treasurer: C. Macnamara, F.R.C.S., Surgeon to the Westminster Hospital, London.

An Address in Medicine will be delivered by Surgeon-Major John S. Billings, Surgeon, United States Army Medical Department, Washington.

An Address in Surgery will be delivered by Frederick Abell Humphry, F.R.C.S., Surgeon to the Sussex County Hospital.

An Address in Public Medicine will be given by E. D. Mapother, M.D., Consulting Medical Officer to the City of Dublin.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

(*All the Sections will be held in the Royal Pavilion.*)

MUSIC-ROOM.

MEDICINE.—*President*, W. H. Broadbent, M.D. *Vice-Presidents*, Frederick Bagshawe, M.D., Hastings; Joseph Ewart, M.D., Brighton. *Honorary Secretaries*, Francis Warner, M.D., 24, Harley Street, London; Henry Seymour Branfoot, M.B., 42, Norfolk Square, Brighton.

BANQUETING-ROOM.

SURGERY.—*President*, John Eric Erichsen, F.R.C.S., F.R.S., London. *Vice-Presidents*, Frederick William Jowers, M.R.C.S., Brighton; John Ward Cousins, F.R.C.S., Southsea. *Honorary Secretaries*, William Johnson Walsham, F.R.C.S., 27, Weymouth Street, London; Willoughby Furner, F.R.C.S., 2, Brunswick Place, Brighton.

SALOON.

OBSTETRIC MEDICINE.—*President*, Alfred Meadows, M.D., London. *Vice-Presidents*, Constantine Holman, M.D., Reigate; Frederick W. Salzmann, M.R.C.S., Brighton. *Honorary Secretaries*, Charles J. Wright, M.R.C.S., Lynton Villa, Virginia Road, Leeds; Alban Doran, F.R.C.S., 9, Granville Place, W.

NORTH DINING-ROOM.

PUBLIC MEDICINE.—*President*, Richard Patrick B. Taaffe, M.D., Brighton. *Vice-Presidents*, Sir Charles Alexander Cameron, M.K.Q.C.P., Dublin; Charles Kelly, M.D., Worthing. *Honorary Secretaries*, W. Brown, F.R.C.S., Carlisle; William Joseph Tyson, M.D., Folkestone.

OLD SCHOOL-BOARD ROOM.

PSYCHOLOGY.—*President*, Thomas Smith Clouston, M.D., Edinburgh. *Vice-Presidents*, Charles A. Lockhart Robertson, M.D., Brighton; Joseph Raymond Gasquet, M.B., Brighton. *Honorary Secretaries*, Charles Spencer Waller Cobbold, M.D., Earlswood Asylum, Redhill; James M. Moody, M.R.C.S., Surrey County Asylum, Canehill, Purley.

MASONIC ROOM.

PATHOLOGY.—*President*, Julius Dreschfeld, M.D., Manchester. *Vice-Presidents*, James Frederick Goodhart, M.D., London; Heneage Gibbes, M.D., London. *Honorary Secretaries*, John E. Ranking, M.D., Mount Ephraim Road, Tunbridge Wells; John Caldwell Uhthoff, M.D., 9, Brunswick Place, Brighton.

KING'S APARTMENTS, 1.

THERAPEUTICS AND PHARMACOLOGY.—*President*, Thomas Lauder Brunton, M.D., F.R.S., London. *Vice-Presidents*, John Mitchell Bruce, M.D., London; Edward Mackey, M.D., Brighton. *Honorary Secretaries*, Cornelius William Suckling, M.D., 108, Newhall Street, Birmingham; John Theodore Cash, M.D., Drumearn, Earlsfield Road, Wandsworth Common, S.W.

KING'S APARTMENTS, 2.

OPHTHALMOLOGY.—*President*, Chas. Oldham, F.R.C.S., Brighton. *Vice-Presidents*, Louis Tosswill, M.B., Exeter; George Anderson Critchett, F.R.C.S.Edin., London. *Honorary Secretaries*, Frank Henry Hodges, F.R.C.S.Edin., 17, Horse Fair Street, Leicester; Arthur Nicholson, M.D., 98, Montpellier Road, Brighton.

KING'S APARTMENTS, 3.

OTOLOGY.—*President*, G. F. Hodgson, M.R.C.S., Brighton. *Vice-Presidents*, Alphonso Elkin Cumberbatch, F.R.C.S., London; Edward Cresswell Baber, M.B., Brighton. *Honorary Secretaries*, Henry Albert Reeves, F.R.C.S.Edin., 78, Grosvenor Street, W., London; Patrick William Maxwell, M.D.Edin., 16, Warrington Place, Dublin.

Honorary Local Secretaries: Thomas Jenner Verrall, M.R.C.S., 95, Western Road, Brighton; Alfred Scott, L.R.C.P., German Place, Brighton.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 10TH, 1886.

12.30 P.M.—Reception of Council of Association by the Mayor of Brighton.
2 P.M.—Meeting of 1885-6 Council. Music-Room, Royal Pavilion.
3 P.M.—General Meeting. Report of Council and other business. Adjourn at 5 P.M. Dome.
8 P.M.—General Meeting. President's Address, and any business adjourned from meeting at 3 o'clock. Dome.

WEDNESDAY, AUGUST 11TH, 1886.

9.30 A.M.—Meeting of 1886-7 Council. Music-Room, Royal Pavilion.
11.0 A.M.—Second General Meeting. Address in Medicine. Dome.
2 to 5 P.M.—Sectional Meetings. Royal Pavilion.
4.30 to 6 P.M.—Garden Party by Sir Julian Goldsmid at St. Ann's Wells.
8.30 P.M.—A *Conversazione* will be given by the President of the Association, and the South-Eastern Branch. Dome and Royal Pavilion.

THURSDAY, AUGUST 12TH, 1886.

9.30 A.M.—Meeting of Council. Music-Room, Royal Pavilion.
11 A.M.—Third General Meeting. Address in Surgery. Presentation of Gold Medal for distinguished merit; and Stewart and Middlemore Prizes. Dome.
2 to 5 P.M.—Sectional Meetings. Royal Pavilion.
7 P.M.—Public Dinner. Dome.

FRIDAY, AUGUST 13TH, 1886.

10 A.M.—Address in Public Medicine. Dome.
11 A.M.—Sectional Meetings. Royal Pavilion.
4 P.M.—Concluding General Meeting. Dome.
8 P.M.—Reception by the Mayor of Brighton. Dome and Royal Pavilion.

SATURDAY, AUGUST 14TH, 1886.

Excursions.

The entrance-hall to the Royal Pavilion will be fitted up as a Reception-Room, and will be opened at 12 o'clock noon on Monday, August 9th, and on the following day at 9 o'clock in the forenoon, and will remain open until 6 o'clock in the afternoon of each day, for the issue of tickets to members, and for supplying all necessary information.

RETURN TICKETS TO BRIGHTON.—Return tickets to Brighton, at the usual 1st and 2nd class ticket rates, issued at all stations under fifty and above ten miles distant from Brighton, on Monday, August 9th, and intervening days, will be available for the return journey from Brighton by any train of the same description and class, up to and including Monday, August 16th, 1886. All return tickets (1st, 2nd, and 3rd class) issued to Brighton from places distant over fifty miles are available for eight days, including day of issue and return.

DAY TICKETS TO BRIGHTON.—Day tickets to Brighton (1st and 2nd class), will be issued on August 10th, 11th, 12th, 13th, and 14th, from London, and all other stations above ten miles distant from Brighton, at a single fare for the double journey, available to return by any train of the same description and class on the day of issue only.

These privileges will be granted only to members of the Association on production of their cards at the Company's various booking offices.

Programmes of the arrangements can be had upon application at the stations of the London, Brighton, and South Coast Railway.

*** *It is particularly requested that gentlemen on their arrival will at once proceed to the Reception-Room, and* (1) *enter name and address, and obtain tickets and programme:* (2) *inquire for letters and telegrams;* (3) *consult the list of lodgings and hotels, etc.*

The following discussions and papers are promised up to the present time. Members desirous of reading papers, or joining in the discussions, are earnestly requested to communicate, without delay, with the Secretaries of the respective Sections.

SECTION A.—MEDICINE.

The following subjects have been chosen for special discussion.

1. Cases in which Disease of the Valves of the Heart has been known to exist for upwards of five years, without causing Serious Symptoms. Introduced by Sir Andrew Clark, M.D., F.R.C.P., F.R.S., London. The following gentlemen have promised to take part in the

discussion: Drs. Gairdner, Clifford Allbutt, B. Foster, Douglas Powell, Sir Dyce Duckworth, M. Brace, Burney Yeo, Skerritt, Saundby, Samson, Tyson, Thomas, S. Mackenzie, D. J. Leech, Bernard O'Connor, S. Bristowe, W. H. Lamb, and Oliver.

2. On the Effects produced by Gall-stones, with particular reference to some Rarer Points in their Symptomatology. Introduced by W. Ord, M.D., F.R.C.P., London. The following gentlemen have promised to take part in the discussion: Drs. Clifford Allbutt, B. Foster, Pavy, Shingleton Smith, Saundby, Sir Peter Eade, M.D., S. Bristowe, R. Eardley-Wilmot, M.B., and Ralfe.

Dr. Radcliffe Crocker will give a Demonstration on the Removal of Hairs by Electrolysis.

The President of the Section will deliver his Address on August 12th.

The following papers are promised.

Chilton, F., M.D. Two Cases of Non-diabetic Acetonuria.
Coutts, J. A., M.B. Latter Effects of Rickets.
Cullimore, D., M.D. Tropical Hepatic Abscess.
Crocker, H. Radcliffe, M.D. A New Treatment for Obstinately recurring Eczema.
Drysdale, C. R., M.D. The Treatment of Phthisis.
Duckworth, Sir Dyce, M.D. Inadequate Treatment of Anæmia.
Eyland, J. L., M.D., Revel. Treatment of Diphtheria.
Gamgee, A., M.D. On Compressed and Rarefied Air.
Hall, F. de Havilland, M.D. Meningitis as a complication of Pneumonia.
Handford, H., M.D. Menstruation and Phthisis.
Haycraft, —, M.D. The Coagulation of the Blood in its Relation to Disease.
Hovell, —, M.D. On some Conditions of Neurasthenia.
Kirk, Robert, M.D. On Urine which darkens with Alkalies occurring in three Members of the same family, and will shew Crystals of an Acid obtained from the Urine in these Cases. 2. On so-called Peptone in the Urine.
Mantle, A., M.D. Etiology of Rheumatism considered from a Bacterial Point of View. Will also give a demonstration of his specimens of Bacteria in Rheumatism.
McVail, D. C., M.B. The Physical conditions that underlie the Thoracic Percussion Sounds.
Moxon, W., M.D. Effects of Turpentine, Ergot, and Water, on Albuminuria.
Myrtle, A. S., M.D. Chronic Inflammation of Mucous Membrane of Pyloric end of Stomach, Duodenum, Common Gall-duct, and Bladder, their Symptoms and Treatment by Harrogate Waters.
Oliver, T., M.D. On the Relationship of Urea to certain Diseased Processes.
Playfair, W. S., M.D. Some Observations on what is called Neurasthenia.
Ralfe, C. H., M.D. Functional Albuminuria.
Rendall, Stanley, M.D. Therapeutical Action of the Waters of Aix-les-Bains.
Savage, George H., M.D. Mental Symptoms with Locomotor Ataxy.
Strahan, J., M.D. Intestinal Ulcers and their Treatment, more especially by Arsenic.
West, Samuel, M.D. Hæmaturia in Granular Kidney.
White, W. Hale, M.D. Inexplicable Pyrexia.
Whitla, E. G., M.D. Melancholia and Insomnia in the Sane. Treatment.

Section B.—Surgery.

The President will deliver the address on Wednesday 11th, at 2 P.M.

Sir Henry Thompson will open a discussion on Suprapubic Lithotomy. The following gentlemen will take part in the discussion: Messrs. W Cadge, Reginald Harrison, Professor Humphry, Berkeley Hill, T. R. Jessop, Greig Smith, W. Pye, Barwell, Bruce Clarke, Edward Lund, Walter Whitehead, Jacobson, and J. Ward Cousins.

The following papers are promised.

Harley, George, M.D., F.R.S. Hepatic Phlebotomy and Puncture in Hypertrophic Congestions of the Liver.
Imlach, Francis, M.D., Liverpool. A Case of Renal Hydatids.
Tait, Lawson, Esq. Surgical Treatment of Diseases of the Liver.

Mr. Jennings will take part in the discussion.

Thornton, J. K., Esq. The Surgery of the Liver.
Willett, A., Esq., and Meredith, W. A., Esq. Cholecystotomy.

Messrs. Macnamara, Morris, Bellamy, Jessop, and Professor Gastin, of Georgia, will take part in the discussion.

Horsley, Victor, M.B. A paper, illustrated by Photographs illuminated by the Lime-light, in connection with the Advances in the Surgery of the Central Nervous System.

Mr. E. Bellamy and Dr. Hughes Bennett will join in the discussion.

Adams, W., Esq. On the Treatment of Congenital Displacement, the so-called Congenital Dislocation of the Hip-Joint, by long-continued Recumbency and Extension; and will show his New Extension Couch.
Anderson, W., Esq. On Treatment of Aneurysm by Galvano-Puncture, illustrated by cases.
Benton, S., Esq. Fistula in Ano of the Horse-Shoe Shape.
Browne, J. Walton, M.D. The Treatment of Club-foot.
Carter, Jas. F., Esq., F.R.C.S.Edm. On the Accessory Organs of Generation in the Male.
Churchill, G., Esq. On the Multiple Causation and the Immediate Treatment of Congenital Club-foot.
Clarke, Bruce, Esq., and Steavenson, W. E., M.D. The Employment of Electricity in the Treatment of Diseases of the Urinary Organs.
Cousins, J. Ward, M.D. A new Mouth-gag with Throat-Guard.
Dempsey, Alexander, M.D. A case of Orbital Aneurysm.
Fagan, John, Esq. Notes on Gunshot Wounds.
Fitch, Simon, M.D., Nova Scotia. The Dome-Trocar and associated Instruments in Paracentesis, Aspiration, Transfusion, Ovariotomy, and Tunnelling the enlarged Prostate.
Harrison, Reginald, Esq. On the Treatment of Urethral Stricture by Internal and External Urethrotomy combined.
Jackson, T. Vincent, Esq., will speak on Supra-pubic Lithotomy.
Jessett, F. B., Esq. Surgical Treatment of certain Tumours of the Neck.
Keetley, C. B., Esq. Further Remarks on the Radical Cure of Hernia by Injections into the Inguinal Canal.
Kirk, Robert, M.D., Glasgow, will show his Vapour-Pressure Injector, and read Notes of Cases treated by it.
Marsh, Howard, Esq. A Case of Abscess of the Liver, opened by free Incision.
Owen, Edmund, Esq. Psoas Abscess: when and where to evacuate it.
Pye, W., Esq. A Case of Multiple Papilloma of the Bladder, removed by the Suprapubic Operation. 2. Two Cases of Suprapubic Cystotomy.
Roberts, Milton Josiah, M.D., New York. On the Diagnosis and Mechanical Operative Treatment of Knock-knee, and Bow-leg deformity; at the same time making a demonstration of the Cutting qualities of his Electro-Osteotome.
Smith, Noble, Esq. On Obscure Disease of the Spinal Column.
Startin, James, Esq. The Surgical Treatment of Acne and Lupus.
Symonds, Charters J., M.D. The Treatment of Malignant Stricture of the Œsophagus by Tubage.
Sympson, Thomas, Esq. A Case of Myositis Ossificans.
Tait, Lawson, Esq., will read for Dr. Mackay, of Huelva, a Contribution to the Surgical Treatment of Gall Stones.
Waldham, W. J., Esq. Cases of Abscess of the Liver opened by free Incision.
Whitehead, Walter, Esq. Three Hundred Consecutive Cases of Hæmorrhoids cured by Excision.

Section C.—Obstetric Medicine.

The President will deliver a short address.

The following two special discussions will take place.

1. The Alternatives to Craniotomy. This discussion will be introduced by Dr. Robert Barnes; and Professor Porro, Dr. Halliday Croom, Dr. E. T. Davies, Liverpool; Dr. Walter, Manchester; Mr. Greig Smith, Clifton, and others, will be among the speakers.

2. On Removal of the Uterine Appendages. Papers will be read by Dr. Savage, Birmingham; Dr. More Madden, Dublin; and others; and Dr. Bantock, Dr. E. T. Davies, Dr. G. Elder, Nottingham; Dr. Imlach, Liverpool; Dr. Walter, Manchester; Mr. Lawson Tait, Birmingham; Mr. Vincent Jackson, Wolverhampton, and others, will take part in the discussion.

The following papers are promised.

Aveling, J. H., M.D. A Case of Extra-uterine Gestation arrested by Electricity.
Ballantyne, J. W., M.B., Edinburgh. Sphygmographic Tracings in Labour and the Puerperium.
Barnes, Fancourt, M.D. On Perinæorrhaphy.
Black, J. Gordon, M.D., Harrogate. The Use of Stem-Pessaries.
Braithwaite, J., M.D. A Method of Treating certain Cases of Amenorrhœa, and Scanty Menstruation.
Dolan, T. M., M.D. Obstetric Experiences, with Observations.
Edis, A. W., M.D. Cases illustrating the Difficulties of Diagnosis in Gynæcological Practice.
Elder, G., M.D. A Case of Vesico-vaginal Fistula.
Emmet, T. C., M.D., New York. On certain mooted points in Gynæcology.
Grigg, W. C., M.D. On the Antiseptic Use of Bichloride of Mercury in Obstetric Practice.
Handfield-Jones, M., M.B. Scanty Secretion of Liquor Amnii in the Early Months of Pregnancy, and its Bearing on Diagnosis.
Hart, D. Berry, M.D. Successful Case of Abdominal Section for Ruptured Fallopian Tube Fœtation, with Microscopic Examination of the part of the tube removed.
Hewitt, W. M. Graily, M.D. The Early History and Etiology of Uterine Flexions and Displacements.
Kinkead, R. J., M.D., Galway. Craniotomy and Cæsarean Section.
Lusk, W. T., M.D., New York. The Proper Moment for the Performance of Gastrotomy in Abdominal Pregnancy.
Routh, C. H. F., M.D. On some Points of Difficulty as affecting Medical Men in Cases of Hysteria with Erotic Symptoms.
Walter, W., M.D. A Case of Uterine Myoma causing obstruction of the Bowels treated by the Removal of the Appendages.

Section D.—Public Medicine.

The general subjects for discussion are the following.

1. Scarlet Fever; its Causation, and the best Sanitary Measures for Dealing with the Disease as it exists among Urban Populations. Dr. Ewart, of Brighton, will open this discussion. Dr. W. Squire will take part.

2. On the Duration of Infectiousness in the following Infectious Diseases: Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. Dr. A. Ransome, of Manchester, will open this discussion. Dr. E. W. Hope, of Liverpool; Dr. T. F. Pearse, Haslemere; and Dr. W. Squire, will take part.

3. Diphtheria in Rural Districts: (*a*) Causation; (*b*) Influence of Soil upon the Disease. Dr. C. Kelly will open this discussion.

4. Reports of Water Analyses: the best Method of Stating these so as to secure one Uniform Plan. Dr. Whitelegge will open this discussion.

Dr. Edgar Crookshank will exhibit the various apparatus employed in a Bacteriological Laboratory, and give demonstrations of cultivations, microscopic preparations, and photographs of bacteria.

The following papers are promised.

Ashby, H., M.D. On the Duration of Infectiveness in Scarlet Fever.
Boobbyer, P., M.B., Nottingham. Scarlet Fever in relation with the disturbance of Impure Subsoil and the Construction of sewers.
Carpenter, A., M.D. The Causation of, and on the Quarantine which is necessary to be observed in, Scarlatina.
Cornish, W., Surgeon-General. On an Outbreak of Cholera amongst British

Emigrants proceeding from London to Queensland in the steamship *Dorunela* during November and December, 1885.

DRYSDALE, C. R., M.D. 1. On Animal Vaccination. 2. Sewage Pollution of the Thames.

EVATT, Surgeon-Major G. J. H. On the Medical Department of an Army Corps in War, with proposal for a more efficient Volunteer Medical Organisation.

GROVES, J., B.A., M.B. The Sanitary Acts as applied to Rural Sanitary Districts.

HANDFORD, H., M.D., Nottingham. Death-rate of Enteric Fever.

KERR, Norman, M.D. On Hydrophobia, and its Prevention.

PAGET, C. E., Esq. The Influence of Acute, supposed Simple, Sore-Throat in the Spread of Diphtheria.

PEARSE, T. F., M.D., Haslemere. On the Periods of Incubation of the principal Exanthemata.

PRINGLE, Surgeon-Major R., M.D. 1. The Advantages and Disadvantages of Human and Animal Lymph compared. 2. State Vaccination, with special reference to the Compulsory Clauses in the Vaccination Acts.

SEATON, E., M.D. A paper on Scarlet Fever.

SQUIRE, W., M.D. On the Influence of Increased Means of Isolation upon the Prevalence of Scarlet Fever in London.

TATHAM, J., M.D. Scarlet Fever, and the best Means for its Prevention amongst Urban Populations.

TAYLOR, Michael, W., M.D., London, formerly Penrith. Diphtheria in Connection with Damp and Mould.

VACHER, F., Esq. Duration of Infectiousness in the Exanthemata and Allied Diseases.

SECTION E.—PSYCHOLOGY.

The President, Dr. T. S. Clouston, will deliver an address on The Relation of Bodily and Psychical Pain.

The following papers are promised.

BEACH, Fletcher, Esq., M.B. The Influence of Hereditary Predisposition in the Production of Imbecility.

CLARKE, A. Campbell, M.B.Glasgow. Experimental Dietetics in Lunacy Practice. A Record of Investigation and Results.

COBBOLD, C. S. W., M.D. Suicidal Tendencies in Congenital Imbeciles.

GILL, Stanley A., Esq., B.A. The Use and Abuse of Seclusion.

SAVAGE, G. H., M.D. On Alternations of Neuroses.

SHUTTLEWORTH, G. E., M.D. The Relation of Marriages of Consanguinity to Mental Unsoundness.

STRAHAN, S. A. K., M.D. How can the Medical Spirit best be kept up in Asylums for the Insane?

THOMSON, D. G., M.D. On the Separate Care and Medical Treatment of Recent Cases of Insanity, either in Existing Asylums, or in Lunatic Hospitals to be Established for that Special Purpose.

TUKE, D. Hack, M.D. On the Alleged Increase of Insanity.

The President will introduce a discussion as to How the Medical Spirit can best be kept up in Asylums for the Insane.

Discussions will also be invited upon Degradation of Habits and Feelings in Relationship to Mental Disease, and other subjects. The Secretaries will be glad to receive communications from members willing to read papers or to take part in the discussions.

SECTION F.—PATHOLOGY.

The following subjects have been chosen for special discussion.

1. Peripheral Neuritis. Opened by papers by Dr. Ross (Manchester), and Dr. Buzzard (London). Mr. Watson Cheyne, Professor Charcot, Drs. Clifford Allbutt, Hadden, Poore, Drummond, Saundby, Maguire, and Whittle, will take part in the discussion.

2. Aneurysm. Introductory paper by Timothy Holmes, F.R.C.S. Messrs. Barwell, Bryant, Savory, H. Morris, C. J. Symonds, Watson Cheyne, R. Maguire, and E. Lund, will take part in the discussion.

3. The Etiology and Pathology of Pneumonia. Introductory papers by Dr. Octavius Sturges and Dr. R. Douglas Powell. Dr. Churton, Dr. R. Maguire, Sir Andrew Clark, Dr. Duckworth, and Dr. Hollis will take part in the discussion.

Dr. Heneage Gibbes will show, in the Museum in connection with the Pathological Section, a series of Microscopical Specimens of Carcinoma and Sarcoma, also a number of Photographs of Normal and Morbid Histology and Bacterium, and Photographs showing Diseased Conditions, life size.

The following papers are promised.

ANDERSON, R. J., M.D. The Presence of a Joint between the Coracoid Process of the Scapula and the Clavical (rare case).

ASALY, —, M.D. The Pathology of Nephritis following Scarlet Fever.

BARWELL, R., Esq. On Aneurysm.

CHEYNE, Watson, M.B. On Cholera.

CHURTON, T., M.D. The Pathology of the Adrenals.

CROCKER, Radcliffe, Esq. The Anatomy of the Early Stage of Keloid; and will show drawings of different types of Leprosy.

HUDSON, Leopold, Esq., will show Specimens of Organisms found in several cases of Pneumonia.

GLYNN, T. R., M.B., Liverpool. Six Cases of Ulcerative Endocarditis.

GREVES, E. Hyla, M.D., Liverpool, will show a Rare Form of Cerebral Tumour, and give an account of the same.

HOLLIS, W. A., M.D. Pulmonary Tuberculosis, associated with Heart-Disease.

MAGUIRE, Robert, M.D. On Albuminuria in Diabetes.

RAKE, B. N., M.D., Government Medical Officer, Trinidad. 1. An Inquiry into the Distribution of the Leprosy Bacillus. 2. Experiments on the Communicability of Leprosy to Animals.

SYMONDS, C. J., Esq. The Formation of Aneurysms in Acute Arteritis.

YOUNG, Professor A. N., Manchester. On Traumatic Malignancy.

SECTION G.—THERAPEUTICS AND PHARMACOLOGY.

An Introductory Presidential Address will be given by Dr. T. Lauder Brunton, F.R.S.

The following subjects have been selected for special discussions.

1. Antipyretics; to be opened by Dr. Carter, of Liverpool.

2. Analgesics; to be opened by Dr. Spender, of Bath; Dr. Brown Séquard will join in the discussion.

3. Action of Drugs in Albuminuria; to be opened by Dr. Saundby, of Birmingham.

The following papers are promised.

BRUCE, Mitchell, M.D. Morphine in Diabetes.

DRYSDALE, Charles R., M.D. Mercury as an Antidote in Syphilis.

GRANVILLE, Mortimer, M.D. The Relief of Pain by Mechanical Vibration or Percussion.

HANDFORD, H., M.D., Nottingham. The Pathology of a rare form of Skin-disease affecting the Sebaceous Follicles.

JAMES, Prosser, M.D. On Local Anæsthetics.

JESSOP, W. H., M.B. On the Therapeutic Effects of Cucaine in Ophthalmic Practice.

LIEBREICH, Professor, Berlin. Lanolin: a new Fatty Substance; its Physical Properties and Therapeutical Uses.

MACKEY, E., M.D. Resorcin in Gastric and Cutaneous Disorders.

MACKENZIE, Stephen, M.D. On the Value of Cannabis Indica in a Certain Class of Headaches.

SHOEMAKER, John, M.D., of Philadelphia. Hamamelis Virginica.

ST. GEORGE, George, Esq., Lisburn. Experiments with Manaca in the Treatment of Rheumatism.

STONE, W. H., M.D., will show the apparatus exhibited by him on the occasion of his Lumleian Lectures.

STRAHAN, J., M.D. An Unrecorded Danger from Continued Large Doses of Iron.

TRUMAN, E. B., Esq. Poisoning by Squills.

SECTION H.—OPHTHALMOLOGY.

Mr. Jonathan Hutchinson will open a discussion on the Different Forms of Choroiditis, in relation to their several Causes.

Mr. Anderson Critchett will open a discussion on Episcleritis.

An improved Electric Refraction Ophthalmoscope will be shown by Mr. Henry Juler.

The following papers are promised.

ABBOTT, G., Esq. The Use of Styles in the Treatment of Epiphora.

ANDREW, Edwyn, M.D. Ophthalmic Hints.

BARRETT, J. W., Esq., and LANG, W., Esq. On the Causation of Phlyctænular Ophthalmia and Sycosis.

BENSON, Arthur H., Esq. On the Operative Treatment of Trichiasis with or without Entropion.

BROWN, Edgar, Esq. On New Remedies.

CRITCHETT, G. Anderson, Esq. On Dislocation of the Lens.

FROST, W. Adams, Esq. What is the best Method of Dealing with a Lost Eye?

GLASCOTT, C. E., M.D. On Sarcoma of the Choroid, followed by Amblyopic Symptoms in the Sound Eye.

GREENWAY, Henry, Esq. Use of Ice and Carbolic Acid in the Treatment of Injuries and Inflammation of the Eyes and Eyelids.

HARTRIDGE, Gustavus, Esq. Strabismus and its Treatment in Young Children.

HEWETSON, H. B., Esq. The Treatment of Interstitial Keratitis by Operation, without Constitutional Remedies.

HIGGENS, Charles, Esq. Headaches in relation to Eye-Conditions.

JOHNSON, L. L., Esq. Paper, and Demonstration of several new Ophthalmic Instruments.

LEE, Charles T., Esq. The Extraction of Soft Cataract by Irrigation.

SNELL, Simeon, Esq. 1. Massage in Eye-Affections. 2. On the Operation for Squint.

TAYLOR, Charles Bell, M.D. 1. Is it Desirable, in Certain Cases, to Substitute Resection of the Optic Nerve for Ablation of the Eye-ball? 2. On a Method of Treating Epiphora without Slitting the Punctum Lacrymale.

A limited number of beds in the Sussex Eye Hospital, Brighton, will be devoted to the reception of cases of interest to be shown at the meetings of the Ophthalmological Section of the British Medical Association at Brighton. Gentlemen wishing to secure beds for such cases are requested to apply, as soon as possible, to Mr. Arthur Nicholson, 98, Montpellier Road, Honorary Secretary of the Section.

SECTION I.—OTOLOGY.

The President will deliver an Address.

The following papers are promised.

BABER, E. C., Esq. On Examination of the Nasal Cavities from the Front (illustrated with Diagrams); and will show some Nasal Cases at the Throat and Ear Dispensary.

BARR, T., M.D. 1. On the Varieties, with Appearance, of the Tympanic Membrane compatible with Good Hearing. 2. On the Value of Rinne's Test, in the Diagnosis of Disease of the Nervous Structures of the Ear.

BROWNE, Walton, M.D., will read notes of cases of Mastoid Abscess.

CUMBERBATCH, A. E., M.B. Aural Vertigo.

DELSTANCHE, Dr. C., Brussels. 1. Case of a Revolver-Bullet in the Ear. 2. Foreign Bodies in the Substance of the Lobule. (In French.)

ELLIS, Richard, Esq. Labyrinthine Hæmorrhage, with Exhibition of Patient.

MACDONALD, Greville, M.D. The Functions of the Nose in Health and Disease.

PRITCHARD, Urban, M.D. Counter-irritation in the Treatment of Ear-disease.

SYMINGTON, J., M.B., Edinburgh. The Anatomy of the Ear in the Child.

WOAKES, E., M.D. Diagramatic Scheme, showing relations between Aural and Nasal Diseases.

WOLSTON, Walter, M.D. Nasal Polypi, their Radical Extirpation and Cure by Electro-cautery, with illustrative cases.

Discussion to be opened by Spencer Watson, Esq. : On the Complications of Nasal Polypi, in which Dr. Charles Worden and Dr. Dundas Grant will take part.

Members desirous of reading papers are particularly requested to communicate without delay, with the Secretaries of Sections, that the arrangements may be as complete as possible prior to the meeting.

Annual Museum.

The twentieth annual museum will, by permission of the Town Council, be located in the Corn Exchange, a large hall, communicating with the Dome, and having a separate entrance in Church Road.

It will be open to the profession from August 9th to August 15th, and will be classified in three sections.

Section A.—Foods, drugs, hygienic and sanitary appliances. A specialty will be made of all kinds of prepared, peptonised, and other compound nutrients. (Honorary Secretary, Dr. Mackey, 1, Brunswick Road, Hove, Brighton.)

Section B.—New books, instruments, and appliances—medical and surgical; galvanic and other batteries and apparatus. (Honorary Secretary, Dr. Whittle, 65, Dyke Road, Brighton.)

Section C.—Anatomical and pathological specimens, diagrams, casts, or models; microscopes and microscopical preparations. (Honorary Secretary, D. W. Giffard, Esq., 5, Pavilion Parade, Old Steine, Brighton.)

A name and description, printed, if possible, must be attached to each exhibit, which should be sent to the Corn Exchange, Brighton (to the care of the Secretaries of the respective sections), between Monday, August 2nd, and Saturday, August 7th. Ample counter space will be provided, and, so far as possible, equal facilities will be given to every exhibitor.

A description, for insertion in the Museum Catalogue, should be forwarded to the private address of the respective Secretaries, at least one month before the meeting, that is, by July 10th.

To Exhibitors.—The expenses of carriage and of removal to be borne by the exhibitor. The Committee will exercise every reasonable care as to objects entrusted to them, but will not be responsible for risk or accident.

Excursions.

On Thursday, August 5th, a steamer of the Clyde Shipping Company (21, Carlton Place, Glasgow) sails from Glasgow, calls at Waterford, August 7th; Plymouth, August 9th; Southampton, August 10th, and passes Brighton the same evening on her way to London. Cabin-fare, 30s.; return, 50s. On Saturday, August 7th, the *Faithful*, or other steamer (Power and Co., 21, Water Street, Liverpool), will sail from Liverpool, call at Falmouth, August 9th; Plymouth, August 9th; Southampton, August 10th, and pass Brighton the same evening on her way to London. Fare, 25s., chief cabin.

On Saturday, August 7th, one of the British and Irish Steam Packet Company's steamers will leave Dublin (company's office, North Wall, Dublin), call at Falmouth, August 9th; Plymouth, August 9th; Southampton, August 10th; Portsmouth, August 10th, and will pass Brighton the same evening on her way to London. Fare, 22s. 6d.; return, 33s. 9d., chief cabin.

On Saturday, August 7th, a steamer of the City of Cork Steam Packet Company (High Street Chambers, Cork) will leave Cork, call at Plymouth and Southampton, and pass Brighton on Tuesday, the 10th, on her way to London. Fare, 20s.; return, 30s.

If sufficient inducement offered, perhaps the owners of some of these steamers might be persuaded to allow their vessels to call off Brighton to land passengers (as there is deep water close in shore at Brighton), provided the local committee of the Association would make arrangements for a boat to meet the vessels off Brighton, and take the passengers ashore. If such arrangements could not be made, passengers could land at Southampton or Portsmouth, and take the train to Brighton.

Members desirous of returning North by steamer are informed that there are no steamers passing Brighton that would call for passengers. The only way would be to go to London by rail, and from thence by steamer for the North.

Notices of Motion.

Dr. Ward Cousins hereby gives notice that he will move the following addition to, and alteration of, the By-laws; namely,

Page 17, By-laws. Addition to "d," second line, after the word "member," add "of a Branch within the limits of the United Kingdom of Great Britain and Ireland."

Addition to "d."—"No person shall be eligible as a representative member of a Colonial or Indian Branch unless, at the time of his election, he shall be a recognised member of the Branch, and shall have resided within the area of the Branch for at least twelve months prior to his election. The election of Colonial and Indian members of the Council shall be annual, and shall be subject to the same by-laws as the election of other representative members."

Mr. John Dix hereby gives notice that, at the Annual Meeting, he intends to submit a proposition not involving an alteration of a By-law on the subject of the payment of travelling expenses of the Representatives of Branches to the meetings of the Council.

A motion will be introduced by the Shropshire and Mid-Wales Branch on the subject of State Honours to the Medical Profession.

Mr. John Marshall gives notice that he will move

"That notices of Births, Marriages, and Deaths, occurring in families of members of the Association, shall be published in the British Medical Journal without charge."

May 6th, 1886. Francis Fowke, *General Secretary.*

The following meetings, by permission of the Council, will be held during the Annual Meeting of the British Medical Association at Brighton.

BRITISH MEDICAL BENEVOLENT FUND.

The Honorary Local Secretaries are requested to meet on Wednesday morning, August 11th, at 10 o'clock, in the King's Apartments, No. 1, Royal Pavilion.

MEDICAL DEFENCE.

The attendance of all members of the Association interested in the question of the formation of a Medical Defence Association, in connection with the British Medical Association, is requested at a meeting to be held at Brighton, in the Town Hall, on Wednesday, August 11th, at 10 o'clock.

On behalf of the Council of the Lancashire and Cheshire Branch, Charles E. Glascott, Honorary Secretary.

IRISH GRADUATES' ASSOCIATION.

The Ninth Annual Meeting of this Association will be held in the Banqueting Room, Royal Pavilion, on Wednesday, August 11th, at 12.30 P.M.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

The Annual Meeting of this Association will be held in the Banqueting-Room, Royal Pavilion, on Thursday, August 12th, at 10 o'clock. It is hoped that all Poor-law Medical Officers present will attend.

MEDICAL SICKNESS, ANNUITY, AND LIFE-ASSURANCE SOCIETY.

The Third Annual Meeting of this Society will be held in the Masonic Room, Royal Pavilion, on Thursday, August 12th, at 10.30 A.M.

COLLECTIVE INVESTIGATION COMMITTEE.

This Committee will meet in the King's Apartments, No. 2, on Thursday, August 12th, at 10.30 A.M.

NEW SYDENHAM SOCIETY.

The Annual Meeting of this Society will be held in the Saloon, on Friday, August 13th, at 9.30 A.M.

Halifax Union.—The expiration of Dr. Britton's five years' appointment, as Medical Officer of Health for the combined sanitary authorities within the area of the Halifax Union, on July 25th, has given rise to a conflict with the Local Government Board, and a divergence of opinion among the authorities themselves. The Elland and Sowerby Bridge Urban Sanitary Authorities have intimated their withdrawal from the combination; and the Local Government Board have stated that they are not aware of any sufficient reason for disturbing the existing arrangement, and warned the Elland Authority that, if they persist in making a separate appointment, they (the Local Government Board) doubt whether they would be justified in sanctioning the repayment, out of the Parliamentary grant, of a moiety of the salary. On the other hand, the Rastrick Authority, upon the motion of the Chairman, seconded by Mr. Dobson, have unanimously passed a resolution, expressing the high opinion of the Board as to the able manner in which Dr. Britton had performed his duties to the Urban Sanitary Authorities of the Halifax Union up to this date, and trusting that no infringements of the present arrangements (which had worked so well) would be permitted, and hoping that other Boards will follow the example of Rastrick. Notwithstanding all this, the Elland Authority have appointed Dr. Denning, at £30 *per annum*, for three years.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Whooping-cough treated by Nasal Insufflations.—A Flameless Lamp for Disinfecting Purposes.—Rabies.—The Cholera-Epidemics of 1884 and 1885 at Marseilles.

DR. T. GUERDER made the following communication at a recent meeting of the Society of Practical Medicine. In the beginning of last February, an epidemic of a severe form of whooping-cough broke out at Pontcarré; infants were especially attacked. At first the disease was treated by fumigations of carbolic acid in the patients' rooms, and the administration of belladonna, carbolic acid, and bromide of potassium, with syrup of poppies. The fits of coughing became less frequent, and the reflex excitability was favourably modified; but when the treatment was suspended, the cough assumed its original violence on account of the extreme susceptibility of many of the children to belladonna poisoning; it was frequently necessary to discontinue the use of the syrup. In the case of a boy, aged 4 years, two teaspoonsful daily caused the pupils to dilate, and delirium ensued. Whooping-cough required protracted treatment, and it was not advisable to administer narcotics to young children for several weeks, even when they could be tolerated. The presence of nasal catarrh, with congestion of the pituitary mucous membrane, and the probable parasitic nature of the complaint, suggested to Dr. Guerder the advisability of local treatment similar to that which had been successful in hay-fever. The probability that fits of whooping-cough might be attributed to a nasal reflex action was supplemented by clinical data of other cases in which nasal reflex action determined fits of coughing or attacks of asthma. Nasal insufflations were practised with a very fine powder composed of boric acid and dried coffee in equal parts. The insufflations were effected by means of a form of nasal insufflator which scattered the powder whilst projecting it into the nostrils, and thus prevented any accumulation on a limited area of the mucous membrane. This detail was of importance, inasmuch as, when the treatment was first adopted, it was unsuccessful, because the mothers did not understand how to effect the insufflation; but there was a marked improvement when it was performed night and morning by a physician. Thirty children were treated in this way; seven of them were scarcely a year old, seven were from one to two years old, six from two to three, and ten from three to eight. Among these thirty children, thirteen had been treated for a week or a fortnight with the syrup above mentioned, and a very decided improvement was noticed, but only of short duration. The remaining seventeen were exclusively treated with nasal insufflations, not taking any other medicine, excepting one or two emetics during the catarrhal period. Out of the thirteen children treated with syrup during the first period, from February 5th to February 19th, three had attacks of intercurrent pneumonia, two children of 7 and 11 months succumbed, the other, 8 years old, recovered. It should be noticed that, during the attack of pneumonia, the fits of coughing entirely subsided, but returned with the same violence during convalescence. From the day when nasal insufflations were employed, no further complications ensued, nor did any more deaths occur. The new treatment was begun on February 19th, with the boy, aged 4, already referred to, who was unable to take belladonna, and who had fits of coughing every hour, night and day. At the end of forty-eight hours, and after four insufflations, the fits of coughing only occurred four times during the night, and five or six times in the day. When the treatment had been continued for a week, only one or two slight attacks of coughing came on during the twenty-four hours. With all the other children, the results were the same when the insufflations had been well performed. In a short space of time, varying from two days to a week, the fits of coughing generally diminished from twenty to fifteen, or even less, in twenty-four hours, and they grew less violent; vomiting and epistaxis also became less frequent. These results were simultaneous with the diminution of the coryza. In half the number of cases, it was observed that, after an improvement was obtained, further progress was slowly effected, but the cough did not thoroughly subside until a fortnight had elapsed. When timely medical aid was obtained, nasal insufflations were performed at the onset of the complaint during the catarrhal period. In these cases, the attack was comparatively slight, and there was complete recovery in about a week or fortnight, and sometimes sooner. In three cases especially, there was a positive abortive influence, and the cough was not periodical; it is possible that these were cases of simple catarrh; nevertheless, the children were in daily contact with others suffering from whooping-cough. Eighteen children had been treated with insufflations of boric acid and powdered coffee, when an article appeared by M. Grasset giving an account of an analogous treatment in whooping-cough adopted by Herr Michael, of Hamburg, who, after trying insufflations with various powders, preferred pulverised benzoin. The results he obtained were as successful as Dr. Guerder's. The latter then tested the value of pulverised benzoin; the success was equal to that resulting from the use of boric acid and powdered coffee, but recovery was slower. In conclusion, it may be stated, with regard to the subject of Dr. Guerder's memoir, that the method of nasal insufflations constitutes a simple treatment, which has proved to result in one of the most efficacious and rapid cures for whooping-cough hitherto known. It seems better calculated than any other remedy to modify morbid conditions occurring in the complaint, such as vomiting, hæmorrhage, and emaciation, as well as any other complication, such as pneumonia.

An apparatus called a flameless lamp is an ingenious application of a well known chemical and physical experiment. This lamp purifies the air in a sick-room or confined space. It consists of a spirit-lamp and a spiral thread of platinum about 15 millimètres in length. In order to use the lamp, it must be filled with alcohol at about 90°. The wick is moistened and the spiral thread having been previously soaked in alcohol, is so placed that it surrounds the wick as closely as is possible without touching it. This last precaution is essential. Then the lamp is lighted, and the platinum-thread immediately becomes red-hot. Two or three minutes afterwards, the lamp is put out by using a glass extinguisher. Currents of air must be avoided, as they make the lamp flicker, and the platinum-spiral is then exposed. As soon as the lamp is put out, the extinguisher is removed from it; the spiral remains incandescent, and continues in this condition so long as there is alcohol in the lamp; it then gives out a sweet etherised odour, and the most mephitic air is quickly purified. In a smoking-room, where generally the smell of smoke is persistent, all odour disappears after the flameless lamp has been used. In order to understand this somewhat complex phenomenon, it is necessary to remember that hammered as well as spongy platinum possesses, at a very high temperature, the property of condensing gas, and facilitating in its pores the combination of the oxygen of the air with combustible gases. The reflex action must not be forgotten; the heat given out by the spiral provokes an abundant evaporation of alcohol. The vapour of alcohol, in passing upon the incandescent platinum, is decomposed, and liberates its oxygen, of which part goes to increase the incandescence. Thus the incandescent platinum accelerates the evaporation of the alcohol, and *vice versâ*. The rest of the oxygen which is set free spreads about the room, and renders the atmosphere wholesome. It is possible that the vapour produces ozone and aldehyde. The production of aldehyde is more probable than that of ozone. The manufacturer of this lamp asserts that ozone is produced when a small quantity of a liquid which he calls ozogene, and contains ether, is mixed with the alcohol. Whatever may be the process, the purification of the air is manifest. This cheap apparatus, invented by M. Dobereiner, is much used by the Belgian physicians. It is well to remember that platinum in a finely divided state like that of spongy platinum, black or in powder, has very remarkable properties. A few drops of formic acid powder upon spongy platinum render the metal incandescent. Many substances, submitted to the influence of finely divided platinum, become decomposed, or enter into combustion—a phenomenon which can only be provoked by heat when this metal is not present. Platinum by its contact alone causes the combustion of hydrogen gas. Berzelius, who studied these phenomena, explained them by catalytic force; but the real cause of this action is not known. Platinum-foil possesses the same properties as spongy platinum, but in a lesser degree.

At a recent meeting of the Conseil d'Hygiène, Dr. Dujardin-Beaumetz furnished the particulars of two supposed cases of rabies admitted into the Hôtel Dieu Hospital. One of the patients exhibited all the symptoms of alcoholic delirium. He left the hospital in two days, perfectly cured; fifteen days previously, he had been bitten by a dog, but the animal was not mad. During one of the attacks of delirium tremens, the patient tried to bite people. M. Dujardin-Beaumetz observed that he had never met with an instance of people suffering from rabies attempting to bite others, and could confidently assert that it was a symptom of alcoholic delirium, and not of rabies. Last year a man attacked by rabies was admitted into the Lariboisière Hospital. He tried to bite the male nurses, but it was found that he was suffering from alcoholism as well as hydrophobia, and Dr. Beaumetz believed that his attempts to bite resulted from alcoholism, and not hydrophobia. The other patient admitted at the

Hôtel Dieu Hospital said of himself that he had hydrophobia, but his true ailment was gastric fever. Last year, he was also received at the Necker Hospital for simulated rabies. M. Dujardin-Beaumetz terminated his report by stating that, since January 1st, 1886, 90 persons had been bitten; one among these did not go to be treated at M. Pasteur's laboratory, and he died.

At a recent meeting of the Academy of Sciences, M. Marey presented a work by M. Guérard, chief engineer of the port of Marseilles. The facts collected by the author demonstrate that the cholera-epidemics of 1884 and 1885 were aggravated, and extended further after violent storms. The epidemics were especially virulent in the localities near the old port. M. Marey's theory that cholera is spread by means of water is confirmed by the facts exposed in the work by M. Guérard.

CORRESPONDENCE.

☞ To Correspondents. ☜

Our correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return, and hold over a great number of communications, chiefly by reason of their unnecessary length.

THE VITALITY OF PATHOGENIC MICRO-ORGANISMS IN WATER.

Sir,—Messrs. Crookes, Odling, and Tidy having recently published the results of some experiments which they have made on the vitality of the bacillus anthracis in London water, I should like to offer the following remarks. The behaviour of various pathogenic micro-organisms in water has, during the past three years, formed the subject of experiment by several authors, including Koch, Cornil and Babès, Nicati and Rietsch.

Within the last two months, no fewer than three papers bearing on this subject have been published, two of them in Germany by Drs. Wolffhügel and Meade Bolton respectively, whilst the third by myself, "On the Multiplication of Micro-Organisms," was communicated to the Royal Society at their meeting in June last. In this paper, I have recorded a large number of experiments, made both with the mixtures of organisms found in various natural waters, as well as with three well characterised forms which are associated with disease, namely, Koch's "comma" spirillum of Asiatic cholera, Finkler-Prior's "comma" spirillum of European cholera, and the bacillus pyocyaneus, which produces the greenish-blue colouring matter frequently present in abscesses. The methods of research, which have been independently selected both by Wolffhügel, Meade Bolton, and myself, are identical, and consist in the examination, by gelatine-plate cultivation, of waters purposely impregnated with the organisms in question. This method is obviously the one which most recommends itself for the purpose, as it not only enables one to ascertain the presence or absence of the organisms, but also of quantitatively following their multiplication or reduction. I may mention that these three organisms present great differences in their behaviour under similar circumstances; thus the bacillus pyocyaneus is possessed of far greater vitality in water than either of the other two, its presence being demonstrable even in distilled water after fifty-three days in numbers exceeding many-fold those originally introduced; Koch's "comma" spirillum, on the other hand, was in the purest forms of potable water, no longer demonstrable after the ninth day, whilst in London sewage it was found in largely multiplied numbers after twenty-nine days, whilst Finkler's spirillum could in no case be detected after the first day, and frequently not even on the day of inoculation. A curious phenomenon, which my experiments, as well as those of Wolffhügel and Meade Bolton, have brought to light, is that, when organisms of this kind, which are not the natural inhabitants of water, are introduced into this medium, a large proportion of them are frequently at first destroyed, a greater or less multiplication in their numbers often subsequently taking place.

The bacillus-anthracis, as is well known to bacteriologists, appears in two very distinct forms, the bacillus-form and the spore-form, and these present very great differences in their powers of endurance, the former being destroyed with comparative ease, whilst the spores are remarkable for their vitality. Mr. Crookes and his colleagues have apparently experimented with the bacillus-form of anthrax only, which they state is rapidly destroyed when introduced into London water; but Dr. Meade Bolton, who has dealt with anthrax in both its forms, has shown that the spores of anthrax retain their vitality, even in distilled water, for upwards of ninety days, and that it is only the bacilli which rapidly perish in some kinds of potable water. In polluted well-water, Meade Bolton has also shown that even the bacilli are persistent for upwards of ninety days, and the spores for nearly a year, whilst Wolffhügel has found that, in polluted river-water (the river Pauke, in Berlin), even when diluted ten-fold with distilled water, the anthrax-bacilli undergo extensive multiplication.

—I am, sir, your obedient servant, Percy F. Frankland.

Normal School of Science, South Kensington Museum, S.W.

THE "DURATION OF INFECTIOUSNESS IN MEASLES," Etc.

Sir,—Will you permit us to correct the misconception which may possibly arise in the minds of those who read Mr. Raven's paper, published in the Journal of July 24th, in which he states, "According to a code of rules issued by the medical officers of schools, a pupil is allowed to rejoin his fellows in three weeks from the date of the measles rash."

The wording of our code is as follows (page 20): "A pupil may go home, or rejoin the school, after measles, in not less than three weeks from the date of the rash, if all desquamation and cough have ceased." And it is further pointed out that this rule, in common with the others given as applicable to the cases of the different infectious diseases under discussion, is a safe one to adopt, "provided patient and clothing are thoroughly disinfected."

The recommendations contained in the code were formulated only after long and anxious deliberation extending over many months, and after consultation with numerous recognised authorities throughout the country. Their aim is to indicate so much as is sufficient, and not more than is necessary, in the way of safeguards against the admission and the spreading of infectious disease in schools. But they are, of course, subject to modification in accordance with the increase, and the increasing precision, of medical and hygienic knowledge.—We remain, etc.,

Alder Smith, C. E. Shelly } Honorary Secretaries, Medical Officers of Schools Association.

London.

ABUSE OF TEA.

Sir,—Would you kindly allow me to draw attention to the fact that, among women at least, the abuse of tea frequently leads to the abuse of alcohol? My experience in connection with a home for inebriate women has led me to this conclusion. Many of the inmates, indeed, almost all of them, were enormous tea-drinkers before they became victims to alcoholic dipsomania. During their indulgence in alcohol, they rarely drink much tea; but, as soon as the former is cut off, they return to the latter. In many instances, alcohol was first used to relieve the nervous symptoms produced by excessive tea-drinking.

In some cases of dipsomania we find it beneficial to exclude tea from the dietary; in others, its use appears of decided service in warding off the alcoholic craving; but, even in the latter cases, it must be given in measured moderation. The antagonism between tea and alcohol has long been observed.

One of my neurotic patients informs me that she always drinks less wine at dinner when she omits afternoon-tea. The habit of taking "a drop of gin" in a cup of tea arises from the experience that the nervous effects of the tea are thereby diminished. On the Continent, the same observation has been made with regard to alcohol and coffee, as the almost universal conjunction of coffee and cognac abundantly testifies.—Yours, J. Muir Howie.

86, Prince's Road, Liverpool.

UNSATISFACTORY INQUESTS.

Sir,—"Probe," who alludes, in your issue of July 24th, to the "curious want of information" shown by another of your correspondents in this matter, appears to have some curious ideas himself as to the duty of a medical man in cases of sudden death. He says, for instance, that one medical man, on being called to a child found dead beside the mother in bed, gives a casual look, and reports to the police, thus securing his guinea at the inquest; while another, who examines the child, is enabled to attribute the death to impaction, say, of a milk-curd, and so misses his fee. But surely an inquest would be held in the latter instance. A certificate of death to the effect that a child—or a man, for the matter of that—had died choked, would, I should imagine, be certain to be refused registration.

As to his remarks about the want of disinterestedness on the part

of medical men, I can only say that I should never volunteer any opinion as to death, from natural causes or otherwise, in any but a patient, except after a *post mortem* examination.—I am, sir, yours, etc.,

CYCLOPS.

MEDICAL OFFICERS OF SCHOOLS ASSOCIATION.

SIR,—We are authorised to communicate to you for publication the accompanying resolutions, which were passed at a special meeting of the Council of the Medical Officers of Schools Association, held in London on July 22nd.—We remain, dear sir, Yours faithfully,

WILLIAM S. SAVORY, President.
ALDER SMITH, CHARLES E. SHELLY } Hon. Secs., M.O.S.A.

I. "A most important precaution towards the prevention of, and the dealing with, infectious diseases in schools, is undivided medical responsibility. Therefore, the medical officer, and he only, should have the entire school under his daily care and medical supervision. He should have full control regarding the entrance into the school of all boys who are known to have recently had any illness, or to have been exposed to infection, as also over the whole arrangements for isolation, nursing, quarantine, and disinfection" (page 9).[1]

II. The medical officer of a public school ought to be appointed by, and should be "responsible only to the governing body." Whatever its actual composition in different cases, the governing body is here taken to include the head-master of the school (page 9).

III. It should be the duty of the medical officer to at once report in writing to the responsible authorities the existence of any sanitary defects, and to suggest such remedial measures as appear to him to be necessary (page 9).

IV. "A large school should possess a good detached infirmary, to which all cases of illness should be sent (no matter in whose house they may occur), and where infectious cases can be thoroughly isolated.....It is of the utmost importance that the infectious wards be completely isolated from the rest of the building, and, if practicable, there should be a separate building for infectious diseases" (page 11).

V. "The first case of infectious disease" which occurs in a school "should be immediately isolated in the infectious ward, and the latter should, therefore, always be in readiness" (page 17).

VI. In the opinion of the Council, a serious outbreak of infectious disease in a school affords a sufficient justification for the temporary removal of healthy children by their parents or guardians if they see fit to do so. Should the outbreak be not only serious in itself—as of typhoid fever or of diphtheria, for example—but dependent upon some sanitary defect which cannot be immediately remedied, or if its origin appear doubtful, then it would be desirable to dismiss the school. (*Vide* page 21, XXII, 3.)

VII. In any case of serious illness, the parents or guardians of the pupil should be at once informed of it.

The Council also deem it most desirable that, in replying to inquiries made by parents with respect to any case of serious illness occurring in a school, the precise terms used by the medical officer in describing the nature or the progress of the malady should be communicated, either directly by him, or through the house-master.

VIII. "The general sanitary arrangements of any school—if not certainly known to be in accord with modern sanitary science—should be thoroughly inspected by a competent person, and all defects at once remedied." (Page 1.)

IX. The Council are of opinion that good would result if an official inquiry were instituted into the measures which are taken in our large schools for the prevention of infectious diseases, and for the medical care of the pupils.

HEMIN AND HÆMATIN.

SIR,—In the report of Dr. Vincent D. Harris, on some of the compounds of hæmatin, etc. (BRITISH MEDICAL JOURNAL, July 17th, 1886, p. 103), it is stated that I "held the belief" that hæmin does not contain chlorine, but was "merely crystallised acid-hæmatin." I have already refuted this error, previously committed by others, in the *Lancet*, vol. ii, 1880, p. 890, in an article entitled: "Note on Hæmin, or so-called Hydrochlorate of Hæmatin." If Dr. Harris had read this article, or the paper by Thudichum and Kingzett, entitled: "On Hæmin, Hæmatin, and a Phosphorous Substance contained in Blood-Corpuscles," published in the *Journal of the Chemical Society* for September, 1876, he could, of course, not have copied this error from p. 11[illegible] of Dr. Gamgee's *Physiological Chemistry*; and if Dr. Gamgee had read that paper, he could, in his turn, not have copied that error from Hoppe-Seyler.

Hæmatin and hæmin have been investigated by Wells, Brande, Chevreul, Lecanu, Sanson, F. Simon, G. Simon, Berzelius, Tiechmann, von Wittich, Groosden, Paquelin and Jolly, R. Schwartz, Rollet, Glénard, Husson, Jäderholm, Mulder, Hoppe-Seyler, Thudichum and Kingzett, Feldhaus, Frey, Shalfeieff, Lagorio, Nencki and Sieber, Struve, and Cazeneuve. If Dr. Harris had carefully studied all these authors before instituting his research, or presenting his report, he would probably have come to much more valuable results than those at which he has arrived.—I am, sir, yours truly,

J. L. W. THUDICHUM, M.D.

[1] The notations in inverted commas are taken from, and the pages refer to, [illegible] published by the Association in 1885.

OBITUARY.

WALTER MOXON, M.D.(Lond.), F.R.C.P.

DR. MOXON, whose sudden death, on July 21st, we announced last week, was still in the prime of life. He was born on June 27th, 1836, and had, therefore, but just completed his fiftieth year. His father held various posts in the Civil Service, and at the time when Walter Moxon, who was one of nine children, was born, the family resided at Midleton, co. Cork. His mother was a native of Sussex. His father subsequently received an appointment in London, and eventually became chief clerk of one of the departments of the Inland Revenue at Somerset House.

Walter Moxon's education was suspended at an early age, in order that he might be put to business in the City of London. The humdrum existence of a merchant's office was, however, little suited to one of his impetuous temperament, and he very soon brought his commercial career to an abrupt termination. Having conceived the desire to enter the medical profession, he devoted himself with so much assiduity to the necessary preliminary studies that he was able to pass the matriculation examination of the University of London without any other assistance than his own industry. He entered at Guy's Hospital in 1854, and very quickly attracted universal attention by the singular brilliancy of his parts. At the First M.B. Examination of the University of London in 1857, he distinguished himself by taking many prizes; and, in the following year, he was appointed one of the assistant-demonstrators of anatomy. Among his contemporaries at Guy's Hospital was Mr. Arthur Durham, and the friendly rivalry between these two distinguished students was one of the topics of the day at Guy's.

In 1859, Dr. Moxon graduated M.B., taking honours in every subject. He became M.D. in 1864, the same year as he was appointed Assistant-Physician to Guy's Hospital. His first important teaching appointment, however, was that of Demonstrator of Anatomy in the Medical School of Guy's Hospital. His knowledge of the human body was most exact and complete. No relation of structures, however minute; no dissection, however unusual, but seemed familiar to him. He was always committing himself to precise and complicated statements, and was never caught tripping. "He knew anatomy," writes a friend and colleague, "as he afterwards, in an introductory lecture, recommended others to learn it—as a cabman knows his way about London. It was by concentration of attention and by continual repetition, that he had become, when I worked under him, the most perfect topographical anatomist I have known."

After five years thus spent in the dissecting-room, he succeeded Dr. Wilks in the pathological department. Here he was as minute, as exact, as accurate as before. His demonstrations were deliberate, elaborate, and emphatic. He made beautiful drawings of microscopic sections, and finished portraits in water-colour of diseased organs. A few of the former appeared in his *Pathological Anatomy*, but the latter must be seen in the *post mortem* theatre of Guy's Hospital, where they almost rival Towne's famous models in the Museum. The result of his pathological work was seen in the second edition of Dr. Wilks's *Lectures*, to which he contributed a considerable part; and also in numerous communications to the Pathological Society. Conspicuous among the contents of its *Transactions*, which represent, perhaps, the highest standard of uniform excellence which our profession can boast, were Moxon's papers—never slight or trivial in substance, and always brought up to the requirements of scientific accuracy.

After several years spent in teaching pathology, he was appointed to the joint lectureship on medicine, a post which he held up to the time of his death. He bestowed great pains on his lectures, as he did on all his work, and became both brilliant and popular. His plan was to concentrate his attention and that of his hearers upon one

subject, which he treated as fully, deeply, and elaborately as his thorough knowledge and wide experience enabled him. Such a teacher gives less information of the kind readily reproduced at examinations than may be gained from the text-books or from the lectures of less highly gifted men; but he riveted attention, he awakened interest, and he stimulated thought. As a clinical physician, the same characteristics brought Dr. Moxon high reputation, while his quaint illustrations and ready epigrams fixed his precepts firmly in the memory. His most important published papers were in the *Guy's Hospital Reports*, and among them we may particularly refer to those on Chronic Arteritis, Atheroma, and Aneurysm, and to that on Insular Sclerosis. His Lumleian Lectures before the College of Physicians were brilliant examples of his accurate and minute observation, his ingenuity, and his literary skill. He became a Fellow of the Royal College of Physicians in 1868, and of late years he took an active part in its affairs, and spoke in the Comitia seldom, but effectively. Rarely has such an impression been made as when he brought forward the case of two general practitioners who had been most unjustly subject to prosecution and reproach. His speech entirely secured his object, and left those who heard it convinced not only of his ability as a speaker, but of his public spirit and generous sympathy with his profession.

His consulting practice had, for several years, been large and increasing. Apart from his skill and insight, he was valued for his scrupulous observance of what is called professional etiquette, but is really nothing more than the precepts of honour liberally interpreted.

Dr. Moxon's domestic circumstances were most happy. He married early a lady of some fortune, and had an only daughter. He resided first at Hornsey, and then at Highgate, retaining consulting-rooms at Finsbury Circus. He had latterly felt the fatigue of this travelling backwards and forwards, and, indeed, had not been in robust health for years; he had had several attacks of severe hæmoptysis, and frequently passed blood with the urine. It is probable that he took a more serious view of the case than others would have done, and looked forward to an incapacitating illness with the most intense dread. He had suffered severely on several occasions from headache, and had also endured much suffering by reason of sleeplessness, for which he had resorted to the use of chloral. On the day of his death, he had one of these attacks; and, in addition, had persistent vomiting, and some hemiplegic weakness. It would seem that, while in this condition, he took a dose of hydrocyanic acid, careless whether the result might not, in his then state of health, prove actually fatal.

The funeral took place at Highgate Cemetery on Saturday, July 24th; there was a very large concourse of mourners, including Sir William Jenner, President of the College of Physicians, the majority of Dr. Moxon's old colleagues, and many students.

Personally, Dr. Moxon was warm-hearted, somewhat impulsive, friendly, hospitable, and generous. He delighted in argument, and was always prepared to maintain a thesis, and, above all, a paradox, with logic, which few could answer, and wit which fewer could emulate. He rarely failed to conquer, but, perhaps, almost as rarely to convince. He was eager to persuade, and hard to be persuaded. But his wit was such as "loves to play, not wound," and an antagonist left him with increased esteem.

His goodness to those in whom he saw the qualities he valued, and to all who were in want of help, was remarkable. On the day of his death, he had staying in his house one of his clinical clerks and the lady in charge of his ward, both of them convalescent from illness contracted in the hospital. By all who knew him, he was regarded with admiration and esteem; by those admitted to intimacy, with veneration and with love.

It is needless for us to attempt further to pourtray the character of this remarkable man, for we are enabled to give this striking memorial from the pen of Dr. Samuel Wilks, who had known him since the brilliant days of his student-career:

"It is impossible in a few lines to pourtray the character of so remarkable a man as the late Dr. Moxon. His was no ordinary mind, and I feel sure there is not anyone unfamiliar with his conversation and writings who could form any conception of its wonderful acuteness and depth. When I say his was no ordinary mind, I intend rather to convey the idea that Moxon could in no way be summarised as an eminent doctor or distinguished scientist. He was thus totally different from his late colleague, Fagge. The latter had a most orderly mind, of great acuteness, and threw aside everything he could not clearly bring to reasonable proof. Of such composition are most of our best scientific men—men whose methods of procedure are clear to all; and, if one judge by results, in the complete overthrowing of old modes of thought, must be regarded as possessing the best minds of the age. Moxon was not one of these; and, in one sense, might be called superior, for he belonged to a class of persons whose mental processes are beyond analysis; he was essentially a genius; he could elaborate doctrines out of a brain which was always dealing with the most subtle problems. Just as the poet is born and not made, so it is with every genius. Moxon was thoroughly outside all that was commonplace, and touched as he was with a spark of the celestial fire, he could pour out his thoughts with a brilliancy which often amazed his hearers.

"Even over his patients he discoursed in a manner entirely his own, and it is to be hoped that there are many of his old pupils who have preserved some of his highly acute and philosophic sayings. His intellect was of that high order that whatever he touched he needs must have advanced, and, therefore, all his contributions to medicine were of the most valuable kind. It is possible that he might have excelled still more at the Bar, or in literature become another Carlyle.

"I have always given him credit for the ready explanation of aphasia being associated with lesions of one side of the brain, from the fact of the left hemisphere being used for the more refined movements of the hand.

"His mode of expression, humour, and wonderful fancy made his writings read sometimes more like a romance. I do not consider that he had the ordinary scientific mind; it was too slow for him, and, moreover, he was not in accord with the doctrines of the leaders of science. His side hits at these men are seen through all his writings. He was truly a metaphysician, and, therefore, in many ways of looking at things, resembled his former colleague, Hinton. He would much rather spend an evening in discussing the subtlest question in mental philosophy, than talk about a case. Having succeeded me in the chair of pathology, he soon acquired a large amount of knowledge on this subject, and then wished to edit my *Lectures on Morbid Anatomy*. I can thoroughly appreciate the perplexity of a reviewer of this work on its first appearance, when he lamented that Moxon had not brought out a book of his own, and left me to re-edit my own lectures; 'for,' said he, 'Wilks and Moxon formed an adulterous connection.'

"There are many passages in this book which show the brilliancy and play of fancy which he could throw over the most commonplace fact; for example, under the paragraph 'Epulis.' 'This is an ancient name for tumours of the gums; but tumours are of many kinds, hence a difficulty in settling which tumours of the gums are to be called "epulis." Virchow gives the term a typographical significance, and calls all tumours of the gums "epulis," while the College of Physicians in its nomenclature goes curiously to the other extreme, and, after placing all possible tumours of the gums under No. 385, makes epulis 386, but gives it no import, so that it stands like a venerable title without estates.'

"I remember standing talking to him one day, when a colleague came up, and complimented him on the largeness of his class, when Moxon replied, 'I don't suppose I give the men better bread and meat than you did, but I put a little mustard on the sandwich.' This condiment he no doubt did use largely.

"His lectures at the College may be remembered from the manner in which he demolished, by his subtle arguments, most of the conventional doctrines about brain functions. It must, however, be admitted that he did not put in their place any established facts demonstrably worked out in the laboratory or wards, but rather suggested some new theories of his own. It is not surprising that there have been those who did not appreciate Moxon; but this, as I have told them, was their own fault; they had never attuned the fibres of their brain in unison with his, and, consequently, had never felt them vibrate when his mind was at work. They had nothing in common with his 'all-subtilising intellect,' to adopt the Poet Laureate's expression about his friend.

"As may be supposed, with such a mind and temperament, Moxon was generous, ardent, and often impulsive. His sympathies with the poor, the suffering, and the injured, were great; and he was always most indignant at wrong-doing. The case of Bowers and Keates, which he warmly espoused, is fresh in the memory of all; and his late advocacy of the claims of students to degrees was not prompted by any selfish interests, but because he saw they were working at an unfair disadvantage. His personal goodness and beneficence knew no bounds, as many who have privately received his bounty can testify. Such men as he die early, for Moxon did not possess the attributes which a French physiologist declared were so advantageous to a long life—a good digestion and a bad heart.

"This hasty sketch of my late friend, whom I so much loved, is a mere outline of his character as he now appears before me. It is to be hoped that more time and leisure may enable some one of his

numerous friends to write fully the life of one who was no ordinary man. Cut off in his prime, there is no foretelling what great things Moxon might have done."

MEDICO-LEGAL AND MEDICO-ETHICAL.

ASSISTANTS AND FEES FOR ATTENDANCE IN COURTS.

LATE ASSISTANT.—If nothing was specified in the agreement, all fees earned by the assistant would belong to his principal, who paid a salary for his services: that being the case, the assistant would only be entitled to keep the amount of his expenses; but, as he incurred those expenses for the benefit of his principal, he would be entitled to have all reasonable expenditure repaid in full. If the principal has taken any part of the money which the assistant properly paid for his expenses, such money may be recovered by action in the county court; but, beyond that, the assistant can sustain no legal claim.

A QUESTION OF ETIQUETTE.

IN replying in the affirmative to our correspondent's two several questions as to whether, in our opinion, "Dr. H. acted rightly in prescribing the water, milk, soda, and pancreatic liquor," and also, "in coming at the request of the parent on five succeeding days" (subject, we presume, to the usual mutual professional arrangement as to the time of meeting), it is scarcely necessary to remark that, if "Anticant" disapproved of Dr. H.'s proposed treatment, it was not only open to him during the private consultative deliberation on the case (which we naturally assume took place immediately subsequent to their examination of the patient), but in perfect accord with his duty, to have expressed his dissent therefrom; and, on the suggested plan of treatment being made known to the parents, to have notified his diverse opinion, and left the decision to them.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

ABLE-BODIED EPILEPTICS.

UNION MEDICAL OFFICER writes: I shall be much obliged if you would advise me, under the following circumstances. I am medical officer for this parish. A young man, now over 16 years old, has for many years suffered from epilepsy. He is yet strong in body, but somewhat weak in mind. I have tried various medicines for the epilepsy, without success. He is, when under treatment, a pauper patient, but is not in receipt of any other relief. His father is an agricultural labourer, and has other children. He is allowed to wander about the village. He is harmless if not meddled with or irritated, but if interfered with, has been violent, and threatened to do others bodily harm. A year ago he was removed to the police station, in a neighbouring village, for violence committed in a public-house (under the influence of liquor). He was seen by the local medical man, certified by him to be insane, and sent to the County Lunatic Asylum. After having been there a week, he was dismissed by the medical superintendent of the asylum, as a person not requiring to be detained there.

Now, I should like to know what my duty is in a case of this kind, and if he were to do grievous bodily harm to any one, who would be responsible, as I do not consider he is responsible for his actions. Is it a case for the police to take up, or for the relieving officer, or for the doctor?

*** The case is one for the police to deal with if there be breach of the public peace, or, for the relieving officer to deal with if he has knowledge that the person is deemed to be a lunatic and is wandering at large. Information must be given to Justice, on oath, if the person be not a pauper, and not wandering at large, but is deemed to be a lunatic and not under proper care and control, or is cruelly treated or neglected by the person having charge of him. And it is one for the medical officer to let alone, unless he finds it to be his duty to give information to relieving officer or Justice, for them to act on.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

STAFF-SURGEON W. J. RANKIN, M.D., has been promoted to the rank of Fleet-Surgeon. Dr. Rankin's commission as Surgeon dates from February 10th, 1866; as Staff-Surgeon from March 10th, 1878. During the campaign in the Soudan, in 1884, he was Staff-Surgeon of the *Hecate* (medal, and Egyptian bronze star).

Mr. J. C. HEAVEN has been appointed Surgeon and Agent at Bristol; Mr. ANTHONY GORHAM, M.D., Staff-Surgeon, and Mr. H. J. MCTODD, Surgeon, to the *Assistance*, additional, for temporary service with the Royal Marines.

The following appointments have also been made at the Admiralty:—WILLIAM BROWN, Staff Surgeon, to the *Ruby*; J. D. A. HARVEY, Staff-Surgeon, to the *President*, additional.

MEDICAL STAFF.

DEPUTY SURGEON GENERAL J. J. THOMPSON is granted retired pay, with the honorary rank of Surgeon-General. Mr. Thompson, who has been Principal Medical Officer of the Dublin District, since the spring of 1884, entered the service as Assistant Surgeon, July 14th, 1854; became Surgeon, March 9th, 1867; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, November 27th, 1879; and Deputy Surgeon-General, September 1st, 1883. The Army Lists do not assign him any war service.

Surgeon R. J. A. DURANT, serving in the Bombay Command, is appointed to the Station Hospital at Indore, *vice* Surgeon W. O. Wolseley.

Surgeon S. J. W. HAYMAN, also serving in the Bombay Command, has been placed on general duty in the Mhow Circle.

Mr. THOMAS WARD JESTON, who was Surgeon to the 36th Regiment during the Peninsular war, died at Henley-on-Thames on July 18th, in his 97th year.

THE INDIAN MEDICAL SERVICE.

SURGEON H. P. YELD, Bengal Establishment, officiating Deputy Assistant Master of the Bombay Mint, is confirmed in that appointment.

Surgeon F. D. C. HAWKINS, Bengal Establishment, whose services have been temporarily placed at the disposal of the Government of the North-Western Provinces and Oude, is appointed to the civil medical charge of Sultanpore.

Surgeon H. S. CARRUTHERS, Madras Establishment, Civil Surgeon of Tellicherry, is directed to act as Civil Surgeon and Superintendent of Madura Gaol, during the absence of Dr. F. C. Smith.

Surgeon A. W. F. STREET and Surgeon-Major J. F. KEITH, M.B., of the Bombay Establishment, respectively delivered over and received charge of the office of the Deputy Sanitary Commissioner, Sind Registration District, on June 14th.

Surgeon F. F. MACCARTIE, M.B., and Surgeon A. W. F. STREET, of the Bombay Establishment, respectively delivered over and received charge of the office of the Health Officer of the Port of Bombay, on June 18th.

The undermentioned officers have leave of absence for the period specified: Surgeon A. J. STONNER, Madras Establishment, for one year and 183 days; Brigade-Surgeon R. E. PEARSE, Madras Establishment, Principal Medical Storekeeper, to sea for three months on medical certificate; Surgeon-Major R. V. POWER, M.D., Madras Establishment, for one year on medical certificate.

Mr. P. M. DEAS, M.D., has been appointed Acting-Surgeon to the 1st Devon Artillery Volunteers.

Acting-Surgeon C. K. HITCHCOCK, of the 2nd Wiltshire Volunteers, has resigned his commission, which dates from May 28th, 1877.

Mr. FREDERICK SHANN is appointed Acting-Surgeon to the 1st West Riding of Yorkshire Volunteers.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on July 22nd.

E. J. A. Haynes, L.R.C.P.Lond., Greenwich, E. O. Gilkes, L.R.C.P.Lond., Dulwich, Students of the London Hospital; E. W. Crossley, L.R.C.P.Lond., Greetland, Yorks, F. A. Harger, Barnes, S.W., of St. Bartholomew's Hospital; J. Hutcheson, L.R.C.P.Lond., Edinburgh, of Edinburgh University; P. G. Lewis, L.S.A., Lincoln's Inn Fields, of King's College; A. S. Percival, Woking of Cambridge and St. George's; W. Permewan, L.S.A., Redruth, of University College; W. H. Baker, Clapham, of St. Thomas's Hospital.

One candidate was referred for three months, and eight for six months.

Admitted Members on July 23rd.

C. B. Cranstown, M.B.Durh., Ludlow, Salop, Student of St. Thomas's Hospital; E. G. Blaxland, L.R.C.P.Lond., Sydney, New South Wales; B. Robinson, L.R.C.P.Lond., West Kensington; C. A. Goullett, L.R.C.P.Lond., St. John's Wood; J. T. Blancard, L.R.C.P.Lond., Middleton Square, H. W. Rickards, L.R.C.P.Lond., and K. N. Bahodhurji, of University College; J. B. Close, L.S.A., Hull, W. H. R. Rivers, Offham, Kent, A. M. Gledden, Hornsey Lane, N., of St. Bartholomew's Hospital; J. B. Thompson, Northwich, F. H. Cottam, Crumpsall, of Manchester Infirmary; H. A. Smith, of Leeds; W. M. Barclay, L.R.C.P.Lond., Clifton, Bristol, of Bristol Infirmary; A. H. Nott, Devizes, of Birmingham; N. R. Howse, Barking Road, of London Hospital; Russell Coombe, West Kensington, Cambridge and St. George's; H. W. Drew, Blackman Street, F. C. Cave, Secretary of Guy's Hospital.

Four candidates were referred for three months, and three for six months.

Admitted Members on July 26th.

C. W. M. Castle, L.S.A., Blackheath, H. W. Branson, L.R.C.P.Lond., Westbourne Park, of King's College; C. T. T. Comber, L.R.C.P.Lond., Kew, J. E. Nihill, Melbourne, H. S. Smith, Surbiton, R. H. W. Wilbe, Finchley Road, N.W., W. H. Hamer, Reigate, of St. Bartholomew's Hospital; C. F. Seville, L.S.A., Manchester, of the Manchester Infirmary; F. R. H. Potts, Amersham, T. Fisher, Greenwich, S.E.; D. A. Waite, Hampstead, N.W., F. S. Hawkins, Trinity Square, S.E., and E. H. Brock, South Norwood, of Guy's Hospital; H. Goodale, Argyll Road, W., of St. George's Hospital; S. E. Holder, Adelaide, of University College; H. T. Kelsall, Westward Ho! of the London Hospital.

Three candidates were referred for three months, and six for six months.

Admitted Members on July 27th.

J. H. Yolland, L.S.A., Birkenhead, C. E. Sunder, Regent's Park, of University College; A. B. Hinde, L.R.C.P.Lond., Guernsey, and A. J. Tomkins, Clifton, of Middlesex Hospital; W. F. Fisher, L.R.C.P.L., Bembridge, Isle of Wight, B. Castle, Guildford Place, of St. Bartholomew's Hospital; W. F. Clarke, Lincoln, J. W. Sandoe, Bodmin, of Guy's Hospital; O. M. Booth, Shorner, of Leeds; F. C. Hounsell, Bessborough Gardens, of Cambridge and St. Thomas's Hospital; F. Farrow, Ardwick, G. B. Harrop, Stalybridge, of Manchester, W. Routh, Wandsworth, of St. George's Hospital; J. V. Owen, Machynlleth, of King's College.

Two candidates were referred for three months, six for six months, and one for twelve months.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS, EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—The examinations for the triple qualification of these bodies in Edinburgh, was held in July, with the following results.

Passed first examination.

Miss G. C. C. Mackinnon, Berwick; Messrs. J. W. Martin, Oxfordshire; J. A. Hamilton, Brighton; J. H. Wilson, Dungourney; D. E. Foley, Killeagh; W. Bell, Preston; J. P. O'Meara, Limerick; M. Gorman, County Cork; E. O. Cox, Dorset; J. O'Neill, Cork; P. O Donoghue, Cork; R. G. Spiller, Cork; J. R. M'Ferran, Galbally; W. S. Armitage, County Tipperary; W. R. Jones-Edwards, Bangor; W. Keiller, Mid-Lothian; T. W. Madge, Devon; J. C. Bryne, Ireland; B. Keane, Sherrness; F. M. Bovill, London; J. Barry, Castletownroche; J. H. Lloyd, Aberystwyth; J. Dalrymple, Whitehaven; J. J. Keane, Listowel; H. A. Lawson, Kildare; D. Wardleworth, Bury, Lancashire; A. J. Troughton, Roydon, Norfolk; D. L. Lindsay, Middlesex; W. Forsyth, Chevers, Cheltenham; S. Mellor, Huddersfield; J. T. T. Ramsay, Dundee; G. M. Grieve, Dundee; H. E. Scott, Edinburgh; W. H. Fawcett, Dublin; J. M. Whiteford, Larne; E. A. C. Hindemarsin, Calcutta; J. Easton, Moffatt; A. Dowling, Cork; P. M'Elligott, Kerry; and G. D. Backhouse, Preston.

Passed second examination.

Messrs. J. W. Martin, Adderbury, England; M. V. C. Marquis, Goa, India; R. Drinkwater, Llangollen; E. O. Cox, Dorset; R. D. B. Gunn, Seetapore, India; J. A. Greig, Edinburgh; J. R. Lowndes, Newcastle-on-Tyne; H. C. C. M'Neill, Folkestone; L. G. Peters, Tunbridge, Kent; J. A. Calderwood, Ayrshire; J. T. Kennedy, Kerry; D. Horan, Kerry; M. M. Murphy, Kerry; J. M Diarmid, Argyleshire; H. E. Mahoune, Sheffield; D. M. Wilson, Ayr; W. S. Kidd, Alyth; J. K. Coutts, Aberdeen; J. Cummings, Demerara; H. R. H. Peare, Melbourne; V. P. Lemane, County Kerry; F. W. Browning, Abergavenny; W. J. Visser, Cape of Good Hope; J. Dunn, Londonderry; J. C. Duarte, Goa, India; J. Cautley, Dublin; W. Bell, Enniskillen; K. B. Narayan, Cooch Behar, India; C. Doherty, County Donegal; and A. H. Goodwyn, County Kildare.

Passed final examination and admitted L.R.C.P., Edinburgh; L.R.C.S., Edinburgh; and L.F.P. and S., Glasgow.

Messrs. S. B. Fenn, Somerset; R. Nugent, India; E. O. Cox, Dorset; T. W. Quinn, India; R. D. B. Gunn, India; J. W. Brooks, Bombay; R. Markland, Wigan; W. E. Thomas, South Wales; J. R. Gaylard, Uxbridge; R. B. Popham, Islington, London; P. P. Park, Ontario; A. C. Evered, Plymouth; J. S. Macpherson, Sutherlandshire; J. A. Nowell, Lancashire; I. H. Davis, Pontypridd; R. J. Reinecke, Cape Colony; T. Monies, India; P. W. O Gorman, India; J. A. Kinloch, Montreal; and L. Carr, Ontario, Canada.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH: DOUBLE QUALIFICATION.—During the July sittings of the examiners the following gentlemen passed their final examinations, and were admitted L.R.C.P., Edinburgh, and L.R.C.S., Edinburgh.

Messrs. M. J. Morgan, Carnarvon; D. R. Macdonald, Edinburgh; R. J. Tristan, Roscommon; T. B. Martin, Sunderland; W. H. Fordham, Fiji; E. J. Williams, Dublin; C. W. Withinshaw, Nantwich; R. E. Lauder, Dublin; N. I. Edghill, Demarara; H. T. Darbier, Lyons; G. M. Giveen, Blackrock; H. Hick, Bolton-on-Dearne; E. Evans, Carnarvonshire; M. Bernstein, Sunderland; K. R. Marx, Germany; E. A. Lightburne, Newry; I. B. le Gentil, Mauritius; and J. Arthur, County Derry.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—During the recent sittings of the examiners the following gentleman was admitted a licentiate of the College.

Mr. G. Wilson, Greenwich.

The following gentlemen were admitted licentiates in dental surgery.

Messrs. H. G. Smith, Edinburgh; F. G. Allen, Derbyshire; and J. Taylor, Lancashire.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At special examinations for the Licences of the College, held on Wednesday, Thursday, and Friday, July 21st, 22nd, and 23rd, 1886, the undermentioned candidates were successful.

For the Licences to Practice Medicine and Midwifery.—John Innes-Stephen, London.

For the Licence to Practice Medicine only.—Thomas Joseph McGrath, Omagh, co. Tyrone; William Wigmore, London.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, July 22nd, 1886.

Armitage, Joseph Hartman, Montreal, Canada.
Close, John Burrill, Florence Avenue, Hull.
Hawkins, Frank Sidney, M.R.C.S., 7, Berkeley Square, Bristol.
Williams, James Francis, Montreal, Canada.

MEDICAL VACANCIES.

The following vacancies are announced.

ANCOATS HOSPITAL, Manchester. Junior House-Surgeon. Salary, £60 per annum, with board, residence, etc. Applications by July 31st to the Secretary.

BLOFIELD UNION. Medical Officer. Salary, £87 per annum, and fees. Applications by July 21st to H. H. Cole, Esq., 67, London Street, Norwich.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road.—House-Surgeon. Rooms, gas, and firing. Applications, by July 31st, to the Secretary.

CRAIGLOCKHART POOR-HOUSE, Edinburgh.—Resident Medical Officer. Salary, £80 per annum. Applications by August 14th to the Visiting Medical Officer.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board and lodging. Applications by August 4th to the Secretary.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—Assistant House-Surgeon. Salary, £50 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," by July 31st, to J. Taylor, Esq.

DURHAM COUNTY ASYLUM, Sedgefield, Ferryhill.—Junior Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent.

GENERAL INFIRMARY, Leeds.—Resident Surgical Officer. Applications by August 20th, to the Secretary of the Faculty.

HARTLEPOOL'S FRIENDLY SOCIETIES MEDICAL ASSOCIATION. Medical Officer. Applications to T. Tweddell, Esq., West Hartlepool.

LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, Mile End, E.—Assistant Demonstrator of Anatomy. Applications by August 12th to the Warden.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer of the Convalescent Home at Cheadle. Salary, £150 per annum, with board and residence. Applications by August 14th, to the Chairman of the Board.

OWENS COLLEGE, Manchester.—Professor of Chemistry. Applications to the Council of the College, under cover, to the Registrar by August 31st.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Member of the Court of Examiners. Applications by August 4th to E. Trimmer, Esq.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Junior Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications by August 3rd to the Honorary Secretary to the Medical Staff.

ST. MARY'S HOSPITAL, Paddington.—Administrator of Anæsthetics. Applications by August 7th to the Secretary.

UNIVERSITY COLLEGE, Bristol.—Medical Tutor. Salary, £100. Applications by August 6th to Dr. E. M. Skerritt, Dean.

WARWICK JOINT HOSPITAL BOARD.—Medical Officer to Infectious Hospital. Salary, £10 per annum, and £2 for each case. Applications, by August 19th, to A. E. Davis, Town Hall, Leamington.

WEST RIDING ASYLUM, WAKEFIELD.—Resident Clinical Assistant. Board, apartments, etc. Applications immediately to the Medical Director at the Asylum.

MEDICAL APPOINTMENTS.

BARROW, A. E., M.B., F.R.C.S., appointed Assistant Surgeon to King's College Hospital, *vice* H. Royes Bell, F.R.C.S., deceased.

DALTON, N., M.D., appointed Assistant Physician to King's College Hospital.

DALY, Edward O., M.A., M.D.Oxon., M.R.C.P., appointed Physician to the Hull Royal Infirmary.

DALY, Owen, M.D., J.P., F.R.C.P., appointed Consulting Physician to the Hull Royal Infirmary.

DAVIDSON, P., M.A., M.B., appointed Honorary Physician to the Liverpool Infirmary for Children, *vice* E. H. Greves, resigned.

DEMETRIADI, Louis, appointed Assistant Resident Surgical Officer to the Huddersfield Infirmary.

FRASER, D. A., M.D., M.R.C.S., L.S.A., appointed Medical Officer to the Uxbridge Union, *vice* W. Furnival, M.R.C.S., resigned.

HOVELL, T. Mark, F.R.C.S.Ed., appointed Lecturer on Diseases of the Throat, at the London Hospital Medical College.

LUNN, William J., M.D., F.R.C.S., appointed Honorary Consulting Surgeon to the Hull Royal Infirmary.

MORDAUNT, G. D., M.R.C.S.Eng., L.S.A.C.Lond., appointed Medical Officer and Public Vaccinator to the Fransham District, Mitford Union, Norfolk, *vice* E. A. Burgess, resigned.

STEEVES, G. Walter, B.A., M.D., M.R.C.S., appointed United States Sanitary Inspector at the Port of Liverpool.

WEBSTER, G. A., M.R.C.S.Eng., appointed House-Surgeon to the West London Hospital, Hammersmith Road, *vice* H. H. Des Voeux, M.R.C.S.Eng., L.R.C.P., L.S.A.Lond., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

HARFORD.—On July 13th, at Heaton, Newcastle-on-Tyne, the wife of Edward Augustus Harford, M.R.C.S., L.R.C.P., of a daughter.

JAKINS.—On July 22nd, at 9, Osnaburgh Street, Regent's Park, the wife of Percy S. Jakins, of a son.

MARRIAGES.

DAVIES—AIRD.—On July 1st, at St. Mary's, Pembroke, by the Rev. D. Parry Davies, vicar of St. Michael's, assisted by the Rev. William Jones, Vicar of St. Mary's, Pembroke, Arthur Mercer Davies, Surgeon, Army Medical Staff, Netley, to Evelyn Crosbie Aird, youngest daughter of the late Captain David Aird, R.N., The Anchorage, Pembroke.

KNOTT—OUTHWAITE.—On July 27th, at Ormesby Parish Church, by the Rev. W. R. Sharrock, M.A., William Knott, M.D., C.M.Edin., to Lily, daughter of Thomas Outhwaite, Esq., Middlesbro.

UNIVERSITY COLLEGE.—Mr. J. M. Horsburgh has been appointed secretary, and will enter upon his duties on October 1st.

AMBULANCE WORK.—Amongst the recipients of the St. John Ambulance Certificates, distributed by the Princess Louise to the students of the Carlshalton College, on Tuesday last, were twenty-one members of the Metropolitan Police—nineteen constables, and two sergeants.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

UNIFORM OF VOLUNTEER ARTILLERY SURGEON (BRIGADE).

ENQUIRENS writes: Be good enough, in the next issue of your JOURNAL, to give particulars of uniform, as required by a Surgeon to Brigade of Volunteer Artillery.

*** The same uniform as other officers of Volunteer Artillery (blue, facings scarlet), excepting that medical officers wear the cocked hat and plume, sword-belt, pouch-belt, and field-pouch, similar to those worn by officers of the Army Medical Department of corresponding rank, silver being substituted for gold, and gold for silver in the lace and ornaments on belts and pouches. It is stated in the Volunteer Regulations last issued, 1884 (see Section xix, par. 716), that patterns of clothing special to volunteer corps are deposited for inspection at the Royal Army Clothing Depôt. This Depôt is in the Grosvenor Road, London, S.W.

UNUNITED FRACTURE OF THE FIBULA.

A MEMBER writes: I have a case of ununited fracture of the fibula, of six months' duration. The fracture is situated at the lower third of the bone, and the man is not able to follow his occupation with ease, as the movement of the leg causes him pain, and often fatigue in the leg. He is 50 years of age. I would feel obliged to know if the two ends of the fracture can be brought in apposition by operation, and union brought about by keeping them together by silver wire. Any suggestion for the treatment will be thankfully received.

ANSWERS.

ANIMAL VACCINATION AT THE ANTIPODES.

WE have recently commented (April 10th), on the calf lymph depôt at Melbourne, and the argument that it afforded against the objection which was raised to Mr. Ernest Hart's labours to introduce animal vaccination in England, that other countries have not thought it necessary to set up calf lymph depôts. We have since received, from Mr. W. E. Hacon, of Christchurch, New Zealand, evidence showing that he had, as early as 1881, successfully cultivated vaccine lymph in the calf, and had supplied the Melbourne authorities with virus therefrom. We may congratulate Mr. Hacon on his early recognition of the value of this method of producing lymph, and on the success which his efforts attained. Mr. Hacon's duties as medical superintendent of the Hospital for the Insane, at Christchurch, have since led him to abandon this work.

MULLEIN OR VERBASCUM THAPSUS.

A. AMBROSE (Bournemouth) writes: If "T. C. D." will communicate with me, I shall be happy to send some mullein plants. I have found the treatment of benefit in many cases, and have grown a quantity.

THE CANARY ISLES AND MADEIRA.

J. R. P. writes: D. C. asks if the climate of Maderia be suitable for delicate children. I would state that, if D. C. wants a warm moist heat, Maderia is a capital place. If a dry climate be more suitable, I would strongly advise Grand Canary, or Teneriffe, where you get the most healthy climate in the world. I give you my address, and shall be pleased to furnish D. C. with full particulars if he will write to me. The New Zealand boats, which start from Plymouth, land passengers in Teneriffe in four and a half days. There is a sanatorium being opened at Oratavia, the other side of this island; a Mr. Harris is its manager.

J. B. F.—The lectures referred to will probably be published in one of the monthly magazines.

M.R.C.S., Dewsbury.—Paget especially denounces this immoral and mischievous doctrine in his Clinical Lectures. Curling, Humphry, and others discountenance it from its scientific aspect. They show that a gland like the breast tolerates total abeyance of its functions throughout life, and that the functions of the testis can likewise remain latent with impunity.

DIPHTHERIA AT THE CHARTERHOUSE.

EDWIN H. ROE, M.R.C.S. (Patricroft) writes: I am glad to see Dr. Haig Brown's letter in the JOURNAL of July 24th. The impression I had previously come to, from the tone of the head-master's letter to the *Times*, was that he wished to conceal some short-coming in the medical attendance. Dr. Brown's letter satisfactorily allays this. At the same time, I must protest against what can not be termed anything else than a gross breach of power on the head master's part in refusing to readmit Mr. Carrick's son, that is, supposing that Mr. Carrick's version is correct, and I have never seen this impugned. This is a matter which concerns every father in the kingdom, and Mr. Carrick has the deep sympathy of every one with whom I have spoken on the subject.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. H. G. Dixon, London; Mr. S. S. Wells, Plymouth; The Secretary of the Chelsea Hospital for Women; Dr. E. Paget Thurstan, Southborough, Tunbridge Wells; Mr. T. Stretch Dowse, London; Dr. F. W. Lowndes, Liverpool; Dr. Withers Moore, Brighton; Dr. F. T. Bond, Gloucester; Dr. Byrom Bramwell, Edinburgh; Mr. A. Ambrose, Bournemouth; Dr. D. A. Fraser, Weston-super-Mare; Dr. R. T. A. O'Callaghan, Carlow; Mr. H. A. Keegel, Kaylutara, Ceylon; Mr. J. Mackenzie Booth, Aberdeen; Mr. J. E. Cooney, London; Mr. W. Elliott Price, Hereford; Dr. F. Cooke, Cheltenham; Rev. F. Burnside, Hertford; Mr. Blackett, London; Mr. C. J. Wright, Leeds; Mr. E. Noble Edwards, Brighton; Mr. J. P. Philpot, Parkstone, Dorset; Dr. T. Troup, Edinburgh; Dr. T. S. Clouston, Edinburgh; Dr. J. Barr, Liverpool; Mr. E. H. Roe, Patricroft; Mr. S. Haynes, Stansted-Montfichat; Dr. W. Smith, Edinburgh; Mr. C. S. Roy, Cambridge; Dr. A. D. Macdonald, Liverpool; Dr. C. W. Suckling, Birmingham; Dr. E. D. Mapother, Dublin; Mr. G. F. Hodgson, Brighton; Dr. F. A. A. Smith, Portsea; Dr. Martin Oxley, Liverpool; Graduate; Mr. Shirley Murphy, London; The Secretary of the University College, Liverpool; Dr. W. J. Simpson, Calcutta; Dr. Wadham, London; Mr. C. E. Shelly, Hertford; Mr. J. Robertson, Edinburgh; Mr. F. A. Cox, London; The Secretary of the General Steam Navigation Company; Mr. W. R. Dodd, London; Mr. R. C. Johnston, Curragh; Mr. Burrows, Witheridge; Dr. Sutherland, London; Mr. Walter Buchanan, Chatham; Mr. W. M. Millard, Edinburgh; Dr. James Brydon, Hawick; Our Newcastle-on-Tyne Correspondent; Mr. T. Sympson, Lincoln; Dr. J. W. Moore, Dublin; Mr. B. Brooks, Hull; Mr. J. Muir Howie, Liverpool; The Secretary of the Cremation Society, London; Mr. W. H. Spurgin, Maryport; Mr. James Oliver, London; Professor Percy F. Frankland, London; A Member; Mr. C. E. Jennings, London; Mr. R. W. Williams, Ashton-under-Lyne; Mr. Vincent Jackson, Wolverhampton; Dr. A. T. Myers, Penrith, Cumberland; Mr. Frederick Fitch, Kidderminster; The Honorary Secretaries of the Darlington Hospital; Mr. B. Bull, Brighton; Dr. Brailey, London; Mr. H. M. Baylis, Malmesbury; Mr. W. P. Howard Cory, Bristol; Dr. Crowe, Worcester; Mr. G. Hewlett, Plymouth; Miss Manson, London; Dr. C. Orton, Newcastle; Mr. James Cantlie, London; Mr. H. A. Smith, Ealing; Dr. Payne, London; Mr. Wm. Johnson, Lancaster; Mr. J. T. Gwynn, Whitchurch; Dr. H. R. Archer, Royston; Mr. Wm. Bennett, Market Rasen; Mr. A. Forbes, Southsea; Dr. Rentoul, Liverpool; Mr. H. E. Jones, Hereford; Dr. Alder Smith, London; Dr. Mickle, London; Messrs. Southall Brothers and Barclay, Birmingham; Mr. R. Fitzroy Benham, London; Mr. Charles Rothwell, Bolton; Dr. Dolan, Halifax; Mr. A. E. Morison, Hartlepool; Dr. B. Foster, Birmingham; Dr. Hacon, Christchurch, N.Z.; Dr. F. A. Davson, Dartmouth; Dr. Tatham, Salford; Dr. W. Stirling, Manchester; Mr. W. Eassie, London; Mr. J. T. Ceely, Alloa, N.B.; Mr. C. G. Ethelston, London; Mr. Talfourd Ely, London; Mr. J. Forsyth Craig, Birmingham; Dr. Kelly, Taunton; Mr. L. Demetriadi, Huddersfield; The Secretary of the Manchester Royal Infirmary; Dr. E. O. Daly, Hull; Mr. Ralph Stockman, Edinburgh; Dr. Edwards, London; Mr. C. A. Rayne, Lancaster; Mr. E. Noble Edwards, Brighton; Dr. G. Walter Steeves, Liverpool; Surgeon-Major Billings, United States Army, London; Dr. Elder, Nottingham; Dr. Lauder Brunton, London; Dr. R. P. B. Tsafe, Brighton; Mr. J. E. Erichsen, London; Dr. Ernest F. Neve, Edinburgh; Dr. J. Eaton, Cleator Moor; Dr. Francis Warner, London; J. R. B.; Mr. J. T. Hartill, Willenhall; Dr. W. Bodkin, Chelmsford; Dr. J. Haddon, Hawick, N.B.; Mr. Thomas Edwards, Harrold, Beds.; Dr. R. Bousted, West Brighton; Mr. Edwin Moore, Preston; Mr. F. J. Hedgcock, London; Dr. W. J. Tyson, Folkestone; Dr. Styrap, Saltburn-by-the-Sea; Dr. Grailly Hewitt, London; etc.

BOOKS, ETC., RECEIVED.

A Text-Book of Human Physiology. By Dr. L. Landois. With additions by W. Stirling, M.D. Vols. i and ii. Second Edition. London: Griffin and Co. 1886.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE "BRITISH MEDICAL JOURNAL."

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AN ADDRESS
ON
PUERPERAL INSANITY.

Delivered at the Annual Meeting of the East Yorks and North Lincoln Branch.

By M. D. MACLEOD, M.B.Edin.,
Medical Superintendent East Riding Asylum: President of the Branch.

Gentlemen, My first duty and wish on taking the chair here to-day, is to thank you for the honour you have conferred upon me in electing me as your president for the ensuing year; I can assure you I am profoundly conscious of the compliment you have paid me.

As is the custom on these occasions, I have prepared an address to deliver to you. I have selected for this purpose a description of puerperal insanity; and I was guided to this selection by a belief that it was a subject where we should all be on common ground, and that a mutual benefit and interest would accrue from an interchange of experience concerning the disease and its bearings.

Formerly, the various mental disorders concomitant with and consequent upon the whole period of child-bearing and rearing were, more or less, mixed up, and described under the generic title of puerperal mania. These neuroses are now, however, properly classified as the insanity of pregnancy, puerperal insanity, and the insanity of lactation, and occur at the respective periods which their names indicate. They are three distinct clinical types of disease capable of diagnostic separation, a point which does not concern us now.

In this address, my remarks will be limited to puerperal insanity proper, by which I mean an insanity connected with the puerperal state, and occurring within a limit of six weeks after the date of the labour. By far the greater number of cases, however, commence during the first fortnight succeeding the labour.

Puerperal insanity is a better name than puerperal mania, as it comprehends all forms of mental symptoms, while puerperal mania would label the disease as one of excitement only. Excitement, as will be seen, is not always the obvious symptom.

The term mania, as indicating a disease, is in itself misleading. It should only, and in reality does, signify a train of symptoms in the sense that dropsy and jaundice do. Mania may be the outcome of many diseased states capable of further differentiation and elucidation. It is, however, a somewhat convenient term, and, if its true significance is borne in mind, it is useful for purposes of classification, and it cannot well be dispensed with.

The classification of the various forms of insanity connected with childbirth, and the nomenclature which I use, although, to a certain extent, admitted by the older writers, was first definitely set out by Dr. Batty Tuke in an admirable paper on this subject, published in the *Edinburgh Medical Journal* for 1865, and, since then, it has been generally adopted.

Before entering upon the description of puerperal insanity, there is a form of mental disorder which occurs during the progress of the labour which it will be well to notice in passing. It is an ephemeral excitement or delirium of an acute character, which usually subsides when the child is born. It is well to bear this in mind, as some importance, from a medico-legal point of view, may attach to this condition; for there can be little doubt that a patient labouring under it is not responsible for her acts. Dr. Playfair remarks, regarding this delirium, "that here chloroform will find one of its most valuable applications."

The onset of puerperal insanity is commonly rapid, and often abrupt. The premonitory symptoms are usually a listless depression, a sense of being ill at ease, a restless irritability and impatience of control. The patient neither eats nor sleeps well. She is unconcerned about her child, or actively hostile to it, and she is suspicious about her husband and relatives; her skin is clammy and pale, and her face is usually flushed; the eyes are restless and brilliant. She has some uterine tenderness, and the state of the lochial discharges abnormal; the pulse is quick and irritable, and the temperature tends to be high. This condition does not last long; an intense excitement supervenes,—an excitement characterised by great restlessness, loud and rapid talking, fleeting delusions, and vivid hallucinations. Constant conversations are carried on in a loud whisper with imaginary presences, interlarded with vehement denunciations of those present, whose identities are mistaken for fiends, devils, or monsters; volleys of abominable oaths and obscenities are discharged at them, and it is a characteristic of this disease that obscenities are almost always a marked feature in the ravings, and that there continues, even into the convalescence, a tendency to obscene and salacious conversation. The expressions of excitement are accompanied with much gesture, and generally with actual, though misguided, violence. All the manifestations of nervous action, mental and motor, are unpurpose-like, and void of coherence. In less acute cases, the general appearances are similar; or, as Dr. Batty Tuke puts it, "the same tone exists."

The bodily state is one of exhaustion little short of collapse. The lips and tongue get dry in an early stage of the disease. There is usually a marked antipathy to food. This antipathy to food is often the result of a delusion. It is thought to be poisoned, or to have been prepared by some filthy devil or fiend. On the other hand, it will be found to be owing to the general excitement and restlessness preventing the patient's attention being sufficiently arrested to get her to partake of nourishment. The bowels are confined, and the dejections offensive. The urine is small in quantity, turbid, and is stated to be frequently albuminous. The temperature, as a rule, is high, more especially so in cases where there are present inflammatory conditions of the passages, septic infection, or diseased states of other internal organs. The lochial discharges may be normal, but usually they are scanty, and more or less putrid. The milk-supply is small, and its quality is said to be poor. Tenderness on pressure, on the lower part of the abdomen, is by no means uncommon.

This state of matters usually continues for a period of from two to three weeks, sometimes longer. In favourable cases, the excitement then begins to subside, there are hopeful signs of mental coherence, the hallucinations are less vivid, sleep and appetite return, the general bodily state shows signs of improvement, and the patient gets stout. In unfavourable cases, the state of exhaustion and collapse continue, the insomnia does not yield, and the violent excitement becomes a state of delirium. Death may result from pure exhaustion, but, in fatal cases, it will be generally found that some form of uterine inflammation, septicæmia, or disease of the lungs, heart, or kidneys, were the most active factors in bringing about the fatal result.

Convalescence to mental health may be progressive and gradual, but, on the other hand, it is usually the case that the subsidence of the excitement is followed by a state of stupor or fatuity which endures for several weeks. The patient becomes dull, and never speaks voluntarily. She moves about in an aimless manner, replying to questions by repeating them like an echo, or by gazing vacantly at the interrogator. She has often, while in this state, fixed delusions, and they are vividly real to her. She is prone to indulge in masturbation now, as well as in the earlier periods of the disease, whether incited by local irritations or feelings arising centrally, it is not easy to determine; probably both causes are at work.

The bodily functions are in this stage in a good condition, sleep is readily obtained, the appetite is good, and the excretions are voided regularly.

Convalescence from this stupor is often abrupt. You may find the patient one day as usual, stupid and dull, but, on visiting her next day, she is bright, and more or less intelligent. Generally, however, the apparent fatuity passes away gradually, each morning finding the patient brighter and more intelligent than the one before. Complete mental health follows, but cannot be considered as established till the menstrual flow is normal.

In cases where the attack is less severe, the excitement is not so intense, and it is of shorter duration. The period of stupor is not so marked, or is absent, and convalescence is more rapid. The state of the bodily health is not of such serious import, the insomnia passes off easily, and the refusal of food is not so persistent.

In all cases of puerperal insanity, there is a tendency to suicidal impulses. Suicide is attempted in an aimless or purposeless manner, but the tendency on that account should not be disregarded, as such attempts have sometimes been successful.

Cases of puerperal insanity, in which mental depression is the most prominent symptom, are met with, but they are not so common as cases in which excitement predominates. The onset of these melancholic cases is more gradual, and generally, though not always, occurs in cases commencing towards the end of the puerperal period. The patient for some days appears out of health, and she does not continue to progress to convalescence after the labour, or appears to lose the ground she has gained. She is morbidly anxious about her husband and child, and she is fretful, and does not readily enter into conversation. As time goes on, she becomes profoundly melancholy, and has delusions of a desponding character. These delusions frequently

have a reference to her husband and child. She believes them ill or dead, and no proof to the contrary will convince her of the unreality of her fancies. The delusions have at times a so-called religious tendency, and point to a desponding hope of a future state. Suicide in such cases is more to be feared and guarded against, as the impulse to it is strong and of a stable character.

The face is pale and gloomy, and the eye listless. The skin and extremities are clammy and cold. The circulation is feeble, the pulse slow, and gives a feeling of emptiness. Sleep is not well obtained, and the appetite is bad. There is not, however, usually the same active objection to feeding, as in the maniacal cases. The bowels are confined, and the tongue is pale, white, and indented.

The melancholia is more obstinate under treatment than the mania observed in other cases. The general debility is more lasting, and the progress towards convalescence more gradual. I am led to think that this class of case will be more commonly found in women whose constitution has been weakened by a rapid succession of previous pregnancies.

There is another form but rarely seen. The patient, without much warning, becomes listless and fatuous, unattentive to her ordinary duties and to the calls of nature. She seems to take no notice of her surroundings. She sleeps if put to bed, takes food if it is given to her, but would starve if not attended to. This is a most intractable form, and if fairly established, usually progresses to complete and incurable dementia.

I have observed a few cases resembling, if not actually, cases of general paralysis of the insane, which seemed to take their origin from a childbirth, but of those which I have seen, the histories were not sufficiently available to form a proper opinion, and I merely mention this for the attention of future observers.

In reviewing the salient points of this disease, we notice in the maniacal cases a quick onset arising in the earlier periods of the puerperal state, a rapid development of excitement, an active excitement characterised by wild restlessness, incoherence, mistaken identities, obscene and immoral conversation, vivid hallucination, and obstinate insomnia. An active antipathy to food. A pale clammy skin, and generally a high temperature. An abnormal condition of the milk supply and of the lochial discharges; constipation and a dry tongue. A general condition of weakness and exhaustion, and we must not forget transitory impulses to commit suicide.

With regard to the temperature, there are some most interesting remarks in a series of Clinical Illustrations of Puerperal Insanity, published by Dr. Campbell Clark in Vol. 2 of the *Lancet*, for 1883. Dr. Clark draws attention to four types of temperature curves (*a*) "a moderate and uniform increase in uncomplicated cases," (*b*) "a periodicity of increase and decrease," (*c*) "a uniformly high evening temperature with well marked morning remission in phthisical cases," (*d*) "a persistent high temperature pursuing an erratic course," and he further adds "a significant addendum to the above statement is that cases of (*c*) and (*d*) types died."

The cases of melancholia are of a later origin, more gradual onset, and are marked by a depressed mental state and persistent delusions of a desponding character, a debilitated state of health, and a general condition of weakness rather than the exhausted condition observed in cases when excitement is most prominent.

The more uncommon type of dementia is marked by a progressive and gradual increase of mental weakness and a concurrent loss of health.

In connection with puerperal insanity in all its forms, it is observed that minor conditions of ill health are present; abscesses of the breasts, abscesses about the fingers and limbs, a tendency to rapid production of bedsores, and of course disorders consequent upon the recent parturition.

Uterine and pelvic complications must always be carefully looked for, and the state of the lungs, heart, and kidneys minutely observed. In this, as in all active morbid mental states, other disorders are apt to be overlooked, as the symptoms are sometimes masked by the too obvious nervous condition. The true state of affairs is only to be discovered by careful physical examination.

Among the causes which predispose a parturient woman to an attack of insanity, heredity plays an important part. It may be taken as an established rule that insanity of a parent or ancestor tends to produce in an individual a strong susceptibility to insanity, or allied nervous disorder—a pathological sensitiveness—a proneness to break down under exciting causes, which would not affect a person with a healthier pedigree. We may therefore clearly assume that hereditary predisposition is an important factor in the production of this disease. It is a more dangerous one also if the tendency has descended in the female line.

The first childbirth is more commonly followed by insanity than succeeding ones, more especially if it takes place late in life. A rapid succession of pregnancies, a prolonged suckling followed by another pregnancy have pernicious effects in this direction. The influence of a normal pregnancy on the blood is no doubt a factor, and if during the pregnancy there are nervous ailments, insanity is more likely to occur during the puerperal period. A previous attack of insanity, not necessarily puerperal, increases the probabilities as also do the presence of diseases of the heart, lungs, or kidneys. Puerperal eclampsia is a predisposing cause of some importance. Hæmorrhages, difficult and instrumental labours, the birth of twins, the sex of the child—male children being more dangerous—and even the use of anæsthetics during labour, are said to have caused the insanity, but most observers do not assign them a high place. Dr. Savage remarks that the drink craving, often present during pregnancy, if yielded to, may predispose to puerperal insanity.

There is a cause which may act as predisposing and exciting—namely, the influence upon the mother of the birth of an illegitimate child. The moral effect of the shame and degradation; the physical effects of less attention and care during pregnancy, parturition, and the puerperal state, are, no doubt, a combination of circumstances of powerful import.

Among the exciting causes, the effects of fright and anxiety, death of the child, or other distressing emotions, have been observed.

The strain of poverty and adverse circumstances, as well from their moral as from their physical effects, tending to improper care, improper or scanty nourishment, unsanitary surroundings, exposure and imprudence during the convalescence—all tend to produce the disorder. With regard to this point, however, I may remark that puerperal insanity is as common, if not more so, among the rich and well-to-do as among the poor.

We must also look upon injuries during parturition as predisposing to septicæmia, or to a complication of inflammatory conditions, as having considerable influence for harm in this direction upon parturient women.

Sir James Simpson, and, after him, Dr. Donkin, of Newcastle, suggest albuminuria as a frequent cause; but this has not met with general acceptance. It must not, on that account, be put aside; for a toxæmic condition, from this or any other cause, may excite puerperal insanity.

Dr. Gooch, in his interesting monograph on *Puerperal Mania*, states his opinion to be, that the cause of "puerperal mania" is "that peculiar state of the sexual system which occurs after delivery." In commenting upon this, in a subsequent chapter, Dr. Gooch's remarks are so striking that I quote them at length. "What I meant was this," he says: "the sexual system in women is a set of organs, which are in action only during half the natural life of the individual; and, even during this half, they are in action only at intervals. During these intervals of action, they diffuse an unusual excitement throughout the nervous system; witness the hysteric affections of puberty; the nervous susceptibility which occurs during every menstrual period; the nervous affections of breeding, and the nervous susceptibility of lying-in women. I do not mean that these appearances are to be observed in every instance of puberty, menstruation, and child-birth; but they occur sufficiently often to show that these states are liable to produce those conditions of the nervous system."

My own observations lead me to the belief that, in most, if not in all, cases of puerperal insanity, the causes will be found to be multiple.

Dr. Clouston, in his *Clinical Lectures on Mental Diseases*, sums up the etiology of the insanity in the following terse statement: "In regard to the cause of the disease, therefore, it is definite and clear—the accompaniments of childbirth produce it."

Having now described the disease, and recited its alleged causes, it may be interesting to examine in detail the statistics connected with it. It would seem an easy matter to assign the frequency of cases of puerperal insanity among parturient women, but I find it is not so. The published records on this point are few and vague. Obstetricians have placed on record the incidence of most, if not all, other puerperal disorders; but, as far as I have been able to discover, they are all but unanimously silent about puerperal insanity from this point of view.

During the years 1878 to 1882, the births of 3,537,580 children were registered in England and Wales. Allowing for plural births, the number 3,500,000 may be taken as fairly representing the parturient women in that period. In the reports of the Lunacy Commissioners for those four years, I find that 1,794 cases of insanity caused by childbirth and the puerperal state were admitted into the asylums of England and Wales. This would give a proportion of one case of insanity in 1,950 labours.

Dr. Reid, in a paper on Puerperal Mania in vol. i of the *Psychological Journal*, mentions that, in 8,338 labours, 21 were followed by insanity, or 1 in 397.

Mr. Rigden, of Canterbury, published, in vol. xxiii of the *Obstetrical Transactions*, a synopsis of 5,628 cases of labour, but did not refer to this point. I, however, wrote to Mr. Rigden, who promptly and courteously replied to me. In his letter he states that, among 6,000 cases of labour attended by himself, 5 cases of puerperal insanity occurred, or 1 in 1,200.

Out of the records of 11,940 cases of labour collected by myself from the registers of friends, and otherwise, I find 30 cases of puerperal insanity, or 1 in 398.

Calculating together the returns of Reid, Rigden, and my own, it would seem that one case of puerperal insanity occurs in each 469 labours. Comparing those figures with these, I based on the registered births and the admissions into asylums, it would seem that less than one-fourth of the patients suffering from puerperal insanity are sent to asylums. This calculation of mine on the registration returns is open to so much source of error that it is probably wrong. I state it for what it is worth.

Cases of puerperal insanity amount to 6 per cent. of the number of female lunatics admitted into English asylums, and to 3 per cent. of the total number of lunatics admitted. This proportion is a trifle higher in America, decidedly higher in the Colonies, but it is lower in Ireland.

When I purposed writing this paper, I addressed a series of questions to the medical superintendents of the English county and borough asylums, asking for certain detailed information about the cases of puerperal insanity admitted into their asylums during the four years 1878 to 1882. I received replies from many, and I here gratefully record the kind assistance of these gentlemen. I got thus important and authoritative facts about 620 cases. Dr. Campbell, of the Cumberland and Westmorland Asylum, gave me full details of 61 cases admitted into his asylum during a period of twelve years, carefully collected by his assistants, Drs. Macphail and Greenlees. Most of these cases had been partly under my own treatment while serving in that asylum. Dr. Batty Tuke, in the papers already referred to, publishes details of 73 cases, and Dr. Clouston, in his *Manual*, of 60 cases. In 186 cases, 65 of them were cases following a first labour, or 84 per cent.; the rest occurring in multiparæ. In 169 cases, the insanity appeared within one week after the labour in 92 instances, or 54 per cent., and of the rest 36 had developed the insanity within two weeks, giving a proportion of 75 per cent. of the cases in which the disease commenced before a fortnight had elapsed after the date of the labour. Of 814 cases of puerperal insanity, 620 recovered, or 77.3 per cent.; 75.4 per cent. of the English asylum cases; 75.0 of Dr. Clouston's; 79.4 of Dr. Batty Tuke's; and 80.6 of Dr. Campbell's cases. Of these 814 cases, 74 died from all causes, giving a mortality-rate of 9 per cent. The causes of death were: in Dr. Batty Tuke's patients, of whom 8 died, 3 from phthisis, 2 from exhaustion, 1 from bronchitis, 1 from pelvic cellulitis, and 1 from peritonitis. Of Dr. Clouston's 5 fatal cases, 1 died of phthisis, 1 of septicæmia, 1 from maniacal exhaustion, and in 2 the cause is not recorded. Of the cases under Dr. Campbell's care, 3 died, 1 from phthisis, 1 from gastric ulcer seven years after admission into the asylum, and 1 committed suicide while absent on probation. Recurrent attacks are recorded in 152 out of the 814 cases, or 18.6 per cent.

The mothers of illegitimate children amounted to 95 of the total of 814, or 11.7 per cent. These figures show that the insanity is nearly three times more common among such than among married women. Hereditary predisposition to insanity was traced in 208 cases out of the 814, or 25.5 per cent. This proportion I believe to be understated.

The duration of the disease, as ascertained in the cases of 107 patients who recovered, is as follows: 34 per cent. recovered before three months, 73 per cent. before six months, and 87 per cent. before nine months had expired. Some of the remaining cases were under treatment for over two years before the recovery took place. In eight cases of melancholia which recovered, the average period of treatment was six months.

As regards mental symptoms in 239 cases, 185 were maniacal, 50 were melancholic, and 4 demented. Looking over these figures, then, we may conclude from them that we have, in puerperal insanity, a mental disease of common prevalence; that the symptoms are acute in a large majority of the cases; that more than two-thirds recover within a few months, and that the risk to life, judging from the asylum mortality-rates, is small. The results among the milder forms and among cases able to be treated at home are no doubt more satisfactory, but I am not in a position to give any reliable facts concerning them.

Puerperal insanity has considerable importance from a medico-legal point of view. Mothers in this state are frequently prompted to, and often accomplish, the destruction of their helpless offspring—prompted to the act sometimes by delusions, at others by sudden and uncontrollable impulses.

Suicidal attempts from similar causes are common, and acts of violence and destruction are a usual occurrence. In acute cases, with much excitement and incoherence, and in cases where mental depression is marked, the irresponsibility is obvious. Where it is not so, and where a criminal act has been committed by a puerperal woman, it should not, however, be too hastily concluded that at the time she was a responsible agent. It is also well to bear in mind that women are prone to make unfounded accusations of assault and immorality while labouring under puerperal insanity, and make them with much plausibility and circumstantial detail.

In an early stage of puerperal insanity, attacks may possibly be arrested by treatment, which should be on the lines of rest, support, and a somewhat derivative evacuation of the bowels. I have known a case, with considerable excitement, get well after a smart purge, a single dose of chloral, and good diet. If, however, the insanity has become fairly established, treatment and care are matters requiring time and trouble.

What to do with a case must depend, to a great extent, upon the circumstances and surroundings of the patient. If poor, and unable to afford the appliances for home treatment, the sooner such a patient is sent to the county or nearest available lunatic asylum, the better for her chances of recovery and life. Recent parturition should be no obstacle to her removal. I have known cases, where a fear that sending them away too soon after the labour would do harm, get so weakened from want of nourishment, and other proper treatment, that the removal to the asylum was all but too late. I have not, on the other hand, seen any injury of consequence follow a prompt removal of a patient in the first few days of the puerperal state.

If, however, the means and surroundings of a patient will permit of it, sending her to an asylum is neither necessary nor desirable.

The patient must be placed under the absolute control of a skilled nurse, who must, of course, act under the directon of the medical attendant. At first, the medical attendant should be prepared to see the patient several times a day, and be within call. The attendance and interference of friends and relatives, unless they happen to be people of sound sense, must be firmly dispensed with. One skilled nurse, in milder cases, assisted by an intelligent woman, will generally be found sufficient; but, in acutely maniacal cases, two nurses (one for day and one for night duty), assisted by two robust women, will be required.

A large, light, well ventilated, and properly warmed bedroom will be the best at first, and the patient should be kept confined to it. As circumstances require, other apartments can, of course, be available afterwards. The sanitary arrangements of the house should be good, and the use of antiseptics be encouraged. In the earlier stages, the patient is apt to be filthy in her habits; to prevent nuisance from this cause, all carpets should be taken up, and replaced by movable mats where required for comfort. The bed should be roomy and not high—indeed, where the patient is very restless, a bed made up on the floor is the best. In cases where the clothes are torn up by the patient, a garment of strong stuff, lined with flannel, lacing up the back, will be found very serviceable. All superfluous furniture should at first be removed, as well as anything the patient might injure herself or other people with; for instance, a piece of long firewood will do to poke the fire with, and be a less lethal weapon than an iron poker. The patient must, on no account, be left by herself; and it is advisable that, at night, the windows should be shuttered.

The first consideration in the treatment, and one that must for the time overshadow all others, is to see that the patient gets sufficient food. The diet should be nourishing, digestible, and somewhat stimulating. Beef-tea, broths with the vegetables strained out of them, farinaceous food, and, above all, milk and its preparations. A reliance upon beef-tea by itself as a food is as much a delusion as any the patient labours under. It is an excellent stimulant, however, if good, and, with farinaceous foods, is nourishing. Eggs and milk as a custard, with some wine, are excellent. Alternate the kind of food, and administer it often. If the patient will not take it from one person, try someone else. If not from a woman, let a man offer it. I have often succeeded in getting such a patient to take a large basin of custard from my own hands when several nurses had failed to persuade her. It is by no means a bad plan to engage a patient's attention by chattering nonsense to her, while diligently spooning the food into her mouth. If the patient cannot be prevailed upon to take food naturally, it must be promptly administered artificially. The means of doing so do

not matter much, so long as she gets it. My own preference is to administer it through the stomach-pump, attached to a flexible India-rubber tube. The tube should be lubricated with glycerine. Food is easily administered in this way, and it is a sure method. Seldom are more than six feedings required for any patient, after which she will usually take food of her own accord. Through the pump, food should be given every four hours. Milk and eggs with wine, beef-tea thickened with corn-flour, but, in cases where the feeding has to be prolonged over three days, mutton minced fine enough to pass through the tube should be given once a day. Some malt-extract among them adds to the value of farinaceous foods; and, no doubt, in such cases, peptonised and pancreatised foods will be found valuable. Dr. Campbell Clark speaks well of enemata of defibrinated blood. Stimulants should be given freely, but with caution, and always along with food. If a patient vomits while the tube is being withdrawn, as she will often do the first once or twice, it cannot be helped; the feeding must be gone on with. Some of the food injected remains each time. The patient should be fed in a recumbent posture, and kept so for some little time after the operation is over. I have added ten grains of subnitrate of bismuth to each feeding with benefit for this vomiting; and, in extreme cases, I have found a subcutaneous injection of one-sixth of a grain of morphine half an hour before the feeding do good.

During the whole treatment, the diet must be generous. Let the patient have what she likes if wholesome, but, above all, plenty of it. The bowels should be carefully attended to, and kept open, for they tend to be confined. The state of the vaginal discharges and the urine require close attention. Bed-sores are apt to form rapidly in exhausted cases. Rubbing the skin over parts liable with an alcoholic solution of tannic acid to some extent prevents or retards their formation. If the breasts are tender and distended with milk, they should be rubbed with belladonna extract, dissolved in glycerine, or friction with castor-oil or salt, as Dr. Savage recommends, relieves them. Avoid the use of narcotics if you wish your patient to do well. In occasional cases, where there is great insomnia, a single dose of chloral given at night, along with some porter or some sherry, with a view of inducing sleep, may do no harm, and, if it seems to do good, use it sparingly, and with caution. If the patient can be got to take nourishment, sleep will come. Intercurrent bodily diseases should be looked for, and treated as they may require. Use the thermometer regularly. If the temperature goes over 99°, something is amiss, and must be discovered.

As the patient progresses towards convalescence, and the excitement begins to subside, outdoor exercise should be encouraged, on foot, if the strength will allow of it, driving if not. As early as possible, the patient should should spend all the time her meals and the weather will permit of it in the open air. Some light manual employment while indoors, such as sewing or knitting, will be found useful in occupying her mind.

When the excitement has passed off, the patient should be allowed to see her friends, or even sooner if she asks for them. A visit from her husband may do her good, or, if apparently it does harm, the effect will not be lasting, and the visit need not be repeated for a time. If friends do see her, advise them not to fuss, or talk foolishly, but to address the patient as a rational being. During the stage of stupor that so often follows, the excitement, visits and converse with husband and relatives are often of great benefit. Tonics and hæmatonics are most useful during the convalescence; and, in women who are strong, morning shower baths are beneficial where there is lethargy or stupor. If the case goes badly from the first,—if complicated septicæmia or inflammatory conditions, or a high temperature persists,—these must be treated on general medical principles, with due attention to proper support.

The foregoing directions apply more particularly to acute cases, but milder cases, and ones where there is less excitement, must be treated upon the same lines. At first, rest, nourishment, and nursing, avoidance of narcotics and depressants, and vigilant observation for complications. Then exercise, employment, and gradually society, attention being given to the restoration of physical health. The treatment of cases where depression is the most prominent mental symptom differs but little. Less physical force is required to control the patient, but vigilance must be strictly enjoined, for here the suicidal propensity is strong and persistent. The need for nourishment is as pressing as in maniacal cases, and outdoor exercise is as beneficial. In all cases, as convalescence progresses, attention should be given to the state of the menses. No case can be considered as cured till the menstruation is regular; aloes and iron pills, ergot and warm hip-baths are indicated. I have found potassium permanganate given in pills most useful in this respect.

A patient who has recovered from puerperal insanity should not be allowed to resume the society of her husband too soon. A pregnancy following quickly upon an attack of this insanity is fraught with considerable danger of a recurrence. If, however, she does become pregnant, she should be encouraged to look forward to her next confinement without apprehension, and the fears of her relations should be studiously concealed from her. When labour takes place, and is safely over, the convalescence should be carefully watched, and more than ordinary attention paid to the state of the milk, lochia, and the excretions. The patient should not be allowed to get low in strength, and, as far as possible, all emotional and disturbing elements kept away from her.

With these and like precautions, based upon intelligent medical experience, the danger of recurrence may be averted; but it must always be remembered that an attack of puerperal insanity not only predisposes a patient to a recurrence after the confinement immediately succeeding it, but also to a recurrence after all the subsequent ones.

Few diseases bring along with them such distress, anxiety, and sorrow as puerperal insanity does. It mars a time of rejoicing and joy in what, under other circumstances, would be a happy family circle, and, by its fell presence, changes bright hopes and congratulations into lamentations and woe.

AN ADDRESS
ON
MEDICAL EDUCATION, EXAMINATIONS, AND DEGREES.

Delivered at the Annual Meeting of the Metropolitan Counties Branch.

By JOHN S. BRISTOWE, M.D., LL.D., F.R.S.,
Senior Physician to St. Thomas's Hospital; President of the Branch.

In rising to perform, as best I may, the first if not the most important duty expected of me, as your newly-elected president, I must begin by thanking you, with all my heart, for the high honour you have to-day conferred upon me; an honour which I never sought, which I did not expect, and which is undeserved. I hope, however, in the near future, to make up for some of my past deficiences, to earn a little of that kind confidence which has been accorded me by anticipation; and, if I may not rival my able, indefatigable and genial predecessor, at least to show my sense of his many great qualities and excellent services by making, during the coming year, his conduct in his high office the pattern for my own.

There is no rule or custom, so far as I know, which limits the choice of subjects for the Presidential address. I wish there were; for during the last few weeks I have been much perplexed by the difficulty of choosing; and have wasted no little time in the consideration of themes which I sooner or later discarded as unsuitable or inopportune. Had I been guided by personal inclination, I should have determined to devote the hour at my command to some study in clinical medicine. But, interesting as I hope such a lecture might have proved, I could not help acknowledging to myself that it would be better suited for one of the local meetings than for our annual gathering. I sought, therefore, among the questions which, during the last twelve months, have chiefly engaged the attention of the Council for one which I might venture to discuss; and it is needless to say that, look which way I would, one of them, predominant over all rivals, forced itself upon me—the question, namely, of how best to provide for students educated in London reasonable facilities for acquiring degrees in medicine. This has been largely discussed during the last year or two in our Council, at general meetings of the Branch, and in the medical journals; and it is at present under the serious consideration of the Royal Colleges of Physicians and Surgeons, to whose joint action most of us look hopefully for the solution of the difficulty. I, too, have had my say. It might well have been thought, therefore, that everything that could be usefully said upon the matter had already been said; and that, at any rate, it was hardly for me to prolong the discussion. I confess that those were my own feelings; and they so far prevailed with me that I should certainly have dismissed the subject from my thoughts, as I had done others, had I felt that I could only treat it from the point of view in which hitherto it has been chiefly regarded.

But, gentlemen, it is now almost universally admitted that English medical men, and the medical schools of London, are at a serious disadvantage in the matter of university degrees, as compared with the profession in Scotland, and the profession of every other European State. There is no need to prove again what has already been only too amply proved. Also it is now generally allowed by those who are directly interested in the subject, that there is no scheme which promises so easy and so satisfactory a remedy for our grievance as that which aims at giving university powers to the conjoint Colleges. There is no need to consider again the facts and arguments which have compelled this conclusion. I do not, then, propose to re-open the fundamental questions on which we are practically agreed. But there are questions arising out of these, some of which are already engaging attention, and will soon, we may hope, press for solution; others of which (though perhaps of less immediate interest) ought not to be disregarded; and most of which may, I think, be suitably discussed. The most important of these relates to the conditions on which the degrees of the united Colleges should be given. But involved in this, and leading up to it, are questions having reference to examinations, to medical education, and to the preliminary training of those about to become medical students. I propose to make a few observations on each of these topics.

1. *The School-training of Boys intended for the Medical Profession*, and the test-examinations to which they ought to be submitted before they are allowed to enter on their special medical studies, are subjects to which much attention has been given by the medical schools, by the various examining bodies, and by the General Medical Council; and which will probably have to be carefully reconsidered by the Colleges of Physicians and Surgeons in relation to their contemplated degrees. For it can hardly be supposed that the minimum preliminary examination now required of candidates for the conjoint licence will be deemed sufficient for those who aim at obtaining the university degrees.

Widely different views are entertained with regard to the education of boys. Many persons still regard the old classical training, as indeed it is still carried out at most of our large public schools, to be the best. Many others think that the study of modern languages provides as good a training as that of the classics, and is of much greater utility. While an increasing number of persons hold that the study of science is at least as valuable for many boys as the study of either ancient or modern languages, and is especially suitable for those whose inclinations lead them to become scientific men or physicians. Much can be said, and said truly, both for and against each of these systems of education. It is certain that much time is wasted in teaching boys to write so-called "elegant" Latin or Greek verses, who could not for the life of them compose a decent stanza in their mother-tongue, and inculcating upon them the niceties of grammatical construction in classical authors, while they are probably quite incompetent, and are not taught, to write a couple of consecutive sentences in reasonably good English; and that the great majority of boys whose schooltime is thus devoted to the study of the ancient tongues, leave school with very little real knowledge of them, and speedily forget the greater part of what they know. It is certain, too, that boys educated mainly in the modern languages, especially on the so-called modern side of our great schools, equally fail to acquire any useful amount of that knowledge o which their time is mainly given. And, as regards scientific education, of which mathematics should be regarded as forming a part, although it must be admitted that it involves studies to which some boys are inclined, and in which they would excel, I feel sure that it is not appropriate as the main pursuit of any large number.

I have been much struck, as I suppose most have been struck who have looked into the matter, with the little apparent influence a boy's position in school exercises over his future position in the world; how little one can foretell future success and eminence from success and eminence at school, or forbode future failure and insignificance from failure and insignificance in the class-room. I do not mean that high distinction at school is incompatible with high distinction in life, or even that the average of future success is not greater among boys who do well at school than among those who do badly. But I do mean that a very large number of those who win distinction at school fail to maintain their pre-eminence afterwards, and that a very large number of those who are nowhere at school achieve greatness.

The explanation of this phenomenon is, no doubt, complex. Some boys mature earlier than others; some are gifted with ready memory, which enables them to accumulate verbal and mechanical knowledge much more easily than their compeers; some, who are endowed with reasoning powers beyond their years, fail to compete successfully with their quicker and shallower companions; but, perhaps more important than is the fact that all the larger number take little or no interest in the subjects upon which scholastic eminence in school-life depends.

But, if most boys carry away from school such an imperfect knowledge of the subjects, which it has been the main object of their masters to teach them, that it proves of no further use to them, and even fades from memory altogether, of what use, it may well be asked, has their school-education been to them? Well, gentlemen, misdirected though their education has been, and capable of great improvement though it might have been, I am very far from thinking it has been useless. Boys learn at school much more than their teachers expressly teach them; and I make bold to say that this incidental knowledge, if I may so term it, is, as a rule, of much greater value to them than is that success which brings them prizes and exhibitions. They learn something of the world in which they dwell, and something of the realms beyond it; they learn something of the heavenly bodies, of their varieties, of their motions, of their composition, and of their relations; they learn something of the geological history of the earth, and much of its geography; they acquire some kind of notion of the different nations and peoples now in existence, and of those of olden times; they become to some extent familiar with the great men who have lived and those who live, and learn to admire great deeds and great works, and to contemn such as are worthy of contempt; they get some insight into literature and science; in a greater or less degree, they acquire facility in the use of the instruments of culture—reading, writing, arithmetic, and the power of expressing themselves in their mother-tongue; and, perhaps more importantly than all, they are taught, by constant association with companions of different characters, with boys of the same standing with themselves and with whom they are on equal terms, with older boys who assume authority over them, and with younger boys over whom they exercise control, to give and take, to recognise superiority, to strive to excel, to maintain their own rights, to yield with a good grace, to curb passion, to throw off selfishness. It is true that of much of the kinds of knowledge which have been enumerated they pick up only a smattering; but it must be recollected that this smattering means not a mere familiarity with small details, but some insight into the large generalisations which are the outcome of laborious investigations carried on for ages, and an acquaintance with which gives them large views of nature and of mankind, and places them intellectually on an infinitely higher level than the savage, however skilful he may be in the pursuits to which his life has been devoted, and, in breadth of knowledge, far above many of those great men to whose collective labours we owe the magnificent edifice of scientific achievement which is the glorious heritage of the age in which we live.

I repeat, that what a boy learns usefully at school is not so much what he is taught expressly, as what he learns incidentally; that what sticks to him as education, as a general rule, is less his Greek and Latin, and his algebra, than the habits of work and continuous thought which the having to learn systematically creates and confirms, the casual knowledge he picks up, and the influence of the moral and physical training he undergoes.

There is no doubt that the system of educating boys could be largely improved. I am sure, looking to results, that, as a general rule, far too much time and labour are devoted to the study of the dry bones of Latin and Greek; that too little time is bestowed on mathematics; that the principles of science should receive much more attention than they do now; that literature, and more especially the literature of our own country, should have due recognition; and, what is of the highest importance, though it is now generally ignored, that boys should be taught systematically to read and speak like gentlemen, and to acquire, at least, some degree of facility in writing grammatical and coherent English. It ought not to be difficult, while requiring all boys to undergo systematic training in some two or three subjects, to find out what their special tastes and talents are, and to make the cultivation of them an additional and important part of their education.

Before proceeding to make a few remarks on the special education of medical students, I may, for a moment, advert to the preliminary education of boys who are intended to enter the medical profession. It is held by many persons that such boys should receive special training, and that, more particularly, science should enter in large proportion into their preliminary studies. I do not myself think that any special preliminary training is desirable; but I think that whatever training is best for average boys is also best for them. I admit the desirability of an acquaintance with modern languages, more especially French and German; but such knowledge is equally desirable in most other walks of life; and my admission that it is desirable for medical students amounts to no more than that these languages should form an integral part of the training of gentlemen.

I am not, at present, expressing any opinion as to whether or not men who aim at the distinction of a university degree should be expected to give proof of higher and more thorough training than such as are content to become medical men without one.

2. *Preliminary Education.*—A fundamental distinction between the education of boys at school, and the special education of medical students, is that the former aims merely at providing such a general training as shall fit boys, at the end of their school career, to start well equipped with general knowledge on the journey of life which is before them, and well-prepared to pursue, with zeal and intelligence, whatever new lines of work the successful prosecution of their journey may require; while the latter represents one of these new lines of work; and a kind of work, moreover, which involves the study and investigation of certain definite subjects with which the student is bound to become reasonably well acquainted, if he is to be permitted to become a medical man. No amount of knowledge of Latin or Greek, of modern language, or of the exact sciences, no literary ability or artistic skill, will make up for ignorance of anatomy and pathology in the person who professes to be a physician or surgeon, or of the uses of medicines, instruments and appliances in the treatment of diseases or accidents. Idleness and desultoriness may be forgiven in the school-boy; but in the medical student are little less than a crime.

Yet, it must be admitted that large numbers of medical students give little serious thought to the work in which it is presumed they are engaged; and finally obtain the licence to practise their profession (if they obtain it at all) mainly by preparing themselves for their examinations with the aid of "grinders" or tutors. This would not be a matter of much importance, if the knowledge required of them were simply such as might be obtained (as a knowledge of mathematics, of classics, and of general literature may) by reading in their chamber. But most of the knowledge which is taught in the medical schools can only be learnt by practical work and observation in the laboratory, in the dissecting room, in the dead-house, and at the bed-side of patients; and, though tutorial instruction may prepare men successfully for examinations, it can give no real or useful knowledge to those who have systematically neglected their proper work. I confess that, looking at the matter from this point of view, it seems to me that many of our medical schools neglect their duty to their pupils, to their pupils' parents, and to the public. They are too apt to allow students to determine for themselves how they shall work, or whether they shall work at all; to sign their schedules after a casual and perfunctory attendance on their duties; and to judge of the quality of their work by their periodical examinations only. The duty of the medical schools is not only to provide the opportunities for acquiring knowledge, but to see that knowledge is acquired. And the best way of doing this is, not to allow the student to attend how and when it pleases him, but to compel him to carry out systematically certain prescribed duties which will thus afford him the opportunity of becoming fairly well, and practically, acquainted with those subjects which it is important he should know. It is true that the idle student will probably give little attention, and will remain idle; but, nevertheless, if compelled to attend lectures, to frequent the dissecting room and the dead-house, and to accompany the physicians and surgeons in their visits to the wards, it is impossible for even the most idle not to pick up a good deal of knowledge, and especially a good deal of practical information, in spite of himself. He can scarcely even avoid becoming occasionally interested in the work going on in his presence. At any rate he would acquire much more real and practically useful knowledge in this way, than he could possibly obtain by only attending, at a comparatively late period, the tutorial classes, which form now so large—I scarcely like to say so valuable—a part of the mechanism of medical education.

There is only one other matter in relation to medical education which I propose to consider. I think no one will deny that a thorough education in medicine and the collateral sciences is one of the most complete, valuable, and ennobling educations that a man can receive, and that such an education is not only a thing to be desired for itself, or for the power it gives one of coping with diseases, and ameliorating the ills of life, but that it furnishes the best starting point for a life to be devoted to the pursuit of any one of the natural sciences. I should be sorry, therefore, to see our medical schools fail in the ambition which has, for the most part, animated them hitherto, and has impelled them to furnish the means of a thorough training in all the sciences related to medicine, even in those like botany, whose bearing on medicine is neither very close nor very obvious; and I should be sorry to find the more industrious and able pupils, and those who aim at obtaining university eminence, ceasing to devote much of their time to a prolonged study of one or more of these sciences. At the same time, when I look to the enormous development that has taken place, within my own memory, not only in these subjects, but in such as are more immediately concerned with the art of healing, namely, pathology and clinical medicine, surgery and midwifery, and consider how rapidly this development is still going on, I cannot but feel that the task set before those students who are anxious to excel generally has become exceedingly arduous, and that its arduousness is increasing; and that, for the great majority of students, and especially for those whose aim in life is not to advance knowledge, but simply to practice their profession, some limitation is absolutely necessary.

It seems to me that this limitation may best be made by requiring of such students only such a knowledge of physics, chemistry, physiology, and pathology, as will be serviceable to them in the study of disease, and in the practice of their profession, and not such a knowledge as would be needed to make them investigators, and by the omission of botany and comparative anatomy from their curriculum.

3. *Examinations.*—The third division of my discourse relates to examinations. I do not mean the examinations which teachers and professors conduct, from time to time, in their several classes, with the object of finding out to what extent their pupils benefit by their instructions, and of keeping them up to their work, and, it may be, of awarding prizes to those of them who acquit themselves best; but I mean the examinations of licensing bodies, or of universities, which aim at determining whether or not students have acquired sufficient knowledge of the subjects of the medical curriculum to allow of their admission into the roll of qualified medical practitioners. I must confess that the more I see of such examinations the less I am satisfied with them; and that, though I regard them as necessary parts of the system, I regard them as necessary evils. The evils of these examinations are mainly: that the preparation for them takes students from their real and practical work, at times when such work is of the greatest importance to them, and sends them to the tutors or grinders instead; and that, however well conducted they may be, they are necessarily very inadequate, and often very unfair, tests of the candidates' knowledge. That they distract students from their systematic work, and interfere seriously with the progress of their real education, is notorious; and I fear it must be acknowledged, that the plan of subdividing the examinations, as is the growing practice, and of requiring examinations in certain groups of subjects to take place at certain intervals, and thus one examination to be the stepping-stone to another (although there may be important reasons in its favour), tends seriously to intensify the evil, and, at any rate, is certainly not an unmixed good. I recollect that, many years ago, at a time when the teaching arrangements at St. Thomas's Hospital were under serious consideration by the hospital staff and lecturers, it was maintained, with great insistance, by one of the ablest and most thoughtful members of the school, that students should be allowed to do their work or not as they pleased, and, if they chose to work, to work in whatever way seemed best to them; that how they acquired their knowledge was immaterial, so long as they did acquire it; that the true test of knowledge was examination; and that our duty towards the students was fulfilled when we afforded them adequate means of learning, and instituted examinations by which the knowledge they had gained could be thoroughly gauged. These views had great influence, and determined our course of procedure to no inconsiderable extent. I think, indeed, this influence still survives. And it must be allowed that there is a liberality of feeling, and a logical consistency, in the views thus expressed, which might well commend their acceptance to those who are not practically acquainted with teaching and examination; and, further, that if our examinations could be made in practice as thorough as in theory it might seem possible to make them, candidates might really be allowed full freedom in the pursuit of knowledge. But though, to a certain extent, I accepted these views at the time, I soon began to discover that they were altogether unsound; and, as I have already shown, I have become, as years have passed and experience has accumulated, more and more distrustful of the value of examinations, and especially of the examinations conducted by the higher examining bodies. An examination cannot possibly be exhaustive. If it were, it would have to be extended over the whole range of details in which the pupil had been educated, and would have to be almost indefinitely prolonged. As a matter of fact, it is only possible for an examiner to dip here and there into the mine of a candidate's knowledge, and extract samples of the ore contained in it, and judge, from those fragments, of the general value of its contents. This, if reasonably well and fairly done, is no doubt a sufficiently satisfactory test of a knowledge of the exact sciences, and even of such knowledge (that of languages, to wit) as may be acquired by reading, and the mere exercise of memory. But, even if well and fairly done, it is a very

insufficient test of the varied knowledge which medical students have to accumulate of knowledge, most of which is acquired by the use of eyes and hands, much of which concerns subjects which are undergoing daily development, and about which there is necessarily much present difference of opinion among teachers, and which, moreover, is so extensive in its range, that even the best of students must be very imperfectly acquainted with many parts of it. But, besides this, there are difficulties as respects the examiners, and difficulties as respects the candidates. It is very hard to be a good examiner. An examiner should have much knowledge of his subject, much experience, much tact and temper, and much penetration. He should know his subject well; for, if he knows it well, he is ready to understand the drift and meaning of confused and imperfect statements, to make allowances for inaccuracies, errors, and differences of opinion; and to adapt his questions and his methods to the special needs of each case; and, moreover, he would not need to prepare his questions carefully beforehand, as I know some examiners have to do. Experience is of great value. I am quite sure that, for the purposes of a pass-examination, those examiners are best who have been long engaged in examinations, and especially those are best who have, additionally, had long experience in teaching. It is very hard for an examiner to avoid losing temper and showing irritability at times. There are occasions, no doubt, when this is excusable: but, unfortunately, the temper is chiefly tried in those cases in which loss of temper does harm; as, for example, when the candidate is a bad stammerer, when he is nervous and confused, and, consequently, finds it difficult to collect his thoughts; or, when he is one of those persons who are naturally incoherent and inarticulate. To the possession of tact, and penetration and judgment, it is impossible to attach too high a value. It is, as I have elsewhere remarked, a very easy thing for an examiner to convict a candidate of ignorance; it is a much more difficult thing to find out what he knows. But it is this which constitutes the real duty of the examiner, and it is this which the combination of qualities I have enumerated best enables him to do. The difficulties on the side of the candidate have been referred to in what precedes. They are mainly nervousness, inability to express his meaning clearly, and inexactness and incompleteness of knowledge. If, then, the examinations cannot be made exhaustive; if the examiners themselves are unfitted (as, no doubt, many are) to perform efficiently the important duties which they undertake; and if the candidates fail from defects, other than that of want of knowledge, to acquit themselves satisfactorily, the result of the examinations cannot be trustworthy. But if they are not, and cannot be, trustworthy, it shows how absolutely necessary it is not to rely upon examination as the real and sufficient test of knowledge, but to insist that every medical student shall undergo the systematic training which is prescribed for him. And I may here add, what I think many teachers will agree with me in, that, not unfrequently, the teachers of students are much better judges of who are fitted, by knowledge and experience, to practise their profession, than are the examiners from the mere result of the examinations by which their competence is supposed to be tested.

Admitting the need of examinations, as I am afraid I must, and yet looking upon them as evils, as I cannot help doing, how should examinations be rendered as efficient for their purpose as possible, and how should their evils be counteracted? It is easier to put these questions than to answer them. It is especially difficult to attempt even to answer them without going into more detail than I am prepared to do. There are two or three considerations, however, to which I may advert. In the first place, I should be disposed to curtail rather than to increase the number of examinations students have to undergo. In the second place, I should recommend that the examiners be always chosen from experienced teachers, and that they be allowed and encouraged to retain office for some considerable length of time, indefinitely if they be found admirable examiners. In the third place, I should like to see some arrangement made by which the teachers of students should take part in their examinations. It seemed to me, when I was visiting the examinations at some of the Scottish Universities, that there was much that was excellent in this plan, and that it tends to insure fairness of treatment to the candidates. In the fourth place, the examination should be made to cover a wide area, and not allowed to be restricted to merely a few scattered points. Such an examination, at first sight, might be taken to mean a more severe examination. As a matter of fact, however, it is the restricted examination which is the more severe one, because the pupil is afforded by it very little opportunity of retrieving his fortunes if he happens from any cause to make mistakes or be misunderstood; and if he does err, or is misunderstood, the examiner is necessarily led to form an exaggerated estimate of his faults and omissions. The more extensive examination is much fairer to the candidate; it gives him larger opportunities of displaying the knowledge he possesses; and the general effect on the examiner is, unless the candidate be really bad, to render his judgment more favourable.

Most of what I have just said relates specially to pass-examinations, to examinations which are concerned not with candidates' relative merits, but only with the question whether they have made sufficient acquaintance with medicine to practise it. Competitive examinations, examinations for honours, stand on quite a different footing. These, as a rule, are entered into by men of higher ambition than their fellows, men who are anxious to obtain prizes and achieve academic eminence, and who are probably desirous also of making their early distinctions stepping-stones to further successes. That many who take a high place in such competitions never do anything more, and turn out eventually to occupy a lower intellectual level than many of those whom they have surpassed in their examinations, does not concern me at this moment. The object of those who compete is to be successful in that for which they are competing; and the object of the examiners is to determine the order of merit shown by the candidates in their answers to the questions submitted to them. Here, in order to institute a fair comparison, every item on which comparison can be made has to be carefully considered and weighed; and it becomes just as important, and just as fair to candidates, to scrutinise their errors and omissions as it is to give credit for the actual knowledge they display. Hence, the principle of the examination seems to me quite different from that of a pass-examination; it does not demand the same qualities in the examiners; it requires painstaking and laborious weighing of evidence; and, I am inclined to think, is best conducted by young examiners.

To repeat the conclusions which I have endeavoured to express with respect to pass-examinations and examinations for honours respectively: it seems to me that, in a pass-examination, it is the duty of the examiner to find out what a man knows, rather than to convict him of ignorance; and that this is best done by men of large experience in teaching and examining, who can make due allowance for the errors which are or seem to be committed, and who, by tact, habit, and temper, are able to drag out the knowledge which is in candidates, but which they fail to yield spontaneously; while, in honour examinations, nearly all that has to be done is to institute an honest and laborious comparison between the actual works of the competitors; and this can be done at least as well by young examiners, who always tend to be logical and strict, as by others, and probably better than by others.

4. *The Conjoined Colleges and Medical Degrees.*—I come, lastly, to the consideration of the conditions under which degrees should be given by the united Colleges, supposing that they acquire the requisite powers. Although there is a general agreement that facilities for obtaining degrees are needed by the medical profession in England, and more especially by persons educated in London, considerable diversity of opinion appears to prevail, not only among the members of the profession who have taken up the question, but among members of the governing bodies of the Colleges of Physicians and Surgeons. Some are anxious that the title of doctor, which almost from time immemorial has been bestowed upon medical men by the general public, should become legalised, and that every medical man should thus become a doctor in his own right. Others desire that the title of doctor should remain (as it is now supposed to be) a mark of some superiority of education; and that, though the opportunity of obtaining it should be afforded to anyone who wishes to work for it and deserves it, it should only be awarded to those who have passed through a certain specified curriculum, and submitted themselves to examinations of greater stringency than are required of those who only seek a licence to practise. It will be recollected, I dare say, that, at a recent meeting of the Branch upon the subject of degrees, a very distinguished member of our body supported, or at any rate did not oppose, the motion which was carried in favour of the acquisition of the power of giving degrees by the two Colleges, and expressed himself as not being unfavourable to the giving of a medical degree to all practitioners of medicine; but, at the same time stated that, if the title became thus general, he should prefer to drop it himself, and enjoy the distinction of being a simple "Mr." Some thought he was making fun of the objects of the meeting, and perhaps he was. At any rate, what he said showed that he thought that, if the title of doctor became universal, it would lose all value. I agree with him. And I think it would be a childish thing, and utterly below the dignity of the two bodies which are at the head of the profession in this country, to stir a finger to obtain such powers, or even to accept them if they were offered. Moreover, if the prefix "doctor" to one's name is all that is required, why should not the profession at once adopt it? The title would not be registrable; but there is no law, so far as I know, against any legally qualified practitioner assuming it.

And the right to use it would thus be acquired exactly as, I believe, the title "Reverend" has been acquired in the course of years by members of the clerical profession. My own view is, and always has been since I have formed any opinion at all upon the subject, that a degree in medicine should be regarded as an honourable distinction; that, though it should be open for all to obtain it, it should only be given to those who have earned it by good work; and that its possession should imply the possession of a wider range of knowledge than is required for the mere practice of the profession as a livelihood. I should, therefore, myself oppose its being given to all who pass the present conjoint examinations, in virtue of these examinations only. I know that these examinations are very good; and that although, in a sense, they are minimum examinations, they are as regards everything, save, perhaps, the preliminary requirements in classics, mathematics, etc., fully equal to the examinations for the passing of which the double degree of M.B. and C.M. are given by the Scottish universities, if they be not superior to them. I should be disposed to suggest that, for all who aim at obtaining the conjoint degree, a more stringent preliminary or matriculation examination should be given, and given by the Colleges themselves, than is required of those who only aim at obtaining a licence; and, perhaps, even that some examination, corresponding to the preliminary scientific of the University of London, should also be instituted; and, further, that the opportunity should be taken of requiring candidates to undergo a somewhat longer training in medicine and surgery, say a year longer, than is demanded of the licentiates.

As regards the matriculation examination, I should not desire that the example of the University of London be followed. I have elsewhere given reasons for objecting to the wide and vexatious range of subjects embraced in their matriculation. What I should like to see is an examination, fairly strict, in some two or three subjects, including Latin and Mathematics, to be required of all candidates, together with a certain number of other subjects of which the candidate might select some two or three. Such an examination might be quite as high in its requirements as that of the University of London; but, while requiring of all candidates a respectable knowledge of certain subjects which are always taught at high-class schools, it would readily accommodate itself to the different kinds of training which are now carried out in different institutions. And, again, if an examination to take the place of the preliminary scientific should be required of students previous to their entry on their strictly professional duties, it should be an examination in botany, chemistry, and physics. It is desirable, I think, that a student should learn his chemistry before he begins his real medical training; and, although neither botany nor physics are essential for the successful pursuit of medicine, they comprise sciences with which it is desirable that the well-educated physician should be more or less familiar, and a knowledge of which helps to give a scientific tone to the mind. I may add that I should be disposed so to frame the preliminary examination for the licentiates that it should be a part of the fuller examination for the graduates, and might, if need were in any particular case, be so supplemented, at a later period of the student's career, as to become with the supplement equivalent to the latter, and so available for those students who, having begun their career in the lower grade, wish to rise out of it.

Some, who have been interesting themselves in the question under consideration, have maintained that, while the entrance examination for future M.D.'s should be more extensive and strict than that for mere licentiates, the professional examinations should be the same in both cases, only that the level of knowledge to secure a pass should be generally raised. To this suggestion I strongly demur. The present examinations err, if they err at all, on the side of strictness, and there is always a tendency among shifting examiners to screw up their requirements. This tendency, instead of being encouraged, should be opposed. I am not quite prepared to suggest how these examinations should differ from those for the licences; but I am disposed to think that a more profound knowledge of physiology and of pathology should be required of graduates than of others, and, as I have already suggested, that the opportunity should be taken of requiring candidates to devote a longer period to their studies, and especially to the study of medicine and surgery and in special practical departments.

An important question is, "What are the degrees the associated Colleges should give?" The universities confer the bachelorship and doctorate in medicine, and the mastership in surgery, and, in some cases, the bachelorship in surgery. I suppose, *primâ facie*, most persons would think that these same degrees should be conferred by the Colleges. I think not. I have no sympathy with the tendency which there seems to be to give university distinctions in respect of more artificial subdivisions of great subjects. The titles of M.B. and M.D. are of high antiquity; they are universally recognised as the academical decoration of men who have been highly educated in medicine, and they imply the possession of knowledge, if not of skill, in all branches of medicine, including surgery and midwifery. What need is there for a degree in surgery? The doctorate in medicine includes it. Moreover, if the Colleges give subordinate degrees for mere sections of medicine, why should they not confer a degree of Doctor of Dental Medicine, as the Americans do, or, to descend from the top to the bottom of the alimentary canal, even Doctor of Bum-Surgery? I do not suppose that our colleges, or our universities either, will ever be tempted to dignify with special degrees skill in minute practical parts of our profession such as these. Yet the establishment of the mastership in surgery marks a tendency in this direction. This degree is of modern date; I do not know, for I have not inquired, what was the occasion of its creation by the Universities of Oxford and Cambridge, and by the University of London. But the history of its adoption by the Scotch universities, and the grounds upon which it is conferred by them, are instructive. It was instituted after the passing of the Medical Act which conferred upon universities the power, which they did not previously possess, of giving licences to practise; and it was instituted not because such a degree was called for by the profession, or even by the surgical branch of it, but because there was a doubt on the part of the university authorities whether the title of M.B. or M.D. carried with it the right to practise surgery as well as medicine. And that in these universities it implies no special education in surgery, or knowledge of it, or confers any real distinction, is shown by the fact that there is no special examination in surgery in respect of it, and that it is conferred as a matter of course on all who obtain the bachelorship of medicine. It is, in fact, a mere licence masquerading in the dress of a degree. There is no reason why our Colleges should perpetuate a sham degree like that; and there is, it seems to me, a very important reason why they should not. Our Colleges, as we hope, will confer a degree in medicine. But it must never be forgotten by us that these two Colleges stand at the very head of medicine and surgery in this country; and that the highest qualifications which they give at the present time occupy a far higher position in the estimation of the medical profession than any university degree. Scarcely a Fellow or Member of the Royal College of Physicians, I should think, esteems his university degree as highly as he does his position in his College. No Fellow of the Royal College of Surgeons can possibly attach anything like the same value to a mastership in surgery that he does to his fellowship. The Colleges, therefore, have no reason whatever to give any so-called university degree to stamp either the highest special knowledge in medicine (using the word medicine in its restricted sense), or the highest special knowledge in surgery. They do that already with titles which stand higher than any university degree; and it would be absurd of them to invent new titles, to compete with their older ones, and to compete with them at a disadvantage.

To summarise my views on the important question I have just discussed: I should wish the Colleges to continue their joint examinations for the licence of the one body and the membership of the other, these qualifications representing their minimum requirement for obtaining a licence to practice; and to retain and exercise their individual powers of conferring by means of the membership and fellowship of the one College, and of the fellowship of the other, the highest distinguishing marks of eminence in medicine and surgery respectively. I should wish them, in their capacity of a medical university, to confer only the degrees of Bachelor and Doctor of Medicine, and that these degrees should imply that those who obtain them have given proof of a better preliminary education than is required of candidates for the licence, of a more extensive and more profound acquaintance with collateral sciences, and of a more extended professional education; and that they should be conferred in respect, not of special excellence in either medicine or surgery, but of a broad and well-balanced training in all branches of medicine. The M.D. degree I should like to be given a year or two later than the M.B. degree; and given, not as by the London University, for what is practically only a repetition of the M.B. examination, but as by the other universities, in respect of a thesis, or as an alternative in respect of a special and exhaustive examination in some branch of science or literature to be selected beforehand by the candidate.

DONATIONS AND BEQUESTS.—The Manchester Royal Infirmary has received £6000 from the Crown out of the estate of the late Mr. Samuel Fletcher, who died intestate and without heirs, as an endowment in aid of the Convalescent Hospital at Cheadle, subject to the payment of a life annuity of £40.—Mr. Charles Charlesworth bequeathed £500 to the Bradford Fever Hospital.

ABSTRACTS OF PRESIDENTIAL ADDRESSES,

Delivered at Annual Meetings of Branches of the British Medical Association.

SOME SOCIAL QUESTIONS IN CONNECTION WITH NERVOUS DISEASE.

Delivered at the Annual Meeting of the Birmingham and Midland Counties Branch.

By S. H. AGAR, L.K.Q.C.P.,
President of the Branch.

After thanking the members of the Branch for the personal honour conferred by electing him President for the ensuing year, Dr. Agar said that he recognised with extreme satisfaction that the choice showed an ever-growing interest in psychological medicine, which was no longer to be hidden under the veil of superstition and mystery, but to take its place as a part and parcel of the common infirmities of the flesh. In solving the various complex problems of nature, it must be forcibly felt that the body and mind were inextricably united. A case of hysterical vomiting, reducing the patient to a condition of extreme prostration, until the exact condition was recognised and appropriate treatment administered, afforded an instance. Still more interesting, as examples of the close sympathy existing between mind and body, were those cases of insanity in which there was an alternation of neurosis. Cases of mental disease were not unfrequently met with alternating with attacks of gout or asthma; and a severe injury, or the sudden outbreak of some acute physical disease, was likely to cut short an outbreak of insanity, especially when of an acute character.

Though it could not be denied that this reflex intimacy had existed from time immemorial, the statement that morbid reflexes were increasing in direct proportion to the advancement in civilisation might not be accepted without hesitation. But, allowing a close intimacy between the pathology of mind and body to exist, it might be well to inquire whether some relationship did not also exist between the frequency of bodily diseases and that of nervous affections. While acknowledging the difficulty of establishing this hypothesis by direct numerical calculation, Dr. Agar found it possible to demonstrate an increase of physical disease of a certain type, otherwise than by appealing to the Registrar-General's returns. Fully recognising the splendid triumphs of modern science over the zymotic diseases, it might still be admitted that there had been a steady increase of physical diseases of a certain nature, apparently developed side by side with increased luxury and civilisation. Broadly speaking, they might be designated modern diseases. Though few in number, and often, at the onset, of apparently trivial character, they depended primarily on some failure of the nervous system. The heart's action became deranged; and consequently the stomach, the digestive tract, and, above all, the brain, were poorly supplied with blood. The overdriven brain became irritable, and the patient suffered from sleeplessness or harassing dreams of his daily pursuits. In other cases, the appetite became capricious, or a meal was followed by symptoms of dyspepsia, till all food became loathsome. Such cases were of frequent occurrence, and, unless speedily recognised and scientifically treated, might produce the gravest consequences to the individual. Dr. Agar recalled a case of acute melancholia in a gentleman devoted to his profession. The only reason that could be assigned for his illness was, that for years he had denied himself all recreation, and was a martyr to dyspepsia. These deleterious influences gave rise to sleepless nights and depression of spirits, which eventually culminated in insanity. A few months' rest and medical treatment brought about his complete recovery.

A second group of modern diseases were those induced by excesses of all kinds, such as the various affections due to excessive indulgence in alcohol, tobacco, and narcotics, and to sexual excess. Perhaps the most interesting nervous disease following excessive indulgence, was alcoholic paralysis; besides the ordinary physical and nervous symptoms, the patient was occasionally the subject of delusions and hallucinations, which, if they persisted or did not decline *pari passu* with the other symptoms, made the prognosis somewhat doubtful.

The proposition that there was any reason to question the steady progress of humanity, would doubtless be received by some with reservation, and in others would even excite a smile of incredulity; but that national degeneration was possible, was only too plainly written on the pages of history. That master of thought and reflection, the late Dr. Darwin, in accounting for the extinction of certain species, refuted the notion that the inhabitants of the earth were swept away by sudden catastrophes at successive epochs. "We have reason to believe," he wrote, "from the study of the tertiary formation, that species and groups of species gradually disappear one after the other, first from one spot, then from another, and finally from the world." Professor Ray Lankester had pointed out that, during the ages that the elaboration of species had been going on, certain forms had, as it were, slowly been left behind, and were now found existing as such lowly organisms as the amœbæ and infusoria; the simpler vertebrates were the representatives of the original vertebrates; the simpler worms represented the original worms.

If degenerative processes in the lower forms of animal life were so complex and sweeping in their character, it became a matter of very serious consideration whether more highly organised animals might not become the subject of similar degenerative processes. Dr. Agar thought he would be able to show that there were serious grounds for concern, if not alarm, at the steady increase of nervous diseases, and more especially of the various forms of mental disease. An objection lately urged by competent observers was that the number of admissions into the various asylums of the country was less in 1885 than in the preceding year, the commercial depression being regarded as the primary preventive cause. "It is noteworthy," Dr. Savage had said, "that political and social convulsions do not greatly increase the numbers of the insane, and that, in fact, the chief part which such differences play is rather to colour or give shape to the disorders than to cause any marked increase." During the Franco-Prussian war, a similar diminution in the number of admissions into the asylums of both countries was noticed. The improvement was only apparent, not real; for in both cases there existed a distinct cause acting on those predisposed to insanity; producing, in consequence, an objective rather than a subjective life. The statistics, both in this country and also in the United States, pointed unquestionably to an increase in the number of the insane. Dr. Pratt, of Michigan, had truly said "that we see more, think more, hear more, worry more, in ten years than our grandfathers did in thirty." The strain was not due to increased demands upon the physical strength. Exemption from nervous diseases might be claimed for those who combined healthy exercise with their daily avocations, and also, for the most part, for public schools and universities, where recreation and intellectual pursuits were judiciously combined. The few cases of insanity among university men occurred in men possessed of little means, but unlimited ambition, combined with a highly sensitive organisation; such men had few social pleasures, and too often insufficient exercise.

A somewhat similar group of cases still more commonly met with consisted of persons who had experienced a change of fortune or occupation after middle life. Borrowing from the cold relentless logic of Dr. Maudsley: "While we may sympathise with their sufferings and their fate, we must still confess that their failure meant weakness; and that they succumbed because it was right they should succumb."

In any case where a medical opinion was sought by those anxious to engage in any new project after middle life, the personal and family history of the individual, and particularly the increased amount of worry and anxiety his new duties will impose on him, must be considered. It was true that recovery might be apparently perfect, even in cases that had for a long time been regarded as incurable. But while the majority returned to their various vocations, they doubtless had an inward distrust of themselves, and were apprehensive of their weakness and liability to relapse into their former malady—a fear only too often realised. Dr. Maudsley had quoted from Dr. Thurnam the statement "that, while a proportion of 40 per cent. of recoveries (calculated from records of the yearly admissions into asylums) was to be regarded as low, a proportion exceeding 45 per cent. might be regarded as a high standard." Thus the liability to a recurrence of the disease, after recovery from the first attack, could not well be estimated as less than 50 per cent.

In the face of such disheartening statistics, it evidently became a matter of the very greatest importance to avert, if possible, the initial attack. When there was not a strongly marked hereditary predisposition, it was admitted that a large proportion of those who eventually became the subjects of mental disease were not "saturated" with insanity; the attack having its origin in some exciting cause, of which the effects need not register themselves permanently in the constitution. The earliest indications of a coming nerve-storm should be combated; for, when once the disease was fairly started, an attack

was seldom averted. It was now admitted by nearly everyone to be possible to avert a threatened attack of gout or phthisis, both pre-eminently hereditary diseases. The judicious administration of a drug, either to produce a healthy action of the bowels, or else to calm and soothe a jaded brain, had again and again cut short undoubted symptoms of puerperal insanity.

Of the many various social problems that at one time or another had occupied the attention of the profession, Dr. Agar considered that the subject of inherited insanity stood pre-eminently first; and with the view of ascertaining to what extent it acted as a predisposing cause, he had collected a few statistics. The admissions on the female side of an institution for two consecutive years numbered 346. Out of this number, one or both of the parents of thirty-six patients had been insane at one time or another; or, in other words, direct hereditary disease was found in 10.4 per cent. of the cases admitted. During the same period, 306 male patients were admitted; of these, parental insanity was strongly marked in twenty-seven of the patients, thus giving a proportion of 8.7 per cent. In all these cases, no other cause than inherited disease was stated in the certificate of admission. These figures, not high nor alarming in themselves, would be comparatively insignificant if marriage were found to be a rare occurrence among these nervous individuals. It was, however, noticeable that celibacy existed in less than half of the cases. The number of children, the result of these marriages, were respectively thirty-three from the males, and thirty-five from the females. It was the future of each of these children that demanded our deepest sympathy and anxious consideration.

As examples of the injurious influence of hereditary neuroses, Dr. Agar sketched the family histories of the Roman Emperors and of the Spanish Royal Family, as described by Dr. Ireland, in his book entitled *The Blot on the Brain*. If, he said, the Romans could have recognised that the imperial purple was usually worn by imperial lunatics, and if they could have added to their matchless laws one to prohibit the insane from marrying, when there was no possibility of a stable offspring being produced, it would be difficult to estimate the enormous amount of human suffering that might thus have been avoided, in its turn exercising a mighty influence on the future destinies of the empire. Legislation in a like cause might have proved an incalculable benefit to Spain.

If the victims of hereditary nervous disease were those only whom the State recognised as insane, the evil, though great, might, perhaps, still be tolerated. But the failure of the parents did not necessarily show itself in the children, either in the same form, or in any recognisable form. Insanity was in truth only one phase out of many in which an hereditary neurosis might show itself. Some of the family of an insane stock became insane in the true sense; others were afflicted with allied neuroses, such as idiocy, epilepsy, and the various forms of moral insanity; while, in addition, a "borderland" between sanity and insanity must be recognised. The influence exerted by these unstable individuals, though difficult to estimate, was of considerable importance. In this class were comprised families where some members were odd in their feelings and action, others were victims of "fixed ideas," and others suffered from certain obstinate neuralgias, chorea, asthma, and diabetes. Any of these might be the harbinger of an attack of insanity, or alternate with it.

Dr. Agar had lately had an opportunity of watching a case of melancholia in a lady who for years was the subject of asthma. When she first came under notice, she was the subject of glycosuria in addition to her mental affliction. Later on, she ceased to pass sugar in her urine, but no improvement had been observed in her mental condition, and her asthmatic attacks had probably been more frequent.

It was an admitted fact that insanity was on the increase. In the thirty-ninth report of the Commissioners in Lunacy, the actual increase over the previous year was 1,176. It followed that allied neuroses would increase *pari passu* with the primary cause. This being the case, it was, in his opinion, little less than culpable neglect, if some efforts were not made to check, in some degree, this cause of national degeneration.

Marriage was often contracted in a blind and reckless way by those who had a strong predisposition to insanity. Although recognising the danger and difficulty of interfering with the personal liberty of the individual with regard to marriage, still, under certain conditions, the tendency to contract unwise marriages might be diminished. The conditions under which a definite opinion might be expressed, could be conveniently divided as follows:

1. Marriage contracted when one of the parties concerned is still insane, or "when he is on leave" from an asylum, or registered hospital;

2. Marriage when insanity existed in one or both parents immediately before the birth of the individual;

3. The marriage of those saturated with insanity.

The possibility of immunity from mental disease in any of these supposed cases, would be admitted to be exceedingly small by all qualified to form an opinion. In order to restrict such marriages, one of two alternatives was open; either to agitate for legislative measures, or to leave the difficulty to be settled by individual enterprise. Those coming under the influence of such severe restrictive legislation would be socially ostracised, and probably regarded by the public with suspicion: thus adding to the difficulty of individual treatment, and perhaps precipitating or increasing the very influences which it was sought to counteract. On careful consideration, the wisest course would seem to be not to appeal to the law, but to the proverbially good common sense of the English public.

For this purpose, Dr. Agar suggested the formation of a medical council, composed of alienists and physicians, who would undertake to frame a concise statement as to the influence which the different degrees of hereditary and individual predisposition were likely to have in the production of insanity; and also to draw up rules for the guidance of the general practitioner, in giving his opinion with regard to the propriety of marriage when one or both of the parties concerned come of a nervous stock. For instance, the probability of immunity from future attacks of insanity occurring either in the contracting parties or their children, would widely differ in the following cases: (1) marriage taking place, the bride being at the time "out on leave;" (2) the marriage of two healthy individuals, with a doubtful case of insanity in a distant relative. No qualified medical men could possibly err in forming an opinion in two such extreme cases. But, filling up the individual links of this nervous chain, there would be found an infinite number of gradations which had to be taken into consideration. Standing midway between the general practitioner and the specialist, it would, he felt, be highly unbecoming for him to speak lightly of the professional attainments of his brother practitioners; but it was none the less a fact that the majority of those entering the profession could have little or no practical acquaintance with insanity. This was partly due to the omission of mental diseases at the various examining boards. In Ireland, the importance of mental diseases was recognised, and a three months' course of clinical work at a recognised hospital or asylum before being admitted to the final examination was necessary. But in England no such knowledge was insisted upon.

In conclusion, Dr. Agar discussed the best means of dealing with habitual drunkenness. As far back as 1858, the advisability of legislation for confirmed inebriates had been broached by Dr. Peddie, in a paper read before the Medico-Chirurgical Society of Edinburgh. The subject was allowed to drop, owing to the feeble efforts of the Lunacy Commission. Since then, the question had been well ventilated by various societies, journals, and daily papers, both in this country and also in the United States. While hesitating to adopt such gigantic restrictive measures on the liquor-traffic as were initiated in America, still it might be asked whether society was sufficiently protected from the consequences of drink by the Habitual Drunkards Act of 1879. In that one-sided measure partial provision was made for those well enough off to avail themselves of its protection. But any Bill which would meet the wants of society must be impartial, applicable to the rich and poor alike. It was generally believed that the poorer classes were more addicted to intemperance, and consequently furnished the largest proportion of dipsomaniacs; and it was they or their children who tended to crowd our workhouses, prisons, and asylums, thus adding an additional burden to the already overtaxed ratepayer. Could nothing more be done, Dr. Agar asked in conclusion, to help the victims of drink-insanity? for, in his opinion, the existing Act was worthless without a compulsory clause.

ON THE NATURE AND CAUSES OF DISEASE.

Delivered at the Annual Meeting of the Border Counties Branch.

By JOHN EATON, M.D.,
President of the Branch.

In commencing this address, Dr. Eaton noted the comparative scarcity of facts and the redundancy of opinions and hypotheses, which obscured all research into the nature and causes of disease. The true constituents of normal blood-plasma were as uncertain as the changes which the plasma really underwent in rheumatism, and it was still unsettled as to whether that disease was essentially a nervous disorder or a form of blood-poisoning. Yet, the task must be pursued, and clear ideas must be attained through patient scientific

research. Disease was clinically a disturbance of the normal play of the functions, causing pain, weakness, *malaise*, and biliousness, as was demonstrated by the phenomena of special diseases, but serious diseases often lay latent before developing clinical symptoms. Organic changes were marked in some diseases, apparently absent in others; but, after all, such changes would probably be detected in the latter class by further investigations. Disease was an abstract term, and it might imply disorder, suffering and loss of function easily accounted for by injury to or changes in organs and tissues, yet the term must also be applied to similar unfavourable subjective conditions not to be traced to visible injuries and changes; and lastly, morbid changes in structures may be independent of any symptoms.

The complexity of the causes of disease, and the difficulty of tracing them, was next considered. The beginning of an intelligent study of pathological anatomy was traced to Morgagni's *De Sedibus et Causis Morborum per Anatomen indagatis*, a work based upon a long series of necropsies made by himself and his master Valsalva. Morbid states of the blood were then discussed. Besides anæmia, spanæmia, leucocythemia, hyperæmia, and forms of blood-poisoning where mineral poisons were really found in the blood, there were also the morbid conditions where specific germs existed, and diseases where forms of life much higher than bacteria were found in the circulation. Reference was then made to the opinions of Panum, Burdon Sanderson, Bergmann and Koch, as to the precise relation of micro-organisms to the infection which they were said to produce, but with which they may only be associated. Dr. Eaton named the principal micro-organisms which had been considered as truly specific, and then gave a succinct account of Pasteur's work. Pathogenic bacilli, as well as the reputed essentially specific forms, were then named in association with the conditions in which they were found.

Notice was then taken of inflammatory products, textural changes and degenerations, new growths, and animal and vegetable parasites. These latter were described at some length, in an instructive manner. Malformations were also discussed. Then some words were said on the predisposing causes of disease, and the influence of age, sex, temperament, diet, occupation, heredity, intermarriage, previous attacks of disease, mental, moral and physical conditions, hygienic surroundings, temperature, atmosphere, habitat, and climate.

Lastly, Dr. Eaton mentioned the principal diseases which appeared to be independent of the above-named influences, and not assignable to any known cause, such as tumours, tetanus, linear atrophy of the skin, fragilitas ossium, mollities ossium, and other widely distributed or purely local diseases.

The lecturer concluded by stating that he hoped his brief review of the researches of distinguished modern authorities would render more definable to the minds of his audience, as it had already to his own mind, knowledge which might hitherto have been somewhat vague, and might henceforth prove suggestive of topics which waited for investigation by the medical profession.

ON THE EFFECTS OF DENTAL DISEASE.

Delivered at the Annual Meeting of the Bath and Bristol Branch.

By C. GAINE, M.R.C.S.,
President of the Branch.

MR. GAINE announced that his aim, throughout the address, would be to direct the attention of the various practitioners to some morbid lesions and important reflex phenomena, which were not unfrequently observed in the daily practice of medical men, and to point out to them where a properly educated practitioner of dental surgery might be of use in aiding the diagnosis of some forms of disease, which were more familiar in the course of daily work to a specialist than they could be to a general practitioner. When we thought of the wide ramifications of the fifth nerve, the distribution of which Mr. Gaine briefly described, it did not surprise us that local irritation of one set of its branches should cause widespread physiological phenomena. The fifth communicated with all the cranial nerves except, apparently, the olfactory, and it might yet be discovered that the trigeminal was, in some manner connected with the first pair.

The communications of the fifth nerve with the vagus through the tonsillar branches of the glosso-pharyngeal, which united with the palatine nerves (branches of Meckel's ganglion) were well known. Through this slender medium of communication, the only one yet made out, we frequently noted severe toothache where no caries, or other symptoms of inflammation, could be detected, through stomach-derangement, which a purgative would frequently relieve, and, on the other hand, gastric disturbance from the different forms of toothache, which relief of the local cause would surely cure.

Many varieties of neuralgia affecting different nerves and nerve-centres had been described, but very little was definitely known about the primary origin of any of them when the pain was of an idiopathic nature. Of the neuralgias described by different writers, but few were attributed to tooth-irritation, although many kinds had been relieved or cured by the removal of a diseased tooth or teeth. A few years since, an obstinate case of chorea in a child, 8 years old, came under the lecturer's care, and was cured after the extraction of several deciduous teeth. The most common form of neuralgia affecting the fifth nerve was ticdouloureux, and this had been frequently cured by removing a tooth or teeth—either carious, or crowded, and impacted as to cause pressure on some nerve-filament, during the process of eruption; the offending teeth, when not carious, could only be discovered by expert sounding or tapping with a steel instrument. This delicate percussion would probably fail the first time, when no signs of periosteal inflammation could be seen, to discover the affected tooth; but at a second visit, a few days later, the cause would probably be detected. Let it not be understood that teeth were frequently the cause of this distressing malady. It arose from a variety of causes, and was probably most frequent in women about the climacteric period; and Mr. Gaine had not found a dental origin for hemicrania.

With regard to those cases where the teeth were primarily affected, either from overcrowding, caries, or congestion of the periodontal membrane, or from tardy eruption of the wisdom teeth, or necrosis of a tooth, or any part of the alveolar process or jaw, technical inquiry would rarely fail to detect the origin of the trouble, and prompt treatment might avert long and painful disease and invalidism. Early attention was always particularly necessary where a fault in the teeth was suspected, causing pain or stiffness in the jaw or surrounding structures, especially if near the time for the eruption of the wisdom teeth; for trismus was apt to set in very rapidly, and any operation that might be necessary was easiest before the spasm of the jaw, with its full complement of teeth, had set in.

The lecturer then referred to his own researches, already published, on trismus or purulent discharge of the antrum and nasal fossæ resulting from dental and alveolar inflammation. He described a case of ptosis and amaurosis associated with fractured upper molar and pus in the antrum. Removal of the stump and evacuation of the pus was followed by disappearance of the ptosis. Another case of neuralgia, trismus, and sinus below the lower jaw was caused by an unerupted wisdom tooth. The removal of that tooth, with the molar next to it, cured the patient. Mr. Gaine related a remarkable instance where, after a blow over the teeth, a lady suffered from paroxysms of pain darting through the head to the back of the ear and down to the shoulder. A lower second molar, which had lost its antagonist, was found to be tender on percussion, yet not carious. It was extracted, and the symptoms almost immediately disappeared. Mr. Gaine split the roots of the tooth, and found the dental canal of the posterior root almost obliterated. The pulp had, no doubt, been calcified for some time; and although the congestion of the periodontal membrane at the apex of the root was apparently slight, there could be no doubt that it was the cause of the mischief. This case showed how through the spinal origin of the fifth nerve, and its communication with the otic ganglion, a morbid impression could be conveyed to the brachial plexus and the ear. All the above cases showed the necessity of timely interference before sinuses had formed and burst through the integuments of the face.

Some observations were then made upon the chronic cachexia or septicæmia seen in persons who went about for years with carious but painless teeth in their heads, or with their teeth half buried in tartar. Such patients remained in a chronic state of invalidism, until the dental mischief was attended to. It was admitted that very serious diseases of the nervous system, even epilepsy and tetanus, were sometimes traced to dental affections. Mr. Gaine then spoke of epulis, cleft palate, and epithelioma of the gums.

The lecturer, in conclusion, referred to the necessity of specialism, as medical science was too wide to be taken up in its entirety as a profession. He advocated, however, the thorough education of dental students in all those branches of science studied by other students of medicine. It was very advisable for the dentist to take a surgical diploma, and it would be better for the public when his scientific education reached such an admitted degree of perfection as to enable him to practise preventive dentistry. By examining the teeth of children and adults, just as the practitioner examined their tongues, not only would dental disorders be averted, but likewise many of the general diseases of the various forms of impaired health, of which those disorders were the cause.

ON THE STUDY OF NATURE AS THE FOUNDATION OF MEDICAL SCIENCE AND THOUGHT.

Delivered at the Annual Meeting of the Lancashire and Cheshire Branch.

By JOHN HARKER, M.D.,
President of the Branch.

Dr. Harker commenced by indicating the necessity for the sound elementary scientific education of medical students, but at the same time he dwelt on the advantages of a real taste for nature, cultivated from student-life throughout the rest of a medical man's career. It gave training, foresight, and prevision for the healing art. The whole essentially progressive scheme of nature taught us to favour and live up to the idea that a true natural human aristocracy might yet be built up as the result of intelligent action, founded on knowledge. Dr. Harker then spoke of the physical characters of air and water, and of the impurities of the latter compound. The perfection of microscopy had enabled Dr. Dallinger to detect desmids measuring cubically one-millionth of an inch. The subtle character of invasion of histological elements by bacteria had been detected by the same advances in the use of the microscope. Even in the plant *anacharis*, a kind of bacteria-fever had been discovered. Dr. D. Astley Gresswell had studied the recrudescence of throat-symptoms in patients who had suffered from diphtheria; and it had thus been discovered that the specific germs of the disease were apt to lodge in the follicles of the fauces, and thus cause both recurrence and the infection of other persons. Bacteria theories required scrutiny; and Dr. Troup in a "Note on Bacteriotherapy" in the Journal of June 19th, showed that the relatively innocent *Bacterium termo* did not kill the specific *Bacillus tuberculosis*, as had been supposed. Dr. Harker then referred to a primitive method of purifying suspected water, long carried out in some parts of the country. The water was boiled and poured over toasted bread; when cool, it was used for drinking purposes. Its hardness was taken away, and germs appeared to be filtered away by the process.

Reference was then made to our advance in knowledge of the blood, and to the lectures of Dr. Osler, recently published in the Journal. His researches indicated further fields for yet more important discoveries.

The lecturer concluded by observing that there was for us in nature a revelation even more sure and valuable than that which we had in tradition, venerable and revered though the latter might be. The witness of nature was always with us for verification. It was a teaching learned from our surroundings, with which we must live in harmony, or else we should signally fail in our life and happiness. We should know ourselves as we were, and bow to the circumstances of our existence. We were taught to appreciate the beauty of natural objects.

We learnt from the study of nature that certain foods were provided for certain creatures, not merely by adaptation, but also as provision. In the case of man, certain fruits were for the north, as, for example, the gooseberry-bush, which, in southern regions, became an evergreen, and ceased to produce succulent edible fruit. On the other hand, the grape was for the sunny south. Nature taught intelligent man the knowledge of good and evil by rewards and punishments. Evil began in the mind, but remained not there, becoming apparent in the life. So also did its converse, good; and, in life, they each had their mede. This we were taught by witnessing the effect of each vice. Sexual infidelity and excess were punished by sexual disease. Taught by nature, we believed not in the epicureanism of the ancients. We must develop and advance, or we should quickly retrograde. Purity and righteousness brought health and peace; dirt and vice brought, as a consequence, disease, misery, and unrest. Matter was sufficient to account for all we saw and knew. Yet we knew that the pure speck of gold, and the sparkling diamond-crystal of carbon, to be as wonderful and as worthy of admiration as were their various compounds and combinations; and even, if at the base of all the elements we should at some future time learn that there was pure matter, our admiration would be but increased. We were taught by design, by Providence, by dominant righteousness, by eternal power. We were no Agnostics, as some who thought in many things so much in harmony with us styled themselves, but in searching into the secrets of nature we found the knowledge of God.

ON HOSPITALISM.

Delivered at the Annual Meeting of the Yorkshire Branch.

By DAVID GOYDER, M.D.,
President of the Branch.

The subject of the address, namely, Hospitalism, in the very widest and most literal sense of the word, had been forced upon Dr. Goyder's attention by recent and prolonged discussions occurring amongst the members of the Honorary Staff of the Bradford Infirmary, as to the manner of enlargement of the institution, the need of advancing pathological and clinical research, the revision of the laws of its management, the influence of the staff on its board, and the increasing difficulty of dealing with its out-patients. The last point was an especially important and pressing question, whether regarded in its relation to the public or to the profession. The growth of hospitals, in proportion to the aggregation of populations, had reached a point at which their economic management began to excite serious doubts and misgivings. A medical man was interested in assisting thorough inquiry into the causes which produced the increased application for hospital-treatment, in assisting to reduce to some definite system the rules regulating admission of patients, and in ensuring the appointment of some responsible authority to enforce those rules. For the causes of the financial failure of hospitals, which was decidedly threatened, not only deteriorated his own work, but depreciated the reasonable expectations and rights of his fellow practitioners outside. Besides, the admission of unsuitable cases tended to produce what was noxious to the state of which the medical man was not an unimportant member, the killing of the self-respect of the well-to-do artisan, and increased pauperisation of the masses.

The abuse of gratuitous hospital-relief had been well proved by statistics. This subject called, he considered, for a searching inquiry by a Royal Commission. This evil was chiefly due, not to uneven distribution of wealth, but rather to faulty safeguarding of the portals of hospital-relief; and, perhaps, not only lay managers, but the part of the profession directly concerned in hospitals, might have shared in distributing lax and lavish benevolence.

Dr. Goyder next discussed the alleged increase of disease. It did not appear to increase in proportion to the growth of the population. The greater frequency of neurotic affections, arising from the wear and worry of life, was counterbalanced by the diminution of zymotic disease effected through sanitation. Intemperance and its consequences were certainly decreasing, and malignant maladies, though their augmentation was alleged, might be dependent for this appearance upon the greater skill exercised in their diagnosis. But if disease was not increasing relatively to population, yet massing of populations increased it in bulk. Thus the increasing centralisation of large commercial and industrial interests concentrated people from the country districts into cramped town-dwellings. This centralisation furnished one great factor in increasing applications for hospital-relief. This, however, could only be ameliorated by sanitation. Some persons, by the way, believed that this excessive centralisation would find its own remedy in the gradual loss by England of its great manufacturing supremacy, and the return of a large mass of the inhabitants of towns to agricultural pursuits—a belief more humane than patriotic, however likely to prove true.

The lecturer then referred to the lavish distribution of recommendations from subscribers to hospitals, which resulted in the admission of numerous cases well able to pay for private advice, to the great detriment of the general practitioner. These recommendations ought to be abolished, and every case henceforth admitted solely on its merits. In some towns in which hospitals had abolished recommendations, especially in centres of teaching, cases were often admitted, whether able to pay or not, because they illustrated to students special characteristics of disease or treatment.

In justice to those who sent them in, it must be admitted that any motive so sordid as payment was never even thought of; but, apart from the benefit to patient or student, was not evil thereby wrought to the practitioner outside? Was it not the first duty of the hospital physician or surgeon, the circumstances of the patient being known, to remit the case to the practitioner who had attended it, and even to urge his prosecution of the case, not for his monetary benefit merely, but that he might increase his skill and acquaintance with the treatment of severe disease? Such a course would do good in every direction.

Another cause of the increase of hospital applicants, was the com-

mon public opinion that the poor obtained the best relief at hospitals. In reality, only remarkable or serious cases obtained special attention, and the out-patient officers were always overworked. The number of cases seen in hospital should be limited, and the rest should be scattered amongst certain outside practitioners, appointed in proportional districts of a town. It was important to exclude patients really poor, but subject to a craze for physic, and others who simply came to get drugs, which they sold to others outside. This had been detected at the Bradford Infirmary.

An expedient to cut off these parasites had been successfully tried at certain hospitals. A nominal charge was made to every patient receiving medicine, remitting it only to patients above suspicion, who produced evidence of inability to pay. That some such method would be an excellent deterrent to unworthy applicants there had just been experimental proof in regard to dental extractions. In the month of May, 1885, the number of teeth extracted gratuitously at the Bradford Infirmary was 230. This number varied month by month, a few less or more, till May 1886, when, at the suggestion of Dr. Bell, a fee of threepence was ordered to be charged to each applicant for extraction; at once, the number of extractions fell from 230 to 63, or about one-fourth. If a fee of threepence deterred applicants, suffering positive pain, from seeking gratuitous relief, a slightly larger fee would surely banish applicants possessing imaginary ailments, or positive thieving propensities. But a proposal of this kind might raise objections. Subscribers might consider that such a demand contravened the first principle for which their benefactions were made: that of affording medical assistance to those temporarily incapacitated by disease. It might be replied that the charge was too small to weaken the act of undoubted charity which they, as subscribers, intended, or which the authorities and unpaid or honorary staff of the hospital administered. It tended to cut off unworthy applicants, yet would be remitted wherever inability to pay was made clear, and it would be cheerfully paid by the mass of the really deserving. Besides, it would only be exacted when medicine was furnished, and the proceeds could be applied to lessen, in some degree, the increasing outlay of hospitals upon drugs.

Again, general practitioners in the poorer districts of towns might allege that such a charge would act as a sort of bribe to their constituency, to save eighteen pence or two shillings a visit and medicine, and lure their patients to the hospital where they could obtain both for sixpence. These fears, however, were groundless, because, where the plan had been tried, the applicants at the hospital had been lessened. Two safeguards would render the abuse of charity impossible: *a*, the fixing of a scale of incomes, below and above which applicants would be refused hospital assistance; and *b*, the employment of officers of the Charity Organisation Society, or a special official detective paid by the hospital, whose duty it would be rigidly to search into the circumstances of all applicants, and report the result to the hospital authorities, who could thus reject all unworthy cases.

After weeding out every unworthy applicant for hospital relief, the number of deserving patients still remained legion. No rightly constituted mind would question for an instant that the best interests of a community were fostered and worthily exercised in providing for the care of its sick poor. For that reason hospitals existed. It was also to the interest of the community, that they should be wisely and efficiently administered. All bodies, therefore, concerned in their monetary support, ought to be represented in their management; and, above all, their acting staffs should be largely represented on all their boards and committees. Wher ethis representation had been absent, disastrous results had followed, especially where the central executive authority had been vested in one or a few paid officials and directors, who disregarded representative boards of management as well as the medical staff. This evil was shown by the wasteful extravagance in the erection of the colossal, unsanitary, and in one portion of them misapplied, buildings of St. Thomas's Hospital; and by the paralysis of the best work of an eminent staff, by the severance from them of the control of the nursing arrangements, at Guy's Hospital. In these respects, matters were more judiciously arranged in the provinces. In Bradford, the staff was fully represented, and the general management of the institution by the laity upon its board appeared to be wise and economical. The voices of the staff should have more weight in questions of improvements in the buildings and their sanitation, and of ampler facilities for clinical and pathological work. The laity on the boards of hospitals should learn that the truest economy ran hand in hand with the rapid and successful treatment of patients; and this was only secured where the opportunities for research and experience by the staff were multiplied and perfected. Dr. Goyder then observed that the lay managers often attributed interested motives to members of a hospital staff who sought the extension of facilities for scientific observation. He pointed out the fallacies underlying this idea. He believed that general practitioners should encourage improvement in this direction by frequent visits to hospitals, in order to keep up their clinical knowledge.

The lecturer then dwelt on the necessity for the control of the nursing in a hospital to be in the hands of the medical staff. He deprecated the aggregation of the sick into large and imposing edifices, and believed that the skill in battling against disease and vitiated air in colossal hospitals might meet with still greater success in the homes of the people, when those homes had been rendered healthy. Dr. Goyder believed that hospitals should be smaller and more scattered, and officered by practitioners living close to them, who best knew the character and social conditions of the surrounding population. More convalescent hospitals were needed, and incurables ought to be treated in special hospitals.

Dr. Goyder believed that this decentralisation would be beneficial and not harmful to students. Their anatomical studies should be pursued in institutions far from hospitals, and afterwards they could go through their clinical education under far healthier conditions than at present. Under the proposed system, patients need not be worried by large classes of students, for the students would be widely distributed over several district hospitals, where they would obtain a sound clinical education. The student's health must also be considered, for he must be strong in order to be of service to the community in after-life. Hence dissecting-rooms should not only be built far from hospitals if possible, but should also be well ventilated and well lighted. There was a great necessity for well-paid medical teachers; and, if hospitals were decentralised, the services of medical officers must cease to be honorary.

The reformations proposed in the address lay in the hands of the profession, and only such an organisation as the British Medical Association could bring to bear upon the Legislature and the public the intelligence and force essential to secure the needful changes. It had been said that reforms seldom issued from within corporate and other self-constituted bodies; but it was of the essence of our profession to be continually impelled into inquiries respecting individual, collective, and national health, and the means for this must keep pace with our advancing knowledge. All we wanted, but that was essential, was united action, and affiliation of all the bodies and interests of the profession present and to come. It would be a fatal misfortune that our wish to advance should fall behind the growing requirements of the age, for the so-called rising democracy was becoming an educated, lynx-eyed, and invading force, which tended to unsettle or overthrow everything which was not in advance of itself. Our knowledge was of a kind which, peculiar in itself, required the devotion of a life to master. Let us only be steadfast in our efforts to perfect and ennoble it more and more, and then we should have the State and people with us, and never against us.

THE RECOVERING POWERS IN OLD AGE.

Read at the Meeting of the East Anglian Branch in Ipswich.

By G. M. HUMPHRY, M.D., F.R.S.,
Professor of Surgery in the University of Cambridge.

In a paper read at the Royston meeting of this Branch, and published in the British Medical Journal, July 12th, 1884, I called attention to the rapidity with which wounds, ulcers, and fractures are often healed in aged persons, adducing evidence from information supplied by members of the Association in reply to a Collective Investigation inquiry. I have since received much additional evidence bearing on the same point, and hope that the contrary impression which has arisen, rather as an issue of probability than as a result of observation, is beginning to be modified.

In that paper I endeavoured to show that the failure of union in intracapsular fracture of the neck of the thigh-bone, upon which so much stress has been laid, is due to the peculiar conditions of the part, to the separation of the broken surfaces, to the buried position of the inner fragment in the cavity of the acetabulum, which prevents the formation of any uniting medium around it, as well as prevents the contact of the fractured parts, and also to the bathing of the fractured surfaces by synovial fluid, wherein the products, which might have subserved to repair, are lost. The neck of the thigh-bone is, indeed, circumstanced much in the same manner as the patella and the olecranon; and that failure of union in it is due to the causes I have indicated, and not to the age at which the accident occurs, is

proved by the fact that union—bony union—will take place, as it also does in the bones I have just mentioned, well, firmly, and quickly, if the fractured surfaces be impacted or kept in close contact, and also by the fact that, when the fracture occurs in the region of the neck of the thigh-bone where these causes do not exist, namely, at or external to the attachment of the capsule, bony union rarely fails to take place quickly, at whatever period of life the lesion is experienced. It is a fracture of common occurrence in old people; yet not many specimens showing want of union, when the patient has survived six weeks, are to be found in our museums. However slight may have been the cause of the lesion, however atrophic may be the bone, however old the patient may have been, bony union has almost always taken place. It may be asked whether intracapsular fracture is more likely to unite if it occur at an earlier period of life. The answer to this cannot, I think, be given. It is an accident that seldom occurs; and I do not remember to have seen any specimens which bear upon the question.

It is not to be wondered at that persons are slow to credit old age with much reparative and recovering power; and, in the paper to which I have referred, I wrote as follows.

"We should not have thought that, when the nutritive forces are generally failing, when strength and weight are diminishing, when repair is each year less and less able to keep pace with wear, as evinced, among other things, by the fact that exhaustion is more quickly induced and less quickly recovered from; when the brain is shrinking, and memory and other mental powers are lowering, and when the circulation is becoming weaker—that, under these circumstances, the nutritive or reparative processes concerned in breach-closing, in the healing of wounds and ulcers, should manifest an increase of energy, at any rate of rapidity, in carrying on their work. I do not know well how to explain it, but this exceptional phenomenon of nutrition is not peculiar to old age. It may be observed in some other lowered conditions. The wounds in patients exhausted by large losses of blood usually heal quickly, as they also do after operations for cancer, and in many other debilitated conditions. I do not mean persons of naturally strumous temperament, but persons who have been weakened by illness, or in other ways. So do, commonly, the gaps caused by carbuncles and bed-sores; and very remarkable is the quick healing of the stump left by the separation of the parts in senile gangrene—that is to say, this evidence of vital energy is manifested in the part next above that which was unable to keep alive at all; and, after fracture of the spine, we sometimes see quick sloughing and quick healing in closely adjacent parts. An exception must be made of certain impaired conditions of the nervous system, in which wounds and sores are sometimes very troublesome."

That paper referred exclusively to the repair of manifest breaches in the body, to the healing, namely, of ulcers, wounds, and fractures.

At the present time, I wish to call your attention to that which is even more remarkable, the recovering or reparative power from diseases or illnesses and their effects, which is not unfrequently manifested by aged persons; and I will do so by reciting some instances which have been furnished me in the replies that have been kindly sent by members of the profession to the inquiry respecting old age instituted by the Collective Investigation Committee of this Association.

1. James Pearson, aged 104, recovered from attacks of diarrhœa at 75 and 90, and from fractured neck of the thigh-bone at 101. In what manner the bones united cannot be determined. He goes about with crutches. (Information given by Dr. Reardon, of Stamford Hill.)

2. Rebecca Burn, aged 104, Dr. Whitby, of Hunstanton, relates, had injury to her hip from a fall at 96, which kept her in bed two or three months, and she quite recovered.

3. Fanny Covill, aged 100 and six months, whom I saw in Yorkshire, in August last, had a severe fit with loss of consciousness, for which she was bled, at 60; and, again, two fits of the same kind at 70; she quite recovered, and had none since.

4. William Chappell, aged 100, had renal dropsy at 82, which lasted two years, and was cured by elaterium. He had a large slough on the thigh, from a bruise, at 99, and quite recovered. (Dr. Haslewood, of Rhymny).

5. Miss Hastings, aged 104, had acute bronchitis at 95, at 98, and 99, each time severely, had pneumonia and erysipelas of the head in her hundredth year. She recovered from all these; and, in her 104th year, had an attack (severe) of pneumonia in both lungs, which passed through its ordinary course, and, in the words of Dr. Pike, of Malvern, she threw off the disease wonderfully, and the lungs cleared up well, leaving only the chronic bronchitis, from which she had latterly suffered; but she did not again fully recover her strength.

6. M. L., aged 108, fractured the wrist at 104. Good callus formed, and there was complete consolidation of the fracture. (Information derived from a resident at Nantes; whether medical man not stated).

7. William Hodge, aged 101, had shingles at 99, and recovered. (Mr. Woodd, of Calstock.)

8. Ann Trew, aged 101, recovered from a severe attack of bronchitis at 82. (Miss Ralmer, of Snetterton.)

9. Mrs. Pellatt, aged 104, had severe fever at 84, and quite recovered. (Dr. Hovell, of Elstree.)

10. Dr. Black, of Wimpole Street, tells me of a lady who recovered rapidly and completely from a Colles's fracture at 89, and completely from burns and scalds on the hands at 92.

11. Dr. Horder, of Cardiff, relates of a man, aged 92, that he has had two attacks of bronchitis and one of pneumonia in the last four years.

12. Dr. Campbell, of Liverpool, relates of a woman, aged 97, that she completely recovered from an attack of acute bronchitis at 95.

13. I was told that James Betts, aged 91, whom I saw at Norwich, had severe erysipelas of the head and face at 89, and quite recovered.

14. Mr. Ronaldson, of Haddington, states that a man, aged 97, had a severe attack of bronchitis at 88, resulting in complete recovery.

These cases, it is true, are not very numerous; but, when taken in conjunction with the fact that aged persons do not often suffer severe illnesses, and that, when they are attacked, they often die in the early stage of the affection, they are sufficiently numerous and startling to arrest our attention, and to suggest some reflections.

First, I think we must notice the difference, just hinted at, which is manifested in old age between the little power they show of bearing up against the first impulses or initial shocks of disease and their power of recovering from its effects—between the power to withstand the tidal flow of disease, and the power of repair during its ebb. This seems to be very marked. The depression associated with oncoming malady, and produced probably, in part at least, by the rise of temperature attendant on it, is ill-borne by the aged, a considerable number of whom sink at the very commencement of an attack, before the disease has had time to make an appreciable impression on the tissues. In reference to this, we must bear in mind the difficulty which is experienced by old persons in maintaining heat, because for the production of a given amount of heat a proportionate metabolism, or tissue-change, in other words, a proportionate exercise of nutritive force and nutritive activity, is required. Hence in the aged, even in health, the temperature of the surface is hardly maintained, and cold is ill-borne. Experience shows, for instance, that men below the middle period of life are alone able to resist the severity of the arctic regions, and that, accordingly, the selection for the exploratory voyages in those sun-bereft and perilous seas must be confined to the young. As we advance in years, and the fires are slackening and the supply of fuel lessening, it becomes more and more necessary to economise heat, to prevent its being dissipated on the atmosphere, to reserve it for the internal and more vital parts, and to reserve the force expended in its production for the necessary functions carried on by those parts. Now, the early stages of disease or illness are usually attended by an exaltation of temperature with an attendant general depression, evidenced by chilly feeling and sense of weakness proportionate to the severity of the attack. A rise of temperature, under these circumstances, in the aged is shown to take place, as pointed out by Charcot, by thermometric examination of the rectum, though the skin may fail to give sign of it. This means, of course, irrespective of other evils, a waste of heat and a wasteful employment of heat-producing force, which leaves too often an insufficient margin for the necessary processes of life, and so causes a fatal depression. Hence, many an old person, who has appeared to be in good health, dies almost without a struggle, perhaps from a chill, before it is known that a cold has been caught, or before any manifestation of illness has attracted attention. From this we gather the importance of watching for, and ministering to, the first signs of incipient affections in the aged; and every day experience tells how much life may be prolonged in old persons, as well as in the young, by such careful attention; and we are the more encouraged to these attentions in the case of the aged, by finding that, of those who survive the initiatory stages of illness, not a few hold on through the attack, even though it be severe, and make their way to complete, quick, and surprising recovery.

It seems strange that failure and suspension of nutrition, which mean sinking and death, should be near neighbours to facility of re-

pair and recovery, which look like evidences of extraordinary nutritive action. This paradox, to which I have already referred, may receive some explanation from the lowered irritability—the lessened nerve-susceptibility—which is a well known feature of the senile frame, and which gives it much immunity from disease. Repair, after all, makes but slight extra demand on nutritive or circulatory activity. It, like developmental work, to which it is in some sort a return, goes on best in the quiet and with little excitement. The granulation and new and tissue-forming, or tissue-repairing, cells are very easily disturbed in their delicate work, and are liable to be so by the vascular or nervous excitation which is easily engendered in the neighbourhood, and which is induced in the young more easily than in the old, and is the source of the festering, and the irritation, and inflammatory surroundings which prove so troublesome in the treatment of the wounds and sores of children. Indeed, it is over-action that we have most to fear as the enemy to repair. Hence, the limitation of irritability or responsive action, the passive condition of the structures, is probably one cause of the large reparative results which we see in some of the lower animals, and may, in like manner, be to some extent the cause of the good and quick reparative results which we often see in the aged. But whatever may be the cause, this capacity for recovery is a factor that must be taken into account in our treatment of the aged, encouraging us to use our best efforts for their restoration, and telling us that, as we are reluctant to give up a child, so, also, we should be slow to give up an old person.

SANITARY REFORM A HUNDRED YEARS AGO.

Abstract of a paper read before the Lancashire and Cheshire Branch.

By CHRISTOPHER JOHNSON, F.R.C.S.

Mr. Johnson said that there was a growing disposition to underrate the importance of the results which had accrued to the people of this country from the application by the Legislature of the teachings of science to the regulation of social life. He proposed to take a retrospective glance at the state of this country when no such regulations existed, and setting grandfatherly neglect and "grandmotherly legislation" side by side, to see which was preferable.

He quoted from the *Transactions* of the College of Physicians for the year 1785 certain facts contained in a paper by Sir George Baker, Bart., Physician-in-Ordinary to the Queen. Seventy-three poor children, chargeable to the parish of St. James, Westminster, had been brought from a house at Wimbledon to a home prepared for them in King Street, Golden Square, on September 24th, 1782. The children were all in good health when transferred; but on October 8th, 1782, a girl, aged 13, was suddenly seized with excruciating pain in the region of the stomach, and in the back, followed by violent headache, delirium, and convulsions. Fresh cases, with similar symptoms, occurred in quick succession. Sir George Baker found that in one room, containing beds for eighteen children and one servant, nine of the girls and the servant were all suffering from the same malady; and that the disease was confined to the inmates of this room. In this chamber, which measured twenty feet in length by sixteen in breadth, and eight feet in height, there were ten beds—nine for the use of the girls, who slept two in a bed; and one for the servant. The chimney had been stopped up with bricks; and at night the door was shut, and the windows closed with shutters. Three candles and an oil-lamp were burnt in the room, but gave little light, often becoming almost extinguished. In an adjoining room of the same size, where eighteen girls slept in nine beds, but where the chimney was not blocked, no cases of illness had occurred. The nine sick children, who were the only girls in the first room over 13 years of age, were removed to a more airy room, and had a better night; but the symptoms recurred on the following morning, and did not entirely disappear for some days. Sir George Baker concluded that the symptoms were due to vitiated air, though the respiratory organs were not affected, and was confirmed in this by the case of a young man related to him by Dr. Heberden, who had been shut up in a room with burning charcoal. The symptoms noted in this young man were of a similar character, and he also suffered from a relapse. Mr. Christopher Johnson inquired whether deficient ventilation may not have had as much to do as overpressure of mind in the case of school-children, who scream at night, and have other anomalous symptoms.

He next referred to the description, published by Dr. Campbell, of Lancaster, in 1785, of an epidemic of fever which prevailed so extensively among the cotton-mills in various parts of Lancaster and Backbarrow, and was of so malignant a character as to excite a panic among the operatives and their neighbours. Dr. Campbell, by attention to ventilation, fumigation, disinfection, and cleanliness, succeeded in checking the epidemic. At about the same time, an inquiry was held by four Manchester physicians, Drs. Percival, Cowling, Easton, and Chorley, into the cause of a similar epidemic prevalent in the cotton-mills at Radcliffe. The report of these physicians fully recognised the importance of ventilating the workrooms by means of large windows on opposite sides, and open fire-places; it recommended that the rooms should be kept clean, and whitewashed thrice yearly; that the privies should be washed daily, and properly ventilated; that the hours of labour should be shortened, and a longer rest allowed in the middle of the day; and that children under 14 should be specially exempted from long hours of labour, and given opportunities for attending school. In these recommendations there was, Mr. Johnson pointed out, the outline of a complete Factory Act. The necessity for legislation was demonstrated, and the direction and extent was clearly defined.

Passing next to the condition of prisons in the last century, he referred to the essays of John Hunter, Dr. Heysham, of Carlisle, and Dr. Campbell, of Lancaster, on Typhus Carcerum (Jail Fever), and described the circumstances under which forty persons, including the Lord Mayor, two judges, an alderman, and other officials, died of a fever contracted at the Old Bailey sessions in 1750. Dr. Heysham stated that the first private house in which the disease appeared was occupied by half-a-dozen poor families, and that not only were the rooms small, but that, to avoid the window-tax, every window that even poverty could dispense with was shut up.

Mr. Christopher Johnson next described the method of inoculating for small-pox, and showed that, though it was followed by a great reduction in mortality, several hundred persons having been inoculated in Carlisle during the last six months of 1779 without a death, while 90 of 300 persons who caught the disease in the ordinary way succumbed, it yet presented many disadvantages.

As showing that the spirit of inquiry was alive at the date referred to, Mr. Johnson mentioned some experiments made by Dr. Home on the relation between the pulse and temperature, and quoted from Duncan's *Annals* a passage with regard to the antiseptic properties of "rectified oil of tar," which showed that Dr. Edmund Saunders, of Plymouth, if he had not discovered carbolic acid, had prepared something very like it.

In conclusion, Mr. Christopher Johnson said that any expenditure on sanitary improvements by this country had been repaid a hundredfold, and reminded those members of the medical profession who considered every duty imposed on them by Government a tax, that they ought rather to look upon it as a legacy duty, a light legacy duty on the rich inheritance which their forefathers by their energy and perseverance, by their honesty and courage, by their patriotism and self-denial, accumulated for them.

TRAUMATIC ENTERITIS AND PERITONITIS: ANOMALOUS CONDITION OF INFERIOR VENA CAVA AND ILIAC VEINS.

By G. A. HARRIS, M.R.C.S., L.R.C.P.Lond.,
Surgeon Bengal Medical Service; Joint Civil Surgeon, Simla.

The details of the subjoined case are of some interest, inasmuch as the anatomical condition found at the *post mortem* examination is, to the best of my belief, unique.

O. L. W., aged 22, Eurasian, was admitted into the General Hospital, Calcutta, under my care, on the evening of May 24th, 1884, with a history of having suffered for the past twenty-four hours from "colic." On admission, he himself gave no history of an injury, and it was not until the next day, that one of his friends told me that on the day previous to coming to hospital, W. had met with a serious injury at football, being violently struck in the abdomen. The chief symptoms previously to coming to hospital were severe and constant abdominal pain, and almost incessant vomiting; and on admission to hospital these were the most important symptoms, with also some collapse.

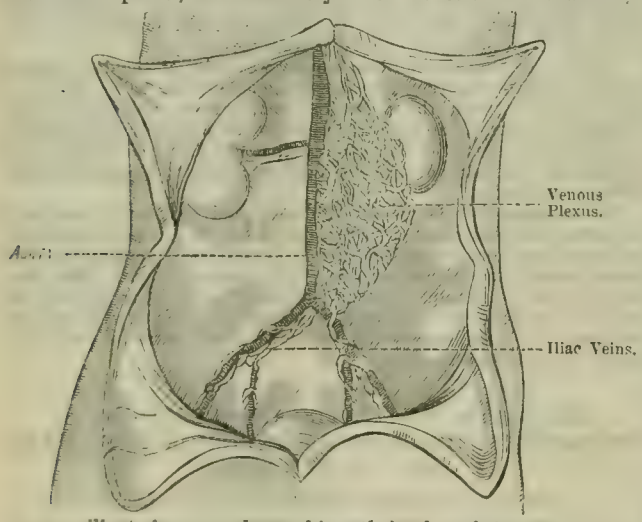
The following day he was much worse, pulse small and wiry. Temperature 102.4°. He had excessive abdominal tenderness and pain, with some tympanites, anxious expression of the face, restlessness, intense headache, and vertigo. The bowels were moved very frequently during the day, sometimes in his clothes, and with intense tenesmus, the motions being scanty and of a grass green colour, and containing shreddy mucus streaked with blood; the skin was pungently hot and dry, and the tongue thickly coated.

May 26th. Temperature 102.6°. He had no sleep at night, in spite of repeated opium draughts and enemata. He was restless and delirious. The motions were still of a bright grass-green colour and containing mucus. Pulse small and thready. The abdomen more tympanitic and acutely painful on pressure. He died at 3.30 a.m. on May 28th.

Post mortem examination seven hours after death.—The body was well nourished. Rigor mortis was present and well marked; there was some cadaveric lividity of the posterior dependent parts. On section, the muscular structures were loaded with dark-coloured blood. A very large quantity of subcutaneous fat was present, in the abdominal region especially.

The peritoneal cavity contained from four to six pints of turbid serum with numerous flakes of lymph floating in it. In places, this sero-lymph had coagulated, and was adherent to the omentum and intestinal coils; the omental fat was very much increased. On lifting up the mesentery and intestines a curious appearance was seen; lying on the floor of the abdomen on the left of the median line was a triangular shaped mass of venous and cellular tissue, in some respects resembling an elongated and curiously shaped placenta; this mass extended from about the level of the body of the fourth lumbar vertebra, up to about an inch below the diaphragm. In this mass the aorta was partially embedded; the aorta was otherwise normal in situation and gave off the usual branches.

On more closely examining the venous mass, it was seen that the inferior vena cava joined it about an inch below the diaphragm, and then was lost in the mass: in fact, it appeared to split up into this venous anastomotic plexus. Up to the point where it joined the plexus, there was no obstruction either in the channel or of the lumen of the inferior cava. The splenic, renal, and portal veins also joined the venous plexus, and were very much dilated. There were no



common iliac veins properly speaking, their places being occupied by narrow continuations of the venous plexus above described, consisting of numerous small-sized veins closely united by areolar tissue; and on dissecting below Poupart's ligament, there appeared a similar condition of the femoral veins. On section, the venous mass showed numerous thrombotic clots; the walls of the individual veins forming the mass were exceedingly thin, and ruptured easily. Anteriorly, posteriorly, and laterally, this large venous plexus was protected by masses of fat in the omentum, mesenteric folds, and subserous areolar tissue. In the right iliac fossa, under the subserous cellular tissue covering the psoas muscle, was a small superficial extravasation of blood; none in the left iliac region. There was no varicose condition noticed of the superficial abdominal veins.

The mucous lining of the intestines was anæmic and pale, and stained of a yellow colour. Here and there were patches of punctiform hyperæmia. At the lower part of the ileum, the solitary glands were very prominent. The mucous membrane covering the lesser curvature of the stomach was pale; towards the greater curvature there was noticed some punctiform congestion. The superior vena cava was normal as regards course and termination.

REMARKS.—I have tried to describe as fully, and yet as concisely as I can, the condition of parts found after death; but I feel that I have not done justice to my case. Perhaps no mere verbal description could clearly convey the anatomical and pathological condition found at the *post mortem* examination. The usual anatomical books, Quain, Gray, Ellis, and Holden, none of them mention a possible variation of the inferior cava such as I have attempted to describe. I have no foreign anatomical works at hand. It will be observed that the venous plexus lay to the left of the aorta; the usual position of the inferior cava as given in text-books is to the right of this vessel.

I think that the anatomical condition in my case was a congenital one, and was not the result of occlusion of the vena cava at some antecedent time; at least, no evidence was forthcoming to lead one to suspect occlusion.

In the *Transactions of the Academy of Medicine* in Ireland (in the number I think for October, 1884) is a very interesting paper by Mr. F. W. Warren on "Occlusion of the Inferior Vena Cava," which will repay perusal. In this case the obstruction was complete, and was caused by "a hard calcareous concretion attached by a narrow pedicle to the great Eustachian valve." It is stated that all the superficial veins of the abdomen and extremities were in an extremely varicose condition. In my case, the closest examination did not reveal any obstruction, and there was no varicosity of the superficial veins of the trunk or the extremities.

At the Pathological Society of London, on April 4th, 1876, Dr. Greenfield brought forward a case of congenital absence of the vena cava.[1] These are the only cases I can find recorded in the journals, of anomalous conditions of the vena cava. A notable peculiarity in my case was the large cushions of fatty tissue which surrounded and protected the venus plexus on all sides.

I have made no remarks on the enteritis and peritonitis, and their treatment, as there was nothing special in either disease; and the treatment, in the main, consisted of opiates internally, and hot fomentations to the abdomen.

The extravasation noticed in the right iliac fossa was, probably, the direct result of the accident on May 23rd.

ARE THE EYES OF THE OFFSPRING OF THE BLIND AFFECTED? ARE THEIR MARRIAGES FRUITFUL?

By SIMEON SNELL, M.R.C.S.Eng.,
Ophthalmic Surgeon to the Sheffield General Infirmary, and to the Institution for the Blind.

THE following paper will serve as a complement to my Report on the Causes of Blindness in the inmates of, and workers at, the Sheffield Institution for the Blind (BRITISH MEDICAL JOURNAL, vol. i, 1886, p. 387). These additional inquiries were undertaken, when my other task was well nigh completed, to ascertain, as far as the limited numbers allowed, the influence upon the offspring of the marriage of the blind. In every instance, to my inquiries as to sight and the formation of the eyes of the children, I was assured that vision was perfect and the ocular condition normal. A similar answer was returned to questions respecting hearing and bodily deformities. The latter were absent, and hearing was always stated to be good. It must be mentioned that none of the children were inspected by me, but I held myself in readiness, had there been in any instance a suspicion as to the condition, to visit and examine such an one. The necessity did not appear to arise.

The results obtained are somewhat at variance with those recorded by other observers. Magnus investigated fourteen instances of married couples in whom one or both were born blind, or became blind at an early age; and found that, out of thirty-four children begotten of these marriages, eight, or 23.5 per cent., were either blind or weak-sighted.

He mentions, moreover, that a man who had lost his sight by blennorrhœa neonatorum had two children affected with microphthalmus. Fuchs states that he was acquainted with a physician who had congenital microphthalmus of right eye, and whose father had lost an eye by irido-cyclitis, when a child. He says, also, that the connection of the eye-disease between father and child is indubitable, for Deutschmann obtained analogous results in his experiments on animals. I give below, in a tabular form, the various families, six-

[1] The records of this case in the medical journals of the time are so imperfect, that it is a little doubtful whether the superior cava is meant, or the inferior cava. Possibly Dr. Greenfield's case was one of "double vena cava," of which there is a good specimen in University Hospital Museum. According to Ellis, this occasional condition in the adult, of two superior venæ cavæ, is a constant condition in the growth of the fœtus at a very early date, and the vessels are also persistent in some of the mammalia. (*Demonstrations of Anatomy*, p. 390.) See also an interesting paper by Professor Marshall, on the Development of the Veins, in the *Philosophical Transactions* for 1850.

teen in number, as complete as my information permits. The numbers are too small to be anything else than an instalment to an interesting inquiry. As to the case of retinitis pigmentosa, no evidence was elicited of children suffering from nyctalopia.

Another point will hardly escape notice, and that is the small proportion of births. The experience of managers of blind institutions is that the workers are very disposed to wedlock; and this notwithstanding that, in consequence of the small wages they can necessarily earn, marriage is, at all events in some places, discouraged.

Of those couples who were both blind, after excluding the recently married, there are three, and only one has children (two). The young man (R.), has had two blind wives, and neither has borne children to live; the triplets by the first wife died immediately after birth.

There are ten men with sighted wives, and excluding one whose wife had ceased to bear children before his blindness came on, there are left nine, with twenty-six children between them, or less than three per family. Adding to this number the three blind couples with two children, there are a total of twelve, with twenty-eight children, or wo and one-third per family. It would almost seem, therefore, that, hough prone to marry, such marriages are less than usually fruitful. Farr placed the number of children per wife in England as 5.2.

Name, Age, etc.	Cause, etc., of Blindness.	No. of Children.
	WIVES SIGHTED.	
M., 32	Optic nerve-atrophy, five years; married two years	None
P., 43	Blind ten years; retino-choroiditis; married twenty-one years; three children	None since blindness
H., 54	Lime in eyes, in childhood, destroying sight; married at 26	Two
J., 48	Blind at 16; injury to left with penknife; right sympathetic ophthalmia; both globes shrunken; married at 20	Six
F., 26	Optic nerve-atrophy after scarlet fever; blind at 7; married at 19	Four
J., 47	Lost sight at 22; right injured by scissors; enucleated; left sympathetic ophthalmitis; globe shrunken; married at 18; eight children, six after blindness	Six
H., 64	Blind, through "blasting," at 36; first married at 21, no children; secondly married at 41, one child	One
W., 43	Blind from 12; retinitis pigmentosa; married at 19	Three
H., 42	Sight lost eight years, blasting stone; married twelve years, one child (born since, blindness)	One
B., 45	Optic nerve-atrophy; blind at 25; married first immediately after blindness, three children, died between ages of 3 and 4; married second time, twelve years, no children, wife had three by former husband	Three
	WIVES BLIND.	
R., 30	Blind at 22; irido-choroiditis, "white eyelashes;" married first at 27, triplets, died a few days after birth, well formed as to eyes, etc.; married second time, two years, no children; wife had two by previous blind husband, both see	None to live
J., 56	Optic nerve-atrophy at 45; married first at 24, one child, died a few hours after birth; second time 18 months, no children, wife blind from ophthalmia neonatorum	None
S., 46	Blind at 21; piece of steel struck right eye; enucleation; left sympathetic ophthalmitis; first married at 28, wife blind, two children, died under a year, vision, etc., good; second married at 33, wife sees, no children	Two
H., 27	Blind in infancy; ophthalmia neonatorum; one child, premature (six months), married a year	
P., 37	Ophthalmia neonatorum; right eye sees fingers and large objects badly; married six weeks; wife blind at 10, from small-pox	
Not at Institution	Wife married to husband born blind, nine months; right hydrophthalmos; no perception of light; left lens opaque	

DONATION.—Sir Smith Child, Bart., has given £500 (additional) to the North Staffordshire Infirmary, to be invested or used as part of the current account, as may be deemed most beneficial by the trustees.

THERAPEUTIC MEMORANDA.

SULPHATE OF IRON IN DIARRHŒA.

IN the BRITISH MEDICAL JOURNAL for July 17th, there is a memorandum from Dr. Braithwaite, of Leeds, on the treatment of diarrhœa in children by the sulphate of iron. Although I have no experience of its efficacy in children, I can endorse the same in the choleraic diarrhœa of adults. It was during the last real invasion of our country by cholera in 1850, when East London and Gateshead suffered severely, that the valuable suggestion of treatment by the the iron sulphate was adopted with success in the larger number of cases of choleraic diarrhœa, if not real cholera, treated here, such cases being diagnosed by blue, cold, wet skin, writhing cramps, and vox choleraica, which, once heard, is never forgotten. It is to be noted that Dr. Braithwaite has omitted mention of what used to be considered the "best bower anchor" in the treatment of all diarrhœas, namely, laudanum, which, if it held, only made the unfortunate vessel swing round upon rocks as dangerous as the storm itself. It is generally known that this ferric salt is, or ought to be, widely used for the disinfection or correction of decomposing fomites of disease in midden heaps, sewers, and the like. Why not use it in the aboriginal and typical sewer *in corpore vili*, in the flushing of which nature uses the most valuable of storm-waters, namely, blood-serum *plus* albumen, to the destruction of the house that owns it? I would suggest the use of this salt by injection, in cases where persistent vomiting stops the way.

In view of a possible visitation of cholera during the near autumn, let anyone having had experiences with the sulphate state them; for though Dr. Neale's *Digest* gives references to the use of the cupric salts, there is not one to this form of the ferric. We should be ready to prove this dangerous foe to be unworthy of the medical man's steel.

CHARLES ROTHWELL.

Bolton.

BROMIDES IN HYPERPYREXIA IN ACUTE INFECTIOUS DISORDERS.

IT does not fall to the lot of any ordinary practitioner to meet with many cases of hyperpyrexia; and, although I have acted as resident in hospitals for several years, I have only met with four cases that I can call to mind; two in typhoid and two in rheumatic fever, all fatal, so that my experience is but limited.

I would like to bring forward this point, that we may reason from other cases of nervous origin that the cause of the high temperature is due to an affection of the nervous system, and if so, the practical point in watching for this symptom is to be most careful that the nervous system has proper rest from sleep. The best typhoid cases are often the most drowsy. Although I am a firm believer in the use of baths, still I think much benefit might be gained from the use of the bromide and other sedatives; I really think that bromide of potassium every four hours, in full doses, has a claim upon our notice in this terrible calamity. Even at the onset of a rise of temperature the drug might be tried, and no case of typhoid or rheumatic fever should be allowed to pass more than two bad nights without a sedative being administered.

I am well aware how sudden is the onset of the hyperpyrexia in many cases; in such cases I would like to know what sixty grains of the bromide might effect, and at the least the violent delirium would be stayed.

W. E. HACON, Christ Church, New Zealand.

LAMP EXPLOSION.—Another victim has this week been added to the large number of those who have met with their death by the neglect of those simple precautions in the use of the paraffin lamp, to which we have before directed attention, and the necessity of which cannot be too often enforced. It appears from the facts adduced at the inquest, that the deceased, a married woman, 33 years of age, rose at 6 o'clock in the morning to put out a paraffin lamp which had been burning through the night. In order to extinguish the lamp, however, the deceased resorted to a practice only too common, namely, that of blowing down the chimney, with the result that the lamp exploded, and set fire to the woman's clothing. The deceased, who was very badly burned, was first taken to the Poplar Hospital, where her wounds were dressed, and subsequently to the London Hospital, where she speedily died from shock, consequent upon the injuries. This fatality would doubtless have been averted had the deceased, when extinguishing the lamp, taken the simple precaution of first lowering the flame until slightly beneath the metal work, and then extinguished it by bringing the mouth to a level with the top of the chimney, and projected a sharp puff of breath across the opening.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ROYAL FREE HOSPITAL.

A CASE ILLUSTRATING THE CONSERVATIVE SURGERY OF THE FINGER.

[Report by Mr. CHARLES TANNER, M.B., from notes by Miss MACPHAIL, dresser.]

A DOMESTIC servant while chopping meat had nearly amputated her left fore-finger. The bone was completely severed, and both digital arteries were divided: the only parts uninjured were the skin and subcutaneous tissues, and the flexor tendons on the palmar aspect of the finger.

The wound was carefully cleansed with carbolic acid lotion (1-20). Both digital arteries were ligatured; and the edges united with deep silver wire sutures. Iodoform was dusted on, a piece of protective placed round the wound, the finger enveloped in salicylic wool, and the arm placed on a pistol splint. The sutures were removed in a fortnight; the wound, with the exception of a granulating surface on the cased side of the finger, had healed by first intention. All dressings were left off on March 30th; and she could move her finger nearly as well as the others.

REMARKS BY Mr. TANNER.—I have always been under the impression, and most books state, that, with an injury of the above extent, amputation of the finger is necessary. Certainly, before the introduction of antiseptics, few would have ventured to endeavour to save the finger. The result shows that, even when both digital arteries are divided, the blood-supply on the palmar surface is sufficient to nourish the finger. As another instance of how well severe injuries of the fingers do when treated strictly antiseptically, I may mention a case recently under the care of Mr. Querrell, one of my fellow residents, of a man who fell in the street and dislocated the phalangeal joint of his right thumb, so that the distal end of the proximal phalanx protuded through the skin on the palmar aspect. This was reduced and treated in a similar manner to the above, the wound healing by first intention and the man getting a movable joint, a matter of no small importance to him, as he was a music-master.

REPORTS OF SOCIETIES.

ACADEMY OF MEDICINE IN IRELAND:
MEDICAL SECTION.

FRIDAY, MARCH 26TH, 1886.

F. R. CRUISE, M.D., President, in the Chair.

Living Specimens.—Dr. R. A. HAYES exhibited a patient from whom a recurrent papilloma of the larynx had been removed (growth exhibited).—Dr. DUFFEY exhibited a case of scleroderma.

Periostitis following Enteric Fever.—Dr. H. C. TWEEDY detailed a case of this comparatively rare affection. The patient, a man aged 33, was treated in Steevens's Hospital for enteric fever. Shortly after convalescence had commenced, his temperature again rose, and a painful fluctuating tumour, oval in shape, appeared beneath the sternal attachment of the great pectoral muscle on the right side, and corresponding to the second, third, and fourth ribs, and their cartilages. After some time the swelling subsided, and finally disappeared altogether. Having alluded to the descriptions given of this disease by different authorities, who variously assigned as its cause direct injury, septicæmia, and impaired nutrition, Dr. Tweedy concluded by noticing some of the principal characteristics of the disease. It occurred most commonly during the stage of convalescence, although cases were recorded in which it appeared as an actual complication of enteric fever. It attacked most frequently the tibia and the ribs, but it had been observed on the femur, the humerus, the ulna, and the parietal bone, and it rarely occurred on more than one bone at a time. The disease was usually chronic in its course, suppuration generally taking place after a time. Sometimes necrosis followed when the long bones had been engaged, although this termination had not been noticed in periostitis of the ribs; while occasionally, as in the instance cited, the case terminated in a spontaneous cure.—Dr. M'SWINEY and the REGISTRAR-GENERAL (Dr. GRIMSHAW) made some remarks on the subject.—Dr. HENRY KENNEDY said that the strumous diathesis frequently led to the disease. He had himself seen a case where the patient, having passed through typhoid fever, complained of a pain in the shin.

The Murmurs of the Mitral Area.—Dr. C. J. NIXON read a communication on cardiac murmurs of the mitral area. He referred to five varieties of mitral murmurs met with: (1) presystolic murmur; (2) postdiastolic murmur; (3) organic systolic murmur; (4) functional systolic or postsystolic murmur; (5) mitral *bruit de scie*. In discussing presystolic and postdiastolic murmurs, attention was directed to the acoustic character of the murmurs, the conditions with which they were associated, and the signs which might simulate them. Presystolic murmur might occur with: (*a*) a sharp clicking first sound; (*b*) a systolic murmur of mitral reflex; (*c*) partial or complete extinction of the aortic second sound; (*d*) a postdiastolic murmur. Postdiastolic murmur was a sign of an extreme amount of stenosis of the mitral area, and, judging from the chronometric position of the murmur, the term postdiastolic was more correct than diastolic. Having discussed the stages of mitral stenosis, as determined by the development of different physical signs, the subject of mitral regurgitant murmurs was next considered. In dealing with the systolic murmur of organic disease, a reference was made to Naunyn's murmur, which was regarded as an instance of a murmur produced by convection, owing to the peculiarities of change in structure of the mitral segments, just as Dr. Sansom had pointed out that organic changes in the mitral orifice might lead to a presystolic murmur being best heard over the tricuspid instead of over the mitral area. The systolic murmur heard over the situation of the left auricular appendix, in cases of chlorosis and such allied conditions, was not, as Dr. Balfour held, a murmur of mitral reflux, but a murmur developed in a displaced pulmonary artery. Systolic mitral murmur was developed in cases of hypertrophy of the left ventricle, associated with Bright's disease, without any organic change in the auriculo-ventricular valve; and it likewise was met with in cases of extreme dilatation of the left ventricle, as in a weak and dilated heart, and in cases of long-standing aortic incompetency. In such cases, the inadequacy of the mitral valve was due either to overstretching of the auriculo-ventricular zona tendinosa, or to a relative shortening of the papillary muscles, in consequence of the dilatation of the cavity of the ventricle. Systolic mitral murmur, of purely functional origin, was next taken into consideration, and the conditions under which it is met with, and the special characteristics of the murmur, were dwelt upon. Dr. Nixon specially referred to the theory urged by Dr. Bramwell, to explain the occurrence of this murmur in connection with a peculiar arrangement of the muscular fibres of the heart, surrounding the auriculo-ventricular ring, constituting what was termed a muscular sphincter. The murmur was held to be produced by want of tone in the muscular fibres of the ventricle, and of the sphincter muscle, allowing such a dilatation of the orifice as to render the valves incompetent. Dr. Nixon showed that this view was incorrect, as the arrangement of the muscular structure of the heart, upon which it was based, did not exist. After alluding to certain conditions in the lung which might simulate a systolic mitral murmur, a brief reference was made to the existence of a mitral *bruit de scie*, met with in cases of aneurysm of the heart, or where an abnormal communication existed between the aorta or pulmonary artery, and one of the ventricles.—Dr. FINNY and Dr. WALTER SMITH made some observations, to which Dr. Nixon replied.

Morbid Appearances in Enteric Fever.—Dr. JAMES LITTLE described a case of enteric fever, and exhibited the parts removed after death. The peculiarity of the case was, that although there was unusually extensive ulceration, both of the small and large intestines, the symptoms during life had been mainly cerebral.

Enteric Fever Fatal by Perforation.—Dr. WALLACE BEATTY read notes of a case of enteric fever fatal by perforation. The patient, a woman, aged 34, was attacked on the twelfth day of illness with a rigor, severe abdominal pain and tenderness, and diarrhœa. The bowels before had been confined. On the thirteenth day there was a rather copious hæmorrhage from the bowels—this did not recur. The patient suffered until her death, on the eighteenth day, from abdominal pain and tenderness, and marked prostration. At the necropsy, general peritonitis was found, and a perforation in the floor of a large ulcer, situated 10½ inches above the ileo-cæcal valve. The interest in the case was that the extent of intestinal disease was very limited, there being in all only five ulcers, of which two were very minute; they were all situated at the termination of the ileum, the highest being the one that had perforated. The rest of the small intestines and the large intestines were healthy.

THE Earl of Derby has been elected President, and Sir Tonman Mosley and Mr. R. N. Philips, Vice-Presidents, of the Manchester Royal Infirmary, for the ensuing year.

REVIEWS AND NOTICES.

A Handbook of the Peak of Derbyshire, and to the Use of the Buxton Mineral Waters. By W. H. Robertson, M.D., F.R.C.P. Eleventh edition; 12mo.; pp. 271. Buxton: 1886.

The eleventh edition of this compact and complete guide requires no recommendation from us. But we would call attention to some of the most recent changes and improvements at Buxton, which are given in detail in this edition, which has been revised by the veteran author, whose first work on these waters dates from forty-eight years ago. A fresh analysis of the Buxton waters has been made very carefully by Dr. Thresh, and it confirms former analyses in all essentials, while it shows that the water still contains a very remarkable amount of nitrogen, to the presence of which gas many writers are inclined to ascribe a portion of the virtues of the waters.

Great improvements have been made in local douches and baths, and in the application of spray, and all the more modern modes of using water, along with the employment of *massage*, have been introduced. Dr. Robertson expresses a hope that this may not lead to a diminished use of baths with total immersion, to which, after all, Buxton mainly owes its therapeutic reputation in gout and rheumatism, and other maladies. It is gratifying to find that the death-rate at Buxton—now only 10 or 11 per 1,000—has gradually fallen as improvements have been made in the drainage and in the disposal of the sewerage. The works have been recently inspected by Sir R. Rawlinson, who has expressed his complete satisfaction with them. One main feature is the somewhat expensive process of adding lime and sulphate of iron, which has been recommended by the Metropolitan Board of Works for the London sewage. The process, the adoption of which does much credit to the authorities of Buxton, is thus shortly described by Dr. Robertson.

"The sewerage is no longer discharged unaltered into the river Wye at a mile's distance from the town, but, under the direction of Dr. Thresh, is now defæcated by the united action of a ferruginous stream and of lime; it is made to pass through a succession of tanks, in which the sediment falls to the bottom, the effluent being declared to be more chemically pure than the water had been before its contamination. The residual sludge, or precipitate, is conveyed and forced by atmospheric pressure into compression vats, and a solidified residuum is obtained in a portable form, fit for agricultural purposes. There is still a remainder of less soluble or insoluble sewage, which is taken and mixed with the contents of the ashpits of the town containing cinders, etc., and is then taken to a powerful furnace for final destruction. We would conclude by asking, can any more complete and satisfactory disposal of sewage be conceived?"

Materia Medica for the Use of Students. By Isambard Owen, M.D., F.R.C.P., Assistant-Physician and Lecturer on Materia Medica and Therapeutics to St. George's Hospital, etc. Second Edition. London: J. & A. Churchill. 1866.

This unpretentious little book is already known to students of materia medica as an aid to the acquisition of the necessary knowledge of this subject for examination purposes. A second edition has now been published in order to comprise the alterations and additions contained in the British Pharmacopœia of 1885, and advantage has been taken of the opportunity to re-write Section III, with a slight modification of the plan. A chapter has been added on the "medicinal uses" of the pharmacopœial drugs, to meet the requirements of the examining boards that include this subject in the limits of their primary examinations in materia medica. Of course, the only scope for originality in a work of this kind consists in the arrangement and classification of the various drugs and their preparations, and these appear to have been carried out in a manner which is clear and comprehensible. By a judicious choice of types, the salient features obtain due prominence, and brevity of description has been carried to its utmost limit. The information conveyed is of a sort which requires to be committed to memory by simple hard application and repetition; and the task is doubtless made easier by the elimination of every word not absolutely necessary. For this reason, the book may take the place of the student's own notes, over which it has certain advantages in the shape of greater accuracy and clearness. It must, however, be borne in mind that, to use Dr. Isambard Owen's own words, the book is to be regarded rather as a supplement to, than a substitute for, the systematic works.

The Medical Digest and Appendix, 1882-1886. By Richard Neale, M.D., Member of the Dutch Medical Society of Batavia. London: Ledger Smith and Co., St. Mary Axe.

Probably no work which has appeared during the present century has been of greater practical value to medical workers and writers than Neale's *Digest*. It is at once an index and an abstract. In a moment, almost at a glance, references are found to every paper of importance which may have been published on any subject required. Not unfrequently, the mere reference is in itself a suggestion, and further search is unnecessary. This is especially the case in the domain of practical therapeutics. The busy practitioner is anxious about a case which proves obstinate and resists all ordinary modes of treatment; by turning to the *Digest*, he finds hints and suggestions as to the methods to be pursued, and the necessity for a consultation may be avoided. The first *Appendix*—and we trust it may be the first of a long series of *Appendices*—has been issued a year earlier than was anticipated: a course necessitated by the mass of material which has accumulated. It covers a period of four years, and contains an enormous number of references. It is often said that the *Digest* is difficult to understand, but we do not think that this is the case. We have often referred to it, not unfrequently when much pressed for time, and have rarely failed to find what was required. We have no hesitation in saying that, without this valuable aid, many a classical medical work would never have been written. Dr. Neale has devoted some of the best years of his life to the performance of what he has regarded in the light of a public duty, and we should not feel surprised if, at no distant date, steps were taken to mark in a substantial manner the value of his services.

NOTES ON BOOKS.

Synopsis of Therapeutics, arranged for the Use of Prescribers. By R. S. Aitchison, M.B. Edin. (Edinburgh: Young J. Pentland. 1886.)—In an extremely small compass, the author has grouped, synoptically, the agents comprising the materia medica. The plan adopted is that of classifying them, primarily, according to the organ upon which they exert their principal effect, and, secondarily, according to their particular action on that organ. This method, as the author informs us, is essentially similar to that adopted in Garrod's work on *Materia Medica*, but is carried out in somewhat greater detail. It certainly possesses the advantage of being practical, and, from the conveniently small size of the book, may prove useful to practitioners who are desirous of availing themselves more fully of the extensive choice of drugs contained in the *British Pharmacopœia*. The therapeutical information has been culled from the most approved sources, at least so we are told, for no authorities are given, nor, indeed, is it necessary they should be; and it has been brought as nearly down to date as the author has conceived would be safe, bearing in mind the unstable grounds on which certain drugs have more recently been recognised in the treatment of particular affections.

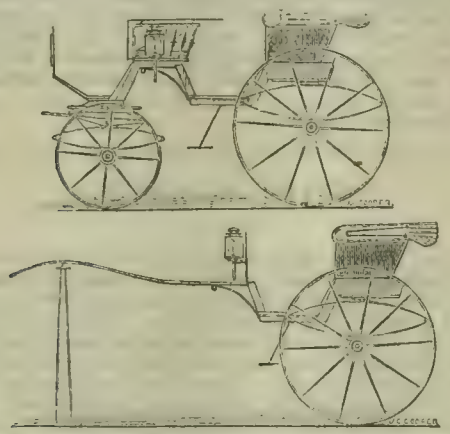
New Commercial Plants and Drugs. By T. Christy, F.L.S., M.S.C.I., etc. (No. 9). (London: Christy and Co. 1886.)—This periodical serves as a connecting link between scientific and commercial enterprise, more especially in the department of materia medica. Mr. Christy appeals to scientific men to apply to him if they want material for researches, or if, on the other hand, they desire to place the result of their researches at the disposal of others. He is, moreover, willing to undertake the negotiations in any matters connected with the application of the results of researches. In fact, the journal represents a sort of "Exchange and Mart" for materials requiring examination, and the results of examinations, on the look-out for a market. Attention is called to the virtual monopoly enjoyed by certain foreign manufacturers, in so far as relates to the rarer organic products; and Mr. Christy expresses a hope that a state of things so injurious to national pride and profit may be altered. Some pages are devoted to the consideration of Strophanthus, the "remedy for fatty degeneration of the heart," and *Doundaké*, which is said to be of use "in highly nervous temperaments, as also in derangements of the stomach." The derivation and description of various other drugs of recent introduction are also given.

Medical Magistrates.—Dr. Andrew Marshall has been placed on the Commission of the Peace for the Borough of Preston, and Mr. David Edgar Jones (the Mayor), for the Borough of Cardiff.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE "EXCELSIOR" PATENT COMBINATION GIG-PHAETON.

SEEING a carriage at the Inventions Exhibition last year which, by a simple arrangement, could be converted from a four-wheeler into a two-wheeler, I was reminded of an old idea of mine—of a carriage which should be both a gig and a phaeton. The carriage at the "Inventories" obtained the gold medal, as the most ingenious improvement in carriages exhibited. I wrote to Messrs. Clift and Son, of Wellington, Salop, the exhibitors, and asked them whether they could not adapt the principle of uniting the two parts to a carriage of the gig-phaeton style. They have done so in the most admirable manner, and I venture to say that the resulting carriage is better adapted for the needs of a country practitioner than any other with which I am acquainted. The accompanying figures will show better



than any amount of description the appearance presented by the carriage as a four-wheeler and as a two-wheeler. The separation or junction, as the case may be, is effected easily and quickly; but I do not think anyone would care to change carriages from day to day. A change from summer to winter, and *vice versâ*, would, however, be a boon to many. Country roads, as a rule, are such heavy travelling in the winter, that to use a two-wheeler instead of a four-wheeler means a gain of at least five miles a day in the work of a horse; while in summer, when roads are easy and the extra weight is of little moment, it is an immense advantage to have a carriage with a second seat. One can go to the station to meet a friend with luggage, or one can stow four or five passengers for a picnic or party. The two-wheeler runs lightly and easily, and, with hood and apron, gives capital shelter in bad weather. The principal advantages of the carriage may be summed up as follows: 1, you get two carriages for the price of one (£52 is the lowest price without a hood); 2, one tax covers both carriages; 3, one coach-house holds both carriages.

I may add that, as a four-wheeler, it has a full lock in turning; and that, by means of a screw-slide, there is a perfect balance for the two-wheeler, and therefore easy motion. I think many country practitioners will be inclined to agree with me that no other carriage combines in one so many decided advantages.

E. PAGET THURSTAN, M.D., Southborough, Tunbridge Wells.

JENSEN'S ICEBERG COD-LIVER OIL.

WE have received from Messrs. Hertz and Collingwood, of Leadenhall Street, E.C., specimens of Jensen's Iceberg Cod-Liver Oil. It is alleged that, as it is made from absolutely fresh and pure livers, and is "ice-refined," it remains bright and clear all the year round. It is almost odourless and tasteless, and we find practically that children take it well, even during the hottest months of the year.

PRESENTATION.—Mr. George Dobson Crowther has been presented with a handsome time-piece, on resigning as House-Surgeon to the Halifax Infirmary.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 7th, 1886.

MEDICAL STUDENT LIFE IN LONDON.

UNDER this head, Surgeon-Major Evatt calls attention in the public papers to a subject which we have more than once—and, it is understood, with good effect—pressed upon the attention of the managers of our London Medical Schools: that is, the provision of suitable residences for medical students, in connection with our schools, and of the general guardianship which the heads of these schools may be expected to exercise in *loco parentis*, and in the collegiate system of the older universities.

Only slow progress is being made in this direction, and it is probable that the caustic criticism of Surgeon-Major Evatt may do something to increase the rate of progress. He states that St. Bartholomew's Hospital, University College, King's College, and St. Mary's, are the only medical schools which have residential arrangements, such that students can live in chambers under suitable supervision, and with the guarantees which parents would naturally desire to have for their sons entering, at a tender age, upon the temptations and distractions of London life. The London Hospital, Guy's, St. Thomas's, St. George's, Westminster, Middlesex, and Charing Cross Hospital Medical Schools, he designates by name as being destitute of any residential accommodation for their students, although many of them are situated in indifferent neighbourhoods, and in poor unhealthy districts.

Few parts of London are now unhealthy, and we should say that it is a mistake to allege that students in connection with any of these schools are called upon to live in unhealthy situations. But most parents would agree in thinking that lads of 18, sent to the metropolis from their home and country life, unused to the ways of a great city, imperfectly armed against its inducements to idleness and to vice, need some collegiate life to counterbalance external temptations, and to take the place of their home life. They need also a friendly hand to guide and, possibly, to restrain them in their daily recreations and ordinary occupations and amusements outside the schools. They need, too, a friendly and sympathetic eye, and all the influences for wholesome public spirit and incorporate self-respect which collegiate life can give. We have pressed this already, with some effect, upon the responsible authorities of the medical schools; and it will be satisfactory if, by drawing public attention anew to this want, some further success is attained in awakening the heads of our medical schools to a salutary sense of their responsibilities, and of their interests in this matter as well as of their duty to the students whom they gather around them. Medical students of Cambridge,

and of the now rising school at Oxford, have, in this, as in some other respects, an incalculable advantage over the students of the London schools. The university schools have already so many advantages in respect to graduation, and the London schools are so heavily handicapped, that they can ill afford to stand out and idly disregard that which is undoubtedly an urgent want for London medical students, and one which they are called upon alike by duty and by interest to supply.

The old system of apprenticeship provided, in many cases, a home for the medical student while he was attending the hospitals, and placed him under all the steady influences, while it supplied him with many of the agreeable relaxations, of English domestic life. Under the eye of his master, he was not only instructed, but warned and guided; and the family life into which he entered in London took the place of that from which he was severed in quitting his father's house. That system is gone, and it behoves those who gather medical students into the London schools to furnish its necessary substitute in residential collegiate establishments. Where they have been tried most recently, and by relatively young hospitals, as at St. Mary's Hospital, they have proved amply successful and self-supporting; so that only moderate enterprise, and reasonable activity and public spirit, are required to enable the managers of all the schools to benefit by such experience, and to supply that which is at present wanting.

Surgeon-Major Evatt calls attention to two other points of collateral interest. Only two schools, he says, furnish definite reports of the attendance of students on the required curriculum of lectures and hospital visits, these being King's College and the Westminster Medical School. Parents are thus devoid of the information which they have a right to expect, and ought to demand, as to the regularity of the attendance of their sons to the required teaching; and he urges that every parent should ask for such reports, and every school should regularly furnish them. In this matter it must, in fairness, be remembered, that no student can present himself for examination without producing a schedule certifying to his regular attendance at the required number of lectures, and of the hospital visits to the wards. Undoubtedly, however, there is great variety of practice, and frequent laxity in the signing of schedules. In some schools, but in some only, attendance is regularly marked, both in the wards and at the lectures, but this is rarely done for both ward attendance and attendance in the lecture room with completeness or regularity; and where it is done, it often happens that the person most interested—the parent or guardian—remains uninformed of the frequent absence of the student from his educational duties, until near the close of his career, when remonstrance has become useless, and reproach is unavailing.

It is of course open to argument that at the age of eighteen to twenty-five, a young man should be left a good deal of latitude as to the methods of picking up information, and as to times and periods of study, and that allowance should be made for the development of individual genius and idiosyncracy and for the tendency of men to give usefully a large amount of time to particular subjects towards which their bent lies. All this, however, could very well be allowed for under any system of check and report; and it is more than probable that the proportion of the social catastrophes and educational failures among medical students might be considerably diminished, if means were taken periodically and systematically to report to their parents or guardians their progress, attendance, and conduct. The proposition is likely to be resented by two classes; by the medical students themselves, who are apt to rate highly a licence which the present system gives alike to the well disposed and to the idlers; and by the school tutors, who from the multiplicity of medical schools in London and their deficiency in adequate funds, are apt to be overworked and underpaid. The one will resent the system of restriction, and the other will object to the imposition of an irksome and laborious duty. It is not in the nature of young men to welcome restraint; it is not in the nature of teachers willingly to accept responsible and troublesome additions to their task. Nevertheless, it will, we think, be agreed that medical students in London are not at present either so well cared for or so well looked after as in their real interests they ought to be, and that in both respects there is an urgent call for immediate and considerable amendment in our metropolitan system. With Dr. Evatt's objection to the system of what is known as perpetual pupilship, we have less sympathy. It has many advantages, and is founded upon real necessities of student-life, while the disadvantages which he alleges are relatively trifling and unimportant.

ON LESIONS OF THE CORNEA FOLLOWING THE INSTILLATION OF CUCAINE.

Numerous instances have now been recorded in which the use of cucaine has been followed by local ill effects: these may be divided into two classes, namely, suppurative panophthalmitis and lesions of the cornea. The former being, in all probability, due to septic infection, cannot be said to depend directly upon the use of cucaine, except in so far as cucaine increases the absorbent properties of the cornea (a subject that will be considered presently), and direct inoculation occurs from impurities in the solution used.

The corneal lesions which have been observed are of two kinds; (1) an affection of the epithelial layer only, consisting of vesication or desquamation, and (2) interstitial opacities, often taking the form of a kind of striated keratitis extending from the wound.

One of the first to observe the superficial changes was Paul Bunge (*Klin. Monatsbl. für Augenheilk.*, 1885, p. 402), and very many instances have been recorded since. In some of these, the case has not been complicated by the employment of any antiseptic solution, a point which, as will presently be seen, is of considerable importance. There can, therefore, be no question that the vesication and desquamation which occasionally follow the use of cucaine are really due to the action of the drug.

With the view of ascertaining how cucaine produces this effect, Würdinger has recently conducted some experiments upon animals (chiefly rabbits, but also upon dogs and guinea-pigs) (*Klin. Monatsbl. für Augenheilk.*, April, 1886). In addition to the anæsthetic action of cucaine, one of its most marked effects is the dryness of the surface of the eye which it causes; this is probably due chiefly to the anæmia of the conjunctiva and the diminution in the lacrymal secretion from constriction of the blood-vessels; but it is probably increased by the wide opening of the palpebral fissure that usually occurs, and the absence of the natural and involuntary blinking movements.

In order to ascertain how far the changes in the corneal epithelium were due to these causes, Würdinger instilled a drop of a 5 per cent. solution into both eyes of a rabbit, at intervals of four minutes. The one eye was kept closed between the instillation, but the other remained open.

In the closed eye, no changes whatever took place in the appearance of the cornea. In the other eye, after three or four minutes, slight changes were noticed; these increased, and, in twenty to twenty-five minutes after the cucaine had been commenced, the cornea presented a superficial and fine roughness, as well as depressed areas, which looked as if they were caused by the shedding of the epithelium. After an hour, the turbidity of the cornea had increased so much, that the condition of the iris could no longer be made out.

Further experiments showed that the intensity of the changes depended more upon the duration of the experiment than upon the concentration of the solution, or the frequency with which it was applied. By dropping distilled water upon the cornea, between the applications of the cucaine, changes which had already occurred were not removed, but their increase was prevented. Microscopic examination of the altered areas showed that the epithelium, where not removed, was thinned out, and that there was also considerable thinning of the anterior layers of the true corneal tissue.

As regards the interstitial opacities of the cornea, Dr. Wood-White (*Ophthalmic Rev.*, Jan., 1886, p. 6) appears to have been the first to suggest that they were due, not to the cucaine itself, but to the simultaneous employment of a solution of corrosive sublimate. He states that he has frequently used cucaine alone, and in conjunction with boracic acid, and has never seen any ill-effects arising from it, but that in the only cases in which he at the same time used a solution of corrosive sublimate (five cases of cataract extraction), a pearly-white opacity, extending from the wound, was visible on the second day; this cleared up completely in all the cases in a few days.

Dr. Wood-White has omitted to state the strength of the solution of corrrosive sublimate used by him, and also whether he has used the same solution alone in other cases; but, assuming that the solution was of the strength ordinarily employed, the conclusion seems a reasonable one that the effect produced was in some way dependent upon the combined action of the cucaine and corrosive sublimate; and some of Würdinger's experiments appear to support this.

Dropping fluorescine into a cucainised and into a non-cucainised eye at the same time, Würdinger found that in the non-cucainised eye only the superficial layers became fluorescent, but that in the cucainised eye the deeper layers also became affected. When the epithelium was removed from a limited area, and "methyl-blau" was dropped upon the abraded surface, it alone became coloured in the non-cucainised eye, while in the cucainised eye the colouring matter extended through the whole cornea. It seemed clear, therefore, that the effect of the cucaine was to increase the absorbent power of the cornea. Finally, Würdinger found that weak solutions of boracic acid, corrosive sublimate, and even of common salt, which in the normal eye were perfectly innocuous, in the fully cucainised eye produced a turbidity of the cornea, identical with the early stage of the striated keratitis which sometimes follows cataract-extraction.

If subsequent experiments should verify these conclusions, it is evident that the views at present held as to the advisability of employing corrosive sublimate as an antiseptic will have to be considerably modified. It is of the utmost importance that these investigations should be carried further, in order to ascertain what is the weakest solution of corrosive sublimate capable of producing the lesions described, and the weakest that is efficient as an antiseptic. In the meantime, steps should be at once taken to ascertain whether any interstitial lesions of the cornea have ensued when cucaine has been used alone. It is significant that most of the reported cases have been furnished by institutions in which corrosive sublimate is used as a matter of routine; but in many instances it is not stated whether it was actually used or not, the point not being considered of any importance at the time of publication.

THE NEW APPOINTMENTS AT THE LOCAL GOVERNMENT BOARD.

ANY remarks on the selections made by Lord Salisbury for the offices of President and Secretary of the Local Government Board, in the administration, must be of a negative kind only. Both Mr. Ritchie and Mr. Walter Long have yet to win their spurs as administrators, and to give outward and visible signs of their capacity for dealing with questions of local government. Mr. Ritchie is, it is true, a business man, and his brief tenure of office as Secretary of the Admiralty in the last Salisbury Government was marked by some important improvements in the procedure of that overgrown department. Of Mr. Walter Long, there is nothing to be said, except that he is a young man aged 32, and is married to a daughter of the Earl of Cork. Mr. Ritchie, though sworn in on Tuesday as a Privy Councillor, has not been admitted to the charmed circle of the Cabinet. Looking to the importance which questions of local government reform must immediately assume as soon as the Irish question is disposed of, this is, we think, distinctly to be regretted; and we must confess to a considerable sympathy with the views of Mr. Chaplin, who declined the presidential chair offered to him, because he felt that he could not do justice to the work which he was likely to be called upon to attempt, unless he had a share in the Cabinet deliberations on the subject.

It has been very generally remarked how completely the reforms that bulked so largely in the election-speeches of last autumn have now relapsed into obscurity. Local government reform was one of these; but, inasmuch as it is in a sense associated with Irish autonomy, it is likely to raise its head again more quickly than some of the others. It is suggested that, when the local government proposals of the new Ministry are in a condition to be unfolded to the House, they will be placed in the hands of a Minister more highly placed than Mr. Ritchie. This will very possibly be the case; but we do not regard it as a proper arrangement, or a fair one, to the department immediately affected. For reasons which we have never been able to divine, Conservative Presidents of the Local Government Board have always been excluded from the Cabinet. Mr. Sclater Booth, Mr. Balfour, and Mr. Ritchie have none of them had the advantage of pressing the claims of their department upon the attention of their colleagues in Council. On the other hand, Mr. Stansfeld, Mr. Dodson, and Sir Charles Dilke all received Cabinet rank on their assumption of the Presidency.

We can well understand that political exigencies may occasionally make it necessary to vary the offices which are supposed to carry with them a seat in the Cabinet; but the same difficulty can hardly have arisen in each of the three occasions on which a Conservative Prime Minister has had to fill up the Presidency of the Local Government Board. We must, we suppose, take it as settled, that in the eyes of one political party at least, the supervision of the health and social life of the population is a subordinate concern of the central Govern-

ment. We know this to be a great tactical and administrative mistake, and we feel sure that the Cabinet will have, eventually, to think so too.

THE Library of Guy's Hospital will be closed to-day (Saturday) at 3 P.M., and reopened on Monday, August 30th, at 9.30.

THE library of the Obstetrical Society of London will be closed from August 16th to September 16th.

SIR T. SPENCER WELLS, Bart., has accepted the Presidentship of the Sanitary Congress, to be held at the city of York, commencing September 21st next. Other arrangements will be shortly announced, and the Council have every reason to expect a successful meeting.

THE graduates who wanted the University of London to send an address or a delegate on the occasion of the Festival at Heidelberg University must have been disappointed by the action of the Senate, who thought that as no invitation had been received, no address or delegate need be sent.

DR. GRANT BEY'S many friends will note with pleasure, that he has been offered and accepted the office of Vice-President in the forthcoming ninth International Medical Congress at Washington. We regret to learn that he has recently been bereaved of his wife, after a long and painful illness.

DR. P. B. C. AYRES, colonial surgeon, Hong Kong, has, on the occasion of his departure for San Francisco, been presented with a highly complimentary valedictory address, and an embossed silver casket by the subordinate members of the Hong Kong Civil Service. The address bears the signatures of seventy-one members of the service.

MR. W. R. SYMONDS has completed a portrait of Surgeon-General Maclean, C.B., late Professor of Military Medicine in the Army Medical School, for the large mess-room at Netley. It is an admirable likeness and a powerfully painted portrait. A replica of it has also been painted by the same artist, intended for presentation to Mrs. Maclean. Both were painted on commission for the medical officers of Her Majesty's British and Indian Armies, in recognition of Professor Maclean's service in the Army Medical School. Mr. Symonds also painted the fine portrait of the late Sir William Muir, K.C.B., now in the ante-room of the mess at Netley. Those just finished will add to the reputation of this rapidly rising artist in his profession.

THE HYDROPHOBIA COMMISSION.

WE understand that the English Commission on Hydrophobia have under consideration the advisability of shortly issuing an *ad interim* report. The general result of the investigations conducted by Professor Victor Horsley, so far as they have gone, has been favourable to M. Pasteur's views.

THE GROWTH OF THE UNIVERSITY OF LONDON.

WE learn, that at the Summer Matriculation Examination of the University of London, there were 1,040 candidates, of whom 16 retired, and 591 passed. For the first M.B. Examination, there are over 150 candidates, a very conclusive proof of the eagerness with which students seek to obtain a degree in medicine even in face of the stringent regulations of the University.

THE BERI-BERI.

THE *Kölniche Zeitung* has a report on the losses inflicted on the Dutch European forces in India by beri-beri. In the four years from 1879 to 1883, 17,722 soldiers were under medical treatment for this disease. The annual loss is about 1,100, between deaths and permanent unfitness for service. It is said that fully half the men borne on the nominal strength of the garrison as fit for duty, have their strength so undermined from the sequelæ of the disease as to be quite unsuited for service in the field. The Dutch papers demand that the troops shall be better fed than common report says they are, and that young medical men, who have studied in the modern school, and are well acquainted with the germ theory, should be sent out to study the disease on the spot. From what is already known of this disease, it is probable that the bacterium is water-borne.

AMBULANCE INSTRUCTION.

WE note with satisfaction that the great value of ambulance instruction is being very generally recognised by the members of the Metropolitan police force, and that many members have obtained certificates of the St. John Ambulance Association. Sir Charles Warren, in making the distribution of the certificates on Thursday last, said that he hoped the recipients would do what they could in inducing other members of the force to join the classes, and so gain that knowledge which could not but be of great advantage to them. It was mentioned that 124 members of the police force at Scotland Yard, Leman Street, Kennington Lane, Blackheath Road, Twickenham, and Albany Street, attended the classes. Of these, 84 passed, and thus obtained certificates.

THE HELEN OF THE HOSPITALS.

A MATRON—*teterrima causa belli*—is once more the cause of the resignation, *en masse*, of the medical staff of a hospital. The circumstances are complicated by unimportant side-issues, which are always imported into such a dispute by hospital committees when they have "committed" themselves to the strong partisanship of an individual whose flag they have hoisted. The conduct of the committee appears to be insufficiently regardful of the gravity of the trust confided to them for the relief of the sick and the medical treatment of the poor. Their justification, as described by themselves, is feeble in the extreme; and wisdom and public spirit will probably lead them in the end—and we hope it will come before long—to learn that an honorary medical staff must be trusted to have the power of judgment as to the suitability of any one of the subordinate officers; and that to accept the resignation of a whole medical staff rather than give up the services of a favourite matron, is to sacrifice the steering of a ship to a fancy for its head steward, with whom the sailing officers decline to work on grounds alleged. It is, from this point of view, a failure of public duty.

A PSYCHOLOGICAL CURIOSITY.

A CORRESPONDENT sends us the following:—"An old man, nearly octogenarian, who has been in bed for twenty-seven years, being a harmless monomaniac, having the delusion that His Satanic Majesty always stood at his door to prevent him from going out, suddenly one morning early in June, took it into his head that the Devil was gone, whereupon he got out of bed, and with nothing on but his shirt, walked down to the quay (nearly a quarter of a mile) and jumped over. Having been a good swimmer in his early days, he struck out, and although a boat put off from a vessel, he swam ashore. Nobody knowing him, he was taken to a public-house, and a medical man was sent for. He was taken home, where he remained two or three days in bed, all the better for his dip. He has been to church, and is now about to resume his former calling, that of a preacher."

STURGE PRIZE COMPETITION.

WITH a view to arrive at the actual facts as to the causes of the serious financial position of the hospitals of London, and so to benefit those noble institutions, Mr. George Sturge has offered to give three prizes, of £25, £10, and £5 respectively, to the writers of the three best essays on "The Causes of the Financial Depression in the Hos-

pitals of London, with Suggestions for Improving their Administration and Finances." The Rev. Canon Erskine Clarke, M.A., the Hon. Conrad Dillon, and Mr. J. S. Wood, all of whom are experienced in hospital matters, will act as judges, and the successful essays will appear in the pages of the *Philanthropist*.

ASSOCIATION OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS.

A MEETING of the Council of this Association was held at the Western Dispensary, Westminster, on Wednesday afternoon, August 4th, when it was proposed that the petition to the Privy Council, now in course of signature, should be placed in the reception room of the British Medical Association, at the annual meeting at Brighton, in order that members who have not already signed, may have the opportunity of so doing. It was also resolved that the said petition should be presented to the Privy Council, at or before the same time, when the Council of the College are seeking alterations in the charter. We are asked to state that the Association of Members will be glad if as many members as possible avail themselves of the opportunity of signing the petition, which prays for the enfranchisement of the members, and direct representation of them on the Council of the College.

SIR B. WALTER FOSTER.

THE honour of Knighthood, which has been conferred upon Dr. B. W. Foster, the President of the Council of the British Medical Association, will be accepted with gratification throughout the Association as a compliment to its highest officer, as well as a recognition of Dr. Foster's professional eminence, and of the service which he has rendered both in reforming the constitution of the Association and in forwarding the cause of medical reform. The British Medical Association has risen to a position of power in the State and in the profession, which long since entitled it to fuller recognition of this kind, and Dr. Foster's personal and political influence, and his services to the State, mark him out as a person eminently fitted to receive distinction of this kind. His professional work has always been of the best kind. He is senior Professor of Medicine in Queen's College, Birmingham. He has been for twenty years continuously occupied as Professor in the Birmingham Medical School, and since 1868 been physician to the Birmingham General Hospital, having previously been physician to the Queen's Hospital. He is at present Chairman of Committee of the National Liberal Federation and of the Allotments and Small Holdings Association, and is J.P. for the county of Warwick. It is much to be regretted, in the interests of the profession, that in the changing conditions of political life he lost, at the last election, a seat in Parliament, which he held during the previous Parliament with so much benefit to the profession, and in virtue of which he rapidly acquired considerable political influence. It is probable, however, that he will soon again find a seat, and in him the medical profession will always have an energetic, able, and powerful supporter of its best interests. It is satisfactory that this distinction has been conferred at this moment, on the eve of the Annual Meeting at Brighton, at which he will take a prominent official part, and where he will undoubtedly receive from the Association, and from members present, hearty congratulations on an honour which he has so well deserved.

SIR WILLIAM STOKES.

SIMULTANEOUS with the announcement of a knighthood to Dr. B. W. Foster, is that of a similar honour conferred upon Mr. Stokes, of Dublin. It has long been felt that the medical profession in Dublin have not received their full share of the distinctions which have of late been liberally showered upon the medical profession. Among those whom the common voice of the profession designated as fitting recipients for honours from the Crown, Mr. Stokes has long held a leading place. He is the distinguished son of an eminent father, and bears a name long and highly honoured in the profession to which he has added distinction. By his personal character, by his surgical eminence, by his public spirit, by his literary culture, Mr. Stokes has played a prominent and honourable part in the professional work, both of the surgical corporation and societies of Ireland and in the affairs of the British Medical Association. He is a member of old standing, and one of those whose frequent presence at the annual meetings is always welcome, and whose contributions to its scientific proceedings are weighty and valuable. No appointment, we imagine, could be more acceptable, and we may hope that this will not be the only mark of honour bestowed upon distinguished members of the profession in Ireland.

MEDICAL HONOURS.

AMONG those on whom honours have recently been conferred, in connection with the Indian and Colonial Exhibition, we are glad to welcome the names of many medical men, who have, by administrative and scientific services to India and the colonies, reflected honour upon their profession, and deserved the recognition of the Crown. Sir George Birdwood, Sir Julius von Haast, and Sir F. Tupper, have received the honour of knighthood, with the Order of St. Michael and St. George, and Dr. George Watt and Dr. John W. Tyler have been made Companions of the Order of the Indian Empire. It is among the many advantages of a medical education that it is based on a knowledge of the biological sciences of zoology and of botany, which enable medical men, under suitable circumstances, to render important scientific services in new countries. And among those who have conferred the greatest benefits in investigating and developing the natural resources of our dominions and colonies, a large proportion are members of the medical profession.

THE HOSPITALS AND THE COLONIAL EXHIBITION.

DR. J. H. AVELING writes to state that, with the object of collecting funds for the hospitals of London, boxes have been placed in various conspicuous places in the Colonial Exhibition. These boxes are of mechanical construction, and "return thanks" for every donation. From the sum so collected, a cheque for £100 has already been sent to the Lord Mayor by Sir Phillip Cunliffe Owen, at the request of H.R.H. the Prince of Wales, who accorded the necessary permission for the placing of the boxes in the Exhibition. Every member of the Royal Family who has visited the Exhibition has contributed to the fund; and it is pointed out that, if every visitor contributed but one penny, over £10,000 would be raised for our 124 hospitals and dispensaries, which exist on charity without any aid from the State. Dr. Aveling points out that every year these institutions relieve 55,000 in-patients and 871,000 out-patients, at a cost of £476,000, while their income from funded property amounts to no more than £78,000. The deficiency of £398,000 *per annum* has to be made up by voluntary contributions.

METROPOLITAN HOSPITAL SUNDAY FUND.

AT the meeting of the Committee of this fund at the Mansion House, it was stated that the total amount available for distribution this year, after allowing sufficiently for liabilities and the usual current expenses, was £38,279, of which £36,679 would go to the hospitals and dispensaries enumerated, and 4 per cent. of the total collected—namely, £1,600—was set apart to purchase surgical appliances. The number of deputations representing committees of various institutions invited to confer with the Committee, and to offer explanations on matters of apparently an unsatisfactory character, was fourteen. Four of the deputations attended, and in three cases the Committee agreed to raise the award. Five institutions sent replies, but did not attend; and from the other five no answers were received. The Committee had felt it their duty to make no award to one dispensary, owing to unsatisfactory management. Thus £5,000 additional have this year been raised by the aid of the considerable efforts made; of this, £2,000 is due to the generosity of an individual donor, Dr. James Wakley, to whom the fund is otherwise much indebted for the initiative of this further effort. Sir Sidney Waterlow has pointed out that the number of beds in the hospitals to which grants were made was 6,412,

but the average number occupied was only 4,853. A little more money given to the hospitals would enable the vacant beds to be utilised; for, while they had the buildings provided and the medical staff at hand, the only additional cost would be for the food and medicines of those taken in for treatment. In the convalescent homes there were 2,178 beds, but only 1,420 were occupied for want of money. Dr. Glover and Sir E. Hay Currie took the opportunity of urging that the fact of there being so many vacant beds in existing hospitals and convalescent homes, should at least have the effect of preventing the starting of similar institutions until the others were overcrowded. The motion for the adoption of the report was carried.

VOX HUMANA.

It has long been known that the inhalation of various volatile substances is capable of producing certain modifications in the human voice; and, of late years, attempts, more or less legitimate in their application, have been made to give this knowledge a practical form. An interesting series of experiments bearing on this subject, have lately been made before the Société Médicale du Panthéon by Dr. Sandras in which, by means of different inhalations, varying from one to twelve, he produced marked variations in the intensity, tone, and *timbre* of the voice. He could not only confer upon the persons so treated the peculiar voice of the confirmed inebriate, but, what is more to the point, he could—temporarily, at any rate—remove it when present. The notes produced by the same larynx were made of high or low pitch at will; and the range of the voice could be notably increased, while harshness or sweetness could be made to alternate. The substances employed for this purpose are not new; it is only their application which may be said to be novel. Tar-water, alcohol, ether, and various essential oils constitute the "battery" for inhalation purposes. The most curious part of the experiments is the accuracy with which certain well-defined effects are said to be obtained. Thus, a certain number of inhalations of one kind will diminish the compass by so many notes, while another will confer an additional eight or ten; some even limit the range to five or six notes. By combining a selection of the agents, accurately graduated results may, we are told, be obtained at will. There is ample scope for research in this direction; and really reliable information on the subject will not only ensure professional honours, but also professional success to the fortunate discoverer. An infirmity of voice, whether congenital or acquired, is scarcely less distressing than one affecting the anatomical disposition of the limbs, and would certainly be subjected to treatment with the same eagerness. We are only waiting for further and trustworthy details on this interesting question to suggest that facilities be offered to the various categories of people to whom we are indebted for the wonderful variety of street cries, which, if curious, are not always harmonious. The costermongers suffering from "diphtheria clericorum," and the itinerant dealer in cast-off garments, who is not, alas! afflicted with aphonia, might fairly be experimented upon *pro bono publico*.

THE VICTIMS OF ALCOHOL.

In the address by the President, Dr. Norman Kerr, at the annual meeting of the Society for the Study and Cure of Inebriety, some interesting figures were given as to the working of the Dalrymple Home for Inebriates during the year 1884. An analysis of these figures shows that the decade from 30 to 40 is that which furnishes the largest number of patients, 33, against 20 in the preceding and 18 in the succeeding ten years. As regards religion, 73 were Protestants, and 5 Catholics; but here it is probably essential to avoid confusing the *post hoc* with the *propter hoc*. It is a significant fact that nearly all were persons of superior education, although, of course, the nature of the institution tends to limit its sphere of action to the more intelligent, if less abstemious, portion of the community. Marriage and celibacy do not seem to be factors of any great importance, inasmuch as the proportion of married and single patients is about the same. Under the heading of "Occupation," the list begins with a large contingent of persons described as of no occupation, *alias* gentlemen, but the somewhat vague denomination "clerks" follows next. It is a sad thing to see that the medical profession furnishes an appreciable contribution, although it is a relief to find only one medical student. Most trades and professions send their representative or representatives to swell the list, with the exception of the licensed victuallers, who may be assumed to be prejudiced against this and similar institutions, or, at any rate, indisposed to turn "Queen's evidence" against a habit on which they are dependent for their profits. Turning to the particular variety of alcoholic drink resorted to, whiskey is in by far the larger number of cases the delinquent; and, even when this spirit is not the one, a spirit of some kind is still mostly in request. A very small number of patients seem to have gone wrong on beer or wine exclusively, and this only serves to emphasise the well ascertained fact of the greater deleteriousness of spirit-drinking. Sixty-six out of seventy-eight patients were likewise addicted to smoking, and several also habitually took morphine or chloral. The fact that sixteen patients had been in the home once before, and two patients twice, only shows what one might expect, that the habit is not easily broken, and that relapses are liable to occur. The exciting causes given are less clear, 28 cases being attributed to "sociability," and 26 to "nerve-shock," whatever that may mean. These figures are very instructive, the more so because they are as reliable as is possible under the circumstances. We commend them to the notice of the profession and the public.

THE ASHTON POISONING CASE.

At the recent assizes at Ashton, a woman, named Britland, was convicted of the wilful murder of a female neighbour, under circumstances which leave no room for doubt as to her guilt. The prisoner had gone to live with the deceased and her husband, only a short time before the events occurred which gave rise to the recent trial. The history of the last illness of the deceased was that, in company with her husband and the prisoner, she had supper, about 10.20 P.M. on May 13th. About midnight she was taken ill; she complained of pains in her stomach, and clutched at the iron rail at the back of her bed, her fingers and body were twitching, she had twitching fits every two or three minutes, and perspired profusely. Death took place six hours after the first symptoms of illness set in. Analysis of the contents of the stomach revealed the presence of one-tenth of a grain of strychnine, and one-thirtieth of a grain of arsenic. The cause of death, therefore, was not doubtful, and the possession of the poison by the prisoner was proved by her purchase of some "vermin-killer" powders a few days previously. Two of these powders were analysed, one being found to contain arsenic and strychnine, and the other strychnine alone. The poison is supposed to have been administered in tea. The husband and daughter of the prisoner had died in the early part of this year, under circumstances of great suspicion, but which apparently were not sufficiently strong to justify a criminal prosecution.

THE ADULTERATION OF COFFEE.

That the public do not obtain that amount of protection from adulteration which, it was intended by Parliament, the Sale of Food Act of 1875 should confer, is becoming more and more apparent; nor is it to be expected that the terrors of the law will be heightened, and the temptation to unscrupulous traders lessened, by such decisions as those recently given by the magistrates at Stratford, when three persons, who had been summoned for selling as pure coffee mixtures containing from 45 to 65 per cent. of chicory, escaped the penalties which the law was intended to enforce, the Bench refusing to give any reason for their decision. That the practice of adulterating coffee, to even greater extent than this, is a practice but too common, has been shown by an analysis of forty-three samples of coffee and coffee-mixtures bought in London during March and April of

this year, which is said to have yielded an average proportion of 50 per cent. of pure coffee; in one case, there was 93 per cent. of adulterants. Chicory, which costs the retailer about threepence per pound, continues to be one of the most common of the adulterants employed, in some cases amounting to three-fourths of chicory to one-fourth of coffee. But other mixtures, of even cheaper kind, are sometimes used for the purposes of adulteration, including burnt sugar, roast and ground roots of dandelion, carrots, parsnips, locust beans, lupines, and other seeds. Hardly one case, we are told, of 500 of successful misrepresentation or fraud, is now brought to light or punished; and this we can readily believe. It is, indeed, high time that some more effective steps were taken to carry out successfully the intentions of the Legislature, and to strengthen the hands of the inspectors under the Act in the endeavour to secure for the public pure and wholesome food, and a public accurate declaration of the contents of the many admixtures, now largely sold for the sole benefit of the trader, and to the gross injury and injustice of the consumer.

NATIONAL PROTECTION AGAINST RABIES.

It is not a little remarkable that, while precautionary measures have been enforced by the Chief Commissioner of Police, to prevent, by the compulsory muzzling of dogs, the spread of hydrophobia within the metropolitan area, no step should have been taken to stamp it out in the provinces, consequently we fail to obtain that immunity which we might reasonably expect by the neglect of preventive measures without. Hardly a week passes but the intelligence reaches us of one or more fresh cases of rabies in country districts. During the past week, three adults and one child have been bitten at Hillingdon, by a dog showing unmistakable evidence of madness. These have all left for Paris, to be treated by M. Pasteur. A further case has occurred at Derby, where a child bitten by a dog on June 25th, succumbed on Saturday, July 31st, showing all the symptoms of hydrophobia. It is lamentable that the many cases which have now occurred should not have shown the necessity for making the police order which now obtains in the metropolis applicable to the whole of England. So long as local centres are allowed to exist all over the country, neither muzzling by local order, or any other step will be effectual in controlling this disease; and the sooner this step is taken the better, so far as the public safety is concerned. The general order for muzzling dogs in Germany has practically extinguished hydrophobia. The general orders concerning the prevention of contagious diseases of cattle have proved equally effectual in this country. There is no reason why human life should be not equally protected. To wait for cases of rabid dog-bite, and then practise Pasteurian inoculation, is indeed to postpone the stage of precaution. If Sir C. Warren's order could be extended to the whole of England, the number of cases of hydrophobia would diminish to a vanishing point.

OROTAVA AS A HEALTH RESORT.

While the Madeira Islands have long enjoyed a certain popularity among well-to-do invalids, the adjacent Canary Islands have, curiously enough, been left to a great extent in obscurity, notwithstanding the enthusiastic encomiums of travellers, and of the few who have ventured out of the beaten track in the search after health. This neglect is no doubt attributable in a large measure to the superior accommodation which has existed in the former islands, for invalids who can ill afford to dispense with the comforts to which they have been accustomed. The means and convenience of transport have also tended to favour Madeira, since as a favourite coaling station most of the large steamers made it a duty and a pleasure to "lay by" on arrival. The inhabitants of the "Fortunate Islands," as they are termed, have, however, shaken off the lethargy which weighed them down, and, stimulated perchance by foreign enterprise, have made up their minds to enter into competition with their neighbours, by providing the accommodation, and offering the inducements, without which even the exquisite situation and the suave and balmy atmosphere of this favoured site are unavailable to those who might desire to derive benefit therefrom. Hotels, constructed and arranged on the most modern plans, have sprung up, replete with those hygienic comforts, the absence of which often more than neutralises any good results due to climatic conditions. The prices, too, appear reasonable enough; though, of course, this is only one feature in the competition which will henceforth tend to render a stay at Orotava possible to others than Rothschilds, Mackays, and Vanderbilts. Indeed, they compare very favourably with the majority of English watering places; so that when the somewhat greater expense entailed by the voyage has been met, living there is cheaper, as well as inconceivably more enjoyable, than elsewhere. Teneriffe, under present arrangements, is within five days sail from Plymouth, and steamers leave both London and Liverpool upwards of eighteen times a month; so that, for convenience and rapidity of transit little is left to be desired. The average temperature between November and March is 63° Fahr., which is somewhat above that of Madeira, but a more important feature is its extreme stability: the variations, indeed, are very slight, not exceeding 5° Fahr. Again, while the rainfall at Madeira has attained 102 inches, and averages 73, the rainfall at Teneriffe does not exceed 14.7 inches. The charming climate, and excellent roads, paved with lava, are peculiarly adapted for patients who are not too debilitated to take horse-exercise. Horses are cheap in these islands, and their proprietors are glad to supply very creditable steeds for prices not exceeding five shillings *a day*. It is quite conceivable that in the immediate future the Canary Islands may come to the front as the "paradise for phthisical patients," as well as the chosen rendezvous of debilitated persons, unable to withstand the variableness of climate of other localities.

COMPLAINT OF FOREIGN COMPETITION IN BELGIUM.

Two Belgian medical senators have recently raised the question of the ease with which foreigners obtain authorisation to practise, on the occasion of the discussion in the Senate on the vote for the funds required by the Department of Public Instruction. M. Michaux complained that, though there were already too many medical men in Belgium, German and English medical men were allowed to come and practise, especially at places like Antwerp, Ostend, and Blankenberghe, without taking any diploma; thus seriously interfering with the practice of local native members of the profession, who naturally felt greatly aggrieved by this needless foreign competition. M. Michaux stated that he saw no objection to certain exceptions being made, such as when an eminent foreigner was appointed to a professorship in Belgium, or when the advice and skill of a foreign practitioner of distinction was desired in consultation, or again, in the case of those practising near the frontier; but he called upon the Ministry to revise the law, so that under ordinary circumstances no one should be allowed to practise without a Belgian diploma. Professor Crocq spoke in the same strain, saying that reciprocity was denied to Belgian practitioners everywhere, "except in America and perhaps at the Congo!"

SCOTLAND.

UNIVERSITY OF ABERDEEN.

It was announced by Principal Geddes, in the address which he gave after the capping ceremony at the Marischal College, on Saturday last, that a gentleman already well known as a liberal benefactor of the University, namely, Mr. George Thompson, of Pitmedden, had given a sum of £3,000 to found a Scholarship or Fellowship of Research, in connection with the Medical Faculty.

THE OUTBREAK OF TYPHOID FEVER AT FERRYDEN.

The outbreak of typhoid fever at Ferryden, near Montrose, which was noticed in the JOURNAL some time ago, has had most melancholy effects, and has also attracted the notice, and elicited the sympathy,

of Her Majesty the Queen, who, through Sir Henry F. Ponsonby, has sent the following letter to Colonel Macdonald, of St. Martins.

"Sir,—I am commanded by the Queen to assure you that Her Majesty sincerely sympathises with those who have suffered in the recent epidemic, which you have reported to the Queen. Her Majesty trusts that an inquiry will be made into the cause of the outbreak of the fever."

EDINBURGH ROYAL HOSPITAL FOR SICK CHILDREN.

THE monthly report of the Royal Hospital for Sick Children, Edinburgh, showed that, during July, the number of patients treated in the hospital was 102. Of these, 64 were in the hospital at the end of June, and 38 were admitted during the month; 28 were discharged cured, and six were relieved. The average daily sick in the hospital during the month was 58. At the dispensary, 550 patients were treated, and 15 were vaccinated, making in all 565. Of 326 new cases during the month, 241 were from the city, 61 from Leith, and 24 from the country. Thus the total number of patients treated at the hospital during the month was 667. The mortuary of the sick Children's Hospital has just been handsomely decorated, and with much artistic care and merit, by Miss Traquair, an amateur artist, under the auspices of the Artists' Social Union, the result being to make a place of gloomy associations less repellent.

UNIVERSITY OF EDINBURGH: GRADUATION CEREMONY.

ON Monday last, the graduation ceremonial, at the close of the summer session of the University of Edinburgh, took place in the United Presbyterian Synod Hall, in the presence of a large assemblage. The Lord Justice-General (Inglis), Chancellor of the University, presided. Degrees of LL.B., B.L., M.D., D.Sc., and B.Sc., were conferred on a number of students, and the degrees of M.B. and C.M. were conferred on no fewer than 219. Professor Chiene delivered an address to the graduates. In the course of his remarks, he gave an account of the history of the University of Edinburgh, and said he thought it was not right that the universities should be closed during the whole of the Long Vacation. He looked forward to the day when the month of September and the beginning of October would be a busy time in the Scottish Universities, when, by careful arrangement with their colleagues in Glasgow and Aberdeen, they should establish a complete system of postgraduate instruction in Scotland. They saw these things being done in Berlin, and they must keep abreast of the times. In speaking of the Edinburgh Royal Infirmary, he said that the infirmary was opened in 1741, and, when completed, contained 228 beds. At that time, the population of Edinburgh was 30,000, and the taxed rental £30,000. The new Infirmary was opened in 1879, with 500 beds. At the time when the present hospital was projected, in 1869, the population of Edinburgh was 200,000, and the taxed rental was £1,000,000. To-day the population was 250,000, and the taxed rental nearly £2,000,000. The communications between all parts of Scotland were now rapidly overtaken, and the infirmary was crowded with patients from every county in Scotland, and from the North of England. He held that the present accommodation of 600 beds must be increased to 1,000. As to the connection between the material prosperity of Edinburgh and the welfare of their School of Medicine, he said that, taking as a basis a calculation that had been made, he found that a large sum of £1,760,000 had passed directly to the citizens of Edinburgh from the students of medicine, between 1865 and 1886. Last year alone they spent upwards of £140,000. Judging from the nationality of the graduates, £70,000, one-half of £140,000, was brought into and spent in Edinburgh from England, Ireland, and other countries.

IRELAND.

HEALTH OF DUBLIN: QUARTERLY REPORT.

THE births during the quarter ended July 3rd numbered, in the Dublin Registration District, 2,675, or 30.3 in every 1,000; and the deaths 2,253, or 25.5. There were 171 deaths registered from zymotic diseases, being a decline of 136 as compared with the previous quarter, and 206 below the average for the second quarter of the ten years 1876-85. Whooping-cough caused 53 deaths against 90; fever 28, against an average or 79; diphtheria 11, and diarrhœa and dysentery 19. Scarlet fever caused only 18 deaths, being 31 under the average for the corresponding quarter of the last ten years. Eight deaths were attributed, during the quarter, to cerebro-spinal fever. Diseases of the respiratory system caused 419 deaths, a number very considerably below the average, and which included 244 from bronchitis, and 93 from pneumonia.

GOVERNMENT APPOINTMENTS.

THE Lord-Lieutenant has appointed Sir George Porter to be a member of the Board of the Richmond District Asylum, and Dr. E. D. Mapother to be one of the governors of the House of Industry Government Hospitals.

THE PUBLIC LUNACY SERVICE.

SEVERAL important appointments have recently been made in the Public Lunacy Service in Ireland. The first in order and in importance is the transference of Mr. Conolly Norman from Monaghan to Dublin, where he succeeds Dr. Lalor, who has retired after a lengthened period of valuable service as Resident Medical Superintendent of the Richmond District Lunatic Asylum. Mr. Edward Taylor, assistant to the Resident Physician of the Central Criminal Lunatic Asylum, at Dundrum, County Dublin, has been promoted to succeed Mr. Norman at Monaghan. To fill the vacancy caused by the death of the lamented Dr. Eames, Resident Medical Superintendent of the Cork District Lunatic Asylum, Mr. James J. Dwyer has been transferred to it from the similar position he held as Superintendent of the Mullingar Asylum. His successor has not yet been announced. A retired naval Deputy Inspector-General of Hospitals and Fleets, Dr. T. R. Burke, has been appointed to the Dundrum Asylum, *vice* Mr Taylor. All the other appointments are well deserved preferments to men who have made their reputation in their special department; and the Government and the recipients are consequently to be congratulated on the selection.

THE DUBLIN HOSPITALS.

FROM the annual report of the Board of Superintendence of the City of Dublin Hospitals which receive Parliamentary aid, we learn that during the year ending March 31st, the number of patients admitted into nine hospitals was 8,686. These, with 817 patients previously admitted, make a total of 9,503, of whom 8,274 were discharged, and 443 died. The mortality was 5.29 per cent. on those treated to a termination. The Board draw attention to the practice which prevails of retaining under treatment unmarried females affected with syphilis, in the wards of general hospitals, a procedure whose impropriety is obvious; as this class of diseases in these cases should be sent to the Lock Hospital. Regret is expressed that no efforts have been made to re-establish the medical school formerly attached to Steevens's Hospital, as the institution is one which could afford great advantages for the promotion of medical education. Of the Government grant of £15,722 15s. 9d., the House of Industry Hospitals obtains the largest amount (£7,472 15s. 9d.), and St. Mark's Ophthalmic Hospital the smallest (£100).

AHOGILL DISPENSARY: THE LATE DR. CHESNUTT.

AT a recent meeting of the Ahogill Dispensary Committee the following resolution was unanimously adopted:—"That we desire to record our deep regret at the death, in the prime of life, and in the midst of his usefulness, of Dr. Chesnutt, medical officer of this district for more than sixteen years. His faithful and conscientious discharge of his duties to the sick poor, his eminent skill and attainments in his profession, his kindness and attention in all cases of serious illness, and his upright and honourable character and conduct in all the rela-

tions of life, gained for him the respect and esteem of all classes. His death is deplored, and his memory will long be held in grateful and kindly remembrance by the many in this neighbourhood whose health has been restored, or whose lives have been saved by his skill and attention. We request our chairman to communicate this resolution to Mrs. Chesnutt, and to convey to her our sincere and heartfelt sympathy with her and her young family in their affliction and sad bereavement."

WESTPORT UNION.

THE guardians have been requested by the Local Government Board to appoint a medical officer for Clareisland and Innishturk, but object in consequence of the expense, which would amount to about 5½d. in the pound on the valuation. As Clareisland is unapproachable at times from the mainland, the medical officer of Louisburgh is practically of little use to the islanders, and the hesitation of the guardians appears inexplicable.

SERIOUS EPIDEMIC OF TYPHUS FEVER IN HARE ISLAND.

ABOUT a week or so ago an outbreak of typhus fever took place on this island, which is situated some six miles from Skibbereen, and is the same place where a few years since a similar epidemic existed, and which caused the death of Dr. Robinson, the efficient medical officer of the district. There are close on fifty cases of fever on the island, but up to the latest reports the mortality has been very low. The cause of the outbreak is undoubtedly due to the defective sanitary arrangements, chief among these being overcrowding, and consequently deficient ventilation in the dwelling-houses. One narrow bedroom, in which there is no provision for ventilation, is the rule rather than the exception with the dwellings in the island, according to the report furnished by Dr. Jennings, Consulting Sanitary Officer of the Skibbereen Union, who, in company with Dr. Hadden, have visited the island, and rendered all the assistance in their power to the distressed inhabitants.

DIRECT REPRESENTATION OF THE PROFESSION.

A MEETING of practitioners, chiefly residing in the North of London, was held on Thursday evening, July 29th, at 1, Highbury Place, to consider the desirability of selecting a candidate for the forthcoming election of the direct representatives on the Medical Council. Among those present were Sir Andrew Clark, Dr. Anderson, Mr. Pearce Gould, Mr. Malcolm Morris, Mr. Nelson Hardy, Mr. Keele, Dr. Stokes, Dr. Reid, Mr. T. Wakley, Mr. C. H. Wade, Mr. E. Cree, Dr. Potter, B. G. Morison, M.B., Mr. Worley, J. J. Lough, M.B., Mr. H. F. Stokes, Dr. Williamson, Mr. W. H. Kesteven, Mr. A. Skipton, Mr. Jackson, Mr. E. Dukes, Mr. W. Cattlin, and Mr. King.

Dr. STOKES, who took the chair, referred to the Medical Act, and to the importance of steps being at once taken to recommend a candidate to the body of the profession.

Mr. KEELE, having explained the origin of the meeting, stated that every medical man in the neighbourhood to whom he had spoken had expressed their opinion in favour of Dr. Glover as being eminently fitted to represent them at the Medical Council.

Sir ANDREW CLARK said the privilege of direct representation which had at last been granted, was, in his opinion, wise and just, and had become necessary. This boon was intended for those who constituted the great bulk of the profession, who did the most work in it, and who were more responsible to the general public than the whole body of consultants put together. The consultants, moreover, were already over-represented on the Council. He hoped that the general practitioners of the country would elect members of their own body for the profession; to elect consultants would be to stultify itself. He anticipated that this would do much to weld into one body the entire profession. But the election by such a constituency was a very difficult matter, and care, he thought, should be taken neither to elect consultants nor *dilettanti*, but only men who were in deed and truth in general practice. Candidates ought, too, to be well acquainted with the recent history of the profession, and known to the leading men in the profession; and, lastly, it was highly important that they should be men of upright and independent character. Such men were not easy to find; but he knew one man who fulfilled all the necessary conditions, and who, if elected, would be one of the best possible members of the Medical Council—this was Dr. Glover, than whom he knew no one more honest, upright, and independent, and he earnestly hoped that he would be elected.

Mr. NELSON HARDY fully agreed that Dr. Glover was the right man to represent the general practitioners on the Medical Council; he was particularly well acquainted with the work of the Council, for he had attended its meetings for some time past, and was thoroughly familiar with the work the Council had to do.

A resolution was proposed by Mr. JACKSON, and seconded by Dr. REID, and carried unanimously, "That Dr. Glover be requested to stand as a candidate."

Dr. GLOVER thanked the meeting for the compliment they had paid him. He said the Act was a very imperfect one, and, even in the matter of direct representation, was not satisfactory. It enlarged an already too large Council, and the direct representatives would only be one-sixth of the Council, or five out of thirty. It was the more important, therefore, that those elected should be chosen from the body of the profession. He would have preferred to take a little more time to think over the matter; but he was in the hands of the meeting, and would be entirely guided by his friends. As it seemed the unanimous and hearty wish of the meeting, he agreed to stand.

A discussion ensued, in which Sir ANDREW CLARK, Mr. T. WAKLEY, Dr. ANDERSON, Mr. MALCOLM MORRIS, Dr. STOKES, and others, took part. It was ultimately decided to resolve the meeting into a grand committee, with power to add to their number. An executive committee was appointed, with Mr. Keele, Dr. Reid, and Mr. H. F. Stokes, as honorary secretaries.

A vote of thanks to Dr. Stokes was passed, and acknowledged in suitable terms.

BRIGHTON MEETING, 1886.

FOREIGN AND COLONIAL VISITORS TO THE BRIGHTON MEETING.

THE following foreign guests and Colonial members have intimated their intention to attend the meeting. Dr. Billings (Washington); Dr. G. Ranney (Michigan); Dr. W. C. Wile (Newtown, Connecticut); Dr. Eylandt (Revel); Dr. Delstanche (Brussels); Dr. S. Fitch (Nova Scotia); Dr. Beaven Rake (Trinidad); Professor Charcot (Paris); Professor Liebreich (Berlin); Professor Gaston (Atlanta, Georgia); Professor Casper; Professor Macdonald; Professor Brown-Séquard (Paris); Professor Porro (Pavia); Professor E. Lusk (New York); Dr. Brody (ex-President of the American Medical Association); Dr. W. von Vragassy. A large number of surgeons and physicians from the United States have already arrived.

ANNUAL MUSEUM OF THE ASSOCIATION.

THANKS to the labours of Dr. Mackey, Dr. Giffard, and Dr. Whittle, there will be an unusually good museum this year. The best firms are well represented, and members will have an opportunity of seeing all new things in foods, drugs, and instruments.

A special feature will be a large exhibit of interesting specimens from the museum of Sussex County Hospital, well known as one of the best provincial museums.

The catalogue, both of this and of the general collection, will be much more detailed than usual, so as to afford valuable information; and a principle steadily kept in view is to make the museum as professional as possible, no large show cases being admitted.

ATTENDANCES AT THE COUNCIL.

MR. DIX (Hull) requests the publication of the following table, which shows the attendance (or absence) of the representatives of the Branches at the meetings of the Council of the British Medical Association held in London during the two years 1884-5, 1885-6.

1884-5.

	Branches, 33. Present.	Representatives, 51. Absent.
October	30	21
January	26	25
April	28	23
July	32	19
Total	116	88

1885-6.

	Branches, 34. Present.	Representatives, 52. Absent.
October	33	19
January	25	27
April	34	18
July	27	25
Total	119	89

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary meeting of the Council was held at the College on Thursday, August 5th, at 4 o'clock.

The minutes of the quarterly meeting of Council, held on the second Thursday of July last, were read and confirmed.

Mr. Berkeley Hill, of University College Hospital, was elected a member of the Court of Examiners in Surgery in place of Mr. John Croft, whose term of office had expired.

It was resolved that the Annual Meeting of Fellows and Members of the College be held at the College on Thursday, November 4th next, for the purpose of receiving the report of the Council. Notice regarding the meeting will be duly advertised.

A letter was read from the Master of the Society of Apothecaries, inviting the College to admit the Society as a party to the conjoint examination of the Colleges of Physicians and Surgeons. It was referred to the President to nominate delegates on behalf of this College to meet an equal number appointed by the College of Physicians, to consider the question and report to the respective Colleges.

The vacancies occasioned by the death of Dr. Moxon as an examiner in Medicine, and by the retirement of Dr. Champneys as examiner in Midwifery, will be filled up in October.

The next quarterly meeting of Council will be held on Thursday, October 14th, at the usual hour.

SOCIETY OF MEDICAL MEN QUALIFIED IN SANITARY SCIENCE.

The inaugural and first annual meeting of the Society was held at the Holborn Restaurant, Holborn, on Thursday, July 22nd, 1886, Sir Joseph Fayrer, K.C.S.I., President, in the chair. Letters were read from Sir Douglas Maclagan, Sir Charles A. Cameron, Professor Gairdner (Glasgow), Drs. Thorne Thorne, Barry, Campbell, Munro, and others, who were unable to attend. Prior to receiving the Council's Report and other business, the President, Sir Joseph Fayrer, gave the following address.

I have to congratulate you, on this the first annual meeting of the "Society of Medical Men Qualified in Sanitary Science," on the success which has already attended the efforts you have made towards the foundation of a Society, which promises, on the one hand, to be productive of great benefit to the profession by ensuring the due recognition of your rights and privileges, and to the public, on the other, by guaranteeing the diffusion of sanitary knowledge and the practical application of the laws which govern the protection of health and the preservation from disease, and indicate the most efficient means of dealing with it should it arise.

It is an assertion of your rights and duties, as medical men, not merely to treat disease, but to deal with all that tends to prevent it, as well as to preserve health.

This obviously paramount duty of medical men has too long been lost sight of; but the time has come when it may no longer be ignored, and it is but right that in civil life, as already, indeed, happens in the public services, sanitary science, as applied to the preservation of public health, should be under medical guidance and control. The ninety-five medical men who have already specially qualified themselves for these duties, and who form the nucleus of this Society, are, we may hope, the pioneers of a movement which will ultimately receive great extension, and include all medical men in the scope of its operations, and gradually but surely vindicate the principle that the prevention of disease and the preservation of health are as integral a part of the duties of the physician as is the treatment of disease.

Your Society, which took its rise so recently as April of the current year, has already made most satisfactory progress, and numbers on its roll nearly half of the medical men who hold certificates of qualification in sanitary science from the various universities and medical corporations entitled to grant these diplomas, besides twelve honorary members eminently distinguished in sanitary science.

We trust, and there is good reason for expressing a confident hope that it will be so, that many others will join the Society, and that its prosperity and utility will be thereby thoroughly established and confirmed.

It appears that, of the whole body of the medical profession, but 200 are now qualified in sanitary science, and of these 175 are in the United Kingdom. Let us hope the numbers will rapidly increase. Of the 95 who at present form the Society, 35 are in London, 46 in the Provinces, 7 in Scotland, 6 in Ireland, and 1 in Australia. Of these, Cambridge University produces 60 per cent., Edinburgh University 12 per cent., Dublin University 7 per cent., London University 5 per cent., the Royal College of Physicians of Edinburgh 5 per cent., the Royal College of Physicians of London 3 per cent., the King and Queen's College of Physicians in Ireland 4 per cent., the University of Glasgow 2 per cent., and the Universities of Oxford and of Durham each 1 per cent.

The objects proposed and set forth in the preamble of your rules are such as must commend themselves to all. I am much pleased to congratulate you on having attained the first object—registration of sanitary science qualifications, as seen by Sect. 21 of the Medical Act, 1886, just passed. The second of the objects named—recognition of the value of such qualifications by sanitary authorities, will naturally follow as a result. The others have to be worked out in the future; and I think I see, in the energy and tact which have carried out the scheme so far and so satisfactorily, an assurance that the two latter clauses will continue to be the aim and object of the Society, raising it to such importance that its influence for good will spread far and wide.

It appears to me that the organisation of the Society is well devised, and bears evidence of much careful thought and knowledge of the objects aimed at. The rules are simple, practical, and calculated to carry out the work without friction or confusion. The general management is entrusted to a Council well selected, which has already held seven meetings, and is subject to such changes and variations in its *personnel*, as experience has shown to conduce generally to the efficient working of a governing body. The arrangements for the working of the Society are excellent, and all I can say is that I wish it full success.

I cannot refrain from observing that the Society is especially indebted to certain of its members for the progress it has made, and for the practical business-like character it has assumed. It would be an unpardonable omission were I to neglect to say how truly we all recognise and cordially acknowledge the untiring and well-directed energies of our indefatigable Honorary Secretary, Mr. Cooney; of our Chairman of Council, Dr. W. R. Smith; of Mr. Joseph Smith, Dr. Sykes, and others, whose efforts in and out of Council have done much for the Society. We can only, in thanking them, say that we trust their energetic efforts will be unremitting, and their interest unabated in the Society, which already owes them so much.

In conclusion, I have only to add that I return you my best thanks for the honour you have done me in electing me to be your President, and to assure you that it will be always a great pleasure to me to do anything in my power to forward the interests of the Society.

After the annual meeting, the members and their friends dined together at the Holborn Restaurant, in celebration of the inauguration of the Society, and in honour of the primary object of this Society being so speedily obtained, namely, the State recognition of public health qualifications in the new Medical Bill. Among those present were the President, Drs. Sykes, W. R. Smith, Walford (Ramsgate), Maclehose (Sevenoaks, Kent), Fosbroke (Stratford-on-Avon), Weddell (Sheffield), Low (Plumstead), Henry Smith, Joseph Smith (Streatham Hill), and others.

THE CHOLERA.

ITALY.

The reported cholera returns from July 28th to August 4th, are as follows:—Trieste 37 cases, 11 deaths; Fiume 15 cases, 8 deaths; Bologna 86 cases, 43 deaths; Ravenna 95 cases, 49 deaths; Ferrara 3 cases, 2 deaths; Codigoro 18 cases, 6 deaths; Massefiscaglia 18 cases, 12 deaths; Manduria 54 cases, 15 deaths; Fianona (Istria) 7 cases, 2 deaths; Largo Sante 5 cases, 1 death; Padua 20 cases, 1 death; Verona 23 cases, 7 deaths; Cittadella 10 cases, 8 deaths; Cavazere 23 cases, 1 death; Arzignano 48 cases; Caerano 14 cases; Arcole 43 cases, 4 deaths; Cucca 60 cases, 22 deaths; Pescantina 23 cases, 3 deaths; Chioggia 25 cases, 8 deaths; Treviso 14 cases, 5 deaths; Castelfranco 98 cases, 10 deaths; Monte Celluna 15 cases, 3 deaths; Valpago 17 cases, 6 deaths; Montebelluna 33 cases, 14 deaths; Venice 10 cases, 1 death; Piazzola 16 cases, 4 deaths; San Michele, Tagliamento 7 cases, 4 deaths.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1886. ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

NOTICE OF COUNCIL MEETINGS.

A MEETING of the Council 1885-1886 will be held in the Music Room, Royal Pavilion, Brighton, on Tuesday next, the 10th instant, at two o'clock in the afternoon. Meetings of the Council 1886-1887 will be held in the Music Room, Royal Pavilion, Brighton, on Wednesday the 11th instant, and Thursday, the 12th instant, at half-past nine o'clock in the forenoon.

FRANCIS FOWKE, *General Secretary.*

London, August 4th, 1886.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

THE fifty-fourth Annual Meeting of the British Medical Association will be held at Brighton, on August 10th, 11th, 12th, and 13th, 1886.

President: W. T. Edwards, M.D., F.R.C.S., Physician to the Glamorgan and Monmouth Infirmary, Cardiff.

President-elect: Withers Moore, M.D., F.R.C.P., Senior Physician to the Sussex County Hospital, Brighton.

President of the Council: B. Walter Foster, M.D., F.R.C.P., Professor of Medicine in Queen's College and Physician to the General Hospital, Birmingham.

Treasurer: C. Macnamara, F.R.C.S., Surgeon to the Westminster Hospital, London.

An Address in Medicine will be delivered by John S. Billings, M.D., LL.D., Surgeon United States Army, Washington.

An Address in Surgery will be delivered by Frederick Abell Humphry, F.R.C.S., Surgeon to the Sussex County Hospital.

An Address in Public Medicine will be given by E. D. Mapother, M.D., Consulting Medical Officer to the City of Dublin.

PROGRAMME OF PROCEEDINGS.

TUESDAY, AUGUST 10TH, 1886.

12.30 P.M.—Reception of Council of Association by the Mayor of Brighton.
2 P.M.—Meeting of 1885-6 Council. Music-Room, Royal Pavilion.
3 P.M.—General Meeting. Report of Council and other business. Adjourn at 5 P.M. Dome.
8 P.M.—General Meeting. President's Address, and any business adjourned from meeting at 3 o'clock. Dome.

WEDNESDAY, AUGUST 11TH, 1886.

9.30 A.M.—Meeting of 1886-7 Council. Music-Room, Royal Pavilion.
11.0 A.M.—Second General Meeting. Address in Medicine. Dome.
2 to 5 P.M.—Sectional Meetings. Royal Pavilion.
4 to 7 P.M.—Garden Party by Sir Julian Goldsmid at St Ann's Wells.
8.30 P.M.—A Conversazione will be given by the President of the Association, and the South-Eastern Branch. Dome and Royal Pavilion.

THURSDAY, AUGUST 12TH, 1886.

9.30 A.M.—Meeting of Council. Music-Room, Royal Pavilion.
11 A.M.—Third General Meeting. Address in Surgery. Presentation of Gold Medal for distinguished merit; and Stewart and Middlemore Prizes. Dome.
2 to 5 P.M.—Sectional Meetings. Royal Pavilion.
7 P.M.—Public Dinner. Dome.

FRIDAY, AUGUST 13TH, 1886.

10 A.M.—Address in Public Medicine. Dome.
11 A.M.—Sectional Meetings. Royal Pavilion.
4 P.M.—Concluding General Meeting. Dome.
8 P.M.—Reception by the Mayor of Brighton. Dome and Royal Pavilion.

SATURDAY, AUGUST 14TH, 1886.

EXCURSIONS.

The entrance-hall to the Royal Pavilion will be fitted up as a Reception-Room, and will be opened at 12 o'clock noon on Monday, August 9th, and on the following day at 9 o'clock in the forenoon, and will remain open until 6 o'clock in the afternoon of each day, for the issue of tickets to members, and for supplying all necessary information.

RETURN TICKETS TO BRIGHTON.—Return tickets to Brighton, at the usual 1st and 2nd class ticket rates, issued at all stations under fifty and above ten miles distant from Brighton, on Monday, August 9th, and intervening days, will be available for the return journey from Brighton by any train of the same description and class, up to and including Monday, August 16th, 1886. All return tickets (1st, 2nd, and 3rd class) issued to Brighton from places distant over fifty miles are available for eight days, including day of issue and return.

DAY TICKETS TO BRIGHTON.—Day tickets to Brighton (1st and 2nd class), will be issued on August 10th, 11th, 12th, 13th, and 14th, from London, and all other stations above ten miles distant from Brighton, at a single fare for the double journey, available to return by any train of the same description and class on the day of issue only.

These privileges will be granted only to members of the Association on production of their cards at the Company's various booking offices.

Programmes of the arrangements can be had upon application at the stations of the London, Brighton, and South Coast Railway.

*** *It is particularly requested that gentlemen on their arrival will at once proceed to the Reception-Room, and* (1) *enter name and address, and obtain tickets and programme;* (2) *inquire for letters and telegrams;* (3) *consult the list of lodgings and hotels, etc.*

The scientific business of the meeting will be conducted in nine Sections, as follows.

(*All the Sections will be held in the Royal Pavilion.*)

SECTION A.—MEDICINE.

MUSIC-ROOM.

President, W. H. Broadbent, M.D., London. *Vice-Presidents*, Frederick Bagshawe, M.D., Hastings; Joseph Ewart, M.D., Brighton. *Honorary Secretaries*, Francis Warner, M.D., 24, Harley Street, London; Henry Seymour Branfoot, M.B., 42, Norfolk Square, Brighton.

The following subjects have been chosen for special discussion.

1. Cases in which Disease of the Valves of the Heart has been known to exist for upwards of five years, without causing Serious Symptoms. Introduced by Sir Andrew Clark, M.D., F.R.C.P., F.R.S., London. The following gentlemen have promised to take part in the discussion: Drs. Gairdner, Clifford Allbutt, B. Foster, Douglas Powell, Sir Dyce Duckworth, M. Bruce, Burney Yeo, Skerritt, Saundby, Sansom, Tyson, Thomas, S. Mackenzie, D. J. Leech, Bernard O'Connor, S. Bristowe, W. H. Lamb, and Oliver.

2. On the Effects produced by Gall-stones, with particular reference to some Rarer Points in their Symptomatology. Introduced by W. Ord, M.D., F.R.C.P., London. The following gentlemen have promised to take part in the discussion: Drs. Clifford Allbutt, Sir B. W. Foster, Pavy, Shingleton Smith, Saundby, Sir Peter Eade, M.D., J. S. Bristowe, R. Eardley-Wilmot, M.B., and Ralfe.

Dr. Radcliffe Crocker will give a Demonstration on the Removal of Hairs by Electrolysis.

The President of the Section will deliver his Address on August 12th.

The following papers are promised.

CHURTON, T., M.D. Two Cases of Non-diabetic Acetonuria.
COUTTS, J. A., M.B. Latter Effects of Rickets.
CULLIMORE, D., M.D. Tropical Hepatic Abscess.
CROCKER, H. Radcliffe, M.D. A New Treatment for obstinately recurring Eczema
DRYSDALE, C. R., M.D. The Treatment of Phthisis.
DUCKWORTH, Sir Dyce, M.D. Inadequate Treatment of Anæmia.
EYLANDT, J. E., M.D., Revel. Treatment of Diphtheria.
FOX, Hingston, Esq. Hints on the Ready Determination of Urea-Excretion.
GAMGEE, A., M.D. On Compressed and Rarefied Air.
HALL, F. de Havilland, M.D. Meningitis as a complication of Pneumonia.
HANDFORD, H., M.D. Menstruation and Phthisis.
HAYCRAFT, J. B., M.D. 1. The Coagulation of the Blood in its Relation to Disease. 2. Demonstration of a Method for the Estimation of Uric Acid.
HOVELL, -, M.D. On some Conditions of Neurasthenia.
KIRK, Robert, M.D. 1. On Urine which darkens with Alkalies occurring in three Members of the same family: will show Crystals of an Acid obtained from the Urine in these Cases. 2. On so-called Peptone in the Urine.
MANTLE, A., M.D. Etiology of Rheumatism considered from a Bacterial Point of View. Will also give a demonstration of his specimens of Bacteria in Rheumatism.
MCVAIL, D. C., M.B. The Physical Conditions that underlie the Thoracic Percussion-Sounds.

Moxon, W., M.D. Effects of Turpentine, Ergot, and Water, on Albuminuria.
Myrtle, A. S., M.D. Chronic Inflammation of Mucous Membrane of Pyloric end of Stomach, Duodenum, Common Gall-duct, and Bladder; their Symptoms, and Treatment by Harrogate Waters.
Oliver, T., M.D. On the Relationship of Urea to certain Diseased Processes.
Playfair, W. S., M.D. Some Observations on what is called Neurasthenia.
Ralfe, C. H., M.D. Functional Albuminuria.
Rendall, Stanley, M.D. Therapeutical Action of the Waters of Aix-les-Bains.
Savage, George H., M.D. Mental Symptoms with Locomotor Ataxy.
Strahan, J., M.D. Intestinal Ulcers and their Treatment, more especially by Arsenic.
West, Samuel, M.D. Hæmaturia in Granular Kidney.
White, W. Hale, M.D. Inexplicable Pyrexia.
Whittle, E. G., M.D. Melancholia and Insomnia in the Sane: Treatment.

Section B.—Surgery.

BANQUETING-ROOM.

President, John Eric Erichsen, F.R.C.S., F.R.S., London. *Vice-Presidents*, Frederick William Jowers, M.R.C.S., Brighton; John Ward Cousins, F.R.C.S., Southsea. *Honorary Secretaries*, William Johnson Walsham, F.R.C.S., 27, Weymouth Street, London; Willoughby Furner, F.R.C.S., 2, Brunswick Place, Brighton.

The President will deliver the address on Wednesday August 11th, at 2 P.M.

Sir Henry Thompson will open a discussion on Suprapubic Lithotomy. The following gentlemen will take part in the discussion: Messrs. W Cadge, Reginald Harrison, Professor Humphry, Berkeley Hill, T. R. Jessop, Greig Smith, W. Pye, Barwell, Bruce Clarke, Edward Lund, Walter Whitehead, Jacobson, Warren, of Birmingham, J. Ward Cousins, and Vincent Jackson.

The following papers are promised.

Harley, George, M.D., F.R.S. Hepatic Phlebotomy and Puncture in Hypertrophic Congestions of the Liver.
Imlach, Francis, M.D. A Case of Renal Hydatids.
Tait, Lawson, Esq. Surgical Treatment of Diseases of the Liver.

Mr. Jennings will take part in the discussion.

Thornton, J. K., Esq. The Surgery of the Liver.
Willett, A., Esq., and Meredith, W. A., Esq. Cholecystotomy.

Messrs. Macnamara, Morris, Bellamy, Jessop, and Professor Gaston, of Georgia, will take part in the discussion.

Horsley, Victor, M.B. A paper, illustrated by Photographs illuminated by the Lime-light, in connection with the Advances in the Surgery of the Central Nervous System.

Mr. E. Bellamy and Dr. Hughes Bennett will join in the discussion.

Adams, W., Esq. On the Treatment of Congenital Displacement, the so-called Congenital Dislocation of the Hip-Joint, by long-continued Recumbency and Extension; and will show his New Extension Couch.
Anderson, W., Esq. On Treatment of Aneurysm by Galvano-Puncture, illustrated by cases.
Benton, S., Esq. Fistula in Ano of the Horse-Shoe Shape.
Browne, J. Walton, M.D. The Treatment of Club-foot.
Browne, Lennox, Esq. On the more complete Surgical Treatment of Suffocative Goitre.
Carter, Jas. F., Esq. On the Accessory Organs of Generation in the Male.
Churchill, F., Esq. On the Multiple Causation and the Immediate Treatment of Congenital Club-foot.
Clarke, Bruce, Esq., and Steavenson, W. E., M.D. The Employment of Electricity in the Treatment of Diseases of the Urinary Organs.
Cousins, J. Ward, M.D. A new Mouth-gag with Throat-Guard.
Dempsey, Alexander, M.D. A case of Orbital Aneurysm.
Fagan, John, Esq. Notes on Gunshot-Wounds.
Fitch, Simon, M.D., Nova Scotia. The Dome-Trocar and associated Instruments in Paracentesis, Aspiration, Transfusion, Ovariotomy, and Tunnelling the enlarged Prostate.
Gaston, Professor, Atlanta, Georgia. The Practicability of Establishing an Artificial Fistulous Opening in the Human Subject between the Gall-Bladder and the Duodenum.
Harrison, Reginald, Esq. On the Treatment of Urethral Stricture by Internal and External Urethrotomy combined.
Jessett, F. B., Esq. Surgical Treatment of certain Tumours of the Neck.
Keetley, C. B., Esq. Further Remarks on the Radical Cure of Hernia by Injections into the Inguinal Canal.
Kirk, Robert, M.D., Glasgow, will show his Vapour-Pressure Injector, and read Notes of Cases treated by it.
Marsh, Howard, Esq. A Case of Abscess of the Liver, opened by free Incision.
Owen, Edmund, Esq. Psoas Abscess: when and how to open it.
Pye, W., Esq. 1. A Case of Multiple Papilloma of the Bladder, removed by the Suprapubic Operation. 2. Two Cases of Suprapubic Cystotomy.
Robbins, Milton Josiah, M.D., New York. On the Diagnosis and Mechanical Operative Treatment of Knock-knee, and Bow-leg Deformity; at the same time making a demonstration of the Cutting Qualities of his Electro-Osteotome.
Smith, Charles, Esq., Brighton. A New Clamp for the Treatment of Hæmorrhoids.
Smith, Noble, Esq. On Obscure Disease of the Spinal Column.
Startin, James, Esq. The Surgical Treatment of Acne and Lupus.
Stokes, Sir William, Dublin. Acute Myxœdema following Thyroidectomy.
Symonds, Charters J., M.D. The Treatment of Malignant Stricture of the Œsophagus by Tubage.
Sympson, Thomas, Esq. A Case of Myositis Ossificans.
Tait, Lawson, Esq., will read for Dr. Mackay, of Huelva, a Contribution to the Surgical Treatment of Gall-stones.
Walsham, W. J., Esq. Cases of Abscess of the Liver opened by free Incision.
Whitehead, Walter, Esq. Three Hundred Consecutive Cases of Hæmorrhoids cured by Excision.
Wile, W. C., M.D., Newtown, Connecticut. On the Relation which Alimentation bears to the Results of Surgical Practice.

Section C.—Obstetric Medicine.

SALOON.

President, Alfred Meadows, M.D., London. *Vice-Presidents*, Constantine Holman, M.D., Reigate; Frederick W. Salzmann, M.R.C.S., Brighton. *Honorary Secretaries*, Charles J. Wright, M.R.C.S., Lynton Villa, Virginia Road, Leeds; Alban Doran, F.R.C.S., 9, Granville Place, W.

The President will deliver a short address.

The following two special discussions will take place.

1. The Alternatives to Craniotomy. This discussion will be introduced by Dr. Robert Barnes; and Professor Porro, Dr. Halliday Croom, Dr. E. T. Davies, Liverpool; Dr. Walter, Manchester; Mr. Greig Smith, Clifton, and others, will be among the speakers.

2. On Removal of the Uterine Appendages. Papers will be read by Dr. Savage, Birmingham; Dr. More Madden, Dublin; and others; and Dr. Bantock, Dr. E. T. Davies, Dr. G. Elder, Nottingham; Dr. Imlach, Liverpool; Dr. Walter, Manchester; Mr. Lawson Tait, Birmingham; Mr. Vincent Jackson, Wolverhampton, and others, will take part in the discussion.

The following papers are promised.

Aveling, J. H., M.D. A Case of Extra-uterine Gestation arrested by Electricity.
Ballantyne, J. W., M.B., Edinburgh. Sphygmographic Tracings in Labour and the Puerperium.
Barnes, Fancourt, M.D. On Perinæorrhaphy.
Beverley, M., M.D. A Record of Twenty Cases of Emmet's Operation for Laceration of the Cervix Uteri, and of Three for Procidentia Uteri.
Black, J. Gordon, M.D., Harrogate. The Use of Stem-Pessaries.
Braithwaite, J., M.D. A Method of Treating certain Cases of Amenorrhœa, and Scanty Menstruation.
Dolan, T. M., M.D. Obstetric Experiences, with Observations.
Edis, A. W., M.D. Cases illustrating the Difficulties of Diagnosis in Gynæcological Practice.
Elder, G., M.D. A Case of Vesico-vaginal Fistula.
Emmet, T. A., M.D., New York. On certain mooted points in Gynæcology.
Grigg, W. C., M.D. On the Antiseptic Use of Bichloride of Mercury in Obstetric Practice.
Handfield-Jones, M., M.B. Scanty Secretion of Liquor Amnii in the Early Months of Pregnancy, and its Bearing on Diagnosis.
Hart, D. Berry, M.D. Successful Case of Abdominal Section for Ruptured Fallopian Tube Fœtation, with Microscopic Examination of the part of the Tube removed.
Hewitt, W. M. Graily, M.D. The Early History and Etiology of Uterine Flexions and Displacements.
Kinkead, R. J., M.D., Galway. Craniotomy and Cæsarean Section.
Lusk, W. T., M.D., New York. The Proper Moment for the Performance of Gastrotomy in Abdominal Pregnancy.
Petch, R., M.D., York. Extra-uterine Gestation treated by Galvano-Puncture.
Ranney, George, M.D., Michigan. Treatment of Mastitis.
Routh, C. H. F., M.D. On some Points of Difficulty as affecting Medical Men in Cases of Hysteria with Erotic Symptoms.
Walter, W., M.D. A Case of Uterine Myoma causing obstruction of the Bowels treated by the Removal of the Appendages.

Section D.—Public Medicine.

NORTH DRAWING-ROOM.

President, Rickard Patrick B. Taaffe, M.D., Brighton. *Vice-Presidents*, Sir Charles Alexander Cameron, M.K.Q.C.P., Dublin; Charles Kelly, M.D., Worthing. *Honorary Secretaries*, W. Brown, F.R.C.S., Carlisle; William Joseph Tyson, M.D., Folkestone.

The President will deliver an address on Wednesday, August 11th, at 2 o'clock P.M.

The general subjects for discussion are the following.

1. Scarlet Fever; its Causation, and the best Sanitary Measures for Dealing with the Disease as it exists among Urban Populations. Dr. Ewart, of Brighton, will open this discussion. Dr. W. Squire will take part.

2. On the Duration of Infectiousness in the following Infectious Diseases: Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. Dr. A. Ransome, of Manchester, will open this discussion. Dr. E. W. Hope, of Liverpool; Dr. T. F. Pearse, Haslemere; and Dr. W. Squire, will take part.

3. Diphtheria in Rural Districts: (*a*) Causation; (*b*) Influence of Soil upon the Disease. Dr. C. Kelly will open this discussion.

4. Reports of Water Analyses: the best Method of Stating these so as to secure one Uniform Plan. Dr. Whitelegge will open this discussion.

Dr. Edgar Crookshank will exhibit the various apparatus employed in a Bacteriological Laboratory, and give demonstrations of cultivations, microscopic preparations, and photographs of bacteria.

The following papers are promised.

Ashby, H., M.D. On the Duration of Infectiveness in Scarlet Fever.
Boobbyer, P., M.B., Nottingham. Scarlet Fever in relation with the disturbance of Impure Subsoil and the Construction of Sewers.
Carpenter, A., M.D. The Causation of, and on the Quarantine which is necessary to be observed in, Scarlatina.
Cornish, Surgeon-General W. R. On an Outbreak of Cholera amongst British Emigrants proceeding from London to Queensland in the steamship *Dorunda* during November and December, 1885.

Davison, James, M.D. The Principle of Separation of the Human Excreta as applied to Closets, and the true Method of Disposing of the Solids and Fluids respectively.
Drysdale, C. R., M.D. 1. On Animal Vaccination. 2. Sewage Pollution of the Thames.
Evatt, Surgeon-Major G. J. H., M.D. On the Medical Department of an Army Corps in War, with proposal for a more efficient Volunteer Medical Organisation.
Groves, J., B.A., M.B. The Sanitary Acts as applied to Rural Sanitary Districts.
Handford, H., M.D. Death-rate of Enteric Fever.
Kerr, Norman, M.D. On Hydrophobia, and its Prevention.
Paget, C. E., Esq. The Influence of Acute, supposed Simple, Sore-Throat in the Spread of Diphtheria.
Pearse, T. F., M.D. On the Periods of Incubation of the principal Exanthemata.
Pringle, Surgeon-Major R., M.D. 1. The Advantages and Disadvantages of Human and Animal Lymph compared. 2. State Vaccination, with special reference to the Compulsory Clauses in the Vaccination Acts.
Seaton, E., M.D. Scarlet Fever.
Squire, W., M.D. On the Influence of Increased Means of Isolation upon the Prevalence of Scarlet Fever in London.
Tatham, J., M.D. Scarlet Fever, and the best Means for its Prevention amongst Urban Populations.
Taylor, Michael W., M.D. Diphtheria in Connection with Damp and Mould.
Vacher, F., Esq. Duration of Infectiousness in the Exanthemata and Allied Diseases.

Section E.—Psychology.

OLD SCHOOL-BOARD ROOM.

President, Thomas Smith Clouston, M.D., Edinburgh. *Vice-Presidents*, Charles A. Lockhart Robertson, M.D., Brighton; Joseph Raymond Gasquet, M.B., Brighton. *Honorary Secretaries*, Charles Spencer Waller Cobbold, M.D., Earlswood Asylum, Redhill; James M. Moody, M.R.C.S., Surrey County Asylum, Canehill, Purley.

The President, Dr. T. S. Clouston, will deliver an address on The Relation of Bodily and Psychical Pain.

The following papers are promised.
Beach, Fletcher, M.B. The Influence of Hereditary Predisposition in the Production of Imbecility.
Clark, A. Campbell, M.B. Experimental Dietetics in Lunacy Practice. A Record of Investigation and Results.
Cobbold, C. S. W., M.D. Suicidal Tendencies in Congenital Imbeciles.
Gill, Stanley A., Esq., B.A. The Use and Abuse of Seclusion.
Savage, G. H., M.D. On Alternations of Neuroses.
Shuttleworth, G. E., M.D. The Relation of Marriages of Consanguinity to Mental Unsoundness.
Strahan, S. A. K., M.D. How can the Medical Spirit best be kept up in Asylums for the Insane?
Thomson, D. G., M.D. On the Separate Care and Medical Treatment of Recent Cases of Insanity, either in Existing Asylums, or in Lunatic Hospitals to be Established for that Special Purpose.
Tuke, D. Hack, M.D. On the Alleged Increase of Insanity.

The President will introduce a discussion as to How the Medical Spirit can best be kept up in Asylums for the Insane.

Section F.—Pathology.

MASONIC ROOM.

President, Julius Dreschfeld, M.D., Manchester. *Vice-Presidents*, James Frederick Goodhart, M.D., London; Heneage Gibbes, M.D., London. *Honorary Secretaries*, John E. Ranking, M.D., Mount Ephraim Road, Tunbridge Wells; John Caldwell Uthoff, M.D., 9, Brunswick Place, Brighton.

The following subjects have been chosen for special discussion.

1. Peripheral Neuritis. Opened by papers by Dr. Ross (Manchester), and Dr. Buzzard (London). Mr. Watson Cheyne, Professor Charcot, Drs. Clifford Allbutt, Hadden, Poore, Drummond, Saundby, Maguire, and Whittle, will take part in the discussion.

2. Aneurysm. Introductory paper by Timothy Holmes, F.R.C.S. Messrs. Barwell, Bryant, Savory, H. Morris, C. J. Symonds, Watson Cheyne, R. Maguire, and E. Lund, will take part in the discussion.

3. The Etiology and Pathology of Pneumonia. Introductory papers by Dr. Octavius Sturges and Dr. R. Douglas Powell. Dr. Churton, Dr. R. Maguire, Sir Andrew Clark, Dr. Duckworth, and Dr. Hollis will take part in the discussion.

Dr. Heneage Gibbes will show, in the Museum in connection with the Pathological Section, a series of Microscopical Specimens of Carcinoma and Sarcoma, also a number of Photographs of Normal and Morbid Histology and Bacterium, and Photographs showing Diseased Conditions, life size.

The following papers are promised.
Anderson, R. J., M.D. The Presence of a Joint between the Coracoid Process of the Scapula and the Clavicle (rare case).
Ashby, H., M.D. The Pathology of Nephritis following Scarlet Fever.
Barwell, R., Esq. On Aneurysm.
Churton, T., M.D. The Pathology of the Adrenals.
Crocker, H. Radcliffe, M.D. The Anatomy of the Early Stage of Keloid; and will show drawings of different types of Leprosy.
Hudson, Leopold, Esq., will show Specimens of Organisms found in several cases of Pneumonia.
Glynn, T. R., M.D. Six Cases of Ulcerative Endocarditis.
Greves, E. Hyla, M.D., will show a Rare Form of Cerebral Tumour, and give an account of the same.
Hollis, W. A., M.D. Pulmonary Tuberculosis, associated with Heart-Disease.
Maguire, Robert, M.D. On Albuminuria in Diabetes.
Rake, B. N., M.D., Government Medical Officer, Trinidad. 1. An Inquiry into the Distribution of the Leprosy-Bacillus. 2. Experiments on the Communicability of Leprosy to Animals.
Symonds, C. J., Esq. The Formation of Aneurysms in Acute Arteritis.
Young, Professor A. H. On Traumatic Malignancy.

Section G.—Therapeutics and Pharmacology.

KING'S APARTMENTS, 1.

President, Thomas Lauder Brunton, M.D., F.R.S., London. *Vice-Presidents*, John Mitchell Bruce, M.D., London; Edward Mackey, M.D., Brighton. *Honorary Secretaries*, Cornelius William Suckling, M.D., 108, Newhall Street, Birmingham; John Theodore Cash, M.D., Drumearn, Earlsfield Road, Wandsworth Common, S.W.

An Introductory Presidential Address will be given by Dr. T. Lauder Brunton, F.R.S.

The following subjects have been selected for special discussions.

1. Antipyretics; to be opened by Dr. Carter, of Liverpool.

2. Analgesics; to be opened by Dr. Spender, of Bath; Dr. Brown Séquard will join in the discussion.

3. Action of Drugs in Albuminuria; to be opened by Dr. Saundby, of Birmingham.

The following papers are promised.
Bruce, Mitchell, M.D. Morphine in Diabetes.
Drysdale, Charles R., M.D. Mercury as an Antidote in Syphilis.
Granville, J. Mortimer, M.D. The Relief of Pain by Mechanical Vibration or Percussion.
Handford, H., M.D. The Pathology of a rare form of Skin-disease affecting the Sebaceous Follicles.
Horsley, Victor, Esq., and Semon, F., M.D. On an Apparently Peripheral and Differential Action of Ether upon the Laryngeal Muscles, etc.
James, Prosser, M.D. On Local Anæsthetics.
Jessop, W. H., M.B. On the Therapeutic Effects of Cucaine in Ophthalmic Practice.
Liebreich, Professor, Berlin. Lanolin: a new Fatty Substance; its Physical Properties and Therapeutical Uses.
Mackey, E., M.D. Resorcin in Gastric and Cutaneous Disorders.
Mackenzie, Stephen, M.D. On the Value of Cannabis Indica in a Certain Class of Headaches.
Shoemaker, John, M.D., Philadelphia. Hamamelis Virginica.
St. George, George, Esq., Lisburn. Experiments with Manaca in the Treatment of Rheumatism.
Stone, W. H., M.D., will show the Apparatus exhibited by him on the occasion of his Lumleian Lectures.
Strahan, J., M.D. An Unrecorded Danger from Continued Large Doses of Iron.
Truman, E. B., M.D. Poisoning by Squills.

Section H.—Ophthalmology.

KING'S APARTMENTS, 2.

President, Chas. Oldham, F.R.C.S., Brighton. *Vice-Presidents*, Louis Tosswill, M.B., Exeter; George Anderson Critchett, F.R.C.S. Edin., London. *Honorary Secretaries*, Frank Henry Hodges, F.R.C.S. Edin., 17, Horse Fair Street, Leicester; Arthur Nicholson, M.D., 98, Montpellier Road, Brighton.

Mr. Jonathan Hutchinson will open a discussion on the Different Forms of Choroiditis, in relation to their several Causes.

Mr. Anderson Critchett will open a discussion on Episcleritis.

An improved Electric Refraction Ophthalmoscope will be shown by Mr. Henry Juler.

The following papers are promised.
Abbott, G., Esq. The Use of Styles in the Treatment of Epiphora.
Andrew, Edwyn, M.D. Ophthalmic Hints.
Barrett, J. W., M.B., and Lang, W., Esq. On the Causation of Phlyctænular Ophthalmia and Sycosis.
Benson, Arthur H., Esq. On the Operative Treatment of Trichiasis with or without Entropion.
Browne, Edgar, Esq. On New Remedies.
Bickerton, T. H., Esq., will show a Case of Growth between the Superficial Corneal Layers, and will exhibit Photographs of a Tumour of the Socket.
Cousins, J. Ward, M.D. 1. New Fixing Forceps. 2. A Right Canine Tooth removed from the Left Orbit of a Child.
Critchett, G. Anderson, Esq. On Dislocation of the Lens.
Frost, W. Adams, Esq. What is the best Method of Dealing with a Lost Eye?
Glascott, C. E., M.D. On Sarcoma of the Choroid, followed by Amblyopic Symptoms in the Sound Eye.
Greenway, Henry, Esq. Use of Ice and Carbolic Acid in the Treatment of Injuries and Inflammation of the Eyes and Eyelids.
Hartridge, Gustavus, Esq. Strabismus and its Treatment in Young Children.
Hewetson, H. B., Esq. The Treatment of Interstitial Keratitis by Operation, without Constitutional Remedies.
Higgens, Charles, Esq. Headaches in relation to Eye-Conditions.

Johnson, L. L., Esq. Paper, and Demonstration of several new Ophthalmic Instruments.
Lee, Charles T., Esq. The Extraction of Soft Cataract by Irrigation.
Snell, Simeon, Esq. 1. Massage in Eye-Affections. 2. On the Operation for Squint.
Taylor, Charles Bell, M.D. 1. Is it Desirable, in Certain Cases, to Substitute Resection of the Optic Nerve for Ablation of the Eye-ball? 2. On a Method of Treating Epiphora without Slitting the Punctum Lacrymale.

A limited number of beds in the Sussex Eye Hospital, Brighton, will be devoted to the reception of cases of interest to be shown at the meetings of the Ophthalmological Section of the British Medical Association at Brighton. Gentlemen wishing to secure beds for such cases are requested to apply, as soon as possible, to Mr. Arthur Nicholson, 98, Montpellier Road, Honorary Secretary of the Section.

Section I.—Otology.

KING'S APARTMENTS, 3.

President, G. F. Hodgson, M.R.C.S., Brighton. *Vice-Presidents*, Alphonso Elkin Cumberbatch, F.R.C.S., London; Edward Cresswell Baber, M.B., Brighton. *Honorary Secretaries*, Henry Albert Reeves, F.R.C.S.Edin., 78, Grosvenor Street, W., London; Patrick William Maxwell, M.D.Edin., 16, Warrington Place, Dublin.

The President will deliver an Address.

The following papers are promised.

Baber, E. C., Esq. On Examination of the Nasal Cavities from the Front (illustrated with Diagrams); and will show some Nasal Cases at the Throat and Ear Dispensary.
Barr, T., M.D. 1. On the Varieties, with Appearance, of the Tympanic Membrane compatible with Good Hearing. 2. On the Value of Rinne's Test, in the Diagnosis of Disease of the Nervous Structures of the Ear.
Browne, J. Walton, M.D. Cases of Mastoid Abscess.
Cumberbatch, A. E., M.B. Aural Vertigo.
Delstanche, Dr. C., Brussels. 1. Case of a Revolver-Bullet in the Ear. 2. Foreign Bodies in the Substance of the Lobule. (In French.)
Ellis, Richard, Esq. Labyrinthine Hæmorrhage, with Exhibition of Patient.
Grant, Dundas, M.D. 1. Pulsating Tinnitus. 2. On the Use of the Tuning-Fork.
MacDonald, Greville, M.D. The Functions of the Nose in Health and Disease.
Pritchard, Urban, M.D. Counter-irritation in the Treatment of Ear-disease.
Symington, J., M.B. The Anatomy of the Ear in the Child.
Wolston, Walter, M.D. Nasal Polypi, their Radical Extirpation and Cure by Electro-cautery, with illustrative Cases.

Discussion to be opened by Spencer Watson, Esq.: On the Complications of Nasal Polypi, in which Dr. Charles Worden and Dr. Dundas Grant will take part.

Honorary Local Secretaries: Thomas Jenner Verrall, M.R.C.S., 95, Western Road, Brighton; Alfred Scott, L.R.C.P., German Place, Brighton.

Annual Museum.

The twentieth annual museum will, by permission of the Town Council, be located in the Corn Exchange, a large hall, communicating with the Dome, and having a separate entrance in Church Road.

It will be open to the profession from August 9th to August 15th, and will be classified in three sections.

Section A.—Foods, drugs, hygienic and sanitary appliances. A specialty will be made of all kinds of prepared, peptonised, and other compound nutrients. (Honorary Secretary, Dr. Mackey, 1, Brunswick Road, Hove, Brighton.)

Section B.—New books, instruments, and appliances—medical and surgical; galvanic and other batteries and apparatus. (Honorary Secretary, Dr. Whittle, 65, Dyke Road, Brighton.)

Section C.—Anatomical and pathological specimens, diagrams, casts, or models; microscopes and microscopical preparations. (Honorary Secretary, D. W. Giffard, Esq., 5, Pavilion Parade, Old Steine, Brighton.)

A name and description, printed, if possible, must be attached to each exhibit, which should be sent to the Corn Exchange, Brighton (to the care of the Secretaries of the respective sections), between Monday, August 2nd, and Saturday, August 7th. Ample counter space will be provided, and, so far as possible, equal facilities will be given to every exhibitor.

A description, for insertion in the Museum Catalogue, should be forwarded to the private address of the respective Secretaries, at least one month before the meeting, that is, by July 10th.

To Exhibitors.—The expenses of carriage and of removal to be borne by the exhibitor. The Committee will exercise every reasonable care as to objects entrusted to them, but will not be responsible for risk or accident.

Excursions.

We are now able to announce the final arrangements for the excursions from Brighton during next week.

The Hastings Excursion.—Number limited to 150. The members will leave Brighton by special train at 9·20 A.M., and will return from Hastings by special train at 8.20 P.M.

The Eastbourne Excursion.—Number limited to 100. The members will leave Brighton by the ordinary train at 9.55 A.M., and arrive at Eastbourne at 10.50 A.M. They can return from Eastbourne by the 7.28 or 7.45, which arrive at Brighton at 8 30 and 8.55 P.M.

The Arundel Excursion.—Number limited to 200. Here again the members will travel by "special." They will leave Brighton at 10.5 A.M., and arrive at Arundel at about 11 A.M. From Arundel they will retrain for Chichester at 3.15 P.M., reaching Chichester before 4 P.M. The return "special" will leave Chichester at 6.50 P.M.

The Tunbridge Wells Excursion.—Number limited to 150. The members, travelling by ordinary train, will leave Brighton at 9.30 A.M., and arrive at Tunbridge Wells at 10.57 A.M. They will return by a train that leaves Tunbridge Wells at 7.17 P.M., and arrives at Brighton at 8.55.

For the convenience of those members who attend this excursion, and also wish to return to London the same night, without coming back to Brighton, the railway authorities have kindly granted permission by which members may travel to London Bridge from Tunbridge Wells *via* Three Bridges, on producing the ordinary London-to-Brighton return ticket. For these members the train will leave Tunbridge Wells at 6.15 P.M., and arrive at London Bridge at 8.33.

The Isle of Wight Excursion.—Number limited to 200. The steamboat "Brighton" will leave the West Pier at 8.30 A.M. The times of arrival at and departure from the Island are necessarily dependent on the state of the weather, and the ruling of Captain Gardiner. However, the members will be able to spend four hours on the Island.

The tickets for all these excursions will cost the same, viz., 6s. 6d., and beyond this no member will have to pay a penny.

The railway tickets will be sold all the week at the "Excursion Table," in the corridor of the Pavilion. Members *are earnestly requested* to purchase their tickets *as early as possible* in the week, so that due notice may be given to their entertainers of the number they are to expect, and to make ready for. Members are also warned that they can only secure a place in the excursions by purchasing the tickets, and that no notice of intention to accompany an excursion will be sufficient to secure a place at that excursion without the purchase of a ticket.

Steamboat Trips.—Thanks to the generosity of Captain Gardiner, the members of the Association will have plenty of opportunities for enjoying small trips on the sea. His boat leaves the West Pier every day at 11 A.M., 3 P.M., and 7.30 P.M. The members may accompany all these trips free of charge on production of their member's tickets.

Special trips will also be made on Thursday and Friday from 4 30 P.M. to 6.30 P.M. These also are free of charge, but are not open to the public. Members attending these two latter trips will have light refreshments provided. A band of musicians will also accompany them.

Members going on any of these excursions can go back to London the same night by the train which leaves Brighton at 10.35 P.M., arriving at London Bridge at 12.10 A.M.

Members desirous of returning North by steamer are informed that there are no steamers passing Brighton that would call for passengers. The only way would be to go to London by rail, and from thence by steamer for the North.

Notices of Motion.

Dr. Ward Cousins hereby gives notice that he will move the following addition to, and alteration of, the By-laws; namely,

Page 17, By-laws. Addition to "d," second line, after the word "member," add "of a Branch within the limits of the United Kingdom of Great Britain and Ireland."

Addition to "d."—"No person shall be eligible as a representative member of a Colonial or Indian Branch unless, at the time of his election, he shall be a recognised member of the Branch, and shall have resided within the area of the Branch for at least twelve months prior to his election. The election of Colonial and Indian members of the Council shall be annual, and shall be subject to the same by-laws as the election of other representative members."

Mr. John Dix hereby gives notice that, at the Annual Meeting, he intends to submit a proposition not involving an alteration of a By-law on the subject of the payment of travelling expenses of the Representatives of Branches to the meetings of the Council.

A motion will be introduced by the Shropshire and Mid-Wales Branch on the subject of State Honours to the Medical Profession.

Mr. JOHN MARSHALL gives notice that he will move

"That notices of Births, Marriages, and Deaths, occurring in families of members of the Association, shall be published in the BRITISH MEDICAL JOURNAL without charge."

May 6th, 1886. FRANCIS FOWKE, *General Secretary.*

THE following meetings, by permission of the Council, will be held during the Annual Meeting of the British Medical Association at Brighton.

BRITISH MEDICAL BENEVOLENT FUND.

THE Honorary Local Secretaries are requested to meet on Wednesday morning, August 11th, at 10 o'clock, in the King's Apartments, No. 1, Royal Pavilion.

MEDICAL DEFENCE.

THE attendance of all members of the Association interested in the question of the formation of a Medical Defence Association, in connection with the British Medical Association, is requested at a meeting to be held at Brighton, in the Town Hall, on Wednesday, August 11th, at 10 o'clock.

On behalf of the Council of the Lancashire and Cheshire Branch, CHARLES E. GLASCOTT, Honorary Secretary.

IRISH GRADUATES' ASSOCIATION.

THE Ninth Annual Meeting of this Association will be held in the Banqueting Room, Royal Pavilion, on Wednesday, August 11th, at 12.30 P.M.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE Annual Meeting of this Association will be held in the Banqueting-Room, Royal Pavilion, on Thursday, August 12th, at 10 o'clock. It is hoped that all Poor-law Medical Officers present will attend.

MEDICAL SICKNESS, ANNUITY, AND LIFE-ASSURANCE SOCIETY.

THE Third Annual Meeting of this Society will be held in the Masonic Room, Royal Pavilion, on Thursday, August 12th, at 10.30 A.M.

COLLECTIVE INVESTIGATION COMMITTEE.

THIS Committee will meet in the King's Apartments, No. 2, on Thursday, August 12th, at 10.30 A.M.

NEW SYDENHAM SOCIETY.

THE Annual Meeting of this Society will be held in the Saloon, on Friday, August 13th, at 9.30 A.M.

PROCEEDINGS OF COUNCIL.

AT a meeting of the Council, held in the Council Room, Exeter Hall, on Wednesday, July 21st, 1886, Present,—

Dr. B. W. FOSTER, President of the Council, in the chair,

Dr. W. T. Edwards, President, Cardiff
Dr. W. Withers Moore, President-elect, Brighton
Mr. C. Macnamara, Treasurer, London
Dr. B. Anningson, Cambridge
Dr. M. M. De Bartolomé, Sheffield
Dr. T. Bridgwater, Harrow-on-the-Hill
Mr. H. T. Butlin, London.
Dr. A. Carpenter, Croydon
Dr. A. H. Carter, Birmingham.
Dr. C. Chadwick, Tunbridge Wells
Dr. J. Ward Cousins, Southsea
Mr. T. W. Crosse, Norwich
Dr. G. W. Crowe, Worcester
Dr. A. Davidson, Liverpool
Dr. P. M. Deas, Exeter
Mr. John Dix, Hull
Dr. J. L. H. Down, London
Dr. W. A. Elliston, Ipswich
Dr. C. E. Glascott, Manchester
Dr. W. C. Grigg, London
Dr. C. Holman, Reigate
Professor G. M. Humphry, F.R.S., Cambridge
Mr. W. D. Husband, Bournemouth
Mr. A. Jackson, Sheffield
Mr. T. Vincent Jackson, Wolverhampton
Mr. T. R. Jessop, Leeds
Mr. H. R. Ker, Halesowen
Dr. W. G. V. Lush, Weymouth
Mr. F. Mason, Bath
Mr. S. W. Sibley, London
Dr. E. M. Skerritt, Clifton
Dr. W. Strange, Worcester
Mr. T. Sympson, Lincoln
Mr. J. Taylor, Chester
Dr. T. W. Trend, Southampton
Mr. F. Wallace, London
Dr. E. Waters, Chester
Mr. C. G. Wheelhouse, Leeds

The Minutes of the last meeting having been printed and circulated, and no objection raised, they were signed as correct.

Read letters of apology for non-attendance from Mr. Alfred Baker, Mr. J. Wright Baker, Dr. Henry Barnes, Surgeon-General Cornish, Dr. Duffey, Dr. Bruce Goff, Mr. Jones-Morris, and Mr. Prankerd.

Continued Minutes 1225 and 1226, of which the following are copies, were then considered.

"That the Council authorise and request the Chairman of the Council, the Chairman and Secretary of the Collective Investigation Committee, and such other persons as they may think fit to associate with themselves, to form a deputation to certain of the Corporations of London, to ask if they would be willing to contribute from their funds towards the carrying out of the Scientific Investigations into the distribution, the causes, and the treatment of disease, which this Association has undertaken with a view to the promotion of the general interests of the community in the matter of public health.

"Whereupon an amendment was moved:

"That the consideration of this question be deferred to the next meeting of the Council.

"The amendment having been put from the chair, the same was declared to be carried."

Whereupon an amendment was moved and seconded (notice of which had been given):

"That a subcommittee be appointed to inquire into the success of the work of Collective Investigation from the commencement of the movement, and report to the Council as to the continuance of the grant."

The motion having been withdrawn, the amendment was put from the chair as a substantive motion, and declared to be carried.

Resolved: That the Committee consist of the following gentlemen: Dr. Chadwick, Dr. Bridgwater, Mr. Sibley, Dr. Davidson, Mr. Butlin, Mr. Hugh Ker, Mr. Arthur Jackson, the President, the President of the Council, and Treasurer *ex-officio.*

Resolved: That 114 of the 115 candidates, whose names appear on the circular convening the meeting, together with the 44 on supplementary list, be and they are hereby elected members of the British Medical Association.

Resolved: That the minutes of the Journal and Finance Committee, of to-day's date, be approved, and the recommendations contained therein carried into effect.

The Journal and Finance Committee minutes contain particulars of accounts for the quarter ending June 30th, amounting to £4,371 1s. 1d., and report of further investment of £1,000 in Bank of England stock.

Read resolution of the South-Eastern Branch, of which the following is a copy—

"Resolved: That the question of payment of travelling expenses of the representatives of the Branches in the Council having been twice considered at annual meetings of the Association, and decided against by considerable majorities, the South-Eastern Branch see no reason for disturbing the existing arrangements, which have been recommended by a Committee, adopted by the Council, and emphatically affirmed by members of the Association."

"That a copy of this resolution be sent to the President of the East York and North Lincoln Branch, and to the President of the Council of the Association."

Resolved: That the report of the Premises Committee be received and adopted.

The report of the Premises Committee minutes ask for authority for the purchase of the lease of certain premises.

Resolved: That the minutes of the Trust Funds Committee of the 20th instant be received and adopted, and the recommendations contained therein carried into effect.

The minutes of the Trust Funds Committee contain reports of adjudicators (see JOURNAL, July 31st, page 225).

The Annual Report of the Council was then considered.

Resolved: That the report of the Council, as amended, be approved, adopted, and published in the JOURNAL for presentation to the General Meeting of Members at the Annual Meeting on the 10th proximo (see page 273).

Resolved: That the Report of the Parliamentary Bills Committee be received, and published in the JOURNAL for presentation to a General Meeting of Members at the Annual Meeting (see page 275).

Resolved: That the Report of the Habitual Drunkards Committee be received, and published in the JOURNAL for presentation to the Annual General Meeting (see page 276).

Resolved: That the Report of the Collective Investigation Committee be received, and published in the JOURNAL for presentation to the Annual Meeting at Brighton (see page 280).

Resolved: That the Report of the Medical Reform Committee be received, and published in the JOURNAL for presentation to the Annual Meeting at Brighton (see page 274).

Resolved: That the minutes of the Medical Reform Committee of the 21st instant be approved, and the recommendations contained therein carried into effect.

Resolved: That the gold medal for Distinguished Merit of the British Medical Association be awarded to Dr. Waters for his long-continued, self-denying, and able services in the cause of Medical Reform.

Dr. Bridgwater presented an engraved portrait of the President of

the Council, framed for hanging in the Council Room of the Association.

Resolved: That the present of the Portrait of the President of the Council be accepted with thanks.

The ballot for giving the medal for merit to Dr. Waters was then declared by the President of Council, 29 voting, and only one dissentient.

Resolved: That the Minutes of the Scientific Grants Committee of the 20th instant be received, approved, and the recommendations contained therein carried into effect.

Resolved: That the Report of the Scientific Grants Committee be received, and printed in the JOURNAL for presentation at the Annual Meeting at Brighton (see page 277).

Resolved: That the meetings of the Medical Sickness Annuity, and Life-Assurance Society, the Poor-law Medical Officers, the British Medical Benevolent Fund, and the Irish Graduates' Association, be allowed to be held as usual during the Annual Meeting, provided they are fixed for times which do not clash with the General and Sectional Meetings.

Resolved: That the Lancashire and Cheshire Branch be allowed to hold a meeting, during the annual meeting of the Association at Brighton, in a separate room, on the subject of Medical Defence.

Resolved: That the list of attendances, together with the returns of representatives of Branches for 1886-87, be received and entered on the minutes.

[*The following Reports of the Council, and of Committees, will be presented at the Annual Meeting at Brighton on August 10th, 11th, 12th, and 13th, and are published in accordance with the regulations for the conduct of Annual Meetings, which require that all Reports of Committees of the Association shall be printed in the Journal before the Annual Meeting.*]

REPORT OF COUNCIL.

Fifty-fourth Annual Meeting of the British Medical Association, Brighton, August, 1886.

SINCE your Council had the pleasure of meeting you at Brighton, in 1851, great changes have taken place, both in this town and your Association. Brighton has increased in population from 65,000 to 107,000; the town was then governed by 120 commissioners; it is now incorporated, and is governed by a Council and a Mayor. On the other hand, the Association, which in 1851 numbered 1,200, has at present nearly 12,000 members, and is incorporated, and governed by the officers of the Association and by representatives on your Council, directly elected by the Branches. The Association has also extended its organisation to the Colonies and to India.

Your Council are glad to be able to report a continued increase in the prosperity of the Association, both financially and in the number of its Branches. In spite of the severe depression, affecting all professions and classes, the increase in the number of our members has been fairly maintained, while the surplus of revenue over expenditure has increased. The revenue of the Association for the past year has been £23,713; the expenditure, £20,400, leaving a balance or surplus of £3,313. This has been invested by your Council, £2,000 in Newcastle Corporation Bonds, 3½ per cent., at £99½; and £1,000 Bank of England Stock, which pays at the present dividends about 3¼ per cent. Your investments now amount to £22,541.

The JOURNAL has now reached a weekly issue of 13,000 copies; and, on the occasion of the twentieth year of office of your editor, Mr. Ernest Hart, your Council have the pleasure to express their sense of the ability and impartiality with which he has performed his duties, and their belief that the success of the JOURNAL is mainly due to his efforts.

Your Council look forward to the formation of new branches which have been promised at Limerick, Bermuda, Ceylon, and at Calcutta. The Sydney Branch forwarded a communication to the General Secretary during the past year, requesting that the JOURNALS to the various members of the New South Wales Branch might be forwarded through an agent, instead of being sent direct from the office. The difficulties and objections were so apparent your Council decided that such an arrangement could not be entertained.

Your Council have the pleasure to report the complete organisation of an important Branch, having its centre in the University city of Oxford. This Branch, though formed previously to the last meeting, had not completed its organisation in time for the Council then to notify it formally to you.

It is desirable, for the interests and influence of the Association, that the Branches should act in closer unison with the Council; and more especially your Council desire to draw the attention of the Indian and Colonial Branches to this point. With this object a modification in the By-laws will be submitted to the annual meeting. The distance from the parent Association and offices, no doubt, renders an interchange of ideas somewhat tedious; but, from the interest with which all communications from the Indian and Colonial Branches are received by the Association, your Council hopes that our Branches throughout the Empire may feel that we have a common object in advancing the welfare of the profession.

The good work so faithfully and courteously performed by the honorary secretaries of the Branches merits your warmest thanks. Amongst those whom your Council regret to report as having resigned their appointments during the past year are Dr. Henry, who has held the office of Honorary Secretary to the Metropolitan Counties Branch for twenty-seven years; Dr. Carter, the Birmingham and Midland Branch; Dr. Hayes, the Dublin Branch; Dr. Marshall, the Midland Branch; Dr. Saunders, the Jamaica Branch; and Dr. Warren, the Sydney and New South Wales Branch.

The various committees appointed by the Council have been constantly at work during the year.

Not only the Association, but the medical profession, are under an obligation to the Medical Reform Committee, and especially to its Chairman, Dr. Edward Waters, of Chester. For the last eighteen years, notwithstanding the pressing claims of an extensive practice, and in spite of disappointments which would have discouraged most men, Dr. Waters has assiduously laboured to promote the Medical Act Amendment Bill, the success of which we have now the pleasure of recording. To his unwearied energy and judicious management is very largely due the passing of the Act.

In the conduct of the Bill through the House of Commons the Association has derived valuable aid from Dr. Foster, the President of the Council, especially in bringing the insufficiency of the proportion of two direct representatives, originally allotted to England, to the notice of the House.

The Parliamentary Bills Committee has rendered valuable assistance in amending the Lunacy Acts Amendment Bill; most of the recommendations of the Committee have been adopted by the Lord Chancellor, and the Bill has passed the House of Lords. The Committee has also had under consideration the various health clauses in the private local Corporation Bills, more especially those which relate to the compulsory registration of infectious disease, and upon which you have from time to time expressed a decided opinion. The Sanitary Clauses of the Burgh and Police of Scotland Bill, and the position of the medical officers of the mercantile marine have also received the attention of your Committee, but the full particulars of the action of this Committee will be placed before you in its report.

The Scientific Grants Committee has not, this year, exceeded your grant of £300. Last year, a special grant of £100 in addition to the £300 was made upon the recommendation of the Committee appointed to consider the application for a proposed research upon the methods of conferring immunity from infection in certain septic diseases, and the conditions upon which such immunity depends. Your Council regrets that no satisfactory report has been received from the recipient of this grant.

The Scientific Scholarships, instituted three years ago next October, expire at the end of the current year. Your scholars have been Dr. Augustus Waller and Mr. Watson Cheyne. Mr. Watson Cheyne's research has been upon "The Relation of Micro-organisms to Disease"; Dr. Waller's, upon "The Fatigue and Recovery of Muscle and Nerve." Elaborate and highly scientific reports have been given by both Mr. Watson Cheyne and Dr. Waller on their respective subjects.

The Collective Investigation Committee has, during the past year, directed its attention principally to winding up the inquiries previously extant; in fact, since July, 1884, the only report published by the Committee has been one drawn up by Professor Humphry, on old age, which appeared in the JOURNAL of the Association in May, 1885. The Collective Investigation Committee, however, feel confident that the nucleus has been successfully formed of a body of regular and persistent workers, which tend gradually to increase; and, to enable them to carry on their work, they solicit a renewal of the grant of £600 for the ensuing year. Your Council are aware that there is a feeling of disappointment among a large proportion of the members of the Association—that, with a net expenditure, up to the present time, of so large a sum as £2,126 on collective investigation, that the result has not been more marked than it now is; but a work of this kind takes time to develop, and, having been commenced, it would seem unwise to hamper its efforts for want of funds. At the

same time, your Council believe that the time has arrived for careful consideration, on the part of the Association, of the subject of collective investigation from a financial point of view. A Subcommittee has been appointed to inquire into the success of the Collective Investigation Committee.

The Trust Funds Committee have, in accordance with the instructions of the Middlemore and Stewart Trust Deeds, offered again prizes on the subjects required by the deeds, approved by the donors, Mr. Middlemore and the late Dr. A. P. Stewart, the latter for the best work on "Contagious Disease," the former for the best essay on the "Discoveries in Ophthalmic Science."

The question of more commodious premises has engaged the attention of your Council during the past year, and in accordance with the wishes of the Association expressed at the last annual meeting, a Committee was appointed for this purpose. This Committee has had the eligibility of various sites under consideration, with valuations, plans, and reports, and your Council trusts, before long, to place before you a satisfactory result; at the same time, there are great difficulties in obtaining the necessary requirements at a reasonable cost.

Your Council in the last annual report stated that, in the opinion of your solicitor, and also of counsel, the Association in General Meeting had not the power to appoint Committees. Your Council, therefore, appointed a Committee to consider and report upon the constitution of the various Committees, and on the mode of the election of the members of the same, and also to suggest in what manner the reports should be brought before the annual meeting of the Association. The Council adopted the following regulations, upon the recommendation of the Committee.

RULES AND REGULATIONS AS REGARDS THE COMMITTEES OF THE BRITISH MEDICAL ASSOCIATION.

1. That the Council may from time to time appoint Committees for such purposes as it may think proper. These Committees may consist either wholly of members of the Council or partly of members of the Council and partly of members of the Association (not members of the Council).

2. That, at the first or subsequent meeting of the Council after the first day of the annual meeting, such Committees as may be desirable shall be appointed. It shall be the duty of any Committee, whose work is to be continued, to provide the Council before the annual meeting with the names suggested to act for the ensuing year.

3. That it shall be competent to the various Committees to add to their number new members. These new members shall be empowered to act on the Committee until the next meeting of the Council, when their names shall be submitted to the Council for election on the Committee.

4. That the Committee shall be empowered to ask other gentlemen, either members of the Association or others, to assist in the deliberations of the Committee, without the power of voting.

5. That it shall be the duty of each Committee to keep the Council informed of their proceedings by submitting their minutes to each quarterly meeting of the Council.

6. That a report from each Committee shall be submitted to a meeting of the Council before the annual meeting of the Association. This report, if approved and adopted by the Council, shall be submitted to the general meeting of the Association.

7. That it shall be the duty of the General Secretary to summons each Committee as soon as convenient after their election.

Amongst the losses in your ranks which you have to deplore are Mr. G. D. Brown, of Ealing; Dr. S. Monckton, of Maidstone; Mr. W. M. Clarke, of Bristol, a former President of the Bath and Bristol Branch; Dr. H. G. Bull, of Hereford, a well known naturalist and antiquarian; Mr. T. J. Tufnell, a former President of the College of Surgeons of Ireland; Dr. S. S. Dyer, of Ringwood, Hants; Dr. K. King, of Hull; Dr. Daniel Allen Charles, of Cookstown; Mr. William Bousfield Page, of Carlisle; Dr. Sigismund Sutro; Dr. John Bishop, of Edinburgh, who was one of the Honorary Secretaries of the Edinburgh Meeting in 1875; Dr. Evory Kennedy, who was President of the Obstetric Section in 1872; Mr. John Archer, of Birmingham; Dr. James Thompson, late of Leamington; Dr. William Cumming, of Edinburgh; Mr. Francis Mason, of London; Deputy Surgeon-General W. H. Corbett, M.D.; Mr. Thomas Darby, one of those who assisted in forming the Dublin Branch of the Association; Mr. White Cooper, Surgeon Oculist in Ordinary to the Queen; Mr. J. M. Burton; Mr. Shadford Walker, President of the Section of Ophthalmology in 1883.

B. WALTER FOSTER, President of the Council.

REPORT OF THE MEDICAL REFORM COMMITTEE.

IN recording the passing of the Medical Act of 1886, the Medical Reform Committee of the Association have to announce the completion of the work they were appointed to discharge on behalf of the Association.

On May 28th, 1867, the Council of the Association nominated a Sub-committee to consider the means of obtaining the representation of "the great body of the profession" in the Medical Council in any alteration of the Medical Act of 1858.

This was the special work delegated to the Sub-committee which reported, accordingly, at the annual meeting held in Dublin in the same year, the mode of doing it, when the report was almost unanimously adopted.

In July, 1868, in pursuance of the instructions of the Association, a deputation from the Council of the Association waited on the General Medical Council, and submitted the resolution passed in Dublin, but without producing any result other than a fruitless discussion on the subject in the Medical Council.

At the ensuing annual meeting of the Association in Oxford in 1868, the Sub-committee of the Council was enlarged by the addition of an equal number of members of the Association who were not members of the Council, and the Direct Representation Committee was thus changed into a committee receiving mandate directly from the Association, in place of being a Sub-committee of the Council of the Association.

At the annual meeting at Newcastle in 1870, the Government Medical Bill, in the charge of the Marquis of Ripon and the late Mr. W. E. Forster, having been withdrawn, the Direct Representation Committee was changed into the Medical Reform Committee of the Association, with instructions to promote a complete Medical Act Amendment Bill on behalf of the Association, whereby a far more extended and more arduous sphere of work was assigned them, and that at a period when the income of the Association barely balanced the expenditure, and when there were no funds available for the payment of parliamentary agents and draftsmen.

The action of the Direct Representation Committee had compelled a recognition of the power wielded by the Association. Other parties were thereby encouraged to enter the field, and, without any real backing behind them, rival bills were proposed. Year after year the action of the Association was thus greatly embarrassed, and its power, in some degree, compromised. The labours of the Medical Reform Committee, however, were none the less annually endorsed and approved by the Association, the Committee as regularly reappointed, and the struggle unceasingly maintained, though under the most discouraging circumstances, in consequence of the opposition to direct representation by members of the General Medical Council and others who descended to stigmatise the members of the Medical Reform Committee as mere "agitators" and "wirepullers." Notwithstanding the employment of these and other opprobrious epithets, the Medical Reform Committee, strong in the consciousness of the justice and need of their work, continued their labours until, after many years, in 1879, during the Government of the late Lord Beaconsfield, the whole subject was referred to a Select Committee of the House of Commons. This Committee sat during the sessions of 1879 and 1880, and had nearly closed the evidence when Parliament was suddenly dissolved. It is an open secret that the Select Committee would have reported in favour of direct representation, and of the examination of all members of the profession in medicine, surgery, and midwifery before admission to the *Medical Register*.

The dissolution of Parliament at the moment when the work of the Select Committee was almost terminated was a bitter disappointment, inasmuch as it compelled a fresh start when the question was near being settled.

A Government, under the premiership of Mr. Gladstone, replaced that under Lord Beaconsfield, with Earl Spencer, as Lord President of the Privy Council, and Mr. Mundella as Vice-President of the Committee of Council on Education. In 1881, they received the Medical Reform Committee as a deputation from the Association, and the Lord President subsequently obtained the appointment, by Her Majesty, of the Royal Commission presided over by the Earl of Camperdown. The Report of the Medical Reform Committee, submitted to the Jubilee Meeting of the Association at Worcester, showed that the Royal Commission had reported in favour of all the points which the Association advocated, and the Committee were instructed to request the Government to frame a Bill on the basis of the Report. With this object, the Medical Reform Committee were, on November 20th, 1882, presented to Lord Carlingford and Mr. Mundella, by His Grace the Duke of Westminster, and Lord

Carlingford, in 1883, carried a Bill through the House of Lords, which failed in the Commons.

In 1884 the same Bill went through the same process. The Government failed to carry it through the Commons, although the leaders of the Opposition and the great mass of the members were in favour of it. The impediments in the way of any Bill which affected the privileges and interests of the Universities and Corporations were, by sad experience, proved to be well-nigh insuperable; and Lord Carlingford, abandoning, in consequence, the Bill of 1883 and 1884, drafted a less ambitious measure in 1885, which, owing to a change of Government, was not proceeded with. The strong opinion formed by the majority of the Royal Commission in favour of Direct Representation enabled the Government to propose these Bills which, for the first time, contained provisions for the direct representation of the medical profession in the Medical Council.

On the advent of the present Government, the Reform Committee lost no time in again pressing forward the need and urgency of medical legislation, and specially dwelt on the increased power which the Association had acquired through the presence of several members of the profession, including the President of the Council of the Association, in Parliament, and through the appointment of Select Committees of the House of Commons on the subject, followed by that of the Royal Commission. Reference was also made to the familiarity of the Lord President and Sir Lyon Playfair, the newly appointed Vice-President of the Committee of Council on Education, with all the details of the question. A hope was also expressed that any Bill that might be undertaken would be introduced in the House of Commons instead of, as previously, in the House of Lords. Following on these representations, Sir Lyon Playfair drafted a Bill which was confidentially laid before the Medical Reform Committee and generally approved. The Bill was subsequently submitted to the Council of the Association with a similar result.

In the passage of this Bill through Committee of the House of Commons, the number of direct representatives for England, through the initiative of Dr. Foster, the President of our Council, was increased from two to three, and, in Clause 10 of the Bill, provision is made for the increase of the number of direct representatives under certain contingencies.

The Bill having received the Royal assent, the direct representation of the profession is now established.

The Act further provides that no one shall be admitted to the *Medical Register* who has not been examined, under the supervision of the Medical Council, in medicine, surgery and midwifery.

The registration of partial qualifications is, therefore, no longer possible.

Your Committee are of opinion that the realisation of these two points constitutes a decided advance in medical legislation, and that it would have been most unwise not to accept them.

The Committee, on the part of the Association, desire to express their thanks to the Lord-President and Sir Lyon Playfair for securing the Medical Act of 1886.

The thanks of the Association are also eminently due to C. Lennox Peel, Esq., C.B., the Clerk of the Privy Council, for the courtesy and kindly consideration he has invariably shown when discussing the details of the quarter of a hundred Medical Bills which have passed through his hands since 1870. His intimate acquaintance with all the intricate questions involved in the subject, and his knowledge of what was possible and what was unattainable, have greatly contributed to the present settlement of the vexed question.

The Medical Reform Committee have a duty to discharge in acknowledging the unstinted assistance afforded them by W. H. Michael, Esq., Q.C., the eminent parliamentary barrister. His services were freely placed at the disposal of the Association, and should not be left without acknowledgment.

The Committee cannot conclude without a reference to the many loyal and devoted members who have worked with them during this fight of twenty years' duration. Sibson, Charlton, Southam, Falconer, Wilkinson, the beloved and ever-lamented Stewart, and the brilliant Hughes Bennett, out of a long roll of lost friends, zealous workers on the Committee, have passed from amongst us—"not dead, but gone before"—and are ever to be honoured by the Association.

EDWARD WATERS, M.D., Chairman and Convener of the Medical Reform Committee.

July 9, 1886.

BEQUESTS AND DONATIONS—Miss A. F. Howis has given fifty guineas to the Charing Cross Hospital.—"A Mother" has given £50 to the North-Eastern Hospital for Children.

REPORT OF THE PARLIAMENTARY BILLS COMMITTEE.

OWING to the pre-occupation of the House of Commons with regard to Irish affairs, medical and social legislative proposals have not received much attention during the past session. Until the Irish question assumed such formidable dimensions, however, the House appeared willing, and even anxious, to forward measures on social questions, and there were some interesting debates early in the session on a variety of Bills and resolutions of this kind introduced by private members. With very few exceptions, however, these Bills did not make any useful progress, and it will not be necessary, in this report, to refer further to them.

Lunacy Acts Amendment Bill.—At a meeting of the Parliamentary Bills Committee, on February 19th, reported in the JOURNAL for February 27th, 1886, a Subcommittee was appointed to consider the provisions of the Lunacy Acts Amendment Bill, 1886, then about to be published. The Subcommittee consisted of the reappointed members of the similar Subcommittee of 1885, namely, Mr. Ernest Hart (chairman), Dr. Langdon Down, Dr. Orange, Mr. Sibley, Mr. Wickham Barnes, Dr. Grigg, Dr. Mickle, together with several new members, Dr. B. Foster, M.P., Dr. Bucknill, F.R.S., and Dr. Alfred Carpenter, J.P.

The Lunacy Acts Amendment Bill of last year was reintroduced by Lord Chancellor Herschell, with large modifications. The original Bill had presented objectionable features, and some of the changes engrafted upon it were also deemed by the Subcommittee to urgently need fundamental alteration in order to make the Bill a fair and workable measure, should it become law.

The Subcommittee met several times, fully considered all the provisions of the Bill, and drafted a memorandum containing a series of recommendations for amendment of the Bill. This memorandum was printed in the JOURNAL of March 13th, 1886, pages 515-7 (the remarks under "Section 17," page 516, second column, should be read under "Section 43," page 517, first column). The memorandum of the Subcommittee, containing the suggested amendments, was accompanied by a letter to the Lord Chancellor, printed at page 560 of the JOURNAL of March 20th.

The chief recommendations of the Subcommittee were:

1. That the same degree of protection afforded by the Bill to the medical practitioners who, in good faith, sign certificates of insanity, should be extended to those who, similarly, in good faith, receive and detain patients in asylums or under single care.

2. That the subsection of the Bill should be omitted by which it was provided that, except in the case of lunatics so found by inquisition, no order should be made for the reception of a lunatic as a "single" patient; that is to say, in the house of a medical or other person not licensed to receive persons of unsound mind.

3. That the sections which, as they stood, would practically have led to a large degree of confiscation, without compensation, of the income and property of private asylum proprietors, should be omitted, or modified, or that the question of reasonable compensation should be entertained.

4. That large modifications should be introduced into the section (liable to much abuse), under which a lunatic could be examined at the request of anyone, and discharged if certain certificates could be obtained.

5. That alterations should be made in the provisions of the Bill concerning workhouse medical officers.

6. That the section should be omitted, or greatly modified, which deals with the periodical reports and certificates, as to mental unsoundness, demanded, under the Bill, from the medical officers of asylums.

After the memorandum embodying the suggestions of the Subcommittee had been transmitted to the Lord Chancellor, his lordship introduced amendments which greatly modified and improved the Bill (see JOURNAL, April 3rd, 1886, pages 649 and 658). A further communication was made to the Lord Chancellor (JOURNAL, April 10th, page 712), pressing several suggestions not yet adopted, and these his lordship promised to consider.

The defeat of the Government led to the withdrawal of the Bill; but, should it be reintroduced in the present form, the following are the chief points of amendment, suggested by the Subcommittee, which still remain to be urged in Committee on the Bill in Parliament.

(*a*) The suggestions which relate to the extension to those who take charge of insane persons, of the protection afforded under the Bill to the medical practitioners who sign certificates of insanity. It is submitted that recent trials, in which actions have been brought against the medical officers of public lunatic hospitals, show that the protec-

tion at present granted by law is inadequate to provide the safeguards that may reasonably be expected, with respect to vexatious actions against those who take charge of insane persons, whether in private or in public asylums.

(*b*) The modification suggested in the section under which any lunatic in any asylum may be examined on the application of any person; and if two medical certificates are obtained, may be discharged; which would sometimes place power in the hands of improper persons, and prove a fertile source of vexatious litigation for alleged improper detention.

(*c*) The amendments suggested with respect to the section dealing with the periodical reports and certificates required from medical officers of asylums, especially with regard to the extreme desirability of providing that the signing and making of all reports or certificates required under the Bill should be protected in precisely the same manner as is adopted in the Bill in respect to the medical certificates of insanity under which persons are sent to asylums.

(*d*) The modifications suggested in order to protect the medical officers of workhouses against heavy damages for not acting in cases of doubt, and to secure remuneration for their certificates.

Leaving the recommendations of the Subcommittee, it may be added that it seems to be desirable that the "justice" should personally examine in all cases, private or pauper; the Bill leaving it optional with regard to the former, and doing away with the protection now afforded by that means to the latter. A new provision of the Bill, also, might well be excised; that by which no order of a justice, etc., would be requisite in cases certified to be of temporary unsoundness of mind, senile decay, or desirous of voluntarily submitting to treatment, and which would be likely to prove a fertile source of litigation.

With comparatively slight alterations, the Bill will be a great boon to the insane, and to those who have to assume responsibility with regard to them.

Burgh Police and Health (Scotland) Bill.—In previous reports, the Committee have gone fully into their proceedings with regard to this Bill, which has now been introduced in four successive sessions of Parliament. On February 18th last, Lord Granville announced it as one of the Bills to which the House of Lords would be invited to give its attention whilst the Government was formulating its Irish proposals. When the new Bill was published, it was found to be identically in the same form as last year, and the Committee deemed it necessary, therefore, to reissue their memorandum of 1884, pointing out the objections to the Bill. This memorandum was circulated amongst peers and members of the House of Commons interested in the question, and Mr. Trevelyan, then Secretary for Scotland, was asked to receive a deputation from this Committee, to explain the views of the profession on the clauses more immediately affecting them. Mr. Trevelyan courteously promised to receive such a deputation, as soon as the Bill came down to the House of Commons; but when it had arrived at this stage, Mr. Trevelyan was no longer a member of the Government. The only stage at which even a pretence of discussing the Bill was made in the House of Lords, was in Committee, which did not last much more than an hour, although the measure contained 553 clauses and a number of schedules. The third reading in the Upper House was passed without any debate whatever; and, in the Commons, the second reading of the Bill was attempted by the Government at 2 A.M. on the morning following that on which it had been delivered to members. Meantime, however, the Committee had made earnest representation to many Scotch members, who intervened to prevent such hurried proceedings. The subsequent defeat of the Government made it impossible to find time for its further discussion. It appears to the Committee that, independently of other objections, the Bill ought not to be passed before a careful inquiry has been made into the whole question of the relations of private medical men with local sanitary authorities, as regards cases of infectious disease occurring in their practice.

Registration of Midwives Bill.—The Subcommittee on this Bill has had under its consideration the question raised by Lord Carlingford, when Lord President, as to whether any of its provisions could be made less stringent, in order to heighten its chances of passing through Parliament; but circumstances have not been favourable to an active prosecution of the measure this year.

Regulation of Dairies.—The Committee have given consideration to the question of the enactments, at present in force, for safeguarding the purity of our milk-supplies, and have made representations to the Government. They had the satisfaction of obtaining this year a clause, in the Lord President's Contagious Diseases (Animals) Act, providing, in accordance with their past suggestions, for the transference of the duty of supervision from the Privy Council to the Local Government Board. The effect of this clause is, that the local sanitary authorities of the country, instead of the courts of quarter sessions, will be charged with the responsibility for regulating the sanitary condition and circumstances of dairies, cow-sheds, and milk-shops. Looking to the illusory character of the existing law on the subject, and to the very general neglect to carry out the orders of Council issued under the Act of 1878, the Committee feel that this proposed transfer of powers is of high practical importance; and they rejoice to observe that, at length, this useful measure of health-legislation has been accomplished.

Private Health Bills.—No opportunity has arisen during the year for direct intervention by the Committee with regard to the assumption by individual corporations of powers requiring medical men and others to make compulsory notification of cases of infectious disease to the medical officer of health. At the beginning of the session, correspondence was opened with those places where such notification was being promoted by the local authority; and the assistance of the Committee was promised to the local profession in case they might wish to express their views on the subject, or to raise objections to the local authority's proposals. In the case of one town (Carlisle), the materials supplied to a leading medical man on behalf of the Committee had the result of inducing the Town Council to withdraw the clauses objected to. In the case of the other towns, there did not appear to be any very strong feeling on the part of the profession; and, as has more than once been explained, no direct action on the part of this Committee is possible. The *locus standi* of the Parliamentary Bills Committee with regard to individual Private Bills has been persistently denied; and, though the Committee attempted, through Dr. Farquharson, M.P., to get the point reopened by the Select Committee to whom the local sanitary Bills of this year were referred, no change in their position has been accorded. Their powers in the matter are, therefore, at present limited to a promise of assistance to local practitioners, though they are not without hope that, when a favourable opportunity occurs, the whole question of the notification of infectious disease, and the relations of the profession with such cases, may be remitted to a Special Committee of the House or a Royal Commission. The information and experience which the Committee have gathered on this very important matter will then, it may be hoped, become usefully available for the advantage of the profession, in whose behalf it has been collected.

ERNEST HART, *Chairman.*

REPORT OF THE HABITUAL DRUNKARDS' LEGISLATIVE COMMITTEE, 1886.

IN presenting their annual report to the Council, the Committee regret that, owing to the unusual absorption of legislative attention by political affairs, no suitable opportunity has been found of laying the proposals for amended legislation for habitual drunkards before either the Ministry or the Parliament.

The Committee have utilised this enforced delay, by giving a thorough consideration to the whole question, in which work they have been considerably aided by the deliberations of the Society for the Study and Cure of Inebriety, and by the published record of the experience of an additional year's operations at the Dalrymple Home for Inebriates, at Rickmansworth.

The Committee, while glad to acknowledge that a certain amount of good has been done by the Habitual Drunkards' Act, has been deeply impressed with the urgent need for a more considerate, complete, and efficient measure.

The Act is defective in many particulars:

1. It will expire in three years more, unless it be renewed.
2. The entrance into a licensed retreat is rendered forbidding by the compulsory appearance of the applicant before two justices. This procedure is deterrent to both sexes, especially to females.
3. By a recent interpretation on the part of the Home Office, the two justices must be "in the Commission of Peace for the county in which the attestation is made." This renders the securing of the necessary two justices more difficult than before, as it frequently happened that a justice from an adjoining county was on a visit to the justice to whom the habitual drunkard applied in the first instance. In retreats on the borders of more than one county, it has been found very difficult to obtain the presence of two justices without taking the applicant a considerable distance away, thus practically rendering patients unable to avail themselves of the provisions of the Act.
4. In the event of escape from a licensed retreat, the compulsory appearance of the patient before a justice is a penal procedure which exercises an untoward influence on the after-treatment in the retreat.
5. There is a want of power over correspondence and remittances forwarded to patients while under treatment, the possession of money being a powerful temptation to escape for the purpose of procuring liquor.
6. There is no authority in the Act for the appointment of a deputy in the absence of the superintendent from illness or other causes.
7. There is a total absence of provision for the cure and control of the destitute habitual drunkard, and for habitual drunkards in all stations in life, who are unwilling to apply for admission into a retreat.

In the United States, and in some of our own colonies, there is better and more effective legislation. In Victoria, for example, a permanent Act, passed in 1872, provides for voluntary application by a patient to one justice only, who has power to authorise the apprehension and conveyance of the applicant to a retreat. Any relation or friend of a habitual drunkard may apply to a county court judge, who can summon the inebriate to show cause against committal to a retreat. On a statutory declaration by two medical practitioners, the judge may order the inebriate's apprehension and committal to a retreat for any period not exceeding twelve months. Patients may be retaken, after having escaped, by any officer or servant belonging to the retreat, by any constable, or by any person authorised in writing by the superintendent, and be conveyed back to the retreat. Letters for patients must be enclosed in an envelope addressed to the superintendent. The superintendent may appoint a substitute to act with full powers during temporary absence.

The Committee recommended that the following amendments be suggested to the Home Secretary and to the Houses of Parliament, which amendments the Committee believe would greatly aid in the reformation and cure of numbers of habitual inebriates, who at present are beyond the reach of all moral and remedial influences.

1. A permanent measure instead of the present temporary Act.
2. In the case of voluntary applications for admission, attestation by one justice instead of by two justices, as at present; the signature of applicant to be attested at the house of the applicant or elsewhere.
3. The escaped patient, instead of, as at present, after re-capture on a warrant, having to appear before a magistrate, to be sent back to the retreat, from which he has escaped, direct; immediate notice being given to the Secretary of State of his return to the retreat.
4. Power to licensee to open all correspondence, if he should think this necessary, and to retain any money enclosures, postal orders or cheques. A memorandum of the amount to be handed to the patient.
5. Provision for the appointment of a deputy medical superintendent, or substitute, during temporary absence of superintendent.
6. Magistrates should have power to commit well-defined cases of habitual drunkenness to a retreat, for care and control, without consent of the patient.
7. The Metropolitan Asylums Board, and other like authorities throughout the kingdom, to have power to make provision for the care and treatment of habitual drunkards of limited or no means.
8. Guardians to be empowered to detain paupers who are habitual drunkards, for a period not exceeding twelve months, for treatment, either in the particular workhouse, or in some licensed retreat, with power in the latter case to pay for their maintenance.

In view of the importance of the work to be done, the Committee recommended their appointment as follows, namely:. The President and President-Elect *ex-officio*, Dr. Norman Kerr, Dr. Foster, M.P.; Mr. D. B. Balding, Mr. H. Branthwaite, Dr. C. Cameron, M.P.; Dr. Alfred Carpenter, Dr. C. R. Drysdale, Dr. J. W. Eastwood, Surgeon-Major Evatt, Dr. R. Farquharson, M.P.; Mr. W. C. Garman, Dr. J. Hill Gibson, Dr. Alexander Grant, Dr. C. J. Hare, Mr. C. Holthouse, Mr. H. R. Ker, Mr. R. H. B. Nicholson, Surgeon-Major G. K. Poole, Mr. J. Prankerd, Fleet-Surgeon G. Robertson, R.N., Dr. Joseph Rogers, Dr. G. D. P. Thomas, Dr. H. W. Williams, Surgeon-General C. R. Francis, Dr. E. H. Vinen.

NORMAN KERR, *Chairman.*
E. HART VINEN, C. R. FRANCIS, } *Secretaries.*

REPORTS OF THE SCIENTIFIC GRANTS COMMITTEE.

THE Scientific Grants Committee have to report that the sum granted in aid of scientific research was £300, of which the following are the particulars:—

	£	s.	d.
Dr. V. D. Harris, 39, Wimpole Street, W., for an Investigation into the Derivation of Hæmoglobin	10	0	0
Dr. Noel Paton, 21, Maitland Street, Edinburgh, a Research upon the Influence of Hepatic Stimulants on the Composition of the Urine	30	0	0
Dr. W. D. Halliburton, 135, Gower Street, W., Research into the Constitutional Properties of the Proteid Matters of the Blood	25	0	0
Professor V. Horsley, 80, Park Street, W., in Aid of Scientific Research in Animal Tissues	30	0	0
Dr. Angel Money, 24, Harley Street, W., for an Experimental Study on Cerebral Capillary Embolism	20	0	0
Dr. Dawson Williams, 4, Oxford and Cambridge Mansions, W., in Aid of an Investigation into Infectious Wound Diseases and Tuberculosis (continued)	30	0	0
Dr. Sidney H. Martin, 135, Gower Street, W.C., in Aid of a Research into the Action of Papain, and Permission to Retain the Apparatus of Mr. Stanley Boyd (continued)	20	0	0
Dr. Theodore Cash, Drumearn, Earlsfield Road, Wandsworth, S.W., in Aid of an Investigation of the Action of Pathogenic upon Non-Pathogenic Organisms	15	0	0
Mr. Ralph Stockman, 2, Bonnington Place, Leith, in Aid of a Research into the Physiological Action and the Therapeutic Value of Vegetable Astringents	35	0	0
Mr. G. A. Atkinson, Wylam-on-Tyne, to Ascertain the Action and Value of Certain Preparations containing Nitrites as Diuretics, notably Spirits of Nitrous Ether	10	0	0
Dr. C. Beevor, 81, Harley Street, W., Localisation of Motor Function in the Cervical Enlargement of the Spinal Cord	25	0	0
Dr. W. Hunter, 8, West Maitland Street, Edinburgh, the Fate of Extravasated Blood	20	0	0
Dr. P. M. Chapman, 1, St. John Street, Hereford, for the Purchase of a Recording Drum for Special Use in Cardiographic Work	26	5	0
	£296	5	0

The following sums have been returned as unused:—

Dr. V. D. Harris	5	0	0
Dr. W. D. Halliburton	6	14	6
Prof. V. Horsley	25	0	0
Dr. Dawson Williams	18	10	5
Dr. S. H. Martin	0	3	9
Dr. Ralph Stockman	1	11	8
Dr. G. A. Atkinson	3	9	8
Dr. W. Hunter	6	19	2
Dr. P. Chapman	6	11	6
Total	£74	0	8

Dr. Noel Paton will shortly send a report upon the subject of his research, namely, the influence of hepatic stimulants on the composition of the urine.

Dr. Halliburton, who has continued the investigation, originally commenced by Professor Schäfer, has been engaged during the past year in continuing his researches on the chemistry and physiology of the blood. A paper, descriptive of his investigations into the blood of crustacea, was published in the *Journal of Physiology*, December, 1885. An abstract of the results obtained from an investigation into certain of the properties of hæmoglobin and methæmoglobin crystals was communicated to the Physiological Society in February of this year.

Dr. Halliburton is at present engaged on researches on the physiological chemistry of lymphatic glands and muscle-plasma; in the latter instance, the phenomena of rigor mortis have especially engaged attention. The incompleteness of these investigations at present prevent Dr. Halliburton from publishing an account of them. When they are more advanced, however, he hopes to send a communication on the subject to the Association.

Professor Victor Horsley's research on the relation between the posterior columns of the spinal cord and the excito-motor area of the cortex, with special reference to Professor Schiff's view on the subject, was undertaken in consequence of the publication in England of certain experiments devised by Professor Schiff, and imagined by him to throw grave doubt upon the views of cerebral function held by the English School of Neurology at the present day. Briefly summed up, his conclusions amounted to this: that the fibres in the posterior columns of the spinal cord run directly to the opposite hemisphere, and that section of them was followed by degeneration of the corresponding excito-motor area: that this part of the cortex was not in the least motor in function, but, on the contrary, a perception-centre of tactile sensibility. These conclusions he considered to be established, more especially, by a series of experiments in which he divided the posterior columns of the cord, and then compared the reaction of the limbs on either side, when the corresponding hemisphere was stimulated with the faradic current in the usual way. This experiment was the one which it was the object of the present research to test, and the results of seven experiments conclusively showed that the apparent diminution in excitability of the opposite motor cortex was a phenomenon entirely due to the production of blocking of the direct pyramidal tract, such blocking being a degenerative, and therefore destructive, process, evoked by the vascular and other disturbances set up by the section of the posterior columns. Where this condition was slight, Schiff's result was absent, and, on the contrary, when the amount of damage to the spinal cord was exaggerated, especially if the antiseptic dressings failed, the phenomenon, as described by Professor Schiff, was easily obtained. This experiment, therefore, cannot be accepted as in any way supporting the views enunciated above. The whole question, however, is an extremely interesting one, and has supplied fresh information concerning the surgery of the spinal cord. Full details are published in *Brain*, April, 1886, page 42.

Dr. Money has continued his research on the effects of artificial embolism of the brain. Although the experiments do not support the theory of Hughlings Jackson, they cannot be said to overthrow it. The most interesting result that has come out of Dr. Money's researches is the varying effects of embolism of the spinal cord. It has been clearly shown that a slight amount of embolism of the cord sets up a condition of exaggerated reflex action; that a further amount of embolism induces spontaneous movements in which the reflexes are still greatly increased, whilst a still further

degree of blockage of vessels entails absolute loss of power, with relaxed limbs and loss of reflex actions. These spontaneous movements occur at irregular intervals in different groups of muscles; they simulate some cases of chorea in human beings, but they differ from the movements of the great bulk of cases of chorea in the exaggerated condition of the reflexes. It must be remembered, however, that, in a few cases of human chorea, the knee-jerks are increased. Chorea is a term that has been applied to such a large number of different kinds of movements, that it has become absolutely necessary to regard the term as synonymous with (generally) involuntary movement. Thus mere twitches of muscles, rhythmical spasms, and irregularly occurring movements, of all kinds, have been called chorea. Even Hughlings Jackson's definition of chorea as a series of movements occurring at irregular intervals, includes Dr. Money's experimental chorea. The truth seems to be, as physiology suggests, that the movements may originate in either the spinal or the cerebral segments. That embolism is capable of doing this in the spinal segment, Dr. Money's experiments, he thinks, leave no doubt; but it has not yet been shown that embolism can originate movements from the cerebral segment.

Dr. Dawson Williams, who has been investigating the mode of action of pathogenic micro-organisms, has made a certain number of observations of some interest. From the exceedingly complicated and tedious nature of the necessary manipulations, those observations are not very numerous, but he proposes to present a report to the Committee within the next few months.

During the last twelve months, Dr. Sidney Martin has been engaged in three researches, which are not yet quite completed.

1. The digestion of gelatin by trypsin, papain, and pepsin. The object was (*a*) to determine what is the relative activity of the three ferments on purified gelatin; (*b*) to examine the intermediate products formed; (*c*) to investigate the properties of the gelatin peptones.

2. The digestion of pure elestin by the same three ferments, with the same object as in the investigation of gelatin. These results will be published shortly, when the investigation of gelatin is completed.

3. The relation of true peptone to elestin and gelatin peptone, chiefly in regard to precipitation by saturation with neutral salts.

A preliminary communication was made to the Physiological Society on this subject (*vide* Proc. Physiological Society, February 13th, 1886). His chief work has been an examination of the proteids of wheaten flour, as to (*a*) the proteids as present in flour; (*b*) the composition of gluten; (*c*) the nature and mode of formation of gluten. Dr. Martin has obtained interesting results which tend to elucidate the subject, and which are important in explaining the dietetic nature of the proteids of flour and bread. A preliminary communication was made to the Physiological Society (at Cambridge) in May, 1886. He is now extending his work into the investigation of the different varieties of wheaten flour, and into rye and barley flours. The results will be published shortly. Since receiving the grant, Dr. Martin has also published a paper on the nature of papain and its action on vegetable proteid (*Journal of Physiology*, vol. vi). This paper includes an investigation into the proteids of papain juice (carica papaya), and a description of three new proteids in plants. A very short abstract appeared in the BRITISH MEDICAL JOURNAL, July, 1885, and in the transactions of the British Association (Aberdeen meeting).

Dr. Theodore Cash has promised a report shortly upon his investigation of the action of pathogenic upon non-pathogenic organisms.

An investigation has been made by Mr. Ralph Stockman, into the physiological action of various kinds of tannic acid, of gallic acid, and of pyrogallic acid, with special reference to their action on the circulatory system, and their therapeutic use as astringents. The result has been to show that these substances, as a class, do not possess the actions which are generally considered to constitute an astringent, and that they are, therefore, probably without therapeutic value. The research has also extended to the form and quantity in which these substances are absorbed from the alimentary canal, circulate in the blood, and are excreted from the body. It is hoped to publish, in a short time, the experiments and results in full.

Dr. George Armstrong Atkinson's investigation bore on the value of nitrites, and compounds in which nitrites are important ingredients, as diuretics.

The nitrite, or rather preparation in which a nitrite—nitrite of ethyl—is an important ingredient, that has hitherto been chiefly used in medicine, is the spirit of nitrous ether. This compound has, of late years, largely lost hold upon the medical profession, partly because its exact therapeutic *rôle* was unknown—its composition being extremely complex—but chiefly because it so frequently failed to produce either diuresis or diaphoresis, these being the principal desiderata where it was prescribed. The valuable work on nitrites, both in their more purely scientific and in their clinical relations, which has been done within the past twenty years, is associated with nitrite of amyl, nitrite of sodium or potassium, or with their congener nitro-glycerine, and it was in connection with these, and with the spirit of nitrous ether, that he applied for and was granted a sum of £10 by the Scientific Grants Committee of the British Medical Association. Dr. Atkinson has, since receiving the grant, made several experiments as to the value of these agents as diuretics, both on men and on dogs, but has not yet made sufficient to give general results as to their effect upon the water, the urea and the uric acid excretion by the kidneys, and the *rationale* of their action. These experiments he hopes to be permitted to continue during the following year. He has, however, done a considerable amount of work at the chemistry of nitrites, and especially at their volumetric estimation. As to the volumetric estimation of inorganic nitrites, Dr. Atkinson finds that a modification of the permanganate process gives the best results, but that as ordinarily employed it is open to fallacy. His modification is to add a large excess of permanganate of potassium to a diluted sulphuric acid, run in the nitrite in a particular way, and then titrate back with a solution of ammonio-ferrous sulphate (Mohr's salt). The details are given in a paper he read before the Royal Society of Edinburgh, on March 15th, 1886, and which will shortly appear in the proceedings of that body. An abstract of the paper appeared in the *Pharmaceutical Journal*, of March 20th, 1886. Further, in connection with the general chemistry of nitrites and their decompositions, Dr. Atkinson has, in the hands of the editor of the *Pharmaceutical Journal*, a paper which he has entitled the pharmacognomy of the nitrites, and in it he also discusses the estimation of organic nitrites. In the *Pharmaceutical Journal*, of April 17th, 1886, he published a short communication on nitrites as impurities in potassium and sodium hydrates, and in other potassium and sodium salts. Dr. Atkinson has shown that nitrite of sodium is generally now met with in pharmaceutical establishments in a fairly pure state, containing nitrous acid equal to from 94 to 96 per cent. of the sodium salt; and he has also discussed the decomposition of nitrite of amyl, and the solubility and decomposition of nitro-glycerine. For none of the expenses in connection with these papers did he feel justified in using the grant, which was awarded for pharmacological and not pharmaceutical research.

Dr. Atkinson wishes to continue his research.

In conjunction with Mr. Horsley, professor at the Brown Institute, Dr. Beevor has been investigating the groups of muscles which are paralysed when the spinal nerves (fourth cervical to second dorsal) are divided. The effect produced by dividing one nerve only has been ascertained for all the above nerves; also the effect of dividing two contiguous nerves at the same time, but always only on one side—the left. The operation was done antiseptically, and, before dividing the nerve, it was faradised, and the resulting movement noted; the muscles were tested electrically, a week or more after the operation, and a list of the affected muscles made. At the end of a month or more, the cortical arm-centres for both the healthy and the injured arm were carefully and minutely stimulated electrically, and the different resulting movements of the two sides carefully noted. The nerves of the brachial plexus, especially on the operated side, were dissected out, so as to ascertain which nerve or nerves had been divided. The arms of both sides were also dissected, to see which muscles were wasted on the operated side. Both nerves and muscles are reserved for microscopical examination.

At present, the results obtained are hardly sufficiently harmonious to publish an exact table of the muscles paralysed by dividing single nerves. The minute electric investigation of Professor Ferrier's arm-centre, alluded to above, has given very definite results, on which the authors have presented a paper to the Royal Society.

The results are taken from stimulating the healthy left cortex, and observing the movements produced in the intact right arm. A normal basis is thus obtained with which to compare the effects produced in the operated or left arm, when the arm-centre is stimulated in the right side of the cortex. The arm-centre was mapped out into areas of about two millimètres in size; and, on faradic stimulation, they observed the joint which was first affected, the quantity of the movement, and the joints which were subsequently affected—showing the march of the movements when the several areas were individually stimulated.

The following results were obtained. The shoulder is especially and primarily represented in the upper part of the arm-centre, nearest the longitudinal fissure, the thumb at the lowest part, the elbow and wrist being intermediate. The "march" at the upper part of the centre is from shoulder to finger and thumb, and at the lowest part *vice versâ*.

Primary movement begins in the shoulder at the upper part of the cortical arm-centre, and in the thumb at the lower part. As a rule, extension of all joints occurs at the upper part, and flexion of all joints predominates at the lower parts of the arm-centre, away from the longitudinal fissure, when these parts are stimulated by faradic currents, which were so weak as only just to produce movements in the opposite arm.

The subject of Dr. William Hunter's research has been the fate of extravasated blood, with special reference to its ultimate destruction within the various blood-destroying organs of the body—for example, liver, spleen, and bone-marrow (the latter being, for present purposes, regarded as an organ). The extravasations were obtained by injecting large quantities of blood into the peritoneal cavity—the blood, in all cases, being obtained from animals of the same species.

By careful enumeration of the blood-corpuscles within the circulation, the rate and extent of the absorption of red blood-corpuscles were determined, as also the duration of their life after absorption (the quantity of blood injected was sometimes enormous, so that no dubiety could exist as to the increase in the number of blood-corpuscles).

The animals were killed at varying intervals of time, so that opportunity was given for observing the nature and the sequence of the local changes which were taking place, such as: 1. The various methods of disintegration of the red blood-corpuscles. 2. The mode of formation of blood-pigment from them. 3. The share taken by cells, not only in the disintegration, but also more especially in the formation of pigment. 4. The nature of the so-called process of organisation of blood-clot. 5. The channels through which absorption of the blood-corpuscles and serum took place—(*a*) Diaphragmatic lymphatics; (*b*) portal vein; (*c*) mesenteric lymphatics. 6. The changes in the lymphatic glands through which the blood passed. 7. The share taken in the ultimate destruction of the absorbed blood-corpuscles by (*a*) the liver; (*b*) the spleen; (*c*) the bone-marrow. 8. The nature of the process of blood destruction in each of these organs. 9. The changes induced in them by excessive destruction. 10. The importance of these observations in throwing light on the normal processes of blood destruction. 11. The equally great importance of them in explaining the pathology of some of the various diseases characterised by great anæmia. 12. Conclusions as to the value to be attached to the operation of blood-transfusion. 13. Conclusions as to the normal duration of life of red blood-corpuscles.

Dr. Paul Chapman's research was on cardiography, with special reference to the relation of the time of duration of ventricular systole to that of diastolic interval. The author, after discussing previous work on the subject, especially that of Dr. A. H. Garrod, gives a table of measurements of the duration of ventricular systole and diastole in each cardiac revolution, for every increase of five beats in frequency per minute between 45 and 150 in the healthy state. He shows that, in the human subject, the duration of systole diminishes by a constant quantity as the pulse frequency increases, the constant diminution being ·0085″ for every increase in frequency of five beats in the minute. He gives his table as one which may be safely used by future workers as a basis of comparison for estimating departures in disease, while emphasising the fact that the duration of ventricular systole may vary, in health, from the measurements given in his table by a limit of ·02″, an increase being most common with the lower pulse rates, a decrease at the higher. Aberrations extending beyond this limit must be considered abnormal. The influence of increase or of diminution of blood-pressure on the duration of ventricular systole is discussed. The importance of the rapid diminution in duration of systole in providing the heart with a requisite amount of rest is pointed out, and it is remarked that a high pulse frequency is not, in all cases, necessarily attended with rapid cardiac failure, though, in some, it must certainly quickly ensue. Marked departures from the relative duration of systole and diastole which should obtain in health are then noticed. The results of experiments with digitalis and convallaria majalis are given, and illustrative tracings shown. The instrument employed in making the observations was the air-containing cardiograph of Dr. Burdon Sanderson.

Research Scholarships.—The following is a short summary of the work done by Mr. Watson Cheyne, Research Scholar of the British Medical Association. 1. Report on micrococci in relation to wounds, abscesses, and septic processes, The BRITISH MEDICAL JOURNAL, September 20th, 27th, and October 4th, 1884, contained an account of an elaborate research into the organisms found sometimes in wounds treated aseptically. This showed the occurrence of different kinds of micrococci under these circumstances, some virulent to rabbits, others not; it also showed the fallacy of Ogston's view that growth without oxygen rendered them more virulent; showed the importance of the kidneys as organs for getting rid of one kind of these organisms, etc. It also contained experiments on suppuration with and without organisms, and pointed out the existence of different kinds of micrococci in abscesses, and some of the conditions under which they can cause abscess. The fact that different kinds of organisms are present in abscesses has since been confirmed and extended by Rossenbach; it contained other facts as to septic processes.

2. A report on cholera, detailing the results of a visit to Paris to study Koch's statements, and setting forth criticisms of the statements of others, leading to the conclusion of the absolute accuracy of Koch's facts, and the high probability of the truth of his views. Koch's facts and views are now accepted by the great majority of competent bacteriologists, many contrary statements having been found to rest on incomplete and imperfect methods, or on misunderstanding of Koch's views (BRITISH MEDICAL JOURNAL, April 25th, May 2nd, 9th, 16th, and 23rd, 1885).

3. Report on foulbrood in bees (BRITISH MEDICAL JOURNAL, September, 1885, and *Journal of the Royal Microscopical Society*, August, 1885), giving an account, in conjunction with Mr. Cheshire, of an investigation into the bacilli associated with this disease, and demonstrating completely that this is a bacillar disease due to the bacillus alvei. Mr. Cheshire's experiments in the way of cure of this affection have been attended with extremely important results, and he has done for the bee industry what Pasteur did for the silkworm industry.

4. A report will be ready in two or three weeks of an elaborate investigation, carried on in great part in Koch's laboratory, into "Some of the Conditions of Infection." The results obtained are of great interest and importance, but open out so many branches of research, that the present report will only be, to a certain extent, preliminary. Among the questions asked, the chief was: Does the dose of virus introduced in any way affect the course of an infective disease? Stress does not seem to have been laid on this point; and, at first sight, on the bacterial view, one would not think that the dose would matter, except, perhaps, in shortening the incubation period, but it turns out otherwise. Where an animal is highly predisposed to the disease, as, for example, guinea-pigs to anthrax, one bacillus, that is, the minutest portion of the virus, produces the same effect as a large dose, though after a longer time; but where the predisposition to the disease is less, a large number as an initial dose are required to cause a fatal result. In some cases, smaller numbers produce only a local effect, and still fewer no effect at all. Further, the mild attack caused by the smaller dose may protect the animal from the fatal result of a larger dose in future, etc.

5. Some experiments have been made on cultivation of tubercle bacilli, which are referred to in a paper in the BRITISH MEDICAL JOURNAL, January, 1885.

6. Report of two cases of idiopathic purpura hæmorrhagica in which micro-organisms were present, *Pathological Transactions*, 1884.

Other matters have been investigated, but have not yet led to sufficiently definite results for publication. It cannot always be known at the beginning of a research, whether the result will be worth publishing; and, further, circumstances frequently arise in the course of a research which lead to its being abandoned, or, at least, laid aside for a time.

Among these may be mentioned a large amount of work done by Mr. Watson Cheyne on foot-and-mouth disease under great difficulties. Many facts of interest and importance were made out, but the absence of a place in which large animals could be kept, and the subsidence of the epidemic, when arrangements might have been made, prevented the completion of the work. It can, however, be taken up at a future time if circumstances are more favourable.

A good deal of work has been done on other bacillar diseases of bees; but such work is very difficult, and material can only be got at particular seasons of the year, so that it remains unfinished.

Experiments have been made on antiseptics, and are still being carried on.

Observations are being made, as opportunity arises, on the presence or absence of bacteria in wounds under different kinds of dressings, etc. These are being continued.

Dr. Waller's report of the work done by him as Research Scholar during the last year is a condensed one, consisting chiefly of results briefly formulated. It also contains a short description of work which is in progress. One of the chief conclusions established is, that the motor end-plate is the weak link in the chain constituted by nerve and muscle, and that interruption of functional continuity first occurs at that point in several conditions of decline, in fatigue, in natural death, in nerve-degene-

ration, as well as in curare-poisoning. The pathological, as well as physiological interest of such a generalisation is obvious, and illustrates once more the common kinship between normal and abnormal processes. Another principle brought into evidence by these observations is, that in the normal fatigue of voluntary power the failure is earlier and more pronounced centrally than peripherally, brain and spinal cord tire before muscle, or motor end plate; nerves, as compared with nerve-centres, do not show any evidence of fatigue; ganglionic tissues alone are the sufferers in nerve exhaustion. The report concludes with a brief reference to an investigation of the excised mammalian heart. Most of our knowledge of the intimate mechanism of cardiac action has been derived from the study of the hearts of cold-blooded animals, and to many questions which arise in the minds of those who have to deal with disordered hearts, physiologists can only answer by deductions from experiments on the hearts of cold-blooded animals. Do the mammalian ventricles contract at once throughout their whole mass, or does a wave pass along the muscular substance of the heart from the auricles? Do nerves take part in the distribution and co-ordination of excitatory impulses throughout the heart's muscle? As regards the frog or tortoise, our information is certain that a wave of contraction passes along the ventricular muscles from base to apex, and that the excitation is not distributed by nerves. But as regards mammalian animals, *non sequitur;* the answer to such elementary points is only to be obtained by experiments, and it is fortunate that the experiments can be made on the living hearts of dead animals.

These are some of the questions arising at the very threshold of any kind of investigation of cardiac muscle on the higher animals which are referred to by Dr. Waller. To deal with them with any measure of success requires arms of precision—the chronograph, the galvanometer, the electrometer—and multiplied experiments. We cannot discuss nor criticise those here, but we may hope, from the monograph which is about to be published of the research undertaken by Drs. Waller and Reid, for some answer to these vexed questions.

The Committee recommend that the Science Scholarships, of £150 each, be again awarded, subject to annual renewal by your Council.

JOSEPH LISTER, Chairman.

REPORT OF THE COLLECTIVE INVESTIGATION COMMITTEE.

THE Collective Investigation Committee presents the following Report to the Council, to be laid before the annual meeting of the Association at Brighton.

The list of returns received during the past year shows that the anticipations expressed in the Committee's last years Report have been in a large measure fulfilled, and that the nucleus has been successfully formed of a body of regular and persistent workers, which tends gradually to increase.

The Committee, during the past twelve months, has directed its attention rather to completing and winding up the inquiries previously extant, than to the issue of new ones.

The returns to the inquiry on Chorea, 439 in number, have been printed under the supervision of the Secretary to the Committee, and a Statistical Report on them has been prepared by Dr. Stephen Mackenzie. Arrangements have been made with the Journal and Finance Committee for the publication of this and succeeding reports in the pages of the JOURNAL. This report will appear at once. The printed tables, together with reprints of the Report, and of Professor Humphry's paper on Old Age, published in the JOURNAL of May 9th, 1885, will form the third volume of the Collective Investigation Record, which will be sold to such members of the Association as may desire to possess the complete text, at a moderate cost.

The returns to the inquiry on Acute Rheumatism, 655 in number, have been printed in like manner. The preparation of a Report upon them has been undertaken by a Subcommitte, and the Report will be published in the JOURNAL. These tables, together with the Report; the tabulated returns and Report on Diphtheria, undertaken by the Diphtheria Subcommittee; Professor Humphry's tables and Report on Centenarians; and other matter, will form Volumes IV and V of the Collective Investigation Record.

Efforts are being made to obtain a still further supply of returns to the inquiry on Habits of Intemperance, before proceeding with the classification of the results.

A Report by Professor Humphry upon Centenarians, forming a second instalment of his Report on the Habits of Old Age, will shortly appear in the JOURNAL. The table is already in the press. He has received numerous returns respecting persons between 80 and 90, and between 90 and 100, and intends, as time permits, to tabulate and report upon them.

The number of returns received to the following inquiries; namely, Gout, Paroxysmal Hæmoglobinuria, Albuminuria in Healthy Persons, Puerperal Pyrexia, and Sleep-walking, having been found to be inconsiderable, the Committee resolved early in the present year to abandon these inquiries.

The Committee has entered upon two important pieces of new work during the year, as follows:—

1. At its meeting in October last, the Committee adopted the form of inquiry into the Geographical Distribution of Rickets, Acute Rheumatism, Chorea, Cancer, and Urinary Calculus, suggested by the Collective Investigation Committee of the International Medical Congress. In the months of December and January, the question-paper upon these subjects was issued, through the medium of the Honorary Local Secretaries, to every member of the Association in the United Kingdom. The inquiry was completed, at private cost, by the issue of a similar paper to every member of the profession, outside the Association. Nearly 4,000 papers have been returned. These are now being sorted and arranged, with a view to the preparation of geographical maps of the diseases in question.

2. The following proposals were made to the Committee in June, 1885, by Dr. B. Walter Foster:—

> 1. The publication of the new *Pharmacopœia* is referred to a Committee of the General Medical Council, who, acting on the opinion of a *few experts*, decide upon additions, etc. Now these additions ought to be made, not on the experience or reading of a few persons, but on the general experience of the Profession. One man may now write up a new drug, make it popular, and get it into use. I should like the British Medical Association to be the authority to speak on new drugs on behalf of its members.
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> 2. To carry this out, I think the Therapeutical Section might, at every annual meeting, have a discussion on new remedies, and select a list for trial during the next twelve months.
>
> 3. The Collective Investigation Committee might receive such list, and organise careful therapeutic testings of the proposed remedies, analyse the replies, and report at the next annual meeting.
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> 4. In this way each year would place before the profession some sound opinions on the efficacy of some few new drugs (three to six, say), and at the end of four or five years an authoritative list might be published by the Collective Investigation Subcommittee as an addendum to the existing *Pharmacopœia*.
>
> 5. When the next *Pharmacopœia* came to be published, the accumulated knowledge of the Association would be at the service of its framers, and the profession would have practically decided on the drugs most valuable and most worthy of admission.
>
> 6, AND LASTLY. There would be gradually formed an authoritative list of remedies worthy of being used, and the busy practitioners would look to our Annual Reports for the best information on new remedies and new modes of treatment.

These proposals were accepted by this Committee, and approved by the officers of the Therapeutic Section. At the meeting of this Committee, on July 8th, 1885, it was suggested that the principle of work advocated by Dr. Foster in reference to Therapeutic subjects, might with advantage be generally adopted, the initiative of most of the inquiries being left to the Sections of the Annual Meeting. At the request of this Committee, its Chairman communicated with the Chairman of the Council upon the subject, and, in consequence, during the Annual Meeting in Cardiff, a conference was held, to which were summoned the President of the Association, the Presidents and Officers of Sections, and the Members of the Collective Investigation Committee present in Cardiff. At this conference the principle of the proposal was unanimously adopted, Dr. Foster's scheme was approved, and it was resolved that for the present year the working of the principle should be commenced in the Therapeutic Section only.

The Therapeutic Section, at its meeting on July 30th, adopted Dr. Foster's scheme, and appointed Mr. Evan Jones, J.P., of Aberdare, Dr. Talfourd Jones, of Brecon, Dr. William Murrell, of London, and Mr. Hancocke Wathen, of Clifton, a Committee to prepare a list of subjects for investigation. That Committee selected the action of Hamamelis, and that of Paraldehyde, as subjects of investigation. At a later date, owing to a fear of toxic effects from the latter drug, the action of Pure Terebene was substituted.

Inquiry papers on these two subjects have been issued, and Reports will be presented to the Therapeutic Section of the Annual Meeting at Brighton.

This Committee having considered that inquiries might be profitably conducted on the following subjects; namely, Cases in which Disease of the Heart-Valves has been known to exist for upwards of five years without causing serious symptoms, and the Extreme Duration of Infectiousness in certain Diseases—a circular letter was addressed in October last, to the Honorary Local Secretaries for Collective Investigation in the various branches, requesting them, if possible, to arrange that discussions should be held upon these subjects in their

respective branches during the current year, as a preliminary to the issue of Inquiry Papers upon them.

Communications were also entered into with the Officers of the Sections of Medicine and of Public Health of the annual meeting of 1886, with the result that arrangements have been made to hold discussions in these Sections upon the above-mentioned subjects; and the results will be taken as guides in the issue of inquiries.

In accordance with the permission of the Council, the Committee has discharged the outstanding liabilities incurred by Professor Humphry and Dr. Owen, on behalf of the Collective Investigation Committee of the International Congress, amounting to £31 19s. 6d.

The Committee has taken into consideration the advisability of an inquiry into the Statistics of Administration of Anæsthetics in the Hospitals of the United Kingdom, and, as a preliminary measure, has addressed a circular letter to the authorities of the said Hospitals, inquiring how far they will be able or willing to co-operate.

The Committee, in conclusion, begs to apply for the renewal of the grant made last year for carrying on the work.

G. M. HUMPHRY, *Chairman of Committee.*

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Bright's Disease without Albuminuria.—The Result of using Collodion in Variolic Eruptions.—Development of the Grey Cortical Substance in the Cerebral Convolutions. — Further Researches on Spartein.—Professor Chevreul.

AT a recent meeting of the Société Medicale des Hôpitaux, M. Dieulafoy described several cases of Bright's disease without albuminuria. Last November a woman was admitted to the hospital who presented symptoms of gastric ulcer—vomiting, pain, and hæmatemesis; the vomiting increased, and became incoercible. Milk-diet was adopted, and cucaine, mixed with morphine, was administered, with negative results. The patient suffered from constant intense headache. The urine was examined daily, but albumen was not detected in it. The temperature was normal, varying from 37° to 36° Cent. (98.6° to 96.8° Fahr.). Subsequently, she was seized with epileptiform convulsions, became comatous, and died. On the day of her death, and the preceding night, the temperature rose to 38° Cent. (100.27° Fahr.). At the necropsy, the stomach was observed to be in a normal condition. There was a limited area of suppurative pneumonia, and mixed nephritis. A second case was that of a patient who suffered from violent oppression. The dyspnœa was not accompanied by cyanosis. The lips were red and fever was absent, characteristics of dyspnœa in Bright's disease. Three years ago, the patient had suffered from violent attacks of suffocation, accompanied by angina pectoris. She passed urine ten or twelve times in a night, suffered from headache, and presented the phenomenon of "le doigt mort" (the dead finger). Besides these symptoms, when auscultated on her entry, a *bruit de galop* was heard. The patient passed 200 grammes of urine free from albumen. She was put on a milk-diet, and the quantity of urine passed every twenty-four hours, in a fortnight's time, increased from 200 grammes to 600, the feeling of oppression disappeared, and a daily examination failed to detect the presence of albumen. The patient was attacked with congestion of both lungs and died. On the day of her death the urine was slightly cloudy. The necropsy showed that there was congestion of both lungs, and indications of former aortitis; the kidneys were normal in size, but the capsules were adherent; two or three small cysts were observed. The cortical tissue was thin and hard. Microscopical examination revealed interstitial nephritis. In another case described by Dr. Dieulafoy the patient suffered from attacks of dyspnœa, vomiting, and the sensation of "the dead finger." The urine was examined every day for a month but no traces of albumen were detected. In a fourth case, the patient was unusually obese. She frequently suffered from a feeling of oppression, also from attacks of vomiting. The symptom of "the dead finger" was present; in this instance there was also entire absence of albuminuria. The urine was carefully analysed during eight months; the result was negative. At the end of that period there was œdema of the lower limbs, and albumen appeared in the urine. The patient was seized with epileptiform convulsions and died in a state of coma. M. Dieulafoy considers that the facts above enumerated prove that Bright's disease can progress, and yet albuminuria may not appear for weeks or months. To this proposition belongs its corollary proved by another series of observation that chronic albuminuria may exist independently of Bright's disease. M. Dieulafoy cited a case in which the patient passed urine containing albumen, and had done so for more than two years. It would therefore appear that the presence of albumen in urine is not a symptom of semeiological importance, as it is supposed to be; and M. Dieulafoy considers that in these numerous cases where chronic nephritis is free from œdema and albuminuria, the diagnosis should depend on a careful clinical examination, and the grouping together of certain characteristic symptoms, such as buzzing in the ears, slight deafness, itching, frequent nocturnal micturition, the sensation of "the dead finger," especially sensibility to cold, a phenomena localised in the lower part of the thighs, knees, and legs, *bruit de galop*, etc.

M. Dieulafoy injected into the veins of a rabbit, weighing 2 kilogrammes, 70 grammes of urine, passed by a patient suffering from Bright's disease, without albuminuria. The results were negative; but 90 grammes increased the respiration. An injection of 160 grammes of this urine caused death, but not a smaller quantity. Another rabbit, after having 160 grammes of urine from a patient with Bright's disease, but free from albumen, injected into its veins, was slightly affected, but perfectly recovered; another survived any doses below 285 grammes; that proved fatal, and would cause death in consequence of exaggerated vascular repletion, independently of the toxic properties of urine.

At a recent meeting of the Société des Hôpitaux, M. Comby stated that the different local remedies which from time to time have been recommended for arresting the variolic eruption, have all in their turn been rejected as dangerous. He mentioned the following case as an example. A female patient entered the St. Louis Hospital with small-pox. Her face was covered with collodion. Papulæ appeared on the trunk and limbs; the face seemed to be free from eruption. On April 11th, papules appeared on the upper lip, and raised the collodion. The eruption spread entirely over the face, and showed through the covering of collodion. The patient suffered intolerable agony. An attempt was made to remove the collodion, but the patient suffered such pain that it had to be given up. The portion of collodion that was separated from the face left the derma exposed to the air. The eruption, which was discrete, semiconfluent, extended to the limbs; and the face was transformed into a running wound most offensive in its odour. The temperature rose to 39.4° Cent. (102.3° Fahr.). On April 15th, the patient became delirious, and died. M. Comby considers that the patient died from the same morbid process that kills patients with serious burns. At the necropsy, all the viscera were found to be healthy. If the patient had not died, she would have been terribly disfigured by buccal or palpebral atresia.

At a recent meeting of the Académie des Sciences, M. Vignal presented a note on the development of the grey cortical substance of the cerebral convolutions. The elements of the cortical substance of the brain are, like those of the spinal cord, solely derived from the ectoderm. At the commencement of gestation, they resemble the embryonic grey substance of the cord. Since Kölliker's works, it is generally known that the primitive layer rapidly divides into two layers—one inner, an epithelial layer, limiting the fourth ventricle; and a second, forming the grey cortical substance of the brain. Between these two layers appears the white substance emanating from the outer layer. As soon as the outer layer appears, the cells of the inner layer lose their epithelial character; they present a large nucleus surrounded by a granular protoplasm, from which proceed a number of prolongations lying close together. These non-differentiated cells begin to be differentiated towards the middle of the sixth month. The first nerve-cells that appear are those which form the lower portion of the third Meynert's layer (the layer of the large pyramidal cortical corpuscles). In the course of the seventh month, the nerve-cells of the fourth layer appear; in the eighth month, those of the second and fifth layers. The first Meynert's layer consists of fine nerve-tubes (Exner); it appears at the sixth week simultaneously with the white substance. At the ninth month, the five Meynert's layers can be easily recognised, although the greater proportion of the cells differ considerably from those in adults. The neuroglia-cells appear at the eighth month. Comparing the development of the grey cerebral substance with that of the grey substance of the cord, M. Vignal comments on the fact that the cerebral development is not so early as that of the cord. The medullary cells begin to appear in the twelfth week of gestation; the cerebral cells in the twenty-eighth week.

MM. Laborde and Legris, in an article entitled "La Methode Expérimentale Appliquée à l'Etude des Substances Médicamenteuses,"

published in the May number of the *Archives de Physiologie Normale et Pathologique*, arrive at the following conclusions concerning spartein. Spartein renders the heart-beats stronger and more protracted; its action on this organ is essentially dynamogenic and central in origin. The absence of any alteration in pressure, and of peripheral or vaso-motor effects, constitutes one of the important proofs of this, and is corroborated by other phenomena; among them, those belonging to convulsions and asphyxiation, which prove a predominant influence on the medulla oblongata and spinal cord. It must always be remembered that, in frogs, a long time after actual death, even when the animal begins to dry up, the heart continues to beat rhythmically, as though spartein gave an impetus to the strength and length of the beats. MM. Laborde and Legris observed similar phenomena in newly born puppies. No other influence proceeding from the nervous system can be supposed to act in this case than that of intracardiac ganglia. Any other hypothesis would necessitate the concomitant and direct contraction of the muscular fibres of the heart. The myographic researches made by these investigators have not at present furnished results that warrant decided conclusions. The therapeutic properties of spartein were formulated by M. Sée in his paper, read to the Académie des Sciences, as follows. "It revives the heart-beats and the pulse; in this respect, its action equals that of digitalis and convallamarine. As a tonic, it is more active, more prompt, and more lasting. It immediately regulates the rhythm in cardiac disturbance; in this effect, it is superior to any other medical substance. In serious atonic conditions, the heart-beats are quickened; and, in this respect, spartein resembles belladonna. The favourable modifications resulting from the action of spartein occur in one hour, or, in some cases, a few hours after its administration, and continue two or three days. When its use is discontinued, during this time the general strength is increased, and respiration is rendered easier, but not so effectually as by potassium iodide. The urinary function is not influenced by such small doses as those hitherto used." The more recent researches made by MM. Laborde and Legris lead them to endorse M. Sée's statement; and they further state that the action of spartein is quicker and more rapid than M. Sée observed it to be. A daily dose of sulphate of spartein varies from five to twenty-five centigrammes. When the action of the heart is weak, either from alteration of tissue, or because it cannot overcome the obstacles offered to the circulatory system, the prompt action of spartein renders it invaluable. In heart-disturbance requiring immediate treatment, in instances of asystolia its use is preferable to that of any other drug. In all cases of weak heart with asthenia, sulphate of spartein should be used, whether there be lesion or not. MM. Laborde and Legris declare that they do not know any conditions that should be regarded as contra-indications to the use of spartein. It is not a cumulative substance. In small doses it does not exercise a deleterious effect, either on the digestive organs or on the cerebro-spinal system. It can be used for some time without an interruption being necessary. When digitalis is used in the necessary intervals of administering it, spartein sulphate may be used with advantage. In cardiac affections accompanied with dropsy, an infusion of broom flowers added to spartein sulphate has a beneficial effect, acting as a diuretic. In cardiac dyspnœa, iodide of potassium may be used, as well as spartein sulphate; and pyridin inhalation should also be administered.

The Emperor of Austria has approved the election of Professor Chevreul as a foreign honorary member of the Academy of Sciences of Vienna.

NEWCASTLE-UPON-TYNE.

[FROM OUR OWN CORRESPONDENT.]

Examinations for Degrees in Medicine.—Tyne Port Sanitary Floating Hospital.—Infirmary.—Corporation "Refuse-Destructor."—North of England Branch of British Medical Association.

AT the late examinations for the Durham University Degrees in Medicine, 76 candidates presented themselves: 12 for the M.D., for practitioners of fifteen years' standing, 8 for the ordinary M.D., 7 for the M.S., and 49 for the M.B.; only 2 candidates failed to satisfy the examiners for the practitioners' M.D., 4 failed in the M.S., and 13 in the M.B. The foreign examiners were Professor George Buchanan, of Glasgow, and Dr. Ralfe, of the London Hospital. Seventy-six is the largest number of candidates examined at one time for degrees in medicine in Newcastle, the oral and clinical portions of the examinations extending over several days. The greatest slaughter was in the examination for the M.S. I understand that it is the desire of the Council to make the examination for this degree more exclusive, so that only students having more than an average knowlege of surgery will be able to pass it. The examination is a thorough test of a man's knowledge, consisting of special surgical paper, *viva voce*, clinical examination of patients, and performance of operations on the dead subject. Dr. James Limont, one of the physicians to the infirmary, privately prepared several candidates for these examinations, and so successfully as to have only one failure.

The new floating hospital for the Tyne Port Sanitary Authority, built by Messrs. Skinner and Wood, is nearly completed, and will be launched on August 2nd. The hospital-buildings are erected on a platform which is supported on ten boilers, seventy feet long, and six in diameter. The platform is 140 feet long, and 80 feet wide; the hospital-blocks are built along the ends and one side of it, the front being left open to the river. As it stands on the "ways," the structure has a peculiar appearance, and the ceremony of launching will attract a large gathering. Mr. Henry Armstrong, medical officer for this city, is also medical officer for the Port Sanitary Authorities, and it is under his supervision, and from plans by the borough surveyor, that this structure, "unique of its kind," has been erected.

The Committee of the Infirmary have decided to give free advice only to cases of accident or to patients urgently in need of medical assistance, and have made a rule that every person seeking advice at their institution must be provided with a subscriber's letter of recommendation. Patients without letters will be charged a small sum each time they present their bottles to the dispenser for medicine.

The corporation of this city have erected at Byker a "refuse-destructor," which was opened about a month ago. The refuse is first tilted into a large shed built over the furnaces; from this it is rammed down into the furnace, and is rapidly consumed. About thirty tons of refuse is consumed in this way *per diem*, the ash that remains selling for sixpence or eightpence a load. The furnaces now opened consist of six cells, and are capable of destroying 12,000 tons of refuse; they will be added to until they consist of twelve cells. According to the city engineer's report, the amount of rubbish to be disposed of in the year amounts to nearly 30,000 tons *per annum*, and this has hitherto been used for the purpose of filling up old quarries or hollows, and making land for building purposes.

The annual meeting of the North of England Branch of the British Medical Association is to be held to-day (Thursday), under the presidency of Dr. Gowans, at South Shields. The members will visit the pier, marine baths, and *Wellesley* training-ship. Unfortunately, there are not many places of very great interest to our profession in that neighbourhood.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

Victoria University Examinations.—Annual Report of the Royal Infirmary.—A Club for London Graduates.

AT the July examinations of the Victoria University, just concluded, five candidates were successful in passing the final examination for the degree of M.B. As this is the second examination which has been held, and there were two successful candidates last year, there are at the present time seven who are entitled to write M.B. (Vict.) after their names. Of the candidates who passed this year, three studied at the Owens College, and two at University College, Liverpool. One candidate, I hear, failed to satisfy the examiners, and was referred to his studies for the present.

The examination, both written and practical, was conducted both at Manchester and Liverpool, an arrangement which necessarily adds to the length of the examination, and wastes the time of the examiners and students. If, when the Yorkshire College is affiliated to the University, each college insists upon the clinical as well as the written examination being conducted at each city, the length of examination will be simply interminable. It is surely not too much to expect that the practical part of the examination could be arranged alternately in each city. At the first or intermediate M.B. examination, I hear that seven out of twelve passed; and, at the preliminary scientific, twenty-two out of twenty-nine.

The annual meeting of the Manchester Royal Infirmary was held last week, and the report for the year ending June 24th, was presented. From this it appears that 4,413 patients were admitted as in-patients, and 25,559 out-patients were seen, and 1,736 visits were made by the medical officers to the patients' homes. The beds had been fully occupied during the year, and the number of out-patients had somewhat increased, partly on account of the severity and length of the winter, and also on account of the recent abolition of "recommends." There can hardly be a doubt that the authorities may be congratulated

on the wisdom of this step, in throwing open their charity to every sufferer who can plead poverty and want of medical aid. As a natural sequence to this wider opening of their doors, they state that every effort has been made to secure the charity from abuse. The cost of each bed in the Infirmary amounted to £46 18s. 5d. per annum, the total cost of maintenance, including Fever Hospital, Lunatic Asylum, and Convalescent Home, amounted to £28,313.

A meeting of graduates of the University of London was held on Friday, under the chairmanship of Sir William Roberts, to consider the desirability of establishing a social club in connection with the university. It was unanimously decided to form such a club, the objects being to promote social intercourse between graduates of the university, and to discuss such matters as may arise in connection with it. A committee was appointed to make arrangements for a dinner in October, and a general meeting for the adoption of rules Mr. William Thorburn was appointed secretary *pro. tem.*

CORRESPONDENCE.

☞ To Correspondents. ☜

Our correspondents are reminded that prolixity is a great bar to publication and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return, and hold over a great number of communications, chiefly by reason of their unnecessary length.

COLLEGE OF SURGEONS.

Sir,—Will you allow me, through the medium of your Journal, to inform members of the Royal College of Surgeons of England, that the petition prepared by the Association of members of the College, for presentation to the Privy Council, and which has been already extensively signed, will lie upon the table of the Entrance Hall, Pavilion, Brighton, during the time of the meeting of the British Medical Association? All members of the College of Surgeons England, who have not yet signed, are earnestly requested to do so.

If possible, a meeting of the members of the Royal College of Surgeons, England, will be arranged for Wednesday, August 11th.—Yours, etc., Joseph Smith, Vice-Pres. Ass. of M.R.C.S.

12, Thornton Avenue, Streatham, S.W.

TREATMENT OF FRACTURED PATELLA.

Sir,—Mr. Frederick Treves is to be congratulated on the absence of any inflammatory symptoms in his cases of fractured patella, treated with Malgaigne's hooks.

If I understand his communication to the Journal of July 24th rightly, the upper punctures for the hooks open the synovial membrane, are simply covered with iodoform, and left freely exposed to the air.

He describes the dangers of Lister's procedure thus: "The operation is somewhat extensive, and not without risk; an anæsthetic has to be used; one median suture is employed, and, where the fracture is irregular, that alone may not serve to maintain true contact."

In dispensing with chloroform, Mr. Treves claims the only real advantage of his method. As regards risk, Lister's operation has a distinct advantage over the proposed application of Malgaigne's hooks. In the former, a free incision is made; all clots and effused fluids are evacuated; free drainage is provided for; and the whole area of the wound is wrapped in antiseptic materials. In the latter, the same risk of opening the joint is incurred; unless a very free opening be made, it is impossible to remove all the clotted blood, and if, as is not at all unlikely from the nature of the after-treatment, septic organisms find their way into the joint, they could not have a better nidus to develop in, and the great safeguard of free drainage is lost. A large joint, containing a mixture of synovial fluid and blood-clot, is one of the most fertile hotbeds of septic developments.

I do not know that Sir Joseph Lister has ever stated that one median suture only must be used; this is sufficient in the large majority of cases, but, if one wire do not bring the fragments together, there cannot be the slightest objection or additional risk in introducing a second.

As regards the objection that a faulty application of the wire cannot be rectified, an advantage which Malgaigne's hooks possess, I think it will be admitted, that he must be a very poor surgeon indeed, who with the parts freely exposed to view, and capable of being brought into contact, cannot fix them in position with the wire. This, if stout enough, is safe, and renders the fragments immovable on each other.

Malgaigne's hooks are more complicated, more difficult to apply; the surgeon works more in the dark; the upper fragment has a tendency to ride, which necessitates the employment of a tape; this has to be tightened from time to time, and this again means that the fragments are not immobile.

It has been my lot to assist at the Listerian operation for fractured patella in nearly a dozen cases. In the majority of them I had charge of the case as house-surgeon; I have seen others as well. In all of these cases the fibrous aponeurosis lapped over the edge of the upper fragment, thus constituting an effectual mechanical bar to bony union, however closely the pieces may have been held together. In two or three cases the joint has been distended with clotted blood, that could not have been evacuated through anything but a free opening.

In all the cases of recent fracture, the joint has been restored to an apparently normal condition. In the old cases the union has been apparently bony, and no interval could be felt.

Mr. Treves has obtained a similar result in his case so treated; but in describing the state of the fragments after using Malgaigne's hooks, he writes, "The interval could not readily be made out." He will be fortunate if no stretching of the bond of union occurs.—Your obedient servant, W. J. Penny.

Clifton.

UNSATISFACTORY INQUESTS.

Sir,—You recently published letters from me and from a "General Practitioner" under the above heading.

As it seemed to me very important that we should have, as "General Practitioner" suggested, some definite pronouncement upon the issue between us, I addressed a letter to the Registrar-General, giving the substance of my letter and that of "General Practitioner's" in full. In his reply, conveyed through the Secretary of the General Register Office, the Registrar-General refers me to the 20th Section of the Births and Deaths Registration Act, 1874, which is quoted as follows.

"In the case of the death of any person attended during his last illness by a registered medical practitioner, that practitioner shall sign and give to some person required by the Act to give information concerning the death, a certificate stating, to the best of his knowledge and belief, the cause of death."

The letter goes on to say: "The duty of the medical practitioner is thus very clearly explained by the 20th Section of the Act, which admits of no other interpretation than that put upon it by 'General Practitioner' in the correspondence to which you refer. The medical practitioner, under the circumstances described in the Act, has no option in the matter; he cannot withhold the certificate. He can, of course, if he sees fit, himself communicate with the coroner or police with regard to any suspicious circumstances which may have come under his notice when in attendance during the last illness of the deceased; but he may safely leave this duty to the Registrar, who, in his regulations, is directed to report to the coroner (on a form provided from this office) all deaths caused directly or indirectly by violence, or which have been attended by suspicious circumstances, as well as sudden deaths, and every death the cause of which is stated to be unknown."

This will probably be news to many of your readers, as it certainly is to me. The history of most cases of criminal poisoning shows that the person qualified to be the informant is generally, if not always, the murderer or murderers. Should the medical attendant have rightly judged the cause of death, and state it on the certificate, what will the prisoner do with it? This is one difficulty; and it would be easy to suggest many others, did not consideration for your space forbid. One escape from the difficulty is suggested in the letter, namely, by stating in the certificate, "Cause unknown; inquest necessary."

The subject is very important; but now that we have this authoritative rule to guide us, I trust that some greater approach to uniformity may be accomplished.—I am, sir, yours faithfully,

Liverpool. Fred. W. Lowndes.

Bequests and Donations.—Mrs. Arthy, of Caistor Hill, Norwich has bequeathed £400 to the Norfolk and Norwich Hospital, £400 to the Jenny Lind Infirmary for Sick Children, £400 to the Norfolk and Norwich Eye Infirmary, and £200 to the Norwich Public Dispensary.

OVARIOTOMY IN LONDON HOSPITALS.

SIR,—As it seems to be forgotten how slow was the progress of ovariotomy in the London Hospitals twenty-five years ago, it may be of some interest to reprint the following from the BRITISH MEDICAL JOURNAL of December 1st, 1860.—Yours, etc., F.R.C.S.

OVARIOTOMY IN LONDON HOSPITALS.

CASES UNDER THE CARE OF MR. BORLASE CHILDS, MR. CURLING, MR. ERICHSEN, MR. COOPER FORSTER, MR. HOLT, MR. HUTCHINSON, MR. NUNN, AND MR. SPENCER WELLS.

DURING the last three years, the operation of ovariotomy has attracted great attention, and the number of cases in which it has been performed, both in London and Provincial Hospitals and in private practice, has been so great, that we are not surprised to find writers in France and Germany speaking of the "recent revival of ovariotomy in England." Still we find that no one has a very definite idea of the results, of the extent of this revival, or of the results of recent improvements in this operation, or in the after treatment. As one attempt to supply defective information we have prepared the following table, which, we believe, contains *all* the cases, either successful or unsuccessful, in which the operation has been performed in London hospitals during the last three years. The only cases omitted are those which have occurred in the practice of Mr. Baker Brown, at the Self-supporting Institution, called the "London Home." We shall be glad to supply this omission in an early number, if Mr. Brown will supply notes of all the cases in which the operation has been performed in that Institution. In the table which follows, we have numbered the operations in the order of their performance, adding the hospital, the name of the operator, date of operation and the result.

Table of Cases.

No.	Hospital.	Operator.	Date of operation.	Result.
1	Samaritan	Mr. S. Wells	February, 1858	Recovered.
2	Metropolitan Free	Mr. Hutchinson	August ,,	,,
3	,, ,,	,,	,, ,,	Died."
4	,, ,,	,,	September ,,	,,
5	Samaritan	Mr. S. Wells	,, ,,	Recovered.
6	Metropolitan Free	Mr. B. Childs	November ,,	Died.
7	Samaritan	Mr. S. Wells	,, ,,	Recovered.
8	University College	Mr. Erichsen	,, ,,	Died.
9	Samaritan	Mr. S. Wells	January, 1859	,,
10	Guy's	Mr. C. Forster	February ,,	,,
11	Metropolitan Free	Mr. B. Childs	,, ,,	,,
12	Samaritan	Mr. S. Wells	May ,,	Recovered.
13	,,	,, ,,	June ,,	Died.
14	,,	,, ,,	,, ,,	Recovered.
15	,,	,, ,,	July ,,	,,
16	,,	,, ,,	October ,,	,,
17	Westminster	Mr. Holt	,, ,,	Died.
18	Samaritan	Mr. S. Wells	December ,,	,,
19	,,	,, ,,	January 1860	Recovered.
20	London	Mr. Curling	February ,,	Died.
21	Samaritan	Mr. S. Wells	,, ,,	,,
22	Middlesex	Mr. Nunn	October ,,	,,
	In a subsequent Note, four other cases were appended.			
23	Guy's	Mr. Bryant	November 1860	Died.
24	University College	Mr. Erichsen	December ,,	,,
25	Samaritan	Mr. S. Wells	January, 1861	Recovered.
26	London	Mr. Curling	March ,,	,,

We believe the above table gives the result of all the operations, twenty-two in number, performed in London hospitals, between January 1858, and November 1860. The general result is, 13 deaths against 9 recoveries. Seven of these recoveries, we believe, have been permanent, the patient still remaining strong and well. In two the patients recovered from the operation, but died some months afterwards of cancer. One of those cases occurred to Mr. Hutchinson, the other to Mr. Spencer Wells. If these two cases be substracted from the recoveries, the deaths would be fifteen and the recoveries only seven. But we do not think it would be fair to do this in any comparison between the mortality after ovariotomy and after other operations. If a man were in good health for some months after lithotomy, or amputation, or the ligature of a large artery, the case would certainly be classed as successful in any statistical table; and we think the same rule should hold good as to ovariotomy. We have stated the fact, however, as of practical importance in deciding upon the operation in cases where a malignant growth of the ovary may fairly be suspected.

It is singular that all the cases of permanent recovery have occurred in one hospital, and in the hands of one operator. Of twelve cases in the Samaritan Hospital, there are four deaths against one temporary and seven permanent recoveries. Of ten cases in other hospitals, there were nine deaths, and only one temporary recovery.

THE public danger arising from the sale of insect-killing bottles containing cyanide of potassium by naturalists and other persons not registered as chemists and druggists, and without compliance with other provisions of the Pharmacy Act, 1868, having recently been brought under the notice of the Council of the Pharmaceutical Society, the Registrar of that Society desires to call attention of such persons to the fact that sale of the insect-killing bottles by them is contrary to the provisions of the above-mentioned Act of Parliament, and that the penalty to which they render themselves liable is £5 for every sale.

DR. WATERS, OF CHESTER.

SIR,—I will not try "to gild refined gold" by adding one word to the noble tribute you pay to Dr. Waters, in your leader in the JOURNAL of July 31st. But I will venture to suggest that the Association in assembly at Brighton can emphasise the deed of the Council, and the words of your article, by acclaiming with one voice the title of Dr. Waters to State honours. That he has "done the State some service" can be amply proved, successive Presidents and Vice-Presidents of the Privy Council being his witnesses.—I have the honour to be, sir, your obedient servant, JOHN W. WATKINS.

Stone Legh, Newton-le-Willows.

STATISTICS RELATING TO OPERATIONS UPON THE KIDNEY.

SIR,—I venture to ask you to do me the favour of printing the enclosed letter, which, to some extent, explains itself. The letter with schedule has been sent to all who, as far as I could find, have recorded operations on the kidney; but as there are many cases which have not been recorded, I should like, through your pages, to ask surgeons who have performed such operations to favour me with a statement of them. I shall be happy to send copies of the schedule to any who may apply to me.—Yours truly, DAVID NEWMAN.

"Royal Infirmary, Glasgow, N.B.

"Sir,—Having collected, with a view to publication, the Statistics relating to Operations upon the Kidney for the relief of disease, it has occurred to me that it would be satisfactory to the Surgeons concerned to have their results verified. I have therefore ventured to apply to the Operators on my list for an authoritative statement of the number and results of Operations performed by them up to date. It will be esteemed a favour if you will fill up and return to me, before August 31st if possible, the enclosed Schedule. Please insert first (I), a note of the Operations performed by you previous to January 1st, 1882, stating, if possible, the Ultimate as well as the Immediate results; and second (II), a list of the Operations performed subsequent to January 1st, 1882.—I have the honour to be, Sir, your obedient servant, DAVID NEWMAN, M.D."

July, 1886.

THE CORRECT USE OF SCIENTIFIC TERMS.

SIR,—Perhaps you will allow me to express a thought suggested by the letters of Mr. Jennings, "F.R.C.S.," and Mr. Williamson. Those letters all deal more or less directly with what logicians are pleased to call the "context of terms," and plead for a correct use of the various terms they mention. Now, the article on "Evolution in Pathology" furnishes another illustration in point when it treats evolution and Darwinism as synonymous terms. If by Darwinism be understood "Erasmus Darwinism," not "Charles Darwinism," a good deal might be said in excuse; but when, as is no doubt the case, a reader and student of Charles Darwin confuses "Charles Darwinism" with evolution, he is almost without excuse; for evolution, as a theory, exists antecedently to and independently of Darwinism; and it surely would be well, on every ground, to use the term Darwinism to connote Mr. Darwin's peculiar contribution to the theory, namely, natural selection, sexual selection, etc. The result would be great gain to both students and critics of evolution and Darwinism; for students would thus have what is always valuable in study—a certain amount of "historical knowledge;" and critics, especially non-readers of Darwin, might be at least silenced, had they the fact brought home to them that criticism of Darwinism might be in no respect criticism of evolution.—I am, yours, etc.,

WILLIAM SMITH.

Zoological Laboratory, Edinburgh University.

ABDOMINAL PALPATION IN OBSTETRICS.

SIR,—I have read, with much interest and pleasure, your leading article in the BRITISH MEDICAL JOURNAL of July 10th, upon Abdominal Palpation in Obstetrics. I have had no experience of obstetrical teaching in Paris, but I can testify to the excellent and thorough practical teaching of the Vienna University in this branch of medicine. While attending the winter session of 1881-82, at Vienna, among other "Special Courses," I attended two obstetric ones; namely, Operative Midwifery, and the Touch Course. The latter, restricted to qualified men, is described as follows: "Über Untersuchungsmethoden der schwangeren und gebarenden Frauen," or "on the methods of examination of pregnant and bearing women." This course is divided into two parts; first, Abdominal Palpation; and second, Vaginal Examination. The abdominal palpation was carried out exactly as you describe, and the professor expected us to diagnose

the exact position of the fœtus, which by the end of the course we could pretty confidently do. The second or vaginal examination was intended to partly verify the first; and, in addition, by noting the state of the os uteri and vagina, we were expected to give an opinion as to how long off labour was, etc. Only four men were admitted to this course at one time, which lasted a month, six days a week. Four to six fresh cases were examined daily, and the fee was about £5. On one occasion I was fortunate enough to discover twins, both presenting by the head—verified by vaginal examination. I cannot speak too highly of this course, which was taught by Dr. T. Felsenreich, Professor Karl Braun's first assistant. Now that the summer session is almost closed, and in the view of the fact that many of the fresh graduates will go to Vienna to prosecute investigations denied to us in England, I strongly urge all not to miss taking out this course, for they will find it invaluable in after-life.

Only quite recently I was called in consultation to a case at our Cottage Hospital here, where one of the surgeons was in doubt as to whether his patient was pregnant or not. She strongly denied pregnancy, and I must say her appearance was strongly "ovarian." The abdomen was large enough almost for full term, but the breasts and nipples were those of a virgin. On abdominal palpation, the case was clear as regards pregnancy. I could make my hands meet deep in the pelvis, and I diagnosed ovarian disease, springing from the left ovary, and this was afterwards verified on operation. The os was that of a virgin, and the cervix long and conical, a state of affairs usually considered as precluding pregnancy.—I am, sir, yours faithfully,

A. T. BRAND, M.D.

Driffield, Yorkshire.

THE QUALITY OF OUT-PATIENT PRACTICE.

SIR,—On the interesting questions raised in your article of July 10th, I should like to be allowed to make a few remarks. My experience in this matter is not inconsiderable, since I have been for fifteen years assistant-physician in charge of out-patients at St. Thomas's Hospital, and had done work of the same kind previously. Comparing the past with the present, my experience does not accord with yours that the quality of out-patient practice has deteriorated. On the contrary, I believe that the out-patient departments of the London hospitals offer a better field of observation than they used to do, that much more teaching is done in them, and that there is a corresponding increase of interest and profit to the students.

Our statistics at St. Thomas's Hospital do not show a preponderance of dyspeptic and hypochondriacal cases. To decide this point, I have taken the cases in my own department for the same day of the week, in five consecutive weeks last month. The total number of new cases was 99, or say 100. Of these, 15, or 15 per cent., were of dyspepsia. Now, I may say in passing that dyspepsia is a very important disease to the practitioner, and one in which experience is very valuable. Simple debility accounts for 10 per cent. Deducting these two categories, I find that the remainder, or 75 per cent., were mostly definite, and in many cases serious, diseases. Organic heart-disease stands for 11 per cent.; phthisis, 6; bronchitis, 5; epilepsy or fits, chorea, anæmia, each 4; rheumatoid arthritis, paralysis, neuralgia, each 3; Bright's disease, jaundice, rheumatism, each 2 per cent. The remainder (25 per cent.) need not be enumerated, but were sufficiently varied, since there was, generally speaking, only one case of each disease; and among them were gout, tabes dorsalis, diabetes, rickets, and whooping-cough. Hysteria was represented by one case, and hypochondria by one only. The latter seems to me to be less commonly found among out-patients than formerly, since even our old friend the sexual hypochondriac is a comparatively rare visitant. Hypochondria, too, I would suggest, is a subject of great practical importance.

I need not enlarge upon the statistics, which speak for themselves, only observing that the above is a summer-list, and that in winter a larger proportion of phthisis, bronchitis, etc., would be found. But it will suffice, I think, to show that the student has abundant materials for studying his future field of work—

"That which before us lies in daily life."

The experience of the writer of your article would seem to be different; but I cannot think that our statistics show anything which could not be paralleled at other hospitals—at least if, as is usually the case, the number of out-patients applying is greater than the number of "letters" to be issued, and consequently some selection is possible.—Your obedient servant,

J. F. PAYNE.

78, Wimpole Street.

DR. W. S. JORDAN has been elected medical officer of Castlebar, No. 1 Dispensing District; he was opposed by Dr. Horkan.

THE EDINBURGH FEVER HOSPITAL AND ITS VISITING PHYSICIAN.

SIR,—I observe, in your issue of July 24th, a paragraph, under the heading of "Scotland," on "The Edinburgh Fever Hospital, and its Visiting Physician." It is there explained that Dr. Littlejohn "had been unable to get any suitable physician to undertake the duties for the sum of one hundred guineas, as offered by the Committee, and he was still of opinion that the advice he formerly gave, that two hundred guineas should be the salary, should be followed. He considered that it was of importance that the gentleman to be appointed should be one who, from his position in the medical profession and experience, should command the confidence of the ratepayers. It was utterly impossible for a Fellow of the Royal College of Physicians to accept the responsible duties of the position at the salary suggested by the Committee."

I do not write to comment on the adequacy of either sum suggested, but to explain and call attention more particularly to the last sentence of the above quotation. The Edinburgh Municipal Fever Hospital has been opened comparatively recently, and has a resident physician, who receives a salary of £200 *per annum*. So far as has transpired, no attempt has been made to fix the qualification which the visiting physician must have; but, from the quotation given above, anyone would conclude that F.R.C.P. of Edinburgh is the highest qualification which an Edinburgh physician can possess.

Such a conclusion, however, would not be correct, seeing that the M.D. of the University of Edinburgh ranks much higher as a qualification than the F.R.C.P. of Edinburgh, which may be obtained without any other examination than is required of their Licentiates, the inadequacy of which was strongly animadverted upon in the evidence given before the Royal Commission, 1881-1882. It would appear, however, that the Town Council is going to assist in upholding the monopoly of the College of Physicians in medical matters in Edinburgh, which has already existed much too long. To prove that such a monopoly exists, I may mention (1) that, among the rules of the Edinburgh Royal Infirmary, there is one which says that no one shall be elected as physician or assistant-physician who is not a Fellow of the Royal College of Physicians of Edinburgh; and that is the only qualification which candidates require to possess. (2) Not only does the College of Physicians hold the key to the Infirmary, but, without being a Fellow of that body, no one can become a physician to any of the charitable dispensaries in the city. (3) In Edinburgh, there is an Extramural School of Medicine. The lectures given in this school are recognised as qualifying for graduation in the University; but the College of Physicians refuses to recognise them as qualifying for her licence, unless the lecturer be a Fellow of the College.

The fees for the Fellowship amount to the sum of £80. Now, one might have expected that the Town Council would not have lent itself to furthering and adding strength to a monopoly which is a great hardship to those intending to practise their profession in Edinburgh. The existence of such a monopoly in Edinburgh is not generally known even by graduates of her University, and, by calling attention to it, many may be saved from much inconvenience.—I am, yours truly,

JOHN HADDON, M.D.

Honey Burn, Hawick, N.B.

BERNHARD VON GUDDEN.

SIR,—The life of this renowned physician, and teacher in the domain of mental disease, calls for more particular notice than has been yet given him by English journals, as he held, in Germany, perhaps the foremost place in that branch of our profession; and his sudden removal, while nobly endeavouring to save the life of the insane King Louis of Bavaria, has filled the hearts of those who knew him with sorrow.

Gudden was born at Cleve, in the Rhine Province, on June 7th, 1824. He studied medicine in the Universities of Bonn, Halle, and Berlin.

In 1855, he was appointed Superintendent at Werneck, where he created, out of the old palace and park, an asylum of the first rank.

In 1869, he was appointed Director of the Asylum of Burgholzli, and Professor of Psychology in the University of Zurich.

In 1872, he was appointed Director of the Asylum for the district of Upper Bavaria, and Professor of Psychology in the University of Munich, which post he held till his death.

His administrative and organising talent was wonderful; the organisation, and, in part, the planning, of the Asylums of Werneck and Munich, are his work. He showed great ability and tact in managing his insane patients, and was strongly opposed to the use of restraint, where it could be avoided; so that, I believe, he several times got into

trouble with the police of Munich, through allowing patients to go into the town without attendants. This confidence, which he was accustomed to place in his patients, seems to have proved the cause of his own death.

As a scientific investigator, Gudden is well known for his experimental inquiries into the anatomy and physiology of the brain. While in Werneck, he began a series of experimental investigations into the growth of the skull, the results of which he published in Munich, in 1874, entitled *Experimentelle Untersuchungen über das Schädelwachsthum.*

Gudden was editor, along with Westphal, of the *Archiv für Psychiatrie und Nervenkrankheiten*, in which many of his papers appeared. By a method of his own, which as regards certainty of results leaves nothing to be desired, he advanced carefully and with definite aim in the study of the anatomy of the brain. His papers on these subjects are patterns of scientific research; but it is a pity they are still scattered in various journals. He had been engaged, during the last few years, collecting and completing these, when, in full strength of body and mind, he has been called from the midst of his work.

A very good portrait of Dr. von Gudden is published in the *Illustrated London News*, of June 26th, together with a sketch of the beautiful lake in which he was drowned.

He was sixty-two years old at the time of his death, and full of energy; and he was such a kindly man, that it was always a pleasure to meet him. His lectures, given in the asylum at Munich, were conversational in style; and I found them extremely interesting, though I should have liked if he had given us more of his special work on brain-anatomy. They chiefly concerned the diagnosis and treatment of the various forms of insanity, illustrated from the wards of the asylum. The asylum with which he was connected will miss him greatly, as he seemed to be much liked and respected by his patients. —I am, sir, yours faithfully, CHARLES WORKMAN, M.D.

THE HOSPITAL BEER BILL.

SIR,—Mr. George Sturge, the excellence of whose motives none can doubt, has lately taken up the question of the consumption of alcohol in hospitals, more particularly as regards that portion alleged to be consumed by the medical staff.

While my sympathies are unhesitatingly assured to any movement which shall restrict the use of alcohol to cases where it is specially indicated, I must peremptorily protest when a tendency is shown to make it appear that an undue amount of alcohol is consumed by the medical staff, an inference which is neither borne out by facts nor consistent with the experience of those who have to do with hospital resident medical officers.

With reference to Mr. Sturge's remarks as to the amount that may be "good" for them to take, this is a question which may well be left to their discretion. Residents are picked men, who owe their position to their diligence in study and general professional talent; their labour, which is severe, is not only unremunerated, but, in many cases, necessitates an actual outlay of cash to secure. Under these circumstances, I venture to maintain that inuendoes of the kind alluded to are unfair, and calculated to create a disastrous and unjustifiable impression with the public.

The only alcoholic beverage supplied to residents is, as a general rule, beer, and besides being furnished exclusively at meal-times, it is most frequently not of a quality to seduce men into over-indulgence. In no hospital, so far as my knowledge extends, are spirits of any kind provided for their use, and any such consumed have to be paid for out of the privy purse of the residents, like the fruit, or other delicacy or addition to the hospital fare, which, if copious, is plain to a degree. The system of exacting unremunerated service from men who can often ill afford to work for nothing, is one which may come under consideration at some future period; but, until that is the case, the least that can be done is to provide for their creature comforts in the manner best suited to their individual tastes.

As Mr. Sturge remarks, it is difficult to ascertain in all cases what this expenditure really amounts to, and it is more than probable that a great part of the beer consumed ought, in reality, to be credited to quite another department.

The practice of giving beer or beer tickets to policemen who bring "cases" to the hospital is, very possibly, responsible for no small share in the consumption, and is one which might well be restricted. At many, if not most, hospitals, some gratuity, either in beer or money, is given to the police on such occasions; and, it is rumoured, that the proximity of this or that hospital to the scene of the accidents will not always account for the run of interesting cases which are brought in. It is even rumoured (although this probably is an exaggeration, and, in any case, scarcely admits of distinct proof) that certain members of the force are addicted to hanging round the entrances to hospitals in order to "conduct" the would be patient into the surgery, their devotedness in these cases not being altogether disinterested.

However this may be, and whatever steps are taken with the view of reducing the expenditure for alcohol in hospitals, I hope that in future the question will be discussed on its proper merits. It would probably be preferable to include the expenditure in beer for residents in the general charge for their maintenance, and so avoid an unseemly comparison.—I am, sir, yours truly,

FORMERLY A MEDICAL RESIDENT.

THE "STRANGERS' COLD."

SIR,—In relation to the "strangers' cold," described by Dr. Macdonald in the JOURNAL of July 24th, as occurring amongst the natives of St. Kilda, perhaps you may think the following of interest.

Dr. Darwin, in his *Naturalist's Voyage*, quotes Dr. Dieffenbach as commenting upon this very case, and adding, as a further instance in point, "that this (stranger's cold) is also believed (in) by the Tahitians, and some of the New Zealanders." He further says that, "In *Vancouver's Voyage Round the World*, a similar statement is made of the Tahitians;" and again that, "The Rev. J. Williams, in his narrative of missionary enterprise, says, 'The intercourse between the natives (Tahitians?) and Europeans is always attended by the introduction of fever, dysentery, etc., which carries off the natives. This is always introduced by ships; and the sailors have often shown no sign of the disease.'" Darwin adds that, "In some countries, foreigners and natives are as differently affected by certain contagious diseases as if they had been different animals;" and later, that "he has heard that, in Shropshire, that sheep which have been imported from vessels, although themselves healthy, if placed in the same fold with others, frequently produce sickness in that flock."

Again, H. W. Bates, in his work on *The Amazons*, page 257, gives, in relation to a tribe of Indians called the Passis, this passage. "The principal cause of their decay in numbers seems to be a disease, which always appears amongst them when a village is visited by people from the civilised settlements, a slow fever, accompanied by the symptoms of a common cold, 'deflux,' as the Brazilians term it, ending probably in consumption. The disorder has been known to break out when the visitors were entirely free from it, the simple contact of civilised men, in some mysterious way, being sufficient to create it."

I think that some of Pasteur's experiments on the attenuation, or concentration, of a virus, by passing it through a series of similar animals, and then inoculating a different kind from the last of this series, have a bearing on this "strangers' cold" of St. Kilda.—I am, sir, yours, etc., HAROLD G. DIXON, M.A. Cantab.

SIR,—I have read, with much pleasure, Dr. Macdonald's interesting article on the above subject; and, with your leave, wish to make a remark or two on the diseases which he discusses. I may state that I visited the lonely habitation five years ago; and as there had been no medical man there for a long time before, I at once fell into an extensive, although not lucrative, practice. Without exaggeration, at the very lowest computation, a fourth of the whole inhabitants consulted me; so that, although their complaints were generally trivial, I had an excellent opportunity of learning the nature of their ailments. The worst of it was, they spoke only Gaelic, and I did not; however, the captain of the steamer acted as interpreter, and there was a resident midwife from Glasgow. She had been on the island for some years, and from her I learned much about the *trismus neonatorum*. She had no hesitation in attributing it to the dietary of the infants. For the first six or seven days they are fed on milk, water, and sugar; then they are put to their mothers' breasts, and then they take ill and die. This is not much to be wondered at, as the breasts, not having been properly looked after, are generally more or less inflamed and gorged with milk. They seldom ail from anything till the change in nursing is made. From what I learned from her, and as no medical man has, as far as I am aware, ever seen a case, I have my doubts whether tetanus is the invariable cause of death. Most of them have convulsions, but whether these are always of a tetanic nature is very questionable. Were the disease due to consanguinity, it is singular that none of its recognised evil effects are ever present; and it is even more singular that here it should produce an effect to which it leads nowhere else. To my mind, the midwife's explanation is the correct one.

I made many inquiries, both of the captain and the midwife, about

the "Harris," or "strangers' cold," or *cnatan-na-gall*, as they call it, and believe it to be a myth, a piece of pure imagination. Their accounts of it evidently vary, for Sands states "they say it is not so severe when a yacht comes from Glasgow or Liverpool"; and Dr. Macdonald, "the natives believe that a boat from some parts, such as Glasgow or Liverpool, will bring a more severe form of the cold than one from the Hebrides." Is it likely that healthy people in these seas are always carrying about with them the germs of this particular malady? If so, how is it that they do not communicate them to the inhabitants of other islands where they land? Foula has far less communication with the outside world than St. Kilda, but they have no "Harris cold" there. Colds, too, I learned, are not of unfrequent occurrence, even when there is no stranger crew to account for their presence. These are said often to affect several at the same time, as colds do elsewhere; which is only to be expected, seeing that they are all exposed to the same climatic and other influences.

One or two coincidences probably originated the belief, and it has been handed down from generation to generation, as other "vulgar errors are." It was even hinted to me that unusual indulgence might have something to do with it, a theory which I combated with their well known temperance. To this the answer was "some are temperate with their own, but will take when it costs them nothing."—I am, etc.,

JAS. BRYDON, Hawick.

CONSULTANTS AND GENERAL PRACTITIONERS.

SIR,—Two letters appear in your JOURNAL of July 24th bearing the signatures respectively of "Gynæcologist" and Dr. Whittle. Both writers are in error in assuming that those who initiated the discussion upon this subject in the medical press, wished to contend for any proprietary right of the general practitioner in his patient. Such is not the object of the Association. The Association aims at the production of a better feeling between the two sections of the profession, and considers that a clear definition of the relationship is the only means of attaining that result.

"Gynæcologist" writes—"I do not admit that the general practitioner has a vested interest in a patient. She has given him a long trial; and, having found him wanting, she has a right to try another practitioner, and another system;" the "system" he defines in another place as a system of too frequent visits.

The general practitioner does not contend for any vested interests, but he thinks it immoral and indefensible that the consultant, who has acquired an exaggerated importance in the eyes of his patient by his recommendation, and to whom he has gone for friendly advice and assistance, should take advantage of a position so created, and deprive him at that time or at any future time of the patient.

"Gynæcologist" apparently thinks that men only of his speciality are capable of treating cases of endometritis or endocervicitis.

We have yet to learn that there exists the necessity for a speciality in the treatment of such cases. If the general practitioner have not sufficient knowledge to conduct cases of such frequent occurrence, the public have grave cause of complaint against those who have the responsibility of his education and admission to the profession.

"Gynæcologist" is the last person who should accuse the general practitioner of a system of too frequent attendance. Such a charge would not lack support if brought against practitioners of his speciality.

It seems to be the fashion for the suburban lady of means to visit her "ladies' doctor" fortnightly throughout the year. We have met with many such cases. One lady says that for ten years she had the constant attendance of the "ladies' doctor," and by way of proof exhibited a collection of pessaries of every conceivable design.

Another lady, visiting a well-known gynæcologist at the instance of a lady friend, is told that she must take lodgings in the vicinity of his house, and remain under treatment six or eight weeks. Failing to find a cause for special treatment, the only symptom being dyspepsia, we advised another opinion. The second opinion, given in a northern accent, was, "you have nothing the matter with you." A few days afterwards the patient was in the saddle following the hounds, little dreaming of the life of misery from which she had been delivered by that second opinion.

Our apology for producing these cases is, that model cases were asked for by gynæcologists. We could bring forward many of the kind, but it is not our wish to do so. We would rather wish that this discussion should be carried on in a friendly spirit, and on higher grounds.

Dr. Whittle complains that the public have not been considered in this discussion. The public would have nothing to lose and all to gain by unanimity in the profession; and it may fairly be contended that, as the profession exists for the good of the public, any reform in its elements should be based upon the broad question of public utility.

It is the common belief that the consultant derives his position by some process of natural selection from the body of the profession; that the men most skilled in the treatment and cure of disease gravitate into the consulting ranks. The public believe that they receive the best possible treatment from the men of the largest experience, if they place the conduct of their case in the hands of one of this body. In this we contend that they are mistaken. The general practitioner has far more experience than the consultant in the detail of every-day treatment, and we maintain that the patient loses both in pocket and in health when the consultant acts as a general practitioner. This loss on the part of the patient becomes much more marked when a specialist acts in the capacity of ordinary attendant. We remember the case of a man with a contracted chest, who consulted a specialist upon this deformity. He also had knee-joint disease, not thought worthy of consideration, and passed over as rheumatism. This man, acting upon his physician's advice, took exercise freely, resulting, at a later date, in such an aggravated condition of the latent joint-disease that amputation was found to be necessary. Cases have been mentioned where phthisis has been overlooked by throat-specialists; and, after a long and expensive and unnecessary course of treatment, the patient has succumbed to the graver malady. It is contended, on the ground of public interest, that consultants should not act as general practitioners. They have devoted their lives to scientific research, and to the study of grave disease, and not to the detail of management of the sick, which is acquired by the general practitioner.

H. WALTER VERDON.
W. GIBSON BOTT.

410 Brixton Road, S.W.

SIR,—The letter of "Gynæcologist" in the JOURNAL for July 24th, concerning consultants and practitioners, deserves nothing but censure, and if I knew the writer he may depend upon it that he would never get a patient from me, and I doubt very much if he would receive the patronage of many others who have gathered his views from his letter. I think it is a great pity, Mr. Editor, that you should allow space in your JOURNAL for anonymous writers upon personal matters: if a man be ashamed, or have not the moral courage, to put his name to his views, he has no right to complain of editorial discourtesy if he be refused space in the BRITISH MEDICAL or any other JOURNAL. The position of consultants and practitioners, or consultations among practitioners, is not merely one of courtesy and professional etiquette alone. It is subject also to the influences of those higher attributes of human nature, namely, the feelings of honour and rectitude which should always be pre-eminent amongst gentlemen. From my point of observation, I maintain that the views of "Gynæcologist" are irreconcilable with the opinion which I have just endeavoured to enunciate. If general practitioner 'A.' takes or sends a patient to "Gynæcologist," he has no business whatever to see that patient again (no matter what the patient might think), unless by the positive consent or in the presence of the general practitioner. Let me ask the question, what would the profession come to if the views of "Gynæcologist" were adopted, and became general? but, on the other hand, I am quite willing to admit that the public, in reference to health, will never be bound down by laws of professional dogmatism, and there is no reason why it should be so.

If a patient have heard of the fame and marvellous skill of "Gynæcologist," and consult him unknown to the general practitioner, meaning that the patient has not been introduced to the consultant through the practitioner, then, I should say, the consultant was at liberty to act in any way which he considered advantageous to the patient's welfare and recovery. I should not consider that the consultant was morally bound to please himself in communicating with the practitioner under such circumstances. The patient must always be a free agent to seek advice from any and every quarter, and the practitioner might accuse the patient of want of etiquette in not informing him that he was going to have the opinion of another medical man; but here I hold the patient is to blame, and not the consultant.

It would be nothing less than ridiculous to think that the consultant must in every case communicate with the general practitioner of every patient who comes under his notice, unless, as I said before, the patient was introduced to the consultant either personally or by letter. But when this is the case, I again repeat that the consultant has no direct right in any way to the patient, and he should never see or receive any fee from such patient unless with the sanction, and by the authority, of the practitioner by whom such patient was introduced.

Apologising for trespassing upon the valuable space in your JOURNAL.—Believe me, Mr. Editor, your obedient servant,

14, Welbeck Street, W. T. STRETCH DOWSE.

SIR,—It is my earnest hope, and, I may add, my confident expectation, that the "Association of General Practitioners" will perish in its infancy. It appears to me to be the offspring of a delusion, to derive its sustenance from envy and uncharitableness, and to be destined, if its life should be prolonged, to render the relations between members of our profession even more "strained" than they are at present. The delusion to which I refer is, that there are two distinct grades in the medical profession, as there are in the profession of the law. Can it be necessary to point out that there is no analogy between the cases? The so-called "general practitioner" has had precisely the same education, holds (or may hold) precisely the same diplomas, and in all respects enjoys the same privileges, as the so-called "consultant." A duly qualified medical man, no matter what may be the nature of his practice, is fully entitled to act as a consultant. No consultant has been admitted to the profession in any special manner, or is bound by any restrictions as to the character of his practice. No consultant has ever promised to be a "pure consultant," and nothing else. It is true that a certain number of men in our profession find it convenient to undertake hospital work, to neglect certain parts of ordinary practice, to devote special attention to medicine or to surgery, or to a single branch of either, and to ask for large fees. But it is a mere vulgar error to suppose that they hold a different rank from that of their brethren who undertake another kind of work. Naturally, some of the "consultants" acquire more knowledge of their own particular line than falls to the lot of those who are engaged in more general practice; and, accordingly, in cases of difficulty we seek their advice, exactly as we should seek the advice of a neighbouring "general practitioner" if we considered him skilful. Are we to boycott these men if they presume to have patients of their own? They have quite as much right to have patients of their own as we have to engage in consultations.

But a very little study of your correspondent's letters is enough to show that the real origin of this extraordinary proposition is to be found in that *sæva indignatio*, which tears our hearts when we find that our patients have gone to someone else. When will the British medical man realise the fact that the British patient is not his personal property, and is consequently not a thing that can be stolen; that a sick man is entitled to change his medical man as often as he pleases; and that if his medical man manifests wrath thereat, he makes himself exceeding ridiculous in the eyes of sensible people? The petulant indignation displayed by some medical men when they discover that a patient has left them, would be very ludicrous if it were not very sad. A respectable tradesman would be ashamed of such undignified behaviour; and our profession is still supposed to be a calling for gentlemen.

Is it, then, to be inferred that a medical man is justified in attempting to gain for himself his neighbour's patients? Assuredly not. Such conduct is most disreputable, and deserves the severest condemnation. But it is not one whit worse in the "consultant" than in the "general practitioner." The supplanter is not to be blamed because he is a "consultant," but because he has acted in a manner unworthy of our profession: and when my neighbour, Dr. Blank, Physician, Surgeon, and Accoucheur, does the same thing, he is equally guilty. And of one thing we may be quite certain, that we shall never eliminate ungentlemanly dealings from the profession of medicine by means of associations framed upon the model of the Irish Land League.

May I, in conclusion, venture to express the hope (or is it too late?) that some time or other a profession, which is called "learned," will see fit to expunge from its vocabulary, the phrase "practitioner?" "Musicianer," "physicianer," "politicianer," are not considered good English; why should we say "practitioner?" For my own part, I decline to adopt the hideous barbarism, and beg to subscribe myself,—Your obedient servant,

A COUNTRY DOCTOR.

SIR,—What a terrible experience "Gynæcologist" has had of the country general practitioner. In the first place, he is unable to treat a case of uterine disease; secondly, he is unable to make an ordinary vaginal examination without causing pain; thirdly, his visits are too frequent and uncertain; and fourthly, he is a drunkard, and frequents the village inn to discuss his cases of uterine diseases.

Now, under the shadow of one, or all of these charges, "Gynæcologist" thinks that he is justified in retaining cases that are sent to him as a consultant. He owns that he does so. With regard to the last three charges, I can safely say there are not a dozen cases in England; and as for the first, if they did not occasionally occur, there would be no "Gynæcologist."—Truly yours,

THOMAS EDWARDS.

Harrold, Beds.

SIR,—The simple modesty of "Gynæcologist," who states that he is "credited with a wonderful power of curing diseases of women" is only equalled by his assumption of superiority to "the village medical man who drinks and would talk about her (the patient's) complaint at the village inn."

One wonders whether he be one of those specialists with a "home" under his supervision, and a staff of nurses who are prepared to vaunt the skill of Dr. Gynæko, and to speak thus disparagingly of the country practitioner who sends up the patients.

Personally, I feel indebted to many a consultant for practical instruction and help in tedious and difficult cases; but, in at least two instances, eminent men who could afford to act differently have persuaded patients to leave their residences and to take houses in or near town, and, in other unprofessional ways, have weaned my patients from me. These, we "village medical men" do not fail to remember when future consultations are proposed.—I am, etc.,

PROBE.

MEDICO-LEGAL AND MEDICO-ETHICAL.

A FRIVOLOUS CHARGE.

A FRIVOLOUS charge against a medical man was heard by Mr. Justice Manisty and a special jury, at Bristol, on Monday, August 2nd. The case was that of *Bailward* v. *Budd*, in which the plaintiff sought to recover damages from the defendant, a medical man, who has for some time been in large practice at Bath, for having prescribed for him a medicine which had had "a lowering effect" on him. It was stated that the plaintiff was a man of peculiar habits, being accustomed to having two breakfasts, one at 11 A.M., the other at 4.30 P.M., his dinner at midnight, and his supper at an early hour in the morning. The medicine contained, among other drugs, bromide of potassium, which was administered to the amount of 22½ grains a day. The plaintiff complained that the amount of bromide of potassium was excessive, and had produced the "lowering effect" complained of, but what this effect was he was unable to describe more particularly. The evidence clearly showed that the medicine had done the plaintiff good instead of harm; and, as soon as two eminent physicians had stated that it was exactly what was required by the plaintiff, who had been in a nervous excited state, the jury stopped the case as being frivolous and vexatious, and found a verdict for the defendant.

R.L.—Under the circumstances stated, credit was clearly given to the husband, and he is the person liable. The brother acted and was treated merely as the husband's agent, and an action brought against him would fail. A lawyer's letter to the husband will probably make him pay the debt.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL SCHOOL AT NETLEY.

THE summer session of the Army Medical School was brought to a close on Friday, July 30th, at the Royal Victoria Hospital, Netley. The duty of handing the awards to the successful surgeons on probation had been kindly undertaken by Sir William Mac Cormac, surgeon of St. Thomas's Hospital, London, who was one of the Royal Commissioners under Lord Morley who inquired into the organisation of the Army Medical Service and the provisions made for the treatment of the sick and wounded during the expedition in Egypt of 1882. Sir William was accompanied on his visit by Sir Thomas Crawford, K.C.B., Director-General of the Army Medical Department; Sir Joseph Fayrer, K.C.S.I., Physician to the Council of India; Surgeon-General W. S. Murray, Principal Medical Officer at Netley; Surgeon-General W. C. Maclean, C.B.; Professors Wm. Aitken, F.R.S., F. De Chaumont, F.R.S., and D. B. Smith; Brigade-Surgeons Blatherwick and Mackinnon; Surgeon-Major Welch and the Medical Staff of the Hospital; Mr. James Cantlie, Surgeon to Charing Cross Hospital; and a goodly gathering of ladies. The proceedings took place in the lecture-room, the young surgeons in their uniforms giving a cordial reception to the company upon their entry.

Professor AITKEN said it had been usual for his colleague, Professor Longmore, to discharge the function which now, in his absence, fell to his lot of announcing the results of the work of the past session of the school, and the names of the successful competitors for the prizes; but the Queen had commanded his presence at Osborne in order that she

might confer upon him the honour of knighthood. While they regretted his absence from this ceremony, at which he had always heretofore been present, he would ask them to join their congratulations with his own, and unite in the wish that Sir Thomas Longmore might have health and happiness for many years to come to enjoy, with Lady Longmore, the well-earned honour Her Majesty had been pleased to bestow. Professor Aitken then presented the following lists of surgeons on probation who were successful at both the London and Netley examinations, with the combined number of marks gained by each, the 52nd session of the school being marked by a large number of successes, viz., 16 for the Indian Army Medical Service, and 59 for the British Army Medical Service.

Sir WILLIAM MAC CORMAC, having handed the prizes to the recipients, addressed the school, observing that the list which had been presented showed there were amongst them many earnest workers, and in many instances the prizes had been won in a remarkable manner, the number of marks gained being very large in proportion to the total number obtainable, viz., 7,800. Sir William then, as a stimulus to the young surgeons he was addressing, proceeded interestingly to notice the chief incidents in the life of the distinguished French surgeon, Ambrose Paré, who, living three hundred and fifty years ago, began his career in humble circumstances, apprenticed to a barber-surgeon of his village, and by perseverance and other good qualities, won his way to a position of eminence in military surgery. From this, Sir William went on to speak of the present condition of the medical service in the army, saying it was on a much higher footing than it once was. As with the profession outside the army, there had been great improvement, and this had been chiefly in the direction of making their service more and more a medical service, and he reminded them that it was now, as medical men, their chief distinction must accrue.

The DIRECTOR-GENERAL proposed an expression of thanks to Sir William Mac Cormac, and added that it gave him great pleasure to testify that the conduct of the class, whilst at Netley Hospital, had been unexceptional.

The proceedings then terminated, and the ladies and gentlemen adjourned to the adjacent officers' quarters, where, in the handsome dining hall of the mess, a first-class luncheon, supplemented by a choice dessert, was served.

BRITISH MEDICAL SERVICE.—The following is a list of surgeons on probation in the Medical Department of the British Army who were successful at both the London and Netley examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows.

	Combined Marks.
[1] 1. Davidson, J. S.	5575
[2] 2. Will, J.	5565
3. Moir, J.	5383
4. Fallon, J.	5375
5. Salvage, J. V.	5308
6. Fowler, J. F. S.	5210
7. Aldridge, A. R.	5190
8. Bostock, R. A.	5008
9. Fayrer, J.	4992
10. Walker, C. P.	4950
11. Macdonald, C. J.	4930
12. Tatham, C. J. W.	4907
13. Clarkson, T. H. F.	4828
14. Austin, H. W.	4715
15. Garner, C.	4689
16. Wright, R. W.	4685
17. Bailey, W. F.	4665
18. Eckersley, E.	4655
19. Cottell, R. J. C.	4635
20. Deacon, J. G.	4585
21. Greig, D. M.	4577
22. Burrows, J. R.	4531
23. Keatly, J.	4445
24. Hennessy, D.	4436
25. Saunders, D. M.	4410
[3] 26. Kiddle, W.	4437
27. O'Callaghan, D. M.	4313
28. Whitty, M. J.	4294
29. Cummins, H. A.	4285
30. Kelly, R. E.	4235
31. Donegan, J. F.	4200
32. Donaldson, J.	4195
33. Mathias, H. B.	4175
34. Bent, G.	4168
35. Barefoot, G. H.	4166
36. Newland, F. R.	4160
37. Windle, R. J.	4143
38. Hall, R. J. D.	4120
39. Marder, E. S.	4115
40. Allport, C. W.	4042
41. Russell, J. J.	4030
42. Edye, J. S.	4013
43. Scott, G.	4005
44. Browning, T.	3982
45. Bate, L. A. F.	3960
46. Trotter, W. J.	3910
47. Hosie, A.	3905
48. Marks, G. F. H.	3896
49. Holyoake, R.	3890
50. Bunt, R. N.	3878
51. Watson, J. J. C.	3785
52. Whaite, T. D.	3741
53. Knaggs, H. T.	3710
54. Le Quesne, F. S.	3670
55. Travers-Smith, V. E.	3626
56. Smyth, N.	3613
57. Cronin, C. S.	3595
58. Dowman, W.	3560
59. Foote, R. E.	3510

[1] Gained the prize in Pathology, presented by Sir Thomas Crawford, K.C.B.
[2] Gained a prize in Pathology.
[3] Gained the Parkes Memorial Bronze Medal.

INDIAN MEDICAL SERVICE.—The following surgeons on probation in Her Majesty's Indian Medical Service were successful at both the London and Netley examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions are determined by the marks gained in London added to those gained at Netley, and the combined numbers are shown in the following list.

	Combined Marks.
[1] 1. W. G. Thorold	6215
[2] 2. P. Hehir	5940
3. L. J. Pisani	5875
4. B. K. Basu	5672
5. N. P. Sinna	5545
6. W. R. Edwards	5518
7. C. Mactaggart	5352
[3] 8. J. F. Evans	5317
9. G. J. H. Bell	5288
10. J. T. Daly	5279
11. H. Fooks	5242
[4] 12. E. Hudson	5190
13. A. C. Deare	5175
14. A. W. Dawson	5107
15. W. H. B. Robinson	5048
16. H. A. Sheppard	4783

[1] Gained the Herbert Prize of £20, with the Montefiore Medal and prize of twenty guineas.
[2] Gained the Martin Memorial Gold Medal.
[3] Gained the Montefiore Second Prize, and also the Prize presented by Surgeon-General W. C. Maclean, C.B.
[4] Gained a prize in pathology, presented by Sir Joseph Fayrer.

MEDICAL STAFF.

BRIGADE-SURGEON H. F. PATERSON, M.D., is directed to officiate on the Administrative Medical Staff of the Bengal army, with the temporary rank of Deputy Surgeon-General, *vice* Deputy Surgeon-General T. N. Hoysted, who has been transferred to the Home Establishment, and during the absence of Deputy Surgeon-General R. Webb, on leave.

Surgeon J. I. ROUTH, doing duty at the station-hospital, St. Thomas's Mount, Madras Command, is ordered to do duty at the station-hospital, Belgaum.

Surgeon-Major JAMES GOOD, serving in the Bengal Command, has been appointed to the civil medical charge of the Shahjehanpore district, in addition to his military duties.

Surgeon-General W. G. TROUSDELL, M.D., died at Waterloo Road, Dublin, on July 23rd, in his 71st year. He entered the service as Assistant-Surgeon April 8th, 1842; became Surgeon, December 13th, 1853; Surgeon-Major, April 8th, 1862; Deputy Surgeon-General, June 30th, 1870; and retired with a step of honorary rank April 28th, 1876. Dr. Trousdell (Hart's *Army List* informs us) served with the 29th Regiment in the Punjaub campaign of 1848-49, and was present at the battles of Chillianwallah and Goojerat (medal with two clasps); also throughout the Eastern campaign of 1854-55, including the battles of Alma and Inkerman, siege and fall of Sebastopol (medal with clasp, and Turkish medal).

THE INDIAN MEDICAL SERVICE.

SURGEON-MAJOR E. A. FITZGERALD, Bengal Establishment, 2nd class civil surgeon, is transferred from Minpoorie to Bareilly.

Surgeon A. J. STURMER, Madras Establishment, is appointed Civil Surgeon and Superintendent of the gaol, Vizagapatam, from the date of the appointment of Dr. Smith to be Medical Officer at Ootacamund. Surgeon J. SMYTH, M.D., is to act in this appointment pending the absence of Surgeon Sturmer on leave.

The Madras Medical Fund Annuities of July, 1886, are granted as follows:—To retired Deputy Surgeon-General W. H. REAN, M.D, and to retired Brigade-Surgeon J. HOUSTON, M.D., and large annuities from July.

Brigade-Surgeon H. V. CARTER, M.D., Bombay Establishment, is appointed to act as Professor of Hygiene in the Grant Medical College, in addition to his other duties, during the absence of Deputy Surgeon-General H. Cook.

It has been notified that the appointment of Garrison-Surgeon at Fort William is abolished from August 1st.

DR. HUGH MILLER is appointed Surgeon to the 1st Cheshire Engineer Volunteers.

Surgeon and Honorary Surgeon-Major C. HOLTTUM, of the 1st Volunteer Battalion of the East Kent Regiment (formerly the 2nd Kent Volunteers) has resigned his commission, to which he was appointed September 7th, 1860; he is permitted to retain his rank and uniform. Mr. PHILIP PHELPS is appointed Acting Surgeon to the same corps.

Mr. JOHN ALLEN, M.B., is appointed Acting Surgeon to the 2nd Perth (Perthshire Highland) Volunteers.

Captain J. R. BUCK is appointed Surgeon to the 2nd Volunteer Battalion of the Worcestershire Regiment (formerly the 2nd Worcester Volunteers), in which corps he has been Captain since January 29th, 1881.

INDIA AND THE COLONIES.

INDIA.

MADRAS MEDICAL COLLEGE.—At the recent distribution of prizes, it was announced that there were fourteen female students, as compared with twelve in the previous year. Of the fourteen, one is an F.A., four have matriculated, and nine have not matriculated. The female students of the Madras College have certainly been very successful. Of those who passed first in 1878, Mrs. Scharlieb is lecturer in Midwifery to the female students at the College, and also superintendent of the Victoria Caste Hospital. Miss Dora White has, for some time, had a large practice at Hyderabad, including the care of the ladies of the Nizam's zenana. Mrs. Mary Lanorgan is employed at Oodeypore as medical adviser to the zenana, and is in charge of a hospital for women and children. Of those who passed subsequently, Mrs. Van Ingen is in charge of Lady Dufferin's dispensary in Calcutta. Miss Hester Smith is in charge of a similar hospital in Ulwar, and has a large practice; while Miss Stewart has just received a medical appointment at Bhopal. Miss Ramsbottom is employed as resident medical officer of the Military Female Orphan

Asylum, and Miss Yerbury as an assistant medical missionary in Khetri. All these ladies are drawing fair incomes, and, as the demand for lady-doctors is sure to increase, a promising career is opening up to many young women in India.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,728 births and 3,521 deaths were registered during the week ending Saturday, July 24th. The annual rate of mortality, which had been increased in the five preceding weeks from 16.8 to 19.7, further rose during the week under notice to 20.2. The rates in the several towns, ranged in order from the lowest, were as follow:— Wolverhampton, 7.8; Derby, 13.1; Bradford, 14.0; Hull, 14.2; Nottingham, 15.3; Sunderland, 15.6; Sheffield, 16.6; Brighton, 16.6; Newcastle-upon-Tyne, 16.8; Leeds, 17.9; Birmingham, 18.0; Huddersfield, 19.4; Bolton, 19.7; Halifax, 20.0; Cardiff, 20.2; Salford, 20.3; Plymouth, 20.4; Liverpool, 20.6; Oldham, 20.8; Bristol, 21.0; Blackburn, 21.4; London, 21.6; Norwich, 22.1; Portsmouth, 22.6; Preston, 23.7; Manchester, 24.2; Leicester, 24.3; and the highest rate during the week was 24.6 in Birkenhead. In the twenty-seven provincial towns, the death-rate averaged 19.1 per 1 000, and was 2.5 below the rate recorded in London, which was, as before stated, equal to 21.6 per 1,000. The 3,521 deaths registered in the twenty-eight towns during the week under notice included 505 which were referred to diarrhœa, 86 to measles, 66 to whooping-cough, 36 to "fever" (principally enteric), 36 to scarlet fever, 25 to diphtheria, and not one to small-pox; in all, 754 deaths resulted from these principal zymotic diseases, against numbers increasing steadily from 263 to 652 in the preceding six weeks. The zymotic death-rate in these towns was equal to 4.3 per 1,000. In London, the zymotic rate was 6.0, and was 3.1 above the mean rate in the twenty-seven provincial towns, among which it ranged from 0.0 in Derby, and 0.6 in Huddersfield, to 5.4 in Portsmouth, 6.7 in Cardiff, and 12.9 in Preston. The deaths from diarrhœa, which had been 86, 222, and 411 in the three preceding weeks, further rose during the week to 505, and caused the highest death-rates in Leeds, Leicester, Cardiff, and London. The fatal cases of measles, which had been 116 and 93 in the two previous weeks, further declined to 86; the disease caused the greatest mortality in Portsmouth and Preston. The deaths from whooping-cough, which had been 58 and 50 in the two previous weeks, rose during the week under notice to 66, and caused the highest death-rates in Halifax and Preston. The 36 deaths referred to "fever" showed a decline of 3 from the number in the previous week; this disease was proportionally most fatal in Brighton and Cardiff. The fatal cases of scarlet fever, which had been 33 and 41 in the two preceding weeks, were 36 in the week under notice, of which 15 occurred in London, and 4 in Leeds. The 25 deaths referred to diphtheria exceeded those in the previous week by 8, and included 11 in London and 8 in Birmingham. No fatal case of small-pox was recorded during the week either in London or in any of the twenty-seven provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 8 and 10 at the end of the two preceding weeks, were 9 on Saturday, July 24th; 2 new cases were admitted to these hospitals during the week, against 3 in each of the two preceding weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.1 per 1,000, and was below the average. The causes of 74, or 2.1 per cent. of the 3,521 deaths registered during the week in the twenty-eight towns, were not certified, either by registered medical practitioners or by coroners.

During the week ending Saturday, July 31st, 5,951 births and 3,593 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had risen in the six preceding weeks from 16.8 to 20.2, further increased during the week under notice to 20.6. The rates in the several towns, ranged in order from the lowest, were as follow:—Hull, 11.2; Brighton, 11.7; Derby, 14.8; Sheffield, 14.9; Plymouth, 17.0; Bradford, 17.6; Nottingham, 18.0; Bolton, 18.3; Salford, 18.5; Newcastle-upon-Tyne, 18.8; Huddersfield, 18.8; Birmingham, 18.9; Leeds, 18.9; Portsmouth, 19.1; Blackburn, 19.1; Bristol, 20.1; Sunderland, 20.2; Wolverhampton, 20.2; Oldham, 20.8; Liverpool, 21.2; Halifax, 21.3; Manchester, 21.9; London, 22.0; Birkenhead, 24.1; Preston, 24.7; Norwich, 25.5; Cardiff 26.9; and the highest rate during the week, 31.0 in Leicester. The death-rate in the twenty-seven provincial towns averaged 19.5 per 1,000, and was 2.5 below the rate recorded in London, which, as before stated, was 22.0 per 1,000. The 3,593 deaths registered in the twenty-eight towns during the week under notice included 672 which were referred to the principal zymotic diseases, against numbers increasing from 263 to 754 in the seven preceding weeks; of these, 646 resulted from diarrhœa, 83 from measles, 59 from whooping-cough, 39 from "fever" (principally enteric), 23 from scarlet fever, 22 from diphtheria, and not one from small-pox. These 672 deaths were equal to an annual rate of 5.0 per 1,000. The zymotic death-rate in London during the week under notice was equal to 6.7, while it averaged only 3.6 per 1,000, in the twenty-seven provincial towns, and ranged from 0.5 and 0.8 in Hull and Oldham, to 6.2 in Preston, 6.9 in Portsmouth, 7.7 in Birkenhead, 8.5 in Norwich, and 11.6 in Leicester. The deaths referred to diarrhœal diseases, which had been 222, 411, and 505 in the three preceding weeks, further rose during the week under notice to 646, and showed the largest proportional fatality in Cardiff, Birkenhead, Norwich, and Leicester. The fatal cases of measles, which had declined in the three preceding weeks from 116 to 86, further fell to 83, and caused the highest death-rates in Halifax, Birkenhead, and Preston. The 59 deaths from whooping-cough showed a decline of 7 from the number in the previous week, and showed the highest proportional fatality in Preston. The fatal cases of "fever," which had been 39 and 36 in the two preceding weeks, rose again to 39 during the week under notice, and caused the highest death-rates in Cardiff and Portsmouth. The 23 deaths referred to scarlet fever showed a further considerable decline from recent weekly numbers. The fatal cases of diphtheria, which had been 17 and 25 in the two previous weeks, declined to 22, of which 15 occurred in London, 2 in Birmingham, and 2 in Liverpool. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 10 and 9 at the end of the two preceding weeks, further declined to 8 on Saturday, July 31st; 1 new case was admitted to these hospitals during the week, against 3 and 2 in the two previous weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.1 per 1,000, and was below the average. The causes of 71, or 2.0 per cent. of the 3,593 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, July 24th, 879 births and 489 deaths were registered in the eight principal Scotch towns, having an estimated population of 1,283,977 persons. The annual rate of mortality, which had been 19.1 and 19.2 per 1,000 in the two preceding weeks, further rose during the week under notice to 19.8, but was 0.4 below the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 14.1 in Leith, 14.8 in Perth, 15.3 in Aberdeen, 16.7 in Edinburgh and in Greenock, 18.4 in Dundee, 23.5 in Glasgow, and 26.0 in Paisley. The 489 deaths registered during the week in these towns included 65 which were referred to the principal zymotic diseases, against 64 and 68 in the two preceding weeks; of these, 33 resulted from diarrhœa, 18 from whooping-cough, 7 from scarlet fever, 4 from "fever," 3 from measles, and not one either from small-pox or diphtheria. These 65 deaths were equal to an annual rate of 2.6 per 1,000, which was 1.7 below the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week were recorded in Glasgow and Paisley. The deaths attributed to diarrhœa in the eight towns, which had slowly increased in the six preceding weeks from 7 to 27, further rose in the week ending July 24th to 33, of which 10 occurred in Glasgow, 9 in Dundee, and 4 in Paisley. The fatal cases of whooping-cough, which had been 10, 17, and 18 in the three previous weeks, rose again to 18 during the week, and of these 17 were returned in Glasgow. The 7 deaths from scarlet fever corresponded with the number in each of the two preceding weeks, and included 5 in Glasgow. Two of the 4 deaths referred to fever occurred in Glasgow, and 2 of the 3 fatal cases of measles were returned in Leith. The death-rate from diseases of the respiratory organs in these Scotch towns during the week was equal to 2.8 per 1,000, against 2.6 in London. The causes of 80, or 16.3 per cent., of the 489 deaths registered during the week in these Scotch towns were uncertified.

In the eight principal Scotch towns, having an estimated population of 1,283,977 persons, 808 births and 481 deaths were registered during the week ending Saturday, July 31st. The annual rate of mortality, which had been 19.2 and 19.8 per 1,000 in the two preceding weeks, declined again during the week under notice to 19.5, and was 1.1 per 1,000 below the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 14.1 in Greenock, 15.6 in Paisley, 16.3 in Leith, 16.4 in Perth, 18.4 in Dundee, 20.3 in Glasgow, 21.2 in Edinburgh, and 21.2 in Aberdeen. The 481 deaths registered during the week in these Scotch towns included 34 which were referred to diarrhœa, 18 to whooping-cough, 8 to measles, 4 to scarlet fever, 2 to diphtheria, 1 to "fever," and not one to small-pox; in all, 67 deaths resulted from these principal zymotic diseases, against 67 and 65 in the two preceding weeks. These 67 deaths were equal to an annual rate of 2.7 per 1,000, which was 2.8 below the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Perth, Glasgow, and Leith. The 34 deaths referred to diarrhœal diseases showed a slight further increase upon recent weekly numbers, and included 15 in Glasgow, 7 in Edinburgh, and 6 in Dundee. The fatal cases of whooping-cough, which had been 18 in each of the two preceding weeks, were again 18 during the week under notice, of which 13 occurred in Glasgow and 2 in Perth. The deaths from measles, which in the five previous weeks had declined from 20 to 3, rose again last week to 8, and included 4 in Edinburgh, 2 in Glasgow, and 2 in Leith. The 4 fatal cases of scarlet fever showed a decline of 3 from the number in the preceding week, and included 3 in Glasgow. Of the 2 deaths referred to diphtheria, 1 occurred in Glasgow and 1 in Edinburgh; and the fatal case of fever was returned in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns, during the week under notice, was equal to 2.7 per 1,000, against 2.1 in London. The causes of 67, or nearly 14 per cent., of the 481 deaths registered during the week in these Scotch towns were uncertified.

MEDICAL NEWS.

Royal College of Physicians of London.—The following gentlemen, having undergone the necessary examinations, were admitted Members on July 29th.

W. Collier, M.D.Camb., Oxford; W. Gay, M.B.Edin., 111, Disraeli Road, S.W.; F. L. Miner, M.D.McGill, 14, Wimpole Street, W.; G. D. Pidcock, M.B.Camb., 52, Devonshire Hill, N.W.

Admitted Licentiates on July 29th.

W. A. Aikin, 7, Clifton Place, Sussex Square, W.; E. C. Arnold, 3, Argyle Street, Tynemouth; P. E. Barber, Brookhill, Sheffield; W. M. Barclay, 22, Canynge Square, Clifton, Bristol; W. B. Barnard, 25, Upper Richmond Road, Putney, S.W.; W. A. H. Barrett, 39, Angell Road, Brixton, S.W.; W. O. Barsham, Lymington; W. Bett, 15, Trinity Square, S.E.; P. P. Bhedwar, Pimlico, S.W.; J. T. Blancard, 67, Middelton Square, E.C.; E. G. Blaxland, Sydney, New South Wales; G. M. Bluett, 15, Regent's Park Terrace, N.W.; H. W. Branson, 30, Tavistock Road, Westbourne Park, W.; L. W. Burton, 1, Terrace, Knatchbull Road, Camberwell, S.E.; F. E. Cave, Glantive, Dorville Road, Lee, S.E.; C. D. Christmas, 5, Weltje Road, Hammersmith, W.; S. A. Clarke, 11, Bolingbroke Road, W.; G. T. Collingwood, 95, Manor Road, Brockley, S.E.; C. T. T. Comber, 2, Clarence Terrace, Priory Park, Kew; J. H. Cox, 4, Malmesbury Road, Bow, E.; W. C. Crocket, M.D.McGill, 24, Tollit Street, Mile End, E.; E. W. Crossley, 35, Weymouth Street, W.; F. G. C. Damian, 51, Lupus Street, S.W.; E. Deane, Guy's Hospital, S.E.; W. L. Dickinson, 9, Chesterfield Street, W.; H. H. Du Boulay, 95, Lancaster Gate, Hyde Park, W.; P. H. Dunn, St. Bartholomew's Hospital, E.C.

H. A. Dutch, 11, Sinclair Gardens, Uxbridge Road, W.; F. G. Engelbach, Fernleigh, Richmond, Surrey; C. F. Fenton, Western Road, Romford; N. H. Forbes, Bedford Park, Chiswick; J. M. France, 9, Guildford Road, South Lambeth, S.W.; G. B. French, Royal Medical Society, Edinburgh; A. H. Gault, Bramhall, Stockport; J. Girvin, Perry Hill, S.E.; C. J. Glasson, 18, Miles Road, Clifton, Bristol; C. F. Glass, 49, Oxford Terrace, Edgware Road, W.; C. A. Goullett, 2, Finchley Road, St. John's Wood, N.W.; H. E. Hackett, 27, Lever Street, Manchester; C. O'B. Harding, 29, Compton Terrace, Islington, N.; F. A. Harger, Castlenau, Barnes, S.W.; J. F. Harries, King's College Hospital, W.C.; E. M. Hassard, Hoddesdon; E. J. A. Haynes, 35, Ashburnham Road, Greenwich, S.E.; G. F. Hentsch, Hoxton House Asylum, N.; W. J. Hill, Royal Hotel, Bath; A. B. Hinde, Middlesex Hospital, W.; J. Hutcheson, 8, Nelson Street, Edinburgh; F. S. Kapadia, 315, Camden Road, Holloway, N.; J. Labey, 24, Harleyford Road, Vauxhall, S.E.; C. C. V. Lyle, 45, Marylands Road, Paddington, W.; A. J. H. Montagne, 19, St. Ann's Villas, Notting Hill, W.; Z. B. Mudge, 22, Claremont Square, N.; R. Nairn, 85, Lambeth Palace Road, S.E.; F. Norman, 87, Choumert Road, Peckham, S.E.; A. W. Pearse, Botesdale, Diss; R. H. Penton, 51, Sewardstone Road, Victoria Park, E.; H. I. Pocock, 5, Worcester Terrace, Clifton, Bristol; H. W. Rickards, 11, Russell Square, W.C.; B. Robinson, 17, Edith Road, West Kensington, W.; H. K. Roper, St. Olave, Waldegrave Road, Upper Norwood, S.E.; J. P. Roughton, St. Julian's Road, Streatham, S.W.; G. Rowell, Guy's Hospital, S.E.; P. M. Seatliff, Macaulay Road, Clapham Common, S.W.; W. D. Smallpeice, 42, Queen Anne's Gate, S.W.; L. M. Snow, 122, King Henry's Road, Primrose Hill, N.W.; E. C. Stabb, Ilfracombe; J. H. Tonking, Carn Brae; A. S. Tredinnick, 22, Claremont Square, N.; A. H. Tubby, 161, Kennington Park Road, S.E.; C. H. Wakeham, 186, Amhurst Road, Hackney, E.; S. E. Ward, Haverhill; W. H. Webb, Brook House, Upper Clapton, E.; A. E. Wilson, 106, Wickham Road, Brockley, S.E.; A. B. Woakes, 78, Harley Street, W.; G. C. W. Wright, Rawcliffe, Selby.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on July 28th.

R. Denman, L.S.A., Sydenham, J. A. Bradbury, L.S.A., Denmark Hill, R. J. Cook, East Dulwich, and E. P. Manby, Trinity Square, Students of Guy's Hospital; E. C. Stabb, L.S.A., Ilfracombe, J. H. Tonking, L.R.C.P.Lond., Pool, Cornwall, S. W. Wheaton, L.R.C.P.Lond., Battersea Road, of St. Thomas's Hospital; N. H. Forbes, L.R.C.P.Lond., Chiswick, of Middlesex Hospital; F. G. Engelbach, L.S.A., Richmond, S.W.; W. O. Barsham, L.R.C.P.Lond., Fincham, Norfolk, J. H. Griffin, L.S.A., Hammersmith, of St. Bartholomew's Hospital; L. W. Pockett, L.S.A., Goole, F. Collins, Adelaide Road, N.W., of University College; W. H. Stevens, Bristol, of Bristol Infirmary; T. Brushfield, Burleigh, of St. George's Hospital; R. H. Rains, Levenshulme, of Manchester Royal Infirmary; E. N. Nason, Nuneaton, of Cambridge and London Hospital.

One candidate was referred for three months, and nine for six months.

Admitted Members on July 29th.

E. B. Holland, Titchfield Terrace, N.W., of Middlesex Hospital; S. H. Jones, L.S.A., George Street, W., of St. Thomas's Hospital; S. A. Mugford, Dean Street, S.E., A. E. Wilson, L.R.C.P.Lond., Brockley, W. A. Shelswell, Banbury, of Guy's Hospital; W. H. Brown, L.S.A., Oxburgh, of London Hospital; W. Malden, M.B.Cantab., Ventnor, and B. Furnivall, L.R.C.P.Lond., Bishopsgate Street Without, of St. Bartholomew's Hospital; S. A. Clarke, L.R.C.P.Lond., West Kensington, and P. J. Shopoff, L.R.C.P.Lond., Brook Street, of St. Mary's Hospital; W. L. Dickinson, L.R.C.P.Lond., Chesterfield Street, W., F. D. Woodhouse, Dorchester, of St. George's Hospital; A. J. Briant, L.S.A., Liverpool, of Royal Infirmary; J. B. Fowler, L.S.A., Harrington Street, N.W., of University College.

Five candidates were referred for three months, seven for six months, and two for nine months.

Admitted Members on July 30th.

C. F. Burton, L.S.A., Harrogate, of St. Thomas's Hospital; W. S. Cunliffe, L.S.A., Stoneleigh, and H. Skelding, Euston Square, of St. Bartholomew's Hospital; T. H. Goodman, L.S.A., Stroud; H. S. Stockton, L.S.A., Wray Crescent, N., and G. H. Charlesworth, L.S.A., Wandsworth, of Charing Cross Hospital; George Rowell, L.R.C.P.Lond., Trinity Square, S.E., of Guy's Hospital; A. P. Luff, L.S.A., Ealing, of St. Mary's Hospital.

Four candidates were referred for three months, six for six months, one for nine months, and one for one year.

Admitted Members on August 2nd.

J. J. Sankey, Notting Hill, of Middlesex Hospital; J. M. Evans, L.R.C.P.Lond., Penybout, Radnor, of London Hospital; E. A. Thompson, Wandsworth Common, of Westminster Hospital; E. H. Biddlecombe, L.R.C.P.Lond., North Allington, of St. Bartholomew's Hospital.

Four candidates were referred for three months, seven for six months, and two for twelve months.

Admitted Members on August 3rd.

J. P. Fenoulhet, Lee, Kent, of St. Bartholomew's Hospital; W. E. P. Phillips, L.S.A., Haverfordwest, of Guy's Hospital; G. C. W. Wright, L.R.C.P.Lond., Rawncliffe, Selby, of London Hospital.

Two candidates were referred for three months, and ten for six months.

Admitted Members on August 4th.

W. Taylor, M.B.Edin., Highfield, Windermere, of Edinburgh University; E. Scily, L.S.A., Congleton, of St. Thomas's Hospital; H. J. M. Watts, L.R.C.P.Lond., of St. Bartholomew's Hospital.

Four were referred for three months, and six for six months.

VICTORIA UNIVERSITY.—The following are the results of the examinations just held. (Candidates' names are in alphabetical order throughout.)

Degree of M.B. Final Examination (Part I.).—*First Division:* F. C. Bury, Owens College; A. W. Collins, University College (Liverpool). *Second Division:* J. G. G. Corkhill, University College; J. Fletcher, Owens College; W. Hurst, Owens College; J. M. Johnson, Owens College. Distinguished in Pharmacology and Therapeutics, F. C. Bury. Final Examination (Part II). —*First Division:* G. F. W. Braide, Owens College; A. W. Collins, University College; J. H. Thompson, Owens College. *Second Division:* J. G. G. Corkhill, University College; J. Fletcher, Owens College. Distinguished in Morbid Anatomy, Forensic Medicine, and Mental Diseases, G. F. W. Braide. Distinguished in Diseases of Children, J. H. Thompson.

Degree of M.R. Intermediate Examination.—*First Division:* J. Gould, University College; F. E. Mathews, Owens College. *Second Division:* T. Fearnhead, Owens College; H. Merrall, Owens College; A. J. Moss, Owens College; H. W. Pomfret, Owens College; F. G. Robinson, Owens College. Distinguished in Materia Medica and Pharmacy, J. Gould, F. E. Mathews.

Preliminary Examination in Science.—First Division: A. E. Ash, Owens College; J. H. Barker, Owens College; R. J. M. Buchanan, University College; A. J. Chalmers, University College; J. Walker Hall, Owens College; W. E. Livesey, University College; E. Molyneux, University College; J. H. Shaw, University College; P. Worley, Owens College. *Second Division:* H. A. Beaver, University College; H. S. Brightmore, Owens College; S. H. Fairrie, University College; W. Griffith, Owens College; W. J. Howarth, Owens College; J. L. Johnstone, Owens College; A. Nixon, Owens College; J. W. Shannon, University College; W. Smith, Owens College; R. Thorburn, Owens College; A. F. Walker, University College; A. C. Wilson, University College; L. Youatt, Owens College.

UNIVERSITY OF GLASGOW.—The following degrees were conferred in the Faculty of Medicine on July 29th.

Doctors of Medicine (M.D.)—I. Highly commended for Thesis: William F. Somerville, M.A., B.Sc., M.B., C.M., Scotland: Thesis—Urosemiotic: the Pathological Chemistry of the Urine; the complete Quantitative Analysis of the Urine; a valuable aid to Clinical Diagnosis. Robert S. Stewart, M.B., C.M., Scotland: Thesis—Observations on the Spinal Cord in the Insane. II. Commended for Thesis: Alexander G. Auld, M.B., C.M., Scotland: Thesis—Studies in Materia Medica. Alexander Rankin, M.B., C.M., Scotland: Thesis — Cerebral Cases, with remarks. III. Ordinary Degree: John Aitken, M.B., C.M., Scotland: Thesis — Depressed Fractures of the Skull. Samuel Alexander, M.B., C.M., Scotland: Thesis — Spontaneous hydrophobia. John Buchanan, M.B., C.M., Scotland: Thesis—Simple Fractures of the Leg. John Carruthers, M.B., C.M., Scotland: Thesis—Illustrative Cases of some Rarer Forms of Nervous Affection. John Duff, M.B., C.M., Scotland: Thesis—Epilepsy. Thomas Dunlop, M.B., C.M., Scotland: Thesis—A Short Review of Hæmophilia (Hæmorrhagic Diathesis), with Notes of Recent Cases. James B. Lawson, M.B., C.M., Scotland: Thesis—Emergencies, the Unconscious State, and Sudden Death. Eric Sinclair, M.B., C.M., Scotland: Thesis—Records of a Series of *Post Mortem* Examinations in a Hospital for the Insane. Alexander J. F. Skottowe, M.B., C.M., India: Thesis—Treatment of Pleural Effusions. William Waddell, M.B., C.M., England: Thesis—Indigestion as Related to Colds and Rheumatism.

Bachelors of Medicine and Masters in Surgery (M.B. and C.M.)—I. Honours: 1. Alexander Bryce, [1] Scotland. 2. William Snodgrass, M.A., Whitewater, U.S.A. 3. John H. Carslaw, M.A., Scotland. II. High Commendation: 1. Daniel M'Kellar Dewar, Scotland. 2. John Macphail, Scotland. 3. James Dunlop, Scotland. 4. William H. Manners, England. 5. Adam T. Nisbet, Scotland. III. Commendation: 1. Robert Mair, Scotland. 2. James G. Connal, Scotland. 3. William H. Fergus, Scotland. 4. John Stewart (Lochgilphead), Scotland. 5. Alexander W. Aird, Scotland. IV. Ordinary Degrees of M.B. and C.M.: Basil J. Adam, Victoria; Charles Banks, Scotland; Colin Baxter, Scotland; Robert M'G. Beattie, Scotland; John Broom, Scotland; James A. Brown, Scotland; Robert Brown, M.A., Scotland; Walter F. Brown, Scotland; James Bruce, Scotland; Archibald Campbell, M.A., Scotland; Archibald T. Campbell, Scotland; Alexander Carmichael, Scotland; Robert Corbett, Scotland; Robert Craik, Scotland; Alexander D. Crawford, Scotland; John R. F. Cullen, Scotland; John Currie, Scotland; John Dodd, Scotland; Joseph L. Downes, Scotland; George G. Ferguson, Scotland; Robert T. Ferguson, Scotland; Robert I. Gardner, Scotland; Bruce E. Goff, Scotland; Andrew Gray, Scotland; Charles Gray, Scotland; Robert W. T. Haddow, Scotland; Robert Hamilton, Scotland; William T. Hannah, Scotland; Walter Hay, Scotland; Robert Henry, Scotland; Robert C. Highet, Scotland; James W. Hill, Scotland; Arthur D. Hughes, Wales; Josias Jago, Scotland; John Keddie, Scotland; John A. Kennedy, M.A., Scotland; James Laurie, Scotland; Robert C. Miller, Scotland; Henry W. B. Monteagle, Scotland; James Muirhead, Scotland; Donald S. MacColl, Scotland; James M'Conechy, Scotland; David Macdonald, Scotland; James M'Donald, Scotland; Thomas R. Macdonald, Scotland; Hugh M. M'Houl, Scotland; George M'Intyre, Scotland; William M'Kinlay, Scotland; Archibald Maclachlan, Scotland; James Maclachlan, Scotland; Alexander H. MacLean, Scotland; David T. MacLeod, Scotland; William T. Nicholson, England; James H. Nicoll, Scotland; Robert S. Penman, Scotland; William F. Phillips, Scotland; William Pyle, Scotland; James Rae, Scotland; Robert Robertson, Scotland; William Robertson, Scotland; Henry W. Robinson, Scotland; Robert Routledge, Scotland; Alexander Roxburgh, Scotland; Archibald Roxburgh, Scotland; Charles E. Scanlan, Scotland; William Shand, Scotland; Henry W. Sinclair, Scotland; James W. H. Steil, England; John Stewart (Renfrew), Scotland; John B. Stewart, M.A., Scotland; John Thorburn, Scotland; Thomas Watt, M.A., Scotland; Robert Whitelaw, Scotland; Donald Wingate, Scotland; Alexander Wylie, Scotland; James Wylie, Scotland; John Young, Scotland. V. Degree of C.M.: John Chalmers, M.D., Scotland. Mr. Walter Fox, of Brazil, received the ordinary degrees of M B and C.M. on July 26th.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine,

[1] Mr. Bryce gained the Brunton Memorial Prize of £10, awarded to the most distinguished medical graduate of the year.

Surgery, and Midwifery, and received certificates to practise, on Thursday, July 29th, 1886.

Bower, William George, The Vineries, Southport.
Briant, Arthur John, Bootle Borough Hospital, Liverpool.
Burton, Charles Frederick, M.R.C.S., South Park Villas, Harrogate.
Cunliffe, William Shrubsole, M.R.C.S., 45, Torrington Square, W.C.
Goodman, Thomas Hubert, 407, Strand, W.C.
Henderson, George Christopher, M.R.C.S., Natal, South Africa.
Hunt, Howard Wrangham, M.R.C.S., 26, Holford Square, W.C.
Paige, Horace Bennett Wood, Whitley, Newcastle-on-Tyne.
Plant, Alexander Whitmore, Wordesley, Stourbridge.
Popham, Robert Brooks, 67, Bartholomew Road, Camden Road.
South, Frederick William Bury, San Nicolas, St. Leonards-on-Sea.
Stockton, Hubert Samuel, 8, Wray Crescent, Tollington Park.
Watson, Henry Gervase, Moorfields, Sheffield.

The following gentlemen have been appointed Examiners of the Society of Apothecaries of London for the ensuing year.

Bullock, Henry, L.S.A., F.R.C.S.E.
Clark, Andrew, L.S.A., F.R.C.S.E.
Duncan, William A., L.S.A., M.R.C.P.Lond., F.R.C.S.Eng., M.D.Brussels.
Fowler, Robert, L.S.A., M.D.Univ.Edin., M.R.C.P.Edin., M.R.C.S.Eng.
Hall, F. de Havilland, L.S.A., M.D.Univ.Lond., F.R.C.P.L., M.R.C.S.E.
Hensley, Frederick J., L.S.A., M.D.Lond., M.R.C.S.E.
Lee, Robert James, M.D.Univ.Camb., F.R.C.P.L.
Makins, G. H., L.S.A., F.R.C.S.
Stocker, John Sherwood, L.S.A., M.R.C.S.E., M.D.Univ.Lond., M.R.C.P.L.
Thorowgood, John Charles, L.S.A., M.R.C.S.E., M.D.Univ.Lond., F.R.C.P.L.
Walsham, W. J., L.S.A., F.R.C.S.Eng., M.B., M.S.Aberd.
Warner, F., L.S.A., F.R.C.S.E., M.D.Univ.Lond., F.R.C.P.L.

MEDICAL VACANCIES.

The following vacancies are announced.

BALLYMENA UNION.—Medical Officer. Salary, £15 per annum, and fees. Application by August 10th to W. Miller, Ahogill, County Antrim.

BIRMINGHAM BOROUGH ASYLUM.—Resident Clinical Assistant. Board and Residence. Applications to E. B. Whitcombe, Esq., Medical Superintendent.

DURHAM COUNTY ASYLUM, Sedgefield, Ferryhill.—Junior Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent.

GENERAL INFIRMARY, Leeds.—Resident Surgical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications by August 20th to T. Blair, Esq., General Manager.

HARTLEPOOL'S FRIENDLY SOCIETIES MEDICAL ASSOCIATION. Medical Officer. Applications to T. Tweddell, Esq., West Hartlepool.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. Brompton.—Resident Clinical Assistants. Applications by August 14th to H. Dobbin, Esq.

LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, Mile End, E.—Assistant Demonstrator of Anatomy. Applications by August 12th to the Warden.

MANCHESTER ROYAL INFIRMARY (MONSALL FEVER HOSPITAL).—Assistant Medical Officer. Salary, £100 per annum, with board and residence. Applications by August 19th to the Chairman of the Board.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer of the Convalescent Home at Cheadle. Salary, £150 per annum, with board and residence. Applications by August 14th, to the Chairman of the Board.

OWENS COLLEGE, Manchester.—Professor of Chemistry. Applications to the Council of the College, under cover, to the Registrar by August 31st.

ST. MARY'S HOSPITAL, Paddington.—Administrator of Anæsthetics. Applications by August 7th to the Secretary.

ST. OLAVE'S UNION, Bermondsey.—Medical Officer of the Workhouse. Salary, £40 per annum, and fees. Applications by August 11th, to J. G. Hawkins, Esq., Clerk.

ST. OLAVE'S UNION, Bermondsey.—District Medical Officer. Salary, £160 per annum, and fees. Applications by August 11th to J. G. Hawkins, Esq., Clerk.

SCARBOROUGH HOSPITAL AND DISPENSARY.—House-Surgeon and Secretary. Salary, £80 per annum, with board and residence. Applications by August 17th to the Secretary.

WARWICK JOINT HOSPITAL BOARD.—Medical Officer to Infectious Hospital. Salary, £10 per annum, and £2 for each case. Applications, by August 19th, to A. E. Davis, Town Hall, Leamington.

WEST RIDING ASYLUM, WAKEFIELD.—Resident Clinical Assistant. Board, apartments, etc. Applications immediately to the Medical Director at the Asylum.

MEDICAL APPOINTMENTS.

DUNDAS, M. G., M.R.C.S., L.S.A., appointed Medical Officer and Public Vaccinator for the Fransham District of the Mitford and Launditch Union, Norfolk.

FITTON, H., M.R.C.S.Eng., L.R.C.P.Ed., appointed Junior House-Surgeon to the Halifax Infirmary, *vice* Mr. Thomas, promoted Senior House-Surgeon.

GRANT, J. Dundas, M.A., M.D., F.R.C.S.Ed., late Assistant-Surgeon Central London Throat and Ear Hospital, appointed Full Surgeon.

HOLTHOUSE, E. H., F.R.C.S.Eng., appointed Honorary Surgeon to the St. Pancras Northern District, *vice* H. Royes Bell, F.R.C.S.Eng., deceased.

LARKING, A. E., M.R.C.S.Eng., L.S.A., appointed House-Surgeon to the Brighton, Hove, and Preston District, *vice* G. G. Hodgson, M.R.C.S.Eng., L.S.A., resigned.

LAW, J. S., M.D.Ed., appointed Resident Clinical Assistant to the North Riding of Yorkshire Lunatic Asylum, Clifton, Yorks.

MEYER, C. H., M.B., appointed Medical Officer to the Hollingbourne Union, *vice* J. N. Bredin, L.K.Q.C.P., resigned.

NEVINS, Arthur E., M.R.C.S., L.R.C.P.&S.Edin., appointed a House-Surgeon to the Middlesex Hospital, *vice* Clement Pound, L.S.A.

REED, W. T., appointed Resident Surgeon to the Royal Sea-Bathing Infirmary, Margate, *vice* W. Bradbrook, M.R.C.S.Eng., resigned.

SWABY-SMITH, C., M.R.C.P.Eng., M.R.C.S., appointed Visiting Physician to the Spelthorne Sanatorium for Inebriates.

WHITE, F. S., M.R.C.S.Eng., L.S.A., appointed Junior Assistant Medical Officer to the Barnwood House Hospital for the Insane, *vice* R. D. Batt, M.R.C.S. Eng., deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

DEATH.

HARGROVE.—Charles William Hargrove, L.R.C.P.Edin., L.F.P.S.Glas., of Olton Warwickshire, died June 26th, from cancer of the tongue.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30 Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

A QUESTION OF DIAGNOSIS.

A.B., M.B. writes: I should be greatly obliged to any reader who would kindly enlighten me as to the nature of the following—to me, obscure and mysterious—affection.

The subject of it is a fairly healthy looking, though somewhat anæmic, young cavalry soldier, aged 26; former trade, plumber; total service, six years; service in India, one year and a half. His medical history sheet shows four admissions into hospital for gonorrhœa, one attack of which was of more than three months' duration, and was complicated with orchitis; two admissions for primary syphilis in 1885, neither attack apparently being followed by secondary symptoms, nor treated by mercury. He has also had one severe attack of dysentery since enlistment, and but very little fever of any kind. There is no splenic nor hepatic enlargement; no albumen in urine.

The ailment regarding which I seek information commenced about nine months ago, and consists of swellings of a dusky-red colour, unattended by pain, but attended by a disagreeable burning, tingling sensation, which suddenly make their appearance, in the most promiscous manner, in various parts of the body, and with almost equal suddenness disappear, but only to reappear somewhere else. The swellings take place singly, a second one not appearing until the former has disappeared. During the last month, for instance, the swelling has occupied the lobe of one ear; from there, it has shifted, in less than twenty-four hours, to the scrotum; thence to the side of the tongue, rendering speech somewhat difficult; thence to the muscles at the back of one arm; thence to the pectoral region on one side; thence to the eyelids, completely closing them, and exactly resembling a pair of black eyes; thence to a thumb or knee; thence to the abdomen, and so on. The swellings come and go in the most rapid manner; and when they disappear, they do so in the most complete manner, and leave no trace whatever.

While the process is going on, the patient feels weak and below par; his appetite fails; his temperature rises about a degree; he is quite incapacitated for duty. After a sojourn of about a fortnight or three weeks in hospital, during which he receives no special treatment, only a tonic, the affection appears to exhaust itself, and he returns to duty, but only to come back to hospital at the end, perhaps, of a fortnight, complaining of the same symptoms.

What is the cause and what the nature of this very peculiar affection? Are the swellings metastatic, or what? It does not bear any resemblance to urticaria, nor to any other affection that I have ever seen or read of.

AN ASSOCIATION OF PRISON-SURGEONS.

DR. GEORGE EVATT (Woolwich) writes: May I ask if there is any Association of Prison-Surgeons, or any periodic meetings of those gentlemen to discuss questions of prison-hygiene, and the relations between Crime and Disease? I should imagine that there are many points in the daily experience of these gentlemen that are worthy of record and discussion.

CHRONIC MUCOUS DIARRHŒA.

DUBITANS writes: I shall feel much obliged if any member will advise me in regard to treatment, and especially as to diet of the following case. For about eighteen months the patient, a young lady, has been troubled with mucous diarrhœa, alternating with costiveness. There has been slight lung mischief with hæmoptysis, but the chest is now healthy. There is considerable loss of flesh, but no night sweating; great weakness and disinclination for exertion; loss of appetite and weak digestion, with pain in the stomach and bowels. I have prescribed iron and hydrochloric acid, which has already considerably improved the appetite and digestion. What effect would malt extract have?

ANSWERS.

TEXT-BOOK ON INSANITY.

R. C. J.—The *Manual of Psychological Medicine*, by Drs. Bucknill and Hack Tuke (Churchill); *Insanity and its Treatment*, by Dr. Blandford (Oliver and Boyd); and the *Handbook of Insanity*, by Dr. Savage (Cassell), are all good works for the purpose.

SULPHIDE OF CALCIUM.

J. C.—Sulphide of calcium has been much recommended, in doses of one-tenth of a grain, frequently repeated, in the treatment of boils, carbuncles, acne, etc., and good results are said to have been obtained. It is best administered in the form of pills made by triturating the sulphide with sugar of milk, adding sufficient glycerine of tragacanth to make a pill-mass. The preparation, however, is very apt to undergo decomposition.

W. T. A.—The Livermore stylographic pen can be obtained at 28, Bartlett's Buildings, E.C.

MR. ROBERT HAGYARD.—Mr. Lewis, Gower Street, has a work on Massage in the press, by Dr. Murrell.

MR. HACON.—The difference between Pasteur's operation and that which you suggest is that Pasteur uses a virus of increasing strength, and during the period of incubation. The date after exposure to small-pox at which inoculation will modify the disease is well established.

QUALIFICATIONS NECESSARY FOR CHARGING FOR MEDICINES.

M.D.UNIV.DUB., having heard that it is necessary, in general practice, to have the Licence of the Society of Apothecaries in order that one may be able to recover for medicines supplied to a patient, wishes to know if it is the case, and whether one can sue on a registered medical degree, if all be put under the head of professional attendance, instead of professional attendance and medicines.

*** The Licence of the Society of Apothecaries is certainly not the only qualification that entitles a registered practitioner to recover for medicines supplied to a patient. Any other qualification in medicine would undoubtedly do so (if registered); and, indeed, it is clear that a registered surgeon may recover for dispensing and administering medicines as subordinate and subservient to a surgical case, which he may be attending. Probably, if the point were raised, it would be found that a still wider interpretation would now be given to the 31st and 32nd Sections of the Medical Act, 1858.

UNSATISFACTORY INQUESTS.

PROBE writes: If, by a medical man called to the case, a child were found suffocated by impaction of a curd of milk in the trachea, or by lumbricoids there, an inquest would no more be necessary than would it be if death were certified to result from bursting of an aneurysm into the air-passages. Research would be poor indeed if *post mortem* examinations were confined to those ordered by a coroner.

MR. W. W. MORRIS (Clun) writes: I would point out to "Probe" that our death-certificate forms commence "I hereby certify that I attended," etc. Does not this mean during life? If so, how can we fill one up for a case not seen until after death?

NOTES, LETTERS, ETC.

RAILWAY CLOSETS.

H. F. P. writes: From a large experience as a railway passenger, as well as from knowledge gained in official positions, I can corroborate Dr. Walter Fergus, as to the frequent bad sanitary condition of railway closets and urinals—I will not say "lavatories," for at some even of the largest railway stations (for example, Crewe, not long ago) facilities for washing are conspicuous by their absence—and of the dangers to health accruing therefrom. From the frequency with which the nose of the male passenger in waiting rooms is assailed by evil odours proceeding from penetralia which he is forbidden to enter, I can quite believe that the other sex are no better treated in this respect than ourselves probably worse, the closets for the use of ladies being generally in a confined air, while those for men are often out-of-doors. Things are generally worst at the older and the smaller stations; in newer stations, improved forms of apparatus have commonly taken the place of the old abominable "pan" and "long hopper" closets, and at the more important stations the closets are usually under the charge of a porter or waiting woman, who is responsible for their cleanliness. I have also often found the house of the station-master, when forming part of the station building, to be built without any regard to hygienic principles, so as to be detrimental to the health of the inmates. I must, in fairness, add that I have always found railway companies quite willing to remedy any unsanitary conditions on their premises when pointed out to them. The fault seems to be that no one considers it his business to look after the state of these places. Medical officers of health and sanitary inspectors would do well to pay attention to the state of the closets at railway stations, more particularly those for the use of ladies. It must be remembered that a railway closet is especially liable to receive specific infection from "ambulant" cases of enteric fever, or choleraic diarrhœa.

THE MEDICAL ACT, 1886, AND THE M.D. BRUSSELS DEGREE.

DR. F. ERNEST POCOCK, M.D. BRUX., Honorary Secretary to the Brussels Medical Graduates' Association, writes: Since the passing of the Medical Act, I have received many letters from graduates of the University of Brussels, saying that they have applied to have their degrees registered, and have been unsuccessful in their application. This is not surprising, as the Act does not come into force till June 1st, 1887.

I am now away from home, and unable therefore, at present, to send a circular letter, but shall be much obliged if you will kindly allow me, through your columns, to suggest to every Brussels graduate that he should at once give notice to the General Medical Council that, on June 1st, 1887 (or earlier, should the date be altered), he will apply to have his degree registered, and will be prepared to support his application by the production of his diploma, and also by affidavit, or in any manner the Council may deem necessary to preclude the possibility of the registration of degrees granted *in absentiâ*. The nearly simultaneous receipt of such a notice from the 210 Brussels graduates practising in England (to say nothing of any other foreign graduates who might choose to do the same) would probably stir up the Council to make such arrangements that there need be no further delay after the arrival of the "said appointed day."

TREATMENT OF INFLAMMATIONS OF EXTREMITIES.

M.B., M.A., writes: Everyone has seen the good effects of elevating and resting a limb affected by inflammation of any kind, such as eczema, inflamed bursæ, joints, ulcers, etc.; but it seems to me that elevation might be carried to a much greater extreme with advantage. We know that a limb can be rendered bloodless for an operation by simple elevation and elastic tourniquet. I should be glad if someone with a large surgical practice would try the experiment of

keeping the affected limb raised to an angle of 50° or 60°, upon a well pillowed board, the knee or elbow being slightly flexed for comfort. I fancy he would be pleased with the result.

Climate of Demerara and Barbadoes.

F. A. D., M.D., writes: Under the heading "Barbadoes as a Sanatorium," in your number of July 17th, "A Traveller" writes as follows: "The sea-bathing it affords, and the trade-winds that blow over the island, render life there preferable to an enervating existence on the mud swamps of Demerara, or in the malarious forest covered country beyond." As this may be misleading, kindly allow me, as a former resident of Demerara and one who has travelled in the country, to draw your attention to the opinion of a "F.R.G.S.," and for the accuracy of which I can vouch. "The climate is warm, but not oppressive. The thermometer, it is true, ranges from 75° to 90°, but a refreshing sea-breeze tempers the heat. The colony is not so unhealthy as is generally supposed, and with care and ordinary precaution, good health can be enjoyed."

The following will also be found in the Exhibition supplement to the *European Mail*, speaking of British Guiana as the "Magnificent Province." "Probably a country of more striking natural features was never known, with its goldfields, now only awaiting settlement of boundary and protection to the miner to become capable of yielding rich results, its broad rivers, its enormous forests, its lonely mountains, such as Roraima, with fantastic surface and hitherto unknown flora, and its cataracts and falls of water, such as Kaieteur, which, when in full flood, is the finest fall of water in the world, not excepting Niagara. But although British Guiana, or as it is popularly called, from its principal county, Demerara, is not a part of the West Indies proper, yet its seaboard looks up to Trinidad and the islands, with which it is connected by mail communication; and its staple, sugar, makes its interest practically identical with that of the Western Archipelago. No one, indeed has yet fully described the marvellous animal and bird life of the interior of Guiana, though Schomburgh and Waterton did their best."

I leave Barbadoes in other hands, only having been on very short visits to the island, on one occasion for the benefit of my health, profiting by the change; but, before closing, I will, by your kind permission, draw attention to the following quotation from a good authority. "The climate, though warm, is perhaps as healthy as any part of the West Indies, and the heat is greatly alleviated by the trade-wind which constantly blows over the island; indeed, the longevity of its inhabitants is a proof of its salubrity."

It must, however, be admitted, as stated by "A Traveller," that "a native of these islands, who sought health in Barbadoes, would naturally be going out of the way."

The Case of Dr. J. S. Ridley.

Mr. H. A. Smith (Burnham Lodge, Ealing) writes: The following contributions have been further made towards the "Ridley Fund."

	£	s.	d.
Thomas Smith, Esq., London	5	5	0
Ashton Godwin, Esq., London	3	3	0
W. F. Giles, Esq., Southampton	2	2	0
C. E. Fitzgerald, Esq., Folkestone	1	1	0
R. Parker, Esq., Malpas	1	1	0
G. Robinson, Esq., Bedford	0	10	0
W. H. Radley, Esq., Scarborough	0	5	0
J. Manning, Esq., Wye, Kent	1	1	0
Small Subscriptions	1	10	0
Total amount subscribed	27	9	6

An Appeal.

Mr. R. Fitzroy Benham (Abercorn House, Baron's Court, S.W.) writes: Referring to my appeal in your Journal, of June 26th, and the list of subscriptions you kindly published on July 10th, I have since received the following sums, and trust that those of your readers who have not yet contributed, will not overlook this very deserving case.

	£	s.	d.
Previously announced ..	31	8	0
Leopold de Rothschild, Esq.	3	3	0
Sir W. Jenner, Bart.	2	2	0
W. M. B.	2	2	0
Professor Anderson	2	0	0
Dr. Barr Meadows	1	1	0
Dr. Reginald Eager	1	1	0
Dr. F. R.	1	1	0
J. W. Barry, Esq.	1	1	0
Dr. G. W. Balfour	1	0	0
Dr. W. P. Brabazon	1	0	0
M.D.Lond.	1	0	0
A Friend..	1	0	0
S. H. Agar, Esq.	1	0	0
W. C. Bland, Esq.	1	0	0
J. Bell, Esq.	0	10	6
"K." Taunton	0	10	6
Dr. R. Keer Johnson	0	10	0
Dr. W. J. Martin	0	10	0
R. G. Coombe, Esq.	0	10	0
Smaller Sums	0	10	6

Cod-Liver Oil and Maltine.

Mr. W. Ralph Dodd (Stamford Hill) writes: As a disinterested party, perhaps you will allow me space to give an independent opinion relative to the solution of cod-liver oil in meat extract?

Assuming that water will dissolve an infinitesimal quantity of cod-liver oil (as it does other oils), it is clear that malt extract, being an aqueous solution of the principles in malt, may dissolve an infinitesimal amount likewise (I don't say that it does), but if it did in this proportion, it would be of no value medicinally. Reasoning thus, it is clear that the so-called solution is not a solution, but an emulsion.

Now, an emulsion may be defined as a mechanical mixture of substances, one of which is insoluble in the other; the surfaces of each particle repel each other, so that contact cannot be maintained without the addition of some substance which can establish a sufficient amount of adhesion to overcome the tendency to separation; in order to accomplish this, such substances as gums are added. This is precisely what occurs when malt extract and cod-liver oil are combined; the density of the former overcomes the resistance of the latter, and holds the oil mechanically with great tenacity, and in a very fine state of subdivision. That such is the case, may be seen with the aid of the microscope, and more easily when the smallest modicum of water is added, thus reducing the density of the malt extract, and setting free the globules of oil. If this were a true solution, it would follow the laws of solution, which it signally fails to do, and the conclusion is that the so-called solution is a mere mechanical mixture.

Rise of Temperature at Night.

Dr. A. W. Wallace (Cardross, Dumbarton) writes: In his reply to "T. D.," Mr. Charles King has just reversed the law of conservation of force. Construction requires heat to be converted into chemical action; therefore temperature falls Waste of tissue is attended with evolution of heat. The facts, rightly interpreted, exactly agree with this. The increased waste during the day causes increased production of heat, which appears as an evening rise of temperature, if the heat-regulating apparatus is out of gear. During the night the process is reversed, and a lower morning temperature is the result. The fact that less carbonic dioxide is evolved during the night than during the day, corroborates the explanation I have given.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. William Donovan, Birmingham; Mr. W. J. Penny, Clifton; Dr. Ashby, Manchester; Mr. G. F. Poynder, Gravesend; Mr. James Lattey, London; Dr. V. Poulain, London; Dr. Lowther, Grange-over-Sands; Dr. J. W. Watkins, Newton-le-Willows; Mr. Thompson, London; Dr. J. H. Aveling, London; Mr. W. A. Thomson, Ampthill; Mr. G. A. Atkinson, Edinburgh; Mr. T. M. Stone, London; Mr. Craven, Southport; Dr. Grant, Cairo; Dr. Simpson, Calcutta; Dr. G. F. Duffey, Dublin; Dr. Rich, Liverpool; Dr. Sutherland, London; Mr. J. Abbey, London; Dr. Lauder Brunton, London; Dr. A. Downes, Chelmsford; Dr. Ranney, S.S. *City of Rome;* Mr. Jeffreys, Chesterfield; A.B., M.B.; Mr. B. Bryan, London; Mr. W. Robinson, London; Mr. W. W. Morris, Clun; Dr. W. H. Lambart, Liverpool; Dr. Archer, Royston; Dr. R. T. A. O'Callaghan, Carlow; Mr. C. H. Cockran, Reading; Mr. Lawson Tait, Birmingham; The Secretary of the Victoria University, Manchester; Mr. Robert Jones, Liverpool; Dr. Bond, London; Dr. Lindsay, Belfast; Dr. Hack Tuke, London; Mr. W. W. Wagstaffe, Sevenoaks; Mr. W. Johnson Smith, Greenwich; Mr. P. S. Donnellan, Liverpool; Dr. D. Newman, Glasgow; Mr. E. Noble Edwards, Brighton; Mr. A. W. Green, London; Dr. J. Macpherson, London; Mr. C. E. Jennings, London; Mr. N. Grattan, Cork; Mr. G. J. Russell, Sevenoaks; Dr. R. J. Anderson, Galway; Dr. Clouston, Edinburgh; Dr. Myers, London; Mr. W. L. Saunder, Manchester; Dr. W. M. Rosten, Birmingham; Mr. W. W. Pryn, Devonport; Dr. Mapother, Dublin; Mr. Gurner, London; Mr. J. E. Erichsen, London; Dr. Petch, York; Mr. A. Scott, Brighton; Dr. Beverley, Norwich; Dr. J. K. Spender, Bath; Mr. G. F. Hodgson, Brighton; M.B., M.C.; Dr. Ranking, Tunbridge Wells; Dr. R. Wade Savage, London; Dr. Banning, Bushey; Professor Stirling, Writtle, Essex; Secretary of *Industries* Office, Manchester; Mr. F. Canton, London; Mr. Dix, Hull; Probe; Mr. A. E. Nevins, London; Mr. G. T. Keele, London; Mr. R. Bremridge, London; Mr. B. Dutton Taplin, Binbrook; Mr. R. H. A. Hunter, London; Dr. Mordey Douglas, Sunderland; Mr. Thomas Blair, Leeds; Mr. Walter Reid, Haslar; Dr. Laffan, Cashel; Mr. George Sturge, London; Mr. W. J. Sansbury, London; The Mayor and Mayoress of Brighton; Mr. W. T. Atkey, Worthing; Mr. M. H. Feeny, Nunhead; Dr. Gairdner, Crieff; Messrs. Fletcher, Fletcher, and Stevenson, London; Mr. Harley, Bath; Mr. W. Magill, London; Mr. H. C. Burdett, London; M.R.C.S.; Mr. F. Shepherd, London; Mr. Vesey Fitzgerald, Birmingham; Messrs. Forrest and Co., London; Messrs. Evans and Wormull, London; Mr. C. F. Rideal, London; Dr. J. Tatham, Salford; Sir J. A. Hanbury, London; etc.

BOOKS, etc., RECEIVED.

Bright's Disease. By C. W. Purdy, M.D. London: H. K. Lewis. 1886.

Monomanie sans Délire: an Examination of the Irresistible Criminal Impulse Theory. By A. W. Renton, M.A. Edinburgh: H. T. Clark. 1886.

Short Sight, Long Sight, and Astigmatism. By G. F. Helm. London: J. and A. Churchill. 1886.

Spasm in Chronic Nerve Disease. By S. J. Sharkey, M.A., M.B., F.R.C.P. London: J. and A. Churchill. 1886.

A Code of Rules for the Prevention of Infectious and Contagious Diseases in Schools. Second Edition. London: J. and A. Churchill. 1886.

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PRESIDENT'S ADDRESS,

DELIVERED AT

THE FIFTY-FOURTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION,

Held in BRIGHTON, August 10th, 11th, 12th, and 13th, 1886.

BY

WITHERS MOORE, M.D., F.R.C.P.,

Senior Physician to the Sussex County Hospital, Brighton.

The Higher Education of Women.

Gentlemen,—Our Association, wherever it has met, has been welcomed heartily. Nowhere, I am persuaded, has the welcome been heartier than it is here. But, on behalf both of the municipal authorities and of my professional brethren, I have said this already. You do not need that—as though there were any doubt—I should say it again.

For my personal self, I will detain you neither with expressions of gratitude for the honour which you have done me in placing me in this Presidential Chair, nor yet with regrets that I cannot more adequately and amply discharge its duties. You will credit your President with feeling as your President ought to feel, and you will not require more of him than that he should be able (as he will be) to say conscientiously "Feci quod potui, non ut volui."

Last year, in the able inaugural address which my predecessor delivered, he found a fitting field at once for the indulgence of his own local loyalty, and for the gratification and instruction of his readily listening audience, in the interesting history which he gave us of the growth of his town of Cardiff (at a rate of progress American rather than British), and of the highly satisfactory results (commercial, social, and municipal, as well as medical) reached there already, and rapidly advancing towards a yet further height of excellence. But, admirably adapted as that address was to its surroundings, I should be making a mistake, I think, were I in this particular to make it my model here. Cardiff was to many of us in some sort a *terra incognita*, a region for early explorers and detailed descriptions. A report on Brighton and its merits (various and numerous as they are) will be welcome, I fear, only if "taken as read."

Leaving last year, with its recent and pleasant recollections, let us take a longer retrospect—one, to some of us, not without the sadnesses of memory, as well as its pleasures. Much has changed since the day—thirty-five years ago—when our Association held its former and only meeting here at Brighton; and the Waterloo veteran, then in this chair, rose (he said) with diffidence at having to address the representatives of such a body—a body the members of which were then hundreds, where we now count thousands. Much has changed, but unfortunately we cannot reckon among the changes the removal of certain serious evils in the organisation and working adjustments of our medico-political constitution and economy, which Dr. Jenks pointed out and complained of thirty-five years ago, and which, could he resume the chair which so willingly we should concede to him, he would find, with surprise and disappointment, have to be complained of still. "The Medical Reform," in Dr. Jenks's address, a "fruit already ripe," proved, after five years' waiting, to have been plucked too soon; and, after all the long battle of the Examining Boards, there is still room for doubting whether a ripe fruit has been gathered even yet: I mean, whether even our latest legislation can at all be acquiesced in as final. The medical aspects of poor-law administration, the "degrading and ill-paid appointments not accepted merely, but made objects of eager competition," the unsolved question of retiring pensions, are not these still with us?

Gratuitous medical relief—that demoraliser of the poor, and incubus upon the profession, 40,000 cases of which occur in Brighton every year—that "indiscriminate abuse of medical charity" which has been well characterised as "eating out whatever of manly independence may have been left in the poorer classes, and at the same time rendering the struggles of the general practitioner more and more severe," is it less rife than heretofore?

And one other point I cannot help adverting to, less for our own sakes than for its issues as affecting our patients, that is, the public generally—I mean our honoraria.

Had but medical fees since Queen Anne's time run a course like that of the legal ones, or had the heads of our profession in London followed the lead of their Parisian brethren, in raising the rate of their remuneration, how great (in these days of railway facilities, and consequent influx of country patients into the metropolis) would have been the gain to all parties concerned? The leading practitoners, with less labour, would have had larger remuneration, and an amount of work not overpassing human capacities. Their patients, fewer in number, would receive fuller attention, and far more frequently (bringing up their own medical advisers) would have the great benefit of a real consultation. Practitioners not as yet of the very first eminence would, with more patients, have multiplied opportunities of exercising their skill, and thereby increasing it; and, as the circle went on widening, there would ensue such a diffusion of work (and wages) as would have the effect of largely augmenting the total amount of practical power and promptitude in the profession, and thereby also of practical benefit at once available for the sick and suffering world of their patients.

However, if (less, as I said, to our own loss than to that of our patients) we have been making, since the Association assembled in Brighton, but little advance towards securing to ourselves a fair day's wages, the case is far otherwise as to our equipment for a fair day's work.

When we think of hygiene raised into a science; of a profound pathology, surely based upon physiology and histology, aided by morbid anatomy, to the unspeakable advantage of clinical observation and diagnosis; of the unwearied observation of the action of remedies on man and animals, which is changing therapeutics from empirical to scientific; of the marvels of etiology, and especially of bacteriology, which may be said to have had its birth some years within the thirty-five, and which is already threatening an entire reversal in our views of the pathology of many diseases of ordinary occurrence among us,—thinking, I say, of all these and the like, it may, perhaps, seem but suitable that I should attempt some summary of the wonderful series of our successes, and that I should build a bridge, as it were, reaching from our former meeting here to our present one.

Arch by arch, however, that bridge has for the most part risen already, in the able addresses delivered year by year by my honoured predecessors and their distinguished coadjutors. Besides, it seems to me that on a public, and, in a certain sense, popular occasion such as the present, it may be well that our President should devote a large portion of his allotted time to some subject of current and popular interest, upon which, as custodians of the public health, instruction and guidance may naturally be looked for from us. And such a course may be taken all the more suitably when, as on the present occasion, you have bestowed the honour of your presidency, not upon some famous scientist or specialist, but upon one of those whose humble (yet not less needful) function it is to take the knowledge, which, at the feet of scientists and specialists, they have acquired, and apply it to the actual use and benefit of mankind, in the persons of their patients.

Such a subject—at once popular and professional—may be found, I think, in what is called the higher education of women, meaning, by "higher education," one which aims at raising women (as it imagines) to the masculine level, by fitting them for the exercise of brain-power in competition with men.

This, then, is our question. Is it for the good of the human race, considered as progressive, that women should be trained and admitted to compete with men in the ways and walks of life, from which, heretofore (as unsuited to their sex), they have been excluded by feeling and usage, and largely, indeed, by actual legislation? Will it be well that we should have female doctors and divines, lawyers, mathematicians and astronomers, professors, publicists, and Ministers of State? Might not one add, female generals and commanders of armies? For Amazonian ambitions are still alive: witness the Dowager Maharanee of Baroda's recent offer to the Viceroy of India, of a corps of women warriors, to aid him in solving the Afghan frontier difficulty. "The fighting capabilities," said this Oriental vindicator of the rights of women, "the fighting capabilities and horsemanship of the Mahratta ladies can be no secret to your Excellency; and I hope that the offer which I make, and which I am prepared to carry out at the shortest notice, will be accepted, and that it will prove a precedent to the ladies of India and of England, and show the prowess with which the female race is capable of bearing arms, and that they can fight side by side with the military forces of the empire." Will it be well, then, that

our women should be equipped and encouraged to enter into the battle of life shoulder to shoulder and on equal terms with men? Do the "rights of women," does "justice to women," demand it? Do the "duties of women" (due to the whole human race, and to their own sex and selves, as a part of that whole) admit it?

The old chivalrous ideal, certainly, was a very different one. It was, that sweat of the brow and sweat of the brain should be mainly masculine—that man should go forth to adventure and achievement, "to his work and to his labour until the evening," while woman should wait at home and welcome him back again, and lend her ear to his tale of doing or of suffering, and reward him with her gentle sympathy and loving appreciation.

"She loved me for the dangers I had passed,
And I loved her that she did pity them."

To the men of "the old time before us," those words of Othello's seemed merely natural. Their thought was, not that woman should have her fair chance with man in the battle of life, but that she should be shielded and sheltered from that rude battle, if possible, altogether; that man should fight it for her. But, if we are to "change all that," then those who enter into the conflict where cuffs are going—man or woman—must be content to be cuffed, and to cuff back again; and the age of chivalry and chivalrous courtesy (so far as woman is concerned), with all which that courtesy did to make life noble and beautiful, must indeed be held finally to have passed away.

But such words may seem too sentimental and somewhat out of place. Well, then, as a professional man to a professional audience, though not without thought of the non-professional many whose attention this address (just because it is your President's) may be expected to command, let me lay before you my reasons for replying in the negative to the question proposed. I think that it is *not* for the good of the human race, considered as progressive, that women should be freed from the restraints which law and custom have imposed upon them, and should receive an education intended to prepare them for the exercise of brain-power in competition with men. And I think thus, because I am persuaded that neither the preliminary training for such competitive work, nor the subsequent practice of it in the actual strife and struggle for existence, can fail to have upon women the effect of more or less (and rather more than less) indisposing them towards, and incapacitating them for, their own proper function—for performing the part, I mean—which (as the issue of the original differentiation of the sexes) Nature has assigned to them in the maintenance and progressive improvement of the human race. For bettering the breed of men, we need and claim to have the best *mothers of men*. This "higher education" will hinder those who would have been the best mothers from being mothers at all, or, if it does not hinder them, more or less it will spoil them. And no training will enable themselves to do what their sons might have done. Bacon's mother ("choice lady," says the biographer, and "exquisitely skilled," as she was) could not have produced the *Novum Organum*, but she—perhaps she alone—could and did produce Bacon.

Such, stated briefly, is my contention. I proceed to set forth more fully the facts and arguments upon which I found it; but, before doing so, let me, at the threshhold of my subject, disclaim all covert intention of proving that women are unfitted for the practise of *medicine*; for, if my question be answered in the affirmative, I see no reason why an exception should be made in favour of our profession. Nor need we, in that case, fear the result. Music, painting, poetry, literature, and cookery, have been as free to women as to men; and yet a Beethoven, a Titian, a Shakspere, a Bacon, or a Soyer has never yet appeared in their midst; and we may rest assured that the day is far distant when a Hippocrates, a Harvey, a Haller, or a Hunter, will adorn the ranks of the lady doctors. Be this as it may, we are citizens first, and medical men after; so that whatever is proved to be for the greatest good of the greatest number, we, as true philanthropists, will cheerfully acquiesce in, even to the sharing of the practice of our profession with our sisters.

What we put before us, then, is the progressive improvement of the human race, the bettering of the breed of man. As Mr. Herbert Spencer (*Education*, page 146) reminds us, "The first requisite to success in life is to be a good animal; and to be a nation of good animals is the first condition to national prosperity." We may add that, to be a race of good animals is the first essential of human well-being. Now, how striking is the contrast when, with the way in which, in the case of the human animal, conjugal and parental unions are left to the haphazard of individual fancies, we comparethe persistent painstaking bestowed upon such unions by the breeders of the inferior animals. How suggestive is the very title-page of a book published in 1810 by one T. Hornby Morland, running as follows:

"The genealogy of the English race horse;
with the
Natural History of his Progenitors,
from the earliest times
down to the period when foreign blood was first
introduced into this Kingdom;
Collected from the best authorities;
to which is added the
general practice of the most judicious breeders,
whereby they have
improved and perfected our breed of blood horses
so as to have acquired a decided pre-eminence and superiority
in the essential points of
size, strength, beauty, speed, bottom, etc., etc., over
those of other countries;
with observations
upon the
present improved method of breeding for the Turf—
on the selection of Stallions
choice of brood mares,
crossing the blood, or mixing races,
&c. &c."

Mr. Youatt speaks of this principle of selection as "that which enables the agriculturist not only to modify the character of his flock, but to change it altogether. It is the magician's wand, by means of which he may summon into life whatever form or mould he pleases." In the absence of any still superior animal to the human, which might exercise an analogous exactitude in the systematic improvement of the breed of man, it would be vain to hope (perhaps wrong to wish) for professional or scientific regulation of the conjugal and parental unions of our own race.

But since there can be no interference with individuals, so much the more, surely, should social and political arrangements be free from any tendency to exclude a whole class (and that the fittest class) from its share in those unions and their results—any tendency to shut the fittest mothers out from motherhood. We are still far from being able to assign to father and mother, exactly, their respective influences in determining the original powers and qualities of the organism which is their common offspring; but this, at least, we may say safely, that it *is* their common offspring, that it derives from both of them, and cannot be healthy and well-conditioned as their common product, unless they be healthy and well-conditioned, so as to make healthy and well-conditioned contributions, severally, in producing it. When, therefore, we consider that the mother cannot be thus healthily and well conditioned if her powers have been persistently strained and overtaxed by competitive efforts and struggles against strength superior to her own, and consider, also, that the strength of man is thus superior, we see already the ruinous unwisdom of encouraging the competition of woman with man, in the severe brain-work of those "higher" studies which make such vast demands upon the vital powers. But how much more does this become apparent when in production and reproduction we include not merely the original powers and qualities of the fertilised germ-mass, as they exist in the new organism's earliest stage at the moment of conception, but take into account, also, all the after-cost to the mother's store of vitality during gestation and after parturition, until the offspring is full-fledged enough to take flight out of the nursery. And, having counted the after-cost, add in next, also, the previous cost of building up and preparing the maternal structure for discharging duly those expensive functions of pregnancy and maternity. When we reflect, moreover, that, compared with the total cost of maternity to woman, the cost of paternity to man is almost inappreciable, does not the conclusion seem to force itself upon us, that, if women are to make the outlay of force which severe competition with man, especially in brain-work, will render necessary, their remaining stock of strength will be inadequate to meet the demands of motherhood—of brain-work especially? for we must remember that, of all activities, none seems so antagonistic to reproductiveness as that of cerebration, which, indeed, follows inevitably from the large outlay of vital capital which cerebration involves.

In Mr. Herbert Spencer's words: "If, of the force which the parent obtains from the environment, much is consumed in its own life, little remains to be consumed in producing other lives. . . . Great is the physiological cost of that discipline by which high mental capacity is reached." In short, education is very expensive, physiologically as well as pecuniarily, and growing girls are not physiologically rich enough to bear the expense of being trained for motherhood, and also that of being trained for competition with men in the severer exercises of the intellect. Before citing facts and further authorities in proof and exemplification of this over-expensiveness, it may be worth while

(well-worn though the topic be) to dwell a little longer upon the part which the mother has in the making of the man—in determining, that is, the progress of the race:

"Children, like tender osiers, take the bow,
And as they first are fashioned, always grow."

Look at the man newly born—his one experience of the extra-uterine atmosphere that it is cold and sets him shivering. Now, some nine or ten years later, look at him again. What a different being has he become! What a wonderful growth and development has there been of his knowledge and faculties, habits and character! Never again in any other ten years, or any number of them, even to the three-score and tenth year, will there be anything approaching to an advance and difference equal to that of the first ten. These first ten years have done more to fix the bent of his life and character than all the long years he may live through in days succeeding. In them, as the poet said, has been the main fashioning of him; and whose has been the chief part in that main fashioning? Has it not been his mother's? How momentous a matter for him, then, what sort of a one that mother has been—vigorous or feeble, healthful or ailing, hopeful or depressed, cheery or complaining, composed or irritable, systematic or chaotic. How much does it matter what sort of a mother he has had to the individual. How much does it matter what sort of a succession of mothers it has had for its successive generations to the race. Is it surprising that there should be that adage as to remarkable men and remarkable mothers? And human excellence is not exclusively that of those who have been remarkable.

"A man's fate," said an Oxford tutor, looking back upon his college experience, "a man's fate all depends on the nursing—on the mother, not on the father. The father has commonly little to do with the boy till the bent is given and the foundation of character laid. All depends on the mother."

Galton, in his *Hereditary Genius*, after citing, as examples of remarkable women, the mothers of Bacon, Buffon, Condorcet, Cuvier, D'Alembert, Gregory, Watts, and others, adds: "It appears, therefore, to be very important to success in science that a man should have an able mother. . . . Of two men of equal abilities, the one who has a truth-loving mother would be more likely to follow the career of science."

Again, who—in Lewes's *Life of Goethe*—can read the poet's early history, with its absorbingly interesting account of the training he received from his mother, without feeling how much the marvellous material owed to its marvellous manipulation; how what the son grew into was very largely what his mother made him into; or, at lowest, prepared and fitted—in fact, enabled—him to grow into? What if Goethe's mother had never married? Would she have written *Faust?*

These questions suggest that, from the training of the man—the manipulation, that is, of the human material—we go back to the material itself; to the making of that which, after it had been made, the mother's training had to manipulate—from the infant new born to the infant unborn. Here, doubtless, we are in a region of far less certainty. Here, we bethink us of the Psalmist's: "We are made secretly." Nevertheless, even here there are such considerable probabilities as, I cannot but think, ought to have great practical weight with us. "Material," why the word itself is but Latin for mothering, a lengthened out form of *mater*. We have no corresponding *paterial*.

A few moments since, we had before us the wonderful contrast of what man was on the day of his birth, and what, in nine or ten years from that birthday, his nursing and training had made or manipulated him into. But, now, let us look at a still more wonderful change and transfiguration, transcending that other one even far more than *it* transcends all those of later life—change and contrast brought about, too, in a period much shorter, one counting, indeed, by months, instead of years.

Instead of nine or ten years forward, from his beginning on the day on which he was born, go nine months backwards, to the true beginning and starting-point of him, when, by growth and development, he had to be built up and prepared for being born. "What," asks Mr. Herbert Spencer, "can be more widely contrasted than a newly born child and the small semi-transparent gelatinous spherule constituting the human ovum? The infant is so complex in structure that a cyclopædia is needed to describe its constituent parts. The germinal vesicle is so simple that it may be described in a line."

But, that all but structureless and unspecialised cell, or cellule, is itself a minute bit, more or less detached, of the maternal organism; and (except for the other scarcely distinguishable paternal cellule which originally coalesced in it), that whole wonderful antenatal structure, with all its complexities, is merely and exclusively made out of the mother's living substance; it has been subjected to influences and impressions exclusively maternal; it is motherstuff throughout. And this goes on thus all the time during which it is developing into readiness to become the new-born babe—the man that is to be. Blood and bone, nerve and muscle, are all made out of mother-stuff. Can we exaggerate the importance to the future man of the quality of that mother-stuff?

Here, naturally, there rise in recollection the many stories (more or less well authenticated) of the results on the bodily configuration or mental disposition of the offspring, occasioned by accidents occurring to the parent during her pregnancy. How, for instance, King James the First's want of personal courage, and congenital horror of edged weapons, are attributed to the impressions produced upon him, or, rather, wrought into him, while still unborn, by what Mary Queen of Scots, his mother, felt and suffered at sight of the naked blades which were slaughtering David Rizzio in her presence. Or, again, how Napoleon's bent of genius towards war and strategy has been regarded as the outcome of his pregnant mother's share in her soldier husband's campaigning, and the consequent occupation of her thoughts and feelings with the movements of war. Such examples make Coleridge's sentence seem less startling, that "the history of a man for the nine months preceding his birth would probably be far more interesting, and contain events of greater moment, than all that follows it." Manifestly, it is before his birth, mainly, that the man is made. From and after his birth, he has mostly not to be made, but to grow; the making of him has been begun and carried on, and well towards completed, in his mother's womb. The food which his developing organism has fed upon has been, in fact, his mother. If it has been good and wholesome food, it has been so, because she was in a good and wholesome condition, had a sound mind in a sound body, possessed an unshaken constitution, a well balanced brain, a healthy digestion—in short, was altogether in such a vital state as to fit and adapt her for discharging duly the arduous functions of maternity.

To return to my facts and authorities in proof that the "higher education" of women tends to indispose them for matrimony and unfit them for maternity. Mr. Herbert Spencer, in his *Principles of Biology*, after noticing that too much bodily labour probably renders women less prolific, proceeds as follows: "That absolute or relative infertility is generally produced in women by mental labour carried to excess, is more clearly shown. Though the regimen of upper class girls is not what it should be, yet, considering that their feeding is better than that of girls belonging to the poorer classes, while in most respects their physical treatment is not worse, the deficiency of reproductive power among them may be reasonably attributed to the overtaxing of their brains, an overtaxing which produces a serious reaction on the physique. This diminution of reproductive power is not shown only by the greater frequency of absolute sterility, nor is it shown only in the earlier cessation of child-bearing; but it is also shown in the very frequent inability of such women to suckle their infants. In its full sense, the reproductive power means the power to bear a well developed infant, and to supply that infant with the natural food for the natural period. Most of the flat-chested girls who survive their high-pressure education are unable to do this. Were their fertility measured by the number of children they could rear without artificial aid, they would prove relatively very infertile."

In confirmation of the foregoing, I may quote the weighty authority of Dr. Matthews Duncan, who, in replying to the question, Do you find that girls who go in for what is called the higher education have the catamenia lessened, or rendered irregular? writes: "I do. I have this as a distinct opinion;" adding, "Amenorrhœa and chlorosis and development of great nervousness are frequent results of overpressure in education at or near the important epoch—fifteen to twenty years of age. To the same cause, I have often attributed destruction of sensuality of a proper commendable kind, and its consequent personal and social evils."

Writing on the same subject, Sir Benjamin Brodie says: "The mind, in the case of girls of the affluent classes, is educated at the expense of the physical structure, they spending more time in actual study than their brothers." The same eminent practitioner once said to a sister of my own who was consulting him (what, perhaps, he might have hesitated to put into writing), "When I see a girl under twelve with a book in her hand, I always feel an inclination to throw it at her head."

The late earnest and scholarly Dr. Ed. H. Clarke (U.S.A.) (I am availing myself here of Sir Crichton Browne's very valuable *Education and the Nervous System*) collected a large amount of testimony bearing on the effects on health of the higher education of

women in America, where it is pushed with a remorseless eagerness as yet but little known in this country; and all the testimony collected by Dr. Clarke is in favour of one conclusion—that severe brain-work for girls, kept up continuously, is most injurious to health. In his *Sex in Education* (Boston, 1882), Dr. Clarke writes: "It is not asserted that all the female graduates of our schools and colleges are pathological specimens, but it is asserted that the number of those graduates who have been disabled in a greater or less degree by these causes is so great as to excite the greatest alarm, and to demand the serious attention of the community. If these causes should continue for the next half-century, and increase in the same ratio as they have for the last fifty years, it requires no prophet to foretell that the women who are to be mothers in our Republic must be drawn from transatlantic homes."

There is hardly an American physician who has specially treated the diseases of women who does not corroborate these words. For instance, Dr. Emmet: "I hold that it is not practicable to educate a girl by the methods found best for a boy, without entailing serious consequences. The ovaries will always be arrested in their growth if the brain is forced.....I not only endorse Dr. Clarke's views so far as he has gone, but my own experince leads me to believe that the evil is even more serious than he has represented." And Dr. Goodall: "From the age of eight to that of sixteen, our daughters spend most of their time in the unwholesome air of the recitation-room, or in poring over their books, when they should be at play.....As the result, the chief skill of our milliners seems to be directed towards concealing the lack of organs needful alike to beauty and maternity, and the girl of to-day becomes the barren wife or invalid mother of to-morrow. Surely a civilisation which stunts, deforms, and enfeebles must be unsound."

So, too, Professor Loomes, of Yale College, looking at the increasing deterioration of American girls, remarks: "The cry in our colleges and time-honoured universities is, 'Open your gates that the fairer part of creation may enter, and join in the mental toil and tournament.' God save our American people from such a misfortune." And our own lamented Dr. Thorburn, of Owens College, to whose article on Female Education I am indebted for my last quotations, having said that "The struggle for existence on the part of single women, and the capacity of a few of their number to ignore, with safety, the physiological difficulties of the majority, are demanding opportunities for education, and its honourable as well as valuable distinctions, which cannot and ought not to be refused them," is constrained to add: "Unfortunately, however, up to this time, no means have been found which will reconcile this with the physiological necessity for intermittent work by the one sex. It becomes, therefore, the duty of every honest physician to make no secret of the mischief which must inevitably accrue, not only to many of our young women, but to our whole population, if the distinction of sex be disregarded."

In like strain, Mr. Lawson Tait, in his *Diseases of the Ovaries*, after declaring himself an advocate of women's rights, says: "At the same time, I cannot help seeing the mischief women will do to themselves and to the race generally, if they avail themselves too fully of their rights when conceded. . . . To have only the inferior women to perpetuate the species, will do more to deteriorate the human race than all the victories of Girton will do to benefit it. This overtraining of young women is wholly unnecessary in the interests of human progress, and it is most mischievous alike to themselves and to humanity. . . . Exceptional culture will infallibly have the tendency to remove the fittest individuals, those most likely to add to the production of children of high-class brain power, from out of the ranks of motherhood."

Much of what has been adduced has reference chiefly to Mr. Herbert Spencer's "upper-class girls," and Sir B. Brodie's "girls of the affluent classes." How much more may over-education be expected to work its ruinous results upon those growing girls who, with antecedents far less favourable as to food and rearing, are stimulated to excessive mental efforts in the preparation for, or practice of, competition in brain-work with men. That such competition has in it the terrible strain of contest of the weaker with the stronger, might have seemed a truth too nearly a truism to bear much insisting on. So, indeed, might that other truth which, granted unreservedly, would free me from all necessity for further argument—the truth that women are meant to be not men, but the mothers of men. It used to be said that Parliament could do anything but turn a man into a woman. But, in these days, there seems to be danger, both in and out of Parliament, that the attempt may be made to turn women into men.

Let us recall to recollection, therefore, some of the natural difficulties in the way of that transformation. The power of the human brain varies with its weight and size. But the brain of woman is 10 per cent. lighter than that of man, so Tiedemann says; and Dr. Thurnam's carefully collected observations indicate a greater and more significant disproportion. Giving 10 per cent. as the excess of weight in the male cerebellum, in the two hemispheres, he tells us, man has the advantage by 12 per cent. Nor is this difference accounted for by difference of stature, which, between the two sexes, is, on the average, not more than 8 per cent.

And, as Gratiolet remarks, this internal smallness of brain has its natural accompaniment in the external frontal development, so that, while "Man's fair large front and eye sublime," as Milton tell us, "Declare absolute rule;" in woman, on the contrary, a large forehead is felt to derogate from beauty. Not that woman is without her proper compensation, as in the line that tells "Of man's imperial front and woman's roseate bloom." So Professor Laycock: "Experience shows that woman has less capacity than man for dealing with the abstract in philosophy, science, and art; and this fact is in accordance with the less development of the frontal convolutions."

To proceed with our evidence as to results. Dr. Hertel, speaking of over-pressure in the high schools of Denmark, writes that: "Of the boys, 29 per cent., and of the girls, 41 per cent., were found to be in a sickly state of health. The diseases most prevalent were anæmia, scrofula, and headache."

In confirmation of Dr. Hertel, I may cite the evidence of Professor N. J. Bystroff (I quote from our own able JOURNAL), "who has examined 7,478 boys and girls in the St. Petersburg schools during the last five years, and found headache in 868; that is, 11.6 per cent. He states that the percentage of headache increases in a direct progression with the age of the children, as well as with the number of hours occupied by them for mental labour; thus, while headache occurred in only 5 per cent. of the children aged 8, it attacked from 28 to 40 per cent. of the pupils aged from 14 to 18. The author argues that an essential cause of obstinate headache in school-children is the excessive mental strain enforced by the present educational programme, which leaves out of consideration the peculiarities of the child's nature, and the elementary principles of scientific hygiene." Even as regards the immediate object—mental progress—it has been well remarked in the *Lancet*, that "a system which leads to such disastrous results as regards bodily health, is no less pernicious in checking mental advance and improvement; for at no epoch of life is the necessity for maintaining the balance between construction and destruction of nervous energy greater than in the period immediately preceding adolescence; and it is just at this time that keen competition is most severely felt in the subjecting, as Dr. Ross remarks, the latest evolved portions of the nervous system to a strain so great that only those possessing the best balanced and strongest system can escape unscathed."

Dr. Tuckmann (Cleveland, U.S.) relates that, in 1881, "of 800 pupils in a particular High School, nearly 25 per cent. of the girls, and 18 per cent. of the boys, from one cause or another, had withdrawn; and that it was found, on investigation, that of the girls so withdrawn, 75 per cent. had left wholly or in part on account of ill-health—were in poor health while at school. Here, it appeared that, whether from necessity or from choice, the girls studied more hours out of school than the boys did."

Quite in accordance are the results arrived at by the extensive investigations of our able co-associate, Sir Crichton Browne, before referred to. But, indeed, there are facts daily emerging in this direction of such painful significance, that I might almost say, a cry of remonstrance has arisen from one end of England to the other. All great dangers are apt to be greatly exaggerated. This one of overtraining may, perhaps, not have been an exception to the rule; but the danger does exist, and is a great one; and the sequence of punishment, after transgression, is sure and certain. Degeneration and impaired nutrition come in place of development; evolution passes into dissolution. And, with mental training, the danger is far greater than with bodily training. The rules of health, sedulously attended to during the latter, are too often disregarded in the former; and thus, the nervous system is developed at the expense of the nutritive. In the case of young children, the consequences of over-training are things of frequent observation. The wonderful Westminster Boy, "the learned Pig," was an imbecile before manhood.

In our contemporary school reports, how many do we find resembling that of Mr. Tyson's (Penrith School Board), respecting the deaths of two children, "the immediate cause, in both cases, being brain fever, undoubtedly resulting from overpressure at school."

Again, to come back to the special subject of this address: "There can be no doubt," writes Mr. Alderson, one of Her Majesty's Inspectors of Schools, "that the work required by the code presses more heavily upon girls than boys. They work more willingly, and they

feel the strain more. They require to be protected from their own willingness to study."

But time admonishes me to make an end. My argument may be summed up very simply. Excessive work, especially in youth, is ruinous to health, both of mind and body; excessive brain-work more surely so than any other. From the eagerness of woman's nature, competitive brain-work among gifted girls can hardly but be excessive, especially if the competition be against the superior brain-weight and brain-strength of man. The resulting ruin can be averted—if it be averted at all—only by drawing so largely upon the woman's whole capital stock of vital force and energy, as to leave a remainder quite inadequate for maternity. The Laureate's "sweet girl-graduate in her golden hair" will not have in her the fulfilment of his later aspiration, his

> "May we see, as ages run,
> The mother featured in the son."

In the prophet's words, "She will not have strength to bring forth;" her reproductive system will more or less have been atrophied; she will have lost her womanhood's proper power. With the power, she will have largely lost also the inclination; of "Love's sweet want," as Shelly calls it, she will know little, for, in Dr. Duncan's more matter-of-fact language, she will have lost "sensuality of a proper commendable kind." Unsexed it might be wrong to call her, but she will be more or less sexless. And the human race will have lost those who should have been her sons. Bacon, for want of a mother, will not be born. She who should have been his mother will perhaps be a very distinguished collegian. That one truism says it all—women are made and meant to be not men, but mothers of men.

A noble mother, a noble wife—are not these the designations in which we find the highest ideal of noble womanhood? Woman was formed to be man's helpmeet, not his rival; heart, not head; sustainer, not leader. Many times, indeed, woman's fate has set her in the foremost place; in some of those times, no doubt, such place has been well and grandly filled by her. Yet even then, our admiration is not untinged with compassion. Even in this year of approaching or commencing jubilee, is it not so with us when we think of that Crown, Royal and Imperial, which, splendid as it is, has so long been left "a lonely splendour"? "Victoria Regina et Imperatrix"—bravely, proudly, gloriously is the burden borne; but would she, who knows its weight, wish a like weight to be laid upon any daughter?

Let this address come back to the humbler life which more belongs to it. "I am king of the household, and thou art its queen," says the happy husband in Longfellow. Permit me to conclude to-day with King Solomon's eulogy for the happy home-queen, the happy wife.—"Who can find a virtuous woman?—for her price is far above rubies. The heart of her husband doth safely trust in her; she will do him good and not evil all the days of her life. She rises while it is yet night, and giveth meat to her household, and a portion to her maidens. She girdeth her loins with strength, and strengtheneth her arms. She perceiveth that her merchandise is good, her candle goeth not out by night. She layeth her hands to the spindle, and her hands hold the distaff. She stretcheth forth her hands to the poor, yea, she reacheth forth her hands to the needy. Her husband is known in the gates, when he sitteth among the elders of the land. Strength and honour are her clothing, and she shall rejoice in time to come. She openeth her mouth with wisdom; and in her tongue is the law of kindness. She looketh well to the ways of her household, and eateth not the bread of idleness. Her children arise up and call her blessed; her husband also, and he praiseth her. Favour is deceitful, and beauty is vain; but a woman that feareth the Lord, she shall be praised."

VOLUNTEER MEDICAL STAFF CORPS.—A very interesting entertainment took place in the beautiful grounds of Charlton Park, on July 31st, in aid of the Kent Volunteer Medical Staff Corps. A number of ladies and gentlemen from London and the county of Kent, at the invitation of Sir Spencer and Lady Maryon-Wilson, witnessed the performance of the Pastoral Play "As You Like It," by ladies and gentlemen of the Lyceum, St. James's, Princess's, and Haymarket Theatres, under the direction of Mr. Ben Greet. At the conclusion of the play, Sir James Hanbury, K.C.B., briefly referred to the objects of the Corps, and moved a cordial vote of thanks to Sir Spencer and Lady Maryon-Wilson for the warm and active interest they have taken in this movement, and to the ladies and gentlemen of the Company, who so generously volunteered their services in aid of this benevolent object. It is gratifying to know that the promotion and development of these Volunteer Medical Staff Corps are actively supported by a large number of the most influential people in Kent.

ADDRESS IN MEDICINE,

BY

JOHN S. BILLINGS, M.D., LL.D. Edin.,
Surgeon, United States Army, Washington.

MEDICINE IN THE UNITED STATES, AND ITS RELATIONS TO CO-OPERATIVE INVESTIGATION.

MR. PRESIDENT, AND GENTLEMEN OF THE BRITISH MEDICAL ASSOCIATION: You all know that the representative of the American medical profession first selected by your executive committee to deliver the address in medicine to-day, was the late Dr. Austin Flint, Sen., of New York, whose death last March is, therefore, a great and direct loss to you as well as to America. Every English physician knows Dr. Flint by reputation and through his writings; but only those few of you who were so fortunate as to know him personally, can fully appreciate the magnitude of the loss which the medical profession has sustained in his death.

This is not the time and place to attempt to pronounce a fitting eulogium upon him and his work; and I shall, therefore, only say that my deep personal sorrow for his removal is mingled with sympathy for the members of this Association, who have been thus deprived of the pleasure of hearing him state in person some of the results of his long and wide experience. The loss is not a total one, it is true, since he had, fortunately, completed his address on "The Medicine of the Future," which has been published, and has, no doubt, been read by all of you; but in this case the printed page is by no means a satisfactory substitute for the spoken word.

In accepting the request, with which I have been honoured by your Council, that I should attempt to take his vacant place on this occasion, it is with a full understanding of my inability to fill it that I stand before you.

The request came at a time when I was hard pressed by official duties, and had neither leisure nor opportunity to undertake any special research; hence, to avoid violating one of my favourite Scotch maxims, "That which you do not know, tell that not to any one," it was necessary to select some subject to which I had already given consideration, and which at the same time would probably be of interest to English physicians.

Reflection on these restrictions soon brought the field of selection into narrow limits, almost into "a small intercept of space of one dimension," as a mathematician would say.

What is the significance of this invitation extended for the first time to a physician of another country, and that country the United States, to come to this annual gathering of the medical men of Great Britain and give the address in medicine?

Does it not mean recognition of the unity of medicine, of the utility of co-operation, of the fact that we have common interests, and that the time has come when it is desirable to hear from the outlying younger branch of the family with a view to mutual pleasure and profit in the future? So it seems to me; and I propose, therefore, to call your attention briefly to some points relating to the present condition and future prospects of Medicine in the United States, and to the direction in which you may reasonably hope and expect from that country in the future the most useful co-operation in the improvement of medical science and art. I believe that these must be matters of interest to you, and that I can perhaps make clear certain peculiarities which do not seem to be as generally understood on this side of the Atlantic, as it is desirable that they should be, to insure sound judgment upon some of the results observed.

In the first place, permit me to call your attention to the fact that it is hardly possible to make any statements with regard to medicine in, or the medical profession of, the United States as a whole, which shall be definite and at the same time distinctive; that is, which will not apply almost equally well to medicine and the medical profession in other countries. This is due to the fact that there are great differences in the organisation of the profession in different parts of America, so that what is true of one State would not be true of another; what is required as to fitness or qualification to practise in one place is not required in another; and the country covers so many parallels of latitude and meridians of longitude, making the conditions of life so diverse, and producing such differences in the prevailing diseases, that a man who is fairly qualified to practise in one section may be poorly fitted to treat the endemic diseases of another.

As, in painting a picture, it is best to locate and define the shadows first, and deal with the lights afterward, let us begin by considering some of the things that American physicians complain about; in other words, some of their supposed grievances. One of these is that the profession is overcrowded; that there are too many doctors, both *in esse* and *in posse*, and that this is due to too low a standard of education, and to the want of legal restrictions as to the qualifications which shall give a man the right to practise. The feelings of some of our physicians on this subject are in full accord with those of the good old New England deacon who told the village scapegrace seeking admission, that "he thought the church was about full."

Now what is the number and distribution of medical men in America? Statistics gathered in 1883,[1] showed that in the United States and Canada there were 90,410 persons calling themselves physicians, being in the proportion of 1 to every 600 of population. In Canada alone, there were 3,487 physicians, or 1 to 1,112 of population. If we take the figures of our last census, of 1880, the proportion of physicians reported, is 1 to 589 of population, of 17 per 10,000. In England and Wales, by the census of 1881, the proportion of physicians is only 5.8 per 10,000, but these figures are not properly comparable with those of the United States, because they do not include unregistered persons. If the same classes were included that are counted in the United States report, I presume that the proportion would be about 9 per 10,000, or a little more than half that in the United States.

In the United States the proportion to the population of those who call themselves physicians varies greatly in different localities; thus, in Colorado there are 29.3, in Indiana 25.2, in Oregon 24.3, and in Arkansas 23.5 per 10,000; while in New Mexico there are only 6.6, in South Carolina 9.2, and in North Carolina 9.7 per 10,000.[2]

It is not easy to give satisfactory reasons for these differences; we can only say that they do not depend to any great extent upon local legislation. The proportion of physicians is generally lowest in the southern States lying east of the Mississippi, and highest in those regions where immigration has recently been active. If we compare, by localities, the proportion of physicians to the population with that of clergymen and lawyers, we find some curious differences. It seems that the lawyers in the United States number 12.7, while in England and Wales they are 6.6 per 10,000, but that on the other hand the clergymen are 14.6 in England and 12.8 in the United States per 10,000 of population. In many instances, it seems that where the lawyers are most numerous the supply of clergymen is smallest. I believe that a fair proportion of physicians to population is about 1 per 1,000, which is not far from the actual proportion in England, while the true proportion of practising physicians in the United States is about 1 in 750. We must admit, then, that there is at all events no scarcity of physicians in the United States, and, as we have over 80 medical schools at work, besides a fair proportion of medical immigrants, there is no immediate danger of any interruption to the supply.

Let us now consider the second head of the complaint, viz., that the standard of education is too low. There is ground for this, considered with reference to some localities, but not for others. I said a moment ago that a man might be fairly qualified for practice in one part of the country and yet find himself at a loss in another. This needs a little explanation, which I can perhaps give most easily in connection with a map of the United States, which I here show you. This map, which was prepared for a very different purpose, indicates, by different shades of colour, the relative proportion of deaths reported as due to malarial disease to the total number of deaths in different parts of the country, for the census year 1879 to 1880. You will note how comparatively light the tint is in the north and north-east, and how dark the shades become in the south and in the valley of the Mississippi, thus indicating the great differences which exist as to the prevalence and deadly effects of the malarial poison in different sections of the country. It is in some of these low bottom lands and swampy districts that we meet with cases of congestive chills and of malarial hæmaturia, cases in which the patient has been described as being "a mere appendage to a huge malarial entity, an incident of a miasmatic cataclysm." Furthermore, this strip of land bordering on the Gulf Coast is in the yellow fever zone, and has, heretofore, been repeatedly desolated by this pestilence.

As compared with the North and East, much of this malarious region is a thinly settled country, an almost purely agricultural country, and not a rich country. I need hardly tell you that the physician who has received his chief clinical instruction in the office of his preceptor in Vermont or New Hampshire, supplemented by distant glimpses of a few hospital cases in Boston or New York, will find himself at a loss at first in dealing with the emergencies of daily practice in Arkansas and Mississippi. He will be subjected to influences which at times are dangerous to one who is not acclimated, and which tend to produce depression of spirits, want of energy, and bad health. He will not have free and constant access to scientific companionship, nor be stimulated by the influence of learned societies, and he cannot avail himself of the ordinary sources of amusement, education, and rest, such as art galleries, the drama, libraries, and museums, etc., which are found in the large cities. Moreover, the pecuniary reward which the practitioner in many of these places can reasonably hope for is comparatively small.

Taking all these things into consideration, it is clear that if a man, after spending from six to eight years, and from £1,000 to £2,000, in acquiring such a general and professional education as it is now considered that a skilled physician should possess, then settle in such a region with the prospect of an average income of from £150 to £200 per year, it is not from pecuniary motives alone. There are such men in such places, men who are not only highly educated and skilled practitioners, but who are also original investigators and thinkers. It was within the limits of this malarial shadow that the foundation of modern gynæcology was laid by Marion Sims, of abdominal surgery by McDowell, Battey, and Gross, of an important part of the physiology of the nervous system by Campbell. Nevertheless, the rule holds good that malaria and science are antagonistic; the exceptions prove the rule.

Nor can the inducements for highly educated physicians to settle in thinly settled localities be made stronger by any form of penal or restrictive legislation. Any attempt to fix a standard of requirements or qualifications for practice, which shall be the same for such rural districts, and for the large cities and manufacturing towns, must result in the adoption of what competent judges would consider so low a standard as to be ridiculous and useless. The demands are widely different, and corresponding differences exist in the sources of supply, that is, in the medical schools.

There is a class of medical schools in the United States, whose object is to give the minimum amount of instruction which will enable a man to commence the practice of medicine without much danger of making such serious and glaring blunders as will be readily detected by the public. There are other schools whose aim and object is to make fairly well trained practitioners; the general character of the instruction given in these being substantially the same as that given in your English hospital medical schools. The results of such a three years' graded course of instruction in medicine as these schools furnish, depend upon the character of the material upon which they work; that is to say, upon the general preliminary education possessed by the student at the time of his matriculation. This is evidently too often defective, and only a few schools have thus far ventured to establish any standard of preliminary examination which at all approaches in its demands that which is required in England.

The proverb that it does not pay to give a 5,000 dollar education to a 5 dollar boy is clearly of American origin, and sums up a great deal of experience.

You have nineteen portals of entrance to the profession, and have not found it easy to keep them all up to the standard. In America we have over eighty gates, a number of turnstiles, and a good deal of the ground is unenclosed common. Many of our physicians are more or less dissatisfied with this state of things, and with the results thereof; and every year in some States efforts are made to secure legislation, which it is supposed will protect the interests of the profession, though those who advocate such legislation are usually prudent enough to claim as their only motive a desire for the protection of the public.

Now, how does this free trade in medicine and the low standard of qualification, or no standard at all, required by law, affect practitioners as individuals? To answer this, we must divide the profession into several classes. In the first place, in all our cities, great and small, there is a large class of physicians who are as well educated and as thoroughly competent to practise their art, as can be found in the world. They have studied both at home and abroad, have had extensive clinical training, are always supplied with the latest and best medical literature and the most improved instruments, and many of them are connected with hospitals and medical schools. Among them are found the majority of our writers and teachers, and the successful men are the survivors of a struggle in which there has been keen and incessant competition. These physicians, whose

[1] Illinois State Board of Health Report, 1884.

[2] A map of the United States was here shown, on which the proportion of persons calling themselves physicians to the population in the several States was indicated by different shades of colour.

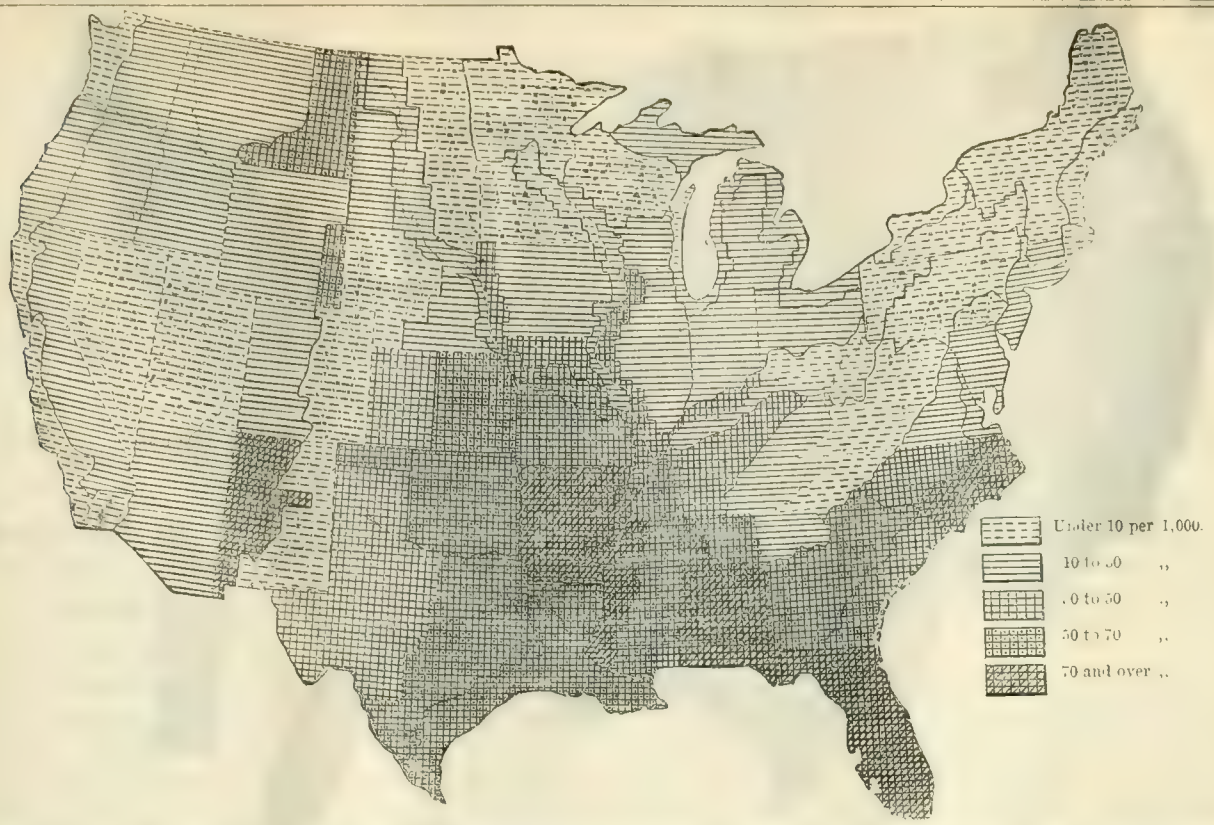


CHART I.—Map of the United States showing the distribution of deaths from Malarial Fever as compared with deaths from known causes. Census of 1880

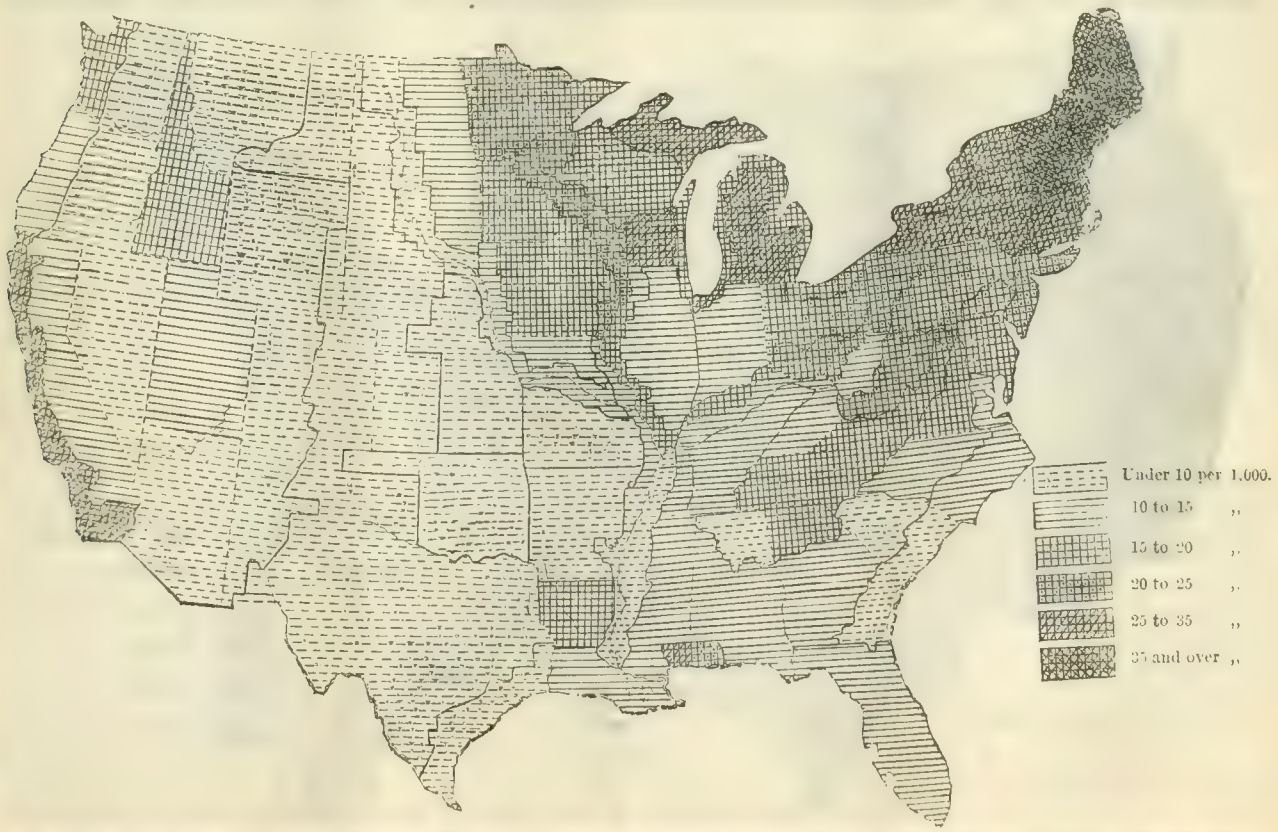
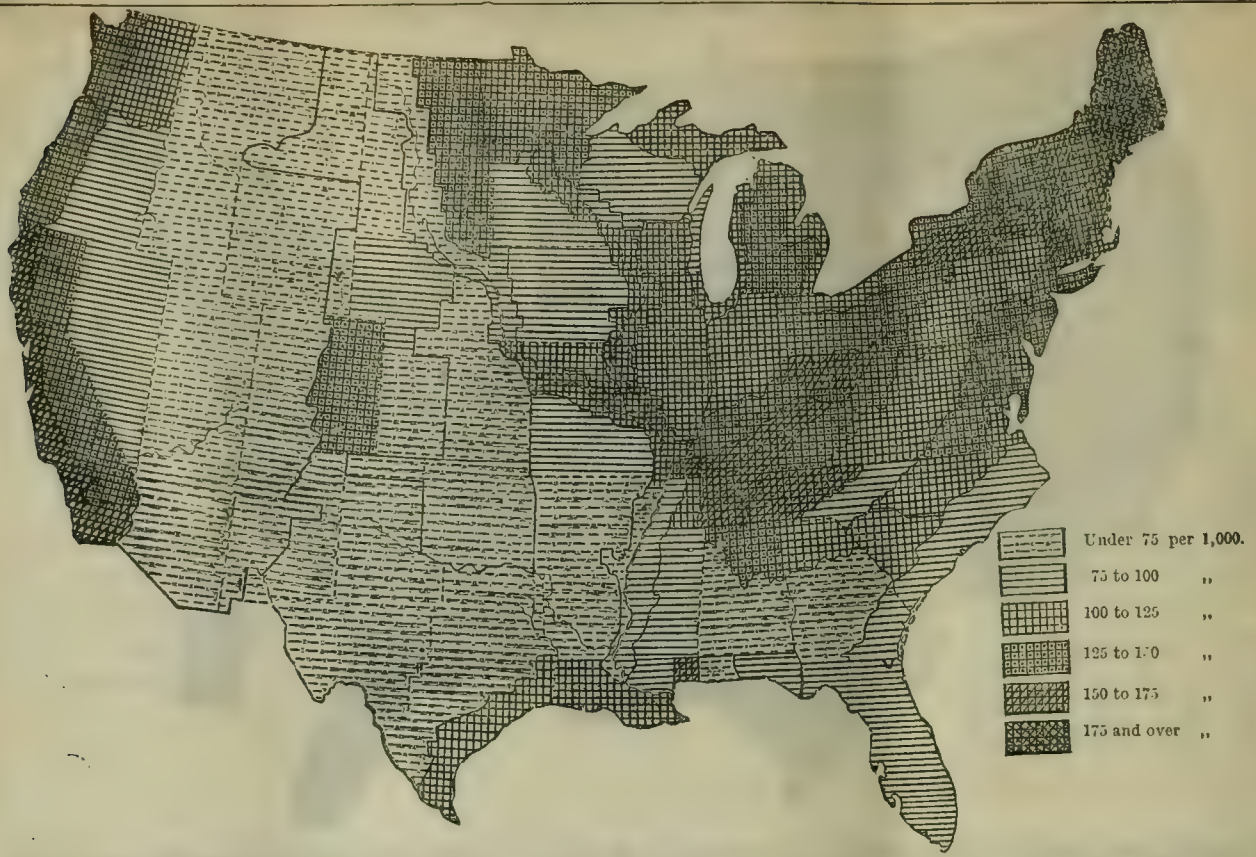
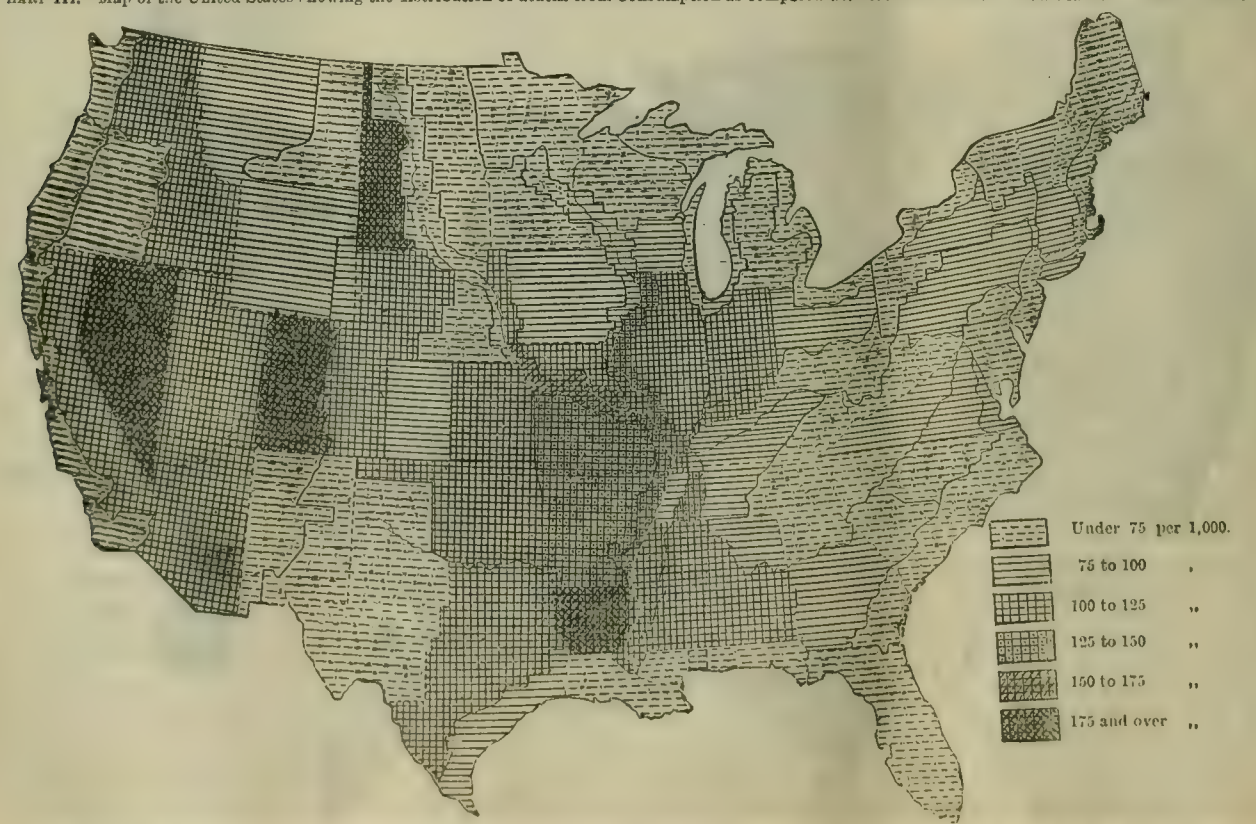


CHART II.—Map of the United States showing the distribution of deaths from Cancer as compared with total deaths from n causes. Census of 1880.



HART III.—Map of the United States showing the distribution of deaths from Consumption as compared with total deaths from known causes. Census of 1880.



HART IV.—Map of the United States showing the distribution of deaths from Pneumonia as compared with total deaths from known causes. Census of 1880.

positions are fairly assured, and who, as a rule, have all the practice they desire, are not usually active leaders in movements to secure medical legislation, although they passively assent to such efforts, or at least do not oppose them; and their names may sometimes be found appended to memorials urging such legislation. They are clear-headed, shrewd, "practical" men, who know that their business interests are not specially injured by quacks and ignoramuses, rather the contrary in fact, for they are called on to repair the damage done by the quack to people who have more money than brains; and they are not inclined to risk the fate of the Mexican donkey who died of *congojas agenas*, that is, "of other people's troubles."

Then there is another large class of honest, hard-working practitioners, who rely more on what they call experience and common sense than on book learning. Many of these have obtained assured positions of respectability and usefulness, and are comparatively indifferent to medical legislation so far as their own interests are concerned. Others, however, who are not so successful, feel the competition of the local herb-doctor or of the travelling quack more keenly, and have more decided views about the importance of diplomas. Among these are the young men who have not yet acquired local fame, and who are apt to become very indignant over the doings of some charlatan in the neighbourhood, or of some druggist who prescribes over his counter. These last are usually quite clear in their minds that the State ought to interfere and prevent injury to the health of the people.

I have known two unsuccessful physicians who finally abandoned practice, and who gave as a reason for their failure—one that "he did not know enough," and the other that "he had not the manners and tact which would inspire confidence in his patients;" but such frank-speaking men are rare.

Thus far, as a rule, the efforts which have been made to secure legislation upon medical matters in America have come from the profession itself, and have been chiefly urged and recommended by physicians. The general public, and even the educated public, has shown very little interest in the matter. It does not demand protection against ignorance, but entrusts the care of its health and the lives of those who are nearest and dearest to it to almost any one who announces himself as prepared to take charge of them. The number of those who profess to practise medicine in the United States, and are not qualified to do so, is undoubtedly large, though by no means so large as one might suppose after listening to the impassioned eloquence which is duly aired every year upon the subject. There are some advertising charlatans, and travelling quacks are occasionally to be met with, but they are rare.

The most rigid tests of qualification in our profession in the United States, are those required of candidates for admission into the medical departments of the army and navy. The standard established for these is about the same as that for the corresponding corps of the English army and navy, and of the candidates who apply, from seventy to eighty per cent. are rejected.

Certainly we must admit that this percentage indicates an unsatisfactory state of things; but what evidence have we as to its results upon the health and life of the people? What shall we take as the measure of the difference of skill in physicians? The death-rate? If we compare the death-rate of the United States with those of other civilised countries, we find that it is as low as any, with the exception of Sweden. Does a low death-rate mean better sanitary condition, or more skill among the doctors? For the last twenty years, the death-rate has been diminishing in England; the average amount of life for each person here has been increased, but I observe that the sanitarians claim this as proof of the value and importance of their efforts, and that nothing is said about its being in any way due to increase in medical skill, or to improvements in medical science. Evidently this test is not a convincing one. Almost the only matter in which figures seem to demonstrate the importance of superior medical education and skill, is in the statistics of deaths due to childbirth, and of the results of surgical operations.

The proportion of deaths from childbirth to the number of births is decidedly greater in the rural districts than in large cities, and among the coloured than among the white population. If this difference were found only in the United States statistics, it might be accounted for by the differences in the trustworthiness of the sources from which the data are derived; but we find similar differences in England, and we must admit that these are probably largely due to the fact that, in cities, labour cases receive more prompt and efficient professional care than they do in the country. I need hardly call your attention to the results of antiseptic surgery, or of modern abdominal surgery, as compared with those of twenty-five years ago. Here there can be no question as to the improvement. It is well to remember in this connection that, whatever undue prolongation of disease or unnecessary mortality is due to want of skilled medical treatment occurs mainly among the wage-earners, the farmers, mechanics, salesmen, needlewomen, etc., and not among the rich, nor yet among the very poor.

Now, seeing that really efficacious legislation with regard to medical education or to the practice of medicine must, like all efficacious legislation, be substantially in accord with public opinion, since it is impossible to continue to punish for any length of time that which public opinion does not condemn; and as the great mass of the people of the United States have not as yet had such evidence as they can understand, and which would thoroughly convince them that it is to their interest to suppress quackery, it follows that it is necessary to go slowly, and to allow such evidence to accumulate.

To me it seems that the most important of the first steps to be taken in this direction is one which has already been taken in Great Britain, namely, the requirement that every death in the community shall be registered, and that, in such registration, satisfactory evidence shall be given as to the cause of death, sufficient, at least, to prove that such cause is what is known as a natural cause, that is, that it is not due to crime.

When it is admitted that one of the duties of government is to provide for such registration, both in the interests of life, and to secure the rights of property, it follows, necessarily, that those persons whose certificates as to the cause of death are to be accepted as satisfactory evidence that there has been no foul play, must present evidence that they are properly qualified to make such certificates. The principle is precisely the same as that which induces a government to provide for the examination of the medical men whom it employs in its army and navy.

So far as the art of medicine is concerned, the demand has much, though by no means all, to do with regulating the quantity and quality of the supply; and there are few localities in the United States where the qualifications of the medical man are not fully up to the standard which the community is able to appreciate, and is willing to pay for. In the natural order of things, suffering and death are the remedies for ignorance, weakness, and vice, and the means of preventing the transmission of these characteristics to offspring. These remedies, though effectual, are drastic, and we do our best to avoid them, but perhaps it is well that the penalties cannot be done away with altogether.

The laws regulating the practice of medicine in the United States are all State laws. If we were to judge only from what may be found in the statute-books, assuming that all the laws contained therein are duly enforced, we should find that nearly two-thirds of the States have laws ostensibly regulating the practice of medicine within their borders. As a matter of fact, however, in over half the States which have laws on this subject, no attempt is made to enforce them, and, in almost all of them, the possession of a diploma, no matter from what source derived, is all that is required.

Of the various methods which have been tried in different States to insure by law that physicians shall be properly qualified, I will call your attention to two, which are of special interest.

The first is that of Alabama, the principle of which is to organise the whole medical profession of the State, and use it as the means of regulating the qualifications of practitioners, and of caring for the public health. The Medical Society of the State of Alabama, with its branches, the county medical societies, thus forms a part of the machinery of the Government; it appoints boards of medical examiners, selects State and county sanitary officials, supervises the registration of vital statistics, the administration of quarantine, etc.,—in short, it is the State Board of Health, and the county branches are the county boards of health.

In that State, the possession of a diploma does not give the right to practice; it simply enables the owner to go before the Examining Board. The examinations before the County Board are partly in writing, and are subject to review by the State Board, which has, in some instances, publicly condemned the local examinations as not sufficient.

This system has now been in operation nine years, and has gradually been consolidated and improved by educating the local boards, and getting all physicians interested in it, until it is now working fairly well. Much remains to be done, and it is too soon to predict results; at present, the success of the system is largely due to the wisdom and energy of one man, who has given his whole time and labour to the work, and it remains to be seen whether the machine which he has built will work well without him.

The second system to which I will call your attention is that of the State of Illinois, which was commenced in 1877, or about the same time as that of Alabama.

In Illinois, anyone who presents a diploma, or licence to practise, from a legally chartered medical institution in good standing, is entitled to practise; and the State Board of Health is to decide as to what shall constitute "good standing." The Board of Health also examines all persons who do not possess satisfactory diplomas, and who nevertheless wish to practise in this State.

One of the greatest practical difficulties in the way of providing any system of State examinations in medicine in the United States is, that public opinion will not support any law which can be supposed to condemn or in any way to injure homœopathic and eclectic practitioners or their schools; and hence any proposed law relating to medicine, or to the organisation of State Boards of Health, which does not recognise the existence of these sects, will, in many States, at all events, meet with enough opposition to defeat it. In Illinois, this difficulty was surmounted by the arrangement that, of the five physicians on the Board, one should be homœopathic, and one eclectic. The Kansas law, passed last year, goes further in this direction, and provides that appointments must be so made that no school of medicine shall ever furnish a majority of the members of the Board. Much to the surprise of many, the Illinois plan has worked very well; there has been no quarrelling in the Board, and the homœopathic and eclectic members seem to have upheld quite as high a standard of qualification as their fellow-members. The results of the work in Illinois have been very good. A large number of ignorant charlatans have been forced to leave the State. The requirements of the Board as to what shall constitute a medical college in good standing have been raised, and it has thus caused improvement in the medical schools, not only of Illinois, but of other States. Moreover, the neighbouring States have been stimulated to action, not only by the force of example, but because they received the men who had been driven out of Illinois, and found the accession an unpleasant one.

As in the case of Alabama, it is too soon to judge definitely of the results; and in Illinois, also, the satisfactory working of the system is largely due to one man, the secretary and executive officer of the Board, who has given his entire time to the work. I do not by any means wish you to suppose, however, that I consider this as being a serious objection to this or any other plan; for, in the building up of any organisation, or the carrying out of any system, much must always depend upon some one man.

The relations of the United States Government to medical education and to the practice of medicine are indirect only, the regulation of these matters by law being part of the police power which, under the constitution, is reserved exclusively to the individual States. The United States employs physicians in its Indian Department, in the Pension Department, in the Marine Hospital Service, and in the medical departments of the army and navy, and it has power to regulate the practice of medicine in those territories which are not yet organised into States, and also in the District of Columbia; but thus far it has made no use of such power. The qualifications of physicians employed in the army and navy, and in the Marine Hospital Service, are determined by examinations made by boards of medical officers belonging to those services. The possession of a diploma from a respectable medical college is a pre-requisite for such examination, but beyond this it does not count; that is to say, the examination is the same for the holders of all diplomas, and covers all branches of medicine. But while the relations of the general government to medical education are thus indirect, they have of late years become of very considerable practical importance, and are now exerting much influence upon medical investigations and literature. This is being effected by the museums and libraries, which are now being formed under the auspices of the government at Washington, and also, to some extent, by certain special investigations undertaken by the government in the interests of preventive medicine. Of these various agencies, one of the most important is the library which has been formed at Washington, under the auspices of the medical department of the army in connection with the Army Medical Museum; both of these institutions being a part of the results of the late civil war. The museum was at first formed to illustrate military medicine and surgery, giving the results, primary and secondary, of injuries inflicted by modern weapons of warfare, and of the diseases of armies in the field; in which direction the collection is unrivalled in extent and completeness. Gradually its scope has been enlarged to include illustrations of anatomy, development, and all branches of pathology and therapeutics, so that it is fast covering the whole field of medical science. In like manner the library, which commenced in a collection of those books relating solely or especially to military medicine and surgery, which were required in the compilation of the *Medical and Surgical History of the War*, has expanded into a great medical library, which is now one of the best practical working collections of the kind in the world. These collections, then, no longer appertain exclusively, or chiefly, to the business of one department, but belong to the whole profession of the United States as a body; and the department which has charge of them is managing them from this point of view. The influence of the library in stimulating research, and upon the quality of medical literature, is already very perceptible, and is destined to increase with advancing years. I think I may also venture to claim that the utility of these collections, and especially of the library, is by no means confined to the medical profession of the United States, for the catalogues and indices, which are being issued in connection with them, are of service to medical writers and teachers all over the world.

As regards investigations into the causes of disease, undertaken at the expense of the general government, only a beginning has as yet been made; but it is sufficient to indicate future possibilities and probabilities. The main importance of the work of the National Board of Health, which was organised in 1879, under the stimulus of the great yellow fever epidemic of the previous year, was due to investigations upon the causes of yellow fever and diphtheria, upon the relations of soils and of water-supply to certain diseases, etc.,—investigations of the same general character as those which are being prosecuted under the auspices of the Local Government Board in this country, and of the Imperial Board of Health of Germany. It is true that, owing to circumstances which I cannot here explain, the work of the National Board of Health has been stopped; but there is every probability that it will be resumed, with, perhaps, some change of organisation, at no distant day; and I need not dwell upon the vast importance to medical science of organised and systematic work in this direction. Similar investigations have been undertaken by State boards of health, and especially by the State Board of Health of Massachusetts, and the fact that governmental health departments are tending to work in this direction is significant as to future co-operation from such sources.

In this connection should be mentioned the National Museum of Hygiene, which has been formed under the direction of the medical department of the United States Navy, which is now one of the most instructive collections of the kind in the world, and has also connected with it an excellent library and a well equipped laboratory.

Comparative and experimental pathology is also receiving attention from the Government under the direction of the Department of Agriculture, which is doing some good work in the investigation of the diseases of our domestic animals. Our investigators are, fortunately, not hampered by any antivivisection laws, and there is little danger that they ever will be; for, though we have our due proportion of fanatics and seekers of notoriety, who wish to emulate the British anti's, their true motives are so well understood that they have little power to do mischief.

Of medical associations in the United States there are several classes. We have a few local societies, analogous to clubs in their organisation, which own property in the form of buildings, libraries, etc., are somewhat conservative in their selection of members, and are only to be found in large cities. Of these, the College of Physicians of Philadelphia is the oldest, and has the largest and best library and museum—it will celebrate the hundreth anniversary of its existence next year. In New York, the Academy of Medicine, and, in Boston, the Medical Library Association, are of the same character; and, in general, each large city has a similar society, although as yet they have not become fully anchored and established by the acquisition of property. The second class includes local societies devoted to specialities, such as pathology, obstetrics, etc. These also are found only in large cities, and as yet are few in number. Four of them only have published transactions. Corresponding with these are national societies devoted to specialties, such as gynæcology, ophthalmology, surgery, pathology, and clinical medicine, etc. These societies meet annually, elect their own members, exercising care in the selection, and publish valuable transactions.

Another class is composed of the county medical societies, which strive to include all regular practitioners residing in their precincts. From these are sent delegates, who form the State medical societies and the American Medical Association. The mode of organisation varies somewhat in the different States, but the representative principle prevails in all. Most of these societies publish transactions, and the American Medical Association now has its journal.

As to the condition of medical science and art in America, it partakes of the general progress, for the press now makes all discoveries the common property of the civilised world. The marked feature of the present epoch is the recent advance in knowledge as to the relations between micro-organisms and certain diseases, and the strong stimulus which this has given to preventive medicine. Sanitation is

becoming fashionable, and if we may believe some of its votaries, it is a very simple matter to prolong the average lifetime to the scriptural "three-score years and ten." All that is necessary is that everything shall be clean, and every person virtuous.

Having learned to distinguish those diseases which can be prevented much more easily and certainly than they can be cured, we may turn them over to the sanitarian, who has his own battles to fight with ignorance and prejudice. If he succeeds, and so far as he succeeds, he will change, in certain respects, the work of the practitioner.

The lives which are saved from cholera and typhoid, from consumption and diphtheria, and from the acute specific diseases, will, at last, be weakened and destroyed in other ways. The work of the physician will not be lessened by preventive medicine; it will simply be required more for older persons, and for another class of diseases. As sanitarians must depend upon practitioners for much of the information which is essential for their work, it follows that if preventive medicine is to become a working power, it will bring the mass of the profession into closer relations with the State than its members have held heretofore. What these relations shall be is one of the most interesting, and, at the same time, one of the most difficult, of the many problems with which we, or our successors, must deal. I have referred to some experiments on this subject which are now being tried in America, where it is much easier to make such trials than it is in an older country hampered with vested interests. Just at present, in this, as in a number of other things, our tendency is toward centralisation, both in the several States and for the whole country, and it is not improbable that we may go far on this road in the future.

I come, now, to the consideration of the second part of my subject, namely, the direction or manner in which we have reason to hope that medicine will be developed in the United States, and the kind of co-operation which you may reasonably expect to receive from the medical profession of that country.

A marked feature of the present day, in medicine as in other things, is the tendency to specialisation in study and in practice. But this very development of specialties, of increasing minuteness in the division of labour, increases the necessity for co-operation, and, in fact, tends to create what we may call the specialty of co-operation. Formerly, a rifle, or a watch, was made by a single workman. No two instruments were exactly alike, each piece had its own individuality and was not interchangeable, and the cost of the whole was such as to put it beyond the reach of the multitude. Now, the work on these things is greatly subdivided; one man makes only one small wheel, or spring, or pinion, and another another, each doing his work according to a uniform pattern, rapidly, perfectly, and at comparatively small cost.

But, in addition to the workmen who make the individual parts, it is now necessary to have one person specially skilled in making drawings and preparing patterns, another to assemble the completed parts, and a third to test the whole after it has been put together. As the centrifugal force increases, the centripetal power must also increase.

In one sense medicine, as we have it to-day, is the result of co-operation, not of deliberate centrally planned and direct co-operation, but of natural selection from results produced by many men, often working at cross purposes and, therefore, wasting much energy, but nevertheless working, though blindly, to a common end. And it is safe to predict that in the future much of the best work will be done in the same way, by individual effort inspired by the love of science, by personal ambition, etc. But the results obtained in this way come slowly, and some things that we want can hardly be obtained by individual effort, even if we were willing to wait; hence we must look to organisation for help.

This is an age of machinery, of exchanges, of corporations, for all these correspond to one and the same fundamental idea. Men make machines to do what the individual cannot do, and they make them not only of brass and iron, but of men, for such an obvious source of power to the man or men who can master the combination is not likely to be overlooked. One result of such organisation is seen in our encyclopædic works on medicine, whether these be called dictionaries or handbooks; another in the great medical journals; another in associations which seek to wield political influence; another in the comparatively recent attempt at collective investigation of disease. With these may be classed also the attempts of government departments to make scientific investigations, to form libraries and museums, to do things which require long continuity of effort on a definite plan in order to produce the best results. And it is by the combination of all these, with the efforts of individual workers, that substantial advance and improvement are to be effected.

In this broader view of co-operation, it is interesting to consider those fields of labour to which comparatively few physicians can devote themselves, because of want of time and opportunity, but whose proper working is, nevertheless, of the greatest importance to the practitioner.

One of these is experimental laboratory-work; and in this direction the prospect of valuable contributions from America is now exceedingly good. Some of the wisest of our most wealthy men have shown their appreciation of the responsibilities which riches entail on their possessors, by seeking new channels through which to benefit their fellow-men. While the old and well known methods of endowing hospitals and charitable institutions are not neglected, there is apparent an increasing tendency to endeavour to promote the advancement of knowledge, and especially of such knowledge as tends to the mitigation of suffering and the improvement of the race, to furnish means for the investigation of disease, to provide laboratories, and to endow medical schools, and thus place them beyond the reach of the temptations and difficulties which must always exist when such schools are dependent upon the fees of students, and are, therefore, practically commercial manufacturing establishments.

As illustrations of this tendency, I may mention the bequest of £1,400,000 by Johns Hopkins to endow, in the city of Baltimore, a university and a hospital of which the medical department is to be a special feature, to be provided with the best laboratory and other facilities for original investigation as well as for teaching; the gift of Mr. Carnegie to the Bellevue Hospital Medical School of New York, in the shape of a well-equipped pathological laboratory; the presentation by Mr. Vanderbilt, and members of his family, to the College of Physicians of New York, of £200,000, to provide for that school new buildings and clinics having the best means of teaching and research; and the endowment by an unknown donor, of a laboratory for the University Medical College of New York, with the sum of £20,000.

Last year, in his retiring address as President of the New York Academy of Medicine, Dr. Fordyce Barker referred to this tendency to regard wealth as a trust to be used for the benefit of humanity, and, after sketching the requirements of the Academy on a scale which would require an endowment of at least a million of dollars, predicted that such an endowment would be furnished by wealthy citizens of the city. I believe that he was right, and that his prediction will become history.

As the class of men who have wealth, leisure, and knowledge becomes greater, there comes an ever increasing demand, not only for the best medical skill, for the most expert practitioner, but also for exhaustive research in every direction which promises to furnish new means for the prevention or relief of suffering, and for warding off, as long as possible, the inevitable end; and hence there is little reason to doubt that the examples I have named will be followed by others in the near future. With such opportunities, and under such conditions and influences, the stimulus to the young and ambitious worker is strong; we have abundance of material of this kind upon which the process of natural selection can operate, and there is little reason to doubt that the result will be substantial and valuable contributions to physiology, pathology, and therapeutics.

I have already referred to some of the work which has been undertaken by the United States Government for the benefit of medicine and of the medical profession in the formation of a library, and the providing of means of assistance in bibliographical research. There is another most important means of advancing medical and sanitary science which only a Government can furnish, and in which field of work England now stands pre-eminent—I refer to vital statistics. In this field, the United States Government has thus far done but little, yet enough to show the great interest and value of what we have a right to hope will be done in the future by combining the work of the several States. This is one of the fields in which international co-operation is most desirable; it alone can furnish data sufficiently complete and reliable for a scientific consideration of the relations of disease to geographical and race distinctions.

Geographical pathology is a very old branch of medicine; as old, at least, as Hippocrates, whose treatise on *Airs, Waters, and Places* is justly famous. Permit me to remind you of its opening clauses. "Whoever wishes to investigate medicine properly, should proceed to consider the seasons of the year, and what effects each of them produces, the winds, the qualities of the waters, the situation and exposure of the city, the character of the ground, and the mode of life of the inhabitants." "Then," says the wise old Greek, "from these things he must proceed to investigate everything else."

There is a breadth of view in that last sentence which is particularly satisfactory. Since the days of Hippocrates, there has accumulated a vast amount of literature relating to the supposed connection between the topographical peculiarities of different cities and countries,

and the diseases which prevail in them; but when the books and essays, which come under the heading of "Medical Topography," are examined, it will be found that the topographical part is much more complete than the medical—which last is mainly confined to the consideration of malarial diseases, and is vague and indefinite with regard to their relative prevalence.

Much of the larger part of our really valuable information on this subject has been obtained within the last twenty-five years, as Professor Hirsch points out in the preface to the recent edition of his very valuable *Handbook of Geographical and Historical Pathology*; and while the contributions of the United States to this branch of medical science have been already important, I hope to be able to show you that they are probably destined to be of steadily increasing importance in the future. Considered as a body, the opportunities of the medical profession of the United States for the study of the manifold influences which can cause, modify, or prevent disease, are in some respects unequalled. As regards peculiarities of climate, soil, altitude, etc., the country is so large as to afford almost every variety of combination, so that Nature may be said to be making a series of experiments, on a grand scale, upon the mass of humanity which is so rapidly increasing in the new world. Especially is this the case with regard to the problems of heredity, as connected with the mysterious relations of certain forms of disease to race. America is at present the great mixing bowl into which are pouring streams of human life from origins the most diverse, from regions the most remote. Black and white, red and yellow, long skulls and short skulls, Celt, Teuton, and Slav are being brought together under similar conditions of climate, food, and occupation, thus permitting the comparison and study of the different effects, if such exist, which result from variations in parentage under conditions of exposure to the same causes of disease.

For a little time, a generation or two at least, the different streams remain pure; then there is more or less mingling, in some cases very little, in others very intimate; but always there is an opportunity of studying the races separately, as well as of investigating the results of their various mixtures.

To illustrate the possibilities in this direction, I will call your attention to some peculiarities in the distribution of deaths from certain causes in different parts of the United States; and, for this purpose, I shall make use of the data from our last census, taken in 1880. We have no general and uniform system of registration of births and deaths. The larger cities, and about half a dozen States, have such a system; but, for much the larger portion of the country, the only means which we have for determining differences in amount or causes of mortality in different localities is through the census, which is taken once in ten years. The data thus obtained with regard to deaths are uncertain, because when these are collected, only at the end of the year, about 30 per cent. of the deaths are unrecorded; and they are inaccurate, because the reports of the causes of death are not furnished by persons competent to give reliable information with regard to them. Nevertheless, these data are the best that we have; and, although for a large part of the country they do not give us the actual number of deaths from any cause or set of causes, they do furnish some interesting information with regard to the relative prevalence and importance of certain causes, and suggest questions and lines for future investigation, although they do not furnish definite and scientific answers.

Take, for instance, this map of the United States, upon which, by varying shades of colour, is shown the proportion of deaths reported as due to cancer, as compared with the reported deaths from all causes. Cancer, using the term in its broadest sense, is a disease which seems to be gradually increasing in frequency among civilised nations, and, possibly, to have a tendency to increase with the advance of civilisation.

In England and Wales, the proportion of deaths from this cause seems to have nearly doubled within the last twenty-six years; and a similar rate of increase can be made out in certain parts of America. How far this increase is a real one, and how far it is due simply to improvement in diagnosis, is a question yet unanswered.

The mortality from cancer in the United States is proportionately greatest in the New England States, somewhat less so in New York and Pennsylvania, and it causes the least proportion of deaths in the Mississippi Valley and the South generally. The proportion of deaths from cancer in the United States is somewhat greater than it is in England; but it is not possible to make any accurate comparisons in this respect. Now, why are the shades on this map so dark in the north-east, and so light in the south? In the first place, cancer is a disease, the mortality from which steadily increases with advanced age, as you may see from this diagram. Hence, cancer causes a higher proportion of mortality in those localities which have the greatest proportion of population living at advanced ages, and in the United States these localities are the New England States, as you will see by this map. One deduction from this, which may perhaps not have occurred to all of you, is that a large proportion of deaths from cancer indicates, to a certain extent, that the locality in which it occurs is a healthy and long settled one, since it has probably a relatively large proportion of inhabitants, and especially females, of an advanced age. But another explanation of the peculiar shading of the cancer map is found in the relations of race to the tendency to death from this disease. The proportion of annual deaths from cancer per 100,000 living population was, in round numbers, twenty-eight for the whites, and thirteen for the coloured. That is to say, cancer is more than twice as prevalent among the whites as it is among the coloured in the same localities, for these figures apply only to the South. On the other hand, cancer appears to cause a greater proportion of deaths in persons of Irish and German parentage, than it does among the rest of the white population, the indications being that between the ages of 15 and 65, the Germans are especially liable to cancer; more so than the Irish, and decidedly more so than the average white population. Now, when we remember that the greater part of the coloured population is in the South, and the greater part of the Irish and German population is in the North, we have another reason for the differences in mortality caused by this disease in the two sections.

Again, take this map, showing the distribution of the deaths from scarlet fever during the census year. You see that this also was most fatal in the North; and here again the influence of race comes in, because, in the negro race, the mortality from this disease appears to be very low. This disease has always been much rarer in the South than in the North, and the contrast was much stronger in former years than it is at present; but this cannot be explained solely, or even to any great extent, by difference of temperature, because scarlet fever has often been epidemic in the tropics, and, on the other hand, in many localities in temperate climates it is amongst the rarest of diseases.

Here is another map showing the distribution of deaths reported as due to diphtheria during the year. Diphtheria is a disease which has been unusually prevalent in the northern portion of the United States for several years. During the census year, it caused 2,374 deaths out of every 100,000 deaths from all causes, while in England, for the year 1880, the deaths from diphtheria were 532 per 100,000 deaths from all causes; that is to say, the comparative mortality from this disease in England was less than one-fourth that of the United States for the same period. Diphtheria, again, is essentially a disease of the north, but especially of the north-west. It causes an excessive mortality in children of German parentage, sufficient to show that here again the influence of race comes into the problem, although, probably, only indirectly; that is to say, it is probable that it is the habits of a peculiar class of people which favour the propagation of the disease rather than any physical peculiarities in the structure of their bodies.

Two more illustrations of the geographical distribution of disease in the United States may be of interest in this connection. The first is that of consumption, the second, of pneumonia.

Consumption is a vague term, and, as used in the census, no doubt includes many cases which were not true tubercular phthisis. It is reported as causing 12 per cent. of all the deaths, or more than any other single cause. In England and Wales, in 1880, it caused a little over 9 per cent. of all the deaths. Such wholesale ratios are, however, of little interest or value. There are very great differences in the liability to this disease in different parts of the United States, as the map makes sufficiently evident, and it is from a study of the causes of these differences in the data derived from large masses of people, combined with clinical histories and experimental laboratory work, that we have good reason to hope to obtain knowledge, not only of the causes of this disease, but of better methods of prevention and treatment than are now at our command. It causes a greater mortality among the Irish, than in other white races, and, perhaps, a greater mortality among coloured than among the white.

Next to consumption, pneumonia is reported as causing the greatest number of deaths in the United States during the census year, giving a ratio of 8.3 per cent. of all deaths, against 4.8 per cent. in England and Wales in 1880. Here, again, the local distribution of deaths is interesting, and the contrast between the map of consumption and that of pneumonia is very striking. Here, again, we find that race peculiarity is an important factor in the problem, the proportion of deaths from pneumonia among the coloured being much greater than it is among the white.

I have elsewhere commented more fully than it is possible to do here upon these peculiarities of the distribution of certain causes of deaths in the United states.[3] In fact, my only object in calling your attention to the subject is to indicate the direction in which we may hope for good work hereafter, which indication is the chief, if not the only valuable, result of the work already done. In the brief comments which I have made upon these maps, you will have noticed the stress which I have made upon race peculiarities. These race problems are simply problems of heredity taken in mass, and there is no need to urge upon an assemblage of medical practitioners the importance of considering family peculiarities in diagnosis, prognosis, and therapeutics. That the questions involved are difficult and complicated is true, but we are already possessed of more knowledge with regard to them than is commonly supposed.

In a lecture on "Life," delivered a few months ago, Professor Brookes, of the Johns Hopkins University, illustrated this as follows: "If I am placed, with my eyes bandaged, before a stone lying free on the surface, and am told to kick it, and if I know at the same time the size, shape, and weight of the stone, and the character of the surface, I can form a pretty accurate idea as to what the result upon the stone will be; while, if the object to be kicked is a dog, and I am given precisely the same data, I cannot tell what will be the effect. But if I can see the dog, I can, in many cases, predict pretty accurately. If he is a bull-dog, he will do one thing; if he is a Gordon setter, he will do another." And, in like manner, the old family doctor knows that when a particular disease appears in his neighbourhood, he may expect to see it produce in one family convulsions, in another collapse, and, in a third, little or no danger or inconvenience.

This kind of knowledge is, however, at present mainly confined to individuals; it has not become a part of the world's knowledge; it is not defined; in other words, it is not scientific. To make it so is the work of the future, and in this work I hope that we shall be able to help you.

I have spoken to little purpose if I have failed to show you that there is a great deal of human nature in American physicians, and that it is a kind of human nature with which you are tolerably familiar. It should be so, for we are of the same race—a race which, perhaps, as Emerson says, "sets a higher value on wealth, victory, and material superiority than other men, has less tranquillity, is less easily contented." Our ancestors were restless, fighters, freebooters and from these ancestors we have the common inheritance of energy of what we call "firmness," and our opponents unreasonable, pig-headed, stubbornness; of liking to manage our own affairs, and, at the same time, to exercise a little judicious supervision over those of our neighbours; of hatred of humbug and lying; and, in spite of our discontent, of a firm belief that our wives and children, habits, houses, modes of business, and of treating disease are, on the whole, better than those of any other people under the sun.

Privately, and between ourselves, we grumble and declare that the country and profession are going to the dogs—nay, we must do so, or we should not be of true English blood; but there is no need for me to tell you that these are only 'growing pains," and not symptoms of progressive ataxy.

While we must consider the difficulties in the way of the improvement of the science and art of medicine, difficulties due to ignorance, to indolence, to conflict of interests, and to the eternal fitness of things, the existence of such difficulties is not a matter to be bemoaned and lamented over. These obstacles are the spice of life, the incentives to action, the source of some of the greatest pleasures which it is given to man to experience.

The child, spending a happy hour with its new puzzle, is a type of the scientific investigator. The naturalist who objected to the statement that this is a miserable world which it is well to be soon done with, on the ground that there are still many species of rhizopods which he had not examined and classified, is another type. On the ethical and sociological side, the matter is summed up in Ruskin's aphorism, that "Fools were made that wise men may take care of them."

It is surely not without cause that there has been given to us this restless spirit of inquisitiveness, this desire to compass the heavens and the earth, this raging infinite thirst for knowledge: it is the outcome of brain-training and natural selection for thousands and tens of thousands of years.

We are in a period of the world's history characterised by material prosperity, by increase of populations, by tendencies to uniformity, to the making of individuals of small account. According to the Swiss philosopher, Alphonse de Candolle, this is to last a thousand years or so, after which the pendulum will swing the other way, and there will follow a long period of diminution and separation of peoples, and of decadence.

Against that decay of nations we know of but one remedy, and that is increase of knowledge and of wisdom. And this increase must be in our knowledge, in the world's wisdom, and not merely in that of John, or Fritz, or Claude.

As each man has special opportunities and duties, if he can only recognise them, so it is with guilds, with professions, and with nations.

I have tried to indicate to you some of these opportunities which are presenting themselves to my colleagues, your brothers, in the lands beyond the sea, and I hope that I shall not be considered rash or vainglorious in saying that I believe they will so use those opportunities as to return compound interest for what they have received from the storehouse of our common inheritance. Force changes form and place, the stored energy of the soil of our plains and valleys has been coming here in the form of meat and grain, has appeared in muscle and brain, and in a hundred other shapes, but none has been destroyed; our loss has been your gain, and in our turn we have received full and fair exchange.

It is our part now to remember that there are not two springs in the year, there are not two periods of youth abounding in energy and desire, or of manhood's strength and self-poise, in the life of any man or of any nation, and for us, as for those who have been before us, the Kanuri proverb holds true, "*Kabu datsia, kargum bago*"—The days being finished, there is no more medicine.

[3] See report on Mortality and Vital Statistics of the United States, as returned the tenth census, 2 vols. 4to., Washington, 1885-1886.

ADDRESS IN SURGERY,

BY

FREDERICK ABELL HUMPHRY, F.R.C.S.,

Surgeon to the Sussex County Hospital.

THE MEDICAL ASPECT OF SURGERY.

MR. PRESIDENT AND GENTLEMEN,—First let me thank you for the honourable position in which I stand with regard to this Association to-day. I assure you it was with great diffidence, and after much consideration, that I accepted the offer of your President to deliver this address, especially when I remembered that we should meet here under the shade of the metropolis, and that my audience would comprise some of the brightest ornaments of our profession assembled not only from London, but also from the provinces, and even from abroad.

In former years, your visits have been made to great centres of industry, and great centres of intellectual and professional activity and vigour. Your visit this year is to a town probably quite as large as many at which you have held your meetings, but it is a town of a peculiar character. Having no special manufacture, no definite industry of its own, it is wanting in many causes of those great surgical injuries and surgical disease that form the fruitful subject of such a paper as this. In fact, it is a town where not disease, but recovery from disease is, medically speaking, its great characteristic. And so, in the wards of our hospital, the numbers of serious and acute diseases do not hold the ordinary proportion to the chronic and strumous cases; hip-joint disease, necrosis, and similar affections that abound in the surrounding country districts.

In casting about, then, for a fit subject for these remarks, I have not chosen to bring before you any group of cases from my own experience, or any special form of treatment for any special disease, but rather to take a wider, and, I trust, as interesting, a subject for consideration.

Looking back over the last half century, I suppose the greatest change that has occurred in the practice of surgery, has been the development of the so-called specialities. This development is cause and consequence, too, of the enormous increase in the knowledge of the art and science of surgery that has occurred during that period; with that increased knowledge have come increased facilities for investigation of disease, and much improved methods of treatment. But, while fully recognising and valuing these great and rapid advances in different directions, it may be worth while to pause—as it were, to take breath—and even look back on the ground already covered.

Are we going too fast? Old theories, old opinions, old treatment, old books, are they sufficiently studied and considered? Are the old relations between medicine and surgery still maintained? Is the Medical side of Surgery (if I may so speak) holding its ground, and making the same advances as the more strictly called Surgery?

Of late years, how much has surgery done for medicine? Has medicine done as much for surgery, and has the medical treatment of surgical disease received the same consideration, or made the same rapid strides as the study and development of operative procedure?

It is now more than fifty years ago that Sir William Lawrence, in an introductory lecture at St. Bartholomew's Hospital, said: "It is the boast of modern surgery to have greatly diminished the number of operations." He continues: "I should think that there are not so many performed in this hospital as there were twenty-five years ago by one-half or two-thirds; the difference has arisen from improved knowledge of the nature and treatment of disease, acquired by the anatomical, pathological, and practical researches of surgeons." But surely never were these researches conducted with such vigour and with such intelligence as in the last fifty years, aided, as they have been, by appliances unknown to the older investigators; and yet surely in no period have operations been so frequent, so formidable, and so successful, as they have been of late years. That improved knowledge of which Lawrence boasted, and to which he referred as the cause of lessened operations, has in itself, by the medical aids to surgery it has introduced, been the main cause of their greater frequency and of their increased success. But, after all, the fact that, in any case, recourse is had to an operation, is an admission that medical treatment has failed in curing the disease. We can hardly open an abscess without acknowledging that, by simpler means, we have been powerless to combat the inflammation that preceded it. In what state, then, is our knowledge as respects Surgical Medicine?

And, first, of inflammation; that subject which occupies rightly so much space at the commencement of all surgical works, and is the enemy we have to meet at all corners in the treatment of surgical disease. It would occupy too much time here to compare the present state of our knowledge of those pathological changes comprised under the head of inflammation with what it was, say, in John Hunter's time; for, in spite of our general advancement, and with the additions of chemistry and the microscope, our views, for all essential purposes of treatment, have not been materially altered in principle.

And yet the treatment of inflammatory affections has undergone considerable modification, due, no doubt, to the altered conditions of life. In bygone days, a man really lived by the sweat of his brow, his occupation was a more active one, and, with fewer holidays and fewer aspirations to be rich, he spent the even tenour of his days in greater health and more comfort. But now life is a struggle; competition and the anxiety to be rich give a man anxious days and sleepless nights. His brain is used to the neglect of his body, and, when his holiday comes, he shrinks from the fatigue of its enjoyment. Illness then finds these two men in very different conditions. Instead of a man who, as formerly, would bear bleeding and active treatment, we now get a man in whom the nervous system predominates, whose digestion is out of order, and to whom sedatives and stimulants are necessary.

This change has become so marked, almost so universal, that we are in considerable danger of forgetting the principles of the antiphlogistic treatment, or perhaps we are timid in putting them into practice in those cases really requiring it. We are inclined to smile at the way in which our forefathers were bled and purged because they had received some slight injury, the result of accident; and many were perhaps bled and purged too freely; but no one who has seen, not only the relief from pain, but also the relief from impending suffocation following a prompt bleeding, in the case of a man suffering severely from fractured ribs, can doubt that the principle, when properly applied, still holds good. The same may be said of the inflammatory affections of the cranium and its contents, the results of injury. A boy under my care in the hospital, some months back, for depressed and comminuted compound fracture of the skull, and for whom I raised some pieces of bone into position, and removed others, had within the first fortnight two separate attacks of convulsion, loss of consciousness, and high temperature lasting many hours; free leeching and purging were employed on each occasion, and each time with marked relief, the boy ultimately recovering completely. I am aware I am telling you nothing new in this, but I am sure that these cases do not now receive the same active treatment as they used to do, or as, it seems to me, they require.

In inflammatory affections of other organs, also, we are probably becoming too timid in the use of depletion. The onset of many local inflammations may be cut short by a free and timely local bleeding. Even a strumous affection of the hip-joint will often have an inflammatory commencement, perhaps following some slight injury; and, if this condition be recognised sufficiently early, and be treated by the application of a few leeches in addition to the ordinary long splint, the inflammatory part of the illness may be controlled, and opportunity be given for the constitutional part of the malady to be arrested by other means. Of many scrofulous inflammations I believe the same may be said, and we are tempted to treat these local affections in strumous patients too constitutionally, forgetting that, while the patient is no doubt scrofulous, his disease is a local and an inflammatory one, and requires a corresponding local treatment. In many such cases, the local inflammation or the local injury is the first evidence of any deviation from a healthy condition; and if we can check the original inflammatory mischief, in its early stage, we may fairly hope to prevent its becoming tinged with the constitutional weakness, and to arrest its further progress to a chronic and wasting illness. As another instance of the change that has taken place in the treatment of inflammatory affections may be mentioned peritonitis. The application of leeches by dozens has given way to the internal administration of opium, and certainly with advantage; and yet even here, in a case of limited and local peritonitis, especially if of traumatic origin, an early application of leeches may be of great advantage in preventing the inflammation from becoming general over the abdomen.

In medical surgery, syphilis is one of the subjects that has necessarily received much attention, and, at the hands of Mr. Hutchinson and others, has been developed both in its clinical history and in its treatment. Compared with, almost classed among, the exanthemata, with its period of incubation, its local manifestations, and its subsequent constitutional symptoms, its pathology seems to have been put on a surer foundation, and the principles of treatment are consequently of a more definite character. Still, all this further experience and investigation does not invalidate in the main either the views of pathology or of treatment as laid down by John Hunter. Its further history has, however, been much extended, and a whole train of symptoms not mentioned by the older writers on syphilis have been explained as due to specific deposits; and the term "visceral syphilis" now includes many pathological conditions that were certainly not recognised as due to this disease. In treatment, now as formerly, mercury is the one remedy—at all events, in the early stages; but salivation, formerly looked on as the necessary evidence of mercury having affected the system, and, with it, the constitutional disorder, is not considered necessary—indeed, is now supposed not to have so good an effect as the slower result obtained by the long continued use of small doses. In this way, the patient does not suffer from the treatment as well as from the complaint, and is able to continue any active occupation he usually follows. On the other hand, in the use of iodide of potassium for the gummata and other tertiary deposits, it would seem that the further they are removed in point of time from the primary affection, the greater the necessity for its free administration. Symptoms yielding slowly, or not at all, to small doses, will, if these be quickly and largely increased, soon show signs of decided improvement. The knowledge of inherited syphilis was till lately confined to the infantile variety; but Mr. Hutchinson has clearly proved some affections of adolescence, notably of the eye and ear, to be of a specific character, and to be cured by specific remedies. Probably, also, there is yet more to know on this subject. Mercurial treatment certainly benefits many children and young adults suffering from some obscure affections that have a more or less strumous appearance, the possible explanation being their really syphilitic origin. A boy, aged 12, lately under my care, suffering severely from symptoms ordinarily recognised as those of strumous ophthalmia —swollen lids, congested conjunctivæ, superficial ulceration of corneæ, and most intense intolerance of light—began to mend soon after the commencement of a mild mercurial course, when the ordinary remedies for such a case had previously utterly failed. Dr. Jeaffreson, of St. Bartholomew's Hospital, one of the best clinical physicians of his time, used to say, "Never give up a case of obscure disease till you have tried iodide of potassium." The pathologists of the present day would tell him he had unconsciously cured a case of visceral syphilis.

Cancer still remains of all diseases, though unfortunately one of the most common, still one of the most obscure and the most intractable. It still defies all our attempts at cure. It is probably, too, on the increase. In the *St. Bartholomew's Hospital Reports* for the year 1860, I find there were 111 cases of cancer admitted; in the year 1885, there were 186, and this does not include those classed under sarcoma, most of which would, no doubt, twenty-five years ago, have been included in the cancer-list. Again, according to the Registrar-General's returns,

the increase of the mortality from cancer in England and Wales in the ten years 1871 to 1880 compared with the ten years 1851 to 1860, was equal to 62 per cent. among males, and to 43 among females. I do not pretend to account for this increase; probably in all classes the consumption of animal food is much greater now than it was twenty-five years ago; but whether this alteration in the habits, specially of those classes that fill the wards of our hospitals, is sufficient cause for this increase, it is at present impossible to say. It rather tallies with the opinion of those surgeons who think that the disease, where established, progresses with less rapidity in those whose animal diet is restricted to a very meagre allowance. Beyond the relief from pain, medicine has, at present, proved useless. From time to time, remedies have been tried, and some have held their ground for a season; but, after a longer experience, have proved of no avail. But we should not be deterred by this failure; those who are specially working at this subject, and who are connected with hospitals for its treatment, are always open to try fairly any remedy which can show any reasonable prospect of success; and surely we may yet hope the time will come when some relief, perhaps some cure, may be found for this dire disease. M. Pasteur has recently opened a wide field for investigation of this kind; may we possibly look for any help from following the lines he has laid down in the treatment he has adopted for hydrophobia and some other diseases of the brute-creation?

In spite of its unquestioned hereditary tendency, cancer commences as a local affection, but extends very early in its course to the neighbouring glands and the general system. This would seem to be borne out by the difference in the rapidity of growth with a corresponding difference in rapidity of return of the three principal kinds of cancer—medullary, carcinoma, epithelioma. In my own experience, I could mention several cases of the latter variety where, after removal, there has been no return during the patient's life, though this has extended some years from the time of operation. Very early removal is at present our only remedy; but surely the efforts of surgical medicine should be directed more than they have been to the medical treatment of cancer. Surgery has done much of late for its removal from regions hitherto looked on as inaccessible: how far greater the triumph, if, by remedies prophylactic or otherwise, some method of treatment could be discovered that would obviate the constant recourse to the knife, with even then a strong probability of a return of the disease.

Till lately, the physician has laid claim to the three great cavities of the body as his peculiar province, but this is so no longer. The surgeon is now called on to assist in their treatment when, from the occurrence of inflammatory effusions or morbid growths, medicine is manifestly powerless; and there is now scarcely an organ that has not been attacked by the operating surgeon with a view of relieving some pathological condition. But, while the surgeon is thus intruding on the physician's province, it behoves him also to participate in the physician's knowledge; while surgery is steadily advancing by introducing new operations and perfecting old ones, is surgical medicine equally advancing by improvements in diagnosis, in its power specially of laying down definitely those indications that make such operations advisable? Surgery of this kind is of a comparatively recent date; but, to the credit of modern surgeons, it may be said that with their increased skill in operating has also increased their skill in diagnosis. The very success of these operations, and their frequency, has doubtless quickened the attention of surgeons to the importance of accurate diagnosis, and brought into prominence symptoms hitherto not much considered, but now of differential value when the question of operation has to be decided. Physical examination of the chest has long ago brought to considerable perfection the knowledge we required for bringing surgery to bear on the affections of the organs of that cavity, but there is much greater difficulty when we come to the viscera of the abdomen. We can tell pretty well the amount of fluid in a pleural cavity, and the character of it, but we can with far less accuracy tell the situation of an obstructed bowel, and its cause; but even in these cases, attended, as they are, by the greatest anxiety and perplexity, and when, perhaps, the greatest refinement of diagnosis is necessary, great advances have been made.

Diagnosis has, however, arrived at its highest development in determining the presence and locality of tumours in the brain, and that with sufficient accuracy to warrant the surgeon's attempt at their removal. The cases, of course, at present, have been few, but sufficiently numerous and sufficiently successful to justify further trial; but, with our present knowledge, there are, I think, few of us who could depend on their powers of diagnosis enough to encourage them in undertaking so serious an operation. In confirmation of this, I may refer to some cases lately published by Mr. Hulke, in which, for intracranial abscess in connection with diseased petrous bone, he carried out an exploratory operation. Notwithstanding his great experience, and the pains and attention he evidently devoted to these cases, the diagnosis of the exact situation of the abscess was far more difficult than the operation planned for its relief. In cases of this kind, too, as Mr. Hulke pointed out, an early diagnosis is the only useful one; and here again is the difficulty still further increased.

Still, in spite of early and accurate diagnosis, in spite of advancing medical knowledge, operations are still increasing. Anæsthetics, and now antiseptics, have been the chief medical helps to the operating surgeon. The administration of chloroform (as a type of the anæsthetics) is now, from the natural requirements of the patient, so necessary a part of the operation, that it becomes more a matter for theoretical than practical consideration as to whether its use is attended or not by any disadvantage in the further progress of the case. The immediate gain to the patient, excluding the very few sad exceptions, is of course enormous, but certainly the obstinate sickness that sometimes follows the use of chloroform has, in the experience of most of us, by adding to the general depression and illness, materially lessened the chance of recovery. It is rare for sickness to follow the use of a small quantity; but, on the other hand, the tendency does not increase in proportion to the length of administration. What is more important, I am sure, is that the material should be of the best kind, and this not only on account of the subsequent sickness, but also for the safety of the patient at the time of operation. With regard to the choice of the anæsthetic, as a rule I prefer chloroform; and, though ether is by some considered safer, and is very useful in persons collapsed from injury or loss of blood, or who are very anæmic, in others, specially old or bronchitic people, it produces so much pulmonary congestion as to be serious at the time, and often troublesome for some days afterwards.

There can be no doubt that the introduction of antiseptics has both increased the number as well as the success of operations. Certainly, many of the large abdominal operations would not have been undertaken unless the surgeon believed that, by their use, the patient was freed from most of the casualties that follow such proceedings. Records of cases treated antiseptically have undoubtedly given marvellous results; but, of late, as marvellous results are occurring in the hands of those who have relinquished that treatment. Its adherents will admit of no compromise, but they must allow, in face of many facts before them, that wounds under favourable circumstances, in a healthy person, may heal as soundly and as quickly without the antiseptic plan as with it, also, that antiseptics do not render their patients absolutely free from those diseases it is their special object to prevent. By antiseptics, I would at once say that I include those means by which septic matter is prevented from being absorbed into a wound; but while fully recognising the importance of Sir Joseph Lister's experiments with regard to the fermentative process and the resulting germs, I cannot believe that on their presence or absence depends the health or otherwise of a wound.

Looking at antiseptics, then, from my point of view, it is neither a sudden nor a recent change in the practice of surgery. Many years ago Mr. Liston, in his book on *Practical Surgery*, gave a graphic, possibly an exaggerated, account of the management of wounds in his day, and he did much to simplify their treatment. He speaks of the many envelopes of cotton and flannel, the compress cloths, the pledgets of "healing ointment," as it is called, which enclosed a stump after amputation; of these, after remaining for some days, being removed loaded with putrid exhalations, and a profusion of bloody, ill digested, fœtid matter. After the stump had been deluged with water from a sponge not over clean, the same application of bandage, plaster and grease, surmounted by some absorbent tow or charpie to soak up the discharge, was repeated. In place of this he left his large wounds partly open, and used his well known application of wet lint and oiled silk frequently changed. Did he not, by his partly open wound, and frequently renewed dressings of clean water, foreshadow the drainage-tube and antiseptics? My first experience of surgery was between the years 1847 and 1850, at Addenbrooke's Hospital, under your distinguished member, Professor Humphry, and in those days he used, after an amputation, all the bleeding vessels being carefully secured, to apply with some firmness a pad both in front of and behind the face of the stump, approximating the flaps, but leaving the line of incision freely open to the air, the stump itself being well raised on a pillow. The pads, which were made of tow and cotton, were left on for many days; the discharge ran over them and into them, and they were septic in an unmitigated degree; but the patient did well, and the stump healed quickly. Did not he and Mr. Liston, though in different ways, fulfil the same object, and that an antiseptic one, of keeping the wound free from blood? Is not decomposing blood our chief enemy in the immediate treatment of wounds after operation? and if we can keep a wound

empty of blood, can we not, with ordinary care and cleanliness, obviate those risks it is the object of antiseptics to avert? What more offensive or more harmful than decomposing blood? The ovariotomist finds that it is not the antiseptic that keeps his mortality so low, but it is the care and patience with which he removes every drop of blood from the peritoneal cavity, even at the risk of using some roughness to the peritoneum itself by the sponging necessary for that purpose. The addition of carbolic acid, and such like remedies, by preventing decomposition, no doubt further minimises septic influences, and is very valuable in the further treatment of the case when discharges of an unhealthy kind are apt to occur. In thus inveighing against blood, I do not forget that blood itself, by gluing together the edges of an incision, or even the small wound of a compound fracture, may be the means of effecting primary union in the part; but here, by drying into a firm crust, it completely excludes the air, and itself becomes a perfect antiseptic.

I must also mention here the very great advantage to hospital-surgery from the recent very laudable antiseptic fever among the nurses. We must all, I am sure, attach the greatest consequence to the improvement, not only in the education and the social status of our present race of nurses, but also in their great attention to the cleanliness of the patients, as well as their wounds. I would admit, then, the great gain to surgery from the use of antiseptics; but I would limit this admission to the gain from the absence of the putrefactive change, not to the absence of germs and the fermentative processes therein implied.

Among the recent aids to surgery must be mentioned electricity. From its stimulating effects on the nervous system, it has long been used to give tone to limbs and muscles weakened by disease or injury; but, of late, advantage has been taken of the chemical effect produced during its passage through the tissues, and of the decomposition that ensues, to cause resolution of tumours or coagulation of blood. In this way it has proved chiefly useful in the treatment of those large thoracic aneurysms that are not amenable to other surgical relief. The clotting that takes place between the needles introduced well into the cavity of the sac becomes the focus for still further coagulation; and in this way, perhaps after repeated applications, the increase of the aneurysm has, in some few cases, been arrested, and, in several, amelioration of symptoms or delay of fatal ones has been accomplished. In nævi and small blood-tumours, electrolysis has the advantage of curing the disease with certainty, and with but little scar. Probably in medical, as in social, life, electricity has not yet fulfilled all the requirements we may expect of it. Some further development of the telephone and the electric light, in its application to medical purposes, will almost certainly take place, and large additions will, we may fairly hope, be made to our present means of surgical diagnosis.

With regard to medicine itself in the treatment of surgical cases, there is but little fresh to record. The surgeon's *Pharmacopœia* is generally a small one; his list of drugs in ordinary use is confined to the few of known value and decided effects, and these must necessarily remain without much change. With the alteration in patients' habits has come a corresponding modification in their treatment. The nervous element in disease is now so prominent, and surgical affections are, from their nature, so commonly of a painful character, that sedatives are the remedies of which the surgeon very largely avails himself; and of these opium is the one on which he most depends, and that not only for its use as a sedative, but for its stimulating, almost feeding, effect in some exhausted states of the system. The fear is, perhaps, of our getting to use opium too freely. The hypodermic injection of morphine, from the facility of its administration, and the promptness of its action, is a most valuable means of giving rest to a patient after operation, or to one in severe pain from any cause; but its facility has created its abuse, and sometimes even in hospital practice its use is continued when the necessity for it has passed away.

But it would be too great a digression for me to enter on the subject of individual drugs. They will, no doubt, be brought before you by those who, in their special sections, will speak with larger experience and greater authority than I can do; for, now that the practice of surgery is broken up into departments, it must be that the remedies themselves also partake of a special character.

Among the medical aids to the treatment of surgical disease, it would be disloyal of me, speaking in this place, and after a long residence in this town, not only to mention but to enforce the great advantage to be gained by sea-air. Besides the bracing effect, as it is popularly called, of sea-air, there is no doubt that many surgical diseases distinctly benefit by a sojourn here. Roughly speaking, the effect on people in health on coming to Brighton is somewhat to check the natural secretions; and, in like manner, probably, patients suffering from exhausting illnesses or discharging abscesses are certainly benefited. They not only improve in general health, but the discharge lessens, a sinus takes on a more vigorous action, and night-perspirations are much diminished.

Scrofulous patients and scrofulous children especially get very great good from a stay in Brighton; and they very quickly show, by their increased activity, improved appetite, and better colour, how soon their system rises to the improved condition of its surroundings. But here, for very practical reasons, I would follow the distinction laid down by Sir William Jenner between the "sanguine" or "serous" type of struma, and the "scrofulous." The former, typified by the highly developed nervous system and active circulation, liable to tubercular affections of brain, lungs, or serous membranes; the latter of phlegmatic temperament, with cold extremities, suffering perhaps from glandular enlargement, rickets, or diseased hip. It is these last that Brighton chiefly benefits. The strictly tubercular do not gain so decidedly; and, in some cases, I have certainly seen harm arise from a residence here. The stimulating air seems too much for persons with such a sensitive nervous and vascular system, and fans into flame smouldering mischief that might, under other circumstances, have remained latent, or perhaps disappeared. Again, for those even whom it benefits, too long a stay defeats its object; from overstimulation the child becomes exhausted, gets to look pale, and flags in strength. For this reason, of all invalids who get good from Brighton, I believe delicate children who come to school here gain most. The three terms spent in a good school by the sea, with the three intervening holidays of a few weeks away from it, give the necessary amount of stimulant, alternating with sufficient relaxation to permanently benefit a child suffering from scrofulous glands, or a diseased bone. It is only for a few weeks in the spring that such patients cannot spend many hours a day here in the open air.

But you will say, What is the object of these remarks? To what do they tend? Surely to this, that while great, almost marvellous, results have followed the late advances and improvements in operative surgery, and which have been so carefully and so scientifically matured by many distinguished surgeons, there is still a wide field open for the investigation and improvement in the medical treatment of surgical disease; and that, on the whole, the strictly surgical and operative treatment has received more than its share of the attention due to disease, looking at it simply from a remedial point of view. I fear we must admit that the tendency of the present day is to eradicate disease rather than to cure it. In his lectures delivered at the Royal College of Surgeons, now many years ago, Mr. Hilton almost apologised for introducing the subject of physiological and mechanical rest as a branch of what he called Natural Therapeutics. And yet, how much has surgery benefited by the principles he enunciated. He brought great anatomical knowledge and wide surgical experience to bear on this subject of Rest, and seemed really to show that there were few surgical affections that were not capable of some relief, and many of cure, if the directions he gave were scientifically carried out.

I mention this as an example of the direction in which scientific surgery may be advanced, and to suggest that if by therapeutics the pain of a cancer can be relieved, or a hip-joint saved, other means than the purely operative demand greater attention, and acquire greater importance than has been hitherto awarded them. Another bright example may be derived from the experiments lately carried on by M. Pasteur. It may perhaps be thought premature to accept his discovery with regard to the treatment of hydrophobia as a scientific fact, but even now the evidence in favour of the correctness of his views is very strong, and is not in opposition to doctrines already acknowledged. He deserves all praise for the patience, assiduity, and care with which he has laboured on this subject, and endeavoured to cure one of the most painful and fatal illnesses that come under the surgeon's care. Surely these examples may encourage us to attempt more in the medical treatment of surgical disease; to endeavour to discover the first deviation from the healthy condition; and to endeavour to find for such deviation some remedy that may arrest its further progress, and obviate the necessity for those operations that have justly helped to raise British surgery to its present high position.

In making these remarks to this Association, I cannot but remember that I am addressing a body of gentlemen who are, like myself, largely engaged in general practice, and who have opportunities of watching disease from its onset to its close, in a way impossible for the pure surgeon or the specialist. Family peculiarities, family histories, family medical secrets are known to us, and in this way we have advantages for investigating, tracing, and treating disease, that

we cannot be too eager to avail ourselves of. In fact, the general practitioner is the living embodiment of that principle I wish so strongly to establish—the necessary and close connection between medicine and surgery, a principle nobly illustrated by many of our great provincial surgeons. Our practice comprises both medicine and surgery; our medical experience out of doors is brought to bear upon our patients in the surgical wards of our hospital. Chloroform has taken away from the value of the rapid and brilliant operation. He is the most successful surgeon who is also the good physician. Surgery should get more dependent on medicine for its help. Operative surgery, from the nature of things, must have a limit, and surely that limit must be nearly reached. Let the medical aspect of surgery, then, command more of your interest and attention. I wish I were a better exponent of its principles, a better example of its practice.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF MEDICINE,

At the Annual Meeting of the British Medical Association, held in Brighton, August, 1886.

By W. H. BROADBENT, M.D., F.R.C.P.,
Physician to St. Mary's Hospital; President of the Section.

REMOTE EFFECTS OF REMEDIES.

Gentlemen,—My first duty is easy and pleasant; it is to tender publicly my sincere thanks to the Council of the Association for the honour they have done me in asking me to preside over your discussions.

Unfortunately, this duty is soon discharged, and I am left in presence of a task which becomes increasingly difficult every year—that is, to find anything which may be worthy of being brought before you in the brief address which the president of this Section is expected to give.

In the perplexity arising from the number of subjects which presented themselves to my mind, or in the poverty of my invention—I will not say which—I have found nothing better with which to occupy your attention for a short time than a few illustrations of the desirability of looking beyond the immediate results of treatment, and of the necessity of exercising forethought in the employment of remedial measures, some remote effects, in fact, of treatment.

That present relief is often obtained at the expense of future suffering and injury, is a trite remark. I might take up my parable and speak of alcohol, the remote effects of which are so terribly frequent; but this is not a lesson which I need enforce, and I allude to it only for use as an illustration. If we were not so familiar with the exhilarating effects of wine, we should find it hard to believe that anything could so entirely lift a man above his surroundings, banishing sorrow and care and enhancing enjoyment, sharpening the wits and raising the spirits, conferring a feeling of self-satisfaction, and throwing a cheerful glow on the most unfavourable circumstances. Supposing all this could be attained without speedy reaction and ultimate ruin to body and mind, is there any consideration which would prevent men from unlimited indulgence?

There will occur to all, again, the pain and depression, the bodily derangement and the mental wreck, by which the opium-eater, or the devotee to hypodermic morphia, ultimately pays for his delicious dreams or her factitious happiness; the miserable irresolution and wretchedness which, after a time, overtake the man who habitually resorts to chloral for the sleep which he ought to court by fresh air and exercise, and by the removal of the influences which give rise to sleeplessness. Even the bromides—the least injurious, perhaps, because least powerful of the remedies employed to procure sleep—besides producing the well-known acne, may bring a man into a state of childish dementia, which, fortunately, does not last. We have not yet begun to see the evil effects of the newer hypnotics, such as paraldehyd, urethan, etc., but coca or cucaine is already beginning to claim its victims, who gradually develop an excitement which becomes maniacal, or an exaltation like that of general paralysis.

These glaring examples of injurious remote effects of measures which are immediately beneficial, are only adduced in order to show the direction of my thoughts.

It may be said that the injury is the result of unauthorised abuse of remedies by patients, and of weak or vicious self-indulgence; but so also will many of the injurious effects I propose to consider be seen to result from patients taking the treatment of their ailments, real or supposed, into their own hands. The point is, that very frequently the treatment has been initiated, or at least sanctioned, by the medical man, just as he has prescribed or administered the first hypodermic dose of morphia.

Let me begin with the familiar subject of gout, and of some of the remedies which are employed in its treatment. It is well known that we can relieve the pain and cut short the paroxysm of an acute attack by the free use of colchicum, veratria, and other drugs having a similar action. It is equally well known that their injudicious use may produce great immediate prostration, and that the remote effects of their habitual employment are often most disastrous. We may, however, administer colchicum; we are, indeed, compelled by the frightful suffering to give it freely in some cases; but we are justified in resorting to it only on condition that we do for the patient by after-treatment—aperients, alkalies, iodides, etc., with careful regulation of the diet—what the attack would have done; that is, clear the system of gout-poison, and bring the secretory and excretory organs into a state of functional efficiency; or the end may be attained by a visit to one of the many baths and waters known to be efficacious in gout. These precautions, and the self-denial required for continued immunity, are frequently unacceptable to the gouty convalescent, and are disregarded; and, when gouty pains return, they are kept down by the remedies which have been found to give relief during the attack, or by some so-called specific. This may be done with success for a very long time. Meanwhile, however, the remote effects are in preparation. These are mainly due to imperfect elimination. It is not implied that colchicum and its allies directly arrest the elimination of uric acid existing in the blood; it is rather antecedent metabolism which is checked, and nitrogenised waste other than urea and uric acid accumulates in the blood and tissues. Such impurities provoke resistance in the arterio-capillary circulation, and we enter upon the condition of high arterial tension, with all its varied damage and danger. It can scarcely be too often repeated that all the effects upon the arteries on the one hand and the heart on the other, associated with contracted granular kidney, namely, arterial degeneration, cerebral hæmorrhage, aneurysm, and dilatation of the left ventricle, valvular disease, are just as commonly produced, independently of kidney-disease, by high pressure in the arterial system due to other causes; and such pressure in an extreme degree may be induced prematurely by the means taken to keep down gout. Even convulsions not distinguishable from those occurring in uræmia may be induced. A case which occurred in my experience within the last twelve months may illustrate effects of this kind.

A man, aged 37, living a sedentary life, of strictly temperate, and indeed abstemious habits, so far as could be ascertained, consulted me in October 1885, on account of continuous headache, with weekly exacerbations of frightful severity, at times attended with vomiting. I was at once struck by the high tension in the arteries; the temporals were prominent and tortuous, the radial was large, full between the beats, and compressed with difficulty, and the pulse was long. The urine, an examination of which was at once suggested by this state of the circulation, was found to have a good colour and normal specific gravity, and did not at this time contain albumen, although traces were found subsequently. I looked upon the paroxysmal headaches as of migraine character, and did not attach sufficient importance to, or adequately deal with, the high arterial tension, especially as the arteries are tightened up in migraine; and I gave only a mild blue and colocynth pill twice a week, while arsenic was prescribed with carbonate of potash, for the migraine. Three weeks later, the paroxysmal headache was better, but the continuous headache remained; no important change was made in the treatment. Nothing more was seen of the patient until I was called to meet in consultation Dr. Wilbe, who had only been summoned to him on the supervention of urgent symptoms. These were, pain in the head of overwhelming severity, incoherence, stupor, intolerance of light and sound, and violent muscular jerkings. He lay on his back or side, the chin down on the breast, his arms bent, the knees drawn up, and all the muscles of the chest and abdomen in a state of powerful tonic contraction, while every three or four seconds there was a violent momentary spasm of the abdominal and thoracic muscles, attended with synchronous flexion on the body of the arms and legs. The heart was beating violently, and the tension in the arteries was extremely high, the radial feeling like a solid incompressible cord. (I may say, in parenthesis, that I have never found the pulse so strong and incompressible in uræmic convulsions as in this patient, the heart usually

appearing to have failed in vigour when they supervene.) It seemed as if the vessels must burst under the strain, and the symptoms were obviously in relation with the high arterial tension; venesection was therefore practised, and sixteen ounces of blood were withdrawn; this was followed by a calomel purge. Great, but not complete, relief was at once experienced, and the patient slowly recovered. A larger bleeding would have been more effectual.

The extraordinary tension present in the arteries throughout this case was incomprehensible until, one day, the patient's sister produced a number of empty bottles, which had contained Laville's specific for gout. He had, in fact, had pain which he attributed to gout and, finding that he was relieved by the specific, he had taken it largely.

Some of the most striking illustrations of injurious remote effects of gout-specifics are furnished by London painters and plumbers. Lead in the system, we know, is a common cause of gout, apparently through its interference with oxidation and metabolism; and plumbers and painters are, in consequence of absorption of lead, extremely subject to this disease. There are, however, well known gout-pills which are very effectual in relieving the pain, and they are taken, as a matter of course, whenever gouty symptoms set in. The attacks being prevented or suppressed, imperfectly oxidised matter, which might have been burnt off, accumulates in the system; and it is among workers in lead who have resorted to this practice, that we see enormous deposits of urate of soda in the hands and feet, and find the arteries ruined by degenerative changes, the result of protracted high pressure, or the heart dilated by the resistance in the peripheral circulation, contracted granular disease of the kidney, itself a product either of the state of the blood or of the vascular tension to which this gives rise, often aggravating the effects of the original blood condition. I need not enumerate the disasters which attend the structural changes mentioned—cerebral hæmorrhage on the one hand, dropsy on the other, acute pulmonary and other attacks, uræmic convulsions. Let me add, however, that it is not only in these direct and conspicuous consequences that injury is manifested; diseases, which would otherwise be attended with no danger, prove fatal when the heart is worn out by the constant struggle with the resistance in the arterioles and capillaries, and convalescence is slow, difficult, and imperfect, when the vessels are deteriorated. In my experience, too, I may mention that gangrene of the lungs has been disproportionately frequent among workers in lead, who have suppressed gouty tendencies by the means named, and it is easy to understand a liability to this complication. Pneumonia is one of the local inflammations to which the constitutional condition may give rise; the circulation has not the normal freedom and rapidity, and there is, moreover, a tendency to coagulation in the blood of gouty subjects, as is manifested by the familiar thrombosis of veins. Such coagulation in the vessels of a pneumonic patch will be the determining cause of gangrene of the lung.

There are other ways in which abnormally and injuriously high arterial tension may be encouraged. One of these is the "Banting" treatment of obesity, as understood and practised by the public. This consists essentially of a highly nitrogenised diet, and, indeed, in the exclusion of the non-nitrogenised sugars and starches, together with a limitation of the amount of fluid taken as drink. We have, therefore, at the same time, a disproportionate amount of nitrogenised matters introduced into the system, which have to be broken up, oxidised, and excreted, and a diminished supply of water, which is essential to active metabolism and elimination. An important part of the method, when properly carried out, is exercise, which, in fresh air, may work off the impurities; but this element of the treatment is usually neglected. The amount of fat is undoubtedly often reduced, but the imperfectly oxidised nitrogenised waste, present in the blood, provokes resistance in the capillaries and generates tension in the arteries.

Cases have repeatedly come under my notice in which the injurious effects, mostly cardiac, of this condition have been manifest; and, in one instance, the first symptoms of dilatation of the left ventricle, which ultimately proved fatal, were so distinctly traceable to the period at which the Banting diet was adopted, that no doubt was left in my mind that it had a preponderating share in producing this change in the heart.

The examples cited, it may be said, simply illustrate the folly of violent interference with natural processes, by people who are ignorant of the consequences; but sometimes the colchicum treatment of gout, or the Banting process, is initiated more or less under the advice of medical men; and, in my opinion, a similar error, for which medical teaching is directly responsible, is committed when strict dietetic treatment is insisted upon in the glycosuria of stout elderly gouty subjects. I will not stop to discuss the question whether this is to be called diabetes or not; but, to be quite clear, I may state that the cases I have in mind are not those in which there is merely, from time to time, a small amount of sugar in the urine, but such as have copious urine with high specific gravity, and the constant presence of much sugar, often with thirst. Now, in some of these patients, the establishment of habitual and free elimination of sugar is coincident with the disappearance of many distressing symptoms, especially digestive troubles, loss of appetite, irritability of temper, disturbed sleep, and morning depression. The altered chemistry of the liver is, in some way, a relief; perhaps it is by the increased elimination of the urea which accompanies the sugar, the two coming from the splitting up of nitrogenised matters. I do not wish to argue from this, that we must let the glycosuria alone, but only that we must bear it in mind in our treatment. Now, in my experience, this form of glycosuria is almost always associated with high tension in the pulse, which is not constantly the case in the diabetes of early life, the pressure in the arteries here being often extremely low; as everyone knows also, it is common in gouty persons, and it may or may not appear to relieve the gout; very often it does nothing of the kind. It appears to me that, with all these evidences of the presence of nitrogenised waste in the blood, it can scarcely be right to insist on a diet from which non-nitrogenised matters are strictly excluded. It may be added that, as a matter of practical observation, such a diet is rarely, if ever, adhered to; patients belonging to this class are not usually such as have been accustomed to self-restraint, or such as can resist the solicitations of a newly reviving appetite; and, when it is attempted, do we not find the mouth to become foul and dry, the appetite fail, the bowels deranged, till we are compelled to relax the restrictions?

But this is not all; here, again, I have met with instances in which the heart has suffered, the long full pulse of sustained tension being replaced by the sudden and short wave in a large full artery, indicative of dilatation, corresponding signs being found on examination of the heart.

These are the cases in which cures are effected at Carlsbad, Marienbad, Vichy, and elsewhere, by the eliminating action of large quantities of water, aided, more or less, by the saline matters contained in it. We have thus therapeutic evidence that what is needed is elimination.

Now, our object is not the removal of the last trace of sugar from the urine, but the comfort, happiness, and long life of the patient. With regard to the prolongation of life, it is impossible to speak definitely; but I can say without hesitation that the patients feel better and happier under eliminant treatment, with a modified mixed diet, than under a rigorous exclusion of starchy foods. They seem, moreover, to go on living indefinitely.

The treatment I have in my mind is the administration of a blue and colocynth pill, once or twice a week, followed up by salicylates and alkalies. It may be added that, although this is not the effect chiefly aimed at, very commonly sugar is completely banished from the urine for months, and sometimes for years.

Another example of injury, gradually wrought by a remedy which affords alleviation of symptoms, is furnished by asthma. There are certain powders, of which "Himrod" seems to be the most popular, the fumes of which, when burnt, sometimes give speedy relief to the asthmatic paroxysm. We cannot wonder that sufferers should resort to this or to any other expedient which promises to cut short the frightful suffocation of the attack; and, in some cases of the purely neurotic asthma, no great harm is done. The bronchial spasm, or hyperæmia, is a trick of an excitable nervous system, and may be met by a remedy which satisfies the demand for a local stimulant or sedative; but the solanaceous drugs, of which the powders are largely composed, contain powerful alkaloids, which obtain direct access to the blood through the pulmonary capillaries, and produce their effects on the nervous and vascular systems; and, when we see the stupified mental condition and the congested face and eyes, and note the large, weak, sluggish pulse, showing paralysis of the arterial walls, it is clear that such effects cannot be indefinitely repeated with impunity. It is where there has been a catarrhal element in the asthma, that the results have seemed to me most disastrous. The right ventricle loses its tone, like the muscular coats of the arteries, and, instead of becoming hypertrophied, yields to the resistance in the pulmonary circulation, and is dilated, finally giving rise to systemic venous stasis and dropsy. In one such case, in a young and otherwise strong man, seen with Dr. Andrews, of Hampstead, I had the opportunity of verifying this dilatation of the right ventricle *post mortem*, there being no other discoverable cause of death. The asthma began in catarrh; the "Himrod," giving relief at first, was employed immoderately, the whole house reeking with it; acute dilatation of the right ventricle took place, and ultimately proved fatal.

Another affection which I have sometimes seen treated without re-

gard to the remote effects of the treatment is sick-headache, so called. This is essentially a nervous paroxysm—a nerve-storm some are pleased to call it—the liability to which is usually inherited, the attacks having a tendency to recur at more or less definite intervals, and usually becoming more frequent and severe when the general tone is low, but also being provoked by emotion, fatigue, certain winds or states of atmosphere, the catamenial period, derangements of the stomach or liver, etc. We cannot, so far as I know, abolish this liability. We can at the most reduce the frequency and severity of the attacks by keeping the general health at its best, and by maintaining a high tone of the nervous system, when exciting causes of an ordinary or average kind are successfully resisted. It is a significant fact, however, that with advancing years, and in women after the cessation of the catamenia, the sick-headaches frequently disappear; and I have observed, too, that, with exceptional intellectual vigour in old age, the liability to paroxysmal headaches has been retained. There is scarcely a week in which we are not called upon to treat these sick-headaches, and we can do much to relieve the exacerbations which have become intolerable, and have driven the patient to seek our aid; but we must acknowledge to ourselves, and I think it is only prudent to acknowledge also to our patients, the limitations of our power. We may not, perhaps, so far reconcile the sufferer to his ailment that he will be rather proud of his migraine than otherwise, as is not unfrequently the case in France, where "ma migraine" is spoken of almost in a tone of affection, or is looked upon as a sort of distinction; but he will listen to common sense, and not be too ready to anticipate the senile immunity which we may promise him. But the radical treatment of sick-headache is sometimes seriously undertaken, occasionally from the point of view of cerebral congestion, more frequently when considered as a symptom of gastro-hepatic derangement. Not very long since, a lady came to my consulting-room for advice with regard to congestion of the brain, of which she said she had had several severe attacks. She had been confined to bed in a darkened room, and had had leeches and blisters applied, and, after recovery from the acute phase, had been placed on a most rigorous diet, from which she had never venture to deviate. She was wretchedly thin and weak, and quite unequal to the care of her house, any emotion bringing on headache, which was looked upon as a threatening of renewed cerebral congestion. Inquiry satisfied me that the first attack of congestion of the brain was simply an exaggerated sick-headache, and subsequent attacks were more severe in consequence of the treatment. I prescribed careful feeding up and arsenic, which was carried out by my friend Mr. Roche Lynch; and nothing more has been heard of congestion of the brain, while the patient has been restored to health and strength.

Without discussing the relation between migraine and the liver, or the feasibility of curing sick-headache by removing hepatic derangement, let me relate a case in which this was attempted with apparent success, but with remote effects which more than counterbalanced the result.

A hard-working professional man, between 50 and 60, who had suffered from sick-headache all his life, and from constipation, was told that the one depended on the other, and that a morning dose of Friedrichshall water and a daily enema would relieve him of both. In the course of months this came to pass, but he became subject to tinnitus aurium, and to attacks of giddiness, in which he sometimes fell down, while he was no longer equal to his duties. The vertigo was attributed to overfeeding and stomach-derangement, and he was strictly dieted, but without good effect; while an ulcer of the cornea developed itself, which may or may not have been the result of innutrition. I first saw him some time after the establishment of the corneal ulcer and heard only of the giddiness—nothing of the migraine and its treatment. The giddiness was indeed trying enough to monopolise both his attention and mine—he walked unsteadily, staggered on the slightest occasion, and had been known to fall down with momentary loss of consciousness; he was anæmic but not thin, and I found very high tension in the pulse with a weak left ventricle. Looking upon the vertigo as the result of imperfect supply of blood to the brain, and this as due to the inability of the heart to cope with the resistance in the arterio-capillary network, I endeavoured to meet these indications by the eliminant action of a mild blue pill with colocynth, which I relied upon to diminish the peripheral resistance, while I gave arsenic with nux vomica and quinine, to improve the condition of the blood and the tone of the cardiac muscle. The immediate effects were most satisfactory. The feelings of insecurity and habitual giddiness were lost, and, although not free from all his symptoms, the patient felt equal to work. This, however, did not last long, for about six weeks later, after worry and strain, he again fell down unconscious. It was only after another severe attack of this kind that I discovered that, determined to retain the benefit he supposed himself to have derived from the Friedrichshall water and low diet—the loss of his headaches, he had persisted in these measures, defeating in this way the endeavour to improve his nutrition and increase his strength. From this time, under better food, there was no recurrence of the attacks, and a winter at Cannes completed the restoration to health and strength. I should, however, have more confidence in the permanence of the recovery, as I told the patient, if he had a return of original headache.

This case leads up to the last illustration I shall bring before you of present relief purchased at the expense of subsequent injury to health. This is the treatment by too careful and restricted a diet of certain forms of so-called indigestion. There are numbers of people, both men and women, but chiefly women, who begin by having pain in the epigastric region, at a variable interval after eating, pain, associated or not with flatulence. This is attributed to some particular article of diet, which is dropped with perhaps temporary suspension of the discomfort. The pain, however, soon returns, and after a number of experiments medical advice is sought. It is not uncommon for the medical man to take the same view of the case as the patient, and a scale of diet is laid down with great minuteness, adopting perhaps all the sufferer's restrictions, and adding more, which is observed with all the greater scrupulousness the more stringent its injunctions, and obeyed all the more readily because the appetite is wanting. I have known this to be done even when neuralgia was crying aloud for more and better blood to be sent to the nerve centres. There are still discomfort, and a sense of repletion after food; and the patient, considering himself to be in possession of the secret of his cure, improves upon the instructions given him, and the list of permissible foods is still further cut down, till starvation point is almost reached, or acute illness puts an end to the dieting. I have seen such documents with the pen run through one article after another of those permitted by the medical man; and a case came before me in the spring, in which the only food taken was soaked biscuit, and this, not by a hysterical girl, but by a mother who was devoting all her energies to the care of her family. The aggravation of the pain, which had from innutrition become severe gastro-enteralgia, was attributed to the obstinacy of the indigestion, and I was expected to suggest something still more simple in the way of food. It was with difficulty that the patient was convinced of the connection between her increasing suffering and her diminishing nourishment; but, this done and the requisite measures adopted, she gradually recovered. I cannot say that fatal results of such treatment have come under my notice, but I have met with many instances in which it has led to great weakness and suffering in the individual, and serious interference with the comfort and welfare of families. The energetic wife and mother has become a fretful invalid, migraine has been aggravated, other neuroses developed, in one case, the most severe anginoid paroxysms, and all capability of useful work has been lost. Sometimes an acute attack of illness supervenes, during which liberal nourishment is insisted upon, and the patient gets up comparatively well. The illness in such cases gets the credit of improvement in the general health, which is really due to the food given during its continuance and during convalescence.

A variety of this dyspepsia, of which I am speaking, is the winter-indigestion of women and weakly men. As cold and damp weather sets in, there are many persons who begin to suffer from pain after eating, and flatulence; or these symptoms may not set in till later in the winter, when the cold and short days have reduced the vital powers. Very frequently, the connection between the indigestion and the season of the year is not recognised, and the subjects of it simply look upon themselves as liable to dyspepsia, which they associate with certain articles of diet, instead of with the winter, or attribute to want of exercise and fresh air. As is well known, however, cold, and especially cold with damp, will inhibit digestion, sometimes so completely, that a hearty meal, eaten with avidity after a cold drive, will be vomited almost unchanged hours afterwards, but this takes place more frequently in a minor degree, sufficiently to give rise to discomfort, and a sense of distension, or the cold will inhibit the hepatic functions, and cause constipation.

Now in all such cases, it is not the food which disagrees with the stomach, but the stomach which disagrees with the food; and the appropriate treatment is not levelling down the nourishment to the digestive capacity of the stomach, but the bringing up of the functional energy of the stomach to the requirements of digestion, by extra food of a stimulating character, such as beef-tea, or an egg-flip between meals, by stimulants at meals, and by tonics. So with regard to winter indigestion; winter is not the time for cutting off food, when it is required in larger amount to neutralise the influence of external cold. What is wanted is protection from the depressing influence of cold, or the means of neutralising it.

It is quite true that most people eat far too much, and, again, that with regard to the stomach, as well as to all other organs and parts of the body, the principle of functional rest is of primary importance in dealing with disease; and restriction of food, and even temporary starvation is often necessary; but we must distinguish, and not starve, those who are suffering from inadequate nourishment, or employ treatment for catarrh, or ulcer, or organic disease, when nothing of the kind is present.

I had on my list a reference to the injudicious use of purgatives, and to the employment of aperients, without reference to the special cause of constipation, and without discriminating between the differing modes of action of the drug selected. I might also have extended the catalogue of injurious remote effects of remedies, but it is time to make way for the more important papers which await your attention.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY,

At the Annual Meeting of the British Medical Association held in Brighton, August, 1886.

By JOHN ERIC ERICHSEN, F.R.C.S., LL.D., F.R.S.,

Surgeon-Extraordinary to Her Majesty the Queen: Emeritus Professor of Surgery and Clinical Surgery at University College: Consulting Surgeon to University College Hospital.

THE TENDENCY OF MODERN SURGERY.

GENTLEMEN,—I wish to say a few words on the tendency of modern surgery. By the "tendency" I mean the lines that it will be most profitable to follow in the immediate future by those who seek to advance surgery beyond its present limits of undoubted excellence—not the lines that lead to success in its teaching and still less in its practice, for with that I have nothing to do, but with the advance in all that relates to the science and the art of that department of our profession. Will these lines be the same as those along which the present generation of surgeons has successfully carried it to so high a pitch of excellence, or will the very success that has attended their efforts in these directions compel a new departure? Have we in fact reached the final terminations of the old routes, and must we follow, if not new, at least less well-explored tracks if we wish to reach an uniformly higher level?

Before answering these questions, let us consider briefly the direction in which surgery has advanced since the introduction of anæsthetics, from which epoch I would roughly date the development of what is now known as "modern surgery." And here I speak only of surgery proper, not of those questions in diagnosis and pathology which are common to it with the other departments of medicine. This advance has been in three distinct lines:

First, and mainly, in the extension of the scope, and in the improvement of the methods, of operative surgery;

Secondly, in the precision both as to exactitude of performance and certainty in the result of operations;

Thirdly, in the application of those methods of scientific research by which those sciences are advanced on which practical surgery is based.

1. The extension of operative surgery since the introduction of anæsthetics is certainly one of the most remarkable phenomena, even of this mechanical age. It cannot have fallen to the lot of many of you to have been personally engaged in surgical operations in the pre-anæsthetic period, but to those who, like myself, were then well acquainted with the operating theatres and the wards of the London and of some of the continental hospitals, and who can carry our minds back to what we should now call the horrors, both as regards physical suffering and total absence of hygienic precautions, of those days, the change that has come over the whole field of operative surgery is more than startling. The scenes with which we were then familiar you happily cannot realise, but the vast extension of operative surgery may be brought home to you by a comparison between its literature then and now.

Take a work on operative surgery written immediately before the introduction of anæsthetics, and compare it with any modern treatise on the same subject, and you will at a glance appreciate this advance. Take, for instance, the last edition of the work on practical surgery by Robert Liston, published in 1846, immediately before the application of anæsthetics to surgical practice. Now, I take this work because it was the standard treatise of its day; its author, Liston, was by universal consent the boldest surgeon and the most skilful operator of his time,—a man who did more to advance operative surgery than any other in his generation. He was a man who possessed in the highest degree the attributes which Celsus claims for the perfect surgeon:—"*Manu strenuâ, stabili, nec unquam intremiscente, animo intrepidus,*" and if I must add "*misericors,*" it is in the sense of one who looked to the ultimate good of the patient, even though it had to be obtained by much physical suffering. Well, if you would compare his work on operative surgery with any manual on the same subject of the present day, you will find that operations which Liston would not have ventured to attempt, as being beyond the reach of rational surgery, are now daily performed; that organs which in his day were supposed to be for ever safe from the knife, at least in the hands of the surgeon, are now incised or extirpated as matters of ordinary practice; that, in fact, operations which Liston would, with all his boldness and skill, have shrunk from contemplating, are now successfully done by every assistant-surgeon of every hospital in the kingdom.

Let me mention some operations as illustration of what I have just said: the removal of tumours and cicatrices from the brain; the excisions of the entire tongue, the larynx, and of the thyroid body; removal of portions of the ribs for the drainage of empyema; the extirpation of the spleen, the kidney, and the uterus and its appendages of the pylorus, of portions of the intestines and vesical tumours; operations of various kinds on the liver and gall-bladder; and finally, the perfection of ovariotomy. To this long list may be added numberless minor operations, with the recapitulations of which I need not detain you; but not one of which will be found to have been practised by Liston and his contemporaries, or alluded to in their works.

These great triumphs in the past might lead to the hope that equally great ones were in store in the future to those who had the skill, the ingenuity, and the courage to follow out the same lines. But this would be a grievous error; the very success in the past has made further progress in the future difficult, if not impossible; and the surgeon of the future must be content to be the follower of his predecessor. What has once been gained can never be lost. Our standpoint is always carried forward, and from it the final limits of the field of operative surgery may now easily be reached. For skill in art is hereditary; it is transmitted from master to pupil; it becomes hereditary in that profession by which it has been created, and in which it continues to be practised.

That the final limits of surgery have been reached in the direction of all that is manipulative and mechanical there can, I venture to think, be little doubt. Within these limits there may be much of movement, of change of modification in the "technique," if I may borrow that word from art; but movement is not necessarily advance, it is often the mere restlessness engendered by dissatisfaction with established methods; change may be the outcome of mere personal vanity, or of more unworthy motives.

It sounds like a platitude to have to say to you that every artery in the human body accessible to the surgeon's scalpel has been tied, and so we have reached the final limit in operations on the arterial system. But within these limits there has been, and probably will still be, much of modification and much of change. Every artery has been tied by every kind of ligature which the ingenuity of man could possibly invent; by permanent and by temporary ligatures, by ligatures of reserve, by hemp and by silk, by narrow threads and by broad tapes, by metallic wires of all kinds, by catgut, silkworm gut, strips of deer-skin, kangaroo-tendon, and ox-aorta.

Every limb has long since been amputated up to its highest point, and so we have reached the limit of advance in this respect. But the operations have been modified by every form of incision that could be invented, circular, flap, oval, quadrilateral, and by every conceivable combination of these.

It is needless to say that every large joint has been excised. These operations also have been modified in every possible way; the excisions have been practised by incisions which were straight, curved, semilunar, oblique L-, T-, and H-shaped. The extraction of the cataractous lens has long been done successfully, but the ingenuity of ophthalmic surgeons has devised no fewer than fourteen different methods by which this single operation can be effected. Vesical calculi have been extracted from the bladder by every channel through which that organ can possibly be reached.

We have thus reached, in many of our most important operations, the final limit to which surgery can be carried. In this respect the art of surgery resembles the imitative and the plastic arts. No art can be carried beyond a certain degree of excellence, and that limit of

excellence once reached, the art can be developed no further, though individual skill may modify its details to a considerable extent. Thus, for instance, sculpture reached its final development nearly 2,000 years ago, and no sculptor of modern times can hope to excel the triumphs of the ancient Greek. The classic purity of the frieze of the Parthenon, the grace of the Venus de Medici, the airy lightness of the Apollo Belvedere, the force of action in the Laocoon, the truth of expression in the dying Gladiator, are beyond rivalry. So in architecture, the Greek temple, the Gothic cathedral, and the Saracenic palace, have served as models to all the builders of modern times. In painting we find the same early attainment of perfection of art; and the great masters of the Italian, the Flemish, and the Spanish schools of the 16th and the 17th centuries, attained a degree of excellence in their art which, if equalled, has certainly never been surpassed by their successors. And, as it is with art, so it is with certain branches of human knowledge, which are more closely allied to surgery. In descriptive anatomy we have long since reached finality, and no anatomist of the present day can hope to give his name to newly discovered ducts, or glands, or arteries, or foramina, and to go down to posterity with Eustachius, or Fallopius, Cowper, Willis, or Monro. As well might the modern traveller hope to rival the discoveries of Americus Vespucius, of Columbus, of Hendrik Hudson, or Captain Cook.

2. But another great advance that has been made in modern surgery is in its precision. Now, there are two kinds of precision; there is the precision which consists in exactitude of performance, and the precision which consists in certainty of result.

So far as exactitude of performance is concerned, there is little left to be desired in modern surgery. The rules laid down for most operations are so precise that the surgeon can hardly err, the more so as the use of anæsthetics, by rendering the patient insensible to all suffering, makes it unnecessary to operate against time, a cause of much fatality in former days; and the use of Esmarch's bandage renders the limb as bloodless as if it were in the dissecting room.

Almost absolute precision of result has also been obtained, so far at least as the wound is concerned, by the employment of strict hygienic precautions and the adoption of the antiseptic method in one or other of its various modifications. The modern surgeon has thus arrived at this point of perfection:—that he can assure his patient that there will be no suffering during the operation, for that can be guarded against by anæsthetics, and no pain afterwards, for that can be averted by antiseptic dressings. We now know that the wound itself is not painful, but that the after-pain is the direct result of its septic inflammation. If this be prevented, and if healing by direct union be obtained, as it may with almost absolute certainly under the improved antiseptic dressings, no after-pain will result during the treatment.

Precision of result, so far as recovery is concerned, is less certain; but here also the gain has been immense, and so great has the advance been, that instead of looking upon any given operator as having a definite rate of mortality, often high, we now look upon death after operation, and as the direct result of the operation, as a rare contingency, and one to be carefully inquired into. No better illustration can be given of this gradual improvement in result than in the diminished run of mortality of compound fractures and of hernia operations under modern methods, and more conspicuously still, the gradual improvement in the result of ovariotomy. This operation, once considered so formidable that its very justifiability was disputed, is now reckoned as by far the most successful of all the great operations in surgery.

3. The development of those methods of scientific research by which those sciences are advanced on which the practice of surgery is based is the next point to be considered; and here we come to ground that has been less assiduously cultivated than other fields of surgery, but which certainly may be expected to yield a fruitful and abundant harvest in the future.

It may, in truth, be doubted whether there is really a "science of surgery" in the sense that we attach to the word "science" when applied to other departments of human knowledge, the observation of natural phenomena, collections of facts governed by and subordinated to certain fixed laws. We should be more correct in saying that surgery is based on certain of the natural sciences, such as those of biology, anatomy, physics, and chemistry, and on pathology.

The art of surgery has been in no way dependent for its advance in the past on the cultivation or the progress of science. There was a highly advanced empirical art of surgery, long before the natural sciences existed as such.

Fractures were mended, dislocations reduced, wounds healed from the earliest times by empirical, but often by very wise, methods. Ambrose Paré knew nothing of the circulation of the blood; he lived 100 years before Harvey, yet he introduced that most useful of all inventions in practical surgery, the use of the ligature for the arrest of arterial hæmorrhage. But so slender was his science, that he tells us he spent two and a half years in paying court to a surgeon at Turin in order to learn the secret of the preparation of the "*huile des petits chiens*," or "oil of whelps;" and he probably attached a higher value to this farrago of boiled puppy dogs and of earthworms pickled in white wine as a cure for gunshot wounds, than to the invention of the ligature. The lithotomists of the 16th and 17th centuries cut successfully for stone till they were taught anatomy, and then a recognition of the dangers attendant on the operation shook their nerves, and they lost their skill. The greatest practical discovery of modern times, that discovery which has revolutionised surgery and conferred the greatest of all boons not only on man but on brutes,—the relief of physical suffering by the use of anæsthetics,—was accidentally made by an American dentist practising in an obscure town of New England, empirically and without any scientific aid or knowledge. In fact, the art has ever been in advance of the science, and the science has too often had to content itself with giving a rational explanation of the phenomena already determined by the art of surgery.

For what is termed "scientific surgery," is of comparatively modern origin. It could not exist when the natural sciences had no existence as such—when chemistry was in the hands of the alchemists, when astrology was a recognised element in medicine, when remedies were applied to the weapon which inflicted the wound, in order sympathetically to cure that very wound.[1] Scientific surgery was still unborn, and, in this country, we date its birth from the days of John Hunter, and have made that great biologist its sponsor by giving it the term "Hunterian."

Art is final, but science is illimitable. We have reached finality in the mere mechanical art of surgery, both as to expansion of its limits and the precision of its practice. But we are yet on the very threshold of the science of surgery. We have yet to learn much from that compound science biology, in its application to the elucidation of surgical problems, that compound science of modern creation into which physiology and histology, pathology, chemistry and physics, enter in equal proportions, which works by means of experimental research; and I venture to think that this is the line of investigation which promises the greatest and most useful results in the cultivator of surgery in the immediate future.

If we look to the brilliant results that have already followed the application of research to practical surgery, we cannot doubt that many of the unsolved problems of surgery will, in the future, have to yield up their secret to the student by research. I could refer to much that has been done in the past in this direction. But let me rather instance three of the more important modern results, in illustration of that which has already rewarded those who have pursued this line of inquiry by the light of modern science, and with the aid of modern scientific appliances.

I will instance in the first place the great importance of establishing the distinction between the septic and the infective processes in wounds; between the septic process, a fermentative change taking place in dead matter only, the products of such fermentation exciting local inflammation and suppuration, giving rise to definite constitutional disturbance when absorbed, and those infective processes in which the living tissues are involved by the development amongst them of micro-organisms of a truly parasitic character.

Then, again, the use of antiseptics in the treatment of wounds is an obvious illustration of the results of scientific research applied to practical surgery, consisting as it does in the application of those observations which have led Pasteur to a new theory of the processes of fermentation and of putrefaction. Formerly, the scientific world, under the domination of the genius of Liebig, looked upon these processes as the direct result of contact with the oxygen of the air, but Pasteur showed that this was an error, and that it is not the oxygen as a constituent of the air, but the air as the vehicle for the micro-organisms that so abundantly float in it, which was the real cause of these processes, and his observations proved that, provided the air be deprived of these organisms by filtration, heat, or chemical action, it may have free access to wounds without any deleterious results.

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[1] Sir Walter Scott gives the following graphic description of this strange practice and belief:

"She bade the gash be cleansed and bound,
No longer by his couch she stood;
But she had ta'en the broken lance,
And wash'd it from the clotted gore,
And salved the splinter o'er and o'er.
William of Deloraine, in trance,
Whene'er she turned it round and round,
Twisted as if she gall'd his wound."

Lay of the Last Minstrel, Canto 3, Stanza xxiii.

Take also that new outcome of the same line of research, brain surgery. By recent methods of investigation two most important lines of inquiry have been followed out, the first leading to the localisation of cerebral injury or disease, so that the surgeon may at once direct his operative measures to the precise spot in the brain affected. This localisation of cerebral action has done for brain surgery and the accurate diagnosis of cerebral disease what auscultation did more than half a century ago for diseases of the chest; namely, giving precision to the diagnosis, and consequently more certainty to the prognosis and the treatment.

But the methods of research that led to the definite localisation of cerebral action led to another and most important result of a very practical character, namely, the discovery that the operation of trephining, which had almost been banished from modern surgery, owing to its extreme fatality, might be rendered almost perfectly safe by the proper employment of the antiseptic method. The animals operated upon in the earlier experiments could not be treated antiseptically, as they always pulled off the dressings that were applied over the trephine opening. These nearly all died. So soon as efficient means had been devised to retain the antiseptic dressings, which was simply done by fixing them to the animal's hair by means of collodion, so that when pulled upon pain was the result, then the operation of trephining lost its fatality and recovery became the almost invariable rule.

I have thus given a few instances of what the experimental method has led to in modern practical surgery. I might multiply these instances to a great extent, were time given me.

The old lines, also, of ordinary clinical observation and of dead-house pathology have long since been followed to their final termination: we can but multiply the facts already so carefully observed, and so admirably recorded by countless observers in every civilised country. It is not by following these old lines that modern surgery will owe its advance, but it is in the application to it of those means of experimental research which are now being worked out in the biological and pathological laboratory, that we may hope to find the solution of many of those problems that have hitherto baffled the surgeon.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PUBLIC MEDICINE,

At the Annual Meeting of the British Medical Association held in Brighton, August, 1886.

By RICKARD PATRICK B. TAAFFE, M.D., F.R.C.S.Eng.,
Medical Officer of Health for Brighton: President of the Section.

VARIOUS TOPICS IN PUBLIC MEDICINE.

I am fully sensible of the compliment paid me in my having been asked to preside over so important a section; but, before proceeding farther, let me heartily join in welcoming the Association to Brighton, and more especially that portion of it which is embraced in the Section of Public Medicine; and I trust that not only the members of this Section, but those also of the other sections, will take advantage of being here to visit and inspect the various sanitary arrangements which the Sanitary Authority of Brighton has provided to meet the wants of so large and populous a town. There is the Sanatorium for the reception and isolation of cases of infectious disease; there is also a sanatorium belonging to Hove, quite ready, I believe, for use. The water-works will well repay a visit; also the sewage-works, and the intercepting sewer by means of which the sewage of Brighton and Hove is carried four miles beyond the town before it is discharged into the sea. I hope sincerely that the visitors will have an enjoyable time during their stay, and that profit and pleasure may be the result.

In this address I intend to bring to your notice the following subjects:—The Abatement of Smoke from Private Chimneys; The Decrease of the Death-Rate in 1871 to 1880; The Mortality of Infants under One Year of Age, from Diarrhœa caused by Improper Feeding. I shall then offer a few remarks on the milk-scarlatina at Hendon, in Middlesex, concluding with a few general observations.

It is an old saying, that where there is smoke there is always fire; but I shall assume that the converse, namely, that where there is fire there must necessarily be smoke, is not true. I shall therefore, in commencing, take as my first subject the Abatement of Smoke; and so take the opportunity of beginning with, instead of, as many things do, ending in smoke.

Smoke-Abatement and Purification of Gas.

A great deal has been done to procure an abatement in the nuisance caused by smoke from chimneys, by putting in force the clause relating thereto in the Public Health Act of 1875. But the clause only applies to the chimneys of factories, breweries, bakehouses, etc., and not to those of private houses. We owe a debt of gratitude to Mr. Ernest Hart for the efforts he has made in connection with the recent Smoke-Abatement Exhibition. As an outcome of that exhibition, our attention ought now to be directed, not only to the chimneys of factories, breweries, etc., but also to the chimneys of private houses. Imagine London with an atmosphere free from smoke, rivalling, in that respect, continental cities; imagine Brighton, although comparatively free, being absolutely free, from smoke; the same remark applies to other towns and health-resorts. Every particle of smoke that ascends into the air is deposited again, in the form of soot, into the air we breathe, and some of it finds its way into our houses and into our lungs; the black sputum expectorated every morning by persons living in London is familiar to Londoners and visitors staying there for any length of time; and, although it has been said by a celebrated person "that there was no such thing as dirt, but only matter in the wrong place," it cannot be doubted that the deposition of soot in our air-passages is not the deposition of matter in the right place, and must of necessity cause irritation to the mucous membranes of the bronchial tubes.

Every housekeeper would gladly be rid of the great drawback to cleanliness, namely, the blacks which find their way into our houses through every cranny. Dr. Angus Smith, on the Air of Towns, 1858, says: "The smoke of large towns is guilty of an offence to the eye, and through the eye it offends us both intellectually and æsthetically; in other words, the darkness and gloominess react on the character, especially of those not accustomed to the place, in such a manner as to make them distinctly conscious of a change. Those accustomed to it are not conscious of the effects; nevertheless, it acts upon them in such a way as to destroy some of the finer instincts of perception of natural beauty. About 1 per cent. weight of the coal used is sent off in the condition of carbon or tarry matter. This will be equal to 60 tons a day for Manchester," or 21,900 tons for 365 such days. That was in 1858. No doubt, the use of smoke-consuming furnaces has improved that state of things very greatly. Now, if all the smoke were consumed in our fires, what a large gain we should have both in a health point of view, and also in economy of fuel.

The remedy has been found in the construction of smoke-consuming grates, notably the underfed, such as were shown in the recent Smoke-Abatement Exhibition. The employment of these grates in private houses might be made compulsory; and this could be done gradually by compelling occupiers to replace one of the old grates by one of the new every year, one for each year of occupation. By this means, in twenty or thirty years time, except of course in very large houses, the old-fashioned wasteful grates would be replaced by the new or smoke-consuming grates.

The money saved by economy of fuel would soon cover the expense incurred by the changes; and the new grates might be held to be fixtures, to be transferred from tenant to tenant at a valuation. It is worthy of note that the fires in the "underfed" grates are always bright at the top, which adds greatly to their cheerful appearance, and to the amount of heat given out.

It is to be hoped that the day is not far distant when we shall be able to have our rooms lighted by the electric light, with all the advantages of breathing air free from the deleterious products of combustion of gas, and having the walls and ceilings of our rooms free from the blackness of smoke; but, until this happy time arrives, we ought to take advantage of any means we can command to remedy, as far as possible, the evils arising from the burning of gas in our homes.

Mr. W. J. Cooper has invented a method for purifying gas. It is done by using limed coal instead of pure coal in the process of manufacture, in the proportion of 2½ parts of slaked lime and 100 parts of coal. The advantage of using limed coal, according to Professor Wanklyn, is as follows. "The coal yields a larger fraction of its nitrogen, in the form of ammonia; it also yields a slightly larger fraction of its carbon, in the form of a volatile compound. It gives a very much smaller portion of its sulphur in volatile forms; and the non-volatile residuum, the coke, is found to be considerably improved in quality. In the distillation of the coal, the lime forms, with the sulphur in it, sulphuret of calcium, which becomes so incorporated with the coke as to be quite inseparable from it; and, when burnt, this sulphuret of calcium, being in the presence of an excess of lime, remains in the ash, thus preventing the sulphur which it contains being given off as sulphurous acid, as is the case with coke made

from coal only. Small as is the addition of lime to the coals, and its after appearance in the coke, it has the effect of promoting combustion, as it acts as a conductor of oxygen, and causes the coke to burn more brightly and cheerfully—in fact, considerably better than ordinary gas-coke ever did or ever can." The advantage of having gas deprived of volatile sulphur-compounds cannot be overestimated, and I hope the Legislature will make the process compulsory in all gas-works. It is being successfully employed at Tunbridge Wells.

I may mention the inventions of Benham and Wenham for carrying off the products of gas from rooms, which doubtless will be further improved, and the difficulty attending the action of horizontal flues overcome.

Decrease in the Death-Rate, 1871-80.

Passing to the next subject, I shall touch upon the striking decrease in the death-rate of 1871-80. The Registrar-General, in the supplement to the Forty-fifth Annual Report, has shown that the mean annual death-rate in England and Wales in the decennium 1871-80 was 21.7, which was lower than in any preceding decennium since civil registration began; the death-rate, although varying from year to year, practically remained stationary during the thirty-three years 1838-70, averaging 22.4.

Mr. Noel Humphreys has pointed out "that the mean death-rate of the first two years of the current decade was so low as 19.3."

Now taking the mean rate of 1883, 19.5; 1884, 19.6; 1885, 19.0; we see that 19.3 is maintained as the average mean death-rate for the first half of the current decade; this shews a decrease (which it is hoped will be continued in the second half) of 1.9, and of 3.1 from the mean rate of 1838-70.

In the Registrar-General's supplement already quoted, Dr. Ogle says: "There can be no reasonable doubt that the very marked and progressive decrease in the general death-rate is due to the effects of the ever-increasing efforts to improve the sanitary condition of the country; and that sanitation should have more distinctly affected the mortality of the young than the old is only what might be naturally anticipated, for it is against noxious influences to which the young are more particularly sensitive that the weapons of sanitary reform have been chiefly directed."

Dr. Ogle further says:—"That sanitary administration can do much to lower the mortality of a given place, is indisputable. The very great general decline in the death-rates since the commencement of active efforts to ensure more efficient sanitation is sufficient evidence of this; as also is the further notable fact, that the decline in the death-rate has been greatest in those parts in which the sanitary administration has been most active, that is to say, it has been greater in the urban than in the rural districts." Again, "The old English life-table, based on the mortality of 1838-54, gave the mean after-life time, or expectation of life after birth, for males 39.91, and for females 41.85; while a life-table which has been based on the mortality of 1871-80 gives the expectation of life for males at 41.35, and for females 44.62, that is, an increase of 1.44 for males, and 2.77 for females.

"By the old table one half of every million males born would be dead before the end of their 45th year; by the new table half would not have died till after the end of the 47th year; that is, an increase of more than two years.

"By the old life-table, half of every million females would have died before the end of the 47th year, whereas by the new life-table half would still be surviving at the end of the 52nd year, or an increase of more than five years." Good news this for the ladies!

"The mean life time of males is by the new life-table 41.35, whereas by the old it was 39.91 years; according therefore to the new table, a million males would live 1,439,139 years more than would be the case according to the old table. Similarly, a million females would live 2,777,584 additional years."

"The mean annual number of births in England and Wales in 1871-80 was 858,878, and of these births, 437,492 were of males, and 421,386 of females. The additional years lived by this annual number of children, if subject to the reduced rates in the new Life Table, would be for males 629,612, for females 1,170,435, or for persons including both sexes, 1,800,047."

Mr. Chadwick says: "The changes in the death-rate have given to the community an annual addition of 1,800,047 years of life shared among its members; and allowing that the changes in the death-rates are the direct consequence of sanitary interference, we must regard this addition of nearly two million years as an annual income derived from the money invested in sanitation.

"That, in accordance with the experience of the Friendly Societies, for every adult death of the wage classes, there are at the least twenty days of bed-lying sickness, involving the loss of wages during the time; and that, according to Sir James Paget, the insurance of those classes against excessive sickness and premature mortality amount to no less than £25,000,000 annually."

The borough of Brighton has shared in the general reduction of the death-rate. The average death-rate in the two decades 1851-60, 1861-70, was 22.0; in the decade 1871-80 it was 20.2; in the decade 1874-83 it was 20.0; in that of 1875-84 it was 19.8; and in that of 1876-85 it was 19.3, showing a decline in the death-rate of the municipal borough of 2.7 per 1,000, without making sufficient allowance for visitors in the population.

In the year 1885, in the Parliamentary Borough of Brighton and Hove, the annual death-rate was 16.4; and allowing for an addition to the population of an average of 10,000 visitors (a moderate addition), the death-rate was only 15.2 per 1,000; this latter being the real death-rate per 1,000 of Brighton for 1885. The death-rate for the year 1885 was 13.1, 14.1, 12.9, 12.5, in the Palace, Kemp Town, Preston, and Hove districts respectively, of the parliamentary borough, no sufficient allowance being made for visitors in the population, which allowance would of course have made the rates lower.

The important conclusions arrived at by the Registrar-General must be my excuse for quoting so largely from his report;—conclusions which must prove most satisfactory to the sanitary authorities of the kingdom, and to all persons engaged in practical sanitation, and which doubtless will serve as an incentive to continued efforts on their part.

The Registrar-General's Weekly Return.

Before leaving the subject of vital statistics, I should like to offer a few remarks on the weekly reports of the Registrar-General. In 1881, I wrote to Dr. Ogle, the Superintendent of the Statistical Department of the Registrar-General's Office, and pointed out that the introductory remarks, on the first page of the weekly returns, were vague in stating that the highest mortality from scarlet fever had shown itself in Hull, Nottingham, and Brighton, the latter being a very different kind of town from the two former; and that, unless the *number* and the rate per 1,000 were given, the public would take an exaggerated view of the mortality, and imagine it to be much greater than it really was. After some correspondence, Dr. Ogle kindly informed me that a portion of my suggestion would in future be adopted in the introductory remarks of the weekly reports, but that he did not see his way to giving the number of deaths without also giving the population, and that to do so would be cumbersome, space being limited.

For one week, in the autumn of 1881, the death-rate from fever in Brighton was announced as 1 per 1,000, in the Registrar-General's weekly return. A few days afterwards, I happened to meet a Doctor of Divinity of Cambridge, who, to my astonishment, expressed himself much concerned at so high a rate, and on inquiring further, I found that he had inferred that a rate of 1 per 1,000 meant 107 deaths reckoned upon the gross population of that year, 107,934. I explained to him that the Registrar-General took a weekly population as a constant by means of which he calculated the annual death-rate for any one week, and that this constant was obtained by dividing the gross population by 52.17747 (the correct number of days in a natural year being 365.24226), thus getting a weekly population; and by multiplying the number of deaths by 1,000, and dividing by the constant or weekly population, the Registrar-General obtained the annual death-rate. In the case mentioned, the death-rate of 1 per 1,000 was equivalent to 2 deaths, and not, as the Doctor of Divinity supposed, 107 deaths; the next day I met a Fellow and gold medalist of the Royal Society, and I found that his reading was the same as that of the Doctor of Divinity. I was somewhat startled at this similarity of opinion, and I inquired of medical men whom I met from time to time, and ascertained that they also had the same idea as the Doctor of Divinity and the Fellow of the Royal Society. It so happened that at this time we had a Health Congress assembled in Brighton, and I had an opportunity of speaking to several medical officers of health on the subject; I was told by them all that their experience went to show that the death-rates were misunderstood by the public. I firmly believe that the general death-rate is as carelessly read as the "fever" death-rate, and the same hazy notions are entertained with regard to it; for whenever the rate has been as high as, say 23 or 25 per 1,000, in a week, I have received numerous and anxious enquiries and letters on the subject; but, when the death-rate has been unusually low—and it has been as low as 9.0 per 1,000 in Brighton in the week ending June 12th of the current year, no one appeared to see it or take the least notice; and I draw the inference that the weekly reports, which should be read one week with another for several weeks, are misunderstood. The value or significance of an annual death-rate may depend on the composition of that rate; as to whether it is principally made up of

deaths of old people, or again, as to whether it is principally or largely made up of deaths from the zymotic diseases. A death-rate of 26 or 30 per 1,000, if the deaths be principally from old age, would be a better rate than one of 13 or 15, if made up principally of the most deadly diseases of the zymotic class.

In the weekly reports of the Registrar-General, it is only the introductory remarks on the front page that are copied by the newspapers. I do not say that the reports mislead, but I do say that they are misunderstood. The public do not clearly understand that the so-called rates are not actual rates at all, in the same sense as the annual or mean death-rates; they do not realise that these figures merely represent what the annual rate in proportion to the population would be, if the number of deaths should prove to be the same each week throughout the whole year.

Recently, the Registrar-General, in the introductory page, in addition to giving the death-rate for the week, has also given in parallel columns the rates of the three previous weeks; this is a great improvement, inasmuch as it substitutes four observations for one, as previously given. I would respectfully suggest the following arrangement as being more easily understood, giving four columns, as at present used, the space being the same.

Towns.	Population.	Week ending July 3rd.		Thirteen Weeks' Average.
		No. of Deaths.	Annual Rate.	

The above plan, if adopted, would give the average of thirteen observations instead of four, and the number of deaths could be given in that part of the weekly report (front page), in which notice is taken of the towns which have the highest zymotic death-rates; the population being given in the second column, meets the objection of Dr. Ogle to giving the number of deaths without giving the population. I would also suggest that a short explanation might be given, in the introductory page, of the method by which the weekly annual death-rates are obtained. In an educational point of view alone this is desirable.

It having been shown by the Registrar-General that the decrease in the death-rate, 1871 to 1880, was principally due to the decrease in the mortality of the young; it appropriately follows that I should take as my next subject one of the principal causes of the mortality of very young children, and point out how the already decreased death-rate of the young may be still further diminished.

Infantile Diarrhœa.

Of 582 deaths from diarrhœa at all ages, recorded by me in seven years, 526 occurred among children under five years of age; and, of the latter, 433 were of children under one year. The deaths occurred principally during the months of August and September; in two of the years, there were deaths in July, 1883-1884. Of 441 children who died from diarrhœa, as regards whom (by special inquiries) the method of feeding was ascertained, 49 only were nursed by the mother, and died at the ages in the following table.

Under 3 Months.	3 and under 8 Months.	8 and under 10 Months.	10 and under 12 Months.	13 Months.	14 Months.	15 Months.	16 Months.	17 Months.	2 Years.
15	18	3	5	1	3	1	1	1	1

Of 392 children fed more or less artificially, who died under one year, the ages at death were as follows:

Under 3 Months.	3 and under 8 Months.	8 and under 10 Months.	10 and under 12 Months.
126	207	39	20

Of these, 260 were fed by milk from the bottle (69 on condensed milk), 36 were nursed by the mother and fed also upon artificial food, 21 were fed entirely on artificial food, 7 were fed on condensed milk only, 62 were fed by milk from the bottle and also by artificial food, 4 were nursed by the mother and fed also from the bottle, 1 was fed on condensed milk and bread sop, and 1 on milk and oatmeal. The following were the artificial foods used: arrowroot, corn-flour, baked flour, Ridge's food, Mellin's food, tea-cakes, tops and bottoms, bread sop, beef-tea, oatmeal.

From these facts it may be deduced that improper feeding and improper nursing, even when the mothers nurse their children, are unmistakably among the principal causes of infantile mortality from diarrhœa. Not only is the kind of food injurious, but I know, from my own experience in the out-patients' room of the Royal Alexandra Hospital for Children in Brighton, that most, if not all, infants have food given to them from hour to hour. If one asked a mother how often she nursed her baby, the answer was almost always, "Whenever it wants it;" and that meant, in most cases, whenever it cried. How is it possible that infants can be reared by such improper feeding? Take an adult, and give him a meal every hour, and watch the effect. He will soon suffer from derangement of the stomach and bowels; indeed, I scarcely think that he will bear such gross feeding for more than a few days. How much more, then, will this mode of feeding prove injurious to infants, whose digestive system is far more delicate?

The statistics of this account of infantile diarrhœa shows that the mortality from diarrhœa has been chiefly among children under 1 (433), and between 1 and 5 years of age (93), leaving only 56 deaths from diarrhœa in persons over five years of age. I am led to believe that the results of the inquiries tend to prove that even infants at the breast may be improperly fed by a too frequent supply; indeed, it is the prevailing custom among monthly nurses, whenever an infant cries, at once to apply it to the breast, or feed it on artificial food—a practice that cannot be too strongly condemned, for by it the child's digestive functions are being constantly employed, with consequent irritation, derangement, and diarrhœa, aided by an impoverished and debilitated condition of the mother, caused by the constant drain.

A great majority of these deaths of infants under one year occurred in poor and more densely populated neighbourhoods. I believe that diarrhœa among the children of the poor is much more frequent and fatal than among the children of the rich and well-to-do, for several reasons. 1. A great number of the labouring classes bring up their children by hand, from the first, in order to allow the mother greater facilities for labour and domestic duties. 2. Due care is not always taken as to the cleanliness of the bottle, or the quantity of the artificial food, which, under these circumstances, in hot weather, is apt to undergo fermentation. 3. Lastly, medical advice is not so easily obtained by the poor as by the rich. No infant at the breast, or who is being brought up by hand, should be fed more than once in three hours during the day, and twice in the night; after four months old, every four hours in the day, and twice in the night. If brought up by hand, the food should consist of only milk-and-water, to be sucked from a bottle. For the first day or two, the *proportions* should be milk one-fourth, water three-fourths; after the first day or two, and up to two months old, milk one-third, water two-thirds; from two to four months old, milk and water in equal parts; from four to seven months old, milk two-thirds, water one-third. A dessert-teaspoonful of sugar of milk may be added to each bottleful. No child under seven months old should ever be fed by the spoon, or receive farinaceous food of any kind. During the months of July, August, and September, it is advisable that the milk used should be boiled. It is safer to have milk boiled at all seasons.

But this improper feeding does not give the whole explanation of the cause of infantile diarrhœa, because the improper feeding, doubtless, takes place throughout the year; but it is principally in the diarrhœa summer quarter—or July, August, and September—that we get epidemics of the disease. Why is this? The only explanation I can at present offer is, that the stomach and bowels are in a state of subacute congestion (or irritation) for months previously, and the climacteric or other epidemic influences now act secondarily in determining the advent of diarrhœa as an epidemic. Probably, when diarrhœa is once started among infants, it may spread by infection. An additional cause is that the poor do not, as a rule, pay much attention to ventilation, so that the air becomes foul and polluted. It is a matter of observation, well recorded, that a long dry summer is a factor in the production of diarrhœa; doubtless owing to foul emanations, which will happen, more or less, even in the best drained places. That warm temperature is a great factor we are quite certain, for the epidemics begin to lessen in severity as the weather becomes cooler, and finally cease, as a rule, in October.

The subject to which I shall now refer is one of great moment, namely, milk scarlatina.

Milk Scarlatina.

Mr. Power, one of the Inspectors of the Local Government Board, and Dr. Klein, have reported quite recently on an outbreak of scarlet fever spread through the medium of milk in London, and at Hendon, in Middlesex; and the conclusion they have come to is somewhat startling, namely, that cows at the dairy farm were affected by scarlet fever as a constitutional disease, with local symptoms consisting of vesication and ulceration of the udders and teats; that the disease was communicable to the cow from the human subject, I presume by inoculation, and from cow to cow by infection; that the milk in itself was not infected, but became so in the process of milking, from infective matter from the ulcers on the udders and teats.

The inquiry is to be continued by the Local Government Board, and the attention of sanitarians and pathologists will be anxiously directed to the results: 1, as to whether scarlet fever can exist in the cow, without having in the first place been communicated from the human subject; 2, whether the hands of milkers can become infected by contact with the ulcers on the udders or teats, as in the case of cow-pox (this does not appear to have happened in the Hendon cases, so far as the report goes); 3, if the cows are affected constitutionally and locally, whether the disease is communicable to the human subject only by the milk becoming infected in the process of milking. In the meantime, it is most advisable that all milk should be boiled.

If medical officers of health keep an accurate record of the milk-supply in connection with the existence of infectious disease in families, as I have myself done for years, I scarcely think such an occurrence as that reported at Hendon could very well escape observation and detection.

Conclusion.

I may say in conclusion that in 1872 a Public Health Act became law, which enacted that the country should be divided into urban and rural sanitary districts, and that medical officers of health should be appointed; three years afterwards followed the Public Act of 1875. From 1872 to the present time, a period of fourteen years, the progress made in the education of the public on sanitary matters has been of the most satisfactory nature,—indeed, almost marvellous, considering the great difficulties that stood in the way, namely, the unsanitary ideas which had been existing for generations, and which were handed down as a sort of unsanitary legacy, so to say; old-fashioned prejudices had to be combated. The notion that every man's house was his castle had to be dispelled. But, of course, the greatest difficulty was, and still is, though greatly lessened, the great and very natural dislike on the part of owners of property to be put to expense; but I am bound to say that, during twelve years' experience, I have found a large number of owners of property perfectly open to reason and moral suasion, and only too anxious to do all in their power to further sanitation; and I believe, as time goes on, and the benefits of having healthy houses and healthy surroundings become better known and understood than they are even at present, the difficulties will become gradually less and less. On the other hand, the obstinate and recalcitrant have to be dealt with; but the process is too slow and tedious. A notice has to be served, of a warning character; if not attended to, an order has to be made by the sanitary committee; this order has to be sanctioned by the sanitary authority. A certain time is given in which to do the work or abate the nuisance; if not done in the time specified, a summons is issued, and an order is made by the magistrates that the work shall be done within a certain time. All this takes, it may be, weeks before a nuisance is abated. The provincial magistrates, under the Public Health Act of 1875, have power to inflict a fine at the time the summons is heard. There ought to be a quicker process. Dr. Dudfield, President of the Society of Medical Officers of Health, in his opening address in 1884, called special attention to the tedious method at present existing for the abatement of nuisances. The case of occupiers is a very different one from that of owners. An occupier having a nuisance dangerous to health on his premises, such nuisance being due either to his own act, connivance, or negligence, should be liable to be at once summoned before a magistrate without any notice whatever.

It is quite time that the Public Health Act of 1875 should be amended in the above and other respects, such as relegating the registration of births and deaths in the various districts to the sanitary departments of those districts. Also, provision should be made against keeping dead bodies so long before interment, especially in warm weather. In the case of deaths from infectious disease, the process of disinfection is delayed by the deferred burial, with manifest risk to the inmates of the houses.

We in the provinces naturally look to London to take the lead in all matters belonging to sanitation or in connection with the sanitary service. London is a great and vast city; it is the seat of the Government of the United Kingdom; in it are located the Local Government Board and its staff of sanitary inspectors, the Asylums Board, Board of Works, Privy Council, the University of London, the great hospitals, the Colleges of Physicians and Surgeons, and last, but not least, the powerful London medical press. When the local government of London is placed on a uniform basis or plan, and thoroughly reorganised, from the example of London we shall look for great things in the extension of the science and practice of sanitation; and we may hope that State Medicine or Public Health will ere long attain the position to which it is so justly entitled.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PSYCHOLOGY.

At the Annual Meeting of the British Medical Association, held in Brighton, August, 1886.

By T. S. CLOUSTON, M.D., F.R.C.P.E.,

Physician-Superintendent Royal Edinburgh Asylum; Lecturer on Mental Diseases, Edinburgh University; President of the Section.

THE RELATIONSHIP OF BODILY AND MENTAL PAIN.

It would be possible to say a great deal regarding the relationship of bodily and psychical pain, and the meaning of this relationship from the physiological and psychological points of view. Even from the metaphysical point of view, a most interesting discussion as to their connection is possible. The whole of the questions regarding peripheral sensory apparatus, centripetal nerve-conduction, basal ganglionic receptive functions, and cortical perceptive action, would come in. The distinction between the nerve-fibres of common tactile and thermal sensation and those of pain; the difference between pain and hyperæsthesia; the connection between sensation and cortical reflex action; the connection between cortical inhibition and pain; the subjective differences between the feelings of organic well-being and ill-being; the causes of the differences between painful and pleasurable emotion, and between painful and pleasurable recollection; the necessary association of mental pain with certain mental images and of mental pleasure with others—all these questions would have to be taken into account in such a discussion. And further, questions as to perception and memory, as to association of ideas and volition, as to the entity that feels any sort of sensation or pain, bodily or mental, and as to consciousness, would have to be touched on in any really exhaustive examination of the relationship of bodily and mental pain. I do not propose to enter on any such wide discussion of this subject. My aim will rather be to be clinical and practical in what I am to say, and, if possible, to select and draw attention to certain facts in this matter, that have come under my notice as a physician practising chiefly in mental diseases, which may be suggestive of similar and wider clinical experiences to my brethren in the same department, and to others who see more of bodily and less of mental pain than we do.

My experience has been a peculiar one, if a very close connection between bodily and mental pain in many cases of disease be not a certain clinical fact. And if this is so, my inference cannot be wrong that it is a fact of immense importance, which has not had sufficient attention directed to it.

I shall not attempt to define what bodily pain is. I shall assume that the term covers and includes all subjective bodily sensations, that are consciously disagreeable. As I shall have occasion to point out, some of the kinds of bodily pain that have a close association with mental pain, are not of the keen typical sort, such as facial neuralgia or the pain of burning, or cutting, or bruising the skin where most sensitive. All kinds of perverted sensations of the unpleasant sort are clinically associated with mental pain, in cases of melancholia. But I shall shortly define the sense in which I shall use the term psychical or mental pain. As yet, the terminology of mental symptoms in disease has been apt to be, with most writers, inconstant and wanting in scientific accuracy. If a clinical writer wished to express the fact that a patient suffering from an exhaustive chronic brain-disease was impaired in his higher volitional and original energising power—the very highest faculty of a human being—he was often described as "lazy," "purposeless," "lacking in energy," or "void of ambition," or in some other such vague way as

left the impression that the man was to blame, and could help his state if he liked. If a man's brain cortex have, through atrophy or apoplexy, become slow of response to outward impressions, its higher reflexes and its sensitiveness being dulled, he is commonly described as being simply "stupid." Medico-psychologists have not adopted the terms of the psychologists, nor those of the metaphysicians, and they have not yet invented terms of their own to express all the varying shades of disturbed mentalisation that come before them. No doubt the attempt has been made by some of them to do so, and we have resulting a formidable array of "manias," and "phobias," and "orexias." But only a limited number of these terms has come into general use, and I have little to say in favour of their general acceptance. But for the general use of the term, "mental pain," I am prepared to plead strongly. It seems to me that it is more true as well as more scientific than "mental depression," which is commonly understood, like melancholia, to describe the whole disease under which the patient labours, rather than one prominent symptom of it like "mental pain." When a man has suffered misfortune, or thinks he has, when he fears disaster, real or imaginary, when he sadly regrets and repents past bad conduct that has occurred or seems to have, he is in all these cases in a state of emotional distress, of painful feeling, and he suffers mental pain. When, without assignable cause, he has lost the normal healthy sense of organic well-being, and has acquired that of organic ill-being, he suffers mental pain. When with no mental, moral, or organic cause known to himself, or even imagined by himself, he is unhappy, knowing intellectually, if he be instructed, that the only possible cause for this must be a dynamical disturbance in the bodily organ of the mental feelings: then the term mental pain expresses the fact, and implies no theory of causation. Mental pain may be the chief symptom of a nervous disease, as neuralgia often is of a bodily one; or it may be a physiological danger signal calling for reflex and volitional action against what is inimical to the organism; or what is related to it: as when it results from the fear of injury in rushing down a steep hill too rapidly, or from the sight of a sick child. This kind of mental pain is simply analogous to the bodily pain of a cut or a bruise, or the organic discomfort of breathing a foul gas, that has the effect of making us remove the painful part from what is cutting or bruising it, or acts as a motive to run away from the bad air. The expression mental pain covers the whole ground of normal and abnormal psychological conditions, where there is a mental feeling of distress and ill-being. Where to consciousness there is unhappiness, there we have mental pain. It may exist in any degree, it may assume most various forms, its duration may be a moment or a lifetime. It may result from fear, or sorrow, or jealousy, or regret, or repentance, or foreboding. It may be connected with disturbance of the social instincts, or of the moral or religious sentiments, or of the love of life, or of the multiform propensities and emotions that circle round the function of the reproduction of the species.

As to the essential nature of pain bodily and mental, we can as yet only speculate. It is difficult to conceive it in the abstract without first conceiving the personality, the *ego* of the metaphysician, which feels. If each earthworm *feels* the foot that treads it, it is just as necessary mentally to summon up the earthworm *ego* when we try to realise what has happened, as it is to conceive the human personality, when a man feels the despair of a lost soul. The efforts on the part of physiologists to discover and follow the physical process that takes place in the nerves of sensation, in the cord and basal ganglia in which these nerves end, and in the cerebral cortex where, all are now agreed, the final seat of feeling, bodily and mental, exists, have led to many new facts being discovered, to much speculation, and to the use of many descriptive phrases that seem to get us nearer the root of the matter. Anstie's "perturbation of nerve-function," and "dynamic disturbance," Ferrier's "physiological discord," Bain's "abatement of some or all of the vital functions," are all attempts, legitimate enough, to enable us to conceive the nature and the physical accompaniments of bodily pain.

Meynert has devoted as close attention as any living investigator to brain-functions, and he has succeeded in making intelligible many complicated reflex cerebral acts that before could not be explained. By means, first, of a demonstration of a suitable anatomical architecture in the brain, of conducting fibres in every direction, and of receptive, co-ordinating, irradiating, and inhibitory nerve-ganglia, then by a careful consideration of the brain-functions,—motor, trophic, sensory, inhibitory, and mental,—as subserved by that architecture, and these ganglia, and their vascular apparatus, by collating the facts of disease and of experiment observed by himself and others, he has in his somewhat involved and difficult way made many nervous and mental facts definitely thinkable, which were before his time quite beyond the region of even intelligible hypothesis. A patient study of Meynert's work on the brain well repays the student of mental disease, and will bear fruit to the practitioner in the enlarged and more definite views he will bring to his practical work. A medical visit to a number of insane patients is like a journey through an untrodden land. One is surrounded by the unknown. The difference between one traveller and another is that one observes, notes, and infers, while another, bewildered by the fact that so much is strange and inexplicable, is simply confused and dulled by it.

Now, the perusal of Meynert's work tends to make us all observant of mental facts, anxious to explain them, and dissatisfied with our present state of ignorance. He is highly suggestive, and begets in us the scientific inquiring state of mind in regard to our daily work. His hypotheses, and his keen efforts to get nearer the mysteries of brain and mind, are stimulating in the highest degree. That is, no doubt, what we all want. He boldly faces the facts of memory, reasoning, volition, and pain, and attempts to explain them on physiological principles. With many modern physiologists, he attributes certain phases of memory to the entire organism, independently of the brain altogether. But, to explain the memory in the ordinary sense, he tries to demonstrate the fitness of the cerebral cortex, with its milliard nerve-cells, to be its seat and vehicle, by means originally of "registered images" from the senses; and he concludes that the number of the cortical cells in each brain fixes the limits of memory for its owner. He calls in his "association-fibres" in the brain to connect the registered images together, and so to form an association of ideas. When one such registered image in the cortex is revived into activity, we have a recollection; and when, by means of fibres associating it with another image, that other image is also revived and associated in our consciousness with the former, we have an idea of an objective something with necessary complicated qualities, and so an inference or act of reasoning. I cannot do better than quote his illustration. "Let us imagine the cortex to be a *tabula rasa*; and let us present to it a phenomenon which, perceived by two sensory surfaces, would, through the mediation of the corona radiata, stimulate two distinct areas of the cerebral cortex. Let the phenomenon in question be a lamb, and let us suppose that it emits a bleating sound. The sight of the lamb will stimulate cells of the visual area, and the bleating sound will arouse cells in the auditory sphere. The lamb disappears, and the two kinds of images which it caused to be registered will grow fainter. If, in the course of time, one of these registered images be revived through the bleating, say, of the lamb hidden in a stable, then not only the auditory, but the visual image of the lamb, will be reproduced. In the cortex, an inference is made from the sound to the body that gave forth the sound.....Inferring one attribute of a phenomenon from the presentation of another attribute constitutes an induction."[1] He shows by experiment how such memory and such power of induction can be destroyed by destroying their physical bases in the cortex, as when the centre of the visual area of a dog's brain is destroyed, and thereafter the animal does not connect the sight of a whip with punishment at all, though he sees the whip before him. In such ways, he renders memory and power of simple induction thinkable as brain-functions, and conformable with brain-mechanism.

His theory of volition I confess I cannot follow, and it is, therefore, not made more thinkable by me. When Meynert claims credit for being the first "to insist that the processes of innervation from the hemispheres, which constitute what we term volitional acts, are nothing more than the perception or memory of the sensations of innervation," he states a proposition which conveys no definite meaning to my mind.

It was necessary for me thus to refer to Meynert's theories of the co-relation of the higher mental acts with brain mechanism and brain function, in order to follow his theory of how pain is caused and felt. He, like almost all modern physiologists, does not admit any theory of pain or of sensation, as being necessary to explain the purposive movements of repulsion in the decapitated frog, when the leg is pinched. He also holds that the still more complicated movements and other phenomena that result from cutaneous irritation, when the brain-ganglia are intact, the cortex only being removed, are all explicable without any sensation of pain. He homologates Schiff's experimental discovery, that, when the conduction through the grey substance of the cortex has been impaired by injury and disease, cutaneous irritation produces merely tactile and thermal sensations, but no sensation of pain, causing a condition of analgesia. We may have an imperfect brain-cortex in fact, which can feel, but can-

[1] This, and the succeeding passages, are quoted from *Psychiatry; a Clinical Treatise on Diseases of the Fore-Brain, based upon a Study of its Structure, Functions, and Nutrition.* By Theodore Meynert, M.D. Translated by B. Sachs M.D

not feel pain, by reason of that imperfection He says, moreover, that the proved slowness of nerve-conduction through the grey substance of the brain, as compared with its conduction through a peripheral nerve (twelve times as long, according to Helmholtz), is owing to a "resistance" to such conduction of impressions in the cortex. He maintains that, "with an increase in the number of muscular groups excited to action by a reflex irritant, an increase in the resistance to nerve-conduction goes hand-in-hand." The "irradiation of any irritation," he thinks, "has a great influence upon the character of the pain-sensation from said irritation." "The sensation of pain, therefore," he says, "is first attended both by a reflex movement, and by an inhibition of nerve-conduction in the grey substance of the spinal cord. It is evident that that inhibition resulting from resistances introduced in nerve-tracts accompanies the simplest reflex processes, while consciousness in the main recognises the inhibition as pain." In short, Meynert's theory is that a slight momentary prick causes little pain, because it only excites in the cord a slight and limited reflex movement that takes place at once, or is at once easily inhibited by the physiological resistance of the grey matter, not tending to spread or "irradiate" through the grey substance of the cord into extensive reflex movements all over the body; while an extensive burn of the skin would cause the most tremendous and long-continued reflex movements on both sides of the body, if not "inhibited" in the grey matter, this process of intense inhibition being recognised by consciousness as intense pain caused by the burn.

Then he brings in the reflex effects of peripheral irritation on the circular apparatus of the blood-vessels, "the centres for which are located in the spinal grey matter. The extent and intensity of this influence vary directly with the amount of the irradiation of the original stimulant impulse." The arteries of the spinal cord contract reflexly in this way, and also the carotids and all their branches supplying the brain. In this way physical pain produces swooning, and explains why, in former centuries, when a confession was extorted in court by torture, the person incriminated would fall asleep while undergoing the pangs of the rack.

Then he points out that "the constriction of the arteries, by impeding the respiration of the nervous elements, must necessarily engender a dyspnœtic phase of nutrition: it will modify the chemical changes going on in these elements. And as a further result of this, we shall find the sensory stimulus associated with the irritation, resulting from a certain degree of dyspnœtic intoxication." He maintains that this "dyspnœa," or non-oxygenation of tissues, always excites "repulsive movements." "Movements of repulsion," according to Meynert, are the result of, and always caused by, sensory impressions adverse to well-being or life, such sensory irritations causing immediately inhibition of nerve-conduction, increased arterial pressure, and de-oxygenation, as well as impaired nutrition of the nerve cells, those effects being recognised by consciousness as pain. "Movements of aggression," again, he applies to all those movements resulting from agreeable sensory stimuli, that tend towards the well-being of the organism and to prolong life, that are attended by the free transmission of nerve-force, by vaso-motor dilatation, a functional hyperæmia of the nerve-centres, and (as he puts it) "an apnœtic phase in consequence of the increased tissue breathing of the nervous elements." "The unhampered purposeless movements of a lively animal, the song of a bird, the merry bark of a dog, are in reality movements of aggression." He concludes that the movements of repulsion, and those of aggression, are equally reflex, because they can both be produced, the one by irritating stimuli, and the other by agreeable gentle non-painful stimuli, in decapitated frogs—as when gentle friction between the shoulder-blades made them croak, and slight pressure and friction of the breast and inner surfaces of the arms, is followed by the sexual embrace, while the croak cannot be thus elicited, nor the sexual spasm excited, "if any part of the frog's body be at the same time touched with acetic acid."

He concludes, also, that "irradiation (of a sensory irritating stimulus) meets with severe and widespread resistances in the grey substance of the cortex, as well as in the central grey substance" of the cord. "In this respect, the pain answers to a sensation of inhibition. The inhibition obstructing the path of the irradiating stimulus calls for an exhausting amount of excitation, and thus effects inhibition of other cortical functions, and sets a limit to the activity of the cortex; it inhibits attention, thought, and the association of ideas as well." Here Meynert is talking of the mental effects of bodily pain; and I shall have occasion to dwell strongly on still more marked inhibition of mental acts resulting from mental pain.

"We may say that the sensation of pain is associated with increased narrowing of the arteries. But contraction of the arteries implies a chemical change," a deficiency of oxygen and of nutritive elements to the cells of the cortex, and rouses in the latter "a disagreeable sensation of pain." Meynert extends this theory beyond the effects of "the perception of actual pain." The mere sight, or touch of, or a sound from, objects which are associated in the forebrain (cortex) with the idea of pain, danger, or death, excite, as much as the pain itself movements of repulsion, and create in the cerebral cortex all the conditions of subjective torture, which we have learned to regard as concomitants of real pain. The reminiscences of painful disagreeable objects arouse all the correlated physiological sensations accompanying genuine objective pain, namely, inhibition, increased arterial pressure, dyspnœtic phases of nutrition, and repulsion. We are in this way brought by Meynert into the region of mental pain, which is thus physiologically and causatively co-related with bodily pain. He says, in regard to painful emotion, psychical pain: "That painful emotions depend solely upon associations, upon inferences pointing to the perception of pain, can be proved by a simple analysis of the objects which excite pain. The retinal images of a tame and of a wild animal, of an indifferent person and of one whom we fear, are projected upon the same retinal area, possess the same colour, and the same intensity of light. An indifferent red fluid and blood leave the same impression upon the retina; mere perception cannot excite emotion, but the associations united to the former can. It is, therefore, the mechanism of the hemispheres only—the process of thought—which excites psychical pain and movements of repulsion, as well as the arterial contraction which may terminate in swooning and in engendering fear and a feeling of incapacity for action." And he further points out that sensory impressions are not needed to rouse psychical pain: "recollections of painful impressions may revive such associations." And he takes, as an illustration, the effect of the news of the death of a friend, whose image in the brain was connected with manifold pleasurable associations. "Such news would cause inhibition of all those associations," "marked inhibition of nervous impulses from the forebrain (cortex) excites like the inhibition of painful sensory stimuli or the suggestion of torture a conception of the impossibility of counteracting this inhibition, which may ultimately lead to suicide."

"Inhibition (in the cortex) is attended by emotion and psychical pain;" "functional hyperæmia is the physical concomitant of thought," and also of pleasurable emotion. "The majority of mental processes are based upon reminiscences or memories which have engaged the functional activity of widely separated regions of the cortex, whence it follows that the functional hyperæmia will invariably affect circumscribed areas at some distance from one another." And, afterwards, he shows how, anatomically, that over "the broad expansion of cortical surface the large number of arteries descending vertically from the pia into the cortex are well calculated to permit partial functional hyperæmia of separate cortical areas." He quotes Fechner, to show that in ordinary sane wakefulness there is, after all, only a "limited wakefulness, with extensive areas of the cortex in a state of functional repose, and, therefore, of anæmia." "The blood-supply in the brain is determined by the functional hyperæmia of the areas called into activity." And, at this point, he goes carefully into the most important question of the brain's rigid walls, of the venous cavities, of the lymphatic spaces, of the cerebro-spinal fluid, of the brain-movements, as these affect the blood-supply and the functional activity of the organ. The relationship of functional cortical activity to its own blood-supply, and its vaso-motor condition generally, is admitted by Meynert to be very obscure. But it is very important in considering normal and abnormal brain-working. That the cortex is a vaso-motor centre for itself, there can be no doubt whatever. He concludes that commonly, and in health, "the functions of the forebrain (cortex) inhibit one another according as one or the other happens to predominate" at the time; that is, intense thought will inhibit emotion, intense attention to objective sounds will inhibit thought, etc.

Maynert's theory of the conditions of the brain and cord, which produce pain bodily and mental, may not be confirmed; but, at present, no other hypothesis has gone so far as his in attempted explanation of the facts. No other is so definite, or is founded on what appear to be physiological laws of nervous action. His theory may be said to hold the field at present. We may yet discover some delicate method of directly measuring the inhibition that is being exercised by a nervous ganglion, or we may yet discover some direct method of measuring the vaso-motor condition of the brain-cortex in its different areas, and so be able directly to prove or disprove his theory. There are many apparent inconsistencies of this theory with facts. For instance, to take a very obvious and common fact: when the passion of anger—an undoubted kind of mental pain—is excited in the brain, we have the terminal branches of the external carotid over the face at first very dilated, as the vigorous "movements of repulsion" are exercised.

Yet we should expect vaso-motor constriction, if Meynert's theory were universally true. But a man "may become pale with rage."

On the other hand, many facts of cerebro-mental disease are strikingly in accordance with it. Take, for instance, the case of a general paralytic in the end of the third stage, when the brain-cortex is degenerated and atrophied to a greater extent than in almost any disease we know. Irritations of the skin in such a case, where the degeneration does not happen to have affected deeply the gray matter of the basal ganglia and spinal cord, will cause no pain, but will set up most extensive and violent reflex motions. I have such a case where a slight prick, or even blowing on the skin of the neck, will put every voluntary muscle of the body into reflex action, and a strong sudden snap with the fingers on his chest will produce a slight convulsion. In such a case there is no inhibition in the cortical ganglia, and so there is no conscious pain, but extensive "irradiation" of the irritation throughout the motor centres.

I think it is a reasonable inference that the condition of the cortex, which directly causes the subjective feeling of bodily pain from a burn of the finger, will be the same as that which causes the pain of typical neuralgia of central origin, and that the cortical state cannot be very different in a woman prostrated with grief on account of the loss of a child, from that of another who has the delusion that she has, by her misconduct, imperilled the salvation of her family. At all events, a definite theory, like that of Meynert, adds an additional interest of a scientific kind to the following clinical facts in regard to the common association of bodily and mental pain.

One of the most common of all clinical facts in a study of the inception of melancholic conditions, that is, of mental disorders where mental pain is the most prominent morbid psychical symptom present, is that the patients have, at a former period, been subject to bodily pain, of some kind or other, usually of the head, and of a neuralgic kind. The typical case of this is that of the woman with a neurotic heredity, who was hysterical at adolescence, who suffered from neuralgia badly at times, till the age of forty, who then, when anæmic and overworked, had a domestic affliction which produced physiological mental pain, and that again induced sleeplessness and loss of flesh. Frontal cephalalgia, pain in the eyeballs, and morbid sensitiveness to sounds, were very prominent symptoms in the case, till the grief deepened into pathological melancholia, with perversion of reasoning in the shape of delusions that she had been in some way the cause of her child's death. When this condition set in, the cephalalgia disappeared along with the pain in the eyes and the auditory hyperæsthesia; but, so long as she could describe her own sensations, she complained of a peculiar feeling in her head, which she said was new and entirely unlike the old neuralgia. It consisted of an unpleasant sensation as of a "creeping feeling inside the skull." During the very worst part of the attack she had no self-control at all, and much motor excitement in the shape of restlessness, moaning, etc.; and at this stage she had no subjective sensations of any bodily pain or paræsthesia of a disagreeable kind, but she clearly had a general sense of organic ill-being. After the acutest stage passed off, she was for a time mentally torpid rather than mentally pained, and when tested she was less sensitive to bodily pain. A crop of boils came out on her, and caused no very great pain. Yet she was not anæsthetic. In reality, at this stage she laboured under a certain degree of mental and bodily analgesia, having bodily sensation and mental feeling, but not being susceptible of any keen pain, mental or bodily. This stage passed off, and she began to feel the old frontal cephalalgia; and from my previous experience, I knew then that the attack of melancholia was drawing to an end. As her red corpuscles increased, and her bodyweight improved under proper treatment, the headache gradually passed off. The neuralgia and the melancholia both inhibited nutrition, sleep, volition, the appetites, and the power of continuous thought.

Now such a clinical connection of bodily and mental pain-symptoms, as existed in this case, is far too frequent to be a coincidence of unrelated phenomena. They both form part of one disease, in my opinion, a disease of the brain-cortex, with sensory, trophic, motor, vaso-motor, and mental symptoms, the sensory and the mental being essentially bound up with the trophic, but the motor and the vaso-motor being secondary. Looking on the sensory function of the brain-cortex as being, from the evolutional point of view, an earlier development than the mental, and as being on a lower plane and of lesser importance, teleologically, as it were, I regard such a case as an example of the lower function being first affected by a disease, which, not being arrested in that lower plane of nerve-action, passed gradually up into a higher region of the cortex, that of mentalisation. But did the sensory disease really cease, as it appeared to do, after the melancholia began? or was the disease there, but the bodily pain not felt? No one can doubt the very close association of sensation with mentalisation; and it is quite certain that there is no dividing line between the higher reflex functions and sensations. In the cases of stupor and very deep dementia, all these functions are almost equally paralysed. A sensory act can excite or inhibit reflex action, a mental act can excite or inhibit both. It may be taken as a physiological fact, too, that there is, in every brain, just a certain innate capacity to feel bodily or mental pleasure or pain; and this power of feeling may be used up either chiefly as bodily sensation, or chiefly as mental emotion; they are, in fact, transferable. I think the facts go to show that, in the case I have described, when the feeling of mental pain began, it took the place of the bodily pain. The higher plane of the cortex having taken on a disturbed acting, the lower plane of bodily feeling ceased its perverted action, passing into a partially anæsthetic state, into which the higher plane also passed afterwards, in the mental analgesia after the stage of motor excitement. But why the return of the neuralgia in a modified form as the mental pain disappeared? In any explanation of a clinical fact in neurology, we must take into account the laws of nervous action physiologically and pathologically, and must often refer to the facts of the simpler nervous disorders to explain those of the more complicated. Now, in this case, we find an analogous fact in a motor disease. Many epileptics suffer from severe neuralgic headaches, and especially so just before a fit. When the fit has passed over, there is, immediately after the unconscious stage, a period of confusion and torpor. While this lasts there is no headache, but, as normal mental activity returns, there is frequently a return of the headache, or of its neurotic equivalent, a morbid mental excitement for a time. It is to be kept in mind, too, that, in some of the cases of melancholia of which I have taken this as an example, almost the normal condition of the patient is one of headache, or being on the verge of it.

The striking fact we have to bear in mind, is the definite clinical relationship of bodily and psychical, in this class of cases not occurring contemporaneously but in sequence. Certainly Meynert's hypothesis of resistance to the irradiation of nerve-conduction in the cortex, together with vascular contraction and dyspnœa of the tissues, as being the immediate cause of pain bodily or mental, would fit in with all the clinical facts of such a case.

When, during the period of bodily or mental pain, the patient "loses control over himself," that is, when the resistance to the nerve-irritation passing into the motor centres ceases, and the patient stamps his feet, shouts, weeps, or rushes about, there is sensible relief to the pain bodily or mental thereby, just as strong motor action, such as setting the teeth or seizing something violently in the hand, modifies the pain of a surgical operation.

Though the intense pain of the neuralgic kind disappears when mental pain becomes intense in melancholia, yet we have in the majority of such cases a perversion of normal sensibility, common or special, of a painful kind *accompanying* the mental pain. It often takes some trouble to find this out in many of the patients, for they are so occupied with their mental misery or their melancholic delusions that they do not speak of such bodily feelings, except indeed in the hypochondrical class of melancholics. The sensations to which I allude are usually referred to the head, and they are of an immense variety. Perhaps the most common are a feeling of emptiness in the head or of fulness, or of weight. Such patients frequently complain to me of feeling as if their brains were gone, and air had taken their place, or as if their skulls were filled with lead. Some of them complain of a throbbing feeling or of a prickling feeling, or of a creeping feeling, or of a hot or a cold feeling in the heads or over their scalps. One man lately said he had a nasty feeling "as if his body hung from his head;" and when he sneezed (which he is averse from doing) as if something burst in his head; another patient says he has a painful feeling of a stick passing from one painful spot in his head to an incisor tooth. He had toothache lately, but he said this was quite a different kind of pain. A lady told me lately, that, when she first became melancholic, she had a peculiar "indescribable" feeling in the top of her head, especially when she was tired, quite different from an ordinary headache. In some cases, it takes the form of special sense hallucinations or perversions. One lady told me after recovery from melancholic resistive (delusional) stupor, that when at her worst she sometimes saw objects of a red colour, for example, the water in her bath, and that stationary objects would seem to enlarge and diminish in size, would come near and recede as she looked at them. She would hear unpleasant sounds and voices, and horrible reminiscences and sights would project themselves across her consciousness, as if from without her; and the sight of common things would seem to indicate painful meanings, for example, the laces of her boots showed that she was to be bound, whipped, and tortured. Her food often

tasted of nastiness to her. All these things no doubt were symptoms of disturbed action of the special sense-areas of the cortex.

Those perverted painful sensations are not confined to the head, or to the special senses. They are referred in some case to the chest, to the abdomen, and to the limbs. Some melancholic patients complain of pains in the region of the heart, and some of feelings of constriction in the chest, as if they could not get breath. Most frequent of all sensations, except those in the head, are sensations of sinking and pain, of fulness, of "anxiety" in the epigastric region. Certain forms of melancholia are so characterised by abdominal symptoms, that they may be fitly called "visceral" cases of the disease. Such organic sensations of discomfort often precede the mental depression like the headache, but, unlike this, they seldom pass away when the mental pain begins. Some patients can tell when they are going to have an attack of melancholia, from the beginning of such sensations.

Spinal pains and discomfort, and even lumbago, are common. I have now a case of aggravated resistive melancholia under my care, whose attacks have always been preceded, and their earlier stages accompanied, by attacks of lumbago, which passed off when the mental pain became intense.

Pains resembling sciatica are not uncommon in the legs before melancholia supervenes; while feelings of stiffness and of cramps in the limbs I have also known. Perverted sensations with regard to the size of the head and limbs are by no means uncommon. I had a patient who said he felt as if his head were enormously large, and another who felt as if his legs had grown quite diminutive.

Perverted sensations of heat and cold are common. One melancholic says he has a constant feeling of cold, another that he feels hot subjectively—the actual bodily temperature in both being just under normal, as is usual in most varieties of melancholia, except the excited form. Sensations of prickling, of formication, of itching in the skin are not uncommon. I have seen many patients, again, who complained of "a want of feeling all over the body, a deadness," as if they carried about a corpse instead of a living body.

I have never been able to believe that such painful and perverted sensations commonly originate in vascular abnormalities. On the contrary, the facts seem to point to a purely nervous origin, but no doubt they are always accompanied, and commonly kept up, by vaso-motor abnormalities; though the facts of megrim and other neuroses seem to point to pain being readily caused, in some cases, by vaso-motor dilatation and paralysis.

My recent experience, since my attention was strongly directed to the close relationship of mental and bodily pain, has been that in nine out of every ten cases of melancholia, if carefully questioned during and after the attacks as to their sensory history, we shall discover, as a clinical fact, painful perversions of bodily sensibility in some shape or other, standing preliminary to or accompanying the attack. Melancholia is not a mere mental disease; it is a general disease of the brain-cortex, usually implying a combination of mental and bodily symptoms, the latter chiefly consisting of neuroses of sensibility, and commonly accompanied by vaso-motor trophic neuroses.

Many every-day facts show that mental and bodily pain can take the place of each other, and in many cases, indeed, cannot co-exist in any great intensity. I have known a painful burn stop the mental pain for the time in melancholia. All of us have seen the transient good effect in some cases of a blister; while, on the other hand, bad news, or even the painful mental anticipation of the dentist's forceps, will often cure toothache. Sometimes a normal and physiological mental pain, such as the news of the death of a child, will inhibit and cure the abnormal pain of melancholia.

Another relationship is frequent. Severe bodily pain long continued will frequently bring on melancholia. I have seen two cases lately of ladies, who, subsequently to painful surgical operations, became melancholic. I have seen melancholia come on after a painful attack of rheumatism. In such cases, no doubt the nutrition and the general nervous energy would be thus run down.

There can be no question whatever as to the general similarity of many of the typical cases of hereditary neuralgia and of hereditary melancholia in the bodily condition of the patients, both being thin, both bad sleepers, bad digesters of their food, both over-sensitive, both intellectual but wanting in staying power for continuous mental work and in surplus energy bodily and mental, and both manifest, in certain cases, a marked tendency to diurnal aggravations. Both may arise from local sources of irritation, bodily and mental. Both inhibit volitional action and energy, emotion and sexual feeling. And, unquestionably, the treatment found useful for both diseases is the same; change of air and scene, a generous fattening diet, cheerful company, systematic regimen and division of time, iron, quinine, tonic nerve stimulants, volitional energy rightly roused, and fixing the attention on objective things of an agreeable kind. In short, whatever nourishes the body, increases the red blood-corpuscles, and causes functional hyperæmia, and improved nutrition of the brain-cortex, cures both diseases.

In certain hereditarily neuropathic families it is very common for one member to be subject to neuralgia, and another to melancholia; while we have all seen hereditary connections between the two diseases, such as a neuralgic mother having a melancholic son. I have seen several cases now of circular neurosis, where an intolerable neuralgia formed one part of the circle, and a deep mental misery formed another.

In hypochondriasis, we have a disease where there is neither acute bodily nor intense mental pain, but a combination of both in a modified and mixed-up way. No one can doubt who has seen a strong intellectual man pass through an attack of hypochondriasis, or of melancholia of the hypochondriacal type, and seen him recover again, that these were real diseases, caused by disordered energising of the brain-cortex, however much the symptoms during the attack seemed mere "imaginations," and the strange conduct appeared controllable by the will, if the patient had chosen to exercise it. But there are few mental diseases where a man's normal volition, his feelings, his habits, and his power of working, will be more inhibited than in this. The pains and discomforts, the imaginary disorders of function, and the general sense of organic ill-being of the hypochondriac, I look on as resulting from an equal disturbance of the mental and sensory portions of the brain-cortex; just as in ordinary melancholia there is an unequal disturbance, the mental portions being most affected. No doubt, the areas that control and specially represent the organic viscera, and their special nerve-ganglia are specially disturbed in function in these cases.

From the prophylactic point of view, the general association of melancholia with sensory disturbances has a special value. Some pain or sensory perversion usually preceding the mental disease, the physician can take early measures of prevention. How many attacks of melancholia could be averted, if proper treatment were only adopted in time?

It appears to me that physicians in general practice frequently do not realise the significance of slight mental depression, accompanying or following neuralgia or sensory perversions, and that psychiatrists often do not sufficiently think of the sensory symptoms in the study and treatment of melancholia. The borderland between neuralgia and melancholia I look on as a very slight one indeed. They are both manifestations of one type of the neurotic diathesis. The seat of both is in the brain-cortex, and in the same part of the cortex, though not in the same cells. The actual cortical conditions under which the mental and the bodily pains arise would appear to be the same; therefore, it seems clear that they should not be studied or treated apart from each other.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PATHOLOGY,

At the Annual Meeting of the British Medical Association held in Brighton, August, 1886.

BY JULIUS DRESCHFELD, M.D., F.R.C.P.,

Professor of Pathology, Victoria University: Physician to the Royal Infirmary, Manchester: President of the Section.

THE RELATIONS OF PATHOLOGY; AND ITS STUDY

GENTLEMEN,—In taking the chair in this section, I wish in the first place to express my sincere thanks for the great honour conferred on me by my election to the presidency, a post which has been held by some of the most eminent men in this country. In spite of all my endeavours, I am afraid I shall be but a feeble successor to them. I will, however, do my best to prove myself worthy of the confidence placed in me, and I am sure I shall not ask in vain for your kind indulgence.

My first, and by no means easiest duty, is to say a few words introductory to our work. In doing so I have avoided taking up any special subject of pathology, as the discussions and papers already announced provide ample material in that direction. Moreover, as our JOURNAL gives from time to time an excellent retrospect of recent pathological researches, I do not propose to occupy your time with such a retrospect on the present occasion. I will only ask your attention for a very short time while I offer a few observations on the

relations of pathology to the other branches of medical science, and on the study of pathology in England compared with other countries.

There is no branch of medicine which has made such rapid strides, and which covers so large a field as pathology, and for reasons which are sufficiently obvious. Pathology, as the study of disease, stands in the same relation to the diseased organism as anatomy and physiology do to the healthy organism.

Pathological anatomy makes us acquainted with the changes in structure which a diseased part undergoes, and pathological physiology considers how and why the functions of such a part become altered. But pathology has also to inquire into the cause of disease; and it is in this particular branch—the etiology of diseases—as I need scarcely tell you, that the greatest activity is being displayed, and that the most important discoveries are being made.

Of these different subdivisions, pathological anatomy, the oldest of them, has received the largest share of attention. It may be said to have been really founded by John Hunter, who has bequeathed to England a museum superior to any in Europe, and which, thanks to the labours of Sir James Paget and his able fellow-workers, has been richly supplemented, and has kept pace with the advancement of pathological science. The study of the minute structure of the diseased organs has gone hand-in-hand with the progress of normal histology and embryology; and, though many points still require clearing up, a considerable number of the great problems of general pathology have been solved, and the gaps yet to be filled up are becoming smaller and smaller. It behoves the pathologist, however, to watch closely the progress of histology, for there are few discoveries in general and special histology which will not find their application in pathology. Take, for instance, the recent researches on the structure of the cell-nucleus, and its changes during the normal processes of cell-life. It has been shown by the older observations of Flemming, Klein, and others, supplemented by the more recent ones of Heuser and Rabl, that the nucleus of a cell—the most active and vital part of a cell—is a composite structure, made up of several constituents, of which one, chromatin, is morphologically the best defined, and which, during the process of cell-division, shows those remarkable changes of form known as karyokinetic figures. Pathology is already beginning to profit by this new line of research. Thus, the observations of Pfitzner show, among other things, that the cancer-cell has an embryonic character; its nucleus is much poorer in chromatin than the nucleus of a normal cell.[1] Again, according to Baumgarten's observations on the karyokinesis seen in the artificially produced tubercle of the cornea and iris, and Scheltema's researches on the inflammatory changes in the subcutaneous tissue, it becomes evident that, in inflammation, the fixed tissue-corpuscles play a much more prominent part than we have hitherto assumed.

I may be allowed to allude to another histological method, introduced quite recently by Ehrlich, which has opened out a new field for pathological research, and may lead to important results concerning the toxic action of many substances. Ehrlich found that methylin blue, when introduced into the living animal body, possesses apparently a peculiar predilection for certain nerve-terminations and nerve-elements, which it stains; while parts more or less analogous, such as the motor nerve-terminations, it leaves unstained. Ehrlich believes that this peculiar behaviour of the nerve-elements is partly due to the richness of oxygen, partly to their alkaline reaction. But even if this explanation be considered as yet too theoretical, this method, if further developed, may give us some insight into the more obscure phenomena of cell-life, the reaction of cells and their specific characters, and may throw further light on some of those peripheric paralyses due to chronic intoxication, which is to form the subject of one of our discussions.

Pathological anatomy, by itself, teaches us more than the mere appearances of the tissues or organs at the time of death; it often enables us to trace the successive steps of the process of disease, and may even lead us to recognise the cause of disease. No doubt the truth is only arrived at after long and tedious labour; often we have to retrace our steps, and often we have to unlearn what we have earned: but in this respect pathological anatomy does not differ materially from other experimental sciences. Nothing illustrates this better than the history of tuberculosis. Laënnec taught the unity of tubercle and phthisis. For many years, pathologists following the lead of Virchow and others, distinguished between tubercle as a new growth and phthisis as the result of inflammation. More minute examination into the histology of tubercle, of phthisis, scrofulosis, and lupus, showed their close relationship, if not actual identity; and independent observers, amongst whom Wilson Fox took the lead, preached again the doctrine of unity of phthisis and tuberculosis, and even before Koch demonstrated the actual cause of tuberculosis, and showed the same bacillus to be present in phthisis, scrofulosis, and lupus, Villemin, Cohnheim, and others believed the cause of tubercle to be some infective agent.

Much more productive than pathological anatomy in the extension of our knowledge of disease, has been pathological physiology or the experimental investigation of disease, a branch of research in which English pathologists are unfortunately prevented at present from successfully competing with their continental brethren. The importance of the pathological experiment did not escape the old observers, and here I may again cite Hunter as one of the pioneers. The commencement of experimental pathology, however, dates from the rise of experimental physiology, with which it is closely allied, and with which it has many points in common. The close relationship of these two sciences was so ably and forcibly brought before this Association by Professor Michael Foster, in the address he gave at the Cambridge meeting, and again by Professor Greenfield, at the Belfast meeting, that no further comments of mine are necessary. There is scarcely any subject of experimental physiology which has not found its application in pathology; and whether we take the researches on the function of the liver, the investigations on the functions of the kidney, the observations on the innervation of the heart, or the numerous experiments on the functions of the different parts of the nervous system, they have not only taught us the normal functions of the body, but thrown light on the morbid processes which underlie disease; hence, also, on its diagnosis.

Experimental inquiries are even of greater necessity in pathology than in physiology; and in support of this assertion I need only point to the observations on inflammation, thrombosis, and fever, and to the whole chapter of the so-called bacterial pathology, culminating in the most recent and most important researches of Pasteur on hydrophobia. It is especially the study of the relations of micro-organisms to disease, prosecuted with such vigour on the Continent, which has already given, and is likely to give, the most valuable results, not only to pathology, but also to hygiene and therapeutics.

We now possess reliable methods for the detection of micro-organisms; we know a good deal already of the specific character of some of them, the progressive virulence of some, and the innocuous nature of others. We have already learned how the virulence of some can be weakened, and how the organism can be made capable of resisting their poisonous action; and yet, though the pathological experiment has been shown not only to be of scientific interest, as furthering the progress of pathology, but also to have practical bearing on the prevention and cure of disease, we pathologists in England, from restrictions placed upon experimental research, labour under the greatest possible difficulties. As the law relating to vivisection stands at present, experimentation concerning some of the most important inquiries is impossible.

One instance I may perhaps be permitted to give. We had quite recently a case of hydrophobia in the Manchester Infirmary, and an opportunity was thus afforded to test one of Pasteur's assertions, namely, that if a portion of the fresh medulla from a patient that has died of hydrophobia be injected beneath the dura mater of a rabbit, death ensues in the rabbit after a certain time from a peculiar form of hydrophobia. As, from the date of admission to the death of the patient only two days elapsed, there was, of course, no time to apply for a licence, and hence the experiment could not be attempted. Now, as hydrophobia is for the time almost extinct in Germany and Austria, while in London alone there occurred, during the first ten months of last year, no fewer than sixteen cases of hydrophobia, Pasteur's inoculation experiments are of much more direct value to us than to the other large European countries; and experimentation from different independent observers is highly desirable.

In the application for a licence, the applicant has to state fully the reasons why he wants to conduct certain experiments, and to give the exact methods he wishes to employ. Now, although it is quite right that an experimenter should know exactly the object of his inquiry, and the methods he wishes to pursue—and it is well known that Claude Bernard, the *bête noire* of the antivivisectionists, and yet one whose contributions to physiology and pathology mark an era in both sciences, always had a full and detailed plan formed before he proceeded to his experimental inquiries—yet it will often happen that new points and different methods will suggest themselves as an experimental investigation proceeds, and yet, in consequence of the restrictions at present existing, it is impossible to deviate from the plan on which the licence is granted. In the interests, not more of the progress of medicine than of humanity, it is highly desirable that some of the restrictions should

[1] It is interesting to note here that Savory arrived at a similar conclusion by a somewhat different route.

be relaxed; and if experimentation were only allowed to be carried on in the physiological laboratories and in the few existing pathological institutes, we might yet hope to compete successfully with continental observers in this fruitful line of inquiry. A powerful society like the British Medical Association, which encourages original research so much, as seen by the foundation of research scholarships, and the grants given for original investigations, may yet, I hope, be able to bring about a relaxation of some of the restrictions in the laws regulating vivisection; and although a powerful appeal has already been made in vain, if another effort be made, especially as the public must now better appreciate the benefits conferred on humanity by experimental methods of research, I think a fresh appeal might not be altogether fruitless.

Fortunately, pathology covers a wider field, and includes more than pathological experimentation; it is closely connected with clinical medicine and surgery, and, in this association, it has been studied as diligently and as successfully in England as on the Continent.

Take, for instance, the pathology of the nervous diseases, in which such enormous progress has been made within the last ten to fifteen years, and where, amongst the many investigators, M. Charcot, whom we gladly welcome here to-day, stands out first and foremost; here careful clinical investigations, coupled with accurate *post mortem* observations, have brought knowledge, system, and order where there was before so much obscurity and disorder. These investigations have not only given us important pathological results, but physiology has largely gained by them; for our knowledge obtained by observations on man of many physiological questions, such as the trophic nerves, the localisation of centres for different functions, rests on a much more satisfactory basis than the results of experimental enquiries, though I do not by any means wish to depreciate the great value they also have. In fact, in every experimental science we require different methods, in order that one method may check another.

Again, the pathology of Bright's disease, which has been so extensively and carefully studied in this country, can only be correctly arrived at by a combination of exact clinical observation and accurate anatomical investigation; though here, too, experimental pathology has contributed much to the elucidation of many obscure points, and will yet solve some of the more intricate phenomena in connection with the subject. But even apart from *post mortem* examinations, there is a bed-side or clinical pathology in which English physicians have taken a leading share; as, for instance, the study of the altered arterial tension in certain diseases, which is of great therapeutic value, and has already led to important therapeutic results. Again, the causes and processes which underlie some forms of dyspepsia are now being better known by help of exact clinical observations; we know now that, in most cases of nervous dyspepsia, gastric digestion is completed in the normal time, and many of the symptoms are due to reflex irritation, in others there is increased secretion of hydrochloric acid in the stomach, whilst in others the gastric juice is deficient in hydrochloric acid, or contains some other acid, lactic or acetic, in abnormal proportions. For our knowledge of the so-called functional diseases, such as hysteria, and for many chapters of psycho-physics, we are as yet entirely dependent on clinical observations. The work to be done here is so extensive that it has led to the establishment of many clinical laboratories on the Continent, for which, as far as I know, no adequate provision has yet been made in our large English hospitals; though I do not wish to ignore the fact that a good deal of such work is carried out privately by some English physicians in their own work-rooms.

From all the foregoing considerations it is evident that pathology covers an immense field; the question how it is best studied, and best taught, is by no means so easy to answer.

It is essential that the pathologist should keep himself thoroughly *au courant* with the progress of histology and physiology, and that he should be fully acquainted with what we have called clinical pathology. Should, then, the pathologist devote his whole time and energies to the *post mortem* room and pathological laboratory, and abstain altogether from active practice or clinical work? Would it not be more advantageous if he could still be engaged in clinical work? Theoretically, there is no reason why he should not be actively engaged in the exercise of his profession; indeed, for one line of pathology, clinical observation is absolutely essential. If we look round, we find that a great deal of the pathological work is done by clinicians; take, for instance, the pathology of nervous diseases, the relations of micro-organisms to diseases, and most chapters of surgical pathology. Our recent progress in the knowledge of these subjects we owe chiefly to the indefatigable labours of men engaged in clinical practice; and yet there are many and obvious reasons why there should be pathologists who should confine their attention to pathology alone. The chief reason is that the whole field is too large for one man to take up; and another reason that, if not allured away from his laboratory, the pathologist can devote much time to teaching, to original research, and to the assistance of those who are actively engaged in their profession, in the working out of problems which present themselves to them in the course of their clinical observations.

Nothing is more useful to the medical practitioner than a thorough knowledge of pathology, and nothing is more likely to make him a careful and thoughtful observer, and to stimulate him to work. In a science like ours, where we have to do at first with a number of detailed inquiries, from which eventually generalisations are deducted, everyone may contribute his quota. Koch laid the foundation of his great discoveries when still a general practitioner, and Stilling did some of his best work in a small work-room, when not yet engrossed by a laborious practice.

If we look at the many excellent clinicians which England has produced, we find that most of them have spent their earlier years in pathological work and pathological research. Amongst the long list of names, many of European fame, I may take one as an example, one who stands out pre-eminently, and who, even by his latest publications, shows us that he is as great a pathologist as he is a surgeon; I mean Sir James Paget. Now, whilst fully admitting the vast amount of pathological work done in England, as seen by that mine of wealth on pathological subjects, the *Transactions of the Pathological Society*, yet one cannot help feeling that still more would be done if we had institutes like those on the Continent, and if pathology entered more largely into the curriculum of our medical study. I think it will be admitted on all hands that it is chiefly by virtue of an arrangement for the complete and systematic study of pathology and physiology, that scientific medicine in Germany has received such a powerful impetus, and that it is the want of these facilities here in England which will make it difficult for us to keep up the race with our neighbours across the Channel.

What we then require in England, above all, is the establishment of well-endowed chairs of pathology, in connection with our leading medical schools. I know the objections there are to State help for such purposes, and the difficulty there exists for obtaining such assistance from the Government; yet, what has been done in recent years for physiology could also be done for pathology, and the example of Cambridge should be followed by the sister University and some of our large medical schools. At present, though the teaching is excellent, we miss the systematic instruction in pathology; the lectures in pathology are insufficient in number, and the teaching in the *post mortem* room is often left to inexperienced demonstrators. Yet there is no country where it is more essential for the ordinary practitioner to be well versed in *post mortem* examinations than in England, where every practitioner may be called upon, in medico-legal cases, to conduct necropsies, and give medical evidence thereon in a court of justice—a system which is very much to be condemned, for I feel sure it would be much better if the medico-legal *post mortem* examinations of one district were conducted by one well qualified person in a centrally situated institution, where there would be the necessary appliances for a detailed and careful examination, and to which students could also have access. The ends of justice would in this way, I think, be better served, and the advantages of such a system, from a scientific point of view, are equally evident.

If we had well appointed teachers of pathology, it would also soon follow that pathology proper would enter more largely into the curriculum of medical students, and form a more prominent part in the examinations for the various diplomas and degrees. Thus there is no separate examination in pathology at any of the examinations, either at the College of Surgeons or College of Physicians, and even the London University has no separate examiners in pathology, and joins together general pathology, general hygiene and therapeutics, all in one examination paper. It is a source of satisfaction that the Cambridge University has not only established an endowed chair of pathology, but gives also due weight to pathology in the medical examination; and I may be pardoned if I allude to the Victoria University, where separate examinations are held, both in general pathology and in pathological anatomy, and where the candidate for the degree has to bring proofs of having studied pathology practically in a laboratory.

However much legal restrictions may interfere with laboratory-work of experimental character, yet the success of our Scotch universities, where pathological teaching is carried out much more systematically and thoroughly than with us, and the excellent work done in the Brown Institution, show that much may be achieved even in spite of these obstacles.

Let it not be supposed that the improved teaching of pathology would add much to the labours of the already overburdened medical student, or that it would have the tendency to make him a pathologist rather than a practitioner of medicine, whose chief duties, after all, will be to heal the sick. It would merely systematise his studies; he would be better prepared for his clinical work, and it would be of the greatest advantage to him afterwards in the exercise of his practice; for, as one of my predecessors in this chair has rightly said, "Pathology is the basis of every rational system of therapeutics."

After these few somewhat disjointed remarks, which express not only my views, but also the views of many practitioners whom I constantly meet, and who appreciate fully the advantages of a systematic training in pathology, I will ask you to turn your attention to the work of this Section, which, both as regards the subjects for discussion and the papers to be read, promises good results. In selecting subjects for discussion, we cannot be said to be behind the age, for as nerves and micro-organisms occupy now-a-days so much of our attention, peripheral neuritis, one of the most recent chapters of nerve-pathology, and the etiology of pneumonia, a disease which by many is now held to be parasitic and infectious, may be considered very fashionable subjects. In the third subject for discussion, aneurysm, we see the close relation of pathology to practical medicine and surgery. These discussions, in which some of our best and ablest workers have promised to take part, will leave but little time for the reading of papers; but these, though small in number, yet cover a very large ground, and are sure to add largely to the useful work on which this Section is about to enter.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PHARMACOLOGY AND THERAPEUTICS,

At the Annual Meeting of the British Medical Association held in Brighton, August, 1886.

By THOMAS LAUDER BRUNTON, M.D., F.R.S.,

Lecturer on Materia Medica and Therapeutics at St. Bartholomew's Hospital
President of the Section.

ON THE CONNECTION BETWEEN CHEMICAL CONSTITUTION AND PHYSIOLOGICAL ACTION.

The meeting of the British Medical Association is not for mutual instruction only; it is also for recreation; and, probably, many members of this Association will utilise the opportunity which a meeting at the seaside, like the present one at Brighton, affords them of indulging in that excellent occupation for an idle man, of watching the waves on the seashore, and speculating how far each of them will come. If one have only half an hour to spare, it is difficult to say whether the tide is ebbing or flowing; it is only by watching for a longer time that one can be certain that the water is really moving in one direction or another. Probably, a great part of the charm which this occupation possesses is due to the resemblance which one involuntarily traces between the ebb and flow of waters and that of human affairs—individual, national, or racial. The life of a single man is very short in comparison with the history of race; and it is often very difficult to say whether mankind is advancing or retrograding, unless we compare his condition at epochs widely removed from one another.

On doing this, we find a general consensus of opinion, to the effect that civilisation has steadily advanced; and this advancement is usualy divided into four stages, characterised by the nature of the tools or weapons employed. In the first, or Paleolithic age, man employed weapons or tools of flint roughly chipped into shape and unpolished. In the next, or Neolithic age, the implements consisted of stone, but they were polished. The next age is characterised by the employment of bronze as a material, and the fourth and highest stage by the employment of iron. These stages are not all marked off from one another, for we find them together in the same country or in different countries. Thus, the age in which at present we live is recognised as the Iron age, on account of the large employment of that metal; but we find that in various countries stone, more or less rudely fashioned, is still used in the manufacture of weapons or tools. For example, when I was in the Colonial Exhibition lately with Mr. Norman Lockyer, he pointed out a kind of threshing implement, such as is now used in Cyprus. It consists of a flat board, in the under side of which are imbedded a number of stone celts exactly like those made by prehistoric man, and perhaps used by him for a similar purpose as well as for axes. In the same way that we recognise four stages in the development of the implements used by man in the arts or in warfare, we may, I think, recognise four stages in the development of the implements he has used in the treatment of disease. In the first stage, crude drugs were employed, prepared in the roughest manner, such as powdered cinchona or metallic antimony. In the next stage, these were converted into more active and more manageable forms, such as extracts or solutions, watery or alcoholic. In the third stage, the pure active principles, separated from the crude drugs, were employed, *e.g.*, morphine and quinine. In the fourth stage, instead of attempting to extract our medicines from the natural products in which they are contained, we seek to make for ourselves such substances as shall possess the particular action we desire. Now, just as we find stone and iron implements occasionally used together in the same country, so we find that drugs belonging to the different stages mentioned, are used at the same time. For example, we may find crude powders, alcoholic extracts, and pure alkaloids all contained in the same pill. Nay more, we may sometimes give to the patient in addition to all these, a medicine made artificially. But while this condition still exists, we notice that crude drugs are being less and less used, and their place is gradually being taken by pure active principles. We may say, then, that we are passing at present from the Stone age into the Bronze age of Pharmacology; and may, indeed, be said to be just entering on the Iron age. This age may be said to have begun about twenty years ago, when the researches which my predecessor in this office, Dr. Fraser, made with Professor Crum Brown upon the connection between physiological action and chemical constitution, inaugurated a new era in Pharmacology. They found that, by modifying the chemical constitution of strychnine, they could also alter its physiological action, and convert it from a poison which would tetanise the spinal cord, into one which would paralyse the motor nerves.

We might perhaps date the beginning of this age from Blake's attempts to show that a connection exists between the form in which various bodies crystallise, and the mode in which they act upon an animal body. Richardson, too, had observed that, amongst various compounds of carbon, certain differences existed in physiological action which might be supposed to correspond to differences in their chemical composition. And at the same time that Crum Brown and Fraser were making their experiments, Schroff in Vienna and Jolyet and Cahours in France had independently arrived at somewhat similar conclusions; nevertheless, I think we may fairly say that it was the experiments of Crum Brown and Fraser which fairly started pharmacology in the new direction in which it has since been steadily advancing. It would be impossible for me to enter at all fully into the recent development of this branch of research, but I think it may be both interesting and useful to try to give you a short and popular account of the chief points already made out; and, in doing so, I may perhaps be excused for using, almost to the extent of abusing, similes which are not precisely exact, but which may be useful in giving you a rough idea of a somewhat complicated subject.

We have all heard of the "flesh-pots" of Egypt; but I find that everybody is not acquainted with the "flesh-pots of Shiloh," though "good little Samuel" has, probably been frequently held up before us as an example to be followed, and possibly the naughty sons of Eli as an example to be avoided. When these sons of Eli were priests in Shiloh, their custom was, when any man offered a sacrifice, to send their servants with a "flesh-hook" of three teeth, in his hand, which he struck into the pan, or kettle, or cauldron, or pot; and all that the flesh-hooks brought up, the priest took for himself.

It is obvious that what the priest's man brought up would depend very greatly on two things, viz., the contents of the pot and the nature of the hook—whether it were large or small, sharp or pointed, single-pronged or many-pronged. It is obvious, too, that a very slight alteration of the points, by the judicious application of a file or whetstone, might considerably influence the savouriness of the priest's dinner. With the small pots that they were likely to have in Shiloh, it would not matter much what the nature of the handle was; but it would matter very greatly if the priests had to go fishing in the brazen sea of Solomon, for there, with a short handle, they might not be able to reach the tit-bits in the middle, and if the handle were too long, they

might go plunging their hooks about the opposite side of the vessel, with the same result as if their handle were too short. Now, in the drugs which we use in medicine, we may find a certain analogy with these flesh-hooks, some part of the drugs being comparable to the hooks, and others to the handle. Perhaps the analogy would be even more correct if we were to regard the hooks as having movable points, which could be taken off and replaced by others of a different form or sharpness. If we take alkaline salts as an example, we may regard the base as the handle, and the halogen as the hook; and by modifying either of these, we may alter the parts of the body affected and the manner in which they are affected. We might, indeed, compare chloride of sodium, in which we have the chlorine attached to sodium, with the low molecular weight of 23, to a hook with so short a shank that it did not reach the big joints lying in the middle of the cauldron; while potassium, with a molecular weight of 40, was just long enough to do this; and rubidium, with a molecular weight of 85, was so long as to go plunging about on the other side. In fact, we find that this is very nearly what occurs in the muscles of the animal body after the administration of the chlorides of sodium, potassium, or rubidium; for, while potassium chloride is a powerful muscular poison, the action of sodium and rubidium chlorides on the muscles is very slight.

We have seen what changes would follow alterations in the shank of our flesh-hook; now let us see the effect of altering the prongs. If we put on a small one like chlorine, it may go dragging about catching everything, but bringing out nothing; a bigger one, like bromine, may lay hold of a lung or a brain; and a bigger one still, like iodine, may lay hold of a big joint. Now, what we find in the body seems to be somewhat similar. The chlorides circulate in the blood without producing any marked alteration beyond that which is due to the substance with which the chlorine is combined. The bromides attack the brain and nerve-centres, and the iodides tend more especially to affect the muscles and the glands.

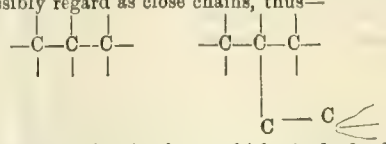
It is evident that another important factor besides the sharpness of the hooks is the number of prongs, and the three-pronged hook seems to be the generally effective one. Now, in pharmacology, there is one substance,—nitrogen,—which appears sometimes to have three, and sometimes five prongs, or affinities, as chemists term them, and it is a substance having a very general and powerful influence over the body. When combined with hydrogen in the form of ammonia or of ammoniacal salts, it affects nerve-centres, motor nerves, and muscles, tending first to stimulate and then to paralyse them. But as we would expect, the effect of the ammonia is modified by its combination with iodine, chlorine, and bromine; and we find that, while the ammonium-chloride generally attacks the spinal cord and causes irritation, ammonium-iodide paralyses the motor nerves and muscles.

When nitrogen has oxygen combined with it in place of hydrogen, so as to form nitrous acid, its action is exerted more especially upon the blood and blood-vessels, so that it causes the blood to become chocolate-coloured, and the blood-vessels to dilate. This power of dilating the vessels is sometimes exceedingly useful in the treatment of disease; and we have been enabled to vary the action of our drugs so as to attain, to a great extent, the end we desire, by our knowledge that the action depends upon the nitrous acid, and not on the substance to which the acid may be attached; or, to return to our own comparison, the effect depends on the nature of the hook rather than on the kind of shank to which it is attached. Thus, where rapid dilation is desired, we use nitrite of amyl; but where a slower and more prolonged action is desirable, we employ nitrite of soda or nitroglycerine.

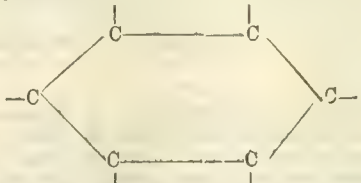
In some useful tools we have the two ends serving different purposes: one end for example being a hammer and the other end a claw for extracting nails; and we can easily imagine a flesh-hook constructed on the same principle, one end, let us say, having the prongs widely apart, and the other the prongs close together. With such a hook, it is evident that the viands which were fished up would be different according as one or other end was put into the pot, for the close prongs would bring up delicate little pieces which would simply slip through the wide ones. If we carry our illustration a step further, and suppose this hook to consist of two parts attached to one another by certain prongs while others were left free, we can see that, if only one prong were left free in each part, but these prongs were of different shapes, the pieces obtained by the man using it would be of a different kind, according as the prong belonged to one end or the other. Now we seem to find something of this sort in the union of nitrogen with carbon. Carbon is a substance with four affinities, while nitrogen appears sometimes to have three and sometimes to have five. When the nitrogen and the carbon are united in such a way that four affinities and each are connected together, leaving one free affinity or prong belonging to pentad nitrogen, thus,—N≡C, the compound is exceedingly poisonous; whereas, when the free affinity or prong belongs to the carbon and the other three affinities are joined to triad nitrogen, thus,—C≡N, the compound is comparatively innocuous.

This fact shows us how very important the nature of the free affinity in the compound is in regard to physiological action.

We have just pictured to ourselves an instrument of two parts, joined together by small hooks, and consisting, in fact, of two links. In this instrument the links differ a good deal from each other; but one link—namely, carbon—has a great power of uniting with itself, so as to form long chains, straight or branching. It also forms what we may possibly regard as close chains, thus—

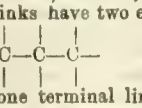


so stiff as to act the part of a shank, to which single hooks or long open chains may be attached. We may represent it graphically thus—

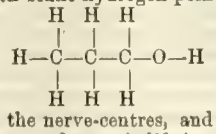


Now, if any of Eli's successors wanted to fish in Solomon's brazen sea with hooks attached to a flexible chain instead of to a stiff shank, the results of his fishing would not only depend on the hooks he used, but on the length of the chain, on the kind of chain, single or branching, and on the position of the links to which the hooks were attached.

Now, in the series of chemical substances to which alcohol belongs, we have an illustration of the modifications in physiological action which are produced by the length of the chain, the kind of chain, and the position of the hooks. The links, in the case of alcohol, consist of carbon atoms attached to each other by one affinity, so that each terminal atom, or link, has three affinities, or prongs, and the intermediate links have two each unattached, thus:

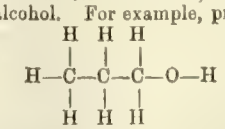


We may regard one prong of one terminal link as furnished with a sharp point, to which we give the name of hydroxyl, while all the others are furnished with blunt hydrogen points, thus:

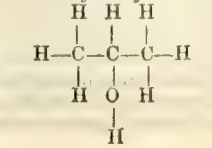


All the alcohols attack the nerve-centres, and paralyse the brain, the spinal cord, and the centres of organic life in the medulla oblongata. In large doses they all produce death, and the longer the chain, the more deadly do they become, until the chain is so heavy that it can hardly be used at all, or, in other words, till the alcohol becomes so solid that it will not readily enter the body and produce its toxic action.

If we fix the sharp hydroxyl on one of the intermediate links, instead of the end one, we would naturally expect that it might simply scratch the pieces of meat instead of pulling them out, as it might do if it were attached to the terminal link; and this is exactly what we find in the case of alcohol. For example, primary propyl alcohol

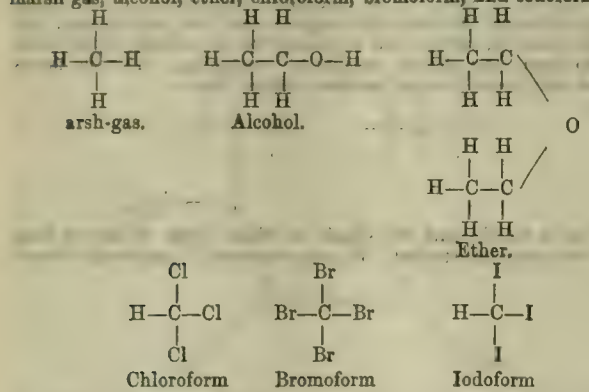


where the hydroxyl is attached to the terminal link, appears to produce steadily increasing paralysis of the nerve-centres; but secondary propyl alcohol, where the hydroxyl is attached to an intermediate link, thus—



scratches up or stimulates the nerve-centres before it paralyses them. (Efron Pflüger's *Archiv*, Band xxxvi, 1467.)

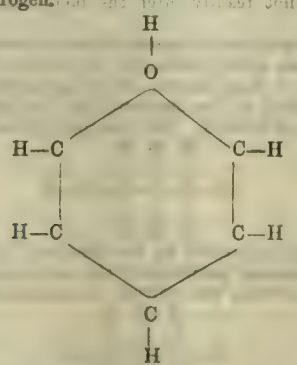
The whole of the carbon compounds, formed on the principle of an open chain, appear to have an action more or less like that of alcohol, though these are modified by the nature of the substances which "tip," as it were, the free affinities of the carbon links. Thus, marsh-gas, alcohol, ether, chloroform, bromoform, and iodoform,



all tend to paralyse nerve-centres, and to exert an anæsthetic action; but the chloral in the chloroform tends to make the substance paralyse the heart more quickly than marsh-gas, alcohol, or ether, which contain hydrogen alone or hydrogen and oxygen; and in iodoform the effect of the carbon is to a great extent swamped by the iodine.

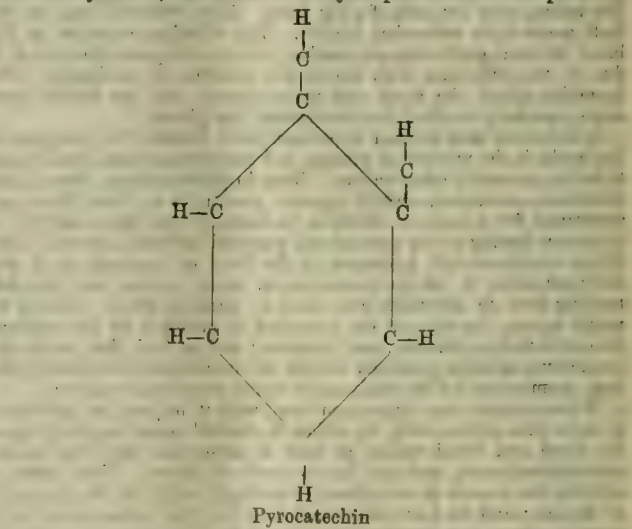
It is to Liebreich's recognition of the fact that similar carbon compounds possess a similar anæsthetic action, that we owe the discovery of chloral. The knowledge of the depressing action on the heart of chlorine in such compounds led Schmiedeberg and Carvello to search for a hypnotic substance which should not contain chlorine, with the result that paraldehyd has been added to our therapeutic *armamentarium*; and the stimulant action of ammonia led Schmiedeberg to introduce a new hypnotic, urethane, which, like chloral, will produce sleep, but, instead of weakening, will stimulate the heart, and is thus admissible in cases where chloral might be dangerous.

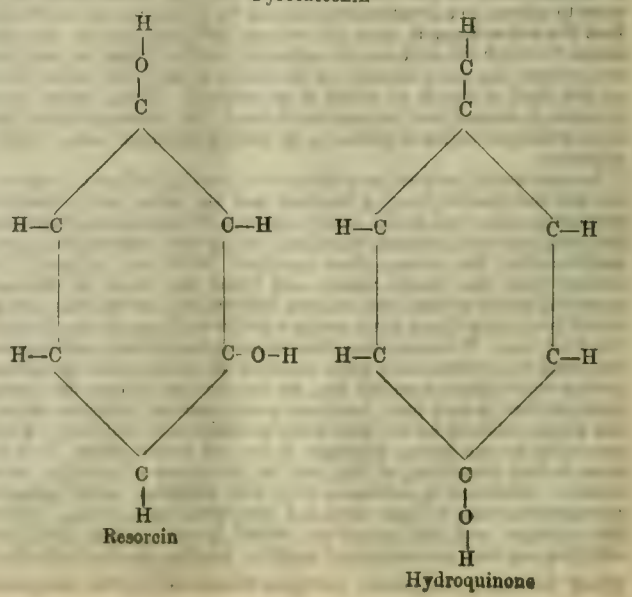
Let us now turn to the other class of carbon compounds in which the atoms are arranged so as to form a close chain, or, as we may call it, a stiff nucleus or shank, to which either single hooks or open chains may be attached. This group of carbon compounds is termed the aromatic series. The substances belonging to it differ from those of the open chain or fatty groups, inasmuch as they tend to stimulate the nerve-centres, and produce convulsions or spasms before paralysing them. But the most marked property which they possess appears to be their power of reducing temperature, and of destroying low forms of life, so that they act both as antipyretics and as antiseptics. We have seen that in the open chains of the fatty series of carbon compounds, the increased number of links appears to increase the activity of the compound, and a condition which is similar, in some respects at least, is to be found in the aromatic series. For example, in phenol or carbolic acid, as it is usually termed, we have one hydroxyl terminal, just as in ordinary alcohol, the other carbon affinities being saturated with hydrogen.



When these hydrogen atoms are replaced by methyl, the antiseptic power of the phenol is increased, and the increase appears to be in proportion to the number of methyl groups which are introduced into the compound. Turning again to our old illustration of the flesh-hooks, we might compare the benzene nucleus to the shank with six points, each of which might be armed either with a sharp hydroxyl hook, or with a blunt hydrogen one, or with a carbon chain. The more the blunt hydrogen hooks were replaced by chains, the more thoroughly would they sweep the pot; and, in fact, we may say that the more chains there are instead of hydrogen, the more thorough is the antiseptic action of the compound.

In the case of antiseptics, all that we want is to ensure a thorough destruction of the microbes, which give rise to putrefaction or disease; but when we come to deal with antipyretics, we have a more complicated problem before us, for we wish to reduce the temperature in man or the higher animals, while, at the same time, we have to avoid producing any marked action on the nervous system in the way either of spasms or paralysis, and also to avoid depressing the circulation and causing collapse. Now several bodies nearly allied to carbolic acid, and differing from it only in the fact that the benzine nucleus in them has two hydroxyl groups attached to it instead of one, as in carbolic acid, have a strong antiseptic power. These bodies are hydroquinone, resorcin, and pyrocatechin; they all have an antiseptic action, but the strength of their action is very different, resorcin having only one-third of the strength of pyrocatechine, and only one-fourth that of hydroquinone. This difference in strength shows us here, also, how important the position of the hydroxyl groups is; because, in pyrocatechin they are close together, in hydroquinone they are as far apart as they can be, and in resorcin they keep an intermediate position.





But these bodies, perhaps from their simple structure, appear to be adapted to attack all parts of the animal organisation, and they are apt to affect the nervous system and circulation. In order to avoid these disadvantages, various attempts have been made to obtain bodies of a similar but more complicated structure, which should have a more specialised action, and would lower the temperature while leaving the nervous system and circulation unaffected. These attempts have been more or less successful, and we owe to them the introduction of three new remedies—kairin, thallin, and antipyrin. The former two, after a brief period of trial, have been found more or less unsatisfactory; but the latter is perhaps, upon the whole, the best antipyretic that we possess, reducing the temperature and, at the same time, having few disadvantages. Salicylate of soda is nearly allied in chemical constitution to resorcin, and as a general antipyretic it is almost equal to antipyrin, and superior to it in cases of rheumatic fever. It is possible that we may still obtain antipyretics more powerful than any we yet possess, and specially adapted to the febrile conditions arising from different causes, for these antipyretics do not appear to be equally successful in different kinds of fever. Antipyrin is best in hectic fever, and salicylate of soda in rheumatic fever, but an antipyretic which will be thoroughly satisfactory in typhoid fever is still a desideratum.

I have said that antipyrin is generally free from any disagreeable action; but this is not always so, for it sometimes may produce collapse. This shows us that, in the action of all our drugs, we have two factors to consider, namely, the drug itself and the body into which we introduce it. We have just been considering the alterations in physiological action which may be produced by changes in the chemical constitution of our drugs; but there is another factor which is perhaps more difficult to investigate, and still more important in the treatment of disease, namely, the condition of our patients. The failure of our drugs to produce the effects we desire is one of the most trying occurrences in medical practice. Thus, in fever, we sometimes find that drugs will not reduce the pulse as they do in non-febrile conditions, and digitalis in pneumonia sometimes appears to have lost its sedative action on the heart altogether. Some years ago I thought that possibly this might be due to the high temperature producing paralysis of the nervous apparatus which restrains the heart, and supposed that the peripheral ends of the vagus in the heart might be paralysed. I then made some experiments, which showed that I was wrong in this supposition. Several years afterwards, my friend Dr. Cash and I made some further experiments, which showed that the failure of digitalis to slow the heart in febrile conditions is really due to paralysis of the regulating nerves of the heart; but the part of them which is paralysed by the heat is their roots in the medulla, and not their endings in the heart.

In other experiments which we made together, we found that the muscle of a frog poisoned by barium could be restored to its normal condition by a high temperature, and also by the application of potash salts. It occurred to us that, if we could saturate the body of an animal with potassium, we should be able to render it proof against the poisonous action of barium. On trying this, we succeeded in rendering animals so far resistant to the action of the poison that they were alive and well after animals of similar size, but unprotected, had succumbed to the action of the same dose of poison, although we did not succeed in ultimately saving the animals.

But Dr. Cash has pursued this line of investigation far beyond the limits of our mutual research, and he has obtained results which seem to me to be amongst the most extraordinary and the most promising in pharmacology. Knowing, as he did, that corrosive sublimate was an exceedingly powerful disinfectant, it occurred to him that it might be more harmful to disease-germs than to the bodies of higher animals, and that he might be able, by the introduction of the poison into the body of an animal, to render it insusceptible to zymotic diseases. A similar idea had occurred to Koch, who injected corrosive sublimate into animals after previously inoculating them with anthrax; but his experiments failed, while Cash has proved successful by introducing the corrosive sublimate before inoculating with anthrax, and thus giving the drug the start of the disease. These experiments acquire an additional interest from the fact that M. Pasteur, although uncertain regarding the exact mode in which his process of inoculation for hydrophobia has brought about such satisfactory results, is disposed to think that the agent which prevents the disease is a chemical substance, and not a microbe.

When we look back for twenty years and see how far pharmacology has advanced since Crum Brown and Fraser's experiments directed it into a new path, we may hope that twenty years more may not only have greatly added to our stock of new remedies, but will have enabled us so to ascertain the condition of our patients that, either by the proper modification of a single remedy, by the proper admixture of remedies, or by proper changes in the food or surroundings of each patient, we may ensure the action we desire, and we shall not have to feel, as we painfully do at the present, that our patients often die for lack of knowledge, not on our part, but on that of our art.

Nothing is more painful to a medical man than having to answer in the negative the agonised appeal "Oh, doctor, can you do nothing?" of those who see passing away friends who are dearer to them than their own life. It is because we medical men know the value of human life and the extent of human suffering; because we are called upon to prolong the lives of those whom not only their friends but their country and the world at large can ill spare; because we must, if possible, relieve pain sometimes amounting to extreme torture in the sufferers themselves, and felt hardly less keenly by their friends, that we consider it is not only permissible but is our imperative duty to gain the knowledge we require to attain our object, even though we sacrifice the lives of animals, and inflict upon them some pain, never wantonly, never carelessly, and almost always slight in comparison with what we often see our patients feel. Moreover, the lower animals suffer from disease as well as men, and we may hope that the advance of pharmacology will give us the means of relieving pain and prolonging life in them as well as in man.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OPHTHALMOLOGY,

At the Annual Meeting of the British Medical Association, held in Brighton, August, 1886.

By CHARLES OLDHAM, F.R.C.S.,

Senior Surgeon to the Sussex and Brighton Infirmary for Diseases of the Eye
President of the Section.

RECENT PROGRESS IN OPHTHALMOLOGY.

Gentlemen,—There are two primary duties incumbent on the members of this Association on whom you have conferred the great and responsible honour of presiding at your deliberations.

The first of these is to bid you all, in the name of your fellow-associates of this town, a most hearty welcome to the meeting which was yesterday inaugurated at the Dome. We sincerely trust that this meeting may be productive of the best results in every way; from a scientific point of view, that the papers read in this Section, and the discussions that will thereupon ensue, may materially tend to the advancement of the art and science of ophthalmology and also—for we do not forget the words of one of the most charming of poets—

> "Neque semper arcum tendit
> Apollo"——

that you may enjoy such social pleasures as we have done our best to provide for your entertainment, as fully as we, your hosts, could desire; and that after the meeting you may return home no whit the worse for the treatment you have received at the hands of "Dr. Brighton."

The second duty I have to perform is to crave your kindly and generous indulgence for the many shortcomings which I fear must inevitably occur in my conduct of your affairs. I can assure you that I bring a desire as earnest for your service, as I feel my capacity to be slender in respect of the position in which you have done me the honour to place me.

The last time the Association met in Brighton was in the year 1851. There was then no Ophthalmic Section. Nearly thirty years were to elapse before the Association, which at that date numbered only about 1,700 or 1,800 members in all, could boast of a body of its associates who devoted their time and abilities to the sole study and practice of the surgery of the eye. But that year was destined to be a memorable one in ophthalmic annals; for it was in 1851 that the great Helmholtz brought out the instrument of which it may be said (and it is an excellent illustration of Schopenhauer's just remark that all great thinkings are apparently obvious in proportion to their greatness) that its principle was apparently so obvious that we marvel that it had never been thought of before. I need not point out to you the entire change that has been wrought in our art by this discovery. It will suffice to say that diseases which, before its advent,

were so many additions to nomenclature, and to nomenclature only, have now become objective entities to the surgeon as well as to the patient.

At first, however, mechanical imperfections in the mode of applying Helmholtz's principles stood in the way of acquiring that accurate knowledge which we now possess, both of the diseases which invade the interior of the eyeball, and the errors of refraction of every kind and dimension which form so large a part of our work. In this enterprise, namely, that of improving the ophthalmoscope to such a point as to enable a practised observer to measure accurately the minutest refractive error, there have of late years been many workers. Perhaps one of the most prominent of these is Mr. John Couper, who has constructed, at a great expenditure of time and labour, one instrument after another in search of perfection. Among other workers in the same field in this country, Messrs. Marcus Gunn, Purves, Johnson, and Stanford Morton, whose ophthalmoscope has become very popular, may be mentioned. In all these instruments the main object has been to make an estimate of the errors of refraction as accurately and as quickly as possible, by means of discs containing a varying number of lenses, and revolving on different systems of mechanism behind the sight-hole of the mirror; and it cannot be denied that many of these have arrived at such a pitch of excellence as to render any further improvement improbable.

Turning to the work of the past year, the magnificent Bowman lecture on Ophthalmology and Diseases of the Nervous System, delivered by Dr. Hughlings Jackson, and Mr. Jonathan Hutchinson's address on Sympathetic Ophthalmia, and the discussion thereupon, will be in the memory of you all. There is not one of us here present who has not been compelled to face the latter terrible disorder over and over again, and, as often, to feel the bitter sense of helplessness in its presence. The mode of its actual propagation, whether, as Mr. Hutchinson suggested, it is the result of blood-poisoning, whose expression is limited to the dimensions of the fellow-organ; whether it be, as I fancy is more generally accepted, an inflammation slowly extending along the optic nerves; or whether it be simply reflex in character, would still appear to be a matter of controversy, in spite of the admirable discussion which followed the address. In any case, the report of the committee of investigation, derived from recorded *facts*, is one with which, I think, all practical oculists will unhesitatingly agree.

Amongst other valuable contributions, Mr. Hartridge has published, as a supplement to that of Mr. Shears, a series of twenty cases of tobacco amblyopia; all his patients improved, and complete recovery resulted in thirteen of the number by simple abstention from the luxury.

A noteworthy analytical report of the causes of blindness in 111 inmates of the Sheffield Institution has been made by Mr. Snell.

Cases of essential shrinking of the conjunctiva have been shown by Messrs. Critchett, Brailey, Lang, and others; and a paper of very considerable importance on thirty cases of meningitis, after excision of the eyeball, was read by Mr. Nettleship, and provoked an interesting, though not an exhaustive, discussion in the Ophthalmological Society. Also a report on the poisonous effects of the vapours of bisulphide of carbon and chloride of sulphur, by a Committee of the same Society, may be recalled to your remembrance.

The thirty-nine cases lately published by Dr. W. A. McKeown, of intracapsular injection of water in the operation of extraction of cataract, will probably be further illustrated by a paper to be read in this Section by Mr. Charles Lee.

It is as alien to what I conceive to be my province to make you any learned address on the more recondite and controversial points of our art, for we have before us for our consideration a series of papers and discussions which promise much in that direction, as to anticipate in any way the matter contained in these contributions. We shall undoubtedly listen to them with great interest, as they will give us the experience of others on questions which each one of us has frequently attempted to solve, and has also lamentably failed more than once at least in the enterprise; such, for instance, will be the first and last papers on our list, namely, "The Treatment of Epiphora."

The authors will doubtless explain why, after we have slit up the canaliculus, and passed a large probe with ease into the nasal duct, it commonly and disappointingly happens that the patient cries to us as freely and as unwillingly as before.

We shall be glad to learn, among other things, from Mr. Edgar Browne's paper on "New Remedies," whether cucaine, that somewhat overrated drug, which has a curious selective power in unequally exerting its attributes on different individuals, may be justly accused of exerting this selective influence in a mode which tends to suppuration after important operations

I note with some regret the absence in our list of any paper on the best mode of treatment of simple chronic glaucoma. Now that we have been enlightened by the labours of Priestly-Smith, Brailey, Landolt, and others, as to the etiology of this formidable affection, the advancement of our knowledge should bear fruit in the direction of some mode of dealing with the problem set before us, other than by iridectomy pure and simple, the results of which are very far indeed from satisfactory. Is there any hope that some other method of counterbalancing drainage, at once unirritating and effective, may be devised? At present, eyes so affected would seem to be best left alone.

Have we learnt anything in the past year with regard to suppuration after operation? Would he not render a great service to mankind who should give us, by some process of generalisation, amongst other precepts, rules for the kind of incision to be made in various operations, but principally, of course, in that for cataract in different individuals—whether such incisions should be severely corneal, or in the sclero-corneal junction—to give us, in short, some indications which should guide us as to the likelihood of consequent suppuration?

It is certainly given to individuals, now and again, to possess what, for went of a better name, may be called an instinct in such matters. As a pointed example of this power of selection by instinct, I may cite the case of Antonius Stradivarius, of Cremona. This great master, by the sense of touch alone, was able to divine the relative acoustic merits of the wood from which he made his hitherto unrivalled violins.

The late Mr. Critchett possessed a rare instinct for the selection not only of cases which were suitable for operation, but also of the particular mode of operating which should best favour success; but, like Antonius Stradivarius, he was apparently unable to convey the method of his secret to others.

I cannot but think that this selective instinct, which has been given to few, may in course of time be formulated for general use. In this connection it is pertinent to ask, how far we are agreed upon the value of antiseptic measures in operations on the eye; and whether, conceding the value of these measures, out of many agents we possess for the purpose, there are any solutions of greater antiseptic virtues, and with fewer drawbacks, than those of the perchloride of mercury and boracic acid?

One of the main objects of every society of oculists, is the propagation of such knowledge of ophthalmic surgery amongst those who do not enjoy their special advantages, as will enable them to avoid being pointed at as the authors of cases of preventable blindness; and also, by a routine acquaintance with the ophthalmoscope, to add a factor, or factors, to the items of evidence which they already possess towards forming a just estimate of many cases which must necessarily pass through their hands in the course of the working year. I venture to think that this has lately been, and is now being, very effectually done.

Such cases as those I have referred to are becoming rarer every day, and I am frequently surprised at the amount and accuracy of ophthalmological knowledge to be met with at the present time amongst those who are not specialists, as compared with the acquirements in this direction a very few years ago.

Ours is, indeed, one of the noblest of sciences. The blind have ever been considered amongst all nations and in all ages, to be the class that most appeals to the commiseration and sympathy of mankind. It is, with us, not only a plain sailing duty in the legitimate exercise of our profession, but also a pleasure of the acutest kind to relieve the necessities of those who call upon us in this respect for aid.

The trustful confidence with which blind humanity invariably relies upon the everyday assistance of its brother man, even in the guise of a stranger, is a very marked feature of this particular affliction. If they so touchingly repose on the ministrations of those who are strangers to them—strangers who possess no other powers for their service than those of sympathy and temporary assistance—must we not consider ourselves to be amongst the happiest of men of science, in that we possess solid and lasting means of relieving their sad fortunes—means largely augmented by the knowledge and insight into their troubles, that we gain in such meetings as the present, wherein we can increase our humanitarian usefulness, by uniting with all loyalty, to throw our experiences into one common treasury for the benefit of mankind?

VACCINATION.—Mr. C. H. Cockran, of Caversham, Reading, has been awarded a Government grant for successful vaccination in his district. This is the third time in succession that Mr. Cockran has received the grant.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OTOLOGY.

At the Annual Meeting of the British Medical Association in Brighton, August, 1886.

By G. F. HODGSON, M.R.C.S.Eng.,
President of the Section.

PROGRESS OF AURAL SURGERY DURING THE PRESENT CENTURY.

GENTLEMEN,—On behalf of my coadjutors, and on my own part, I have the pleasure to offer all of you who are visitors a hearty welcome, and to express the hope that your short stay in our town will be pleasurable enough to induce you soon to revisit it.

At these annual gatherings, it has become customary for the chairman of each section to open it by some introductory remarks. On the present occasion, I will endeavour to occupy the time by very briefly reviewing the progress which our specialty has made (at least medically and surgically) during the present century.

This period of above eighty years will indeed include the history of about all that can be recorded on the subject, to any purpose; as, although the anatomy of the organ of hearing had been fairly well made out for a century or more previously, a knowledge of its diseases and their suitable treatment could not be said to exist; what was thought and done being not only devoid of common sense, but for the most part empirical, not to say absurd, and sometimes even disgusting.

In 1806, Mr. John Cunningham Saunders (Demonstrator of Practical Anatomy at St. Thomas's Hospital) brought out the first book, of English origin, that put aural surgery on a clearer and sounder footing. He classified the diseases as they respectively affect the outer, middle, and internal portions of the organ; and, although his means of diagnosis were very defective, yet, by making numerous careful dissections of the ears of deceased persons who had been deaf, he obtained valuable information wherewith to guide his notions of pathology and treatment. He pretty successfully treated otorrhœa and polypus, practised paracentesis of the membrane for tympanal suppuration, and showed that neglected suppuration of the ear might lead to brain-disease. Some six years previously, Mr. Cooper (afterwards Sir Astley) had, at the suggestion of Sir Everard Home, punctured the membrane in a few cases in which the Eustachian tube was supposed to be impervious, with the object of letting air into the drum-cavity. No speculum was known to these surgeons, but their operations were performed with the aid of sunlight directed into the meatus.

Saunders also did not adopt the Eustachian catheter, although two other Englishmen (Cleland and Wathan) independently had invented and used it, for both air and fluids, about half-a-century previously. Indeed, Saunders seems to have known but little of non-suppurative tympanal disease. His notions of labyrinthine affections were also very vague, the presence of tinnitus being considered by him as an important symptom of it. His treatment of tinnitus, too (eight grains of calomel at night, followed by an ounce and a half of sulphate of soda in the morning, daily for a fortnight) would not harmonise with the present views of either surgeons or patients. Saunders died young, only four years after the publication of his book; but this subsequently was edited and republished several times.

Thirty years afterwards, Kramer of Berlin, and two years later, Pilcher of London, each brought out a book on diseases of the ear, Kramer's soon being put into English dress by Dr. J. R. Bennett. Both of these authors dwelt much on the importance of Eustachian treatment:—Kramer by means of the catheter and a metallic air-pump for forcing in air and vapours to the tympanum, and Pilcher by using bougies and stilettes, and sending in fluid injections by the catheter and a syringe.

Kramer's treatise held sway for many years; although his air-pump soon fell into disuse in England, especially after the occurrence in London of two sudden deaths during its employment by a practitioner in Gower Street. Emphysema of the throat, implicating the glottis, as supposed to be the effect, the mucous membrane having been torn first by the point of the catheter. A case of emphysema of the neck, whilst using the catheter and air-press, occurred to Pilcher, but it did not prove fatal. One would suppose that in these cases the catheters had not button-ends. Even now I meet with such instruments in some of the shops, but surely they find but few purchasers. A shorter instrument also I much prefer; it remains in position much more readily. Some years ago, I had all mine abbreviated by a silversmith, who cut out nearly one inch and a half of the tube, and then reunited the ends. Such shorter instruments are now made by Mayer and Meltzer, at the suggestion, I believe, of Dr. Woakes. (Here are some of them.)

In 1848, in the *Lancet* for July 1st, Mr. Yearsley made public his fortunate discovery of the so-called "cotton-wool drum," the value of which is still considered as great as then. If Saunders had lived longer, one can imagine that he might have hit upon something of the sort, as he seems to have been much struck with the fact that one or two of his patients heard remarkably better whilst a drop or two of fluid (even if it were pus) was in contact with the maimed membrane. Most of us, I suppose, have met with similar instances.

During the decade from 1850 to 1860, Wilde of Dublin, and Toynbee of London, came to the front, the former advancing aural surgery in a thoroughly practical and common-sense manner. The polypus snare, a free incision down to the mastoid process, and the tubular speculum are identified with his name; the speculum, however, being modified from Gruber's, and perhaps not thereby improved.

Toynbee (a fellow-student with myself, but a few years older), by his painstaking and indefatigable dissections, put the pathological anatomy of the ear on a footing never previously approached, and which has largely helped forward a more correct understanding of the subject. Like Saunders, Toynbee died young.

It would appear that it was in consequence of Toynbee having drawn attention to the normal condition of the Eustachian tube being *closure* (except under the influence of some muscular action, such as swallowing), that Politzer was led to work out his simple and now well-known method of inflating the drum-cavity. This happy invention, like Yearsley's artificial drum, added immensely to our means of curing or mending several forms of deafness; and it came most opportunely, as after the abolition of Kramer's air-press, no satisfactory substitute had been hit upon. Toynbee had even resorted to blowing his own breath along the catheter.

The name of Politzer brings us to within a quarter of a century of the present day. During this period, increased activity has sprung up, most civilized countries having furnished men who have made advances in otological knowledge. Thus, Lucae and Politzer have taught us the use of the tuning-fork; trephining the mastoid (which Petit originated in 1774) has been revived by Troltsch, James Hinton, and some Americans, and been fully established as an orthodox proceeding. In passing, I may just show this neatly made drill (miniatured by Mayer and Meltzer from a coarser implement in use by American mechanics), as, to my mind, the most ready instrument for letting-out pus from the mastoid cells; and the movable check, fitted to it at my suggestion, makes its use quite safe. Troltsch again has given us a simple, but effectual, mode of illuminating the meatus and the drum-membrane; and the laryngscope, reversed, serves us well for examining the pharynx and posterior nares; whilst, during the same space of time, numerous books and monographs have appeared, wherein not only the minuter anatomy (healthy and morbid) and physiology of the ear, but also the general principles and various details of aural surgery, have been described with as much accuracy as characterizes other branches of surgery.

Amongst these instructive works, one cannot refrain from mentioning with appreciation the *Archives of Otology* (German and American); Politzer's *Monograph on the Membrana Tympani;* Peter Allen's Lectures at St. Mary's Hospital; Dalby's Lectures at St. George's Hospital; and especially Hinton's *Questions of Aural Surgery*, and his beautiful atlas of the membrana tympani, with its 150 figures, hand-coloured by Mrs. Hinton. "Adenoid growths in the naso-pharyngeal space," have been made much of by Meyer, of Denmark; and Woakes has endeavoured to elucidate the mysteries of giddiness and tinnitus. I suppose that the climate of Brighton is not favourable to the development of these adenomata. Anyhow, I have never met with such large growths as Meyer describes; and, as remedies, bracing constitutional tonics, and strong local astringents (especially a saturated solution of tannin in spirits of chloroform), with, rarely, the use of this little home-made steel finger-nail, have sufficed with me.

Now that I am speaking of Brighton, I may incidentally say that, although I have practiced here for forty years, I have met with nothing to support the theory advanced by some aural surgeons, that exostoses of the meatus owe their origin to sea-bathing, although I have known prolonged "side-stroke" swimming in the sea cause severe ordinary otitis on the submerged side.

The still more recent literary productions are too fresh in the minds

of us all to need allusion to them, unless to show that on all sides the evidence of to-day amply proves that Otology is fairly abreast of the various other branches of the healing art.

The very existence, indeed, of this "Section" itself, helps to strengthen this position; and I will venture to trust that the fact of this Section being presided over, on the present occasion, by a "general practitioner," may not only not lessen the value of its work, but that it may even tend, in some measure, to convince general practitioners, as a body, that a decent knowledge of aural surgery is quite within their reach, and should receive a share of their attention.

In conclusion, as a still further proof of modern gains in connection with our speciality, I may just allude to those cases in which surgical skill is hopeless—the simply deaf may yet be helped by an improved instrumental conveyer of sound, and "lip-reading" may save the deaf-dumb from social exclusion.

Gentlemen, I thank you for your patient endurance of what, I fear, has been rather an ordeal.

FIFTY-FOURTH ANNUAL MEETING.

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRIGHTON, August, 10th, 11th, 12th, and 13th, 1886.

FIRST GENERAL MEETING: TUESDAY, AUGUST 10TH, 1886.

THE first general meeting was held in the Dome of the Pavilion, Brighton, at 3 P.M., on Tuesday, August 10th.

The chair was taken by Dr. W. T. EDWARDS, President for 1885-86.

The minutes of the previous meeting were confirmed.

Address of Retiring President.—Dr. EDWARDS, in resigning the chair, said he desired most heartily to thank the members of the Association for the great distinction that had been conferred upon him. The year in anticipation of his appointment had been one of great anxiety. He felt himself unfitted for so responsible a position, but, by the kindness of the South Wales Branch, and the courtesy of all the officials of the Association, he hoped he had been able to discharge his duties in such a way as to promote the interests of the Association. He had great pleasure in knowing that the chair was this year to be filled by their worthy representative, Dr. Withers Moore; he was so well known as an active member of the Council, a distinguished member of the profession, that it was unnecessary to say anything in his praise. They were all well assured that in his hands the duties of his office would be worthily discharged. Again thanking the members for their kindness, he asked Dr. Withers Moore to take the chair.

Dr. WITHERS MOORE, in taking the chair, said he desired, on behalf of the municipal authorities of the town, and of his professional brethren, to bid the Association a hearty welcome to Brighton. They were honoured by an unusually large number of visitors. It might be invidious to single out any of them, but, there being a very large contingent from the United States, he might be permitted to mention one name—that of Dr. Davis, the President-elect of the International Medical Congress,—one of the most popular men in his country. They heartily welcomed him to England, as indeed they did all their foreign visitors. The Local Executive Committee had done all in their power to conduce to the comfort and convenience of the members, who, it was hoped, would have a prosperous, pleasant, and profitable meeting, which might take rank with the most successful of its predecessors.

Vote of Thanks to Dr. Edwards.—Dr. E. WATERS (Chester) congratulated Dr. Withers Moore on his assumption of the duties of President, a position to which he had been promoted not only by the good-will of the profession in Brighton—those who had known him so long and so well—but also by the universal voice of the Association. In proposing a vote of thanks to their outgoing President, Dr. Edwards, who was elected to the chair at their meeting in Cardiff, he said his recollection of Cardiff went back a great many years, to a time when, passing through it as a small country town where the mail changed horses, it had, he believed, something like 1,200 inhabitants. The then small hamlet was now a town of 120,000 inhabitants, full of life, full of prosperity, full of intellect, and the seat of one of the rising schools of learning that he trusted they would one day see flourishing in Wales. Dr. Edwards occupied a prominent position in connection with the University of Wales, of which there was a college founded in Cardiff, and in that respect showed his warm interest in all that promoted the advance of education in that country. He moved:

"That the cordial thanks of the Association be given to Dr. W. T. Edwards for the courteous and able manner in which he has filled the office of President during the past twelve months, and that he be elected a Vice-President for life."

He believed that, in carrying that resolution, they would have placed on the list of their permanent officers one who would always be attentive to his duties, and would promote in every way the future good and welfare of the Association.

Dr. CHADWICK (Tunbridge Wells) in seconding the resolution, which he did with unmingled satisfaction, said there was one point that he wished particularly to emphasise. In order to the prosperity and progress of the Association, it was a matter of vital importance to those gentlemen who received its honours and discharged them so effectively that they should keep those honours in mind, and not let the Association, so far as they were concerned, be cast aside as a useless thing, except as contributing to their honour for the time being. He was not afraid to make use of this sort of representation to the outgoing President, because he could appeal to his own conduct for twenty years since he had been President; and therefore, when he said that the Association had a right to expect that they would not forget the source whence their honours had been derived, he was sure that he should be excused.

The PRESIDENT said, in putting the resolution, that he felt how difficult it would be to follow so able and courteous a President as their friend, Dr. Edwards.

The resolution was carried by acclamation.

Dr. EDWARDS said he was very grateful for the very handsome manner in which Dr. Waters and Dr. Chadwick had referred to his services, and for his appointment as Vice-President for life. His election to the office of President had been the greatest honour he had received during his professional career. To have received such a mark of confidence from his professional brethren, and then to be elected a Vice-President of the Association, was a distinction of which any medical man might well be proud, and he hoped that whatever of life and energy might be left to him would be devoted to the promotion of the best interests of the Association. He had been happily thrown into contact with the most earnest men in the profession anxious to promote its dignity and advance the learning and education of the youth now aspiring to enter it; and he hoped that by the means of the Association they would be all the more fitted to take their stand among the honourable professions of the country.

Report of Council.—The Report of Council, which was published at page 273 of the JOURNAL of August 7th, was read, the following supplement being added.

Since this report was written, the awards of the adjudicators have been submitted to your Council. In the case of the Stewart Prize, the adjudicators, Dr. George Buchanan, Dr. Grainger Stewart, and Dr. Walter Dickson, have reported in favour of Dr. Robert Cory, who has made valuable and important work on the subject of vaccination. The report of the adjudicators is published in the JOURNAL of July 31st, page 225. There were five long essays sent in for competition for the Middlemore Prize; and, after careful consideration, the adjudicators, Dr. Argyll Robertson and Mr. Nettleship reported that, of the five excellent essays sent in, the two best—bearing the mottoes of "Ars longa, vita brevis," and "Nichts neues"—were so equally balanced in merit, that they advised the prize should be equally divided between their authors. On opening the envelopes with these mottoes, your Council found that the names of the authors were Mr. John Berry and Mr. Adams Frost. The cordial thanks of the Association are due to Dr. Walter Dickson, Dr. George Buchanan, and Dr. Grainger Stewart, for their careful consideration, for the great amount of valuable and important work already done by recent investigators on epidemiological subjects, both at home and abroad, and to Dr. Argyll Robertson and Mr. Nettleship for their arduous labours in reading through five large essays on the subject of recent advances in ophthalmological science. The successful competitors have been asked to attend the general meeting of Thursday, immediately after the Address in Surgery has been delivered, when the prizes will be presented to them.

Sir W. FOSTER (who had been congratulated by the President on his knighthood) said the kindly words that had been spoken from the chair, and endorsed by his fellow-associates, were exceedingly pleasant and grateful to him. Any distinction like that which he had received was a distinction only when it came from professional work, and on account of service rendered to one's fellow-creatures. He believed it had been in the main due to the fact that he had been honoured by them in being

placed in the position of President of their Council. It was, therefore, a compliment to the British Medical Association; and, as a compliment to an official of that Association, an official who did much for the profession, and through the profession for the public, he accepted it. He moved:

"That the report of the Council, together with the financial statement for the year ending December 31st, 1885, be received and adopted."

In doing so, he said the report contained an allusion to the town of Brighton, and its growth and importance as compared with its condition at their former visit in 1851. He was sure no body of their countrymen would rejoice more than the medical profession that Brighton had grown and prospered, because they all recognised it as a health-resort of extreme value, and, as their President wittily observed at the dinner, remarkably healthy, in spite of the fact that it was a health-resort. He need not refer more to the town of Brighton than to say, from the little he had seen of it that day, that he was sure they would all receive a very hearty welcome, and be received in a way which would endear the town to them, and make them look back upon that meeting with pleasant and grateful memories. The Association had grown even to a larger extent than the town in which they were assembled; and they congratulated themselves on the fact that they had nearly 12,000 members, and were the largest scientific association that the world had ever seen. That greatness and that largeness made their responsibilities greater, and those responsibilities rested upon every individual member; and he hoped that each one would go back to his daily work animated by the sense that he was an unit in that great Society, which had for its object the maintenance and dignity of the medical profession, and the advancement of everything that could conduce to the welfare of the common humanity, of which they were all proud. The Report referred to their financial position, which, he was glad to say, was extremely satisfactory. They had a considerable balance of profit on the year's work, and that had been well invested, and was credited as part of the property of the Association. They were all extremely proud of the BRITISH MEDICAL JOURNAL, as the greatest medical journal that had yet been produced. It had by far the largest circulation of any medical journal in the world. It had been ably and brilliantly conducted by its present Editor, Mr. Ernest Hart, over a period of twenty years; and he was sure the members of the Association would agree with the Council that that long period of service, so conducive to the prosperity of their JOURNAL, and so conducive to the prosperity and growth of their great Association, made it right and proper to point out that for twenty years Mr. Ernest Hart had faithfully served them, and raised the Association JOURNAL from a comparatively small publication to be at the head of the whole medical literature of the civilised world. Those services were great, and he was aware that they all recognised them. With reference to the more recent growth of the Association, they had had Branches founded in different parts of the Colonies. They had also had the only uncovered area in England practically filled up by the establishment of a Branch in the city of Oxford; and they hoped one day to renew the pleasant memories of that academic city, by holding an annual meeting of the Association therein. Mention was also made of a great question that had, more or less, agitated all their minds—the question of medical reform; and it was a matter of extreme gratification that, after many years of continuous struggle, after repeated disappointment and failures, they had secured the passage of a Medical Bill through Parliament, and that the Medical Act of 1886 gave them certain principles for which they had long contended. That struggle, long continued, very often so arduous and so difficult that the chief workers in the cause of medical reform had been reduced almost to a condition of despair, had been at last crowned with success; and it had been so mainly on account of the persistent, the untiring, and self-denying labour of the President of the Medical Reform Committee, Dr. Waters. By that Act they obtained a security for the complete education of every medical man who came upon the *Register*, and also, though in a much smaller degree than he should have liked, it gave them some direct representation in the management of the Council which they paid to support. They supported the General Medical Council in the administration of the medical affairs of the whole profession, and it was only a matter of common justice that they should be represented on that body. They would now get such a representation, and their influence in the future on medical education, and the whole status of the medical profession, would depend very much on how they used the opportunity now given, and selected suitable persons to govern their affairs after their own methods. The Parliamentary Bills Committee had been doing very useful and valuable work, which would be more fully dilated upon in the report which would be presented on their behalf. The report also referred to the collective investigation work, and some members might be aware that there had been in the profession a certain amount of disappointment that they had not more tangible and definite results in consequence of their expenditure. The results were disappointing, but they must not on that account be in a hurry to give up a great work, and one which might become still greater in the future. The whole subject would be brought before the Association in a resolution to be submitted at a subsequent meeting. He now came to the pleasing fact that they had, in accordance with certain trusts in the hands of trustees on behalf of the Association, awarded certain prizes. These prizes, the Middlemore and Stewart, had been given for very good work indeed, and would be presented to the winners at a subsequent meeting. With reference to the accommodation of the Association, they had for a long time suffered in their premises in the Strand from want of space, and had been obliged to produce the JOURNAL under conditions that, as medical men, they felt were really a disgrace to them. Their printers had been working under conditions that were not really good and sanitary, and although they had made the best efforts they could from time to time to remedy those defects, the narrow space at their command had prevented their giving anything like an adequate amount of space to the production of the JOURNAL. That JOURNAL had grown so enormously in bulk and numbers since they entered the premises that they had been quite unable, with all the additions and improvements they could make, to keep pace with the growth of the business conducted there. For two or three years past they had been endeavouring carefully to look for suitable premises. He had never been very favourable to the purchase of a freehold site, and the erection of a stately edifice. He thought they should learn to walk before attempting to run; and, although at the present time they had £20,000, that would not go far in the purchase of a freehold and the erection of a stately building. He had, therefore, been very anxious that the labours of the Premises Subcommittee should not be directed to the expenditure of any large amount of money. It was better that they should go on developing carefully and cautiously the very lucrative business they were conducting at their office, saving a few thousands a year, and putting them by, so that, probably in ten, fifteen, or twenty years, they might enter on the full glory of their possessions. At the present time they were saving about £3,000 a year; he wished that to continue, without any enormous drain on their resources, because, in the future development of the medical profession, they, as a representative body, might have to contend with the vested interests of great corporations. He hoped they might all work amicably together, but if they did ever have to contend with a great corporation like the College of Physicians, or the College of Surgeons, over some question of medical policy, the resources of war would greatly influence the result of that contest, and he wanted the Association to be so rich that it might enter on such a contest without fear, and without being afterwards reproached that it attempted a task beyond its powers. Hence the whole future, he believed, of the medical profession depended upon the cautious way in which they approached this subject. When the report was written, they were still without the power of saying that they had obtained a home. He was happy to tell the members that, since coming to the meeting, he had received a telegram which told them that they had at last obtained possession of a place that would be worthy of the association, and fit for the carrying on of their business. Their solicitor to-day had purchased one of the best buildings in the Strand, and at a comparatively small sum; that is, he had purchased the leasehold of the premises lately occupied by the Briton Medical and General Insurance Company. In those premises there was ample space for many years to come. It was a short lease, something under twenty years, but in those premises there was sufficient space for the conducting of their business, as far as they could calculate, for the next twenty years. They would have a capital room for their Council meetings, and would be able to conduct the whole of their business and the production of their JOURNAL within the four walls of the building. At the same time they would have a building that would not be a disgrace, but rather a credit, and one which from its situation would greatly add to the business, the progress, and development of the Association. During the year, they had endeavoured to organise their various committees. It was impossible that all the work of the Association could be performed by the Council itself, and therefore a great deal of it had to be divided among committees. Those committees had now been reduced to a state of order, and had been made directly responsible to the Council. In that way, the whole work of the Association could be harmonised, and brought to a common result, such as might be satisfactorily laid before the Association at the annual meeting. The regulations by which this had been

done were embodied in the report. Allusion was also made to the fact that they had lost many able and valued men, good and able practitioners, from the ranks of the Association during the past year. They all sorrowed in those losses. He would not particularise any of them, but was sure that every member would regret some of those serious losses which had occurred since they had last the pleasure of meeting at Cardiff. He moved the adjournment of the report.

Dr. CARTER, in seconding the motion, said, that while they all recognised the immense debt of gratitude which they owed to Dr. Waters for many years of most self-sacrificing labour, they must not forget the immense advantage which had accrued from the position held by Sir Walter Foster in Parliament, and the able way in which he had seconded the efforts made outside. With reference to the selection of their representatives at the Medical Council, he suggested that the Medical Reform Committee should be instructed to select and nominate to the Association at large three gentlemen fitted to represent them on the Council. He was sure that the Association would cordially endorse such a nomination. This would prevent heart-burnings and jealousy and individual effort, and would, he felt confident, best secure their interests.

Dr. MORRIS (Spalding) thought the Report should have told the members how they were to proceed in this matter of the election of their representatives in the General Medical Council. He hoped that no vote would be given to any man who was not a general practitioner. He had presumed himself to step forward, but was quite ready to give way to some such plan as that suggested by Dr. Carter. He (Dr. Morris) had been forty-five years in general practice holding union appointments and club appointments, and if he did not know the requirements of the general practitioner, he did not know who did. He had also taken an active part in the Association, and had been a member of the Council for many years. He had worked with most of those around him; they knew who he was, and he was at the service of the profession if they chose to elect him. His suggestion with reference to the election would be that the Council should submit a list of candidates to the general practitioners, and that those obtaining the highest number of votes should be supported as the candidates of the Association; that would be a very fair way of doing it. He hoped that some such means would be adopted, or otherwise they might depend upon it they would be under the influence of those already in power.

Mr. HENRY MARSHALL, referring to the financial statement, thought the meeting was entitled to know to whom the sum of £1,598 8s. for "Contributions to the JOURNAL" was paid. He was quite sure there was no wish that there should be any concealment in the matter of expenditure, and therefore he should be glad if some information could be given on the point. He was glad to observe that the Council intimated that they were about to consider the subject of collective investigation from the financial point of view. He wished it were possible to take up the subject of medical protection, and to expend a portion of the funds at their disposal in prosecuting quacks and unqualified practitioners of every kind. This would be a benefit to every member of the profession, and would be of far more practical service to the Association than collective investigation.

Mr. NICHOLSON suggested that the Council should nominate three members to represent the Association on the General Medical Council.

Dr. CARTER said he intended to move a resolution on this subject.

Mr. HUGH KER said he was very glad that Dr. Carter had brought this subject forward, as it was of very great importance to the profession. They were to have three representatives, but those, if backed up by the whole profession, would have a power on the Council such as no other member could possess. It was, therefore, extremely important that they should have a proper selection of candidates. If it was left to a haphazard nomination, they would have a whole heap of nominations, and it would be a chance if they did not go in with three broken sticks, instead of the three men who ought to represent them. He thought it would be hardly fair to ask the Reform Committee or the Council to nominate candidates, and should prefer that a ballot should be taken during their meetings, by which means they would probably arrive at the three men who were most likely to receive support from the Association and the profession at large.

Sir W. FOSTER, in reply, said, with reference to the large item of £1,600 paid to contributors, the most scrupulous care was taken by the Council to investigate all the details. It would be impossible to conduct the JOURNAL if they were obliged to publish the names of everybody who wrote for it. They had a number of contributors of unsigned articles, whose contributions were of the utmost value on certain public questions, because they were people who could speak with special knowledge; but those contributors would be lost if the Association were to publish at the annual meeting the names of the people who wrote those articles. He could assure Mr. Marshall that the matter was looked over most carefully. During the last year, one of the members of the Council moved for a return to show how much the editor and each subeditor received out of that sum; and, when the return was presented, the Council was quite satisfied with the result. With reference to the prosecution of quacks, that was a very large matter, and would require a great deal of consideration. He could not give any answer at once to a proposal of that kind.

The resolution for the adoption of the report was then agreed to.

Representation of Colonial and Indian Branches.—Dr. WARD COUSINS moved, pursuant to notice, the following addition to, and alteration of, the by-laws, namely:

"Page 17, By-laws. Addition to 'd,' second line, after the word 'member,' add 'of a Branch within the limits of the United Kingdom of Great Britain and Ireland.' Addition to 'd.'—'No person shall be eligible as a representative member of a Colonial or Indian Branch unless, at the time of his election, he shall be a recognised member of the Branch, and shall have resided within the area of the Branch for at least twelve months prior to his election. The election of Colonial and Indian members of the Council shall be annual, and shall be subject to the same by-laws as the election of other representative members.'"

According to the present rule, he said, no one could be elected as a representative member unless at the time of his election he was resident within the area of the Branch nominating him as their member. That was a wise provision for the United Kingdom, but it bore hardly upon the Colonial and Indian Branches, and might require, if enforced, that the representative of a distant colony should spend nine months every year in travelling to and from London to attend the meetings of the Council, in which case he would probably consult with Mr. Dix on the question of the payment of his travelling expenses. The object of his proposal was to limit the application of the rule to the United Kingdom, and to make special provision for the election of representatives from Colonial and Indian Branches. He believed that all the members of the Association desired that every Branch should have a representative on the Council, and that distance should be no bar to mutual co-operation. The question had been discussed by the Council, who approved of his proposal.

Mr. SOLOMON seconded the motion.

On the motion of Mr. TAYLOR, seconded by Dr. SHEEN, the question was referred to the Council, to be reported upon at the next general meeting.

Payment of Representatives in the Council.—Mr. JOHN DIX (who asked permission to postpone his motion to the evening, which the meeting refused) moved:

"That the Council of the Association be requested to consider the question of paying the travelling expenses of the representatives of the Branches to the Council meetings."

The result, he said, of the present rule, was that many of the distant Branches were not adequately represented on the Council. The distance entailed on the representative not only loss of time, but pecuniary loss in leaving his practice, and in the payment of travelling expenses. The tax was often a heavy one. In his own case, it amounted to £10 a year for travelling expenses alone. It was absurd to say that the Branches should pay the expenses. Why should the Edinburgh Branch be called upon to pay £30 a year, while the Metropolitan Counties Branch could send five members at a cost of 9s. 8d. a year? The result of the present system was, that some of the distant Branches sent no representatives at all. During the present year five Branches had nominated none, and in other cases the members nominated had not attended. Metropolitan members could attend the Council meetings for nothing, except perhaps Dr. Bridgwater; and even he could not spend more than 9s. 4d. a year in his travelling expenses. If all the expenses of all the members were paid by the Association, the maximum amount would be under £500 a year, which was a flea-bite in comparison with the income of the Association.

Dr. DEAS seconded the motion.

Dr. BRIDGWATER said he differed from Mr. Dix in all his arguments. Members were elected to represent Branches, and had always done so without any reference to payment. By the accident of circumstances, some lived at a longer distance than others. Claim for compensation from the Association, on that ground, was invalid. The Branches, as a whole, had expressed their disapproval, and were, for the most part, prepared to defray the railway expenses of their representatives; and many did so.

Dr. EYTON-JONES opposed the motion. Mr. DIX, he said, had sent out circulars to all the Branches, and the majority of replies had been distinctly against the resolution. The Association had on several occasions decisively recorded its opinion on the subject, and he solemnly protested against the occupation of the time of the members in discussing it again. The work of the Association was done as much, or more, by Committee of the Council as at its quarterly meetings, and, if the principle of dipping into the funds of the Association for railway fares were once adopted, there would be no end to it, and there would be no funds for great professional purposes.

Mr. VINCENT JACKSON moved the adjournment of the debate, which was put and negatived.

The motion was then put and negatived, and the meeting was adjourned to 8 P.M.

The adjourned meeting was held in the Dome, Dr. WITHERS MOORE, President, in the chair.

Welcome to Dr. Davis of Chicago.—Sir W. FOSTER said: that in the name of the Association he desired to welcome heartily among them Dr. N. S. Davis, one of the founders of the American Medical Association, and the President-elect of the International Medical Congress. By their cheers the members had given to Dr. Davis a welcome which he desired the Association to give to their kindred beyond the seas.

President's Address.—The President delivered his address, which is published at page 295.

Dr. N. S. DAVIS moved: "That the best thanks of the Association be given to the President, Dr. Withers Moore, for his able and interesting address." He could not refrain from expressing his most cordial sympathy in the sentiments that had been expressed in the main body of the address. There was no more important theme that could occupy the attention of medical men as conservators of public health, no higher duty that they could discharge, than that of bringing their influence to bear in endeavouring to stay the tendency that had sprung up in many countries, and in none more than his own, to push the female sex forward to qualify in the higher brain-work necessary for all the higher avocations usually occupied by men. He had been so situated in connection with some of the American schools as to have had personal opportunities for observations in regard to the results of such action, and he thought there was already abundant practical demonstration in the few years that had elapsed since those trials had been made, to show that every evil which had been alluded to in the President's address had clearly followed. Instead of raising the question whether women could be trained to an equality of man, he would claim that woman had all the capacities of intellect and brain, and every qualification designed to fit her for her high station in the world, which the God of nature had designed her to fulfil; and while she could not be qualified safely, properly, and beneficially to fill the station and discharge the duties designed to be done by man, neither could man be qualified to perform the duties of the female sex. Both were supreme in their proper spheres; but when they defied the laws of nature, and undertook to transform and intermingle them, they were striking a fatal blow at the welfare of the race.

Dr. QUAIN, in seconding the motion, congratulated the President on the position which he had attained. As to his address, he had never heard the subject more eloquently and forcibly discussed, and he had no doubt that its effect would be very striking and beneficial. It had been said that, if the American ladies pressed onward as they were doing, they would have to import English ladies from this side of the ocean, and when that result followed, he believed it would produce a very great effect indeed.

The motion was unanimously adopted; and the PRESIDENT briefly acknowledged the compliment.

Notices of Births, Marriages, and Deaths.—Mr. JOHN MARSHALL (Dover) moved:

"That notices of births, marriages, and deaths occurring in the families of members of this Association, shall be published in the BRITISH MEDICAL JOURNAL without charge."

He contended that, as the JOURNAL was the property of the members, they should have some consideration in regard to advertisements generally, and that notices sent by them of births, deaths, and marriages in their families should be inserted gratuitously.

Dr. C. SMITH (London) seconded the motion.

Mr. WHEELHOUSE urged that the matter was purely a business one, and one which the Council and the JOURNAL Committee could well decide. He moved as an amendment that the matter be referred to the Council.

Mr. MASON seconded the amendment, which was agreed to; and it was also carried as a substantive motion.

SECOND GENERAL MEETING, WEDNESDAY, AUGUST 11TH.

Dr. WITHERS MOORE, President, took the chair at 11 A.M.

Annual Meeting in 1887.—Sir W. FOSTER said, with reference to the annual meeting of next year, that the Association was in a position which it had experienced before, of not having any invitation. There were plenty of invitations for 1888 and 1889. Under these circumstances, while looking forward to going to Glasgow in 1888, and possibly to Leeds or some other large English town in 1889, it was necessary that the Council should be empowered to make arrangements for 1887. He therefore moved, "That it be referred to the Council to arrange for the place of meeting of 1887, and, further, that the Council be empowered to appoint the president-elect." There would be no difficulty, he expected, in getting a cordial invitation from one of the towns, probably in the West of England; and if the matter were left in the hands of the Council, they would do their best to carry out the arrangement, so as to give pleasure to every member of the Association.

The resolution was seconded by Mr. WHEELHOUSE, and agreed to.

A number of delegates from American, Continental, and foreign Medical Societies, were then severally introduced to the President.

Address in Medicine.—The PRESIDENT said that last autumn, Medical Great Britain stretched forth her hand across the Atlantic to be warmly grasped by one of America's ablest and best of men. Dr. Austin Flint cordially reciprocated the friendly act, and at once set to work to prepare his address. That address was finished last spring, and then the Master called him home. They cordially sympathised with their American brethren in this truly great loss which they had sustained by the death of one whom they esteemed as a brother, as well as a great physician. It was in this latter capacity that they mourned his loss—a loss which would be felt wherever medicine was recognised as a science. The gap thus made in the arrangements, large though it was, had to be filled up; and the President of the Council agreed with him, that, as the invitation was intended as a compliment to the nation, as well as the individual, they ought to repeat it. The eloquence and ability of Dr. Billings, being known from past experience, he was asked to take up the mantle which had fallen from his esteemed colleague. Dr. Billings was present, and he (the President) would not tantalise the members further by withholding from them the treat to which, no doubt, they were looking forward, but would at once introduce Dr. Billings to their notice.

Dr. BILLINGS then delivered the Address, which is published on page 299.

Director-General Sir THOMAS CRAWFORD proposed, "That the best thanks of the Association be given to Major Billings, M.D., for his most able and interesting address, and for having undertaken to visit this country and act as Orator in Medicine, in consequence of the lamented demise of Professor Austin Flint." He said that language failed him to pass a suitable eulogium upon Dr. Billings's address. There were, however, two points in it to which he would ask special attention; first, the unity of medicine, as represented by its universality; and secondly, the means which had been adopted in various countries to fix a minimum standard for men practising the art and science of medicine. Those two points had been so admirably dealt with by Dr. Billings that they could not do better than couple his name with them, he having been himself a personification of the energy which he had so graphically described as characteristic of the race, in working out the unity of medicine, by bringing together various nationalities for the purpose of its cultivation. No members of the profession had done better work in that direction. The medical library, on which he had bestowed so much labour, was second to none in the world, and coupled with that was the admirable museum, which had grown out of his efforts and those of his brethren of the Medical Department of the Army.

Dr. ORD, in seconding the motion, said that Dr. Billings's address was one of the greatest intellectual treats that he had enjoyed. It was indeed thoroughly characteristic of the man and of his great power of work and organisation; and his views had been expressed with a touch of humour which had sent them deep down into all their memories.

The PRESIDENT, in putting the motion, said that the address was an ample justification of the choice of the Council.

The vote of thanks was passed unanimously by acclamation.

Dr. BILLINGS said it was quite impossible to make any response to the reception he had met with. He appreciated it very highly, and thanked the Association very warmly.

Dr. WITHERS MOORE then left the chair, which was occupied during the remainder of the meeting by Sir W. Foster, President of the Council.

New Premises for the Association.—The CHAIRMAN reported that the Council had authorized the payment of £4,500 for the purchase of the lease of the premises hitherto occupied by the Briton Medical and General Life Association, which, he believed, would form a fitting home for the Association during the eighteen years of the lease yet to run. Besides affording accommodation for the business of the JOURNAL, he hoped that it would provide a reading room for the use of members when in town. After providing a sinking fund for the restoration of the money, and the necessary amount for repairs, supposing the present premises to be let at the rent of £320, the new premises would stand at about £800 a year, and for the expenditure they would obtain great social and commercial advantages, and add greater dignity to the Association. When the lease had expired, he hoped that the Association would be able to enter on the freehold property, with a building of its own worthy of the position it would then occupy.

Award of Prize to Dr. Ward Cousins.—Sir W. FOSTER reported that the Council had awarded to Dr. Ward Cousins a prize of £20, adjudged in 1883 by the Otological Section, for the invention of a sound-deadener. The prize had been offered by a gentleman, who, for certain reasons, had declined to pay the amount; and the Council had thought it only right that the Association should supply the funds for that purpose. He would ask the meeting whether it approved of the course that had been adopted.

The resolution of the Council was unanimously affirmed.

Dr. WARD COUSINS thanked the meeting for the handsome way in which he had been treated, and expressed his intention of offering a prize of the same amount for some other object, notice of which would be given in the JOURNAL.

Representatives in the General Medical Council.—Dr. CARTER moved:

"That it be an instruction from this meeting to the Council of the British Medical Association to select three names of gentlemen suitable for election to the General Medical Council by the medical practitioners of England, and to submit them to a future general meeting during the session of the Association in Brighton."

He said that very much depended on the way in which members of the profession exercised their right of choosing representatives to sit at the General Medical Council. Everything would have to be done before November, and there were only two methods of proceeding—to allow gentlemen to nominate themselves, or to entrust the duty to some organisation. The British Medical Association was really the organisation of the medical practitioners of England; and he thought they could not do better than ask the Council of that body, in whom they had every confidence, to select the names of three gentlemen whom they might deem suitable, and submit them to a meeting during the present session.

Dr. EYTON-JONES, in seconding the resolution, said he hoped that the selection would not be limited to any particular class, but that gentlemen would be chosen who were best qualified to look after the rights of general practitioners.

Dr. KER, in supporting the resolution, sugggested that more than three members should be nominated, leaving the voting members to decide between them.

Dr. DOLAN moved, as an amendment,

"That inasmuch as it is inexpedient that this Association should appear in any way to interfere with the discretion of the profession at large to elect their direct representatives, the action of the Association ought to be strictly limited to obtaining from such of its members as desire to express their opinion a *plebiscite* upon the names of those candidates for the office who may submit their names for the purpose through the Council."

Now that the profession possessed the franchise, it was proposed that they should surrender their powers into the hands of the Council. There had been other workers and other candidates in the field. The present proposal had come upon them by surprise. He thought that the members would be stultifying themselves by adopting Dr. Carter's resolution.

Dr. MORRIS (Spalding) supported the amendment, but thought that the JOURNAL might be entrusted with the task of ascertaining the feelings of the members of the Association.

Dr. DUNCAN (Glasgow) differed both from the motion and the amendment. He did not know why the Association, which was a "British" one, should be restricted to the nomination of English representatives. If that were done, the Scotch and Irish Branches would be thrown off. He would suggest that the Council be instructed to send out circulars to the various Branches, requesting them to furnish names of gentlemen proposed for election by the medical practitioners of the United Kingdom, to be submitted to a future general meeting during the present session.

The CHAIRMAN said there would not be time to submit the names so sent in to a meeting during the present session.

Dr. DUNCAN said that in that case he would support Dr. Dolan's amendment.

Mr. BROWN was greatly surprised that the Council should have brought forward such a resolution.

The CHAIRMAN said that the Council was in no way responsible for it, and it in no way originated with them, but was spontaneously and unexpectedly moved in the body of the meeting by Dr. Carter.

Mr. BROWN said that the proposal was a most objectionable one, practically delegating the election to a caucus. Representatives should be elected on their own merits, instead of being nominated by a body like the Council.

Dr. MASON (Glasgow) opposed the motion as impolitic.

Mr. ALDERSON hoped that the rights of general practitioners would be specially guarded, but he would not exclude anyone who had been a general practitioner but was now a consultant.

Dr. CARTER, in replying, said it had occurred to him that the Council, as at present constituted, might be advisedly entrusted with the task of selection; but as there appeared to be a general feeling against his resolution, he would withdraw it.

On Dr. DOLAN's amendment, which now assumed the form of a substantive resolution, being put,

Dr. B. O'CONNOR moved, as an amendment, that no action be taken in the matter.

Dr. DOLAN then withdrew his proposal, and the matter dropped.

The proceedings were then brought to a close.

THIRD GENERAL MEETING, THURSDAY, AUGUST 12TH.

Dr. WITHERS MOORE, President, took the chair at 11 A.M.

Address in Surgery.—The Address in Surgery was read by Mr. F. A. HUMPHRY, F.R.C.S., Surgeon to the Sussex County Hospital. It is published on p. 307. On the motion of Sir WILLIAM MAC CORMAC, seconded by Mr. WHEELHOUSE, the thanks of the Association were given to Mr. Humphry for his address.

Presentation of Medal to Dr. Waters.—Sir W. FOSTER said that the gold medal for distinguished merit of the British Medical Association had been this year awarded to Dr. Edward Waters, for his long-continued, self-denying, and able services in the cause of medical reform. He handed the medal to the President for presentation. The President, amid loud cheers, then presented the medal to Dr. Waters, who expressed his heart-felt gratitude for the distinguished honour conferred upon him—an honour which, he said, had surpassed his wildest imaginings.

Stewart and Middlemore Prizes.—The Stewart Prize was presented to Dr. Robert Cory, and the Middlemore Prize, for the best Essay on the Advance of Ophthalmological Science during the past three years, to Mr. G. Berry and Mr. Adams Frost.

The International Medical Congress.—An invitation to the International Medical Congress next year, in Washington, was given by Drs. Davies, Brodie, and Pancoast, and the cordial thanks of the meeting were given to those gentlemen and the other American delegates for the invitation.

Peerages for Medical Men.—Mr. HUMPHREYS (Shrewsbury) submitted a memorial of the Shropshire and Mid-Wales Branch to be forwarded to the Prime Minister, suggesting the bestowal of peerages on distinguished medical men who were thought worthy of State honours. After a short discussion, the acceptance of the memorial was negatived by a large majority.

[A fuller report of this day's proceedings will appear in our next issue.]

ST. GEORGE'S HOSPITAL.—The prizes gained by students in the medical school of this hospital were distributed to the successful competitors on Friday, July 23rd, by the Dean of the School, Dr. Wadham. The following are the names of those to whom prizes were awarded. William Brown £100 Exhibition: Mr. A. W. Vernon; Treasurer's Prize: Mr. W. L. Dickinson; Thompson Medal: Mr. H. J. Wheeler; Brackenbury Prize in Medicine: Mr. D. L. Dickenson; in Surgery: Mr. W. Goodale; Sir Charles Clarke's Prize: Mr. H. Lawson; Acland Prize in Clinical Medicine: Mr. D. L. Dickinson; Brodie Prize in Clinical Surgery: Mr. H. Goodale; Honorary Certificate: Mr. L. Lancaster; Henry Charles Johnson Memorial Prize: Mr. Cyril Ogle; Pollock Prize in Physiology: Mr. Cyril Ogle; Honorary Certificate: Mr. H. Higgins; General Proficiency Prizes, third class: Mr. L. Lancaster; second class: Mr. W. M. Davidson, Mr. M. Le Cronier, and Mr. C. T. Heaton; first class: Mr. Lionel Seymour.

BRITISH MEDICAL ASSOCIATION SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 14th, 1886.

THE MEETING AT BRIGHTON.

THE annual meeting at Brighton has, as might have been expected, been very largely attended, and has fully realised the anticipations which we ventured to express, that it would prove to be in every way brilliantly successful. That admirable organisation of Dr. Withers Moore and his colleagues, the public spirit of the leading inhabitants and of the profession resident in the Queen of watering places and throughout the south-eastern counties, have provided ample funds with which to realise all the advantages offered by the favourable situation of Brighton and its many attractions and facilities. The buildings of the Pavilion sufficed to afford spacious accommodation for all the sections, and for the museum, within one enclosure. The public receptions were on a scale of unusual splendour, and the favourite residence of George the Fourth provided accommodation for all the work and the amusements of the Association, as well as for the meetings of accessory organisations, to which, in increasing numbers, the Association gives useful hospitality on the occasion of its annual meetings.

There was a great concourse of foreign guests, always one of the most agreeable features of these meetings. There was a large reception of the best intellect of all the great cities of Great Britain. Well-known leaders of the profession from London, Edinburgh, Dublin, Glasgow, Manchester, Leeds, Liverpool, and the South and West of England, gave weight and dignity to the scientific work in the Sections, which have been unusually numerous and weighty.

Professor Liebreich, of Berlin, gave a luminous address in the Section of Therapeutics on another of those new products, with more than one of which his genius has already enriched the resources of medical practice; a product which is apparently destined to revolutionise, to some extent, cutaneous medicine, to enlarge the powers of the healing art, and to provide that which neither vaseline nor any of the animal fats previously known have been able to afford, namely, a keratinous fat highly absorbable, dissoluble with water, an organic compound natural to all dermatic and epithelial structures, the importance of which has hitherto been overlooked, and which he has succeeded not only in extracting, but in purifying and rendering available, as a basis of ointments and inunctions, which promises to be of inestimable value.

Professor Charcot gave a luminous address on one of the most interesting forms of nephritic disease. Professor Lusk, of New York, Dr. Emmet, and others, added valuable contributions in their respective sections; while most of the names known in medicine and surgery in the United Kingdom are represented in this year's record of the scientific proceedings of the annual meeting of the Association.

Of the various addresses we speak elsewhere; they were of a high order, and attracted large audiences, who showed by their enthusiasm with what pleasure they listened to the words of the eloquent and learned speakers. Nothing occurred to mar the harmony of the meetings; and although the conduct of the later parts of the business meetings still leaves much to be desired, this is an element of inefficiency for which time and the good sense of the members generally will probably provide a remedy; and they will probably learn, possibly to their own cost, that it is a mistake to allow important administrative business to be carried on at the fag end of meetings already fatigued by long addresses, and in which only a very small number of persons still remain to conduct what may at any moment prove to be business of high importance. It is easy, under such circumstances, for any small party of malcontents, to use the phrase of one of our American visitors, to capture a meeting; and the experience of many meetings has shown that in this respect some improvement is necessary.

Nothing of any great importance needed to be done at this annual meeting; but the consideration given to some questions of really considerable importance was very slight and perfunctory, and the attendance at the meetings at which certain business resolutions were discussed and passed was so small as to be in no sense representative while the discussions were hasty and inadequate. The feeling in this matter appears to be so general, and it is obviously so well founded, that it is as well to refer to it here, in order that the matter may receive some general consideration with a view to an improvement in what is an obvious defect in the business management of the annual meetings.

The proceedings were greatly heightened in interest by the attendance of a delegation from the International Medical Congress, to be held in America, at Washington, in September, 1887, to present an invitation to attend the Congress to the members of the British Medical Association. There have been some considerable internal dissensions among the organisers of this Congress, but it was very generally felt that this ought not to and could not prevent the invitation from America from receiving a cordial acceptance. This invitation, which was made at once in the name of the International Medical Congress by its President-elect, and of the American Medical Association by some of its principal officers, was received with that sincere and affectionate cordiality which both the purport of the message and the sources from which it came already assured for it in advance. It lost nothing of dignity or of interest in the weighty and grave words of Dr. N. S. Davis, one of the oldest and most respected members of the profession in America, and one who holds very much the same relation to the American profession as Sir Charles Hastings long held to the profession in Great Britain. Dr. Davis was practically the founder of the American Medical Association, and is its most respected spokesman. The English profession may be sure that they will receive in America a welcome of unlimited hospitality, and of boundless kindness and brotherly affection. They will see there a great country and a great profession, which has sprung up and developed with a rapidity and to an extent which the world has never seen during the life-time of many who were present to hear the invitation. In our own country, Paget, Lister, Mac Cormac; in France, Charcot, Trélat; and in all the countries of Europe, leading representatives of science have accepted invitations to be enrolled on the list of Vice

Presidents. In America, the President of the United States, and the great officers of State, have signified their acceptance of the offices of Patrons of the meeting; and official recognition of the highest kind, such as is naturally due to a great gathering of medical men from all parts of the world, will be accorded to those who accept the invitation to attend the first great International Medical Congress which has ever been held in the United States.

The presentation to Dr. Waters of the gold medal of the Association, in recognition of his most eminent and distinguished services to the profession, in the promotion of medical reform, was a feature of the greatest interest at the meeting; and the enthusiasm with which he was received, and the hearty and affectionate good wishes which were offered to him on all sides, sealed the award of the Council with the approbation of the whole Association, and must have greatly enhanced the pleasure with which Dr. Waters received this mark of the affectionate gratitude of the Association to him for his long services to it, and to the profession at large.

The meeting has proceeded throughout with all the conditions of satisfaction and success, and it will undoubtedly terminate under circumstances as happy as those of its first days.

THE PRESIDENT'S ADDRESS.

THE first great function of an association is to associate; and the British Medical Association, in its meeting at Brighton this week, had felt the most legitimate and substantial pleasure of fulfilling its function. There are many forms which the pleasure takes—the union in listening to the more general addresses, the meeting and discussion with perhaps more intimate friends, and the more absorbing subjects in the special sections; but, for all, the President's Address is a bond of common interest, and throws its shadow before it. Dr. Withers Moore gracefully expressed a full consciousness of being the second President who had addressed the British Medical Association at Brighton. The Association met there in 1851; and it takes a long memory, and a large grasp, to realise the full difference of the position, and the progress on many points, wide though slow, that has since been made.

But Dr. Withers Moore did not suffer himself to fall into that easy view of self-congratulation for a profession, which is apt to be induced on making a retrospect. He devoted himself at once to a large question which has many sides beyond professional interests. "Is it for the good," he asks, "of the human race, considered as progressive, that women should be trained and admitted to compete with men in the ways and walks of life from which, heretofore (as unsuited to their sex), they have been excluded by feeling and usage, and largely, indeed, by actual legislation?" The President has no doubt of a decided answer in the negative for his own part, but invites us to consider some aspects of this fundamental question of society. It is not difficult for him to lead us gently on to realise, in spite of some Hindoo Amazons, the general foolishness of making soldiers out of women, even though we hear nothing of such exceptions as Joan of Arc, which we should think must prove the rule. It is not difficult to show that for bettering, in some physical points, the breed of men, if they are to be considered from the same point of view as racehorses, the feminine half of the race should be kept under very strict limiting conditions; and, taking his text from Herbert Spencer, that the first requisite for success in life is to be a good animal, Dr. Withers Moore, in various interesting directions develops its application to the mothers of the human race. The "higher education" of women, against which he is pleading, carries its own condemnation with it, in his opinion, inasmuch as it "indisposes to matrimony, and unfits for maternity." That it indisposes to matrimony, we should not be inclined to discuss here; though it should be remembered that it may have different effects on the two parties to such an action, and any results which may come from it just at first are apt to be a little exaggerated, so long as it can only be watched and estimated among a few enthusiasts who may be apt to outrun affection as well as to overstep prudence, and rejoice in being proto-martyrs, as it were, in their crusade. That it unfits for maternity is a really serious accusation, and a point on which all the world is anxious to learn the most that the medical men can teach them. On this branch of the subject, Dr. Withers Moore can adduce the weighty corroborative testimony of Dr. Matthews Duncan, as to the injurious functional effects of overpressure in education upon girls; and anyone who appreciates Dr. Duncan's extremely careful consideration of the subject, will realise the importance of his conclusions. In the United States, as is shown by many others besides the distinguished witnesses, Dr. E. H. Clarke, Dr. Emmet, and Professor Loomis, whom the President calls in evidence, the question excites a much more keen and practical interest; for there is no doubt that the pure American stock does not increase nearly as fast as some imported from England, and more especially from Ireland. How far "higher education," or what seems to be considered almost synonymous, "overpressure in education," contributes to this result, needs careful consideration; though we should imagine that to draw any line of action from it would be hard enough.

One of the most distinguished modern historical essays points out how largely the Roman Empire was lost by the Romans, owing to their sterility; they had not enough children to oppose to the barbarian invaders; and, on the other hand, it is not hard to show how largely fertility is contributing to establish the larger empire of the English-speaking race, and how highly they prize it. But the Roman women did not have fewer children from the overpressure of education; there were many different factors at work there, as there may be now in the comparatively small families of the upper classes in the United States. The impulses that keep France an unfertile country are far stronger than any that result from education.

Throughout, Dr. Withers Moore has gone on the assumption that every woman is to be a wife—a simple, and it may be in some ways an ideal, conception of the whole duty of woman, but one that separates it more than need be from the whole duty of man. Modern society has slowly and for long been breaking with that opinion. Nature, one may say, has to a certain extent broken with it in leaving us in England a large excess of marriageable women over marriageable men. If every Englishwoman were employed as a wife (and how many unions worse than solitude that would involve), there would still be a considerable surplus who would have to employ themselves. If we hamper them in their employment by merely legal obstacles, we are only too apt to keep up the continual irritation of a barrier which shuts off an unknown land. There may be nothing better to be had beyond the limit, but everyone who is shut out fancies that there is. It is the better plan to throw open the ground, and let them see and try for themselves. So, too, with the advocates of the extension of the sphere of women's work. They may see many pleasant prospects which women are strictly forbidden to approach, though their circum-

stances press them hard. The pleasant prospects may be mirages, but it is better to be allowed to make trial of them than to be fenced off. *Experientia docet.* So of the competition of women with men in some things, such as a medical profession. If all were obliged to attempt it, it would ruin many and kill some; but the common sense of the world does not go readily to such a holocaust. If it were undertaken by the few that wish for it, it might need much experience to learn its best methods, and might involve some bitter disappointments, but there would be some successes to show that the attempt was not foolhardiness, as Sir W. Gull pointed out in well weighed words in a memorial speech some few months ago. The good of the human race, which is the end set in view in considering these difficult problems, has no short cuts to it; we are not likely to gain much without losing something.

THE ADDRESS IN MEDICINE.

THE key-note of Dr. Billings's address was the need for co-operation among medical men, not only in defence of their professional interests—an attitude which, however speciously or even honestly presented as a concern for the protection of the public, is not easily distinguishable from a highly respectable form of trades-unionism—but still more in the advancement of knowledge by organised, not by mere collective, investigation. For not only does the extent of the ever-widening field of science necessitate a division of labour, through which division the separate parts are more perfectly worked, but there is a large mass of potential knowledge as yet unformulated, and not to be found in books, as to the diverse effects of like causes, be they specific micro-organisms, physical injuries, or meteorological influences, on individuals of different bodily organisation or psychical characteristics. The existence of some relation, though as yet unrecognised, of some factors on which these different effects depend, is assumed in the expression "heredity;" and it is the possession, in however ill-defined a form, of this knowledge in the case of small groups of persons, that gives weight to the judgment of the "family doctor," who knows the patient better than is possible for the consultant, though the latter may have a far clearer conception of the disease.

What the family is to the individual, that the race is to the family; and, in national or racial types, we see heredity on a larger scale, though it is probable that much of what appears, at first sight, as racial differences in the incidence and type, the prevalence and the fatality, of particular diseases, is rather to be explained by difference in national habits and ways of living, belonging to the domain of hygiene rather than of pathology.

Our American brethren have, as Dr. Billings pointed out, an enormous advantage over those of any other country, in the opportunities presented by the diversity of races and the range of climate to be found in the United States; where Teuton, Celt, and Slav, Spaniard, Negro, and Aboriginal American, are to be met with, in every degree of purity and of intermixture, and the effects of every climate to be studied in the case of each.

That these rich mines of facts have not hitherto yielded such results as might have been reasonably expected, is owing to two principal causes; one being the constitution of the profession itself, and the other the defective census and registration arrangements in the greater number of the States.

The regulation of medical practice is considered in America to be a matter for local police rather than national concern; and, in more than half of the States, the practice of medicine is perfectly free and unrestricted by legislation. In nearly all the States the possession of a diploma, of any character or description, confers the right to practise. In Alabama, however, a State examination must be passed by all, whatever their diplomas; and, in Illinois, diplomas granted by certain medical schools, deemed of "good standing" by the State Board of Health are recognised as qualifications; the holders of doubtful diplomas, or of none at all, being required to prove their fitness by examination. There are no fewer than eighty universities and medical corporations, some of which aim at giving the smallest amount of instruction that shall enable a man to practise, without the certainty of committing such gross blunders as the public would easily detect; while in others, the teaching does not materially differ from that given in the schools of Great Britain and the more advanced countries of Europe. But scarcely anywhere is due regard paid to preliminary and general education; so that, while America can boast of physicians and surgeons equal to any in Europe, there are too many who, from want of capacity and from defective education, derive but little benefit from the three years course of medical study, which is all that is actually required. In short, as Dr. Billings puts it, while we have nineteen portals to the profession, they have eighty gates, several turnstiles, and much unenclosed common land.

Taking the country as a whole, there are nearly twice as many "persons calling themselves physicians" as there are medical men in the same population in this country, where we feel the profession too full: but the proportion varies remarkably in different states, being 23 to 29 per 10,000 in Arkansas, Oregon, Indiana, and Colorado, while it is only 9 in the Carolinas, and 6 in New Mexico. Local legislation will not account for these differences; but as a rule the numbers are highest in those States where immigration is most active, and lowest in those where the negro element is largest, and where malaria is prevalent, or where the population is still sparse and scanty.

It is very difficult to draw any conclusion as to the influence of this state of things on the public health, partly from the fact that such inferences are materially affected by the various constitutions of the populations as regards age, and consequent on immigration, and partly from the imperfect and untrustworthy character of the statistics, especially of the mortality; 30 per cent. of the deaths not being recorded at all and the remainder largely certified by persons without any medical knowledge.

Dr. Billings urges a reform in this direction, as of paramount necessity, not only as tending indirectly to inform the public as to the difference between qualified medical men and pretenders, but as absolutely essential to the utilisation of these materials for the purposes of public health, and as evidence of progress. Legislation can, however, never be pushed far in advance of popular opinion, and reform must begin in the profession itself, its members influencing the public mind. Already a tendency towards centralisation is evident, while wealthy and educated men are endowing not merely hospitals, but centres for original research, among which the university founded by Johns Hopkins, at a cost of nearly a million and a half sterling, stands pre-eminent.

Dr. Billings showed, by a series of shaded maps, the geographical distribution of certain diseases, which suggested curious questions as to the special proclivities of particular races, and influence of surroundings and climate on each. For instance, although it was natural to expect that cancer should be more frequent in the old

settled States, where there would be a large proportion of persons, especially females, of advanced age, the fact also comes out that the white races are more prone to this disease than the blacks, in the ratio of 28 to 13 per 100,000 living, while, among the whites, the Germans seem to be the most prone. The black races, again, enjoy a relative immunity from deaths from scarlatina; and diphtheria is most fatal among the German and Scandinavian settlers.

From our acquaintance with the reports of the various Boards of Health, we should, however, be disposed to express this last fact in a somewhat different way; namely, that diphtheria is most prevalent in the damp and sparsely peopled settlements in the back-woods and on the shores of the great lakes, where the pioneers of civilisation belong chiefly to these two races. On the other hand, pneumonia, which furnishes a mortality twice as great as in this country, is far more fatal to the negro than it is to the white man.

THE ADDRESS IN SURGERY.

In his Address in Surgery, Mr. F. A. Humphry refrained from following either of the courses that are usual on occasions of this kind. Instead of dealing at length with any isolated subject of special interest, or of passing in review the most recent additions to surgical knowledge, he directed the attention of his hearers to several matters of practical import, with the object of showing the need, at the present day, of more careful study, on the part of surgeons, of the medical treatment of surgical disease. It is suggested in this address that, under the great and still increasing influence of specialism, surgeons, whilst attacking the domain of the physician, and subjecting, with brilliant success, the diseases of internal organs to operative and radical treatment, have devoted themselves too exclusively to strictly surgical and operative procedures, and neglected strictly medical methods. "Are the old relations," it is asked, "between medicine and surgery still maintained, and has medicine done as much for surgery, and has the medical treatment of surgical disease received the same consideration, or made the same rapid strides, as the study and development of operative procedure?" Fifty years ago, Sir William Lawrence reported that it was the boast of the surgery of his time to have greatly diminished the number of operations. At the present day, we are informed that in no period have operations been so frequent as they have been of late years. Though, as a result of more vigorous research and of improved knowledge, operative surgery is practised more frequently, and with increased success; yet, according to Mr. Humphry, the fact that, in any case, recourse is had to an operation, is an admission that medical treatment has failed in curing the disease.

This question of the relations between medicine and surgery in modern practice must have already presented itself to many minds, and Mr. Humphry has certainly done well in bringing so important a subject under the notice of the profession. There can be but little doubt that at the present day it is desirable to impress on surgeons, especially on teachers of surgery, the expediency of a careful study of medical methods in their treatment of surgical disease—and moreover, (and this we think a still more important point) of medical methods of diagnosis and clinical research.

Mr. Humphry, following in the footsteps of a former President of the Metropolitan Counties Branch of the Association, reminds the profession of certain "good remedies out of fashion." Whilst acknowledging that considerable modifications in the treatment of inflammatory affections have been rendered necessary in consequence of altered conditions of life, he holds that we are in considerable danger of forgetting the principles of the antiphlogistic treatment. It is suggested that surgeons are now too timid in the use of depletion; and, though perhaps our forefathers were bled too freely, a more frequent application of leeches would be found of much service in the treatment of certain inflammatory complications of injuries of the head and chest, of peritonitis of traumatic origin, and of the early and inflammatory stages of joint-disease. Even cancer, which in the opinion of most modern surgeons cannot be attacked successfully, where accessible, except by bold and free operation, may, it is anticipated, be found amenable to other than surgical modes of treatment. Alluding to the recent investigations of Pasteur, and the lines laid down in his treatment of hydrophobia, Mr. Humphry states that surely we may yet hope the time will come when some relief, perhaps some cure, may be found for malignant disease. It is held that "the efforts of surgical medicine should be directed more than they have been to the medical treatment of cancer." Very little grounds, we fear, will be found in this portion of Mr. Humphry's excellent address for sanguine expectation of any future substitution of medical for strictly surgical means in the treatment of malignant growths. It would, of course, be a great triumph "if by remedies, prophylactic or otherwise, some method of treatment could be discovered that would obviate the constant recourse to the knife;" but at present the results, both of pathological research and of clinical experience, render very dim the outlook in a medical direction.

In the course of some remarks on recent advance in the surgical treatment of diseases and injuries of the three great cavities of the body, Mr. Humphry inquires whether surgical medicine is advancing to the same extent as operative treatment by improvements in diagnosis, and in laying down definitely those indications that make such operations advisable. It is acknowledged that with the surgeon's increased skill in operating has also increased his skill in diagnosis, especially in cases of injury to the head and of tumour of the brain; although, at the present time, as Mr. Humphry points out, there are few who could depend enough on their own powers of diagnosis with regard to the presence and locality of such growths, to undertake any serious operation for their removal.

Many surgeons will doubtless be disappointed at finding in this address very little mention, but on the other hand rather studious disregard, of the present position of antiseptic surgery. Mr. Humphry speaks in warm terms of the brilliant success and the still widening region of modern operative surgery, but seems to ignore the great and decided influence on such progress, of Listerism and its modifications. Antiseptic methods seem to be regarded as in some way useful to nurses, and an admission of the gain to surgery from the use of antiseptics is limited to a somewhat obscure distinction between "the absence of the putrefactive change, and the absence of germs and the fermentative processes therein implied."

After some remarks on the use of drugs, especially sedatives, in surgery, and on probable future developments of electric aids to surgical therapeutics, we are told of the effects of Brighton air, both for good and harm, on healthy subjects and on surgical patients. "There can be no doubt," Mr. Humphry tells us, "that many surgical diseases distinctly benefit by a sojourn at Brighton." Scrofulous patients, and especially those who are young, derive great benefit if the stay be not so prolonged as to cause exhaustion from too much

stimulation. In this respect, however, many other watering-places would probably claim equal if not superior advantages, whilst conceding to Brighton its great attractions of a social character associated with its situation near the sea.

In the concluding portion of the address, reference is made to recent investigations in the treatment of hydrophobia, as a bright example of the direction in which scientific surgery might be advanced. Mr. Humphry reserves his judgment on the scientific value of these investigations; but, in terms which, we think, express the general feeling of the British Medical Association, speaks in generous sympathy of M. Pasteur, as one "deserving all praise for the patience, assiduity, and care with which he has laboured on this subject, and endeavoured to cure one of the most painful and fatal illnesses that come under the surgeon's care."

THE ADDRESS IN THE SECTION OF SURGERY.

THE Address in the Section of Surgery, by Mr. Erichsen, is worthy of careful perusal, coming as it does from an acknowledged master, and one whose experience has been peculiarly large. Moreover, the address is marked with the thoughtfulness of one who is not carried away by the rapid current of what may be only superficial progress, and who has seen such advances in the art and science of surgery as younger men have some difficulty in realising. Those who listened to the address will have been struck with the warning note it contains against great expectations. Old surgeons will welcome it as a pæan of satisfaction over what has been done by them and their predecessors; and younger surgeons will have listened with respect to the words of advice about the future lines of progress, as well as to the less encouraging prospects, which a thoughtful and experienced surgeon feels can be held out to those who expect great advances in the future. But, are we satisfied that we have reached finality, even in the direction where he sees it? And, if the same views had been expressed by some Nestor in the profession fifty years ago, would they not have appeared as true, and the advances which have since taken place have appeared as much beyond the region of probability, as certain lines of advance now seem to this Nestor?

He begins with the questions: Will the lines of future progress be the same as those along which the present generation of surgeons has successfully carried it to so high a pitch of excellence; or, will the very success that has attended their efforts in this direction compel a new departure? Have we, in fact, reached the final termination of the old routes; and must we follow, if not new, at least less well explored tracks, if we wish to reach an uniformly higher level?

He first considers the direction in which surgery has advanced in modern times, and takes the introduction of anæsthetics as the commencement of this epoch. This advance, he maintains, has been in three distinct lines. The first and most important has been in the extension of the scope and in the improvement of the methods of operative surgery; and here he is forced to the conclusion that "the very success in the past has made further progress in the future difficult, if not impossible." "That the final limits of surgery have been reached in the direction of all that is manipulative and mechanical, there can, I venture to think, be little doubt." He argues that, as art is finite, so surgery, as an art, is finite, and its limit has been probably reached. We should, however, be sorry if this feeling became general.

The second line in which advance has been made is precision; and, as regards exactitude of performance, there is, he thinks, little left to be desired in modern surgery; while "almost absolute precision of result has been obtained," so far, at least, as the healing of the wound is concerned, by the employment of strict hygienic precautions and the adoption of the antiseptic method in one or other of its various modifications. "The modern surgeon has thus arrived at this point of perfection: that he can assure his patient there will be no suffering during the operation, for that can be guarded against by anæsthetics; and no pain afterwards, for that can be averted by antiseptic dressings." This is satisfactory; but we fear there will always be timid and clumsy operators, and it is not every surgeon who gains his *tactus eruditus* easily or quickly. However, in the opinion of the speaker, along this line there does not seem much chance of future progress.

The third line of advance is the development of those methods of scientific research by which those sciences are advanced, upon which the practice of surgery is based, and here a fruitful and abundant harvest in the future may be expected. Scientific surgery is of comparatively modern origin; and here we are yet on the very threshold of the science of surgery. It is from biology—a large and, perhaps, rather indefinite term, which is made to include physiology, histology, pathology, chemistry, and physics—that surgical problems are to receive their elucidation. And he instances three of the more important modern results which have followed experimental research along this line—the use of antiseptics, the localisation of cerebral injury or disease, and the advance in cerebral surgery, with the successful treatment of trephine wounds in the lower animals. The last of these instances seems, however, to require successful application to human surgery, before it can be placed on the same footing as the first two.

The old lines have been followed up to their final termination; and the speaker maintained that it is by the application of those means of experimental research, which are now being worked out in the biological and pathological laboratory, that we may hope to find the solution of many of those problems that have hitherto baffled the surgeon.

The wisdom of this view of the direction of future progress few will gainsay, and it is along these lines that advance has been worked for of late years; but the speaker's view of the finality which has been reached in the other directions indicated, will, perhaps, hardly be shared by younger and more hopeful and enthusiastic surgeons. Much as we aim at a more general diffusion of knowledge and skill, the limit, we hope, has not yet been reached in the scope or methods of operative surgery, nor in the precision of performance or result.

MR. LAWSON TAIT has received the honorary degree of M.D. of the University of the city of New York.

WE understand that the autumn session, the last under the old regulations, of the General Medical Council, will commence on November 9th.

CHARGE AGAINST A MEDICAL MAN.

LAST week, at the Liverpool Assizes, before Mr. Justice Cave and a special jury, an action was tried, in which John Casey, and his wife, Mary Casey, sought to recover damages from Dr. Francis Imlach, of Liverpool, for improperly performing an operation on the female plaintiff without her consent. The charge was that he had removed the uterine appendages unnecessarily, without giving her information as to the nature of the operation, or as to its after-results.

The hearing of the case occupied two days (August 6th and 7th). Mr. C. E. Steele, Dr. Bennett, Dr. Grimsdale, and Dr. Alexander, gave evidence in favour of the plaintiff; and Mr. Lawson Tait, Dr. J. H. Aveling, Dr. Thomas Savage, Mr. Greig Smith, and other medical men, testified that the course which Dr. Imlach had followed was a right and proper one. At the conclusion of the evidence for the defendant, the jury intimated that they had made up their minds, and at once returned a verdict for the defendant. A fuller report of the proceedings is unavoidably delayed till next week.

HYDROPHOBIA COMMISSION.

We understand that, after considering a draft report, to which we referred last week, the Hydrophobia Commission have determined to defer making any report until the investigations at present in progress have been completed.

DEATH OF MR. GEORGE BUSK, F.R.S.

We regret to announce the decease, on August 10th, after a long illness, of Mr. George Busk, Consulting-Surgeon to the Seamen's Hospital. A biographical notice of this eminent man of science is published at page 346.

UNIVERSITY COLLEGE, LONDON.

Sir William Roberts, M.D., F.R.S., Professor of Clinical Medicine in the Victoria University, Fellow of University College, has kindly consented to preside at the annual dinner of the Faculty of Medicine, which will take place at the Freemasons' Tavern, on Monday, October 4th. Tickets (12s. each) may be had of the honorary secretaries, Dr. Poore (30, Wimpole Street), and Mr. Stonham, F.R.C.S. (109, Gower Street).

THE PASTEUR INSTITUTE.

The Paris Municipal Council have again been discussing the question of providing a site for the proposed Pasteur Institute, in the Rue Vanquelin, where a piece of ground, having an area of 2,500 mètres, has been marked out for the purpose. At the previous meeting the council granted the site for thirty years; but on the representation of M. Pasteur, that so brief a term was inadequate, in view of the importance of the buildings to be erected, it was proposed to grant the land for a term of ninety-nine years. M. Cattiaux, a member of the council, vigorously opposed the suggestion. M. Chantemps spoke warmly of the honour with which France had been covered by the work of M. Pasteur, observing that, "from all points of the globe *savants* had been sent to study M. Pasteur's methods of contending with that great invisible enemy, the microbe, and that all went back to the irrespective countries wonder-struck with what they saw in his laboratory. M. Chantemps read the list of M. Pasteur's cures of rabies, stating that it embraced 1,009 cases, in which there were 11 Russians, of whom 8 were wolf-bitten, 1 Roumanian, and 3 French patients who died of the disease. He said that before M. Pasteur discovered his cure, from 12 to 15 persons, bitten by animals, died in the Paris Hospital. A long and heated debate ensued; a counter-proposal was rejected by 35 to 13. Finally, the proposal of MM. Longuet and Humbert to extend the concession from 30 to 99 years was carried.

FATAL DOSES.

Two deaths are reported to have occurred last week from fatal doses of medicines taken for the relief of pain. The first is that of the wife of a physician, named Mary Sarah Wesselhoeft, aged 40, who was found dead in her bed. The deceased, according to the evidence of her husband given at the inquest, had been suffering from asthma, and had been in the habit of taking small quantities of ether for its relief. She had been cautioned of the danger she incurred. It was stated that, on the evening prior to her death, the deceased had asked for a bottle of ether. Dr. F. M. Robertson, who was called to the deceased, stated death was due to an overdose of ether, accelerated no doubt by the position of her mouth on the pillow. The jury, in returning a verdict that the deceased was poisoned through inhaling an overdose of ether, added a rider to the effect that they were of opinion that so large a quantity of ether should not have been placed at her command.—Another death from an overdose of a medicine occurred last week at Darlington, when a young man, James Stabler, aged 18, took a fatal dose of aconite with a view of alleviating the neuralgic pains from which he was suffering. It was stated at the inquest that directions were given on the bottle that one or two teaspoonfuls were to be taken at intervals. There were twenty-four tea spoonfuls in the bottle, only six being left. It was proved that after 12 o'clock on Monday night twelve teaspoonfuls must have been taken, with the result that the deceased was found dead in bed on the following morning. Dr. Raine stated in his evidence that the medicine was an usual one, and if it had been taken in accordance with the label, it would not have had the effect he found in the stomach, and have caused death. The verdict of the jury was to the effect that the deceased died from an overdose of medicine, containing the poison aconite, inadvertently taken.

HEALTH-RESORTS AND INFECTIOUS DISEASE.

We are asked to state that, at their meeting last week, the Salford Health Committee had under special consideration a report of their Medical Officer of Health on the relation of health-resorts to the spread of infectious disease. The Committee thought the report so important that they directed Dr. Tatham to forward a copy of it to the chairmen of the sanitary authorities of the neighbouring watering-places, and other health-resorts, which are principally patronised by the inhabitants of Salford. The following is the text of the report referred to.

"*Seaside Resorts and Infectious Disease.*—Although each successive autumn furnishes additional evidence of the fact that children taken to the seaside for the benefit of their health frequently contract scarlet and other infectious fevers at these health-resorts, it is not a little astonishing that heads of families continue to manifest so little anxiety that the quarters they select should present a clean bill of health. As the watering-places on our coast mainly depend for support on visitors from inland towns, the latter are entitled to receive from the authorities of the former a guarantee that the seeds of disease and death shall not be actively present in apartments offered for occupation. But, in order to afford this security, it is necessary that the local authorities should receive prompt information of all infectious attacks within their domain. It is a pleasure to record that powers for the compulsory notification of infectious disease are already in operation at Blackpool and Llandudno, two of the most popular of the health-resorts frequented by the holiday seekers of Salford; and visitors to these towns who are anxious for the safety of their families, may consequently obtain reliable information from the respective medical officers of health. I hope that before long I shall have the pleasure of conveying similarly welcome news with respect to many more of the neighbouring watering-places, frequented by the dwellers in this great centre of industry. The Registrar-General's quarterly return for the quarter just ended will be issued very shortly, and, as in past years, will be at the Health Office for inspection. In Table VIII of that document will be found a return of the deaths from infectious disease, registered during the recent quarter, in each of the principal watering-places of Great Britain. This table may usefully be consulted by those who are contemplating a visit to the seaside."

DEATH OF DR. ROBERT FOWLER.

We regret to hear of the death, from pyæmia, on August 7th, of Dr. Robert Fowler, of Bishopsgate Street Without, and Old Burlington Street. Dr. Fowler was widely known and highly esteemed in the medical world of London, as well as by the public. He was one of the examiners of the Society of Apothecaries, and for some years was one of the representatives of the City of London in the Metropolitan Asylums Board. He held some years ago the offices of President and of Orator (in 1882) of the Hunterian Society, to which he was also for sometime Honorary Librarian. Dr. Fowler was the author of a well-known medical vocabulary, and of several contributions bearing on the condition of the Poor-law Medical Service. In 1869, when the celebrated case of the "Welsh fasting girl" was attracting public attention, Dr.

Fowler made a careful investigation, the results of which were communicated to this JOURNAL, and also published, in 1871, in the form of a treatise, comprising a complete history of the case, with observations on death from starvation.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE annual general meeting of the Medico-Psychological Association was held in the rooms of the Medical Society of London, 11, Chandos Street, on Monday, August 9th, under the presidency of Dr. G. H. Savage. At the opening of the proceedings, there were many expressions of deep regret at the recent and somewhat sudden death of Dr. Eames, the President for the past year, under whose auspices the previous annual meeting had taken place at Cork; and a resolution of sympathy with his family was unanimously adopted. Dr. F. Needham was elected to be President for the year 1886-7. Some discussion arose in reference to the examinations for the certificate, now granted by the Association, of competency in psychological medicine. Among other modifications, the fee was lowered to three guineas, and it was decided that the examination should be open to any one who was a student in medicine, and that there should be no restriction as to his being qualified before applying for the certificate; but that, if successful, he should not receive it until he should be registered. It was decided that the next annual meeting should be held in London. At the afternoon meeting, the President read an address on the subject of the Pathology of Insanity, which was followed by a discussion, in which Drs. Clouston, Connolly Norman, Hack Tuke, and Rayner, took part. The members afterwards dined together at the "Ship," at Greenwich.

PARKES MEMORIAL PRIZE ESSAY.

SIX essays were sent in on December 31st, 1885, on the following subject: "The Prevention of Disease among Troops during Military Operations in Tropical and Subtropical Climates." The following gentlemen consented to act as assessors at the request of the Committee: Surgeon-General W. C. Maclean, C.B.; Deputy Surgeon-General J. A. Marston, M.D.; and Honorary Deputy Surgeon-General H. L. Veale, M.D. After careful consideration of the essays, the assessors unanimously adjudged the prize to the one bearing the motto:

"Tenacem propositi virum
Non civium ardor prava jubentium,
Non vultus instantis tyranni
Mente quatit,
Nec fulminantis magna manus Jovis."

The author proved to be Dr. Andrew Duncan, F.R.C.S., of the Indian Medical Service, who entered the Medical Service on September 30th, 1878. The prize, which consists of £100 in money, with a gold medal of the value of 15 guineas, is awarded every third year to the writer of the best essay on a subject connected with hygiene, the competition for which is open to the medical officers of the Army, Navy, and Indian Services of executive rank on full pay, with the exception of the assistant-professors of the Army Medical School during their term of office. The subject for the next prize is "The Etiology and Prevention of Yellow Fever;" to be illustrated as far as possible from the personal experience of the writer. Essays must be sent in to the Committee of the "Parkes Memorial Fund," care of the Director-General, Army Medical Department, 6, Whitehall Yard, London, S.W., on or before December 31st, 1888; each essay must have a motto, and be accompanied with a sealed envelope bearing the motto and containing the name of the competitor. The Committee of the Parkes Memorial Fund consist of Sir T. Longmore, C.B., Surgeon-General, President; Professor F. S. B. F. de Chaumont, M.D., F.R.S., Treasurer; and Surgeon A. M. Davies, Medical Staff, Secretary.

☞ AT the board meeting of the Hospital Saturday Fund, held on Saturday last, it was reported that, notwithstanding the unfavourable state of the weather, the Hospital Saturday street collection had realised £4,000; being £500 less than the amount obtained last year.

SCOTLAND.

ROYAL HOSPITAL FOR SICK CHILDREN.

AT a meeting of the Directors of the Royal Hospital for Sick Children, Edinburgh, held last week, the following appointments were made to the offices of resident physicians; Messrs. D. M. Moir, M.A., M.B., and C.M., and J. Grant Fletcher, M.B. and C.M. Their tenure of office is six months.

COMPLETION OF EDINBURGH UNIVERSITY BUILDING.

THE University of Edinburgh in its original plan was intended to have, at its east or principal side, in South Bridge, a dome. This part of the architect's conception was never carried out. Now, however, through the munificence of the late Mr. Robert Cox, W.S., the building will be completed and enhanced by the erection of a very handsome dome. The architect of the new work is Mr. Rowand Anderson, LL.D. (who also designed the New University Buildings); and the erection of the structure will be commenced at once, so as to be well finished before the beginning of the winter session. When completed, it will be a handsome addition to the noble front planned by Adams in the last century, and an ornament to the city.

IRELAND.

VICEREGAL COURT.

The following appointments have been made in the household of His Excellency:—*Physician in Ordinary:* George W. Hatchell, M.D. *Surgeons in Ordinary:* Edward Hamilton, F.R.C.S.I., P. C. Smyly, F.R.C.S.I. *Surgeon to Household:* Thos. Nedley, F.R.C.S.I. *Surgeon-Oculist:* Archibald H. Jacob, F.R.C.S.I. *Surgeon-Dentist in Ordinary:* Robert H. Moore, F.R.C.S.I.

APOTHECARIES' HALL OF IRELAND.

AT the annual meeting of the General Council, held in pursuance of the Statute of Incorporation on August 2nd, the following were duly elected as office-bearers for the ensuing year:—*Governor:* Edward O'Neill. *Deputy-Governor:* George Wyse. *Court of Directors and Examiners:* Edward H. Bolland, Thomas Collins, John Evans, Arthur Harvey, Charles Holmes, Charles Henry Leet, Robert Montgomery, Charles F. Moore, Henry P. Nolan, Richard O'Flaherty, Sir G. B. Owens, J.P., John Ryan, James Shaw. *Representative on the General Medical Council:* Thomas Collins.

CORK FEVER HOSPITAL.

AT a meeting of the General Committee last week, Dr. Cotter resigned the position of extraordinary physician to the hospital, which he has held for some years. Much regret has been felt by the committee and medical staff on his retirement.

AHOGILL DISPENSARY, BALLYMENA UNION.

BY the death of Dr. Chesnutt, a vacancy arose for a medical officer to this dispensary. The salary attached was £90 a year and fees, but on the death of Dr. Chesnutt, a meeting of the guardians of Ballymena Union was held, and the salary reduced by £30 *per annum*.

VACCINATION.

ACCORDING to the returns of vaccination received for the second quarter of the year, there were 32,557 persons successfully vaccinated in Ireland; in 2,704 cases, the operation was postponed, and 60 children were reported as insusceptible of the operation. The deaths of 1,625 unvaccinated children, under three months old, were registered during the quarter, making a total of 36,946 children with regard to whom particulars as to vaccination were ascertained.

MEDICAL DEFENCE.

A MEETING of members of the British Medical Association interested in the question of the formation of a Medical Defence Association, was held in the Town Hall, Brighton, on Wednesday, August 11th; Dr. W. A. Elliston (Ipswich) in the chair. Among those present were: Dr. C. E. Glascott, Honorary Secretary (Manchester), Dr. Dolan (Halifax), Dr. Barron (Southport), Dr. Jacob (Dublin), Mr. Nelson Hardy (London), Mr. George Brown (London), Dr. Carter (Liverpool), Mr. Ernest Hart (London), Dr. Glaister (Glasgow), Dr. Walter Smith and Mr. Brindley James (London).

The CHAIRMAN explained that this meeting was convened by the secretary of the Lancashire and Cheshire Branch, and that he occupied the chair quite unexpectedly, in the absence of Dr. Harker, the president of that Branch. The question of establishing a Medical Defence Fund had been brought prominently before a meeting of the East Anglian Branch, held in January last, by Dr. J. Sinclair Holden, at which the following resolution was passed:—"That, as medical men may at any time become liable to false and groundless charges of a ruinous nature, it is most desirable that a Medical Defence Fund be formed and administered in connection with the British Medical Association, and that its members should be asked to contribute a small sum annually to this fund. Those who do so, becoming entitled, should occasion arise, to legal advice and assistance." To give effect to this resolution, it was determined to address a circular letter to all the Branches of the Association, in order to gather their opinion on the subject. Dr. Elliston said that, as a member of the Council, he had given notice at the last meeting that he would, at an early meeting of the Council, move a resolution that the whole matter be referred to a Committee of the Council. In response to that circular, they had received replies from twenty-five English Branches of the Association. Out of the twenty-five English Branches, fourteen had signified their approval of the movement. Of these, the following ten Branches passed resolutions in similar terms to those of the circular:—1. Birmingham and Midland Counties; 2. Cambridge and Huntingdon; 3. Dorset and West Hants; 4. East Anglian; 5. Lancashire and Cheshire (in addition they drew up a scheme to work the fund as a Medical Defence Society); 6. Shropshire and Mid-Wales; 7. South Midland; 8. South-Western; 9. Staffordshire; 10. Worcester and Hereford.

The *East York and North Lincoln Branch* unanimously passed the following:—"That, in the opinion of this Branch, it is desirable that the British Medical Association should use its funds and influence to protect any of its members against false and groundless charges."

The *Southern Branch* passed the following:—"That this meeting, having considered the resolution of the East Anglian Branch, is of opinion that the Council of the British Medical Association should consider the case of any member against whom legal proceedings are undertaken for alleged improper conduct, and should have the power of using the funds of the Association for his defence."

The *Bath and Bristol Branch* passed no resolution, but agreed that their representatives would support the project in the General Council.

The *Border Counties Branch* sent a copy of the circular to each of its members requesting a reply. From 120 members, 23 replied, all approving of the project.

The *Metropolitan Counties Branch* resolved "That the proposition as laid before them is so difficult in its details, that it cannot be carried out practically with safety to the Association, which, if it allowed an institution of the kind proposed to be connected with it, might incur a dangerous pecuniary responsibility."

The *South-Eastern Branch* "Declined to lend the subject their support because they arrived at the conviction that the establishment of a Defence Fund would probably tend to increase the number of false charges, instead of diminishing them, inasmuch as the existence of such a fund would guarantee costs."

The *West Somerset Branch* discussed the question, but no decision was arrived at.

Two replies only came from Scotland and Ireland.

The *Northern Counties of Scotland Branch* deferred their reply for the present.

The *North of Ireland Branch* passed a resolution in favour of the movement in the terms of the circular.

The following were the objections made against the formation of a Medical Defence Society in connection with the British Medical Asssociation.

1. If the preliminary investigation and decision led the Society to refuse its aid to a member who applied for its protection, this would seriously prejudice his future case if it came to a legal action. On the other hand, any laxity of decision might lead the Society to undertake indefensible cases, which might expose not only the Society, but also the British Medical Association, to serious moral reproach.

Answer.—The answer was, that the experience of many years showed that a Defence Society had become a necessity in the profession, and such Society must undertake the delicate responsibilities involved in it. While endeavouring to fulfil its object of defending medical men from false charges, or even from charges arising from an error of professional judgment, it could guard itself from screening an unprincipled member from the legal consequences of his misdeeds, by the direct refusal or withdrawal of its protection.

2. The second objection, raised by the South-Eastern Branch, June 8th, 1886, was that the Council of this Branch declined to lend the subject their support, because they arrived at the conviction that the establishment of a Defence Fund would probably tend to increase the number of false charges, instead of diminishing them, inasmuch as the existence of such a fund would guarantee costs.

Answer.—The meaning of this objection was rather obscure. If it meant that the existence of a defence fund would encourage false charges, then the reverse of the objection was certainly the most probable—namely, the existence of such a fund would prevent false charges. The aim of such charges was to injure or ruin a medical man; but, when it was known that the medical man was protected by a powerful Society, the originators of such charges would halt before embarking in useless litigation, in which costs would assuredly recoil on themselves.

3. The third objection—made by the Metropolitan Counties Branch, June 29th, 1886,—was to the effect that the proposition, as laid before them, was so difficult in its details that it could not be carried out practically with safety to the Association, which, if it allowed an institution of the kind proposed to be connected with it, might incur a dangerous pecuniary responsibility.

Answer.—The scheme as proposed now of forming a Medical Defence Society, working through the organisation of the British Medical Association, was entirely separate as to its management and liabilities, and the Association could incur no pecuniary responsibility.

The simple fact to be decided was, whether it was desirable to form such an institution as that proposed; whether those unfortunate charges which were from time to time undoubtedly made could be overcome, or in some sense met, so as to prevent the utter ruin of some medical men; and whether, on the other hand, the many charges of malpractice, which the Chairman thought were rather increasing in numbers, could not be met by such a society as that proposed. For his own part, he (the Chairman) would say his sympathy was with the latter. Dr. Holden had taken some pains in the matter, and had drawn up a list of the false charges which had been made against medical men during the last four or five years. This list was read by the Chairman.

Dr. BARRON said they had nothing to expect from the Council, and, in point of fact, any action taken ought to be entirely independent of the Council of the British Medical Association. He referred to the signal success which had attended the formation of the Medical Sickness, Annuity, and Life-Assurance Society. He thought it must be apparent to everyone that the principle of self-defence must be affirmed. In respect to the statement that had been made that such a society would tend to increase the number of cases of malpractice, Dr. Barron said he did not think personal defence or preparation for war was ever the occasion of war. He did not quite agree with the manner in which the question had been brought forward by the East Anglian Branch, nor with the general terms of the circular of the Lancashire and Cheshire Branch; but, apart from that, he thought there were general points which could be dealt with quite independently of what those two Branches had said on the question. Dr. Barron concluded by proposing a resolution to the effect that a number of gentlemen, five or seven, be appointed to inquire into the general question, and that the general principle that it is desirable to establish a Medical Defence Fund be affirmed.

Dr. ALDERSON, who spoke as one of the Council of the Medical Defence Society, referred to the work which had been done by the Society with which he was connected, and spoke of the still greater work which could be accomplished by a large Association like the British Medical Association.

Dr. GLAISTER, in supporting the resolution, spoke of the great interest taken by those dwelling in the West of Scotland in this subject.

Dr. W. ARMSTRONG was in favour of a committee being at once appointed.

Mr. G. BROWN said, with regard to the resolution which had been proposed and seconded, he thought they must all agree that it was very

desirable that something should be done, and probably the appointment of a committee would be the proper course to take; but he thought they should not ignore the fact that they were members of a great Association, and an Association whose duty it was to do the work they were met to discuss. Eleven years ago, he had taken an active part in forming the Medical Defence Association, which had done a considerable amount of work, but which suffered from want of funds. He hailed the present movement with the greatest satisfaction, and he was deputed by the Council of the Medical Defence Association to say that they were prepared to dissolve, or do anything to assist in supporting the movement, if undertaken by the British Medical Association.

Dr. CARTER (Liverpool) seconded Dr. Barron's resolution.

Mr. G. BROWN proposed, as an amendment, the following:

"That this meeting requests the Council of the British Medical Association to consider the possibility of forming a Medical Defence Association in connection with the Association."

Dr. CARTER thought it would be better if the proposed Medical Defence Association were to start quite independently of the British Medical Association, as the Medical Sickness, Annuity, and Life-Assurance Society had done; and, at a later period, the British Medical Association might be inclined to make it a part of its own organisation. He felt firmly convinced that, if they attempted to tack it on to the work of the British Medical Association, they would fail. He strongly urged that as a matter of policy.

Mr. NELSON HARDY, in seconding the amendment of Mr. George Brown, observed there was nothing in the rules of the British Medical Association to prevent their taking this work upon themselves, but rather considered that it came within the scope of the objects for which the Association was founded.

Mr. BRINDLEY JAMES supported the amendment.

Dr. JACOB (Dublin) spoke of the part taken by the Irish Medical Association in the work of medical defence; and added that, whatever might be done, whether through a newly formed association, or through one of the associations already existing, or through the British Medical Association, it was of the highest interest and importance that the association to whom the duty was confided should be of the most impartial character, to hold the balance between medical and non-medical contentions, without which they would fail. He thought some of the best men in the profession fitted for this duty would be found in the British Medical Association. The Irish Medical Association found the greatest difficulty in holding the balance.

Dr. WALTER SMITH proposed that a deputation be appointed to wait upon the Council of the Association, and lay the matter before that body.

Mr. ERNEST HART said that, speaking quite unofficially (and he was not a member of the Council), but from his experience of the Medical Sickness, Annuity, and Life Assurance Society, he should strongly urge them to keep the matter entirely in their own hands until their plans were fully matured. This would be by far the wisest thing they could do. It was not of the slightest use to go before the Council with an abstract idea. Reference had been made by more than one speaker to the Medical Sickness and Annuity Fund, but that Society did not go before the Association to ask it to pledge its responsibility, moral or material, but even struck out the word "British," which, it was thought, might identify it too closely with the Association.

The following resolution, proposed by Dr. WALTER SMITH and Mr. NELSON HARDY, was ultimately carried.

"That this meeting affirms the general principle of a medical defence committee, and that we request the Council of the British Medical Association to consider the possibility of its formation."

It was proposed by Dr. GLAISTER, seconded, and carried, that the following gentlemen form a deputation, and attend the Council meeting of Thursday: Dr. Jacob, Dr. Armstrong, Mr. George Brown, Mr. Brindley James, Dr. Walter Smith, Dr. Alderson, Dr. Glascott, and Mr. Nelson Hardy.

A further resolution was passed, on the proposition of Dr. BARRON, to the effect that the committee so constituted should report the result of their interview with the Council to a meeting convened for 1.30 on Thursday.

THE Sanitary Committee of the Lancaster Town Council and Urban Sanitary Authority (the minutes of which were confirmed on July 28th) unanimously passed the following resolution at their last meeting:—"That this Authority desire to express their high appreciation of the long and valuable services of Dr. Harker, the Medical Officer of Health. His great experience and ability, and his zealous devotion to the interests of the body he served, combined to render him a most useful officer, and the Authority regret his retirement."

BRITISH DENTAL ASSOCIATION.

THE annual general meeting of the British Dental Association will be held in the theatre of the Royal School of Mines, Jermyn Street, and in the Dental Hospital of London, 40, Leicester Square, on Thursday, Friday, and Saturday, August 19th, 20th, and 21st. In the absence, from illness, of the President, Mr. Richard White, the chair will be taken on Thursday by Sir John Tomes, who will address the Association. Sir Edwin Saunders, F.R.C.S., the President-elect, will then take the chair, and deliver an address. The following is a list of the papers promised: "On Dental Education," by Morton Smale, Esq., M.R.C.S., L.D.S.Eng., L.S.A.; "On the Treatment of Alveolar Abscess," by W. Grayston, Esq., L.D.S.I.; "A Simple Method of Photomicrography, suitable for the Delineation of Dental and other Tissues," by T. Charters White, Esq., M.R.C.S., L.D.S.Eng.; "Dentistry and its Relation to the State," by George Cunningham, Esq., D.M.D.; "The Conjoined Diploma in Medicine and Surgery, and its Acquirement by Dental Students," by S. J. Hutchinson, Esq., M.R.C.S., L.D.S.Eng.; "Compulsory Attention to the Teeth of School-Children," second paper, by W. M. Fisher, Esq., L.D.S.Eng.; "Public Appointments in Relation to Dental Surgeons, and the Methods in which they are conferred," by W. G. Gordon Jones, L.D.S.I.

There will be a *conversazione* on Thursday, August 19th, given by the Odontological Society, in the rooms of the Medical Society of London, Chandos Street.

On Friday, August 20th, the annual meeting of the Dental Benevolent Fund will be held in the theatre of the Royal School of Mines, at 10 A.M.; and at 6.30 of the same day, the annual dinner of the Association will be held at the Criterion.

On Saturday, August 21st, a garden-party will be given by Sir Edwin and Lady Saunders, at Fairlawn, Wimbledon Common.

THE CHOLERA.

PRECAUTIONS AGAINST CHOLERA.

CHOLERA still prevails, and seems inclined to increase, in many of the Mediterranean ports with which this country is in constant communication; so that we cannot rely with any confidence on the disease not reaching our own shores. The Local Government Board have, therefore, done well again to urge upon sanitary authorities throughout the country (by a circular letter dated August 7th), "the importance of their continuing, without intermission, to take all measures within their power for maintaining their districts in a state of security against the infection of cholera." With that circular, they have forwarded a reprint of the memorandum on "Precautions against the Infection of Cholera," which they have issued on former occasions. Amongst other things, this memorandum points out that the dangers which have to be guarded against as favouring the spread of cholera-infection are, particularly, two. First, and above all, there is the danger of water-supplies which are in any (even the slightest) degree tainted by house-refuse or other like kinds of filth; as where there is outflow, leakage, or filtration, from sewers, house-drains, privies, cesspools, foul ditches, or the like, into springs, streams, wells, or reservoirs from which the supply of water is drawn, or into the soil in which the wells are situate; a danger which may exist on a small scale (but, perhaps, often repeated in the same district) at the pump or dip-well of a private house, or, on a large or even vast scale, in the source of public water-works. And secondly, there is the danger of breathing air which is foul with effluvia from the same sorts of impurity.

The Medical Department of the Local Government Board have also, during the last couple of years, been exercising their influence for good in another manner. They have been carrying out a sanitary survey of the country, and the medical inspectors have, in personal conferences with the local sanitary authorities, pointed out the various directions in which each individual district requires improvement. There is reason to believe that this has had a good effect with most of the local bodies, and that much beneficial work has, in consequence, been set on foot. There are, unfortunately, many local authorities that cannot be moved into effective action until some serious outbreak of disease breaks out in their districts; but even these authorities have in numerous cases been persuaded to secure increased cleanliness and greater care in matters affecting the public health.

It cannot, however, be too frequently urged upon the general public that the local conditions which would enable cholera, if imported, to spread its infection in this country, are conditions which, day by day, in the absence of cholera, create and spread other diseases

diseases which, as being never absent from the country, are, in the long run, far more destructive than cholera: and the sanitary improvements which would justify a sense of security against any apprehended importation of cholera, would, to their extent, though cholera should never reappear in England, give amply remunerative results in the prevention of those other diseases.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1886. ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

Francis Fowke, *General Secretary*.

NORTH WALES BRANCH: ANNUAL MEETING.

The thirty-seventh meeting of this Branch was held on July 20th at the Advanced Elementary School, Blaenau Festiniog. The retiring President, Mr. J. Lloyd Roberts (Denbigh), took the chair, and introduced the President for the year, Dr. T. Eyton-Jones, (Wrexham).

New Members.—Dr. John Roberts (Menai Bridge), and Mr. C. E. Steele (Liverpool) were elected members of the Branch; and Dr. W. W. Herbert, of the North Wales Counties Lunatic Asylum, Denbigh, was elected a member of the Association and Branch.

Report of Council.—The Secretary read the report, which pointed out the continued increase of the members of the Branch, now numbering 117, and the satisfactory financial position. Regret was expressed at the death of three members, namely, Dr. O. Richards (Bala), Mr. R. O. Jones (Bala), and Mr. R. Arthur Jones (Llanfairpwllgwingyll).

Places of Meeting in 1887.—Corwen and Holyhead were selected as places to hold the intermediate and annual meetings in 1887.

President-Elect.—On the proposition of Dr. Eyton-Jones, seconded by Mr. Lloyd Roberts, Mr. Charles Williams (Duffryn) was elected President for the ensuing year.

District Council.—Messrs. O. T. Williams and E. T. Hughes (Holyhead), Evan Williams (Llangefni), Hughes (Bala), J. R. Walker (Corwen), and Dr. E. J. Lloyd (Bangor) were elected the Branch Council.

Honorary Secretary and Honorary Treasurer.—Mr. Jones-Morris (Portmadoc) was re-elected to the former office, and Mr. John Richards (Bangor) to the latter.

Representative of the Council.—Dr. John Roberts (Chester) proposed, and Dr. Charles Williams seconded, the re-election of Mr. Jones-Morris.

Representative on the Parliamentary Bills Committee.—It was proposed by Dr. S. E. Griffith (Portmadoc), and seconded by Mr. Wm. Jones (Ruabon), that the President, Dr. Eyton-Jones, be elected.

Payment of Members of the Council.—The circular letter of the East York and North Lincoln Branch, relative to the payment of travelling expenses of the representatives of the Branches on the Council was read, and, after discussion, it was resolved, on the motion of Mr. J. Lloyd Roberts, "That it lie on the table."

President's Address.—Dr. Eyton-Jones delivered an address "On some of the Advances in Medical Science during the past twenty years." It was proposed by Mr. John Richards (Bangor), and seconded by Mr. Wm. Jones (Ruabon), "That a hearty vote of thanks be accorded to him for his excellent address."

Papers, etc.—The following communications were made.

1. Mr. Lawson Tait gave the notes of six cases of Uterine Myoma he had that day seen with Mr. Robert Roberts, of Blaenau.

2. Dr. John Roberts (Chester) read a paper on the Abuse of Purgative Medicines.

3. Mr. John Richards made a few remarks on a Case of Compression of the Bowel, where constipation had existed for sixteen days, and was ultimately relieved without operation.

4. Dr. Emrys-Jones (Manchester) read a paper on the Application of Ophthalmic Remedies.

5. Mr. Robert Jones (Liverpool) gave a demonstration on the Manikin of the Application of Thomas's Hip, Knee, and Ankle Splints.

Luncheon and Dinner.—The members were hospitably entertained by Mr. Robert Roberts, at his residence, Isallt. After the meeting, the members and guests, numbering 44, dined together at the Queen's Hotel.

OBITUARY.

GEORGE BUSK, F.R.S.

We regret to have to chronicle the death of Mr. George Busk, at his residence in Harley Street, on Tuesday last, August 10th, after a long and painful illness.

Mr. Busk entered the medical profession in 1830, and became a member of the Royal College of Surgeons. Thirteen years later, when the new Charter was granted to the College, instituting a body of Fellows, he was one of those elected to the Fellowship. From 1856 to 1859 he held the chair of Hunterian Professor of Comparative Anatomy and Physiology, in which he was suceeded by the present President of the College, Mr. Savory. In 1863 he was elected, along with Mr. Samuel Lane and the late Mr. Hancock, a member of the Council; and, on his re-election in 1871, had the honour of becoming the President of the College. He was also elected a member of the Court of Examiners in 1868. After serving all the offices of the College, he continued a member of Council till 1879, when he retired, and did not seek re-election. During his whole career, he took a great interest in the museum and its welfare, and, at the time of his death, was a trustee of the Hunterian Collection which it contains. Mr. Busk, however, did not confine his interest in public bodies to his own College. The University of London also received its share of his attention; he held the office of Examiner in Comparative Anatomy and Zoology in it, and was afterwards elected a member of its Senate, on which he sat till the time of his death. He likewise took a great interest in the work of the scientific societies, and was a Fellow of, and served on the Council of, the Royal Society, the Linnæan, the Geological, and the Zoological Societies. On four occasions he was elected a Vice-President of the Royal Society, and was President of the Ethnological Society, before the amalgamation of that Society and the Anthropological Society into the Anthropological Institute of Great Britain and Ireland. At the meeting of the British Association at Exeter, in 1869, Mr. Busk was president of Section D (Biology). On the passing of the Vivisection Act, Mr. Busk was appointed Government Inspector under the Act, an office which he held till last year, when declining health compelled him to resign. The tact and impartiality with which he administered the difficult and delicate duties of Inspector are well known, and we are assured were much appreciated both by physiologists and the Home Office authorities.

Most men, so fully occupied with public duties, could find but little time for professional and scientific work. This was not the case with Mr. Busk, as the publications of the various Societies to which he belonged will show that not only did he do his share of work in their organisation and management, but also contributed many articles of great value at their meetings. His papers, published in the *Transactions* of the Royal Society, on Extinct Elephants found in Malta, and on the Teeth of Ungulates, are especially monographs of great value, the production of which represents long and laborious research. Mr. Busk was also joint translator and editor of Kölliker's *Manual of Histology*, and of Wedl's *Rudiments of Pathological Histology*. His reputation, however, as an advancer of knowledge is greatest in zoology, anthropology, and geology, the sciences to which he chiefly devoted his attention, and with which his name will undoubtedly ever be connected in the history of their progress, during the middle of the nineteenth century, in this country.

Mr. Busk will be remembered by those acquainted with him as one of the kindest of friends, always ready to give assistance and advice. His public duties and society work brought him into contact with a large circle of persons, who soon learned to love and appreciate him for his genuine qualities. The universal regret which will be felt by all his friends at his death, though occurring at a good ripe age, is probably the surest sign of the esteem in which he was held.

MEDICAL NEWS.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, August 5th, 1886.

Dutt, Aaron Chunder, 200, St. Paul's Road, Highbury, N.
Tomlinson, William Henry, 13, Craig Street, Devonshire Street, Manchester.

At the recent examination for the prizes in Botany, given annually by the Society of Apothecaries, the successful candidates were:

Boyce, Robert Wm., of University College, the Gold Medal.
Hall, Frederick Wm., of Guy's Hospital, the Silver Medal and Books.

MEDICAL VACANCIES.

The following vacancies are announced.

BIRMINGHAM BOROUGH ASYLUM.—Resident Clinical Assistant. Board and Residence. Applications to E. B. Whitcombe, Esq., Medical Superintendent.

CLIFDEN UNION.—Medical Officer, Innisboffin Dispensary. Salary, £100 per annum, and fees. Applications to Mr. James Gorham, Honorary Secretary, Lough Cartron, Clifden. Election on August 25th.

DURHAM COUNTY ASYLUM, Sedgefield, Ferryhill.—Junior Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent.

GALWAY UNION.—Medical Officer, Spiddal Dispensary. Salary, £115 per annum, and fees. Applications to Mr. Lynch Coleman, Honorary Secretary. Election on August 16th.

GENERAL INFIRMARY, Leeds.—Resident Surgical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications by August 20th to T. Blair, Esq., General Manager.

HARTLEPOOL'S FRIENDLY SOCIETIES MEDICAL ASSOCIATION. Medical Officer. Applications to T. Tweddell, Esq., West Hartlepool.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. Brompton.—Resident Clinical Assistants. Applications by August 14th to H. Dobbin, Esq.

MANCHESTER ROYAL INFIRMARY (MONSALL FEVER HOSPITAL).—Assistant Medical Officer. Salary, £100 per annum, with board and residence. Applications by August 19th to the Chairman of the Board.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer of the Convalescent Home at Cheadle. Salary, £150 per annum, with board and residence. Applications by August 14th, to the Chairman of the Board.

OWENS COLLEGE, Manchester.—Professor of Chemistry. Applications to the Council of the College, under cover, to the Registrar by August 31st.

SCARBOROUGH HOSPITAL AND DISPENSARY.—House-Surgeon and Secretary. Salary, £80 per annum, with board and residence. Applications by August 17th to the Secretary.

WARWICK JOINT HOSPITAL BOARD.—Medical Officer to Infectious Hospital. Salary, £10 per annum, and £2 for each case. Applications, by August 19th, to A. E. Davis, Town Hall, Leamington.

WEST RIDING ASYLUM, WAKEFIELD.—Resident Clinical Assistant. Board, apartments, etc. Applications immediately to the Medical Director at the Asylum.

MEDICAL APPOINTMENTS.

BARBER, P. E., M.R.C.S., L.R.C.P.Lond., appointed Junior Assistant House-Surgeon to the Sheffield Public Hospital and Dispensary, *vice* R. Beresford, L.S.A., resigned.

CHRISTMAS, C. D., M.R.C.S., L.S.A., L.R.C.P., appointed Medical Officer to the Ashford Friendly Societies and Public Medical Association.

EASTWOOD, L., L.R.C.P. and L.M.Ed., L.R.C.S.Ed., L.S.A.Lond., appointed Surgeon to the Darlington Hospital and Dispensary.

RING, W., L.R.C.P., L.R.C.S.Edin., appointed Assistant House-Surgeon to the Devonshire Hospital, Buxton, Derbyshire, *vice* H. Fitton, M.R.C.S., L.R.C.P.Edin., resigned.

SIMPSON, James, M.D.Q.U.I., L.F.P.S.Glas., appointed Medcal Officer for the Ahoghill Dispensary District, Ballymena Union, *vice* J. Wallace Chestnutt, M.A., M.D., L.R.C.S.Edin., deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

BIRTHS.

MICHAEL.—On the 17th July, at Boaz Island, Bermuda, the wife of Surgeon H. J. Michael, Medical Staff, of a daughter.

SHAW.—August 8th, at the Zareba, Epsom Road, Guildford, the wife of Brigade-Surgeon John Alexander Shaw, M.D., F.R.C.S.I., of a daughter.

WILLIAMS.—On the 6th instant, at the Grange, Grinshill, near Shrewsbury, the wife of Clarence Williams, M.R.C.P., of a daughter.

MARRIAGES.

HALL—MORGAN.—On August 4th, at St. Mary's Church, Dilwyn, Herefordshire, by the Rev. Charles A. Stokes, Vicar of Warmfield, Yorkshire, and Fellow of Clare College, Cambridge, uncle of the bride, assisted by the Rev. Robert Bentley, Vicar of Grendon Bishop and Lecturer of Bromyard, Thomas Lambert Hall, M.R.C.S., L.S.A., The Great House, Dilwyn, to Edith Mabel, third daughter of the Rev. Thomas Morgan, Vicar of Dilwyn.

KEETLEY—LONG.—On the 5th instant, at St. Mary's, Clapham Park Road, by the Rev. Richard Crofts, Charles B. Keetley, F.R.C.S., of 10, George Street, Hanover Square, W., to Anna M., daughter of the late Henry Holmes Long, Esq., H.E.I.C.S.

LEECH—BOGHURST.—August 5th, 1886, at the Parish Church, Frating, near Colchester, by the Rev. Canon Mayor, Arthur Herbert Leech, M.R.C.S.E. and L.S.A., third son of Henry P. Leech, M.R.C.S.E. and L.S.A., Woolpit, Suffolk, to Annie Madaline, fourth daughter of William Philip Boghurst, of the Abbey, Frating.

PENNY—PINDER.—On August 5th, at St. Matthew's, Denmark Hill, by the Rev. Stephen Penny, M.A., brother of the bridegroom, assisted by the Rev. H. Weston Wright, Edmund J. Penny, Esq., M.R.C.S., of Berkhampsted, Herts, to Annie Sophia Devall, daughter of Dr. and Mrs. Pinder, Camberwell Green.

CENTENARIANS.—The death of Sarah Marshall, a widow, at Nantyglo, at the great age of 107 years, is announced. The certificate of her baptism, in the possession of the Rev. John Marran, the vicar, states that she was baptised on May 11th, 1779. She has had eight children, two of whom survive her. She could read and knit, and retained all her faculties to the last.—An inmate of the Bury St. Edmund's Union House, named Joseph Gathercole, has just died at the reputed age of 104 years. He had lived there about sixty years, having been gatekeeper many years till too feeble. He only kept his bed about a fortnight, and was in the enjoyment of his faculties almost to the end.—A curious case has been brought before the Pontypridd magistrates, in which a widow named Elizabeth Hughes, aged 103 years, was charged with stealing a cheque for £5 14s. It appears she had gone to an insurance agent for her policy, and whilst there the postman placed a letter on the table for the agent, which she seized. She was followed home by the police, who found the letter and cheque in her possession. In reply to the magistrates, she said she was 102 years old. She thought she was only taking the policy from the agent's office. The case was withdrawn in consideration of her great age.—A few days ago, the friends of Chevreul, the French chemist, celebrated his hundredth birth-day. He was the guest of the evening, and was accompanied by his son, aged 70 years.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30 Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

PRACTICE IN BRAZIL.

A MEMBER asks for information with regard to practice in the Brazils or the Argentine Republic. What chance would a man with British qualifications have in either place? Would he be allowed to practise? Are assistantships or partnerships obtainable? Is living expensive? Is work lucrative? How much Spanish (or Portuguese) is it necessary to know?

ANSWERS.

D.—The right course would have been to at once have called in a constable, and to have given the parties into charge.

EXAMINATIONS IN SANITARY SCIENCE.

M.R.C.S.—The examinations in Sanitary Science of the University of Cambridge, of the Royal Colleges of Physicians of London and of Edinburgh, of the Faculty of Physicians and Surgeons of Glasgow, and of the King and Queen's College of Physicians in Ireland, are open to registered medical practitioners, without reference to their being connected with universities.

THE MEDICAL ACT, 1886.

M.D.—The new Medical Act, passed last session, was published in full in the BRITISH MEDICAL JOURNAL of July 3rd, page 36.

INQUIRER.—The Medical Act, so far as registration is concerned, will come into force on the 1st day of June, 1887, or such other day in June, 1887, as may be appointed by the Privy Council.

W.R.—No foreign degrees can be registered under the Act before June 1st, 1887.

NOTES, LETTERS, ETC.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following questions were submitted to the candidates at the recent final examination for the diploma of Member.—*Surgical Anatomy and the Principles and Practice of Surgery.* (Candidates were required to answer at least four (including one of the first two) of the six questions, and were strongly advised to answer all six questions.) 1. Give the relations of the femoral artery in the middle of the thigh, and describe the operation for applying a ligature for punctured-wound at that part. 2. Describe the position and attachments of the omohyoid muscle. State fully its relations to the larger vessels of the neck, and its use as a guide to the operator. 3. What is an intussusception of the bowel? Give its causes, diagnosis, and treatment. 4. Give the differential diagnosis of ascites, ovarian tumour, and pregnancy. Describe the operation of ovariotomy. 5. Give the signs of a dislocation of the radius and ulna backwards. What structures would resist reduction? How would you reduce the dislocation, and in what position would you put the limb afterwards? 6. How would you diagnose an acute inflammation of the middle ear? What are the dangers of such of a case? Describe its treatment.—*Midwifery and Diseases of Women.* (Candidates were required to answer three of the four questions.) 1. How would you distinguish between a face and breech presenting? Describe the management of labour when the breech presents. 2. How would you treat a case of partial placenta prævia when the os uteri is dilated to the size of half a crown and hæmorrhage is present? 3. What is puerperal eclampsia? What are the pathological conditions with which it is associated? How would you treat a case (1) before the attack, (2) during the attack? 4. What is pelvic hæmatocele? What are the conditions for which it may be mistaken, and how would you make the diagnosis?—*Principles and Practice of Medicine.* (Candidates were required to answer three of the four questions, including question No. 4.) 1. What are the causes, symptoms, sequelæ, diagnosis, and treatment of diphtheria when it affects the fauces and pharynx? 2. Describe the causes, appearances, and treatment of ringworm; give the prognosis and diagnosis. 3. What are the different kinds of hemiplegia, and how does each kind enable you to predicate the seat and nature of the lesion? 4. Give the composition, uses, and doses of ceriî oxalas; injectio morphiæ hypodermica; liquor strychniæ; oleum terebinthinæ; pulvis ipecacuanhæ compositus; pulvis kino compositus; tinctura camphoræ composita; tinctura cannabis indicæ.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. W. Macgill, London; Mr. E. J. Mather, London; Mr. R. Clement Lucas, London; Mr. H. Duncan Browne, Holywell; Dr. J. Dreschfeld, Manchester; Mr. Shirley F. Murphy, London; Messrs. Duncan, Flockhart, and Co., Edinburgh; Mr. Munro Scott, London; The Woodhouse and Rawson Electric Supply Company; Dr. A. D. Macdonald, Liverpool; Messrs. Sampson Low and Co., London; Messrs. Baillière et Fils, Paris; Dr. R. P. B. Taaffe, Brighton; Mr. J. G. W. Bullock, Rugby; Dr. Rich, Liverpool; Mr. Lawson Tait, Birmingham; Inquirer; Mr. J. H. Stallard, San Francisco; Secretary Sanitary Institute of Great Britain; Mr. J. Vesey Fitzgerald, Birmingham; Mr. L. Eastwood, Darlington; Dr. Tatham, Salford; Mr. W. Jones-Morris, Portmadoc; Dr. E. G. Whittle, Brighton; Mr. J. E. Cooney, London; Sir B. Foster, M.D., Birmingham; Messrs. Jeyes and Co., London; Mr. W. Wagstaffe, Sevenoaks; Sir Henry Thompson, London; Dr. Rogers, London; Dr. W. Wadham, London; Mr. G. A. Harris, Simla; Dr. Sinclair, Edinburgh; Mr. R. Jeffreys, Chesterfield; Dr. J. Macintyre, Glasgow; Dr. Willoughby, London; Mr. N. H. Turner, London; Mr. T. E. Lovegrove, Nottingham; Mr. W. Johnson Smith, London; Mr. A. M. Davies, Netley; Messrs. Sugg and Co., London; Mr. C. Gane, Bath; Mr. S. F. Proctor, St. Lucia; Dr. Mickle, London; Dr. U. Prichard, London; Mr. J. H. Gilmour, Andover; Messrs. Wilson and Son, London; Mr. G. Buckston Browne, London; Mr. W. Donovan, Birmingham; Mr. J. K. Thornton, London; Dr. G. Harley, London; Dr. O. Sturges, London; Dr. D. G. Thomson, Cave Hill; Mr. A. Nicholson, Brighton; Mr. H. B. Hewetson, Leeds; Mr. J. Fagan, Belfast; Dr. T. Savage, Birmingham; Mr. Erichsen, London; Mr. Andrew Clark, London; Member; Mr. W. Bruce Clarke, London; A Member; Mr. R. T. C. Robertson, Hamilton; Mr. W. Brown, Carlisle; Surgeon-General Cornish, London; Mr. P. Boobbyer, Nottingham; Mr. C. E. Paget, Kendal; Mr. Vacher, Birkenhead; Dr. M. W. Taylor, London; Dr. S. West, London; Dr. C. W. Ralfe, London; Dr. de Havilland Hall, London; Dr. Stephen Mackenzie, London; Dr. E. B. Truman, Nottingham; Dr. Mitchell Bruce, London; Dr. Davison, Bournemouth; Mr. C. Higgens, London; Dr. E. Andrew, Shrewsbury; Dr. Warner, London; Dr. Kirk, Partick, Glasgow; Dr. G. H. Savage, London; Mr. W. Anderson, London; Dr. Hingston Fox, London; Dr. C. R. Drysdale, London; Dr. Eylandt, Revel; Dr. Handford, Nottingham; Sir Dyce Duckworth, London; Dr. S. M. Rendall, Aix-le-Bains; Dr. Mantle, Stanley, Durham; Dr. R. Barnes, London; Mr. A. Benson, Dublin; Sir William Stokes, Dublin; Mr. R. Ellis, Newcastle-on-Tyne; Mr. A. E. Cumberbatch, London; Dr. J. Strahan, Belfast; Dr. D. C. McVail, Glasgow; Dr. T. Oliver, Newcastle-on-Tyne; Mr. J. W. Barrett, London; Dr. C. E. Glascott, Manchester; Mr. H. Greenway, Plymouth; Dr. Hale White, London; Dr. Fletcher Beach, Darenth; Dr. Hollis, Brighton; Dr. Beverley, Norwich; Mr. E. A. Browne, Liverpool; Dr. C. B. Taylor, Nottingham; Mr. Anderson Critchett, London; Mr. C. G. Lee, Liverpool; Mr. Simeon Snell, Sheffield; Mr. W. Adams Frost, London; M.D.; Dr. Walton Browne, Belfast; Dr. Whitelegge, Nottingham; Mr. W. B. Holderness, Windsor; Dr. Carrington, London; W. R.; Mr. E. J. Parrott, Hayes; Enquirens; Rev. A. Turnbull, Penistone; Dr. H. Dalton, Harrogate; Dr. G. V. Poore, London; Mr. W. J. Penny, Clifton; Mr. H. F. Stokes, London; Mr. Charles King, London; Dr. Rentoul, Liverpool; Mr. Jabez Hogg, London; Dr. J. A. Coutts, Manchester; Dr. Churton, Leeds; Dr. Cobbold, Earlswood; Dr. S. A. K. Strahan, Northampton; Dr. Cullimore, London; Mr. Howard Marsh, London; Dr. Buzzard, London; Mr. C. J. Symonds, London; Dr. Wolston, Edinburgh; Mr. E. Owen, London; Dr. J. Ward Cousins, Southsea; Dr. Shuttleworth, Lancaster; Dr. Tyson, Folkestone; Dr. Goodridge, Bath; Dr. Radcliffe Crocker, London; Dr. J. Ewart, Brighton; Dr. Myrtle, Harrogate; Dr. Spender, Bath; Mr. R. Barwell, London; Mr. Cresswell Baber, Brighton; The Registrar of the Faculty of Physicians and Surgeons of Glasgow; Mr. W. Whitehead, Manchester; Mr. Walsham, London; Our Paris Correspondent; Dr. E. P. Philpots, Bournemouth; Mr. Walter Fowler, London; Dr. Rayner, Hanwell; Dr. C. R. Illingworth, Accrington; Mr. G. Munro Smith, Clifton; Dr. Charles E. Ryan, Emly; Mr. T. H. Smith, Alcester; Dr. J. F. Woodroffe, London; Dr. Curnow, London; Dr. Groves, Carisbrooke; Dr. C. Kelly, Worthing; Mr. Reginald Harrison, Liverpool; An Assistant Hospital-Physician; The Registrar of the University of London; Mr. H Rainbird, Saxilby; Dr. H. F. Burnes, London, etc.

BOOKS, ETC., RECEIVED.

Our Dress and Our Food in Relation to Health. By D. Edgar Flinn, F.R.C.S. Dublin: M. H. Gill and Son. 1886.

Elements of the Comparative Anatomy of Vertebrates. Adapted from the German of Robert Wiedersheim by W. Newton Parker. London: Macmillan and Co. 1886.

A System of Practical Medicine, by American authors. Edited by William Pepper, M.D., LL.D., assisted by Louis Starr, M.D. Vol. v: Diseases of the Nervous System. London: Sampson Low, Marston, and Co. 1886.

The Gas Engineers' Chemical Annual. By J. A. Wanklyn. London: Scientific Publishing Co. 1886.

How to Use Our Eyes, and how to preserve them from Infancy to Old Age. By John Browning, F.R.A.S., F.R.M.S. Fourth edition. London: Chatto and Windus. 1886.

Lays of the Colleges; being a Collection of Songs and Verses by Members of the Æsculapian, Medico-Chirurgical, and other Professional Clubs in Edinburgh. Edinburgh: Maclachlan and Stewart. 1886.

Paralyses—Cerebral, Bulbar, and Spinal: A Manual of Diagnosis for Students and Practitioners. By H. Charlton Bastian, M.A., M.D. London: H. K. Lewis. 1886.

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ADDRESS IN PUBLIC MEDICINE.

Delivered at the Annual Meeting of the British Medical Association in Brighton, August, 1886.

BY

E. D. MAPOTHER, M.D.,

Consulting Medical Officer to the City of Dublin, Ex-President R.C.S.I.

THE MEDICAL PROFESSION IN IRELAND AND ITS WORK.

THE medical profession in Ireland and its work will be the subject of the address which, in response to the invitation of the President and Council, I humbly submit.

The exhaustive way in which the great questions grouped under the name of public medicine have been treated by my predecessors since the section was founded in Dublin, and by the editor of the JOURNAL, has rendered selection of topics very difficult. My choice arose in the belief that reliable information concerning my country would just now interest a British medical audience, and that, being somewhat conversant with its curative and preventive organisations, the limited time at my disposal could be thus best used.

I shall, of course, only dwell on those points wherein our system differs from the British.

And at the outset, perhaps, those fond of ancient lore may be pleased to hear of what kind our calling was when (to use the words of a matchless orator) "Ireland had almost a monopoly of learning and piety, and when she nearly alone held up the truths of civilisation, of true Christian civilisation in Northern and Western Europe."

In the introduction to South's *Memorials to the Craft of Surgery*, Sir J. Paget says: "Many of the things thus told must seem to us very strange, and in this sense amusing; especially if we only think of them as if they were occurring now and under the same conditions as we are living under. A more careful reading will show that the 'strange' things were usually fitted to the times and the circumstances in which they happened; and that, like the organs and the changes in an embryo, and in spite of many errors and defects of human management, they were in progress towards better things." The earlier dwellers in Ireland were very heterogenous, and battles were constant between the various races. Military surgery must needs have been cultivated. However, I pass by this time of which Diancecht, that is "God of Healing," was the most renowned, the reliable and the fabulous being too much intermingled in the records.

The Brehon Code of Laws, the most ancient in Europe, dating from the fifth century, lately translated under a government commission, of which Dr. Graves (now Bishop of Limerick) was secretary, deals largely with medical affairs. The most important of them, Senchus Mor, originated with St. Patrick, and for twelve centuries controlled the native Irish, especially while the tribal system prevailed. The provision in them most worthy of imitation at present was that the physician sat in the Council of the State. Sir D. Corrigan, our greatest physician, and one of our foremost public men, regarded membership of the Privy Council as vastly superior to titular distinction—yet he was never offered that position, wherein his splendid abilities would have widely served his nation. Sanitary and many other great public works are controlled by this body in Ireland. These Brehon Laws refer to surgeons who lived before the second century. They carefully provide for distress, that is, taxation, for the support of a son taken from his mother's dead breast, for the incurable, for the care of the sick as to food, bedding, nursing, and a house with wind blowing in all quarters, and with a stream close by. The medical man had power to keep from the sick room "fools and female scolds." The mode of distraint in case of a physician was, "Let his horsewhip and his probes be taken up. If he has not the proper number of such things, let a thread be tied about the finger next his little finger."

The unqualified physician was to be fined if he operated without getting a guarantee against damages, or without having given notice that he was not qualified. The regular practitioner was to be quite exempt. An impartial physician was to be the judge of the mode of treatment, and of the due recompense.

The fees, always paid by oxen, the current coin, were most exactly proportioned to the rank of the patient. Cattle abounded, and as late as 1369 the value of a cow in Dublin was only 6s. 4d.

Injuries were distinguished as the "lump-blow," that is, when swelling followed, and the "white blow" where no ecchymosis resulted. Castration was a dire offence in the case of procreating men, but in the case of old men or clerics quite trivial; simple and compound fractures were plainly separated in fixing fines.

Testing times were laid down for special injuries, within which the doctor or the inflictor was liable for damages according as the blame was adjudged.

Penalties were so often assigned for the felonious bleeding of living cattle, that the practice must have been common. In 1770, a great epidemic of diarrhœa raged in Munster, owing to scarcity of food, and the poorer owners of cows periodically bled them, and prepared the blood as a kind of pudding. A similar food, known as "drisheens," obtained as the beast is being slaughtered, is to the present a favourite in Cork.

The Royal Irish Academy possesses very great numbers of medical manuscripts written in the thirteenth, fourteenth, and fifteenth centuries; and, even as regards historical interest, their translation is most desirable.

In presenting a few records of epidemics in Ireland, it will not be convenient to follow strict chronological order. In 1492, the sweating-sickness raged, and most wondrously differentiated the races, the English settlers having been alone attacked. This has been explained by excess of food and drink; but the profound physiological differences which mark the nervous systems of the Celt and the Saxon have much to do with their relative *capacitas morbi*. Caius recorded that the French were exempt, while the English in France suffered. In all ages, writers, from Strabo downwards, attest the cerebro-spinal activity of the Celt, his mental vivacity and muscularity. In our bogs are often found boughs of oak five inches in diameter cut by a single stroke of the axe. His proneness to follow a leader, often for no sound reason, was acquired in the tribal system under which he lived.

On the other hand, his vaso-motor and visceral strength has been lowered by many centuries of scanty food. Saxon immigrants and Celtic emigrants have been in larger proportions males than females, and thus the influence of the Celtic mothers has preponderated in the visceral characteristics of the people.

In 1760, the proportion of the Celt to the Saxon was, in Connaught, nine-tenths; in Munster, five-sixths; in Leinster, two-thirds; and in Ulster, two-fifths. Early in the previous century, the Saxon element had been much greater.

The Celt's weak endurance of climatic change is sadly illustrated at American ports; and shock, that is, impress on the sympathetic system, after great operations—for example, ovariotomy—is far more potent than in the case of the Saxon. Surgical statistics in Paris, and amongst the French in the battles of 1870, mark the same racial feature. Sir J. Simpson asserted that the potato-fed Irish, the oat-fed Scotch, and the rice-fed Hindu bear operations well; but theirs is the kind of endurance to be tested by the septicæmic thermometer, which, at the other end, indicates the constitution of the brewery vatman.

As to the sixteenth century, many of the surgical injuries were scarcely reparable. Lord President Sir Henry Sidney reports to the Privy Council: "They fight for their dinners, and many of them lose their heads before they be served with their suppers." It was upon this Viceroy that lithotrity was first performed, namely, in 1559, at Dublin. About this time, all social ties among the native Irish were fearfully disorganised; for pay, the father fought the son, the son the father. The entire population of the country was only half a million. It is believed to have been three millions before the English invasion.

It does not appear that the ancient Irish were largely addicted to intoxicating drinks, and they were mainly ale and mead. Stanihurst, who was not a native, in his *Dieta Medicorum* (1550), bursts into extravagant praises of whiskey.

"It drieth up the breaking out of hands, and killeth the flesh-worms; it scoureth all scruf and scalds from the head, being therewith washed before meals. Being moderately taken it sloweth age, it strengtheneth youth, it helpeth digestion, it cutteth phlegm, it abandoneth melancholie, it relisheth the heart, it lighteneth the mind, it quickeneth the spirits. It keepeth and preserveth the head from whistling, the eyes from dazzling, the tongue from lisping, the mouth from mafflling, the teeth from chattering, the throat from rattling, the hands from shivering, the sinews from shrinking, the veins from crumpling, the bones from aching, the marrow from soaking."

To this day there is a universal belief among the vulgar as to the preventive and curative effects of whiskey in the onset of acute disease.

According to Dr. Rutty, there were in Dublin, in 1749, 3,500 drink-shops in a population of about 150,000. The habit of taking drinks and giving them as a treat, without using food at the same time, has been, amongst the underfed poor, always rife in Ireland more than elsewhere, and as it was new whiskey, taken occasionally, not habitually, excitement and violence often arose.

J. Howard tells us that, in the Irish prisons, whiskey was procurable in any quantity at the price of 4s. per gallon. In 1772, the Foundling Hospital was supplied with beer at 1s. per ten gallons, stuff, it must have been, which could not have induced children to acquire habits of alcoholic indulgence.

At present, amongst the humbler rural population, alcoholic diseases are not comparatively frequent, but they are amongst the middle classes. It is remarkable that not one retreat for the treatment of dipsomaniacs has been set up. The clause prohibiting their being owned by the proprietor of a lunatic asylum seems to me unwise. In cities where our emigrants have settled in large numbers, drink is, alas! a very potential cause of mortality. In New York, deaths by alcoholism and by Bright's disease are said to be thrice as numerous amongst the Irish as amongst the Germans. In that city, greater crowding, and more scantily clothed and unwashed bodies, would seem to have influenced the mortality by phthisis and bronchitis, for it is nearly twice as great in the former as in the latter race. Over half the deaths in New York occur in the tenement-houses, which are there defined as buildings in which more than three families reside. I regret that, in American towns, it is often found that death-rates are in direct ratio to illiteracy, and illiteracy to Irish element of population. The general election of 1885 brought out the melancholy fact that one in four and a half of the voters in Ireland were illiterate. In Donegal county, the proportion was 8,424 to 19,183. Only 1 in 58 of the electors of Scotland were unable to read and write.

Starchy food has much to do with our high phthisis-rate; and there is more of it in the tea and bread diet which has been substituted for the milk, egg, and potato menu in vogue before the famine of 1847.

Since Strabo called us "poophagi," herb-eaters, our peasant's food has often been too bulky. The teeth in ancient Irish skulls are worn like those of horses, and more bronze sickles have been found in Ireland than in all the rest of Europe. In the famines of 1822 and 1846, wood-sorrel and other wild plants were resorted to, when the treacherous potato failed. On the other hand, eight or ten centuries ago, animal food aided largely the physical prowess, and the mental eminence of the Irish, for then the flesh of the game they hunted, beef and butter, were plentifully used. Casks of this latter food, converted into adipocere, are often found in bogs.

It is hard to believe, yet it is true, that so ill-practised is the cooking art, that potatoes, the staple food, are often served turnip-like and water-logged. In 1864, Dr. E. Smith, who was commissioned by government, reported that the weekly consumption by the Irish farm-labourer, and of his English fellow, were in ounces.

	Irish.	English.
Bread-stuffs	326	196
Potatoes	92	96
Meat	4.5	16
Milk	135	32
Fats	1.3	5.5

This return is erroneous as regards every item.

For the seventeenth century, Irish medicine has not much to call into court. Allen Mullen's discovery of the ciliary vessels and nerves, Robert Boyle's statement that the blood-clots by the loss of an alkaline spirit, Sir Hans Sloane's pre-eminent position in science, and Thomas Proby's great surgical skill, are all that are noteworthy. The descendants of this surgeon and of Ralph Howard, Professor of Physic, in 1674, in the University, are respectively Earl of Carysfort and Earl of Wicklow, and each owns a side of the Vale of Ovoca, a classic spot amongst those which my countrymen hope may tempt their British brethren to brave the three hour voyage across the channel. The notable medical man of the century was Sir P. Dun; for, by having insisted, against the advice of many surgeons, that the wound of William III, at the Boyne, was trivial, he contributed much towards the winning of that battle so decisive. A knighthood and large grants of forfeited lands were his rewards, the latter serving good purposes in Dublin to the present day. On condition that Dun's endowment was to be for one chair only in the College, Albinus, Haller, and Van Swieten, became candidates, and offered to test their merits by competitive examination. The Act of 1741, however, subdivided the professorship, and thus was lost the opportunity of gaining the greatest anatomist, the greatest physiologist, or the greatest pathologist of the first half of the eighteenth century—any one of whom would have created and fostered such enthusiasm, that Dublin would have become a famous seat of medical science. Until the time of James Macartney, she could not lay claim to such a distinction. An eloquent notice of this anatomist formed part of the address of Professor MacAlister, in opening the Anatomy and Physiology Section of the Academy of Medicine.

As is often the case, Irishmen shone more brilliantly abroad than at home, and the most famous of the medical emigrants was Neil O'Glacan, an able writer, who filled successively the chairs of Physic in Toulouse and Bologna. He was, in 1629, Privy Councillor to Louis XIII, King of France, a monarch who enrolled himself as "Master Surgeon."

Dr. Sir W. Petty was not born in Ireland, but spent the last thirty-five years of his wonderously active life there. He became all powerful, and amassed great wealth, endowing the Lansdowne family, of which he was the founder. He had been Professor of Anatomy at Oxford, and his greatest work, written in 1672, he styled *The Political Anatomy of Ireland*. The preface discusses "The Body Natural and the Body Politick, and the arts of preserving both in health and strength; it is as reasonable that, as anatomy is the best foundation of the one, so also of the other; and that to practice upon the politick without knowing the symmetry, fabrick and proportion of it is as casual as the practice of old women and empirics." Furthermore, as students in medicine practice their inquiries upon cheap and common animals, and such whose actions they are best acquainted with, and where there is the least confusion and perplexure of parts, I have chosen Ireland as such a political animal, who is scarce 20 years old, where the intrigue of State is not very complicate, and with which I have been conversant from an embrion." If he were there to-day to anatomise her, his tone would be less confident.

From many mediæval plagues Ireland, owing to isolation, appears to have been spared; but in respect of others, as elsewhere, there was enough in domestic conditions to account for their malignity without appealing to atmospheric or telluric influences. Open houses, called "betaghs," to which all classes were welcome, helped much to spread contagion.

Typhus has had its home more in Ireland than in any other country; and the vastness of its diffusion was such that, during the epidemic of 1818, a million and a half of cases were recorded, and in that of 1846-7 there were treated in hospitals 579,721 individuals. You will see how widespread was distress by the fact that, during July, 1847, 3,020,712 separate persons were given cooked rations. The population was under seven millions. The traits of the people became changed; thieving, unknown before, was widespread; sadness reigned, and the national pastimes died out.

Drs. Barker and Cheyne, in their truly classical work, assign as a cause of the fearful famines and fevers which raged during the eighteenth and the first quarter of the nineteenth century, "the high price of land artificially created by land-jobbers, and the vast income drawn from the country by absentees, the deadliest foes of Ireland." Many of the famine and fever-stricken people perished for want of the aid which a resident gentry could have afforded, and appeals to the absentee landlords in England or the Continent usually had no response.

Dr. Cheyne was Professor of Medicine in the School of the College of Surgeons, and his advanced scientific position will appear from the fact that he recorded the axilla and mouth-temperature of 250 cases of fever during the summer of 1817. Sir C. Cameron, in his history of the College, details the circumstances which led Dr. Cheyne to settle in Dublin. "He states that he found the profession respected, chiefly, no doubt, owing to the eminent physicians who had flourished during the previous half century; for example, Dr. Smith, remarkable for his munificence; Sir N. Barry, whom Mr. Grattan characterised as the most accomplished gentleman he had ever known; Dr. Plunkett, the witty and learned brother of the Lord Chancellor. He found the Dublin physicians, mostly belonging to Cullen's school, relying chiefly on symptomatology, and paying but little attention to pathology. Much of the purely medical practice was passing into the hands of the surgeons." His invasion was successful, as he attained the most lucrative practice ever known in Dublin. Just now there is much more cogitation about emigration than immigration as regards that capital.

How our profession suffered, will appear from a few figures. Between 1818 and 1839, 560 physicians had fever; and, in 1847, 123 died of it, the latter being a rate 35 times greater than the fever death-rate of the people in general. The poor emigrants during the latter epidemic were fairly said to have made Liverpool "the hospital and cemetery of Ireland," for its death-rate became 63.5—double its average, and the highest of any modern city. During that year,

400,000 Irish entered Liverpool, of whom 70,000 stayed there, overflowing its already crowded tenements. Corrigan had foreseen the sequence of famine and fever; and Virchow, in his *Hunger-Typhus*, extols our great countryman, and laments that "Ireland is even to-day (1868) the land of famine, of typhus, and of emigration."

The circumstances of the cholera-epidemic with us must convince the most sceptical of the portability of the disease. On July 26th, 1866, as coroner's witness, I was directed to see the body of a girl who had died, it was believed, after seven hours' illness. Although I had never seen a case of cholera, the blue shrivelled skin and the ejecta showed what was to be dealt with. In the morning, she had arrived from Liverpool by the ordinary passenger-boat, and had vomited, it was supposed, from sea-sickness. Her dwelling there had been the seat of several cases. A wake was held, for we had no power to prevent it, and exhortation was useless, as they believed she had died of no catching disease. Owing to the exertions of Catholic clergymen, these dangerous meetings are now rarely held in towns. Her death was followed by those of three other persons. One, while ill, had used a privy in a house a mile off, whither he had gone to buy the coffin. In that house, the next case occurred. Further, an early victim was a woman who lived a mile and a half away, but dealt in the place first attacked. From these several foci, the contagium was quickly disseminated. Out of 923 victims, only three belonged to the better classes in Dublin. It is a curious coincidence that our magnificent water-supply was distributed on the same day that the last case of cholera arose. The only striking fact shown by a map on which the site of every case was marked, was that the beds of old diverted streams were most favourite habitats. This may have been owing to the lower level, or to fæcal impregnation of the soil. Very many places in Ireland have defective water-supplies. I see many cases of illness in country patients due to extreme hardness of water. In 1880, the water of a favourite spring in a large town had 385 grains of solids per gallon, and that from a well in a fashionable Dublin suburb gave 22 grains of organic matter. It was largely fæcalised.

In the year 1867 we had a brief but fierce epidemic of cerebro-spinal meningitis. Not one etiological fact was made out then, nor do I believe since, as regards this malady.

If cholera or small-pox again threaten us by sea, it is not certain that they could be efficiently met by the machinery now in working order. Observation, or it may be quarantine-hospitals in isolated positions, such as, for Dublin, the Pigeon House Road, for Liverpool, New Ferry, for London the floating hospital at Purfleet, could alone cope with such an impending disaster. Undoubtedly, such provisions for occasional use must be kept, while they are despised as useless. In 1876, we equipped a vessel in our river; but, having been only twice used, it was given up. In 1883, it intercepted a virulent case of small-pox, which otherwise would probably have caused an outbreak. A ship from Riga came in without flying the yellow flag, although the ailment of one of the crew was apparent. He was removed at once to our hospital-ship, and a young medical man remained with him, without intermission, till recovery. The clothes of both were then burned, and the doctor swam to the shore, where he put on new garments. Small-pox has fluctuated remarkably in Ireland during the past twenty-five years; the maximum, 10,317 cases, was in 1872; the minimum, last year, 18 cases. In the former year, the virus had exhaustively searched for its unprotected victims.

I could present to you a view of the health of the Irish people in no way so clear as by a brief summary of a paper read last year in the Academy of Medicine by Dr. Grimshaw, our Registrar-General. During the decade 1871-80, the mean civic population (that is, those dwelling in unions wherein there were towns of 10,000 people and upwards) was 1,476,929, and the death-rate was 22.5. On the other hand, the rural population was 3,816,678, and its death-rate 16.6. Had it been up to that of the town-people, about 22,000 more deaths would have occurred. Of counties, the extremes are, Mayo, 13.9; and Dublin, 26.2. The only possible source of error is, that the registration may be less complete in the sparse than in the crowded districts. On the census-night, the rate of the temporarily sick was 10.5 per 1,000 of the civic, 6.6 in the case of the rural population.

As townspeople have better houses, purer water, improved sanitary appliances, and more efficient medical care, they should be healthier, were it not that condensation vitiates the air, that their occupations are less healthy, and that there is greater proneness to intoxication and other evil habits. Of course, infective diseases prevail more in towns than in the country, and the figures are respectively 3.2 and 1.8; but, as regards phthisis and other respiratory diseases, an excess on the same side appears. The deaths by phthisis were, per 1,000, 2.8 amongst the civic, 1.6 amongst the rural, and by other diseases of the breathing organs 3.8 and 2.3. The magnitude of these ratios will be seen when it is stated that these two causes together produce over one-fourth of the deaths in Ireland. Preventable ills in my city promote phthisis, but its low level and climate must also be blamed. Dr. J. W. Moore, a most reliable observer, describes the latter as follows: "In the fullest sense an insular one, free from extremes of heat and cold—except on very rare occasions—and characterised by a moderate rainfall (about twenty-eight inches) annually, which is distributed, however, over a large number of days (about 195 in each year), clouded skies, a high degree of humidity, and a prevalence of brisk winds, chiefly from westerly points of the compass, make up the climatology of the Irish capital." The great moistness of the climate of Ireland in general accounts largely for the prevalence of phthisis. The stimulating and oxidising sunlight is interfered with, and cutaneous action is checked.

With regard to two single items, Dr. Grimshaw shows that the risks of childbirth, owing to want of skilled attendance, are greater in the rural than in the urban districts; and that in our great factory town, Belfast, the conditions of life tend powerfully to promote phthisis. The death-rate for the whole country last year was 18.4, and the average of the decade was 18.3.

The sick poor in Ireland are better cared for than in any other country, thanks to the Medical Charities Act of 1851. Before the establishment of the Poor Law, the arrangements were most imperfect and irregular; for example, in 1836, in the county Mayo, which is seventy-two miles by fifty-eight, the travelling too being of the hardest, but one dispensary existed. Such institutions were supported by a small grant from county cess and by subscriptions, in the collecting of which by the medical officer there was much humiliation. The Poor Law Commissioners, in their first report on the Dispensaries, 1853, declare "There is now afforded to those officers a practical and sure means of protection, provided they avail themselves of it, against an abuse most fatal to their professional interests, which prevailed extensively under the former system, whereby many contributors to this tax were permitted to look upon themselves, their families, and dependents, as peculiarly the objects of the charity; and led them to expect attendance and advice in return for their subscriptions. We trust that all tendency to abuse of this nature may, under the present law, be effectually suppressed by a judicious and firm exercise of the power possessed by Dispensary Committees, to cancel tickets for Medical Relief given by the individuals authorised to issue them to persons not entitled by their position to receive it, and by the publicity which may be expected to arise from discussions in Committee on such occasion." In 1841, they had reported that persons holding one or two hundred acres had sought gratuitous medical relief.

The great want now is the provision of cottage hospitals, in which infective cases could be taken. In the sparsely inhabited parts, a fever hospital for a county is useless at perhaps twenty miles distance, the more so as there is nothing in the shape of an ambulance-wagon for reaching it. The fever hospitals already provided have had the most signal effects in lessening this great cause of death and pauperism.

At present, the medical officers of workhouses and dispensaries number over 1,000, being about half the practitioners of the country; in a few places the two posts are held by the same person. They must be qualified in medicine, surgery, and midwifery, and, until lately, should be 23 years old. This restriction, still in force for workhouse medical officers, has excluded many, as entry into the far more desirable public services may be obtained when they have got their licences from the medical authorities, in all of which 21 years is the standard.

Their duties were well summarised in an address given by Dr. Jacob, in the State Medicine Subsection of our Academy last February. Including care of the sick and vaccination, they yearly treat nearly a fifth of the whole population, while they register about 126,000 births and 96,000 deaths. The visits paid last year were 595,486, of which nearly one-third were at the patients' homes.

The emoluments to medical officers, including vaccination, were £99,787, and £2,836 to apothecaries.

The appointment has been heretofore decided by local interest, but I have for many years advocated the competitive system, which has told so well in the other public medical services. There are, of course, great differences. The military officer obtains uniform pay, and follows a moving population—a dispensary medical man might have to settle in a poor district, in which severe labour earns £150 yearly; another might at once obtain a small but well-to-do practice, where one-third of the work will gain three times the income. A half-yearly competition under the Local Government Board would establish a roll of merit.

Vacancies, as they occur, might be filled, the probationers meanwhile acting as assistant officers to workhouses, many of which are now under-manned. There are difficulties, of course, in the working of such a system; for instance, it would be lamentable that a brilliant man should be wasted on a dismal western district; and promotion for high marks or good service from one district might imply the severance of social and confidential ties which quickly bind together the physician and his patients. The change should never be compulsory, but a good man should be given the option of taking a vacant place.

The system having been organised a few years after the great famine, 1846 to 1849, far more persons were then entitled to free attendance than in such prosperous decades as from 1869 to 1878. Land legislation having more clearly defined the classes who ought to pay, the medical man is applied to by individuals who should be paying patients on a scale of which the poor-law valuation should be the basis. In the beginning of each year, a list of those entitled to free relief might be made out in each district.

In England and Scotland, the relieving officer applies the rigid test of pauperism for gratuitous medical care and drugs.

The remedy of cancelling a ticket comes too late, and is little used, as only about 500 are thus dealt with out of three quarters of a million issued.

The expenditure on drugs and on medical appliances was last year £27,653, a sum vastly above the rate in other countries, and yet it is believed that their quality is very inferior. It was proposed, with much reason, that they should be contracted for to serve the whole country. In a central depôt these articles could be examined as to purity and fitness, and then distributed to the unions as a contribution from the Consolidated Fund (in the same way as is a proportion of the medical and other salaries); or their value could be annually charged to each district according to consumption. Another plan which would tend towards ensuring that the drugs were not only pure, but well kept, would be the employment of inspectors, expert in pharmaceutical analysis, to visit periodically the workhouse pharmacies and dispensaries.

The right of pension to poor-law medical officers on the grounds of length of service or proven ill health, as in the case of other civil servants, should be conceded; several instances of grossly harsh refusals have arisen, many a septuagenarian has been kept in very galling harness. All unions in which the officer had served should contribute, and the State should in all justice pay the same proportion towards the maintenance of the worked out, which it does to the working medical man.

The amalgamation of unions in the more thinly peopled districts is now forcibly advocated, and if such take place, enactments should provide for compensation or transference of the medical officers of the suppressed union. It was lately held in the Queen's Bench that no such power exists. At present there are 87 annuitants receiving £6,956, the average being £79 9s.

It has occurred to me that the extension of the Post-Office Assurance system to the granting of weekly stipends in cases where the assured were sick or maimed, would be most desirable. The comparative adoption of that act in England and Ireland is, however, not encouraging; for of the insurances effected since 1865, only one-fourteenth have been in Ireland, where the inconveniences of the benefit societies are so universally felt. Incorrect entry of age, the delay, trouble, and expense of getting the money, such waste in salaries that a canvasser is paid 15s. weekly if he bring in 24 penny subscriptions, are faults greatly complained of. Their shakiness may be fairly judged of by the fact that over 10,000 friendly societies failed in the ten years 1856 to 1865, and the substitution of some sound system is called for.

My English hearers will be surprised to learn that provident dispensaries are unknown in Ireland, except in a few of the larger towns.

As far as I can judge, the Poor-law Medical Service in England is not as well organised as with us. Mr. Rivington, in his Carmichael Essay, calculates the average payment to each medical officer for attendances, drugs, and appliances at £69, and that an average of 149 poor persons are under the care and supervision of each at a time. This number is, however, owing to caprice of guardians and other causes, most unequal—often four times greater in some districts than in others.

It is manifestly better that the practitioner should, as with us, be supplied with drugs and surgical appliances. In our two Colleges, any pecuniary interest in them is forbidden in the declarations which their Fellows make. The picture of the dispensary system in the north of Scotland given in the same authoritative work is astounding in respect to size and inaccessibility of districts, smallness of pay, and insecurity of appointment. In the remoter districts in Great Britain, the system in force in Ireland for building residences for the medical officers might be very usefully copied.

During the past six years, social changes have taken place in the rural districts, which call loudly for alteration in the payments to practitioners. Notwithstanding the reduction of rents, the farmers and the shopkeepers have become less able or less willing to pay, and the landowners, who were generous patients of the local medical men, or of Dublin consultants in critical cases, have left Ireland in great numbers. The general practitioner system, as known in England, where separate charges are made for advice and for medicines, has scarcely any representatives in Ireland. In Dublin, a few most estimable gentlemen connected with the Apothecaries' Hall follow it; but, throughout the country, for the guinea fee one or more visits, according to distance, are given, and the drugs are included. Neither has counter-practice—that is, the selection by the chemist of drugs according to the name of the patient's complaint—much hold.

Notwithstanding lessened population and greatly lessened wealth in the country, the number of practitioners entered in the *Medical Directory* has increased, having been, on the passing of the Medical Act, 1,836; in 1872, 2,384; and now is 2,501.

The proportion of practitioners to each 10,000 of the people in England was in each of the three last censuses as follows—8.5, 7.2, 6.4; and in Ireland, 3.7, 4.1, 4 5. Our estimated population is now 4,924,342, or less than three-fifths of what it was forty years ago, before the famine. In nine counties—Galway, Kerry, Meath, Westmeath, King's, Queen's, Kildare, Wicklow, and North Tipperary—the population is less than 100 per square mile; and in two of them, Meath and Kildare, over 15 per cent. get poor-law relief. According to income-tax assessment, the distribution of wealth varies in Ireland astonishingly. In one county, Dublin, it is per inhabitant £10 14s. 4d.; in another, Leitrim, 4s. 5d.

As it is now a popular cry that we should revert to past modes of relief for the poor, I may refer to the Act II of Anne, by which the workhouse was set up in James Street, Dublin (which afterwards became a foundling hospital only). The beggars taken up were lodged horribly, treated cruelly, and finally transported beyond the seas. I may refer also to the Act of George III, 1772, which established corporations in every county and city who might license by badges such helpless poor as had lived in the district a year to beg therein. Our cities and towns soon swarmed with most miserable objects.

In 1787, Lord Clare said, "I agree with Mr. Grattan that the lower order of the people in Munster are in a state of oppression, abject poverty, sloth, dirt, and misery, not to be equalled in any other part of the world."

The machinery for the relief of the acutely sick about this time was sadly imperfect. The county hospitals were all visited by the immortal John Howard. I will only note his report as to the state of one. "All the rooms very dirty; little or no bedding; an upper room full of fowls; a dunghill in the small front court." As to the appointment of officers, he says of another: "I am well informed that the surgeon spent £500 in procuring votes to ensure his election. The same scandalous abuse by which the lives and health of the poor are in a manner put up to auction prevails, as is well known, in many of the London Hospitals."

Now the county infirmaries are efficiently and most economically managed. Nearly one-third of their support is from private benevolence, and more than half the inmates come from homes over five miles distant. The cost per bed is £37 yearly, and per patient £2 10s. In the Dublin hospitals receiving Parliamentary grants, the average cost per bed is £54. For many years there has been an agitation for the closing of our county infirmaries, the workhouse hospitals to be alone maintained.

For the treatment of acute diseases and accidents arising amongst the artisan, smaller farming, and trading classes, and higher servants, the county institutions are clearly needful; and perhaps some small payment by or on behalf of the patients should be demanded in aid of the public rates. Corrigan often forcibly urged that "sickness should not be made a chain to drag a man into a poorhouse." Including all kinds of hospitals except those of the workhouses, there are 6,484 beds available in all Ireland, and 3,130 were occupied on the census-night, April 3rd, 1881.

Time would not allow my discussing the peculiar features of the clinical hospitals of Dublin, and indeed it would not be proper to do so, as they are being investigated by a Government Commission. I will only recall the fact, so creditable to our profesaion, that many of them were endowed by the fortunes of medical men—Dun, Steevens, and Mosse, for examples.

There is, probably, no city in the world in which hospitals are so numerous as in Dublin, there being ten, besides obstetric and ophthalmic

ones. Of course, they benefit patients from distant places besides the city population, which is only 249,602. By this distribution of hospital-relief, cases which it would be risky to convey long distances are served, but the materials for clinical study are too much subdivided. Lord Spencer appointed a Commission to inquire into a project for amalgamation, but it has not yet reported. I have suggested that two or three hospitals should unite as to their teaching and classes. As there are altogether thirty-seven hospital-surgeoncies, that office is easily, perhaps too easily, obtained.

The number of medical students in Dublin averages 1,300; but fewer of these are engaged in real hospital-work as clinical clerks and dressers than should be. One reason with shame I confess, namely, that persons following other occupations from ten o'clock till late in the afternoon are permitted to pose as students of medicine. There is no restriction as to the number each physician or surgeon shall have under supervision. In 1702, a by-law declared that no surgeon at St. Thomas's "shall have more than three cubbs at one time, nor take any for less than a year." Very large sums were gained by Dublin surgeons in the first third of this century as apprentice-fees. During his career, Mr. Cusack entered seventy-eight apprentices on the College-books, each of whom paid him about £400.

I will not describe the character of the clinical teaching, but quote Sir W. Bowman, who had frequent opportunities of observing it. He said at the meeting in Dublin in 1867:—"The eminent spirit of Dublin as a clinical school of medicine and surgery has been, perhaps, less appreciated than it deserves by the world at large owing to its geographical position, somewhat aloof and insulated from the ordinary tracks of travel. The system of teaching was eminently honest, scientific and practical, laboriously and richly turning to the best use of science and instruction great opportunities, the teachers exhibiting themselves to students as students themselves in the great field of nature." We are not much given to specialism; for instance, there is no institution which treats skin-diseases exclusively. Dr. Barnes lately wrote of "the unrivalled advantages which Dublin possesses for clinical obstetric work and the fame of its teachers." In the general management of our hospitals, the medical staff take little or no part, and in the Act regulating Sir P. Dun's Hospital it is forbidden that they shall.

Just before the Irish College of Surgeons was founded, there were in Dublin sixty-eight surgeons and forty-four physicians, and under some of these the soldiers had been placed; for, the barracks being in bad repair, houses in various quarters were hired. The Army Medical Board was then organised mainly by the energy of George Renny, who retired from the Director-Generalship of Hospitals in 1847 after service, on full pay, of seventy-two years, a period of active employment probably never exceeded in our or any other profession. A portrait, a splendid work of art, in my College attests the feelings which his contemporaries entertained towards him.

I may mention that the penal laws, which excluded Catholics from most important callings, did not control entrance into the medical ranks. Of that creed was Lord Trimleston, who practiced physic actively during the middle third of last century.

Sir Philip Crampton stated that, when he was beginning practice in Dublin in 1805, he was told by Richards that the entire surgical fees of that city could be only estimated at £10,000 a year, nearly half of which he was receiving, and the others divided the rest. The pure physicians earned about £21,000, Dr. Percival's share being nearly one third.

If there had been death-registration in Dublin during the final ten years of last century, its disclosures would have been terrific. During 1791-7, six hundred syphilised children were said to have died in the Foundling Hospital, and one only to have recovered. Many of them had the virus when admitted, the rest contracted it by unwashed feeding utensils or clothes. However, a Committee of the House of Commons inquired, and having found that want of decent care and of curative treatment had caused this wondrous mortality, ordered the dismissal of all the medical officers. It was reported that infants lay "three and four together in filthy cradles with covering insufficient to preserve vital heat at an inclement season, and remote from fire," and that the matron, having been appealed to, said, "Those children were just laid there to die." It was fairly concluded that this was more than savage cruelty, reflecting on humanity and national character. In a report to the Local Government Board, 1875, Mr. Wodsworth, who had taken most benevolent interest in the case of the survivors, states: "Infants from all parts of the country, and at all seasons, were brought up in batches of eight or ten in kishes or creels," and frequently died on the road after terrible sufferings. In 1826, Parliament voted £37,350 for the maintenance of children—nearly seven thousand—supported by this notorious institution.

Wakefield described the Charter School children as puny beyond belief; and Whitelaw, our reliable historian, found the tenement houses filthy and filled to an amazing extent. In No. 6, Braithwaite Street, an eight-room house of average size, he counted 108 inhabitants. Seventy years afterwards I found in the air of a room in the same house (thirteen persons having slept therein) three times as much organic matter as in that of the College of Surgeons dissecting-room, in which there were eight subjects.

Prior to 1864, Ireland had no death-registration, which had been at work in England for twenty-eight years, with most palpable benefit; no sanitary power even to the extent of thinning an overcrowded tenement.

In 1865, I attempted to depict the sanitary state of twenty-nine towns in various parts of Ireland, their death-rates and their status of disease, as shown by fever cases and the cases of cholera in 1832, 1849, and 1854. I will cite a few striking figures; in Gort, of 3,056 inhabitants, one-half suffered cholera in 1849; in Ballinasloe, of 4,934, the same proportion; in Kinsale, of 6,918, one-sixth; in Kells, of 4,205, one-twelfth, all within seven weeks. In Navan, in 1818, one-fourth of the people had typhus. In all these instances, bad water-supply and worse housing were the palpable promoting causes of these pestilences. Steps are being taken much more actively for improvement of the latter evil than the former. Last month it was reported that the water for Dungarvan (population 7,391) was carried in barrels from a spring a mile off and sold. It was scantily used, and the sewers were never flushed.

In 1864, prosecutions for nuisances were most unfrequent; for examples, one each in Clare, Leitrim, Fermanagh; and, in King's County, not one during that or the following year.

Since 1876, the Local Government Board has sanctioned loans, mainly for works for water-supply and sewerage, to the amount of £1,547,169. The economical advantages of this system of home-inquiry will appear when I tell you that two Parliamentary Committee contests (in both of which I was a witness) cost Sligo half the sum estimated for water-supply, and the bill was finally thrown out. In the cholera-epidemic of 1832, this town suffered more than any other town in Europe, 1,232 of the 10,000 inhabitants having been attacked, and seven of the nine medical men having died.

Of all sanitary bills, the most radical was that printed on June 2nd for four medical members—Dr. Farquharson, Sir H. Roscoe, Sir G. Hunter and Dr. Cameron—"For the better sanitation of dwelling-houses, schools, hotels, hospitals, etc." All such were to be registered, after they were certified, to the local boards by engineers or medical men qualified in sanitary science, as being in a satisfactory state.

As to inspection of the sanitary state of rural districts, I fear the unions in nine-tenths of the country are unable to pay for any improvement. If they become able, or if a paternal government becomes paymaster, the system of health officers for large districts recompensed handsomely for the giving up of other emoluments must be adopted. Meanwhile, in Ireland, sanitary inspection has been done with great public spirit by the dispensary officers, for so wretched was the stipend that it could not weigh.

Distinctions in battles against epidemics should surely be as readily won as in warfare, where the motives are not so noble. That the want of them does not cause the heroic fire to die out attests the humane spirit which actuates the medical soldier. I was much amused in reading in the address of the President of the Law Society which appealed for honours for that profession, the sentence, "A medical man, besides making a fortune at his profession, might look forward to being made a baronet, perhaps even to a peerage." Three weeks ago, on a public occasion, one of our most eminent judges called ours "the noblest amongst the lay professions," but he could not have shown that there was practical appreciation of such characteristics as compared with that which his own profession receives.

The steady decrease of fever cases, treated by poor-law officers, must be largely attributed to the working of Public Health Acts and the spread of sanitary knowledge. The number for 1865 was 26,566; for last year, 5,780, and 1,664 deaths by that disease were registered.

The earnings of the poorer cottiers by labour in England, during the harvest, have been greatly lessened by the use of machinery.

In 1841 the rural population was 7,000,000, and 8 per 1,000 of them migrated to England for wages; now it is 4,000,000, while but 5 per 1,000 leave their homes for this purpose. These figures relate to the whole country; but in the West things are as bad as they were before the calamity which befel us in 1846-51. No less remarkable a person than Queen Elizabeth condemned the concentration of rural labourers in towns. In 1580 her words were: "Great multitudes of poor people inhabiting small rooms, being therein heaped together and in

a sort smothered in one house; if plague or sickness came amongst them, it would presently spread through the whole city and confines." The hovels of our rural poor are still so awful that the full spread of the provisions of the Labourers Dwellings Acts, 1883-85, can alone make a traveller in many western regions realize that he is in a civilised country. On Hare Island, near Skibbereen, where typhus is now raging, there were found dwelling, in one room of a small cabin, twelve persons. In one room of another, three married couples and four children slept. Under these Acts, there have been built or authorised 14,390 cottages, to cost £1,330,949. The usual rent is 1s. weekly. Several of the preliminary inquiries have been abortive from want of medical evidence, which, however, the officers were willing to give, the question of fees being postponed. Their provisions will relieve the dangerous congestion of the smaller towns, and lessen pauperism; for the family of the labourer dwelling in them, could not live on the earnings of the bread-winner, which were low, owing to his fatigue in walking great distances to his work. The establishment of county boards to manage the numerous functions now thrown on Poor Law Guardians is often very forcibly advocated, so that the latter will have the care of the infirm and sick alone, but some central directing body will nevertheless be needed. The desirability of rating whole unions instead of electoral districts unequally is every day becoming more apparent. It was never more forcibly advocated than in the address delivered at the Belfast meeting of the British Association in 1852, by the great Dr. Alison, of Edinburgh.

The office of coroner is held in many counties by medical men; but the expensive mode of election, namely, by the votes of the Parliamentary Constituency, makes it, in case of contest, often a doubtful prize.

Inquests in various towns, from 1871 to 1880, were held in strikingly different proportions of the deaths: namely, Belfast, 1-57th; Dublin, 1-46th; Galway, 1-32nd; Limerick, 1-28th; Cork, 1-23rd; Derry and Waterford, 1-22nd; and Sligo, 1-13th. In some of our towns the coroners must be far more active than their brethren elsewhere, or suspicious deaths are sadly numerous. The proportions of such investigated deaths which are found to be violent, also vary remarkably: Dublin, 4-5ths; Belfast, 2-3rds; Limerick, Galway, and Sligo, 2-5ths; Cork and Waterford, 1-4th; and Derry, 1-5th. In all England the proportion is 2-3rds, and in London 5-8ths. Violent deaths out of every 1,000,000 living are—in England, 745; New York, 730; Prussia, 486; and in the most sober nation, France, 268. In Dublin in 1880 the ratio was 660. Under the Coroners' Act (1881) for Ireland, following the rule in English counties (1860), a salary based on the average number of inquests for the five previous years was allowed. Only medical practitioners, barristers, solicitors, or magistrates of five years' standing were made eligible.

It is surely time that in large cities there should be, in addition to the last attendant, experts whose evidence as to cause of death might be received with implicit reliance, and that the necropsies should be held in hospitals for the instruction of students. Such changes were urged by a Special Committee of the House of Commons, in 1879. No general statute on this important subject has been passed for fifty years, yet it is one on which all parties might agree towards the codification of previous acts, the adoption of the qualification in the Irish Act, and the placing of the elective power in some smaller body than the parliamentary voters.

To the public medical services I am induced to refer, as there has been too little kinship between them and civil practitioners, although it is most desirable in the interest of the profession at large that the former should be kept at a high state of efficiency, and because those who have the control of these services have always lent a willing ear to suggestions emanating from our body. Moreover, in them is now being tried the question, important for us all, "Can the medical profession be entrusted with the complete control of hospitals?" and it is our interest to see that the trial is a fair one. A few words will point out what are the advantages of the public services. All three Services—the Army, the Naval and the Indian—seem to offer careers to medical men in many respects highly attractive. To spend twenty years seeing the world in pleasant company, fairly well paid, occupied, yet not fatigued with congenial pursuits, with, at the end of that time, the choice of continuing in the service or of drifting into civil life on a liberal pension, seems not a bad way of answering the great question of youth, What shall I make of my life? Yet these careers have some drawbacks, and some of the regulations call loudly for amendment.

It seems hard that the clauses of recent warrants affecting the pay and allowances of medical officers should have no force in India. Even if these warrants had not been issued, some increase of pay would be equitable for India, owing to the depreciation in the value of the rupee. To withhold there pecuniary advantages that are given at home and in all our colonies, is anomalous and unjustifiable. In computing retiring allowances, periods of half-pay are considered in the case of combatant, not of medical, officers.

The social isolation, which must be endured on joining the service, owing to their not being attached to a regiment, is much complained of by the juniors. If the authorities could see their way to attaching junior surgeons to regiments for periods of five years, these officers would gain much in discipline and the amenities of life, and the regiments would be spared the constant changes of medical advisers, to which they now so much object. The period during which administrative medical officers hold their appointments, namely, until the incumbent reaches sixty years, is too prolonged; and it follows that, when young men are promoted for special service, they completely block the way of all older than themselves. If it were regulated that administrative appointments could only be held for a limited number of years, as is the case in the combatant, commissariat, and ordnance store departments, a constant and healthful flow of promotion would go on, and deserving junior men could be promoted without injustice to their seniors. It is becoming most evident that the creation in the medical services of some unit larger than the individual, who now, whether as officer or private, wanders from station to station, and arrives a stranger amongst strangers wherever he goes, is required. At present, when it is necessary to organise for active service, a bearer-company or field-hospital, men, non-commissioned officers and officers, are got together from various stations, and their first acquaintance with one another is on board the transport that takes them abroad. What would be the efficiency of a battery of artillery so got together? Yet the carrying, the feeding, the lodging, and healing of wounded men, is as complex a problem as the killing of sound ones. The views on such topics, and on practical education in hospital hygiene and dieting, which have been so forcibly put forward by Surgeon-Major Evatt, and some of his disciples in civil life, are most worthy of our consideration. In Ireland, we are warmly interested in the medical staff, for nearly one-third of it are alumni of the College of Surgeons, and over a hundred others were qualified by other bodies in that country.

As from personal visits, in 1865, I was made aware of the value of the work done at Netley Laboratory, it has often been to me a matter of surprise that, in a few principal stations, means for scientific investigation of hygienic and pathological questions have not been established.

In 1812, the Admiralty requested the Irish College of Surgeons to examine into the state of health and of wounds, if any, of officers retiring or going on half pay. The fee was proportional to rank, three guineas in the case of an admiral, one in that of a mate.

I shall not even touch upon the question of the fitness or unfitness of women for ordinary practice, as not one has settled in Ireland; the size of country districts, the number of male rivals in the towns, and the decreasing remuneration in both, have probably been deterrent.

There are two occupations, however, in which their services could with great advantage be accepted, namely, mechanical dentistry and dispensing. In the United States, dentists frequently employ female assistants whom they find expert manipulators and accurate book-keepers, and, moreover, content with lower remuneration than men. There cannot be a doubt that women would readily master the chemical knowledge required, and would make skilful and conscientious pharmacists. A rude shock was given to the confiding trust which practitioners had in the exactness of dispensing by the disclosures published in our JOURNAL last February. A prescription was sent to fifty West-end establishments, in seventeen of which it was very incorrectly dispensed, the extremes of error being that in one case the drug was 57 per cent. in excess; in another the deficiency was 85 per cent. The ordinary chemists were the most accurate. It would be very desirable that such an investigation should be conducted on an extensive scale.

The sale of patent medicines and other nostrums is very limited in Ireland, due probably to the poverty of the people and the adequate distribution of medical relief. It is therefore strange to find them largely advertised in country papers.

You will be surprised to hear that in Ireland—a country deeply interested in the production of horses and cattle, and where epizootics are rife—there are no means for the teaching of veterinary science or art. As nearly all the scientific chairs already exist in our medical schools, a hospital for diseased animals and a dissecting-room are alone needed. If they be not shortly provided, the present practitioners will find it hard to defend themselves from accusations of want of public spirit or dread of competition. Our very old and most useful body, the Royal Dublin Society, has lately decided that it

would not be justified in undertaking the risk ; but there is no doubt that the project would soon become self-supporting, if a public grant was made for the building. It is right, however, to state that the number of diplomas granted by the London College, which alone examines in Great Britain, was, for the year ending last June, only fifty.

In 1882, the Academy of Medicine was formed by the amalgamation of the Medical, Surgical, Pathological, and Obstetrical Societies. Two ranks were created, those of Fellows and Members. Admission to the former was most liberal at first ; but now some restriction, as to number or qualification, such as Fellowship of a College or the Doctorate of Medicine, for which an Arts degree is required, so as to make it something of a blue ribbon of science, is desirable. The Sections are Medical, Surgical, Pathological, and Obstetrical ; and there are Subsections of Public Health and Anatomy and Physiology. The meetings occur alternately in the Colleges of Physicians and Surgeons, and the result has been unexpectedly successful. There are now 211 Fellows, 35 Members, and 24 Student Associates, for the meetings are open to senior pupils ; and the volumes issued show an amount of work far in excess of that accomplished by the four bodies when separate.

Its immediate predecessor, the American Academy, founded in 1876, numbers only 291 Fellows, in a country where about 97,000 practitioners reside ; but this is not surprising, when we learn that graduation in Arts is a necessary qualification. By such a bar, Cheyne, Corrigan, Stokes, Crampton, Carmichael—to take a few examples from my country—would have been ineligible ; but in Great Britain this absurd rule would tell even more injuriously. Many circumstances forbid most promising students from a university course ; and, when professional labour is undertaken, it is rarely possible that extraneous studies can be superadded.

Scientific medicine having been provided for by the Academy, the Dublin Branch of the Association has concerned itself only with such questions as medical legislation, the position of the public medical officers, the notification of infective diseases, and vaccination. It has 184 members ; and the annual dinner, to which many leading personages are invited, is one of the social events of the city.

The new Medical Act has been so fully discussed, that it would be tedious to even allude to any but one topic—that is, the preponderating influence of the licensing bodies, and the absurd inequality of the constituencies which elect their representatives. Of the thirty members, twenty are to be sent from these bodies, elected in the most diverse modes. Taking Ireland only, in Dublin University the power is vested in the Provost and seven Senior Fellows, only one of whom is medical, and he takes the seat.

In the Royal University, the electors are thirty-six senators, of whom seven are medical, and one of them is their representative. When I recall to your memories the names of the gentlemen thus chosen—Drs. Haughton and Banks—you will be convinced that so conspicuous is their fitness, that the proper constituencies—namely, the medical graduates—could make no better choice.

In the Apothecaries' Hall, the directors, that is, a few of the shareholders, choose one of themselves.

In the College of Surgeons, the Council of twenty-one, annually elected by the 363 Fellows, nominate the representative ; and, lastly, in the College of Physicians, all the Fellows (49) have a voice. In all the authorities, the voting power should be vested in those who hold the highest rank—that is, Doctors and Fellows.

The recognition of foreign and colonial qualifications is a great step towards international reciprocity. It is to be hoped that only those qualifying bodies where the standard is high will be recognised. The desideratum to be next sought for is the assimilation of weights and measures. At the meeting of our Association at Cork, Professor Charcot said that his acquaintance with British work was more obstructed by our ways in these particulars than by our language.

A few words touching our universities, which, like those of England and Scotland, have been the pets of the new Medical Act. Dublin, unlike any city in the world, has two universities ; while the opinion of all educated and disinterested men, is that there should be a single *Mater*.

There are so many prominent advocates for colleges in which the government and the education shall be denominational, and so many others who desire to see all religious tests abolished, that the question will never be set at rest until equitable endowments are provided for each class of institution. Let there be diversity in the colleges, but unity in the university.

The famous site of learning now approaching its tercentenary should alone survive, due representation being given to such colleges as may be added to Trinity, with which now it has alone to do. It is to be hoped that its system of choosing its Fellows (from which the governing body is by seniority constituted) will never be wholly dispensed with. It is by competitive examination ; and although, in this way, men fitted for original work may not always come to the front, it is a far surer way of getting competent teachers than other elective modes.

While the Bill to create the Royal University was being passed, no one conceived that it was intended unduly, if not exclusively, to benefit the three provincial medical schools, and one in Dublin. However, in 1882, medical Fellows were advertised for, but on the appointed day none were selected ; yet for medical examinerships (offices not before notified), sixteen professors most unexpectedly came into permanent power. The proportions were from the three provincial schools—six out of twenty professors from one Dublin school, seven of the eight professors (the eighth was a Senator), and from the other four schools two of the fifty professors. One selected examiner was not a teacher.

The number of anatomical students in the favoured school of Dublin, according to the returns of the previous session, was recorded as 100, against 736 attending the other four together. I forbear from comment upon our universities, as the reports of the Medical Council visitors, and the replies thereto, will suggest enough.

That proposals for the conjunction of medical licensing bodies are not very novel, would appear from "The Craft of Surgery ;" for there is fully quoted such a scheme, framed in 1423, under the title of "The ordenaunce and articles of Phisicions withinne the cite of London, and Surgeons of the same cite."

During the present century, Richard Carmichael was the ablest advocate of the union of physic and surgery, and, by a great congress of the profession in 1839, nearly carried his object. The College of Physicians, then a small body—30 Fellows and 52 Licentiates—meeting in Sir P. Dun's Hospital, refused very generous terms, owing to their pride in their landed estates. Just now this pride has had a fall, but they may rejoice that nearly three times as many licentiates pass yearly as there were then altogether on the roll ; and they now have a noble hall. By his will, Carmichael left £3,000 to form a prize fund for essays, to further this union. Awards of £200 and £100 will be made next May.

Extraordinary variation is exhibited in the number of licences, or lower qualifications, issued by the Irish bodies at various periods. In 1797, only one medical student matriculated in the University. For the ten years, 1826-35, the average numbers were—University of Dublin 15, College of Physicians 5, College of Surgeons 32, and Apothecaries' Hall 57. For the five years ending 1871 the numbers were : University of Dublin, 34 ; Queen's University, 55; College of Physicians, 86; College of Surgeons, 108; and Apothecaries' Hall, 22. Last year they were respectively 52, 76, 142, 85, and 25, and the figures touching earlier examinations show two notable facts—the number passed for first half in the College of Physicians was only 15, and the percentage of rejection in the College of Surgeons for the three first years' examinations together was 38.5 of 460 examined.

The Irish Colleges of Physicians and Surgeons, like the English and the Scotch, are now virtually united ; only the higher titles are to be granted separately. Let us hope that the fusion will be completed by all being empowered to call their qualification M.D., as is universally the case in America. The full letters of their licences L.K. and Q.C.P.I., L.R.C.S.I., and L.M., are peculiarly unhandy. Although there are doctorates in four other faculties, us alone will the public call "doctors." Of other designations, "registered medical practitioner" is too long, and "medical man" does not include our professional sisters. As a single word, I see no objection to "medicist," which is quite analogous to "scientist," "statist," "jurist," etc. In the thirteenth century, the Welsh military corps had attached to it an officer styled "medicus." Shakespeare used the word "medicine" to signify a physician.

Conjunction between some of our five schools is much to be desired, especially as regards the preliminary scientific subjects. If thus remunerative chairs were arranged, the first year might be fairly devoted to Physics, Chemistry, and Biology.

There are several peculiarities in the educational and examinational curriculum of the Irish conjoined bodies just adopted. There are four examinations, one at the end of each year, and each must be passed before study, which is in rigidly enforced order, can be continued. Chemistry, Materia Medica, and Medicine, are examined in during two years, and Surgery and Anatomy during three. Anatomical lectures must be attended for the first two winters, and dissections performed for three. The only branch of anatomy which was required for the first year was osteology ; surely, a slight knowledge of the structure and relations of the viscera will be a more useful prelude to physiology and to hospital study. Elementary Anatomy and Physiology are in the first examinations in England and Scotland.

Since 1698, when Clopton Havers was elected first Gale lecturer on osteology, undue value has been fixed on the subject. Specimens are easily prepared and kept, and, while they are being handled, teacher and learner are readily reminded of the facts to be acquired.

Anatomy is highly esteemed as a means of mental training, a purpose for which it would be fit for the earlier years; but, during the later ones, no memory could retain a thorough acquaintance with it together with the far more important knowledge to be then stored up. One would have thought that Mr. Syme's committee of the Medical Council (1868-9) would have set this question at rest. The 131 teachers whom they consulted were almost unanimous in restricting anatomical work to the first half of study. In the faulty system lately superseded in my College, there were but two examinations, and Anatomy counted nearly 50 per cent. of the first.

These top-heavy candidates were easily knocked over; fifteen out of nineteen failed a few weeks ago. Thirty-two years ago, when I passed, work with a grinder was indispensable for making knowledge producible; the entire professional examination was oral, only occupying an hour on each of two consecutive days. In some cases, the hours were allowed to be consecutive. Under the new scheme, each student is examined during about fifteen hours within the four years, and in every item the methods are the most practical in the United Kingdom. The conjoined plan compels work in a school during the first year; that of the College of Surgeons did not, and the period went popularly by the name of "the Skibbereen year," as it might be spent in that remote place. Grinding was thus encouraged to a pernicious degree; for the student, having to answer at the end of the year in many subjects, about which he had only read, depended on cramming alone—a fault likely to endure for his whole pupilage.

The conjoint curriculum has no place for the assistancy with a practitioner, which some value highly, but preferably it insists on *bonâ fide* work as dresser and clinical clerk, which has heretofore been a want in the Dublin Hospital system, and on attendance at ophthalmic and obstetric institutions, and the compounding department of a clinical hospital. In future, the declaration of the President of the Medical Council will be applicable to my city likewise. "The instruction given in London hospitals for the average learners is tenfold more detailed and more precise than in the student days of Hunter and of Brodie." That all our young fellows do not become prodigies, proves there are limits to receptivity.

In the final examination, in addition to medicine, surgery and midwifery, the cardidate should be allowed to choose one of the three great special lines of practice towards which he may be called, namely, mental pathology, ophthalmology, or hygiene, and tested in it alone. The growing importance of the last named is shown by the fact that it forms a necessary part of examination in 91 of the 233 colleges which qualify in the United States and Canada. If the Apothecaries' Hall be raised into a full licensing body (the legality of so doing is at least questionable), the medical profession in Ireland will have lost far more than it will have gained by the Medical Act. As that company does not annually receive as much money for its licenses as is paid by a single candidate for any registrable qualification, to abolish its power would inflict pecuniary loss only infinitesimal compared with other sources of profit. As dispensers, they have been largely supplanted by the licentiates of the Pharmaceutical Society.

And now I end this imperfect survey of medical affairs in Ireland, and express to you earnest thanks for having patiently listened to it.

INVERSION OF UTERUS WITH A LARGE FIBROID.—Dr. Goossens, of the Rotterdam Hospital, mentions, in a Dutch medical journal, an interesting case of inversion of the uterus, complicated with a fibrous tumour of the wall. The woman was first admitted into the hospital in 1881 for menorrhagia, which had lasted for three years, or since her last confinement. On examination, a large tumour was found in the vagina, the base being evidently within the uterus. By means of bimanual exploration, the organ was felt to be enlarged and hard. While the surgeons were considering whether a vaginal operation or a laparotomy offered the best hope of success, the patient solved the question for them by leaving the hospital. After the lapse of four years, she was brought back apparently dying from profuse hæmorrhage. During defæcation, a large rounded mass was extruded about eight inches from the vulva; this proved to be a myoma of the fundus of the now inverted uterus. An elastic ligature was at once applied to the base of the myoma, care being taken not to wound the peritoneum inside the inverted organ. The hæmorrhage being thus arrested, the tumour was removed, and, antiseptic measures being taken, the uterus was replaced. The patient was ultimately discharged, cured.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OBSTETRIC MEDICINE,

At the Annual Meeting of the British Medical Association held in Brighton, August, 1886.

BY ALFRED MEADOWS, M.D., F.R.C.P.,
Physician-Accoucheur to St. Mary's Hospital: President of the Section.

ON CERTAIN OBSTETRIC AND GYNÆCOLOGICAL OPERATIONS.

BEFORE we proceed to the special business of the Section, it is customary, and, I think, fitting, that the President should make a few introductory remarks; and in doing so I desire, first, in the name of this Association, to offer a hearty welcome to all those who have kindly honoured us with their presence, and especially those whom, though foreigners in a national sense, we are proud to regard as brethren, whose lives are spent in, and whose hearts are devoted to, the study and advancement of gynæcology and obstetrics. I wish, also, to express my thanks to the Council of this Association for the high honour they conferred upon me in electing me to the Presidency of this Section. It is an honour of which I feel justly proud; and it is one which can be best appreciated by those who are cognisant of the great work which, year by year, is being carried on by the practitioners of this department of medicine.

And here I would venture to make a remark upon the growing differentiation of the subjects of which this Section takes cognisance. More and more evident each year is the divergence which is springing up between obstetrics and gynæcology; not that the practitioners of either department recognise any antagonism between the two; but rather the conviction is being forced upon their minds, that each is sufficiently important to be regarded as a separate "item," and is best studied and advanced by judicious and judicial separation. In America, in Germany, and elsewhere, this divorce is being effected as a matter of scientific necessity, and in our own country the same process of disintegration is going on; while its formal recognition has been prominently advanced by the Council of the International Medical Congress, which has established separate sections in obstetrics and in gynæcology, just as in various centres of study, in the great cities of Europe and America, the same division is being effected. I hold, very strongly, the opinion that it is to the advantage of both, certainly it is to gynæcology, that this divorce should be recognised; for, although it may probably be said that all obstetricians are gynæcologists, more or less, the converse certainly is not true; for many are proud, and justly so, of their gynæcological attainments and reputation, who have no pretensions, and do not lay claim, to be considered as obstetricians. This division will, I have no doubt, become more and more marked as the science and practice extend; and it would be wise, I think, for those in authority to recognise the fact, and do their utmost to advance a most important work. As I have remarked, there is no necessary antagonism between the two; but, as in some other circumstances and relations in life, a forced union between parties, where one or both desire a friendly separation, is sure to lead to family quarrels, and will hinder rather than promote those cordial relations which are essential to prosperity and progress.

It cannot, I think, be denied that this Section is yearly growing in importance and interest; nor, I think, can it be disputed that the advances which have been made and the brilliant achievements which have been wrought in the practice of gynæcology during recent years have placed this department in the foremost rank of surgical art, and have enabled the gynæcologist to rivet the attention of the whole profession on the marvellous record of his courage and his skill. I venture to say that, if we look up and down the history of surgery in this or any other country during the last quarter of a century, it would puzzle us to find a parallel to the chapter which may now be written of the abdominal surgery which the gynæcologist has introduced. Nowhere is there such a record of life saved, of suffering averted, of health restored, of happiness secured, as is inscribed on that tablet of time which the knife of the gynæcologist has carved in letters of indelible characters. Nor is it only in the department of gynæcology that new departures are being taken for the saving of

human life and the amelioration of human suffering. If I am not mistaken, the discussion which is to take place here to-day on the subject introduced by that master of obstetric surgery, Dr. Barnes—namely, the Alternatives to Craniotomy—will mark an epoch in the practice of midwifery in this country, if not in the whole world; and I earnestly trust that it will lead to a new departure, by which many lives will be spared which are now sacrificed, and the conscience of the obstetrician will in the future be made happy by the promulgation of a new law, the assertion of a new principle, which will save his hand from becoming an instrument of slaughter, a slayer of innocent life; I had almost said the murderer of an unprotected infant.

I do not know what is in store for us from the pen of Dr. Barnes; but I will venture to prophesy that, if that Nestor of British midwifery be not going to recommend, as I earnestly hope he will, the total or almost total abolition of craniotomy, at all events I trust that his remarks will tend in that direction; and I have some confidence that, if not in our day, at all events in the next generation, it will be regarded as almost as great a crime to thrust the perforator into the head of an unborn as of a born infant. The whole tendency of modern midwifery practice is in this direction. The conscience of the profession is being freshly awakened, and the heart of the practitioner is being stirred to revolt against an act which is, in one aspect at least, truly barbarous, and from which his whole moral nature shrinks. I am certainly not much in favour of sentimental legislation, nor do I think that sentiment alone is a safe guide in many of the practical affairs of daily life; but I do protest against a practice which offends against the highest sentiment of religion of any and every kind, and I contend that we have not exhausted the resources of civilisation until we have found out some means by which we may in every case of labour, with reasonable chances of maternal safety, extract a living and viable child from the mother who gives it life. In the operation of Porro we have a suggestion which has undoubtedly advanced abdominal surgery as a mode of obstetric delivery, and is a great improvement upon the old Cæsarean operation. Not the least merit of Porro's operation is the fact that it ensures the mother against a repetition of the peril in which pregnancy places her. On this point, I entirely agree with Mr. Lawson Tait when he says that, "upon the moral ground, I am quite sure that a Porro's operation is preferable to a craniotomy; for in the latter the child is inevitably destroyed, and the mother runs as great a risk as I think she would in Porro's operation. I feel certain that the decision of the profession on this point will be before long to give up the performance of those operations destructive to the child, in favour of an operation which saves it and subjects the mother to little more risk, and which has the great advantage that it prevents her from being subjected to a similar risk in future."

This observation exactly tallies with my own feeling on this subject; and to the gynæcologist quite as much as, if not more than, to the obstetrician, will be due the great merit of revolutionising our practice in this respect, and of inaugurating a new era of that combination which is the best augury for the happiness of mankind, medical quite as much as political, conservatism and progress. The profession in America is already agitated on this subject, by disputants drawn from both the clerical and the medical professions. That they should mutually misunderstand one another is not, perhaps, much to be wondered at, as they would naturally regard the question from totally different points of view. The one would be inclined to regard it only from the moral standpoint, while the other would be tempted to limit his observations only to its scientific bearings. The truest aspect would probably be that which took account of both; but I confess I think the danger with us lies in the too exclusive recognition of the latter, to the partial disregard of the former; and the facility with which craniotomy can be performed, as compared with either of its alternatives, must ever constitute a temptation which only a high moral sense, aided by a strict rule pointing in the opposite direction, and ever suggesting the commandment, "Thou shalt not kill," will suffice to avert. Let us hope that the influence of this Section, meeting in this beautiful town, and surrounded with so much that is lovely in nature, will cast its great influence into the scale of conservatism, and will do what in it lies to check the fearful tide of infant slaughter which sweeps away annually, in this country alone, nearly 2,000 innocent lives, besides some hundreds of mothers. I say it behoves us all now, and especially we in England, who have done so much to perfect abdominal surgery, and who may be regarded as the pioneers in this department of surgical practice, to look well to it, lest the honours of this great conservative movement be taken from us, to the lasting discredit of British midwifery.

Little, if at all, inferior to this important question, which belongs more especially to the obstetrician, is that other subject which the executive of this Section has selected for consideration on Friday, and which belongs to the department of gynæcology, namely, the removal of the uterine appendages. It may be that this term is the best that can be selected, but I confess it always appears to me to express a physiological error; for the ovaries and the Fallopian tubes ought certainly not to be regarded merely as appendages to the uterus. Rather, I should say that the uterus is an appendage to the other organs, which are undoubtedly its superior in physiological work. But, be that as it may, their removal is becoming—may I not rather say has already become—one of the more startling innovations in modern gynæcological surgery, and bids fair to occupy the attention of the profession for many years to come.

It is greatly to be deplored that so much of bitterness and angry feeling has been imported into the discussion of this subject; for though it is as certain now as when the maxim was first uttered, that "Magna est veritas et prevalebit," yet nothing so hinders the establishment of truth as the importation of angry discussion, and the imputing of evil motives. But it seems to be a law of the moral world that anything which invades its territory is sure to provoke opposition, and to excite angry contention; and the operation I am now considering is just one of those which touches upon moral considerations above and beyond its purely scientific bearings. I can well imagine that if a similar operation could be applied to the opposite sex, and were practised with the same freedom, the same dexterity, and upon grounds which the opponents of the former operation characterise as the same triviality, no doubt the hue and cry which is now being raised, not only throughout Europe, but also in America, would be increased by such a chorus of angry voices as would suffice to sweep it entirely out of existence. Happily, however, we men are safe against this innovation; and being, therefore, perfectly free to view the question as one entirely outside ourselves, we should be the less inclined to personalities, and should determine its merits with that calm judicial mind which we are wont to claim as the distinctive characteristic of the superior sex.

It is not my intention—for I have not the time—to discuss the merits or demerits of this question, involving, as it does, moral as well as physical considerations in relation to the sexual functions; no doubt, these will be well and ably advanced by those who are to take part in the discussion on Friday. This much, at all events, I may say: that I thoroughly believe in the sound and scientific basis upon which the operation is founded; that I regard it as a most valuable addition to our methods of curing certain cases of ovarian and tubal disease which are beyond the reach of therapeutic remedies; that I entirely endorse the view of its applicability to certain forms of nervous diseases which have hitherto resisted all attempts of cure by means of drugs, even when these so-called appendages are not the seat of any cognisable disease; and, lastly, I believe that, by this operation, and by this alone, in many cases, the sufferings caused by the presence of certain forms of uterine fibromata may be entirely removed, the growth of the tumour be thereby arrested, and its disappearance, in some cases, effected. It may also, I think, be a question for consideration whether, in women who are the subjects of such pelvic distortion, that the birth of a living child *per vias naturales* is an impossibility, the removal of the ovaries, and with them the Fallopian tubes, as being both useless and, possibly, troublesome, ought not to be performed. The risks of the operation are really so slight, and the results, in all the cases above referred to, are so satisfactory, that I feel sure the minds of gynæcologists will, before long, arrive at an unanimous opinion in favour of this proceeding in all the cases mentioned. As regards the last of these, that where it is done to prevent impregnation occurring in cases of extreme pelvic dystocia, it is impossible to deny that, in comparison with craniotomy, the Cæsarean section, or Porro's operation, or even the induction of premature labour, the risk of oöphorectomy is incomparably less; and I contend that, on moral grounds, too, it is far better that, in these special cases, this operation should be performed rather than that those so-called safeguards should be practised to prevent impregnation, which are, too often, not only disgusting and revolting to the female mind, but are absolutely demoralising, and tend to destroy that proper modesty which should exist between married people.

But, while thus expressing a very decided opinion in favour of this operation in properly selected cases, I cannot refrain from uttering one word of caution, lest the very facility with which it can be performed, and the certainty which characterises its results, should tempt us to be somewhat too lavish in our selection of the cases alleged to be fitting; and I am the more inclined to make this remark from the fact that I cannot, at present, regard our power of diagnosis as anything like so satisfactory as it ought to be before deciding on so important an operation. I think we should strive after

much greater perfection in diagnosis than we at present possess; and surely careful clinical observation, aided as it is now by actual inspection of the parts in the operations so commonly performed, ought soon, by a careful comparison of the subjective with the objective, to put us in possession of such an amount of valuable material as should enable us to arrive at absolutely certain data in the matter of diagnosis.

Again, I am inclined to think that there is some risk of our losing sight of the fact that there is such a thing as medical treatment, both topical and general, and that not every case of disease of the appendages, so-called, must necessarily come under the radical treatment of the knife, the pen, in many cases, may very well be substituted for the knife: and assuredly we shall never advance the science of therapeutics if practice such as this is to be the rule. I know it is said that these cases only come to the surgeon when the physician has signally failed. No doubt this is so in many cases; but some of us are physicians and surgeons as well, and I would strongly counsel all such to take good heed to the medical aspect of their cases before they resort to surgical interference, and only to adopt the latter when all other means have been honestly and perseveringly tried, and have as signally failed. These remarks apply, of course, only to cases of disease of the appendages themselves, and do not touch those other conditions for which I have declared my opinion that the operation is perfectly justifiable.

Time will not permit my discussing, or even cursorily alluding to, the many other topics, of great value and interest, which are to come before us in this Section. I have referred to these two only because of their supreme importance, and in the belief that I ought to place on record the opinions which I hold regarding them. Many other most interesting subjects will be brought forward,—notably a paper by Dr. Lusk, of New York, on the proper moment for performing gastrotomy in abdominal pregnancy,—which cannot fail to interest both the obstetrician and the gynæcologist; also, one by Dr. Emmet, which is to bring before our notice certain moot points in gynæcology. Then we have, from Dr. Aveling and Dr. Petch, two interesting communications on the employment of electricity in extra-uterine fœtation, the former of whom is, I believe, the first in this country who has used this method of treatment successfully. The subject of Emmet's operation for laceration of the cervix uteri is also to be brought forward, with a record of twenty cases, by Dr. Beverley; and I may also refer, lastly, to the paper, by Dr. Fancourt Barnes, on perinæorraphy. These are sufficient to show that the meetings of our Section will certainly not be dull for want of interesting material—indeed, I may well congratulate the members of this Section on the splendid work that will come up for discussion in the papers which are to be brought forward; and gynæcologists may feel justly proud of the wonderful advances which are being made in this department of medical and surgical practice. I question very much whether there is any other department of our profession which has made such strides towards perfection in operative skill, and has achieved such signal success. But, together with this congratulation, I would like to add the expression of my earnest hope that we shall not rest content with our present skill in diagnosis, nor with the uncertainties which yet surround our therapeutics. There are still many dark corners in gynæcology upon which the light of careful, accurate, and painstaking clinical observation is required to clear up doubtful points in diagnosis; and there is a great deal more yet to be done before our therapeutics can lay claim to anything approaching an exact science. It may be an Utopian idea on my part; but I confess I do not see why we should not possess a group of remedies whose action upon the ovary, or the uterus, should be as well known and understood, and as certain in their results, as are the actions of diuretics on the kidneys, purgatives on the bowels, and cholagogues on the liver. To this end at least we ought to work; and if, at each yearly meeting of this Association, only one such remedy be announced, whose reputation is founded on careful and accurate clinical observation, then our successors will have good cause to congratulate us on the work which we have done.

CHLORODYNE DRINKING.—At the inquest on the body of a lady, aged 62, of independent means, residing with two other maiden sisters, it was stated in the course of the medical evidence, that all three of the sisters had been in the habit, for two or three years, of taking chlorodyne in large quantities, so much so, that their bodies had become emaciated, their mental condition affected, and the use of their limbs had become impaired. The body of the deceased did not weigh more than 50lbs., and death was due to continued overdosing of chlorodyne.—The jury returned a verdict of death from continued overdoses of chlorodyne.

THE BRADSHAWE LECTURE
ON
DIABETIC COMA.

Delivered before the Royal College of Physicians of London, August 18th, 1886.

BY JULIUS DRESCHFELD, M.D., F.R.C.P.,
Professor of Pathology, Victoria University: Physician to the Royal Infirmary, Manchester.

WHEN I received through you, Sir, the flattering request to deliver the Bradshawe Lecture for this year, I felt that only second to the high honour thus conferred on me was the difficulty of finding a subject worthy of so august and select an audience. My choice fell on a subject, which, though of small compass, is yet full of interest both to the physician and to the pathologist; it is a subject which has engaged my attention for a number of years, and in which even a slight contribution to the elucidation of the obscure pathology is not void of interest. By Diabetic Coma, we understand a peculiar train of symptoms coming on, more or less suddenly, in the course of diabetes, characterised chiefly by coma, and often ending fatally in a very short time. Now, a sudden death is not uncommon in diabetes; yet the term diabetic coma is by no means applicable to all these cases, though coma may form a principal symptom. In many there is a well-known cause, and, after death, a well-defined lesion is found. Thus, in some instances, a diabetic person may suddenly become comatose, and die after a few hours or a few days, and the necropsy reveals a cerebral hæmorrhage; others die from acute croupous pneumonia, which, in diabetes, as in Bright's disease, may come on without the usual symptoms, such as rigor or pain in the chest, may run a rapidly fatal course, without much rise of temperature or expectoration of rusty sputum, and where, unless an examination of the chest reveal the physical condition of the lung, the principal symptoms will be dyspnœa and gradually deepening coma.

Again, albuminuria is not unfrequently observed in diabetes, and, according to Stokvis, occurs even much oftener than is generally supposed, as the large amount of urine passed interferes with the detection of small quantities of albumen. Now, though the presence of albumen may be due to a variety of causes, as I shall presently have occasion to mention, yet, there are observed occasionally cases where interstitial nephritis and diabetes exist together, either independently, or, as Pavy believes, where this form of Bright's disease develops during the course of diabetes. In some of these, the nephritis may have a beneficial effect on the diabetes; in others, however, death may take place, apparently from diabetic coma, but in reality from uræmia. I have seen two cases of diabetes where, after some premonitory symptoms, such as headache and vomiting, coma with marked dyspnœa rapidly developed, and speedily led to a fatal issue. The urine contained in one case but a small amount of sugar, and in both cases only a trace of albumen. The characteristic odour of acetone, however, was not noticed, and the urine gave no reaction with perchloride of iron. The *post mortem* examination showed in both cases markedly contracted kidneys, with typical interstitial nephritis, and the heart in both cases was very much hypertrophied.

Intercurrent affections, by no means fatal in themselves, coming on in the more severe forms of diabetes, may speedily lead to death, with symptoms resembling diabetic coma; and even slight operations, though they are sometimes followed by typical diabetic coma, at other times cause death from shock, from paralysis of the heart or paralysis of the higher nerve-centres. Quite recently I had a patient under my care who suffered from diabetes, and who had also a stricture of the urethra. The breath of the patient had the characteristic odour, and the urine contained acetone, but no aceto-acetic acid. The presence of the stricture, causing a very considerable distension of the bladder, necessitated the introduction of the catheter, and this was soon followed by a rise in temperature, from the normal to 103°, and by death from collapse, within ten hours of the introduction of the instrument. The *post mortem* examination revealed stricture of the urethra, a dilated and hypertrophied bladder, and some amount of hydronephrosis; the remaining substance of the kidney showed no changes, and the heart was found free from fatty degeneration. There can be little doubt that we had here a case of the so-called "catheter fever."

If we except cases such as these, there remains yet a large number where, without any apparent cause, suddenly symptoms appear, of which a gradual deepening coma, with more or less dyspnœa, forms the most prominent feature, and which leads to death often in a few hours, or a few days. These constitute the true cases of diabetic coma; but here, again, it is essential, in order to get at the true pathology, to distinguish several forms, according to the etiology, symptoms, and pathological appearances; and it is chiefly owing to the want of clearly distinguishing the several forms, that so much discrepancy exists among the numerous observers who have written on this subject. In a paper which I read before the Manchester Medical Society, on October 5th, 1881, and an abstract of which appeared in the BRITISH MEDICAL JOURNAL of October 29th, 1881, I classified the cases of diabetic coma, according to the symptoms, into three groups; one form, chiefly characterised by drowsiness, soon passing into coma; a second form, resembling alcohol intoxication, a marked symptom being a staggering gait, incoherent and thick speech, an excited state of the nervous system, followed by drowsiness and coma; and a third group, including by far the largest number of cases, where dyspnœa was usually a most marked symptom, followed by coma, and where both the breath of the patient and the urine showed a characteristic odour of acetone, and the urine contained a peculiar body, giving a deep claret-colour, with perchloride of iron. I distinctly pointed out then, that these forms differed not only in their symptoms, but most probably also in their pathology. It was, therefore, a source of great satisfaction to me to find that Frerichs, in a paper published in the *Zeitschrift für Klinische Medicin*, some time after the appearance of the short abstract of my paper, and again in his great work on *Diabetes*, published in 1884, adopted an almost identical classification as regards the symptomatology, and was able, by virtue of larger material, to distinguish more clearly the pathological difference of the first group from the other two.

If we now consider the first of the three groups, which I would now call "diabetic collapse," and for the first exact description of which we are indebted to Prout, we find, as regards the symptomatology, the following:

The patient, without any premonitory symptoms, begins to suffer from drowsiness, lebitude, excessive weakness in the limbs; the extremities become cold; hands, feet, and face become livid; the pulse quick, small, threadlike, soon reaching 120 and 130; the respirations are only slightly quickened, shallow, without there being much dyspnœa; the temperature gradually falls, the skin in some cases becomes covered with perspiration, and death ensues from collapse in most cases within ten to twenty hours. During the first few hours, the patient is still able to pass urine voluntarily. With the progress of the coma the urine is retained in the bladder; but, when withdrawn, is found to contain a considerable amount of sugar (5 to 8 per cent.), but no acetone or aceto-acetic acid. In two cases which I had an opportunity of seeing, it contained a small amount of albumen. The nervous system presents few other symptoms besides the coma; the pupils re-act, though somewhat sluggish; there may be some slight headache, but active delirium and convulsions are mostly absent.

The *post mortem* examination shows no marked naked-eye changes. In about half the number of cases which I have collected from various authors, there was not found much emaciation; in some cases the body appeared stout, with a good deal of adipose tissue. The heart, in a case described by Frerichs, showed marked fatty degeneration. In the one of the two cases which I have seen, a similar change was noticed; in the other case the heart was enveloped in a great deal of fat, but its muscular structure showed but a very limited granular degeneration. The liver in this case was found affected with fatty infiltration, and it showed numerous greyish patches, which, when microscopically examined, consisted of fatty detritus.

In trying to analyse how many of the recorded cases of diabetic coma belong to this group, we meet with many difficulties, as may be imagined from the short and insufficient data. Besides the cases described by Prout and Frerichs, I find cases belonging to this group described by Donkin, Bourneville, Pavy, Taylor, and others. An analysis of such cases allows us to draw the following conclusions as regards the etiological factors.

1. Diabetic collapse occurs chiefly, though not exclusively, in older people, after the age of 40.

2. It attacks persons who have suffered from diabetic symptoms for some time, and who are, as a rule, still stout and well-nourished at the time of attack.

In short, the cases belong more to that form of diabetes recently described by Hoffman as constitutional diabetes, or diabetes of stout people, where the course of the disease is slow and protracted, and where gout or nephritis form frequent associations, and where the appearances of carbuncles and other necrotic changes are not uncommon.

The exciting cause in the majority of cases is, as was again first pointed out by Prout, some extra physical exertion, as a long walk, or a brisk walk, or some sudden shock. In a smaller number of cases, an error of diet, or, as in one of my cases, immoderate drinking immediately before the onset of attack, act as the exciting factors.

What is the cause of diabetic collapse? Frerichs believes the collapse to be due to the failure of the heart's action from fatty degeneration. Donkin and Pavy had already expressed a somewhat similar view, but have extended that explanation to apply for all, or nearly all cases, of diabetic coma. Though we have but few reliable anatomical data, yet the view of Frerichs seems to me to be supported by many facts. Thus Schmitz has shown that, amongst 109 diabetic patients, 80 showed considerable weakness of the heart; and, in several *post mortem* examinations on diabetic patients, the heart has been found to weigh only four to five ounces. Again, if death be due to sudden exhaustion brought about by a more than ordinary demand being made on the constitution weakened and altered by the diabetes, we should expect a somewhat similar mode of death in other constitutional diseases where the heart's muscle is altered, and the blood has undergone changes, but where there is no diabetes; and that this is actually the case, is easy of demonstration. I need only allude to the sudden death coming on in persons with fatty livers, where, with few premonitory symptoms, such as abdominal pain and vomiting, collapse, soon ending fatally, comes on, and where the *post mortem* examination shows, besides the fatty liver, fatty degeneration of the heart. These cases were first described by Addison, and, since then, by Saundby, myself, Sabourin, and others. Or, again, take pernicious anæmia; we find here, not unfrequently, the patient becoming more or less suddenly drowsy and comatose, and the necropsy reveals fatty degeneration of the heart and of other viscera, sometimes well marked, at other times but slightly marked.

The second form—the alcoholic form of diabetic coma—is of rarer occurrence, and is most likely pathologically identical with the third form. In its symptoms it resembles acute alcoholic intoxication, and, in one case, recorded by Kulz, the urine was found to contain large quantities of alcohol. The case was that of a middle-aged man, who had been in hospital for diabetes. He took a walk in the hospital garden, and was suddenly taken with symptoms which made even the doctor believe the patient was under the influence of drink, though it was clearly proved that the patient could have had no access to any alcoholic liquor. The patient became excited, sang and swore, the speech became thick, and he staggered like a drunken man; the pulse was accelerated, the conjunctivæ injected. This state was soon followed by deep coma and death. The urine drawn from the bladder showed, besides sugar, a considerable amount of alcohol.

For the following brief account of a similar case, I am indebted to my friend, Dr. Cullingworth. A young servant-girl called on him on May 25th, 1881, complaining of great thirst and weakness; and, on examination, the urine was found to have a specific gravity of 1035, and to contain a considerable quantity of sugar; nothing abnormal was noticed about her breath. Dr. Cullingworth prescribed some opium and nux vomica, and advised her to go to her home in Wales. The next we hear of her is an account, in one of the Manchester newspapers, of her death, which took place under very distressing circumstances. It seems that, on her way to her home, she left the train in which she was travelling, at some small station, and she seemed so excited that she was believed to be intoxicated. She called at an hotel, but was refused admission, owing to her apparently drunken condition; at last she was taken up by a policeman, who took her to a small inn, where she was seen by Mr. Reed, a local medical man, late at night, who found her in a semi-conscious state; her face very pale; her pupils dilated, acting slowly to light; her pulse rapid; her breathing quick. She was seen again by Mr. Reed next morning, when she was quite unconscious, the breathing rapid and noisy, and the extremities cold. She had passed some urine during the night, which contained sugar. The coma deepened, and she died at eight o'clock the same evening.

Frerichs describes a few cases, somewhat similar in their symptoms to alcoholic intoxication. In these cases, the expired air smelled strongly of acetone, and the urine gave the characteristic reaction with perchloride of iron; but no mention is made as to the presence of alcohol in urine. The question as to the presence of alcohol in these cases is, therefore, one which, in future observations, will have to be more fully inquired into before they can be looked upon as a pathologically distinct type.

The third form—which I would now call, for want of a better name, coma from acetonæmia, by far the most common form, of which I have observed no fewer than sixteen fatal cases, and where, in ten cases, I was able to study the *post mortem* changes—is the one which will occupy our chief attention.

Since the first exact description was given by Kussmaul, it has been the subject of such a vast number of inquiries, that I will not attempt to trace out the history of its literature. To its symptomatology, which is well known, I need also but briefly allude.

The first symptoms consist of lassitude, or some slight dyspnœa or severe gastric pain with vomiting; often there is also some slight headache, restlessness, and excitement. From this initial stage, the patient passes into a state of drowsiness, associated with marked dyspnœa, and this is soon followed by coma and death. If we analyse the symptoms more in detail, and for this purpose I have made use of more than eighty recorded cases, we find the following conditions.

1. As regards the nervous system, there is a period of excitement. During this period, we notice headache, vertigo, a state of excitement not unlike that seen in alcoholic intoxication, incoherence of language, delirium bordering on mania. Convulsions are rarely noticed, and, in the sixteen cases of my own, they occurred only once, and I find them noticed in six other cases, though jactation of the limbs is more common. These symptoms are, sooner or later, succeeded by signs of depression: hebetude, thick speech, drowsiness, and coma. The condition of the pupils is not constant; they react, though somewhat sluggish, almost to the last; they have been found sometimes dilated, at other times contracted. The special sense-organs show us noteworthy symptoms. The fundus of the eye in four cases, which I have examined for that purpose, was found healthy. Star describes in one case a peculiar tint of the retina, the vessels having a peculiar black-coloured appearance, due to fatty embolism (!) Pain in other parts of the body is often noticed, especially abdominal pain, which is often one of the first symptoms observed, and which may be so severe as to simulate peritonitis. The vaso-motor nerves are profoundly affected; the face is often flushed at first, and afterwards becomes pale; the extremities become cyanotic: the skin, at first dry, is often, later on, found covered with clammy perspiration.

2. As regards the vascular system, we notice a soft pulse of low tension, becoming quick, small, threadlike, and irregular. The heart's action is feeble. The veins in the neck are not distended.

3. As regards the respiratory apparatus, we notice marked dyspnœa; this may be one of the first symptoms, and gradually increases up to the last; it is inspiratory at first, and afterwards both inspiratory and expiratory. The dyspnœa is present in most, but by no means in all cases, and has the character described by Kussmaul: the thorax expands well in all directions; on auscultation, air is heard to enter all parts of the lungs fully, and yet there is the great breathlessness—the air-hunger of Kussmaul. The respirations vary in number; often they are not much increased in number; in some cases they may be even diminished. The patient often complains of pain in the chest, and physical examination occasionally shows the presence of limited broncho-pneumonia. The expired air has a peculiar chloroform-like smell, and that this is due to acetone can be easily demonstrated. By allowing a patient to breathe in water only for a short time, I obtained distinct acetone reaction; no aceto-acetic acid, however, could be detected. In all the sixteen cases which I observed, the odour was most marked and present from the very onset.

4. As regards the digestive system, there are noticed the dry red tongue, loss of appetite, nausea, vomiting of copious masses, with intense epigastric pain, which often constitutes one of the first symptoms. The condition of the bowels varies; at times there is at first constipation, followed by the evacuation of very copious motions; or, from the first, there may be profuse diarrhœa.

5. As regards the urinary organs, the urine is found diminished in quantity; in cases where the amount of sugar has been determined before the onset of the coma, this too has decreased, and sometimes (in one of my cases) entirely disappeared. The reaction of the urine is often very acid, but not invariably so. Ammonia is often found increased. The urine has the same odour as the breath, and contains acetone. It gives, with perchloride of iron, the claret-red colour which has now been conclusively proved to be due to aceto-acetic acid. In the more recently reported cases, by Minkowsky and Kulz, the urine contained also oxy-butyric acid, and the β-crotonic acid of Stadelmann. In the last of my cases of diabetic coma, Dr. Liebmann, late assistant to Professor Keküle, who kindly assisted me in all the other chemical observations, carefully analysed the urine, which was withdrawn by catheter from the patient a few hours before death, and found aceto-acetic acid, but no oxy-butyric acid. In one case, the urine had a distinctly milky appearance, and microscopic examination showed the presence of large quantities of fat. The urine, in all my cases, also showed the presence of albumen—sometimes only a trace, at other times a fairly perceptible quantity. The almost constant occurrence of albumen has been noticed also by Stokvis; in a good many of the other recorded cases, however, it was not detected. In several of my cases, hyaline and small granular casts were seen on microscopic examination.

6. The temperature is usually found to rise during the first stage; with the onset of the coma, it falls, and may, just before death, descend to 95°, 94°, and, as in a case reported by Sir W. Foster, may be as low as 90°.

7. The blood, examined microscopically, shows us noteworthy changes. Where there is much anæmia, we have the usual appearances of the blood, such as a large number of microcytes and poikilocytes, whilst the leucocytes are found diminished in number. Chemical examination of the blood withdrawn during life, in four cases, showed the presence of fat in very varying proportions. In one case, already reported by Dr. Gamgee, the ethereal extract contained 12.76 per mille; in another, 2.32 per mille; in a third, 6.2 per mille; and in a fourth, 2.15 per mille. The blood, in the two cases where a large quantity of fat was found, separated, on standing, into two distinct layers, of which the upper one had a creamy appearance, and consisted of fat-granules, which, after a time, coalesced into large fat-drops.

Now, as regards the course which diabetic coma runs, it may be said to be fatal in about 90 per cent. Of the fatal cases, some run their course, without any premonitory symptoms, in a remarkably short space of time—from twelve to twenty-four hours. In about 60 per cent. of the cases, however, the disease lasts two or three days, and is ushered in by lassitude, abdominal pain, or dyspnœa. In other cases, the fatal coma is preceded for weeks or months by a condition which may be called chronic acetonæmia, where the exhaled air has the peculiar odour, and the urine contains aceto-acetic acid. When once the graver symptoms of coma appear, death, as a rule, follows. Sometimes, however, the symptoms improve for a time, and then reappear with fatal results, or gradual and steady improvement follows. This, unfortunately, happens in the smallest number of cases.

As regards the etiology, some points, I think, are clearly established.

1. Diabetic coma affects chiefly the younger persons. According to Pavy, who based his statistics on nearly 4,000 cases, 55.65 per cent. of the cases of diabetes occurred between the ages of 40 and 60; whilst, from an analysis of eighty cases of diabetic coma, I find that 70 per cent. occurred between the ages of 20 and 40, and only 24 per cent. between 40 and 60. It may occur, also, in very young persons and even children under the age of 5.

2. It may come very early in the course of diabetes; in a case communicated to me by Professor Charcot, the urine was examined two months before diabetic coma appeared, and found free from sugar; and in some of the cases which ended most rapidly fatal, the patient showed no subjective symptoms of diabetes previously to the attack of coma. In the younger persons, diabetic coma mostly appears from six to twelve months after the first symptoms of diabetes; in the older persons, coma is noticed at a later period. From these facts, we may conclude that coma occurs almost exclusively in the severer forms of diabetes.

3. As regards hereditary disposition, I have noticed some interesting facts. Quincke records a fatal case of diabetic coma in a girl, aged 16, whose brother, aged 19, and uncle, aged 29, had also died in a similar way. Frerichs observed diabetic coma in a girl, aged 12; her brother, aged 15, who also suffered from diabetes, was much affected by the death of his sister, and died from diabetic coma two days after her. In another case given by Frerichs, two sisters, one aged 18, the other 21, died from coma; the first symptoms in the elder sister appearing as she stood at the bed of her dying sister. Professor Charcot kindly communicated to me a case of death from diabetic coma in a gentleman, aged 42, whose sister died also from diabetic coma, at the age of 50, and whose father had also died from diabetes; whilst one uncle, who had phthisis, from which he recovered, died suddenly. In a case of rapidly fatal diabetic coma, which I saw with Mr. Bradley, a younger brother, who was known to have had diabetes, had died under similar circumstances. I give these facts without any comments; they seem, however, to show as if a predisposition was inherited.

As regards the exciting causes, several have been well established; of these, the principal are:

1. Excessive physical exercise. This seems to be the exciting cause in about 50 per cent. of the cases.

2. Mental shock. This contributes 10 per cent.

3. The sudden change of diet from a mixed to an exclusively nitro-

genous diet. This I have noticed in one of my earlier cases, where a rigid diet was instituted in a patient that had not been treated at all before, and where, on the second day of treatment, fatal coma set in. I know of several others; and Ebstein, Joenecke, and Von Mering relate fatal cases from exclusive meat diet. An exclusively nitrogenous diet is often, but not always, well borne, and borne with good effects, as was established by Cantani; but the change from the mixed to the nitrogenous diet should be gradual, and never abrupt.

4. Surgical operations in diabetic patients are occasionally followed by coma. It would seem as if the causal agent here was the nervous shock; it would be interesting, however, to see how far the administration of the anæsthetic is to be blamed. Thus, in about thirty operations for cataract in diabetic patients, where no anæsthetic was given, Dr. Glascott informs me he has never met with diabetic coma following the operation.

5. Lastly, intercurrent febrile affections, as croupous pneumonia and catarrhal pneumonia, an acute gastric catarrh, or a pharyngeal abscess occurring in diabetic patients, may soon be followed by the symptoms of coma.

Before discussing the pathology, we ought to glance briefly at the anatomical lesions found after death. I will not tire you with a long recital of changes which are inconstant, and have no bearing on the pathology of diabetic coma, and will only briefly allude to the more important ones, taking as a basis my own ten cases, and those recently described by English and continental observers.

The nervous system presents, as a rule, no noteworthy alterations. The changes described by Dickinson were seen in one of my cases, and have also been described by Frerichs and Ebstein. Whatever their bearing may be to the pathology of diabetes generally, they have no special relation to the causation of diabetic coma. Fat-embolism I could only see in one case where, both in the lungs and in the glomeruli of the kidney, numerous small capillary emboli were found. In all my other cases I missed this change, though I searched for it very carefully; and even in the one case, where, during life, the blood was found to contain a large amount of fat, our examination for fat emboli gave only negative results. Much more frequently did I find the necrotic changes in the epithelium of the convoluted tubes of the kidney, a pathological condition first described by Cantani and Ebstein, and more recently again by Mackenzie and Taylor, and with which I had been familiar for a long time. In six out of ten cases this degeneration was more or less marked, a proportion which is much higher than that given by Frerichs.

The glycogen reaction described by Ehrlich, and observed recently by Abeles, in the cortex of the brain in some cases of diabetic coma was looked for by me in three cases, but only in one did I detect it. It is found in cases of diabetes without coma, and even Frerichs does not vindicate for it any very close relation to diabetic coma. Of other changes, I will only note that the heart is usually found small, but rarely otherwise altered; that the pancreas is often found small and atrophied, as in four cases given by Windle; and that, in one case, Saundby found atrophy and interstitial cell-infiltration of the semilunar ganglia.

Lastly, the liver in several of my cases presented some changes. The capillaries were found very much distended, and the liver-cells atrophied; and, in one case, small greyish patches were seen, which consisted of an accumulation of fat-granules; fatty infiltration of the liver-cells was observed in several of my cases.

We are now in a position to discuss the pathology of diabetic coma; and considering the varieties of lesions found after death, and their inconstancy, it is not astonishing that so many different views exist as to the nature of the process which underlies diabetic coma. We need not stop to discuss the views which make the symptoms primarily dependent on an alteration of the nervous system, or on a thickening of the blood by an excess of sugar. The picture which a person suffering from diabetic coma presents is so clearly one of an acute intoxication of one kind or another, that our attention must be chiefly directed to those abnormal bodies which are found circulating in the blood, or which appear in the secretions. These bodies are, on the one hand, fat; on the other, acetone, aceto-acetic ether, aceto-acetic acid, and β-oxy-butyric acid.

The presence of an increased quantity of fat in the blood, and the blocking up of the small vessels in the different organs, have led Sanders and Hamilton to the well-known and ingenious view that all the symptoms observed in diabetic coma might be due to fat-embolism. The vital objections to this theory are now equally well known.

1. In the majority of cases of diabetic coma, fat-embolism is not found.

2. Fat-embolism, both in the kidney and in the lungs, is often found after death in the most varied diseases and injuries, and often without any apparent symptoms, as was shown by the observations of Moulin (*Lancet*, July 30th, 1881), and others.

3. Experiments on animals (Scribe Wiener) have shown that unless very large quantities of fat are injected, no bad results follow, as the fat is gradually eliminated by the kidneys: and some such process seems to occur also in man, for the presence of fat in the urine in diabetic patients has been noticed by Habershon, Hadden, Morrison, and others, and was also seen in one of our fatal cases of coma.

While it is thus not unlikely that, in some few cases where the amount of fat in the blood is large and the emboli extensive, the symptoms, all or in part, might be due to fat-embolism, for the large majority of cases this explanation will not hold good.

We have next to consider acetone and aceto-acetic acid and oxy-butyric acid. The breath of many patients suffering from diabetes has long been known to have a peculiar chloroform-like odour; and that this is due to acetone can easily be proved by allowing such patients to breathe into water. After a short time the water will have the same odour, and on distillation, a body passes over which gives all the reactions of acetone. Again, in the urine of such patients there is almost always found a body which gives with perchloride of iron a deep-red colour. This body, first detected by Gerhardt, and believed for a time to be aceto-acetic ether, has now been proved by Tollens and Deichmann to be aceto-acetic acid. As aceto-acetic acid is a very unstable body, and easily splits up into acetone and carbonic acid, the presence of the former in the expired air is easily understood.

It must, however, be borne in mind that in many cases of diabetes, acetone may appear in the urine without aceto-acetic acid. As many other bodies, and sometimes even normal urine, give a red colour with perchloride of iron, and as this fact seems to have escaped the attention of many of the most recent observers, I may be permitted to state briefly the characteristic tests for aceto-acetic acid: 1. The urine is treated with concentrated solution of perchloride of iron, and filtered from the phosphates, which are precipitated. The claret-red colour disappears on heating. 2. The urine, after the addition of a small quantity of dilute sulphuric acid, is shaken up with ether, and in the ether extract, which takes up the aceto-acetic acid, perchloride of iron produces again the characteristic colour which gradually fades on standing. 3. The urine, on distillation, gives characteristic reaction for acetone, as aceto-acetic acid is easily decomposed. The acetone was tested by Lieben's and Legal's test.

Lieben's test consists in the addition of a solution of iodine in iodide of potassium to the distilled urine, when a yellow precipitate of iodoform crystals appears; this test is the most delicate test, but may apply to other bodies besides acetone.

Legal's test consists in the addition to the distilled portion of a small quantity of caustic soda solution, then a few drops of a solution of sodium nitro-prusside, and then a few drops of acetic acid, when a beautiful red colour appears if acetone be present.

Now, both acetone and aceto-acetic acid are found in the majority of cases of diabetic coma. We have not missed them in any of the cases which we examined since this test was first made known, and they are present from the very onset of the symptoms.

It behoves us, therefore, to see how far these bodies have a toxic effect. The toxic effects of acetone have been investigated by Kussmaul, Buhl, Frerichs, Penzoldt, Albertoni, De Gennes, and Jaksch, and with such varying results that I thought it not unnecessary again to take up this subject. In a first series of experiments, the effect of acetone on healthy subjects was studied. My friend, Dr. Lindermann, Mr. Adami, one of my clinical clerks, and myself, took large doses, ten to twenty grammes, of acetone without any ill effects beyond a little drowsiness and headache. In one of us, a slight diminution of temperature, pulse, and respiration, was noticed, but these did not increase on administration of large doses of acetone. The exhaled air, soon after administration, contained a considerable amount of acetone; the urine, however, only contained a trace, and even this disappeared after a few hours. A good deal of the acetone must, therefore, have passed out of the lungs, and another part must have been quickly burnt off, and a very small quantity only could have entered the circulation. Dr. Lindemann tried subcutaneous injections of acetone on himself, and it was found that fifty minims could be injected without any effect being produced. The urine, however, contained acetone for twelve hours after the last injection.

In a second series of experiments, large quantities (100 grammes) of grape-sugar were taken, and then some acetone; the breath again smelled strongly of acetone, but the urine contained a trace of acetone but no sugar. Bearing in mind that acetone had been recommended for phthisis many years ago by Dr. Hastings, and recently again by Neu-

mann, we felt no hesitation in giving it to patients suffering from various diseases; and here we noticed again its ready elimination, but with certain exceptions. Given to diabetic patients, it produced no ill effect, except some drowsiness, and, in one case, most marked diaphoresis; but the urine continued to contain acetone for some days after the administration of this drug had been stopped; and, in one case, the urine contained aceto-acetic acid. The same result was seen in cases where the function of the liver was impaired, as in cases of gall-stones and of cirrhosis of the liver. It would, therefore, appear that, normally, if acetone be taken by the mouth, it is readily passed from the digestive tract into the liver, and is in part burnt up there, while another part passes into the lungs, and is eliminated; whilst, if the functions of the liver be impaired, it remains in the body a longer time, and is much more slowly eliminated. With the experimental investigation of this question, I am at present occupied; and, having only but recently obtained the necessary license, I am unfortunately, as yet, not in a position to lay the results before you.

In a third series, I traced the effects of subcutaneous injections, seeing that large doses given by the mouth had no effect. It was given to rabbits; and it was found that, if small doses, from five to ten minims, were given in sufficiently long intervals to allow it to be eliminated, not more than some slight drowsiness was noticed; the animal became quiet, and appeared drowsy and heavy, but this effect soon passed off. If, however, the small doses were administered at shorter intervals, it was found that, after five or six doses of ten minims, the animal became at first drowsy and then comatose; the respirations became slower and deeper, and spasmodic jerkings of the legs and head came on. The urine was found to contain a small trace of albumen. The animal was then killed, and the kidneys examined. No necrotic changes were seen; but, when treated after Posner's method, the albumen deposit was seen within the capsules of the glomeruli. Penzoldt and Jaksch, by modifying the experiment somewhat, so as to prevent the elimination of acetone by the lungs, obtained similar results with much smaller doses.

Aceto-acetic ether, given to healthy persons and to diabetic patients, produced no results. The urine contained acetone, but no aceto-acetic acid. Subcutaneous injections with this body in cats and dogs were tried by Quincke, who found that even small doses were followed by death from coma, with marked dyspnœa.

Aceto-acetic acid I tried in a similar way; and, like Frerichs, I found that even large doses can be borne with immunity by healthy persons, if given by the mouth. The urine only contained acetone, but no aceto-acetic acid. Smaller doses, injected into rabbits, gave rise to no symptoms. Large doses, according to Jaksch, produce albumen, which persists for a few days.

Experiments with oxy-butyric acid (which, on oxidation, gives rise to aceto-acetic acid, and which has been found, in a few cases of diabetic coma, in the urine) were tried by Albertoni, who found that it had no particular toxic effect, and did not give rise to the appearance of aceto-acetic acid in the urine. Rabbits, after the administration of six grammes, died under symptoms of depression.

Before considering the bearing of these experimental results on the pathology of diabetic coma, we will briefly notice the appearance of these bodies in other diseases than diabetes. Acetone may occur in small quantities in normal urine; in large quantities it has been found by Jaksch and others in many febrile diseases, and in some chronic disorders, especially if associated with fever. Quite recently, the same author describes a case where, in a healthy young man, after an error in diet, there followed violent vomiting, loss of consciousness, and epileptic attacks, and where the urine contained a large amount of acetone. All these symptoms rapidly subsided with the disappearance of the acetone, and this case is looked upon by Jaksch as an auto-infection by acetone.

Of much more frequent occurrence, and more closely connected with the subject under discussion, is the so-called diaceturia, where the breath has the acetone odour, and the urine gives the perchloride of iron reaction, which, in the recent cases I have observed, has been found to be due to aceto-acetic acid. This condition has been noticed by Seifert, Penzoldt, Litten, Le Nobel, Jaksch, and, in this country, by Windle. I have observed it in a healthy person, after he has taken large quantities of alcohol, in two cases of gastric ulcer, in one case of hysterical vomiting, in one case of cancer of the stomach, in a case of syphilitic cirrhosis of the liver, and in one case of exophthalmic goitre; and it undoubtedly occurs frequently in the acute febrile diseases. In some of these cases, there were no distinct symptoms referable to these bodies; in others, there was marked vomiting, headache, and great general depression, and these symptoms subsided with the disappearance of the aceto-acetic acid from the urine. The case of cirrhosis of the liver died from symptoms having the closest resemblance to diabetic coma. The patient complained of a sudden epigastric pain, became very restless, there appeared marked dyspnœa, and death from coma ensued thirty-six hours after the onset. The breath had at first a marked acetone odour; the urine gave aceto-acetic reaction, but contained no trace of sugar, nor had sugar been noticed at any previous time, though the patient had been under observation for some years. (Litten observed a similar fatal termination in a child suffering from scarlet fever. Here, then, we have death from diabetic coma without diabetes.)

One peculiar feature I noticed in this case, which is worthy of mention. We found that some time before death the acetone odour disappeared, and the urine now gave no reaction with perchloride of iron, and, when tested for acetone, instead of giving a red colour with the nitro-prusside test, gave a beautiful blue colour. Now, a few days ago, a patient who had been under the care of Dr. Morgan, and who was suffering from severe diabetes, and whose urine contained aceto-acetic acid, died from diabetic coma; with the onset of the attack, the urine contained still a good deal of sugar (about 5 per cent.), and gave the characteristic reaction for aceto-acetic acid. As the coma developed, he passed some urine perfectly free from sugar; the acetone odour had disappeared, and, with it, also the perchloride of iron reaction; but, instead of this, exactly the same blue colour was obtained in testing for acetone. I have never seen this reaction before, nor has it been noticed by any other observer, so far as I know, and I cannot say to what it may be due.

To sum up, then, the experimental results, we see that none of these bodies mentioned can be said to be toxic, in the ordinary sense of the word, and that all of them can be taken by a healthy person in large quantities, without any ill effects; that acetone, if present in the blood of animals in large quantities, or if not quickly eliminated, will produce symptoms not at all unlike those of diabetic coma; and lastly, that both acetone and aceto-acetic, if injected in large quantities, will produce albuminuria.

And, as regards the clinical results, we see that, in many acute and chronic diseases, acetone and acetic acid may occur; and, whilst often only producing slight and temporary symptoms, may occasionally give rise to all the graver symptoms of the coma seen in diabetes.

If we now consider how profoundly the blood and tissues are altered in diabetes, and how often the functions of the liver and kidneys are found impeded, we can, I think, readily understand that the elimination of acetone, and the other bodies which give rise to it, is interfered with, and their toxic symptoms produced. I have already drawn attention to the presence of albumen in these cases, which I believe with Stokvis, is rarely missed. Now, whether this be due to the necrotic changes in the epithelium, or to the irritation set up by the acetone and aceto-acetic acid, there can be little doubt that, even without showing material changes, the kidneys have their function impaired.

But I believe the impairment of the normal function of the liver plays even a more important part than that of the kidneys. The observations I have given above seems to indicate this, the changes in the liver observed by Cantani. Mya and myself support it, and we further notice that it is chiefly in cases of the liver-cancer that symptoms like those of diabetic coma are seen. Whilst believing that acetone has a large share in the production of the symptoms, I hold that it is only one of a series of bodies of which aceto-acetic acid is another, β-oxy-butyric acid a third, and of which there are probably more, which, if not quickly eliminated, act powerfully on the nervous system, and thus produce diabetic coma. Whether some of these acids act by withdrawing the alkalies from the blood; in fact, whether they produce an acid intoxication, as Stadelmann and Minkowsky believe, a statement which is supported by the experimental research of Walter on the action of acids on certain animals, remains yet to be seen. Certainly, in the very last case of diabetic coma, the case of Dr. Morgan's quoted above, the urine increased nearly double in acidity during the progress of the coma; thus, at the onset, 100 cubic centimètres required 13.4 cubic centimètres of one-tenth normal soda solution, and, towards the end, the same quantity of urine required 26 cubic centimètres of normal soda solution for neutralisation. I may say, however, that in this case, no oxy-butyric acid was found by Dr. Liebmann.

I can only compare this third form of diabetic coma to uræmia, though the toxic agents here are totally different, and the symptoms not less so. We have an acute form of uræmia as we have an acute acetonæmia, if I may be allowed (for want of a better expression) to use this term, and we have also a chronic form corresponding to acetonæmia; again, we may have an accumulation of urea, uric acid, and the extractive matters of urine with no fatal result, and occasionally with

but few symptoms, if these bodies can again soon be eliminated; and, lastly, the injection of urea into the blood of animals, owing to its rapid elimination, produces even less toxic effects than the administration of acetone, though the retention of urea plays undoubtedly an important part in the causation of uræmia. How and where these bodies are formed is as yet a matter of speculation. It is not easy to see how they can be formed from oxydation, or further, fermentation of sugar. It seems more likely, especially according to the observations of Jaksch and Rosenfeld, that acetone at least is formed from the albuminous bodies; and if so, we can somewhat understand why the sudden change from a mixed to a pure nitrogenous diet should bring on the symptoms of coma.

There remain yet, however, a number of cases where the symptoms of diabetic coma with marked dyspnœa appear, and where yet no acetone is contained in the exhaled air, and no aceto-acetic acid is found in the urine. These cases I would relegate to our first group—the diabetic collapse—from which they seem to differ only in one additional symptom—dyspnœa. I cannot help feeling that rather too much stress has been laid on this "Kussmaul's symptom," which simply indicates, I think, that the respiratory centre is profoundly implicated. We miss the dyspnœa in otherwise typical cases of diabetic coma; and that it may be present in collapse or coma, independent of diabetes, is seen in the cases of pernicious anæmia related by Riess. Whether some of these cases may not be due to an intoxication by an alkaloid, a ptomaine, produced by fermentative changes in the body, is a point about which at present we have but too little positive evidence; but about which, considering the activity displayed in that line of research by Brieger, Bouchard, and others, we shall, no doubt, hear more before long.

And now a few words as to treatment. However much physicians may differ as to the pathology of diabetic coma, I think it is admitted generally that the appearance of the acetone breath and the presence of perchloride of iron reaction always indicate that we have a severe case of diabetes to deal with, and that in these cases a slight cause may bring on a fatal coma. Such patients should be forbidden active exercise; they should avoid mental worry and excitement. As obstinate constipation has occasionally been assigned as an exciting cause, the condition of the bowels should be attended to, but only gentle laxatives be given. If the symptoms come on soon after a course of an exclusive nitrogenous diet, a mixed diet should be at once recommended. We may in this way succeed in averting the symptoms of coma, for when once these are present, our therapeutics are powerless. Intravenous injection of phosphate of soda and chloride of sodium, recommended by Fagge, only delayed the fatal event for a few hours; not more success was obtained by transfusion. Stadelmann believing, as we saw, that the symptoms of diabetic coma depended on the presence of increased acid in the blood, gave in one case large doses of bicarbonate of soda; there was some slight temporary improvement, but the fatal result followed a few hours later. The different antiseptics have been tried, but with no better result; in fact, several cases of diabetes died from coma during a course of treatment with carbolic acid. The inhalation of oxygen, and the administration of stimulants, such as ether and camphor, gave no better result; the latter are, however, indicated in diabetic collapse. Very gloomy indeed is thus the progress of diabetic coma, and only too true the saying of Prout, who compares a person with diabetis to one who is walking on the brink of a precipice.

THERAPEUTIC MEMORANDA.

TREATMENT OF TWO FORMS OF DIARRHŒA IN CHILDREN

DRS. BRAITHWAITE and W. W. Millard have recently contributed interesting notes on the subject of one form of infantile diarrhœa.

My own ideas regarding that and another form have been inspired by the valuable observations to be found in Dr. Ringer's book (seventh edition, 1879, pp. 246-248), to which I may be pardoned for referring my brother practitioners, who have not hitherto followed his line of treatment in these diseases.

There is no greater certainty in therapeutics than that "infantile cholera"—profuse watery diarrhœa—will be cured if treated within the first few hours by one-sixth of a grain of grey-powder given hourly even by itself. But I give usually one-sixth of a grain of hydrargyrum cum cretâ, with two grains of lactopeptine; and in some cases I administer as another *adjuvans* a vegetable astringent, such as krameria. Again, when the stools are slimy with, it may be, blood-streaks, I give liquor hydrargyri perchloridi, 2½ drachms in 2 ounces of water, of which a teaspoonful given every hour meets the case.

The diet should be cold, consisting of arrowroot made with water, and very slightly sweetened; barley or rice water to drink. One case which was baffling the grey-powder was explained by the presence of a piece of undigested beef on a napkin. Maternal ideas of feeding have sometimes to be sharply enlightened.

ARCHIBALD MACDONALD, M.D.Edin., Liverpool.

REVIEWS AND NOTICES.

CLIMATE AND HEALTH IN AUSTRALASIA. Edited by JAMES BONWICK, F.R.G.S. New Zealand, New South Wales, Victoria, Tasmania. Four Pamphlets. 12mo. London: Street & Co. 1886.

WE have to thank Mr. BONWICK for bringing together a quantity of information about the climate and health of our Australasian colonies, which will be useful to physicians as well as to emigrants. The varieties of climate in those regions are very numerous. One may say generally, that New South Wales and Victoria are hot and dry; Western Australia has a humid climate, while Northern Queensland has a tropical one. Tasmania has a medium excellent climate, while New Zealand has a breezy colder one, in many ways resembling that of England. But besides such generalisations, we have to consider locality. There are coast and inland climates, and differences of altitude from the sea level up to the colonial high Alps, with their snow. Some of the most favourite climates are those of the highlands of the north, or New England in New South Wales, of Rivenna in Victoria, and of Tasmania. We are told that consumptive patients in Tasmania or New Zealand, seek the dry plains of the Rivenna, or the sea-side Brisbane, in Southern Queensland. In short, there is a great variety of climates in those regions, as might have been expected, and we are beginning to distinguish them. The balance of evidence would seem to show, that phthisis is benefited by well-chosen Australian climates. In such cases, where patients are sent from England, the effect of the sea-voyage has to be taken into account. We have only space to add that Mr. Bonwick's book confirms the singular fact of the very great prevalence of rheumatism in all those colonies, though Victoria is said to suffer less from it than the others. The fact of the great heat not being so injurious in Australia as in other hot countries, and of its rarely producing sunstroke, continues to be accepted. We could mention many other interesting topics. Meantime, we are glad that Mr. Bonwick has presented, in a concrete form, much matter which, we hope, will be subjected to examination and correction in the future.

NOTES ON BOOKS.

South Africa as a Health Resort. By ARTHUR FULLER, M.B.C.M. Edin., M.R.C.S.L., 12mo., pp. 70. (London: W. B. Whittingham and Co. 1886).—Those who think of sending phthisical patients to Southern Africa, may gather many useful practical hints from this little volume. It shows the facilities, not only of reaching the Cape, but of arriving at various excellent health-stations in the interior, by the aid of railways. Long journeys, of many days' duration, in bullock-carriages, need not now be necessarily undertaken.

Remarks on the Climate of Dublin. By JOHN WILLIAM MOORE, M.D. 8vo., pp. 19. (Dublin. 1886).—Dr. Moore thus sums up the results of twenty years of laborious observations by himself, and by his father: "The climate of Dublin is, in the fullest sense, an *insular* one, free from extremes of heat and cold, except on very rare occasions, and characterised by a moderate rain-fall (about 28 inches) annually, which, however, is distributed over a large number of days (about 195 in each year). Clouded skies, a high degree of humidity, and a prevalence of brisk winds, chiefly from westerly points of the compass, make up the climatology of the Irish capital."

Bright's Illustrated Guide to Bournemouth. 12mo., pp. 182. (Bournemouth: F. J. Bright. 1886.)—This guide, consisting of 182 closely printed pages, compiled by Mr. C. H. Octavius Curtis, contains ample information on all general subjects for visitors to Bournemouth—we would say almost too ample, for fifty-eight pages is an unconscionable amount of space to devote to a description of the modern churches in that place. Dr. Davison has contributed a judicious chapter on the climate of Bournemouth.

FIFTY-FOURTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in BRIGHTON, August, 10th, 11th, 12th, and 13th, 1886.

THIRD GENERAL MEETING, THURSDAY, AUGUST 12TH.

Dr. WITHERS MOORE, President, took the chair at 11 A.M.

The Address in Surgery.—The PRESIDENT, in introducing Mr. F. A. Humphry, as the reader of the Address in Surgery, said that he was a valued friend and an able colleague of his own, and a cousin of one whose name was never mentioned in the gatherings of the Association without a cordial welcome—Professor Humphry, of Cambridge. He (the President) was proud of the choice he had made of Mr. Humphry, as the orator of the day, and he looked forward with confidence to the verdict of those who listened to the address.

Mr. HUMPHRY then delivered the Address in Surgery. It was published at page 307 of the JOURNAL for August 14th.

Sir WILLIAM MAC CORMAC said he had been asked to express, on behalf of the large number of members present, their thanks, and he was sure that all would join in those thanks to Mr. Humphry, for the address he had just delivered. He wished someone had been chosen more fitted to adequately express the sentiments which they all must feel as to the character of that address. It was one to which they had listened with the greatest pleasure, characterised as it was by lucidity, by a critical mind, and by an extreme suggestiveness, blending in the happiest manner the old surgery with the new, taking what was good out of it, and not forgetting it; and there was much, he thought, that they had forgotten in the old surgery. It was not every novelty which was good, and Mr. Humphry had shown, when approaching a new subject, that he did so with a critical mind. He had shown, and it was a point they should not forget, how much medicine and surgery overlapped. In these days especially of specialism, they were apt somewhat to overlook this fact, that they could not dissociate surgery from medicine. Mr. Humphry had touched all, or nearly all, the great questions in the surgical branch of medicine. He had touched them in the manner that he (Sir William Mac Cormac) had tried to describe, and each of those subjects which he had touched he had adorned. It was men such as Mr. Humphry who created that character for honesty and unselfish seeking for the good of their patients which English surgery had attained, and which placed it in the honourable position which it held in the estimation of all countries where that surgery was known. He was sure, therefore, that they would all respond most heartily to the proposition, that "The warm thanks of the Association be given to Mr. Frederick Abell Humphry, for his interesting and admirable Address in Surgery."

Mr. WHEELHOUSE said he had the greatest pleasure in seconding the vote of thanks. He did so on several grounds, but chiefly on the ground of the clearness and lucidity with which Mr. Humphry had brought before them the changes which had taken place, and were still continuing to take place over the whole field of the surgery of the present day. To those who, like himself, could remember the surgery of old days, it was no difficult matter, as Sir William Mac Cormac had said, to see the vast amount of good that there was in that surgery. To those who were working in the more active and progressive surgery of the present day, there were faults to be seen in the old surgery which had steadily been cut away, and in their place they had been given principles and methods of action which were advancing surgery at a rate such as had never been equalled in former times. When Mr. Humphry spoke of the change of type in disease and surgical conditions, he could not help feeling that they were all, as it were, labourers on an old farm; their predecessors had done all that they could; they had made all out of it that they could, and they found that, if they were left where they were, there would be, comparatively speaking, but little increase to come from the land in its then condition. Now they were trying first of all to meet the changes in the soil, for it was in the soil of the human constitution that these changes were mainly developing. They were trying how far they could adapt themselves to the change of soil, and as the agricultural labourer tried to do that by increasing his knowledge of productive manures and so forth, and by the introduction of new materials, instruments, and methods, so were they in the medical profession;—they were enriching their soil by looking after their sanitary condition, and they were enriching their methods of making that soil productive by the introduction of antiseptics, of anæsthetics, and of new surgical procedures of all kinds. He professed to be a surgeon of the old type, but he was thankful to say that he was surrounded by a band of younger men who were pushing things that he, a few years ago, would have thought inconceivable into absolute practice, and were carrying them out day by day. It was through these younger men whose practice he was abundantly thankful to watch, and follow, and profit by; and it was by addresses such as that which they had heard from Mr. Humphry, in which the labours of the younger men of the year were all focussed and placed before their observation, that they reaped the benefit of these great social meetings, which he never attended without taking home a new stock of something to think about in his professional practice.

The resolution was carried by acclamation.

Mr. HUMPHRY said he was extremely obliged to Sir William Mac Cormac and to Mr. Wheelhouse for the kind way in which they had referred to his address. He had felt a good deal of diffidence in addressing such an assembly; and, when the President asked him to deliver the address, he felt that it was very much like putting a square peg into a round hole. Still, if what he had presented met with approbation, and suggested something for further thought, he was satisfied.

The Gold Medal for Distinguished Merit.—Sir B. WALTER FOSTER, President of the Council, said: It may be in the knowledge of most of you here that in the year 1877 the Association instituted a special order of merit. That special order of merit was described as "The Order of Distinguished Merit of the British Medical Association;" and the badge of that order consists of a medal in gold, silver, or bronze. It was enacted that this medal should be awarded to any gentleman who should have conspicuously raised the character of the medical profession by scientific work, by extraordinary professional services, or by special services rendered to the British Medical Association. Since 1877, we have been comparatively careful—almost, I was going to say, too careful—in awarding this order of merit; but on three occasions we have given the gold medal, which it will be your pleasure to see awarded to-day. On the first occasion we gave it, for heroism in civil life, to Mr. H. Naunton Davies, of Pontypridd, who, you may remember, greatly distinguished himself, at the risk of his own life, in rescuing some unfortunate people from a colliery disaster in South Wales. We were glad to recognise in him one of those heroes of whom the profession has many, who are always willing to encounter any danger, however dreadful, however perilous, for the holy and divine mission of saving human life. In the second instance, this medal was awarded to one who did credit to the medical corps of the British army by acting like a true hero, and at the same time like a tender, kind, and compassionate doctor, in that terrible conflict which occurred at Rorke's Drift. Surgeon-Major Reynolds ranks among the military heroes of whom our profession and the world at large are justly proud. Then we passed to another form of distinguished merit, and to that we also gave the gold medal in the person of the late Dr. William Farr. He, as you know, spent the greater part of a long and useful life in developing the science of vital statistics, till he made the statistical department of this Empire a model for statistical inquiry into health and disease—a model which has been adopted, I think, by almost every civilised community in the world. We felt that his service was of a kind worthy of our recognition; it was scientific work of the highest kind; it was medical work of the highest kind; and the Council of the Association and the Association itself felt that in Dr. Farr they had a worthy recipient of their highest honours. We now propose to-day to reward another kind of merit, which has never hitherto been recognised by this Association, and which is too often, I think, but little recognised by the world at large. There are services rendered to every body of men in their corporate capacity, services which improve the organisation, which develop the power of acting together for good, which elevates the social and professional status—services but too often forgotten, but which leave a lasting mark on the position of any great profession. You know that for long years past we have been struggling to obtain, in our relations to the public and the State, that kind of legal position which we think is materially advantageous to our profession, and to the public, whom we delight to serve. It is essential that the relations of a great profession like ours should be so ordered in its relations to the public, as to give the public the highest medical skill, and give us, at the same time, the highest possible amount of protection. We have endeavoured to obtain legislative enactments over a long series of years for this purpose. In 1858, this Association sprang first into an almost national importance by the part it took in obtaining the first Medical Act. You know that Medical Act was found to be, in many respects, imperfect, and, for twenty-five years or so, we have been grumbling

at the imperfection of the Act which we found, three or four years after it was passed, did not answer our expectations. During the whole of that quarter of a century, this Association, through its Medical Reform Committee, has been endeavouring, time after time, to obtain an amendment of the Medical Act of 1858. We have met with disaster after disaster; we have had deputation after deputation courteously received and courteously dismissed; we have had committee after committee sitting and seeing no fruitful end to their labours; we have had Royal Commissions reporting in voluminous books as to what the medical profession wanted; but we had failed, up to this year, to get through the House of Commons any Bill that would be useful to us for the purpose at which we were aiming. During the whole of this time, we have had a committee of this Association doing quiet, steady, unobtrusive work on your behalf, and over that Committee has presided a gentleman who, when our fortunes seemed darkest, when hope seemed most distant, when medical reform seemed a mere vain fancy on the part of a few enthusiasts, has never lost heart, has never lost courage, has never failed of industry. Throughout the whole there has been one man ever hopeful, ever earnest, ever energetic, and that man was Dr. Edward Waters. At last, in the Parliament that ended a few weeks ago, Dr. Waters was able to get introduced by the Government a Bill, which, although imperfect in many details, and which did not rise to the level of what enthusiasts in medical reform wished, nevertheless contained in it two of the great principles for which he had fought so earnestly and so well. One of those principles was, that it was right that every medical man should be completely and thoroughly qualified in each of the three great branches of his profession before he was placed upon the legal register of practitioners. That was a wise and thoughtful principle, because it is a principle not only good for us as elevating our position as a profession, but it is more widely and more thoroughly useful to the great public who depend upon our services. We also claimed in this Bill, through Dr. Waters, a right to be recognised on the General Medical Council. For years past, we have been fighting this battle of having, at all events, some representation on this great body, which receives our money, and manages our education generally. That position was promised us when the original Bill was passed, but, year after year, we vainly appealed for that representation which ought always to go with taxation. We have been taxed, but we have had no voice in the distribution of the funds which we have paid to the General Medical Council; and at last, in this Act, we got that principle recognised—not recognised as widely as it should be—not recognised to the full extent which I think this profession has a right to claim—but we got a recognition of the principle. When the House of Commons was told by one speaking in the name of the British Medical Association that that recognition was inadequate, the House, on both sides, was willing to extend the representation as far as it could within the ordinary limits that the Bill allowed. Well, that Bill had many dangers and difficulties to encounter. It was watched with care till it had finally passed through the House of Commons; but through the whole of the critical stages of the Bill, when dangers loomed largest, when perils were nearest to us, Dr. Waters was always at the right hand of the representatives of the Government, and of the medical members of the House, to give them counsel as to what to yield and what to demand, so that we owe to him very largely the final success which crowned the efforts of the Medical Reform Committee after twenty-five years of long-continued and self-denying service. When this Bill was passed, the Medical Reform Committee met in London, and, congratulating themselves on this successful termination of their long and weary labours, passed this resolution, which has been engrossed here, and which, with your permission, I will now read to you: "At a numerously attended meeting of the Council of the British Medical Association, held in the Council Room, Exeter Hall, Strand, on Wednesday, July 21st, 1886, a resolution of the Medical Reform Committee, held July 20th, 1886, Dr. Charles Chadwick in the chair, of which the following is a copy, was unanimously approved: 'That this committee cannot conclude the labours of this session, in which the Medical Amendment Act of 1886 has been obtained, and the principles of direct representation and complete qualification of medical candidates for registration have been successfully affirmed, without expressing its appreciation of the self-sacrificing and devoted labour and able effort which Dr. Waters, chairman of this committee, has for a long series of years placed at the service of the profession. It offers to him its hearty congratulations and its thanks for the courtesy and distinguished ability with which he has conducted its work, and presided over its meetings. It desires that this resolution be submitted to the Council, together with an expression of the opinion of the committee that it hopes the Council will consider the best means of affording signal public recognition of the consistent and continuous services of Dr. Waters to the Association and to the profession in securing this measure of medical reform. On which it was moved by the President of the Council (Dr. B. W. Foster), seconded by Dr. Bartolomé, of Sheffield, and resolved—'That the gold medal for distinguished merit of the British Medical Association be awarded to Dr. Edward Waters for his long continued, self-denying, and able services in the cause of medical reform.'" It is to me a great pleasure to have to present to the President, to receive this mark of honour to-day, Dr. Edward Waters, not only on account of the nature of the services he has rendered to every individual member of the profession, and because I personally have known the sacrifices of time, money, and of bodily and mental power which he has made to the great cause for which he has worked so long and so faithfully, but also because I know his high character in the medical world, and that worthiness which has entitled him to the esteem and respect of every member of our profession.

The PRESIDENT, in presenting the medal said: Dr. Waters, I feel very proud to be the instrument of conferring upon you this great honour. At the same time I cannot help feeling a tinge of commiseration when I remember that "Othello's occupation's gone"—that the mainspring of your life has been rudely snapped by an Act of Parliament. But those powers of mind which have been so ably alluded to by the President of the Council will, I have no doubt, find another field for their exercise. I trust that you will live many years to enjoy this honour, and that you will still continue to the end of your days to take the active and able part that you have done in the affairs of this Association. May you long remain near to us, and enjoy your present great distinction.

Dr. WATERS: Mr. President, Sir Walter Foster, and members of the British Medical Association: I need not say with what feelings I appear here before you. I highly appreciate the high distinction which has been conferred upon me—a distinction which of all others I would have desired to crown my life, and of which I trust I shall always prove myself (I do not say worthy, but) not unworthy, as a devoted and loyal member of the Association. My professional life has been mixed up with this Association from the time when as a stranger I settled in Chester, without friends, without connection, and was unable, even when I stood for the post of physician to the Chester Infirmary, to get a man to second my nomination. What body was it that under such circumstances I fell back upon for that support which every man in our profession requires? I joined the Lancashire and Cheshire Branch of the British Medical Association, and in that body I found life-long friends, from whom I have derived information, with whom my professional knowledge has been increased, and who helped me in the first steps that connected me with the general body of the Association. When, in 1859, the Lancashire and Cheshire Branch elected me President, my first words were,—that I cared comparatively little for the opinion of the general public, provided I could only win the esteem and regard of my professional brethren. Subsequently, it so happened that, unworthy as I was, I was elected to the high post of President of the Association; and from that day I determined with what little power I possessed, at any rate with zeal, to discharge any duty that the Association might be pleased to impose upon me. It was in that spirit that, at the earnest solicitation of the late Dr. Sibson, then the President of the Council of the Association, I accepted the post of Chairman of the Direct Representation Committee of the Association. I will not go through the work done by that committee; I will not detail how it was merged at Newcastle, on the withdrawal of the Government Bill of 1870, into the Medical Reform Committee. I will not refer to the embarrassments with which we had to contend. We met with them where we might least have expected; we met with them in the running of rival Bills, which had no chance of being carried, but which neutralised the power of this Association for at least three years. The time, however came, in 1870, when the power of the Association, as Sir Walter Foster has told us, was recognised by the Government; and we had Select Committees and Royal Commissions appointed, and the result at last has been that we have secured this new Act, with reference to which our most gracious Queen has used these words: "I have given my assent to the Bill for effecting important reforms in connection with the medical profession." No other word need be said to justify the action of the Association and of the Medical Reform Committee during these long years, in pursuance of the mission confided to it. Now, as it was when, in my more humble capacity of President of the Lancashire and Cheshire Branch, I gave expression to my sentiments of high regard for the esteem of my professional brethren, what must my feelings be now, standing here before a body which represents 12,000 educated

medical men, having earned a reward of which, in my wildest imaginings, I could never have dreamed, which must always be handed down by those with whom I am connected as one of the greatest honours I could have attained? Indeed, I disregard all else in comparison with this medal which has been bestowed upon me. There is no other mark of esteem that could equal it in my estimation. I thank you, Sir Walter Foster, for your expressions, which, though they were too flattering, I accept in the spirit in which they were given. I also thank you, Mr. President, and I thank the members generally, for this signal mark of regard and esteem.

Invitation to the International Medical Congress at Washington.—The American delegates were introduced by the President. They included Dr. N. S. Davis, of Chicago, president-elect of the International Medical Congress; Dr. Brodie, of Detroit, ex-president of the American Medical Association; Dr. Pancoast, of Philadelphia; Dr. Wile, of Newtown, Connecticut; Dr. Shoemaker, of Philadelphia; and Dr. Fitch, of Halifax, Nova Scotia.

Dr. NATHAN DAVIS (Chicago) thanked the members on behalf of himself and his colleagues for all the courtesies shown to them. He then invited the members of the profession to attend the International Congress in Washington in September, 1887. He referred to and explained the internal difficulties which had occurred in organising the Congress, and certain secessions which had followed. An organising committee had been formed, each State and territory being represented, and all branches of the profession. An executive committee had also been formed to carry out all the details of the Congress, and their report on the subject had been unanimously adopted by the American Medical Association. He was therefore in a position to invite the members of the profession in England to go to America, where he could promise that they would meet with a reception as cordial as Americans knew how to give. A local reception committee had been formed at Washington, consisting of forty of the resident physicians of the capital, assisted by representatives of the medical officers of the army and navy. Excursions were also being organised, and everything would be done to make the Congress instructive and agreeable. Those who attended would certainly be received with open arms and warm hearts, and would find good entertainment. He might add that the President of the United States, the heads of the executive departments, the President of the Senate, and the Speaker of the House of Representatives, had lent their names as patrons of the Congress, and would help to entertain the members.

Dr. BRODIE and Dr. PANCOAST expressed in expressive terms their concurrence in the invitation, and their desire that the profession in the mother country should be well represented.

The PRESIDENT proposed a vote of thanks to the American delegates for their kind invitation, which would certainly be largely accepted.

Sir W. FOSTER seconded the motion, which was unanimously agreed to.

The whole meeting then rose, and gave cheers for the delegates.

State Honours to Medical Men.—Mr. HUMPHREYS (Shrewsbury) submitted a memorial from the Shropshire and Mid-Wales Branch to the Prime Minister, suggesting that peerages should be conferred on eminent medical men. He stated that men of great talent in the army or navy or in civil life, who had rendered signal service to their country, were often rewarded with peerages; but the highest reward given to a medical man who, by his talent and his industry, had alleviated the sufferings of his fellow creatures and prolonged life, was a baronetcy, while many medical men of the highest distinction had had no State honours at all. In regard to Sir B. Brodie and Sir Wm. Gull, a peerage had been suggested as appropriate; but it had been stated that there was no precedent for making medical men peers. The object of the memorial was to get such a precedent established. Churchmen, lawyers, commercial men, and politicians, and all kinds were to be found in the House of Lords, but no medical man had ever entered its portals. In France and Germany, the highest honours had been given to medical men. He proposed that the memorial should be accepted by the Association.

Mr. VINCENT JACKSON seconded the motion.

Dr. ROYLE suggested that the State honours conferred should not be limited to peerages.

Dr. BRIDGWATER thought it would not be becoming to the dignity of the Association to enter into the position of suppliants for honours.

Sir WALTER FOSTER said that, without expressing any opinion as to the prayer of the memorial, he thought that no memorial going up from a small meeting of thirty or forty persons could be regarded as expressing the sentiments of the Association. It would, he thought, be much better to refer the matter to the Council for consideration.

The motion was then put, and negatived by a large majority.

FOURTH GENERAL MEETING: FRIDAY, AUGUST 13.

THE fourth general meeting was held in the Dome on Friday, August 13th; Dr. WITHERS MOORE, President, in the chair.

Address in Public Medicine.—Dr. MAPOTHER delivered the address in State Medicine. (It is published at p. 349.)

Dr. TAAFFE, in proposing "that the cordial thanks of the Association be given to Dr. Mapother for his able address in State Medicine," said that the address had travelled over a wide range of subjects, and contained a vast amount of information; and he hoped that, when the projected tunnel between England and Ireland was made, the members of the Association would make themselves personally acquainted with the subjects which Dr. Mapother had so brilliantly treated.

Surgeon-General CORNISH, in seconding the vote of thanks, stated that when he was advising the Government in the Madras Presidency during the famine of 1876-77, he was greatly indebted to an admirable account, which had been written by Dr. Donovan, an Irish dispensary surgeon, on the famine in Ireland in 1845.

The vote of thanks having been unanimously passed, was briefly acknowledged by Dr. Mapother.

Medicine in Canada.—Dr. GRANT (Ottawa), after expressing his thanks for the courtesy and hospitality that had been extended to him and his colleagues, asked permission to say a few words with regard to Canada. That country would no doubt be well represented at the Congress in Washington. The preliminary difficulties that had arisen in regard to the organisation of the gathering had been removed, and he hoped that the Congress would be highly successful. He desired to thank Sir Walter Foster and those associated with him in the House of Commons, for their efforts in the cause of legislation, extending to Canada the privileges contained in the Act just passed. He had come over as a delegate to see the members of the House of Commons, but while he was coming, the desired legislation had taken place. Canada was a young country, but it contained twelve or fifteen thousand medical men, most of whom, after receiving a medical education in Canada, came to England or the Continent. There were in Canada no fewer than ten medical schools, the professors of which were largely from the centres of Great Britain. The curriculum was of four years' duration, and a preliminary education almost equal to that of a B.A. was required before a student could enter on the study of medicine. The medical examination took place at the end of the second and fourth years. A summer course of three months was also required for clinical work. He had himself practised thirty years in Ottawa. They scarcely knew such a disease there as consumption. Most of the cases seen there were not of a sporadic character, but were generally imported. The reason for their exemption was that, like Bournemouth, they were in the neighbourhood of pine trees. There were millions of feet of sawn lumber exposed every day, and the exhalation of pine material, which was antiseptic and curative, was such that the atmosphere was impregnated with it. Those who came suffering from weak lungs invariably went away improved, and the medical profession often got the credit of what nature had accomplished by that hygienic cause. Then there were the hot springs at Banff, on the Pacific Railway, in British territory, equal to those of Arkansas, where the Canadian Government contemplated putting up a great park and hotel. In the north, there were many progressive centres that would astonish visitors. Winnipeg, for example, that numbered only a few hundred people six or seven years ago, now had a population of 35,000, with buildings which would be a credit to an English centre. There was ample scope in the colony for English medical men, and a good prospect. At the hot springs, at Arkansas, medical men received from 50,000 to 70,000 dollars a year; and he believed that, at the Canadian hot springs, young men from England would find a lucrative practice.

CONCLUDING GENERAL MEETING.

THE concluding general meeting was held at 3 P.M. on Friday, in the Dome, the President, Dr. WITHERS MOORE, in the chair.

Report of the Medical Reform Committee.—Dr. E. WATERS said it was his happy privilege to address the members on a subject with which he had, he feared, too often wearied them. He had now arrived at the termination of labours which had extended over so very many years, that the youth and activity which once characterised him had, he feared, departed for ever. Gentlemen who were rather inclined to smile when he made the observation, had little idea of the feeling that oppressed him of the weight of years that had covered him. His duty was to move the adoption of the Report of the Medical Reform Committee of the Association. In doing so, he thought it right, now that

they had arrived at the termination of their labours, that they should revert somewhat, but still in few words, to the Act of 1858. It was well known that that Act was due to the labours of the British Medical Association. It was well known that Sir Charles Hastings, at the period President of the Council, was taken into consultation by the Government, and that he had to play a great part in bringing about that Act. After twenty-five years of conflict, it had then become manifest that no Act at all could be carried unless great concessions were made on the part of the Association in regard to the principles with which they had started, as essential in regard to medical reform; they had then simply to be content with what was termed reciprocity; that was, that the absurdity of a man qualified in one portion or one of the cities of the kingdom being precluded from practising in the rest of the kingdom, was done away with. The next point gained was a very important one, and that was the establishment of a medical register, by which it became clear in courts of law and to themselves who were really registered medicial practitioners, and thereby qualified to practise the profession. The third point brought about was the establishment of a Medical Council. With regard to the constitution of that Medical Council the conflicts were great, and even threatened to mar legislation; but, acting under the advice of the Parliamentary advisers of the Association, concessions were made, particularly on the point of the direct representation of the profession in the Medical Council. It was admitted by their representatives in the last instance that it was impossible to have the profession then represented on the Medical Council, in consequence of there being no official register of the profession, and, consequently, no means of ascertaining who were and who were not qualified to vote. The three points, therefore, that were gained in 1858 were the establishment of the Council, the establishment of reciprocity, and the formation of a medical register. A good deal was expected of the Medical Council, but in the end the profession found that it did not work as well as it was desired. The mutual jealousies of the various bodies represented upon it rendered it impossible for them to agree on any definite subject. The consequence was that, in a few years, the Association took action, and started, in the first instance, on the determination that the profession who supported the Medical Council should have a voice in its deliberations. They had succeeded at last in securing the direct representation of the profession in the Medical Council, and that was no doubt a great triumph on the part of the Association. With regard to the principle of direct representation, and, in fact, to the carrying of that Act, he must say a few words. There had been throughout the whole of the past century many ardent reformers, but the only body that had persistently, continuously, and determinedly insisted on medical reform had been the British Medical Association. Though acting on behalf of so powerful a body, the Medical Reform Committee had to encounter difficulties of an almost insuperable character in pressing forward the subject. It was only two years ago that the Bill of Lord Carlingford was withdrawn, and all the reformers with whom he had been acting were in despair, and even thought that it would be better to retire from the conflict. He (Dr. Waters) determined that as long as the Association held on, it would not do for him to abandon it; and therefore it was that after communication with the Government, and finding out what was obtainable and what was unattainable, the Medical Act of 1886 had been passed. He repeated that the Act of 1858, notwithstanding the action of medical reformers outside the Association, would never have been carried but for the Association. Sir Charles Hastings was the trusted confidant of the Government, and was applied to as president of the Council of the Association; and in the late negotiation, which led up to the passing of the present Act, during the last two years, he (Dr. Waters) had been in constant communication with the Government as to what was practicable and what was not. The result had been an undoubted step in advance, and which, he believed, would go much further to settle this question of medical reform than they had sometimes been induced to think. This Act admitted representatives of the Medical Council. Difficulties might arise as to the selection of candidates, and he was not one of those who would countenance dictation on the part of the Association in respect to the selection of candidates. But they must admit that, if men connected with the medical journals deemed it right and proper to select a candidate, then the members of the Association, who had played the chief part in the passing of the Act, were themselves, more than any other body, entitled to select candidates. They did not elect them, but they could advise the profession as to the men who were to be elected; and the profession would not be acting wisely if they did not consider most seriously the claims of the men who might be recommended. He could speak freely on this subject, because it was well-known to the Council and to the men with whom he had been working for years on the committee, that he would not have worked as he had done if it was for a moment supposed that he was going to be a candidate for the honourable and responsible position of being one of the direct representatives on the Medical Council. He was out of the field. It might seem presumptuous in him to suppose that he could be in the field; but, as many had spoken to him, it would be ridiculous modesty on his part if he did not tell the profession openly that he had nothing whatever to do with the matter, and that he was not going to be a direct representative of the profession. It would, therefore, be for the Association to select men who would do them credit, who would be received by the Council as able to guide them in matters in regard to the education of the profession. The work lying before the direct representatives was one of most serious import, and the responsibility of electing good representatives rested with the Association and the profession generally. He had had a very hard struggle. He had been frequently called the stormy petrel, when he had come forward and disturbed the rest in which the corporations were slumbering peacefully, and in which they were anxious to remain; but now that this Bill had passed, which was a great boon to the profession, he was delighted to know that his enemies of yesterday were his great friends of to-day. If the JOURNAL of the Association had not been at their disposal, and if the Editor had not loyally supported him from the time when he joined the Medical Reform Committee to the present day, he did not think it would have been possible, by any means in his power, to have succeeded. He should not discharge a duty, which he owed to Mr. Ernest Hart, if he did not state so much to the members of the Association, who for twenty years had benefited by him as the most able editor of any journal in the kingdom. In conclusion, he would say that, of all things that had occurred to him in life, of all pleasures that he could have dreamt of, none had been so great as the award of the gold medal of the Association. He moved: "That the Report of the Medical Reform Committee be received and adopted."

[The report of the Committee was published at page 274 of the JOURNAL for August 7th.]

Dr. GRIMSHAW (Registrar-General for Ireland) seconded the resolution. He had special reasons to be pleased with this opportunity of saying a few words on this question. It was in the year the Association first met in Dublin that the Reform Committee was established, and he was one of those who voted for it. For many years he was a member of the Reform Committee, and should have continued up to the last had it not been for the fact that it was likely to collide, to some extent, with his official connection with the Government. He, therefore, had to retire from it, but he had not ceased to take a very great interest in the work of that Committee, and had been enabled to give advice in quarters where he believed it was more effectively attended to than it would have been if he had been a member. A great deal had been said about Dr. Waters' striking qualities and about his management, and he had adopted the name that had been conferred upon him as the strong whip of the corporations. But there was another quality that Dr. Waters possessed which had not been mentioned. He was a first-class diplomatist in dealing with a great number of troublesome people who came across his path in discussing this question, and he believed that his diplomacy had nearly as much to do with passing this measure as his fighting qualities. Already one of the results of the passing of the Act had begun to work in Dublin. They had made many attempts there to form a complete conjoint examination for granting diplomas in all the branches of medical science, and to try to prevent the admission of imperfectly qualified candidates. These had, up till very recently, proved a failure, but since the passing of the Act, when it was manifest that something must be done, they had been hard at work preparing a scheme which, he believed, was as good a one as could be put together for carrying out a conjoint examination in medicine, surgery, and midwifery for Ireland. That result, he believed, would be altogether owing to the passing of that Bill, and he mentioned it as showing how useful legislation had already been.

The resolution was agreed to.

Report of the Parliamentary Bills Committee.—Mr. ERNEST HART said it was his duty, as Chairman of the Parliamentary Bills Committee of the Association, to move "That the Report of the Parliamentary Bills Committee be received and adopted." It had been printed in the JOURNAL (August 7th, page 275), and it had been printed also in the daily Journal of the meeting. The Parliamentary Bills Committee, as they were aware, consisted not only of persons specially designated by the Central Council of the Association for their knowledge and the special interest in the general political interests of the profession, to carry on its political business, but also of delegates chosen by the members

of the branches of the Association. It was, therefore, a Committee on which they endeavoured that the whole mind of the Association, its executive mind, and also the special opinions of every branch, and of every hundred members of that branch, should be fully represented. They took care that every member of the Committee should be fully informed before the Committee met of all the business to be brought before it, and that he should have the opportunity of reading a full statement of the Report to be laid before the Committee, and of forwarding to the Committee in writing, if he were unable to attend it, the views which he or the Council which he was deputed to represent, entertained on the subjects to be brought before the meeting. They endeavoured in that Committee to ascertain fully the views of the whole Association, and of every section of it; and then by energetic work they endeavoured to impress those views upon the House of Commons, and upon the House of Lords, and upon the private and public committees of each House. They had carried out that work with some diligence, with great labour, and not without effect, during the last session, and he hoped that the results of those labours as presented by the Committee would commend themselves to their approval. If they did not, he feared that no words of his would help the cause, and he would therefore move the adoption of the Report.

Dr. KELLY (Taunton) seconded the resolution, which was agreed to.

Report of the Scientific Grants Committee.—Mr. SIBLEY moved "That the Report of the Scientific Grants Committee be received and adopted." (See JOURNAL, August 7th, page 277.) He said the Scientific Grants Committee constituted one of the most important means of action of the Association. As soon as the Association became in a tolerably prosperous condition, it was thought one of the best means it could have of spending its money would be that of encouraging science; and this it did by means of the scientific grants. The Association voted the sum of £600 each year for this purpose, £300 being given in small votes for the special encouragement of any particular research to various individuals, selected with extreme care by the Scientific Grants Committee. In this way a considerable amount of scientific work was done, these small sums enabling many of the younger men to spend money upon these researches in the way of instruments, and so forth. That the work done by them was good, they had full evidence in the publication of their reports in the JOURNAL of the Association. The other sum of £300 a-year for the last three years had been divided into two Research Scholarships, each of £150, tenable for three years. The two Research scholars were Mr. Watson Cheyne and Dr. Waller; their work spoke for itself, and, therefore, he need not do more than move the adoption of the Report.

Dr. CHADWICK seconded the resolution, which was agreed to.

Report of the Habitual Drunkards Legislation Committee.—Dr. NORMAN KERR moved that the Report of the Committee for Restrictive Legislation for Habitual Drunkards be received and adopted (see JOURNAL, August 7th, page 276). The Committee had not been able to carry out their own recommendations to the Council, which were sent back to them with a mandate to impress upon the Legislature and the Ministry the desirability of making a permanent Act instead of a temporary one, and also of amending in a proper direction the very imperfect and incomplete temporary Act which they had at present. They had utilised the time lost in that way by some further investigations into the Habitual Drunkards Acts of their own colonies and of America. They were far behind America in this, for there was not a State in America in which the poorest habitual drunkard could not go and surrender his freedom for a time in the hope of cure from this disease, which was as much entitled to prevention and cure as any other dire disease. They were far behind America in this respect. In nearly all the Colonies there was as good legislation as there was in the United States. As they were going to have a Congress on Inebriety somewhere about July, 1887, he hoped that the labours of this Committee and the Association would ere long end in some thoroughly satisfactory measure, whereby long neglected duties might be undertaken by the profession, by the public, and by the community of this great country.

Dr. JACOB seconded the resolution, and regretted that the circumstances of the Association did not permit a more deliberate consideration of these great questions.

The PRESIDENT said that these matters were left in the hands of Committees, and it would be a very poor compliment to them to cavil at their reports.

The resolution was agreed to.

Report of the Collective Investigation Committee.—Dr. BRIDGWATER proposed "That the Report of the Collective Investigation Committee be received and adopted" (see JOURNAL, August 7th, page 280). They must all realise the importance of investigation. He hoped that they would see that it involved a great deal of present work, whilst the advantages to accrue and the good that would result were somewhat buried at present in the future.

Mr. JONES-MORRIS said he had very great pleasure in seconding the adoption of the Report. He only wished that all the members of the Association had as much zeal for collective investigation as Dr. Humphry, the Chairman of the Committee, had. He had worked most assiduously, and it was only to be wished that the results had been more favourable.

The resolution was agreed to.

Alteration of By-law.—Sir WALTER FOSTER, in the absence of Dr. Ward Cousins, brought before the meeting the alteration of by-laws which Dr. Ward Cousins proposed at a previous meeting. The members then were so exceedingly anxious to have a short sitting, that they would not allow the business to be transacted with that deliberation and carefulness that all the officers of the Association were anxious to have exhibited. The fact was that, at the early meetings of the Association, members were too apt to run away at the first opportunity to indulge in those pleasures which they had, no doubt, earned, but which they had not earned by work for the Association, and they left a few devoted adherents to transact the business. On that occasion, these alterations of the by-laws proposed by Dr. Ward Cousins were referred back to the Council. The Council had already had them under consideration for nearly twelve months, and, therefore, he did not think that any good could be done by discussing them again. He asked the meeting to adopt them if they were able, and to make them come into force at once. The object was to make such alteration with reference to the representation of the Branches as would allow a Colonial Branch to send a representative, who, although he might have resided within that Branch for some time, did not at present reside within the Branch. For instance, they had on the platform Surgeon-General Cornish; he was representing one of the Indian Branches; but, according to the by-law, not residing within the area of that Branch, he could not be elected as a continued representative, and so would be disqualified from sitting on the Council. He asked them, therefore, to make it permissible, in the case of Colonial and Indian Branches, that they should elect representatives who did not reside within the area of their Branches. He moved that these alterations be adopted:

"Page 17, By-laws. Addition to 'd,' second line, after the word 'member,' add 'of a Branch within the limits of the United Kingdom of Great Britain and Ireland.' Addition to 'd:' 'No person shall be eligible as a representative member of a Colonial or Indian Branch unless, at the time of his election, he shall be a recognised member of the Branch, and shall have resided within the area of the Branch for at least twelve months prior to his election. The election of Colonial and Indian members of the Council shall be annual, and shall be subject to the same by-laws as the election of other representative members.'"

Dr. B. O'CONNOR seconded the motion. It fully accorded with an alteration in the by-laws which he himself recommended two years ago.

The resolution was agreed to.

Honorary Members.—Sir B. WALTER FOSTER said he had now to move officially that certain gentlemen be elected honorary members of the British Medical Association. There was a list, not a very long one, of about thirty-five names of honorary members; and during past years his predecessors in office had jealously guarded the entrance into that very limited list. They wished to keep it a distinguished list among all lists that indicated professional eminence. There had been one feature in that meeting which, above all other features, made it memorable in the annals of the Association: it had been a meeting largely attended by representatives of that great country across the Atlantic, and by representatives from the colonies. It was, therefore, considered a fitting opportunity to confer the honorary membership of the Association on some of those gentlemen. Everyone, he was sure, would wish that they had felt able to extend this courtesy to a very much greater number than were proposed, but there were certain reasons which made it desirable always to make this honour a comparatively limited one. Acting, therefore, upon the instructions and traditions handed down by their predecessors, the Council had decided to submit four names of gentlemen whom he should propose to be made honorary members of the Association. He therefore moved, "That Dr. Nathan S. Davis, of Chicago; Major Billings, M.D., of Washington; Dr. J. A. Grant, of Ottawa; and Dr. W. H. Hingston, of Montreal, be, and are hereby elected, honorary members of the British Medical Association." Each of these gentlemen had a certain claim for this distinction. Dr. N. S. Davis was one of the early founders, and was practically at present the parent, of the American Medical Association. He was also appointed to preside over the great International

Congress in America next year. He had taken part in their proceedings, and they were very much indebted to him for the interest he had lent to some of their meetings. They all listened to the magic charm of Major Billings's eloquence the other day; they laughed at his dry humour; they entered into the statistical investigations which he laid before them; and everyone went away pleased, interested, and instructed by his admirable address. Dr. Grant had done a great deal for medical politics in the Dominion, and held a very high position amongst practitioners. He had been chairman of what corresponded to their General Medical Council in the Dominion, and had also held a position in the Legislative Chamber of that country. Then they had Dr. Hingston, whom all remembered for many years as an active pioneer in the surgical literature of Canada, who held the position of President of some of the Medical Corporations of that country, and who was well known as a distinguished surgeon in that great dependency. These were some of the claims that these gentlemen had upon their notice, and he had great pleasure in moving that they be elected honorary members.

The PRESIDENT said he had great pleasure in taking upon himself the seconding of this motion. If there had been one feature which had predominated the meeting, it had been the large number of Colonial and American brethren who had attended, and it had been a great source of gratification to him to welcome them to the old mother country. He hoped that they would return to their respective homes with warm feelings towards their English brethren.

The resolution was carried by acclamation.

Dr. N. S. DAVIS said that since the first day of his coming amongst them, he had been literally overwhelmed by their kindness and the courtesies that had been extended to him, but this had placed a climax upon them all. He accepted the compliment not so much for himself as for the great Association kindred with their own, with which he had been so long associated. He wished his English brethren to realise that it was no further from Liverpool to New York or Chicago, than it was from Chicago or New York to Liverpool, and he hoped to have the honour of receiving many of them on the other side of the Atlantic. He hoped as time rolled on the distance might grow less, and that the mingling of nations and fraternities would increase, especially in the medical profession, until the fraternity of the medical profession of all the nations on the earth should be full and complete.

Dr. HINGSTON said that he was taken so completely by surprise, that he had no words to express the sense of obligation under which he had been placed. He believed that, if possible, this mark of courtesy would attach Canada still more with the land from which it was separated only by the Atlantic, and he could assure them that in no colony were there to be found more devoted and loyal subjects to the British Crown.

Votes of Thanks.—The following votes of thanks were unanimously adopted:—

Moved by the PRESIDENT, seconded by Mr. WHEELHOUSE (Leeds): "That the cordial thanks of the Association be given to his worship the Mayor of Brighton (Mr. Alderman E. J. Reeves) for his great hospitality at the opening of the meeting, and for the grand reception given by him and the Mayoress at its close."

Moved by Professor GEIKIE (Toronto), seconded by Dr. W. STRANGE (Worcester): "That the warm thanks of the Association be given to the Mayor and Corporation of Brighton for their liberality in granting the free use of their admirable buildings, the Royal Pavilion, Dome, and Corn Exchange, for the purposes of the meetings."

Moved by Director-General Sir THOMAS CRAWFORD, seconded by Professor CUMING (Belfast): "That the hearty thanks of the Association be accorded to the President of the Association and the members of the South-Eastern Branch, for their splendid reception at the Royal Pavilion and Dome, on Wednesday, August 11th."

Moved by Dr. BERNARD O'CONNOR (London), seconded by Dr. VRAGASSY (Vienna): "That the best thanks of the Association be given to Sir Julian Goldsmid for his courteous invitation of its members to a garden-party at St. Ann's Well, on Wednesday, August 11th."

Moved by Dr. MAPOTHER (Dublin), seconded by Surgeon-General CORNISH (London): "That the warm thanks of the Association be presented to the Committees of the New Club and Brighton Sailing Club, for so kindly throwing open their respective clubs during the meeting."

Moved by Dr. DELSTANCHE (Brussels), second by Dr. TREND (Southampton): "That the best thanks of the Association be given to the Directors of the Aquarium and the East and West Piers for so kindly throwing open their establishments to the members of the Association."

Moved by Dr. DOUGLAS POWELL (London), seconded by Dr. JAMES DUNCAN (Glasgow): "That Mr. Booth be warmly thanked for his kindness in according the privilege to members of viewing his admirable collection of birds."

Moved by Professor GAIRDNER (Glasgow), seconded by Dr. GRIMSHAW (Dublin): "That the Honorary Local Secretaries, Mr. T. Jenner Verrall and Mr. Alfred Scott, be requested to accept the hearty thanks of the Association for their assiduous labours in organising this most successful meeting."

Moved by Sir DYCE DUCKWORTH (London), seconded by Dr. KELLY (Taunton): "That the members of the Association desire to record their high appreciation of the kindness of Mr. J. O. Halliwell Phillips, F.R.S., in inviting the members of the Association to inspect his collection of Shakespearean rarities."

Moved by Dr. BRODIE (Detroit, U.S.A.), seconded by Dr. WALTER DICKSON (London): "That the Association tender to the Treasurer, Mr. G. F. Hodgson, and to the members of the Executive Committee, Mr. Marcus Allen, Mr. Seymour Burrows, Mr. Cresswell Baber, Mr. Noble Edwards, Mr. Giffard, Mr. Hodson, Dr. Mackey, Dr. Ross, and Dr. Whittle, their warm appreciation of their successful efforts in the arrangements of the various departments committed to their charge."

Moved by Dr. W. T. EDWARDS (Cardiff), seconded by Dr. HOLMAN (Reigate): "That the cordial thanks of the Association be accorded to his Grace the Duke of Norfolk for his kind invitation to luncheon, and to inspect Arundel Castle on August 14th.—That the thanks of the Association be given to Sir Thomas and Lady Brassey for their invitation to its members to visit their home at Normanhurst, and to inspect their collection of curiosities."

Vote of Thanks to the President.—The President left the chair, which was taken by Sir WALTER FOSTER, President of the Council.

It was moved by Dr. CHADWICK (Tunbridge Wells), seconded by the PRESIDENT OF THE COUNCIL, and carried by acclamation: "That the warm thanks of the Association be given to Dr. Withers Moore for the able and courteous way in which he has presided over this, the fifty-fourth, Annual Meeting of the British Medical Association."

The PRESIDENT, in acknowledging the vote, thanked the members for their kindness, and took the opportunity of giving an explanation in reference to his opening address, which, he said, had been very generally misinterpreted by the press. He had, he said, the deepest respect for the ladies; and, just as he would not like to see a delicately nurtured lady spending ten hours a day in wheeling a barrow up a steep incline as a navvy, so he would spare her the labour of spending ten hours a day in making the mathematical calculations required for astronomy. Woman in her special vocation was far superior to man; why therefore should she try to rival man in his? She was secure in her present position; she would not be secure if she attempted to change it.

THE ANNUAL DINNER.

THE annual dinner was held on Friday, August 13th, in the Dome, and was attended by about four hundred members; Dr. WITHERS MOORE, President, in the chair.

After the customary loyal toasts,

The PRESIDENT proposed "The Bishop and Clergy of the diocese, and Ministers of all denominations." Time was, he said, when the ministry of the mind and body was the exclusive work of the clergy; but, as theology became more elaborated, and medicine and surgery were raised into sciences, it became necessary to separate the two callings. Nevertheless, there remained a borderland, which was common to the practice of both; and thus it was that the members of the two professions had come to look upon each other as fellow-workers, having a common object, the good and well-being of mankind. They were favoured with the presence of the Bishop of the diocese, who, though the oldest prelate on the bench, was still vigorous in mind and body, and as conscientious as he was vigorous. He desired to thank his lordship for the kindly feeling he entertained towards the profession, as evinced by his presence on that and on many other public occasions. The Nonconformists were well represented by Dr. Hamilton, who had always shown a kindly and keen appreciation of the catholicity of their profession.

The BISHOP OF CHICHESTER, in responding, said he thought it a high honour to be allowed to return thanks for the clergy over whom he unworthily presided. The President had very well said that there was a most intimate connection between the clergy and the medical profession. Other professions stood apart, not mingling with one another. He did not know if the clergy, although they had great respect for the lawyers, entertained feelings of any particular attachment to them—[*laughter*]; but it was not so with the medical profession. They met frequently, met at the most sorrowing moments,

and went with their lives in their hands to do their duty to those who required their assistance. [*Applause.*] He had, on the part of the clergy, to acknowledge thankfully the immense unspeakable self-devotion of the medical profession. Wherever they were needed, they went, like the Duke of Wellington's army, willing to go anywhere and do anything. The poorest man rejoiced in their services, and benefited by them as much as the richest in the land. [*Applause.*] That was the true test of real Christianity. They were all on the same great level of mortality, and none knew it better than those who had an intimate acquaintance with the marvellous frame of the human body. None could forget it who, like themselves, had the care of the health of those in this vast country committed to them. He looked with a sort of awe upon that assembly. He considered that the mortal interests of this vast community of England were entrusted to their care; and he considered that that interest could not be in better, safer, or more conscientious hands. He felt proud of their President—[*cheers, and cries of* "So are we"]—and felt proud that Sussex could produce a medical man so capable of filling the chair that he now occupied. [*Cheers.*] He never doubted that the subject of his address would be wisely chosen and most worthily elaborated, but he had shown courage as well as wisdom and knowledge. He had, in his address, hit upon a point which lay very deep at the root of their national interests. It was essential, at the present moment, that their women should be brought up capable of fulfilling that special sphere which God in His Providence had allotted to what was commonly termed the weaker sex, but which, in many cases, was far better and nobler than their own sex. [*Cheers.*] Women had their vocations; and he considered that it would be extremely unwise to thwart the will of Providence, and lift them, to their own unspeakable damage, from the sphere in which God had placed them. He had seen the damage done to young women by forcing, in their schools, not only the poorer classes, but the higher classes, all struggling in the dreadful race which everyone had to run to obtain the necessaries of life. There was a dreadful stimulus applied to these young people, and it was the duty of the medical profession to stand forward and protect them, and see that they were not forced by any undue pressure. [*Cheers.*] He was sure the appeal might be made to their chivalrous feelings; but it was not only a question of chivalry, but of physiology, and that was a question that medical men were best able to determine. He hoped that the whole profession would, with one voice, declare that young women should not be pressed beyond their powers, so as to undermine their health and destroy their future usefulness.

The Rev. Dr. HAMILTON, replying on behalf of the Nonconformists, said he felt it to be one of his greatest privileges to be associated with the medical profession. He knew that medical men (whom he regarded with the highest admiration) were often glad to meet ministers of the gospel, and, in the progress of humanity, he hoped they would go hand-in-hand together.

Mr. WHEELHOUSE, in proposing "The Army, Navy, and Reserve Forces," said it needed but little on his part, or on the part of anyone else, to remind the company of the immense services rendered to the country by the Army, the Navy, and the Reserve Forces. While they knew from history the great work which those forces had accomplished in the past, they knew also perfectly well, from what had been passing under their own eyes, what they would do in the future whenever they should be called upon to act. In passing, recently, through the Royal Academy, he had seen the picture of General Stephenson, mortally wounded, carried with loving and tender care on the shoulders of his men to the place of his death that, to the end, he might guide their operations. That was what their generals had always been, and would always be, ready to do; and while the general would do that, the men would always be proud to carry him on their shoulders. Where the officers led the men would follow, as they had done in the deserts of Egypt and in the Soudan, and would endure, with uncomplaining patience, thirst or hunger, or privation of any kind. Then, if the veterans of the army were thus doing their duty, how was it with the younger men? Gentlemen, think for one moment of those two brave boys who, after the disaster at Isandlana, rather than permit the colours of their country to fall into the hands of the enemy, chose to wrap them round their own bodies, and, as in their shrouds, lie down in them to die. It was of such material that our generals, our junior officers, and our armies were made; and, wherever England bade them go, our armies would go, and would go to victory. [*Applause.*] Then as to the Navy. He would ask them to think of that little steamboat on the Nile, stranded, and disabled by a cannon-shot through her boiler, everyone in her condemned, apparently, to death at the hands of an enemy who thought they had an easy prey; and then let them remember how gallantly Lord Charles Beresford rescued her; and let them not forget the engineer who, caring nothing for balls and bullets, patched the hole in her boiler, and set her going again. As to the Reserve Forces, they were truly volunteers; they were no conscripts; they were not in the ranks on compulsion, or in response to any law; they were truly soldiers at heart, and they simply said, "Do you need us? if so, we are at your disposal, our lives are at your service;" and, he had no doubt, whenever they were called upon to defend the shores of Britain, they would show that they were made of the same good stuff as were the regular forces. Then, he saw around him a brilliant gathering of ladies; and, as a tribute of gratitude to them, he asked the members also to pledge that noble band of women who, wheresoever our armies or our navies might be called upon to go, were ready to go with them; who, when our men were stricken down by wounds or sickness, were ever ready to receive, and tenderly to nurse them, and of whom the old couplet

> "When pain and anguish wring the brow,
> A ministering angel thou,"

was written in indelible characters on many a brave man's heart. He asked the company to couple with men who fought their country's battles the names and memories of the noble, patient women, who followed them and tended them in their sickness, and who were as much a part of the army as the men themselves. [*Cheers*]. He coupled with the toast the names of Director-General Sir Thomas Crawford and Admiral Fielding.

Director-General Sir THOMAS CRAWFORD, in acknowledging the toast, said he did not think that the proposer had said a word too much on behalf of the gallant men of the army, and the equally gallant women who accompanied them. The latter were no Amazons, but genuine sisters, and their services were highly appreciated by those whom they faithfully served. The troops now in Egypt, not having the stimulus of active service, had been suffering greatly from exposure; but he was happy to say that that suffering had not only been materially decreased, but had almost ceased. It was no doubt a great misfortune to have young soldiers, of whom the army was mainly composed, so much exposed; but the very youth of the soldiers was a great advantage to the army, which was by no means to be depreciated. If there were not greater steadiness, there was certainly greater sobriety than heretofore, and the men could be entrusted with great labours and privation without fearing that they would fall victims to drunkenness. He was glad to say that the causes of mortality which were directly attributable to that vice were steadily disappearing from the army. Of the volunteers, the country ought to be most proud. That element was by no means a small one in the defences of the country. It consisted of 250,000 men as well trained in the use of arms as perhaps any troops in Europe, and behind that reserve of volunteers were double the number of supernumeraries prepared for service if called upon. The medical services in the army were satisfactorily provided for; he could not say that that was the case with the volunteers, but they were making progress in that direction. During the last year or two, an addition had been made to the corps of medical officers, and ambulance corps had been established, which would be of very great service should the volunteers be called out. He hoped that such bodies of men would be scattered over the country, so that, should necessity arise, the volunteers might have as good assistance of that kind as the army itself was provided with. [*Cheers.*]

Admiral FIELDING, M.P., acknowledging the toast on behalf of the Navy, said that, being the only county member present, he could say with a light heart, that, in company with Sir Walter Foster, he had endeavoured to do his duty, as far as the medical profession was concerned, in the last Parliament. When the Medical Acts Amendment Bill was going through, he placed himself between Sir W. Foster and Sir Lyon Playfair, and thought that, if he drew a middle line between their opinions, he should not go far wrong. [*Laughter.*] As to the Navy, there was a time when medical men did not think very highly of it in regard to the treatment which the profession received. He quite sympathised with them, and agreed that they were right, and the naval authorities wrong. In his younger days, assistant-surgeons were plentiful, but in those times the remedies were few in number; as the old Scotchman said, "There are but twa remedies for all diseases—calamy and lodomy." [*Laughter.*] They had got beyond that in the navy, and had among them as clever medical men as were to be found on shore. He had understood that there were more candidates for the army than for the navy, but in reality, the navy was a far better service for medical men. It was yachting on a large scale, and at the expense of the country. [*Laughter.*] They were well treated and well paid, and had retirement in the heyday of life, when they could give their services to the community on shore, having had the

advantages of naval experience. There was now no grievance to be complained of, and he hoped that the heads of the profession would not fail to indicate the naval service as the first in the world, so that they might get the best talent into it. They were well satisfied with the medical officers they had; they were laborious and self-denying, and, as a rule, good friends and messmates. He had lately been reading in the train the address of Dr. Billings as to the state of the medical service in the United States, and had mentally resolved, if he ever travelled thither, he would take a private medical chest with him. It appeared that there were no fewer than eighty gateways, with ever so many turnstiles, and a lot of unenclosed commons, to get into the service; and if that were so, he thought that every traveller ought to take a private chest with him, and steer clear of the doctors—[*laughter*]—except in Alabama and Illinois, where they were in a state of happiness.

Dr. CHADWICK proposed the toast, "The Mayor and Corporation of Brighton." He congratulated the Association on the success of the Brighton gathering, and that success, he said, was largely due to the exertions of the Mayor and Corporation. He also congratulated the Municipal authorities on the excellent sanitary arrangements of the town.

The MAYOR OF BRIGHTON, in acknowledging the toast, said he was deeply sensible of the honour conferred upon the town by the visit of the British Medical Association. It was thirty-five years since its last visit to Brighton was paid, but he hoped that so long a period would not elapse before the visit was repeated.

Mr. Alderman DAVID SMITH, M.P., said that Brighton had the honour of receiving many large bodies of importance, but it had never received a body of gentlemen with greater pleasure than it had the British Medical Association. [*Applause.*] The toast which he had the honour to propose was "Success to the Association," and he was quite sure, as it was to a great extent drinking to their noble selves, that they would respond to the toast with acclamation. [*Laughter.*] Their Society had now been in existence for fifty-four years; and it had not only existed for that length of time, but it had gone on and prospered, until it had become possessed of large sums of money, which it spent for the benefit of the science they all so nobly represented. They used their money well, and all of them did their duty in assisting and helping those who so sorely at times needed that help; and he knew no body of men who deserved more praise for the charity they bestowed on all classes and conditions of men. [*Applause.*] When they looked at the hospitals, not only in Brighton, but all through the country, and knew that the medical men gave their knowledge gratis to these institutions, he felt that such a body of men were an example to the world. [*Applause.*] Of all things in this country, the public hospitals were looked on as one great thing which belonged to England. Go to whatever part of the world they might, they would not find these institutions free and open, as they were in England; but they would find Government institutions, which were quite different things. They had done great honour to Brighton in electing one of their men, who had given his time and talent to the noble Sussex County Hospital, to be their President in this jubilee year. He hoped they would carry away from Brighton many pleasant memories, and would be induced to pay another visit, to see what further progress they had made, just as they now saw what progress had been made since their visit in 1851. All would recognise the advance the people of Brighton had made in sanitary matters; and, although they had considerably extended their boundaries, it would be seen that they had a creditable health-return. [*Hear, hear.*] He believed they had almost, if not quite, the smallest death-rate in England. Though they had a movable population of invalids and of persons who came to Brighton as a health-resort, still the Corporation so attended to sanitary matters that they managed to keep pace with, and even beat, the rest of the world. He had to couple with the toast the name of a gentleman who had received well-earned honours—namely, Sir Walter Foster. [*Loud Applause.*]

Sir WALTER FOSTER acknowledged the toast. His first duty, he said, was to thank the colleagues among whom he had worked so long, and the friends whom he saw around him, for the kind and generous way in which they had received the personal aspect of the toast; but, behind that, there was the greater and better aspect, that of the British Medical Association. They were met for the second time in the great capital of the sea, the Queen of English, and possibly of European, watering places, and they would carry away three very pleasant memories in connection with the visit. First, every member of the Association would feel that the Association had been received with a hospitality which had been splendid in its character, graceful in its distribution, and generous, and in every way worthy of the town. Secondly, the meeting had been rendered memorable by the highest honour of the Association being conferred on a veteran in their ranks, for services rendered to the rank and file of the medical profession. And, thirdly, the meeting had been, beyond all other meetings in recent years, of a cosmopolitan character. They had among them many members of the medical profession from the great continent of America and from the Colonies, of which every Englishman was proud, and they had had scientific lustre cast upon their proceedings by the presence of some of the greatest scientists from those centres of scientific life, Paris and Berlin. From all parts of the civilised world men had come to the meeting, and they held them as brethren working in a common cause.

> "Oh! wheresoever those may be
> Betwixt the slumbers of the poles,
> To-day they count as kindred souls."

But there was another aspect in which the meeting might be regarded. The Association was a great popular organisation of a great profession; it was an organisation which took into its ranks with perfect equality every member of the medical profession in Great Britain and Ireland and its dependencies, in such a way as to make the profession felt not only in the councils of the nation, but in that social progress in which every human being was interested. He hoped that, as time rolled on, the Association would be a still greater and higher power. They often complained that doctors had not the same advantages and social distinctions which belonged to the kindred professions of the Church and the law; but there was a cause lying behind all the neglect, and the cause was that honours and worldly distinctions went to those professions that were first organised. The Church was the first organised profession that the civilised world ever saw; then came the profession of the law, organised afterwards, and attaining high position and distinction. Medical men, meanwhile, had been doing humbler work, and looking too continuously after the petty, but yet high and noble, details of their daily life to think of organisation; and it was only in these latter days, when intercommunication and civilisation had given them the opportunity, that they had met together, and organised themselves into a great Association. Through that Association they could reach forward to high things; he hoped, however, that it would never be made an engine to reach forward for selfish ends, but that it would be made the means of renewed and successful efforts for the alleviation of suffering and the progress of the human race. [*Hear, hear.*] He thanked the members for the many favours extended to him, and assured them that, as long as he had health and strength to serve the Association in any capacity, however humble, he should regard it as the greatest distinction of his life to be permitted to be the instrument of doing its work. [*Cheers.*]

Dr. NATHAN S. DAVIS, of Chicago, in proposing the health of the President, said he rose to perform one of the most pleasing duties of his life. It had been his privilege for many years, in his own country, once a year to meet an assembly analogous to the one before him; they had held their meetings in almost every prominent city in the various sections of their country, and he had always observed that wherever he had been one-half of the benefit and pleasure of the gatherings depended on the order, the method, and the dignity with which the business and the social meetings were conducted. This order, of course, depended largely on the man who occupied the chair and presided over their deliberations; and it was a pleasure to say that he had attended few gatherings where as great a degree of order, method, and dignity had been maintained as he had witnessed on the present occasion. [*Applause.*] In reference to the President, he must say that the ability, the dignity, and the grace with which he had presided over the various meetings had only been equalled by his personal kindliness and boundless hospitality. [*Applause.*] And he knew that he not only spoke his own sentiments, but the sentiments of his colleagues who had crossed the sea for the same purpose as himself, when he said that one of the most pleasant recollections they would take back would be with reference to the liberality and urbanity with which the President had received them. The British Medical Association existed for the benefit of the profession and of the human race, for every step it took was a step for the alleviation of human suffering and the prolongation of human life, ushering in the day when sickness and pain and sorrow should be banished for another and brighter state of existence. He hoped that the gentleman who now presided over them might long live to enjoy prosperity and happiness, and long might the Association enjoy the services of as dignified and able presiding officers as it now possessed. [*Renewed applause.*]

The PRESIDENT, in replying, said he only wished he could take to himself a tithe of the pleasant things that had been said about himself. He was deeply grateful for the kind way in which the toast had been received. If the members of the Association were satisfied with

the way in which he had discharged his duties during the week, he was well repaid for any sleepless nights he might have passed in anticipation of the meeting.

Mr. ERNEST HART said they had to welcome many guests from far distant places. They had contributed, by their labours in the Sections, to the value and the dignity of the proceedings of the Association, and they graced the banquet on that occasion. He desired to thank them for their aid in the scientific work of the Association, for their personal sympathy, and still more for their presence that evening, which had added an ornament and a pleasure to the proceedings. There were among the guests eminent representatives from France. In the Institute of France—the greatest scientific institution of the country, and perhaps the most eminent scientific institution in Europe—there were in that highest hierachy of science but three physicians, and two of them were present that night—[*cheers*]—Brown-Séquard, whose name was dear to science and immortal in her records, and whose personality was known and loved in two continents, dear equally to America and to England, in both of which countries he had resided long, and to both of whose scientific records he had added much of imperishable value; and Charcot, his colleague and compeer of science, whose name, whose person, whose works, and whose individuality were familiar to them all in England, and whose presence was always welcomed at their meetings with an enthusiasm which would be renewed that night. [*Cheers.*] Germany had also sent, amongst others, Oscar Liebreich, the discoverer of chloral, a man of profound science and initiative genius, a benefactor to humanity, one whose gentle courtesy and sweet humanity left, wherever he went, personal recollections which enhanced their admiration for his attainments. From America they had a delegation which had been already welcomed to the platform, and which had brought to them a message of hospitable invitation to the great Continent of English-speaking people, which they hoped to visit in numbers that he was sure would not terrify or overwhelm that cordiality with which Americans had known how to enhance the glory of the traditional hospitality of their country. [*Cheers.*] Even distant Japan, long sealed in the feudal secresy of ages, was represented. Japan had suddenly cast off the bonds of Asiatic civilisation, and had rapidly attained to the last results of English and German science; and there was present Dr. Miyake, Dean of the Medical University of Tokio, whom they had had many opportunities of knowing as one of the most able, learned, and scientific physicians, equally versed in the science of this country and of Germany, and equally capable of expressing himself in his own language and in the languages of modern Europe. Finally, they had to welcome those whom he spoke of last, because they were nearest home and dearest to their hearts, the medical representatives of Greater Britain from the Colonies and the Dominion of Canada. Amongst them were Dr. Grant of Ottawa, more than once President of the College of Physicians of his country, and during a series of years the medical officer of the representatives of the Crown in the Dominion; and Professor Hingston, of Montreal, who, since his arrival in this country had received telegraphic communication that he had been elected President of the College of Physicians and Surgeons in Canada; and there was also Dr. Brodie, the genial and able President of the American Medical Association. He desired to couple the names of those gentlemen with the toast he had proposed. [*Cheers.*]

M. CHARCOT, in responding, said he esteemed it a high honour to be called upon to speak to the toast of the guests whom they had invited to be present upon that occasion. Might he be allowed, in that very place, to give expression to a feeling which he was sure was shared by the eminent colleagues whom he had the honour to represent, for it was a feeling of sincere and profound gratitude for the most cordial and courteous welcome which they had received from the British Medical Association? Fortunately for himself, he had frequently had an opportunity for the last twenty years of enjoying that generous hospitality which was a characteristic of the medical profession of the British Islands. There, as elsewhere, that hospitality met them with open arms at the gates of the kind and beautiful city of Brighton, in which it appeared to be inexhaustible. All the people whom they met, and all the things which they saw, appeared to have formed a subtle conspiracy to delight their minds and to captivate their hearts; and he must confess that they had had a signal triumph. He could not have the honour to take a part in these congresses of the British Medical Association without meeting everywhere sympathetic eyes, kind receptions, friendly hand-shakings; but the fact was that it seemed to him that, although he might be a guest, he could not be altogether a stranger in that great and glorious country, England. [*Applause.*]

Professor OSCAR LIEBREICH, who also responded to the toast, said that, in the name of his compatriots, he desired to express his hearty thanks for the friendly reception they had met with. They were but few, because the preparation for one of the greatest associations of scientific men in Berlin, under the direction of M. Virchow and M. Hofmann, had claimed most of their time. But they knew how attentively Germany followed the progress of science in this country. The progress of medical science was also the progress of humanity. Humanitarian development was the basis of all medical science. For that reason all nations, including themselves, would continue to regard the work of the British Medical Association with respect and esteem. To give one example, he might mention chloroform and the antiseptic treatment, always remembered as the fruit of scientific labour in England. For the rapid extension of all knowledge, they were indebted to the invention of the art of printing; but the art of making great scientific associations to unite the success of printing and the intercourse of nations was, after that, a very important discovery. The British Medical Association had proved it in the most noble sense, for it united the most successful of scientific associations with the publication of a most excellent medical journal. [*Applause.*]

Dr. BRODIE and Dr. HINGSTON also eloquently responded.

Mr. MACNAMARA proposed "The Readers of Addresses, and Presidents of Sections." He alluded especially to the presence of Mr. Erichsen, who, he said, had attained the highest honours which an English surgeon could receive, and whose book was a household work with every medical practitioner. He also referred to the presence of the reader of the Address in Medicine who had come from America, and said that no address had been listened to with greater attention than that of Dr. Billings.

Dr. BILLINGS, in responding, said that the invitation he had received to read an address had no reference to his own personality, but had originated in a desire to extend courtesy, and the right hand of fellowship, to brethren across the seas. The feeling, he could assure them, was highly appreciated by all physicians in the United States, who cordially approved of the choice that had first been made of the late Dr. Austin Flint, to read the Address in Medicine.

After a brief acknowledgment from Dr. BROADBENT,

Mr. ERICHSEN also responded. He said he had been always in cordial sympathy with the Association, though he had not always been able to enter into its working as he could have desired. It had done great good to the profession, not only by scientific work, but by the social gatherings which brought men together from distant parts of the country, and of the world. Its political work, also, was of the highest value in upholding the dignity and position of the profession, in its social and general relations to the public.

Sir W. STOKES, in proposing "The Health of the Honorary Secretaries, the Reception Committee, and the Treasurer," alluded to the assiduous labours of those gentlemen, and the excellent results which had followed them.

The toast was briefly acknowledged by Mr. G. F. HODGSON, Mr. T. J. VERRALL, Mr. A. SCOTT, Mr. BURROWS, and Mr. EDWARDS.

The company then separated.

ENTERTAINMENTS.

RECEPTION AND LUNCHEON AT THE PAVILION.—On Tuesday, August 10th, His Worship the Mayor of Brighton (Alderman E. J. Reeves), wearing his chain of office, attended at the North Drawing-Room of the Royal Pavilion to receive the Council of the Association. The whole of the lower suite of apartments were thrown open for the reception of the visitors, who began to arrive in rapid succession about half-past twelve o'clock. The half-hour prior to luncheon was occupied in introductions between the members of the Brighton corporation and those of the British Medical Association. Shortly after one o'clock, the visitors adjourned to the banqueting-room to partake of the Mayor's hospitality. At the luncheon there were present: His Worship the Mayor, in the chair, supported on the right by Dr. Edwards, President of the Association, and the Right Hon. W. T. Marriott, Q.C., M.P., and on the left by Dr. Withers Moore, President-elect, and Alderman David Smith, M.P. Members of the Brighton corporation, and other leading townspeople were also present, together with a large number of members of the Council of the Association, and other professional visitors from all parts of Great Britain and the continent. After luncheon, grace having been said, the Mayor proposed "The Queen," and "The Prince and Princess of Wales and the rest of the Royal Family." These toasts were loyally received. The MAYOR then proposed health and continued prosperity to "The British Medical Association." He alluded in appropriate terms to the attention which had been bestowed by various gentlemen upon Brighton to make it the most beautiful and the most splendid town that anyone could desire. He passed on to speak in highly favour-

able terms of the sewage arrangements, the excellence of which, he pointed out, the members of the Association would have the opportunity to test for themselves, and he could not but hope for a very favourable verdict. He said, without hesitation, that, as regarded the water-supply, the town was unequalled. [*Applause.*] The most earnest wish of himself and the Corporation was to give the Association a most warm and cordial reception; and the inhabitants of Brighton were very glad to know that Dr. Withers Moore, an esteemed townsman, was the President-elect. [*Applause.*] The Mayor concluded, amidst considerable applause, by bidding the Association, on behalf of the town, a very hearty welcome on the occasion of this their second visit.—Dr. W. T. EDWARDS (President of the Association), replied, and acknowledged, in grateful terms, the large-hearted hospitality that had been extended to the Association by the Mayor, Corporation, and inhabitants of Brighton.—Sir B. WALTER FOSTER (President of the Council) next responded, and touched upon the extraordinary growth of both the town of Brighton and the Association since last they met, nearly a generation ago, for the purpose of holding their annual meeting in the precincts of this town. In bringing his remarks to a conclusion, he proposed the health of "The Mayor," who had well and truly earned the esteem and respect of the citizens of Brighton, and he expressed a hope that others would emulate his example and follow in his footsteps. [*Applause.*]—Dr. WITHERS MOORE (President-elect) also replied to the toast.—His WORSHIP the MAYOR replied to the toast proposed by Sir Walter Foster. The thanks, he said, were not due to him for the hospitality, but to the town of Brighton. It was his honour to be permitted to be their Mayor. He was exceedingly proud to hold the post that had been conferred upon him, and he was very happy to have done what he had accomplished that day. [*Applause.*]

SOIRÉE BY THE PRESIDENT OF THE ASSOCIATION AND THE MEMBERS OF THE SOUTH-EASTERN BRANCH.—On the evening of Wednesday, the President (Dr. Withers Moore) and the members of the South-Eastern Branch of the Association gave a *soirée* at the Royal Pavilion, on which occasion it is estimated that at least three thousand persons were present, including a large number of ladies. The whole of the grounds were brought into use for the purposes of the entertainment, and the eastern and western lawns were brilliantly illuminated by Chinese lanterns and coloured lights. From tree to tree, and in some parts from branch to branch, the prettily coloured lanterns were swung, while "glow-worm" lights shed their lesser illumination from every border of the flower-beds, and from every bush. The band of the 1st Sussex Artillery played on the eastern lawn, and Mr. Devin's string band occupied a platform gorgeous in coloured lights on the western lawn. The full advantage of an *al fresco* entertainment could not be enjoyed, as recent rains had rendered the lawns too soft for agreeable promenading. In the Music Room, the Brighton Quartette, in the intervals of the instrumental performances, contributed vocal music. Later in the evening, short concerts were given in the same room, and in the Banqueting Room; while in the Masonic Room, Mr. C. T. West gave some of his amusing sketches. Organ-recitals and comedy and farce were given in the Dome, which building was decorated with remarkable effectiveness, the stage for theatricals being surrounded with flowers and curtains, and festoons of flags rendering the body of the building wonderfully attractive. The approach from the King's Apartments was by a covered way, illuminated by scores of coloured lights and Chinese lanterns. The inner circle, enclosed, was crowded. The attractions were performances on the organ by Mr. Alfred King, Corporation organist, and the production of the musical comedietta, *The Queen of Hearts*. The farce, *Your Life is in Danger*, was also played. The Entrance Hall and Vestibule were suitably decorated, and the corridor and its approaches presented a most handsome and luxurious appearance, both as regards furnishing and floral decorations. The lower rooms had plants placed in them in convenient positions. The North and South Drawing Rooms were used for refreshments, and the dancing took place in the saloon, from eleven o'clock until one. The picture gallery was thrown open for the inspection of the visitors, and this was sought by many, not only as a picture gallery, but as a retiring-room and promenade. Although the Dome was well crowded during the whole evening, the rooms in the Pavilion were very largely patronised, each being filled to such an extent that movement from place to place was at times difficult. The idea of the evening seemed to be a general tour of the entertainments which were provided, so that there was a constant stream of traffic throughout the various buildings. The whole of the arrangements for this vast gathering were most admirably carried out by the stewards, Mr. E. Noble Edwards, Mr. A. Scott, Mr. H. A. Hodson, Mr. Seymour Burrows, Dr. E. J. Stephens, Dr. Marcus Allen, Mr. G. F. Hodgson, Dr. J. Harris Ross, Mr. E. Treeves, Mr. T. J. Verrall, and Mr. E. Cresswell Baber.

RECEPTION BY THE MAYOR.—On Friday, August 13th, at 9 P.M., the Mayor and Mayoress of Brighton held a reception at the Royal Pavilion. The cards sent out numbered 1,300, but as a large proportion of them bore three or four names, the invitations numbered close upon three thousand. As on Wednesday, when the President of the Association and the South-Eastern Branch gave a *soirée*, the whole of the Pavilion rooms, including the King's Apartments and the Dome, Picture Gallery, and Library were brought into requisition. As the weather was not at all promising, the western lawn was not illuminated, but the gaslights around the eastern lawn were lit, so that, if it should be fine overhead, the guests might promenade in the open air. The colonnade on the east side of the Pavilion was covered in with blue and white and red and white striped drapery, and by this means easy communication was secured between the various rooms. The floor was carpeted, and chairs arranged at intervals. Bands of ivy were carried along the drapery, about breast high, and long sprays depended in graceful fashion from the strings. The pillars were similarly treated, with the addition of fine spikes of hollyhocks. The entrance-hall, vestibule, and corridor were elegantly upholstered, as were also the Chinese rooms and the King's Apartments. A covered way, floored with crimson cloth, was constructed between the King's Apartments and the Dome, and this was lighted with Japanese lanterns. The Music Room, Banqueting Room, Saloon, and Picture Gallery were set apart for dancing, all except the Music Room being engaged for waltzing. The band of the 5th (Royal Irish) Lancers occupied the platform in the Music Room, and Mr. W. Devin supplied the bands for the other rooms. The north and south Drawing-rooms were utilised as retiring rooms, and refreshments were served in the King's Apartments. A splendid show of photographs of groups of members and visitors, taken by Messrs. W. and A. H. Fry, was on view in the vestibule, one picture, with the gold medalist (Dr. Waters) and the President of the Association and the President of Council, being remarkably fine. The Library was open as a retiring room, and the Dome was thrown open as a promenade and lounge, refreshments being dispensed from long tables placed beneath the gallery around the northern portion. Electric communication was established between the Music and Banqueting Rooms and the Saloon, so that all the bands on that side of the grounds were able to commence and cease almost at the same moment. The Mayor and Mayoress were in attendance by nine o'clock to receive the guests, and dancing commenced shortly afterwards, and was continued into the early morning.

GARDEN PARTY.—On Wednesday afternoon, August 11th, Sir Julian Goldsmid, M.P., and Lady Goldsmid, invited the members of the Association to St. Ann's Well and Wild Garden, a picturesque spot at Furze Hill, where there is a chalybeate spring. The grounds are five acres in extent, and on Wednesday a material addition was made thereto by Mr. A. S. Creak, M.A., who pulled down a fence dividing the Wild Garden from the grounds of Wick House School. Sir Julian and Lady Goldsmid were unable to be present, and the visitors were received on their behalf by Mr. Thomas Dunhill, Sir Julian Goldsmid's agent. The guests began to arrive at about 4 o'clock, and between that time and 6 o'clock, when the entertainment ceased, a large number of ladies and gentlemen were present. The band of the 5th (Royal Irish) Lancers was in attendance, and, under the direction of Mr. J. W. Wood, played some capital music. The band of the Volunteer Artillery, under the direction of Mr. Devin, was also present, playing in another part of the gardens, and contributed to the enjoyment of the company. During the afternoon, light refreshments were served to the visitors. Altogether the gathering was one of a very pleasant description, the picturesque grounds, freshened by recent rains, and the excellent music provided, combining to give the social gathering agreeable characteristics.

THE recent demonstration for the Halifax Infirmary has, unfortunately, resulted in a loss of £32 11s. 1d.

DONATIONS AND BEQUESTS.—Mr. Alfred Stokes has given £1,000 to the Birmingham Skin and Lock Hospital. Miss Stokes has bequeathed £1,000 to the Endowment Fund of the Wolverhampton and Staffordshire Hospital. The Sheffield General Infirmary has received £250 under the will of George Bassett. The Court of Common Council of the City of London have given £105 to the Building Fund of the Cheyne Hospital for Sick and Incurable Children. Mr. R. Hayne has given £100 to the Dorset County Hospital, Dorchester. The Yeatman Hospital, Sherburn, has received £100 under the will of Mr. Samuel Ellis. The British Home for Incurables has received £100 under the will of Mr. Calvert Toulmin, and £50 under that of Mrs. Thomas.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 21st, 1886.

THE MEETING AT BRIGHTON.

THE fifty-fourth annual meeting of the Association at Brighton was throughout successful, and ended as it began, with general congratulations and a universal feeling of satisfaction. The number of members in attendance was over 1,200; and this is the more noticeable, seeing that the south-eastern counties are mainly agricultural, not vastly populated, and do not supply, therefore, that great local medical population which ensures a numerously attended meeting when the Association holds its congresses in great cities or crowded centres of population. There were many agreeable incidents which marked the course of the meeting, both general and sectional, and all of the proceedings were well attended. The presence of the American delegates in considerable number lent special interest to the meeting, and their reception will have indicated to our brethren across the Atlantic how warm are the feelings of respect and affection with which they are regarded in the mother country. Happily, also, the Dominion of Canada was well represented by some of its most distinguished medical men.

The Association marked its desire to do honour to the American visitors and to our Canadian colleagues and fellow-subjects by opening, on this occasion, the rigidly guarded list of its honorary members. No association, perhaps, of anything like the same importance guards its honorary list of members with more jealous care, and the rule is one equally remarkable for its distinction as for its brevity. On this occasion, however, and to do especial honour to our American and Canadian guests, two eminent men, Dr. Nathan S. Davis, the President-elect of the International Medical Congress, and one of the principal founders of the American Medical Association, and Dr. Billings, of Washington, the reader of the address on medicine, were elected honorary members as representatives of the profession in the United States; and Dr. Grant, of Ottawa, who has filled the highest offices in Canada in the Colleges of Surgeons and Physicians, and in State medical bodies, and has been physician in charge of successive Governors-General in Canada, and Mr. Hingston, of Montreal, a surgeon of high repute in this country, as in the dominion of Canada, and who is also President for the year of the College of Surgeons and Physicians of Lower Canada, were elected honorary members as representatives of the Dominion.

The announcement to the members that premises had been secured of suitable size, and of a character adequate to carry on with dignity the general business of the Association at its head-quarters in London, was received with general satisfaction. The building which has been obtained as the new home of the Association is one of considerable prominence and some architectural pretensions, in a leading thoroughfare, and is to provide a much-needed accommodation for the Council and its various divisional Committees; and it was intimated that it will probably be possible, also, to provide a reading-room for the use of members, that will make a sort of head-quarters to which they can resort on their visit to London.

The presentation of the Gold Medal to Dr. Waters was felt by all to be a slight, but graceful and just, tribute to his long-continued services in a most arduous capacity to the Association, and the continual sacrifices which he had made on its behalf during a long series of years. The essays which have been successful for the Middlemore Prize, and the excellent work of Dr. Cory, were rewarded by honours which have fallen upon worthy and distinguished recipients. An act of tardy justice was done in awarding Dr. Ward Cousins the prize which he had earned for his useful additions to the resources of aural surgery. The reports of the Committees and the votes of thanks were hurried over, as usual, in a somewhat undignified way and unsatisfactory manner, inadequate time and opportunity being afforded for discussion. In this respect a defect was noticeable to which we already alluded last week; and it is very desirable that means shall be found, in future years, to remedy this as far as possible.

On many previous occasions there has been a most cordial desire on the part both of the medical practitioners of the towns in which the annual meetings have been held, and the leading inhabitants, to give a warm and hospitable reception to the Association; but never has this feeling found a more practical expression than at Brighton. The town possesses, in its splendid Pavilion and Dome, and its ample means of accommodating visitors, special facilities for the holding of large meetings. The liberality of the Mayor and Corporation placed the Pavilion, Dome, and Corn Exchange at the disposal of the Association during the week; and it would be difficult—if not, indeed, impossible—to find more convenient premises for the meetings of the Association and its various Sections.

But the good will of the municipal authorities was not limited to a gracious permission to use the public buildings. They gave their visitors not a mere civil reception, but a cordial welcome. Even before the formal commencement of the proceedings, the Mayor of Brighton, Mr. Alderman Reeves, indicated the kindly feeling of himself and colleagues by entertaining at luncheon, along with many of his fellow-townsmen, a large number of members of the Council of the Association, and other visitors, and by expressing his good wishes for the prosperity of the Association, and the success of the meeting. The splendid reception given on the last evening of the meeting by the Mayor and Mayoress was another gratifying instance of the kindly feeling of the people of Brighton towards the Association. His Worship the Mayor may be assured that the vote of thanks given to him at the close of the meeting is no mere form of words, but is a sincere expression of the gratitude of the Association to him for the active and generous interest which he manifested in its welfare, and in the success of the meeting.

The cordial and liberal co-operation of the municipal authorities, and, indeed, of the inhabitants of Brighton generally, formed an admirable complement to the proceedings of the President of the Association and the members of the South-Eastern Branch, which in their turn left nothing to be desired. It cannot be doubted that a

good share of the success of the meeting was due to the happy choice of Dr. Withers Moore as President. His high professional reputation, the esteem in which he is held not only by his medical brethren but by the public, his generous hospitality, and his excellent business capacities, which were manifested throughout the meeting, indicate him as one in honouring whom the Association has done honour to itself. And, amid all the anxiety which must be felt by one who has before him the prospect of having to preside over a great meeting such as that of the Association, the cordial support which he received from his professional brethren must have been most gratifying. Under the able management of Mr. G. F. Hodgson as treasurer, an ample contribution towards the expenses of the meeting was received from the members of the Branch, not in Brighton alone, but throughout its extensive area. The Local Reception Committee comprised a list of more than fifty names, with Dr. Moore as Chairman. Mr. T. J. Verrall and Mr. A. Scott performed the duties of honorary local secretaries; and the arrangements connected with various special departments were entrusted to the following gentlemen: reception room, Dr. J. H. Ross; *soirée*, Mr. E. Noble Edwards; hotels and lodgings, Dr. Marcus Allen; dinner, Mr. Seymour Burrows; excursions, Mr. Alfred Scott; daily journal and printing, Mr. Cresswell Baber; museum, Dr. Mackey, Dr. E. G. Whittle, Mr. D. W. Giffard, and Mr. H. Algernon Hodson. That all these most ably performed the duties which they undertook, will be readily conceded by all who attended the meeting, and they well deserved the vote of thanks given to them at the close of the proceedings.

Besides the Mayor and Corporation, and the officials connected with the meeting, others of the inhabitants and neighbours contributed their share towards increasing the pleasure of the visit. Sir Julian Goldsmid gave a Garden Party at St. Ann's Well, which was very largely attended. Mr. E. T. Booth invited members to visit his splendid museum of birds; and Mr. Halliwell Phillips showed to a party of members the interesting collection of Shakesperian relics which he possesses. Arrangements were also made for visits to the Brighton Water-works and Sewage-works, and to the medical institutions of the town, of which many members availed themselves. The New Club, and the Brighton Sailing Club, the Aquarium, and the two Piers, were, by the kindness of the committees and directors, thrown open to the members during the meeting.

Excursions were made on Saturday to Arundel and Chichester; Eastbourne, Pevensey, and Beachy Head; the Isle of Wight; Tunbridge Wells and neighbourhood; and Hastings, St. Leonard's, Normanhurst, and Battle Abbey; and were numerously attended. At Arundel, the guests were invited by the Duke of Norfolk to visit the Castle and partake of luncheon; and, in the unavoidable absence of his Grace, they received a most hospitable welcome from his steward, Captain Mostyn. Sir Thomas and Lady Brassey also invited those who took part in the Hastings excursion to visit their home at Normanhurst. And, in all the places which the excursionists visited they were most cordially received, both by their medical brethren and the inhabitants, and had afforded to them every facility for visiting and inspecting numerous places of historical, antiquarian, and sanitary interest. A brief account of the excursions will be given in another page.

To the scientific work of the meeting we have already referred. The addresses of the President, and of Dr. Billings in Medicine, Mr. F. A. Humphry in Surgery, and Dr. Mapother in Public Medicine, are before our readers; as are also the addresses of the Presidents of the several sections. The work done in these will be recorded in future numbers of the JOURNAL. Mr. Edgar Crookshank's demonstrations in connection with bacteriology were a most interesting feature in connection with the meeting. A notice will be found in another page.

In all respects, the meeting of the Association at Brighton has been most successful. Those who undertook the arrangements of the meeting no doubt found their work facilitated by the existing conditions of the place, and by the generous liberality with which their efforts were seconded by the public; yet the undertaking must have often severely taxed their time and energy. Now, however, that the meeting is ended, they have the satisfaction of knowing that they have done their work well, and that the verdict of the numerous visitors to Brighton during last week, is one of universal satisfaction.

THE ADDRESSES IN PUBLIC MEDICINE.

BOTH the Addresses in Public Medicine delivered at the Brighton meeting last week will be read with interest, though with interest of a somewhat different kind. They reflect with faithful accuracy the standpoints from which the two orators severally regard the question. Dr. Mapother, as the consultant and the physician holding many public and honorary appointments, surveys the field of public effort for the physical welfare of the people, and finds it exceeding broad. Dr. Taaffe, addressing a more specialised audience, appropriately takes up certain particular points of public medicine which may fitly form the subject of useful debate by the experts assembled under his presidency.

Ireland now holds a large place in the thoughts of the nation, and there are evidences of late of much greater anxiety to ascertain the real state of her affairs. Dr. Mapother skilfully turns this interest in his country to account, by sketching in broad and vivid outline the history of medicine in Ireland, and the present work of the profession in it. His address abounds in facts and illustrations which not only testify to the author's erudition, but are in themselves highly instructive. We shall not attempt to analyse the historical portion of the address here, though we are tempted to point the moral from the remark "that writers in all ages, from Strabo downwards, attest the cerebro-spinal activity of the Celt, his muscularity and mental vivacity. His proneness to follow a leader, often for no sound reason, was acquired in the tribal system under which he lived." Sir William Petty, in his well known *Political Anatomy of Ireland*, said in 1672 that, "as students in medicine practise their inquiries upon cheap and common animals, and such whose actions they are best acquainted with, and where there is least confusion and perplexure of parts, I have chosen Ireland as such a political animal, who is scarce twenty years old, where the intrigue of State is not very complicate, and with which I have been conversant from an embrion." The reasons for Dr. Mapother's address of 1886 are not quite identical with these, but no one who reads it can fail to be impressed with his familiarity with the subject "from an embrion." There is scarcely a single aspect of the history of the profession in Ireland which he has not touched upon and illustrated by facts and figures. The exigencies of editorial space compel us, however, to omit reference to much that is interesting, and to concentrate such remarks as are suggested by the address to matters which have an intimate and obvious relation with public medicine.

Dr. Mapother was no doubt encumbered with the multitude of points in connection with the profession that arose to his pen, and therefore refrained from dealing with matters which, though connected with public medicine, did not immediately concern medical men. Of such is the burning question of the extension of local self-government in Ireland. There has been, of late, an inordinate amount of public discussion on this point, and there threatens to be a great deal more. If Dr. Mapother would give us, out of his fulness of knowledge, his views on the subject, and would sketch out for us what he regards as a proper system of medico-sanitary supervision for the country, our new Administration would have a sound scientific basis to rest upon, when they take up the question as a part of the future government of Ireland. It is easy to see from the address that Ireland is in many respects very backward in sanitary matters, though greatly improved of late years. Since 1876, the Irish Local Government Board have sanctioned loans, mainly for works of water-supply and sewerage, to the amount of £1,547,169. Few there are who would be prepared to defend our present system of Private Bill Legislation as either efficient or economical; and when Dr. Mapother points out that two parliamentary contests in London, as to a system of water-supply, cost Sligo half the sum estimated for the works, there can be little difference of opinion as to the propriety of referring schemes of this kind to a tribunal sitting in Dublin.

Sanitary improvement appears, however, to be mainly confined to the towns. Dr. Mapother fears the unions in nine-tenths of the country are unable to pay for any improvement in the inspection of the sanitary state of rural districts. Notwithstanding the wretched pay, the dispensary officers have done with great public spirit the work of sanitary inspection; but Dr. Mapother supports the general view that the system of health-officers for large districts, recompensed handsomely for the giving-up of other emoluments, must be adopted. The steady decrease of fever cases treated by poor-law officers is encouraging. The number twenty years ago was 26,566; for last year it was 5,780.

A far larger proportion of the sickness of the population is treated in Ireland by the dispensary medical officers than in other parts of the kingdom. Dr. Mapother says, indeed, that "the sick-poor in Ireland are better cared for than in any other country, thanks to the Medical Charities Act of 1851." At present, the medical officers of workhouses and dispensaries number over 1,000, being about half the practitioners of the country. Including care of the sick and vaccination, they yearly treat nearly a fifth of the whole population; while they register about 126,000 births and 96,000 deaths. The visits paid last year were 595,486, of which nearly a third were at the patients' homes. Provident dispensaries, it appears, are unknown in Ireland, except in a few of the larger towns.

One other of the many points touched upon by Dr. Mapother deserves a word of notice in this place, before dismissing the address. He draws attention, very properly and opportunely, to the need for reform in the law as to inquests and the registration of the causes of death. He thinks that "it is surely time that, in large cities, there should be, in addition to the last attendant, experts, whose evidence as to cause of death might be received with implicit reliance, and that the necropsies should be held in hospitals for the instruction of students." Incidentally he points out that Ireland is somewhat better off than England, in that only medical practitioners, barristers, solicitors, or magistrates of five years' standing, are eligible for the office of coroner there. A classification of our English coroners according to occupation would reveal some startling and humiliating facts. Our legislation on the subject is scandalously antiquated and inefficient; and, if the Government ever finds time to take up social questions, here is one which deserves very early attention.

Dr. Taaffe's address is of an essentially businesslike order. He takes certain matters of immediate medico-sanitary importance, and summarises the facts concerning them which it is important or useful for his auditors to know. On the sadly pressing question of smoke-abatement, he throws out the suggestion that the compulsory employment of smoke-consuming grates might be accomplished gradually, "by compelling occupiers to replace one of the old grates by one of the new every year, one for each year of occupation. By this means, in twenty or thirty years' time, the old-fashioned wasteful grates would be replaced by the new or smoke-consuming grates." His observations on the death-rates of the Registrar-General's weekly return merit particular attention. There can be no doubt that much mischief is caused amongst unthinking and technically uninstructed people (that is, the largest proportion of the community) by the free publication in the newspapers of the crude weekly death-rates which the Registrar-General announces in his returns. We quite concur in Dr. Taaffe's observation, that, if the reports do not mislead, they are misunderstood. "The public do not clearly understand that the so-called rates are not actual rates at all, in the same sense as the annual or mean death-rates; they do not realise that these figures merely represent what the annual rate, in proportion to the population, would be if the number of deaths should prove to be the same each week throughout the year." Dr. Taaffe's suggestion as to the giving in each return the average rate for the previous thirteen weeks appears useful, and entirely unobjectionable; and we should be glad if the Registrar-General's Department, with that openness of mind which is characteristic of it, could see its way to the adoption of the improved form given in the address.

The medical officer of health of a large urban community must needs find himself confronted every now and then with the difficult problem of the diminution of infant mortality. During the hot season of the year, infantile diarrhœa destroys many promising young lives. The etiology of this disease seems to be still baffling some of our most competent investigators. Dr. Taaffe arrives at the not difficult conclusion that "improper feeding and improper nursing, even when the mothers nurse their children, are unmistakably among the principal causes of infantile mortality from diarrhœa." But he admits that improper feeding does not account for the whole. Warm weather has an undoubted influence; and he suggests that "the stomach and bowels are in a state of subacute congestion (or irritation) for months previously; and the climacteric and other epidemic influences act secondarily in determining the advent of diarrhœa as an epidemic."

Dr. Taaffe concludes with a well timed reminder, that we must not expect too much at present from the operation of Acts which had to undo the sanitary misgovernment of generations. He thinks that, since 1872, the progress made in the education of the public has been of the most satisfactory nature, indeed almost marvellous, considering the great difficulties which stood in the way. He makes certain suggestions for the amendment of the Public Health Act, which are worthy of the attention of the Local Government Board. As to

London "taking the lead in all matters belonging to sanitation, or in connection with the sanitary service," we fear this is a very far cry. If our great provincial towns wait until "the local government of London is placed on a uniform basis, and thoroughly re-organised," in order to take it as their exemplar "in the extension of the science and practice of sanitation," we fear their public health arrangements will fall sadly behindhand. There are, we may hope, signs in the air that "Public Health will, ere long, attain the position to which it is so justly entitled;" but we may say with a good deal of confidence that this will not arise from the activity which London or Londoners display in the matter. The defects and difficulties of the local self-government of the metropolis are, however, far too complicated matters to discuss at the end of an article.

ON THE CONNECTION BETWEEN CHEMICAL CONSTITUTION AND PHYSIOLOGICAL ACTION.

As we have often insisted here and elsewhere, no decided advance ever occurred in the practice of medicine until a close connection was established between it and chemistry. This connection, we are glad to observe, has been gradually drawn closer and closer, but in no way has it been more clearly shown than by the demonstration, through the investigation of the molecular constitution of different bodies, of the distinct connection existing between the specific atomic grouping of these bodies, and their physiological action.

In his most instructive and scientific address, delivered at the opening of the section of Pharmacology and Therapeutics at the annual meeting in Brighton, Dr. Lauder Brunton has taken up this most interesting subject, and he has succeeded, we think, in making it easy of comprehension, even by a comparatively unscientific mind.

Just, he said, as the advancement of civilisation is usually divided into four stages, characterised by the nature of the tools or weapons employed by mankind, so we may fairly recognise four stages in the development of the implements used by man in the treatment of disease. Crude drugs, prepared in the roughest way, were made use of in the first stage; in the next, their more active and more manageable forms, such as watery, or alcoholic extracts or solutions; in the third, their pure active principles; and in the fourth, artificial products possessing the particular action which we desire.

But these different forms of drugs need not necessarily be dissociated, but may often with advantage be used at the same time; the modern tendency, however, being for crude drugs to be less and less used, and their place taken by pure active principles. We are, so to speak, in the bronze age of Pharmacology, and just entering upon the iron age; which latter may fairly be said to have begun twenty years ago, with the researches of Professors Fraser and Crum Brown upon the connection between physiological action and chemical constitution.

To simplify his explanations of some of the recent advances made in pharmacology, Dr. Brunton made use of the capital simile of the three-toothed "flesh-hook," used in connection with the "flesh-pots of Shiloh." The custom, when a sacrifice was offered, was to strike this flesh-hook into the cauldron or pot; and all that the hooks brought up the priest took to himself.

Of course, it is obvious that what would thus be brought up would depend greatly on the contents of the pot, and on the nature of the hook; the character of the handle also being of importance. Now, in the drugs used in medicine, a certain analogy may be drawn with these flesh-hooks, some parts of the drugs being comparable to the hooks, and others to the handle—the hooks, further, having movable points which could be taken off and replaced by others of a different form or sharpness. As changes in the material brought up would follow alterations in the shank as well as in the prongs of the fish-hook, so, in like manner, different effects would result from drugs by varying the molecular weight of their basic radicles, or by altering the elements or radicles combined with these. We must refer the reader to the lucid illustrations of the above, given by Dr. Brunton in his address; suffice it to say here that he thus explains why it is that, while potassic chloride is a powerful muscular poison, the action of sodic and rubidic chlorides on the muscles is very slight; and that, while the chlorides circulate in the blood without producing any marked alteration beyond what is due to the substance with which the chlorine is combined, the bromides attack the brain and nerve-centres, and the iodides tend more especially to affect the muscles and the glands.

The number of prongs of the fork is another important factor, the three-pronged hook seeming to be the generally effective one. Nitrogen has three, and sometimes five, prongs or affinities; in its combinations with hydrogen, in the form of ammonia, it affects nerve-centres, motor nerves, and muscles, tending first to stimulate and then to paralyse them. But, as we would naturally expect, the effect of the ammonia is modified by its combination with iodine, chlorine, and bromine; and we find that, while the ammonic chloride generally attacks the spinal cord and causes irritation, ammonic iodide paralyses the motor nerves and muscles. On the other hand, when combined with oxygen in place of hydrogen, its action is exerted more especially upon the blood and blood-vessels—rapid dilatation of the latter, for example, being produced by amyl nitrite, slower and more prolonged dilatation by sodic nitrite or nitro-glycerine.

Of the high importance of the nature of the free affinity of the chemical compound upon its physiological action, the lecturer gave several instructive examples. The nature of the shank or central molecule, also, he showed to possess an important influence; and, as an illustration of the modifications in physiological action produced by the length and character of the centric chain, as well as by the position of its hooks, he advanced the alcoholic series as an example. The links here consist of carbon atoms, each terminal link being furnished with a sharp hydroxyl point, and the others being provided with blunt hydrogen points. All the alcohols attack the nerve-centres, and paralyse the brain, the spinal cord, and the medullary centres of organic life; in large doses producing death—the longer the chain, the more deadly being their properties.

By recognising the fact that similar carbon compounds possess a similar anæsthetic action, Liebreich discovered chloral. To avoid the cardiac depressing action of chlorine, search was made for a hypnotic not containing this element, and paraldehyd was the result. And, led by the stimulant action of ammonia, Schmiedeberg has introduced the new hypnotic urethan, which acts, like chloral, as a hypnotic; being admissible, however, on account of its stimulant action on the heart, where chloral might prove dangerous.

The study of the molecular constitution of drugs has enabled us to obtain certain bodies of complicated structure which reduce animal temperature without affecting the nervous system and circulation. Kairin, thallin, and antipyrin, are examples of these; but, while the

first two are more or less unsatisfactory, the last is probably the best antipyretic we possess. But it must be confessed that, while antipyrin is best in hectic fever, and salicylate of soda in rheumatic fever, a satisfactory antipyretic in typhoid fever is still a desideratum.

So very considerable and satisfactory has been our progress in pharmacology during the last twenty years—an advance towards which, we may say, the lecturer himself has contributed largely—that we are filled with the hope that, before two more decades have passed away, we shall not only have added greatly to our new stock of remedies, but we shall also have become more enlightened in our endeavours to ascertain the true condition of our patients, thereby the better ensuring the action desired, whether by a single remedy or an admixture of remedies, or by a proper change in their diet and hygienic surroundings.

The whole address, we can truthfully say, will well repay perusal, not alone for the material contained in it, but also for its suggestiveness; for in Dr. Lauder Brunton we really possess a teacher of materia medica of whom his country may well be proud. The address itself, indeed, is such a one as we were led to expect from a man of science, a physiologist as well as a physician; the author, too, of a treatise on therapeutics of such scientific value.

We cannot do better than conclude this article with the eloquent words with which the lecturer himself brought his own valuable address to a close, as we, like all our enlightened readers, feel bound so cordially to re-echo them in our breasts:

"Nothing is more painful to a medical man than having to answer in the negative to an agonised appeal, 'Oh, doctor, can you do nothing?' of those who see passing away those who are dearer to them than their own life. It is because we know the value of human life and the extent of human suffering; because we are called upon to prolong the lives of those not only their friends but their country and the world at large can ill spare; and to relieve pain sometimes amounting to extreme torture in the sufferers themselves, and felt hardly less keenly by their friends, that we consider that it is not only permissible but is our imperative duty to gain the knowledge we require to attain our object, even though we sacrifice the lives of animals and inflict upon them some pain, never wantonly, never carelessly, and almost always slight in comparison with what we often see our patients feel. Moreover, the lower animals suffer from disease as well as men, and we may hope that the advance of pharmacology will give us the means of relieving pain and prolonging life in them as well as in man."

THE REMOTE EFFECTS OF REMEDIES.

THE subject which Dr. Broadbent chose for his address as President of the Section of Medicine at the annual meeting is one which, important as it is, can scarcely be said to have received, to the full extent, the attention which it deserves. That the physician should at least avoid doing harm to his patient by the medicines which he administers is a long recognised maxim; but its application has probably been too generally confined to the idea that the remedy prescribed should, even if it do no good, at least not injuriously affect the patient. Another direction in which the maxim may be applied is, however, pointed out by Dr. Broadbent. A remedy, the action of which is at first undoubtedly beneficial, by relieving symptoms and mitigating disease, may, if its use be persisted in too long, and without proper guidance, or if its work be not assisted or regulated by the administration of other remedies, give rise to a morbid condition, and thus virtually undo the good which may have attended its moderate use.

As Dr. Broadbent pointed out, instances of the evil results of misuse of things, in themselves good if judiciously and moderately used, are ready at hand. We do not require to be reminded of the injurious effects of abuse of alcohol; and the miserable conditions of the opium-eater, or of the devotee to hypodermic morphine, or to chloral, are well known to medical men at least. The injurious remote effects in these cases are generally recognised to be due to the unauthorised abuse by patients of certain agents which affect the nervous system; but Dr. Broadbent believes, further, that many injurious effects, resulting from the injudicious use of remedies of other classes, are also traceable to the patients taking on themselves to continue the treatment which has been prescribed for them, and from which they have found relief.

In illustration of his remarks, Dr. Broadbent adduced the evil effects attending the habitual use of colchicum or of "specifics" by the gouty, or the misapplication of the "Banting" process by the obese, or the immoderate use of "Himrod" by the asthmatic; as well as the treatment, without regard to remote effects, of sick-headache and of so-called indigestion. Other examples besides those noticed in detail—such as the injudicious use of purgatives—were necessarily passed over, but will readily suggest themselves.

It was not within the sphere of duty assigned to Dr. Broadbent to go beyond the strictly practical aspect of the subject, or to discuss its moral or social relations. But, from the valuable observations which he made in his address, the question naturally arises, How can such injurious results of self-quackery be obviated? Herein lies the difficulty. The physician may give wise counsel to his patient, not to abuse the good thing which has for the time being given relief; the advice may be followed—or quite as often it may not. And if the patient choose, even to his own detriment, to persist in a course against which he has been warned, what means of prevention are there? This part of the subject is one which we cannot discuss in the present place; but we cordially thank Dr. Broadbent for his suggestive address, and recommend our readers to peruse it and mark it well.

MR. GEORGE LAWSON has been appointed Surgeon-Oculist in Ordinary to the Queen, in the place of Mr. White Cooper.

THE German and Austrian Cremation Association will hold a congress at Gotha about the middle of September. A matter which will be specially considered is, how to overcome the opposition of the various Governments who have hitherto declined to permit cremation.

THE Right Hon. C. T. Ritchie, President of the Local Government Board, visited the camp at Darenth on Monday, and inspected the site for the proposed permanent small-pox hospital. He also made a careful inspection of the temporary buildings now standing, which were in use during the last small-pox epidemic.

M. LUYS has communicated to the Society of Biology, in Paris, observations of a most astounding and somewhat incredible nature. He placed in some tubes, sealed by a lamp, wine, juices, distilled water, etc., and applied these tubes to different parts of the body of subjects already hypnotised. He then noted the exhibition of phenomena closely related with the ordinary symptomatology of these substances. Sometimes the action was unilateral.

IN our recent review of Dr. Robertson's *Handbook of the Peak of Derbyshire*, the system of sewage-disposal devised by Dr. Thresh is spoken of as "the somewhat expensive process of adding lime and

sulphate of iron." We are informed, however, hat the defæcating agents employed are lime and the natural waters of a strong chalybeate spring. The latter contains not only iron-salts, but also compounds of aluminium and magnesium, and costs the town nothing. The process, therefore, is a singularly inexpensive one, so far as cost of chemicals is concerned.

INGLEBY LECTURES.

THE officers of Queen's College have arranged for the delivery of two lectures on "Recent Advances on Abdominal Surgery," by Mr. Lawson Tait, President of the British Gynæcological Society, on Thursday and Friday, September 2nd and 3rd, at 4 P.M., in the lecture room of the Queen's College, Paradise Street, Birmingham. Medical Members and Associates can obtain tickets of admission to these lectures on application at the reception-room of the British Association for the Advancement of Science.

TRUTH STRANGER THAN FICTION.

LAST week, the French public was agitated by the discovery of the body of a genteel girl who was found dead in a sequestered street in the suburbs of Paris. There were no marks of violence; but the circumstances were so suspicious that no doubt was entertained, either by the police or the public, that death was due to crime. For some days, the journals were full of wild theories as to the motives which might have prompted the murder of the interesting victim. The real circumstances of the case, as now ascertained, are a trifle less romantic, but are sufficiently curious, from several points of view, to merit a passing remark. At the *post mortem* examination, which was made in the usual course of events at the Morgue, it was discovered that death was due to suffocation caused by impaction in the larynx of a collection of those restless and enterprising worms, the *Ascaris lumbricoides*, which the child had presumably vomited, but not ejected. Not the least remarkable feature in the case is the explanation afforded by the parents of their conduct in the matter. Terrified by the sudden death of the child, which nothing had foretold or could explain, they had preferred depositing the body in a quiet unfrequented spot to risking the malicious remarks and innuendoes of the neighbours, and of that dread official the *concierge*. Rather than face this and a possible trial for manslaughter, they, in a fit of desperation, resorted to the reprehensible plan which excited so lively an interest in French society. The cause of death is one which deserves to be recorded in the annals of legal medicine.

THE REVENUE FROM PATENT MEDICINES.

THE Board of Inland Revenue chuckle a good deal in their just-published annual report about the growth of the revenue from patent medicines. They observe that "the increase under the head of Patent Medicine Stamps is considerable as usual, and shows how these medicines continue to gain in public favour." This may be a subject for congratulation by the Inland Revenue, but it may well be doubted how far the growing habit of the population to resort to these quack remedies is beneficial to the nation at large. Twenty years ago there were only 11,520 patent medicine vendors in the kingdom, and only 7½ millions of labels issued, yielding £60,000 to the revenue. In ten years more, viz, in 1876, the vendors had increased to 15,022, and nearly 16 million labels were issued, yielding £123,000. Now there are 20,279 vendors, and 21½ millions of labels were issued during last year, yielding an income to the Government of £179,000. Obviously, the efforts made to induce the Government to place the preparation and sale of patent medicines under better regulations, are terribly handicapped by the supposed danger of losing this very profitable and growing source of revenue.

HEALTH RESORTS AND INFECTIOUS DISEASE.

DR. TATHAM, of Salford, in a very useful report which we reproduced in our columns last week, referred to the importance of holiday makers being able to obtain without difficulty accurate particulars as to the death-rates and health conditions of the seaside and other resorts to which they are intending to take their families. In this connection we may refer to a very useful table which is published in the current number of our contemporary, the *Sanitary Record*, which gives in detail particulars of the health statistics of forty-six of the principal watering-places in England and Wales. It would appear from this table that the mean death-rate during the three months ending June last in these forty-six resorts did not exceed 15.6 per 1,000 of their present population, estimated by the Registrar-General at 1,150,000 persons. In the corresponding quarter of the three preceding years, 1883-84-85, the mean death-rate in these towns had been 17.9, 16.0, and 16.1 per 1,000 respectively. The lowest rates during the three months under notice were recorded in Littlehampton, Malvern, Isle of Wight, Hastings, Clifton, and Eastbourne. The highest death-rates among these watering-places last quarter were returned in Penzance, Dartmouth, Bangor, Exmouth, and Lyme-Regis. No death from any of the principal zymotic diseases was recorded during the quarter in Littlehampton, Weston-super-Mare, or Tenby; and only one in Whitby, Bognor, Lyme-Regis, Teignmouth, Ilfracombe, Malvern, and Buxton. In the other towns the highest zymotic death-rates were recorded in Lowestoft, Worthing, Eastborne, Southend, Folkestone, and Exmouth. The zymotic rate in these forty-six towns did not exceed 0.97 per 1,000, and was considerably below the general zymotic rate in England and Wales, as well as the mean rate in the twenty-eight large English towns during the same period. The remarkable freedom from scarlet fever enjoyed by these watering-places at the present time is a noteworthy feature; only 11 fatal cases of this disease were recorded in the forty-six health resorts during the quarter, of which 6 occurred in Yarmouth. Nine deaths were referred to measles in Exmouth, and 5 in Blackpool; diphtheria caused 4 deaths in Folkestone, 4 in Brighton, and 4 in Blackpool; while fever was proportionately most prevalent in Ramsgate, and whooping-cough in Scarborough, Lowestoft, and Eastbourne.

THE CHARTERHOUSE "PECCAVI."

THE assertion that the sanitary arrangements of the Charterhouse School at Godalming were not all that they might be was met, when first made, by an indignant, almost reproachful, denial; everything, it was more than hinted, that a paternal governing body could do had been done, and to suggest that the drainage might be defective was really shocking ingratitude. People, however, who are disposed to believe that there is no effect without a cause were content to await the result of the enquiry by the Local Government Board before forming any definite opinion. Even before this report is ready, however, the action of the governing body itself proves that it is conscious of a serious flaw in its arrangements. When the ground at Godalming was bought, not enough was acquired for the erection of masters'-houses, which, consequently, were built on adjoining plots of about an acre, or an acre and a-half, in extent. In these houses, the solid excreta are treated on the dry system, but all the slop-water had to be got rid of in some other way; sub-irrigation has been tried, but, as each house contains from sixty to seventy persons, has failed. The masters and the governing body have been at loggerheads with the local sanitary authority for years, and have only within the last fortnight come to terms by conceding what the sanitary authority proposed long ago. The Charterhouse is to provide and maintain a sewer, with the necessary outfall, at their own cost, and the rural sanitary authority agree to accept the sewer. The parent, however, who first called public attention to the presence of an epidemic of diphtheria in the school, and withdrew his son from an area which the head-master and governing body now, by their action, admit is in an unsanitary condition, is punished by the refusal to receive his son back. This may be good discipline, but it is very doubtful justice.

ENTERIC FEVER AND STRAWBERRIES AND CREAM.

A SOMEWHAT remarkable outbreak of enteric fever has recently occurred in Lancing College, about two miles from New Shoreham. The first case showed itself on July 7th; and, during the fortnight following, thirteen further cases occurred, of which two proved fatal. No further cases have, however, occurred in connection with the College. We are glad to find that the sanitary arrangements of this large educational establishment appear to have had no part in the causation of the outbreak, both the water-supply and the drainage having been found by Dr. Kelly, the local health officer who investigated the matter, to be above suspicion. The infection seems, without doubt, to have been conveyed in certain cream obtained from a particular dairy in New Shoreham, and partaken of, with strawberries, by the boys on the cricket field. Various circumstances pointed to this cream as the medium of infection; and the suspicion received further confirmation when it was found that an outbreak of typhoid had simultaneously occurred in the adjoining town of New Shoreham, and that the persons attacked had, for the most part, used milk from the dairy in question. Examination of this dairy disclosed faulty drainage, and also showed that the water used was derived from a well dangerously near to sources of contamination. The drainage has since been rectified, and water from the mains of the local Water Company has been substituted for that of the well. But the question may not unreasonably be asked, why was not this done long ago? Having regard to the polluted condition of the soil, few, if any, wells in the town could be relied upon as safe from pollution, or from the risk of pollution; and yet, we understand, there are a large number of wells still in use. This would seem to be the less excusable, as the wholesome supply of the Shoreham Waterworks Company is almost everywhere available. The Local Authority would do well to study the powers they possess under Section 70 of the Public Health Act, 1875, for securing the closing of polluted wells; and, under Section 62, for requiring the supply of proper water throughout their districts, through the medium of the existing water company. In 1880, 1881, and 1885, large outbreaks of enteric fever occurred in this small town of 3,500 inhabitants, and during the present outbreak 80 or 90 cases have already occurred since the middle of June.

THE PHYSIOLOGICAL ACTION OF MENTHOL.

DR. GOLDSCHEIDER, at a meeting, on April 9th, of the Physiological Society of Berlin, discussed the action of menthol on the sensory nerves. It was well known that it produced on the skin a sensation of cold, which was commonly ascribed to evaporation. On the other hand, the same sensation, when produced in the mouth by solutions containing menthol or peppermint, was explained by a supposed astringent effect. Dr. Goldscheider had come to the conclusion that neither of these explanations was correct. He made his experiments with a solution of menthol in lanolin, which he rubbed into circumscribed regions of the skin. After the rubbing, the thermometer showed, in all such places, an increase of temperature to the extent of 2° Cent., notwithstanding the marked sense of cold produced. The hypothesis of evaporation was excluded by the fact that the feeling of cold was no less marked when the part rubbed was covered with a watch-glass, and could, therefore, be produced only by direct stimulation of the nerves of sensation of cold. Again, if of two corresponding places on the forehead, where these nerves are most abundant, one were rubbed with the menthol ointment, and the other not, bodies which previously had caused no particular sensation would be felt as cold on the former spot, but not on the latter. Dr. Goldscheider, observing that while some regions, as the forehead, were especially sensitive to cold, others, as the elbow and the volar side of the wrist, were so to heat, found that the inunction of these with menthol produced a sensation of warmth, though less striking than that of cold in the former regions; and he called attention to the recent communication of Professor Herzen, on the precisely analogous results of pressure on the nerve-trunks in these regions respectively. He therefore concluded that the sensations, in some places of cold, and in other places of heat, produced by menthol, were purely subjective and consequent on the direct stimulation of the special nerves of temperature, those usually cognisant of cold being far more sensitive to its influence than were those adapted to receive impressions of higher temperatures.

DR. NATHAN S. DAVIS.

THE leading position assigned to Dr. N. S. Davis, of Chicago, by his countrymen as President-elect of the approaching International Medical Congress at Washington, and the prominent position of honour assigned to him at the annual meeting of the British Medical Association at Brighton, will make many of our readers desire to know more of the professional life-history of this venerable and respected physician. Dr. Davis received the degree of Doctor of Medicine from the Regents of the University of New York in 1837, and has been engaged in the practical duties of the profession from that time until the present. In 1844, while a member of the New York State Medical Society, he originated the movement that resulted in the permanent organisation of the American Medical Association in 1847. At the annual meeting of that Association in 1851, he read a valuable paper, giving the results of original investigation in regard to the effects of different kinds of food and of alcoholic liquors on the temperature of the human body, etc. His contributions to medical literature since have been valuable and numerous. In 1850, he was elected Professor of Principles and Practice of Medicine in the Medical College in Chicago, and Professor of Clinical Medicine in the Mercy Hospital, which positions he continues to hold at the present time. He was President of the American Medical Association during the years 1864 and 1865. In 1879 he received the honorary degree of LL.D. from the Illinois Wesleyan University. He is an Honorary Member of the New York Academy of Medicine, of the College of Physicians of Philadelphia, and of many other scientific and medical societies in his own country. In 1883, the American Medical Association having decided to publish its transactions in the form of a weekly medical journal, Dr. Davis was chosen its chief editor. In 1886 he was appointed Secretary-General, and, after the death of the late Professor Austin Flint, he was unanimously elected President of the Preliminary Organisation of the International Medical Congress to be held in Washington in September, 1887. The above is a brief description of Professor Davis's career. It remains only to state how highly he is esteemed by his compeers in the United States. He stands now as the recognised head of the profession in his country, the successor of the lamented Flint and the other great men who preceded him. Probably no physician in the United States has done more to keep up the tone of the profession, and to make the profession one solid, earnest body, desirous of advancing science, benefiting humanity, and adding to the glory of the country.

PREVENTION OF HYDROPHOBIA.

THE following particulars regarding the results of the action of the police, under the Dogs' Act, 1871, for the month of July, 1886, are furnished by Sir Charles Warren, Chief Commissioner of Police. The total number of dogs under control, taken by the police to the Dogs' Home, during the month was 2,898; of these, 52 were killed in the streets as rabid, and 1 developed madness at the Dogs' Home. Of the 52 killed in the streets as being rabid or savage, the diseases are classified as follows: number afflicted with epilepsy 20, with fits 2, convulsions 6, acute peritonitis 1, ferocious or savage 4. Against owners of dogs not under control, 587 summonses were taken out. The magistrates at Petty Sessions at Barnet, Uxbridge, Edgware, and Kingston borough and district have decided that dogs under control should be muzzled or led. Of the 65 persons known to have been bitten by dogs during the month, 6 civilians and 3 constables were bitten by mad dogs. One case of hydrophobia is reported to have occurred during the month.

SMOKE ABATEMENT.

THE Report of the Chief Inspector of Alkali Works, for 1885, has just been issued as a Parliamentary paper. Among the subjects treated in the Report are the efforts which have been made to prevent the escape of noxious chlorine gas during the manufacture of bleaching powder, and the more general question of the emission of black coal smoke from factory chimneys. With regard to this latter subject, the words of the Chief Inspector are worthy of attention. He says that "it is a curable evil, and therefore ought to be cured. In order to purge the air of our manufacturing districts of its black soot, to remove the pall of smoke which shuts out the sunlight and enfeebles both animal and vegetable life, pressure is needed from outside, a determination on the part of the public that the evil shall cease." Mr. Fletcher then refers to the use of the bituminous coal of the Hartley district, Northumberland, in steam-boilers of the Navy. Smoke is not a necessity, but simply the result either of a bad boiler or a bad stoker. The Report also treats of the recovery of tar and ammonia from the gases from blast furnaces.

RESISTANCE TO VACCINATION.

THE official returns just issued concerning vaccination at Leicester show that, for the twelve months ending June 30th, the number of defaulters has increased by 3,500, only 1,041 children being vaccinated out of 4,600 births. It is now estimated that there are about 10,000 defaulters in the town; and, in order to enforce the law, each defaulter would have to be served with two separate notices of his default, or a total of 20,000 notices. In addition to this, each defaulter would have to be summoned, under one section of the Act of Parliament, to show cause why an order should not be made to obey the law, and then summoned, under another section, for disobedience to the order, making altogether 20,000 summonses. The summonses and notices together, which would thus have to be served before the law could be enforced, number 40,000. The law has completely broken down. The guardians meanwhile have stopped the vaccination-officer from issuing summonses, and have openly challenged the interference of the Local Government Board.

SANITARY REQUIREMENTS OF THE HOUSES OF PARLIAMENT.

IN view of the recognised unsanitary condition of the Palace of Westminster, disclosed by recent investigation, it was universally felt that no time should be lost in commencing to give effect to the recommendations of Sir Henry Roscoe's Committee, and it is satisfactory to know that the Office of Works has not been backward, and that already considerable progress has been made with the remedial works suggested by the Committee, the principal of which were as follows:—(1) that the drainage of the Palace be cut off entirely from that of the Metropolitan system by pumping the sewage by means of Shone's pneumatic injectors, and that the main sewers passing under the Houses of Parliament be reconstructed on the most approved modern principles; (2) that all soil-pipes, lavatories, waste-pipes, sinks, etc., be cut off from direct communication with the sewers, and properly trapped and ventilated; (3) that the middle auxiliary drain or sewer running from north to south be entirely renewed, with such increased fall as can be given; (4) that the east and west drains be examined and put into proper repair; (5) that the steam and hot water now allowed to enter the sewers be condensed and cooled; (6) that the ventilation of the kitchens be improved; and (7) that improvements in means of obtaining fresh air in the House of Commons, and in the Commons lobby, be made. The Committee having further advised that the designing and superintendence of the works in question should be entrusted to independent experts, Mr. Isaac Shone, C.E., has been appointed engineer, and W. J. Phillips, C.E., resident engineer; and the works, which are to cost less than £10,000, have been let by the First Commissioner in three contracts, namely, to Messrs. John Mowlem and Co. (general works), Messrs. Hughes and Lancaster (pneumatic and hydraulic ejectors), and the Gas Engineering Company (gas-engine compressors).

NURSES AT THE FULHAM HOSPITAL.

WE published in the JOURNAL of July 17th, an inquiry by a correspondent writing under the name of "Municeps," as to whether several of the nurses at the Small-pox Hospital, Fulham, had contracted small-pox, although they had been vaccinated, and we stated that after inquiry, we learnt that no nurse at the Small-pox Hospital, at Fulham, has contracted small-pox since it was first opened. A journal, whose pages are devoted to arguments against vaccination, characterises this statement as untrue, and, quoting from the hospital report for the year 1881, points out the following return in that report relating to the "Staff since the institution of the hospital." "Total number of staff engaged, 295. Number of those who had previously had small-pox, forty-two; number of those who took small-pox, five. Four of these five had been re-vaccinated." We are indebted to Mr. R. D. Sweeting, Medical Superintendent, for information: first, that not a single nurse had had small-pox; second, that the persons who were in the service of the hospital, and who contracted small-pox, were not nurses. But their history is instructive, and by Mr. Sweeting's courtesy, we are able to reproduce it here. The total number of these persons is eight, and this includes every case since the hospital was first opened up to the present time, viz., one male house servant not re-vaccinated, three female house servants not re-vaccinated, one laundry-maid and one kitchen-maid unsuccessfully re-vaccinated, one mess-room maid and one coach-smith re-vaccinated too late. We trust our contemporary, who has condemned our previous assertion in unusual terms, will inform its readers of the error into which it has fallen.

ALCOHOL IN FRANCE.

A SERIES of resolutions have been adopted by the commission appointed by the Paris Academy of Medicine, to make an investigation and report on the danger to the well-being of the population from the increased use of alcohol. The Government are requested to take the most stringent measures to prevent the entry into France of artificially alcoholised wine. It is also asked that the number of taverns and wine shops shall be largely reduced, and that the laws for the repression of drunkenness shall be strictly enforced.

NOTIFICATION OF INFECTIOUS DISEASES IN AUSTRIA.

THE Government of Austria has issued a decree, calling upon the heads of families to inform the police authorities of any case of contagious illness occurring in their households; these illnesses include cholera, typhus fever, typhoid fever, small-pox, scarlet fever, diphtheria, dysentery, measles, whooping cough, chicken-pox, erysipelas, puerperal fever. The following incident will show how strictly the above regulation is enforced. A man who had two children attacked with small-pox, and omitted to notify their illness to the police authorities, was condemned to ten days' imprisonment, during one of which he was deprived of food, and another was passed in a dark cell. A medical man, who had seen the children before the eruption appeared, was accused of negligence, but the charge was dismissed on the grounds that the duties of a medical man terminate when he receives his fee.

SCOTLAND.

A GRATEFUL PATIENT WITH A LONG MEMORY.

THE following notice from a public print is worthy of reproduction:—"The treasurer of the Dundee Royal Infirmary has received a donation of £100 from William Sweeney, Hedge Row, Dundee, in return for treatment received by him while an inmate of the Old Infirmary, in 1843."

EDINBURGH UNIVERSITY COURT.

AT a meeting of Edinburgh University Court, held recently, Mr. Francis M. Caird, M.B., F.R.C.D.Edin., Lecturer on Surgery, Extramural School, Edinburgh, and Mr. R. Milne Murray, M.B. and C.M.,

M.R.C.P.E., Lecturer on Midwifery, Edinburgh Extra-mural School, were recognised as teachers of medicine, whose courses of instruction would qualify for graduation in Edinburgh University. At the same meeting, Mr. James Milne, Ph.D., Lecturer on Chemistry, Glasgow, had the recognition of his lectures continued, as conducted by him on his new premises, in the Glasgow Royal Infirmary School of Medicine.

HEALTH OF EDINBURGH.

THE death-rate of Edingburgh for the first week of August was 17 per 1000. Of the total number of deaths (85), there were 30 from diseases of the respiratory disorders. The intimations of cases of infectous disorder are the best criterion of the state of the city with regard to zymotic diseases. There were three intimations of typhoid fever, five of diphtheria, twenty-two of scarlet fever, and forty-one of measles. There were two deaths from such diseases, namely, one from typhoid, fever and one from measles.

THE CITY HOSPITAL, ABERDEEN.

RECENTLY there were serious complaints made by the Trades Council, Aberdeen, as to the management and internal economy of the City Hospital, Cuningachill; and the charges against the Institution were of such a specific nature, and coming from such a quarter, that the Public Health Committee of Aberdeen Town Council investigated the matter, and evidently found that there was reason for complaint, for it reported that, under the arrangements now in force, and others which are being carried out at considerable expense, there is every reason to believe that complaints of a similar nature are not likely to occur again. The Committee also points out that the City Hospital was intended originally only for emergencies, and not to be kept permanently open, completely officered, and with all its machinery in regular working order. The action of the Trades Council has thus been abundantly justified, and the public is indebted to it for its action in this matter.

GLASGOW UNIVERSITY STUDENTS' UNION.

BUILDING operations have been begun at the university for the erection of the Union buildings, the expense of which is to be met by a gift of £5,000 from an unknown donor, acting through Professor Macleod. The building is to cost £4,000; the remainder is to be spent on furnishings. The plans provide for a two-storied erection of a late Gothic type. One of the chief parts of the building will consist of a hall, with galleries capable of seating three to four hundred. It will be used for the meetings of the Dialectic and other societies. It is to be surrounded by lobbies, giving direct access to all parts of the hall, and adapted for voting purposes in the House of Commons method. On the same floor will be a dining-room, while above will be rooms for use as news-room, library, and reading-rooms. A square tower, capping one end of the building, will give accommodation for a smoking-room. Provision will also be made for committee-rooms, and for culinary operations. The Union premises, it is expected, will be open to all students on payment of a merely nominal yearly subscription. They will meet a want which has long been a cause of discontent among the students; for though the university buildings have cost over £300,000—indeed, nearly £350,000—there is not a single room of any kind available for the use of students, apart from the reading-room connected with the library. For a room in which to hold a meeting of even a small committee, students had to ask the use of a retiring-room connected with some of the class-rooms. The Senate has apparently never seen the necessity of trying to meet this want, although the liberality of the Marquis of Bute gave them the opportunity. It is a matter of congratulation that the latest generous donor to the university has made it certain that the students will be benefited by his liberality. Even at present murmurings have been heard at the way in which the Senate has tried to set aside the committee of students appointed early this year for the formation of a union, and to proceed with the buildings without consulting them. It is to be hoped that, now the operations have been begun, the Senate will not deny to the students their fair share in the direction of a scheme which it will be the students' business to support, and without whose support it cannot prosper.

IRELAND.

HEALTH OF BELFAST.

DURING the four weeks ending July 24th, the births registered numbered 615, and the deaths 344; of the latter, 129 were due to lung affections. The average death-rate was from all causes 19.6, from zymotic diseases 1.9, and from affections of the lungs 7.5. The past four weeks has shown a considerable diminution in the general death-rate, and likewise in that from lung-disease. The death-rate from zymotic affections still continues low; and, although there has been a little increase in the number of typhus cases reported, hitherto the disease has been of a mild, and not fatal, type.

HEALTH OF IRELAND FOR 1885.

DURING the past year, the births registered amounted to 115,951, and the deaths to 90,712. The birth-rate was under, and the death-rate slightly in excess of, the annual average for the previous ten years. The increase of population was 25,539, and the loss by emigration 62,034, showing a decrease of 36,795 in the population during the year. The death-rate was equal to 18.4 per 1,000 inhabitants, while the mortality from zymotic diseases was greatly below the average of the previous ten years. There were only four deaths recorded from small-pox, but there was an increase in the fatal cases of measles, the great majority of those which were recorded in Leinster occurring in the Dublin registration district. From phthisis there were 10,709 deaths, a number above the average.

EPIDEMIC OF FEVER IN HARE ISLAND.

DR. O'FARRELL, Local Government Board Inspector, in a recent report as to the condition of the inhabitants, states that whooping-cough has been prevalent for some months past in almost every part of the Skibbereen Union, and there were also some sporadic cases of typhus fever in the spring and early summer. The typhus infection from one of these cases would seem to have travelled to Hare Island from the mainland, a distance of about a mile, and attacked in June a girl named Driscoll, who, with her brothers and sisters, was suffering from whooping-cough at the time. A brother took the fever from her, and was removed on July 3rd to the Skibbereen Fever Hospital, where he is now convalescent. The disease has since attacked twenty-two persons, making twenty-four cases in all, and of these eleven are now making favourable progress towards recovery, in an improvised hospital on the island. The disease so far has been of a mild character, and there has been only one death, or a mortality of 4.19 per cent. The measures which would seem most likely to check the progress of the disease are the frequent medical inspection of the inhabitants, so that any fresh case may be at once detected and isolated. In case of death, strict enforcement of Clause 142, Public Health Act, 1878, which prohibits wakes under penalty where death has resulted from infectious disease; destruction of clothing and bed-clothing of those attacked, and thorough disinfection of the premises from which patients have been removed; also securing a good water-supply by deepening and protecting existing wells, whose water has on analysis been found to be good, and closure of schools for at least two months. These measures are especially important with regard to a population, such as inhabits Hare Island, whose usually crowded and ill-ventilated dwellings afford extreme facilities for the spread of infection. The general condition of the island is lamentably bad; some of the houses are so dilapidated as to be unfit for human habitation, and almost all are extremely overcrowded, with filthy manure-heaps, or fœtid cess-pools, in front of the doors. There is little doubt that the epidemics which have so frequently attacked Hare Island owe their origin to overcrowding in the dwellings of the inhabitants.

DIRECT REPRESENTATION OF THE PROFESSION IN THE GENERAL MEDICAL COUNCIL.

We are requested to state that, during the Brighton Meeting, a number of gentlemen fairly representative of the profession in England, chiefly in the provinces and Wales, held an informal meeting at the Grand Hotel, on Thursday, August 12th, to consider what steps it would be advisable to take in order to secure the election of proper persons as direct representatives of this part of the United Kingdom in the General Medical Council.

The meeting resolved itself into a provisional Committee, with power to add to its numbers, so as to obtain the widest possible basis for the movement. It was unanimously agreed that the two Secretaries then appointed should take immediate steps to complete the Committee in a thoroughly representative manner, and arrange for a meeting to be held in Birmingham early in September. At the preliminary meeting at Brighton, the names of several gentlemen were canvassed as suitable persons for nomination in the event of their consent being obtained; but it was thought premature that the meeting should take any definite proceedings in that respect.

At a future meeting, no doubt, three gentlemen will be selected suitable in every way to represent their professional brethren, whom it will be proposed to invite to accept candidature. Since the meeting to which we have referred, it is stated that several representative men, whose names are not at present announced, have signified their willingness to stand if properly requisitioned. These gentlemen would not only represent the profession in different parts of the kingdom, but also all the grades of the profession.

It is hoped that members of the profession will not pledge themselves to any person until the names of all the candidates shall have been submitted to them.

THE BACTERIOLOGICAL DEMONSTRATIONS.

There was probably no part of the programme of the annual meeting this year more instructive and more generally appreciated than the extended illustration of bacteriology, which was held at the School of Science and Art in connection with the section of Public Medicine.

The project had its origin in a proposal made by Mr. Hodgson after the reading of a paper on "Micro-organisms in Disease," by Mr. Crookshank, at a conjoint meeting of the Sussex district of the South-Eastern Branch of the Association, held at Brighton in the spring, under Mr. Hodgson's presidency. Mr. Crookshank had, on this occasion, demonstrated microscopic preparations under no fewer than fifty microscopes; and the proposal of a more extended illustration of the subject at the annual meeting was sanctioned and encouraged by the President-elect, who was also present at the district meeting.

The local arrangements were entrusted to Mr. Hodgson, and the Association is to be congratulated upon the selection of rooms eminently suitable for the purpose. The credit for this is entirely due to Mr. Hodgson, and to the Committee of the School of Science and Art, who generously placed these rooms at his disposal. Gas and water being at hand, one room was speedily equipped as a working laboratory, in which the cultivations on various media were prepared; while, in adjacent rooms, there was a collection—a veritable museum—illustrative of the new science of bacteriology.

The subject was divided into four sections. Room A was devoted to bacteriological apparatus. An exhibit by Becker and Co., of Maiden Lane, consisted of sterilisers, incubators, and all the instruments and glassware necessary for a laboratory equipment. Messrs. Griffin and Son had also supplied an extensive collection of incubators, sterilising apparatus, baths, measures, and other requisites of home-manufacture. On another table Messrs. Beck showed the more purely histological necessaries; while a number of little bacteriological accessories, apparently not obtainable in England, were exhibited by Mr. Crookshank himself, in addition to the apparatus which was in use in the working part of the laboratory.

In a second room (Section B) there were over fifty cultivations of pathogenic and non-pathogenic micro-organisms growing in test-tubes of various nutrient media, and on potatoes in glass dishes. Each individual test-tube was supported in a neatly labelled stand, the whole being arranged so as to form a very instructive series. Interesting as it might be to describe all, we only have space to mention especially the microbes isolated from pus; numerous cultivations of cocci in pneumonic sputum; the tubercle-bacillus on blood-serum, with (side by side) the lungs of inoculated animals; the bacillus of typhoid fever; the microbe of chicken-cholera; the bacillus of foul-brood in bees; the bacillus of septicæmia in mice; various comma-bacilli; numerous chromogenic bacteria; and, lastly, yeasts, sarcinæ, and moulds.

In a third room were comprised Sections C and D. Those visitors who were particularly interested in this absorbing study, found in Section C more than sufficient to satisfy a single visit. Half a hundred microscopes in themselves presented an exhibition of extreme interest and practical value. Suffice it to say that they were supplied principally by Mr. C. Baker, Mr. Beck, Messrs. Powell and Lealand, and Mr. Swift. With the exception of a few low powers, the objects were exhibited under powers of varying magnitude, $\frac{1}{6}$, $\frac{1}{10}$, $\frac{1}{12}$, $\frac{1}{20}$, $\frac{1}{25}$, and $\frac{1}{25}$. Thus, an excellent opportunity was afforded of judging the comparative merits of water and oil-immersion lenses, and of the work of different makers. The preparations themselves had to be studied very carefully to be fully appreciated. Interesting as all the preparations were which illustrated bacterial pathology, attention was fixed more particularly on the sections of bovine actinomycosis from tumours of the jaw and the lung. We have never before seen more beautiful demonstrations of the characteristic fungus of this disease. Tuberculosis in man and birds, leprosy, glanders, anthrax in all the phases of the life-history of the bacillus, the spirillum of relapsing fever, and numerous preparations of other pathogenic and non-pathogenic species completed the list.

Lastly, in the same room, Section D was devoted to the results of Mr. Crookshank's work in pathological photo-micrography. These photographs represented a very vast amount of work, comprising, as they did, original negatives, transparencies, enlargements, silver, ferro-prussiate, platinotype, Eastmân bromide paper prints, and autotypes in special colours. Original negatives of no fewer than sixty different subjects were shown, and transparencies and enlargements of 40 of these were laid out for inspection and criticism. The amplification obtained by enlargement varied from × 800 to × 9000. The majority of the original negatives had been taken direct from the specimen with a $\frac{1}{25}$ o—i of Powell and Lealand. A tubercle-bacillus × 2500 brought out the beading with marvellous definition, while many micro-organisms in tissue-sections were equally definite. Such valuable and faithful reproductions of preparations as seen under the microscope will do more than anything that has been hitherto accomplished to stimulate the employment of photomicrography in our histological laboratories, the preparations which had been reproduced in coloured autotype giving a very faithful impression of the object as seen under the microscope.

THE MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The third annual meeting of this Society was held in the Masonic Room of the Royal Pavilion, Brighton, on Thurday, August 12th. Among those present were Dr. Charles Aldridge (Plympton), Mr. E. Bartlett, Mr. W. Bartlett, Dr. Brierley (Manchester), Dr. G. Bert (Stourbridge), Dr. G. W. Crowe (Worcester), Dr. Dolan (Halifax), Dr. W. A. Elliston (Ipswich), Dr. Frazer (Bournemouth), Mr. George St. George (Lisburn), Mr. L. M. Griffiths (Clifton), Mr. Major Greenwood, jun. (London), Mr. Ernest Hart (Chairman), Dr. de Vere Hunt (Bolton), Mr. J. Brindley James (London), Mr. Vincent Jackson (Wolverhampton), Mr. E. Jepson (Durham), Dr. Samuel Johnson (Stoke-upon-Trent), Dr. Mackey (Brighton), Dr. Ord (London), Vice-Chairman; Dr. J. Pickett (London), Dr. Andrew Ricchie (Pollokshaws), Mr. Noble Smith (London), Treasurer; Dr. Walter Smith (London), Dr. George Stevenson (Manchester), Mr. Septimus Sibley (London), Treasurer; Mr. C. R. Straton (Wilton), Dr. J. Stephens, Dr. E. D. Vinrace, Mr. F. Wallace (London), Dr. Michell Wilson (Doncaster).

Mr. Ernest Hart, on taking the chair, observed that their proceedings need not be long; and it was, perhaps, all the more easy for them to transact their business briefly, seeing that it was of so entirely a satisfactory character. He thought they might congratulate themselves, to an extent which they could hardly have expected when first the Society was started, that they were able at so early a date to present a report every feature of which was satisfactory, and every prospect which arose out of it promising. They would remember that, when first he summoned a meeting of the profession in Liverpool, the attendance at that meeting was not very large, and that they were obliged to confess to themselves that they were commencing an experiment which had many features of doubt in it, and some which were not altogether of a hopeful character. They were beginning an experiment for the first time; they were attempting to do that which had been repeatedly attempted by powerful bodies outside the profession for the public at large—that which had been

attempted, commenced, and carried on by numerous insurance-societies, not one of which, so far as he knew, had succeeded in making this department of their enterprise successful or continuous. Every insurance-society which had attempted to carry out what had long been recognised as a great need for classes other than the labouring classes—who had succeeded in this matter of making a provision against sickness and disablement—every attempt of the kind which had been made, had either altogether failed or had succeeded so partially and so slightly, that those societies which had still attached to them nominally a sickness fund had allowed it to lapse, and it had fallen into abeyance. Then they had also to remember that an attempt of this kind was made some years ago on behalf of the medical profession, and that that attempt also, although it was supported by men of eminence and ability, had not proved successful. And they knew that when they commenced this enterprise they were met with those sort of disappointing prophecies and melancholy good wishes which were often the forerunners of failure. But in looking round, as they were bound to look round into the affairs of life, not only at the ordinary course of past events, but at the causes which had lain at the bottom of success or of failure, they were able to recognise the fact that the causes of failure which existed in these institutions were such as they had it in their power, in a great measure, to eliminate, and that they possessed special elements of success which were not at the command of any who had hitherto attempted to found a society of this sort. The cause of failure he had found, on studying the matter, had been first of all, as a general rule, that the public to whom institutions having objects identical with their own had appealed was not united by any common bond, that it had no general organisation, had no facilities for intercommunication, and had not any such well-established means of communication, and such general sympathy, as enabled those who attempted to do this at once to appeal to a compact body of men, animated by a desire not only to help themselves, but to help each other. In founding this Society he had largely counted upon his relation to and the confidence of a great body of professional men to whom he could make appeal, and who would be willing to dispense with and to put aside that expensive machinery which had underlain the failure of those past attempts. They were able to put aside all this great expense, and rely upon the good will of medical men to do away with the cost of advertisements, and to rely upon a body of officers who were willing to take part in the administration of the Society without payment, from a desire to see the work succeed. Working in that spirit, he was able to count on the co-operation of others not only in the past, but in the future. From his position in the British Medical Association, and his relation to its JOURNAL and to its branches, he felt that he possessed a means of making known this valuable work as it proceeded, inexpensively and continuously, and of enabling them to communicate with each other from week to week, and of making their progress hand-in-hand. This power was at once a privilege and a responsibility, which he felt bound to employ for the good of others. The result had been that now, at the end of three years, he was able to congratulate them upon the fact that they had a Society which had fulfilled everything which it had promised; which was now in such a position that they were able to say that under no circumstances was it likely, he believed—he might say, under no circumstances was it possible—that the Society could fail to fulfil the whole of its engagements. For it was already based upon such a foundation that all its funds were secure now and in the future; the tables which they had calculated, had proved not only to be equal to supplying all that the Society promised on that basis to supply, but in each fund there was a surplus which must, in the arithmetical calculations which could not be defeated by any change which it was possible to foresee, supply not only the fullest demands made upon it, but even a surplus. That which distinguished their Society from all other societies of the kind, in this or any other profession, was that it was entirely free from any eleemosynary element. No one asked charity or gave charity. The richest man might join this Society with the most entire feeling of independence, and feel that he was not only providing for himself, but, by joining a Society having objects such as theirs, he was doing something for others as well as for himself, by the example which he set, and by extending the basis of the Society. The poorest man found in this Society, by a moderate subscription, the means of insuring himself against calamities which experience could not foresee, and which came upon the most laborious, most saving, and most trustworthy person, just at a moment when he least expected it, and struck him down in a moment when his work was most needed. Perhaps they would bear with him if he mentioned one or two cases which showed, in a very striking light, the advantages which the Society had already conferred. There was one gentleman who, after one year of membership, having entered in full health, was struck down with locomotor ataxy; that gentleman had paid altogether to the Society £34; he had already received £214, and, not only that, but he had the satisfaction of knowing that he was secure for the rest of his life from absolute poverty, for he would be entitled for the rest of his life to a pension which would preserve him from destitution. Another gentleman, after a year and eight months' membership, was suddenly attacked with hæmoptysis. He had paid into the Society £18 11s., and received £110 8s. These gentlemen were struck down early in life, the first at 34, the second at 23. Another, aged 27, declared on after thirteen months' membership, having had an ischio-rectal abscess, and afterwards lung-disease; he had paid £15 15s., and received £119 14s. Another gentleman, aged 40, after nineteen months' membership, suffered from rheumatic iritis which destroyed one eye. He had paid into the Society £22 3s., and received £56 8s. Another, aged 31, after one year and ten months' membership, was attacked with blood-poisoning. He paid into the funds £9 11s., and received £48. Another gentleman, aged 26, after six months' membership, was struck down with double pneumonia. He had paid £7 14s., and had received £35 8s. Another gentleman, aged 22, after six months' membership, was struck down with sudden hæmoptysis. He paid £6 6s., and had received £67 4s., and was still on their lists of payments. These were all cases in which men joined in perfect health, after having undergone rigid medical examination. They were the exceptions which only such a fund could meet. They were attacked with unforeseen illness, without having given any previous indications of it. It would be seen that the Society required a most rigid medical examination; and they conceived themselves bound, as trustees for the Society, to scrutinise, not unkindly, not ungenerously, but accurately, every claim which came before the Society week by week. Each claimant was required to furnish an independent medical certificate as to his then state at the end of each week; and when they thought they saw any reason for investigation, they asked for the necessary information to protect the Society's interests. They carried on all such inquiries with every possible consideration for the claimant, and while seeing that every claim was paid, they saw that no undue claim was made upon the funds of the Society; and the result was that, although they had been able to do so much, the claims were still within the original estimate. There was another class of facts which had come to his notice, which he (the Chairman) was sure they would think interesting. Their experience had proved the fact of an unexpected liability of the medical profession to disablement by accident. Theirs was not only a sickness society, but an accident insurance society; that was to say, where disablement occurred through accident, they treated it as sickness, and the following was their experience. They found among the accidents of the year: trap-accident, amount paid, £6; ditto, £4 4s.; fall, injury to spine, £10 16s.; broken leg (riding), £54 12s.; severe sprain, £18; bicycle accident, £4 4s.; trap-accident, £19 16s.; fall from horse, £6 15s.; broken arm (driving), £18 12s.; accident (driving), £10 4s.; fracture, £43 16s.; injury to eye, £16 16s.; sprain, £6; trap-accident, £8 8s.; omnibus-accident, £25 16s.; fall and sprain, £4 16s.; trap-accident, £8 8s.; fall on lawn, £8 8s.; broken leg, £21; carriage-accident, £3 3s.; sprain, £8 8s. In all, during the short duration of their Society, they had already paid £308 2s. in cases of temporary disablement from practice by accident. He (the Chairman) thought that was a very important indication of the special uses of their Society in that direction; and he was very much struck, as he was quite sure they would be, if they compared the payments of this Society and the results which they had there, to the payments made and the results achieved by those admirable benevolent institutions in the medical profession, which they all desired to see flourish, and to which their Society could but prove useful, because it would to some extent—never entirely—supersede the drafts and demands upon their funds. Now, if they turned to the records of the most admirable of those societies in which they were all most interested—the British Medical Benevolent Fund, they would see to what direful straits large numbers of the medical profession were still reduced, and to what terrible conditions the ordinary calamities of practice, such as this Society met so successfully, reduced their families, and they would see how small was the pittance which such benevolence was able to allot; how temporary the assistance, and with what melancholy gladness the smallest doles were received by the families of medical men, and by medical men themselves, who had not joined such societies as theirs, but who had been obliged to leave themselves, in old age and sickness, and those who were dependent upon them, to the generosity of medical charities. They would see that to some persons, under the most terrible circumstances, a sum of £5 was voted; another had received relief five times, £50, that was to

say, £10 a year for five years, and here no income whatever was stated. There was another case, "voted £10, now in bad health," "suffering from paralysis, relieved six times, £65." That was to say, there were long lists of persons, reduced to the very direst straits; and it was found by the experience of a really munificent generosity, that the claims for relief were so numerous, that it was thought to be, and was, a stretch of generosity to be enabled to vote £5 a-year, £10 a-year, or in extreme cases of the greatest destitution, and the highest worth, a very limited number of pensions of from £20 to £25. Now that which was here extorted by dire calamity, through the generosity of the profession, every man could, by a moderate payment, secure for himself as a matter of right and for the whole of his life, so that he ventured to hope that this Society would continue to prosper and to extend throughout the whole profession; and his object in mentioning this was to ask each member to take such means as might seem to him best in his own sphere, to make known more and more the benefits of the Society, and that in such way their numbers might be recruited. They had the report before them, and knew what a satisfactory state of things it disclosed; that during the present year there was an ever-increasing balance of revenue over expenditure, and that they had already a reserve of £11,330 to the good; and what was most satisfactory was, that their surplus was increasing in ratio as well as amount. Last year they had only £6,433, which had grown in two years, and their increase for this year was very nearly £5,000. That was to say, they had very nearly doubled their reserve during the year; and what he was sure they would feel to be a most satisfactory feature was that, while their business was increasing, and their revenue growing, their expenses of management had somewhat diminished. Small as they were during the previous year, they had actually been less during the present year; and whilst they would have been entitled (by putting aside 10 per cent.) to have spent £700 or £800 for management—that being a very small allowance—they had expended rather less than 5 per cent., and they had placed to the credit of their management fund nearly £1,000. That £1,000 would stand specially to the credit of that fund, but of course it was a surplus, and available as a surplus for all the purposes of the Society. That economy was a very distinct element in giving absolute strength to the whole funds of the Association. He (the Chairman) was sure the members would feel with him that they owed very much to the Executive Committee, and especially to the Treasurers and Vice-Presidents, for their continued supervision. They knew that a work of this kind involved an immense amount of detail; that they sent out hundreds of cheques; that they received hundreds of claims; that they received a great number of proposals all of which had to be investigated, and they did not accept above 50 per cent. They were by no means willing to accept doubtful lives or risky membership. All those had to be investigated, as also the conditions under which a person was living. Sometimes they received certificates from sons, or friends, or partners. They might, of course, be satisfactory; but they felt it better, in the interests of the Society, that, as far as possible, the certificates should be of an independent character. All those matters required a great deal of attention. Of course, a great deal of the routine work was done by their excellent Secretary, Mr. Radley, who brought before him (the Chairman) and the other officers anything which required attention; and he was sure they would feel that very great thanks were due to those gentlemen—the officers of the Association, especially Dr. Ord, the Vice-President, and Mr. Sibley and Mr. Noble Smith, the Treasurers—for the amount of time they had given to the affairs of the Society; and he would like to say, as they were about to propose the re-election of their Committee and Council, that they would always be glad to hear of any gentleman who wished for the following year to go on the Committee, and would be able to take part in the affairs of the Society and attend its meetings. What they required was a working committee of gentlemen whose occupations gave them time. The Chairman concluded by thanking the meeting for the patient hearing which they had given him.

Dr. DOLAN (Halifax) said he had great pleasure in seconding the adoption of the report. He thought they might congratulate the Chairman and themselves on what had hitherto been done; on the large balance they were amassing; on the increasing premiums; and, he thought, on the increase of numbers. He was glad to see, and he thought it one of the most gratifying features of the Society, that so few retired after having once taken out a policy. There was one thing he hoped might result from their meeting, namely, that when members went away, they would try to impress upon their neighbours the great value of the work the Society was doing, and try to disabuse the minds of many of a great objection which he found to prevail in Yorkshire, where they imagined that, by a low premium of a couple of guineas, they could secure all the advantages which sprang from this Society as regards weekly and yearly payments. Low premiums were incompatible with perfect security; and the great value of this Society, he thought, was that the name of Mr. Neison afforded a guarantee to the members of the Society of the most perfect security, and an assurance that all the claims that came before the Society would be most amply and fully met.

Dr. WALTER SMITH congratulated the Executive Committee upon their very satisfactory report. With a view to making the Society and its benefits more generally known among the profession, he suggested to the Executive Committee their taking into consideration the possibility of extending the benefits of the Society, which was at present confined to medical men and to students. He thought it very important that they should have some young members among them. He saw by the rules that, in any part of the country where there were ten members, a local secretary was appointed; and he asked whether it would not be possible to have a local secretary in every branch, or in every large district in England, whose duty it should be to make known the objects of the Society and look after members. He further suggested the appointment of a local secretary in each of the four postal districts of the metropolis. Dr. Smith was of opinion that the certificates given should be paid for; it would, he thought, create more interest in the Society, and induce other members to join. The first quarterly payment being made in advance, he thought each succeeding payment should be similarly paid in advance, and the interest of the money go towards the managerial expenses. Under the present arrangement, a member could claim sick pay in the quarter for which his premium was not paid.

Dr. BRIERLEY (Manchester) said, speaking as a representative of the Provinces, he thought the great success of the Society was due to its excellent tables, economical management, and low expenses. He strongly opposed the suggested payment of one medical man for assisting another. It was contrary to all the rules of professional brotherhood. He congratulated the Society upon the admirable management and the benefits conferred on the profession. The great success of the undertaking was due to their Chairman; and in founding and carrying on with such brilliant ability and energy this Society, Mr. Ernest Hart had conferred a lasting benefit on his profession, and acquired a great claim to their gratitude. He thanked the Executive Committee also for the thorough manner in which they had done their work. He had great pleasure in supporting the Report, and in congratulating the members and their Executive Committee on the results which had been achieved during the past twelve months.

Dr. WILSON (Doncaster) said he found it impossible to ask any questions without congratulating the Chairman upon the clear statement he had made, and the Committee, to whom they were greatly indebted. He wished to know if the premium would be reduced if paid half-yearly or yearly, instead of quarterly.

The CHAIRMAN, in reply to a further question from Dr. Wilson, explained that sick pay was continued to the incapacitated until the age of 65.

Dr. WILSON said that added a strong additional claim to the benefits of the Society.

Mr. DE VERE HUNT suggested that the age at which the premiums cease be reduced from 65 to 60.

Mr. STRATON said there was one question he would like to ask, arising out of a statement made by the Chairman as regards the appropriation of the funds of the various branches of the Society. He saw no charge in the insurance fund, or other funds, for management. The management expenses were bulked. He thought there should be some understanding as to the distribution of that fund, and also as to the liability of members. Was there any liability beyond the surplus of the management fund?

The CHAIRMAN said the last two questions practically ran together: the question as to the liability of one department to another, and the apportionment of a surplus. The answer to that was very simple. The Society itself, in all departments of its fund, was liable for any temporary deficit which might arise in each fund, if any should arise, of which there was no prospect. The division into separate funds was only a matter of convenience for them. There was one Society, one liability, and one general fund. As to the question of the apportionment of a surplus, that would be a question which could only come up for discussion at the quinquennial valuation, and they would then see what was the amount to the credit of each fund, and then the actuary would advise whether the surplus existing in a fund should be left in a particular fund, or whether it should be appropriated. But the first important point which might induce error, was the idea that there was any liability whatever on the part of members for any payment, under any circumstances, beyond their subscription. From the very advantageous official construction of the Society, which was under the Friendly Societies Act, there was no capital fund except that furnished

by subscription, and there was no liability for any member beyond the payment of his subscription. As to the payments, the charges of this Society were the lowest known. There was no other society which had ever attempted, or did attempt, to do that which they were doing which had not always been obliged to adopt a higher scale of charge. They were able, by reason of the basis of management which he had explained at the foundation of the Society, and by the extreme economy of their arrangements, to lower their tables by 10 to 20 per cent. below what they would have had to put them at if they had charged the ordinary costs of management, agencies, commissions, rent, commission-fees, and advertisements. Two societies, encouraged by their success, had attempted to found a similar system, but they had recourse to much higher charges, and could not compete with them. In the report, two examples were given, from which it would be seen that a person who joined their Society, by paying, at age 20, a quarterly premium of £1 10s. 7d., received four guineas a week during sickness up to the age of 65, and for the rest of his life, if permanently disabled, he got two guineas a week. Now, in one of the societies started in imitation, he would have to pay, in the first instance, £2 0s. 8d., instead of £1 10s. 7d.; that was to say, 30 per cent. more, and for that he got £4 a week, instead of £4 4s. a week, up to the age of 60, instead of up to the age of 65, and other things similar. A second rival, since started, showed similar figures; so that, instead of their tables being higher, they were lower than those of any other society giving the same benefits. He did not think any other society could reach their standard of economy, and precisely because they did not do that which Dr. Walter Smith wished them to do; precisely for the reason that they started on the basis that a medical man did not make any charge for rendering a service to a brother practitioner, and that was the main basis of the first advantage they had—that they were working one for each other. As to the question of reducing premiums, and as to the age at which they could be reduced, and as to payments made in advance, those, observed the Chairman, were all questions of detail which would be carefully considered; but he thought any advantages which could be derived in this way from associated interest would be so small as to be hardly worth considering.

It was proposed by Dr. T. M. Dolan, and seconded by Dr. Walter Smith, "That the report and audited statement of accounts be received and adopted." This was carried unanimously.

It was proposed by Dr. Aldridge, and seconded by Dr. Frazer, "That the members of the Executive Committee be and are hereby re-elected." This was also unanimously accepted.

Dr. Aldridge stated that, in the village in which he lived, there were but three medical men, all of whom were members of this Society. There were benefits from the Society, the extent of which was not apparent in the figures before them. He recognised one of the cases mentioned by the Chairman, and could say that in that case it would have been simply disastrous to the young man who had only recently commenced practice, if he had not had such a fund as this to fall back upon.

Mr. Noble Smith (London) proposed, "That the alterations in Rules IV, XIV, and XVIII, printed on the first page of the Report, be agreed to, and that Table V be added to the tables of the Society." In explaining the reasons for the introduction of this additional table, he said there were a certain number of people who had expressed a wish for an additional table, so that, provided a person paying into the Society's annuity fund died before arriving at the age of 65, something would be secured to his representatives out of the payments he had made into the Society, extending, perhaps, over a series of years. In accordance with that desire, a fresh table had been prepared by the actuary, Mr. Neison, which provided, in the event of death occurring before the age of 65, for the return of the following proportions of the premiums paid:—(a) Of a member for not less than 5 years, 50 per cent.; (b) Of a member for not less than ten years, 75 per cent. That, he thought, would meet a great want on the part of members. Attention was also called to the alteration in Rule XIV, the second paragraph of which would now read as follows:—

"The amount contributed for shall be paid to his representatives on the death of any member whose proposal has been accepted, provided he has paid the first premium, and subsequent premiums, according to these Rules. No payment shall be made on account of a death due to the act of the member, unless at least two years shall have elapsed from the date of entry."

A further addition was that to be made to Rule XVIII, which would give the Executive Committee power to invest in British, Colonial, or Indian Government securities.

Mr. Vincent Jackson (Wolverhampton) seconded the proposal, and said he thought the suggested alterations were most important. Any member who desired that a portion of the money he had paid should at his death return to his representatives, could now secure this by paying a slight additional premium for the rest of his life, or till he reached the age of 65.

Dr. Walter Smith said he had much pleasure in supporting the Rule.

It was proposed, "That the arbitrators, Dr. Farquharson, M.P., J. Vesey Fitzgerald, Esq., Professor W. T. Gairdner, M.D., W. H. Michael, Esq., Q.C., and J. W. Stephenson be and are hereby re-elected."

It was proposed by Mr. Greenwood, and seconded by Mr. Brindley James, "That the following gentlemen be, and are hereby, elected members of the General Committee: Dr. R. J. Coombs, Dr. W. A. Elliston, Mr. de Vere Hunt, Dr. J. W. Hunt, Dr. F. S. Palmer, Mr. T. E. Parsons, Dr. J. Pickett, Dr. G. W. Crowe, Dr. R. Lord, Mr. W. Thomas, Mr. L. W. Griffiths, Mr. W. J. Stephens."

This motion was carried.

Mr. Sibley, in proposing that the cordial thanks of the meeting be given to the Chairman of the Society, Mr. Ernest Hart, said all present and most of the absent members fully knew and appreciated the great debt which they owed to their Chairman. Had it not been for the great exertions of Mr. Ernest Hart in the first instance, and for his continued activity in the interests of this Society, he did not think it could have been established. Mr. Ernest Hart had been actuated by the principle of encouraging thrift in every direction; and, had it not been for his great administrative ability, his continuous devotion, and his attention to details, they could not have established the Society on its present basis, or carried it on with such solid success and valuable results. He thought their most cordial thanks were due to Mr. Ernest Hart.

Dr. Frazer (Bournemouth) seconded the motion, which was carried by acclamation.

POOR LAW MEDICAL OFFICERS' ASSOCIATION.

The annual meeting of the Poor Law Medical Officers' Association, presided over by Dr. Joseph Rogers, was held on Thursday, August 12th, in the North Drawing Room, in the Royal Pavilion, Brighton.

The Chairman said that, twenty years ago last November, they held a meeting in London, at which it was decided that action should be taken consequent upon the exposure that had been made of the condition of the workhouses and infirmaries belonging to the metropolis and elsewhere. As the outcome of the first meeting a powerful Association was formed, that brought about a change in the law, the Metropolitan Poor Law Act being the outcome of their initiative in November, 1865. In the following May, with a view of throwing the onus of the sad condition of the workhouses upon the wretched workhouse medical officers, the Local Government Board, acting on the suggestion of Dr. Edward Smith, who was their only medical inspector, issued a most extraordinary series of questions with a view of entrapping the workhouse medical officers into such a form of reply as would lead to the view that they wished to carry out, that they, and they alone, were responsible for the sad condition of the workhouses. He was the medical officer of the Strand Union at the time, and one of them came to him. He saw at once its Jesuitical meaning: that it was intended to trip them up, and that, unless it were circumvented, something most unfortunate would happen. He therefore issued a circular letter to every workhouse medical officer in the metropolis, asking them to meet him at the Freemasons' Tavern. That meeting was held, and from it originated the Association, which for the last twenty years, in different parts of the kingdom—sometimes with great success, sometimes in small numbers—had regularly met. At the last annual meeting he drew attention to the action of Mr. Jesse Collings, who, in the last days of the Parliament that ended in 1885, suddenly sprang upon the Conservatives the proposition that the grant of poor law medical relief should not in future debar the recipient from exercising the elective franchise, as had been the rule since the introduction of the Poor Law, in 1834. This piece of hysterical procedure was unfortunately accepted by the Government, and one day it would be found to tax unduly the resources of the badly remunerated poor-law medical officers. One case to which attention had been drawn in the British Medical Journal during the year, was that of a district medical officer of St. Pancras, who had been summoned before the magistrates by the Commissioners in Lunacy for an alleged wrongful description of the place where he had seen a lunatic. A form of certificate had been brought to him with the words "St. Pancras Workhouse" printed in red ink. He filled in the certificate, stating that he had seen the man at 3, Euston

Square, but unwittingly omitted to run his pen through "St. Pancras Workhouse." For this clerical error he was subjected to the indignity of being summoned; and, on the magistrate expressing the opinion that the error was not wilful, the summons was withdrawn. Another case of interest arose in Kells Union, in Ireland. The medical officer, Dr. Ringwood, had reported unfavourably upon the sanitary state of the workhouse and infirmary. His report had been denied, and he had been called upon to resign. The matter had been afterwards reported to the Local Government Board, whose report was altogether in Dr. Ringwood's favour, his statements having been fully borne out. In another case, the medical officers of Camberwell were refused extra payment for additional labour thrown on them by an outbreak of small-pox, although a gratuity was given to the relieving officers for their extra work in removing the cases to the small-pox hospital. In the Evesham Union, Worcester, an application had been made by Mr. A. H. Marten for an increase of stipend, which was miserably insufficient. The facts were indisputable; but Mr. Marten's application failed, the ground alleged for the refusal being that, if the application were granted, a similar result would follow in the case of his four colleagues. A correspondence had taken place between Mr. A. S. Stokes, of Windon, of the Oundle Union, and the Local Government Board, from which it appeared that the guardians of that union had appointed and retained in office for three years an unregistered person. On his resignation, they appointed Mr. Stokes, who, finding his salary was much less than that of his unregistered predecessor, resigned; and the Board then appointed a medical officer who lived eight miles away, and retained him in office on the advice of the Local Poor-law Inspector, rather than pay Mr. Stokes the moderate stipend he had claimed. The Council of the Association had, with other persons, waited upon the Metropolitan Asylums Board, with a view of urging the restoration of Dr. Collie, the Medical Superintendent, who had been suspended nine months previously. The interview led to his reinstatement on probation. But for their intervention, it was morally certain that Dr. Collie's suspension would have been confirmed, and that he would have been made a scapegoat of the system of wrongdoing which the official inquiry had exposed. Attention had been drawn to the action of Mr. Justice Brien, at the Cork Assizes, when a medical witness complained that he had been only allowed £2 a day for his attendance at Court, instead of three guineas, with 15s. daily for expenses. The Judge intimated that he did not consider the amount paid sufficient, that he would insist on medical witnesses being more liberally remunerated, and that he would treat it as a contempt of Court if his recommendation were not attended to. A medical man who complained that he had been called by the police to the station-house to visit prisoners in custody without payment had been informed that the police had no such authority, and had been advised, if asked again, to refuse to go unless an order for payment were previously secured. In the Evesham Union, the clerk had struck out a claim of £2 made by Mr. Haynes for attendance on a case of phlegmasia dolens, the patient living four miles away and requiring repeated visits, extending over several weeks. The Local Government Board, on being appealed to, adopted the interpretation of the clerk, but suggested that something should be given by the Guardians. Mr. Haynes was accordingly paid £1 only. Attention had been drawn to a notice of motion, put on the paper by a member of the Royston Board of Guardians, that the stipends of the officers should be reduced. It had been pointed out that even if such a motion were carried, it would not receive the sanction of the Local Government Board. Similar attempts had been made by other Boards of Guardians, but up to the present time without success. Attention had been drawn to the action of the Chesterton Board of Guardians towards their Medical Officer, Mr. Bridger. When visiting a sick pauper, two poor women had asked him to see an aged woman who had been found on the bricks in front of the fire-place, half dead. Mr. Bridger had directed one of the women to call in the relieving officer to ask him to send her into the workhouse or provide someone to take care of her. The relieving officer had contented himself, however, with asking the woman whether the old lady would go into the workhouse, and as she refused, nothing further was done. Two days afterwards she was found in a similar position, dead. At the inquest, the coroner commented on the conduct of the relieving officer, and said that if Mr. Bridger had made an application to him in writing, he would have directed them to find a verdict of manslaughter against the relieving officer. Subsequently the guardians held an inquiry, when Mr. Bridger was exposed to a cross-fire of questions, and ultimately a resolution was unanimously adopted by the board exonerating the relieving officer, while a similar resolution respecting Mr. Bridger was only carried by a majority of three, in a board of 15 members. Dr. Simpson, principal medical officer of the Birmingham workhouse, had been accused by the chairman of the infirmary committee with being the cause of an outbreak of puerperal fever in the lying-in wards, and requested to discontinue his attendance. It appeared that there had been two or three outbreaks, by no means an uncommon circumstance in the lying-in wards of workhouses. Dr. Simpson continuing to visit the wards, the matter was referred to the Local Government Board. An official inquiry was held, and, subsequently, Dr. Simpson received a letter from the Local Government Board requesting him to resign. During the late Parliament, an attempt to amend the laws relating to lunacy was made in the House of Lords. The Bill passed the third reading, and was put down in the House of Commons. It was drawn on the same principle as the Bill of 1884, with regard to its clauses referring to workhouse medical officers, but as no one seemed to care about the matter it was not for him, who was in no way affected by it, to take any further action. It had, however, shared the fate of many other deserving measures, and it was probable that it might be some time before any further tinkering with the lunacy laws would be attempted. After narrating several other cases of interest to poor-law medical officers, the Chairman said he had urged on his professional brethren the advisability of steadily refusing to attend any case, however urgent it might be alleged to be, unless an order was brought. An overseer was to be found in every parish, whose order was equally valid with that of a relieving officer, and the friends of the applicants for medical relief should be made to apply for it.

Mr. BRIDGER moved that the best thanks of the meeting be given to the President and the Council for their exertions during the past year, and to the Editor of the BRITISH MEDICAL JOURNAL for the valuable assistance he had afforded the Association at all times.

Dr. FEGAN seconded the resolution, which was agreed to.

Dr. NORMAN KERR moved "That this meeting congratulates their President, Dr. Joseph Rogers, on his recovery from a serious illness, thanks him warmly for his noble and unselfish efforts on behalf of the Poor Law Medical Officers, and of the welfare of the poor, and trusts that he may be long spared to continue the work to which he has so generously devoted the best of his life."

Mr. SIMPSON seconded the resolution, which was agreed to.

Dr. JACOB (Dublin) mentioned an instance which occurred in Ireland in which a workhouse being closed, the medical officer was discharged without any compensation. The Irish Medical Association took up the case and fought it out, he regretted to say, to an adverse conclusion. The decision of the Courts was, that the Local Government Board were not responsible for the dismissal of the man; that, although it was in consequence of their sealed order abolishing the union that he was removed, still he had no remedy, inasmuch as the sealed order was strictly within the power of the Local Government Board.

Mr. WICKHAM BARNES (Secretary) reported that the financial position of the Association was, at the present time, secure, they having a small balance in hand.

Mr. BALDING moved: "That having regard to the admitted usefulness of the Association, it is now eminently desirable that the attention of the poor-law medical officers be called to the advisability of their joining the Association in order that the hands of the Council may be strengthened in their efforts to meet the many cases of injustice and oppression which members of the Poor-law medical service have to submit to from their boards of guardians and other authorities."

Mr. CORNWALL seconded the resolution, which was agreed to, and the proceedings terminated.

BRITISH MEDICAL BENEVOLENT FUND.

A MEETING of Honorary Local Secretaries of the British Medica Benevolent Fund, for the purpose of conferring with the ordinary members of Committee, was held, by the kind permission of the Council of the British Medical Association, at 10 A.M., on Wednesday, August 11th, in the King's Apartments of the Royal Pavilion, Brighton. There was only a limited attendance, and the business was confined to introductions, by the Treasurer, Dr. Broadbent, of the members of the Committee in London to the *ex officio* members who undertake the work in the provinces. In this way it was hoped to promote an *esprit de corps* amongst those interested in the working of this useful charity, and to induce the local secretaries to make exertions to obtain further subscriptions from the public and the profession in their several localities, and so increase the power of the Benevolent Fund in doing good, not only in this its jubilee year, but also in the future.

MEDICAL DEFENCE.

An adjourned meeting of members of the British Medical Association, who met to consider the question of forming a Medical Defence Association, either in connection with or apart from the British Medical Association, was held, on Thursday, August 12th, at the Town Hall, Brighton. The meeting of the previous day, it will be remembered, was adjourned for the purpose of enabling a deputation, then appointed to wait upon the Council of the Association, to ascertain whether they would be prepared to give their support to such a movement, and to report the result.

Dr. Daniel Thomas took the chair, in the unavoidable absence of Dr. Elliston.

Dr. Walter Smith said that six out of the seven members had that morning waited on the Council of the Association, and representatives of England, Scotland, and Ireland had addressed the Council. The President of the Council had, in reply, expressed his sympathy with the object of the deputation, but had pointed out that there was a great pressure of business just now, and that, moreover, it was impossible for the Council to consider the subject at present, from the fact that certain notice had to be given to all members of the Council before any subject could be discussed. The Chairman of the Council added that there were certain difficulties in the way—legal and otherwise—but promised that every consideration should be given to the matter at the October meeting of the Council. Dr. Smith concluded by suggesting that the course now to be adopted was to appoint a committee to keep touch with the Council, and, if necessary, to report to a further meeting when the decision of the Council was made known. If the answer were in the negative, then they could take steps to form a thoroughly representative Society, independent of the Association.

A discursive discussion followed as to the constitution and inadequacy of the present Defence Societies and the rules necessary to make the proposed Society thoroughly efficient, one gentleman suggesting that the subject of the constitution should be thoroughly thrashed out in the organ of the Association, and the Committee should then come forward with a cut-and-dried scheme.

Another gentleman expressed the opinion that the British Medical Association should widen its scope to such an extent as to take in the present Poor Law Officers' Association, the subject of defence, and many other branches which at present had their separate organisations; a slight increase being made in the subscriptions to the British Medical Association in order to cover the additional expense. This slight increase, coming from about 12,000 members, would mean a great addition to the funds.

It was decided to appoint a provisional Committee, with Mr. W. Armstrong (Manchester) as Secretary, and Dr. Brassey Brierley (Manchester) as Treasurer, to be summoned at some convenient time and place in London, for the purpose of taking further steps in dealing with this matter.

IRISH MEDICAL SCHOOLS AND GRADUATES ASSOCIATION.

The provincial meeting of the above Association, which now includes 400 members, was held on Wednesday, August 11th, in the Royal Pavilion, Brighton; the President, Dr. Macnaughton Jones, in the chair. There was a large attendance of members.

The Council reported that, as a result of their sending a deputation to Sir Lyon Playfair, a clause had been inserted in the Medical Act Amendment Bill (now on the Statute Book), by which the degree of Master in Obstetrics of the two Irish Universities and the diploma of member of the King and Queen's College of Physicians, in Ireland, were admitted to the *Medical Register*. Thus they had been able to remedy a grievance under which those seeking Poor Law appointments had previously laboured.

A discussion arose respecting the obstacles placed, by boards of governors of several English hospitals, in the way of those holding the Fellowships of the Colleges of Physicians and Surgeons in Ireland, who might wish to obtain appointments on their medical or surgical staff. A recent instance of this was afforded by the Board of the Bristol General Hospital framing a rule confirmed last June, which practically excluded from appointments on the surgical staff, all except Fellows of the Royal College of Surgeons of England. Sir William Stokes said he would be sorry to think that the Governors of the Institution referred to made that rule with a desire to insult the College of which he had the honour of being the President. Their action had probably arisen from their being unacquainted with the requirements necessary in order to obtain the Irish Fellowship, the examination for which was a most searching one. He strongly urged the importance of bringing these facts under the notice of the framers of the rule referred to. Sir Thomas Crawford, K.C.B., said that so highly was the qualification of Fellow of the College of Surgeons in Ireland thought of by the Army Medical Department, that those holding it were exempted from examination for higher grades in the Army Medical Service. Sir James Hanbury, K.C.B., thought that it would be well if the British Medical Association could be got to lend its powerful aid in having such an obvious injustice removed. The President said the only logical ground on which such a distinction as that made by the Bristol Hospital could be justified was a superiority of qualification; and he denied altogether that holding the English Fellowship proved the possession of higher professional attainments. The tests of the Irish College of Surgeons were quite as high as those of the English, and ought to command equal right to compete for appointments on the staff of any hospital in any part of the United Kingdom. He promised to get the Council of the Association to move in the matter without delay, especially as the Bristol Hospital was not alone in this exclusive action. The matter was referred to the Council to report on at the October general meeting in London; the President remarking that he felt sure such exclusiveness would be condemned by all Englishmen acquainted with the severity of the tests to which those holding the Fellowship of the Irish College had to submit.

The death of the Founder and Honorary Treasurer of the Association (Dr. James Thompson) was reported. A vote of condolence with the family of the deceased was passed. Brigade-Surgeon W. Alexander, M.D.Q.U.I., was appointed to the post rendered vacant by Dr. Thompson's death.

Several members resident in the north of England having suggested that a winter meeting should be held this year in one of the large towns of Lancashire or Yorkshire, the question of altering the rules so as to increase from three to four annually the number of general meetings, was referred to the Council.

The President moved the following resolution, which was seconded by Sir Thomas Crawford, K.C.B., and carried unanimously:—"That the hearty congratulations of the Association are hereby offered to Sir B. Walter Foster, and to Sir William Stokes (both ex-Presidents of the Association) on the honours recently conferred on them by Her Majesty."

The proceedings closed with a vote of thanks to the Local Committee of the British Medical Association, for the use of the room in which the meeting was held.

The provincial dinner took place the same evening, at Page's Restaurant, Brighton. Fifty-two members and guests sat down. The chair was occupied by the president, who was supported by Dr. Nathan S. Davis (President-Elect of the International Medical Congress); Dr. W. Brodie (ex-President of the American Medical Association); Professor Pancoast, M.D.; Dr. W. T. Edwards, Dr. Wile (New Town), Dr. S. C. Gordon (Portland, Maine), Dr. Stone (Connecticut), and other guests. Several ladies graced the banquet, including Mrs. Macnaughton Jones, Lady Mac Cormac, Mrs. Stewart, and others. Among the members present were Sir Thomas Crawford, K.C.B. (President-Elect); Sir William Mac Cormac (Vice-President); Sir James A. Hanbury, K.C.B.; Brigade-Surgeon William Alexander, M.D., Dr. C. G. D. Mosse, Drs. G. H. Kidd and T. W. Grimshaw (Dublin), etc. The usual loyal toasts were duly honoured. Dr. J. W. Moore proposed, "Prosperity to the Irish Medical Schools and Graduates Association." The Chairman, in responding, bore testimony to the untiring energy of the Honorary Secretary for the Provinces, through whose exertions the roll now included 141 more names than it did when they met last year at Cardiff, notwithstanding the loss by death during that period of five members, one being their old and valued friend, the founder of the Association—the late Dr. James Thompson. The health of "The Guests" was proposed by Sir Thomas Crawford, and responded to by Dr. Nathan S. Davis, in an eloquent speech, in which he said that Ireland might well be proud of the *alumni* of its medical schools. The proportion of those who hailed from Ireland, among the distinguished medical men of the United States, was considerable; and such a Society was doing good work in bringing together, from time to time, *alumni* of the Irish Medical schools, colleges, and universities, and thus helping to break down prejudices, and to foster that brotherly feeling which always was a conspicuous feature of the medical profession in every part of the world. He concluded by inviting every member of the Association to give their American brethren an opportunity of reciprocating at Washington next year, in some degree, the great kindness they had received in England. The speech of Dr. Davis, which was very heartily applauded, brought the proceedings to a close.

COLLECTIVE INVESTIGATION COMMITTEE.

LIST OF RETURNS RECEIVED DURING THE MONTH OF JULY, 1886.

Border Counties Branch: XIV, J. R. Hamilton, M.D. (2); Terebene, W. H. Calvert, M.B.

Edinburgh Branch: Terebene, H. M. Church, M.D., R. P. Ritchie, M.D., T. R. Ronaldson, M.B.

Metropolitan Counties Branch: IV (1), V, XI, Intemperance (2), E. G. Gilbert, M.D.; XIII, Bitton Collard, F.R.C.S. (9), C. A. James (2); Terebene, Isambard Owen, M.D.; Hamamelis, H. Gervis, M.D., R. Barnes, M.D.; Intemperance, T. Morton, M.D., W. O'Dell, F.R.C.S.

North of Scotland Branch: IV, H. W. Lang, M.D., J. Ferguson, M.B.

South-Eastern Branch: East Kent District: IV, C. Cotton (2); Intemperance, R. Lyddon. West Surrey District: Intemperance, G. Wilks, M.B. (2), J. Lee Jardine (3).

South Midland Branch: Hamamelis, W. J. Mackie, M.D., H. C. Rogers; Terebene, R. E. Burges, M.D.

South Wales Branch: Intemperance, T. Hall Redwood, M.D. (4).

South-Western Branch: South Devon District: H. W. Lavermore (5).

West Somerset Branch: IV (4), IV a, Intemperance, C. P. Coombs.

The Committee beg also to acknowledge (August 20th) the receipt, since their last acknowledgment on July 17th, of the following replies to the International Inquiry into the geographical distribution of certain diseases.

Lancashire and Cheshire Branch: Manchester District, 1.

Metropolitan Counties Branch, 2.

South Midland Branch, 1.

The Secretary to the International Committee begs also to acknowledge (August 20th) the receipt of one return from Scotland since his last acknowledgment on July 17th.

The Secretary to the Collective Investigation Committee will feel obliged if any contributors who do not find their returns included in this list will communicate with him at once.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1886. ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary*.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

PROCEEDINGS OF COUNCIL.

AT a meeting of the Council for 1885-86, held in the Music Room Royal Pavilion, on Tuesday, August 10th, 1886, Present,—

Sir B. WALTER FOSTER, President of the Council, in the chair

Dr. W. T. Edwards, President, Cardiff
Dr. W. Withers Moore, President-elect, Brighton
Mr. C. Macnamara, Treasurer, London
Mr. J. W. Baker, Derby
Dr. G. B. Barron, Southport
Dr. T. Bridgwater, Harrow-on-the-Hill
Mr. H. T. Butlin, London
Dr. C. Chadwick, Tunbridge Wells
Surgeon-General W. R. Cornish, London
Dr. J. Ward Cousins, Southsea
Mr. T. W. Crosse, Norwich
Dr. G. W. Crowe, Worcester
Dr. P. M. Deas, Exeter
Mr. John Dix, Hull
Dr. J. L. H. Down, London
Dr. C. E. Glascott, Manchester
Dr. Bruce Goff, Bothwell
Mr. G. F. Hodgson, Brighton
Dr. C. Holman, Reigate
Mr. A. Jackson, Sheffield
Mr. T. Vincent Jackson, Wolverhampton
Mr. T. R. Jessop, Leeds
Mr. H. R. Ker, Halesowen
Mr. F. Mason, Bath
Mr. W. Jones-Morris, Portmadoc
Dr. F. Needham, Gloucester
Dr. G. H. Philipson, Newcastle-on-Tyne
Mr. J. Prankerd, Bath
Dr. A. Sheen, Cardiff
Mr. S. W. Sibley, London
Dr. A. Strange, Shrewsbury
Dr. W. Strange, Worcester
Mr. T. Sympson, Lincoln
Mr. J. Taylor, Chester
Dr. T. W. Trend, Southampton
Mr. F. Wallace, London
Dr. E. Waters, Chester
Mr. C. G. Wheelhouse, Leeds

The Minutes of the last meeting were read and found correct.

Letters of apology were read from Dr. Wade, Mr. Husband, and Dr. Grigg.

An application was received from the Association of Members of the Royal College of Surgeons, requesting that facilities should be afforded them for holding their meeting, and that their petition should be allowed to lie in the Reception Room for signature.

It was proposed that the request be not granted.

Whereupon an amendment was proposed and seconded, that facility be afforded for the meeting of the Association.

The amendment was adopted; and it was also adopted as a substantive resolution.

Resolved: "That the minute awarding the Gold Medal for Distinguished Merit of the British Medical Association to Dr. Waters for his self-denying, long-continued, and able services in the cause of Medical Reform be, and it is hereby, confirmed."

Read letters from Mr. T. Jenner Verrall and Dr. P. Watson Williams (Brighton).

Resolved: "That Dr. P. Watson Williams be elected a member of the Association."

Read by-laws of the Bermuda Branch of the Association adopted at a special meeting.

Resolved: "That the Council of the British Medical Association record with great pleasure their recognition of a Branch for Bermuda, and their approval of the proposed by-laws; and they tender their congratulation and thanks to Surgeon-General Graves-Irwin, Mr. Eldon Harvey, and others, who have been instrumental in the foundation of the Branch."

The minutes of the Parliamentary Bills Committee were referred to the new Council.

Read letter from the Representatives of the International Medical Congress, requesting facilities for communicating with the members of the British Medical Association on the subject and the use of a room in the Pavilion on Thursday, a copy of which is as follows.

Grand Hotel, Brighton, August 10th, 1886.

To Sir B. Walter Foster, M.D., Chairman of Council of the British Medical Association.

SIR,—We, the undersigned Officers and Members of the Executive Council of the International Medical Congress, to be held in Washington, U.S.A., on the 5th to 11th of September, 1887, desire to take this opportunity of communicating to Members of the Medical Profession in Great Britain, and especially to Members of the British Medical Association, some of the arrangements for the reception at that Congress, and to extend to them a cordial invitation to visit our country, and to attend the Congress.

We shall be greatly obliged to you, and to the Council of the British Medical Association, if you could afford us facilities for this purpose; and we would ask o your courtesy to allow us the use of a room in the Pavilion, at a stated hour on Thursday next, if convenient, for the purpose of meeting members of the Association, to whom we could make a statement on the subject.—We are, dear Sir, your faithful servants,

N. S. DAVIS, M.D., LL.D., President of the Preliminary Organisation of the Ninth International Medical Congress, and Member of the Executive Committee, and Ex-President of the American Medical Association.

W Brodie, M.D., Vice-President of the Congress, and late President of the American Medical Association.
W. H. Pancoast, M.D., etc., Vice-President of the American Medical Association; Member of the Executive Council of the International Congress, 1887.
Wm. C. Wile, M.A., Vice-President of the American Medical Association.

Resolved: "That the request be granted."

Resolved: "That eighty-one of the candidates for election as members, and whose names appear on the circular calling the meeting and supplementary list, be elected members of the Association."

List of Attendances of Council and Committees, including Meeting on August 10th, 1886.

The letter R. means Representative of a Branch.)

Name and Address.	Number of Council Meetings Held (7).	Number of Times Summoned, Inclusive of Committees, etc.	Number of Total Attendances.
Sir B. W. Foster, Birmingham, President of Council	7	40	35
Mr. C. Macnamara, London, Treasurer	7	37	30
Dr. T. Bridgwater, Harrow-on-the Hill, R.	7	16	16
Dr. C. Chadwick, Tunbridge Wells, Vice-President	7	25	24
Surgeon-General Cornish, London, R.	6	10	8
Dr. J. W. Cousins, Southsea, R.	7	22	19
Dr. G. W. Crowe, Worcester, R.	6	10	6
Dr. W. C. Grigg, London, R.	6	25	23
Mr. H. R. Ker, Halesowen, R.	7	10	10
Dr. W. G. V. Lush, Weymouth, R.	6	7	6
Dr. W. Withers Moore, Brighton, President-elect	7	27	15
Dr. A. Sheen, Cardiff, R.	6	12	9
Mr. S. W. Sibley, London, R.	7	26	24
Dr. E. M. Skerritt, Bristol, R.	6	7	6
Mr. T. Sympson, Lincoln, R.	7	11	10
Mr. F. Wallace, London, R.	7	7	7
Mr. C. G. Wheelhouse, Leeds, Vice-President	7	25	9
Dr. A. Davidson, Liverpool, R.	5	16	10
Mr. T. V. Jackson, Wolverhampton, R.	6	22	8
Dr. W. Jones Morris, Portmadoc, R.	5	7	5
Dr. C. Parsons, Dover, R.	4	23	14
Dr. E. Waters, Chester, Vice-President	6	17	11
Dr. A. Carpenter, Croydon, Vice-President	4	14	8
Mr. J. Dix, Hull, R.	5	15	8
Dr. G. F. Duffey, Dublin, R.	3	11	4
Dr. W. A. Elliston, Ipswich, R.	4	7	4
Dr. C. E. Glascott, Manchester, R.	5	7	5
Dr. C. Holman, Reigate, R.	5	15	11
Mr. A. Jackson, Sheffield, R.	5	17	7
Mr. F. Mason, Bath, R.	5	11	9
Dr. F. Needham, Gloucester, R.	4	7	4
Dr. A. Strange, Shrewsbury, R.	4	7	4
Dr. W. Strange, Worcester, Vice-President	5	13	6
Dr. T. W. Trend, Southampton, R.	5	10	4
Dr. W. T. Edwards, Cardiff, President	4	27	7
Dr. B. Anningson, Cambridge, R.	3	7	3
Mr. J. W. Baker, Derby, R.	3	7	3
Dr. H. Barnes, Carlisle, R.	2	7	2
Mr. B. Barrow, Ryde, Vice-President	2	7	2
Mr. H. T. Butlin, London, R.	4	2	6
Dr. A. H. Carter, Birmingham, R.	3	7	3
Dr. P. M. Deas, Exeter, R.	4	9	4
Dr. J. L. H. Down, London, R.	4	2	6
Dr. B. Goff, Bothwell, R.	3	2	5
Mr. G. F. Hodgson, Brighton, R.	3	8	4
Professor G. M. Humphry, F.R.S., Cambridge, Vice-President	3	3	4
Mr. W. D. Husband, Bournemouth, Vice-President	3	1	4
Mr. T. R. Jessop, Leeds, R.	4	7	4
Dr. D. J. Leech, Manchester, R.	2	11	1
Mr. J. Prankerd, Bath, R.	3	9	4
Mr. J. Taylor, Chester, R.	4	7	4
Dr. G. B. Barron, Southport, R.	2	7	2
Dr. M. M. de Bartolomé, Sheffield, Vice-President	2	9	4
Mr. T. W. Crosse, Norwich, R.	3	7	3
Dr. J. Cuming, Belfast, Vice-President	1	9	1
Dr. A. Dempsey, Belfast, R.	1	7	1
Dr. D. Drummond, Newcastle-on-Tyne, R.	1	7	1
Sir H. W. Acland, K.C.B., M.D., Oxford, Vice-President	0	7	0
Mr. A. Baker, Birmingham, Vice-President	0	6	0
Dr. Bryan, Northampton, R.	0	7	0
Sir G. Burrows, Bart., London, Vice-President	0	7	0
Dr. J. Chiene, Edinburgh, R.	0	7	0
Dr. A. Locher, Canterbury, Vice-President	0	7	0
Dr. D. Macintyre, Portwilliam, R.	0	7	0
Dr. J. Moore, Belfast, R.	0	7	0
Professor D. C. O'Connor, Cork, Vice-President	0	7	0
Sir G. E. Paget, F.R.S., Cambridge, Vice-President	0	7	0
Dr. G. H. Philipson, Newcastle-on-Tyne, R.	1	7	1
Dr. W. F. Wade, Birmingham, Vice-President	0	7	0
Dr. A. T. H. Waters, Liverpool, Vice-President	0	7	0
Mr. W. B. Young, Reading, R.	0	7	

At a meeting of the Council for 1886-87 held in the Music Room, Royal Pavilion, Brighton, on Wednesday, August 11th, 1886, present,—

Sir B. Walter Foster, President of the Council, in the chair;

Dr. W. Withers Moore, President, Brighton
Mr. C. Macnamara, Treasurer, London
Mr. J. W. Baker, Derby
Dr. G. B. Barron, Southport
Dr. T. Bridgwater, Harrow
Mr. H. T. Butlin, London
Dr. C. Chadwick, Tunbridge Wells
Surgeon-General Cornish, London
Dr. J. W. Ward Cousins, Southsea
Mr. T. W. Crosse, Norwich
Dr. G. W. Crowe, Worcester
Dr. J. Cuming, Belfast
Dr. A. Davidson, Liverpool
Dr. P. M. Deas, Exeter
Mr. J. Dix, Hull
Dr. J. L. H. Down, London
Dr. W. A. Elliston, Ipswich
Dr. C. E. Glascott, Manchester
Dr. Bruce Goff, Bothwell
Dr. Ogilvie Grant, Inverness
Mr. G. F. Hodgson, Brighton
Mr. A. Jackson, Sheffield
Mr. T. V. Jackson, Wolverhampton
Mr. T. R. Jessop, Leeds
Dr. W. M. Kelly, Taunton
Mr. H. R. Ker, Halesowen
Mr. F. Mason, Bath
Mr. W. Jones-Morris, Portmadoc
Dr. F. Needham, Gloucester
Dr. C. Parsons, Dover
Dr. A. Sheen, Cardiff
Mr. S. W. Sibley, London
Dr. A. Strange, Shrewsbury
Dr. W. Strange, Worcester
Mr. T. Sympson, Lincoln
Mr. J. Taylor, Chester
Dr. T. W. Trend, Southampton
Mr. F. Wallace, London
Mr. C. G. Wheelhouse, Leeds
Mr. A. Winkfield, Oxford

The minutes of the last meeting were read, and, having been amended, were signed as correct.

Read the names of the Representatives elected by the Branches, as follows, namely:

Aberdeen, Banff, and Kincardine Branch.—No return. *Bath and Bristol Branch.*—F. Mason, Esq., Bath; E. Markham Skerritt, M.D., Clifton, Bristol. *Birmingham and Midland Counties Branch.*—Hugh R. Ker, Esq., Halesowen; Robert Saundby, M.D., Birmingham. *Border Counties Branch.*—Henry Barnes, M.D., Carlisle. *Cambridge and Huntingdon Branch.*—Bushell Anningson, M.D., Cambridge. *Dorset and West Hants Branch.*—W. G. Vawdrey Lush, M.D., Weymouth. *Dublin Branch.*—George F. Duffey, M.D., Dublin. *East Anglian Branch.*—T. W. Crosse, Esq., Norwich; W. A. Elliston, M.D., Ipswich. *East York and North Lincoln Branch.*—J. Dix, Esq., Hull. *Edinburgh Branch.*—G. A. Gibson, M.D., Edinburgh. *Glasgow and West of Scotland Branch.*—Bruce Goff, M.D., Bothwell. *Gloucestershire Branch.*—F. Needham, M.D., Gloucester. *Lancashire and Cheshire Branch.*—G. B. Barron, M.D., Southport; A. Davidson, M.D., Liverpool; C. E. Glascott, M.D., Manchester; James Hardie, M.D., Manchester; James Taylor, Esq., Chester. *Metropolitan Counties Branch.*—Thomas Bridgwater, M.B., Harrow; W. Chapman Grigg, M.D., Curzon Street; H. T. Butlin, Esq., Queen Anne Street; Septimus W. Sibley, Esq., Harley Street; Frederick Wallace, Esq., Cazenove Road, Upper Clapton. *Midland Branch.*—J. Wright Baker, Esq., Derby; T. Simpson, Esq., Lincoln. *Northern Counties of Scotland Branch.*—Ogilvie Grant, M.B., Inverness. *North of England Branch.*—David Drummond, M.D., Newcastle-on-Tyne; G. E. Williamson, Esq., Newcastle-on-Tyne. *North of Ireland Branch.*—A. Dempsey, M.D., Belfast; J. Moore, M.D., Belfast. *North Wales Branch.*—W. Jones-Morris, Esq., Portmadoc. *Oxford Branch.* Alfred Winkfield, Esq., Oxford. *Reading Branch.*—W. B. Young, Esq., Reading. *Shropshire and Mid-Wales Branch.*—A. Strange, M.D., Bicton Heath, Shrewsbury. *Southern Branch.*—J. Ward Cousins, M.D., Southsea; Theophilus W. Trend, M.D., Southampton. *South of Ireland Branch.*—No return. *South-Eastern Branch.*—C. Holman, M.D., Reigate; G. F. Hodgson, Esq., Brighton; C. Parsons, M.D., Dover. *South Indian and Madras Branch.*—Surgeon-General W. R. Cornish, M.D., Cresswell Gardens. *South Midland Branch.*—J. M. Bryan, M.D., Northampton. *South Wales and Monmouthshire Branch.*—A. Sheen, M.D., Cardiff. *South-Western Branch.*—P. M. Deas, M.B., Exeter. *Staffordshire Branch.*—T. Vincent Jackson, Esq., Wolverhampton. *Thames Valley Branch.*—J. Langdon H. Down, M.D., Harley Street. *West of Ireland Branch.*—No return. *West Somerset Branch.*—W. M. Kelly, M.D., Taunton. *Worcestershire and Herefordshire Branch.*—G. W. Crowe, M.D., Worcester. *Yorkshire Branch.*—A. Jackson, Esq., Sheffield; T. R. Jessop, Esq., Leeds.

The President of the Council reported that no invitation for holding the annual meeting had been received for 1887.

Resolved: "That it be recommended to the general meeting of to-day that it be referred to the Council to arrange for the annual meeting of 1887, and that the Council be empowered to appoint a President-elect."

Dr. Bruce Goff reported that, at meetings of the medical profession of Glasgow, it had been decided to give an invitation to the Association to hold the Annual Meeting of 1888 at Glasgow.

Resolved: "That the Council authorise the payment of £4,500 for the premises lately held by the Briton Medical Insurance Company, and purchased by the solicitor on behalf of the Association."

Resolved: "That a prize of £20 be awarded to Dr. Ward Cousins for his invention of a sound-deadener, for which the award of the Association of this sum was made at the annual meeting of 1883."

Dr. Bruce Goff gave notice that he would move at the next Council meeting, that it be an instruction to the Council to take means to ascertain the feeling of the branches in regard to the payment of the travelling expenses of representatives on the Council only to the four London meetings of the Council.

At a meeting of the Council, held in the Music Room, Royal Pavilion, August 12th, 1886; Present,—

Sir B. Walter Foster, President of Council, in the chair;

Dr. W. Withers Moore, President, Brighton	Mr. A. Jackson, Sheffield
Mr. C. Macnamara, Treasurer, London	Mr. T. V. Jackson, Wolverhampton
Dr. G. B. Barron, Southport	Mr. T. R. Jessop, Leeds
Dr. T. Bridgwater, Harrow	Mr. W. M. Kelly, Taunton
Dr. C. Chadwick, Tunbridge Wells	Mr. H. R. Ker, Halesowen
Dr. J. Ward Cousins, Southsea	Mr. F. Mason, Bath
Mr. T. W. Crosse, Norwich	Mr. W. Jones-Morris, Portmadoc
Dr. G. W. Crowe, Worcester	Dr. F. Needham, Gloucester
Dr. A. Davidson, Liverpool	Dr. C. Parsons, Dover
Dr. P. M. Deas, Exeter	Mr. S. W. Sibley, London
Mr. John Dix, Hull	Dr. A. Strange, Shrewsbury
Dr. J. L. H. Down, London	Dr. W. Strange, Worcester
Dr. W. A. Elliston, Ipswich	Mr. T. Sympson, Lincoln
Dr. C. E. Glascott, Manchester	Mr. J. Taylor, Chester
Dr. Bruce Goff, Bothwell	Dr. T. W. Trend, Southampton
Dr. Ogilvie Grant, Inverness	Mr. F. Wallace, London
Dr. Holman, Reigate	Mr. C. G. Wheelhouse, Leeds
	Dr. A. Winkfield, Oxford

The minutes of the last meeting were read and found correct.

A deputation from Leeds invited the Association to hold its annual meeting of 1889 in that town.

Resolved: "That the Council recommend to the favourable consideration of its successors the invitation to hold the annual meeting of 1889 in Leeds."

A deputation from a meeting held on Wednesday, August 11th, attended the Council, and urged the desirability of forming a Medical Defence Association in connection with the British Medical Association.

The President of the Council stated to the deputation that the matter should, at an early date, have the careful consideration of the Council.

The appointment of the Journal and Finance Committee was then considered.

The President of the Council reported that the three retiring members were Mr. Mason, Dr. Holman, and Dr. W. Strange, and that Dr. Leech was taken off as no longer representing the Lancashire and Cheshire Branch. Seven gentlemen having been nominated, a ballot was taken, and the following gentlemen were declared to be elected: namely, Mr. Wheelhouse, Mr. Hugh Ker, Dr. Parsons, Dr. Bridgwater.

Resolved: "That the remaining members of the Journal and Finance Committee be re-appointed, namely, the President and the President-elect *ex-officio;* Sir B. Walter Foster, M.D., President of the Council; C. Macnamara, Esq., Treasurer; C. Chadwick, M.D.; J. Ward Cousins, M.D.; A. Davidson, M.D.; G. F. Duffey, M.D.; Bruce Goff, M.D.; W. Chapman Grigg, M.D.; T. Vincent Jackson, Esq.; A. Sheen, M.D.; S. W. Sibley, Esq.; T. Sympson, Esq.; E. Waters, M.D."

Resolved: "That the gentlemen whose names are as follows be appointed the Parliamentary Bills Committee: J. Wight, M.D.; A. J. Harrison, M.B.; R. Tiffen, M.D.; D. B. Balding, Esq.; A. McMillan, M.D.; G. A. Gibson, M.D.; Bruce Goff, M.D.; R. Harrison, Esq.; W. R. Heath, Esq.; Ogilvie Grant, M.D.; G. H. Philipson, M.D.; R. Esler, M.D.; James Stuart, M.D.; T. Eyton-Jones, M.D.; H. H. Phillips, Esq.; J. R. Humphreys, Esq.; C. Holman, M.D.; R. W. Watkins, Esq.; P. M. Deas, M.B.; C. Orton, M.D.; W. D. Spanton, Esq.; J. L. H. Down, M.D.; J. Prankerd, Esq.; G. W. Crowe, M.D.; W. Strange, M.D.; Arthur Jackson, Esq.; H. Barnes, M.D.; Robert Barnes, M.D.; J. Wickham Barnes, Esq.; J. W. Browne, M.D.; J. C. Bucknill, M.D.; A. Carpenter, M.D.; Deputy Chairman; Walter Dickson, M.D.; Surgeon-Major G. J. H. Evatt; Sir B. Walter Foster, M.D.; W. C. Grigg, M.D.; C. H. Rogers Harrison, Esq.; Ernest Hart, Esq., Chairman and Convener; A. Henry, M.D.; A. Kidd, M.D.; C. Macnamara, Esq.; W. J. Mickle, M.D.; D. Nicolson, M.D.; O. E. Owen, Esq.; Joseph Rogers, M.D.; S. W. Sibley, Esq.; George Slight, M.D.; F. Wallace, Esq.; E. Whittle, M.D."

Resolved: "That the gentlemen whose names are as follows be appointed the Scientific Grants Committee: The President and the President-elect *ex-officio;* Sir B. W. Foster, M.D., President of Council; C. Macnamara, Esq., Treasurer; Sir Joseph Lister, Bart., F.R.S., Chairman; Alfred Baker, Esq.; H. T. Butlin, Esq.; A. Davidson, M.D.; D. Ferrier, M.D., F.R.S.; Professor Michael Foster, M.D., F.R.S.; A. Gamgee, M.D., F.R.S.; Professor G. M. Humphry, M.D., F.R.S.; A. Jackson, Esq.; E. Klein, M.D., F.R.S.; Sir James Paget, Bart., F.R.S.; C. Parsons, M.D.; Professor Rutherford, M.D., F.R.S.; Professor Burdon Sanderson, M.D., F.R.S.; Professor E. A. Schäfer, F.R.S.; S. W. Sibley, Esq.; S. Wilks, M.D., F.R.S.; Ernest Hart, Esq."

Resolved: "That the gentlemen whose names are as follows be appointed the Committee on Legislative Restriction for Habitual Drunkards: The President and the President-elect *ex-officio;* Norman S. Kerr, M.D., Chairman; Sir B. W. Foster, M.D., President of Council; D. B. Balding, Esq.; H. Branthwaite, Esq.; C. Cameron, M.D., M.P.; A. Carpenter, M.D.; C. R. Drysdale, M.D.; J. W. Eastwood, M.D.; Surgeon-Major G. J. H. Evatt; R. Farquharson, M.D., M.P.; W. C. Garman, Esq.; J. Hill Gibson, M.D.; Alex. Grant, M.D.; C. J. Hare, M.D.; C. Holthouse, Esq.; H. R. Ker, Esq.; R. H. B. Nicholson, Esq.; Surgeon-Major G. K. Poole, M.D.; J. Prankerd, Esq.; Fleet-Surgeon G. Robertson, R.N.; Joseph Rogers, M.D.; G. D. P. Thomas, M.D.; H. W. Williams, M.D.; Surgeon-General C. R. Francis, Honorary Secretary; E. H. Vinen, M.D., Honorary Secretary."

Resolved: "That the gentlemen whose names are as follows be appointed the Trust Funds Committee: The President and the President-elect *ex-officio;* Sir B. W. Foster, M.D., President of Council; C. Macnamara, Esq., Treasurer; Alfred Baker, Esq.; C. Chadwick, M.D.; W. D. Husband, Esq.; E. Waters, M.D.; C. G. Wheelhouse, Esq."

Resolved: "That the gentlemen whose names are as follows be appointed the Collective Investigation Committee: The President and the President-elect *ex-officio;* Sir B. W. Foster, M.D., President of Council; C. Macnamara, Esq., Treasurer; Professor Humphry, F.R.S.; H. G. Barling, M.D.; R. L. Bowles, M.D.; T. Bridgwater, M.B.; H. T. Butlin, Esq.; A. Carpenter, M.D.; J. Ward Cousins, M.D.; Sir Dyce Duckworth; G. F. Duffey, M.D.; J. E. Eddison, M.D.; W. P. Herringham, M.B.; Jonathan Hutchinson, Esq., F.R.S.; A. Jackson, Esq.; D. J. Leech, M.D.; A. Sheen, M.D."

Resolved: "That the gentlemen whose names are as follows be appointed the Premises Committee: Sir B. W. Foster, M.D., President of Council; C. Macnamara, Esq., Treasurer; T. Bridgwater, M.B.; C. Chadwick, M.D.; S. W. Sibley, Esq."

Resolved: "That the gentlemen whose names are as follows be appointed the Committee on Branch Organisation: Surgeon-General Cornish; J. Ward Cousins, M.D.; J. Cuming, M.D.; J. Langdon H. Down, M.D.; Sir B. W. Foster, M.D., President of Council; W. C. Grigg, M.D.; A. Jackson, Esq.; D. C. McVail, M.D.; C. Parsons, M.D.; T. W. Trend, M.D."

Resolved: "That five of the candidates whose names appeared in the Daily Journal of August 12th, all resident abroad, be and they are hereby elected Members of the Association."

Resolved: "That it be an instruction to the Council to take means to ascertain the feelings of the Branches in regard to the payment of the travelling expenses of representatives on the Council only to the four London meetings of the Council."

Read letter from the Solicitor, reporting that he had purchased, on behalf of the Association, the lease of the premises formerly occupied by the Briton Medical General Assurance Association, 429, Strand, London, for £4,500, but that he had been unable to purchase the lease of the adjoining premises, 2 and 3, Agar Street, for the limit fixed by the Premises Subcommittee.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Resection of Lung, and Removal of a Kidney.—The Toxic Properties of Febrile Urine.—An Outbreak of Small-pox.—Consumption of Alcohol.—General News.

N. Demons read an interesting note at a recent meeting of the Paris Surgical Society. An adult was stabbed between the ninth and tenth ribs. A portion of the lung-tissue protruded, and formed a mass about as large as an apple. The same day, the patient passed blood with his urine. M. Demons resected, by means of the *écraseur*, the hernial portion of lung, and applied the thermo-cautery. Some days after the operation, there was purulent effusion on the left side of the thorax; the fluid was proved to consist principally of urine. Nephrectomy was performed in the lumbar region, section of the twelfth rib being carefully avoided. The pedicle of the kidney was divided and carefully tied; the wound was sutured with metallic threads. Union took place by first intention, but, two months subsequently, a bundle of cellular tissue sloughed away, and opened the

cicatrix. It is now six months since the operation was performed, and recovery appears to be perfectly established.

M. Feltz, of Nancy, has forwarded to the Académie des Sciences a paper, in which he states that, in a former work by him and the late Professor Ritter, which gained the Godard prize in 1884, it was demonstated that normal fresh urine, well filtered and heated to 33° cent. (91.4° Fahr.), and of a density varying from 1018 to 1020, is toxic to dogs if the quantity injected into the veins be equal to three times the volume of urine secreted by them in twenty-four hours. The weight of this quantity is, with some slight variations, above one-fifteenth of the weight of the animal. The symptoms, which are thus caused, are identical with those determined in dogs, when the urinary secretion is prevented. MM. Ritter and Feltz were, by the result of their experiments, published in their memoir of 1881, led to suppose that the toxicity of normal urine increases with its density; also that the principal toxic agent in normal urine is contained in its inorganic substances rather than in its organic, and especially in its potassium salts. Professor Feltz has recently made a fresh series of experiments with the view of ascertaining the action of certain kinds of human pathological urine. The action of febrile urine was first studied. Fourteen dogs were experimented on, and in all much smaller quantities produce uræmic symptoms than would have been possible with normal urine. The toxic power of febrile urine has no relation to its density. Urine of a density of 1007 may be as toxic as urine of density 1024. This is very evident in the urine of typhoid and rheumatic patients. Thus there are, in pathological urine, agents which are either absent in normal urine, or present only in very small quantities.

Dr. Auguste Ollivier has investigated the origin of an epidemic of small-pox which broke out at Saint Denis, about a hundred yards from the small-pox hospital. At a recent meeting of the Council of Hygiene, Dr. Ollivier made the following statement. The first case of small-pox appeared in January at a house on the road to Aubervilliers. A second case occurred a few days later in a neighbouring street. During March, May, April, and June, other people were seized in different neighbourhoods distant from each other. Some of these were removed to the hospital. There were as many private cases as those admitted into the small-pox hospital. The neighbourhood which constituted the focus of contagion is densely populated, and is bordered on one side by a dirty gutter. Dr. Ollivier thinks that the close proximity of the small-pox hospital was an important factor in the origin of the epidemic, and proposes that the hospital authorities shall be called upon to keep the isolated pavilions used by the patients in a state of scrupulous cleanliness; also, that a disinfecting stove should be set up. He further desires that parents should be reminded of the necessity of having their children vaccinated, and that the gutter be cleansed and kept clean.

At a recent meeting of the Academy of Medicine, M. Rochard read a report drawn up by the commission appointed by the Academy to investigate the question of alcohol and hygiene. The report stated that during the last forty years the consumption of alcohol has doubled, and alcoholism has increased to an alarming extent. The alcohols used in the manufacture of wine are so inferior in quality, that they are highly injurious to the public health. The alcohols extracted from beetroots, potatoes, and cereals, contain a large proportion of deleterious principles, which are not removed by imperfect distillation. Italian and Spanish wines contain a large proportion of these injurious alcohols.

A new medical journal has appeared under the name of *Jornal de Médecina e de Pharmacia*. It appears the 5th and 25th of every month. It is written in Portuguese, and is published at 71, Rue de Rennes, Paris.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Casey versus Imlach: Application for a New Trial.—Charge of threatening another Member of the Staff of the Women's Hospital.—Noble's Isle of Man Hospital.—Purchase of Netherfield Hospital.

AFTER several postponements, the case against Dr. Imlach has at last been heard; and, as was anticipated, at all events by those who knew the facts of the case, Dr. Imlach secured the verdict. His senior counsel, Mr. Bigham, Q.C., in applying for costs, for which the judge duly certified, said that he feared his client would have but little chance of obtaining them. But in spite of the apparently very poor position occupied by the Caseys, it is now stated that notice of an application for a new trial has been given by the plaintiff, on the grounds that the verdict was against the weight of evidence; and also, that, in accordance with the admitted facts, the plaintiff was entitled to a verdict, the husband not having been informed of the intended operation before it was performed. I hear that the case will be tried before three judges in the course of two or three months' time.

On Saturday last, Franz Hoeffner, described as an artist, was brought up at the police-court, before the deputy stipendiary, charged with having threatened to assault Dr. Burton, Surgeon to the Hospital for Women, Shaw Street. It was stated in court that the proceedings arose out of the recent trial at the Assizes of Casey *v.* Imlach. It seems that last year, the prisoner's wife became an in-patient at the hospital, suffering from some internal complaint. She was successfully operated upon by Dr. Burton, and was in due course discharged cured. In March of this year, the prisoner wrote to thank Dr. Burton for the benefit his wife had derived from his treatment. A few days ago, Dr. Burton received another letter from the prisoner, couched in the most violent language, and challenging him to a duel. This letter was read in court, and the case remanded for a week.

The foundation-stone of the Isle of Man Hospital and Dispensary, presented to the island by Mr. and Mrs. Noble, and which is to be called "Noble's Isle of Man Hospital," was laid at the end of last month by Mrs. Noble, in the presence of the Bishop and other influential residents. The building is to consist of two pavilions, connected by a block containing rooms for the resident staff, operating-theatre, boardroom, etc. The dispensary will be on the ground-floor of one of the pavilions. The hospital will accommodate, in all, thirty-six patients, this number being inclusive of four private patients, and also of four lock cases. The cost of erection is to be £4,038. At the ceremony, the possibility, at no distant date, of providing a convalescent institution for the Isle of Man was referred to by one of the speakers.

At a recent meeting of the Hospitals Special Committee of the City Council, a resolution was passed recommending the purchase of the Netherfield Road Fever Hospital. To meet the requirements of the Liverpool Improvement Act, 1886, the committee are further authorised to negotiate for the purchase of sufficient surrounding land to provide a zone of forty feet in width round the building.

CORRESPONDENCE.

☞ TO CORRESPONDENTS. ☜

OUR correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the JOURNAL, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return, and hold over a great number of communications, chiefly by reason of their unnecessary length.

THE LATE DR. MOXON.

SIR,—As an old Guy's man, who has felt deeply the death of Dr. Moxon, may I be allowed to express a hope that steps will be taken to perpetuate his memory at the hospital he so adorned? Guy's Hospital has suffered terribly by the loss of Moxon and Fagge in so short a time, and, as men have gladly shown their esteem and veneration for the latter, so would they wish for a like opportunity now. Moxon and Hilton Fagge were as totally unlike in their method of teaching as two men could well be, but they were alike in that they spent their lives in advancing the school and the profession they loved so well; and personally I fail to decide which of the two men I esteemed most highly, or from whom I learnt most, but to both I owe a deep debt of gratitude.—I am, sir, yours faithfully,

J. FARRANT FRY.

Swansea.

PUERPERAL INSANITY.

SIR,—In an address by me on "Puerperal Insanity," published in the BRITISH MEDICAL JOURNAL of August 7th, I find I am in error in attributing to Dr. Batty Tuke the classification of the insanities connected with reproduction into the "insanity of pregnancy," "puerperal insanity," and "insanity of lactation."

Dr. Batty Tuke's papers, published in the *Edinburgh Medical Journal* in 1865, are, no doubt, the first practical writings under these heads; but the arrangement and classification are those of Dr. Skae, and were published by him in 1863, in his address delivered as President of the Medico-Psychological Association.—I am, sir, yours obediently,

M. D. MACLEOD.

Beverley.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

SIR,—The report of the Royal Medical Benevolent College, for 1885, quite recently issued, deserves, I venture to think, special notice at your hands.

The Governors will certainly unite with the Council in thankful appreciation of the success which attended their biennial festival, held in May last, and heartily second the expression of thanks to its President, Sir Andrew Clark, for his generous advocacy of the College. They will also, I am sure, congratulate the Council on the successful commencement of his duties by the new head-master. It may be confidently hoped that the school will, under his experienced and judicious management, rapidly take its proper place among the public schools of the country.

I may also refer to the gratifying state of that item of the college income which bears the burthen of the benevolent part of its work. The Council assure us that the balance-sheet for 1886 will record (in their next report) the gratifying financial result of this year's festival. No less satisfactory is it to gather from this year's report, that the annual subscriptions, a source of income the most important and reliable, have risen from £2,554 in 1883, to £2,950 in 1885.

I shall not be wrong in attributing this satisfactory increase to an improved organisation, carried out by the zealous efforts of Mr. Warren. The Council announced to us last year the temporary engagement of this gentleman to revive the organisation of a system of local secretaries throughout the country, which, it must be acknowledged, had certainly fallen somewhat out of working order.

I can bear testimony to the useful work and judicious efforts of this gentleman, in the cause of the College, from having repeatedly been brought into contact with local secretaries and country subscribers. Furthermore, I would bespeak for Mr. Warren the cordial co-operation of the members of our profession, so that he may have an increasing success in the completion of the task he has undertaken.

You, Sir, have already alluded to that portion of the report touching the election of the pensioners and foundation-scholars; and I can only desire to express satisfaction, in which many will join, in noting that this year, in marked contrast to the election of 1885, the candidates recommended by the Committee of Investigation were to a large extent accepted, affording good grounds for hope that in future the candidates thus recommended may be generally successful.

This result is doubtless in great part due to the support given by you to the circular issued by the Election Reform Committee, in March last, to the governors of the College. This circular reminded the subscribers that it rested with themselves to ensure the success of the recommended candidates by voting for them, and for them alone.

I beg leave to close this letter by acknowledging the wise and self-denying labours of the Council, and in wishing to those labours a complete success.—I remain, Sir, your most obedient servant,

JABEZ HOGG.

REMOTE EFFECTS OF REMEDIES.

SIR,—No one can peruse the able address delivered by Dr. Broadbent before the Section of Medicine, at Brighton, without being powerfully impressed by it. The remote effects of what purchases "present ease," is a matter far too little regarded in medicine. What the patient wants is to get relief from pain, or some other immediate trouble. The future lies beyond the sphere of his vision, and, when pointed out, is not always particularly acceptable to him. A marked instance came before me recently, in the person of a gouty man. On my pointing out to him the evils which lay before him, he listened patiently and politely, and then remarked: "It is very good of you, doctor, so be so thoughtful about my future; but I am thinking more of my present." And, no doubt, he was spokesman for a large class of patients. They do not care to look beyond the immediate present, or to subordinate it to the future; nor do they give their medical men any encouragement to look to the remoter consequences of the remedial agents employed, provided they act immediately.

Dr. Broadbent has handled the subject with consummate ability; but one matter there is to which he has not alluded—doubtless on the score of time—which is so important, and of such everyday occurrence, that it seems to me well to allude to it now, when Dr. Broadbent has drawn attention to the above topic. It is the use of opiates to relieve cough. When the poor, worn, emaciated consumptive is racked with cough, which almost shakes the frame to pieces, it would be cruelty to withhold the welcome soothing cough linctus. But it is a very different matter to give opium or morphine to allay a cough which is little more than troublesome. To sip a cough linctus at frequent intervals, or to take a cough lozenge from time to time during the day, is often a most pernicious practice. The sedative carries with it its all-round action, and the liver and digestive organs feel its paralysing influence.

So much harm have I seen done by the poisonous cough linctus, that it is banned in my wards at Victoria Park Hospital; with only one exception, namely, when the case is hopeless. But so long as there is a prospect of life, I never throw the chance away, nor blot it out by handicapping the assimilative organs by the crippling effect of continuous sedatives. My rule may be too hard and fast in the opinions of some others who act differently, but it gives good results. When the cough prevents sleep, a narcotic at bedtime may be indicated; but this is far less objectionable, possibly as the digestive organs are resting at that time; and it is possible, too, to counteract any evil effect by adding an agent like aloes, which is an hepatic stimulant, as well as acting on the bowels. But opiates during the day are a slow poison in cases where the great aim is to improve the nutrition.

The old adage, "to strike when the iron is hot," must be my apology for trespassing upon your space at this time.—I remain, Sir, yours faithfully,

J. MILNER FOTHERGILL.

HISTORY OF MEDICINE AS A BRANCH OF PROFESSIONAL EDUCATION.

SIR,—May I suggest, while the scheme for granting medical degrees for London students is still under consideration, that a very suitable item in the requirements for a title which should be something more than a mere licence to practise, would be an acquaintance on the part of candidates with the history and progress of medicine.

One is not disposed to deny that a man may be perfectly capable of opening an abscess or expressing a placenta, without knowing anything of the theories of the medical schools, or the vagaries of bloodletters and water-doctors; but it is certainly to be desired that a man who aspires to the higher ranks of the profession should be conversant with, at any rate, the more salient facts which have advanced or retarded the progress of medicine in the past.

Such knowledge is not by any means without its value; history repeats itself; and one of the surest methods of avoiding error in the present and in the future is to cultivate an acquaintance with the mistakes of those who have preceded us on the difficult and uncertain path of progress and research.

The subject is one which might well form part of the classical education to be exacted from future aspirants. At present, beyond a vague notion of a gentleman called Hippocrates, and of another called Galen, most medical men know little, and would be sorely plagued if a patient more than usually erudite ventured to allude to the subject.—I am, sir, your obedient servant,

ALFRED S. GUBB.

14, College Park Terrace, Kensal Town, W.

"THE STRANGERS' COLD."

SIR,—I see, in the JOURNAL of August 7th, some correspondence on the catarrh which is stated by Dr. Macdonald to attack the inhabitants of St. Kilda on the arrival of vessels with passengers. It has been suggested that "germs" may explain the matter, and that no explanation is necessary, as the idea is a mere myth. A clever and probably correct solution may be found in a footnote in the Auchinleck edition of Boswell's *Life of Johnson*, vol. i, p. 345; it is as follows.—"Dr. John Campbell, the celebrated writer, took a great deal of pains to ascertain this fact, and attempted to account for it on physical principles, from the effect of effluvia from human bodies. A lady of Norfolk, by a letter to my friend Dr. Burney, has favoured me with the following solution: 'Now for the explication of this seeming mystery, which is so very obvious, as, for that reason, to have escaped the penetration of Dr. Johnson and his friend, as well as that of the author. Reading the book with my ingenious friend, the late Rev. Mr. Christian of Dorking—after ruminating a little, 'The cause' (says he) 'is a natural one. The situation of St. Kilda renders a north-east wind indispensably necessary before a stranger can land. The wind, not the stranger, occasions an epidemic cold.'"

I hope this simple theory will commend itself to Dr. Macdonald, and am, Sir, yours truly,

Clifton. G. MUNRO SMITH.

A SUPPOSED CAUSE OF HERNIA.—M. Aubert, in a demographic report, read before the Académie de Médecine, stated that hernia was very frequent among the natives of le Bocage, a locality in La Vendée. This he attributed to the necessity of constantly climbing or jumping over the hedges which separate the fields.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE ACTION AGAINST DR. IMLACH, OF LIVERPOOL.

On August 6th and 7th, at the Liverpool Assizes, before Mr. Justice Cave and a special jury, an action was heard in which John Casey, and his wife, Mary Casey, sought to recover damages from Francis Imlach, surgeon, for performing improperly an operation on the female plaintiff, without her consent. The defendant in his pleadings denied the allegation. Mr. French, Q.C., and Mr. Walton were for the plaintiffs, and Mr. Bigham, Q.C., and Mr. Butler for the defendant.

Mr. French, in opening the case, said the plaintiff, John Casey, was formerly a sailor. The female plaintiff was married to him in 1874, and her complaint against the defendant was that, whilst she was an invalid at the hospital for women in Soho Street, at which he was the senior surgeon, he performed upon her an operation of a very grave character, seriously affecting her after-life, without giving her any information as to the nature of the operation, or as to what its after-results upon her would be. A further complaint was that the operation itself was an unnecessary one. Removal of the uterine appendages, that is, the ovaries and their ducts, was an operation not long known in surgery, and one which so seriously affected a woman that it was not had recourse to by surgeons except under circumstances of the gravest necessity in certain classes of disease, for the purpose of saving human life. He then related the circumstances under which Mrs. Casey became the patient of Dr. Imlach, and what occurred in relation to his attendance. Mrs. Casey was married in the year 1874, and had had five children, four of whom died in birth. Her health was fairly good up to the year 1881. In March of that year, she began to suffer from pains in the lower portion of her stomach, and consequently called at the Lying-in Hospital, which then existed in Myrtle Street. She was there attended by Dr. Burton, and the pains disappeared. She remained in good health for upwards of two years, until the month of April, 1883, when she was attended for inflammation of the bowels by Dr. Utting, who gave her medicine which brought her no relief; and afterwards she became an outdoor patient of the Hospital for Women. The woman remained under Dr. Imlach's care as an outdoor patient for a period of about two months, from June to August. During that time she was under medical treatment, but did not undergo any bodily examination or surgical operation. At the end of that treatment, the pains disappeared, and she remained well until December, 1884. On the 7th or 8th of that month, she again felt very ill from pains similar to those she had previously experienced; and, on the 15th, Dr. Imlach examined her. After the examination, the doctor told her she was suffering from inflammation of the womb; that the case was a serious one; that it would be necessary to perform an operation to bring down the inflammation; and that, if she did not submit to the operation, the case was a "gone one" in six months. He further told her that she would require to remain in hospital for three weeks, but not one word as to the nature of the operation—that she was to be unsexed. The female plaintiff went into the hospital on December 18th; and Dr. Imlach, without any further communication with her or her friends, and without calling into consultation the senior medical officer of the hospital, according to the hospital regulations, himself performed the operation known as ovariotomy upon the woman. She remained in the hospital until December 31st, when she was discharged, and for some time afterwards became an outdoor patient. As a result of the operation, her bodily system was entirely altered, but the pains from which she had previously suffered disappeared. In the month of January, 1886, about twelve or fourteen months after the operation was performed, she called on Dr. Imlach at his house, and then for the first time heard what was the exact nature of the operation, and what her position in life had become. After that, the woman was for some time under the care of Dr. Wallace. One painful circumstance in connection with the case was that, according to his instructions, what medical men would expect to follow from an operation of this kind had actually occurred, and the result had been a change not only in her own life, but in the life of her husband. Apart altogether from the degree of information which a medical man should give to his patient, another complaint in this case was that the operation was entirely unnecessary. Dr. Imlach, a surgeon not of very long standing, had become very skilful in his profession. He had had great experience in surgical cases, and had performed this novel operation very frequently. The operation was one which had had not more than from twelve to fifteen years' existence in this country, and among the body of surgeons there was not any large number who practised it. The defendant, as surgeon, made the usual entry in his notebook at the time of the operation, and described it as being for hæmatocele and hæmatosalpinx. Mr. Lawson Tait, of Birmingham, was, he believed, the founder in England of this school of surgery, and there was a passage in his writings in which he condemned the removal of—

Mr. Bigham: We cannot have what a gentleman writes; Mr. Lawson Tait will probably be here to give his evidence.

Mr. French (continuing) thought he would be able to show that Mrs. Casey's disease did not justify the performance of the operation. In support of that view, he would be able to call before them a number of unwilling witnesses, well known and eminent medical men in Liverpool, who would give their views as to the course of treatment followed by the defendant. He did not propose to enter into any question of dispute or discussions which had arisen, but he could not ignore the fact that there had been a great deal of discussion among medical men, throwing light upon this question.

Mary Casey, the plaintiff, was then called, and described her visits to Dr. Wilson, Dr. Utting, Dr. Burton, and Dr. Imlach. On December 8th, 1884, she went to see Dr. Imlach about a pain from which she was suffering, and he, for the first time, examined her. He then told her she would have to undergo an operation. She asked him what was the matter with her, and he replied that it was inflammation just outside the womb. She entered the Hospital for Women on December 15th; and, on the 17th, she was again examined by Dr. Imlach. On the 18th she was taken into the operation-room, and ether was administered to her. She thought four or five doctors were present, and the next she remembered was that she was lying in the special ward. As to the nature of the operation, and its results, she was never told by Dr. Imlach, or anyone else. On December 31st she was removed home in a cab, and then remained in bed for a fortnight. In the beginning of the present year she heard something of what the nature of the operation was; and, on January 29th, she went to see Dr. Imlach, who admitted having performed it. She complained of weakness and giddiness, and asked him how it was her health was not better, and he replied, "How do I know whether you get enough to eat or not?" Dr. Imlach then went to a book in the corner of the room, and then said that he had not performed the operation she thought he had. She reminded him of his previous admission, and he then said he had performed the operation. Her health had been worse since the operation than before.—Cross-examined by Mr. Bigham: She lived in Beaufort Street, Toxteth Park, and her husband was a labourer, earning 25s. a week. Up to the time of the operation, she had been a hard-working woman; but since, she only did the light work of the house. When she was examined on December 8th, she understood that she was suffering from internal inflammation, and by an operation she understood that this inflammation would be removed. The nature of the operation was not discussed by her and the nurses in the hospital. If she had been told what the operation would be, she would never have submitted to it. She first heard of the discussion among the medical profession as to Dr. Imlach's operation about the beginning of the present year; but, just before that, a neighbour had told her what had been done to her. Three weeks elapsed before she went to see Dr. Imlach. Her answer to interrogatories on the pleadings that she did not know what happened until January 29th, 1886, was incorrect. She told Dr. Imlach that she would have the law of him, but she did not say that she knew of an attorney, and an individual who would pay the expenses. She went to Dr. Wallace because she had heard that he was an eminent man. She had not heard that Dr. Wallace was taking a strong part in the medical discussion.

John Casey, the husband, gave evidence that he was never told of the serious operation to be performed on his wife.

Mr. Walton then read the examination of Dr. Wallace, Professor of Midwifery at University College, Liverpool, who gave as his opinion that, from what he had seen of the case in Dr. Imlach's note-book as to what the woman was suffering from, the operation was unnecessary. He should consider the disease would be amenable to rest and medical treatment. He was of opinion that the defendant had not had sufficient time for observation of the case to justify an operation.

Mr. Steele, assistant medical officer at the Hospital for Women, was next called. He said he knew nothing about the case, and had not examined the patient; but, from the notes in Dr. Imlach's book, he did not think the symptoms there described were sufficient to justify the removal of the ovaries. He did not think three days was an appreciable time to be allowed to see if the patient could recover by medical means. Judging from the information before him, and from Dr. Imlach's note-book, he certainly should not himself have operated in the case. It was a rule of the hospital that the whole

staff should be invited to a consultation when there was to be any operation.

Dr. BENNETT gave similar evidence.

Dr. GRIMSDALE, consulting medical officer to the Hospital for Women, said that in the case of a patient suffering from hæmatocele and hæmatosalpinx, with a temperature of 100° at the highest, and 96° at the lowest, laparotomy would not commend itself to his judgment. He had had a great many cases in his life, but never had the idea of resorting to the knife. A very great majority of the patients recovered under medical treatment alone, and especially prolonged rest. He had been present at a few of Dr. Imlach's operations, and regarded him as a skilful operator. He did not consider that the conditions described in Dr. Imlach's answers to interrogatories justified the operation.

Dr. ALEXANDER stated that he had made over 3,000 *post mortem* examinations, many of them on women, and in only one instance had he met with hæmatocele, and, in that case, the patient had died from it.

Dr. BURTON was called for the plaintiff, but did not appear. This closed the case for the plaintiff.

Mr. BIGHAM, in opening the defence, said he need hardly say that this case was about as serious and responsible as any case could well be. An attack had been made upon the professional reputation of a man who had devoted the best part of his life to his profession; and, if that attack were successful, his prospects would be destroyed for ever, because the charge made against him was not that he had been guilty of some error of judgment in the exercise of his profession, for that would not entitle the plaintiff to succeed in this action. No professional man was responsible for a mere error of judgment in the exercise of his profession, but the charge against Dr. Imlach was one of what he might call wilful misconduct in the practice of his profession. It was a charge of negligence; and, having regard to the nature of the operation, it was a charge of gross negligence, and negligence of a most culpable kind; therefore, he must ask the jury to approach the case with the greatest attention they could devote to it. The issue they would have to try would be whether Dr. Imlach brought to the case of Mrs. Casey the attention, the experience, and the skill of a properly qualified man. His case was that Dr. Imlach did bring to bear in this case the care, attention, and the knowledge derived from long experience, and everything that could be required from a medical man in treating such a case. His experience enabled him to diagnose the case, and to form an opinion upon which he could properly act. Dr. Imlach would tell them from what he found the woman suffering, and that only such an operation as he had performed would save her life. He undoubtedly conveyed to the patient the nature of the operation that had to be performed, and told her what the result would be. It was almost incredible to believe that the woman remained in the hospital three days without knowing what kind of operation she was to undergo. As a matter of fact, she was told by the lady-superintendent and a nurse the nature of the operation.

Dr. FRANCIS IMLACH, the defendant, was then called. He said that he was M.D. of Edinburgh, a Member of the Royal College of Surgeons, and one of the Council of the British Gynæcological Society. He was one of the acting medical officers for the Women's Hospital in Shaw Street. The plaintiff first called on him in 1883, when the hospital was in Myrtle Street, and he treated her for two months medicinally. She again called on him on December 8th, 1884, when he examined her, and the examination indicated a serious state of the woman's health. She suffered frequently from menorrhagia, which lasted three weeks at a time, had constant pain, and her health was completely broken down. In his opinion, nothing but an operation would save her life, and he told her so. He told her, in terms she could well understand, what the result of the operation would be. Before performing the operation, he had a consultation about her case with Dr. Lupton, one of the acting medical officers of the hospital, who was that day too ill to attend. At the operation, the lady-superintendent of the hospital, the head-nurse, and Dr. Davies were present, and he was almost confident some other assistant medical officer was there also. The disease and the operation were then described as follows. The womb was dragged back and to the left by dense adhesions. The Fallopian tubes were greatly thickened by chronic inflammation; and the right one contained a large, dense, old blood-clot, which was ulcerating into the appendix vermiformis. Both ovaries were completely cirrhotic, and there was a large quantity of treacly blood and clot in the peritoneal cavity. The operation consisted in the removal of this blood, and of the source of the bleeding, and was, in his opinion, a proper operation. It was an urgent case.

Mr. LAWSON TAIT, Surgeon to the Birmingham Hospital for Women, stated that intraperitoneal hæmatocele was very distinct from extraperitoneal, and was fatal in 96 per cent. of the cases, if left long. In the great majority of the cases, it was fatal in three hours, if not operated upon. From Dr. Imlach's description of the case, he should say the operation was a most proper one. The plaintiff had also described the disease exactly; and he was satisfied that she had had recurrent intraperitoneal hæmatocele. Extraperitoneal hæmatocele was fatal in about 5 per cent. of the cases. This case was an urgent one, and was a case to be treated surgically and not medically. —Cross-examined by Mr. FRENCH: Can you explain why Dr. Grimsdale has not had occasion to perform this operation? I can point to a large number of cases which have passed through Dr. Grimsdale's hands, and come to me for operation; and the explanation is, that Dr. Grimsdale has not followed the advances made sufficiently to recognise the value of the operation. He had known medical treatment tried in intraperitoneal hæmatocele, and it had always failed. The mortality was at least 95 per cent.

Dr. JAMES AVELING, Senior Physician to the Chelsea Hospital for Women, agreed with Mr. Lawson Tait that the operation was a proper one, and that Dr. Imlach had sufficient time to enable him to judge as to the advisability of it.

Dr. THOMAS SAVAGE, Surgeon to the Birmingham Hospital for Women, gave similar evidence; and, in answer to his lordship, said he was quite prepared to say that, in this case, recovery by medical treatment was impossible. Although nature had been successful three times before, he did not think it would have been the slightest use to give nature a chance again, because, every time the pain occurred, the patient was on the brink of a precipice, and was in imminent danger of death.

Mr. J. GREIG SMITH, Surgeon to the Bristol Royal Infirmary, said he was the author of a pamphlet regarding the operation in question. His opinion was similar to that already given by Mr. Tait and others.

Dr. SINCLAIR, Physician for Diseases of Women at the Southern Hospital, Manchester, also gave evidence as to the necessity of the operation.

Dr. MARSH said he was a general practitioner in Liverpool, and not a specialist in diseases of women. Having heard the evidence of the plaintiff and of Dr. Imlach, he was of opinion that the operation was a proper one to perform under the circumstances. He had had cases of the kind brought under his notice in his general practice. In one case, he had sent a patient to Dr. Imlach, who had operated with his assistance; and the patient recovered. In cross-examination by Mr. French, Dr. Marsh said he did not think medical treatment would have been of any avail with Mrs. Casey.

Dr. HOWIE said that, in the diseased condition of the pelvic organs of Mrs. Casey, any sudden exertion might have caused her death in twenty minutes; and no careful medical man would have delayed performing the operation.

Dr. DAVIES, one of the assistant medical officers at the Shaw Street Hospital, had never known a case of removal of the uterine appendages by Dr. Imlach of which he had disapproved. In this case, medicine would have been of no use; the woman was in imminent danger, and required prompt operation. He had attended nearly all the operations that had been performed at the hospital, and denied that he had ever disagreed with Dr. Imlach's surgical practice.

Miss CARLESS, the Lady-Superintendent of the Hospital for Women, said that patients were invariably informed of the nature of the operation and its results before they were submitted to it.

SARAH WHITE, head nurse at that time, was present on December 17th, when Dr. Imlach informed Mrs. Casey of the nature of the operation, and she confirmed Dr. Imlach's evidence on this point. She had also told Mrs. Casey herself on the morning of the operation.

This concluded the case for the defendant; and his lordship was on the point of adjourning until the 9th, before hearing counsel, when the jury intimated that they had made up their minds as to their verdict. Counsel not desiring to address the jury, a verdict was at once returned for the defendant. His lordship certified for costs.

FEES FOR DEATH-CERTIFICATES.

MEMBER writes: I am house-surgeon to a general hospital. A. B. was admitted to one of our wards, and, in the course of several weeks, died, and I signed the usual certificate of death.

The friends of the deceased now apply to me for a further certificate of his demise, to enable them to obtain payment of the sum for which his life was insured.

Am I entitled to take a fee for the second certificate?

MEDICAL MAGISTRATE.—Dr. Moorhead has been appointed a Justice of the Peace for King's County.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

THE following appointments have been made at the Admiralty during the past week: A. W. MAY, Surgeon, to the Portsmouth Division of the Royal Marines; J. O. B. WILLIAMS, M.D., Surgeon, to the *Jackal*, for temporary service; GODFREY GOODMAN, Fleet-Surgeon, to the *Rupert*; W. B. FLETCHER, Fleet-Surgeon, to Sheerness Dockyard; J. S. DOBBYN, Fleet-Surgeon, to the *Crocodile*; JAMES PORTER, M.D., Surgeon, to Bermuda Hospital; W. R. M. YOUNG, Surgeon, to the *Impregnable*; J. L. SWEETNAM, Staff-Surgeon, to the *Tourmaline*; JOSEPH WOOD, Staff-Surgeon, to the *Shannon*; JOHN BRUNT, Surgeon, to the *Flora*; B. C. E. F. GUNN, Surgeon, to the *Duncan*; G. W. BELL, Surgeon, to the Marine Artillery Division; W. E. BENNETT, Staff-Surgeon, to the *Pylades*.

Staff-Surgeon W. J. RANKIN, M.D., has been placed on the retired list of his rank. He entered the Royal Navy as Surgeon February 10th, 1868, and became Staff-Surgeon March 16th, 1878. Dr. Rankin was Staff-Surgeon of the *Humber* during the naval and military operations near Suakin in 1884, and has the Egyptian medal and the Khedive's bronze star.

Staff-Surgeon C. E. PLAYFAIR died at Boxmoor on August 6th. His commissions bore date: Surgeon, April 11th, 1851; Staff-Surgeon, June 16th, 1857. He retired April 1st, 1870.

MEDICAL STAFF.

SURGEON-MAJOR A. KIRWAN, serving in Bengal, assumed charge of the civil medical duties at Attock, on May 31st, relieving Hospital-Assistant Gunesh Das.

Brigade-Surgeon A. F. BRADSHAW is promoted to be Deputy Surgeon-General. He entered the Army Medical Department as Assistant-Surgeon, May 27th, 1857; became Surgeon, May 17th, 1871; Surgeon-Major, March 1st, 1873; and Brigade-Surgeon, March 12th, 1882. Mr. Bradshaw served with the 2nd Battalion of the Rifle Brigade through the whole of its service in the suppression of the Indian Mutiny, including the capture of Lucknow and numerous affairs during the Oude campaign (medal with clasp). He was also engaged in the Zhob Valley Expedition in 1884, as Principal Medical Officer, and was mentioned in despatches for his services therein.

Brigade-Surgeon T. N. HOYSTED, serving in Bengal, is appointed to the officiating Administrative Medical Charge of the Allahabad Division, *vice* Deputy Surgeon-General R. Webb, granted leave to England, with effect from April 13th last.

Brigade-Surgeon H. F. PATERSON, M.D., serving in Bengal, is appointed to the officiating Administrative Medical Charge of the Allahabad Division, *vice* Deputy Surgeon-General T. N. Hoysted, proceeded to England, with effect from May 29th last.

Surgeon-Major R. BLOOD, M.D., and Surgeon-Major H. STANNARD, have been permitted to exchange places on the Indian roster of service.

Surgeon R. R. K. ELMES is directed to remain in England from June 25th until required to embark for India next trooping season.

ARCHIBALD GORDON, M.D., C.B., L.H., Inspector-General of Hospitals, and Honorary Surgeon to Her Majesty, died on August 3rd, at Woodlands, West Hoathley, in the seventy-fifth year of his age. Dr. Gordon became a licentiate of the Royal College of Surgeons at Edinburgh, in 1832, and took his M.D. degree at Edinburgh University in 1834. He was appointed an Assistant-Surgeon in the Army Medical Department, June 28th, 1836, and became Surgeon, September 12th, 1848; Surgeon-Major, October 27th, 1854; Deputy Inspector-General, January 25th, 1856; and Inspector-General, March 9th, 1867. He retired on half-pay, July 1st, 1870. He served (says *Hart's Army List*) with the 53rd regiment in the Sutlej campaign in 1846, including the affair of Buddiwal, and the actions of Aliwal and Sobraon (medal and clasp). He served, also, in medical charge of the 24th Regiment throughout the Punjab campaign of 1848-9, and was present at the battles of Sadoolapoore, Chillianwallah, and Gujerat (medal with two clasps). In the Eastern campaign of 1854-5, he was engaged at the affair at Bulganak, at the battle of Alma and the capture of Balaklava, and was Principal Medical Officer of the 2nd Division throughout the siege and fall of Sebastopol, and of the Kinbourn expedition. For his services in the Crimea, he obtained the medal with three clasps, the Turkish medal, the Companionship of the Order of the Bath, and the Knighthood of the Legion of Honour. Dr. Gordon was principal medical officer with the expeditionary force to China in 1857, and was present at the capture of Canton (medal with clasp), and also throughout the Oudh campaign in 1858-9 (medal).

Inspector-General T. R. JAMESON, M.D., died on July 6th last. His commissions bore date: Assistant-Surgeon, January 10th, 1834; Surgeon, December 5th, 1843; Surgeon-Major, March 28th, 1854; Deputy Inspector-General, December 31st, 1858; and Inspector-General, November 17th, 1863; retiring on half-pay, March 9th, 1867. Dr. Jameson served in the Kafir war of 1846-47 (medal), and in Turkey and Russia from April, 1854, to July, 1856 (Turkish medal and fifth class of the Order of Medjidie).

Surgeon-Major E. CONNELLAN died of abscess of the lungs at Cyprus on July 6th, aged 45. He entered the service as Assistant-Surgeon, October 2nd, 1865; became Surgeon March 1st, 1873; and Surgeon Major October 2nd, 1877. Surgeon-Major Connellan was engaged in the Ashanti war of 1873-74 (medal).

Surgeon W. M. DOWDING died at Margate on June 26th last. He ranked as Assistant-Surgeon May 9th, 1845, and Surgeon May 19th, 1854. He retired on half-pay October 1st, 1861. Surgeon Dowding was present in the Crimea from August 30th, 1855, and was at the siege of Sebastopol (medal with clasp, and Turkish medal).

Brigade-Surgeon G. B. POPPELWELL died at Bath on August 10th, in his 56th year. He entered as Assistant-Surgeon June 4th, 1851; rose to Surgeon March 13th, 1866; and Surgeon-Major March 1st, 1873; retiring on half-pay August 14th, 1880. Mr. Poppelwell served on the Staff in the Crimea in 1854-55, and was with the 31st Regiment at the siege of Sebastopol, and at the attack on the Redan on June 18th (medal with clasp, and Turkish medal). He was with the 84th Regiment from the commencement of the Indian Mutiny, and with Havelock's force at Mungarwar and Alumbagh, the relief of Lucknow, and its subsequent defence; with Outram's force at the Alumbagh, including the repulse of numerous attacks at the siege and capture of Lucknow; and with the 90th Light Infantry during the subsequent operations in Oude (medal with two clasps, and a year's service for Lucknow). He was thanked in orders at Cawnpore by Brigadier-General Neil for "his unwearied attention and exertion to his numerous patients, and his excellent hospital arrangements in treating so many sick and wounded." He was also engaged in the war in New Zealand in 1861-66 (medal).

Brigade-Surgeon C. E. SMITH, M.D., is granted retired pay, with the honorary rank of Deputy Surgeon-General. Dr. Smith entered the service as Assistant-Surgeon April 20th, 1858; became Surgeon March 1st, 1873; Surgeon-Major July 11th, 1874; and Brigade-Surgeon May 30th, 1885. The Army Lists do not assign him any war-service.

Surgeon-Major H. T. CHAPMAN is also granted retired pay, with a step of honorary rank. His previous commissions are dated: Assistant-Surgeon, March 31st, 1866; Surgeon, March 1st, 1873; and Surgeon-Major, March 31st, 1878. Mr. Chapman served with the expedition to the Soudan under Sir Gerald Graham in 1884, and has the Egyptian medal and the Khedive's bronze star.

THE INDIAN MEDICAL SERVICE.

SURGEON T. H. SWEENY, Bengal Establishment, Deputy Sanitary Commissioner 1st Circle, is, at his own request, reappointed a Civil Surgeon of the Second Class, grade-station Bareilly.

Surgeon-Major G. MASSY, Bengal Establishment, Civil Surgeon, on return from sick-leave, resumed charge of his duties at Rawul Pindee on June 5th, relieving Surgeon E. S. Brander.

Surgeon J. A. NELIS, Bengal Establishment, assumed charge of the civil medical duties of Hazara on June 11th, relieving Brigade-Surgeon G. Farrell, C.B.

Surgeon E. W. REILLY, Madras Establishment, is ordered to do general duty under the orders of the Principal Medical Officer, Burmah Field Force, Mandalay.

Surgeon E. E. DA COSTA, Madras Establishment, is ordered to do general duty under the orders of the Deputy Surgeon-General, Her Majesty's Forces, Burmah Division.

The undermentioned gentlemen are granted leave of absence for the periods specified: Surgeon-Major A. B. SEAMAN, Bengal Establishment, Medical Officer 2nd Native Infantry, for one year on medical certificate; Surgeon-Major E. A. BIRCH, Bengal Establishment, for six months on medical certificate; Surgeon-Major W. E. JOHNSON, M.D., Madras Establishment, for ninety days on privilege-leave; Surgeon F. C. SMITH, Madras Establishment, District Medical and Sanitary Officer, Madura, for six months on urgent private affairs.

The services of Surgeon C. L. SWAINE, M.B., officiating Civil Surgeon at Belaspore, Central Provinces, are replaced at the disposal of the Military Department.

Surgeon E. R. W. C. CARROLL, Bengal Establishment, who was specially examined at Meerut on June 7th, passed in Hindustani by the lower standard.

Surgeon C. C. VAID, Bengal Establishment, is appointed to the permanent medical charge of the 11th Native Infantry, *vice* Surgeon-Major J. L. Corbett, M.D., who has been permanently transferred to civil employ.

Brigade-Surgeon G. FARRELL, C.B., Bengal Establishment, Honorary Surgeon to the Viceroy, is appointed Principal Medical Officer to the field force in Upper Burmah, with the temporary rank of Deputy Surgeon-General from such date as he may take over the duties from Surgeon-Major H. W. Mackinnon.

Acting-Surgeon JOHN GIBSON, of the 1st Orkney Artillery Volunteers, has resigned his commission, which bore date July 24th, 1880.

Mr. L. H. JONES, M.D., has been appointed Surgeon to the 6th Lancashire (1st Manchester) Volunteers.

Surgeon and Honorary Surgeon-Major JOSEPH WICKHAM, of the Westmoreland and Cumberland Yeomanry, has resigned his commission, which bore date May 10th, 1847.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:—

		From		To
Brigade-Surgeon	B. C. Kerr, M.D.	Enniskillen		Fermoy.
,,	A. F. Bradshaw	Bombay		Egypt.
Surgeon-Major	S. G. White, M.D.	Chatham		Barbadoes.
,,	W. P. Smith	Dublin		Enniskillen.
,,	J. S. M'Cutchan, M.B.	Clonmel		Bermuda.
,,	T. C. Tolmie	Egypt		Woolwich.
,,	W. C. Gasteen, M.B.	Malta		Cyprus.
,,	W. Findlay	Bermuda		Aldershot.
,,	H. J. W. Barrow	Egypt		Devonport.
Surgeon	W. J. R. Rainsford	Dublin		Mullingar.
,,	I. Boulger	Egypt		Cork.
,,	A. W. Carleton, M.B.	Mullingar		Dublin.
,,	H. E. W. Barrington, M.B.	C. of Good Hope		Aldershot.
,,	B. T. M'Creery, M.B.	Fermoy		Waterford.
,,	A. Asbury	Fermoy		Dublin.
,,	M. F. Macnamara	—		Dublin.
,,	W. S. Lecky, M.B.	Aldershot		C. of Good Hope.
,,	H. Saunders	—		Aldershot.
,,	J. H. A. Rhodes	Newcastle		Burnley.
,,	F. A. B. Daly, M.B.	Egypt		Dublin.
,,	T. E. Noding	—		Chatham.
,,	G. S. O'Grady	Dublin		Clonmel.
,,	J. Semple	Dublin		Belfast.
,,	H. C. Gordon, M.B.	West Coast, Africa		Woolwich.
,,	G. B. Russell, M.B.	Egypt		Fermoy.
,,	H. Mitchell	Suakin		Portsmouth.
,,	A. P. H. Griffiths	Suakin		Egypt.
,,	W. R. D. Crooke, M.D.	Fermoy		Bengal.
,,	W. P. Squire	Pembroke Dock		Bengal.
,,	C. L. Walsh	Dover		Bengal.
,,	J. J. O'Donnell, M.B.	Curragh		Barbadoes.
Quartermaster	H. Graham	Egypt		S. E. District.
,,	W. Murray	S. E. District		Aldershot.

PRESENTATION. — Dr. Holmes Morrison, on the occasion of his leaving Dunning for Perth, has been entertained to a complimentary dinner, and presented with a purse of sovereigns, and a silver card-case for Mrs. Morrison.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

DIPHTHERIA FROM MILK.

Once again milk appears to have been associated in some mysterious way with the spread of disease. In the middle of last month, a sudden and extensive, though not fatal, outbreak of throat-illness occurred in the city of Canterbury. The circumstances of this outbreak are so important, and appear to have been so little appreciated, that we think it well to reproduce in his own words the account which Mr. Wacher, the local health-officer, gives of the results of the very careful inquiry which he at once instituted. Mr. Wacher says:

"This is the most remarkable outbreak of sore-throat in Canterbury that I have seen; not only on account of the number of persons attacked, but also because of the suddenness of the outbreak, the short space of time in which it occurred, and the fact of its being confined, as far as I know, to one district. Within a period of eight days, from the 11th to the 18th of July, inclusive, there were 231 persons attacked by this malady. It was not confined to any one class, but affected all equally. The symptoms of the cases I observed myself were local inflammation of the throat with small white patches on the tonsils, and enlargement of the glands of the neck. Many of the cases were very mild, and only lasted two or three days, and recovered without medical treatment. Some of the cases were more severe, and lasted a fortnight, leaving the patient weak and prostrate. Those were pronounced to be diphtheria, and the throats were distinctly of a diphtheritic type. There were no fatal cases; 422 houses in St. Dunstan's district were visited, and out of this number—

	Supplied Houses.	Cases.	Non-cases.
A milkman	160	94	66
Milkmen and others	36	21	15
No milk	52	1	51
Condensed	8	0	8
Various milkmen	166	4	162
Total	422	120	302

It will be seen from the above, that 94 houses out of 120 that had cases, were supplied by one milkman, and that it also occurred in 21 houses supplied by the same milkman and others. This leaves five houses with cases to account for. In one house no milk was used, but there were cases next door on one side, and next door but one on the other side. This case happened at the end of the epidemic, and might have caught the infection. In the four other cases supplied by various milkmen, two of these cases were visiting patients with the sore-throat, and were afterwards attacked. The third case was in the habit of having tea with a neighbour, by whom milk was used from the same source. Her children all had milk from another source, and escaped. This case also visited a house with sore-throat. The fourth case did not drink the milk, and there was no known cause of infection. She was subject to sore-throat. The water supplying the district was pure. There were no cases of sore-throat in the neighbourhood previous to the outbreak, and there was no climatic influence at work, as far as I know. The large number of cases occurring within the space of a few days, pointed to a common cause for the epidemic; and, when you come to consider the large number of cases connected with one milk supply, it is only reasonable to come to the conclusion that the milk was the prime cause of the epidemic. To ascertain what was the prime cause of the infection, Dr. Robinson, the Medical Officer of Health for East Kent, visited the dairy, and it was found by him that the milkman and his family were suffering from sore-throat. A pet lamb on the premises was suffering with sore-throat. Dr. Robinson visited the field where the cows were kept; four calves had been suffering from diarrhœa. As far as we know the cows were healthy. Dr. Robinson had some cases of sore-throat in Harbledown, all supplied by the same milkman. In one row of twelve cottages at Harbledown, there were two cases, one at each end, supplied by the same milkman. In the other ten cottages supplied by the other milkmen, there was not a single case. The milkman stated all his cows were well, but, in my opinion, they might have had some slight ailment, which he had not recognised, but which caused the contamination of the milk."

As the subject of milk-infection is now receiving the special consideration of the Medical Department of the Local Government Board, whose attention has been attracted to the Canterbury epidemic, we may expect to hear that the circumstances of this outbreak will be scientifically studied in detail. Meanwhile, it may be useful to note that at the neighbouring town of Dover there was a remarkable outbreak of throat-illness in the beginning of 1884, which was traced by Dr. M. K. Robinson, the Medical Officer of Health, to the use of milk and cream tainted with the poison of aphthous fever derived from cattle. Considerable interest was taken in the question at the time (the Journal for March 22, 1884, page 569), and at a meeting of the medical profession in Dover, held to compare the notes and evidence forthcoming on the subject, it was held that the tainted milk was the cause of the epidemic. Other outbreaks of throat-disease, in the West Ashford and Thanet districts, occurred about the same period, and from many points of resemblance in the symptoms, and their association with local outbreaks of aphthous fever in cattle, presented considerable analogy to the Dover epidemic. The question is worthy of further investigation in connection with the important reports of Mr. Power, Dr. Klein, and others, recently issued by the Local Government Board, concerning the outbreak of milk-scarlatina at Hendon.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

The Registrar-General has recently issued his Quarterly Return relating to the births and deaths registered in England and Wales during the second or spring quarter of this year, and to the marriages in the three months ending March last. The marriage-rate showed a further decline from the rates in the three preceding corresponding quarters, and was lower than the rate recorded in the first quarter of any year since civil registration was established in 1837. The birth-rate and the death-rate were also considerably below their respective averages. The mean temperature during the quarter slightly exceeded the average, and the weather generally was favourable to the public health.

The births of 230,924 children were registered in England and Wales during the three months ending June last, equal to an annual rate of 33.2 per 1,000 of the population, estimated by the Registrar-General to be nearly twenty-eight millions of persons. This birth-rate was 1.9 per 1,000 below the mean rate in the corresponding quarters of the ten years 1876-85, but exceeded the exceptionally low rate that prevailed in the second quarter of last year. The birth-rate during the quarter under notice ranged, in the several counties, from 27.0 in Essex, and 27.9 in Sussex, to 36.6 in Nottinghamshire, 37.2 in Northumberland, 38.8 in Monmouthshire, and 38.9 in Durham. In the twenty-eight large towns for which the Registrar-General publishes weekly returns, the birth-rate last quarter averaged 33.1 per 1,000, and ranged from 24.9 in Brighton and in Huddersfield, to 39.0 in Blackburn, 39.3 in Newcastle-upon-Tyne, and 42.0 in Cardiff. The births registered in England and Wales during the quarter under notice exceeded the deaths by 105,752; this represents the natural increase of the population during that period. From the Board of Trade Returns, it appears that 119,126 emigrants sailed from the various ports of the United Kingdom, at which emigration officers are stationed; of these, 43,959 were English, 8,481 Scotch, and 29,682 Irish. The proportion of British emigrants to a million of the respective populations of the three divisions of the United Kingdom were 1,577 from England, 2,147 from Scotland, and 6,073 from Ireland.

During the second quarter of 1886, the deaths of 125,172 persons were registered in England and Wales, equal to an annual rate of 18.0 per 1,000 of the estimated population. This death-rate was nearly 2 per 1,000 below the average rate in the corresponding quarters of the ten years 1876-85, and was lower than the rate recorded in the second quarter of any year since civil registration was established in 1837. Among the urban population of the country, estimated at nearly seventeen millions, the rate of mortality during the quarter under notice was equal to 18.3 per 1,000; in the remaining and chiefly rural population of nearly eleven millions of persons, the rate was 17.5. These urban and rural rates were below their respective averages in the ten preceding corresponding quarters. The rate of mortality last quarter, among infants under one year of age, was 3.1 per cent. below the average; that among children and adults aged between one and sixty years, 13.9 per cent.; and that among persons aged upwards of sixty years, 0.9 per cent. below the average.

The 125,172 deaths registered in England and Wales during the three months ending June last included 10,825 which were referred to the principal zymotic diseases; of these, 3,396 resulted from whooping-cough, 2,882 from measles, 1,667 from diarrhœa, 1,069 from "fever" (including typhus, typhoid, and simple fever), 937 from scarlet fever, 769 from diphtheria, and 105 from small-pox. These 10,825 deaths were equal to an annual rate of 1.56 per 1,000, which was considerably below the mean rate in the ten preceding corresponding quarters. The mortality from each of these principal zymotic diseases, except diphtheria, was considerably below the average; the

death-rates from scarlet fever and from fever were below those recorded in any preceding quarter. The 105 fatal cases of small-pox were fewer than those returned in any quarter since the third of 1880, and included 11 which belonged to London and its outer ring (6 which occurred in Sevenoaks), 1 in Bristol, 22 in Hartlepool, and 58 in other parts of England and Wales.

DISMISSAL OF MEDICAL OFFICERS IN SCOTLAND.

SIR,—Will you kindly inform me, through your columns, whether the visiting medical officer of a Scotch poor-house can be dismissed from office by the managers of the parish, owing to a proposed change in the arrangement of medical staffs; and, if so, whether he is entitled to compensation from the parochial board for loss of salary, etc.?

I understand that there is a law regarding this point in England, but am uncertain if the same law applies to Scotland. I fear much that the Scotch parochial medical men are much behind our English brethren in standing up for our just rights.—I am,

A PAROCHIAL MEDICAL OFFICER FOR FOURTEEN YEARS.

*** Within the last few years, a disposition has been exhibited by the Board of Supervision to assimilate the law relating to the appointment, tenure, and compensation for deprivation of office of parochial medical officers, to that of England and Ireland, but with what success we cannot at the moment determine. We, therefore, advise our correspondent to submit his question direct to the Secretary of the Scotch Local Government Board or Board of Supervision. We can fully endorse our correspondent's opinion as to the apathy and indifference of his professional brethren as to all matters relating to their offices and emoluments, that being the probable reason why they are worse paid and considered than the services in England and Wales, and in Ireland.

LEAVE OF ABSENCE.

A MEMBER.—Under the circumstances mentioned in our correspondent's letter, we hold that it would not be unreasonable to make such an application to the board of guardians; and in the event (by no means improbable) of assent being given, that the Local Government Board would sanction such an arrangement. If our correspondent have a personal friend on the Board, or know any Member of Parliament he can influence, let him get such friend or member to lay the facts before Mr. Hugh Owen, Permanent Secretary of the Local Government Board, and solicit his kindly offices. Mr. H. Owen, like his father before him, is at all times disposed to take a just and kindly interest in any legitimate application by a medical officer; and if his influence at headquarters can be secured, the object sought for will be more easily obtained.

FEE FOR EXAMINATION OF A SUPPOSED LUNATIC.

W. A. T.—We have repeatedly pointed out that, under the Pauper Lunacy Acts, neither the relieving officer nor the board of guardians have any authority to determine whether any or what amount of fee should be paid for certifying as to the insanity, or otherwise, of a person who has been taken before a magistrate or justice of the peace. The authority is vested in the magistrate solely.

In the case before us, we advise that our correspondent, before taking legal steps to recover the fee, should communicate with the magistrate, and solicit his friendly interference. If he decline, it would then be competent for him to take out a summons; but, to ensure success, it would be necessary to subpœna the magistrate and relieving officer as witnesses in the suit.

PUBLIC VACCINATORS.

SIR,—I should be extremely obliged if you would kindly answer the following questions.

1. Is a public vaccinator to a union supposed to appoint a substitute or deputy in case of his absence?

2. If so, must the deputy be qualified both in surgery and in medicine, and also have obtained a certificate of instruction in vaccination?

3. Under what circumstances can the guardians of a union object to the appointment of any person as substitute?

4. Is a medical man, who is a poor-law medical officer to two districts of a union, ineligible to be appointed deputy vaccinator to the same union?—I am, your truly, ENQUIRENS.

*** 1. Certainly; exactly as if the appointment was to a workhouse or district. 2. The deputy must hold a double qualification, and have a vaccination-certificate as well. 3. The objections to the appointment of a substitute are not made by the board of guardians, except on the initiative of the Local Government Board inspector, to whom all such fresh appointments are reported. 4. We are not aware that any such objection has ever been raised; if it have been, it is very unreasonable.

HEALTH OF ENGLISH TOWNS.

In the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,397 births and 3,742 deaths were registered during the week ending Saturday, August 7th. The annual rate of mortality, which had steadily increased in the seven preceding weeks from 16.8 to 20.6 per 1,000, declined during the week under notice to 19.9. The rates in the several towns, ranged in order from the lowest, were as follow:—Halifax, 10.0; Hull, 10.4; Derby, 10.8; Plymouth, 15.0; Huddersfield, 15.3; Birmingham, 16.2; Sheffield, 16.4; Nottingham, 16.8; Newcastle-upon-Tyne, 16.8; Bristol, 17.0; Wolverhampton, 17.0; Cardiff, 17.6; Brighton, 17.9; Bradford, 18.1; Bolton, 19.2; Sunderland, 19.6; London, 20.4; Birkenhead, 20.8; Liverpool, 21.6; Preston, 21.6; Leeds, 22.5; Portsmouth, 22.6; Salford, 22.7; Oldham, 23.2; Blackburn, 24.1; Manchester, 24.4; Norwich, 28.9; and the highest rate during the week, 31.4 in Leicester. In the twenty-seven provincial towns the death-rate averaged 19.6 per 1,000, and was 0.3 below the rate recorded in London, which, as before stated, was 20.4 per 1,000. The 3,472 deaths registered in the twenty-eight towns during the week under notice included 657 which were referred to diarrhœa, 62 to measles, 55 to whooping-cough, 43 to scarlet fever, 38 to "fever" (principally enteric), 13 to diphtheria, and 1 to small-pox; in all, 869 deaths resulted from these principal zymotic diseases, against 754 and 872 in the two preceding weeks. The zymotic death-rate was equal to 5.0 per 1,000. In London, the zymotic rate was as high as 5.9, and exceeded by 1.7 per 1,000 the mean rate in the twenty-seven provincial towns, among which it ranged from 0.3 and 0.6 in Hull and Derby, to 6.2 in Cardiff, 6.5 in Portsmouth, 6.9 in Leeds, 9.6 in Norwich, and 9.7 in Leicester. The fatal cases of diarrhœa, which had risen in the five preceding weeks from 86 to 646, further increased during the week under notice to 657, and caused the highest death-rates in Birkenhead, Leeds, Norwich, and Leicester. The deaths referred to measles, which had steadily declined from 116 to 83 in the four previous weeks, further fell last week to 62; this disease was proportionately most fatal in Preston. The 55 fatal cases of whooping-cough showed a further decline from recent weekly numbers, and caused the highest death-rates in Manchester and Norwich. The deaths from scarlet fever, which had been 36 and 23 in the two preceding weeks, rose again during the week under notice to 43, and showed the highest proportional fatality in Salford. The 38 fatal cases of "fever" corresponded with the number in the previous week; this disease was proportionally most fatal in Cardiff and Portsmouth. The deaths referred to diphtheria, which had been 25 and 22 in the two preceding weeks, further declined during the week under notice to 13, a lower number than in any week since the middle of 1884; 9 occurred in London and 3 in Liverpool. The fatal case of small-pox was recorded in Liverpool, no death from this disease being returned either in London or in any other of the twenty-eight large towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had declined from 10 to 8 at the end of the two preceding weeks, were again 8 on Saturday, August 7th; the admissions were 2 during the week, against 3, 2, and 1 in the three previous weeks. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 1.9 per 1,000, and was below the average. The causes of 73, or 2.1 per cent. of the 3,472 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, August 7th, 766 births and 464 deaths were registered in the eight principal Scotch towns, having an estimated population of 1,288,977 persons. The annual rate of mortality, which had been 19.8 and 19.5 per 1,000 in the two preceding weeks, further declined to 18.8 in the week under notice, and was 1.1 per 1,000 below the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 11.5 in Perth, 14.4 in Dundee, 14.6 in Greenock, 17.6 in Aberdeen, 18.5 in Leith, 19.2 in Edinburgh 20.5 in Glasgow, and 25.2 in Paisley. The 464 deaths registered during the week in these towns included 77 which were referred to the principal zymotic diseases, against 65 and 67 in the two preceding weeks; of these, 28 resulted from diarrhœa, 23 from whooping-cough, 15 from scarlet fever, 8 from "fever," 2 from diphtheria, 1 from measles, and not one from small-pox. These 77 deaths were equal to an annual rate of 3.1 per 1,000, which was as much as 1.9 below the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week were recorded in Glasgow and Paisley. The fatal cases of diarrhœa, which had risen from 24 to 34 in the four preceding weeks, declined during the week under notice to 28, of which 10 occurred in Glasgow, 7 in Edinburgh, and 5 in Dundee. The 23 deaths referred to whooping-cough exceeded by 5 the number returned in the previous week, and included 18 in Glasgow, and 2 in Aberdeen. The fatal cases of scarlet fever, which had been 7 and 4 in the two preceding weeks, rose in the week ending August 7th to 15, of which 13 were returned in Glasgow. The 8 deaths referred to different forms of fever considerably exceeded those recorded in any recent week, and included 4 in Glasgow. Of the 2 fatal cases of diphtheria, 1 occurred in Paisley and 1 in Glasgow; and the death from measles was returned in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 2.4 per 1,000, against 1.9 in London. The causes of 58, or 12.5 per cent., of the 464 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

IN the week ending Saturday, July 10th, 339 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered, was 20.4 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 31.0; Belfast, 18.1; Cork, 22.7; Drogheda, 12.7; Dublin, 22.2; Dundalk, 21.8; Galway, 10.1; Kilkenny, 8.5; Limerick, 17.5; Lisburn, 14.5; Londonderry, 30.3; Lurgan, 30.8; Newry, 14.0; Sligo, 24.1; Waterford, 13.9; Wexford, 17.1. The deaths from the principal zymotic diseases in the sixteen districts, were equal to an annual rate of 1.7 per 1,000, the rates varying from 0.0 in nine of the districts, to 5.1 in Lurgan; the 6 deaths from all causes registered in that district comprising 1 from diarrhœa. The 77 deaths from all causes registered in Belfast, comprised 1 from measles, 1 from scarlatina, 1 from typhus, 1 from ill-defined fever, and 2 from diarrhœa; among the 35 deaths in Cork were 2 from scarlatina, 1 from enteric fever, and 2 from diarrhœa; and the 4 deaths in Wexford comprised 1 from diphtheria. In the Dublin Registration District, the births registered during the week amounted to 204, 103 boys and 101 girls; and the deaths to 156, 86 males and 70 females. The deaths represent an annual rate of mortality of 23.0 in every 1,000 of the estimated population; omitting the deaths of persons admitted into public institutions from localities outside the district, the rate was 22.2 per 1,000. Twenty-one deaths from zymotic diseases were registered being 7 over the number for the preceding week, but 3 under the average for the 27th week of the last ten years; they comprised 1 from measles, 4 from scarlet fever (scarlatina), 1 from typhus, 2 from whooping-cough, 2 from cerebro-spinal fever, 1 from ill-defined fever, 1 from enteric fever, 4 from diarrhœa, 2 from erysipelas, etc. Twenty-six deaths from diseases of the respiratory system were registered, being 4 in excess of the average for the corresponding week of the last ten years, and 12 over the number for the week ending July 3rd; they comprised 11 from bronchitis, and 10 from pneumonia or inflammation of the lungs. The deaths of 13 children under 5 years of age (including 11 infants under 1 year old) were ascribed to convulsions. Two deaths were caused by apoplexy, 10 by other diseases of the brain and nervous system (exclusive of convulsions), and 8 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 29 deaths, and mesenteric disease 5. Six accidental deaths, 1 case of homicide, and 2 cases of suicide were registered. In 12 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending Saturday, July 17th, 1886, 319 deaths were registered in the sixteen principal town districts of Ireland. The average annual death rate represented by the deaths registered was 19.2 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 10.3; Belfast, 21.2; Cork, 13.6; Drogheda, 25.4; Dublin, 19.3; Dundalk, 8.7; Galway, 23.5; Kilkenny, 21.1; Limerick, 22.9; Lisburn, 19.3; Londonderry, 26.7; Lurgan, 0.0; Newry, 10.5; Sligo, 4.8; Waterford, 23.2; Wexford, 21.4. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1.7 per 1,000, the rates varying from 0.0 in Waterford, Newry, Kilkenny, Sligo, Lisburn, Lurgan, and Armagh, to 4.4 in Dundalk; the 2 deaths from all causes registered in that district comprising 1 from diarrhœa. The 90 deaths from all causes, registered in Belfast, comprise 3 from scarlatina, 1 from whooping-cough, 1 from diphtheria, and 5 from diarrhœa; and the 15 deaths in Londonderry comprise 1 from whooping-cough and 1 from ill-defined fever. In the Dublin Registration District, the births registered during the week amounted to 172—89 boys and 83 girls; and the deaths to 135—68 males and 65 females. Seventeen deaths from zymotic diseases were registered, being 4 under the number for the preceding week, and 7 under the average for the twenty-eighth week of the last ten years; they comprised 1 from scarlet fever (scarlatina), 2 from typhus, 1 from diphtheria, 1 from cerebro-spinal fever, 2 from simple continued and ill-defined fever, 1 from enteric fever, 4 from diarrhœa, 1 from erysipelas etc. Fourteen deaths from diseases of the respiratory system were registered; they comprise 8 from bronchitis, 1 from pneumonia, and 3 from croup. The deaths of 5 children under 5 years of age (including three infants under 1 year old) were ascribed to convulsions. Six deaths were caused by diseases of the brain and nervous system (exclusive of convulsions), and 8 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 24 deaths, mesenteric disease 2, and cancer 3. Eight accidental deaths were registered. In thirteen instances, the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending July 24th, 305 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 18.4 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 10.3; Belfast, 16.7; Cork, 20.8; Drogheda, 29.6; Dublin, 20.4; Dundalk, 4.4; Galway, 16.8; Kilkenny, 8.5.; Limerick, 10.8; Lisburn, 24.2; Londonderry, 17.8; Lurgan, 25.7; Newry, 3.5; Sligo, 0.0; Waterford, 23.2; Wexford, 34.2. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1.1 per 1,000, the rates varying from 0.0 in twelve of the districts to 5.1 in Lurgan; the 5 deaths from all causes registered in that district comprising 1 from typhus. The 71 deaths from all causes registered in Belfast comprise 1 from measles, 1 from scarlatina, 1 from enteric fever, and 3 from diarrhœa. In the Dublin Registration District, the births registered during the week amounted to 211—121 boys and 90 girls,—and the deaths to 142—79 males and 63 females. The deaths represent an annual rate of mortality of 21.0 in every 1,000 of the estimated population; omitting the deaths of persons admitted into public institutions from localities outside the district, the rate was 20.4 per 1,000. Thirteen deaths from zymotic diseases were registered, being 4 under the number for the preceding week, and 12 under the average of the 29th week of the last ten years; they comprise 1 from scarlet fever (scarlatina), 2 from whooping-cough, 1 from cerebro-spinal fever, 4 from enteric fever, and 5 from diarrhœa. Sixteen deaths from diseases of the respiratory system were registered in Dublin, being 2 over the number for the week ending July 17th, but 3 below the average for the corresponding week of the last ten years; they comprised 13 from bronchitis. The deaths of 12 children (including 7 infants under 1 year old) were ascribed to convulsions. Four deaths were caused by apoplexy, 7 by other diseases of the brain and nervous system (exclusive of convulsions), and 7 by diseases of the circulatory system. Phthisis and pulmonary consumption caused 21 deaths, mesenteric disease 6, and cancer 4. Five accidental deaths were registered. In 13 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

It appears, from statistics published in the Registrar-General's return for the week ending July 24th, that the annual death-rate was recently equal to 22.5 per 1,000 in Bombay, and 32.0 in Madras. Measles caused 15 deaths in Bombay and diarrhœal diseases 38 in Madras; "fever" mortality showed the usual excess in each of these Indian cities. According to the most recently received weekly returns, the annual death-rate averaged 25.2 per 1,000 persons estimated to be living in twenty of the largest European cities, and exceeded by 5.0 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 28.9, and showed a decline from the high rates in recent weeks; the 514 deaths included 17 from "fever," 17 from measles, and 6 from small-pox. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 20.0, the rates ranging from 15.1 in Christiania, to 22.9 in Stockholm; diphtheria and croup caused 7 deaths in Copenhagen, 4 in Christiania, and 3 in Stockholm; the 88 deaths in Stockholm included 21 from diarrhœal diseases. In Paris, the death-rate was equal to 22.7, and exceeded that which prevailed in London by 1.1; the 979 deaths included 34 from measles, 21 from diphtheria and croup, and 11 from typhoid fever. The 174 deaths in Brussels, of which 24 resulted from diarrhœal diseases, and 2 from "fever," gave a rate of 20.8. The rate in Geneva was 24.5, and the 34 deaths included 2 from whooping-cough. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 20.5, the several rates being 18.1 in Rotterdam, 20.2 in Amsterdam, and 24.7 in the Hague; measles caused 6 deaths in the Hague, and diphtheria and croup 4 in Amsterdam. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 28.0, and ranged from 21.3 and 24.0 in Vienna and Hamburg, to 33.0 in Prague and 36.0 in Buda-Pesth. Small-pox caused 13 deaths in Buda-Pesth, and 3 in Prague; diphtheria showed the largest mortality in Buda-Pesth and Dresden. The death-rate was equal to 21.8 in Venice, and 23.4 in Rome; the 61 deaths in Venice included 7 from cholera, and of the 148 deaths in Rome, 5 resulted from small-pox, 3 from diphtheria, and 2 from typhoid fever. In Alexandria, the death-rate was 66.3, and in Cairo 57.9; diarrhœal diseases caused 145 deaths in Cairo, and 95 in Alexandria, and typhoid fever 17 in Cairo. In four of the largest American cities, the mean recorded death-rate was 22.5, the rates ranging from 19.2 in Brooklyn, to 28.5 in Baltimore. Diphtheria caused considerable mortality in New York and Brooklyn; 10 deaths from typhoid fever were recorded in Philadelphia, and 42 from infantile cholera in Baltimore.

It appears from statistics published in the Registrar-General's return for the week ending July 31st, that the annual death-rate recently averaged 26.7 per 1,000 in the three principal Indian cities; it was 22.0 in Calcutta, 23.3 in Bombay and 32.8 in Madras. Cholera caused 8 deaths in Calcutta, and small-pox 2 in Bombay; "fever" mortality was excessive in each of these Indian cities. According to the most recently received weekly returns, the annual death-rate averaged 27.3 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded by no less than 6.7 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 28.7, showing a further slight decline from the rates in previous weeks; the 511 deaths included 95 from diarrhœal diseases, 23 from measles, and 20 from "fever." In three other northern cities—Copenhagen, Christiania, and Stockholm—the death-rate averaged only 22.7, and ranged from 15.7 in Stockholm, to 24.6 in Christiania; diphtheria and croup caused 7 deaths in Christiania, and 3 in Copenhagen; 13 deaths in Copenhagen and 21 in Stockholm resulted from diarrhœal diseases. In Paris, the death-rate was equal to 23.5, and exceeded the rate that prevailed in London by 1.5; the deaths included 162 from infantile diarrhœa, and 13 from typhoid fever. The 212 deaths in Brussels, of which 54 resulted from diarrhœal diseases and 3 from "fever," gave a rate of 25.3. The rate in Geneva was only 12.2, and no death-rate from zymotic diseases was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 22.6, the several rates being 19.5 in Rotterdam, 22.2 in Amsterdam, and 27.7 in the Hague; measles caused 5 deaths in the Hague, and 4 in Amsterdam. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 30.4, and ranged from 24.9 in Hamburg and 25.0 in Vienna and Munich, to 32.6 in Berlin, and 34.2 in Buda-Pesth. Diarrhœal diseases caused 278 of the 837 deaths in Berlin, and 52 of the 126 in Breslau; diphtheria showed the greatest mortality in Hamburg; and small-pox caused 17 deaths in Buda-Pesth, and 2 in Vienna. The mean death-rate in three of the principal Italian cities was 25.8, the rate being 24.8 in Rome, 25.8 in Turin, and 46.8 in Venice. Small-pox caused 5 deaths in Rome and 3 in Turin; typhoid fever 4, and diarrhœal diseases 21 in Rome; and diphtheria and croup 8 in Turin. The death-rate was equal to 52.6 in Cairo, and 64.3 in Alexandria; diarrhœal diseases caused 132 deaths in Cairo, and 108 in Alexandria; typhoid fever 21 in Cairo, and small-pox 2 in Alexandria. In four of the largest American cities, the mean recorded death-rate was 27.6, the rates ranging from 21.4 in Brooklyn, to 24.3 in Baltimore. Diarrhœal diseases showed a marked increase in New York, Philadelphia, and Baltimore; diphtheria caused considerable mortality in New York and Brooklyn; and 10 deaths from typhoid fever were recorded in Philadelphia.

INDIA AND THE COLONIES.

INDIA.

DISPENSARIES IN THE PUNJAB.—The total number of these at the end of 1885, was 193, and they were managed by a staff of 35 assistant-surgeons, and 175 hospital assistants and native medical men. Some difficulty was found in providing duly qualified medical officers to manage the dispensaries, as the demands on the medical staff of the province were very heavy, owing to the requirements of the State railways and the loan of medical officers for foreign service. There was an increase of 1,550 in the number of indoor patients treated, but the number of outpatients fell from 1,742,639 in 1884, to 1,739,517, or a decrease of only 3,122. As last year was a much healthier one than the previous one, owing to a decrease in the cases of small-pox and malarial fevers, these figures seem to show that the dispensaries are increasing both in usefulness and popularity. There was an increase of no fewer than 4,276 in the number of goitre cases treated, and though this disease is generally supposed to be confined to the hills and sub-montane tracts, it appears also to be generally prevalent in the Montgomery and Jhang districts. The number of cases of ophthalmia treated was 134,145, and this disease is steadily increasing. It is proposed to provide the city of Delhi, where the present dispensaries have proved inadequate for the number of patients, with a suitable hospital. A sum of Rs. 103,636, including contributions from provincial and district funds, has already been collected, and it is hoped that a further sum of Rs. 47,000 will be collected during the present year. The foundation stone of the building was laid by Lord Dufferin in November last. This, however, is not the only hospital that is to be erected at Delhi; as it is proposed to build a hospital for women there, as a part of the Lady Dufferin's Fund project. There is also a lying-in hospital at Amritsor, and one at Lahore, under a qualified lady doctor; and it is expected that another such hospital, under the superintendence of a lady doctor from England, and two European nurses, will be opened at Simla. The income of the dispensaries amounted to Rs. 388,751, being an increase of Rs. 14,886 over that of the previous year, while the expenditure was Rs. 382,292. The sums realised from subscriptions were Rs. 18,389, of which Europeans contributed Rs. 12,722, and the natives only Rs. 5,667. The Lieutenant-Governor once more calls attention to the indifference of the natives, who chiefly profit by these medical institutions.

THE UNIVERSITY OF BOMBAY.—The students of the Grant Medical College propose to shortly send in a representation to the Bombay University, to abolish the present degree of Licentiate of Medicine, and substitute the degree of Bachelor of Medicine.

OBITUARY.

THOMAS HENRY PURDON, M.B., F.R.C.S.I., OF BELFAST.

THE subject of this notice died at his residence, Wellington Place, Belfast, in his eighty-first year. Deceased was the descendant of an old Huguenot family which settled in Ireland during the reign of Elizabeth. His father and a brother were in the Army Medical Department; while another brother, also a medical man, died about four years since. Dr. Purdon also had one son in the medical profession (Dr. Henry Purdon), who was drowned at sea; and three nephews practising in Belfast. Dr. Purdon was educated at the Royal School, Armagh, and matriculated in Trinity College at the early age of 13. He also attended for some time the Edinburgh Medical School. He obtained the Fellowship of the Royal College of Surgeons in Ireland in 1826, and graduated in medicine two years afterwards. While living in Dublin, he was prosector for Dr. Harrison, the distinguished anatomist of Trinity College. He held various appointments—Surgeon to the Royal Hospital, Belfast, and latterly Consulting Surgeon; Consulting Surgeon to Belfast Ophthalmic Hospital; Consulting Physician to the Hospital for Consumption. Some years ago, he was Surgeon to the County Antrim Prison, to the Deaf and Dumb Institution, and to the Infirmary and Poorhouse. He had retired from practice for some years, and his principal relaxation was to work with the microscope and telescope. Dr. Purdon was greatly esteemed and respected by his professional brethren, and by the citizens of Belfast, where he practised for many years.

ROBERT JAMES MANN, M.D., F.R.C.S.

DR. MANN died after a few hours' illness at his residence at Wandsworth Common, on August 4th. He was born in Norwich, in January, 1817, and at an early age evinced a love of, and aptitude for, natural science. Botany was his first pursuit, and, whilst still a student, he published an excellent list of the flowering plants of the Norfolk district. Dr. Mann studied at University College, dressed for Mr. Liston, and became M.R.C.S. and L.S.A., in 1840. For some years he practised in Norfolk, at the same time continuing his scientific pursuits, and beginning to occupy himself also with literary undertakings. His first published book was *The Planetary and Stellar Universe*, an excellent popular exposition of astronomy, which, with meteorology, remained favourite studies with him throughout life.

In 1854 he graduated at St. Andrew's, and about this time he was employed in assisting his old teacher and attached friend, Dr. C. J. B. Williams, in the revision and publication of the last edition of his *Principles of Medicine*, assistance, the value of which, was generously acknowledged in the work itself, and again, in the much more recently published *Memorials of Life and Work*, of that eminent physician. In 1878, Dr. Mann was elected a Fellow of the Royal College of Surgeons.

In 1857, on the invitation of Bishop Colenso, Dr. Mann left England for Natal, where he resided nine years, during seven of which he was Superintendent of Education for that colony. In this capacity, he succeeded, working against great difficulties, in starting elementary schools for both its English and Dutch inhabitants, and ultimately in assisting those for the native population also. This, undoubtedly, was a noteworthy achievement in his life. During his residence in Natal he also carried out and recorded daily meteorological observations, the tabulated results of which are in the hands of the Meteorological Office. After his return to England, he was twice elected President of the Meteorological Society.

Dr. Mann, at the time of his death, was one of the oldest contributors to the *Edinburgh Review*. He excelled in the popular exposition of science, and published many works of an elementary character, on physiology, &c. In particular, he early took up the question of hygiene and sanitary management, and issued, as long as thirty years ago, small treatises on these important subjects, written with a view to bring them within the intelligent apprehension of the working classes. These were ultimately collected in a small volume, entitled *Health for the Household*.

He was from first to last a most active and indefatigable worker, and no doubt his end was hastened by his being, during the past four months, although already in failing health, busily engaged in preparing and bringing out the Catalogue of the Natal Court, at the Colonial and Indian Exhibition, and in forwarding the arranging and labelling of the articles in it.

He was buried in the Kensal Green Cemetery, on Monday, August 9th.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—Preliminary Scientific (M.B.) Examination: July, 1886. Pass-list. Entire Examination.

First Division.—C. Barker, Firth College, Sheffield; *C. K. Bowes, Christ Church, Oxford, and St. Bartholomew's Hospital; *A. H. Card, St. Paul's School, and Guy's Hospital; *A. E. Cope, University of Durham College of Medicine, Newcastle-on-Tyne; *F. P. S. Cresswell, Christ's College, Brecon, and University College, Cardiff; R. C. Despard, Private study; *A. H. Green, Owens College; J. Grimshaw, Yorkshire and Elmfield Colleges; *R. Hamilton, Manchester Grammar School, and Owens College; F. D. Harris, King Edward's High School and Mason College, Birmingham; B. W. Hogarth, Yorkshire and Elmfield Colleges; W. W. Kennedy, St. Bartholomew's Hospital; C. H. Langford, King's College School, and St. Bartholomew's Hospital; V. W. Low, Surrey County School, and St. Mary's Hospital; J. Moore, St. Bartholomew's Hospital; S. H. Perry, Mason College, Birmingham; C. H. Preston, Peter Street School, Manchester, and Owens College; W. G. Rogers, Wesleyan College, Taunton, and Guy's Hospital; L. G. Scudamore, St. Thomas's Hospital; *W. M. Stevens, Cavendish College, Cambridge; W. H. Sturge, University College, Bristol; H. W. Webber, Guy's Hospital, and Mannamead School, Plymouth; *F. W. Wilson, Ark House, Banbury, and Guy's Hospital; A. S. Wohlmann, Guy's Hospital; T. J. Wood, University College.

Second Division.—E. B. Allan, University College; V. B. Bennett, University College, Liverpool; D. A. Birrell, Private study and St. Mary's Hospital; E. M. Brockbank, Owens College; E. Chichester, Prior Park College and London Hospital; J. Dickinson, Westminster Hospital; E. L. Dove, Girton and University Colleges; H. A. Eccles, University College and School; *J. G. Hewitson, University College, London, and Durham College of Science, Newcastle-on-Tyne; *D. Homfray, Owens College; J. W. F. Jewell, Guy's Hospital; A. S. Jones, University College, and private tuition; L. D. Lowsley, St. Bartholomew's Hospital, and Reading School; *M. L. C. Madgshon, School of Science and Art, Newcastle-on-Tyne; A. H. Minton, King's College; I. Newton, Epsom College; E. M. Pace, Normal School of Science, and private tuition; E. L. Pritchard, Epsom College; F. A. Roberts, Yorkshire College, Leeds; W. S. Rowntree, Owens College; W. E. Sargant, St. Bartholomew's Hospital, and private tuition; A. R. Savell, St. Paul's School, and King's College and School; *E. N. Smith, University College; T. G. Stevens, St. Paul's School, and Guy's Hospital; W. L. Symes, St. Mary's Hospital; W. M. Thomas, Epsom College; E. N. Tribe, University College, and private tuition; W. Twyford, Owens College; C. F. Wakefield, Guy's Hospital; C. J. Weichert, University College, and private tuition; A. L. Whitehead, Yorkshire College, Leeds; *F. N. Windsor, Owens College; *W. B. Winston, Guy's Hospital.

Two Subjects of the Examination.†—H. W. C. Austen (P., B.), St. Bartholomew's Hospital, and private study; W. P. Bale (P., B.), Owens College; W. Bligh (P., B.), University College and School; J. E. Briscoe (C., B.), Yorkshire College, Leeds; J. J. Brown (C., B.), Guy's Hospital; J. H. Bryant (C., B.), Guy's Hospital; C. S. De Segundo (C., P.), St. Bartholomew's Hospital; D. Drew (P., B.), University College, and private tuition; F. Ede (C., B.), University College, and private tuition; C. H. Hemming (C., P.), private study; M. L. Hepburn (P., B.), St. Bartholomew's Hospital, and private tuition; G. L. Hill (P., B.), Mason College, Birmingham, and private tuition; H. Hodgson (P., B.), Rugby School, and University College; R. James (C., B.), University College, Cardiff; E. Johnstone (C., B.), Owens College; A. W. Lemarchand (C., B.), St. Bartholomew's Hospital; T. D. Lister (C., P.), Aske's Schools, Hatcham; and Guy's Hospital; W. B. Morton (P., B.), University College; C. B. T. Musgrave (C., P.), The College, Sidmouth, and private study; J. Neale (P., B.), Mason College, Birmingham, and private study; H. T. Parker (P., B.), St. Bartholomew's Hospital; A. E. Reynolds (C. B.), University College, and St. Bartholomew's Hospital; H. B. Rowbotham (C., B.), Mason College, Birmingham, and private study; C. E. Salter (C., P.), St. Paul's School; H. Slater (C., P.), University College; R. Smith (C., P.), Owens College; C. B. P. Spencer (P., B.), Guy's Hospital; J. H. Sproat (P., B.), Wolverhampton Grammar School, and Mason College; Mildred E. K. Staley (C., B.), Mason College, Birmingham; Caroline Sturge (C., P.), University College, and private tuition; T. M. Tibbetts (C., B.), Bourne and Mason Colleges, Birmingham; T. S. Vincent (C., B.), Mason College, Birmingham; J. H. F. Way (C., B.), Epsom and University Colleges; J. Williamson (C., B.), St. Bartholomew's Hospital.

One Subject of the Examination.†—E. L. Adams (C.), Guy's Hospital, and private study; A. J. Adkins (B.), St. Thomas's Hospital; J. F. H. Broadbent (C.), private study; W. F. Colclough (B.), Guy's Hospital, and University College; John N. Collins (B.), London Hospital; H. Corby (B.), London Hospital; H. J. Curtis (P.), University College, Cardiff; E. W. Diver (C.), University College; H. O'N. Fraser-Luckie (P.), St. Bartholomew's Hospital; H. E. Girdlestone (C.), St. Thomas's Hospital; J. C. M. Given (C.), University College, Liverpool; D. R. Green (B.), University College; A. Gurney (B.), London Hospital; A. E. P. Hughes (B.), St. Thomas's Hospital; T. H. Ionides (B.), University College; A. E. Madge (C.), University College, and St. Bartholomew's and London Hospitals; H. F. Mantell (B.), St. Mary's Hospital; Y. H. Mills (B.), London Hospital; C. E. M. Morriss (B.), University College; M. E. Paul (B.), London Hospital, and private study; C. H. Perram (C.), Normal School of Science, South Kensington; E. A. Perram (C.), Normal School of Science, South Kensington; J. A. Pickels (B.), Owens College; W. J. Procter (B.), University College, and London Hospital; J. D. Rawlings (B.), St. Bartholomew's Hospital; R. W. Richards (B.), Mason College, Birmingham, and University College; J. W. Sames (B.), Christ's Hospital, and University College; J. H. Sequeira (B.), London Hospital; H. R. Smith (P.), Mill Hill School, and University College; J. C. Webb (C.), Cheltenham College; A. M. Weir (B.), University College.

* These candidates have also passed in the Mathematics of the Intermediate Examination in Science, and have thus become admissible to the B.Sc. Examination.

† The subjects taken up by these candidates are indicated by initials after the name—C. = Chemistry; P. = Physics; B. = Biology; Z. = Zoology.

[N.B.—The names of candidates who have obtained honours do not appear in this list.]

Intermediate Examinations in Science and Preliminary Scientific (M.B.) Examination, 1886. Examinations for Honours. Inorganic Chemistry.

First Class.—E. P. Perman, *Int. Sc.* (Exhibition), King's College, and private tuition and study; **M. C. Clutterbuck, *Int. Sc.*, University College, Bristol; J. F. Tristram, *Int. Sc.*, Merton College, Oxford, and private study; A. Dufton, *Int. Sc.*, Non-adscript, Cambridge; G. E. Blanch, *Int. Sc.*, Christ Church, Oxford.

Second Class.—A. B. Rendle, *Int. Sc.*, St. John's College, Cambridge; T. J. Baker, *Int. Sc.*, Mason College, Birmingham; W. P. Montgomery, *Prel. Sci.*, Merton College, Oxford; Ll. Roberts, *Prel. Sci.*, St. Bartholomew's Hospital; C. F. T. Blyth, *Int. Sc.*, University College; M. M. L. Agarwala, *Int. Sc.*, Muir Central College, Allahabad and University College.

Third Class.—*G. Baxendale, *Prel. Sci.*, Owens College; *E. M. Farrer, *Prel. Sci.*, Bedford College, London; J. Smale, *Prel. Sci.*, University College; *J. E. Ramsay, *Prel. Sci.*, University of Sydney, and University College; J. S. Bolton, *Int. Sc.*, private tuition.

Experimental Physics.

First Class.—H. E. Schmitz, *Int. Sc.* ("Neill Arnott" Exhibition and Medal), The Yorkshire College, Leeds; *C. G. Lamb, *Int. Sc.* ("Neil Arnott" Medal), Polytechnic Classes.

Second Class.—R. A. Lehfeldt, *Int. Sc.*, Birkbeck Institution, and private study, *F. M. Turner, *Prel. Sci.*, City of London School, and Trinity College, Cambridge (equal); *J. E. Ramsay, *Prel. Sci.*, University of Sydney and University College.

Third Class.—J. H. Dibb, *Int. Sc.*, The Yorkshire College, Leeds; J. F. Tristram, *Int. Sc.*, Merton College, Oxford, and private study; *G. R. F. Stilwell, *Prel. Sci.*, Epsom College.

Botany.

First Class.—A. B. Rendle, *Int. Sc.* (Exhibition), St. John's College, Cambridge.

Third Class.—*E. M. Farrer, *Prel. Sci.*, Bedford College, London; F. E. Weiss, *Int. Sc.*, University College.

Zoology.

First Class.—H. Tilley, *Prel. Sci.* (Exhibition), Wesleyan College, Taunton, and University College; F. E. Weiss, *Int. Sc.*, University College; F. G. Longbottom, *Prel. Sci.*, Ladies' College, Cheltenham, University College, and private study.

Second Class.—A. C. Stevenson, *Prel. Sci.*, King's College, Aberdeen, and University College; J. R. Davis, *Int. Sc.*, private study; H. J. Waring, *Prel. Sci.*, Chorley Grammar School, St. Bartholomew's Hospital, and Owens College; *E. M. N. Williams, *Prel. Sci.*, Newnham College, Cambridge, and University College.

Third Class.—M. H. Browne, *Prel. Sci.*, University College, and private study; *W. J. Potts, *Prel. Sci.*, Owens College; *S. L. B. Wilks, *Prel. Sci.*, The Yorkshire College, Leeds.

** Obtained the number of marks qualifying for the Exhibition or Prize.

* These candidates have also passed in the mathematics of the Intermediate Examination in Science, and have thus become admissible to the B.Sc. Examination.

Intermediate Examination in Medicine, 1886. Pass-list. Entire Examination.

First Division.—G. A. Berry, Owens College; R. Bird, St. Bartholomew's Hospital; F. F. Blackman, B.Sc., St. Bartholomew's Hospital; G. C. Borrett, London Hospital; R. W. Boyce, University College; A. N. Boycott, St. Thomas's Hospital; A. E. Brindley, Owens College; E. V. Brown, St. Bartholomew's Hospital; H. A. Burrowes, University College, Liverpool; G. W. Chaster, University College, and School of Medicine, Liverpool; C. W. Cooke, St. Thomas's Hospital; H. Corner, London Hospital; T. H. R. Crowle, St. Mary's Hospital; C. S. Dowdell, University College; C. Duer, University College; P. J. Duncan, Charing Cross Hospital; W. S. Fenwick, London Hospital; H. M. Fernando, University College; J. L. Firth, King's and University Colleges; F. Grange, Charing Cross Hospital; J. A. Hayward, St. Bartholomew's Hospital; R. T. Hewlett, King's College; J. S. Hicks, London Hospital; C. R. Killick, London Hospital; H. E. Knight, St. Bartholomew's Hospital; T. Lissaman, St. Bartholomew's Hospital; F. S. Locke, St. Bartholomew's Hospital; F. E. Mathews, St. Bartholomew's Hospital; R. D. Mothersole, Guy's Hospital; G. J. Padbury, Guy's Hospital; A. Parkin, Guy's Hospital; J. P. Parkinson, University College; R. Pickard, St. Bartholomew's Hospital; B. Pierce, St. Bartholomew's Hospital; Ll. W. Powell, University College; J. E. Platt, Owens College; W. B. Ransom, B.Sc., Cambridge and University College; E. N. Reichardt, St. Bartholomew's Hospital; N. C. Ridley, St. Mary's Hospital; C. H. Roberts, St. Bartholomew's Hospital; E. A. Roberts, St. Thomas's Hospital; T. W. Smith, Guy's Hospital; G. W. Sutherland, B.A. Sydney, University of Edinburgh; S. S. Swift, University College, and School of Medicine, Liverpool; W. W. H. Tate, University College; F. W. Tunnicliffe, St. Bartholomew's Hospital; E. O. Turner, University College; F. B. Wells, University College; G. B. M. White, University College; H. E. Whitehead, St. Bartholomew's Hospital; H. Williams, St. Bartholomew's Hospital; W. G. Willoughby, St. Bartholomew's Hospital.

Second Division.—H. G. Adamson, St. Bartholomew's Hospital; L. W. Andrews, St. Bartholomew's Hospital; G. H. Barker, Bristol Medical School; R. A. Beaver, University College and School of Medicine, Liverpool; F. R. Blaxall, University College; E. E. Bowden, Owens College; W. F. Brook, St. Thomas's Hospital; H. J. Campbell, Guy's Hospital; W. C. Carter, University College; H. G. G. Cook, St. Bartholomew's Hospital; J. E. Dyer, University College; H. A. Edmonds, Guy's Hospital; H. W. Elphick, University College; H. M. Evans, University College; G. D. Freer, Queen's and Mason Colleges, Birmingham; A. D. Fripp, Guy's Hospital; T. A. Goodfellow, Owens College; A. D. P. Hodges, London Hospital; G. L. Kemp, Guy's Hospital; K. McLaren, St. Bartholomew's Hospital; A. J. Moss, Owens College; C. Price-Jones, Guy's Hospital; G. H. D. Robinson, St. Bartholomew's Hospital; H. Rockley, Guy's Hospital; Mary Royce, London School of Medicine for Women; H. Sharman, University College; J. K. Warry, London Hospital; E. Wills, University College; C. Wilson, London Hospital; A. E. Wynter, St. Bartholomew's Hospital.

Excluding Physiology.

First Division.—L. A. Bidwell, St. Thomas's Hospital; R. W. Cameron, B.A., Owens College; C. A. Hebbert, Westminster Hospital; H. V. Hickman, Guy's Hospital; W. H. Iddon, Owens College; A. H. Joseph, Medical School and Royal Infirmary, Bristol; H. A. Kidd, St. Mary's Hospital; S. W. Morgan, Bristol Medical School; R. J. Stephens, King's College; W. K. Walls, Owens College.

Second Division.—F. M. House, St. Thomas's Hospital; S. F. Mawson, Owens College.

Physiology only.

First Division.—C. F. M. Althorp, The Yorkshire College, Leeds; R. O. Bowman, Owen's College; A. T. Brown, Guy's Hospital; J. E. Gould, University College; F. Harris, London School of Medicine for Women; B. G. A. Moynihan, The Yorkshire College, Leeds; C. P. Spink, The Yorkshire College, Leeds; W. E. Tresidder, Guy's Hospital.

Second Division.—F. W. Abbott, Charing Cross Hospital; G. Barlow, Owens College; A. E. Giles, Owens College; A. Green, Guy's Hospital; J. A. Shaw, University College; H. E. H. Smith, King's College; F. A. Spreat, St. Bartholomew's Hospital.

UNIVERSITY OF EDINBURGH.—The following gentlemen received degrees in Medicine and Surgery on Monday, August 2nd, 1886.

Degree of Doctor of Medicine, with the Title of the Theses. (*** Those who have obtained gold medals for their dissertations; ** deemed worthy of competing for the dissertation gold medals; * commended for their dissertations.) R. S. Anderson, Scotland, M.B. and C.M., 1877: Dyspepsia and its Relations to Functional Cardiac Disorders. J. B. Bawden, England, M.B. and C.M., 1884: Hysteria. F. F. Bond, England, M.B. and C.M., 1884: Sick Headache, its Pathology and Causes. **J. H. Brown, England, M.B. and C.M., 1883: Dupuytren's Contraction of the Palmar Fascia. *S. G. Campbell, Natal, M.B. and C.M. (with Second-Class Honours), 1882: On some points in the Etiology, Diagnosis, and Curative Action of Remedies in Dysentery and Diarrhœa. *** E. Carmichael, Scotland, M.B. and C.M. (with First-Class Honours), 1884: Transfusion or Injection of Blood and other Fluids, with special reference to the Injection of Blood with Saline Solution. E. A. Chill, India, M.B. and C.M., 1883: Observations on Rotheln. **A. C. Clark, Scotland, M.B., 1878: Etiology, Pathology, and Treatment of Puerperal Insanity. **A. H. W. Clemow, England, M.B. and C.M., 1883: Micro-Organisms in their Relation to the Infective Granulomata. *F. H. Crowdy, Newfoundland, M.B. and C.M., 1875: Exophthalmic Goitre. *A. S. Cumming, Scotland, M.B. and C.M., 1884: Personal Observations on some of the Health-Resorts in the Riviera. *A. Donald, Scotland (M.A.), M.B. and C.M. (with Second-Class Honours), 1883: Internal Uterine Hæmorrhage during the Latter End of Pregnancy and the First Stages of Labour. W. S. Flett, Scotland, M.B. and C.M., 1884: Disease from a Public Health Point of View. *T. A. Fraser, England, M.B. and C.M. (with Second-Class Honours), 1882: Clinical Studies in the North Riding Infirmary. *W. Gay, England, M.B. and C.M., 1882: The Convulsive Diathesis of Infancy. C. D. G. Hailes, England, M.B. and C.M., 1884: Offensive Odours in the Breath. G. Henderson, Scotland, M.B. and C.M., 1877: Phlebotomy. *W. W. Herbert, Wales, M.B. and C.M., 1882: Notes upon Hæmatoma Auris. *W. A. Holmes, England, M.B. and C.M., 1884: Follicular and Efflorescent Membrane Formation in the Throat; the Symptoms, Pathology, Results, Etiology, and Treatment. ***W. Hunter, Scotland, M.B. and C.M. (with First-Class Honours) 1883: The Physiology and Pathology of Blood-Transfusion, and the Fate of Extravasated Blood. **W. S. Lang, Scotland, M.B. and C.M. (with First-Class Honours), 1884: Internal Derangements of the Knee-Joint. *W. Lauder, Scotland, M.B., 1878: Remarks on Oophorectomy. B. F. P. MacDonald, Scotland, M.B. and C.M., 1884: Virulent Outbreak of Rotheln at Bampton, near Penrith. ***A. Macfadyen, Scotland, M.B. and C.M., 1883: The Behaviour of Bacteria in the Digestive Tract. D. MacGregor, Scotland (M.A.), M.B. and C.M., 1884: Neuralgia and Neuritis. D. Macmillan, Scotland (M.A.), M.B. and C.M., 1880: Self-Control a Therapeutic; or, the Influence of the Mental Condition of a Patient to Promote or Retard his Recovery. A. A. Matheson, Scotland, M.B. and C.M., 1883: The Bacillary Origin of Phthisis Pulmonalis. A. S. Myrtle, England, M.B. and C.M., 1883: On the Relation of the Errors of Refraction to Senile Cataract. *T. Nelson, Scotland, M.B. and C.M., 1880: On the Disposal of Sewage in England. F. W. Niesche, Australia, M.B. and C.M., 1880: Typhoid Fever. *E. H. L. Oliphant, France, M.B. and C.M., 1882: On the Relations of Speech and Aphasia. A. G. Paterson, Brazil (M.A.), M.B. and C.M., 1884: Nævus: its Varieties, Pathology, and Treatment. ***A. M. Paterson, England, M.B. and C.M. (with First-Class Honours), 1883: The Spinal Nervous System in the Mammalia. **H. W. Phillips, England, M.B. and C.M., 1881: Definition of Acute Idiopathic Myelitis. *J. Priestley, England (B.A.), M.B. and C.M., 1883: Retinoscopy, or the Shadow-Test for the Measurement of Refractions. J. Rees, Wales, M.B. and C.M., 1882: Visceral Syphilis. *T. R. Scott, Scotland, M.B. and C.M., 1874: Tubercular Meningitis. *J. Smith, Scotland (M.A.), M.B. and C.M., 1881: Tobacco Amblyopia. *C. Stein, Scotland, M.B. and C.M., 1883: Diseases of the Knee-Joint, with special reference to their Treatment by Operation. J. Stiell, Scotland, M.B. and C.M., 1871: Remarks on Indigestion. *A. J. Stiles, England, M.B. and C.M., 1883: The Sanitary Condition of the Fens of Lincolnshire in reference to the Origin and Mitigation of certain Zymotic Diseases. ***R. Stockman, Scotland, M.B. and C.M. (with Second-Class Honours), 1882: The Action and Therapeutic Value of Vegetable Astringents. T. E. Underhill, England, M.B. and C.M., 1876: Spontaneous Fractures. R. Vassie, Scotland, M.B. and C.M., 1883: Ozæna. *A. O. Ward, England, M.B. and C.M., 1883: Eucalyptol Vapour in Diphtheria. J. H. Williams, Wales, M.B. and C.M., 1881: Some Points in the Surgery of the Sphincter Ani. *O. G. Wood, Canada, M.B., 1873: Contribution to the Etiology of Malario-Enteric Fever. W. C. Woods, England, M.B. and C.M., 1882: Hydatid of the Liver, with Special Reference to its Surgical Treatment in Australia. P. Yates, England, M.B. and C.M., 1883: Excision of Hip.

Degrees of Bachelor of Medicine and Master in Surgery.—(*a* indicates that the candidate has passed the examinations with first-class honours; *b* indicates that the candidate has passed the examinations with second-class honours.) A. Aikman, Scotland; J. Allison, Scotland; J. Anderson, Scotland; W. A. Anderson, England; G. Ap Thomas, Wales; *b*J. A. Armitage, (B.A.) England; W. O. R. Arnot, Africa; G. R. Ayshford, England; W. H. Bansall (B.A.) England; A. E. Barlow, England; A. G. Baschet, Mauritius; S. Beattie, Ireland; J. Biggam, M.A., Scotland; V. Black, Australia; E. G.

Blanc, Trinidad; J. F. de Boissière, Trinidad; A. L. Borrodaile, England; J. E. Bowser, England; W. F. Boycott, England; D. G. Braidwood, Scotland; F. L. H. Brown, England; T. H. Bryce (M.A.), Scotland; J. M. Campbell (M.A.), India; E. Capper, England; *b*E. W. Carlier (B.Sc.), England; J. G. Cassels, England; J. A. Clark, Scotland; F. H. Clarke, England; R. J. Copeland, India; W. Craig, Scotland; J. Cunninghame, New Zealand; A. E. Curtis, England; A. L. Curtis, England; E. N. Darwent, America; G. S. Davidson (M.A.), Scotland; J. E. Davies, Wales; F. W. D'Evelyn, Ireland; D. S. Doughty, Scotland; A. Edington, Scotland; A. Fahmy, Egypt; W. J. Fairlie, England; R. H. J. Fetherston, Australia; *b*O. Field, England; T. H. Fiske, England; J. G. Fletcher, Scotland; R. S. Forrest, Scotland; D. Fraser, Scotland; D. A. Fraser, Scotland; N. S. Fraser, Newfoundland; P. Fraser, Wales; R. Fullerton, Scotland; J. W. Gainer, England; T. Galbraith, Scotland; J. Galletly (M.A.), Scotland; *b*L. D. Gamble, Ireland; P. C. Garson, Orkney; T. H. Gibson, England; G. V. Gilray, Scotland; G. B. Goodal, England; R. P. R. Gordon (M.A.), Scotland; J. Graham, Scotland; A. E. Grant, India; G. F. Grant, Scotland; J. W. Grant, Scotland; T. P. Gray, Scotland; W. D. Grieve, Scotland; F. O. Guérin, Mauritius; *b*G. L. Gulland (M.A., B.Sc.), Scotland; E. A. W. Hall, India; G. Hall, England; W. H. A. Hall, India; G. Hardyman, Scotland; F. J. L. Hart, Scotland; J. F. Haswell, England; L. A. Hawkes, New Zealand; C. W. Hayward, England; T. Henderson, Italy; H. B. Hetherington, England; *b*. S. Hicks, England; R. N. Highmoor, England; W. H. Hill, England; W. R. Hill, India; F. R. B. Hinde, England; J. R. Holmes, England; R. Howden, Scotland; J. M. Hughes, Wales; C. W. Hunter, Scotland; J. Hutcheson, Scotland; T. B. Hyslop, Scotland; W. H. M. Ingham, Bermuda; E. M. Inglis, Australia; R. W. Inkster, Shetland; R. P. Jack, Scotland; R. Jardine, New Brunswick; *a*F. H. Jeffcoat, (B.A.), New Zealand; F. M. Johnson, Australia; J. J. Johnson, Australia; O. Johnson (B.A.), Sierra Leone; J. P. Johnston, Africa; B. Jones, Wales; T. J. Jones (B.A.), England; F. A. Juckes, England; C. P. Kennard, England; *a*F. T. King, New Zealand; W. H. E. Knaggs, Cape of Good Hope; J. H. A. Laing, Scotland; G. J. Lamb-O'Neil, Australia; J. Lamrock, Australia; J. D. Leigh, England; *a*P. A. Lindsay (B.A.), New Zealand; H. H. Littlejohn (M.A.), Scotland; E. L. B. Loubser, Africa; D. C. A. McAllum, India; J. McAndrew, Scotland; W. Macansh, Australia; J. Macdonald, Scotland; T. MacDonald, Scotland; T. F. McFarlane, Scotland; I. D. Mackay (B.A.), Ireland; T. Mackenzie (M.A.), Scotland; W. A. Mackintosh, Scotland; H. W. G. Macleod, India; J. McNaughton, Australia; P. B. McNicol, Scotland; C. C. Manifold, India; A. Mann, England; J. D. Menzies, England; D. S. van der Merwe, Africa; G. A. Mitchell, England; T. Morris, Wales; A. Morrow, Canada; C. J. Morton, Scotland; G. W. Moseley, England; J. Musgrove, England; A. W. Nash, Australia; J. T. C. Nash, India; W. S. Nason, England; M. J. Oliver, Scotland; R. J. Paton, India; J. A. Perez, Trinidad; W. Philp (M.A.), Scotland; *a*G. A. Pirie, Scotland; J. Pirie, Scotland; G. H. Pollard, England; H. P. Prankerd, Australia; A. Primrose, Canada; A. R. Rainy (M.A.), Scotland; W. B. Reid, Scotland; W. S. P. Ricketts, India; G. B. Ritchie, Scotland; E. T. Roberts, England; E. V. Roberts, Wales; F. C. Roberts, England; R. G. Roberts, England; R. Robinson, England; B. S. Robson, England; J. Ross, Scotland; J. Ross, Scotland; J. R. H. Ross, Ireland; A. B. P. Russell, India; J. S. R. Russell, Demerara; D. M. Sangle, India; S. R. Savage (B.A.), Cape; H. C. L. Scofield, England; *b*D. W. Scotland, India; *b*A. Sellers, England; R. F. Shepherd, England; R. D. Shiels, Scotland; G. T. Sinclair, Orkney; R. W. Smeddle, England; H. M'M. Smellie, Scotland; G. P. Smith, Scotland; J. Smith, Scotland; *a*J. W. Smith, England; A. C. Smyth, Ireland; W. Steven, Scotland; T. Stevenson, Scotland; J. Stupart-Archibald, Scotland; D. G. Sutherland, Scotland; G. A. Sutherland (M.A.), Scotland; W. H. Sutherland, India; W. G. Sym, Scotland; W. Symington, Scotland, J. R. Talbot, Ireland; J. W. Talent, England; A. H. Taylor, England; H. I. Taylor (B.A.), Canada; I. Taylor, Australia; J. Taylor (M.A.), Scotland; W. Taylor, England; C. C. Teacher, Scotland; A. Thomson, Scotland; F. W. Thomson (M.A.), Scotland; *a*J. Tillie, Scotland; J. K. Tomory, Scotland; J. W. Travell, England; E. B. Turner, England; *a*W. H. Turton, England; E. M. Tyrell, India; A. H. Vassie, Scotland; H. W. Vernon, England; W. Vickers, England; D. E. Walker, Scotland; P. Wardle, England; *b*C. H. Waters, Scotland; *b*J. L. Welch, (M.A.), Jamaica; J. A. Wetherell, England; J. H. Whiteside, England; J. Wilkinson, Ireland; C. L. Williams, England; A. D. Wilson, Scotland; G. Wilson, Bermuda; J. Wilson, Scotland; W. B. Wilson, England; W. C. Wilson, England; Arthur Wood, England; W. S. R. Woodforde, England; E. R. Woodhouse, England; D. J. L. van Wyk, Africa.

UNIVERSITY OF ABERDEEN.—On Saturday, July 31st, the following gentlemen received degrees in medicine and surgery.

Degree of M.D.—J. H. Anderson, M.B., C.M., Stonehaven; G. C. Argo, M.A., M.B., C.M., Sedgfield, Durham; J. M. Booth, M.A., M.B., C.M., Aberdeen; W. B. Ferguson, M.B., C.M., Newtown; W. Geddie, M.B., C.M., Accrington; W. R. Holmes, M.B., C.M., Oldham; J. Inglis, M.B., C.M., Kirkley, Lowestoft; P. W. Macdonald, M.B., C.M., Dorchester; J. Matheson, M.A., M.B., C.M., London; A. A. Morrison, M.A., M.B., C.M., Alexandria; F. R. Mutch, M.B., C.M., Nottingham; J. Reid, M.B., C.M., Adelaide; J. T. Robb, M.B., C.M., Tottenham; A. G. Smith, M.A., M.B., C.M., Errol; W. Stericker, M.B., C.M., Dulwich Grove; P. A. Sullivan, M.B., C.M., Carlisle; J. Taylor, M.B., C.M., Durham.

Degrees of M.B. and C.M.—C. M. Aird, Wakefield; H. Angus, Arbroath; C. A. Arnold, Chichester; J. M. Barnes, Fonlsworth, Manchester; C. W. S. Barrett; T. C. Bennett, Moonta, South Australia; J. F. Binnie, M.A., Aberdeen; H. H. Brown, Peterhead; G. Burgess, Grantown-on-Spey; A. W. Chapman, Manchester; A. F. C. Clark, Woodside; F. L. Collie, Viewbank, Cults; E. G. Coward, Huddersfield; A. W. Dalgarno, Peterhead; W. Davidson, Kinneff; J. S. Dickie, Aberdeen; J. C. G. Duffus, M.A., Cullen; G. Findlay, M.A., Aberdeen; C. F. Forbes, Deal; G. Forbes, Tarland; H. F. Forbes, Cove, Kincardineshire; J. Galloway, M.A., Inverurie; W. S. Geddie, Garmouth; W. H. Gray, St. Margaret's Hope, Orkney; W. Greig, Tyrie; A. N. Grieve, M.A., Fraserburgh; W. H. Hewlett, Stroud; A. C. Hutchinson, London; A. G. R. Ingram, M.A., Rothiemay; A. S. Jameson, Aberdeen; J. T. Lewis, Aberdeen; P. J. Lumsden, India; D. G. G. Macdonald, Inverness; A. Mackay, Aberdeen; F. Macrae, Dingwall; J. Malcolm, Ashbourne; E. T. Martin, Much Wenlock; W. Milligan, Old Aberdeen; A. Milne, Aberdeen; G. L. H. Milne, M.A., Fyvie; J. Murray, Galashiels; J. Nicol, Inverurie; E. R. Orchard, Kingussie; C. Reid, Aberdeen; G. M. Reid, Aberdeen; G. H. Reynolds, Kent; C. Robertson, Aberdeen; H. Ross, Cults, Aberdeen; J. Russell, M.A., Insch; W. Scatterty, M.A., Kennethmont; D. A. Shirres, Aberdeen; A. Simpson, M.A., Aberdeen; J. W. Smith, Chapel-en-le-Frith; J. H. Stenhouse, Friockheim; E. M. de Souza, Goa; R. B. T. Stephenson, Aberdeen; J. Taylor, Woodside, Elgin; J. Thomson, M.A., Montrose; J. D. Thomson, M.A., Cullen; V. W. Twining; W. D. Urquhart, Woodside, Aberdeen; G. Williamson, M.A., Elgin; R. G. Wills, Axminster.

Of the above-named candidates, J. C. G. Duffus, M.A., and J. D. Thomson, M.A., received their degrees in Medicine and Surgery with highest academical honours; G. Findlay, M.A., J. Galloway, W. Milligan, and J. Murray received their degrees in Medicine and Surgery with honourable distinction.

At the same time, T. F. Dewar, T. H. Fyfe, G. B. D. Macdonald, and G. N. Wilson were certified to have passed all the examinations, but did not graduate.

The following candidates have passed the First Division of the First Professional Examination.

M. de Alcazar, J. F. Black, T. Bromilow, J. A. Bruce, E. T. Cox, A. R. Cushny, W. C. Dale, M.A., W. J. M'C. Ettles, J. P. Farquharson, C. F. Fearnside, C. G. Foggo, F. C. S. Forbes, D. W. Geddie, J. A. R. Glennie, C. Grant, J. A. Hargreaves, J. Harper, A. G. Johnston, E. J. T. Jones, F. Kelly, J. M. Key, J. C. M. Kinnear, G. A. Lang, G. W. Lovie, F. W. Ludlow, J. D. L. Macalister, N. M. MacFarlane, A. M'Gillivray, A. Mackay, A. R. Mackinnon, J. M'Rae, M.A., J. W. MacVine, W. Y. F. Paul, J. P. Philip, T. Pimley, D. Reid, J. Reid, W. R. Reith, M.A., D. Rennet, A. Rese, D. Russell, J. Russell, M.A., C. R. Selby, G. J. Silver, D. M. Smith, W. H. Stephen, W. C. Taylor, F. H. Thomson, W. Thomson, F. F. Tindall, A. V. Trow, J. Troup, J. Valentine, R. H. Wace.

The following candidates have completed the First Professional Examination.

W. Bromilow, G. J. Buchanan, H. F. Cameron, A. Dingwall, R. A. S. Eden, J. Fraser (Beauly), J. Fraser (Aberdeen), A. P. F. Gammack, W. Goodwin, B. A. Heathcote, B. B. Hoggan, T. Macallan, A. Mackay, A. F. Mackenzie, W. L. Mackenzie, M.A., J. R. M'Lean, D. M'Ritchie, G. C. Milligan, B. W. Mudd, W. E. Munro, W. A. Murray, B.A., F. Noble, G. R. C. Russell, R. G. Wylie.

The following candidates have passed the Second Professional Examination.

J. Barclay, A. T. G. Beveridge, F. Booth, J. S. Butter, R. H. Cook, G. Davidson, A. C. Fergusson, G. Gibb, D. A. Harvey, G. Henry, J. E. Holden, J. Johnstone (Otago), G. W. E. Kerr, W. S. M'Gowan, R. H. MacKay, A. D. Mackinnon, N. Mackinnon, J. C. MacIntosh, J. Pirie, W. St. C. Symmers, G. Watt, J. Webster.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following candidates at the July sittings of the examiners held in Glasgow passed the respective examinations for the triple qualification conferred in conjunction by the three Scottish medical corporations.

First Examination.—H. Ward, of Glasgow University; W. A. Williams, J. G. Curdie, G. Tocher, J. P. Granger, P. A. Docherty, and J. Menzies, of Anderson's College; J. Quigley, of Anderson's College and Queen's College, Galway; A. Nicholson, J. A. T. Hall, W. Kelly, J. Jackson, and J. M. Omond, of the Glasgow Royal Infirmary School; M. D. Gray, of Queen's College, Belfast, and Anderson's College; G. C. H. Norman, of Guy's Hospital; S. T. Browne, of Madras Medical College; F. E. Nazareth, of Grant Medical College, Bombay; E. B. Roberts and Richard T. Wheeler, of the Edinburgh School; C. S. Morrison, of the University of Calcutta and Surgeon's Hall, Edinburgh; A. E. Henderson and E. E. Ward, of the London School of Medicine for Women; J. S. Vasalli and A. O. Hibbert, of the Leeds School; J. F. Atkins, A. M. Williams, and J. E. J. Pegg, of the Birmingham School; J. Darbyshire and J. R. S. Park, of Owens College.

Second Examination.—R. Boyle, C. H. Humphrey, J. Robert Jones, and A. D. Pithie, of Anderson's College; W. J. France, of the Glasgow Royal Infirmary School; J. Brown and H. Ward, of Glasgow University; A. H. H. Watson, J. Tighe, J. A. Orloff (Ceylon), C. D. Stewart and R. T. Wheeler, of the Edinburgh School; A. E. Huband and G. H. Drinkwater, of the Birmingham School; J. S. Vasalli, of the Leeds School; Michael M'Laughlin, of Queen's College, Galway, and Anderson's College; J. H. Clements, of St. Thomas's Hospital; W. F. Garrett, W. Armour, and J. R. S. Park, of Owens College; A. Bradshaw and J. A. Orloff, of the Dublin School; W. H. Baillie and J. M'Elfatrick, of Queen's College, Belfast; C. D. F. de Mello, of Grant Medical College, Bombay.

Final Examination (and admitted Licentiates).—J. M'Clymont, E. Ball, E. Whitwell, H. Johnson, A. M'Arthur, J. C. Davidson, J. K. Jones, A. J. Harwood, and A. C. Milne, of the Glasgow Medical School; A. J. S. Ker, of the Edinburgh School and the London Medical College for Women; H. W. Cross, of the Newcastle-on-Tyne School; A. H. Hoffmann, of the Birmingham School; F. H. Gaunson, of Melbourne University and the Edinburgh School; J. T. Chapman and Alfred W. Kinder, of Melbourne University; W. C. Halpin, of the Dublin School; J. de Souza and F. V. A. de Souza, of the Grant Medical College, Bombay; Francis D. Robertson, M.D., M'Gill College, Montreal.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, August 12th, 1886.

Annesley, William Oliver Tyndale, 4, Church Terrace, Lee, Kent.
Barber, Robert David, The General Hospital, Nottingham.

Bronner, Hermann, 33, Manor Row, Bradford.
Carden, Warburton Vandeleur, 17, Lawn Road, Haverstock Hill, N.W.
Gee, Frederick William, University College Hospital.

MEDICAL VACANCIES.

The following vacancies are announced.

BIRMINGHAM BOROUGH ASYLUM.—Resident Clinical Assistant. Board and Residence. Applications to E. B. Whitcombe, Esq., Medical Superintendent.

BRIXTON AND STREATHAM DISPENSARY.—Doubly qualified Medical Man for two months. Salary, £4 4s. per week, with furnished apartments, coal, gas, and attendance. Applications by August 21st to the Secretary, Water Lane, Brixton.

DURHAM COUNTY ASYLUM, Sedgefield, Ferryhill.—Junior Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent.

HARTLEPOOL'S FRIENDLY SOCIETIES MEDICAL ASSOCIATION. Medical Officer. Applications to T. Tweddell, Esq., West Hartlepool.

OWENS COLLEGE, Manchester.—Professor of Chemistry. Applications to the Council of the College, under cover, to the Registrar by August 31st.

RICHMOND HOSPITAL, Surrey.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by September 13th to G. C. Rowland, Esq.

ROYAL PORTSMOUTH (PORTSEA) AND GOSPORT HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by August 25th to the Chairman of the Committee, Vicarage, Portsmouth.

STANLEY HOSPITAL, Kirkdale, Liverpool.—Junior House-Surgeon. Salary, £70 per annum, with board and rooms. Applications by August 26th to J. E. Bennett, Esq.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay.—Junior House-Surgeon and Dispenser. Salary, £90 per annum, with board, lodging, and attendance. Applications by September 4th to W. H. Kitson, Esq., Shiphay, Torquay.

WEST RIDING ASYLUM, WAKEFIELD.—Resident Clinical Assistant. Board, apartments, etc. Applications immediately to the Medical Director at the Asylum.

MEDICAL APPOINTMENTS.

CAUDWELL, Henry, L.R.C.P. and L.M., and L.R.C.S.Ed., appointed Resident House-Surgeon to the Buckinghamshire General Infirmary *vice* John Rodley, M.R.C.S., resigned.

DAVIS, Henry, M.R.C.S.Eng., L.S.A.Lond., appointed Teacher and Administrator of Anæsthetics to St. Mary's Hospital.

FOWLER, J. Kingston, M.A., M.D.Cantab., F.R.C.P., appointed Physician to the Metropolitan Life Assurance Society, *vice* W. Moxon, M.D., deceased.

GORHAM, P. C., L.R.C.P.Edin., appointed Medical Officer to the Clifden Infirmary and Workhouse Fever Hospital; also Medical Officer to the Clifden Union Dispensary, and Medical Officer of Health to the Clifden Union.

HELM, J. H., M.B.Edin., appointed Resident Medical Officer to the Craiglockhart Poor-house, *vice* G. Michael, M.B., resigned.

KIRBY, Samuel J. J., L.R.C.P. and L.M.Ed., M.R.C.S.Eng. and L.S.A.Lond., appointed Medical Officer of Health to The Grays Urban Sanitary District.

PRESTON, Henry T., M.D., M.R.C.S., appointed Honorary Surgeon to Kidderminster Infirmary, *vice* J. Spofforth, M.R.C.S., resigned.

PROWSE, W., M.R.C.S.Eng., appointed Medical Officer to the Axbridge Union, *vice* W. Furnivall, M.R.C.S.Eng., deceased.

SIMPSON, J., M.D.Q.U.I., appointed Medical Officer to the Dispensary District of Ahoghill in the Ballymena Union, *vice* J. W. Chestnutt, M.D., deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

BIRTH.

CARTER.—On Thursday, August 12th, at 21, Temple Row, Birmingham, the wife of Alfred H. Carter, M.D., of a son.

MARRIAGES.

GREENER—RIDGLEY.—On Tuesday, August 17th, at Ramsey, M. H. Greener, M.B., C.M., Clare Street, Cardiff, to Florence, daughter of E. B. Ridgley, Ramsey, Huntingdonshire.

PRICE—ROBERTS.—August 18th, by licence, at the Tabernacle Welsh Calvinistic Methodist Chapel, Bangor, North Wales, Emyr Owen Price, M.B., Bangor, to Emma, younger daughter of Alderman Meshach Roberts, Bangor.

ROSS—DANIELS.—On August 17th, at St. Peter's Church, Brighton, by the Rev. Julius Hannah, Douglas McKissock Ross, M.B., to Emma Frances, only daughter of William Charles Daniels.

WOODS—REES-PHILIPPS.—August 12th, at St. Philip's Church, Kensington, by the Rev. John Groves, Chaplain of Kensington Palace, John Francis Woods, Medical Superintendent of Hoxton House Asylum, to Nora, youngest daughter of James Rees-Philipps, of 3, Berkeley Place, Cheltenham.

DEATHS.

CHEYNE.—On August 16th, after a very short illness at Fairholme, Crosted Road, West Dulwich, S.E., Robert Romley Cheyne, F.R.C.S. and L.S.A., of the above address, and 27, Nottingham Place, W., aged 75.

PEGGE.—On August 17th, at Vernon House, Britonferry, Glamorganshire, Catherine Milton, beloved wife of Charles Pegge, M.R.C.S. and L.S.A., aged 39.

THOMSON. August 12th, at Ashton, Torquay, Spencer Thomson, M.D., aged 69, formerly of Grangewood Lodge, Leicestershire.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30 Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies.*

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

Algiers.

A Member would feel much obliged for information as to Algiers for the winter residence of a young man with laryngeal phthisis. Can any book on the subject be recommended?

Incontinence of Urine.

Nodrog writes: I have a patient whom I have treated for some months for an incontinence of urine with belladonna, iron, and strychnine in full doses. He is twelve years old, and has suffered from the trouble since he was three years of age. At that time lithotrity was performed. He has rather a long prepuce, which can be fully retracted. His urine is alkaline, and the last time I saw him I prescribed acids. Would circumcision cure the incontinence? Would any of your numerous readers oblige me with their advice? Incontinence never takes place during sleep.

NOTES, LETTERS, ETC.

Rise of Temperature at Night.

Mr. Charles King writes: Dr. Wallace says I have reversed the law of conservation of force. Is this so? Dr. Wallace states that "construction requires heat to be converted into chemical action, and that, therefore, temperature falls." But heat is produced by chemical action, and is not its cause. From the chemical action, we get the rise in temperature and the repair. Take the case of a patient with a fractured leg. According to Dr. Wallace, the process of reparation of bone should be accompanied by a fall in temperature; but this does not happen. It appears to me that the demands on the body in the day lessen vitality and lower the temperature. In health, this is restored in the night during sleep, without inconvenience; but the easy process is lost in disease, and the restoration, or attempted restoration, is attended with increased chemical action, restlessness, and rise of temperature.

Are the Eyes of the Offspring of the Blind Affected? Are their Marriages Fruitful?

Mr. W. Burns (Manchester) writes: I observe an article on the above in the Journal of August 7th, by Mr. Snell, of Sheffield. With such limited statistics as Mr. Snell gives, almost anything might be proved. Several of Mr. Snell's instances might be cited against himself. For example, H., aged 64, was married at 21, and did not become blind till he was 36, yet he had no children by his first wife. He was married a second time, aged 41, and had one child. That case clearly goes against Mr. Snell; and I might maintain by it that he became fruitful through his blindness.

H., aged 42, was married four years before he became blind; yet he had no children, whereas he has had one since he lost his eyesight. That, also, goes against Mr. Snell. I could add more, but I would trespass too much on your space.

The Canary Islands as a Health-Resort.

Dr. E. P. Philpots (Bournemouth) writes: As the recent effort to bring the climatic advantages of the Canary Islands before the public, and to found a sanatorium, was greatly stimulated by my presence there last year during a visit made to obtain information relative to the rainfall, temperature, etc., I have read with great interest your remarks in the British Medical Journal of August 7th, and I believe them to be substantially correct. I shall be pleased to give the benefit of my experience of the Canaries, which is based upon several visits there, and a somewhat long association with them, to any of your readers to whom such information would be of use.

Vaccination: a Challenge.

The British Medical Association is invited, through the public press, by an anti-vaccinationist, to select a "champion" to discuss in public debate with another champion, appointed by the anti-vaccination societies of England, the merits of vaccination. We fail to see why the Association should concern itself with such discussion; it is not its duty to induce unwilling people to submit to vaccination, but rather to discuss vaccination, among other medical subjects, for the mutual information of all members of the profession. The proposal to appeal to a public audience may, and doubtless does, imply the conviction of the writer that his own views cannot be shaken, but we doubt whether the public would be the wiser when the discussion was concluded. It requires but a very brief study of the reports of the Registrar-General to satisfy the mind of any person who is open to conviction that more lives are saved by vaccination than by any other means which medical men possess for combating disease.

Climate of Demerara and Barbadoes.

Dr. H. Dalton (Harrogate) writes: I do not know who your correspondent "F. A. D." is; but, as one born in county Demerara, colony of British Guiana (too often confounded with Guinea in Africa, notably by visitors to the present Colonial Exhibition), may I be permitted to correct statements which, I admit, may have crept in unintentionally? A glance at a map will show that the country known as Guiana does not look up to the island of Trinidad, sometimes called a sister colony, owing to its size. The latter is to the north of the Venezuelan Republic.

It is a mistake to say that no work has been published with regard to the general and natural history of the country since the times of Schomberg (or Schomburgk) and Waterton. All about it, even to the classification of Fauna and Flora, was published in two volumes by a firm of then well known London publishers, in 1852. The work gave the whole history of the settlement previously to (as far as known), and from the time of, the first authenticated English visitor, Sir Walter Raleigh. The governments of the two neighbouring colonies, French and Dutch Guiana, recognising the value of the work, had portions of it translated into their languages, awarding the original writer honorary distinctions, through their consuls: for what applied to one portion, was applicable to the whole territory. Its hidden wealth was pointed out. When, some years ago, a boundary question was mooted in Parliament, reference was made to the work. It is out of print, and I have no vested right in it, though it was written by my father.

Treatment of Inflammation of Extremities.

Mr. W. J. Penny (Clifton) writes: In a case of compound fracture and dislocation of the ankle, in a middle-aged man of intemperate habits, in which free oozing of blood occurred, and it was difficult to introduce sufficient drainage, I tried elevation of the leg at an angle of about 60°, with the object of checking bleeding and inflammation. The elevation was gradually lessened after the second day, and the result was most gratifying.

Royal College of Surgeons of England.

In the list of gentlemen who recently passed the primary examination in Anatomy and Physiology at the Royal College of Surgeons, published in the Journal of July 17th, the name of Mr. J. Panting was accidentally omitted. Mr. Panting passed in both subjects.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. A. E. Bridger, London; Mr. A. Ledlie, Belfast; Dr. Withers Moore, Brighton; Mr. T. Martin, Guernsey; Mr. W. Maine, Colchester; Dr. Rentoul, Liverpool; Surgeon W. M. Craig, H.M.S. *Sultan*, Milford Haven; Dr. M. D. Macleod, Beverley; Dr. J. O. Affleck, Edinburgh; Mr. E. Crookshank, London; Mr. W. J. Walsham, London; Mr. J. F. Fry, Swansea; Mr. J. A. Byerley, Portsea; Mr. J. Ellis Crisp, Carsham; F.R.C.P.; Mr. R. Hagyard, Hull; Mr. A. H. Wood, London; Dr. Pye, Galway; Dr. Imlach, Liverpool; Dr. More Madden, Dublin; Dr. J. K. Fowler, London; Mr. Munro Scott, London; Mr. G. F. Hodgson, Brighton; Mr. Willoughby Furner, Brighton; Mr. B. Thompson Lowne, London; Dr. H. F. A. Goodridge, Bath; Mr. George Eastes, London; Dr. J. M. H. Martin, Blackburn; The Secretary of the Apothecaries' Company, London; Dr. C. Vise, Tunbridge Wells; Surgeon S. J. Flood, London; Dr. T. Laffan, Cashel; Mr. W. J. Walsham, London; Mr. D. W. Giffard, Dublin; Sir J. C. Browne, London; Mr. Lawson Tait, Birmingham; Dr. R. Black, Greenock; Mr. H. A. Hodson, Brighton; Mr. E. East, London; Mr. W. Gordon, Glasgow; Dr. J. Dreschfeld, Manchester; Dr. J. Milner Fothergill, London; Our Liverpool Correspondent; Dr. F. A. A. Smith, Portsea; Mr. H. Davis, London; Mr. S. J. J. Kirby, Grays; Dr. T. Oliver, Newcastle-on-Tyne; Dr. Tyson, Folkestone; Sir Dyce Duckworth, London; Dr. Campbell Clark, Bothwell; Mr. T. H. Summerhill, Rhyl; Dr. D. H. Tuke, Hanwell; Dr. C. S. W. Cobbold, Earlswood; Mr. H. S. Branfoot, Brighton; Mr. A. G. Francis, Cambridge; Dr. J. Rogers, London; Mr. H. Caudwell, Aylesbury; Dr. J. M. Moir, Belize; Mr. W. Adams Frost, London; Mr. P. C. Gorham, Clifden; Dr. Dempsey, Belfast; Mr. J. E. Bennett, Kirkdale; Dr. L. M. Campbell, London; Miss Chapman, Edinburgh; Dr. S. Martin, London; Mr. J. C. Thresh, Manchester; Messrs. A. C. Parascho and Co., London; Mr. F. F. Perry, Lahore; Mr. W. Whitehead, Manchester; Dr. W. Macgill, Edinburgh; Mr. J. Robertson, Edinburgh; Mr. C. J. Rideal, London; Mr. E. M. Beal, London; Dr. J. N. Love, St. Louis; Messrs. Evans and Wormull, London; Dr. H. Lowther, Ventnor; Mr. O. Foster, Hitchin; Dr. E. G. Whittle, Brighton: Mr. J. J. Marsh, Ormskirk; Mr. J. Smith, London; Mr. W. Brown, Carlisle; Dr. Lowther, Ventnor; Dr. Uhthoff, Brighton; Mr. H. W. Haffmann, London; Dr. Suckling, Birmingham; Dr. Sandiford, Castlemartyr, co. Cork; Dr. Macpherson, London, etc.

BOOKS, etc., RECEIVED.

Guy's Hospital Reports. Edited by Frederick Taylor, M.D., and N. Davies-Colley, M.A., M.C. Vol. XLIII, being XXVIII of the Third Series. London: J. and A. Churchill. 1886.

The Equine Hospital Prescriber. By J. B. and A. Gresswell. London: Baillière Tindall, and Cox. 1886.

What I Believe. By Leon Tolstoi. Translated from the Russian by C. Popoff. London: Eliot Stock. 1886.

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REPORT

TO THE

SCIENTIFIC GRANTS COMMITTEE

OF THE

BRITISH MEDICAL ASSOCIATION.

ON AN APPARENTLY PERIPHERAL AND DIFFERENTIAL ACTION OF ETHER UPON THE LARYNGEAL MUSCLES.

Read in the Section of Therapeutics and Pharmacology at the Annual Meeting of the British Medical Association in Brighton.

By FELIX SEMON, M.D., F.R.C.P.,
Assistant-Physician in charge of the Throat Department at St. Thomas's Hospital.
AND
VICTOR HORSLEY, B.S., F.R.S.
Professor Superintendent of the Brown Institute.

In a paper read before the American Laryngological Association, on June 24th, 1885, and published in the 7th volume of the *Transactions* of that Association, Dr. Hooper, of Boston, makes the following observations.

"The power of ether, chloroform, and other anæsthetics, to impair the action of these constrictors (namely, the constrictor muscles of the larynx), is too well known to need mention. To carry this line of thought a little further, should we not expect that, provided we could preserve the organic life of an animal, while its volition was at the same time completely abolished—should we not expect, we ask, under these circumstances, to get a dilatation of the glottis on irritating the recurrent nerves, instead of a closure, for the posterior crico-arytænoid muscles are muscles of organic life? Indeed, we believe we should, and we submit the following experiments in support of that belief."... .....[Here follows a description of the methods and apparatus used.] "The phenomena of an irritation applied to the recurrent laryngeal nerve, producing an abduction of the corresponding vocal band, was first observed by accident. A small dog, of no particular breed, of an age estimated at about ten months, as it still had some of its puppy teeth, was being prepared for a different order of research. On looking for the left recurrent nerve, it was not found in its proper anatomical situation, but two small nerves were discovered near. As it was doubtful what these two branches were, or whether they went to the larynx at all, a shielded electrode was placed on the outer and larger nerve; and, while the vocal bands were watched through the mouth, it was irritated. The very unexpected result of the stimulation was a forcible abduction of the left vocal band. Dr. T. W. Warren, assistant in physiology, was requested to come and witness this unusual sight. The ether sponge had been removed from the dog since the beginning of the experiment; and, by the time Dr. Warren was ready to look at the larynx, the animal was somewhat out of its influence. At all events, on stimulating the nerve a second time, the familiar closure of the glottis was manifested, instead of the dilatation so evident a few moments before. On the assumption that the degree to which the animal was narcotised might have something to do with these phenomena, a large quantity of ether was again administered. After the dog was profoundly under its influence, the nerve was irritated a second time, when both Professor Bowditch and Dr. Warren observed the abduction of the vocal band, which was more marked in proportion as the stimulation was more intense. On removing the anæsthetic, the dilatation became less and less as the animal regained its consciousness, when, finally, a contraction of the glottis supervened. The different stages in this experiment were readily followed by watching the dog's vocal bands; while, at the same time, the recurrent nerve was irritated at intervals of a few moments.

"Between extreme dilatation and forcible contraction under these circumstances there seemed to be a neutral point, so to speak, when the stimulation produced merely a vibratory movement of the vocal band; but this was soon succeeded by an attempt at contraction, and this in turn passed into a frank and decided closure of the glottis, as the animal, as before mentioned, came out of the effects of the ether. Similar results followed stimulation of one or the other of the divisions of the left recurrent nerve. These branches, as was shown by subsequent dissection, and as you will see on the specimen, united into one nerve fifteen millimètres below the cricoid cartilage; and from this point to the larynx it is a single nerve. The effects of irritation applied to the right recurrent (which was single) agreed with those on the left. Stimulation was effected by means of an ordinary induction-apparatus the intensity varying from 1 to 40. In general, however, in this and in subsequent investigations on other dogs, the intensity used was from 1 to 8, never over 10, and generally about 3. The experiment, many times observed on this animal, was repeated, with confirmatory results, on eight different dogs. But the extent and the force, it must be mentioned, with which the vocal bands were abducted, differed in different dogs. In five instances, the arytænoid cartilage was rotated outward so forcibly that the vocal band lay flat against the wall of the larynx. Moreover, in one case, there was a marked abduction of the vocal cord on the opposite side. In other dogs, a mixed movement was observed—that is, the band approached the median line anteriorly; while a simultaneous contraction of the posterior crico-arytænoid muscle took place posteriorly, which left in the respiratory portion of the glottis a large triangular opening, the glottic picture resembling an exaggerated form of paralysis of the arytænoideus transversus muscle. These phenomena were observed after the recurrent nerve had been cut and its peripheral end stimulated, as well as when the nerve was intact."

It is the last sentence of this statement to which we wish to draw particular attention. If true, it would seem to reveal a hitherto entirely unsuspected local action of a general anæsthetic agent, such as ether; and it appeared to us so remarkable that Dr. Hooper should have disposed of his important observation in so few words, that we resolved to repeat the experiment with various modifications, in order to convince ourselves of the correctness of his statement. Had he confined himself to speaking of the *uncut* recurrent laryngeal nerve as furnishing this remarkable phenomenon (on stimulation), we should, on the following *à priori* grounds, have been quite ready to admit the probability of the existence of such an apparent differentiation, though certainly we would not go so far as to assert with him that the specific power of ether, chloroform, and other anæsthetics upon the constrictor muscles of the larynx was "too well known to need mention."

The employment of anæsthetic agents in surgery is based upon our knowledge of the fact that they exercise a powerful, though transitory influence over the sensory and the voluntary motor apparatus whilst they affect the motor apparatus of so-called organic life only when they are administered in huge, in fact in lethal, doses. The heart, the intercostal muscles, and the diaphragm continue to act undisturbedly at a period when no pain is felt, and all voluntary and ordinary reflex movement is abolished.

Now the larynx comes under both of these headings. It serves the purely voluntary function of phonation on the one hand, and the almost entirely automatic process of respiration on the other. The first named function is subserved by the strong groups of adductor and tensor muscles, the second by the solitary abductor muscles (posterior crico-arytænoids). The latter, although relatively the largest of the various laryngeal muscles proper, are not equal in strength to the combined forces of their antagonists, the adductors. This is plainly shown by the fact that powerful adduction of the vocal cords always[1] follows stimulation by strong[2] currents of the recurrent laryngeal nerve, provided that the animal is not deeply under the influence of an anæsthetic, and the same result is observed when the recurrent laryngeal nerve is stimulated in the recently excised larynx.[3]

In consideration of the fact that anæsthetics have a specific effect upon the voluntary motor apparatus, it would not cause much surprise if it should be found that the position of the vocal cord on stimulation should be the very opposite of the one just mentioned if the animal were deeply narcotised; for the adductors, though stronger, would be hampered by the anæsthetic, the abductors remaining unaffected. Under these circumstances, the experiment practically amounts to stimulation of the abductor fibres only.

But such an *à priori* explanation only holds good in the case of the *uncut* nerve, and would not account for the appearance of the phenome-

[1] This statement is only to be taken as applying absolutely to dogs and monkeys, for we have found, as will be described later on, marked differences between different genera of animals.

[2] With weak stimuli, others things being equal, abduction of the vocal cords generally occurs, as has recently been shown by Frank Donaldson, junr. ("The Function of the Recurrent Laryngeal Nerve," *American Journal of Medical Sciences*, July, 1886). We have repeated in a few instances Dr. Donaldson's experiments, and have, on the whole, obtained similar results.

[3] Read's experiments, confirmed by us.

non, if it were observed on stimulation of the *cut* recurrent nerve also. For up to the present time, so far as we are aware, the above-mentioned discriminating action of anæsthetic agents has always been ascribed to their different influence upon the nerve-centres—namely, inhibition of the highest, that is, the cortical; while the lowest, bulbar, etc., continued to act unhindered. The recurrent laryngeal nerve is—with the exception of the branches to the crico-thyroid muscle derived from the superior laryngeal nerve, and the pharyngeal plexus (Exner)—the only source of motor innervation of the larynx. If, therefore, in an animal very deeply narcotised, abduction of the vocal cord occurs when the peripheral end of the cut recurrent laryngeal nerve supplying the muscles of that cord is stimulated, it is perfectly obvious that the effect of the narcotic is in no wise due to the central nervous system.[4] We would be driven, therefore, to conclude, that ether must act specifically on either the nerve-fibres, their endings in the adductor muscles, or on the muscular substance itself, supposing that there is no peripheral ganglionic apparatus subserving the function of movement in the larynx, of which we have at present no evidence.

Now, having been able to confirm (so far as dogs are concerned) Dr. Hooper's statement on this point, we should, in view of the absolute novelty of the fact and of the absence, so far as we are aware, of parallel instances, rather have distrusted our own experiments than believed in a discriminating peripheral influence of an anæsthetic on muscles or nerves, had there not been important collateral evidence, indicating that there are, indeed, important differences in the nutritive conditions of the adductor and abductor groups of laryngeal muscles.

In order to prove this last statement, it will be necessary to digress for a while from our main subject, and to detail at some length the facts upon which it is founded.

In the first place, one of us (Semon) has shown, in several papers[5], that in all cases of acute or chronic organic disease or injury of the nuclei or trunks of the motor laryngeal nerves (spinal accessory, pneumogastric, recurrent laryngeal), the abductor muscle or muscles first succumb, whilst, on the other hand, in cases of functional disorder, the adductors usually alone suffer. The first named fact has not only been established by clinical observation, but also been confirmed by the results of *post mortem* examinations.

Secondly, Dr. Krause, of Berlin, who offers a different explanation of the phonatory position of the cord or cords in cases belonging to the above-mentioned class, nevertheless has brought forward experimental evidence,[6] in our opinion confirmatory of the accuracy of the explanation just given. Having attached corks loosely to the recurrent laryngeal nerves of dogs, he found, on making the *post mortem* examination, which apparently was never performed later than five days after the cork had been tied to the nerve, that "the adductors were well preserved, whilst in the posterior crico-arytænoid muscle several fibres, with slight opacity and indistinct striation, were found." Though Dr. Krause explains this result by the "mechanical immobilisation" of the posterior crico-arytænoid muscle, to which, in his opinion, it is exposed in consequence of the experiment, we would submit, as, indeed, Dr. O. Rosenbach and Professor B. Fränkel have done before us,[7] that an actual histological change in consequence of mere "mechanical immobilisation" of only two to five days' duration, is practically unknown, and that this fact drives us again directly to the very conclusion—which he combats—namely, that when an organic lesion (in his experiments, the cork, that is, a hard foreign body) attacks the whole trunk of the recurrent laryngeal nerve, the abductor muscle first succumbs.

Thirdly, the subject has been studied from the histological point of view by Grützner[8] and Simanowsky,[9] whose results point to the conclusion that there are distinct histological differences between the two groups of muscles, and that the abductors belong to the class of Krause's and Ranvier's red muscles; the adductors, at least the thyreo-arytænoideus internus, to the so-called white muscles.

We do not enter into further details upon this point, although the general, as well as several of the experimental, results of these investigators are in contradiction with our own. We refrain, however, from entering upon anything like an analysis of this contradiction, inasmuch as Grützner repeatedly and definitely states that his work is still incomplete, and his publication only preliminary.

Fourthly—and we would lay great stress upon this point—we have found, in a series of experiments, the following remarkable fact. If, in all classes of animals experimented upon (monkeys, dogs, cats, rabbits), the larynx be excised immediately after death, and the laryngeal muscles individually stimulated, it is seen that the posterior crico-arytænoid muscles, which, as we have just observed, are absolutely the largest of the laryngeal muscles, nevertheless lose their electrical excitability long before any of the adductors.[10] It goes without saying, that we treated the antagonistic groups of muscles in exactly the same way, as will be seen from the following details of our experiments.

METHOD.—The animal was killed sometimes by an overdose of the anæsthetic, sometimes by puncture of the heart, sometimes by bleeding. The larynx was immediately excised *en bloc*, and the posterior crico-arytænoids, the lateral crico-arytænoids, the external thyreo-arytænoids, and the interarytænoid muscles, were rapidly laid bare by dissecting off the mucous membrane and the wing of the thyroid cartilage. The muscles were then stimulated with ordinary platinum electrodes, the current being obtained from a Dubois-Reymond's sledge induction-coil, the index of which is at 0, when the secondary coil covers the primary, and the whole being supplied by one Daniell's cell.

EXPERIMENT I. (XLV. of our Series).—June 24th, 1886. Small female young fox-terrier. Etherised, thin silk thread, soaked in 1 per cent. chromic acid solution, cautiously passed through the left recurrent laryngeal nerve under antiseptic precautions.[11]

Examination of the larynx immediately after operation shows that both cords move equally and well.

June 25th, 1886, 4.30 P.M. Both cords move equally and well.

June 26th, 28th, 30th, and July 2nd. Result always the same.

July 5th, 1886, 4.30 P.M. Animal dies during etherisation. All attempts at resuscitation having proved unsuccessful, the larynx is excised about ten minutes after death, and the laryngeal muscles are equally exposed. 4.40 P.M. Coil 10. All muscles react to the coil; but the left posterior crico-arytænoid contracts much more feebly than the right, or, indeed, any of the laryngeal muscles. 4.45. Contraction of left posterior crico-arytænoid much weaker, and confined to outer and lower third of the muscle. Contraction of all other muscles very powerful. 4.50. Contraction of left posterior crico-arytænoid still weaker, otherwise the same. 4.55. Contraction of left posterior crico-arytænoid muscle hardly perceptible; contraction of right posterior crico-arytænoid slow; contraction of other muscles unimpaired. 5.0. Contraction of left posterior crico-arytænoid gone; contraction of right slower than five minutes previously; contractions of other muscles unimpaired. 5.5. Contractions of right posterior crico-arytænoid very weak; contractions of lateral crico-arytænoids, external thyreo-arytænoids, and interarytænoid still very good. 5.10. Contractions of right posterior crico-arytænoid gone; contractions of adductors slower, but still powerful. 5.15. Contractions of lateral adductors again slower, and now somewhat weak, but still marked. (No difference between the two sides.) Contractions of interarytænoid rather weak. 5.20. Slight further general diminution of contractility. 5.25. Further diminution, but contractions of lateral crico-arytænoids and external thyreo-arytænoids still marked. Contraction of interarytænoid muscle hardly perceptible. 5.30. Contraction of interarytænoid gone. 5.35. Lateral crico-arytænoids contract still, but more feebly than before. 5.40. Contractions of lateral crico-arytænoids gone, of external thyreo-arytænoids very weak, but still perceptible. 5.45. Contractions of external thyreo-arytænoids still perceptible. 5.50. The same; right side better than left. 5.55. Contraction of left external thyreo-arytænoid gone, of right just perceptible. 6 P.M. Contraction of right external thyreo-arytænoid gone. Left recurrent laryngeal excised. Loop found *in situ*; very little cicatricial tissue around it; nerve not swollen or otherwise changed.

We attach to this particular experiment, which we have per-

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[4] We wish to insist on the perhaps somewhat obvious fact that this influence is exercised through the agency of the circulation, and not by any topical influence of ether on the larynx; since, in all our experiments but one, the animals were tracheotomised, and the anæsthetic administered through a funnel and India-rubber tube.

[5] Felix Semon, Clinical Remarks on the Proclivity of the Abductor Fibres, etc. (*Archives of Laryngology*, Vol. ii, No. 3, 1881), and Ueber die Lähmung der einzelnen Fasergattungen des Nervus Recurrens (*Berl. Klin. Wochenschrift*, 1883, Nos. 46 u. 47).

[6] J. Krause, Experiment. Untersuchungen und Studien über Contracturen der Stimmbandmuskeln (Virchow's Arch., Vol. xviii, 1884). Reprint, p. 17.

[7] Virchow's *Arch.*, vol. xcv., part 1, Jan. 2, 1884, and *Internationales Central-blatt für Laryngologie*, etc., vol. ii, 1885-1886, p. 191.

[8] *Breslauer ärztl. Zeitschrift*, 1883, Nos. 18 and 24, and *Recueil Zoologique Suisse*, 1884, No. 4, 1884.

[9] *Gelsche Klin. med.* Nos. 26-29, 1884; and *Internat. Centralblatt für Laryngologie*, vol. ii, 1885-1886, p. 40. Analysis by Dr. Lunin, of St. Petersburg.

[10] We note in connection with this point, that Dr. Donaldson (p. 4, *op. cit.*) observed that, when after death the recurrent laryngeal never was stimulated, abduction disappeared long before adduction. This observation is completely explained by our experiments, which show that the abductors "die" before the adductors.

[11] This experiment was performed in order to test Dr. Hooper's assertion (*loc. cit.*) that, under such circumstances, the abductor fibres of the recurrent laryngeal nerve offer greater resistance to destructive agents than the adductor fibres.

formed three times with identical results, a very special importance; for it not only proves the point which we have here immediately in view—namely, that the posterior crico-arytænoid muscles lose their electrical excitability long before the adductors—but, in addition, tends to confirm, in our opinion, in the most unmistakable manner, the view first advanced by one of us (Semon), and referred to in the beginning of this paragraph; namely, that, in cases of organic disease or injury of the centres or trunks of the motor laryngeal nerves, the abductor muscle or muscles first succumb. The result of this experiment is the more important, because in it the muscles were directly excited, and all collateral sources of error thus excluded.

EXPERIMENT II. (XXII. of our series). April 2nd, 1886. Adult rabbit, died from overdose of ether. Coil 15 used throughout the experiment. 6.40 P.M. Larynx excised. Stimulation of all the muscles was followed by powerful contraction. 6.50 P.M. Ditto. 6.55 P.M. Slight diminution of energy in the contraction of both the left posterior and the left lateral crico-arytænoid muscles. 7 P.M. Contraction of left posterior crico-arytænoid, very weak; fibrillar twitchings in the same. Contraction of left lateral crico-arytænoid still very good. Contraction of interarytænoid muscle rather weak. 7.5 P.M. Contraction of both posterior crico-arytænoids entirely gone. Contraction of interarytænoid still present, though weak; contraction of left lateral crico-arytænoid still very powerful. 7.10 P.M. Contraction of interarytænoid gone. Contraction of left lateral crico-arytænoid just as powerful as it was at 6.55. 7.15 P.M. Some diminution of contractility of left lateral crico-arytænoid. 7.20 P.M. Still contraction, though again weaker. 7.25 P.M. The same. (Left off experimenting.)

EXPERIMENT III. (XXIV. of our Series). April 3rd, 1886. Strong male cat, died from overdose of ether. Coils of different strengths used during experiments. 5.30 P.M. Larynx excised. Stimulation of all the muscles (coil 15) was followed by powerful contraction. 5.35 P.M. The same. 5.40 P.M. The same, perhaps a little diminution in contraction of posterior crico-arytænoid muscles. 5.45 P.M. No change. 5.50 P.M. Contraction of posterior crico-arytænoid muscles considerably diminished; contractions of adductors, especially of external thyreo-arytænoids and of interarytænoid muscle still very good. 5.55 P.M. Contractility of posterior crico-arytænoids almost gone. Adductors contract well. 6 P.M. Contraction of abductors entirely gone when coil 15 is used. With more powerful currents (coils 10-0), it is still possible to elicit weak and slow contractions, but they contrast most markedly with the powerful contractions of the adductors, when currents of the same strengths are applied to them. 6.5 P.M. The same. 6.15. Even with coil 0, no contraction of the posterior crico-arytænoids is obtained, whilst the thyreo-arytænoids and the lateral crico-arytænoids still powerfully contract. The contraction of the interarytænoid is almost entirely gone. 6.20. Contractility of thyreo-artænoids and lateral crico-arytænoids gets weaker (always coil 0 used), but is still marked. 6.30. Only traces of excitability left in thyreo-arytænoid muscles. (Left off experimenting.)

EXPERIMENT IV (XXIII of our series). April 3rd, 1886. Male pigtail monkey, died from syncope during preparations for laying the medulla bare; larynx immediately excised. 3.15 P.M. Stimulation of the individual muscles (coil 15) results in hardly any action. On stimulation with coil 0, the interarytænoid muscle, the lateral crico-arytænoids, and especially the external thyreo-arytænoids, respond strongly, whilst the posterior crico-arytænoids are absolutely unexcitable. The response of the interarytænoid soon slackened entirely, whilst the thyreo-arytænoids and the lateral crico-arytænoids still responded, though also with much diminished energy, at 3.30, when the experiment was concluded.

The experiment was repeated three more times on dogs, always with identical results; so that, if we add to this last series the three experiments, in which passed a chromic acid thread through one recurrent nerve, we have, on the whole, ten experiments, showing with remarkable constancy that the abductors lose their electric excitability long before the adductors.

These results appear all the more important, since Onimus has shown [12] that both the extensor muscles and the nerves supplying them—to which the abductor apparatus has been likened ere now (Rosenbach and Semon)—also lose their electric excitability after death before the flexors; and since Jeanselme and Lermoyez (*Archives de Physiologie Normale et Pathologique*, Nro. 6, 1885) have found, on stimulating within three-quarters of an hour from death the laryngeal muscles of patients who had died from cholera, that no contractions at all could be obtained of the posterior crico-arytænoids, whilst the thyreo-arytænoids well responded to the stimulus.

[*To be continued.*]

[12] "On the Excitability of the Nerves and Muscles after Death" (*Journal de l'Anatomie*, November 15th, 1880).

AN ADDRESS
ON
MICROBES AND DISEASE.

Introductory to the Demonstrations in Bacteriology given at the Annual Meeting of the British Medical Association, held in Brighton, August, 1886.

By EDGAR M. CROOKSHANK, M.B.,
Demonstrator of Physiology in King's College, London.

GENTLEMEN,—Many, perhaps, may have expected that the formation of this laboratory would be made the occasion for reading papers or holding discussions in these rooms, in connection with bacterial pathology. It might have been regarded as an opportunity for publishing the discovery of some interesting micro-organisms, or for giving an account of recent researches in connection with the etiology of some morbid process which has been hitherto veiled in obscurity. This, however, is not the case, and for this reason. As is only too well known, we have in England no laboratory devoted to this particular line of research; we have, so far as I am aware, in London, no institution to which a medical man can be directed where he could obtain a course of instruction, or a series of systematic demonstrations. With, perhaps, one exception, there is no hospital or medical school in London that can be said to give substantial encouragement to this branch of study. Obviously, then, an occasion like the present affords an opportunity of forming a temporary laboratory, which may in some measure supply this want, by enabling the busy practitioner, and many others who have not time to visit the laboratories abroad, some opportunity of gaining a practical acquaintance with the subject. Instead of papers and discussions on points of doubt in the past, or of hopes of what may be done in the future, we are met to have demonstrations of what has already been done, and more particularly illustrations of those points which, being based upon absolute proof, will undoubtedly bear the test of time and experience. To afford an opportunity of explaining the methods employed in bacteriology, and of showing cultivations of micro-organisms, and of demonstrating the microscopical appearances of the pathogenic species, is the purpose for which this laboratory has been arranged. That you should be able to understand the meaning of these mysterious tubes, and to appreciate the value of the preparations under the microscope, I will endeavour to briefly describe a few points which indicate the lines of research.

It must be remembered that we have to deal with organisms wonderfully minute, and that we have to study the life-history of each individual species. When we realise the ubiquitous character of microbes, their presence in the air we breathe, in the water we drink, and in the earth on which we move and have our being, the difficulties of isolating one particular form from another would seem to be insuperable; nevertheless, with delicate methods and with minute precautions, we are able to effect this.

The medical man being interested more especially in those micro-organisms which are related to disease, it will be sufficient to give illustrations of the methods which are employed in investigating the life-history of the pathogenic microbes. It must not be supposed that it can be, or ever is, considered sufficient simply to discover, by the aid of the microscope, a micro-organism connected with a disease, in order to proclaim it as the actual cause of the disease. Even if we can, in addition, cultivate it apart from the diseased body, the mere fact of its being able to increase and multiply, and to exhibit peculiar microscopic characteristics, affords us no evidence whatever of its being pathogenic. From such evidence as this, conclusions would be only conjectural, instead of being based upon absolute proof. One cannot, therefore, too often repeat the necessary requirements for accepting the belief in a micro-organism as the *causa causans* of a disease.

To Koch we are indebted for laying down concisely what these requirements are. In the first place, the micro-organisms must be constantly found in the blood, lymph, or tissues of the diseased man or animal. To ascertain their presence, we must apply our knowledge of practical histology, augmented by many special staining reactions, and, in some cases, micro-chemical tests. In the second place, we must isolate the micro-organisms from the blood, lymph, or tissues, and cultivate them apart from the diseased body in suitable media, and we must carry on these pure cultivations through successive genera-

tions. To isolate and cultivate the microbes requires special apparatus, in some cases simple, in others complicated and expensive. It is at this stage of the inquiry that the investigator requires aid from his medical school or from the pathological department of his hospital, for otherwise the expense of the apparatus will probably be such a burden to his finances, as to prohibit his prosecuting his researches. The suitable medium must be a pabulum which has been rendered free from all pre-existing micro-organisms. This is effected by sterilisation, by means of hot air or steam, in such apparatus as you have exhibited before you.

We will suppose that we are anxious to investigate some material, such as blood or pus, in which we suspect the presence of a micro-organism. We take a glass rod furnished at one extremity with a platinum wire; we deprive it of any micro-organisms which may have alighted upon it by heating it in the Bunsen burner; and then, as the platinum rapidly cools again, we can almost immediately dip the point of the wire into the material to be examined. This test-tube—which is, as you see, plugged with cotton-wool—is filled about one-third with a nutrient jelly. The tube being held mouth downwards, and the plug twisted out, the inoculating needle is steadily thrust into the jelly and withdrawn, and the plug replaced. These tubes, with their contained medium—nutrient gelatine, nutrient agar-agar, blood-serum, or hydrocele-fluid, as the case may be—are also perfectly germ-free. The tubes themselves have been cleansed and sterilised by a temperature of 150° Cent. (302° Fahr.) for an hour or longer, the cotton-wool sterilised by similar means, and the nutrient medium itself sterilised by exposure to prolonged heat, or by boiling on several successive days. If it were not so, the nutrient jellies would in a very short time fall a prey to bacteria of putrefaction, or, in simple language, "go bad." It is sufficient to introduce an invisible quantity of micro-organisms. Nothing will be observable immediately after the inoculation; but in the course of a day or two, according to the rapidity of the growth of the particular micro-organism, the temperature of the room, and the nature of the nutrient medium, the germs will increase and multiply in the needle-track, and produce some visible change. The resulting appearances are very varied. You have many examples before you; in some, there is the appearance of a white thread or a delicate cloud; or the medium has liquefied, or become milky, or tinged a pea-green or smoky brown; or a growth or deposit has resulted, of a blood-red, vermilion, purple, or yellow colour.

The method first described is simple and effectual where we have to deal with the presence of one micro-organism; but, it may well be asked, what is the course of procedure if there be different species of micro-organisms present together? How can a mixture of micro-organisms be treated so as to isolate them one from another, and to test the properties of each? How can they be separated, so as to ascertain which are pathogenic and which harmless? In such a case, there is a method which is as simple as it is beautiful. Instead of inoculating our medium in the solid state, it must be first liquefied; and, when the mixture of microbes has been introduced, the inoculating needle is stirred round and round, and the test-tube tipped and rolled between the fingers. The microbes introduced become disseminated throughout the liquid medium; and, if the gelatine be poured out upon a small pane of glass, the individual microbes are fixed by the setting of the gelatine, each in a particular spot. In order to effectually separate from each other the different species of micrococci, bacteria, or bacilli which may be present, we must employ a method of dilution. A fresh tube of nutrient jelly is inoculated with a droplet from the first tube, a third tube from the second, and a fourth from the third. Then, in the so-called "plate-cultivations" prepared from these diluted inoculations, we shall find that the micro-organisms have been completely separated from each other. The colonies resulting from each microbe giving rise to its own species, will be so completely isolated as to leave no chance of their commingling. From these colonies we inoculate fresh tubes of nutrient media, so that at last we have growing in separate tubes all, or nearly all, the microbes present in the original mixture. The appearances of these colonies before inoculation should be carefully studied; for in some cases they are absolutely characteristic, and in others help to distinguish micro-organisms which resemble each other in form. As an example of a very beautiful and characteristic colony-growth, I would draw your attention to the impression-preparations of colonies of anthrax and of several other micro-organisms exhibited under the microscope. The same method has also been extensively used for studying the various microbes in water; but we must remember that nutrient gelatine is not a suitable pabulum for each and every microbe; and we must, therefore, supplement our test by means of cultivations on other media.

As an example of another medium, I would point to the growths on sterilised potatoes. The outside of the potato is covered with microbes found in the earth, and these must be removed by thoroughly cleansing the potatoes, and soaking them in a solution of corrosive sublimate. When cut in halves with a sterilised knife, the cut surfaces present a germ-free soil, which is very favourable to the growth of many, particularly the chromogenic, species. The inoculating needle traced over the potato, with no immediate visible effect, will, in the course of a day or two, result in such a growth, for example, of the bacillus violaceus or micrococcus prodigiosus, that one might imagine that some violet or red ink had been spilt over the surface of the potato. These pigment-producing microbes are of the greatest interest; for, not only is there a wide field for research in the investigation of the chemistry of these pigments, but the very fact that these simple organisms are endowed with the power of producing such striking colours—are, in fact, miniature laboratories for the production of these beautiful pigments—helps us to understand that other species are equally capable of manufacturing the most virulent poison, or of inducing some chemical change, some fermentation in the blood or tissues, which produces a fatal result.

By such means having obtained a pure cultivation, we must carry it on through successive generations. The importance of the successive cultivation cannot be overestimated, for the process does away with the possibility of the fatal result being due to some chemical poison transferred from the material examined to the nutrient jelly. If, after carrying on a cultivation through a hundred or a thousand tubes, the growth be as virulent as in the first tube, it surely cannot be held that the result is still due to any chemical poison mechanically carried over in the first inoculation, for the original fraction of a drop must have become diluted to such an extent as to be absolutely inert.

We must be able, with a pure cultivation, to reproduce the disease in question; and, lastly, we must be able to find the micro-organisms again in the blood, lymph, or tissues of the inoculated animals. It may be asked, Are there any micro-organisms which undoubtedly comply with all these requirements? And the answer is, Most assuredly there are. We may, indeed, very roughly divide the so-called pathogenic microbes into three great classes: first, those which absolutely answer these tests in every particular, and which are, therefore, undoubtedly the cause of disease; secondly, those in which the chain of evidence is not absolutely complete, but which we nevertheless believe to be the cause of the disease; and, lastly, those which are very probably only accidentally associated with disease. Of the first class, the bacillus of anthrax, the bacillus of mouse-septicæmia, and the micrococcus tetragonus, may be given as examples. In all these cases we can easily isolate the microbe; we can carry on any number of successive pure cultivations, and we can always reproduce the disease, and find the same micro-organism again. Of the second class, we may give as examples the bacillus of tubercle and of leprosy. In the case of the first the evidence is very strong, but the chain is not absolutely complete, in that in some cases of tuberculosis it is very difficult to demonstrate in tissue-sections the existence of the bacillus at all; and, therefore, until such cases are explained, or until it is more generally accepted that there are forms of tuberculosis etiologically different, of which bacillary tuberculosis is one, there will continue to be doubt in the minds of many as to the discovery of the bacillus being of any importance at all. So, too, with the bacillus of leprosy, the chain of evidence is incomplete, for the bacillus has not been cultivated apart, and the disease reproduced by inoculation; and yet, from the veritable invasion of the affected tissues by the bacilli, there can be but little doubt that the bacilli are the active agents in producing the disease. Lastly, we have the class which includes many micrococci, bacteria, and bacilli, present, for example, in the mucous membranes of the respiratory and alimentary tracts, or in the skin, which have been described as characteristic of certain diseases, but about which we must have far more evidence before we can maintain that they are more than accidental associates.

Consumption of Tobacco in Europe.—M. Paul Leroy-Beaulieu, in an interesting paper in the *Economiste Français*, gives the following figures, showing the quantity of tobacco consumed in the different countries of Europe, and the rate per 1,000 inhabitants is, according to him, as follows:—Spain, 110 lb.; Italy, 128 lb.; Great Britain, 138 lb.; Russia, 182 lb.; Hungary, 207 lb.; France, 210 lb.; Denmark, 224 lb.; Norway, 229 lb.; Austria, 273 lb.; Germany, 336 lb.; Holland, 448 lb.; and Belgium, 560 lb. In other words, while in Spain little more than 1 lb. per head is consumed, nearly double that quantity is consumed in France, three times as much in Germany, four times as much in Holland, and five times as much in Belgium.

CLINICAL LECTURES ON THE UTERINE NEUROSES.

Delivered at University College Hospital.

By GRAILY HEWITT, M.D., F.R.C.P.,
Professor of Obstetric Medicine, University College; Obstetric Physician to the Hospital.

Lecture III.

B.—Hysterical Attacks.

The next series of phenomena which come under consideration as hystero-neuroses are those commonly designated *hysterical attacks* or *hysterical convulsions*. These phenomena have at all times attracted much attention, and have been repeatedly described and discussed. They do not occur very frequently, and consequently opportunities of making observations on their nature and causation on a large scale do not present themselves.

Speaking generally respecting these phenomena, two opinions have been advanced concerning them; the one being that they are dependent upon the uterus or ovaries for their origination; the other, that they are a part of a general disturbance of the nervous system, the generative organs having no special influence in producing them.

Another general remark to be made is, that those who have made the diseases of the generative organs their special study uphold the former of these two views.

The principal objection to the view that these phenomena, as observed in women, have their origin in the uterus or ovaries, is, that hysterical convulsions indistinguishable from those observed in the female sex are sometimes present in the male sex also. To this it may be replied, that the nervous centres are not essentially different in the two sexes. Convulsive phenomena may be present in both sexes. Hysterical convulsions having a central origin may probably occur in both sexes. There may also occur reflex convulsions having the so-called hysterical character in both sexes, but the peripheric irritation giving rise to the attacks may be different in the man and in the woman. In both sexes, it appears, as proved by Charcot's cases, that reflex convulsions may be initiated by irritation of the generative organs. It is quite reconcilable with the foregoing that hysterical attacks should be, as we know to be the case, far more common in the woman than in the man. It also might be expected that reflex hysterical convulsions in the woman should be producible by an irritation present in the uterus or in the ovary.

My own observations, continued over several years, have induced me to come to the conclusion that reflex hysterical attacks or convulsions in women are, as a rule, associated with particular disorders of the uterus, and that the phenomena are preventable and curable by treatment based upon a knowledge of this association.

Without discussing this important question more fully at this moment, I propose to lay before you particulars of cases which have come under my notice, and which have furnished the data on which my conclusions have been formed.

So far as the female sex is concerned, there appear to be two classes of cases in which convulsive attacks, such as are termed "hysterical," occur: 1, those which are produced by a sudden impression on the emotional centres, such as that due to fright, a severe mental shock, etc.; and, 2, those which occur quite irrespectively of any such mental disturbance. The cases which I have to bring forward belong exclusively to the second of these classes. They are instances of hysterical attacks which appear to be reflex in character, and which are originated by means of an irritation in the generative organs, the uterus being the special organ to which the clinical facts I have observed point, rather than to the ovary.

I have already published a series of eighteen cases, illustrative of the opinion above-mentioned, these cases having come under my notice in the ten years from 1870 to 1880. They formed the subject of a paper read at the International Medical Congress held in London in 1881, and were afterwards published also in the fourth edition of my work on *Diseases of Women*.

The following is an abstract of one of the eighteen cases.

The patient, married, aged 30, and had one child, 4½ years. She had good health up to one year ago. Then an illness followed six weeks' nursing a sick child; first, an attack consisting of slight loss of consciousness for a moment; then convulsions. Since then, she had had two or three convulsive attacks in a day, as a rule, lasting a short time, without unconsciousness. The convulsions had been more intense lately. Menstruation had ceased for three months, but had just occurred again once. The uterus was acutely anteflexed. A cradle-pessary was employed, and the uterus unbent by means of a sound. The attacks were at once reduced in frequency. She was under observation seven weeks. The attacks latterly only occurred once in two or three days, and were very slight. Menstruation had again occurred rather profusely.

In most of the other cases, very distinct and severe flexion and displacement of the uterus existed; while, in some, the distortion of the uterus was less severe. In some, the attacks were frequent and severe; in others, less severe. In almost all the cases, the remedial effect of mechanical support of the uterus by means of a pessary, or by other measures calculated to diminish the degree of the flexion, and to prevent further intensification of the flexion or displacement, was most evident, and, it may be said, remarkable. In some of the cases, severe sickness was also noted, and in these latter cases the treatment had a like beneficial effect on the sickness and on the convulsions.

The conclusion to which the series of eighteen cases pointed was that, prior to the initiation of the treatment, the condition of the uterus was such that, when the patient slightly exerted herself, a convulsive attack was liable to occur. Here the argument used, in regard to the cases of reflex sickness, again applies; and, seeing that these exertions were calculated to increase the existing displacement, it was reasonable to infer that the attack was in such cases initiated by the exertion. Seeing, further, that the tendency to attacks was removed by putting the uterus at rest, and by procedures calculated to lessen the degree of flexion, or, at all events, to prevent further exaggeration of such flexion, the inference was a natural one, that the hysterical attacks no longer occurred because there was no further increase of the flexion.

Case xix. *Hysterical Attacks.*—Miss ——, aged 34, had never been strong. She had St. Vitus' dance eight years ago; since which time she had been ill in various ways. 1. She had now hysterical attacks eight months out of the twelve in the year. They came on the day before the period. She began to cry, then fell down, so far unconscious that she only knew if her name were called. She had therewith sensations of pins and needles over the body. The attack lasted a few minutes. She was left exhausted for twenty-four hours. 2. Menstruation was scanty. 3. She was unable to walk longer than fifteen minutes; this produced a feeling of bearing down and weight, as of something pressing down in the lower part of the abdomen. Micturition was very frequent, and especially near the periods. The uterus was large; it appeared swollen and anteflexed, with posterior rotation; it was very low down, close to the coccyx. Treatment consisted in the use of the cradle-pessary, diet, etc. The attacks ceased almost directly. They have not returned (now four years have elapsed). She wore the pessary, with intermissions, until last year, when it was removed.

Case xx.—J. A. B., single, aged 32, was admitted June 1st, 1883. She had stood a good deal in a shop during the last eighteen years. Nine months ago she had a severe trembling attack on going to bed, followed by perspiration. The following night there was another attack, with laughing, crying, and whistling, also pains in the back. She had since had pain in the back, and several attacks of shivering, followed by laughing or crying, also attacks of laughing, etc., without previous shivering. She had often a feeling of "globus." Menstruation was occasionally painful; recently, it had been profuse, with clots. She had a sister who had suffered from cataleptic fits since a severe fall. The uterus was very low down and anteflexed. She was treated by use of cradle-pessary with complete success.

Case xxi.—Mrs. ——, aged 21, married fourteen months, had suffered since marriage from severe hysterical attacks and vaginal hyperæsthesia. She was very badly fed at school, and suffered then from sores on the feet, and was very hungry at night. She suffered now from severe sickness and dysmenorrhœa. The uterus was acutely anteflexed; its body was large. A sound reduced the uterus to its proper shape, but it returned to the flexed shaped directly after withdrawal of the sound.

Case xxii.—Miss ——, aged 34, had had dysmenorrhœa for many years, worse during the last eight years. She had frequent hysterical attacks. The uterus was anteflexed and large. She was treated by a cradle-pessary; later on by a steel dilator. The attacks ceased speedily; the dysmenorrhœa was relieved at a later period.

Case xxiii.—Miss ——, aged 28, had been ill since the age of 16, from occasional severe "hysterical" attacks, accompanied with loss of sensation, or partly so. In an attack which occurred while she was under observation, the eyes became fixed, the teeth clenched;

she knew what was going on, but could not speak; the back became arched, and, after further convulsive movements, she lapsed into a condition of quiescence. The whole duration varied from one hour to one hour and a half. The attacks occurred chiefly just before the periods. The uterus was found of a hardish consistence, acutely anteflexed, and to one side. She was treated by a cradle-pessary, and rest for three weeks; went away for a month; was again treated for a month. After six months she returned for treatment, the attacks now being reduced to slight faintings. After this they entirely ceased, and the patient remains (1886), after the lapse of eleven years, in good health, and free from attacks.

Case xxiv. *Hysterical Retchings.*—Mrs. ——, aged 25, had five children, the last three years ago. She had been ill since. She was slightly nervous, hysterical, and sensitive. She had been treated for uterine displacement. I found the uterus sensitive to touch, to an extravagant degree; the slightest touch brought on violent retchings, and much agitation. The uterus was acutely retroflexed, but not very low down. She was treated by rest, pessary, and use of sound for five weeks. She went home much relieved. Twelve months afterwards, she was found to be pregnant.

Case xxv.—*Supposed Hysterical Attacks, Result of Lifting.*—A. D., single, aged 25, was admitted February 19th, 1884, into University College Hospital. Menstruation was tolerably regular. She generally had pain before the periods. The quantity at the periods was small, otherwise she had been pretty well until thirteen weeks ago. At that time she was suddenly taken with faintness and palpitation, and pain in the back and head. She took to her bed, and was pronounced to be affected with hysteria. A fortnight previously she had lifted a four-post bedstead, with mattresses upon it. She had since had attacks of palpitation and faintness, and occasionally crying (but no convulsions), mostly in the morning. The os uteri was soft and œdematous. There was sharp retroflexion of the uterus; the organ was low down. The sound gave pain. Reduction was not difficult. A Hodge's pessary, made from a 2¾-inch ring, was used. February 25th: There had been no attack since admission. Her appearance was very strikingly improved. March 5th: She was still better. The uterus was still a little retroflexed. It required a rather larger pessary.

The seven cases above related, together with eighteen previously published (one above quoted in abstract), comprise twenty-five instances in which hysterical attacks, in most cases of very distinct character, were observed. In some of the cases, the manifestations were of a slighter kind, but sufficiently distinctive to warrant their being classified along with other more severe cases. I have also records of other minor cases not here given.

I wish now to mention the particulars of a case which presents features of great interest, as illustrative of the *modus operandi* of the uterine irritation in producing the hysterical attack.

Being very desirous of seeing the hysterical cases under the care of M. Charcot in Paris, I visited his wards in April, 1885, when he kindly showed me several marked cases, and, in compliance with my request, he most kindly permitted me to examine minutely such of them as I selected. With the further kind co-operation of his *chef de clinique*, Dr. Marie, I saw and examined two cases, both young women, affected with severe hysterical seizures. One of them was not fully examined, on account of the presence of the hymen, but the other was carefully examined as regards the condition of the uterus.

Case xxvi.—L. H., aged 20, was admitted into the Salpêtrière, April, 1885. At the age of 8, she had nervous attacks during three months. At the age of 18, she had nervous cough, more at night than in the day. Soon afterwards she had typhoid fever, during which there were no attacks of hysteria; afterwards, she was under Dr. Meenet in the Hôpital St. Antoine for hysterical attacks. At night she rose, and walked in her sleep. Her condition on entering the Salpêtrière in April, 1885, was as follows. Cutaneous sensibility was notably diminished on the left side; taste and smell were almost gone on the left side. The field of vision was much restricted. During the attacks, there was loss of consciousness. "Phase tonique, puis arc de cercle en avant en arrière et lateralement, pas de grands mouvements, attitudes passionelles très peu marquées. Point ovarien droit. Point hysterogène à la region externe du sein droit."

The foregoing is Dr. Marie's account. I saw the patient on April 8th. She was brought in and laid on the bed. Her occupation necessitated the sitting position ten hours a day. Menstruation occurred too often; the periods were eight days. She had had hysterical attacks the last six months; the attacks occurred generally twice a day or oftener. She was for the moment, and because she felt that an attack was coming on, wearing an "ovarian compressor" on the right side. Dr. Marie stating that an attack would certainly come on at once on removal of the compressor, a vaginal examination was made with the finger before removing it. The uterus was found presenting a round swelling, very low down in front, of the size of a small orange. The cervix was small, the os natural. A deep depression separated the cervix from the body of the uterus. The swelling was the body of the uterus. The ovarian compression was now removed; immediately an attack commenced, and the back soon became completely arched, the patient resting on the back of the head and the heels. The finger was now introduced, and the body of the uterus forcibly pushed upwards in the middle line towards the brim of the pelvis. When it was completely pushed upwards, the attack began to pass off. On slightly withdrawing the finger, the attack recommenced, and was again arrested by increasing the pressure by means of the finger. The uterus resisted this pressure at first, presenting a hard firm consistence; but, by increasing the pressure, it could be so raised, that the body of the uterus was elevated about an inch and a half from its first discovered position. The pressure was withdrawn and reapplied three times in succession, with the same result in regard to its controlling effect on the convulsive manifestations. In the next place the head was laid low, and a pillow placed under the pelvis so as to raise it above the level of the head. In two or three minutes the attack was renewed in the absence of the digital vaginal pressure. The sound was next introduced, very slightly curved; and, when fully inserted, it was turned round, so as to produce slight retroflexion of the uterus; it was held in this position during six minutes. There was no attack, or symptom of an attack, during this time, the patient complaining of pain at first. The sound was then turned round, so as to retain the uterus in a state of normal slight anteflexion, and was held in this position for eight minutes, during which time there was no attack, and no symptom of an attack.

The observations, which was made in presence of Dr. Marie and three other visitors, now ceased, and the patient left the room without having had, Dr. Marie remarked, an "attack" in the complete sense of the word.

I did not see the patient again, but Dr. Marie kindly wrote a week later, and informed me that, half an hour after she had returned to her ward, she had some very intense attacks, which continued during several hours.

Judging from my own observations, one of the most important of the clinical facts in connection with the causation of the attacks is the very frequent evidence of the relation between movements or physical exertions, and the oncoming of the attacks in question, over-exertion of some kind, in walking, lifting a heavy object, prolonged effort in nursing, fall from a horse, etc. These are some of the causes mentioned. In others, a considerable weakness, the result of fever, followed by ordinary exertion, undue standing, confined sedentary position, etc., were noteworthy precedents of the attacks. The beneficial influence of general rest, and observance of the horizontal position in some of the cases, was evidently, to a certain degree, preventive of attacks, and, so far, also gave proof of the mechanical method of production of the attacks in question.

In the severe cases, however, mere rest had proved insufficient to relieve the patient before the patients came under my notice; and the attacks were only arrested when the uterus was more decidedly dealt with in the manner already described, offering further proof of the accuracy of the theory of the mechanical origin of the attacks.

Looking over records of cases detailed by Richer in his work *Etudes Cliniques sur l'Hystero-Epilepsie* (Paris, 1881), I find, in some of them, incidental corroboration of a mechanical factor in the etiology of these attacks. Thus (page 1) a case is mentioned where the patient, who had had no attack for eight months, and who had acted as nurse in the hospital, became very feeble, had suppression of catamenia two months, then vomiting incessantly, and the attacks, from which she had been free, recommenced. Again (page 190), a patient, aged 16, who had starved herself in order to avoid becoming fat, was suddenly attacked with pain in the leg while swinging in a gymnasium, could not walk, and began to have cataleptic attacks. Another patient (page 193), aged 30, had a miscarriage twenty-five days before admission. She was quiet for fifteen days, then went for a drive; the result was uterine hæmorrhage, and then attacks began to occur. Another (page 203), aged 27, had miscarriage eight months after marriage. Attacks followed and became severe. She had twenty-five in seven weeks, and also nausea and vomiting. She was treated first by hydrotherapy; this failing, by puncture and cauterisation of the os uteri. The attacks ceased at once. She remained cured for two years; then had recurrence of vomiting.

These cases give evidence of the relationship between the uterus and production of attacks, also, in a certain degree, of the influence of physical exertion in their origination.

ON THE PRINCIPLE OF TRACTION-RODS, WITH A SIMPLE SUGGESTION APPLICABLE TO ANY FORCEPS.

By WILLIAM STEPHENSON, M.D.,
Professor of Midwifery in the University of Aberdeen.

THE addition of traction-rods to midwifery-forceps marks an epoch in the process of their evolution. The credit of the conception is due to Tarnier; and, though his special form may be superseded, yet the profession will ever be indebted to him for the idea. They may as yet be imperfect in form, but it is not likely that the principle will be given up. Certainly no other modification has attracted so much attention, and been adopted in special cases by men of different schools in all parts of the world. Whatever objections may be brought against his forceps, the opinion that they possess some advantage over the ordinary instruments is too general amongst those who have tried them to be ignored. In what does this advantage consist, or what is the principle involved in traction-rods? becomes an important question.

For myself, I must admit that the objections I entertain to Tarnier's forceps have prejudiced me against them. I still hold that they are too cumbrous and complicated to meet the wants of the general practitioner; that their method of use implied in the term axis-traction is delusive and wrong when applied generally; and that we lose much of the power and information of the skilled tactus when we relinquish the hold of the handles proper, and draw only by the rods. Experience in their use has, nevertheless, taught me that they embody an important principle, which brings the forceps nearer to the ideal of what they should be.

In comparing the action of traction-rods with that of the ordinary curved forceps, Tarnier and his followers do not state the subject accurately. They have assumed that the power is exerted always by simple traction, and that in both cases the force can be represented by a straight line. This is true for traction-rods only; it does not correctly represent the mode of using the ordinary forceps. With them it may be possible, in very easy cases, to deliver the head by simple traction; but, whenever the resistance is considerable, there is, consciously or not, on the part of the operator, always a leverage or straining effect by the hand, whereby the action is rendered compound, one force drawing in the line of the handles, and others acting as a couple, whereby the force is directed in the line of the axis of the blades. The resultant, therefore, cannot be represented by a straight line, but by a line and a couple; and the recognition of this fact is essential to the understanding of the principles of traction-rods. The difference between Tarnier's and ordinary forceps is not between direct and oblique traction; but between simple traction and a leverage or straining action, where the fulcrum can never be a rigidly fixed point. Dr. Albert Smith (*Transactions of the American Gynæcological Society*, vol. 6, 1881) advocates the leverage method, pure and simple, without traction; generally, however, the two are combined, and in difficult labour it is impossible with the ordinary curved forceps to deliver the head without some degree of leverage or straining.

In discussing the subject, it would be well were all agreed as to the essential requirements in an ideal pair of forceps. These to my mind are the following.

1. They should provide a secure hold, which gives full command over the head. It is not sufficient that the hold does not slip, but the command also over the head must be good. For this purpose, we must be able to apply the blades to the head, in whatever position it may be, so that the force passes through the centre, and acts equally on all parts. Such a hold, having been obtained, should not be disturbed. The pelvic curve in the forceps is necessary to accomplish this when the head is at the brim.

2. Prehension should mainly be dependent upon the cephalic curve, with a minimum amount of compression. To maintain the perfect action of the blades in this respect, it is necessary that the line of traction should coincide with the axis of prehension of the blades. In proportion as traction is made out of the axis of prehension, the forceps are liable to slip, and increased compression is necessary to counteract this, and retain the hold. In order to permit a variation in the line of traction, it is advisable that the fenestra should be of sufficient width.

3. The forceps should be such that the extractive force can be exerted in any desired direction by simple traction only, and free from all strain upon the hand of the operator or on the fœtal head. With an instrument such as the forceps must necessarily be, force can be always applied more directly and accurately and more savingly by simple traction, than by a combination of traction and leverage exerted by straining with one hand, or operating by two hands through a rigid rod. Simple traction, skilfully adjusted, is the safest and most saving mode of action.

4. The forceps should afford facility of varying the line of traction, when necessary, without disturbing the hold and command over the head. This condition cannot be accomplished by simple traction with forceps which, when applied, form a rigid rod. With such an instrument, a change in the direction of the force can be accomplished only by a change in the position of the blades, or by the leverage action of the hand. To effect the change by simple traction only, the instrument must be composed of two parts, one movable upon the other.

The question between the ordinary forceps and traction-rods turns on the means of adjusting the line of traction; but, whilst Tarnier and his followers have limited themselves to the axis of the pelvis, and mainly directed their attention to the head at the brim, the means devised have a much more extended application. By the prominence given to the opinion that traction should in all cases be made in the line of the pelvic axis, the true principle of the use of traction-rods has been obscured, and placed on too narrow a footing. Direct axis-traction is all that is required in simple cases where the resistance is offered by the soft parts alone; but it is quite insufficient in difficult delivery, where not only is the normal mechanism changed, but the resistance is greatly increased by malposition of the head, or by contraction of the pelvis.

Men may deceive themselves, and imagine that they are drawing directly in the line of the pelvic axis; but how can this be ascertained more than in a general way? It is certain also that the true line of action in difficult labour often lies out of the direction proper in the normal pelvis and head. Every skilled operator keeps the pelvic axis in view; but, consciously or not, the tactus leads him independently to adjust the direction of the force, altering it from time to time to meet the requirements of the case. It is not alone when the head is at the brim that traction is required out of the normal line, but also when the head is well in the pelvis, if its position be faulty. It is not, then, direct axis-traction alone that we must aim at, but skilfully adjusted traction; we must be able to vary the direction when necessary, and the question to be determined is, what is the best mode of obtaining the means of readily altering the line of traction, without diminishing the command over the head, or rendering the forceps liable to slip?

The pelvic curve in the forceps is necessary to obtain a proper hold of the head when it is at the brim, but it diminishes the power of simple traction, and necessitates the use of other means to obtain the proper direction of the force. In the straight forceps, the line of traction supplied by the handles coincides with the prehensile axis of the blades, and thereby a good hold of the head is secured with a minimum amount of compression. But when the pelvic curve is introduced, the two no longer lie in one line, but are inclined to each other at an angle (Fig. 1). The greater this angle, the more is the power of



Fig. 1.

prehension and simple traction diminished. The defect, so far as the hold is concerned, is readily compensated by additional compression, whilst the defect in the line of traction is corrected by a leverage action of the hand. In easy cases, so long as the resistance is not great, the amount of compression is not such as is likely to be injurious to the head, nor is the strain on the hand so great as materially to limit the power. The instrument answers fairly well, and is sufficient for the majority of ordinary cases. But when the resistance is great, the defects become apparent. The amount of lever action becomes too much for one hand, and both are brought into requisition—one pulling one way, the other another. The strain, moreover, is not confined to the operating hands alone,—it is conveyed to the fœtal head. In the

efforts to adjust the traction, the handles are carried backwards, straining the pressure, or altering the position of the blades; the command over the head is lessened; and not unfrequently, when the strain is great, the forceps slip.

Another means of correcting the defects of the ordinary forceps is to give to the handles a curve complementary to that in the blades, as in Aveling's forceps. This, however, only restores the line of simple traction to that of the axis of prehension. It does not meet the fourth requirement described above, of affording the means of varying the line of traction without straining or otherwise disturbing the grasp upon the head.

With all forceps which, when applied, form, so to speak, a rigid rod, the line of simple traction can be varied only by altering the position of the blades, or moving blades and head together. A change in the position of the blades does not necessarily imply diminished command over the head, yet in some cases this must undoubtedly happen. With the other resource, that of turning the head with the blades, the movement may occasionally be advisable, but generally it would certainly derange the mechanism of the labour. It is important, therefore, that we should have at our command, when resistance is great, some other means of adjusting the line of traction, other than that supplied by the handles of the instrument. This means for facility and accuracy in the adjustment must be movable upon, and not a component part of, the rigid instrument. The requirement is met by adding a separate traction-rod, freely movable upon the forceps proper.

All the forms of traction-rods which have as yet been devised are open to the serious objection that they greatly complicate the instrument; some simpler means is most desirable; and it would be a further recommendaton if it could be applied to any form of the forceps, and be used or laid aside as desired. This, I would suggest, is to be found in a simple hook, such as is here figured (Fig. 2). What I

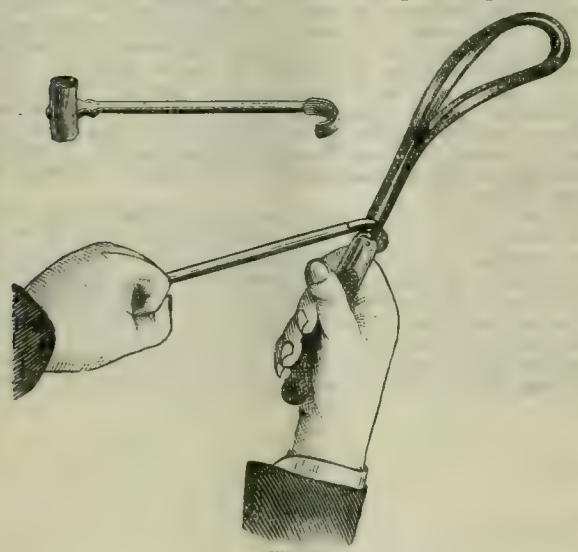


Fig. 2.

first employed was the ordinary crotchet and blunt hook combined, using the crotchet end as the hook, and it answered very well. Held in the left hand, the tractor can, when wanted, be attached between the shanks and over the lock. With it so placed, and the right hand grasping the handles in the ordinary manner, traction is made simultaneously with both hands, the right acting in the line of the handles, the left at a proper angle, so that the resultant will coincide with the line of the desired movement. The force can be thus exerted in any direction, and changed at any time, without affecting the hold of the instrument, or throwing a strain other than direct traction upon the fœtal head. Perfect facility in the most delicate modification in the direction of the force is thus secured; simple traction without strain alone is used, whilst the means is simplicity itself, and can be used with any forceps. It is, I contend, a great mistake to relinquish the hold of the prehensile handles, as recommended by Tarnier and his followers. We thus lose much of the valuable information which is conveyed through the instrument to the mind of the operator—that skilled tactus, the full value of which can be estimated by those only who possess it.

An objection may be advanced that the power is applied less directly than with Tarnier's rods, and therefore there is loss of force. Even if this be the case, it is certainly largely counterbalanced by the gain in simplicity. And, after all, does not this suggestion look very like what has before been advanced? It embodies the action to which many have recourse, when they use both hands with the forceps; but it defines more clearly the principle, and gives greater precision to the action. It recalls to mind the fillet over the lock, suggested by H. F. Nägele, in 1843; and the peculiar instrument of Herman, with a similar application.[1] But the idea associated with these is what I would wholly discard—that of leverage; whereas what is sought for and specially insisted upon, in the use of the simple tractor, is direct traction only.

The chief question is, Does the plan fulfil the end in view? I have now used it in several difficult forceps cases, and am satisfied that I obtained with the simple tractor the same advantage I had found from using a modified Tarnier's forceps. In one case I have had the opportunity of comparing the two methods with the same patient, and therefore as near as possible under the same conditions. The first time, I employed the late Dr. Macdonald's modification of Tarnier's forceps, the second, the ordinary Simpson's forceps with the hook tractor; the latter answered in every way as satisfactorily as the more complicated instrument. Those of my friends who have tried the tractor have reported favourably upon it. Experience alone will decide the relative merits, with the sure result of the "survival of the fittest."

A CASE OF RUPTURE OF THE SPLEEN.

By C. E. FAUNCE, M.R.C.S.Eng.,
Surgeon, Army Medical Staff.

John D., aged 25, a private in the 2nd Battalion Northumberland Fusiliers, was brought to the Station Hospital, Meean Meer, on March 30th, 1886, having been found dead in his bed that morning, at a camp about three miles away. He was on the road to the hills for his health. From evidence given at a court of inquiry held, with reference to the death of J. D., the following facts were elicited as to his condition up to the time he was last seen alive. A comrade who went out with him, on March 29th, at 7.45 P.M., to the head-quarter canteen, stated that on the way thither deceased fell heavily on to his left side, into a drain, but he only complained of having hurt his "shins," and went on to the canteen where they had some beer. Returning to the camp, deceased again fell, but rose all right, and said "good-night" to his companion.

At 10 o'clock P.M., he was found lying near a tent, by a sergeant, who, with the help of another man, took him to his tent and put him to bed. At 3 A.M., a comrade who was sleeping in the same tent woke up and found the deceased "creeping about," saying that he wanted "to go to the rear;" but when he tried to take him thither he refused to go; he therefore put him back to bed again, and the next time he saw him, he was dead—he was found dead in his bed at 5 A.M.

Although the man was stated to have been sober, he had evidently been drinking a good deal without becoming absolutely drunk. He had served in India for six years, and during that time had been five times in hospital for ague; and it was on account of his debility from malaria that he was being sent to the hills.

Post mortem Examination, made about Four Hours after Death.—There were no marks of external violence, except a recent looking bruise, about two inches long, over the crest of the ilium. On opening the abdomen, a large quantity of dark-coloured blood escaped, measuring two pints. The peritoneum was normal in appearance, and the intestines did not show any signs of injury or congestion. The stomach was empty, and no odour of alcohol was detected. On removing the intestines and examining the cavity of the abdomen, the spleen was felt to be ruptured, with a number of large blood-clots lying in its vicinity. This rupture extended along the whole convex surface of the organ, and at its lower part right through its substance. The spleen weighed 22 ounces, was very congested, and extremely friable. The liver weighed 52 ounces; it was pigmented and congested, but its substance was firm. All the other organs were healthy.

Testimonial to Dr. Herbert Birmingham.—Dr. Birmingham, late medical officer of Castlebar Dispensary, on the eve of his departure to Australia, was last week presented with an address by his numerous friends of Ballinrobe. The address was accompanied by a valuable set of surgical instruments.

[1] See Dr. Albert Smith's paper, before referred to.

OBSTETRIC MEMORANDA.

VARIX OF LABIUM: RUPTURE DURING LABOUR.

A LITTLE time ago I attended a Mrs. F., aged 39, in her eighth confinement. Labour commenced about 8 o'clock in the evening, though she had been ailing for over twenty-four hours. On examination, a breech was made out. After a short time, it came well down into the pelvis, and, when it was near the outlet, the right labium began to swell. Delivery was easily effected, and, whilst the child was being separated, the patient was seized with another very strong pain. On examination, made with difficulty, a second bag of membranes could be felt. The tumour, however, steadily increased to an alarming size. Another pain coming on, the tumour suddenly burst on its inner side, deluging the bed. Not caring to take the whole responsibility of the case, I sent for Mr. Holmes, of Burmantofts, requesting him to bring his forceps. In the meantime, as hæmorrhage was freely going on, I made a firm pad of a napkin, and held it to the parts, so as to effectually stop the bleeding. On Mr. Holmes's arrival, he put the short forceps on the second head. The child was suddenly expelled, the injured part, at the same time, being firmly compressed. The placentæ were easily disposed of. On examining the damage, it was found that the inner side of the labium was so torn, that four fingers could be passed into the opening, which led to a cavity sufficiently large to hold the whole hand. The bleeding had now abated; the cavity was, therefore, filled with strips of lint, and iodoform was well dusted on. Pressure being applied by means of a firm spica bandage, the patient was left for the night, opium being given. The following morning, the plugs were removed; very little bleeding occurred. The vagina was syringed out with solution of perchloride of mercury (1 in 3,000); an iodoform suppository was placed well up into the vagina, and the wound was dusted with iodoform; this was done twice daily for a week. The patient made a very good recovery. A piece of vein, about three-fourths of an inch long, which lay across the wound, sloughed off about the fifth day, a little bleeding taking place. On questioning the patient about the veins, she told me, after all was over, that she had had a lump there for some time, which became larger towards night, but she did not think it worth while to tell me. Supposing I had known about it before delivery, could anything have been done to prevent rupture?

AMBROSE ATKINSON, M.R.C.S. Eng.
Burmantofts.

THERAPEUTIC MEMORANDA.

THE USE OF CUCAINE AS A LOCAL ANÆSTHETIC.

The following case is interesting, showing the value of cucaine as a local anæsthetic.

A man, aged 47, suffering from a tight stricture at the bulbous portion of the urethra, which had twice caused retention, was given ether for the purpose of having his stricture stretched; he became, however, so violent from the anæsthetic that the operation had to be abandoned. On the following morning, I determined to try the effect of cucaine. I injected into the urethra half an ounce, or rather more, of a 5 per cent. solution, and anointed all the instruments used with an ointment containing 5 grains to the ounce (I think in another case I shall use lanolin). I waited five minutes, retaining as well as I could the solution in the urethra; I then passed Mr. Harrison's "stretcher" through the stricture, which had taken some days of continuous dilatation with the finest bougies to enable it to pass. There was no pain whatever; and in the course of half an hour I dilated gradually, so that the No. 10 rod passed easily along the stretcher, and through the stretcher, no pain whatever being experienced, beyond a desire to pass urine. A No. 9 bougie is now passed by the patient into his bladder.

WM. B. HOLDERNESS, Windsor.

PRESENTATIONS.—On the occasion of his resigning the post of a medical officer of the Reading Medical Dispensary, which he has held for eleven years, Mr. Oded Lowsley has been presented, by upwards of 600 patients and friends, with a handsome marble clock and bronze figures.—Fleet-Surgeon O'Malley, late Surgeon of the Dockyard, Plymouth, recently appointed to the *Excellent*, has received from several officers representing the Metropolitan Police, a very handsome and costly gold bracelet as a presentation to Mrs. O'Malley.

THE funds of the Swansea Hospital, which were enriched to the extent of £1,500, by the two previous concerts given by Madame Patti-Nicolini, for the benefit of this institution, will, by a third concert given this week by the same lady, be further augmented.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

CHARING CROSS HOSPITAL.

TWO CASES OF GOITRE: REMOVAL OF GLAND: RECOVERY.

[Under the care of J. ASTLEY BLOXAM, F.R.C.S.]

CASE I.—S., aged, 31, married, was admitted on April 21st, 1884. About fifteen years ago, when staying in Germany, she suffered from amenorrhœa for over six months; menstruation returned spontaneously. During this period she first noticed a slight enlargement of the neck, but, as it was not painful nor tender, she did not trouble about it until a year later, when she placed herself under treatment, and was ordered iodine ointment, but as no improvement followed she discontinued it. The swelling remained stationary until she married, when it began to grow again, especially after each of her eight confinements. In 1879, she went to St. Thomas' Hospital, but, as she was pregnant, no operation was advised. She had never had any illness; she had four children alive and quite healthy, the other four died in infancy. Her sister was free, but her mother had suffered from the same complaint for years, goître being very common in their home, near Frankfort.

On admission, a large, highly elastic and apparently solid tumour, about ten inches in circumference and about four in depth, occupied the front of the neck; it moved in deglutition. She considered that it had increased about two inches during the previous four years. It was not painful nor tender. The temperature was normal, and the general health was good.

On April 23rd, Mr. Bloxam punctured the swelling, but did not succeed in draining off any fluid. The measurement round the neck over the swelling was 17½ inches. On May 1st, after consultation, the removal of the swelling was decided upon.

May 23rd.—The patient being put under an anæsthetic, a horizontal incision about six inches long, over the tumour, was made; Mr. Bloxam dissected down to the capsule, and tied any large vessels visible on its surface, leaving the capsule intact, with the exception of a small incision to allow the passage of a probe which was passed from the middle line above, outwards, and downwards, to a point at about the middle of the outer margin of the gland on each side. Silk ligatures were then passed through and tied so as to secure the superior thyroid arteries. The same process was followed at the inferior angles of the gland to secure the inferior thyroid arteries. The tumour was then cut through and but little hæmorrhage followed; the remaining bleeding vessels were ligatured with catgut and the edges of the wound brought together with horsehair sutures. A drainage-tube was inserted, and a simple dressing applied. The operation was carried out under the carbolic spray. The patient was rather prostate for about three-quarters of an hour. The tumour, which weighed sixteen ounces, was a multilocular cyst containing glairy fluid. When the patient rallied from the shock of the operation, a good deal of oozing took place, and it was found necessary to tie three more vessels, after which the hæmorrhage ceased.

On May 24th, her aspect was good, but her temperature had risen to 102° F.; the pulse was 120. She complained of some headache, and respiration was rapid. She was ordered nutrient enemata and brandy.

May 26th. She was progressing satisfactorily, but the temperature, which on the previous day had been 102° F., was still 101.2° F.; the pulse was 130. The wound was washed with boracic acid solution.

On May 27th, the temperature had fallen to 100.4° F., and the appetite was better. The discharge from the wound was very fœtid.

On June 3rd, three ligatures were removed, and a quantity of pus escaped from the wound. The temperature was 98.6° F.

A large piece of slough came away on June 9th, and some pus; the wound was syringed with weak carbolic solution. She was much stronger and better, slept well, and had a good appetite.

On July 1st, the patient was very much better. The wound was healing well. She was discharged on July 9th.

June, 1886. The patient called at the hospital by request, and appeared to be in excellent health and spirits. All the gland had not been removed, and some enlargement had taken place of the remainder, but only slowly, and not enough to do more than give a fullness to the throat. A small linear scar was all that remained to testify to the rather formidable operation which she had undergone.

CASE II.—E. M., aged 40, married, was admitted on May 31st, 1884. She was brought up at Leamington, but had lived in London for the seventeen years before admission. She had had nine children, and her family history was free from anything of the nature of goitre. She had lost one sister from a rapid form of phthisis. The patient first noticed a swelling of the neck, when she was 18 years of age, before she left home. It never gave her much trouble until recently, when she had a good deal of difficulty in breathing, on exertion, which interfered with her general duties. She had been under several medical men, had taken a good deal of medicine, and had rubbed and painted the swelling without any effect. She had noticed that her neck always increased in size more rapidly after her confinements. It was larger on the left than on the right side.

On June 5th, Mr. Bloxam punctured the prominent portions of the swelling, but no fluid escaped. He then made an incision, under antiseptic precautions, in the middle line, exposing the fibrous investment of the gland. A small incision only was made, to allow the passage of a probe and stout catgut ligatures, from a point in the median line above the gland, downwards and outwards to the middle of its external margin on each side. These ligatures being tied secured the superior thyroid arteries, and the inferior thyroid arteries were secured in a similar way. When this had been done, the whole of the gland was removed, with very little loss of blood. The edges of the wound were brought together by means of horse-hair sutures, and a drainage-tube inserted. The patient rallied well after the operation. She was ordered nutrient enemata every four hours.

The wound was dressed antiseptically every day; there was but little discharge. She slept well and had a good appetite. The temperature was 98.5° F., and the pulse 100. On June 13th, the wound was progressing very favourably, and was healing fast. The patient's general condition was very good. She left the hospital on June 21st, the wound having nearly healed up.

There has so far been no recurrence of the growth.

REVIEWS AND NOTICES.

THE SCIENCE AND PRACTICE OF SURGERY. By FREDERICK JAMES GANT, F.R.C.S., Senior Surgeon to the Royal Free Hospital. Third edition. London: Baillière, Tindall, and Cox. 1886.

MR. GANT is to be congratulated upon this work reaching a third edition; and the publishers have produced two very handsome volumes, well printed, well illustrated, and well bound. The author has acted wisely in associating with himself many well-known names for the more special subjects, but their contributions amount to a very small proportion of the work. The author points out in his preface to this edition that these special contributions thus amount to 233 pages out of nearly 2,300, so that he is himself responsible for about nine-tenths of the work. The present edition contains nearly 500 pages more than previous ones, and there is no doubt that the author has honestly endeavoured to bring it up to the present requirements and the present knowledge of the subject. Many new illustrations have been added, and it is a feature of the work that the pathological aspects of surgery have been very fully considered. It is, however, to be regretted that, in the majority of instances, the explanation of the engraving has to be found only by wading through the text, and it is a difficult matter very often for the reader to find what are the important points to be noted in the illustration.

We confess to being unable to recognise how this work differs from other works on the subject of surgery, and how it is "unrestricted by any conventional limitations with regard to the science and the art," or how it is "better fitted for the guidance of the surgeon, and under the varied circumstances experienced in the course of practice." It is not clear what the author claims, or in what it is supposed to be better than others; and the style of the preface is only indicative of the style of writing found in the work. The sentence quoted above is continued thus:—"But these professional requirements" (but what these may be is left to the reader's imagination with a charming freedom from troublesome explanation) "will best fulfil the true educational wants of the student in surgery, by supplying an adequate course of preparation for the duties and responsibilities he must undertake as a surgical practitioner, and which will enable him to give a reason for the faith that is in him." This is very pleasant, but what it all means is difficult to say.

If we look into the main body of the work we find the same diffuseness, and yet there is much original information, cases narrated more or less fully; tables of results of operation from the author's own and from metropolitan surgeons' experience, and valuable pathological illustrations from hospital museums, and from the Royal College of Surgeons. The older authorities are fully quoted, and reference is made to more recent writers and observations; and the author has in this edition given special prominence to inflammation, tumours, wounds and antiseptic treatment, neuropathology, aneurysms, diseases of bones and joints, excisional surgery and osteotomy, injuries of the head and brain, surgery, diseases of the breast, abdominal surgery, surgical diseases of the kidneys, and diseases of the genito-urinary organs. Mr. Watson Cheyne has given a chapter on Bacteria in Surgery, which will be read with interest, but we do not find that the other parts of the work at all equally advanced when treating of subjects in which micro-organisms have to be considered. The chapters on excisional surgery and brain surgery are certainly very full and good, and the latter is illustrated by some useful diagrams from Lucas-Championnière to assist the operator in determining the locality of the different convolutions, and this is now an important and necessary subject of study for the scientific surgeon. Dr. Long Fox's article in Quain's *Dictionary of Medicine* is freely quoted from, and an useful chapter is produced.

It will be found that the drawback to the work is its prolixity. The material contained in it is good, and the information brought generally up to date; but we question whether the student will find time to wade through so ponderous a work, when the endeavours of modern authors is to give the facts and theories of the science and practice of surgery as concisely as is compatible with clearness.

NOTES ON BOOKS.

Contra-indications for Visiting the High Altitudes. By A. TUCKER WISE, M.D. 8vo., pp. 22. (London: J. and A. Churchill.)—This book can be regarded only as a reprint of a portion of Dr. Wise's last book on Alpine climates, except in so far as it supplies a guide to the many excursions that may be made to places of interest near Maloja.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CASCARA CAPSULES.

MESSRS. DUNCAN, FLOCKHART AND CO., 104 and 106, South Canongate, Edinburgh, have submitted to us capsules, each containing half a teaspoonful of fluid extract of cascara sagrada. The chief drawback to the use of this laxative is its unpleasantly bitter flavour, which is, of course, obviated when it is taken enclosed in capsules.

MEDICAL MAGISTRATE.—The Lord Chancellor of Ireland has appointed Dr. Charles E. Ryan, of Emly, Tipperary, to the Commission of the Peace for that county.

BEQUESTS.—Mrs. Elizabeth Hughes, of Pembroke Road, Dublin, has bequeathed £1,000 each to the Adelaide Hospital, the Rotunda Lying-in Hospital, the Meath Hospital, Sir Patrick Dun's Hospital, and the City of Dublin Hospital; £500 to Mercers' Hospital, and £300 to the Coombe Lying-in Hospital, all at Dublin; and £1,000 to the Convalescent Home at Stillorgan.—Mr. Richard Towne, of Ormonde Terrace, Regent's Park, has bequeathed £1,000 to the National Orthopædic Hospital, £300 to the Hospital for Incurables, £200 to the Cancer Hospital, £200 to the Hospital for the Paralysed and Epileptic, £200 to the North London Hospital for Consumption, and £100 to the Hospital for Sick Children.—Miss Francis Barnes, of Carlisle, has bequeathed £500 to the Border Counties Home for Incurables at Stanwix, £500 to the Cumberland Infirmary, £500 to the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties at Lancaster, £300 to the Carlisle Dispensary, and £300 to the Convalescent Institution at Silloth.—The Leeds General Infirmary has received £400 under the will of Viscountess Mountgarret.—Mr. George Wilson, J.P., of Banner Cross, has bequeathed £250 to the Children's Hospital, £150 to the General Infirmary, and £100 to the Public Hospital and Dispensary, all at Sheffield.—The Gloucester Infirmary has received £107 2s. 9d. under the will of Miss Elizabeth Baxter.—The Sussex County Hospital at Brighton has received £100 less duty, under the will of Mrs. M. Soane.

FIFTY-FOURTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRIGHTON, August, 10th, 11th, 12th, and 13th, 1886.

PROCEEDINGS OF SECTIONS.

THE subjoined brief summary of the proceedings of Sections at the annual meeting of the British Medical Association in Brighton will indicate the nature and extent of the work done. Many of the papers read, and the discussions thereon, will be published in the JOURNAL.

SECTION A.—MEDICINE.

President: W. H. Broadbent, M.D. *Vice-Presidents:* F. Bagshawe, M.D.; J. Ewart, M.D. *Secretaries:* F. Warner, M.D.; H. S. Branfoot, M.B.

Wednesday, August 11th.

Sir ANDREW CLARK, Bart., F.R.S., opened a discussion on Cases in which Disease of the Valves of the Heart had been known to exist for upwards of Five Years, without causing Serious Symptoms. The debate was continued by Professor Gairdner, Dr. Clifford Allbutt, Dr. Bristowe, Dr. Leech, and Dr. Bowles; after which Sir Andrew Clark replied.

Dr. W. S. PLAYFAIR read Some Observations on what is called Neurasthenia.

Mr. DE BERDT HOVELL read a paper on Some Conditions of Neurasthenia. Remarks on the subject were made by Dr. Drysdale and Dr. Hughlings Jackson.

Thursday, August 12th.

The PRESIDENT, Dr. BROADBENT, delivered an address, which was published at page 311 of the JOURNAL of August 14th. A vote of thanks was given to the President for his address.

Dr. ORD read a paper on Gallstones, with particular reference to some rarer points in their Symptomotology. In the discussion which followed, Sir Peter Eade, Dr. Clifford Allbutt, and Professor Charcot took part.

Dr. G. H. SAVAGE read a paper on Mental Symptoms, with Locomotor ataxy.

Dr. C. H. RALFE read a paper on Functional Albuminuria.

Dr. T. OLIVER read a paper on the Relation of Urea to certain Diseased Processes.

Friday, August 13th.

Dr. A. MANTLE gave a demonstration of Bacteria in Rheumatism.

Dr. RADCLIFFE CROCKER showed the method of Removal of Hair by Electrolysis.

Dr. E. G. WHITTLE read a paper on Insomnia and Melancholia in the Sane; on which Dr. Drysdale made some remarks.

Professor HAYCRAFT demonstrated a New Method of Estimating Uric Acid; and read a paper on Some Points in the Coagulation of the Blood.

Dr. A. GAMGEE read a paper on Condensed and Rarefied Air in the Treatment of Chronic Bronchitis, Emphysema, and Spasmodic Asthma. Dr. Bowles made some remarks.

Dr. HINGSTON FOX read a paper on the Ready Determination of the Excretion of Urea.

Dr. EYLANDT (Reval) read a paper on the Treatment of Diphtheria. Dr. J. A. Grant (Ottawa) made remarks.

Dr. RADCLIFFE CROCKER described a New Treatment for Obstinately Recurring Eczema.

Dr. KIRK read a paper on a New Acid formed in Human Urine, which darkens with Alkalies. A few remarks on the subject were made by Dr. A. Gamgee.

SECTION B.—SURGERY.

President: John E. Erichsen, F.R.C.S., F.R.S. *Vice-Presidents:* F. W. Jowers, M.R.C.S.; J. Ward Cousins, M.D., F.R.C.S. *Secretaries:* W. J. Walsham, F.R.C.S.; Willoughby Furner, F.R.C.S.

Wednesday, August 11th.

The PRESIDENT opened the proceedings by an address, which was published at page 314 of the JOURNAL for August 14th.

A discussion on Suprapubic Lithotomy was opened by Sir HENRY THOMPSON, who was followed by Mr. Walter Pye, Mr. Reginald Harrison, Mr. Cadge, Mr. T. R. Jessop, Mr. R. Barwell, Dr. Ward Cousins, Surgeon-Major Keegan, Sir W. Mac Cormac, Mr. Jacobson, Mr. Bruce Clarke, and Dr. Hingston (Montreal).

Thursday, August 12th.

The Surgery of the Liver was the principal subject of discussion.

Dr. GEORGE HARLEY read two papers: one on a case of Hepatitis with Dropsy, in which Hepatic Phlebotomy was performed; the other on Puncturing the Liver-Capsule in Cases of Chronic Congestive Hypertrophy.

Mr. KNOWSLEY THORNTON read a paper on the Surgical Treatment of Diseases of the Liver.

Mr. A. WILLETT read a paper on Cholecystotomy.

Mr. HOWARD MARSH described a Case of Abscess of the Liver treated by Incision and Drainage.

Mr. LAWSON TAIT read a paper on the Surgical Treatment of Diseases of the Liver.

A discussion followed the reading of these papers, in which Dr. P. Royle, Mr. Smith (Netley), Dr. Cullimore, Mr. Willett, Surgeon-Major Black, Mr. J. Prankerd, Mr. Humphry, Dr. J. Ewart, and Mr. Johnson took part; after which Dr. Harley replied.

Dr. SIMON FITCH (Halifax, Nova Scotia) described the Dome-Trocar and Associated Instruments in Paracentesis, Aspiration, Transfusion, Ovariotomy, and Tunnelling the Enlarged Prostate.

Mr. EDMUND OWEN read a paper on Psoas Abscess: when and how to open it.

Mr. WILLIAM ADAMS read a paper on the Treatment of Congenital Displacement of the Hip-joint by long continued Recumbency and Extension.

Friday, August 13th.

A paper, illustrated by photographs illuminated by lime-light, on Advances in the Surgery of the Nervous System, was read by Mr. Victor Horsley; on which remarks were made by M. Charcot (Paris), Mr. Jackson, Dr. Royle, Dr. Thwing (Brooklyn), and Dr. Gibbon.

Mr. W. BRUCE CLARKE and Dr. W. E. STEAVENSON read papers on the Employment of Electricity in the Treatment of Disease of the Urinary Organs; on which remarks were made by Mr. Vincent Jackson and Mr. Whitehead; after which Mr. Bruce Clarke and Dr. Steavenson replied.

Mr. REGINALD HARRISON read a paper on the Treatment of Certain Forms of Urethral Stricture by External and Internal Urethrotomy combined, which was discussed by Dr. Ward Cousins, Professor Pancoast (Philadelphia), Mr. S. Benton, and Mr. W. Whitehead.

Dr. WARD COUSINS showed and described a new Mouth-gag and Throat-guard.

A paper on Obscure Diseases of the Spinal Column was read by Mr. NOBLE SMITH. Mr. T. R. Jessop made some remarks.

Sir WILLIAM STOKES read a paper on Acute Myxœdema following Thyroidectomy.

Mr. T. SYMPSON described a case of Myositis Ossificans, on which the President of the Section made some remarks.

Mr. LENNOX BROWNE read a paper on the More Complete Surgical Treatment of Suffocative Goître, on which remarks were made by Mr. Hemming and Mr. T. R. Jessop.

Mr. WALTER WHITEHEAD read a paper on Three Hundred Consecutive Cases of Hæmorrhoids cured by Excision. A discussion followed, in which Dr. Ward Cousins, Mr. Hemming, Dr. Pancoast, Mr. T. R. Jessop, Mr. Lennox Browne, and Brigade-Surgeon Boustead took part.

Mr. CHARLES SMITH showed and described a New Clamp for the Treatment of Hæmorrhoids.

A paper on Fistula-in-Ano of the Horseshoe Shape was read by Mr. S. BENTON.

Mr. JAMES STARTIN read a paper on the Surgical Treatment of Acne and Lupus, on which remarks were made by Dr. Pancoast.

Dr. W. C. WILE (Newtown, Connecticut) read a paper on the Relation which Alimentation bears to the Results of Surgical Practice.

Mr. F. B. JESSETT read a paper on the Surgical Treatment of Certain Tumours of the Neck.

A paper on the Treatment of Aneurysm by Galvano-puncture, illustrated by Cases, was read by Mr. WILLIAM ANDERSON.

Dr. A. DEMPSEY described a Case of Orbital Aneurysm.

The following papers, which had been presented to the Section, were taken as read.

FAGAN, JOHN, Esq.: Notes of Cases of Gunshot-wounds.

SYMONDS, CHARTERS J., M.S.: The Treatment of Malignant Stricture of the Œsophagus by Tubage or Permanent Catheterism.

WILE, W. C., M.D.: 1. Excision of the Entire Shaft of the Tibia for Necrosis, with Reproduction of the Bone; 2. Simple Cyst of the Left Ovary; 3. A Case of Retention of the Urine from Enlarged Prostate, and Occlusion of the Urethra from Pressure and Strictures; Operation; Recovery.

Section C.—Obstetric Medicine.

President: Alfred Meadows, M.D. *Vice-Presidents:* C. Holman, M.D.; F.W. Salzmann. M.R.C.S. *Secretaries:* C. J. Wright, M.R.C.S.; Alban Doran, F.R.C.S.

Wednesday, August 11th.

The President delivered an address, which was published at page 356 of the Journal for August 21st.

A discussion on the Alternatives to Craniotomy was introduced by Dr. Robert Barnes. A paper, by Dr. Kinkead, on Craniotomy and Cæsarean Section, was read by the Secretary. The discussion was shared in by Dr. Lusk (New York), Dr. H. P. C. Wilson (Baltimore), Dr. J. G. Swayne, Mr. Lawson Tait, Dr. More Madden, Dr. Neville, Dr. Alderson, Dr. M. Cameron, Dr. Thompson (Rome), Mr. Hough, Dr. Edis, and Mr. C. J. Wright; after which Dr. Barnes replied.

Dr. T. A. Emmet (New York) read a paper on Certain Mooted Points in Gynæcology.

Dr. Graily Hewitt read a paper on the Early History and Etiology of Uterine Flexures and Displacements.

Remarks on these papers were made by Dr. Bantock and Dr. Gordon (Portland, Maine); and Dr. Emmet replied.

Thursday, August 12th.

Dr. Lusk (New York) read a paper on the Proper moment for the Performance of Gastrotomy in Abdominal Pregnancy. A discussion followed, in which Mr. Lawson Tait, Dr. Meadows, Dr. Wilson (Baltimore), Mr. Jessop, Mr. Doran, and Dr. Edis took part; and Dr. Lusk briefly replied.

Dr. Berry Hart described a Successful Case of Abdominal Section for Ruptured Fallopian Tube Fœtation, with microscopic examinations of the part of the tube removed.

Dr. J. H. Aveling described a Case of Extra-uterine Gestation arrested by Electricity.

Dr. R. Petch (New York) described a Case of Extra-uterine Gestation treated by Galvano-puncture.

A discussion followed, in which Mr. C. J. Wright, Dr. Gill Wylie (New York), Dr. Gardner (Montreal), Dr. Edis, Dr. Routh, Mr. Lawson Tait, Dr. Kelly (Philadelphia), Dr. Hanks, Dr. Steavenson, and Dr. Lusk took part.

Dr. G. E. Ranney (Lansing, Michigan) read a paper on the Treatment of Mastitis; on which remarks were made by Dr. Edis, Dr. Bantock, and Dr. Swayne; after which Dr. Ranney replied.

Dr. M. Beverley read a record of Twenty Cases of Emmet's Operation for Laceration of the Cervix, and of Three for Procidentia Uteri. Remarks were made by Dr. Gordon (Portland, Maine), Dr. D. Kelly (Philadelphia), and Dr. Gill Wylie (New York); and Dr. Beverley briefly replied.

Friday, August 13th.

The proceedings of this day consisted of a discussion on Removal of the Uterine Appendages. Papers on the subject were read by Dr. Thomas Savage and Dr. More Madden; and remarks were made by Dr. Bantock, Dr. Gordon (Portland, Maine), Dr. G. Elder, Dr. F. Imlach, Dr. Gill Wylie (New York), Dr. E. T. Davies, Dr. Wilson (Baltimore), Mr. Lawson Tait, Dr. Kelly (Philadelphia), Dr. Graily Hewitt, and Mr. Vincent Jackson; after which Dr. More Madden replied.

A vote of thanks was given to the President, on the proposal of Dr. T. Savage, seconded by Dr. Graily Hewitt. Dr. Wilson, of Baltimore, thanked the President in the name of the American visitors.

The following papers were not read for want of time.

Ballantyne, J. W., M.B.: Sphygmographic Tracings in Labour and the Puerperium.

Black, J. Gordon, M.D.: The Use of Stem-Pessaries.

Braithwaite, James, M.D.: A Method of Treating Some Cases of Scanty Menstruation and of Amenorrhœa.

Dolan, T. M., M.D.: Obstetric Experiences, with Observations.

Edis, A. W., M.D.: Cases illustrating the Difficulties of Diagnosis in Gynæcological Practice.

Elder, G., M.D.: A Case of Vesico-vaginal Fistula.

Section D.—Public Medicine.

President: R. P. B. Taaffe, M.D. *Vice-Presidents:* Sir Charles A. Cameron, M.K.Q.C.P; Charles Kelly, M.D. *Secretaries:* W. Brown, F.R.C.S.Ed.; W. J. Tyson, M.D.

Wednesday, August 11th.

The President delivered an address, which was published at page 316 of the Journal for August 14th.

Dr. Joseph Ewart opened a discussion on Scarlet Fever, its Causation, and the best Sanitary Measures for dealing with the Disease as it exists among Urban Populations. The subsequent speakers were Dr. W. Squire, Dr. Grimshaw (Registrar-General for Ireland), Mr. Harris Butterfield, Mr. Vacher, Mr. W. Brown, Dr. Taaffe, Dr. Groves, Dr. Norman Kerr, Dr. Sykes, Dr. Duncan (Glasgow); and Dr. Ewart replied.

Mr. P. Boobbyer (Basford) read a paper on Scarlet Fever in Relation with the Disturbance of Impure Subsoil and the Construction of Sewers; from Personal Observation during an Epidemic.

Surgeon-Major R. Pringle read a paper on the the Advantages and Disadvantages of Human and Animal Lymph.

Thursday, August 12th.

A discussion took place on the Duration of Infectiveness in Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. A letter on the subject from Dr. A. Ransome, was read. Dr. F. Pearse read a paper on the subject; and remarks were made by Surgeon-Major Pringle and Dr. A. Gamgee.

Another discussion took place on the Causation of Diphtheria in Rural Districts, and the Influence of Soil upon the Disease.

Dr. C. Kelly read a paper on the Relation of Soil to Diphtheria in West Sussex. Remarks were made by Dr. H. F. Parsons, Dr. J. Mitchell Wilson, Dr. W. Squire, and Dr. Groves; after which Dr. Kelly replied.

Surgeon-Major Evatt read a paper on the Medical Department of an Army Corps in War, with proposals for a more efficient Volunteer Medical Organisation; on which remarks were made by Dr. J. S. Billings and Surgeon Pearse.

Dr. John Tatham (Salford) read a paper on Scarlet Fever, and the best means for its Prevention in Large Urban Populations. A discussion followed, in which Mr. Shirley Murphy, Dr. H. F. Parsons, Dr. Whitelegge, and Surgeon-Major Pringle took part. At the close of the discussion, the following resolution, moved by Dr. J. Tatham and seconded by Dr. Grimshaw, was carried.

"That the Public Health Section, having considered the paper read and the remarks made, are of opinion that the time has arrived when the protection afforded by the powers for the compulsory notification of infectious diseases, should be extended to the population generally; and they therefore recommend the Council of the Association to consider, at an early date, the advisability of endeavouring to promote general legislation with this object in view."

Dr. Norman Kerr read a Paper on Hydrophobia and its Prevention.

Mr. C. E. Paget read a paper on the Influence of Acute Supposed Simple Sore-Throat in the Spread of Diphtheria; on which some remarks were made by Mr. Sidney Turner.

Surgeon-General W. R. Cornish read a paper on an Outbreak of Cholera amongst British Emigrants proceeding from London to Queensland in the Steamship *Dorumela* during November and December 1885.

Thursday, August 13th.

Dr. Michael W. Taylor read a paper on Diphtheria in connection with Damp and Mould; on which remarks were made by Dr. B. O'Connor and Dr. Duncan (Glasgow).

Dr. C. R. Drysdale read a paper on Animal Vaccination; on which remarks were made by Mr. Shirley Murphy.

Dr. Groves read a paper on the Sanitary Acts as applied to Rural Sanitary Districts.

Dr. W. Squire read a paper on the Influence of Increased Means of Isolation upon the Prevalence of Scarlet Fever in London; on which Dr. Sykes made some remarks.

Dr. Whitelegge read a paper on Water Analysis.

Dr. James Davison read a paper on the Principle of Separation of the Human Excreta as applied to Closets, and the True Method of Disposing of the Solids and Fluids respectively. Remarks were made by Dr. Drysdale and Dr. Duncan.

A paper was read by the Rev. Dr. de Colleville, delegate of the Society of Public Health in Belgium.

A paper by Surgeon-Major Pringle, on State Vaccination, was taken as read.

A vote of thanks to the President, moved by Surgeon-Major Pringle, and seconded by Dr. Drysdale, closed the proceedings of the Section.

Section E.—Psychology.

President: T. S. Clouston, M.D. *Vice-Presidents:* C. A. Lockhart Robertson, M.D.; J. R. Gasquet, M.B. *Secretaries:* C. S. W. Cobbold, M.D.; J. M. Moody, M.R.C.S

Wednesday, August 11th.

The PRESIDENT delivered an address, which was published at page 319 of the JOURNAL for August 14th.

Dr. A. CAMPBELL CLARK read a paper on Experimental Dietetics in Lunacy Practice: a Record of Investigations and Results. The paper was illustrated by printed tables. A discussion followed, in which the President, Dr. J. A. Campbell, Dr. G. H. Savage, Dr. Needham, Dr. Deas, and Dr. Chapman took part; and Dr. Campbell Clark replied.

Dr. G. E. SHUTTLEWORTH read a paper on the Relation of Marriages of Consanguinity to Mental Unsoundness, on which remarks were made by Dr. Ball (Paris), Dr. Langdon Down, Dr. Fletcher Beach, and Dr. Hack Tuke.

Thursday, August 12th.

Dr. C. E. BEEVOR gave a demonstration of Weigert's Hæmatoxylon Method of Staining the Central Nervous Tissues. Dr. Savage and Dr. Hughlings Jackson spoke on the subject; and Dr. Beevor replied.

A discussion on the question, How may the Medical Spirit be best kept up in Asylums for the Insane? was opened by the PRESIDENT (Dr. CLOUSTON), who was followed by Dr. Savage, Dr. Ball (Paris), Dr. J. A. Campbell, Dr. Hack Tuke, Dr. Urquhart, Dr. Outterson Wood, Dr. Needham, Dr. Campbell Clark, Dr. Lyle, Dr. Whitcombe, Dr. Aldridge, and Dr. Deas.

A paper on the subject of the discussion, by Dr. S. A. K. STRAHAN, was read in his absence by the Secretary.

Dr. D. G. THOMSON read a paper on the Separate Care and Medical Treatment of Recent Cases of Insanity, either in existing Asylums or in Lunatic Hospitals to be Established for that Special Purpose. Dr. Cobbold made some remarks.

Dr. HACK TUKE read a paper on the Alleged Increase of Insanity, the discussion on which was adjourned.

Friday, August 13th.

Dr. TUKE's paper on the Alleged Increase of Insanity was discussed by the President, Dr. Cobbold, Dr. Outterson Wood, Dr. Fletcher Beach, and Dr. J. A. Campbell; and Dr. Tuke replied.

Dr. COBBOLD read a paper on Suicidal Tendencies in Congenital Imbeciles, which was discussed by the President, Dr. Shuttleworth, Dr. Fletcher Beach, and Dr. Hack Tuke; after which Dr. Cobbold replied.

Dr. PALMER drew attention to Certain Pathological Changes in the Brain of General Paralytics, and exhibited drawings and microscopic preparations.

Dr. FLETCHER BEACH read a paper on the Influence of Hereditary Predisposition in the Production of Imbecility. Remarks were made by Dr. Hack Tuke, Dr. Shuttleworth, and the President; and Dr. Beach replied.

Dr. COBBOLD directed attention to the recently passed Idiots Act, 1886.

Dr. J. A. CAMPBELL read a paper on the Use and Abuse of Seclusion, on which remarks were made by the President, Dr. Outterson Wood, Mr. Whitcombe, Dr. Hack Tuke, and Dr. Deas.

A vote of thanks to the President, proposed by Dr. GASQUET, and seconded by Mr. WHITCOMBE was carried by acclamation. A hearty vote of thanks was also given to the Secretaries.

SECTION F.—PATHOLOGY.

President: Julius Dreschfeld, M.D. *Vice-Presidents:* J. F. Goodhart, M.D.; Heneage Gibbes, M.D. *Secretaries:* J. E. Ranking, M.D.; J. C. Uhthoff, M.D.

Wednesday, August 11th.

The PRESIDENT opened the proceedings by an address, which was published at page 323 of the JOURNAL for August 14th.

A discussion on Peripheral Neuritis took place. Papers were read by Dr. JAMES ROSS and Dr. BUZZARD; and remarks were made by Professor Charcot, Professor Brown-Séquard, Dr. E. H. Greves, and Dr. E. G. Whittle.

Dr. B. N. RAKE (Trinidad) read two papers: 1. An Inquiry on the Distribution of the Leprosy-bacillus; 2. Experiments on the Communicability of Leprosy to Animals. He also showed specimens of Leprosy.

Dr. RADCLIFFE CROCKER described the Anatomy of the Early Stage of Keloid, and showed photographs and drawings illustrating Anæsthetic, Tubercular, and Mixed Leprosy, and the Effects of the Disease upon the Skin and Nerves.

Thursday, August 12th.

A discussion on the Pathology of Aneurysm was opened by Mr. T. HOLMES, who read a paper on the subject. A paper was also read by Mr. R. Barwell; and remarks were made by Mr. C. J. Symonds.

Dr. H. F. A. GOODRIDGE read a paper on a Case of Aneurysm of the Abdominal Aorta, on which remarks were made by Mr. Holmes and Dr. Dreschfeld.

Mr. R. BARWELL showed a photograph of, and described, a Case of Upward Dislocation of the Sternal End of the Clavicle; on which remarks were made by Mr. Holmes.

Dr. W. C. CHAFFEY read a paper on Fibrinous Deposits within the Heart in Diphtheria and in some other Diseases of Children. A discussion followed, in which Dr. A. T. Brett, Dr. S. Coupland, Dr. Woodhead, and the President took part.

Friday, August 13th.

A discussion on the Etiology and Pathology of Pneumonia was introduced with the reading of papers by Dr. O. STURGES and Dr. R. DOUGLAS POWELL; and was shared in by Dr. Churton, Dr. W. A. Hollis, Surgeon-Major Black, Dr. Coupland, Dr. Maguire, and the President; after which Dr. Sturges and Dr. Powell replied. In connection with the papers, Dr. Sturges showed microscopic specimens of Pneumonia; and Dr. Powell exhibited Cultivations of Pneumococci in gelatine, and Photographs of Pneumococci, made by Dr. Crookshank, from preparations by Mr. L. Hudson.

Dr. W. A. HOLLIS read a paper on Pulmonary Tuberculosis associated with Heart-disease.

A paper by Dr. R. MAGUIRE, on Albuminuria in Diabetes, was taken as read.

Dr. HENEAGE GIBBES showed in the Museum a series of Microscopic Specimens of Carcinoma and Sarcoma; also a number of Photographs of Normal and Morbid Histology and Bacteria, and Photographs showing Diseased Conditions (life size).

Mr. LEOPOLD HUDSON showed specimens of Organisms found in several cases of Pneumonia.

SECTION G.—THERAPEUTICS AND PHARMACOLOGY.

President: T. Lauder Brunton, M.D., F.R.S. *Vice-Presidents:* J. Mitchell Bruce, M.D.; E. Mackey, M.D. *Secretaries:* C. W. Suckling, M.D.; J. T. Coats, M.D.

Wednesday, August 11th.

The PRESIDENT, Dr. LAUDER BRUNTON, F.R.S., delivered an address, which was published at page 326 of the JOURNAL for August 14th.

Dr. WILLIAM CARTER opened a discussion on Antipyretics, and was followed by Dr. Leech.

Professor OSCAR LIEBREICH (Berlin) read a paper on Lanolin. Dr. Shoemaker (Philadelphia), Dr. Mackey, and Dr. Haycraft made some remarks, and Dr. Liebreich replied.

Dr. SHOEMAKER (Philadelphia) read a paper on Hamamelis Virginica, which was discussed by Dr. Wilberforce Smith, Dr. W. Carter, Dr. Coldstream, and Dr. Pollok, after which Dr. Shoemaker replied.

Dr. MACKEY read a paper on Resorcin in Gastric and Cutaneous Disorders. Dr. Wilberforce Smith made some remarks.

Thursday, August 12th.

A discussion on Analgesics was opened by Dr. KENT SPENDER, who was followed by Professor Brown-Séquard (Paris), Professor Liebreich (Berlin), Dr. Leech, and Dr. Mackey.

Dr. PROSSER JAMES read a paper on Local Anæsthetics.

Dr. MORTIMER GRANVILLE read a paper on the Relief of Pain by Mechanical Vibration or Percussion. Remarks were made by Dr. Mackey, Professor Brown-Séquard (Paris), and Dr. Carter, and Dr. Granville replied.

Mr. W. H. JESSOP read a paper on the Therapeutic Effects of Cucaine in Ophthalmic Practice, on which Dr. Mackey made some remarks.

Dr. STEPHEN MACKENZIE read a paper on the Value of Cannabis Indica in a certain class of Headaches, on which remarks were made by Dr. Mackey.

Thursday, August 13th.

A discussion on the Action of Drugs in Albuminuria was opened by a paper on the subject by Dr. R. SAUNDBY.

Dr. J. BLAKE (San Francisco) read a paper on the Climate of California in relation to the Treatment of Consumption. Dr. Drysdale, Dr. Coldstream (Florence), and Dr. Donaldson (Baltimore) took part in the discussion which followed, and Dr. Blake replied.

Dr. MITCHELL BRUCE read a paper on Morphine in Diabetes, on which remarks were made by Dr. Mackey.

Dr. C. R. DRYSDALE read a paper on Mercury as an Antidote in Syphilis.

Mr. G. ST. GEORGE (Lisburn) read a paper on Manaca in the Treatment of Rheumatoid Arthritis. Dr. Mackey made some remarks.

A paper by Professor V. HORSLEY and Dr. F. SEMON, on an Apparently Peripheral and Differential Action of Ether upon the Laryngeal Muscles, was read, and was discussed by Dr. Mitchell Bruce, Dr. Arthur Gamgee, and Dr. Donaldson (Baltimore), after which Dr. Semon replied.

The Report of the Collective Investigation Committee on the Action of Hamamelis and Terebene was read by Dr. ISAMBARD OWEN, and the following resolution was adopted: "That the Report be received with thanks, and that the Committee of the Therapeutic Section which was formed last year at the Cardiff Meeting be empowered to continue its work, and that permission be granted to add to its numbers."

The following papers were taken as read.

STRAHAN, J., M.D. An unrecorded Danger from Continued Large Doses of Iron.

TRUMAN, E. B., Esq. Poisoning by Squills.

SECTION H.—OPHTHALMOLOGY.

President: Charles Oldham, F.R.C.S. *Vice-Presidents:* L. H. Tosswill, M.B.; G. A. Critchett, F.R.C.S.Ed. *Secretaries:* F. H. Hodges, F.R.C.S.Ed.; A. Nicholson, M.B.

Wednesday, August 11th.

The PRESIDENT (Mr. OLDHAM) delivered an address, which was published at page 329 of the JOURNAL for August 14th.

On the proposal of Mr. MCHARDY, seconded by Mr. F. MASON, a vote of thanks was given to the President for his address.

Mr. MCHARDY showed Mr. Henry Juler's Improved Electric Refraction Ophthalmoscope; on which remarks were made by Mr. Mason, Dr. Glascott, and Mr. Edgar Browne.

Dr. EDWYN ANDREW read a paper entitled Ophthalmic Hints, which was described by Mr. H. B. Hewetson, Mr. Simeon Snell, and Dr. C. B. Taylor.

Mr. A. H. BENSON read a paper on the Operative Treatment of Trichiasis, with or without Entropion. Remarks were made by Dr. Glascott, Mr. Snell, Mr. Hewetson, and Mr. Edgar Browne; and Mr. Benson replied.

Mr. EDGAR BROWNE read a paper on New Remedies in Ophthalmic Practice, which was discussed by Mr. S. Snell, Mr. Hewetson, and Mr. Critchett; after which Mr. Browne replied.

Mr. ANDERSON CRITCHETT read a paper on Dislocation of the Lens. Remarks were made by Mr. Edgar Browne and Dr. Bell Taylor; and Mr. Critchett replied.

Mr. C. G. LEE read a paper on the Extraction of Soft Cataract by Irrigation; which was discussed by Mr. E. Browne, Mr. A. H. Benson, and Dr. Gamgee.

The following paper was read by Dr. C. BELL TAYLOR: Is it desirable, in certain cases, to substitute Resection of the Optic Nerve for Oblation of the Eyeball?

Thursday, August 12th.

A discussion on Choroiditis Disseminata was introduced by Mr. JONATHAN HUTCHINSON, who was followed by Mr. Edgar Browne, Mr. Anderson Critchett, Mr. Vose Solomon, and Dr. Hughlings Jackson.

Mr. T. H. BICKERTON showed a case of Growth between the Superficial Corneal Layers, and exhibited Photographs of a Tumour of the Socket. Remarks were made by Mr. E. A. Browne.

Mr. SIMEON SNELL read a paper on Massage in Eye-Affections, which was discussed by Mr. G. L. Johnson, Mr. Hodges, and Dr. E. Andrew.

A paper on the Operation for Squint, was also read by Mr. SNELL, and was discussed by Mr. A. H. Benson and Mr. Adams Frost.

Mr. G. ABBOTT read a paper on the Use of Styles in the Treatment of Epiphora; on which remarks were made by Mr. A. H. Benson, Mr. Edgar Browne, Mr. C. G. Lee, Mr. Anderson Critchett, Mr. Tosswill, and Dr. E. Andrew.

Friday, August 13th.

Dr. WARD COUSINS showed a new Fixing Forceps, and a Right Canine Tooth removed from the Left Orbit of a Child.

Mr. W. ADAMS FROST read a paper on the question, What is the best method of dealing with a Lost Eye? Remarks were made by Dr. Glascott, Mr. Critchett, Mr. Higgens, and Mr. Snell; and Mr. Frost replied.

Dr. GLASCOTT read a paper on Sarcoma of the Choroid, followed by Amblyopic Symptoms in the Sound Eye.

Mr. H. GREENWAY read a paper on the Use of Ice and Carbolic Acid in the Treatment of Injuries and Inflammation of the Eyes and Eyelids.

Mr. C. HIGGENS read a paper on the Relation of Headache to the condition of the Eyes; on which some remarks were made by Mr. Critchett.

During the meeting, a limited number of beds in the Sussex Eye Hospital were devoted to the reception of cases of interest to be shown at the meetings of the Sections.

EXCURSIONS.

THE number, variety, and attractiveness of the excursions which followed the meeting at Brighton, on Saturday, August 14th, have rarely been exceeded in the records of our annual meetings. But apart from the natural attractiveness of such well-known and tempting resorts as the Isle of Wight, Hastings, Normanhurst and Battle, Tunbridge Wells, Eastbourne and Pevensey, and Arundel and Chichester, and the beautiful weather which prevailed, no small amount of the enjoyment attending these trips was due to the careful arrangements made, and to the hospitable treatment and the hearty welcome which awaited the visitors on their arrival at their several destinations.

EXCURSION TO HASTINGS, BATTLE, AND NORMANHURST.—A party of about 150, including a number of ladies, under the guidance of Mr. H. Algernon Hodson (to whom great praise is due for the excellency of all the arrangements), left Brighton by a special train at 9.20 arriving at the Warrior Square Station, St. Leonard's, at 10.30, and were received by Dr. Trollope and other members of the Association at Hastings and St. Leonard's. The following places were visited before luncheon—the Castle, Hospital, Baths, Pier, and Lady Brassey's interesting museum; after this, the visitors adjourned to the Warrior Square Concert Room, where a banquet had been prepared under the auspices of the Mayor and Town Council, at which were present, amongst others, the Dean of Battle, the Mayor (Mr. Bradman), the Town Council, Mr. Wilson Noble, M.P., Dr. Trollope, and other local practitioners. Dr. Trollope presided. After luncheon, carriages were provided to take the members to Battle Abbey, were they were received by the Duke of Cleveland, and the antiquities of the place explained by Mr. Cole, M.A. Next, the members visited Normanhurst, the seat of Sir Thomas Brassey. In the absence of Sir Thomas and Lady Brassey, the honours of the place were done by Dr. Trollope and other local members. Tea and other light refreshments were supplied, and after a most enjoyable day the party returned to St. Leonard's, from which place they were conveyed to Brighton by special train, arriving about 9.30.

EXCURSION TO EASTBOURNE AND PEVENSEY.—Though the smallest as regards number—100 being the limit—this was by no means the least enjoyable of the excursions. The special train left Brighton at 9.55, and the journey to Eastbourne was effected in about an hour. The visitors were met at the Eastbourne Railway Station by the Mayor (Alderman Boulton), the Deputy-Mayor (Mr. G. Ambrose Wallis, C.E.), and a number of medical gentlemen. As soon as possible after arrival the visitors were conveyed in carriages to the new waterworks, the sewer-ejector works at the east end of the town, and also to the Princess Alice Hospital at Upperton. Mr. G. A. Wallis, C.E., agent to the Duke of Devonshire, explained the Shone's system of drainage, as adopted and worked successfully at Eastbourne; and also described the new waterworks on the north side of the town. With these, and also the Memorial Hospital, the medical visitors expressed themselves well pleased, and several of the ladies who were included in the company descended the ejector-works chambers in Carlisle Road. At 2 o'clock, the Mayor of Eastbourne presided at an invitation-luncheon at the Devonshire Park Pavilion. The company included, in addition to the visitors, Rev. Canon Sutton, Rev. Canon Whelpton, many of the medical men of the place, and a number of ladies. The Pavilion was adorned with flowering plants, and the Town and Pier Band supplied the music for the occasion. Dr. Bransby Roberts proposed "The Queen," which was drunk with musical honours. In proposing "Our Visitors," Dr. Roberts said that it gave him pleasure to welcome so many members of the British Medical Association to Eastbourne. He wished also to return thanks in the name of the medical gentlemen of Eastbourne to Mr. G. A. Wallis for readily lending his assistance that day in explaining local matters to the visitors. They were all proud of the British Medical Association. Much work had been carried out by the different committees at the Brighton meeting, and this would be for the good of the country. He trusted their visitors would carry back with them some pleasurable recollections of Eastbourne, a town which, thirty years ago, had only a population of

3,000 inhabitants. But everything had been done which could be done to render the place attractive. He gave them a very hearty welcome to Eastbourne, and said that if, on some future occasion, the British Medical Association should honour Eastbourne with a visit, they would receive a most hearty welcome from the medical profession and from the town. He coupled the toast with the names of Mr. Wallace (a member of the Council of the Association), the Mayor, and Dr. J. H. Ewart. Mr. Wallace thanked the Eastbourne gentlemen for the hospitality accorded, and expressed regret that no other members of the Council were then present to enjoy so hearty a welcome as they had received that day. The Mayor (Alderman Boulton) said he welcomed the members of the Association in the name of the residents of the town. He might say that it was always the desire of anybody who happened to fill the office of Mayor of Eastbourne to welcome representatives of such Associations to the town. Dr. J. H. Ewart, who had actively exerted himself in carrying out the details of the visit, and in arranging for luncheon, was warmly thanked and complimented by Dr. Roberts and others; and at 3 o'clock, the guests, including the ladies, left the Pavilion for Beachy head, Pevensey Castle, and other places of note in the vicinity. The return train to Brighton left Eastbourne about half-past 7, and arrived at Brighton an hour later.

Excursion to Arundel and Chichester.—The party for this attractive excursion was limited to 200, and the train, which left Brighton at 10.5, went first to Arundel, where the Duke of Norfolk had generously provided luncheon at the Castle, and afterwards to Chichester. From Arundel station, the party went direct to the Castle, where they were met by Captain Mostyn (Steward to the Duke of Norfolk). Under the Captain's guidance, the Castle and grounds were inspected, and the Cathedral visited, and luncheon was then partaken of. The special train for Chichester took the party from Arundel at 3.15, and the cathedral city was reached in time for members to attend the four o'clock service. Afterwards, the Cathedral was thoroughly inspected, and, at five o'clock, Dr. Tyacke and other local medical men entertained the visitors at tea in the Council Chamber.

Excursion to Tunbridge Wells.—About eighty members took part in this excursion, and arrived at Tunbridge Wells at 11 o'clock. They were met at the station by several of the local medical men, and driven in breaks, etc., to the Pump Room for light refreshment. After this all started for drives, about sixty going to Penshurst, twenty to Eridge, and a small party to Bayham. The party going to Penshurst, where they arrived after a drive of seven miles, was, through the kindness of Lord de L'Isle and Dudley, allowed to view the whole of Penshurst Place, which is a most perfect example of a wealthy gentleman's house of the time of Edward III. (A.D. 1341), showing the manners and customs of that period. After inspecting the church, in the Sidney Chapel of which are many brasses and monuments to the Sidney family, the visitors returned by way of Bidborough and Southborough, through the Common to the Pump Room. The party going to Eridge Castle, the seat of the Marquess of Abergavenny, K.G., drove to the Eridge Rocks. Then they drove through Eridge Park to the Castle, meeting the Marquess, who was driving the Prince Albert Victor to the station. They were shown all over Eridge Castle and grounds. The others drove six miles to Bayham, where every facility was given them for viewing the noble mansion of the Marquess Camden, with the ruins of Bayham Abbey, which are close at hand, in the Park. Having returned, the visitors met at the Pump Room, and partook of a cold collation at 3.30, being joined by nearly all the local medical men and several ladies. Dr. Chadwick was in the chair; and Mr. B. Marsack and Dr. Johnson acted as vice-chairmen. After the toast of "The Queen and the Royal Family," the Chairman proposed "the British Medical Association," which was replied to by Dr. James Cuming, of Belfast, lately President of the Association. "Our Scotch and Irish Friends" was replied to by Dr. More Madden, of Dublin, and Dr. Glaister, of Glasgow. The other toasts were, "The Hosts," "The Secretary of the Local Excursion Committee," and "The Ladies." About 5 P.M., the visitors walked to the Spa buildings and grounds, where every kind of bath was shown. Afternoon-tea was partaken of, and the visitors left between 6 and 7 P.M.

The Isle of Wight.—Between eighty and ninety ladies and gentlemen availed themselves of the opportunity afforded of proceeding to Ryde by the steamer *Brighton*. The weather, which at one time threatened to be anything but favourable to enjoyment, brightened as the party arrived in the Solent. A pleasant trip was then made, and on arriving at Ryde some seventy ladies and gentlemen sat down to a substantial cold collation which had been provided for them in a spacious marquee erected for the occasion at Yelf's Hotel, and to which good justice was done. Having thoroughly explored the neighbourhood, and seen all that was best to be seen, the party returned home, reaching Brighton about 9 o'clock.

Visit to the Waterworks.—On Friday, a party of members paid a visit to the western pumping-station, in connection with the water supply of the town, at Goldstone Bottom, where they were received by Mr. Baker, the engineer, and his courteous attendants, and having been suitably attired in overalls, were let down the well and conducted through the adits. There are two pumping stations for supplying the borough and the other districts within the area of supply, one at the northern and the other at the western end of the town, the northern station being situated on the Lewes Road, and the western station at Goldstone Bottom, about one mile from the sea, near West Blatchington. The Lewes Road station has two engines, one of 150 horse-power, and the other 100 horse-power, capable of lifting 285,000 gallons of water per hour from the wells into the distributing reservoirs, which are situated at elevations of 120, 203, 453, and 507 feet respectively above the mean level of the sea, for supplying the different parts of the district. The Goldstone Bottom station has two engines, each of 150 horse-power, capable of lifting 300,000 gallons per hour. The water is obtained by driving headings or tunnels in the chalk, by which the fissures are cut, whence the water is forced up into the reservoirs. The capacity of the reservoir for storage of water is 9,000,000 gallons. At Goldstone alone, not less than 7,000,000 of gallons per day can be pumped in an exceptionally dry season, or double the present requirements of Brighton, Hove, and the other places within the area of supply. The visitors had a good opportunity of judging for themselves of the inexhaustible character of the water-supply; and they came up from their journey of investigation evidently impressed with what they had seen.

Visit to the Sanatorium.—By the invitation of Councillor Daniel, Chairman of the Sanitary Committee of the Brighton Town Council, the members of the British Medical Association were, on Thursday, August 12th, afforded an opportunity of inspecting the Sanatorium, situated on the Downs. Conveyances were in readiness at the Royal Pavilion at 9 o'clock, and between seventy and eighty gentlemen were driven to the Sanatorium. Several members of the Sanitary Committee were present, including Councillor Styer, and the Medical Officer of Health (Dr. R. P. B. Taaffe). On arriving at the Sanatorium, the visitors were conducted by Dr. Taaffe through the various wards, commencing with the scarlet fever ward, and then the administrative block, the group of corrugated iron buildings, and afterwards the disinfecting-house, were also visited, Dr. Taaffe explaining to the visitors the system on which the institution was worked. He pointed out that the building was only a temporary one, and remarked that they hoped before long to have a "Palace of Health" erected on the same site. The whole of the visitors expressed themselves exceedingly satisfied and interested in what they had seen, and, before leaving, passed votes of thanks to Dr. Taaffe and Councillor Daniel. They were then driven back, reaching the Pavilion about 11 o'clock.

Inspection of the Intercepting Sewer.—On the afternoon of Friday, August 13th, at the invitation of the Brighton Intercepting and Outfall Sewers Board, members of the Association visited and inspected the ventilating and outfall works of the sewers of Brighton and Hove. Mr. Alderman W. H. Hallet, D.L., Chairman of the Board, received the visitors, who numbered about a hundred, and included a number of foreign medical men. The visitors first inspected the penstocks, which were minutely described by Mr. P. C. Lockwood, the borough surveyor. It was a subject of common comment that offensive odours were almost entirely absent, and is was explained that this was due to the operation of a furnace and ventilating shaft at Roedean, east of Portobello. Passing through a tunnel in the cliff the visitors arrived on the beach, where the low waterfall was inspected. Subsequently the company partook of refreshments provided by Mr. Alderman Hallett, and then, after assembling on the cliff, Mr. Lockwood explained the principle upon which the main sewer and the works were laid, and how they worked. A vote of thanks to Mr. Alderman Hallett and the members of the Board, for their courtesy, was moved by Dr. Royle, of Manchester. He remarked upon the efficiency of the works, and warmly acknowledged the hospitality of Mr. Alderman and Mrs. Hallett.—The Chairman of the Board said the sewer had been in operation eleven years, and the men who worked in it reported that it was as clean now as when it was opened. The complimentary proceedings being ended, Mr. Lockwood, in answer to several questions, resumed his remarks. He gave information as to the constitution of the Sewers Board, and showed how the sewers were constantly flushed, adding that the Board would be able to pour down the sewers 20 million gallons of fresh water every day, if necessary.

Roedean was then visited, and here Mr. Lockwood explained the process of the ventilation of the main sewer; after which the visitors returned to Brighton.

ATKINS WATER SOFTENING PROCESS.—A demonstration of the Atkins Water Softening Process in action at the Sussex County Hospital, was given, on Wednesday, August 11th, by the Atkins Filter and Engineering Company, Limited, London. A large number of visitors attended to witness the action of this apparatus. The buildings have been erected on the highest ground, consisting of lime mixing tank, lime cylinders, tank with divisions for mixing the lime-water with the water from the main, and lastly, the disc-filter tank; the whole being connected by pipes through which the flow both of the lime-water and the main supply are regulated by two valves worked according to the scale or gauge on each. This mode of measurement enables the ordinary workman to perform his work with every guarantee of precision, so essential to the treatment of water by Dr Clark's process. This system, we were informed, has been adopted for the whole town supplies of Southampton and Wellingborough (between 2,000,000 and 3,000,000 gallons per day); at Henley-on-Thames it has been successfully in operation since 1882; and it has also been in use in numerous health institutions and towns throughout the country.

A YOUTH, who was bitten on the finger by a rabid dog in March last, has died in St. Bartholomew's Hospital from hydrophobia.

TREATMENT OF PRURITUS.—A solution of menthol, two to ten grains in the ounce, is said to be a very effectual remedy in the treatment of the troublesome itching which accompanies urticaria, eczema and pruritus.

SIMPLE REMEDY FOR CHRONIC DIARRHŒA.—A drachm of a saturated solution of common salt in cider-vinegar, three times a day, is recommended by Dr. T. C. Smith in the *Therapeutic Gazette* as a useful remedy in chronic diarrhœa.

IT is reported that another of M. Pasteur's patients has just died at Leste, near Bordeaux, after undergoing ten inoculations. The victim is a little boy, named Cladicie, aged 3½ years, who was bitten by a mad dog on June 14th last.

CENTENARIANS—A lady, the oldest inhabitant of Orton, Westmorland, has just entered upon her 100th year. Mrs. Hannah Millns, of Holbeach (mother of Mr. Robert Millns, Clerk to the Local Board), died on August 18th, in her 100th year. A lady named Symons, of the Halton Road, Canonbury, will attain her 102nd year in December.

DENTISTS' ACT.—A dentist named Friederik, practising at Walthamstow, was summoned last week for not being registered under the Dentists' Act, 1878, using the letters D.D.S., or some other title implying that he was registered under the said Act, or that he was a person qualified to practise dentistry. It was stated that the defendant had a plate attached to his door bearing the words "Dr. Friederik, D.D.S., U.S. America." He had exposed outside a case of artificial teeth; and, when shown a card wherein he was described as a Doctor of Dental Surgery, he admitted that it was his. Mr. Sharman, for the defence, said that this prosecution was the outcome of a row between rival dental practitioners; and he would point out that the defendant was a fully qualified man, and the holder of a diploma in dental surgery. He had only been in England for twelve months, and was willing to go through any examination in dental surgery, if such examination were conducted in a language with which he was familiar. The case was very simple—that a fully qualified man was practising without being registered; and, as the prosecution only had the desire to vindicate the law, he (Mr. Sharman) would ask the Bench to order the defendant to pay the costs of the proceedings, and bind him over to come up for judgment when called on. The magistrates imposed a fine of 20s. and costs.

PRESENTATION.—On Saturday, August 14th, the matron, some of the sisters, and many of the nurses, assembled in John Ward to present Sir Dyce Duckworth with a testimonial, on the occasion of his resignation of the medical lectureship in the Nursing School of St. Bartholomew's Hospital. The testimonial consisted of a handsome salad-bowl of Doulton manufacture, mounted in silver, and suitably inscribed; also of a large album, containing many of the photographs of the sisters and former pupils of the school. In replying, Sir Dyce Duckworth confessed his regret at the necessity for giving up this duty, which had always been a pleasure to him during the nine years he had held office amongst the nursing staff, and felt sure that it was now committed to a very able successor in the person of his colleague, Dr. Norman Moore.

BRITISH MEDICAL ASSOCIATION SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 28th, 1886.

THE WORK OF THE SECTIONS AT THE ANNUAL MEETING.

THE sectional work carried out at the Brighton meeting is of unusual interest and importance. We shall present, from time to time, as full a report of the proceedings in all the sections as the great demands made on our space will allow. Meantime, it will be of interest to summarily indicate some of the principal and more important proceedings in each department.

The work of the *Section of Medicine* opened with a discussion on Heart-disease, introduced by Sir Andrew Clark, which was well supported by subsequent speakers. This discussion excited much interest, and various speakers gave their personal impressions and some facts of importance; the bearing of the question on life-assurance was several times referred to. It is hoped that the inquiry on this subject to be undertaken by the Collective Investigation Committee will be prosecuted with vigour, as facts are greatly wanted to decide the various points of prognosis.

Some facts of extreme interest and high scientific value were put forward by Dr. William Ord, in opening a discussion on Gall-stones, and by those gentlemen who followed him.

On Friday morning, demonstrations were given by Dr. R. Crocker on the Removal of Hairs by Electrolysis; the apparatus used, and details of the method, being shown in the case of a female patient anxious for the removal of her beard. At the same, Dr. A. Mantle, of Durham, demonstrated microscopic specimens of the bacilli which he has found to be constantly present in the effusions and in the blood in cases of acute and chronic rheumatism. Cultivations of these bacilli were also demonstrated. Professor Haycraft demonstrated a new method of estimating the quantity of uric acid in urine, and also read a most valuable paper on some points concerning the coagulation of the blood. Several papers on the clinical examination of the urine formed a group of much interest and importance.

The Section was ably presided over by Dr. Broadbent, and the interest of those present was well sustained by various papers of considerable value, and the remarks of many speakers. The attendance upon this Section was very satisfactory, particularly upon the first two days of the meeting, when the large room was well filled.

The work in the *Section of Surgery* was carried on vigorously under the distinguished presidency of Mr. Erichsen. The subject selected for discussion, and several of the miscellaneous papers, appeared to excite much interest; indeed, the large room in the Pavilion, known as the Banqueting-room, in which the Section was held, was on

several occasions, quite full, whilst the attendance was at all times large. The proceedings were opened by an eloquent address by the President, which will be found at page 314 of the JOURNAL. On its conclusion, the actual business of the Section began by Sir Henry Thompson introducing a discussion on Suprapubic Lithotomy, in which so many members took part as to occupy the whole of the remaining time at the the disposal of the Section on that day. Amongst the many speakers were Mr. Cadge, of Norwich; Mr. Reginald Harrison, of Liverpool; Sir William Mac Cormac; Surgeon-Major Keegan, of Indore; Dr. Hingston, of Montreal; and Mr. Jessop, of Leeds. Sir Henry Thompson gave a summary of his experience of the suprapubic method, and advocated it for medium-sized and for large stones. As the space was practically unlimited, there was no danger of hæmorrhage, and, if it occurred, it could be easily dealt with; the rectum and the sexual organs were not interfered with; and the after-treatment was simple, and allowed the use of antiseptics. Mr. Jessop expressed some disappointment that Sir Henry had not laid down rules to guide surgeons in the selection of cases in which the suprapubic method was the more appropriate, and that his paper contained nothing that had not already been published. It is but fair to Sir Henry Thompson to say that, when the subject of suprapubic lithotomy was selected for discussion, now many months ago, the operation had not attracted the attention which it has since received. Perhaps the chief point of interest in the discussion centred in the remarkable experience of Surgeon-Major Keegan, who exhibited a series of fifty-six stones, removed by crushing, in children, and several large stones, one weighing over six ounces, which he had successfully removed from adults in the same way. He maintained that, if stones of such a size could thus be removed in adults by litholapaxy, but few cases in adults could call for the suprapubic operation; and whilst stones (one of which weighed over 700 grains from a boy aged 10) could likewise be thus readily crushed by means of the slender lithotrite which he exhibited, in few instances also could the suprapubic operation be necessary in children. On the whole, the majority of speakers, whilst they questioned the propriety, with our present experience, of abandoning the successful lateral operation for medium-sized stones, were in favour of the suprapubic operation for very large calculi.

The work of the second day was chiefly devoted to recent advances in Hepatic Surgery, papers on this subject being contributed by Professor Gaston, Drs. Harley and Mackey, and Messrs. Marsh, Lawson Tait, Thornton, Walsham, and Willett. The discussion on the same was a little unsatisfactory from a surgical point of view, and had a tendency to drift into the question of the medical treatment of congestion of the liver. It is probable that few of the members had had much experience in the comparatively recent operations of cholecystotomy and cholecystectomy; hence the absence of discussion of the interesting and suggestive papers by Mr. Knowsley Thornton and Mr. Willett, and the remarkable series of successful cases by Mr. Lawson Tait. Professor Gaston's paper, dealing with the experimental inquiry as to the feasibility of establishing a communication between the gall-bladder and the intestine in cases of obstruction to the common bile-duct, was of special interest.

The third subject selected for discussion—the Surgery of the Central Nervous System—was introduced by Mr. Victor Horsley, who exhibited three patients whom he had successfully trephined for traumatic epilepsy, illustrating his remarks by photographs projected on a screen by the lime-light. Professor Charcot and Dr. Hughlings Jackson, amongst others, took part in the discussion. The success attending Mr. Horsley's operation was of singular interest, as demonstrating the value of experimental research in animals for the relief of human suffering. One patient on whom he operated had suffered for many years from epileptic fits, the aura beginning in a twirling movement in the thumb, and then extending up the arm. He produced a similar condition in a monkey; and, having thus ascertained the probable situation of the lesion, proceeded to trephine his patient, with the result of finding a tumour which had not been suspected, and the entire cessation of the fits after its removal. His paper is exceedingly practical and suggestive, and, when published, will well repay careful perusal.

Amongst the miscellaneous papers which occupied the attention of the Section, both at the second and the third meetings, may be mentioned those by Dr. Steavenson on the employment of Electricity in the Treatment of Diseases of the Urinary Organs; by Sir William Stokes on Acute Myxœdema following Thyroidectomy; and by Mr. Whitehead on three hundred consecutive cases of Hæmorrhoids cured by Excision.

The discussions in the *Section of Obstetric Medicine* monopolised almost the entire space of time allotted to sectional meetings. By discussion, in this case, we mean not only the debate upon two subjects, as announced during the past month in the programme, but also the dissertation upon four papers on matters associated with extra-uterine pregnancy. Hence, technically, there were three discussions. On the first day, Dr. Robert Barnes started the debate on the Alternatives to Craniotomy, which was vigorously maintained, most of the speakers favouring abdominal section as preferable to craniotomy, at least when the pelvis was exceedingly narrow. In accordance with the necessities of the work of the Section, an excellent paper by Dr. Kinkead, of Galway, was read as part of this discussion. On the other hand, many of the independent contributions announced in the programme were unavoidably left unread, owing to the length of the special debates.

On the second day, Dr. Lusk read his contribution on the Proper Moment for the Performance of Gastrotomy in Abdominal Pregnancy. Partly out of compliment to the distinguished American who read the paper, and partly owing to the fact that the readers of the three remaining dissertations, on a similar subject, were unavoidably absent, a discussion immediately followed Dr. Lusk's paper; but further debate on extra-uterine pregnancy and its treatment followed, when the Secretaries had read the communications of Drs. Berry Hart, Aveling, and Petch. The last two referred chiefly to two cases of the destruction of the fœtus by electrolysis, a practice which excited much comment, favourable and adverse. The author, in each case, could claim success; but the question as to whether the electric current should be directly applied to the fœtus, or only to the uterine walls, remained unsolved, since the two methods were tried, one in each case. Dr. Petch, in whose case the fœtus was directly submitted to a strong current, alleged that he succeeded in causing the fœtal tissues to be actually dissolved.

Dr. Thomas Savage led the debate on Removal of the Uterine Appendages, which was held on the third day. A particularly animated discussion followed, as had been expected. Dr. More Madden was in favour of the conservative treatment of chronic ovarian and tubal inflammations. Dr. Bantock counselled a less indiscriminate

removal of diseased appendages than was at present in vogue amongst leading gynæcologists. Mr. Lawson Tait and Drs. Imlach, Gill Wylie, and others, firmly maintained that serious as well as incurable diseases of the appendages, other than new growths, were frequent, and demanded operation.

On the first day, Dr. Emmet maintained his well-known views on certain gynæcological questions; and, on the second, Dr. Beverley, of Norwich, read an account of a series of operations for the Repair of Lacerated Cervix Uteri, and the cure of prolapse of the womb. Dr. Graily Hewitt read, on the third day, some remarks on Flexions and Displacements; and Dr. Ranney, of Michigan, contributed a monograph of high merit on the Treatment of Mastitis.

The discussions, though mostly of an animated character, were conducted with the utmost courtesy and good humour. The three special debates (for, as we have already remarked, the papers on extra-uterine pregnancy constituted a third special subject for discussion), will, when published in the JOURNAL, constitute a valuable record of the publicly expressed opinions of high authorities, on subjects of great scientific, medical, and ethical importance.

A striking feature in the work of the Section was the large number of American obstetricians and gynæcologists who took part in the debates. Drs. Lusk (New York), Emmet, Gill Wylie (New York), Wilson (Baltimore), Hanks (New York), Gordon (Portland), Ranney (Michigan), and Kelly (Philadelphia), all joined heartily in the discussions. Scotland, and the school of essentially conservative gynæcology, was barely represented, and at the best only in an indirect manner, one of the speakers being a Scotchman practising in London, and one of the papers being written by an Edinburgh teacher, and read, in his absence, by one of the secretaries. The Birmingham school and its representatives in other large provincial towns mustered in great force and number. Drs. More Madden and Neville ably represented the famed school of the Irish capital.

In the *Section of Public Medicine*, the papers were numerous, and of excellent merit. The good quality and abundance of the papers this year were no doubt mainly due to the practical character of the topics suggested for discussion. The discussion on Scarlet Fever, its causation and the best sanitary measures for dealing with disease as it exists among certain populations, suggested by Mr. William Brown, of Carlisle, was introduced in a able and comprehensive manner by Deputy Surgeon-General Joseph Ewart. That part of the subject which had reference to the means which ought to be adopted for the prevention of the disease, proved a most fruitful and useful source of debate.

The second subject discussed—the Duration of Infectiveness in Scarlatina, Small-pox, Measles, Mumps, and Diphtheria—was opened by a paper by Dr. A. Ransome, of Manchester, which, in the absence of the author, was read by Dr. Gamgee. We regret that this important topic did not bring forth from the members of the Association such an exposition of their views as might have been expected from the value of the subject introduced. The absence of Dr. Ransome might possibly account for this circumstance.

Dr. Kelly, of Worthing, opened a discussion on Diphtheria, its causation, and the influence of soil upon the disease, by a well considered paper, in which he almost proved conclusively from facts which had come under his own observation that rural diphtheria had a very close connection with dampness of soil.

The last subject of debate, reports of Water-Analyses, and the best method of stating these so as to secure one uniform plan, was opened by Dr. Whitelegge, whose paper displayed an intimate knowledge of chemical methods.

The work in the *Section of Psychology* was carried on with exceptional spirit, a lively interest being taken in the papers and discussions throughout the three days. The proceedings opened on Wednesday with the address of the President, Dr. T. S. Clouston, on the Relation of Bodily and Psychical Pain. This address, which was printed at page 319 of the JOURNAL for August 14th, was thoroughly appreciated by the distinguished members of the specialty who were present; a hearty vote of thanks to the orator being proposed by Dr. Hack Tuke, and carried by acclamation. Dr. Savage's paper on alternations of Neuroses excited much interest, the discussion which followed being maintained by Professor Ball (of Paris), Dr. Hughlings Jackson, Dr. Hack Tuke, Dr. Clouston, and others. A paper of interest to the general public as well as to the profession was contributed by Dr. Hack Tuke, upon the subject of the Alleged Increase of Insanity. The author presented a series of elaborate tables and calculations, which confirmed the view that the increase in the number of registered lunatics is due to greater longevity and accumulation, but not to any increase in the proportion of new cases to the population. This paper was also the subject of very general and interesting debate.

One of the most prominent features of the proceedings was the discussion on the question How may the Medical Spirit best be maintained in Asylums for the Insane? Thursday afternoon was specially set apart for this. The President opened the subject in a speech of great power, illustrating his views by plans of admission and infirmary wards for lunatic asylums. A very large number of members took part in the debate, and papers on the same subject were contributed by Dr. Strahan and Dr. Thomson. Special attention was directed to (1) the separate treatment of recent and curable cases, (2) the training of asylum-attendants, (3) the necessity for an increase in the number of asylum medical officers, with an improvement in the position of the second in command; and (4) the classification of patients in asylums. The Secretary of the Section (Dr. Cobbold) pointed out that the medical spirit in asylums is increasing in strength year by year; that the above subjects are all receiving much attention. Curable cases are treated in special wards; attendants are trained by lectures, demonstrations, handbooks, and examinations (with prizes). Assistant medical officers in some few asylums are enabled to marry, and are encouraged to do good medical work; and the patients in most asylums are suitably classified. There was a general agreement amongst the members that, in large asylums, an efficient assistant medical officer should be styled "resident physician," and should have responsible charge of the purely medical work, his pay and position being such as to encourage him to make a career of this special work, remaining free from the cares of administration. The patients would thus have the advantage of constant medical treatment by a physician of experience in mental disease; this being hardly possible at present, owing to the large amount of administrative work which necessarily falls to the lot of medical superintendents. As the strictly medical treatment of insanity depends largely upon the patient's every-day surroundings, occupations, amusement, companionship, diet, etc., it is absolutely necessary that the chief administrative officer in a lunatic asylum should be a qualified medical man. No layman ever supervises the domestic arrangements

in the true interests of the patients; he may possess the best intentions, but he has not the necessary knowledge.

The medical superintendents of the great idiot asylums took a prominent part in the proceedings, each of them reading a paper of interest. Dr. Cobbold also directed attention to the provisions of the Idiots Act, 1886, which has recently become law.

It is not possible within the limits of this notice even to mention the titles of all the interesting papers which were read and fully discussed, but they certainly afforded conclusive evidence that the true medical spirit is largely abroad among our asylum medical officers. Great interest was evinced in some most beautiful microscopic preparations of brain-tissue which were exhibited and described by Dr. Palmer, of Lincoln, and Dr. Beevor, of London; indeed, the members of the Section were to be seen studying these, long after the regulation hour for the cessation of business, so much so as to call forth the remark from a well known member of the profession, that the "Lunatic Section" was the most industrious of any. The proceedings were brought to a close on Friday by hearty votes of thanks to the President and the Secretaries, for their highly successful conduct of the business of the Section.

As seen by the list of discussions and papers, the work done in the *Section of Pathology* was interesting and varied. The attendance of members was unfortunately very scanty; but this is readily accounted for when it is remembered that but few of them are pure pathologists, and, of the others, the majority clearly prefer the more interesting and practical sections of Medicine and Surgery. The opening papers in the three special discussions, on Peripheral Neuritis, on Aneurysm, and on Pneumonia, were valuable contributions to the pathology of the subjects in question, and the ensuing discussions on the last of the three was especially interesting. Professor Charcot, who spoke much to the point after Dr. Buzzard's paper on peripheral neuritis, was listened to with much attention; and the specimens and drawings of Leprosy shown by Dr. Rake and Dr. Radcliffe Crocker, and those of Pneumococci by Mr. Leopold Hudson, were the subject of much interest.

The work of the *Section of Therapeutics and Pharmacology* consisted of a presidential address, discussions, and many valuable papers, which served to occupy the whole of the available time during the three working days of the Brighton Meeting. The attendance in this Section was large, and the tone of those who chiefly appeared as speakers was hopeful, and evidenced a confidence engendered by the accelerated progress which scientific clinical observation and experimental pharmacological research are making in the race with human suffering and disease. The President's address, highly suggestive in its matter and ingenious in its similes, dealt with the relationship which has been demonstrated to exist between the action of a given drug upon the organism and its chemical constitution, a subject to which Dr. Lauder Brunton has made no inconsiderable contribution himself. The Section readily adopted the tone of the address, and the feeling of the individual members was constantly expressed in the succeeding days by a desire to substitute, when possible, the scientific or fundamental reason for the action of this or that drug, in place of self-complacent empiricism, which contents itself with the dogmatic formula, "I know it does so-and-so," but does not trouble to inquire why.

Of the discussions, that opened by Dr. Carter, of Liverpool, on Antipyretics, and that by Dr. Spender, of Bath, on Analgesics or anodynes, were marked by the production of matter which will furnish much food for thought in these important subjects. Especially the remarks of the former, on the choice of an antipyretic remedy in various diseases, were of the highest practical importance. Dr. Spender's eloquent and masterly opening of the discussion on Analgesics was listened to with the keenest attention by a large number of members; and, after he had concluded, Professor Brown-Séquard, of Paris, and Professor Liebreich, of Berlin, added to the interest of the debate by each speaking to results obtained in their own experimental inquiries; the former with regard to a local effect exerted upon the terminations of the superior laryngeal nerve as causal to a general anæsthesia; the latter, to the relationship between atonic composition and physiological action of certain bichlorinated and trichlorinated compounds.

Conspicuous amongst the papers was one by Dr. Mitchell Bruce, one of the vice-presidents, on the action of Morphine in Diabetes, in which, by means of a series of observations as ingeniously contrived as they were laboriously executed, he showed the manner in which the administration of morphine should be carried out in order to reduce the elimination of sugar, by which he has certainly added considerably to our knowledge of the nature of the disease itself.

On the first and second days, noteworthy papers were read by Professor Liebreich on Lanoline, by Dr. Mackey on Resorcin, by Dr. Shoemaker on Hamamelis, by Dr. Mortimer Granville on Mechanical Percussion, by Dr. Jessop on Cucaine, by Dr. Prosser James on Local anæsthetics, by Dr. S. Mackenzie on Cannabis Indica in certain forms of Headache. Dr. Stone demonstrated the highly elaborate and ingenious instruments by means of which he has measured the electric resistance of the human body. (For a description of these see report of his Lumleian lectures in this JOURNAL.)

On the concluding day, a paper on the Climate of California in Consumption was read by Dr. Blake, of San Francisco, which furnished and elicited much valuable information on the treatment of pulmonary affections by climate generally. Papers by Mr. George St. George on Manaca in Rheumatoid Arthritis, by Dr. Drysdale on Mercury in Syphilis, by Mr. Horsley and Dr. Semon on the action of Ether in modifying the effect of stimulation of the Recurrent Laryngeal Nerve followed. A report issued by the Collective Investigation Committee on the action of Hamamelis Virginica and of Turpentine was read.

The Section had the advantage of the presence at various times of the following gentlemen, who spoke in the discussions. Dr. Donaldson (Baltimore), Dr. Shoemaker (Philadelphia), Professor Brown-Séquard, Professor Liebreich. Dr. Coldstream, Dr. Gamgee, Dr. Haycraft, Dr. Leech, Dr. Wilberforce Smith, and others.

The papers and discussions in the *Section of Ophthalmology* were not inferior in any respect to those at any former meeting, and have clearly shown that the fear that the establishment of the Ophthalmological Society would impair the interest of the sectional meetings at the annual gathering of the British Medical Association, was entirely groundless.

Mr. Hutchinson's paper on the causes of Choroiditis was a masterpiece indeed; probably no other surgeon could have shown so large a collection of drawings, illustrating a clinical experience extending over many years. It is much to be regretted that the lack of time, money, or artistic skill, renders it impossible for most of those who are engaged in active practice to place on permanent record interesting and rare ophthalmoscopic appearances. Illustrations such

as those shown by Mr. Hutchinson (some of which were of great artistic merit), form a permanent record of clinical experience, which can be preserved in no other way. The paper was not one of a nature to excite much discussion, but it was listened to with breathless attention, in a very crowded room.

The discussion on the subject of optico ciliary neurotomy, which followed a paper by Dr. Bell Taylor, may be described as animated, but the operation is one which never obtained a firm footing in this country, and has long been abandoned by most of its former advocates.

The paper by Mr. Adams Frost, on the relative merits of Enucleation, Evisceration, and Mules's Operation, was followed by an interesting discussion, which showed that the two latter operations had not yet been very generally adopted, the reaction which usually follows them being considered by some a serious objection, while others doubt whether they are efficient as safeguards against sympathetic mischief. Further experience is needed to show whether the modification suggested by Mr. Adams Frost would prove valuable.

The subject of the Treatment of Lacrymal Obstruction, introduced by a paper by Mr. G. Abbott, is one that is interesting to ophthalmic surgeons, and the discussion was consequently comprehensive. The tendency to return, with some modifications, to the treatment by styles, was a noticeable feature, although many of the speakers had had experience of accidents resulting from it. The danger of over-dilatation, by means of which the capillary action of the lacrymal duct was destroyed, was mentioned by several speakers.

The meetings of the Section were well attended, especially during the first two days, and were ably presided over by Mr. Oldham.

In the *Section of Otology*, after the reading of an excellent address by Mr. Hodgson, the president, the business of the Section began. Dr. Dundas Grant read a paper on the Use of the Tuning-fork, and one on Pulsating Tinnitus; and Dr. Erskine, of Glasgow, Dr. Urban Pritchard, of London, and Dr. Warden, of Birmingham, discussed it. This paper was followed by one on the Functions of the Nose in Health and Disease, by Dr. Greville Macdonald, and in its course he raised strong objections to a mode common in a certain quarter, of removing portions of the turbinated bones in nasal affections, which really did not need so severe a mutilation. All the speakers, and there were many, concurred that necrosing ethmoiditis was very rare in their experience, and that frequent mutilating operations were quite uncalled for; and, as these gentlemen were aural surgeons of experience, the opinion of the Section must have considerable influence in checking needless operations.

A paper by Mr. Baber, on the Examination of the Nasal Cavities from the front, elicited an interesting discussion; and the papers of Dr. Pritchard, on Counter-irritation; of Mr. Spencer Watson, on the Complications of Nasal Polypi; and of Dr. Woolston, on the Electric Cautery, were well worthy of the instructive discussion which followed. Mr. Symington's paper, on the Anatomy of the Middle Ear in Children, was much appreciated as a well worked out scientific contribution to a subject which has important practical bearings for aurists. It was illustrated by several well executed frozen sections. Mr. Ellis, of Newcastle, showed an interesting case of labyrinthine hæmorrhage, at the Sussex Ear and Throat Dispensary. Dr. Delstanche, of Brussels, did good service by exhibiting and demonstrating his collection of novel instruments for diagnosis and treatment in rhinology and otology, thus bringing one of the best attended and successful meetings of this Section to a pleasant termination.

A strong opinion was expressed that the title of the Section was not consonant with the nature of the majority of the papers read; and that in future it would be better to have a Section devoted to the Diseases of the Throat, Nose, and Ear, and that one of the three days should be set apart for the reading and discussion of each branch, so that laryngology, otology, and rhinology, would be thoroughly represented and put on a perfectly equal platform. This suggestion is well worthy of the consideration of the Council in arranging for future meetings.

PROFESSIONAL RESPONSIBILITIES.

One of the most difficult parts of a physician's duties, and one which demands all the tact and judgment he can bring to bear, consists in determining the proper course to pursue when certain diagnoses have been arrived at. A woman who believes herself to be suffering from some trifling and passing ailment, is shown to be the subject of carcinoma; a patient with a supposed simple sore on his lip has epithelioma; or a person apparently in good health is found, on examination, to be the possessor of some form or other of cardiac disease, not only unsuspected, but, it may be, unfelt. The physicians of "chest-hospitals" know as well as any the difficulty of deciding whether to reveal the true nature of the case, or to leave the patient in a state of ignorance, which, after all, is comparative bliss.

Of course, the plan adopted is modified according to circumstances. Affections such as epithelioma, where surgical intervention is imperative, are naturally explained without reticence; for the more fully the patient understands his position, the more disposed will he be to acquiesce in the necessary remedial measures. The real difficulty lies in those cases, such as cancer or heart-disease, where little or nothing may be practicable for their relief, but where a fatal termination is either inevitable or to be feared.

In the discussion at the Brighton meeting on the duration of life with heart-disease, Dr. Bristowe made some very excellent and apposite observations on this subject. "It is," he said, "quite early enough, in my opinion, for a man to know that he has heart-disease when he begins to feel the effects of it;" and with this sententious remark most practitioners will agree. Incalculable harm has often been done by the abrupt announcement that a patient has cancer, or that another has heart-disease; and the evil is aggravated by the fact that, as in all other human affairs, the diagnosis may be wrong, or the prognosis may not be realised. Sir Andrew Clark told a very amusing but instructive anecdote of his having been called to see a gentleman suffering from bronchitis, who, fifty years before, had been precipitately superannuated on full salary, on the announcement by the medical officer to an insurance-company that he was the victim of an incurable form of heart-disease, and would probably not live more than six months.

Dr. Bristowe, in expressing the belief, backed by the hope, of his own freedom from "murmurs," sturdily declared that nothing short of acute and pressing circumstances would induce him to give any of his colleagues the opportunity of disturbing his equanimity by such an announcement.

The best plan to pursue in such cases is undoubtedly to discharge the responsibility of the knowledge so obtained on to the shoulders of a near and trustworthy relation or friend. Simple silence is apt to

lead subsequently to the imputation of ignorance; and, for the sakes of both the practitioner and the patient, it is desirable that cognisance should be taken of the actual condition of the latter, even when no immediate bad results are to be anticipated.

THE annual dinner of St. George's Hospital Medical School will take place at the Criterion Restaurant on Friday, October 1st, when the chair will be taken by Dr. Clifford Allbutt, F.R.S., of Leeds.

THE Czar of Russia, it is stated, sent M. Pasteur 40,000 roubles for his institute. The subscriptions received now amount to £64,000.

IT is intended that the meetings of the International Medical Congress, at Washington, shall commence on Monday, September 5th, 1887, at 12 noon.

THE eleventh Congress of French Surgeons will be held in Paris, from October 18th to 24th, under the presidency of Professor Ollier, of Lyons.

DR. OLIVER WENDELL HOLMES, who, during a stay of some months in this country, has everywhere received that cordial welcome which the popularity of his works could not fail to secure for him, sailed from Liverpool on Saturday afternoon, in the Cunard steamer *Aurania*, for New York.

WE learn that the authorities of St. Bartholomew's Hospital School have declined to receive visitors of the school from the Medical Council in an official form. They add that the school is at all times open to the inspection of those who are interested in the subject, and who have a claim to be received as visitors.

THE seventeenth annual meeting of the German Anthropological Society was held in Stettin, on August 10th and 11th, under the presidency of Professor Virchow, and was well attended by members from all parts of Germany, and from foreign countries.

THE annual meeting of the German Ophthalmological Society was held in Heidelberg, on August 9th. It was attended by one hundred and fifty visitors from all parts of Europe. The Von Gräfe gold medal, for the most valuable contributions to ophthalmology during the last ten years, was presented to Professor von Helmholtz, of Berlin.

THE AMERICAN MEDICAL ASSOCIATION.

THE next annual meeting of the American Medical Association is to be held in Chicago, on June 7th, 8th, 9th, and 10th. The officers are: *President*, E. H. Gregory, M.D., St. Louis, Missouri; *Permanent Secretary*, W. B. Atkinson, M.D., Philadelphia; *Assistant-Secretary*, J. Nevins Hyde, M.D., Chicago; *Treasurer*, R. J. Dunglison, M.D., Philadelphia; *Librarian*, C. H. A. Kleinschmidt, M.D., Washington; *Chairman of Committee of Arrangements*, C. G. Smith, M.D., Chicago.

DANGERS OF SELF-DOSING.

ANOTHER instance of the danger attending the unguarded use, by persons suffering from extreme pain, of medicines which, taken in large and unprescribed quantities, are productive of poisoning and death, is illustrated by the circumstances surrounding the death of Susan Boyce, aged 52, who, it appears, had been in the habit of taking laudanum for neuralgia. On Monday evening, on her husband returning home, he found her sitting in a chair, apparently asleep. He left her there, and went to bed. On awaking the next morning, he found her in the same position in which he had left her the previous evening, and insensible. He noticed that a bottle that had contained laudanum was empty. Medical aid was called in, and she was removed to the Royal Free Hospital, where she died three hours after admission.

MEDICAL REGISTRATION.

IN view of the coming election, by registered medical practitioners, of representatives on the General Medical Council, pursuant to the Medical Act (1886), and in order to enable the Registrar, in accordance with the provisions of the said Act, to forward by post a voting paper to each registered practitioner, at his registered address, a special notice has been issued to each registered practitioner, asking him to state whether his address as given in the *Register* is correct, and whether there is any registrable addition to his qualifications that he may wish to be inserted. It is particularly requested that the form which accompanies the notice should be immediately sent, whether or not any corrections be required, prepaid, in the addressed envelope enclosed therewith, to the Registrar of the General Medical Council, Mr. W. J. C. Miller, 299, Oxford Street, London, W.

THE VISITORS TO THE BRIGHTON MEETING.

SUBJOINED is an extract from a letter written last week by Dr. J. A. Grant, of Ottawa, to the President of the British Medical Association. It forms a graceful supplement to the expressions of cordial satisfaction with their reception, uttered by several of the visitors to the Brighton meeting.

"Will you kindly convey to the Council of the British Medical Association my sincere thanks for the very great honour conferred in making me an honorary member of the Association? This I consider one of the highest gifts in the hands of the medical profession, and I shall treasure it as such. Wishing the Association every possible degree of prosperity in forwarding the best interests of the human family, by the promotion of scientific inquiry, in order to lessen the progress of disease, very sincerely yours, J. A. GRANT."

POISONOUS FUNGI.

Too much care cannot be exercised by those whose knowledge of the distinguishing characteristics of edible fungi is imperfect. Two instances of a fatality which in the summer and autumn months is too common, have been afforded during the past week. A man named Whitworth, aged 32, residing at Radnor, it would appear, partook, on Sunday evening, of what he regarded as mushrooms for supper, and immediately afterwards he became so ill that it was deemed advisable to remove him to the hospital, where he died. His daughter died on Saturday, and both deaths are attributed to mushroom-poisoning.

CALOMEL IN SUMMER DIARRHŒA.

THE administration of very small frequently-repeated doses of calomel, is recommended by Dr. Musser, of Philadelphia (*Therapeutic Gazette*), in the treatment of summer diarrhœa and vomiting of infancy. In severe cases, he recommends a powder containing one-eighth to one-twentieth of a grain of calomel, combined with one-twelfth to one-fourth of a grain of Dover's powder, if there be much pain, fever, or restlessness. These ingredients, combined with a small quantity of powdered sugar, make a very minute powder, which is placed dry on the tongue, and washed down by a spoonful of water, with or without stimulant. He recommends that the dose should be repeated every half-hour at first.

SACCHARIN.

SACCHARIN, the new coal-tar derivative which is sweeter than sugar and is yet neither a food nor a poison to man, so that it may be used by diabetics for sweetening dishes, is, in its chemical constitution, an acid; it is anhydrous orthosulphaminbenzoic acid. As it has so ponderous a name by nature, the discoverer and manufacturers, who by the way are very dilatory in putting the new drug on to the market, did wisely to give it a short and simple trade name. It is well, however, to remember that the substance has an acid constitution; for, as Dr. L. Wolff has pointed out in a paper read at the Philadelphia County Medical Society, it can be used to combine with alkaloids; with quinine, for instance, it forms a sulphaminbenzoate of quinine, the bitter taste of the alkaloid being almost completely masked.

THE PRESIDENT'S ADDRESS AT BRIGHTON.

Among the many letters, commendatory and condemnatory, received by Dr. Withers Moore, anent his Address on the Higher Education of Women, the subjoined is perhaps unique in its spirit and expression. For reasons which, we hope, will be duly appreciated by the writer's friends, we suppress her name.

"London, August 18th.

"Sir,—Having read your learned discourse on the subject of the higher education of women, I beg, though rather late, to thank you, on my own behalf and that of my sex generally, for your very high opinion of us, as expressed at the meeting of the British Medical Association; though I must confess that it is somewhat new and startling to learn that women were created solely for the purpose of propagating the human species, and, as such, for the mere convenience of that glorious creature 'man,' as represented by your own illustrious self. It may perhaps be showing my great ignorance and inferiority when I, as a woman, repudiate your highly flattering suggestions, and not only entirely and emphatically deny the truth of them (though you are such a very distinguished medical man), and assert that, having been created with an equal intellect as man's, and with an equal love of knowledge and independence, that in itself proves the utter fallacy of your disgusting theory. Of course, every one is aware that medical men are threatened with the loss of quite half of their practice by the admission of women into the profession, as their women patients would of course gladly give the preference to their own sex, when they have the opportunity; and as medical gentlemen are by no means indifferent to the question of pounds, shillings, and pence, it is not so much wonder that they express such horror at the prospect of their fat incomes being endangered. Though, however, on this account they may deserve some pity, yet that alone will not be sufficient to preserve them from the ridicule and contempt excited by their miserable efforts to exclude women from the medical profession, the sordid motive for doing so being too palpable. Therefore, before saying adieu, let me give you one piece of advice, which is that, in your future opposition to the progress of women, not at any rate to repeat the disgusting, and insulting, and ignorant remarks on my sex, or else you may perhaps find by bitter experience that, though women are, as you make them out to be, on a level with the beasts of the field, they may yet be capable of showing their resentment at being insulted by administering a sound chastisement on the offender, even though he may occupy the important position of President of the British Medical Association, or of any other ridiculous and trumpery association.—Your obedient servant, "—— ——."

THE TEMPERANCE QUESTION AT THE BRIGHTON MEETING.

About 160 members of the British Medical Association were entertained at breakfast on Friday, August 13th, by the National Temperance League. The breakfast was given in the Banqueting-room of the Royal Pavilion. Mr. M. Wallis, J.P., Brighton, occupied the chair. This was the eighteenth assembly of the kind during the annual meetings of the Association; and it was memorable from the fact that Dr. N. S. Davis, of Chicago, whose distinguished medical career we last week noticed, and who, for nearly sixty years, has been a staunch advocate of teetotalism, delivered a weighty address. Dr. Davis sailed for New York on Wednesday last, and, during his short stay in this country, has done much to promote the solidarity of the medical profession in the two great English-speaking nations of the globe. But, probably, none of his achievements in Britain are likely to be more highly appreciated, at any rate, by the advocates of temperance, than the address in favour of abstention which he delivered upon the occasion in question. Mr. John Taylor and Dr. N. Kerr proposed and seconded a hearty resolution of welcome to Dr. Davis. In reply, that gentleman said that his life-long convictions in favour of temperance were the result of early training by his mother. He, therefore, counselled all mothers to recognise fully the great influence they possessed over their children during the time of childhood, and to inculcate temperance by example and precept from the first. He also considered the proverb, "When you are in Rome you should do as the Romans do," in regard to alcoholic drink, a dangerous maxim. Men should be of tougher fibre than to let such an easy going principle be a guide in life. He said that, in America, there were at least 500 medical men who had found by experience that they needed no alcohol in the treatment of disease; he had found it useless as a tonic in the recovery from disease; the patients who did not take it recovered strength sooner than those who took it. A little alcohol acted as an anæsthetic, and dulled the cerebral hemispheres, and so removed, for a time, the consciousness of aches, pains, and weariness, and left the individual at ease. Some took it in January, when the weather was cold, because it kept up the bodily heat; although, indeed, it actually reduced the bodily temperature whilst its influence lasted. Others took it in July to keep them cool. Nursing mothers took it, too, to conserve their strength. Now, in all these cases, the anæsthetic effects of the alcohol caused the patient to appreciate less fully the influence of cold, heat, or want of strength; but, in reality, it did much harm. It was assumed to promote digestion, but this it failed to accomplish. In fact, each of the positions in turn taken up by the medical advocates of alcohol had been found to be fallacious, until its position in America had been narrowed down to this, that it was only given in acute diseases where it was supposed there was danger from extreme weakness, as in typhoid fever. But actually, in proportion to the amount of alcohol taken, by so much was the heart's force diminished. According to Professor Martin's experiments, the presence of half an ounce of alcohol, absorbed and diffused in the blood of a good ordinary adult man, was sufficient to make a very marked and decided diminution in the cardiac power. Alcohol, indeed, acted as a cardiac paralyser. Anstie had shown that the apparent excitement and exhilaration caused by alcohol were only the first step in the stage of paralysis. The increased number of contractions of a heart under the influence of alcohol were not indicative of augmented cardiac power, but a sign that the physiological power of the heart was disturbed. The quickening was an evidence of the heart's embarrassment. Medical men should, therefore, teach that wine, beer, and spirits were simply anæsthetics, and poisonous, and calculated to shorten the duration of human life. Professor Geikie, of Toronto Medical College, Dr. Simon Fitch, of Nova Scotia, and other gentlemen, addressed the meeting in a similar strain; after which the proceedings, which were of an enthusiastic description, terminated.

DEATH FROM RABIES.

The death of a man, aged 35, from hydrophobia, occurred on Friday August 20th, at Haggerston. The deceased, who was a saw sharpener by trade, was bitten in December last by a Dalmatian dog belonging to his employer, which flew at him and bit him on the little finger, when he was in the act of lighting a fire in his master's office. The wound was cauterised at the time. The widow of the deceased stated that when he came home on the Saturday prior to his death, he appeared strange, and was unable to drink any tea. He told her that while out he had tried to drink some coffee, but was unable to do so. He could not bear the sight of water. On the Monday the deceased, according to a witness, crawled about the bed, and refused liquid of any kind. He leaped about, and at last became very violent, and snapped at those around him. He said: "When you see that coming on go away, as I do not want to bite any of you." The deceased died in great agony on the following Tuesday. Mr. Major Greenwood, surgeon, Queen's Road, Dalston, said he attended deceased up to the time of his death, which resulted from rabies, consequent on the bite of a dog. A verdict was returned in accordance with the medical evidence.

THE HOSPITAL FOR WOMEN IN LIVERPOOL.

Our correspondent in Liverpool has already informed us (see last week's JOURNAL) that the proceedings in the case of Casey *versus* Imlach cannot be regarded as finally settled, but that an application for a new trial has been made on behalf of the plaintiffs, and will probably be heard in the course of two or three months. In the meantime, a considerable amount of strong feeling is being displayed, through the daily press of Liverpool and otherwise, in connection with

the method of practice adopted by the medical officers of the Hospital for Women in Shaw Street. On August 14th, Mr. Franz Hoeffner, the husband of a patient alleged to have been made the subject of improper and unnecessary operation, was charged at the Liverpool police-court with sending a letter to Mr. J. E. Burton, one of the surgeons of the hospital, challenging him to fight a duel, and has since been committed for trial. Another patient's husband, Mr. J. A. Noble, of Southport, has also published a letter strongly condemnatory of the practice of the surgeons of the hospital; and Dr. Imlach has commenced an action against the *Liverpool Mercury* for the publication of Mr. Noble's letter. In view of the legal proceedings in connection with the circumstances above-mentioned, we defer comment for the present.

MUSCULAR RHEUMATISM.

THE Editor of *Punch* has been describing to his readers how he journeyed to Royat on account of certain symptoms which "may be rheumatism or overworkism, but quite impossible that a shooting pain down my foot, and a red-hot twinge in my right toe, can be gout! Absurd! I admit that, in any other person, such symptoms would be decidedly and unequivocally demonstrative of gout. But in myself—oh dear, no—perish the thought!" According to Billroth, the old physicians, who had it themselves, used to call gout "the wise man's disease;" yet modern sufferers, professional and lay, show a strong disinclination to admit that the symptoms which distress them are due to gout. For instance, an American physician calls attention to the value of magnesium-sulphate, given in doses of ten grains three times a day, in the treatment of muscular rheumatism. The treatment seems familiar; and, reading a little further, we find that he had tried the drugs on himself with great success. Hence the diagnosis; for no man ever puts his own aches and pains down to the hepatic derangement or gouty tendency which he would readily discover in a patient. The mode in which muscular pains are produced is very obscure; but there can be little doubt but that some, such as those which are so troublesome in the early stage of influenza and certain exanthems, are due to the poisoned state of the blood. It would be absurd to call these prodromal pains rheumatic; and it only leads to confusion of ideas to speak of every pain seated in the muscles, of which the cause cannot be discovered, as rheumatic, more especially if the pain be relieved by a few doses of Epsom salts or blue pill.

QUALIFIED PLUMBERS.

IN pursuance of the resolution come to in 1884, at the conference of the metropolitan and provincial plumbers, to open a register for efficient workmen, this has been done, and there are now between two hundred and three hundred plumbers (masters and operatives) registered, and a large number of candidates from various parts of the country are awaiting enrolment. All applications are considered by a special committee of registration, which includes members of the General Council as well as practical plumbers, in order that no trade interest or prejudice may operate against any applicant, but, on the contrary, that the utmost fairness and impartiality may be secured to all. The company is not connected with any plumbers' societies or trade-organisations formed for other purposes; and the function of the registering committee is confined to distinguishing those who are fairly entitled to be registered as qualified plumbers, the object being thus to raise the standing and efficiency of plumbers as a body, in a manner consistent with the important position they occupy in relation to the public health. Beside the registration, the company are engaged in promoting special classes of technical instruction for plumbers.

A GRATEFUL PATIENT.

A SHORT time since, a man, with a somewhat foreign appearance, presented himself at the house of a medical man, residing in the suburbs of London, and said that he had come to thank the doctor for kind attention and advice, received a couple of years previously. The latter experienced some difficulty in calling the occurrence to mind, but felt reassured when the quondam patient explained how, since that time he had been abroad and, while in the tropics, it had occurred to him to invest in something which he might offer to his medical attendant, as a small token of his appreciation and gratitude. The medical man could not fail to be flattered at the expression of sentiments such as these. The visitor proceeded to explain that his investment had taken the form of a pair of grey parrots, which he now begged the medical man to accept. He added that the birds were not with him, but that if the medical man would merely cover the carriage, he would immediately fetch them from the Victoria Docks, where they were languishing. This was naturally at once forthcoming, to the extent of half-a-crown, which our man pocketed; and he soon after left on his errand. Whether some accident has befallen this unfortunate man, and incapacitated him from fulfilling his promise, or whether he has lost the money for travelling expenses, is not clearly known. Certain it is that something, probably "circumstances over which he had no control," has prevented him from carrying out his project. There is a sort of sequel to this lamentable miscarriage of praiseworthy intentions. A few evenings after his visit, the medical man mentioned the incidents alluded to above, to a neighbouring practitioner, or rather, he had begun doing so, when the other, with a winning smile, suddenly exclaimed, "Is it parrots?" and then indulged in loud laughter. It transpired that, by a curious coincidence, he too had had a grateful patient animated by similar intentions at about the same date; but, not being addicted to parrots, he had postponed payment of the carriage until their arrival, which has not yet taken place.

BRITISH DENTAL ASSOCIATION.

AT the annual general meeting of this Association, held last week at the Royal School of Mines, Jermyn Street, Sir John Tomes (President of the Representative Board) delivered a brief address mainly devoted to elucidating the provisions of the recent Medical Act. On the motion of Mr. Underwood, he was enthusiastically thanked for the many and various services he had rendered the Association and dental science. Sir Edwin Saunders (President-elect of the Association) afterwards delivered his inaugural address. He traced the progress in general and scientific matters achieved during the past few years, and dealt with the valuable results of recent scientific research, and the good which had followed that popularising of science which the great Exhibition inaugurated. This brought him to the subject of dentistry, his remarks having relation to the means for imparting instruction in this department of medical science. Condemning the inadequacy of former means, he paid a high tribute to those available today. A vote of thanks was passed to Sir Edwin Saunders for his address. In the afternoon, papers were read by Mr. Morton Smale, on Dental Education; by Mr. T. Charters White, on a Simple Method of Photomicography suitable for the Delineation of Dental and other Tissues; and by Mr. George Cunningham, on Dentistry and its Relation to the State. An interesting discussion followed the reading of the last named paper. In the evening, a *conversazione* was given by the Odontological Society in the rooms of the Medical Society of London, Chandos Street. The annual dinner took place on Friday evening, at the Criterion, Sir Edwin Saunders (the President) in the chair. There was a large attendance. In giving the health of the Queen, the chairman referred, amid cheers, to a compliment which Her Majesty once paid them, observing, "Yours is a most useful profession; for while some require the services of the oculist, a still smaller number of the aurist, almost all, sooner or later, have need of those of the dentist." Mr. S. W. Sibley proposed "The British Dental Association," for which Mr. F. Canton responded. Other toasts were the Royal College of Surgeons, and the Odontological and Odonto-Chirurgical Societies, the Dental Schools, etc.

INFECTIOUS DISEASE.

It was reported at a meeting of the Westbury-on-Severn Guardians, on Tuesday, by the Chairman, Mr. W. C. Wemyss, that a serious outbreak of typhoid fever, of the most malignant type, had occurred in the Forest of Dean. It would seem that a relative of a collier named Hyde, who had died at Blaenavon of the fever, had been sent to the Forest Church for burial. It is stated that Hyde and his wife afterwards slept in a bed that had been occupied by some of the mourners, and in this way caught the infection. They were attended by some neighbours named Bruce, and all the members of both families then caught the disease. Hyde and his wife, it was said, had since died.

PRECAUTIONS AGAINST CHOLERA AT CARDIFF.

In view of the importance of intercepting any case of choleraic sickness that may be on board a vessel before it comes into dock at Cardiff, the Government have authorised the temporary employment of a steam tug by the Customs officers of that port. By this arrangement the Customs officers will be enabled to board vessels from abroad in Penarth Roads, which, owing to local conditions, would not be practicable without the use of a tug.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The local committee of arrangements, recognising the importance of the next annual meeting of the American Public Health Association, to be held at Toronto, October 4th to 8th, 1886, and desirous of securing as large an attendance as possible of members of the Association, and of others interested in public health questions who may wish to become members, have determined to send certificates giving the benefit of reduced rates of transportation to all such. Arrangements have been made with the Canadian Pacific Railway, by which a limited number of delegates to the Association will receive return tickets for the Pacific Coast, from Toronto, Montreal, or Quebec, at the greatly reduced rate of 85 dollars, and 25 dollars extra for drawing-room and sleeping cars. This trip has been specially arranged for the benefit of English delegates who are expected to be present, and will probably start on Monday, September 20th. Any delegates desiring to take the trip are requested to communicate at once to the Committee on transportation, of which Dr. Theodore S. Covernton, of Toronto, is the chairman. The head-quarters of the Association will be at the Rosin House, and its meetings held in Shaftesbury Hall, Queen Street West.

DEATH AFTER PASTEURIAN TREATMENT.

An inquiry was held at Rawtenstall, on Tuesday, into the circumstances attending the death of a boy named Harry Colling, aged ten years, who, on July 8th, while returning from school, was bitten by a dog suffering from rabies. He received four bites on the face, one of which went through the lower lip into the gum, and another through his upper lip. Two hours afterwards, Dr. Bucknill cauterised the wounds with nitrate of silver. Subsequently, antiseptic lotion was applied for a few days; after which the wound healed. Subsequently, the lad went to M. Pasteur for treatment, arriving in Paris on July 17th, and being inoculated three times that day and once on each of the following ten days. He died on Friday last. In answer to the jury, Mr. Charles Bucknill, medical student, who accompanied the lad to Paris, stated that M. Pasteur declined to express an opinion how the case would turn out, as it was one of the most serious that had come under his notice. Mr. Bucknill also said that M. Pasteur stated to him that his treatment was successful in 85 per cent. of the cases brought to him. A verdict of "Death from hydrophobia" was returned.

A FATAL MISTAKE.

A case of poisoning by misadventure occurred on Tuesday last, the details of which were reported to be as follows. The unfortunate victim, a Mr. Alfred James Norman, had, it appears, a few days since, accompanied by his wife, arrived in London from Colchester, intending, after visiting friends at Finsbury, to continue their journey to Bournemouth. Feeling somewhat fatigued, Mr. Norman went to a neighbouring druggist's shop, and asked for a tonic. The druggist proceeded to mix a draught as desired, and the unfortunate gentleman at once drank it. His head immediately fell on one side, and he became insensible. Mr. Norman was then removed to a room at the back of the shop, and a surgeon sent for, who attended at once, but life was extinct. It was then discovered that an error had been committed in the mixing of the draught, and, instead of a tonic, a mixture containing strong carbolic acid had been supplied. The body was at once removed to the mortuary.

A DANGER FROM PUBLIC BATHS.

An interesting case is recorded by Dr. Aubert, in which blennorrhœa was communicated by means of a bath. A lady consulted him for her child, aged 4 years, who, for some days, had had an abundant vulvar secretion. The child complained also of pain and burning in passing urine. In relating the case, the mother stated that she herself had, for some weeks, been affected with a like discharge, and her husband with an urethral discharge. According to the lady's husband, this was due to drinking turbid wine; an explanation which, as it was satisfactory to the lady, was not questioned by the medical man. A microscopic examination revealed the gonococcus in the discharge from both mother and daughter. On further inquiry, it appeared that the child, three or four days before the appearance of its discharge, had taken a bath with its mother. No other possible source of infection could be thought of. In the same family there was another child which did not have the bath, and which escaped the infection. Professor Filippi, of Florence, commenting on this case (*Lo Sperimentale*, October, 1885), relates that, during the previous year, fifty-five little girls were infected with vulvitis at the public baths of Santa Lucia at Florence. Some of the children also contracted severe purulent inflammation of the eyes. The only explanation of this outbreak was, that the contagion had been deposited in the water by some woman or child already infected. Professor Filippi goes on to remark on the hygienic and medico-legal aspects of the case. It is not always possible to make sure that people making use of public baths are free from every sort of infectious disease. Unless, therefore, the supply of water be undergoing constant renewal, the water ought to be changed for each person. The forensic aspect of the case is also important. When a child, with vulvar discharge, is brought for examination on account of a supposed criminal assault, the above-mentioned mode of infection ought to be borne in mind.

SCOTLAND.

COURSE OF MORBID HISTOLOGY FOR MEDICAL PRACTITIONERS.

In our advertising columns, a course of instruction in Practical Pathology and Morbid Histology is announced by Dr. David Newman. A course, such as this, will be of special value to practitioners who have not had, during their student-career, an opportunity of studying pathology in a practical form; and as instruction in morbid histology is of comparatively recent development, we doubt not that many practitioners in the neighbourhood of Glasgow will avail themselves of the opportunity now afforded them.

LOW MORTALITY IN EDINBURGH.

Last week, the mortality in Edinburgh reached the satisfactory rate of 14 per 1,000. There were only 70 deaths in all, of which 30 were from pulmonary diseases, and 5 from zymotic diseases, namely, 2 from diphtheria, and 1 each from scarlet fever, measles, and whooping-cough. The intimations of infectious diseases were, of typhoid 7, diphtheria 2, scarlet fever 26, and measles 12. In Leith, there were 20 deaths, 13 of which were of children under 5 years of age. Two deaths were caused by measles, and 1 by whooping-cough.

THE POLLUTED CONDITION OF THE CLYDE.

TOURISTS, sailing from Glasgow on the Clyde at this season, need no specialist to tell them that it is in anything but a pure condition. At a meeting of Glasgow Town Council, held on Monday, a member gave notice that, at next meeting, he would move that a statement of all the schemes and suggestions for the purification of the Clyde, which had been made to and discussed by the Council, be prepared by the Master of Works for the information of the members. Reference was also made to the same subject in the minutes, where it was stated that a subcommittee had had under consideration several reports by Dr. Wallace, in reference to refuse thrown into the river from chemical and other works.

IRELAND.

CORK FEVER HOSPITAL.

A SPECIAL meeting was held last week for the purpose of electing an extraordinary physician to the hospital, when Dr. Frederick E. Adams was unanimously appointed.

DEATH OF DR. JOSEPH LALOR.

DR. LALOR died last week in the West of Ireland, whither he had recently gone to reside. For many years he held the appointment of resident medical superintendent to the Richmond District Lunatic Asylum, and only a few weeks since resigned that office. The deceased gentleman was in his 76th year.

ULSTER EYE, EAR, AND THROAT HOSPITAL.

OPERATIONS for cataract are amongst the most important which, in an institution like the above, the ophthalmic surgeon is called upon to perform; and in the report recently issued, we learn that last year 71 cases of cataract were under treatment by Dr. McKeown, the visiting surgeon. Of these, 31 were operations for senile cataract by this gentleman's injection-method, and 12 operations for traumatic cataract treated by the same method. The results by this method were very satisfactory; and it is gratifying to know that this modification in the operation has been adopted extensively in Germany and France.

NORTH DUBLIN UNION: COST OF MEDICAL APPLIANCES.

ONE of the guardians last week drew attention to the extravagant amount charged for surgical instruments and appliances supplied to the dispensaries attached to the union. The amount charged was £350, and although the return was said to be for two years, yet, when contrasted with the entire expense for surgical instruments for the South Union, namely, £6 7s. 3d., it appears absurdly high. As the guardian in question pointed out, in one case an order had been given for a dozen brass ear-syringes, and one syringe of this particular kind would last twenty years. The matter has been referred to the Dispensary Committee for investigation.

BELFAST ROYAL HOSPITAL.

THE committee, in their recent quarterly report, record their high appreciation of the character and services of the late Dr. Mac Cormac, who, for many years, acted as one of the physicians of the hospital. They also refer to the handsome stained-glass window, which Dr. Whitla has presented as a token of his lively interest in the institution. There has been a decrease in the income of the hospital, and the committee deplore this state of things, especially considering the pressing and special demands which have of late been made upon the institution, in connection with railway accidents and local disturbances. Many new beds had to be fitted up, and great expenditure was needed for the surgical treatment of the cases. Dr. William Whitla was re-elected as physician, and Dr. O'Neill as surgeon, at the quarterly meeting of the committee, held last Monday, August 23rd.

DUNDALK WORKHOUSE: ACCOMMODATION FOR LUNATICS.

AT a recent meeting of the guardians, a resolution was proposed to effect that a motion, carried on July 26th, postponing for 3 months the improvements for accommodating the extra lunatics in the house, should be rescinded. The idiot department is said to be overcrowded, and the maternity ward, singular to state, is placed in the middle of it. The alterations suggested by a committee at a former meeting were sanctiond by the Local Government Board, and are expected to cost about £300. The resolution was unanimously adopted

HEALTH OF CORK.

DURING the four weeks ending August 7th, the births registered in the Cork district numbered 144, being equal to a rate of 23.36. There were 90 deaths recorded, and the annual mortality gives a ratio per 1,000 inhabitants of 14.60, and an urban death-rate of 12.65. The mortality for the month is the lowest on record for the city, and, indeed, is the lowest recorded in any town, in either England or Ireland, for the four weeks referred to.

HEALTH OF IRELAND: JUNE QUARTER.

THE births registered amounted to 30,281, or 24.8 per 1,000; and the deaths to 23,143, or 18.9. The birth-rate was 0.8, and the death-rate 0.6 under the average for the June quarter of the past five years. The deaths from the principal zymotic diseases came to 1,178, or a decline of 270 as contrasted with the previous quarter. Measles only caused 61 deaths, a number considerably below the average; scarlet fever 127, or 79 less; typhus 121, or 30 less; whooping-cough 316, or 131 less; diphtheria 78, a number slightly in excess. The deaths from diarrhœa amounted to 224, being a considerable decrease as contrasted with the corresponding quarter of recent years. There were 545 inquests reported to the registrars during the quarter, a number equa to 1 in every 42 of the total deaths registered.

MOUNTBELLEW UNION.

AT the meeting of the guardians held on July 23rd last, a resolution was adopted reducing the salaries of the medical and other officers of the union 30 per cent., and the matter came before the Local Government Board for their sanction and approval. At a meeting of the guardians last week, a letter was read from the Local Government Board, informing them that they declined to sanction the proposed reduction, on the ground that, when a person engages in the service of the board of guardians at a certain salary, and the terms of appointment are that he be paid such a salary, it is not reasonable or just to reduce that rate of payment, without sufficient grounds for doing so, while he satisfactorily discharges the duties he undertook to perform. In this instance, the reduction of the salaries would be a great injustice, because the present salaries of some of the officers are the same as those at which they were appointed. In reference to the other officers, whose salaries have been raised after years of efficient service, the board considered it would be ungenerous to deprive them of part of the advantage so gained while the duties remained unchanged, and that such a proceeding would tend to produce discontent and a feeling of insecurity in regard to their position, which would have an injurious effect on the administration of the affairs of the union, as it would discourage zeal and attention on the part of the officers in the performance of their duties. Dr. Trench, Medical Officer of the Killaroon Dispensary for the past thirty-four years, is a case in point; and it certainly would appear reasonable that his length of service and that other union officers should render them deserving of consideration in regard to the continuance of their existing emoluments.

THE DENTAL HOSPITAL OF LONDON.—The report for the past year states that 39,185 cases had been treated since last report (a large number of them painlessly, under anæsthetics); being 881 in excess of the previous year, and the largest number in any one year since the opening of the hospital. In consequence of the great increase of patients, it had been found necessary to open an extra stopping room which involved the purchase of additional operating chairs.

THE HEALTH OF WINDSOR.

CONSIDERABLE excitement is manifested in Windsor as to the statements which have been made in a medical contemporary with regard to the alleged unsanitary condition of the town. On Tuesday, a crowded meeting of the residents was held at the Guildhall to protest against these statements, and a resolution was passed to the effect that "such of the statements as are founded on facts are grossly exaggerated, and the remainder absolutely untrue." It was decided, at the same time, that a deputation of ratepayers should join with the representatives of the Town Council, who are about to interview the President of the Local Government Board for the purpose of asking for a medical inspection of the town. It will be difficult for Mr. Ritchie to refuse a request coming from such a quarter, and backed up, it may be supposed, with Court influence. We do not, however, envy the medical inspector to whom the task will be assigned. All sorts of collateral issues will infallibly be raised, and the task of steering clear of them will not be an easy one. If the state of affairs be as alleged, it would appear better to send down a joint commission of the general inspector of the district, an engineer, and a medical man, with power to examine witnesses on oath.

The decision of the Local Government Board as to sending down an inspector will probably not be announced until the deputation has attended at Whitehall; but meanwhile it may be interesting to quote what the local medical officer of health has to say on the subject in his last annual report. Dr. Casey says: "Overcrowding is certainly not frequent in Windsor. For instance, among 143 cottages, for the most part of the lowest class, which I myself inspected during the past year, I met with one case only in which I thought it necessary to advise the authority to interfere, and three others in which I could legally have reported overcrowding to exist. But, of course, it must be understood that the legal standard is a low one. Two houses were condemned as being unfit for habitation. With regard to such action, it would seem to be not superfluous to point out that, except in the case of new buildings, a house can be so condemned only on the ground that it is in such a state as to be dangerous to health. It is satisfactory that it has not been found necessary in any instance to have recourse to legal proceedings in order to enforce compliance with the requirements of the sanitary authority. The chief difficulties which have been met with were due to the injurious action of the law of leasehold tenure. A lessee is naturally reluctant to go to expense in improving a property in which he will in a few years lose all interest; and I do not hesitate to say that this custom is the most efficient cause, not only of the bad construction of new houses, but also of the neglect through which old ones are suffered to fall into delapidation and decay. There are in Windsor, as in every old town, dwellings cramped up, ill-constructed, and squalid—habitations which are a danger to morals, if not very notably so to health; and to substitute for them a more abundant supply of comfortable and wholesome cottages would be a boon to the poor of inestimable value, and a work of enlightened philanthropy."

THE NEW SYDENHAM SOCIETY.

THE annual meeting of this Society was held in the Saloon, Royal Pavilion, Brighton, on Friday, August 13th; Mr. S. W. SIBLEY in the chair.

The report read by the Honorary Secretary, Mr. JONATHAN HUTCHINSON, F.R.S., stated that the series of works issued for 1885 consisted of the second and concluding volume of Graves's *Clinical Medicine*; the second volume of Hirsch's *Handbook of Geographical and Historical Pathology*; and a fasciculus of the *Lexicon of Medical Terms*. The series for the current year had been commenced by the issue of a volume of *Selected Monographs on Microparasites in their Relation to Disease*, edited by Mr. Watson Cheyne. A fasciculus of the *Lexicon* had also been published. The third and concluding volume of Hirsch's *Handbook* was almost ready, and, with another fasciculus of the *Lexicon*, it would probably conclude the series for this year. The Council had satisfaction in stating that the editors of the *Lexicon* looked forward to being able to complete their work within four years. They estimated that more than half the work was now published. The Council intended to give this work preference over all others, and would do everything in its power to expedite its completion. After much consideration, the conclusion had been arrived at that it would be in conformity with the wishes of a majority of members if, in the future, the Society's work were restricted chiefly to translations of modern books, and that no more reprints of English authors be produced. This principle would accordingly guide the action of the Council in the selection of new works for some years to come. It was, of course, not final, but was open to revision, should circumstances occur to make such a course seem desirable. During the year, only one new work had been adopted for translation. This was a series of *Clinical Lectures* now in course of publication by Professor Charcot, and it would be issued as promptly as practicable after the completion of the original. The Society closed the year with a fair balance in hand. For various reasons, the Society's income had for several years past somewhat declined; but it was hoped, now that the *Lexicon* was well advanced, and its completion in near prospect, that a large increase in the number of members would shortly take place.

Mr. T. SYMPSON (Lincoln) moved the adoption of the report, and referred to the very excellent letter sent by Mr. Hutchinson to the BRITISH MEDICAL JOURNAL. No doubt that letter would have a decided effect in increasing the prosperity of the Society.

Mr. MASON (Bath) seconded the motion. He was very pleased to see there was some probability of the *Lexicon* being finished, at any rate within the term of one's natural life.

Mr. JACKSON (Wolverhampton) said it would be a good plan if a local secretary received an instruction from any member in his district, that he was anxious for a particular work to be introduced into the Society, and that he should communicate that fact to the honorary secretary. Members would take more interest in the Society if they felt that their wishes were made known at headquarters, and were there carefully and impartially considered.

The CHAIRMAN said the suggestion was a very excellent one. It was the only means by which the Council could become acquainted with the feelings of the Society at large.

Mr. JONATHAN HUTCHINSON said that, as to the *Lexicon*, more than one-half was finished, and the editors looked forward to completing the remainder within the four years. The state of the Society was such as to give the Council some anxiety, and they would be very much obliged if members would make a personal effort in their districts towards enlisting new members. Many of the large towns were quite as backward in the way of subscribing to the Society as the country districts. In Brighton, for instance, they had not more than one or two members, and several other large places were in a similar condition. It depended chiefly upon the activity of the local secretaries.

The motion for the adoption of the report and accounts was agreed to.

The officers for the coming year having been elected, Mr. JONES-MORRIS moved: "That the best thanks of the Society be given to the Honorary Local Secretaries, on whose exertions in the past so much of the success of the Society has depended." Dr. CHADWICK seconded the motion, which was agreed to. The thanks of the Society were also voted to the retiring officers, and the honorary secretary, and the proceedings terminated.

THE CHOLERA.

CHOLERA IN ITALY.

THE following are the returns from August 22nd to August 25th: at Barletta, 30 cases and 15 deaths; at Acquaviva, 10 cases and 2 deaths; at Biscegli, 25 cases and 10 deaths; at San Marco in Lamis, 18 cases and 5 deaths; at Cerignola, 22 cases, 9 deaths; at Ruvo di Puglia, 14 cases, 16 deaths; at Vicenza, 17 cases, 6 deaths; at Verona, 5 cases, 3 deaths; at Padua, 28 cases, 9 deaths; at Venice, 5 cases; at Bologna, 10 cases and 2 deaths; at Coreggioli, 4 cases and 1 death; at Forli, 5 cases and 1 death; at Ravenna, 14 cases and 10 deaths.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The quarterly court of the above Society was held at 53, Berners Street, on Wednesday, July 14th, at 8 P.M.; Dr. Iliff, Vice-President, in the chair. One member was elected, the resignations of two were accepted, four were reported as having ceased to be members, and the deaths of five were announced. Three fresh applications for grants were read from three widows, and assistance at the rate of £25, £35, and £50 *per annum* was given to them. The deaths of two widows were reported; one had been in receipt of £40 *per annum* since 1858, the other of £35 *per annum* since 1864. Grants amounting to £1,353 were made to the sixty-two widows, nine orphans on the books, and the three orphans on the Copeland Fund. The expenses of the quarter were £37 odd. A legacy of £300 from the late Dr. Harvey Owen was reported by the Treasurer.

MEMBERS PRESENT AT THE ANNUAL MEETING.

THE following names of members and visitors attending the annual meeting were entered in the books provided for the purpose:

Abbott, G., Esq., Tunbridge Wells; Acland, T. D., M.D., London; Adam, J., M.D., West Malling; Adams, J.; Adams, William, Esq., London; Adams, T. R. M.D., Croydon; Addison, Chas. E., Esq., Colchester; Adeney, E. L., M.D., Tunbridge Wells; Adkins, E. J., Esq., Hastings; Alban, E., Esq., Lindfield; Alderson, F. H., M.D., Hammersmith; Aldridge, C., M.D., Plympton; Alexander, W., M.D., Liverpool; Allan, Donald, M.D., London; Allbutt, T. Clifford, M.D., F.R.S., Leeds; Allen, B. H., M.D., Hastings; Allen, Marcus, Esq., Brighton; Anderson, J., M.D., London; Anderson, W., Esq., London; Anderson, W. S., M.D., Chapel-en-le-Frith; Andrew, E., M.D., Shrewsbury; Andrews, Henry C., M.D., London; Arbuckle, H. W., M.D., Doncaster; Armistead, William, M.B., Cambridge; Armstrong, H. G., Esq., Crowthorne; Armstrong, W., Esq., Manchester; Arnison, W. C., M.D., Newcastle-on-Tyne; Arthur, James, Esq., Ferry Hill, Durham; Ashby, Henry, M.D., Manchester; Atkey, W. T., Esq., Worthing; Aveling, C. T., M.D., Upper Clapton; Axford, W. H., M.B., Southsea.

Baber, E. Creswell, M.B., Brighton; Bagshawe, F., M.D., St. Leonard's; Baker, J. Wright, Esq., Derby; Balding, D. B., Esq., Royston; Ball, B., M.D., Paris; Ballance, C. H., Esq., London; Ballantyne, J., Esq., London; Bamford, C. R., Uttoxeter; Barker, Alfred J., M.D., London; Barker, Fordyce, M.D., New York; Barnes, J. W., Esq., London; Barnes, R., M.D., London; Barnes, T. H., M.D., Croydon; Barnish, W. C., Esq., Wigan; Barrett, S. B., Esq., Fareham; Barron, G. B., M.D., Southport; Barrow, Surgeon-Major F. E., London; Bartholomew, M. L., Esq., London; Bartlett, W., Esq., London; Bartlett, Edward, Esq., London; Barwell, R., Esq., London; Bass, W., M.D., Lowell, Massachusetts; Baxter, P. C., M.D., Dublin; Bayard, W., M.B.; Beach, Fletcher, M.B., Darenth; Beaman, E. H., Esq., Newton-le-Willows; Beaufort, St. S., M.B., Brighton; Beck, C., Esq., London; Beck, F. E., Esq., Belfast; Beevor, C., M.D., London; Begley, W. C., M.D., Hammersmith; Bell, John Henry, M.D., Bradford; Bennet, A. Hughes, M.D., London; Benson, A. H., Esq., Dublin; Bentham, S., Esq., London; Benton, S., Esq., London; Berry, H. T., Esq., Bayswater; Best, G. P., M.B., Cheltenham; Beverley, Michael, M.D., Norwich; Biden, W. P., Esq., Hyères; Billings, John S., M.D., Washington; Birch, R., Esq., Newbury; Bird, Valentine, M.D., Brighton; Black, R., M.D., Brighton; Black, J. G., M.D., Harrogate; Black, Surgeon-Major W. T., Edinburgh; Blake, James, M.D., San Francisco; Blaker, T. F. I., Esq., Brighton; Bluett, John, Esq., Chesterfield; Bodkin, W., M.D., Chelmsford; Bombaugh, C. C., M.D., Baltimore; Bond, Charles J., Esq., Leicester; Boobbyer, P., M.B., Nottingham; Booth, J. Mackenzie, M.D., Aberdeen; Booth, L., M.D., Durham; Borel, F., M.D., Neuchâtel; Bourke, Surgeon U. J., Woolwich; Boustead, Brigade-Surgeon R., Brighton; Bowles, R. L., M.D., Folkestone; Bowman, R. A., Esq., Brighton; Boyd, A. J., M.D. Shankhill, Dublin; Boyes, J. F., M.B., Brighton; Bradbury, J. B., M.D., Cambridge; Bradley, C. Lawrence, Esq., London; Branthwaite, R. W., Esq., Rickmansworth; Brebner, G. R., M.D., Croydon; Brett, A. T., M.D., Watford; Bridger, J., Esq., Cottenham; Bridgwater, Thomas, M.B., Harrow; Brierley, J. Brassey, M.D., Manchester; Bristowe, J. S., M.D., F.R.S., London; Broadbent, S. W., Esq., Dalton-le-Dale; Broadbent, W. H., M.D., London; Brodie, David, M.D., Canterbury; Brodie, W., M.D., Detroit; Brodie, W., M.D., Detroit; Brookhouse, J., M.D., Nottingham; Bronny, L., Esq., London; Brooke, H. G., M.B., Manchester; Broom, J., M.D., Clifton; Brown, G., Esq., London; Brown, T., Esq., London; Brown, W., Esq., Carlisle; Brown, W. Moore, M.B., Kilmarnock; Browne, E. A., Esq., Liverpool; Browne, George, Esq., Brighton; Browne J. Walton, B. A., M.D., Belfast; Brown-Séquard, C. E., M.D., F.R.S., Paris; Bruce, J. M., M.D., London; Bryan, T. C., Esq., Littlehampton; Buck, C. W., Esq., Settle; Buckell, Arthur, M.D., Chichester; Buisen, J., M.D., Madrid; Burney, W. C. S., Esq., Greenwich; Burrows, J., M.D., New York; Burrows, W. Seymour, Esq., Brighton; Burt, G., Stourbridge; Butler, Arthur, Esq., Evershot; Butlin, H. T., Esq., London; Butterfield, Harris, Esq., Sevenoaks; Buxton, Dudley W. M.D., London; Buzzard, T., M.D., London; Byass, T. S., M.D., Cuckfield.

Cadge, W., Esq., Norwich; Calnek, T. M., M.D., Cartagena, Costa Rica; Cameron, Murdoch, M.D., Glasgow; Cameron, James, M.D., Montreal; Campbell, J., M.D., Hartford, Connecticut; Campbell, J. A., M.D., Carlisle; Candy, John, M.D., Southampton; Cant, W. J., Esq., Lincoln; Carey, Charles, Esq., Brighton; Carolin, W. F., M.D., Boston; Carr, W., M.B., Glasgow; Carreau, J. S., M.D., New York; Carrington, R. E., M.D., London; Carter, G. R., Esq., Anerley; Carter, J. T., Esq., Glasgow; Carter, S., Esq., London; Carter, Wm., M.D., Liverpool; Cash, J. Theodore, M.D., Wandsworth; Caskie, J. B., M.D., London; Caspar, Leopold, M.D., Berlin; Chadwick, Chas., M.D., Tunbridge Wells; Chadwick, J. R., M.D., Boston, U.S.A.; Chaffey, W. C., M.D., Clapham; Chaldecott, C. W., Esq., Dorking; Chalmers, J., M.D., London; Chapman, T. A., M.D., Hereford; Charcot, J., M.D., Paris; Charles, T. Edmondstone, M.D., Isleworth; Chiappini, Peter, M.D., Cape Town; Churchill, F., M.B., London; Churton, T., M.D., Leeds; Clark, Sir Andrew, Bart., M.D., London; Clark, A. C., M.B., Bothwell; Clark, James, M.D., Lichfield; Clarke, J. J., M.D., Brighton; Clarke, C. G., Esq., Bessbrook, Ireland; Clarke, W. Bruce, M.B., London; Clarke, R. H., Esq., Redhill; Cleveland, W., F., M.D., London; Clouston, T. S., M.D., Edinburgh; Coates, W. H., Esq., Tunbridge Wells; Cobb, Surgeon R., Bengal; Cobbold, C. S. W., M.D., Earlswood; Cockburn, R., Esq., London; Codrington, Deputy Surgeon-General O., Putney; Coffin, B. J. M., Esq., London; Colbourne, Louis, M.B., Buenos Ayres; Coldstream, Alex. R., Esq., London; Collie, J., M.B., London; Colman, W. T., Esq., London; Constable, John, M.D., Leuchars; Cooke, J., M.B., St. Leonard's; Coombe, C. F., Esq., Sheffield; Cooney, J. E., Esq., London; Coquerel, E., M.D., Paris; Coquerel, G., M.D., Paris; Corbin, M. A. Bazille, Esq., Guernsey; Cornish, Surgeon-General W. R., M.D., London; Cornwall, J., Fairford; Corry, W., M.D., Drumquin; Coupland, Sidney, M.D., London; Cousins, J. Ward, M.D., Portsea; Covernton, C. J., Esq., Knighton; Covernton, T. S., Esq., Toronto, Cowley, J., Esq., Upton-on-Severn; Cox, F. A., Esq., London; Crane, C. R., Esq., Brighton; Craven, R. M., Esq., Southport; Crawford, G. R. J., M.D., St. John, New Brunswick; Crawford, J., Esq., Ightham, Sevenoaks; Crawford, Sir Thomas, K.C.B., M.D., London; Crean, R., M.D., Manchester; Cree, W. E., Esq., London; Cresswell, Pearson R., Esq., Dowlais; Cribb, Henry, Esq., Bishop Stortford; Crichton, Geo., M.B., Twickenham; Crickmay, Ed., Esq., Laxfield; Crighton, Alex., M.B., Brymbo, Wrexham; Crighton, R. W., M.D., Eastbourne; Crichett, Anderson, Esq., London; Crocker, H. Radcliffe, M.D., London; Croft, John, Esq., London; Cronecker, F., M.D., Strasburg; Crookshank, E. M., M.B., London; Crosse, Thomas W., Esq., Norwich; Crosskey, Walter F., M.D., Lewes; Crowe, G. Wyndham M.D., Worcester; Cullimore, D. H., M.D., London; Cullingworth, C. J., M.D., Manchester; Cuming, J., M.D., Belfast; Curling, W., Esq., Ramsgate.

Dale, G. C., M.D., Upper Tooting; Dallaway, D., Esq., London; Dambrill-Davies, W. R., Esq., Chelford; David, W. W., Esq., Pontypridd; Davidson, A., M.D., Liverpool; Davies, A. M., Esq., Netley; Davies, E. T., M.D., Liverpool; Davies, D. S., M.B., Clifton; Davies, H. Naunton, Pontypridd; Davies, Sidney, M.B., Cairo; Davis, Nathan S., M.D., Chicago; Davison, James, M.D., Bournemouth; Deas, P. Maury, M.B., Exeter; Delstauche, Ch., M.D., Brussels; Dickinson, Thomas, Esq., London; Dickson, J. D., M.D., Marlow; Dickson, Walter, M.D., London; Dill, J. Gordon, M.B., Brighton; Dix, John, Esq., Hull; Dobbyn, J. S., M.D., H.M.S. *Crocodile*; Dodd, H. A., Esq., Hove; Dodsworth, F. C., Esq., Turnham Green; Dolman, A. H., Esq., Derby; Donaldson, F., M.D., Baltimore; Donovan, J. O., Esq., Kingston; Doran, Alban, Esq., London; Down, Langdon, M.D., London; Downes, E., M.D., Eastbourne; Dowse, T. S., M.D., London; Drage, Charles, M.D., Hatfield; Dreschfeld, J., M.D., Manchester; Duckworth, Sir Dyce, M.D., London; Duke, A., Esq., Dublin; Dukes, M. C., M.D., Croydon; Duncan, E., M.D., Crosshill, Glasgow; Duncan, J., M.B., Cleland; Durham, A. E., Esq., London.

Eade, Sir Peter, M.D., Norwich; Eardley-Wilmot, H., M.B., Leamington; Earle, Charles W., M.D., Chicago; East, Ed., Esq., London; Eastes, G., Esq., London; Edis, Arthur W., M.D., London; Edwards, E. Noble, Esq., Brighton; Edwards, W. L., Esq., Carmarthen; Edwards, W. T., M.D., Cardiff; Elder, George, M.D., Nottingham; Elliott, T., M.D., Tunbridge Wells; Ellis, Heber D., M.D., Eastbourne; Ellis, Richard, Esq., Newcastle-on-Tyne; Elliston, W. A., M.D., Ipswich; Emmet, Thomas A., M.D.; Ensor, E. T., M.D., London; Erichsen, John Eric, Esq., F.R.S., London; Erskine, J., M.A., M.B., Glasgow; Erskine, Robert, M.D., Camborne; Erwin, S. J., Esq., Manchester; Esler, R., M.D., Belfast; Evans, Maurice G., Esq., Cardiff; Evans, L., Esq., Clapham; Evatt, Surgeon-Major, G. J. H., M.D., Woolwich; Eve, F. S., Esq., London; Ewart, Joseph, M.D., Brighton; Eylandt, E., M.D., Reval; Eyton-Jones, T., M.D., Wrexham.

Fegan, Richard, M.D., Blackheath; Fennings, Allen, M.D., London; Fernie, E., M.D., Stone, Staffordshire; Fisher, S. W., M.D., Brighton; Fitch, Simon, M.D., Halifax, Nova Scotia; Fitzmaurice, Richard, Esq., Lindfield; Fleming, J., M.D., London; Fligg, W., M.B., Grahamstown; Footner, J. B., Esq., Tunbridge Wells; Forbes, D. M., Esq., London; Ford, J., M.D., Eltham; Foreman, T. D., Esq., Denton, Lancashire; Forsyth, A., M.D., Greenwich; Foster, Sir B. Walter, M.D., Birmingham; Fowler, Oliver H., Esq., Cirencester; Fowler, T., Esq., Epping; Fox, L. S., M.D., Boston, Massachusetts; Fox, R. H., M.D., London; Francis, G. P., Esq., Bourton, Dorset; Frank, P., M.D., Cannes; Frazer, William, M.D., Bournemouth; Freeman, A. J., M.D., Italy; Freer, Edward L., Esq., Birmingham; Frobisher, Martin, Esq., Leeds; Frost, W. A., Esq., London; Fuller, T., M.D., New Shoreham; Fuller, William, M.B., Oswestry; Furner, E. J., Esq., Brighton; Furner, W., Esq., Brighton; Fussell, E. F., M.B., Brighton.

Gabbett, H. S., M.D., Eastbourne; Gairdner, M. W., M.B., Naples; Gairdner, W. T., M.D., Glasgow; Galloway, W., Esq., Gateshead-on-Tyne; Gallwey, T. J., Esq., Brighton; Galton, E. H., Esq., Brixton; Galton, John H., M.D., Upper Norwood; Gambier, T., M.D., St. Leonard's; Gamgee, Arthur, M.D., F.R.S., St. Leonard's; Gardner, Thomas T., Esq., Leamington; Gardner, William, M.D., Montreal; Garner, John, Esq., Birmingham; Gasquet, J. R., M.B., Brighton; Gaven, J. A., Esq., London; Gayton, W., M.D., Hampstead; Geikie, W. B., M.D., Toronto; Gibbes, H., M.D., London; Gibbon, Septimus, M.B., London; Gibson, C., M.D., Newcastle-on-Tyne; Giffard, D. W., Esq., Brighton; Gilmour, J. H., Esq., Hurstbourne Tarrant; Glascott, Charles E., M.D., Manchester; Glaister, J., M.D., Glasgow; Glasier, C., M.D., Eastbourne; Goff, Bruce, M.D., Bothwell; Gooch, James W., Esq., Windsor; Goodhart, J. F., M.D., London; Goodridge, H. F. A., M.D., Bath; Gordon, John, Esq., Brighton; Gordon, S. C., M.D., Portland, Maine; Gorham, Richard V., Esq., Yoxford; Gould, John, Esq., Hatherleigh; Graham, A. R., M.B., Weybridge; Graham, George H., Esq., Storrington; Granger, F. M., Esq., Chester; Grant, O., M.B., Inverness; Grant, J. A., Esq., Ottawa; Grant, J. D., Esq., London; Gravely, R., Esq., Newick; Gray, John A., Hornsey; Gray, C., Esq., Newmarket; Gray, R., Esq., Armagh; Gray, T. S., M.D., Dundee; Greenwood, M., jun., Esq., Dalston; Greves, E. H., M.D., Bournemouth; Grewcock, J. B., Esq., Pershore; Griffith, D. C. B., Esq., Brighton; Griffith, G. De G., Esq., London; Griffith, Samuel, M.D., Portmadoc; Griffith, W. S., M.B., London; Griffiths, L. M., Esq., Clifton; Griffiths, Charles T.; Grimshaw, T. W., M.D., Dublin; Gripper, W., M.B., Wallington; Gross, C., M.B., London; Groves, J., M.D., Carisbrooke; Gubb, Alfred S., Esq., London.

Hackney, J., Esq., Hythe; Habgood, H., M.D., Eastbourne; Haigh-Brown, C. W., M.D., Godalming; Hairsine, Hudson, Esq., Roos, near Hull; Hall, F., M.D., Leeds; Hall, J. E., Esq., Swansea; Hamilton, H., Esq., Chiltern; Hamilton, T. K., M.D., Laura, South Australia; Hanbury, Sir James, K.C.B., Blackheath; Handfield-Jones, M., M.B., London; Handford, Henry, M.D., Nottingham; Hanks, H. T., M.D., New York; Hanly, Edward, M.D., Buenos Ayres; Hanly, J. J., Esq., Brighton; Hardy, H. Nelson, Esq., London; Hargreaves, James B., Esq., Armley; Harley, G., M.D., F.R.S., London; Harmer, W. M., Esq., Hawkhurst; Harris, F. H., Esq., Mildenhall; Harris, W. J., Esq., Worthing; Harrison, R., Esq., Liverpool; Harrison, R. C., Esq., London; Hart, Ernest, Esq., London; Hart, Eugene J. T., Esq., Brighton; Hartley, R., Esq., Thirsk; Hartt, C. H., Esq., Greenwich; Harvey, T. P., Esq., St. Leonard's; Hassell, E., Esq., Brighton; Haviland, H. J., M.D., London; Haward, E., M.D., London; Hawken, G. L. L., Esq., Hurstpierpoint; Haycraft, John, Esq., Birmingham; Hayman, Charles N., M.B., Eastbourne; Hedley, John, Esq., Middlesborough-on-Tees; Hemming, J. Hughes, Esq., Kimbottom; Henderson, T. Brown, M.D., Glasgow; Henry, A., M.D., London; Hensman, W., Esq., Taunton; Herdman, W. J., M.D., Ann Arbor, Michigan; Herschell, Fisher, M.D., Connecticut; Hewetson, H. B., Esq., Leeds; Hewitt, F., Esq., London; Hewitt, Graily, M.D., London; Hills, F. F., Esq., Bristol; Hingston, W. H., M.D., Montreal; Hitchcock, Homer O., M.D., Kalamazoo, Michigan; Hodges, F. H., Esq., Leicester; Hodgson, G. F., Esq., Brighton; Hodgson, Gerald G., Esq., Brighton; Hodson, H. Algernon, Esq., Brighton; Hogg, C., M.D., Brighton; Holberton, H. N., Esq., East Molesey; Holdsworth, S., M.D., Wakefield; Hollis, W. Amslie, M.D., Brighton; Holman, Constantine, M.D., Reigate; Holmes, T., Esq., London; Hooper, F. H., M.D., Boston, Massachusetts; Horsley, V., Esq., London; Hough, J. H., Esq., Cambridge; Hovell, D. de B., Esq., Elstree; Hovell, T. M., Esq., London; Hubbard, Henry W., Esq., London; Hughes, E. T., Esq., Holyhead; Humphreys, F. B., Esq., Rottingdean; Humphreys, Henry, M.D., St. Leonard's; Humphreys, J. R., Shrewsbury; Humphry, F. A., Esq., Brighton; Humphry, G. M., M.D., F.R.S., Cambridge; Humphry, L., M.B., Cambridge; Hunt, De Vere, Esq., Bolton; Hutchinson, Jonathan, Esq., F.R.S., London; Hutton, J. S., Esq., London.

Imlach, F., M.D., Liverpool; Ince, Surgeon-Major John, M.D., Farningham

Jackson, Arthur, Esq., Sheffield; Jackson, Vincent, Esq., Wolverhampton

Jackson, J. Hughlings, M.D., F.R.S., London; Jacob, Archibald H., M.D., Dublin; Jacques, Edwin, M.D., London; Jagielski, V., M.D., London; Jalland, Robert, Esq., Horncastle; James, J. Brindley, Esq., London; James, J. Davies, Esq., Blackwood; James, Prosser, M.D., London; Jeffreys, Richard, Esq., Chesterfield; Jepson, E., Esq., Durham; Jepson, Octavius, M.D., Stone, Dartford; Jessett, Fredk. B., Esq., London; Jessop, T. R., Esq., Leeds; Jessop, W. H., M.B., London; Jessop, C. M., Esq., London; Job, S., Esq., Newark; Johnson, S., M.D., Stoke-on-Trent; Johnson, G. L., M.B., London; Johnson, James, M.D., London; Johnston, W. J., M.D., Surgeon Army Medical Staff, Sheffield; Joll, B. B., M.B., Liverpool; Jones, D., Esq., Liverpool; Jones, J. A., Esq., North Wales; Jones, Evan, Esq., Ty-Mawr, Aberdare; Jowers, F. W., Esq., Brighton; Joyce, Thos., M.D., Cranbrook.

Kealy, J. R., M.D., Gosport; Keegan, Surgeon-Major, D. F., M.D., India; Kelly, C., M.D., Worthing; Kelly, Howard A., M.D., Philadelphia; Kelly, W. M., M.D., Taunton; Kelsey, A., Esq., Redhill; Kempe, C. M., Esq., New Shoreham; Ker, Hugh R., Esq., Halesowen; Kernot, C. N., M.D., Calcutta; Kershaw, Alfred, Esq., Farnworth, near Bolton; Keser, J. S., M.D., London; Kidd, G. H., M.D., Dublin; King, James, M.B., Leigh, Lancashire; King, J. B., M.D., Brighton; Kirk, R., M.D., Glasgow; Kirkland, James, Esq., Airdrie; Kitcroft, T. E., Esq., Bolton; Knaggs, Samuel, Esq., Huddersfield; Knight, H. J., Esq., Rotherham; Koch, W. V. M., M.B., Cottingham, Hull.

Laing, H. W., M.D., Bridge of Earn; Lamb, W. H., M.B., London; Lambert, J., M.D., Birkenhead; Lambert, William O., M.A., M.D., Sunderland; Lane, J., Esq., London; Lang, W., Esq., London; Latimer, H. A., Esq., Swansea; Lawrence, A. G., M.D., Chepstow; Lawrence, J., M.D., Darlington; Lawrence, L. W. K., Esq., Hove; Lay, C. E., Esq., Saxmundham; Leak, T. Mallorie, Esq., Hemsworth; Lee, C. G., Esq., Liverpool; Lee, F. F., M.B., Salisbury; Lee, Henry, Esq., London; Leech, D. J., M.D., Manchester; Leeson, J. F., Esq., Brighton; Leigh, W. D., Esq., Liverpool; Leigh, T., Esq., Brighton; Lewis, Charles Francis, Esq., Henfield; Ley, H. Rooke, Esq., Manchester; Liebreich, Oscar, M.D., Berlin; Littlejohn, S. G., M.B., Hanwell; Lofthouse, Deputy Surgeon-General, London; Lord, F., Esq., Southsea; Lowdell, Charles, Esq., St. Leonard's; Lowdell, Edward, Esq., Hove; Lowdell, J. L., Esq., Hove; Lowe, W. G., M.D., Burton-on-Trent; Lucey, W. Cubitt, M.D., Enfield; Lunn, W. J., M.D., Hull; Lusk, W. T., M.D., New York; Lyle, Thomas, M.D., Birmingham.

McAllisk, J. M., M.D., Albany, New York; McAndrew, James J., Esq., London; Macarthur, Alexander J., Esq., Brighton; McCallum, E., Esq., Edinburgh; McClelland, R. B., M.D., Banbridge, co. Down; Mac Cormac, Sir W., London; MacDonald, G., M.D., London; MacDonnell, R., M.D., Dublin; Macfie, Charles, M.D., Bolton; McGuire, Hunter, M.D., Richmond, U.S.A.; McHardy, M. M., Esq., London; McKellar, Deputy Surgeon-General E., M.D., Brighton; McKelvie, R. M.D., Brighton; Mackenzie, Stephen, M.D., London; Mackey, E., M.D., Brighton; McMorris, R., Esq., Strabane; MacNab, F., Esq., Hull; Macnamara, C., Esq., London; MacQueen, Thos., M.B., Eastbourne; McVail, D. C., M.D., Glasgow; Madden, T. M., M.D., Dublin; Maguire, R., M.D., London; Maguire, T. S., Esq., Wolverton; Mahomed, A. G. S., Esq., Bournemouth; Manning, H. J., Esq., Laverstock, Salisbury; Manning, Leonard A., M.B., Llanymynech; Manser, F., Esq., Tunbridge Wells; Mantle, A., M.D., Durham; Mapother, E. D., M.D., Dublin; Margetson, W. E., Esq., Dewsbury; Marsack, Arthur, Esq., Tunbridge Wells; Marsack, Blackall, Esq., Tunbridge Wells; Marsh, Howard, Esq., London; Marshall, B., Esq., Manchester; Marshall, John, Esq., Dover; Martin, W. Y., M.D., Walkden, Bolton; Martin, Henry A., M.D., Southsea; Martin, R. J., Esq., Atherton; Martin, E. S., M.D., Newry; Mason, Frederick, Esq., Bath; Masters, J. A., Esq., Brook Green; Mathieson, J. H., M.D., Ontaria; Mathieson, F., M.B., London; Mattison, J. B., M.D., Brooklyn, New York; Maury, R. B., M.D., Memphis, Tennessee; May, Bennett, Esq., Birmingham; Maybury, A. Kingston, M.D., Richmond; Maynard, Clarkson, Esq., Erith; Meadows, Alfred, M.D., London; Medwin, A. G., M.D., London; Meredith, J., M.D., Wellington, Somerset; Meredith, W. A., M.B., London; Mickle, W. J., M.D., London; Millar, A. P., M.D., Nelson-in-Marsden; Miller, James D., M.B., London; Miller, J. F., M.D., Paris; Milsome, J. R., M.D., Weybridge; Mitchell, Harrison, M.D., Cockermouth; Miyake, Professor H., Tokio, Japan; Montgomery, J. B., M.D., Penzance; Montgomery, R. J., M.B., Dublin; Moody, Jas., Esq., Cane Hill, Purley; Moore, Withers, M.D., Brighton; Moore, J. W., M.D., Dublin; Moore, G., Esq., Eastbourne; Morgan, George, Esq., Brighton; Morgan, L. W., M.D., Pontypridd; Morgan, W. Lewis, Esq., Oxford; Morris, W. Jones, Esq., Portmadoc; Morris, M., Esq., London; Morris, Edwin, M.D., Spalding; Morton, Thomas H., M.D., Sheffield; Morton, C. A., Esq., Carlisle; Morton, A. S., M.B., London; Mosse, C. G., Esq., Brighton; Muggeridge, H. H., Esq., Ashford; Muir, Henry Skey, M.D., Hounslow; Muir-Smith, A., M.D., Govan; Mullin, James, M.D., Cardiff; Mumby, B. H., M.D., Southsea; Munro, A. C., South Shields; Munro, J. C., M.D., Boston, U.S.A.; Murphy, S. F., Esq., London; Murray, W., M.D., Burley-in-Wharfedale; Murrell, W., M.D., London; Myddleton-Gavey, E. H., Esq., Camberwell.

Napper, A., Esq., Guildford; Napper, A. A., Esq., Cranleigh; Needham, F., M.D., Gloucester; Neilson, Archibald, Esq., Glasgow; Neville, W. C., M.D., Dublin; Neville, Thomas, M.D., London; Nevitt, John G., Esq., Chapel Allerton; Newman, A. P., M.D., Crawley; Newsholme, A., M.D., Clapham; Newth, A. H., M.D., Hayward's Heath; Newton, George, Esq., Dukinfield; Nicholson, R. H. B., Esq., Hull; Nicholson, A., M.D., Brighton; Norry, W. A., M.B., London.

Oakley, John, Esq., Halifax; O'Callaghan, R. T. A., Esq., Carlow; O'Connor, Bernard, M.D., London; Ogg, Surgeon-General G. S., W. London; Oldham, Chas., Esq., Brighton; Oliver, Thomas, M.D., Newcastle-upon-Tyne; Oliver, W., Esq., Stafford; Ord, W. M., M.D., London; Orwin, A. W., M.D., London; O'Ryan, J. F., Esq., Tipperary; O'Sullivan, S., M.D., Cork; Oswald, James W. J., M.D., London; Owen, E., Esq., London; Owen, W., Esq., London.

Paget, C. E., Esq., Kendal; Palmer, Edward, M.D., Bracebridge, Lincoln; Pancoast, W. H., M.D., Philadelphia; Pardington, G. L., M.D., Tunbridge Wells; Parish, F., Esq., Worthing; Parker, R. W., Esq., London; Parker, Rushton, Esq., Liverpool; Parkinson, C. H. Watts, Esq., Wimborne; Parsloe, H. H., Esq., Black Torrington; Parsons, Charles, M.D., Dover; Parsons, Daniel, Esq., Worthing; Parsons, Francis H., M.D., Worthing; Parsons, H. F., M.D., South Norwood; Partridge, Thomas, Esq., Stroud; Patton, Alex., M.B., Finglas, co. Dublin; Paul, J. H., M.D., Camberwell; Pavy, F. W., M.D., F.R.S., London; Pearce, G., M.D., Glasgow; Pearce, H., Esq., Hurstpierpoint; Pearce, Walter, M.B., London; Pearse, W. E. Grindley, Esq., London; Pearse, T. Frederick, M.D., Haslemere; Pearse, William, Esq., St. Tudye, Bodmin; Pearson, F. W., M.D., Baltimore; Peck, W. F., Esq., Davenport, Iowa; Peltzer, A., M.D., Venice; Penfold, H., Esq., Brighton; Penrose, Francis G., M.B., Wimbledon; Percival, Thomas, Esq., Knottingley; Perkin, R. F., Esq., Warwick; Perkins-Case, P. W., M.D., Croydon; Petch, R., M.D., York; Philipson, G. H., M.D., Newcastle; Phillips, L. W. K., Esq., Hove; Phillips, H. H., M.D., Reading; Pickett, J., M.D., London; Pickles, John J., Esq., Leeds; Pink, C. H., M.B., Nelson, Lancashire; Playfair, W. S., M.D., London; Pollard, C., Esq., Burgess Hill; Pollock James F., M.D., Dublin; Pollock, R. J., Esq., Wimbledon; Pollock, W., M.B., Eastbourne; Pollok, Robert, M.B., Pollokshields, Glasgow; Poole, Surgeon-Major George K., M.D., Upper Norwood; Pope, Edward, Esq., Tring; Pope, Frank M., M.B., Leicester; Porter, W. E., Esq., Lindfield; Powell, E., Esq., Nottingham; Powell, G. D., M.D., Dublin; Powell, J., Esq., Newcastle-Emlyn; Powell, R. D., M.D., London; Power, C., M.D., London; Prankerd, John, Esq., Bath; Prankerd, O. R., Esq., Brighton; Pratt, A., M.D., Bletchingley; Pratt, Walter, Esq., Leighton Buzzard; Pringle, Surgeon-Major Robert, M.D., Blackheath; Pritchard, U., M.D., London; Purnell, J. J., Esq., Streatham; Purser, John M., M.D., Dublin; Purvis, Prior, M.D., Blackheath; Putsey, W. H., Esq., Staff-Surgeon R.N., Portland; Pye, Walter, Esq., London.

Radcliffe, S. J., M.D., Washington; Rake, B. N., M.D., Trinidad; Ralfe, C. H., M.D., London; Raud, J., Esq., London; Ranking, J. E., M.D., Tunbridge Wells; Ranney, George, M.D., Michigan; Raye, Surgeon-Major D. C. O'Connell, M.D., India; Reeves, H. A., Esq., London; Reihlen, M., M.D., London; Rendall, S. M., M.D., Aix-les-Bains; Renner, C., M.D., London; Richards, John, Esq., Bangor; Richardson, A. J., M.B., Hove; Richardson, C., Esq., Leeds; Richardson, T. A., Esq., Croydon; Ridge, J. J., M.D., Enfield; Rigden, G., Esq., Canterbury; Richmond, T., Esq., Glasgow; Ritchie, Andrew, M.D., Pollokshaws; Rivington, W., M.S., London; Roberts, A. T., M.D., Brighton; Roberts, B., M.D., Eastbourne; Roberts, F. T., M.D., London; Roberts, Robert, Esq., Portmadoc; Roberts, W. Owen, M.D., Landsville; Robertson, J. A., M.D., Sheffield; Robinson, A. H., M.D., London; Robinson, Edward, Esq., Leeds; Roe, E. H., Esq., Patricroft, Manchester; Roe, J. W., M.D., Ellesmere; Rogers, J., M.D., London; Rogers-Tillstone, H., M.B., London; Rolland, J. T., M.D., London; Rosebrugh, —, M.D., Hamilton, Canada; Ross, Douglas M., M.B., Brighton; Ross, James, M.D., Manchester; Ross, James A., M.D., London; Ross, J. Harris, M.D., Brighton; Routh, C. H. F., M.D., London; Row, W., Esq., Overton; Rowe, W. P., Esq., Liverpool; Royle, P., M.D., J.P., Manchester; Ruckley, Henry R., Esq., High Wycombe; Rudd, Brigade-Surgeon T., M.D., Woolwich; Rugg, G. L., Esq., London; Rugg, G. P., M.D., London; Rundle, H., Esq., Southsea; Ryan, J., M.B. Brighton; Rygate, D. J., Esq., Cambridge; Rygate, J. R., Esq., Cambridge.

St. George, George, Esq., Lisburn; Salzmann, F. W., Esq., Brighton; Sanders, J. W., M.D., London; Sandford, A. M., M.D., Cork; Sankey, Julius O., Esq., Oxford; Saunders, C. E., M.D., Hayward's Heath; Saunders, H. W., M.B., Upper Tooting; Savage, Thomas, M.D., Birmingham; Savage, J. G., Esq., Brighton; Savage, George H., M.D., London; Savill, T. D., M.D., London; Sawdon, Frederick J., M.D., Hull; Scatliff, A. W., Esq., Margate; Scatliff, J. M. Elborough, M.D., Brighton; Scott, Alfred, Esq., Brighton; Scott, R. J., Esq., Bath; Sealy, J. T. H., Castleton, Sheffield; Seaton, D., Esq., Bitterne, Southampton; Semon, Felix, M.D., London; Shaw, George, Esq., Enfield; Sheen, A., M.D., Cardiff; Shimeld, J., Esq., Ilford; Shipton, W., Esq., Montreal; Shoemaker, J. V., M.D., Philadelphia; Shuttleworth, G. E., M.D., Lancaster; Sibley, S. W., Esq., London; Simpson, W. S., Esq., Worthing; Sinclair, Eric, M.D., Gladesville, Mulugan; Sisk, J. O'Neill, M.D., Fermoy; Sloman, S. G., Esq., Farnham; Small, E. H., M.D., Pittsburgh, U.S.A.; Smith, C. J., Esq., Brighton; Smith, David B., M.D., Netley; Smith, E. K., Esq., St. Leonard's; Smith, E. Stanley, Esq., London; Smith, F. H., Esq., Hertford; Smith, G. J. M., M.D., Hurstpierpoint; Smith, H. A., Esq., Ealing; Smith, John, M.B., London; Smith, Joseph, Esq., Streatham; Smith, Noble, Esq., London; Smith, S. Parsons, Croydon; Smith, Solomon C., M.D., Halifax; Smith, Thos., M.D., Woodley, Stockport; Smith, Walter, M.D., London; Smith, W., M.D., Manchester; Smith, W. W., M.D., London; Smyth, Joseph, M.D., Naas; Snell, S., Esq., Sheffield; Snow, W. V., M.D., Bournemouth; Siordet, J. L., M.B., Mentone; Solomon, J. Vose, Esq., Birmingham; Spender, J. K., M.D., Bath; Spooner, C. H., Esq., Brighton; Squire, W., M.D., London; Stamford, W., Esq., Tunbridge Wells; Starling, E., M.D., Tunbridge Wells; Startin, J., Esq., London; Stear, Henry, Esq., Saffron Walden; Steavenson, W. E., M.D., London; Steel, S. H., M.B., Abergavenny; Stephen, A. W., Esq., Peckham; Stephens, Edward, Esq., Ilminster; Stephens, J., M.D., Brighton; Stephens, W. J., Esq., Brighton; Stevens, A. F., Esq., Ixworth; Stevens, W. G., M.B., Renfrew; Stevenson, George, M.D., Manchester; Stewart, James, M.D., Montreal; Stewart, Jas., Esq., Clifton; Stewart, R. S., M.D., Bridgend; Stokes, Sir William, Dublin; Stone, T. M., Esq., Wimbledon; Stone, W. D., M.D., London; Stone, W. H., M.D., London; Strange, A., M.D., Shrewsbury; Strange, William, M.D., Worcester; Straton, C. R., Esq., Salisbury; Stripland, G. B., Esq., Worthing; Stuart, J., M.D., Ballymena; Sturges, Octavius, M.D., London; Suckling, C. W., M.D., Birmingham; Sutherland, H., M.D., London; Suzuki, S. M., M.D., Tokio, Japan; Swain, Edward, Esq., Baldock; Swales, Edward, Esq., Sheerness; Swayne, J. G., M.D., Clifton; Sweeting, R. D. R., Esq., Fulham; Sykes, J., M.D., Doncaster; Sykes, John F. J., M.B., London; Symington, J., M.D., Edinburgh; Symonds, C. J., M.S., London; Symons, H. E., Esq., Eastbourne; Sympson, T., Esq., Lincoln.

Taaffe, R. P. B., M.D., Brighton; Tait, Lawson, Esq., Birmingham; Tapson, John, M.D., Blackheath; Tapson, J. A., Esq., Clapham; Tatham, J. F. W., M.B., Salford; Taunton, W. W., Esq., Norwood; Taylor, C., M.D., London; Taylor, C. Bell, M.D., Nottingham; Taylor, G. G. Stopford, Esq., Liverpool; Taylor, James, Esq., Chester; Taylor, M. W., M.D., London; Taylor, W., M.D., Cardiff; Terry, G., Esq., Mells, Frome; Thetford, W., Esq., Strangford; Thomas, G. D., M.D., London; Thomas, Jabez, Esq., Swansea; Thomas, W. R., M.D., Sheffield; Thompson, E., M.D., London; Thompson, Surgeon-General J. J., Brighton; Thompson, J. A. Mulville, Esq., Hemel Hempstead; Thomson, W. A., Esq., Ampthill; Thornton, J. K., M.B., London; Thurstan, E. P., M.D., Southborough; Thwing, E. P., M.D., Brooklyn, New York; Tiffen, R., M.D., Wigton; Tilley, Samuel, Esq., Cranford; Tomkins, H., M.D., Leicester; Tomlinson, E. D., M.D., Southsea; Tosswill, Louis H., M.B., Exeter; Travers, R. B., Esq., London; Treves, E., Esq., Hove; Treves, Fred., Esq., London; Trend, T. W., M.D., Southampton; Trollope, T., M.D., St. Leonard's; Tryon, J. R., M.D., Washington, U.S.; Tuke, D. H., M.D., Hanwell; Turner, J. S., Esq., Upper Norwood; Tyacke, N., M.D., Chichester; Tyson, W. J., M.B., Folkestone.

Uhthoff, John C., M.D., Brighton; Upton, A., Esq., Hove; Urquhart, A. R., M.D., Perth.

Vacher, F., Esq., Birkenhead; Vasey, Chas., Esq., London; Vasey, Lyon, Esq., Staff-Surgeon, R.N.; Verley, R. L., Esq., London; Vernon, M. H. H., Esq., Horsham; Verrall, T. Jenner, Esq., Brighton; Vinrace, E. D., Esq., Erdington; Vise, C., M.D., Tunbridge Wells; Vragassy, W., M.D., Vienna.

Wales, T. G., Esq., Downham Market; Walford, T. L., Esq., Reading; Wallace, F., Esq., London; Wallace, A., M.D., Rochdale; Waller, A. D., M.D., London; Wallis, Hugh, Esq., Alfriston; Wallis, William, Esq., Hartfield; Walsham, W. J., Esq., London; Walters, C. A., Esq., Cheltenham; Walters, F. R., M.D., London; Walton, R. S., M.B., Scarborough; Warburton, J. W., Esq., Liverpool; Ward, J.

L. W., Merthyr Tydfil; Warden Charles, M.D., Birmingham; Waring, F. J., M.D., Hove; Warner, Francis, M.D., London; Waters, Edward, M.D., Chester; Watkins, R. W., Esq., Towcester; Watkins, E. T., M.D., London; Watson, W. Spencer, Esq., London; Watson, Deputy Surgeon-General Geo. A.; Webster, Thomas, Esq., Bristol; Welch, C., Esq., Brighton; Weld, C. H., Esq., Sandhurst; Weller, George, Esq., Wanstead; Wells, Charles, M.D., London; Welsh, F. Fawsett, Esq., St. Leonard's; Wethered, F. J., Esq., Clifton; Wheeler, Daniel, Esq., Chelmsford; Wheeler, John, M.D., London; Wheelhouse, C. G., Esq., Leeds; Whitcombe, E. B., Esq., Birmingham; White, Brigade-Surgeon B. J., London; White, Surgeon-Major C., Winchester; White, James, Esq., Wigan; White, R., Esq., Brighton; White, S. S., M.D., St. Leonard's; White, T., Charters, Esq.; White, W. Hale, M.D., London; White, W. R., M.D., Wadhurst; Whitehead, Walter, Esq., Manchester; Whitelegge, B. A., M.D., Nottingham; Whittle, E. G., M.D., Brighton; Wile, W. C., M.D., Newtown, Connecticut; Wilkins, G. H., Esq., London; Willett, A., Esq., London; Williams, A. Wynn, M.D., London; Williams, Evan, M.R.C.S., Llangefni; Williams, Morgan, M.D., Cardiff; Williams, O. T., Esq., Holyhead; Williams, P. Watson, Esq., Brighton; Willis, Robertson, W., Esq., Barkleston; Wills, J., Esq., Guildford; Willmore, F. W., Esq., Walsall; Wilmott, A. E., Esq., Burnham; Wilson, H. P., M.D., Baltimore; Wilson, James, C., M.D., Philadelphia; Wilson, J. M., M.D., Doncaster; Wilson, Samuel, Esq., London; Winkfield, A., Esq., Oxford; Winter, J. N., Esq., Brighton; Wise, R. Stanton, M.D., Banbury; Wolston, W. T. P., M.D., Edinburgh; Wood, Casey A., M.D., Montreal; Wood, E. S., M.D., St. Paul, Minnesota; Wood, T. Outterson, M.D., London; Woodhead, G. S., M.D., Edinburgh; Worley, W. C., Esq., London; Worship, J. L., Esq., Sevenoaks; Wrench, E. M., Esq., Baslow; Wright, Alfred, Esq., London; Wright, Charles J., Esq., Leeds; Wright, Henry, M.D., Ottawa; Wylie, A., M.D., London; Wylie, W. Gill, M.D., New York.

Young, E. Parker, Esq., London; Young, W. Butler, Esq., Reading.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1886. ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.—The next meeting will be held at the George Hotel, Halstead, September 11th, 1886, at 3.30 P.M. Dr. R. G. Kellett, of Halstead, has kindly invited the members present to dinner at the George after the meeting. A special train will leave Halstead at 8.45 P.M. for the main line and for Haverhill. The following papers have been promised. 1. On some interesting Cases of Midwifery, by Dr. Kellett. 2. Pessaries, their Varieties, Uses, and Abuses, by Dr. Clement Godson. 3. Mr. John Taylor (Earl's Colne) will show a large Biliary Calculus, an interesting specimen of Fractured Femur, a Drawing of a Case of Ichthyosis. 4. Mr. Simpson (Coggeshill) will show a Drawing of a peculiar form of Skin-Disease. 5. Mr. W. T. Jackman will describe some recent improvements in ophthalmic instruments and models. Members wishing to read papers or exhibit cases, are requested to communicate with the Honorary Secretary, WM. THOS. JACKMAN, Coggeshall, Essex.

SPECIAL CORRESPONDENCE.

SWITZERLAND.

[FROM OUR OWN CORRESPONDENT.]

Loetscher's Guide.—Extirpation of Omphalo-mesenteric Cyst.—Salol as a Dressing Material.—No Muscarin in Bug Agaric.—Prevention of Drowning.—Failure of Sight in Glaucoma.—Massage in Fungous Arthritis.—Medical Students in Swiss Universities.—A Centenarian.

THE second edition of Dr. H. Loetscher's *Schweizer Kur-Almanach* for 1886 has just appeared, and may be safely recommended to travellers who come to Switzerland, bent on seeking cure, or repose, or a pleasant tour. It contains a large map of bathing places, and a hundred and twenty views, panoramas, and special maps, as well as 352 pages of good text, full of useful information. It is really astonishing how this neatly bound and printed and profusely illustrated book can be sold at the price of 3 francs (2s. 6d.).

In the *Correspondenz-Blatt für Schweizer Aertze*, No. 13, 1886, p. 345, Dr. Theophil Schaad details a very interresting case of extirpation by laparotomy, of a cyst of the omphalo-mesenteric duct in a woman, aged 32. The patient was up and about on the fifteenth day after the operation (performed by Dr. Kuhn, of St. Gall). The tumour had the size of an apple, and was filled with a chocolate-coloured opaque viscid fluid, containing considerable quantities of cholesterine, fat, etc. The walls of the cyst consisted of unstriated muscle, fibres, and mucous membrane with glands and cylinder-epithelium.

As Dr. Herman Sahli states, salol (see BRITISH MEDICAL JOURNAL, July 17th, 1886, p. 130) is a good antiseptic agent. A series of careful experiments, by Professor Nencki and his assistant, Dr. Nadejda O. Sieber (a Russian lady doctor), has proved that the drug inhibits the growth of putrefaction-microbes as powerfully as salicylic acid (in powder). At the same time, salol has not the irritating or caustic properties of the acid. Dr. Sahli obtained rapid and good results from powdering with salol, in several cases of syphilitic and soft chancrous ulcers, several times a day by means of a brush, from insufflating into the nasal cavities in ozæna, or into the external auditory meatus in otorrhœa, and from injecting (in the shape of emulsions, made of 5 to 10 parts of the drug to 200 of vehicle) into the urethra in gonorrhœa. He recommends, also, the use of salol for gargles (3 parts of the drug to 100 of water).

At a meeting of the Berne Medico-Pharmaceutical Society, Professor Nencki stated that, basing his views on some researches by himself and Dr. Berlinerblau (a Russian), he was inclined to think that muscarin did not pre-exist in amanita muscaria, but was formed under the influence of certain procedures during extraction. Experimenting with dried amanita (which had been brought to him from Siberia, by Professor Dybowski of Lemberg), he was unable to obtain any alcoholic extract containing muscarin. The extract contained only lecithin. On the other hand, an extract obtained by boiling the mushroom with water, gave at once all physiological effects of muscarin.

Referring to the bathing season, Dr. Ziegler urges medical men to give as much publicity as possible to the "warning symptom," consisting in the appearance of a deep red colouration of the skin in the bather. The symptom being a sure foreteller of coming syncope, the bather attacked with it must be at once compelled to get out of the water, even if he or she feel well at the moment. Many a life may be saved by paying a due attention to that sign, which was first pointed out by French military surgeons.

Professor Pflüger, of Berne (the present *rector magnificus* of the University) describes several cases which seem to prove that failure of sight in glaucoma depends upon some lesion (œdema) of the bacillary layer of the retina, and not upon an increased intra-ocular tension, as Von Graefe thought and taught.

The treatment of fungous disease of the wrist and knee-joints (arthritis fungosa) by massage, is spoken of very favourably by Dr. Niehaus, of Berne. The best results (complete cure with preservation of function) are obtained in fungous arthritis of the wrist-joint, all parts of which articulation are fairly accessible for the manipulating hand. The duration of treatment required for cure varies between

three and twenty months. Fistulæ and abscesses by no means contraindicate the treatment. A strict disinfection of the surgeon's hands, as well as of the parts which are subjected to massage, represents a very important condition for a successful treatment.

According to an official report, the number of students registered at the five Swiss medical faculties during the summer session of 1886 was 675, 71 of them being women. In detail, the Basle faculty numbered 121 male students (amongst them 12 foreigners); the Berne faculty, 173 male (40 foreigners), and 30 female (29 foreigners, mostly Russians); the Geneva faculty, 112 male (32 foreigners), and 7 female (all foreigners); the Lausanne faculty, 15 male (1 foreigner) and 1 female (foreigner); and the Zurich faculty, 188 male (46 foreigners) and 33 female (24 foreigners).

According to the *Bund*, August 4th, 1886, on June 28th, there has died in St. Gingolph (on the French-Swiss frontier) at her own villa, a widowed lady, named Richard, née Dietrich, of Basle, aged 126. She was born on June 28th, 1760, and married four times (all in the last century). Up to her 110th year, her sight was good, but then rapidly failed. For the last ten years, she passed her days more asleep than awake.

CORRESPONDENCE.

☞ To Correspondents. ☜

Our correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return, and hold over a great number of communications, chiefly by reason of their unnecessary length.

MEMORIAL TO THE LATE DR. MOXON.

Sir,—In your last issue, Mr. Farrant Fry made a welcome allusion to the late Dr. Moxon's high talents and distinguished position as a physician and teacher, and suggested that some steps should be taken to perpetuate his memory. Doubtless, many will be in sympathy with this proposal. Among those who have already communicated with me on this subject is the esteemed President of the Royal College of Physicians, Sir William Jenner, who begged that, if any steps were taken in this direction, the memorial should not be confined to the staff and students of Guy's Hospital.

The close intimacy that I enjoyed for so many years with my late teacher, friend, and colleague, deterred me from initiating any movement of the kind; but, now that the suggestion has been made, I shall be glad to join with others in carrying out Mr. Fry's proposal. I have the authority of Dr. Moxon's immediate relatives to state that such a public memorial would be agreeable to their feelings; but they wish it to be distinctly understood that, whereas the late Dr. Moxon's generosity and free hospitality prevented him from accumulating any considerable fortune from his professional income, he left his family free from any suspicion of want. They would, therefore, desire that any funds collected should be devoted exclusively to that form of memorial which would best perpetuate his memory.—I am, sir, your obedient servant,

R. Clement Lucas.

18, Finsbury Square.

THE VISIT TO RYDE.

Sir,—I wish the members of the Association who visited this place on Saturday, August 14th, to know that it was no fault of mine that they were not cordially welcomed. I had no intimation of any sort until the Friday previous that we should be so honoured. I had on that day important engagements which I could not break, and which I should not have made had I been informed of the intended visit. I regret that the Manager of Excursions appears to have overlooked the fact of my being one of the Vice-presidents of the Association, although he may not have known that I am the Chief Magistrate of Ryde.—I am, Sir, yours faithfully,

B. Barrow, Mayor of Ryde.

Southlands, Ryde.

ASSOCIATION OF LICENTIATES OF SCOTTISH CORPORATIONS.

Sir,—Would you kindly allow me, through your columns, to ask any gentlemen desirous of forming an Association as above, to forward their names to me, with a view of holding a preliminary meeting?—I am, yours, etc.,

Arthur H. Wood, L.R.C.P. and S.E.

49, Wells Street, Oxford Street, W.

THE RELIEF OF COUGH.

Sir,—On finishing my perusal of Dr. Broadbent's admirable address before the Section of Medicine at Brighton, I felt sorry that he had not touched upon the pernicious after-effects of opiates administered for the relief of cough. Dr. Fothergill, however, in the Journal of August 21st, to a certain extent made good the deficiency; but, unlike Dr. Broadbent, Dr. Fothergill did not give any suggestions as to what remedies or combination of remedies he employs in their place. In the visiting-list of the practitioner, cases in which cough is a prominent symptom form a large proportion; and to be able to prescribe a good cough-mixture is a recommendation to many people. There is no drug which acts so quickly in allaying cough as opium; but, unfortunately, the sedative action of the drug does not stop at the lungs, but the liver, skin, and kidneys are each and all of them acted upon; and in most cases, after the cough has been relieved, the patient remarks, "Now, doctor, if you will give me something to give me an appetite, I will be about right." It is this difficulty—namely, to administer a mixture which, while it allays the cough, does not interfere with the digestive organs—that baffles many of us.

In most of my cases of bronchitis and phthisis, if not in its advanced stages, I am in the habit of prescribing the hypophosphites along with cod-liver oil, in the form of an emulsion; and I find that, if the patient will have a little patience, this combination seldom fails to give a great amount of relief. Since the introduction of pure terebene, I have combined that with the oil, with the result that the nutrition was improved, the cough was cured, and the digestive organs not interfered with. It is mainly in the advanced stages of phthisis, when the patient is sleepless from continued coughing, that I administer opiates.—I am, etc.,

J. Hutchison.

Shawlands, Glasgow, N.B.

NOMENCLATURE FOR OPERATIONS UPON THE OVARIES.

Sir,—In the Journal of July 3rd, page 49, you published a note from me, containing several reasons why we require an accurate and reformed nomenclature for ovarian surgery. My note, as any one may see, is absolutely free from anything like personality. In the Journal of July 24th, page 187, there is a letter, signed "F.R.C.S.," in which the reasons why we may require a better nomenclature are stated much more forcibly than I had done. This writer goes further than I did, or can, and states that "we have not yet been able to settle even what constitutes an abdominal section;" and argues that, because cases of removal of parovarian cysts cannot be properly included in tables of ovariotomy, we should publish every variety of abdominal operation, in chronological order, all in one table. Moreover, "F.R.C.S." finds it impossible, at the present moment, to give a "definite and scientific answer" to the question: "What is ovariotomy?"

Surely, Sir, a Fellow of the College of Surgeons, who can write so full an acknowledgment of our present difficulties, would do far better were he to try to remove them, than by indulging in unbecoming and irrelevant personal remarks. His assertions, that my inquiry does not deserve a serious answer, that I am a "cat's-paw," and "only at the fringe of the question," do not help me or any other surgeon in its serious study. Such a man as "F.R.C.S." could afford valuable assistance to seekers after truth; and, if he would do so, instead of attempting to extol himself by trying to rob others of their good name, and by constructing tables which manifest self-glory rather than scientific accuracy, he would be a wiser and not a sadder man. I have treated the scientific portions of "F.R.C.S.'s" letter seriously; as to the personal parts of it, I feel sure that every other Fellow of the College condemns their introduction into a scientific debate.—I am, Sir, yours faithfully,

Chas. E. Jennings.

Park Street, Grosvenor Square, W.

BATH AND AIX-LES-BAINS.

Sir,—On this subject Dr. Tilt has contributed a short paper to the Journal, in which he discusses the merits and demerits of these famous spas. But, as it appears that he has not visited Bath since 1874, his criticism loses much of its value.

During the past few years, a great deal has been done to make Bath more worthy of professional support and public patronage. The science of mineral waters is better understood; the art of applying them is recognised as an integral portion of the art of medicine; and there is no longer the same prejudice in favour of foreign watering-places, just because they are foreign. It suffices to say that the

thermal quality of the Bath waters renders them unique in Great Britain and Ireland.

Many London physicians and surgeons have come to Bath during the last three or four years, and not a few distinguished men living in other parts of England. That we still have much to learn, is cheerfully acknowledged; but it is equally true that we are ready to learn it. If everything is accomplished successfully, which we are now trying to do, within another twelvemonth Bath will be one of the first spas in the world. But English weather is not, and never will be, Italian; our scenery is exquisite, but we do not pretend to rival the skies and the vegetation of Aix-les-Bains. And the mere fact of going abroad weighs more with a number of people than any special system of bathing or quality of the waters.

Two remarks by Dr. Tilt call for particular notice.

1. Our season for bathing is governed to some extent by our climate. Bath is planted in a geological basin, surrounded by hills, except to the westward; the air is soft, sedative, and comparatively calm, but too relaxing during the six or seven hottest weeks in the summer. From time immemorial, the spring and autumn have been regarded as the best times for bathing here; and we feel that there are good grounds for this preference. The claims of Bath as a winter residence are well known. We do not grudge Buxton, Harrogate, and Strathpeffer their short summer "innings."

2. It is not the custom at British spas to appoint "bath doctors," or medical men who devote their whole time and skill to the bathing. It is a sufficient argument to say that this would be contrary to the genius of the profession in this country. Nearly every patient who comes to Bath is provided with an introduction from his or her own medical adviser to some physician or surgeon here, and anything beyond this is simply impossible. There can be no monopoly of knowledge or practice in a matter which is open to every one. If the medical men do not (as a rule) accompany their patients to the baths, it is because they give precise written or printed instructions, and rely on the care and fidelity of the attendants.

There is a local tradition that a medical man once wrote a little tract, and announced himself on the first page as "consulting physican for the Bath waters." But this self-constituted title only amused his brethren, and puzzled lay people.

I invite Dr. Tilt to come and see Bath again, and remain, Sir, your obedient servant,

M. D.

Bath.

THE VITALITY OF MICRO-ORGANISMS.

SIR,—The recent assertion by Messrs. Crookes, Odling, and Tidy that bacillus anthracis survives but "a few hours" in water, together with Dr. Percy Frankland's interesting communication in the JOURNAL of July 31st, induces me to send you the following note of the earlier results of some hitherto unpublished experiments of my own in the same field.

It is well-known that ordinary distilled water commonly contains the spores or potential elements of many kinds of micro-organisms, so that the addition of a few drops of such water speedily causes an abundant development in suitable nutritive media.

My object was to ascertain and compare the duration of existence of these spores under what would seem to be starvation circumstances. Precautions, especially necessary as I was purposely not working with "pure cultures," were taken against error from accidental intrusion of foreign germs. After nearly two years' experience I arrive at the following results.

The various forms of micro-organisms found in distilled water develop less readily as time goes on, but they differ greatly in their respective powers of resistance, so that the dominant species of one period will be distinct from those of another.

Bacterium termo and the putrefactive bacilli, which formerly appeared, are now replaced by bacillus subtilis, a fine "leptothrix," and two kinds of hyphomycetous fungi. The spores of each of these has survived for 424 days in plain distilled water, and will probably continue so to survive much longer.

I have also described, in the last volume of the *Proceedings of the Royal Society*, a peculiar bacillus forming globose or cylindical fronds of zoogloea, which had resisted four months' exposure to strong sunlight, and to repeated elevations of temperature of from 60° to 70° C.

Elsewhere I have given reasons for thinking that micro-organisms endure injurious influences—as of sunlight—better in water than in nutrient media, for the simple reason that they are usually unable to enter upon the vegetative phases of their existence. This, of course, is precisely on all fours with Professor Tyndall's classical observation on the sterilisation of hay-infusion by boiling on successive days.

In conclusion, I may refer those who are interested in this matter to a memoir by Professor Duclaux, in *Ann. de Chemie et de Physique*, Mai, 1885, in which the duration of life of micro-organisms in exhausted cultures is carefully studied.

In sixty-five flasks of M. Pasteur's earlier researches, examined by Duclaux, one hyphomycetes (Aspergillus niger), one micrococcus, and four species of bacillus, had retained their vitality for twenty-five years.—I am, Sir, your obedient servant,

Chelmsford. ARTHUR DOWNES, M.D.

THE IMMEDIATE REDUCTION OF DEFORMITIES.

SIR,—Mr. Noble Smith in the JOURNAL for April 17, in commenting on "the rapid method of treatment of orthopædic deformities," makes use of the following remarks.

"Caution, however, is necessary that actual union is obtained. Care must be taken not to apply too much pressure upon the place of separation, and the tendon must be examined from time to time, and the parts brought nearer together, if the separation seem too near. This supervision cannot take place when plaster-of-Paris bandage is used, and I have seen disastrous results from thus fixing the foot in the natural position, after tendency for talipes equinus. *Severe talipes calcaneus resulted from excessive lengthening of the tendo Achillis.*" (The italics are my own). "There need be no fear of such an unfortunate effect, if movable splints be used, and the progress carefully watched."

I have come to place such implicit confidence in all that Mr. Noble Smith writes, that I hesitate before yielding to the temptation to question the sentence I have italicised in the above. He speaks of "disastrous results" in the sentence immediately preceding, and I conclude that this resulting "severe talipes calcaneus," is one of the disastrous results. 1. May I ask are there any more results so disastrous? 2. In view of the dearth of such cases in orthopædic literature, may I not hope that Mr. Smith will place on record one or more of the cases of "severe talipes calcaneus" which have resulted, by reason of this after-treatment?

At a recent meeting of the Orthopædic Section of the New York Academy of Medicine, this very question—the danger of a permanent calcaneus resulting—was very fully discussed, and the members, several of whom are men of long and large experience in this branch of surgery, were unable to report any such cases as those to which Mr. Smith alludes.

My reason for addressing the JOURNAL is that the readers as well as myself may have the benefit of Mr. Smith's reply.

New York. V. P. GIBNEY, M.D.

SIR,—In answering the above communication from Dr. Gibney, I would first remind the readers of this JOURNAL that the words of mine which are quoted referred to the plan of reducing deformed parts as much as possible at the time of tenotomy, instead of the procedure generally adopted in this country of allowing the tendons to heal in the abnormal position, and then stretching the uniting material while it is new and plastic.

Dr. Gibney, in a very courteous manner, questions the occurrence of severe talipes calcaneus from excessive lengthening of the tendo Achillis after division of that tendon for talipes equinus, and requests that I should put on record any other case in which "disastrous results" have in my experience occurred. In reply, I am glad to be able to say that I only referred to one case. It was in a child of about 8 or 9 years of age, and the lengthening of the tendon was so great that instrumental aid was requisite to enable the child to walk. I saw this case five years ago. The parents described, with apparent correctness, the foot as having been originally extended in the equinus position, and the existence of a scar in the ordinary place of operation upon the tendo Achillis supported their statement of the nature of the deformity and the operation for its relief. I used the word disastrous as indicating my opinion at the time, but I should not now consider such a case so serious, because I should expect to be able to cure it by ablation of a piece of the lengthened tendon.

This case I cannot but look upon as an exceptional one, and to be accepted with caution, because I had not personal knowledge of its previous history. As to my personal experience, I am happy to say that it supports Dr. Gibney's, as I have never had other than satisfactory results after tenotomy; and this is especially the case after immediate reduction, a plan of operation which is highly beneficial in every respect (except to the pocket of the surgeon). It simplifies the treatment immensely, and leads, I believe, to better results than the old-fashioned plan.

The fear I expressed of the possibility of evils resulting after much separation of the divided parts, if the cases should be treated carelessly, was dictated rather by caution than by experience, and is sup-

ported by the words of Dr. Gibney himself in a very instructive paper of his published in the *New York Medical Journal*, which he has been so kind as to send me. He writes: "One can see how the operation might be done in a way that might lead to a bad result. If, for instance, in paralytic equinus the operation was done, and the foot was flexed so as to produce a wide separation of the divided ends of the tendon, a calcaneus would undoubtedly result.....It is very rarely that a tendon is made too long by tenotomy."

I may add that I adopt the "immediate reduction" plan, even in paralytic cases, and the results are most satisfactory.—I am, etc.,

Queen Anne Street, London, W. NOBLE SMITH.

THE RECENT CASE OF POISONING BY COMMON SORREL (RUMEX ACETOSA).

SIR,—Having made the *post mortem* examination on the boy Edward Arthur Geary, at the request of Mr. Clarke, of Gravelly Hill, who attended him during life, I feel it incumbent upon me to supply you with particulars of the case.

Common sorrel is not generally known to be poisonous, and is not mentioned in ordinary text-books on poisons. It is not mentioned by Guy and Ferrier, Blyth, Woodman and Tidy, Ziemssen's *Cyclopædia*, or in recent editions of Taylor's work on poisons; but it is mentioned in the first edition of Taylor's work, 1847, where a fatal case is mentioned, and reference made to two cases of severe illness following the eating of sorrel, recorded in the *London Medical Gazette*, Vol. xl., page 69. Mr. Clarke has supplied me with his notes of the case, which are as follows.—"I was summoned to see Edwin Arthur Geary, a boy aged 5, at 10 A.M., on June 12th, 1886. He had been perfectly well up to the present attack. At once seeing the critical condition of the boy, I desired the presence of their own medical attendant; he not being at home, Mr. Fairley, of Aston, was sent for, and arrived about 11 o'clock. The patient was being nursed by a neighbour, and was unconscious, the face cold and pale, forehead moist, extremities cold, respiration slow, pulse frequent and feeble. The prostration was great. There was no convulsion. The conjunctiva was only slightly sensitive to touch, the pupils small, but not markedly contracted, but later on they dilated. I learned from the father that the patient had been drinking soapy water, which had collected in the soap-bowl underneath the perforated dish that held the soap. I also learned from a neighbour that he had been eating a large quantity of the flowering stalks of the common green sorrel (Rumex acetosa) the night before, followed by a meal of plum cake. He then went to bed, and on the following morning he was seen drinking from the soap-bowl, and in a short time he fainted. The servant carried him downstairs to his father, who gave him an emetic of salt and water, but the emetic had not acted when I saw the boy. I at once placed him on the bed, and produced vomiting with a feather; and he ejected about three-quarters of a pint of colourless, odourless, transparent fluid, containing very little mucus, but no blood, and no shreds of mucous membrane. I administered a teaspoonful of vinegar diluted, in order to neutralise the alkalinity of the soap; and gave him an enema of brandy, ordered hot bottles to the limbs and body, and a mustard-plaister to the heart. He shortly afterwards passed a copious liquid motion, and his pulse was feeble and intermittent. Mr. Fairley now arrived. Upon examining the motion, which was green in colour, we found it to contain a large quantity of stalks, ribbed like the stalks of sorrel. Small quantities of brandy were administered by the mouth, and brandy was given *per rectum;* and chalk also was administered. At 2 P.M. I left the patient. There were signs of reaction in the pulse, which was fuller, soft, and 120 per minute. I saw the patient again at 5 P.M.; he was still unconscious and collapsed. Vomiting and purging had been frequent during my absence. He died about 5.30 P.M., seven hours and a half after I first saw him."

The necropsy was performed by myself on June 14th, forty-nine hours after death. Rigor mortis was well marked. There was no trace of external injury. The lips were cyanosed, but there was no erosion or staining. No erosion or staining could be observed on the tongue or mucous membrane of the mouth and throat. The dura mater was tense, but healthy; as were the other membranes of the brain, except that the veins of the pia mater were very turgid. The brain itself was congested, but otherwise perfectly healthy. The stomach was empty, and, except for a small patch of congestion near the pylorus, was healthy. The small intestine contained yellowish fluid material, containing stalks of some vegetable partially digested; these stalks were ribbed, and were about the size of sorrel-stalks; some of them were two inches and a half long. The heart was flaccid and empty, otherwise normal. The lungs were a little congested at the base and along the posterior border. The liver and kidneys were congested. The condition of the heart and the visceral congestion were compatible with, and pointed to, death from collapse. Mr. Fairley was of opinion that death was due to the sorrel, the poisonous effect of which was accentuated by the soap and water. I expressed agreement with him, but suggested that the vomit, urine, contents of intestine, the soap and water, and portions of the viscera, should be preserved. Mr. Clarke having wisely secured the vomit and the soapy water, these have been analysed by Dr. Bostock Hill, the County Analyst, and Professor of Toxicology at Queen's College, who informs me that he cannot detect oxalic acid or any other poison in any of them. The soap and water was a very weak solution of soap, and not at all poisonous.

What was the cause of death in this case? The boy, previously in perfect health, ate a large quantity of sorrel at about 7 P.M. He was quite well, and complained of no pain or nausea till the morning, when he evidently felt ill and thirsty, or he would not have attempted to drink soapy water. He drank about four ounces of the water, and was found a few minutes after on the floor almost insensible. It appears to me that slow poisoning must have been going on all night, and that the swallowing of fluid was followed by a fresh absorption of the poison, which caused immediate collapse, his getting out of bed also hastening it. Any speculation as to the chemical action between the soap and water and the sorrel helps us very little in explaining the collapse immediately following its ingestion, seeing that the soda salt, if formed, is only very slightly more soluble than the potash salt.

Mitscherlich estimated that the proportion of binoxalate of potassium present is .75 per cent. of the fresh plant, and that 1 ounce of fresh sorrel contains about 3 grains of that salt. It seems impossible that such a small quantity of binoxalate of potassium, even supposing that he ate 2 or 3 ounces of the plant, which would be a great deal, could prove fatal. It may be that there is some other poisonous substance present not known.

The case, in my opinion, was one of death from poisoning by sorrel, and this opinion is confirmed by the fact that a playmate of the boy, who had also eaten sorrel, was ill for two or three days.—I am, etc.,

Birmingham. C. W. SUCKLING.

NAVAL AND MILITARY MEDICAL SERVICES.

VOLUNTEER MEDICAL STAFF CORPS: ANNUAL INSPECTION.

ON Saturday, July 17th, 1886, the principal medical officer of the Home District, Sir JAMES HANBURY, K.C.B., held his annual inspection of this corps. He was accompanied by Surgeon H. R. O. Cross, Grenadier Guards. The members of the corps mustered to the number of 296. In their full dress kit they looked imposing. Since last year the physique of the men seems to have improved considerably.

Sir James made a most minute inspection of the corps, and had each company parade before him, and every officer had to come out in front of his company and drill the men. The following manœuvres were gone through:—wheeling into line; open order for inspection; marching past in column; forming seats; formation of a bearer company; rendering first aid in the field and waggon loading. The inspecting officer finally congratulated the Commandant, officers, and men on their smart appearance, and on the way in which they had gone through the severe test to which he had submitted them.

NAVAL MEDICAL DEPARTMENT.—At the competition for commissions in the Medical Service of the Royal Navy, held on August 9th and following days, in the Hall of the University of London, the undermentioned gentlemen were the successful candidates.

	Marks.		Marks.
G. H. Milnes	2990	J. M. France	2270
A. E. Weightman	2885	J. Menary	2270
J. W. O. Underhill	2580	W. G. Axford	2265
C. H. Upham	2525	W. C. Spiller	2240
F. J. Burns	2495	G. T. Broatch	2210
A. T. Rimell	2485	W. Bett	2200
D. J. P. M'Nabb	2465	H. W. Rickards	2150
C. Strickland	2440	F. A. Brice	2110

As is shown in another column, all these gentlemen have been gazetted as Surgeons in Her Majesty's fleet.

ARMY MEDICAL STAFF.—The following candidates who were successful for appointments as Surgeons in the Medical Staff of Her

Majesty's Army, at the competitive examination in London, on the 9th and following days of August, 1886.

	Marks.		Marks.
F. J. Morgan	3180	W. L. Gray	2380
C. H. Hale	3050	L. E. A. Salmon	2370
E. A. Burnside	2895	M. P. Holt	2360
W. C. Poole	2870	D. Steill	2360
W. H. Horrocks	2830	J. C. Morgan	2340
G Raymond	2765	C. J. Weir	2330
H. C. Thurston	2750	A. B. Hinde	2325
A. Y. Reily	2660	J. W. Bullen	2320
B. H. Scott	2655	B. J. Inniss	2310
G. A. Wade	2655	R. H. Penton	2310
H. St. G. Hore	2650	R. C. Thacker	2300
A. C. Watson	2620	H. J. Pocock	2290
D. R. A. Julian	2610	C. A. Young	2265
E. Corcoran	2560	M. O'Brien	2240
J. W. Cockerill	2540	E. M. Hassard	2235
J. C. McCulloch	2500	G. Hilliard	2235
S. Macdonald	2495	W. N. Murphy	2200
J. Ritchie	2490	C. R. Elliott	2150
E. W. Gray	2470	S. F. Clark	2110
J. Minniece	2460	F C. Sinclair	2090
E. G. Browne	2380		

INDIAN MEDICAL SERVICE.—The following is a list of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination held at Burlington House on August 9th, 1886, and following days. Thirty-seven candidates competed for twenty-five appointments. Thirty-three were reported qualified.

	Marks.		Marks.
R. P. Macnamara	3165	J. H. Sellick	2530
H. W. Pilgrim	2970	E. C. Hare	2490
J. Mc. D. Swinburne	2770	F. C. Clarkson	2480
G. B. French	2740	R. H. Castor	2470
F. W. Thomson	2735	H. M. Morris	2470
G. C. Hall	2730	F. G. Maidmeat	2400
S. H. Henderson	2715	J. P. Doyle	2370
C. R. M. Green	2710	J. T. Blancard	2350
J. E. Dyson	2650	E. A. W. Hall	2340
C. N. Bensley	2630	D. W. Scotlan	2340
E. H. Brown	2620	James Norwood, M.D.	2330
B. B. Grayfoot	2570	A. R. P. Russell	2315
J. G. Jordan	2570		

EXAMINATION OF CANDIDATES FOR HER MAJESTY'S ARMY, INDIAN AND NAVAL MEDICAL SERVICES.

THE following questions were submitted to the candidates at the recent examination. *Anatomy and Physiology.*—1. Describe the hip-joint, giving an account of that portion of each bone which enters into its formation, the ligaments and muscles with their respective uses, which are in immediate relation with the articulation, and the vessels and nerves with which it is supplied. 2. Describe the origin, distribution, and anatomical relations of the arteries, and their branches which supply the hand with blood. 3. Describe the anatomical relations, connections, and structure of the small intestine, from the pylorus to the ileo-cæcal valve, with its blood-supply and innervation, giving an account also of the processes carried on in each portion of this section of the intestinal tube. 4. Describe the anatomical relations, connections, structure, and functions of the spheno-palatine ganglion. 5. Describe the anatomical relations, connections, structure, and functions of the prostate gland. *Surgery.*—1. Describe the complications which may arise in cases of neglected stricture of the urethra, and the treatment to be adopted under the various conditions. What are the usual causes of death in such cases? 2. What are the causes of the condition known as "angular curvature" of the spine? Describe the various complications attendant on it, when affecting different parts of the vertebral column, and the treatment of each. 3. A man is the subject of a recent and large inguinal hernia, without symptoms of strangulation; the surgeon has failed to reduce it, under the influence of an anæsthetic. Describe the treatment to be adopted under such circumstances, with any complications which may subsequently arise, and in what manner these should be dealt with. 4. Describe the symptoms and causes of senile gangrene, and its treatment. What are the characteristics of that form of gangrene which is associated with diabetes, and in what respect would its course and treatment differ from that of the former variety? 5. By what symptoms may acute inflammation of the synovial membrane of the knee-joint be diagnosed from an acute abscess of the bursa of the patella? What are the usual causes of the former, and what treatment should be adopted in its various stages? 6. What are the most common causes of necrosis of bone? In what respect does the acute differ from the chronic form, and what should be the treatment in each? *Medicine.*—1. A case for critical analysis and commentary (details given). Discuss fully the pathology and probable morbid anatomy of this case, explaining your views in detail regarding the origin, progress, and development of the symptoms and physical signs, and their mutual relationship, if any, with your conclusions as to diagnosis. 2. Give an account of the origin, symptoms, diagnosis, progress, and morbid anatomy of a hydatid tumour in the liver. 3. What are the morbid conditions to which the names of "renal colic" and "gall-stone colic" are respectively applied? Describe the symptoms of "renal colic," and its diagnosis from other disorders for which it may be mistaken. How would you treat a paroxysm of renal colic, and how manage the case after relief of the paroxysm? 4. What are the difficulties peculiar to labour when an arm or a shoulder is the presenting part? How would you manage such a case? 5. What are the actions, therapeutic uses and doses, of the following preparations:—Liquor potassæ, liquor strychniæ, extractum belladonnæ, extractum hyoscyami, tinctura nucis vomicæ, tinctura rhei, colocynthidis pulpa, scammoniæ resina, antimonium tartaratum? *Chemistry.*—1. What are the most important proximal constituents of wheaten flour? Distinguish the nitrogenous from the non-nitrogenous. 2. What is ozone? By what means may its presence be detected? 3. What is cyanogen? Give its symbol. What part does it take in the composition of hydrocyanic acid? *Zoology.*—1. What is parthenogenesis? Mention one or more of the instances which have been adduced as cases of its occurrence in the animal kingdom. 2. What are the chief peculiarities in which the respiratory system of birds differs from that of mammals? 3. Refer to its class and order, respectively, the bat and the mole. *Botany.*—4. Refer to its natural order a plant with the following characters:—Leaves compound; corolla of five petals, papilionaceous; ovary superior, formed by a single carpel, dividing by deliscence into two valves along a dorsal and a ventral line of suture; seeds without albumen. Adduce from the *Pharmacopœia* one or more examples of this order. 5. Describe the changes which occur in the pollengrain when it falls on the stigma. 6. Give an example of a flower rendered incomplete by the absence of one or more of its verticils. Mention the missing verticil or verticils in the example cited. *Physics.*—7. What is meant by the torricellian vacuum? What important implement depends for its action on the presence of this vacuum? 8. What is meant by the specific heat of a body? 9. Explain the phenomenon of the regular occurrence of land-breeze and sea-breeze.

THE NAVY.

THE following appointments have been made at the Admiralty during the past week:—J. B. DREW, Staff-Surgeon to the *Boscawen*.

The undermentioned qualified candidates for the Naval Medical Service have been appointed to be Surgeons in Her Majesty's fleet, and have all been appointed to the *Duke of Wellington*, additional, for Haslar Hospital:—G. H. MILNES, M.B.; A. E. WEIGHTMAN, J. W. O. UNDERHILL, M.B.; C. H. UPHAM, F. J. BURNS, M.D.; A. T. RIMELL, D. J. P. M'NABB, C. STRICKLAND, J. M. FRANCE, J. MENARY, M.D.; W. G. AXFORD, W. C. SPILLER, M.B.; G. T. BROATCH, M.B.; W. BETT, H. W. RICKARDS, F. A. BRICE, J. W. SLAUGHTER, M.B.

THE MEDICAL STAFF.

THE services of Surgeon A. E. HAYES have been placed at the disposal of the Egyptian Government for duty with the Egyptian army, and he will proceed to Egypt forthwith.

Surgeon R. E. MOLESWORTH, serving in Bengal, is appointed to the civil medical charge of Seetapore, in addition to his own duties, during the absence on privilege leave of Surgeon-Major E. MULVANY.

With the sanction of the Bengal Government, Surgeon R. J. S. SIMPSON, M.B., is placed on special duty to accompany Surgeon SUGENOYA, of the Japanese Mission, on his tour through India as far as Madras.

Surgeon R. J. GEDDES, M.B., who is serving in the Madras command, has passed the examination in Hindustani by the lower standard.

Surgeon M. W. KERIN, who has arrived at Madras from Upper Burmah, is ordered to do duty at the station-hospital at Belgaum.

Surgeon J. I. ROUTH, doing duty at the station-hospital, St. Thomas's Mount, Madras, is appointed to the medical charge of the station-hospital at Calicut.

Mr. J. R. PHILPOTS has been appointed Acting-Surgeon to the 1st Dorset Artillery Volunteers.

Surgeon and Hon. Surgeon-Major T. SMALL, of the 1st Lincoln Artillery Volunteers, has resigned his commission, which dates from April 21st, 1875; he is permitted to retain his rank and uniform.

Surgeon and Honorary Surgeon-Major O. C. MAURICE, of the 1st Volunteer Battalion of the Princess Charlotte of Wales's Royal Berkshire Regiment (formerly the 1st Berkshire Volunteers), has also resigned his commission, with permission to retain his rank and uniform.

Surgeon H. G. HATHAWAY, in medical charge of the station-hospital at Calicut, Madras, is directed to do duty under the orders of the Principal Medical Officer, Burmah Field Force, Mandalay.

THE INDIAN MEDICAL SERVICE.

SURGEON H. HENDLEY, Bengal Establishment, is appointed to the permanent medical charge of the 7th Cavalry, *vice* Brigade-Surgeon J. C. Morice, appointed to the 2nd Battalion 4th Goorkhas.

Surgeon-Major C. SIBTHORPE, Madras Establishment, Fort Surgeon, Fort St. George, with port and marine duties, etc., to act as Surgeon of the General Hospital, during the absence of Dr. Ratton on leave.

Surgeon-Major H. ALLISON, M.D., Madras Establishment, Assistant-Physician, General Hospital, to act as Fort Surgeon, Fort St. George, with port and marine duties, and Medical Inspector of Seamen at Madras, during the employment of Dr. Sibthorpe on other duty.

Deputy Surgeon-General A. J. DALE, M.B., Bengal Establishment, has retired from the service, which he entered October 20th, 1853, having attained the rank of Deputy Surgeon-General, August 3rd, 1882. He served during the Afghan war in 1879 in the Koorum Valley (medal).

Surgeon-Major A. G. GRANT, M.B., Bengal Establishment, has also retired. He ranked as Assistant-Surgeon April 1st, 1868, and became Surgeon-Major twelve years thereafter. During the War in Afghanistan in 1879-80, he was engaged with the Candahar Field Force (medal).

Surgeon C. C. VAID, Bengal Establishment, is appointed to the permanent medical charge of the 11th Native Infantry, *vice* Surgeon-Major J. L. Corbett, M.D., who is permanently transferred to civil employ.

Surgeon-Major H. WHITWELL, Bengal Establishment, Officiating Principal Assistant to the Opium Agent, Behar, is appointed to act, in addition to his own duties, as Civil Surgeon of Patna and Superintendent of the Temple Medical School, during the absence on leave of Surgeon-Major F. C. Nicholson, from the date on which he joined the latter appointment.

Surgeon S. J. THOMSON, Bengal Establishment, Deputy Sanitary Commissioner, 3rd Circle North-West Provinces and Oude, is transferred to the charge of the 1st Circle, in addition to his other duties.

Surgeon-Major P. MURPHY, M.D., Bombay Establishment, to act as Civil Surgeon, Broach, in addition to his ordinary duties as Acting Superintendent of Mahableshwur.

Surgeon-Major A. BARRY, M.D., Bombay Establishment, to act as Civil Surgeon, Bejapore, in addition to his ordinary duties as Superintendent of Matheran.

Surgeon-Major H. J. BLANC, M.D., Bombay Establishment, who entered the service as Assistant-Surgeon, February 10th, 1859, is promoted to be Brigade-Surgeon, *vice* Brigade-Surgeon C. Joynt, retired. Dr. Blanc, while serving on special duty in Abyssinia in 1867-68, was made prisoner by the Abyssinians. On his liberation, he joined the British troops, and was present at the capture of Magdala. He was compensated and thanked by Government, and received the medal for the campaign.

Surgeon-Major W. Dymock, Bombay Establishment, who entered at the same time as Dr. Blanc, is also promoted to be Brigade-Surgeon, *vice* Brigade-Surgeon H. R. L. M'Dougall, retired. Brigade-Surgeon Dymock served during the Indian mutiny campaign in 1859 with the Kattywar Field Force against the Wagheers, and was present at the capture of Dantal Hill.

Surgeon-Major F. C. Barker, M.D., Bombay Establishment, Civil Surgeon of Rajkote, is appointed to the officiating medical charge of the 8th Native Infantry, in addition to his own duties, during the absence of Surgeon-Major J. S. Wilkins on field-service in Burmah.

The undermentioned gentlemen have been admitted as Surgeons in the Bengal Establishment:—W. G. Thorold, Patrick Hehir, N. P. Sinha, Charles Maccaggart, L. J. Pisani, B. K. Basu, J. F. Evans, W. R. Edwards, Henry Fooks, A. C. Deare, Ernest Hudson, G. J. H. Bell, J. T. Daly, W. H. B. Robinson, A. W. Dawson, H. A. Sheppard.

The services of Surgeon R. R. H. Whitwell, Bengal Establishment, are permanently placed at the disposal of the Chief Commissioner of Assam.

The services of Surgeon-Major G. C. Roy, M.D., Surgeons R. D. Murray, M.B., G. M. Dixon, and W. Deane, all of the Bengal Establishment, have been placed at the disposal of the Military Department, for employment in Burmah.

The undermentioned gentlemen, all of the Bengal Establishment, have obtained leave of absence for the periods specified:—Surgeon-Major W. H. Gregg, M.B., for one year, on medical certificate; Surgeon-Major J. M'Conaghey, M.D., for one year, on medical certificate; Surgeon-Major F. C. Nicholson, M.B., for three months; Surgeon J. F. Mullen, for one year; Surgeon-Major E. Mulvany, privilege leave for three months; Surgeon-Major A. Cameron, M.D., privilege leave for three months.

Surgeon-Major H. J. Gane, late of the Bombay Establishment, died at Clifton, on July 27th, in his 66th year. He entered the service as Assistant-Surgeon March 20th, 1853, and became Surgeon-Major March 20th, 1873, and retired April 28th, 1875.

A telegram from Mandalay, under date of August 19th, states that there is much sickness among the troops at Bhamo. Four hundred, or 25 per cent. of the entire force, are in hospital. At Membu, a very unhealthy station, 450 are in hospital.

The officers of the Medical Staff, Dover, entertained Brigadier-Surgeon Tanner at a farewell dinner on Friday, August 13th, previously to his departure for Mauritius. This officer was very popular amongst the Medical Staff at Dover, where he has been stationed since 1882, with the exception of a short interval of service at Suakin; and for some time he performed the administrative duties of the South-eastern district.

MEDICO-LEGAL AND MEDICO-ETHICAL.

COTTAGE HOSPITALS AND CORONERS' FEES.

Sir,—I wish to call your attention to a gross injustice to which members of the profession who happen to be also honorary surgeons to a cottage hospital are liable; and also to invoke the powerful aid of the British Medical Association to obtain such an alteration of the law as may procure redress.

Hitherto, when a death has occurred (subsequently to an accident) in the Hayes Cottage Hospital, and I have been summoned by the coroner to give evidence as to the cause, I have received the usual fee; but, on July 21st, after completing my evidence on a case of death from concussion, I was told by the coroner, Dr. Diplock, that he could not give me a fee, as I was the appointed surgeon to the Cottage Hospital; and he referred to a recent magisterial decision at Claydon. The inquest was summoned for 11.15 A.M., and was not over until past noon, so I was compelled to spend the most valuable hour of the day there without recompense. If I had allowed the poor man to die in his cottage from bad nursing, etc., I should have received my fee; but because I did my best to bring him through, by having him removed where he could get skilled nursing and properly prepared nourishment, I am deprived of it. The jury was so impressed with the injustice of the case, that its foreman said, if the verdict had not already been given, he would have insisted upon a *post mortem* examination, and the medical man should have had a fee somehow.

I may mention that I receive no emolument whatever from the Cottage Hospital; on the contrary, I give a liberal subscription to the fund in addition to my services. Yours very truly,

Ed. J. Parrott.

The Thorn, Hayes, Middlesex.

A QUESTION OF FEE.

Sir,—I was called in to a case where a man had cut his throat. On arriving, I could not get into his room, and had to borrow a ladder. The person with me not caring about going up to the window, which was fortunately open, I went up myself, and found the room apparently empty, with the bed pushed against the door. We then went upstairs, and forced the door open, and found no one. Meanwhile, the relations found the man in the garden, sitting on the water-closet, he having jumped out of the window. I went down, and found him sitting in his shirt only, with half a dozen gashes, inflicted with a blunt razor, on his throat. I stitched up these flesh-wounds as best I could, and, on the arrival of the police, sent him to the hospital. Previously to this he had attempted the life of his father; he is now in the asylum. What would be a reasonable fee for charge in such a case? They are not gentry, but in comfortable circumstances?—I am, yours truly,

M.R.C.S.

International Association of Surgical and Orthopedic Instrument Makers.—The fourth meeting of this Association will be held at 12, Dorotheenstrasse, Berlin, on Tuesday, September 14th, at 6 P.M. Intending members, of any nationality, are invited to attend. Further particulars may be obtained from the Secretary, Mr. Krohne, of 8, Duke Street, Manchester Square, W.

INDIA AND THE COLONIES.

INDIA.

Lunatic Asylums of Bengal.—The report on the lunatic asylums of Bengal, up to the end of 1885, will not be without some amount of interest to Europeans. With a slightly increased number in the asylums, the percentage of recovery was slightly larger, being 9.89, against 9.77 in 1884. The number in the asylums of Bhauanipur, Dullanda, Dakka, Patna, Berhampur, and Kuttak were 955 persons, as against 919 at the end of the previous year. The number of criminal lunatics increased from 363 to 387. Fifty criminal lunatics were discharged or transferred, 30 died, but 93 new criminal lunatics were admitted, and 11 old criminals readmitted. Of the new admissions, 27 were charged with murder, 12 with culpable homicide, attempt to murder, grievous hurt and hurt, 7 for attempting to commit suicide, 18 with theft, and the remainder with such crimes as arson, housebreaking, trespass, etc. The chief causes of insanity were, as usual, the excessive use of bhang and intemperance, while 9 cases are attributed to hereditary predisposition, 7 to fevers, and 5 to epilepsy. The health of the inmates of the asylums was generally good, and the absence of injuries of any kind at all at the asylums, except Dakka and Dullanda, speaks well for the care and humanity exercised over the patients. Altogether, notwithstanding the increased number of inmates, the total number of deaths was only 73, as compared with 87 in 1884. The expenditure amounted to 86,171 rupees, which was less by 5,524 rupees than that of the previous year. The average cost of each lunatic's diet *per diem* was one anna and six pies, being the same as in 1884. The European asylum at Bhauanipur contained 29 persons, of whom 13 were Europeans, 14 East Indians, and 2 Armenians. Twenty persons were admitted during the year, of whom 12 were males and 8 females, 19 being from the civil population, and one a soldier. During the year, 3 persons were discharged cured, 3 were despatched to Europe under the Merchant Shipping Act, 12 were made over to their friends, 3 were sent to Europe as still insane, and one died. The total expenditure amounted to 19,731 rupees, and the amount contributed by the friends of paying patients was 12,338 rupees.

The Cama Obstetric Hospital, Bombay.—When a scheme for procuring female medical aid for the women of India was mooted in Bombay in 1883, Mr. Cama offered to the Government, through the promoters, a sum of 1,00,000 rupees for founding a hospital to be exclusively devoted to the relief of sick women and children of all sections of the population of Bombay, on condition that the Government should provide a suitable site on the Esplanade free of charge, and should maintain the hospital. This offer was generously and readily accepted, and land to the extent of 19,000 square yards was granted for the purpose. This liberal gift of the Government induced Mr. Cama to supplement his offer by a further sum, making up the total to 1,64,311 rupees, being the estimated cost of a building worthy of the site—elegant in design, commodious, and answering all sanitary requirements. This building, the foundation-stone of which was laid by H.R.H. the Duke of Connaught on November 22nd, 1883, was opened in the presence of a large and representative assembly, including a number of European and native ladies, on Friday, July 30th, by His Excellency Lord Reay, Governor of Bombay. His lordship, after complimenting Mr. Cama on his princely munificence, said that, in securing Drs. Pechey and Ellaby, they had secured for the hospital the promise of success. At all events, Government would not in any way trammel Miss Pechey and Miss Ellaby in the way they should go. As to the nursing, Miss Scott would be at the head of a noble band of workers. He might say, on this occasion, that for no section of the community, for no section of his countrymen and countrywomen, did he feel more respect than for these sisters and nurses, who turned every hospital, not only into a medical school, but into a school of constant and daily self-denial. Self-denial and self-sacrifice were at the root of this work, and self-denial and self-sacrifice would make them prosperous.

Medico-Chirurgical College of Philadelphia.—This institution, which was chartered in 1850, is undergoing important alterations in order to increase its usefulness for purposes of instruction. Some large buildings near the centre of the city have been obtained, and will be fitted with lecture-rooms, laboratories, etc. Dr. W. H. Pancoast, many years professor of anatomy in Jefferson College, has been appointed to the same chair in the Medico-Chirurgical College; Dr. Shoemaker has been appointed Professor of Dermatology and Venereal Diseases; Dr. E. E. Montgomery, Professor of Gynæcology; and Dr. W. B. Atkinson, Professor of Pædiatrics and Sanitary Science.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE TRUE DEATH-RATES OF LONDON DISTRICTS DURING THE SECOND QUARTER OF 1886.

In the accompanying table will be found summarised the vital and mortal statistics of the thirty-nine sanitary districts of the metropolis, based upon the Registrar-General's returns for the second quarter of the current year. The mortality figures in the table relate to the deaths of persons actually belonging to the respective sanitary districts, and are the result of a complete system of distribution of the deaths occurring in the institutions of London, among the various sanitary districts in which the patients had previously resided. By this means the precise number of deaths of persons actually belonging to the respective sanitary districts is known, as all deaths occurring in institutions of persons who had previously resided in another sanitary district have been excluded from the total deaths in the district in which the institution is situated, and credited to the districts from which they came. By this means alone can reliable data be secured upon which to calculate trustworthy rates of mortality.

The births registered in London during the second quarter of this year were 32,980, equal to an annual rate of 31.9 per 1,000 of the population of the metropolis, estimated at 4,149,533 persons. The London birth-rate in the corresponding period of the two preceding years was 33.8 and 31.4 per 1,000 respectively. The birth-rate in the various sanitary districts showed the usual wide variations, the age and sex distribution of the population differing greatly. In Kensington, St. George (Hanover Square), St. James (Westminster), and Hampstead, where a large proportion of the population consists of unmarried females, chiefly domestic servants, the birth-rates are exceptionally low; while in Fulham, St. Luke's, Bethnal Green, Whitechapel, and St. George-in-the-East, where the population contains a large proportion of young married persons, the birth-rates showed a marked excess.

The 17,501 deaths registered in London during the quarter under notice were equal to an annual rate of 16.9 per 1,000 of the estimated population, which was below that recorded in the corresponding quarter of any year on record. During the ten years 1876-85, the rate of mortality in London in the June quarter averaged 20.7 per 1,000; the rate during the quarter under notice was, therefore, as much as 3.8 per 1,000 below this average. The lowest death-rates among the thirty-nine sanitary districts last quarter were 12.8 in Kensington, 13.7 in Lewisham, 14.0 in Hampstead and in Hackney, 14.3 in Wandsworth, and 14.4 in Paddington and in Islington. The rates ranged upwards in the other districts to 23.9 in St. George, Southwark, 24.5 in St. Olave, Southwark, 24.6 in St. George-in-the-East, 25.5 in Holborn, and 27.5 in St. Luke's. During the quarter under notice, 1,977 deaths were referred to the principal zymotic diseases in London; of these, 786 resulted from whooping-cough, 536 from measles, 243 from diarrhœa, 183 from diphtheria, 118 from different forms of "fever" (including 2 from typhus, 98 from enteric or typhoid fever, and 18 from ill-defined forms of fever), 102 from scarlet fever, and 9 from small-pox. These 1,977 deaths were equal to an annual rate of 1.9 per 1,000, which was considerably below the rate recorded in the corresponding quarter of 1885. The lowest zymotic death-rates during the quarter under notice in the

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after complete distribution of Deaths occurring in Public Institutions, during the Second Quarter of 1886.

Sanitary Areas.	Estimated Population middle of 1886.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.
				Births.	Deaths.	Principal Zymotic Diseases.											
LONDON	4,149,533	32,980	17,501	31.9	16.9	1.9	1,977	9	536	102	183	786	2	98	18	243	124
West Districts																	
Paddington	111,135	717	398	25.9	14.4	1.4	40	—	7	1	7	19	—	3	1	2	119
Kensington	189,584	1,032	586	22.2	12.8	1.3	61	—	9	2	9	30	—	4	—	7	118
Fulham	146,369	1,309	601	35.9	16.5	2.1	78	—	24	3	5	32	—	4	—	10	123
Chelsea	97,716	817	428	33.6	17.6	1.8	44	—	4	1	9	26	—	1	—	3	115
St George, Hanover Square	88,176	441	344	20.1	15.7	1.8	40	—	5	5	9	16	—	1	—	6	122
Westminster	56,484	406	277	28.8	19.7	2.3	33	—	5	4	—	21	—	—	—	3	150
St. James, Westminster	28,174	141	136	20.1	19.4	0.7	5	—	2	—	—	1	—	—	—	2	199
North Districts																	
Marylebone	150,884	1,155	712	30.7	18.9	1.9	54	1	10	3	7	20	1	—	—	12	137
Hampstead	53,758	333	187	24.9	14.0	0.8	11	—	1	—	1	7	—	1	—	1	111
St. Pancras	241,557	1,895	1,022	31.5	17.0	1.5	92	2	20	1	15	36	—	7	—	13	123
Islington	321,824	2,422	1,151	30.2	14.4	1.5	123	—	34	—	13	51	—	11	1	13	111
Hackney	225,725	1,666	787	29.6	14.0	1.6	92		15	4	9	41	—	8	3	12	110
Central Districts																	
St. Giles	41,348	347	231	33.7	22.4	2.6	27	—	6	2	—	13	—	1	—	5	150
St. Martin-in-the-Fields	15,721	73	74	18.6	18.9	1.3	5	—	1	—	—	2	—	1		1	205
Strand	30,114	204	167	27.2	22.3	1.3	10	—	2	—	3	4	—	—	—	1	172
Holborn	31,625	238	201	30.2	25.5	4.1	32	—	7	—	1	19	—	2	—	3	147
Clerkenwell	69,172	525	320	30.5	18.6	2.2	38	—	9	2	1	17	—	1	1	7	168
St. Luke's	43,043	444	295	41.4	27.5	4.8	51	—	29	4	1	13	—	—	1	3	146
London City	41,055	227	218	21.9	21.0	0.6	6	—	—	1	—	3	—	2	—	—	70
East Districts																	
Shoreditch	125,508	1,138	642	36.4	20.5	3.6	112	—	45	7	6	35		7	—	12	153
Bethnal Green	129,895	1,297	509	40.1	18.5	2.0	64	—	9	5	2	36		—	3	9	123
Whitechapel	68,345	698	327	41.0	19.2	2.1	36		4	5	1	15	—	1	—	10	152
St. George-in-the-East	46,403	458	284	39.6	24.6	2.0	23	—	2	3	3	8	—	2	—	5	135
Stepney	58,030	479	314	32.8	21.5	2.2	32	—	9	4	1	11	—	1	—	6	203
Mile End Old Town	111,607	983	459	35.4	16.5	1.7	47	—	1	11	—	23	—	1	—	11	110
Poplar	178,343	1,534	675	34.5	15.2	1.3	58	1	1	15	6	17	—	5	5	8	114
South Districts																	
St. Saviour, Southwark	27,525	213	151	31.1	22.0	1.9	13	—	3	1	—	4	—	2	—	3	89
St. George, Southwark	59,329	561	354	38.0	23.9	2.8	41	2	9	1	1	22	1	1	—	4	150
Newington	117,870	1,055	518	35.9	17.6	2.1	61		25	2	11	15	—	2	—	6	128
St. Olave, Southwark	10,502	98	64	37.5	24.5	1.5	4	—	—		1		—	—	—	3	92
Bermondsey	88,770	817	443	36.9	20.0	2.2	49	—	15	—	5	19	—	1	—	9	115
Rotherhithe	40,958	327	178	32.0	17.4	3.3	34	—	13	3	2	10	—	—	—	6	147
Lambeth	278,731	2,243	1,155	32.3	16.6	2.2	156	2	48	8	11	67	—	3	—	17	129
Wandsworth	267,826	2,236	956	33.5	14.3	1.6	108	—	11	1	10	71	—	7	1	7	111
Camberwell	238,001	1,830	913	30.9	15.4	2.1	124	—	59	3	7	34	—	9	1	11	125
Greenwich	148,745	1,266	657	34.2	17.8	2.3	85	1	14	1	12	15	—	5	—	7	100
Lewisham	56,080	397	192	28.4	13.7	1.1	16	—	5	1	1	4	—	1	—	1	78
Woolwich	36,871	314	188	34.2	20.5	2.5	23	—	10	—	4	4	—	2	1	2	86
Plumstead	78,730	644	289	32.8	14.7	2.5	49		33	—	8	5	—	1	—	2	99

thirty-nine sanitary districts were returned in London City, St. James Westminster, Hampstead, and Lewisham; the highest in St. George's, Southwark, Rotherhithe, Shoreditch, Holborn, and St. Luke's. Compared with the preceding quarter, the fatality of diphtheria and whooping cough showed a marked decline, while that of each of the other zymotic diseases showed a slight increase. The deaths from small-pox in the metropolis, which had been 602, 136, 32, and 8 in the four previous quarters, were 9 last quarter. These 9 fatal cases included 7 of London residents which were recorded in the Metropolitan Asylum Hospital Ship *Atlas*, situated outside Registration London, all of which have been credited to the districts in which they resided prior to their removal to the hospital. Of the 9 deaths from small-pox, 2 belonged to St. Pancras, 2 to St. George's, Southwark, and 2 to Lambeth. Whooping-cough showed the largest proportional fatality in Shoreditch, Bethnal Green, Westminster, and St. George Southwark; measles in Greenwich, Rotherhithe, Shoreditch, Plumstead, and St. Luke's; diphtheria in Newington; and "fever" in Shoreditch.

Infant mortality in London last quarter, measured by the proportion of deaths under 1 year of age to births registered, averaged 124 per 1,000, against 131 and 139 in the corresponding periods of 1884 and 1885. Among the various sanitary districts, the rates of infant mortality were lowest in London City, Lewisham, Woolwich, St. Saviour Southwark, and St. Olave Southwark; while they showed the greatest excess in Clerkenwell, Strand, St. James Westminster, Stepney, and St. Martin-in-the-Fields.

PAUPERS' BODIES FOR DISSECTION.—Much indignation is expressed in Spalding and neighbourhood at the action of the Spalding Board of Guardians, in sending away for dissection and other purposes the bodies of paupers who may happen to die in the workhouse, and leave no friends. A man named Bryan entered the workhouse lately, and shortly afterwards expired in the infirmary, having, it appeared, no relatives. In accordance with a resolution, his body was forwarded by the Board to the Cambridge School of Anatomy. Two of the deceased's brothers have appeared, as well as other relations, and are highly indignant at the disposal of the body of the deceased. At the recent meeting of the Board of Guardians the matter was investigated, the relatives being present. The motion to secure the abandonment of the practice was introduced, and the subject will be again considered.

REGISTRATION OF HOUSE-BOATS.—At the Petty Session for the Northampton Division of Northamptonshire, on the 14th August, George Savage, of Stoke Bruerne, was charged, at the instance of the Hardingstone Rural Sanitary Authority, with using a boat called the *Britannia*, as a dwelling-house, on the river Nene, at Billing Wharf, on the 25th June last, the same not being duly registered. Mr. William Abbott, Canal Inspector under the Authority, said he inspected the boat at Billing Wharf on June 25th. It was in charge of Frank Inns, and he produced a certificate dated March 23rd, 1881, for a boat named *Jane* (No. 21). Mr. Pugh, for the defendant, said no doubt that technically an offence had been committed, but it was in ignorance. The defendant bought the boat and the certificate with it from Thomas James Bradshaw, and he had altered the name simply because he had two boats named in a similar manner. Savage contended that the boat was not in any way a dwelling, as he only used it for short distances, and the men came home and slept at lodgings. No women or children ever lived in the boats. On Mr. Savage promising to have the boat registered, the summons was dismissed on payment of 9s. 6d. costs. A summons against Frank Inns, the master of the boat, was withdrawn.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, August 14th, 5,984 births and 3,299 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had been 20.6 and 19.9 per 1,000 in the two preceding weeks, further declined during the week under notice to 18.9. The rates in the several towns, ranged in order from the lowest, were as follow:—Derby, 12.5; Hull, 13.9; Bristol, 14.4; Brighton, 14.8; Huddersfield, 15.5; Nottingham, 15.8; Norwich, 15.9; Sunderland, 16.0; Bradford, 17.1; Birmingham, 17.4; Sheffield, 17.6; Bolton, 17.8; Manchester, 18.1; Leeds, 18.5; London, 18.9; Wolverhampton, 18.9; Halifax, 19.3; Oldham, 19.6; Newcastle-upon-Tyne, 20.2; Portsmouth, 20.3; Plymouth, 20.4; Leicester, 20.9; Preston, 22.1; Liverpool, 23.4; Salford, 23.7; Blackburn, 24.1; Birkenhead, 24.1; and the highest rate during the week, 27.9 in Cardiff. The death-rate in the twenty-seven provincial towns averaged 18.9 per 1,000, and corresponded with the rate recorded in London. The 3,299 deaths registered in the twenty-eight towns during the week under notice included 717 which were referred to the principal zymotic diseases, against 877 and 871 in the two preceding weeks; of these, 349 resulted from diarrhœa, 83 from measles, 41 from "fever" (principally enteric), 33 from whooping-cough, 30 from scarlet fever, 26 from diphtheria, and not one from small-pox. These 717 deaths were equal to an annual rate of 4.1 per 1,000. The zymotic death-rate in London during the week under notice was equal to 4.5 per 1,000, while in the twenty-seven provincial towns it averaged 3.8, and ranged from 0.7 in Newcastle-upon-Tyne, 1.1 in Hull, and 1.2 in Oldham, to 6.9 in Salford, 7.8 in Leicester, and 11.9 in Cardiff. The deaths referred to diarrhœal diseases, which had risen in the six preceding weeks from 86 to 659, declined during the week under notice to 580, and showed the largest proportional fatality in Salford, Norwich, Cardiff, and Leicester. The fatal cases of measles, which had steadily declined in the five previous weeks from 116 to 62, further fell to 54, and caused the highest death-rates in Blackburn and Preston. The 44 deaths referred to different forms of fever showed a decline of 6 from the number in the preceding week, and showed the largest proportional fatality in Portsmouth and Cardiff. The fatal cases of whooping-cough, which had been 66, 59, and 55 in the three previous weeks, further fell during the week under notice to 33. The 30 deaths from scarlet fever showed a decline of 13 from the number in the previous week, and included 10 in London and 4 in Liverpool. The 26 fatal cases of diphtheria exceeded those returned in any recent week; 15 occurred in London, 3 in Liverpool, and 2 in Plymouth. No death was referred to small-pox either in London or in any of the twenty-seven provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 8 at the end of each of the two preceding weeks, declined to 5 on Saturday, August 14th; no new case was admitted to these hospitals during the week. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 1.9 per 1,000, and was considerably below the average. The causes of 76, or 2.3 per cent. of the 3,299 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

In the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,876 births and 3,400 deaths were registered during the week ending Saturday, August 21st. The annual rate of mortality, which had declined in the three preceding weeks from 20.6 to 18.9 per 1,000, rose again during the week under notice to 19.5. The rates in the several towns, ranged in order from the lowest, were as follow:—Derby, 11.9; Wolverhampton, 14.4; Bristol, 15.1; Blackburn, 15.5; Brighton, 16.1; Hull, 16.3; Huddersfield, 16.5; Nottingham, 16.8; Bradford, 16.9; Plymouth, 17.7; London, 17.9; Leeds, 18.6; Bolton, 18.8; Birmingham, 18.9; Portsmouth, 18.5; Halifax, 20.0; Manchester, 20.2; Sheffield, 20.3; Newcastle-upon-Tyne, 20.5; Preston, 23.2; Oldham, 23.6; Sunderland, 23.7; Leicester, 24.3; Cardiff, 25.4; Salford, 25.7; Birkenhead, 27.9; Liverpool, 28.9; and the highest rate during the week, 36.8 in Norwich. In the twenty-seven provincial towns the death-rate averaged 20.9 per 1,000, and exceeded by 3.0 the rate recorded in London, which, as before stated, did not exceed 17.9 per 1,000. The 3,400 deaths registered in the twenty-eight towns during the week under notice included 606 which were referred to diarrhœa, 52 to whooping-cough, 49 to measles, 40 to "fever" (principally enteric), 32 to scarlet fever, 26 to diphtheria, and not one to small-pox; in all, 805 deaths resulted from the principal zymotic diseases, against 871 and 718 in the two preceding weeks. The zymotic death-rate was equal to 4.6 per 1,000. In London, the zymotic rate was 3.8, while in the twenty-seven provincial towns it averaged 5.0 per 1,000, and ranged from 0.7 in Plymouth and in Halifax, and 1.8 in Huddersfield, to 7.7 in Salford, 7.8 in Leicester, and 10.8 in Norwich. The fatal cases of diarrhœa, which had been 659 and 531 in the two preceding weeks, rose again during the week under notice to 606, and caused the highest death-rates in Birkenhead, Liverpool, Leicester, and Norwich. The deaths referred to whooping-cough, which had steadily declined in the four previous weeks from 66 to 33, rose again to 52, and showed the largest proportionate fatality in Preston and Sunderland. The 49 fatal cases of measles showed a further decline from recent weekly numbers, and caused the highest death-rate in Preston. The deaths referred to different forms of "fever," which had been 38 and 44 in the two preceding weeks, were 40 during the week under notice, and showed the largest proportional fatality in Preston, Portsmouth, and Cardiff. The 32 fatal cases of scarlet fever exceeded by 2 the number recorded in the previous week; this disease caused the highest death-rate in Salford. The deaths from diphtheria, which had been 13 and 26 in the two preceding weeks, were again 26 in the week under notice, and included 17 in London, 3 in Liverpool, and 2 in Birmingham. No fatal case of small-pox occurred during the week, either in London or in any of the twenty-seven provincial towns. No small-pox patients were under treatment in the Metropolitan Asylum Hospitals, on Saturday, August 21st; at the end of the two preceding weeks the numbers of patients were 8 and 5 respectively. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 1.9 per 1,000, and was below the average. The causes of 89, or 2.6 per cent. of the 3,400 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns, having an estimated population of 1,283,977 persons, 805 births and 430 deaths were registered during the week ending Saturday, August 14th. The annual rate of mortality, which had declined from 19.8 to 18.8 per 1,000 in the three preceding weeks, further fell during the week under notice to 17.4 and was 1.5 per 1,000 below the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 12.5 in Greenock, 13.1 in Perth, 14.4 in Dundee, 15.3 in Aberdeen, 17.2 in Edinburgh, 18.5 in Leith, 19.0 in Glasgow, and 23.4 in Paisley. The 430 deaths registered during the week in these Scotch towns included 21 which were referred to whooping-cough, 18 to diarrhœa, 12 to scarlet fever, 5 to measles, 4 to diphtheria, 3 to "fever," and not one to small-pox; in all, 63 deaths resulted from these principal zymotic diseases, against 67 and 77 in the two preceding weeks. These 63 deaths were equal to an annual rate of 2.6 per 1,000, which was 1.5 below the average zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Aberdeen, Paisley, and Glasgow. The deaths referred to whooping-cough, which had been 18 and 23 in the two preceding weeks, declined to 21, of which 16 occurred in Glasgow and 4 in Aberdeen. The fatal cases of diarrhœa, which in the two previous weeks had been 34 and 28, further fell during the week under notice to 18, and included 11 in Glasgow and 3 in Paisley. The 12 deaths from scarlet fever showed a decline of 3 from the number in the preceding week; 7 were returned in Glasgow and 3 in Edinburgh. Of the 5 fatal cases of measles, 2 occurred in Leith and 2 in Glasgow. The 4 deaths referred to diphtheria exceeded the number in any recent week, and included 3 in Glasgow and 1 in Edinburgh. The fatal cases of "fever," which had been 1 and 8 in the two preceding weeks, declined again to 3, of which 2 occurred

in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns, was equal to 2.9 per 1,000, against 1.9 in London. As many as 60, or nearly 14 per cent., of the 430 deaths registered during the week in these Scotch towns were uncertified.

During the week ending Saturday, August 21st, 797 births and 441 deaths were registered in the eight principal Scotch towns having an estimated population of 1,283,977 persons. The annual rate of mortality, which had steadily declined in the five preceding weeks from 19.8 to 17.4 per 1,000, rose again to 17.9 during the week under notice, but was 1.6 per 1,000 below the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 11.5 in Perth, 11.8 in Greenock, 14.4 in Aberdeen, 14.8 in Leith, 15.4 in Dundee, 15.5 in Edinburgh, 20.5 in Glasgow, and 32.1 in Paisley. The 441 deaths registered during the week under notice included 72 which were referred to the principal zymotic diseases, against 77 and 63 in the two preceding weeks; of these, 23 resulted from diarrhœa, 22 from whooping-cough, 9 from measles, 8 from scarlet fever, 5 from diphtheria, 5 from "fever," and not one from small-pox. These 72 deaths were equal to an annual rate of 2.9 per 1,000, which was 1.7 below the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Leith, Paisley, and Glasgow. The fatal cases of diarrhœa, which had declined from 34 to 18 in the three preceding weeks, rose again to 23, of which 15 occurred in Glasgow, 4 in Paisley, and 3 in Edinburgh. The deaths referred to whooping-cough, which had been 23 and 21 in the two previous weeks, were 22 during the week under notice, and included 18 in Glasgow. The 9 fatal cases of measles showed a further increase upon recent weekly numbers; 4 were returned in Glasgow, 2 in Leith, and 2 in Edinburgh. The fatal cases of scarlet fever, which had increased from 4 to 12 in the three preceding weeks, declined to 8, of which 7 occurred in Glasgow. The 5 deaths from diphtheria showed a further increase upon those in recent weeks, and included 3 in Edinburgh. The 5 fatal cases of "fever" exceeded by 3 the number in the previous week, and included 3 in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 2.5 per 1,000, against 1.9 in London. The causes of 75, or 17 per cent., of the 441 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

In the week ending July 31st, 279 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 16.8 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000:—Armagh, 15.5; Belfast, 18.8; Cork, 13.0; Drogheda, 25.4; Dublin, 17.0; Dundalk, 17.5; Galway, 23.5; Kilkenny, 16.9; Limerick, 10.8; Lisburn, 24.2; Londonderry, 16.0; Lurgan, 5.1; Newry, 10.5; Sligo, 4.8; Waterford, 27.8; Wexford, 4.3. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1.0 per 1,000, the rates varying from 0.0 in eleven of the districts to 5.1 in Lurgan; the only death registered in that district being 1 from typhus. The 80 deaths from all causes registered in Belfast comprised 1 from typhus, 2 from diphtheria, 2 from enteric fever, and 4 from diarrhœa. In the Dublin Registration District, the deaths registered during the week amounted to 117. Seven deaths from zymotic diseases registered in Dublin; they comprised 2 from scarlet fever, 1 from typhus, 1 from diphtheria, 1 from diarrhœa, etc. Nineteen deaths from diseases of the respiratory system were registered; they comprised 10 from bronchitis, 1 from pneumonia, and 3 from croup. The deaths of 10 children (including 9 infants under 1 year old) were ascribed to convulsions. One death was caused by apoplexy, 8 deaths by other diseases of the brain and nervous system (exclusive of convulsions), and 9 by diseases of the circulatory system. Phthisis caused 19 deaths, mesenteric disease 3, and cancer 4. Three accidental deaths were registered. In 20 instances, the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending August 7th, 276 deaths were registered in Dublin and fifteen of the principal urban sanitary districts in Ireland. The average annual death-rate represented by the deaths registered was 16.6 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 0.0; Belfast, 16.0; Cork, 15.6; Drogheda, 16.9; Dublin, 17.3; Dundalk, 17.5; Galway, 23.5; Kilkenny, 21.1; Limerick, 21.6; Lisburn, 24.2; Londonderry, 21.4; Lurgan, 20.5; Newry, 10.5; Sligo, 4.8; Waterford, 6.9; Wexford, 12.8. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1.8 per 1,000, the rates varying from 0.0 in Waterford, Galway, Newry, Kilkenny, Wexford, Sligo, Lisburn, and Armagh, to 5.1 in Lurgan; the 4 deaths from all causes registered in the last-named district comprising 1 from typhus (one death from this disease occurred in this district in each of the two preceding weeks). The 68 deaths from all causes registered in Belfast comprised 1 from scarlatina, 2 from whooping-cough, 1 from diphtheria, 2 from simple continued and ill-defined fever, and 2 from diarrhœa; and the 12 deaths in Londonderry comprised 2 from enteric fever. In the Dublin Registration District the deaths registered during the week amounted to 119. Sixteen deaths from zymotic diseases were registered in Dublin; they comprised 7 from scarlet fever, 1 from whooping-cough, 3 from diphtheria, 1 from ill-defined fever, 1 from enteric fever, 2 from diarrhœa, etc. Ten deaths from diseases of the respiratory system were registered; they comprised 4 from bronchitis, and 4 from pneumonia. The deaths of 9 children under five years old (including 4 infants under one year old) were ascribed to convulsions. Two deaths were caused by apoplexy, 9 by other diseases of the brain and nervous system (exclusive of convulsions), and 3 by diseases of the circulatory system. Phthisis caused 30 deaths, mesenteric disease 3, and cancer 3. Two accidental deaths were registered. In 10 instances the cause of death was uncertified, there having been no medical attendant during the last illness. One of the persons whose deaths were registered during the week (a man) was stated to have been aged 102 years.

HEALTH OF FOREIGN CITIES.

It appears from statistics published in the Registrar-General's return for the week ending August 7th, that the annual death-rate recently averaged 26.1 per 1,000 in the three principal Indian cities; it was 20.1 in Calcutta, 24.1 in Bombay, and 30.8 in Madras. Cholera caused 7 deaths in Calcutta, and 1 in Bombay, and 37 deaths were referred to diarrhœal diseases in Madras; "fever" mortality showed about equal excess in each of these Indian cities. According to the most recently received weekly returns, the annual death-rate averaged 26.3 per 1,000 persons estimated to be living in twenty-two of the largest European cities, and exceeded by no less than 6.4 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 26.7, showed a further decline from the rates in previous weeks; the 475 deaths included 96 from diarrhœal diseases, 21 from "fever," and 3 from small-pox. In three other northern cities—Copenhagen, Christiania, and Stockholm—the death-rate averaged 24.3, and ranged from 22.0 in Stockholm, to 27.4 in Christiania; diarrhœal diseases caused 22 deaths in Copenhagen, 23 in Stockholm, and 32 in Christiania; 5 deaths from diphtheria and croup occurred in Christiania, and 5 in Copenhagen. In Paris, the death-rate was equal to 21.6, and somewhat exceeded the rate that prevailed in London; the deaths included 26 from diphtheria and croup, 26 from measles, and 6 from typhoid. The 201 deaths in Brussels, of which 35 resulted from diarrhœal diseases, 4 from measles, and 3 from scarlet fever, gave a rate of 24.1. The rate in Geneva was only 13.7, but one fatal case of scarlet fever was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 23.2, the several rates being 17.5 in Rotterdam, 23.6 in the Hague, and 25.8 in Amsterdam; diarrhœal diseases caused 6 deaths in Amsterdam, and measles 7 in the Hague. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 29.9, and ranged from 21.5 in Vienna and 25.8 in Dresden, to 34.9 in Breslau and 35.1 in Munich. Diarrhœal diseases caused the largest excess of mortality in Berlin, Breslau, and Munich; small-pox caused 15 deaths in Buda-Pesth, and 4 in Prague; and the greatest mortality from diphtheria occurred in Buda-Pesth. The mean death-rate in three of the principal Italian cities was 27.4, the rate being 24.3 in Venice, 27.5 in Rome, and 28.5 in Turin; small-pox caused 5 deaths in Rome, and cholera 12 in Venice; in Turin, 9 deaths from fever and croup, and 6 from typhoid fever were recorded. The death-rate was equal to 69.9 in Alexandria, and to 48.0 in Cairo; 100 deaths from diarrhœal diseases occurred in Alexandria, and 148 in Cairo; small-pox caused 3 deaths in Alexandria, and typhoid fever 15 in Cairo and 4 in Alexandria. In four of the largest American cities, the mean recorded death rate was 33.8, the rates ranging from 24.6 in Philadelphia to 42.7 in New York. The great excess of mortality in New York was mainly due to the fatality of diarrhœal diseases, which were also very fatal in Philadelphia and Baltimore; diphtheria caused 40 deaths in New York, and 17 in Brooklyn.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, August 20th, 1886.

The River Lea.—Sir CHARLES RUSSELL had a motion on the paper, "That the Select Committee of the last Parliament to inquire into and report upon the condition of the River Lea, and to make such recommendations as may appear necessary, be reappointed.—Lord RANDOLPH CHURCHILL hoped the hon. gentleman would be satisfied with the assurance that, at the beginning of next session, the Government would give him every assistance in the reappointment of the committee. The season was now so far advanced that the committee would not really be able to do any practical work before that time.—Sir CHARLES RUSSELL expressed himself satisfied with the statement, and withdrew the motion.

Monday, August 23rd, 1886.

Ventilation of the House.—On the motion of Mr. JACKSON, it was agreed to reappoint the following Committee to inquire into the ventilation of the House: Dr. Farquharson, Sir H. Roscoe, Mr. Lyell, Sir G. Hunter, Mr. Isaacs, Mr. R. Power, Mr. C. Flower, Mr. Tatton Egerton, and Mr. Plunket, with power to send for persons, papers, and records; three to be the quorum; and that the minutes of evidence taken before the Committee in the last Parliament be referred to the Committee.

The Maryborough Lunatic Asylum.—Sir M. HICKS-BEACH, in reply to Mr. LALOR, said that the office of visiting physician became vacant by the resignation of Dr. Jacob, senior. The vacancy was advertised in the usual manner, and the Board of Governors elected Dr. W. S. Jacob. He was not aware of any ground for the suggestion that there was any previous understanding that such an appointment should be made. Dr. Jacob, Jun., was not cousin to the resident medical superintendent, nor was the Government inspector his uncle. Dr. Jacob, Senr., who had now resigned, and the resident medical superintendent, were connected by marriage. When the new appointment was submitted to the Lord-Lieutenant for confirmation, it would be for his Excellency to consider whether there was any reason why he should decline to confirm it.

OBITUARY.

JOSEPH WALLACE CHESTNUTT, M.A., M.D., L.R.C.S.Edin.

UNIVERSAL regret was felt over a large district of County Antrim at the death of Dr. Chestnutt, which occurred after a lingering illness at his residence, Ahoghill, near Ballymena, on July 7th. After a brilliant career in the Queen's University, he obtained his degree of B.A. with first-class honours, and the gold medal in Natural Science in 1860. Thereupon the then Irish Government offered him a direct appointment as Subinspector of the Irish Constabulary, which he declined. Turning his attention to medicine, he graduated M.D. in

the Queen's University in 1865, and also took the diploma of the Royal College of Surgeons, Edinburgh. After spending some time in England, he was appointed medical officer of the Ahoghill district of the Ballymena Union, which, with several other appointments, he held until his death. His services were sought after far and near, and he was looked on as one of the foremost professional men in the county. But failing health for some years back compelled him to decline all night-work, and to limit his ordinary work as much as possible. He spent much time in the study of botany, of which he had a very extensive knowledge; and some years back his Alma Mater conferred on him the degree of M.A. *honoris causâ*.

He died rather suddenly, though not unexpectedly, leaving a wife and four children (two by a previous marriage) to mourn his loss. His funeral was largely attended by all classes, and the coffin was borne to the grave on the shoulders of the members of the Royal Irish Constabulary belonging to the district, who almost idolised him. He died in the prime of life, being only about fifty years of age. The local papers publish articles which show his former fellow-students the esteem in which he was held in his immediate neighbourhood.

JOHN MATTHEW DUDGEON, M.B., C.M.Edin., L.S.A., Edinburgh.

We regret to record the death of Mr. J. Matthew Dudgeon, M.B., C.M., which took place at his residence, Rankeillor Street, Edinburgh, on August 13th, at the early age of 32.

Mr. Dudgeon was educated at the University of Edinburgh, where he took the degree of M.B. and C.M., in 1878. He had previously obtained the licence of the Apothecaries' Society, London. After having for some time acted as assistant to practitioners, both in England and Scotland, Mr. Dudgeon settled in Comrie, Perthshire, where he carried on a large practice, and was widely esteemed in the district. Chiefly from considerations of health, he left Comrie, and sailed on several voyages as ship-surgeon on board steamers of the Allan Line, which had the effect of greatly invigorating him. Thereafter settling in Edinburgh, Mr. Dudgeon speedily acquired, by his ability an energy, an extensive practice, and also held several important parochial and other public appointments. In the midst of a career of much usefulness and promise, he was struck down in a very sad way. For some weeks he had complained of recurring cardiac pain, apparently of anginal character, and was strongly urged by the friends who treated him to take immediate rest. With much reluctance he consented; and, on the evening of his death, after completing the arrangements necessary for handing over his work to a *locum tenens*, he had just retired to his room, when he was seized with a violent paroxysm, which, notwithstanding the prompt application of remedies by a medical friend who was beside him, proved fatal almost instantly.

This announcement will come as a painful surprise to many of Mr. Dudgeon's professional brethren in Scotland and elsewhere, to whom, as also to a wide circle of patients and friends, he had endeared himself by his genial manner and many excellent qualities.

SPENCER THOMSON, M.D., Torquay.

A wide circle of friends, both lay and professional, will long regret the loss of this genial and accomplished physician. Dr. Spencer Thomson was the son of the late W. J. Thomson, R.S.A., and was born in Edinburgh in 1817. Educated at the Edinburgh Academy, under the late Rev. Dr. Terrot, afterwards Bishop of Edinburgh, he chose the profession of medicine, and took successively the diplomas of the Royal College of Surgeons of Edinburgh, the Society of Apothecaries of London, and the degree of M.D. at the University of St. Andrew's. After acting as class-assistant to the late Professor Sir Robert Christison, in the University of Edinburgh, he occupied a similar post under his uncle, the late Dr. Anthony Todd Thomson, in University College, London.

He then began practice near Tamworth, afterwards removing to the neighbourhood of Burton-on-Trent. Here for many years he lived and worked, his popularity steadily increasing. It was during this period that he wrote the *Dictionary of Domestic Medicine*, which has now reached its seventeenth edition, together with many other contributions to medical science, field botany, and general literature.

His health, however, began to give way under the strain of work; and, in 1867, he migrated to Torquay for change and rest. But he could not be idle; and here again patients gathered to him in ever-increasing numbers. And so he continued until he was seized with his last illness, and could do no more. His health had been unsatisfactory for some time; but it was not until shortly before his death that signs of malignant disease of the liver manifested themselves; and to this he succumbed on August 12th.

Dr. Spencer Thomson was a man of artistic and poetic temperament, a keen lover of Nature; and united the greatest warmth of heart to the most sagacious judgment. He was staunch and chivalrous as a friend, and his devotion to duty was marked by the most absolute unselfishness and earnestness, as many besides the present writer can testify. His scientific knowledge was both broad and deep, and he was a man of infinite practical resource. Not many men have lived a life of such generous usefulness, or earned such sincere gratitude. Dr. Thomson leaves a widow and two daughters.

FRANK HASTINGS HAMILTON, M.D., LL.D.

This distinguished American surgeon died in New York, of pulmonary disease, on August 11th, at the age of 73.

Dr. F. H. Hamilton was born at Wilmington, Vermont, in 1813. He graduated in medicine in the University of Pennsylvania in 1833, and began practice in Auburn, New York. In 1844, he removed to Buffalo, and, in conjunction with the late Dr. Austin Flint and the late Dr. White, he had a large share in establishing the medical department of the University of Buffalo. In 1862, he removed to New York, having been appointed a professor of surgery in Bellevue Hospital Medical College; this position he resigned in 1875. During the war of the rebellion, he served in the United States Army, and became medical inspector.

Dr. Hamilton was a member of the American Medical Association, of the Medical Society of the State of New York (of which he was President in 1855), and of several other medical societies in the city and State of New York. At the time of his death, he was surgeon to Bellevue Hospital, and consulting surgeon to several institutions.

The work by which Dr. Hamilton is best known is his treatise on *Fractures and Dislocations*. This work has passed through several editions, has been translated into more than one European language, and is a recognised authority on the subjects of which it treats. He also wrote, among other books, a work on military surgery and a general text-book on surgery. His contributions to periodical literature were more substantial than numerous.

The death of Dr. Hamilton is a serious loss to the medical profession in New York, and, indeed, in the United States generally.

MEDICAL NEWS.

University of London.—Intermediate Examination in Medicine. Examinations for Honours. Anatomy.

First Class.—John E. Platt (Exhibition and Gold Medal), Owens College; * Alfred Parkin (Gold Medal), Guy's Hospital.

Third Class.—John L. Firth, King's and University Colleges; Walter W. H. Tate, University College; and Gilbert B. M. White, University College (all equal).

Materia Medica and Pharmaceutical Chemistry.

First Class.—Frank Grange (Exhibition and Gold Medal), Charing Cross Hospital; ** William S. Fenwick, London Hospital; Alfred Parkin, Guy's Hospital; Frank S. Locke, St. Bartholomew's Hospital, and Ransom Pickard, St. Bartholomew's Hospital (equal).

Second Class.—Rubert W. Boyce, University College; Robert D. Mothersole, Guy's Hospital; Robert Bird, St. Bartholomew's Hospital.

Third Class.—Hilarion M. Fernando, University College; Charles H. Roberts, St. Bartholomew's Hospital; Charles R. Killick, London Hospital; Henry E. Whitehead, St. Bartholomew's Hospital; Bedford Pierce, St. Bartholomew's Hospital; John L. Firth, King's and University Colleges.

Organic Chemistry.

First Class.—F. F. Blackman, B.Sc. (Exhibition and Gold Medal), St. Bartholomew's Hospital; Alfred Parkin, Guy's Hospital; Hilarion M. Fernando, University College.

Second Class.—Charles H. Robert, St. Bartholomew's Hospital; Frank S. Locke, St. Bartholomew's Hospital; Bedford Pierce, St. Bartholomew's Hospital.

Third Class.—Robert Bird, St. Bartholomew's Hospital; Edward A. Roberts, St. Thomas's Hospital; Robert D. Mothersole, Guy's Hospital.

Physiology and Histology.

First Class.—John L. Firth (Exhibition and Gold Medal), King's and University Colleges; Hilarion M. Fernando (Gold Medal), University College.

Second Class.—John P. Parkinson, University College; Frederick F. Blackman, St. Bartholomew's Hospital; Frank S. Locke, St. Bartholomew's Hospital; Alfred Parkin, Guy's Hospital.

Third Class.—Gilbert B. M. White, University College; Rubert W. Boyce, University College; Ransom Pickard, St. Bartholomew's Hospital; Albert E. Brindley, Owens College, and Bedford Pierce, St. Bartholomew's Hospital, (equal); Robert Bird, St. Bartholomew's Hospital; Herbert Williams, St. Bartholomew's Hospital; Nicholas C. Ridley, St. Mary's Hospital; George A. Berry, Owens College.

* Obtained the number of marks qualifying for the exhibition and medal.

** Obtained the number of marks qualifying for a medal.

Society of Apothecaries of London.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, August 19th, 1886.

Robinson, Abraham Hepworth, M.R.C.S., 318, Manchester Road, Hodenwoo near Manchester.

Sankey, Julius Ivor, 105, Portland Road, Notting Hill, W.

MEDICAL VACANCIES.

The following vacancies are announced.

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House-Surgeon. Salary, £60 per annum, with board, etc. Applications by September 14th to the Secretary.

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester Street, Warwick Square.—House Surgeon. Applications by September 4th to the Senior Physician at the Hospital.

BRISTOL GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications by September 8th to the Secretary.

BRISTOL ROYAL INFIRMARY. Assistant Resident Medical Officer and Pathologist. Salary, £80 per annum, with board, lodging, and washing. Applications by September 10th to the Secretary.

COUNTY DOWN INFIRMARY.—Registrar, Compounder of Medicine, and Assistant to Surgeon. Salary, 60 guineas, with board, fuel, and washing. Candidates must have a diploma in surgery. Election on September 11th.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Board and lodging. Applications to C. W. Carver, Esq.

OWENS COLLEGE, Manchester.—Professor of Chemistry. Applications to the Council of the College, under cover, to the Registrar by August 31st.

RICHMOND HOSPITAL, Surrey.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by September 13th to G. C. Rowland, Esq.

ROYAL BERKS HOSPITAL, Reading. Assistant House-Surgeon. Board and lodging. Applications by September 14th to J. T. Hugo, Esq.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon. Applications by September 3rd to Dr. C. Reid.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay.—Junior House-Surgeon and Dispenser. Salary, £90 per annum, with board, lodging, and attendance. Applications by September 4th to W. H. Kitson, Esq., Shiphay, Torquay.

TYRONE COUNTY INFIRMARY.—House-Surgeon. Particulars on application to Dr. Thompson, Omagh, co. Tyrone.

WESTERN GENERAL DISPENSARY, Marylebone Road. House-Surgeon. Salary, £120 per annum, with residence, fuel, and attendance. Applications by September 6th to the Secretary.

MEDICAL APPOINTMENTS.

BRIGHT, J. A., M.R.C.S., F.S.A., appointed Honorary Consulting-Surgeon to the Sir George Bowles Hospital, Butleigh, near Glastonbury.

COOMBS, S. W., F.R.C.S..Ed., L.R.C.P.Ed., appointed Medical Officer for the First District of the Worcester Union.

CREASY, R., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Second District of the Winslow Union.

DAVIS, H., M.R.C.S., appointed Administrator of Anæsthetics to St. Mary's Hospital, Paddington.

EVILL, F. C., M.R.C.S., appointed Resident Clinical Assistant to the Hospital for Consumption, Brompton, *vice* Dr. J. W. Carr, resigned.

FRAZER, K., B.A., M.D., appointed House-Surgeon and Secretary to the Scarborough Hospital and Dispensary, *vice* F. W. A. Godfrey, M.B., resigned.

LITTLEWOOD, H., F.R.C.S., appointed Resident Surgical Officer to the General Infirmary, Leeds, *vice* F. H. Mayo, M.R.C.S., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

BIRTHS.

CLARKE.—On August 18th, at 21, Lee Terrace, Blackheath, the wife of Ernest Clarke, M.D., B.S., of a daughter.

ELSNER.—On July 5th, at Richmond Villa, Richmond, Melbourne, Australia, the wife of F. W. Elsner, F.R.C.S.I., of a daughter (*Melbourne Argus*, 6th).

MARRIAGES.

CLENDINNEN—WELCHMAN.—On July 9th, at Carlton, Melbourne, F. J. Clendinnen, son of the late J. J. Clendinnen, and nephew of the late W. Gillbee, M.R.C.S., to Lottie, eldest daughter of W. Welchman, Esq., J.P., of Melbourne.

PRICE—PAGE.—On August 24th, at St. Stephen's, Hampstead, by the Reverend C. H. Banning, Vicar of Strood, John Alfred Parry Price, M.D., Reading, to Frances Mary, eldest daughter of J. Bentley Page, Esq.

RICH—CLARKE. On August 21st, at St. Michael and All Angels, Lower Sydenham, Kent, by the Reverend H. R. Wakefield, Vicar, Arthur Creswell Rich, M.B.Lond., M.R.C.S.Eng., eldest son of J. W. Rich, Esq., of Liverpool, to Orynthia Maud P. Clarke, second daughter of the late Alfred John Clarke, M.R.C.S., etc., of Gloucester.

THIELE—DIXON.—On August 15th, at St. John's Church, Chatham, by the Reverend Henry Boys, Rector, Herman Thiele, M.B., C.M., Surgeon Medical Staff, to Louisa Frances Kate, youngest daughter of S. E. Dixon, Esq., of Hastings, Sussex. (Canadian papers please copy.)

DEATH OF A MEDICAL MAN FROM DROWNING.—The intelligence reaches us from Kachár, India, of the death of Dr. W. B. R. McWha, which occurred under circumstances peculiarly distressing. The deceased gentleman was but 24 years of age, and held, prior to his departure for India, the post of resident surgeon of the Union Infirmary in Belfast. He had only just arrived in India, and met his untimely end through drowning, by the capsising of a small craft in which were the deceased, his brother, and a native, who at the time were engaged in duck-shooting.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30 Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

FIXED FEES FOR MEDICAL MEN.

DR. R. RENTOUL (Liverpool) writes: Will any member please give me whatever information they may possess regarding the fixing of medical fees by the State? I think such a system exists in Canada, Austria, Shanghai, and other places. I shall feel deeply obliged for full information as to fees, etc.

A QUESTION OF TREATMENT.

M.B.A. asks for suggestions as to treatment for the following case. His son, aged 13, had, up to last January, uninterrupted good health. At that time he returned from school with enlarged tonsils, slight bronchitis, and generally out of health. In a short time the bronchitis cleared up, but left him constipated in his bowels. Early in the spring he had a severe and prolonged attack of pertussis; this has now all disappeared. His bowels still remain constipated, not acting for four or five days, and then only with the aid of aperients. Nux vomica, belladonna, aloes, etc., and the saline aperients have been tried in vain. His lungs are sound, but his appetite is bad. He sleeps well, and can take fair active exercise, and has no cough.

BEECHAM'S PILLS.

PARAGON asks: Can any member give me the formula of the much advertised Beecham's pill? It is much used by lower class patients as a remedy for "everything."

F.R.C.P. asks for the address of Professor Carl Vogt.

HOME FOR A PARALYTIC.

A MEMBER of the profession wishes to find a comfortable home for a brother who is hopelessly paralysed. The patient would prefer an establishment where he would have the society of other invalids to a private residence. He requires good nursing rather than medical treatment. If any kind reader could give any information, he would render a great service.

ANSWERS.

CAIUS should apply to the Home Secretary for the official forms which require to be filled up.

A MEMBER.—1. Apply to the Secretary of the Poor Law Medical Officers' Association, Mr. J. Wickham Barnes, 3, Bolt Court, Fleet Street, E.C. 2. The Secretary of the British Gynæcological Society is Dr. Fancourt Barnes, 7, Queen Anne Street, W.

PRACTICE IN BRAZIL.

DR. R. E. BURGES (Kettering) writes: In the JOURNAL for August 14th, a member asks for information as to practice in the Brazils or the Argentine Republic. About five years ago I was out there, and made inquiries on the subject, and I believe I am correct in saying that, before being allowed to practise in either place, a man with British qualifications must study in the hospitals out there for two years, and then pass an examination in medicine, surgery, etc., and that he would also have to pass an examination in the Spanish language. I heard of several Englishmen in Monte Video and Buenos Ayres who were doing very well. I have reason to believe that fees are good, but living is very expensive. As to whether assistantships or partnerships are obtainable, I cannot say.

IRISH LICENCES IN MEDICINE.

MR. J. J. BINGHAM (Alfreton).—There is no university or medical corporation in Dublin which grants a degree or licence in medicine without evidence of previous attendance on lectures, hospital practice, etc. The licence in midwifery is granted only to persons already qualified.

MULLEIN OR VERBASCUM IN PHTHISIS.

IN reply to the inquiry of T. C. D., Messrs. Parke, Davis, and Co. write to say that mullein leaves (verbascum thapsus) as supplied by them to Dr. Quinlan, of Dublin, may be obtained of their London agents, Messrs. Burgoyne and Co., 16, Coleman Street, E.C., but add that an infusion can most easily be made from the fluid extract as supplied by them. Three ounces of the fluid extract may be used in thirteen ounces of the milk in preference to the leaves.

POOR CLERK.—Apply at the surgical out-patient department of any of the London general hospitals.

NOTES, LETTERS, ETC.

THE RIDLEY FUND.

THE following subscriptions have been received since the last published list. The fund will be closed next month. (For case, see JOURNAL, June 26th.)

	£	s.	d.
T. Lauder Brunton, F.R.S., London	2	2	0
Dr. Cumberbatch, London	1	1	0
M. H. H. V., Horsham	1	1	0
T. Eyton-Jones, Esq., Wrexham	1	1	0
R. Palgrave Simpson, Esq., Weymouth	0	10	6
J. Brierley Hughes, Macclesfield	0	10	0
E. H. Addenbrook, Kidderminster	0	10	0
J. M. Hembrough, Esq., Great Grimsby	0	10	0
W. S., Ealing	0	10	0

MR. "PUNCH" NODDING.

WHILE (no doubt) our excellent and facetious contemporary Mr. *Punch* and his sagacious companion Toby were enjoying their well-earned "forty winks" last week, someone inserted in the number of his well-known paper for August 21st what was intended to be a joke at the expense of the President of the British Medical Association, who is accused of having said in his address: "What if Goethe's mother had never married? Would *he* have written *Faust?*" Unfortunately for the point of the joke, this is not what Dr. Withers Moore said. It was: "Would *she* have written *Faust?*" The word "she" appears in Dr. Moore's address as published in the BRITISH MEDICAL JOURNAL of August 14th (page 297 column 1); and, as we have ascertained by careful examination, it was printed correctly in the very first proof of the address. The author of the paragraph in *Punch* must have copied from some inaccurate report which appeared elsewhere than in this JOURNAL, and for which Dr. Withers Moore is in no way responsible. Mr. *Punch's* moral courage and sense of justice are too well known to render it necessary to say more on the subject.

A SLIGHT ERROR.

A GERMAN contemporary announces that "the President of the British Medical Association, Dr. B. Forster, has been raised to the peerage (*Adelstand*)."

THE USE OF INDIA-RUBBER BANDAGES.

DR. F. A. A. SMITH (Portsea) writes: India-rubber bandages were first brought out, I believe, for the cure of chronic ulcers of the leg, which heal up very rapidly under their use. I find them most useful in many other affections. In a case of effusion into the knee-joint, the result of a blow, when rest in bed, fomentations, blisters, and Scott's dressing did little or no good, the use of an India-rubber bandage was followed by the greatest benefit, all effusion being removed in a few days. In a case of bad varicose veins of the legs, of over forty years' standing, the veins were practically cured after a year's treatment by India-rubber bandages. I find nothing to equal their use; also, after the acute symptoms have subsided, in swellings of rheumatic or gouty origin. I have no doubt but that an India-rubber bag of suitable size could be made for the treatment of cases of orchitis, and would be found far preferable to the ordinary strapping.

ERRATA.

IN the JOURNAL of August 21st, page 368, column 1, line 23, for "Dr. Kelly Taunton," read "Dr. Kealy, Gosport." In page 370, column 2, for "Admiral Fielding" read "Admiral Field."

MADEIRA AND THE CANARY ISLANDS.

MR. MORDEY DOUGLAS (Sunderland) writes: Having spent last winter in Madeira and the Canary Islands, I shall be glad to give "D. C," in a private letter, information of the advantages and disadvantages of the islands of Madeira, Teneriffe, and Grand Canary.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. M. Beverley, Norwich; Dr. Heneage Gibbes, London; Dr. Imlach, Liverpool; Dr. Tyson, Folkestone; Dr. Churton, Leeds; Dr. M. W. C. Gori, Amsterdam; The Director-General, Army Medical Department; Dr. R. Rentoul, Liverpool; Sir William Stokes, Dublin; Dr. W. Wylie, Skipton; Mr. Victor Horsley, London; Mr. Partridge, Stroud; Messrs. Walker, Troke, and Co., London; Mr. W. H. Fretz, Molyneux, St. Kitt's; Mr. A. Finegan, Castlebar; Paragon; Mr. E. H. Addenbrooke, Kidderminster; Dr. R. E. Burges, Kettering; Mr. J. J. Reynolds, Boxford, Colchester; Dr. A. T. Myers, Penrith; Dr. J. Hutchison, Shawlands, Glasgow; Mr. W. T. Jackman, Coggeshall; Mr. C. Gaine, Bath; Dr. D. Newman, Glasgow; Mr. R. Clement Lucas, London; Mr. J. W. A. Napier, Egremont, Cheshire; Dr. G. F. Rossiter, Weston-super-Mare; Mr. Henry Fox, Birmingham; Mr. Barrow, Ryde; Dr. F. de Havilland Hall, London; Mr. W. A. Phillips, Faversham; Dr. A. Creswell Rich, Liverpool; Dr. Styrap, Shrewsbury; Mr. J. J. Bingham, Alfreton; Dr. G. Hewitt, London; Dr. W. T. Gairdner, Glasgow; Messrs. C. J. Hewlett and Son, London; Mr. C. W. Covernton, Aspley Guise; Mr. H. J. Barnes, Bermuda; Mr. G. Meadows, Hastings; Dr. Rutherford, Dumfries; Junior Member; Dr. W. R. Dalzell, Liverpool; Dr. W. Smith, Pershore; Dr. James Brydon, Hawick; Dr. L. W. Marshall, Nottingham; Mr. Adams Frost, London; Mr. H. P. Dimmock, Sukkar, India; Mr. W. Johnson, Jubalpur; Dr. R. Kirk, Partick, Glasgow; Dr. Idelson, Berne; Dr. Hack Tuke, London; Mr. C. M. Campbell, London; Mr. H. E. Richardson, Birkenhead; Dr. C. R. Walker, Leytonstone; Dr. Withers Moore, Brighton; Mr. W. Keays, Dublin; Mr. C. Stennett-Redmund, Gateshead; Dr. Dreschfeld, Manchester; Mr. W. R. Burgess, Manchester; Jeyes' Sanitary Compounds Company, London; Mr. H. A. Smith, Ealing; Dr. Prosser James, London; Mr. W. Barlow, Bolton; Mr. B. Strachan, Sunderland; Mr. R. J. Scott, Bath; Mr. C. F. Pickering, Bristol; Dr. C. Elliott, Clifton; Dr. A. Harvey, London; A Member; Dr. L. H. Ormsby, Dublin; Poor Clerk; Dr. Douglas Powell, London; Mr. R. A. Chudleigh, Wimborne; Dr. Spencer, Clifton; Mr. E. L. Hussey, Oxford; Mr. J. Montgomerie, Partick, Glasgow; Dr. Gordon Black, Harrogate; Dr. J. Renton, Glasgow; Mr. P. D. Eastes, Canterbury; Dr. H. O'Shea, Biarritz; Mr. F. Churchill, London; Dr. F. Gahire, Belize, etc.

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REPORT

TO THE

SCIENTIFIC GRANTS COMMITTEE

OF THE

BRITISH MEDICAL ASSOCIATION.

ON AN APPARENTLY PERIPHERAL AND DIFFERENTIAL ACTION OF ETHER UPON THE LARYNGEAL MUSCLES.

Read in the Section of Therapeutics and Pharmacology at the Annual Meeting of the British Medical Association in Brighton.

By FELIX SEMON, M.D., F.R.C.P.,
Assistant-Physician in charge of the Throat Department at St. Thomas's Hospital;
AND
VICTOR HORSLEY, B.S., F.R.S.
Professor Superintendent of the Brown Institute.

(*Concluded from page 407*).

After the foregoing digression, we now resume the thread of our main argument, and proceed to narrate our experimental investigation of Dr. Hooper's observation. We have performed for this purpose thirty-two experiments on the uncut and cut recurrent laryngeal nerve in twenty animals altogether, of which three were monkeys, eight dogs, five cats, and four rabbits.[13] Of these experiments, twenty were performed on the uncut and twelve on the cut nerve, as shown in the subjoined two tables.

Method.—The method employed was invariably the same, with the only exception, that in one instance (Experiment XXXIV) tracheotomy was not performed. The animal was first narcotised with ether, or two parts of ether to one part of chloroform, fixed on its back, and tracheotomised, after which the narcosis was always maintained with ether alone. The lower jaw was then raised, the tongue drawn forward, and the epiglottis lifted by means of a thread passed through it, so that the larynx could be inspected from above. In those animals (for example, monkeys and rabbits) in which such a proceeding was impossible, the larynx was inspected from below, through an opening in the uppermost rings of the trachea. This modification was also sometimes adopted in the cases of cats. Threads were then cautiously passed under the recurrent laryngeal nerves, which were laid bare to such an extent, that they could be gently lifted for fully half to one inch from the wound for the purposes of stimulation.[14] This was always done, because we found, by experience, that such an amount of lifting of the nerve from the surrounding parts was absolutely necessary to avoid error due to spread of current to neighbouring nerves, for even when the nerve was lifted to this extent, we obtained on a few occasions, when using very strong currents, mixed results, which were by more perfect insulation, proved to be due to the just mentioned source of error. In connection with this point we would urge our strong conviction, that if in experiments of this character any electrode be used, by which the nerve is kept buried in the wound (such as Ludwig's clamp-electrode), the results will always be open to the foregoing objection. We employed carefully insulated platinum point electrodes, which were applied to the upper free surface of the nerve. The stimulus was supplied by one, sometimes two, Daniell's cells, an ordinary Dubois-Reymond's induction coil fitted with a Neef's hammer, and the scale was so arranged, that 0 corresponded to the point at which the secondary coil completely covered the primary, with which apparatus consequently a distance of 30 cm. signifies an excessive weak current.

We append herewith the full details of a representative experiment as an example of our method.

Experiment I, February 17th, 1886. Large mongrel collie dog, etherised, tracheotomised, and fixed according to foregoing description. Stimulation of nerves as before-mentioned. (One Daniell's cell employed.) Deeply etherised.[15]

Left Recurrent Laryngeal Nerve.

Coil.	*Result.*
15 cm.	Marked abduction of left vocal cord.

Animal allowed to partly recover from the etherisation.

15 cm.	Marked adduction of left vocal cord.

Left recurrent laryngeal nerve cut, and peripheral end stimulated. Animal slightly etherised.

10 cm.	Very marked adduction.

Animal deeply etherised.

10 cm.	Maximum of abduction.

Stimulation of the central end of the recurrent laryngeal nerve produced no effect whatever even with the coil at 0 cm.

Right Recurrent Laryngeal Nerve.

Animal slightly etherised.

Coil.	*Result.*
15 cm.	Marked adduction of right vocal cord.

Animal fully etherised.

15 cm.	Marked abduction of right vocal cord.

Right recurrent laryngeal nerve cut. (Cadaveric position of the glottis.) Stimulation of peripheral end. Animal not deeply under ether.

15 cm.	Marked adduction of right vocal cord.

Animal deeply under ether.

15 cm.	Marked abduction of right vocal cord.

The accompanying tables, in which AD signifies adduction, AB abduction, give in a succinct manner the chief details of each of our experiments.

From a perusal of these tables, certain important facts will at once be obvious.

In the first place, our experiments on dogs are very constant indeed, and corroborate Dr. Hooper's original statements; secondly, they show that there was, in these animals, no difference in the effect, whether the nerve was entire or cut; thirdly, it will be observed, that almost all these results were obtained with a current of 15 cm., the current being, of course, of the same strength in all states of narcosis of the animal. This is obviously an important fact, when we take into consideration the results obtained by Dr. F. Donaldson, Jun., and referred to by us on page 405. This author denies that the effect described by Dr. Hooper is in any way due to the depth of narcosis, but states that, no matter what that depth may be, stimulation with a weak current always produces abduction, stimulation with a strong current always adduction of the corresponding vocal cord. Although, as stated on page 405, we have obtained, in the few instances in which, up to the present time, we have been able to repeat Dr. Donaldson's experiments with currents of varying strength, similar results, yet this harmony between his results and ours only exists where the animal was not deeply narcotised.

This brings us now to the crucial point of the whole investigation, namely, the depth of the narcosis. We have found that in order to obtain the effect described by Dr. Hooper, it is almost always necessary to increase the depth of the narcosis nearly to the point of death; and it would appear to us that Dr. Donaldson (who, by the way, has apparently performed only three experiments with ether as the only anæsthetic) has failed in verifying Dr. Hooper's observations, because he has never pushed the narcosis to the required degree.

In proof of this belief, we have performed three[16] experiments, in which we first obtained Dr. Donaldson's result, the animal being slightly narcotised; but then, having pushed the etherisation to its extreme limit, we obtained Dr. Hooper's result, with currents of all strengths, as will be seen from the appended detailed experiment.

Experiment LII, July 29th, 1886. Young collie dog; etherised; left recurrent laryngeal nerve laid bare; larynx looked at from above; animal well etherised.

Coil.	*Result.*
30.	Slight abduction of the left vocal cord.
25.	A little more abduction of left vocal cord.
20.	Respiratory position.

[13] The operative procedure of the experiments was performed by Mr. Horsley in accordance with the requirements of the law.

[14] In view of some cases recently brought forward, in which pleuritic exudation is stated to have, by mere indirect traction, caused disorders of mobility of the corresponding vocal cord (Moeser), we would draw attention to the fact that the above described considerable direct traction on the nerves never interfered with the respiratory movements of the corresponding cord in our experiments, this being a point to which we naturally paid special attention.

[15] This animal was used for excitation of the vagi, and was killed after the final excitation of the right recurrent laryngeal nerve.

[16] Owing to the novelty of Dr. Donaldson's communication, we have been unable to investigate further the points raised by him; but we think that the results of our three experiments are so clear as to offer a [illegible] upon the [illegible] between the results of Dr. Donaldson and ourselves.

TABLE I.—*Uncut Recurrent.*

Species of Animals.	Experiment No.	Slightly under Ether.		Well under.		Very deeply under.		Remarks.
		Coil.		Coil.		Coil.		
1. Large collie dog	I	15	AD	—	—	15	AB	Both recurrents.
2. Bull-terrier	II	15	AD	—	—	15	AB	
3. Retriever	IV	15	AD	15	AD	—	—	The animal was supposed to be deeply under.
4. Spaniel	XIII	15	AD	—	—	15	AB	
5. Rabbit	V	15	AD	—	—	15	AD	
6. Rabbit	VIII	15	AD (bilateral)	—	—	15	AB (unilateral)	Action of interarytænoid muscle (?).
7. Small cat	VI	15	AB	—	—	15	AB	
8. Cat	VII	15-10	AB left, mixed movement, right recurrent	—	—	15	AB left recurrent, right not tried	
9. Monkey	XII	15	AD	—	—	15	AB	Both recurrents.
10. Monkey	XIV	15	AD	—	—	15	AB	
11. Fox-terrier	XVII	15	AD	—	—	15	AB	
12. Monkey	XVIII	15	AD (bilateral)	—	—	15	Mixed movements	The bilateral action was only obtained from the left recurrent. (Interarytænoid action (?)
13. Cat	XIX	20	AD	—	—	20	AB	
14. Rabbit	XX	15	AD	—	—	15	Arrest in respiratory position	
15. Rabbit	XXII	15	AD incomplete, anterior end of vocal cord only	—	—	15	AB	
16. Cat	XXIV	15	AD	—	—	15	AD	
17. Cat	XXV	15	AB (both recurrents)	—	—	15	AB	
18. Fox-terrier	XXXIV	30	AD	—	—	30	AB	Not tracheotomised.
19. Retriever	L	0 (great resistance introduced)	AD	—	—	0 (great resistance introduced)	AB	Tambour experiment.
20. Fox-terrier	LIV	Ditto	AD	—	—	Ditto	AB	Ditto

TABLE II.—*Cut Recurrent.*

Species of Animals.	Experiment No.	Slightly under Ether.		Well under.		Very deeply under.		Remarks.
		Coil.		Coil.		Coil.		
1. Large collie dog	I	10	AD	—	—	10	AB	Both recurrents.
2. Fox-terrier	III	15	AD	—	—	15-0	AB	Left recurrent.
3. Retriever	IV	15	AD	—	—	15	AB	Both recurrents.
4. Small cat	VI	15	AB	—	—	15-25	AB	Ditto
5. Cat	VII	—	—	15-5	Mixed movements	—	—	Ditto
6. Monkey	XII	15	AD left recurrent, mixed movement right	—	—	15	AD	Long exposure and stimulation of nerves.
7. Monkey	XIV	15	AD both recurrents	—	—	—	AB right recurrent; AD left recurrent	Long exposure and stimulation of left recurrent.
8. Fox-terrier	XVII	16	AD	—	—	15	AB	
9. Cat	XXV	15	AB (both recurrents)	—	—	15	AB	
10. Fox-terrier	XXXIV	30	AD	—	—	30	AB	Not tracheotomised.
11. Retriever	L	0 (great resistance introduced)	AD	—	—	0 (great resistance introduced)	AB	Tambour experiment.
12. Fox-terrier	LIV	Ditto	AD	—	—	Ditto	AB	Ditto

15. Mixed effect { Adduction anteriorly. / Abduction posteriorly.
12.5. Marked adduction.

Animal very deeply etherised.

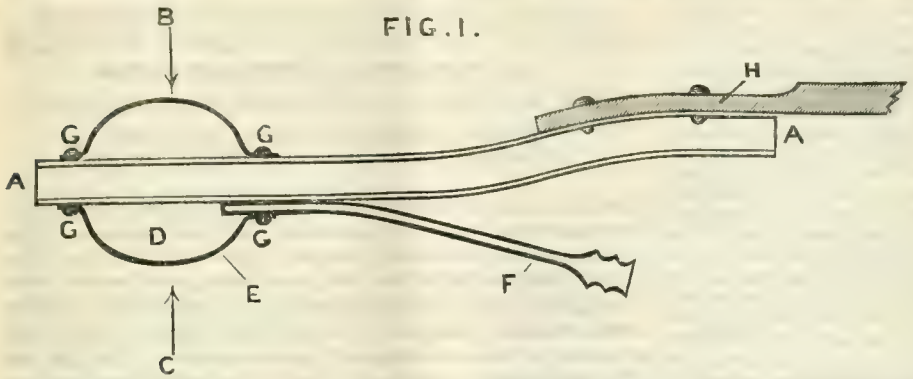
Coil.	Result.
30.	From slight (at 30, to excessive (at 5).
25.	
20	
15.	Abduction of left vocal cord.
12.5	
5.	
0.	

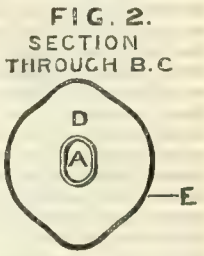
In order to remove any reasonable doubt as to the reality of the "ether effect," we determined to graphically record the same. For this purpose, we employed an exploring tambour, devised by one of us (Horsley), consisting simply of a central tube of oval section, surrounded by a thin rubber air chamber, for about 3 cm. of its length. This air-chamber is connected with a Marey's recording tambour, the same writing on a blackened cylinder, on which, also, is simultaneously marked the moment-duration and rate of stimulation. The animal being fixed, as before described, and tracheotomy having been previously performed, the exploring tambour is gently inserted between the vocal cords, the adductor and abductor movements of which are consequently recorded by the rising and falling respectively of the lever.

With this simple apparatus, it was extremely easy to obtain a graphic record of the movements of the vocal cords[17] under the circumstances referred to above, and in the subjoined tracing it will be seen that, when the animal was slightly etherised excitation of the recurrent laryngeal nerve was followed by powerful adduction of the vocal cords (both recurrent laryngeal nerves were stimulated simultaneously) demonstrated by the rise of the lever; whereas, when the animal was nearly dead from ether-narcosis, the opposite effect followed, namely, a fall of the lever, that is, abduction of the vocal cords. It need hardly be added that the current in both instances was exactly of the same strength.

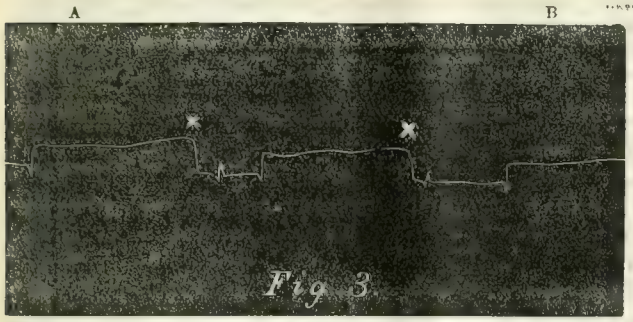
We trust that the proofs we have adduced of the reality of the "ether effect" will be now considered adequate, and we leave the question here without venturing on any explanation or conclusion,

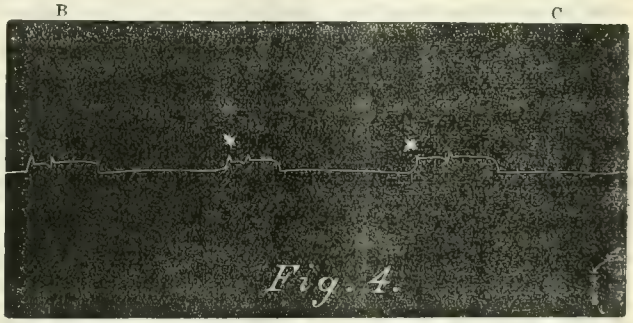
[17] The tambour also, of course, records slightly the coarse antero-posterior (tension), and up and down movements of the larynx; but, as will be seen in the accompanying tracings (where the recurrent laryngeal nerves have been cut), this complication may practically be neglected. Finally, the degree of abduction recorded is, of course, much dependent on the accuracy with which the tambour fills the larynx.





A=Central Air-tube.
BC=Line of Section shown in Fig. 2.
D=Air-chamber around A.
E=India-rubber Bag enclosing Air-chamber D.
F=Tube leading from Air-chamber D to a recording Tambour.
G=Ligatures fixing the Rubber-bag to the Central Tube.
H=Portion of Supporting Rod.





Explanation.—During the period, A B of the tracing, that is, Fig. 3, the animal (a large retriever dog) was moderately narcotised with ether, that is, sufficient to keep it perfectly unconscious. During the period B C (Fig. 4), the narcosis was pushed to an extreme point. The asterisks indicate the commencement of stimulation.

save that a difference in the metabolic processes of the abductor and adductor muscles appears to exist.

We cannot close this paper without referring, however briefly, to a series of fallacies which surround this investigation.

Firstly, in Tables I and II, it will have been observed that the results obtained from animals of different genera vary very considerably. All variations in the instances of monkeys and rabbits can be attributed to the action of simple causes, such as exposure of delicate nerves, injury of the same by repeated excitation, etc., but the case is different with cats. In these animals, it will be seen that abduction frequently followed excitation of the recurrent laryngeal nerve (cut or uncut) whatever the degree of narcosis; and we may say here that this appears not to be a peculiarity of the peripheral portion of the laryngeal apparatus in the cat, for we have observed a corresponding functional arrangement in the cortical centre for the movements of the vocal cord.[18]

Secondly, it would also appear that, apart from generic differences, there are not rarely individual peculiarities in the same class of animals, for even when apparently every precaution has been taken to avoid known sources of error, we have observed that in some animals adduction, in others abduction, is more easily obtained.

Thirdly, age also seems to play an important *rôle* in determining the difference of activity of movement just referred to; for in every instance that we have performed an experiment on a puppy (that is, 2 to 3 months old) we have found that abduction very greatly prevails.

Fourthly, as will readily be conceded from general considerations, the prolongation of an experiment introduces complications by reason of damage to the nerves exposed. We have observed this and, moreover, are in a position to state that the power of abduction distinctly failed from this cause before that of adduction.

Fifthly, we desire to draw particular attention to the fact that frequently it is very difficult (owing, no doubt, to excessive action of the interarytænoid and internal thyreo-arytenoid muscles) to classify the position of the vocal cords as one of abduction or adduction.

If to the foregoing sources of error we add those referred to in the earlier part of this paper, namely (1), the possibility of spread of current; (2) the question of the strength of the current, and (3) the depth of the narcosis,[19] the difficulties in the way of drawing positive conclusions from experiments of this subject, will be generally admitted.

We trust, however, that we have made clear, for future investigation, the causation of some of these difficulties.

[18] As this subject of generic differences is very complicated, we shall not do more than thus refer to it, with the reservation that what we have said is only a preliminary communication.

[19] Owing to pressure of work, we have not been able to discuss the action of other anæsthetics than ether.

THE FUNCTION OF THE RECURRENT LARYNGEAL NERVE.

Remarks made after the Reading of the above Paper,

By FRANK DONALDSON, M.D., Baltimore, U.S.A.

I AM glad to have had the privilege of hearing Dr. Semon's paper. It is replete with the results of his original researches of great scientific and practical value.

The contribution of Dr. F. H. Hooper, of Boston, to which he alluded, has attracted much attention in Europe as well as at home. His experimental studies were upon a new field—scarcely touched upon previously—the respiratory function of the human larynx (*Transactions of American Laryngological Association*, 1885).

The compound nerve, "the recurrent laryngeal," contains sensory motor fibres and branches of the sympathetic. It is distributed freely to all the intrinsic muscles of the larynx (except the crico-thyroid). This includes the five adductors (or phonatory) and the two abductors (or automatic). The interesting physiological question arises, Why is it that this one nerve, distributed to these two sets of muscles, causes them to act in opposite directions—one set (the adductors) drawing the vocal bands in phonation together in close coaptation, the other set separating these same bands in respiration; the same nerve constricting and dilating the glottis? In considering this subject, Dr. Hooper very pertinently inquires, Why is it that, when an irritant enters the larynx, or the recurrent laryngeal is stimulated, the adductors, and not the abductors, immediately contract with a spasm, and close the larynx? As he states, this action cannot be explained on the ground that the five adductors overpowered by their muscular force the two abductors, for the aggregate bulk of muscular

fibres is very nearly the same. Dr. Hooper's explanation, sustained by the results of his experiments, was that, while the respiratory muscles were holding the glottis always open during the whole of life, for the absolutely necessary function of air-introduction, the phonatory or constricting muscles are more dependent upon the consciousness of the individual in order to respond to any irritation. Thus the adductors guard the function of hæmatosis. These constrictor muscles, according to Dr. Hooper, cease to act if the animal is in a state of profound narcosis, as in a man who is "dead-drunk;" then any living insect could crawl in or out of the mouth and larynx without exciting reflex contraction of their muscles. He cites the well known fact that general anæsthetics impair the action of these constrictors. This author goes further, and says, should we not expect, provided we could preserve the organic life of an animal while its volition was at the same time completely abolished, to get dilatation of the glottis on irritating the recurrent nerve, instead of closure—the posterior crico-arytænoid being a muscle of organic life? His experimental results confirmed this view: that the constrictor muscles of the larynx are dependent upon consciousness, and that, when animals are profoundly narcotised under ether, stimulation of the recurrent laryngeal nerve always produced abduction of the abductors. This dilatation, produced by stimulation, became less and less as the animal recovered from the narcotism, until, finally, contraction of the glottis followed stimulation.

Since the publication of Dr. Hooper's valuable results, my son, Dr. F. Donaldson, junior, instituted a series of experiments on the physiological function of the recurrent laryngeal nerve, in the Johns Hopkins University biological laboratory, which were read at the meeting of the American Laryngological Association in May, 1886.[1] Dr. Semon has referred several times to this paper. Dr. Donaldson, junior, wished to test Dr. Hooper's conclusions above stated: that the constrictors cease to act during profound narcosis; and that, under these conditions, the posterior crico-arytænoid, under stimulation, produce dilatation of the larynx. These experiments were performed with great care, and every appreciable source of error avoided. In the first five experiments on dogs, he invariably found, in using the induction-coil of the strength of 10, that the animal, being profoundly anæsthetised, adduction was produced. The same result followed when the dog was slightly etherised. He did not in a single case have abduction. In his sixth experiment, Dr. Donaldson used the same strength of induction-coil as in the previous experiments, with the same results, no matter whether profound or partial narcosis was produced. Afterwards, however, on the same animal, after weakening the force of the current to 18, he found the vocal bands abducted. Again returning to the stronger (10) stimulation, adduction was produced. In each subsequent experiment, he found the same result: from feeble stimulation, abduction; from strong stimulation, adduction. His conclusions did not, consequently, coincide with those of Dr. Hooper. His experiments showed—(1) that the constrictor muscles do not cease to act during narcosis, no matter how profound, or during suspension of consciousness from any cause; (2) that abduction obtained by Dr. Hooper was in no way reflex; (3) that abduction takes place under the influence of weak stimulation invariably, whether the animal be eupnœic or apnœic, when the medulla was destroyed, and after local death. Dr. Donaldson, junior, in finding that the posterior crico-arytænoid muscles respond to weaker stimulation than the adductor muscles, left to subsequent investigators whether this was dependent upon the irritability in the nerve-fibres or in the muscular fibres. Neither Dr. Hooper nor Dr. Donaldson, junior, found any evidence that the fibres of the abductor fibres were more vulnerable and more prone to disease than those of the adductors. This is, however, insisted upon by Dr. Semon as having been found by him, not only clinically, but from *post mortem* examinations.

We thus see that in this important field of experimental physiological work, as in other investigations, the observers do not agree in their conclusions, although they are all earnestly striving to arrive at the same goal—truth. Dr. Semon confirms some of the results of each of the previous experimenters, and does not confirm others. He has also given us much food for thought in his very suggestive paper.

[1] See [illegible] *Journal of Medical* [illegible] for July, 1886, article "Function of Recurrent Laryngeal Nerve," by F. Donaldson, junior.

PRESENTATION.—Mr. W. H. Thornton, Surgeon, of Margate, has been presented with a solid silver tea-kettle by the Vicar and parishioners of Holy Trinity Church, and other friends, as a recognition of the services rendered by him during the thirty-two years of his churchwardenship.

CHEESY INFARCT OF SPLEEN: EXTENSIVE SECONDARY ULCERATION OF LARGE INTESTINE, AND PLEURITIS IN ENTERIC FEVER.

Read at a Meeting of the Liverpool Medical Institution.

By R. S. ARCHER, B.A., M.B., M.Ch.Dubl.,
Physician to the Netherfield Fever Hospital, Liverpool.

EMILY M., aged 27, was admitted to hospital on October 19th, 1885. She stated that, eight days previously, she had been seized with frontal headache, followed by vomiting, rigors, and diarrhœa. The patient presented undoubted symptoms and signs of enteric fever. Amongst the most important of these may be mentioned the characteristic eruption, tenderness in the right iliac region, increased area of splenic dulness, and a haggard, listless expression. The pulse was 108, and the tongue was dry and furred. The pulse throughout was high, sometimes reaching 140, and occasionally even exceeding that rate.

The temperature was irregular, at times reaching nearly 105° Fahr. About the twenty-sixth day of the fever, it began to assume those long, rather regular, and gradually declining curves, which are wont to indicate in this fever that the febrile movement is coming to a termination, and, on the thirty-fifth day, it seemed to have settled down near the normal line; but on the evening of this day, it again rose to between 102° and 103°, remaining high and irregular till the fatal termination on the forty-third day. This rise of temperature was regarded as indicative of the onset of an intercurrent complication.

Diarrhœa was more or less constant throughout, and occasionally profuse. On the twelfth day, there were voided four or five ounces of blood, which had the effect of considerably lowering the temperature, and keeping it about 102° for twenty-four hours.

Vomiting, always a symptom of bad omen in the acute specific fevers, was frequent. Profuse sweating, also another symptom of evil import, occasionally occurred. Abdominal tympanites and tenderness were more or less generally present. The expression of the face was throughout haggard and listless, and the cheeks occasionally became flushed to a marked degree. Prostration and emaciation were notable symptoms, and gradually progressive. The tongue was usually dry, fissured, and furred, but occasionally glazed, and there were sordes on the teeth.

Pleuritic friction-sound, and signs of consolidation, manifested themselves over the region of the base of the left lung on the twenty-fourth day. These signs remained more or less constant, and were very distressing to the patient till death.

Death supervened about the forty-third day from the onset of the fever, the apparent cause being gradually progressive exhaustion; that is to say, there was no one symptom that could be regarded as specially determining the fatal issue.

Post Mortem Examination.—Emaciation was extreme. *Chest:* Both lungs were hypostatically congested, the left one especially so, and the base of the latter was in the condition known as "splenisation." The diaphragmatic surface of the left lung was firmly adherent, and the pleural cavity on this side contained a small quantity of fluid. The heart was apparently healthy. *Abdomen:* The omentum was almost entirely devoid of fat. The small intestine contained some greenish fæces. In the lower part of the ileum there were numerous ulcers, quite free from sloughs, and some of them were cicatrising. In the colon, just beyond the ileo-cæcal valve, the mucous membrane appeared as if it were hypertrophied, and it was studded with ulcerations of the solitary glands, presenting various stages of the ulcerative process; some were merely swollen and hyperæmic, others were occupied by adhering sloughs, and a few presented clean punched-out surfaces, the sloughs having separated. This condition extended all the way down to the rectum, only in a less degree as we descended. The *Spleen* was enlarged and congested, and contained in its upper part a cheesy mass, about the size of a walnut. This mass was firmly adhering to the diaphragm.

REMARKS.—The points in this case that appear to be of special interest, from a clinical stand-point, are three, namely: (1) the pleuritis; (2) the cheesy infarct of the spleen; and (3) the extensive secondary ulceration of the large intestine.

Pleuritis would appear to be a complication of unfrequent occurrence in enteric fever. Thus Liebermeister found this condition only 64 times in 1,743 cases, or 3.6 per cent., and, of these, 21, or 35 per cent.,

died. I can find no reference to this complication in Stokes's *Lectures on Fever*, and, assuredly, if it were at all of common occurrence, it could not have escaped the diagnostic acumen of this most distinguished physician.

With reference to cheesy infarcts of the spleen, this lesion would also appear not to be of common occurrence. It will probably be recollected that, at a meeting of this Society, on November 19th, 1885, there was related by me a case of splenic abscess in enteric fever, which contributed to a fatal termination, by bursting into the pleural cavity, and kindling purulent peritonitis. It may, perhaps, be predicated concerning the splenic infarct in the case under consideration, that, had the patient lived, it is quite within the range of possibility that the infarct would have broken down, and gone on to the formation of an abscess. But, unlike the abscess referred to above, had this happened, when we consider the adhesion of the spleen to the diaphragm, and also of the latter structure to the lung, it is by no means improbable that this abscess would have burst directly into the left lung, and been discharged by expectoration. This, doubtless, would have been a serious accident, but not necessarily of itself fatal.

Ulceration of the colon is of common enough occurrence in enteric fever, but it is not usual to find the ulcers so numerous, and extending so low down as they did in this case. The ulceration, it is submitted, must be regarded as a secondary lesion, probably induced by the passage of specific fæces over the mucous membrane. It was this, doubtless, that caused the recurrence and continuance of the febrile symptoms, and contributed in no small degree to a fatal termination, by keeping up an exhausting and intractable diarrhœa.

PIPERINE IN INTERMITTENT FEVER.

By C. S. TAYLOR, M.D., B.Sc.

As many cases of intermittent fever seem to resist the use of quinine, and all the other remedies in ordinary use, the following cases, which fell under my observation, will, I trust, exemplify piperine as an excellent addition to our knowledge of the treatment of this disease.

Case I.—M. J., aged 18, had suffered periodically, upwards of two years, with intermittent fever. It appeared that she had taken sulphate of quinine in great quantities, and in large doses, with the effect of only subduing the disease for a short time. She was sent abroad for a change of climate, and every other means had been used to cure the disease, without success.

Treatment.—She was directed to begin as soon as perspiration commenced, without regard to the heat of the skin, or quickness of the pulse, 3 grains of piperine every hour, until 18 grains had been taken; and, on the following day, when intermission was complete, the same quantity every three hours. This has, in every case, succeeded in checking the paroxysm, and as soon as that is accomplished for some days, the following pills, taken in the morning, noon, and evening, will be found beneficial: ℞ Pilulæ hydrarg. gr. j; piperinæ gra. ij; quinæ sulph. gra. iij; syrupi q. s. Should the second paroxysm be escaped, the following pill should be taken every third hour: ℞ Piperinæ gra. v; mucil. gum. acaciæ q. s.

It is now upwards of three years since the patient was treated, and she has continued free from the malady.

Case II.—Mrs. C., aged 34, had had several severe paroxysms of tertiary intermittent fever, but very irregular in its attacks. Infusion of cinchona, as well as sulphate of quinine, had been freely taken, but to no advantage. On April 15th, while taking a cold bath, she was seized with ague. At 7 A.M., I found her shivering severely. I ordered warm drinks to be given frequently. At 12 o'clock, cold shivering continued, and the symptoms were alarming; the pulse was scarcely felt. The skin was cold, universally clammy, and unpleasant to the touch. The lips were of a slate-colour. The countenance was contracted, the eyes sunken, and the patient evinced marks of great agitation and alarm.

Treatment.—Hot flannels were applied over the chest and abdomen; the legs and feet were rolled up in hot cloths, and stone vessels, filled with hot water, were constantly kept under her arms, and along the inside of the thighs and legs; and warm brandy-toddy was given frequently in small quantities. At 4 P.M., finding the reaction could not be brought on, five grains of piperine were given. This was with great difficulty swallowed; it was, therefore, washed down with an ounce of brandy, in half a tumbler of champagne. Afterwards, full doses of the aromatic spirit of ammonia were ordered to be taken every third hour, and the champagne to be continued. At 6 P.M., reaction commenced, and, as the heat increased, the hot applications and stimulants were suspended. At 8 P.M., heat was general, and in proportion to the cold stage. On the following morning, the sweating stage commenced; and, as soon as it was general, five-grain pills of piperine was ordered to be taken every second hour, and continued for four days. On physical examination, the liver and spleen were found to be enlarged and hard, yet free from pain when pressed. The following pills were prescribed, and the patient was ordered to take one every two hours. ℞ Piperinæ gra. xxxvj; pilul. hydrargyri gra. xij. To be made into twelve pills. In case the bowels were not open, a wineglassful of the following mixture was to be taken when required: ℞ Sulph. magnesiæ ℥iss; sulph. quiniæ ℈ii; acidi sulph. dil. ℥ij; aquæ puræ ad ℥xx.

It is now three months since she first had an attack of the disease. Health perfectly restored.

There are a great many patients having an objection to taking quinine, in consequence of its affecting the head; but the piperine, although a powerful stimulant, carminative, and febrifuge, does not in the least degree, from personal observations, affect the sensorium.

GANGRENE OF THE PENIS.

By F. A. COWARD, L.R.C.P. and S.Ed., Huddersfield.

As cases of gangrene of the penis are somewhat rare, I forward notes of two cases which have come under my care this year.

Case I.—On January 9th, J. L., a weaver, aged 35, a married man, consulted me for a swollen and œdematous condition of the penis. He had not suffered at any time from gonorrhœa, syphilis, or stricture. He had had good health, but at times was given to fits of intemperance. He had worked up to the time of consulting me. On the 10th I found him in much the same condition as the day before; the only difference being that there was a slight discoloration on the skin on one side, near the prepuce. On the morning of the 11th, I was surprised to find the whole of the prepuce, and a portion of the skin behind it, one black mass of slough. With the assistance of my friend, Mr. John Martin, I placed the man under chloroform, and slit up the gangrenous mass. I then found that the glans penis was also in a partial state of degeneration; but no signs of chancre, either hard or soft, were to be found, nor could we find any enlargement of the lymphatic glands. From the 11th up to the 17th, the gangrene spread slowly from the extremity to within an inch of the root; and, a line of demarcation having now shown itself, about three-fourths of an inch from the root, on the afternoon of the 17th, again assisted by Mr. Martin, I amputated the penis by means of the thermo-cautery, and the man made a rapid recovery, his temperature never rising above 99°. He returned to work on February 5th, and has had no relapse, nor any signs of venereal complaint. There can be little doubt that this was a true case of idiopathic gangrene, due to embolism of the dorsal artery.

Case II.—On April 8th, J. J., aged 40, a married man, came to the surgery suffering from acute orchitis of the left testicle, and an inguinal hernia of old standing on the right side. I ordered him to bed, and visited him the next day, the 9th, and found his condition much the same, only that the hernia was not down. On the morning of the 10th, he sent, asking to be seen early, as he was in great pain, and unable to pass urine. My assistant went, and found the penis greatly swollen and œdematous, and twisted upon itself; the scrotum and lower portion of the abdomen were œdematous also, and evidently infiltrated with extravasated urine. He with difficulty passed a No. 1 catheter, there being a tight stricture about two inches from the meatus, and drew off over a pint of urine, but retained the catheter in the bladder. On the 11th, the man appeared better. The swelling had somewhat subsided. He was in no pain, and had passed a fair quantity of urine by aid of the catheter. On the 12th, the catheter was removed, and a No. 3 passed and retained. The swelling had gone down considerably, but a slight discoloration was now noticeable on the skin near the prepuce. On the 13th, at noon, he was much depressed. His skin was clammy; he had muttering delirium and flickering pulse; respirations over 40. The penis, near the prepuce, was one gangrenous mass. By 4 in the afternoon, gangrene had spread from the extremity to the root of the penis, and thence over the lower portion of the abdomen; and by 11 the same evening, the last time I saw him, it had reached the umbilicus. He died before morning. Evidently on the 10th, during an effort to pass urine, the urethra must have given way behind the old stricture, and extravasation of urine occurred. The bladder could not have been ruptured, for by the aid of the catheter urine was passed freely up to the time of death.

NOTES ON A CASE OF INTERMENINGEAL HÆMORRHAGE.

By ARTHUR H. CLEMOW, M.D.

THE following case is of interest, owing to the unusual appearances of the hæmorrhage as presented on *post mortem* examination. On November 23rd, 1885, I was called to see a lady, aged 67. She had always lived in good circumstances, had enjoyed fairly good health, and there was no history to afford any information regarding the condition from which she was suffering. She complained of intense headache, chiefly frontal, but also extending round to the occiput, which generally became much aggravated each evening between 8 and 10 o'clock. A calomel and rhubarb powder was first ordered; but, as only slight and transitory improvement followed its administration, it was followed by a mixture containing bromide of ammonium and tincture of hyoscyamus. This, however, in combination with the local application of mustard to the nape of the neck, appeared to afford little or no relief to the pain. The urine (which was examined two or three times during the course of the illness) was normal; the heart's action was slow and feeble; pulse about 60 per minute; the radial artery was not perceptibly atheromatous.

From the time when first seen to the date of death, the patient steadily declined. The symptoms were very variable. At times she was wakeful and restless for days together, and then would pass into a drowsy, semi-unconscious condition. There were never any motor paralyses; and control of the bowel was maintained throughout, though, after December 4th, the urine was always passed in bed. She could take scarcely any nourishment, and at one time was fed by enemata, these having subsequently to be abandoned on account of the great tenderness of the whole body, involving considerable suffering in their administration. There was consequently marked and progressive emaciation. Her breathing was frequently "cerebral" in character, and at times there were perceptible twitchings in the flexor and pronator muscles of the forearm on both sides. At no period of the illness were there any eye-symptoms, and the ophthalmoscope revealed no changes in the vessels of the fundus. Her temperature, until within a very short time of her death, which occurred on December 20th, was constantly subnormal (97° to 98.2°).

Post Mortem Examination.—December 21st. On removing the skull-cap, a quantity of dark, puce-coloured, blood-stained fluid escaped from a hole made accidentally in the dura mater. The vessels of the membrane were engorged with blood, and, on dissecting it from off the brain, its inner surface was found to be lined with a dark, puce-coloured, membranous-looking material, mottled with darker patches here and there, suggestive of venous extravasation. This was adherent throughout to the dura mater, from which, however, it could be stripped with little difficulty. It covered both hemispheres above, and on the right side extended into the middle and posterior fossæ of the base of the skull, becoming thinner towards the middle line. On the left side, the middle fossa alone was lined. The anterior fossa on each side was free. It passed downwards on each side the falx cerebri between the cerebral hemispheres, becoming very much thinner as the free margin of the falx was approached. The tentorium cerebelli was not covered by it. In its thickest part,—that is, where it covered the hemispheres on each side above—it was about one-tenth to one-eighth of an inch in thickness. Microscopic examination proved it to be composed entirely of blood, which had been effused between the dura mater and arachnoid. From the thin nature of the clot, and its diffusion over so wide an area, the hæmorrhage had presumably been capillary, and must have taken place very gradually. From the fact of both sides being similarly affected, it must also be concluded that there had been a rupture of a vessel or vessels on each side about the same time. The arteries at the base of the brain presented no atheroma perceptible to the naked eye.

VARIATIONS IN STRENGTH OF DRUGS.—At a recent meeting of the Belgian Royal Academy of Medicine, M. Gille read a report on M. Herlaut's researches on the officinal powders of rhubarb, jalap, and cinnamon. The results obtained demonstrate that these substances vary even in the same species, in the same organ, according to the climate, soil, and age of the plant. The component tissues of the plant, and the substances contained in them exhibit characteristics useful in indicating the qualities of certain drugs obtained from the vegetable kingdom, also in helping to detect adulteration. In some instances, these indications are more useful than those given by chemistry, when it is a question of detecting flour or calomel. But, as a general rule, the microscope is not so valuable a source of information as is chemical analysis.

THERAPEUTIC MEMORANDA.

IRON IN THE TREATMENT OF WHOOPING-COUGH.

IF there be any one drug deserving of the term "specific" for whooping-cough, it is iron. I have formed this opinion after five years' experience in the treatment of this troublesome complaint. I grant th carbolic acid in minim-doses, by its anæsthetic action upon th gastric and pharyngeal mucous surfaces, checks the cough and t vomiting, and thus leaves the vital powers with every chance of asserting themselves. But in those cases where the disease has gained such ground as to have extended into the remotest parts of the bronchial system, and to have caused ulceration of the skin and mucous membranes, carbolic acid is of no use alone. The blood has lost almost all its fibrin and hæmoglobin; the skin is white as alabaster; the flesh throughout the body is soft and flabby, from the loss of general nutrition power; and the mucous membranes of the mouth and pharynx are covered with aphthous patches and sloughing ulcerations. Palliatives like carbolic acid are powerless in cases like these. Measures taken to arrest the disease must be radical.

In whooping-cough, diphtheria, and all the eruptive fevers, there is the development, sooner or later, of well-marked spanæmia, and, on this account, it cannot, I think, be too strongly insisted upon that iron should be given as soon as possible. In whooping-cough, I give from half to one minim of the perchloride of iron every two, three, or four hours, with the same dose of carbolic acid, well sweetened with syrup or glycerine. If any sedative be needed at night, I give from two to three or four grains of chloral in simple syrup.

The inhalation of carburetted hydrogen (as in common house-gas) for a minute or two, four or five times a day, as recommended by Dr. W. T. Greene, is a very valuable means of treatment also.

In cases of meningitis occurring during whooping-cough, I have had the best results with the biniodide of mercury prescribed as follows: ℞ Sol. hydrarg. bichlor. ʒiii—ʒss; potass. iodidi gr. xv; syrupi ʒss; aquam ad ʒii; one teaspoonful every two or three hours. This mixture I frequently give with the three-grain doses of chloral at bed-time, with the object of preventing the development of any head-mischief; whilst the iron mixture is given during the day.

C. R. ILLINGWORTH, M.D.

OBSTETRIC MEMORANDA.

PLACENTA SUCCENTURIATA.

MRS. M., aged 26, slightly over eight months gone in her second pregnancy, had her labour ushered in by pretty copious hæmorrhage, followed by weak and unfrequent pains. There had been no previous hæmorrhage during the rest of the term. She was seen two or three hours afterwards, and the os was then the size of a crown-piece, head presenting, and membranes unruptured. The finger introduced within the os, and swept round, felt no trace of placenta. The membranes were ruptured and a bandage applied, and, the pains becoming at once very severe and frequent, the child was speedily born. The placenta was also removed without delay or difficulty, and consisted of two distinct circular portions, separated from each other on the surface of the membranes by at least two inches, the one measuring about five inches in diameter and the other three. The cord was inserted into the larger, and blood-vessels were distributed to the other along the surface of the membranes. Had the placenta not been examined, this would without doubt, have passed as a case of accidental hæmorrhage; but, supposing one of the portions to have been placed over the fundus, the hæmorrhage must have reached well down towards the cervix—constituting in fact, a variety of lateral placenta prævia. The child had numerous venous nævi spread over the face, but was otherwise well developed.

This case is still further interesting, in that the patient, after being six months gone in her first pregnancy, first noticed a tumour on the right side of the abdomen, which, as she herself said, was then as big as a cocoa-nut, but not painful or otherwise causing much inconvenience. It did not come under my observation till the uterus was grasped during the third stage of labour, when it was very distinct and prominent, being situated over the right cornu of the uterus, continuous, and freely movable with it. It has since caused no trouble; but a similar state of matters was found at her last confinement, a short time ago, only the prominence seemed slightly less. A fortnight after labour, it was not perceptible on cursory palpation. Is it a case of bicornute uterus?

B. STRACHAN, M.B., Sunderland.

SURGICAL MEMORANDA.

FALL OF 110 FEET: SLIGHT INJURY.

J. S., aged about 40, and weighing fourteen stone, on May 14th, fell a distance of 110 feet from the steeple of a church, in course of building, the total height of the spire being 130 feet, and the fall occurring when he was within twenty feet of the top. In his descent, he broke a scaffold-pole in two, and then fell through the wooden roof of an engine-house below, breaking several planks and two strong joists, on to some sacks of cement inside. He was unconscious when picked up, but became sensible in a short time; and, on examination, was found only to have dislocated the left metacarpals from the carpus, to have broken the left tibia just above the ankle, and to have sustained some bruises about the back and hips. On May 26th, the leg being in plaster-of-Paris, he was able to leave for his home at Bristol, twelve days after the accident. T. G. PARROTT, L.R.C.P.Lond.

OPHTHALMOLOGICAL MEMORANDA.

NOTE ON THE VALUE OF CORROSIVE SUBLIMATE SOLUTIONS IN OPHTHALMIC OPERATIONS.

FROM the beginning of October, 1885, until the end of June, 1886, in every ophthalmic operation I have adopted the precaution of bathing the eye with a solution of corrosive sublimate, strength 1 to 5,000, whenever the superficial parts of the eye were to be operated on, and 1 in 2,000 in cases of evisceration, operations on the eyelids, etc.

One hundred and fifty-two operations have been performed, and these include 23 operations for cataract, 34 iridectomies, 11 cauterisations for ulcer of the cornea, 8 eviscerations, 12 tenotomies for strabismus, 2 trephinings of the cornea for conical cornea, and 35 in which the canaliculus was slit open. In none of these did inflammation and suppuration follow; this fact I cannot but regard as a testimony to the value of the antiseptic employed, all the more so as in every previous winter I have invariably seen eyes destroyed by acute suppuration after very slight operations. Cucaine solution (4 per cent.) was used regularly along with the sublimate solution, and I have not as yet been able to satisfy myself that any harm has accrued from it.

The above results confirm the observations of several continental ophthalmic surgeons, and also those of Mr. Berry, given in the *Ophthalmological Review* for October, 1885.

J. CRAWFORD RENTON, M.D.Ed.,
Surgeon to the Eye Infirmary, and Surgeon to the Dispensary of the Western Infirmary, Glasgow.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF CEREBRAL HÆMORRHAGE ILLUSTRATING THE MODE OF RECOVERY.

(Under the care of Dr. FREDERICK ROBERTS, F.R.C.P.)

[For the notes of this case we are indebted to Mr. PERCY FLEMING, late House-Physician.]

J. P., aged 45, an organ grinder, fell on March 9th, 1885, while engaged in his occupation. He was picked up unconscious, with his right arm paralysed. When admitted on March 11th he was only semiconscious; he was able to answer "yes" and "no," but, beyond this, was inarticulate. There was conjugate deviation of the eyes to the left. The optic discs were not altered. Painful impressions could not be appreciated in the face and upper limb, and but imperfectly in the trunk and lower limb on the right side; the conjunctival reflex was absent on that side. In addition, there was right hemiplegia affecting the face, tongue, and upper and lower limbs; the patient only retained the power of slightly flexing the right hip. On the right side, the superficial reflexes were absent, and the patient had no control over the bladder or rectum; the knee-jerk was increased, and ankle-clonus was present on the right side. The urine contained one-half albumen; the temperature in the rectum was 102.6° Fahr. The pulse was full, slow, and regular, sixty in the minute; the arteries were very tortuous and rigid.

On March 13th, the patient had improved; the temperature was 99° Fahr.; the urine only contained one-third albumen; he had regained consciousness, and was able to utter some words intelligently; he had recovered power over the hip and knee, and the knee-jerk and ankle-clonus were less marked.

He had a prolonged attack of epistaxis on March 17th, and, on March 19th, he was unable to answer questions; power over the arm, which was being regained, was diminished, and the temperature was 100° F.

On the following day, all the symptoms were aggravated; in the afternoon, the muscles of the neck, arm, and leg on the right side were affected by fine tremors, and the trunk dropped to that side when he sat up. The temperature in the right axilla was 103.4° Fahr., in the left, 103° Fahr.

The patient became more profoundly unconscious on March 22nd. The limbs on the right side were quite flaccid; on the left, rigid; the right eye deviated upwards and outwards. The temperature in the rectum was 102.6° Fahr., in the right axilla, 99.4°, in the left, 100.4°. He died in the afternoon.

The necropsy revealed an extensive hæmorrhage into the substance of the brain. All the fibres of the internal capsule, except a few of the innermost, had been torn through.

REMARKS.—The above case has been reported because it serves to explain the mechanism of recovery in a case of hemiplegia due to cerebral hæmorrhage. Mr. Victor Horsley has shown that a spreading hæmorrhage from the lenticulo-striate artery, gradually, and in succession, involved the fibres coming from the face, arm, leg, and trunk centres in the cortex, causing a permanent or temporary paralysis, according as they were lacerated or only pressed upon; and, further, that the definite order of recovery, usually observed in these cases, namely, first the trunk, then the leg, and next the arm, was due to the absorption of clot and œdema, causing the pressure on the internal capsular fibres to be removed or diminished, such diminution of pressure, of course, occurring first at the part most removed from the seat of hæmorrhage. These facts were advanced to show that it was unnecessary to suppose, with Dr. Broadbent, that, when a higher centre was involved, the lower centres, owing to their close commissural connections, took on the lost function, in order to explain the recovery in a case of hemiplegia.

The case just reported confirms these views in a striking manner. For corresponding to the fact that both the leg and trunk recovered to some extent, it was found, after death, that all the internal capsular fibres were torn through, except those coming from the leg and trunk centres, which were only pressed upon.

Paralysis due to pressure, and not to laceration, shows signs of improvement in a few days, for it must be supposed that any acute pressure would be relieved in that time. This fact, then, becomes an important factor in the prognosis of such cases; it was exemplified in this case, for within four days of the onset there was considerable power in the leg, but none in the arm.

AMERICAN OTOLOGICAL SOCIETY.—At the nineteenth annual meeting, held at New London, Connecticut, on July 20th, the following officers were elected for the ensuing year: *President*, J. S. Prout, M.D. (Brooklyn); *Vice-President*, S. Sexton, M.D. (New York); *Secretary and Treasurer*, J. J. B. Vermyne, M.D. (New Bedford).

AMERICAN OPHTHALMOLOGICAL SOCIETY.—The twenty-second annual meeting was held at New London, Connecticut, on July 21st and 22nd. The following officers were elected: *President*, W. F. Norris, M.D. (Philadelphia); *Vice-President*, H. Derby, M.D. (Boston); *Secretary and Treasurer*, O. F. Wadsworth, M.D. (Boston).

VACCINATION.—Dr. Horace Lowther, of Ventnor, has been awarded the grant (second time) provided by Parliament for efficient vaccination in his district.—Mr. J. J. Reynolds, medical officer of the Boxford District of the Cosford Union, has obtained the Government grant of £6 7s. for successful vaccination in his district.

PRESENTATION.—Dr. Joseph Balfe has been presented with a splendid keyless chrono-micrometer, bearing the inscription: "Presented by a few friends to Dr. Balfe, on the occasion of his leaving Norwich for British Guiana. August 9th, 1886."

ON Thursday, August 26th, Sir Edwin and Lady Saunders had the honour to entertain Her Royal Highness the Princess Mary Adelaide, Duchess of Teck, His Serene Highness the Duke of Teck, Princess Victoria, and the Princes Adolphus, Francis, and Alexander, at their villa, Fairlawn, Wimbledon Common.

REVIEWS AND NOTICES.

THE DISEASES OF THE PROSTATE: THEIR PATHOLOGY AND TREATMENT. By Sir HENRY THOMPSON. Sixth edition. London: J. and A. Churchill. 1886.

THE surgery of the urinary organs is assuredly not standing still; and, although it is only three years since the fifth edition appeared, we have read the sixth edition of Sir HENRY THOMPSON on *Diseases of the Prostate* with much interest. The special points of interest and of comparative novelty in this new volume are Sir Henry Thompson's consideration of the use of the term "hypertrophy of the prostate;" his views on the treatment of the chronically enlarged prostate by compression and by electricity; his discussion of the various theories which, from time to time, have been brought forward to account for the enlargement of the prostate in advancing life; and his recommendations and suggestions in the operative treatment of those exceptional cases where, as age advances, the enlarged prostate gives rise to very severe symptoms.

The author objects to the term "hypertrophy" of the prostate. He points out that the prostate consists of stromal and glandular elements, that usually the chronically enlarged prostate consists chiefly of stromal elements, but that these stromal elements do not themselves exist in normal proportions, the connective tissue being usually much in excess of the other constituents. He cannot, therefore, accept the chronic enlargement of the prostate in age as a true hypertrophy, but would prefer the term "fibrous hypertrophy" for the majority of cases, and the term "fibro-muscular hyperplasia" for those rarer cases where the enlargement is due to increase of the fibrous and muscular elements of the stroma in normal proportion, and he would use generically the term "enlarged prostate." Professor Guyon, of Paris, has lately advanced the theory that enlargement of the prostate is identical with the change known in other organs as sclerosis. The author combats this theory, showing that the enlargement is not invariably due to increase of connective tissue, that the enlarged prostate has no tendency to subsequent contraction, and that it is by no means necessarily found in those of feeble or of decaying constitution.

Sir Henry Thompson is surprised that anyone acquainted with what has been tried in the treatment of the enlarged prostate by compression should, in these days, gravely propose to repeat it. He remarks "that it is very easy to excite inflammation in an enlarged prostate and in the adjacent bladder, and not very easy to subdue it." And with regard to the use of electricity as a means of reducing the volume of the enlarged prostate he says, "experience does not warrant us in drawing any favourable conclusions respecting its employment."

The question of the reason why a certain number of men suffer from enlargement of the prostate is very fully and ably discussed, but with negative result, the author being obliged to confess that the question, at present, remains unanswered to his satisfaction. Many years ago, Sir Henry Thompson proposed to keep a suprapubic puncture into the bladder permanently open in those cases where, as age advances, the urinary symptoms due to prostatic disease become severe. He now advocates the *boutonnière* operation by the perinæum as bidding fair, on the whole, to be more useful; and he gives full directions for the performance of this operation, and for the after-treatment of the patient.

In a standard work of the kind before us, there is little but what is praiseworthy and excellent. We would, however, remark that we think there is room for a little judicious weeding. We live in times when the student has to economise time to the utmost; and, in future editions, the pages devoted to the medicinal treatment of chronic cystitis might, perhaps, be somewhat curtailed; and we see no reason for still introducing the figure and description of Mercier's instrument for avoiding a false passage, which surely no surgeon worthy of the name has ever used. Altogether, the volume before us is a credit to its author and to English surgery, and may be confidently recommended to the student and to the practitioner.

AMERICAN NEUROLOGICAL ASSOCIATION.—At the twelfth annual meeting, held at Long Branch on July 21st, 22nd, and 23rd, the following officers were elected for the ensuing year: *President*, Landon C. Gray, M.D. (Brooklyn); *Vice-President*, John Van Bibber, M.D. (Baltimore); *Secretary and Treasurer*, Graeme M. Hammond, M.D. (New York).

COMPENSATION FOR PERSONAL INJURIES ON RAIL AND RIVER. By T. J. WESLEY BENNETT, F.R.S.L., F.C.A. London: The *Commercial Gazette* Office.

THIS book is professedly written for the purpose of supplying much needed information to those who have sustained injuries while travelling, and who wish to obtain compensation from the company whose servants have been instrumental in causing the injury. Mr. BENNETT states that his "object is to suggest the courses to be pursued in making a claim from the time of the accident until it is finally disposed of." For this purpose, he gives thirteen pages of hints or maxims, most of which seem good enough, but which do not strike one as by any means exhaustive of the subject with which they profess to deal. The hints as to how the claimant is to behave when visited by medical men sent to investigate his injuries on behalf of the defendant company seem the best; but they would hardly be a complete guide by themselves. The book does not attempt to state or classify the cases in which a claim for compensation for injuries may be made with any hope of success; but just at the end it states that companies are apt to set up "contributory negligence" as a defence, apparently implying that it is morally wrong of them to assert that the claimant came by his injuries by his own fault. The book also suggests that this defence is sometimes sprung upon a plaintiff at the last moment; and possibly the author may hold such an opinion. If he do, it is, of course, erroneous; as parties to an action, even under the modern system, are bound, long before the trial, to state on paper what is the case on which they mean to rely.

After the hints, on which we have commented, the book contains seventy pages of reports of actions which have been brought against companies. As far as we can see, they have been taken from a commonplace book, and put here at random. The reports seem to be merely cuttings from newspapers, which often omit to state the point of the case, if it had one, and merely record the fact that a particular plaintiff obtained, or failed to obtain, a certain amount of damages. Some of the reports are fuller, and are apparently taken from the *Times*, and give an abstract of the arguments which were used, and of the reasons on which the decision was based. But even here they are unsatisfactory. Several of the cases given are recognised as legal precedents. The author might have quoted from authorised legal reports, and extracted principles from them; and then the cases he gives might have been useful as a guide to persons intending to claim compensation. As it is, newspaper reports showing the verdict of a jury are given; but all mention of the subsequent history of the case, and of its ultimate result, is omitted; or, if that result be mentioned, it is dismissed so shortly as to leave the impression that the verdict, although subsequently reversed, was the all-important feature of the case. A notable instance of this is the case of Walker *v.* the Midland Railway Company, which is reported at Nisi Prius, and the fact recorded that the jury gave a verdict for the plaintiff for £3,500. The case is a well known one, and the company were not sued as carriers at all. The plaintiff's husband fell down the lift at the St. Pancras Hotel, and was killed; and the jury gave the verdict above mentioned. This took place about three years ago, and the courts have several times since considered it. This year it was finally disposed of, as the House of Lords entered judgment for the defendant Company, holding them not responsible for the accident. Possibly this judgment was not given till after the book was ready for press; but no mention is made of any stage of the case subsequent to the verdict of the jury, although they were all reported both in newspapers and in law reports long before the date of Mr. Bennett's book.

ADDISON'S DISEASE IN A NEW-BORN INFANT.—Dr. E. Belaïeff, of Voronej, details, in the *Meditzenskoie Obozrenie*, No. 1, 1886, page 54, a unique case of Addison's Disease in a new-born male infant. No case occurring in a child younger than 3 years of age has ever been recorded. The child had been deserted, and was found lying on the pavement. It appeared to be about seven days old. The integuments were slightly yellowish with a grey tint. Later on, the yellowish discolouration disappeared, while the skin gradually assumed a dirty grey colour, which was most intense on the back and belly, especially around the navel. Notwithstanding a good appetite, the infant steadily became prostrated and emaciated, and fifty-three days after admission died in an unconscious state during a paroxysm of tonic and clonic convulsions. There was no fever from the beginning to the end. At the necropsy both suprarenal capsules were found considerably enlarged (1 × ¾ inch), their upper two-thirds being transformed into an aggregate of thin-walled, semi-translucent cysts, the size of which varied from that of a pin's head to a small cherry. The cysts contained clear serous fluid.

FIFTY-FOURTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BRIGHTON, August, 10th, 11th, 12th, and 13th, 1886.

THE ANNUAL MUSEUM.

THE nineteenth of the series of exhibitions, which it has been customary now for some years to hold in connection with the annual meetings of the Association, and which this year was held most conveniently, by permission of the Town Council, in the Corn Exchange, Brighton—a large hall communicating with the Dome, having a separate entrance in Church Street—was characterised in every particular by the greatest success. The spaciousness and accessibility of the building; the large number of exhibitors of high standing who availed themselves of the opportunity offered; and the general excellency of the extensive range of exhibits, were all elements of success, which, with the very admirable arrangements—and what, we fear, must have been the very arduous labours—of the Honorary Secretaries, Drs. Mackey, Whittle, and Gifford, to whom the greatest praise is due, combined to make it, what it undoubtedly was, one of the most successful efforts in this direction. The exhibits were arranged in the following Sections. Section *A.*—Foods, Drugs, Hygienic and Sanitary Appliances; Speciality of all kinds of Prepared, Peptonised, and other Compound Nutrients. Section *B.*—New Books, Instruments, and Appliances, Medical and Surgical; Galvanic and other Batteries and Apparatus. Section *C.*—Anatomical and Pathological Specimens, Diagrams, Casts, and Models; Microscopes and Microscopical Preparations.

SECTION A. included a large number of important exhibits, tastefully arranged, from some of our best known and esteemed wholesale druggists, both here and in America. Among the latest discoveries of science were to be seen specimens of Lanoline, the new cholesterine fat, introduced by Professor Liebreich, of Berlin, with specimens of all the most recent additions to our materia medica, the enumeration of which, however, will be found in the descriptive note of the various exhibits. Hygienic and Sanitary Appliances, including Invalid and Surgical Furniture, etc., were worthily represented.

SECTION B.—Surgical Instruments constituted a brilliant display, and included the most recent novelties and improvements, the points of which were ably demonstrated by the representatives of each firm. The application of the electric light in Laryngoscopy, and in the Illumination of Cavities, attracted much attention. The assortment of Electric Batteries was large and varied. The Opticians' table was a beautiful and interesting sight, embracing all the varieties of Optical and Scientific Apparatus. Instruments of Ophthalmic Surgery were shown at various parts of the Surgical Instrument table, and in some cases were a most important and attractive exhibit. The Literature of Medicine was represented at another table, on which were also shown Maps illustrating the Distribution of Cancer, etc., by Dr. Haviland; various Charts and Diagrams for clinical use, as well as Specimens of different forms of Visiting-lists, methods of Book-keeping, etc. This Section, it may be said, illustrated, in a very practical way, the rapid advance of surgical art.

SECTION C. provided a varied and interesting exhibit, comprising a large selection of Pathological Microscopic Slides, by Dr. Heneage Gibbes, chiefly illustrating the many forms of Carcinoma and Sarcoma, which attracted much attention; as did also many Micro-photographs of the same Slides, which could be compared with the mounted specimens. A good display of Histological, Botanical, and Pathological Slides were exhibited by Messrs. J. and R. Beck, of Cornhill; others also by Messrs. Medland, Borough, S.E.; Vial, of Crediton; and W. E. Hinton, of Holloway, N. Dermatology was well represented by many admirable coloured drawings by Mr. Jonathan Hutchinson, Dr. Crocker, and Mr. James Startin; also some very interesting coloured models by Dr. H. Brooke, of Manchester. The Sussex County Hospital provided a rare display of varied and rare Pathological Specimens, some few of which may be said to be unique. From the Guy's Hospital Museum some fine specimens of the Treatment of Aneurysm by plugging were shown; and several very interestig specimens were also offered by Mr. Morrant Baker, Dr. Chaffey, Mr. Henry Vevers, Mr. Edmund Owen, and specimens were also shown from the Alexandra Hospital for Children, Brighton.

The following is a list of the exhibitors and their principal exhibits.

SECTION A.—FOOD, DRUGS, HYGIENIC AND SANITARY APPLIANCES, ETC.

Messrs. ALLEN and HANBURYS, whose pharmaceutical preparations are so well known, had a very extensive and well displayed exhibit. They claim for their Malted Farinaceous Food that it is made strictly in accordance with Baron Leibig's direction, being prepared from the finest selected cereal grains, in combination with malt-extract (not with malt-meal); and that it is thus free from all indigestible and irritating matter, whilst it possesses the valuable digestive and nutritive constituents of malt. Their Bynin, or liquid malt, while possessing the same peptic and nutritive properties as the ordinary extract of malt, is said to be more convenient to use than the denser and more viscid preparations, and subject to neither fermentation nor crystallisation. In combination with bynin, they exhibit two digestive solutions—Byno-pepsin and Byno-pancreatine—which, as their names suggest, are solutions of pepsin and the active principles of the pancreas in combination with malt. It is claimed for the bynin that, besides adding to the digestive power of the preparations, it has the property of retaining the activity of these ferments unimpaired for a much longer period than the usual weak alcoholic solutions. Their Perfected Cod-liver Oil, and also tasteless and odourless Castor-oil, both of which were shown, are well known, and have been much appreciated by the profession. The exhibits of fluid extracts and effervescing preparations were very complete. We observed a fluid Extract of Cinchona, containing 5 per cent. of alkaloids in their natural state of combination as tannates and cincho-tannates; containing also the natural acids and aromatic and astringent properties of the bark without deterioration. This extract, it is stated, will mix perfectly with distilled water without producing the copious deposit thrown down by the *British Pharmacopœia* article, as usually prepared. Amongst the granular preparations we observed effervescing Cucaine Hydrochlorate. This contains one-twentieth of a grain of the salt in one drachm, and is introduced as a pleasant form for administering the remedy in sea-sickness; also an effervescing Hydrobromate of Caffein, containing one grain of the salt in each drachm, put forward as a refreshing stimulant in nervous depression, and as having an action much more lasting, and less harmful eventually, than that of any beverage containing alcohol. They also exhibited Salol, Iodol, Resorcin, Hydrochinon, and other new chemicals and active principles, which fully sustain the reputation for excellence that this firm have established for themselves. We must just add that, amongst their exhibit of Spray-douches, Enema-apparatus, and other medical accessories, an inexpensive and compact form of Chloride of Ammonium Inhaler attracted a good deal of attention, both from its simplicity and effectiveness, and non-liability to be broken or get out of order.

Messrs. ARMBRECHT, NELSON, and Co. (23, Duke Street, Grosvenor Square, London) exhibited, and invited exhibitors to taste, their new Coca Wine, prepared from the green leaves of the Coca (Erythroxylon Coca). These leaves are dried, and then macerated in wine of three kinds, Malaga, Burgundy, and Madeira, to accommodate the various requirements of the palate, the result being a most agreeable and pleasing beverage, which the manufacturers claim to be a powerful nerve-stimulant, and a useful sedative in sleeplessness produced by nervous exhaustion. This firm also exhibited a Koumiss or milk-wine, of which they are the manufacturers.

The AYLESBURY DAIRY COMPANY, Limited (31, St. Petersburgh Place, London, W.) exhibited samples of their Koumiss in five different varieties: Artificial Human Milk, Sparkling Bland, a preparation containing the Salts of Milk, and Specially Prepared Milk for use on shipboard, etc.

G. VAN ABBOTT and SON'S exhibited their specialties for diabetics and invalids, comprising Hypophosphite of Lime and other Biscuits; Bran Gluten Biscottes; Gluten Bread, Gluten Flour, Semola, Macaroni, Vermicelli, Chocolate Cakes, Almond Cakes; Prepared Glycerine (for sweetening Diabetic's tea, coffee, etc.), Glycerine Jujubes, etc., Soups, and Dietetic Extract of Vegetables; Chocolate and Liebig's Extract of Meat, without Sugar; Callard's Ivory Jelly, without Sugar; Valentine's Meat Juice, Essence of Beef, Mutton, and Chicken; Concentrated Beef-tea, Turtle and other Soups, Chicken Broth; Calf's Foot and other Jellies, Meat Lozenges and Biscuits.

Messrs. BARTON BROTHERS (77, King's Road, Brighton) exhibited Dentifricium, "a liquid tooth soap, free from sugar, honey, glycerine, or flavouring ingredient, except perfumed spirit," which is a most agreeable tooth-wash, tastefully and conveniently put up in bottles with metal tops. Brighton Glycerine Cream, a skin-emollient less heating than glycerine; Succus Scapi Taraxaci; Liquid Cochineal, etc., were among the other exhibits of this firm.

Messrs. JOHN BELL and Co. (225, Oxford Street, W.) exhibited samples of Absorbent Cotton with Boric, Carbolic, and Salicylic Acids,

Eucalyptus Oil, Iodine, Iodoform, Perchloride of Iron, Matico, Corrosive Sublimate, Tannin, Tar, and Thymol.

Messrs. BRAND and Co. (11, Little Stanhope Street, Mayfair) had, as usual, a good display of their dietetic specialities for invalids, comprising their meat essences, peptone articles, concentrated articles, jellies, etc.

Messrs. BURGOYNE, BURBIDGES and Co. (of 16, Coleman Street, E.C.) exhibited what are well known as Dr. Koch's Meat-Peptones and Hazen Morse's Malto-Pepsin.

Messrs. BURROUGHS, WELLCOME, and Co.'s exhibit was, as usual, a most attractive one, and came in for a good deal of notice. One of the most interesting articles exhibited by them was Lanolin, the new basis for ointments. It is the fat natural to hair and the horny layer of the skin, and a little of it rubbed into the skin shows no grease-stain a moment later. It is obtained from sheep's wool, and should not be confused with imitations containing fatty acids. Lanolin seems to possess all the essentials for a perfect basis for ointments. It will absorb 110 times its weight of water, and takes up all kinds of medicaments. It is neutral, preservable, of excellent consistence, slightly adhesive, and very penetrating. It has been shown to be borne with impunity by an irritable and inflamed skin, and is prescribed to prevent formation of crust, and in a vast variety of skin-diseases. No irritation results from its application, and the physiological action of medicines introduced with it are said to be immediate and pronounced. But half the amount ordinarily required of any drug should be used in making ointments with lanolin. In it, the radical in ordinary fats (glycerine) is replaced by cholesterine. It does not turn rancid or decompose. After exposure for a time, it becomes somewhat darker, on account of the evaporation of water. Strophanthus pods were another interesting object for scientific curiosity. As ample opportunities were afforded all to examine the Kepler Solution of Cod-liver Oil in Extract of Malt, under high powers of the microscope, a great number of medical men availed themselves of the opportunity. While in emulsions the oil was clearly visible, in the Kepler solution no globules were present. The Kepler Extract of Malt, of high diastatic power and nutritive worth, was also shown. A spoonful of it will liquefy a plate of gruel. The Hypodermic Pocket-case for convenience, utility, and safety, cannot be surpassed; it is fitted with a full line of soluble hypodermic tabloids, accurate and reliable. The compressed drugs in Tablets and Tabloids are now in general use by all. The Compressed Trinitrine Tabloids (nitro-glycerine), Voice Tabloids (cucaine with potash and borax), Antipyrin, and Urethan Tabloids, were among the complete list of pure compressed drugs in tabloids. Bitter medicines, pleasantly disguised in elixoids, Bishop's inimitable Granular Effervescent Citrate of Caffeine, and Extract of Nux Vomica; Lawton's pure snowy-white Cotton, capable of absorbing thirteen times its weight of water; Hazeline, containing, in a pleasant and utilisable form, the active principles of the Hamamelis; the Burrough's Chloride of Ammonia Inhaler (Vereker's patent), always ready for use, and giving neutral fumes; the Vaginal Tampons (Barnes), and the Artificial Sponges, were a few of the excellent products of this firm. Experiments were shown with the Fairchild Digestive Ferments, and some freshly peptonised foods exhibited. The milk was peptonised with Fairchild's Peptonising Powders, the beef-tea with Zymine (Extractum Pancreatic). Pepsin in scales (digesting 1,000 times its own weight) was preserved plain and in beautiful tabloids, as was the Zymine as well. Eucalyptine, Dialysed Iron (Wyeth)—a neutral and bland chalybeate—and the Beef and Iron Wine, should not pass without a reference, nor the vast variety of medicine-chests made for missionaries, travellers—we noticed one made for the African explorer, Stanley—and cases for general practitioners, for families at the seaside, and for cases of poisoning.

Messrs. BEIERSDORF and Co. (Altona) exhibited specimens of Dr. Unna's preparations for skin-diseases. Dr. Unna's name is well known among English dermatologists.

Messrs. THOMAS CHRISTY and Co. (155, Fenchurch Street). The exhibit of this firm possessed particular interest for medical visitors, comprising, as it did, a goodly assortment of new and rare drugs. We can do no more than enumerate here a few of the drugs shown, but a full and descriptive catalogue, which may be had on application, is well worthy of perusal: Acalypha Indica (an emetic for children), Alvelos Milk (a specific for cancerous ulcers), Baptisia (a powerful alterative, antiseptic, emmenagogue, and emetic, used in typhoid fever and putrid sore-throats), Chaulmugra Oil, Cucaine-Christy Lozenges, Cornus, Coto, Damiana (for renal and vesical diseases, nephritic albuminuria, diabetes, and nervine tonic), Duboisia (for ophthalmic diseases), Euonymus (a powerful hepatic stimulant), Goa Powder (for ringworm, psoriasis, etc.), Grindelia (in asthma, etc.), Kola Nut, Papaw Milk, Strophanthus, Viburnum, Yerba Santa, Abrus, Lloyd's Hydrastis, Aletrin, and many other concentrated and "eclectic" preparations.

Messrs. CORBYN, STACEY and Co., showed a large number of interesting new drugs and preparations, including very fine specimens of fresh Bael Fruit, from which is prepared a confection which, besides being pleasant to taste, claims to be a valuable astringent in dysenteric diarrhœa, and more active than preparations made from the dried drug; Viburnum Prunifolium, recently recommended as an arrester of uterine action; Mist. Cascara Comp., an improved form of administering cascara sagrada; Liq. Cerii Citratis and Syrup Cerii Comp., preparations intended to take the place of the insoluble oxalate; Pure Terebene, of which this firm are large manufacturers; Adonis Vernalis, for heart-disease; Apocynum Cannabinum, a diuretic in dropsy; Effervescent Bromocaffeine, a new granular preparation, which is said to have yielded good results in sick headache and nervous headache, due to physical exhaustion or protracted mental effort; a new dry sparkling Coca Wine, free from the flavour of the drug, as well as over two hundred other specimens of useful, and, in many instances, popular preparations.

Messrs. ARTHUR H. COX and Co. (St. Martin's Place, Brighton) showed a tastefully arranged exhibit of their "Tasteless Pills," of which they were the originators and patentees in 1854. An extensive list was given, among which is to be found most of the new remedies.

Messrs. EDGE BROTHERS, Limited (17, Farringdon Road), had an attractive display of their Invalid Foods, including the "Lion Brand" Meat Essences, Real Turtle Soup, Concentrated Beef-tea, "Lion" Relish, Stock for Soup, etc., chiefly in glass bottles, and therefore entirely free from any metallic taste.

Messrs. ESSINGER and Co. (11, Hatton Garden, E.C.) showed specimens of Hartmann's Patent Wood-Wool, Wood-Wool Wadding, and Diapers.

Messrs. FELTOE and SONS exhibited samples of their well known and much appreciated Spécialité Lime-Juice.

FRIEDRICHSHALL WATER.—This old established and favourite aperient mineral water was exhibited by the APOLLINARIS COMPANY in the improved form by which it has recently achieved renewed popularity and an enhanced reputation. The favourable opinion which has long been entertained of this aperient water has been heightened of late years by the physiological investigations which attribute considerable importance in the selection of an habitual aperient, to the combination of chloride of sodium with the aperient saline. This combination has probably always underlaid the excellent clinical results attained by the use of Friedrichshall, and its continued favour with the medical profession in all countries, although the precise therapeutical and physiological reasons for its superiority over the ordinary sulphated aperients were not adequately appreciated. An objection which probably impeded its progress in public favour of late years was the relative bulk of the dose required to produce a marked aperient effect. Notwithstanding this, it has held a foremost place for many years, owing to the valuable quality which it has, that it may be used continuously in diminishing doses; whereas most saline aperients wear out their influence, and appear to fatigue the intestine, so that they need to be used in increasing doses. Owing to recent improvements in the method of taking the water from the well, it is now obtained free from all dilution near the surface to which it was formerly subject, so that the Friedrichshall water, as now presented, is of double its former strength, and half the dose previously required is therefore efficient. As the result of this important improvement, Friedrichshall appears to have taken a new lease of popularity, and its use is widely and rapidly increasing.

Messrs. GLAISYER and KEMP (North Street, Brighton), had a very large display of drugs and preparations, including: Quinine Iodide (soluble), Quinine Acetate, Quinine Sulphate (soluble), Quinine Phosphate, Quinina, Quinidina, Liquid Extract of Bark from C. Calisaya, Liquid Extract of Coca, Liquid Extract of Bark from C. Succirubra, Liquid Extract of Bark (*B.P.*), Camphor, Helenin, Cucaine Hydrochlorate Crystal, Cucaine Hydrochlorate, Cucaine Alkaloid, Cucaine Hydrobromate, Cupreine Sulphate, Cinchonamin, Cinchonidina, Iodoform, Urethane, Hypnone, Terebene, Quinine Bromide, Quinine Salicylate, Quinine Hydrochlorate, Quinine Valerianate.

Messrs. T. G. GIBBONS and SON (Manchester) exhibited their Salve Sticks, prepared according to the suggestions of Dr. H. G. Brooke, Manchester (see BRITISH MEDICAL JOURNAL, May 22nd, 1886); with model of arm, demonstrating method of applying a Chrysarobin Stick in a case of Psoriasis. The basis of these sticks is composed of Cocao Butter, or of Lanolin and Yellow Wax, in varying proportions, according to the nature and requirements of each active ingredient.

Mr. HOFF (of 29, New Bridge Street, London) was present with

samples of Hamburgh Hoff's Malt Extract, which has been before the public now for many years.

JEYES' SANITARY COMPOUNDS COMPANY, LIMITED, exhibited samples of their preparations for Disinfecting, Deodorising, Cleansing, and Antiseptic purposes. Of these, creosote is the main active ingredient. Jeyes' "Perfect Purifier," a fluid, is put forward by its manufacturers as being a safe and reliable adjunct for medicinal spray in throat-affections, 1 to 100 parts; also for wounds, and assisting the healing of disintegration of tissues. Jeyes' Sanitary Powder and Disinfectant Soaps are both well adapted for their several uses.

The JOHNSTON FLUID BEEF COMPANY (10, Trinity Square, Tower Hill, E.C.) had an excellent exhibit of their various specialties, consisting of their Fluid Beef and Lozenges (containing both the albumen and the fibrin), Peptonised Fluid Beef and Lozenges, Peptonised Beef-tea, etc.

The KREOCHYLE COMPANY (9, Farringdon Road) exhibited specimens of Kreochyle or Liquid Meat, and Boro-Glyceride Antiseptic.

LIEBIG'S EXTRACT OF MEAT COMPANY, LIMITED (9, Fenchurch Avenue), showed samples of their tins and jars of Extract of Meat.

Messrs. MASON and Co. had an attractive display of their various Invalid and Dietetic Specialities, including their Essence of Beef, Concentrated Beef-tea, in specially prepared skins; Concentrated Meat Lozenges, Turtle Soup, etc. Many of these are put up in hermetically sealed tins, and are thus guarded against the introduction of germs.

Mr. G. MELLIN (Stafford Street, Peckham) exhibited and distributed samples of the well known Mellin's Food for Infants and Invalids, prepared from gluten containing wheaten flour, coarsely broken malt, bran, potash and water according to Liebig's formulæ, excluding the milk, and which requires to be dissolved in fresh cow's milk (not condensed milk) and water in given proportions; also Lacto-Glycose, or milk food, the same preparation as the above, with the difference only that fresh cow's milk, deprived of a portion of its cream, has been added instead of water. This only needs to be dissolved in warm water to be available for use, and constitutes a nutritious and easily digested food.

Dr. Michaelis's Tonic Cocoa was exhibited by Messrs. STOLLWERCK BROTHERS (Cologne), through their London agents, Messrs. KUHNER, HENDSCHELL, and Co., 145, Cannon Street. This novel preparation constitutes a new departure in dietetics, and was exhibited for the first time in England on this occasion. Samples were freely given to practitioners, and the agents inform us that they are willing to furnish samples of suitable size for trial by public institutions or practitioners. It has already been familiar to us for some short time, owing to its successful introduction into Germany under the best auspices. It is a preparation of pure cocoa of the first quality, combined with a soluble extract of acorn, freed from all cellulose. The great object in view has been to provide an agreeable daily beverage, which should represent all the best qualities of a nutritive and refreshing drink, and, at the same time, combined with a natural vegetable tonic. This cocoa has all the flavour of a fine chocolate, and while belonging to that class of drink which contains the alkaloid which all mankind appear to have sought after and found in every climate under the various forms of tea, coffee, and cocoa, it is ingeniously free from the disadvantages attending these time-honoured beverages. It is free from the disturbing nervine effects of tea and coffee, while it is much more refreshing than ordinary cocoa, and has a tonic value due to its soluble acorn-extract. It is very freely taken by children as well as by adults. It is made at the suggestion of Professor Liebreich from a formula furnished by Dr. Michaelis, and has been extensively employed in the hospitals of Berlin and of Munich, with the best effects, under the eye of Professor Senator and others, as the sole diet of children suffering from disordered digestion, infantile diarrhœa, defective nutrition, and marasmus. The manufacturers have an European reputation for the perfection and purity of their products. An immense sale has been rapidly achieved by this cocoa in Germany, and it is advancing into high favour in France. It will, no doubt, receive extended trial in England, and is likely to meet with very general favour. No more nutritious, agreeable, and useful beverage could be employed; and in the diet of children, of invalids, and convalescents, its place is evidently marked by its valuable constitution and agreeable flavour.

Mr. J. MONTGOMERIE (Dumbarton Road, Partick, Glasgow) exhibited Digestive Bread, Biscuits, and Rusks, which, it was stated, are put through a particular process before firing, and, by the action of Paterson's extract of malt, the starch contained in the flour reduced to a minimum. It is put forward as being, from its greater digestibility, a valuable addition to the food of children and invalids.

Messrs. LOEFLUND and Co. (148½, Fenchurch Street) show their well known Pure Hordeum Malt Extract, together with the combinations of Lime, Iron, Pepsine, and Hops. They have introduced an improved form of their Pure Hordeum and Cod Liver Oil; this they do not claim to be a solution, but a perfectly emulsified form of this fat. For those who cannot take or assimilate cod-liver oil they have introduced a Condensed Cream Emulsion (Cremor Hordeatus), which is a combination of fresh Alpine cream and "Pure Hordeum," which they claim to be useful in all wasting diseases. Their Kindermilch is an infant's food, of which they say that it is entirely free from starch and cane-sugar, rich in milk-fat and milk-salts, together with alkaline albuminates. They have also a Cream-Milk, condensed on entirely new principles, without cane-sugar or antiseptics; this is a condensed milk, which they regard as of much special food-value. They also exhibit, for the first time, Mustard-leaves for Sinapisms, which are a cleanly and convenient form of using mustard, and, being cheap, valuable for both hospital and private use.

Messrs. MCKESSON & ROBBINS (of 38, Mark Lane) showed Transparent Amorphous Alkaloid, Crystallised Alkaloid, and Dry Crystals, Hydrochlorate of Cucaine, as also the well known "McK. and R." Pills. The quality of the masses in the "McK. and R." capsuled pills, as exhited through a lens which magnified the interior of the pills (containing mineral salts) twenty diameters, gave ocular demonstration of careful laboratory work.

Messrs. MACKEY, MACKEY, and Co. (of Bouverie Street) had an interesting collection of specialities and pharmaceutical preparations, among which may be enumerated their Mistura Bismuthi Comp., a preparation which they claim to be useful in cases of diarrhœa, dyspepsia, and general disorders of the stomach. There was an excellent exhibition of the new Neutral Soluble Salts of Cerium, including Ammonio-Citrate, Ammonio-Tartrate, Sodio-Citrate, and Sodio-Tartrate; the compound preparation, Mistura Cerii Co., which was said to have been administered in cases of vomiting with good effects, especially in the vomiting of pregnancy. Mistura Cascara Co. Conc. is a preparation of Cascara Sagrada. We may also mention [Liquor Santal cum] Copaiba, Buchu, et Cubeba, a remedy for chronic gleet, and other affections of the urinary organs; elegant preparations of Chlorodyne, Epulixon, Syrupus Hypophosphitum Co., etc. We noticed new *Pharmacopœia* preparations, and newly introduced specialties—Cucaine, Urethran, Iodol, and various Soaps and Disinfectants. Mackey's Oxychlorogene, we were told, is used in various Government departments, and has obtained commendation from high sanitary authorities. An excellent exhibition of Pills was shown, both pearl and gelatine coated; and the exhibit altogether was one which attracted considerable notice.

THE MALTINE MANUFACTURING COMPANY (of 24 and 25, Hart Street, Bloomsbury) displayed samples of "Maltine;" Carnrick's Beef Peptonoids concentrated; Beef, Wheat, and Milk; Carnrick's Peptonised Cod-liver Oil and Milk, equal parts of milk and cod-liver oil; and Carnrick's Soluble Food for infants, invalids, and the aged.

Mr. MARTINDALE (of New Cavendish Street) exhibited a small Antidote Bag, with chemical and physiological antidotes, as suggested by Dr. Murrell; Squibbs's Urea Apparatus, in which, by decomposing the urea in urine by a solution of chlorinated soda, and measuring the volume of nitrogen evolved, an estimate of its amount can easily be obtained; Cucaine Sprays, having the advantage of economising the solution of this expensive alkaloid; also some convenient Ear Syringes, Insufflators, and Inhalers. Alembroth Salt, in large crystals—the double salt of corrosive sublimate and ammonium—is a powerful antiseptic; its solution is recommended for medicating surgical dressings; it is said to be less irritating than the sublimate, and as it does not combine so quickly with albumen, its action is more persistent than the pure sublimate. Mr. Martindale also exhibited a series of Glass Capsules, some, such as chloroform, nitrite of amyl, etc., covered with silk and cotton-wool, for inhaling when fractured; others, such as carbolic acid and Fehling's solution, are portable for surgeon's use. Coca Preparations, as also Coca Leaves and Cucaine Salts, were shown. The Hydrochlorate of Cucaine was in beautiful white, pearly, anhydrous crystals; Cucaine Pastils, Pills, and Tablets, were also shown, the last Mr. Martindale claims to be useful as a preventitive of sea-sickness. He had a fine specimen of Eucalyptus Gum (Red Gum), and of Eucalyptus Oil; and of granular effervescent preparations, he showed Effervescent Sulphate of Sodium, Phosphate of Sodium, Sodio-Magnesian Aperient, and Hydrobromate of Caffeine, as well as Pure Hydrobromate of Caffeine, in large Crystals, and pure Bromo-Caffeine; also a series of Hamamelis Preparations. The new Hypnotics, Hypnone, and Hypnone Capsules, Paraldehyde and Urethane, the latter in fine, large, colourless crystals, proved to be attractive specimens. Of Iodo-

form he made a good display—crystals, powder, and precipitate; also some aromatised with Coumarin. Iodol, Iodo-salicylic Acid, and Di-iodo-salicylic Acid, were exhibited, and suggested as odourless substitutes for iodoform; Tannate of Mercury, and Pills of the same, for syphilis, and Chloride of Methyl, compressed in copper cylinders; this latter, a gas, is thus liquefied like nitrous oxide, and is said to have been much used in Paris lately for producing local anæsthesia, as a revulsive in pleurisy, pneumonia, and trigeminal neuralgia, and for freezing in histological work. Nitro-glycerine tablets were displayed, of various strengths. Officinal Ointments, with Petroleum Bases, and a series of Coated Pills, were shown. Resorcin, in fine, white, crystalline plates, was a fine specimen; as also Salol, in small white crystals. Of Terebene, Mr. Martindale showed a specimen of fine odour; also Terebene Capsules, as well as Terpin-Hydrate and Terpin Pills; the latter are said to be more easily taken and more palatable than terebene. He also showed a specimen of Permanganate of Zinc, in fine iridescent crystals; and specimens of Brownen's Gelatine Lamels, or Discs, for ophthalmic and hypodermic use.

Mr. Joseph Mack's Austrian Pine Products (Pinus Pumilio) were exhibited by Messrs. PAUL, MARTIN, and Co. (Billiter Square, London). These products are prepared by a pharmaceutical chemist in the Reichenhall distilleries in Bavaria, and in Gmain, near Salzburg, Austria, whose aim it has been to produce pure essence of pine, perfectly free from all secondary products, such as vapours of tar, turpentine, etc. From the experiments he has made, he has arrived at the conclusion that the purest essence of pine is that obtained from the needles of the Pinus Pumilio; and that the higher the altitude and the nearer to the region of perpetual snow the Pinus Pumilio grows, the more certain are the medicinal properties of its essence; and none, we are told, are used by him which grow at a lower elevation than from 5,000 to 7,000 feet above the level of the sea. The therapeutical properties of this essence of Austrian pine are said to be so largely recognised abroad as to have become recognised as almost a household necessity; and by those suffering from colds, coughs, sore-throats, asthma, and bronchial and pulmonary affections generally, as well as rheumatism and the like, we are told, the pine-treatment which obtains at Reichenhall and some other places is largely resorted to. The following is a list of the preparations of the Austrian pine manufactured by Mr. Mack: 1, Essence of Austrian Pine; 2, Antirheumatic Bath; 3, Solution of the Essence of Austrian Pine; 4, Capsules of Essence of Austrian Pine; 5, Pectoral Syrup; 6, Paste Pectorale (or Lozenges); 7, Pine-Flannel and Pine-Wool; and 8, Pine-Soap. Mack's Essence of Austrian Pine is an ether-like colourless fluid, having a fresh and agreeable odour. Twenty drops poured on a piece of blotting-paper, and pinned to the curtain, will suffice to impart to the atmosphere of a large room an invigorating odour, such as one meets with in the pine-forests, which will last many hours. For fumigation, it is claimed for this essence that it is of value in the treatment of colds, coughs, sore-throats, bronchitis, acute and chronic (winter-cough) asthma, whooping-cough, and diphtheria. Mack's Extract of Austrian Pine is said to be of value in rheumatism, gout, and sciatica, and forms a most luxurious bath. The other preparations are all said to be of equal hygienic value.

Messrs. MOTTERSHEAD and Co. (Manchester) displayed samples of Benger's preparations of the Natural Digestive Ferments, of which we have had occasion previously to speak in terms of warm commendation; also Benger's Concentrated Essence of Rennet, and Benger's Peptone suppositories for rectal alimentation.

NESTLÉ'S Milk Food for Infants occupied a prominent place among the dietetic preparations shown.

Messrs. OPPENHEIMER BROTHERS and Co. (1 and 3, Sun Street, Finsbury Square) exhibited in a very attractive form their well-known preparation Liquor Euonymine et Pepsinæ Compositus, and their recently introduced Liquor Euonymine et Cascaræ Sagradæ Compositus; Liquor Euonymine et Bismuthi Compositus; and Pepto-porcine, or Acidulated Fluid Pepsine. For the latter preparation, the manufacturers claim a very high digestive power, on account of its being prepared entirely without the aid of heat.

The exhibit of Messrs. PARKE, DAVIS and Co. (of Detroit), the London agents for whom are Messrs. Burgoyne, Burbidges and Co., 16, Coleman Street, attracted, as usual, a good deal of attention. Among the pharmaceutical preparations of this well-known firm were to be seen the Fluid Extracts, with which their name has been so long identified, including their Cascara Sagrada (Rhamnus Purshiana), which they also supply as a cordial, and other well known preparations. Among the concentrations were those of Euonymin Irisin, Podophyllin, Leptandrin, etc. Another exhibit of this firm was that of Dessicated Bullock's Blood, as a substitute for beef-tea, containing the essential nutritive principle of beef adapted for oral and rectal administration; also, Empty Gelatine Capsules for taking nauseous medicines. Messrs. Parke, Davis and Co. are the sole agents for Semple's Atomising Inhaler, by which any medicine can be atomised by force without the action of hydrochloric acid or aqua ammonia; the irritating properties of the muriate of ammonia vapour are therefore avoided. Descriptive pamphlets can be obtained explaining the working of the apparatus, and giving the formulæ particularly adapted for inhalation.

PATERSON'S CHEMICAL MANUFACTURING Co., Limited (Phœnix Chemical Works, Glasgow) showed samples of Paterson's Extract of Malt, for which they claim great diastatic power, by reason of a new malting process whereby the barley, it is said, is prepared with the diastase in full strength, and carefully retained in the subsequent extraction and concentration. This firm also exhibited an Emulsion of Extract of Malt with Cod-Liver Oil; the proportions of which are stated to be 20 per cent. of oil to 80 per cent. extract of malt. It is stated that it is very pleasant in flavour, and that the combination of the oil and extract of malt is quite perfect.

Messrs. C. ROOME and Co. (Canning Town) showed samples of their Pure Neutral Soaps.

Mr. W. E. SACKER, the sole London agent for Messrs. W. H. Schieffelin and Co. (New York), 79, Fenchurch Street, E.C., had a good display of the Soluble Pills and Granules, in tasteless coating, for which that firm has acquired a well deserved reputation, and taken a large number of medals; also Cucaine Pellets, Voice Discs, and Sacker's Compound Syrup of Hypophosphites.

Mr. E. F. SALMON (30, Western Road, Hove) showed a selection of Drugs and Pharmaceutical Preparations, also "Pearls" of Aloine.

The preparations of the SANITAS COMPANY, LIMITED (Three Colt Lane, Bethnal Green) are becoming as numerous as they are useful, and most of them have already acquired a very extended popularity. Whether as a disinfecting fluid and a wholesome air-purifier for the bed-room and the sick chamber, as an insecticide and liquid soap, an agreeable toilet fluid, a pleasantly cleansing tooth-powder, furniture polish, or toilet and nursery powder—and these are but a few of its applications—its pleasing pine odour, and its non-poisonous and excellent disinfecting qualities, have obtained for Sanitas considerable patronage and general commendation. The Sanitas Soaps have long ago found their way into our workhouses and hospitals.

The special prominence which the Committee desired to give to preparations of the digestive ferments, induced Messrs. SAVORY and MOORE to show a very complete series of the various articles of this class for which they have so long been famous. Amongst their more recent introductions we noticed the Meat Peptone, the concentrated Peptonised Milk and Milk with Cocoa, the Peptic Table-Salt, and their very efficient and convenient Peptonising Pellets, all of which have been favourably reported on in our columns. Some pills of Pancreatine, coated with Keratin, were included in their exhibit, and the idea struck us as being worthy of more extended application, especially in the case of such medicines as aloes, etc. The Coca Wine prepared by this firm possesses, in a peculiarly high degree, the invigorating properties of the drug, and, at the same time, the flavour, which characteristic is very agreeable to the palate. The firm included, of course, in their exhibit specimens of the Medicated Gelatine preparations introduced by them, and now well known and justly appreciated. They also showed some solid liniments of Aconite, Belladonna, Mustard, etc., with Menthol as a basis; pastilles of Cucaine and Codeine, of far more inviting appearance than is usual; Codeine and Glycerine Jelly, nasal suppositories of Cucaine for Hay-Fever, and a series of the chief preparations of the new *British Pharmacopœia*. Amongst new remedies we noticed specimens of Hypnone, Urethane; Iodol, the promising odourless substitute for iodoform; Salol, a derivative from, and substitute for, salicylic acid; Ichthyol, Terebene, Lanolin (purified), which Professor Liebreich expressed himself much pleased to see; Antipyrine, Thalline Salts, Chinoline Tartrate, and recently suggested cardiac remedies, such as Caffeine Salts, Sparteine Sulphate, and several preparations of Convallaria. The whole exhibit was well displayed, and attracted considerable attention.

Messrs. SCHMOELE, RHODES, and Co. (131, Wool Exchange, Coleman Street, E.C.) showed samples of Cibils' Fluid Extract of Beef, an analysis of which, by Professor Attfield, shows the properties to be those of a true essence.

The digestive preparations manufactured by DE HOGHTON and Co., and which were exhibited by Mr. John Sellers (9, Farringdon Road), were of three kinds. The first—Peptic Digestive Pills—contain pepsine, diastase, and a little pancreatine, with a carminative and suitable excipient. It is stated of these pills that they have unique properties, and that they are reliable digestives, free from all injurious

ingredients. The next preparation—Peptic Digestive Powder—acts in a similar manner on food, converting starch into dextrine and glucose, and emulsifying all oleaginous aliments. In this case, the chief digestive elements are pancreatine and diastase (the active principle of malt extract), with a suitable carminative and diluent. The powder is recommended by the manufacturers for breakfast, or light repasts, in preference to the pills, and may be taken in soups, or enclosed in Maw's wafer-papers, without the taste being observable. The Peptic Cholagogue, which is put forward as "an improved liver-pill," contains, in addition to the catalytic solvents above mentioned, a simple purgative, which assists peristaltic action, at the same time that it is certain and safe in its effect. Messrs. Sellers are also the manufacturers of a Naphthol Soap, which should serve an useful purpose. The remarkable efficacy of naphthol potash soap in the treatment of cutaneous diseases has been referred to by Dr. Shoemaker, of Philadelphia, in a paper read by him before the Medical Society of Pennsylvania.

Messrs. T. H. Smith and Co. (21, Duke Street, Edinburgh, and 2, Worship Street, London) exhibited specially prepared Alkaloids, etc., Aloin, Codeine, Cryptopia, Meconoiosine, Morphine Alkaloid, Meconic Acid, Gallic Acid, Tannic Acid, Morphine Tartrate, Jalap Resin, and Scammony Resin.

Messrs. Tylee and Boutelle (Bath) displayed samples of Glycerine Cocaia Jelly, Glycerine and Cocaia Jujubes, Gargle Lozenges, Cod-liver Oil Cream.

Messrs. Voltmer and Co. (Altona) showed a preparation of milk, described as Artificial Human Milk.

The exhibit of Messrs. Walker, Troke and Co., of 82, City Road, London, consisted of Preparations of Pepsine, manufactured by Mr. Carl L. Jensen, Philadelphia, for whom they are the English agents. They comprise Crystal Pepsine, so named owing to its appearance resembling minute transparent crystals. It is practically inodorous and tasteless, and perfectly soluble in water, without the use of acid. The manufacturer claims for it very great solvent power, one grain dissolving the white portions of two or three boiled eggs. The Crystal Pepsine is also exhibited in the form of Crystal Pepsine Tablets, which are pleasantly flavoured, and of convenient size, somewhat similar in appearance to the other American compressed tablets, with which the public are already acquainted. Jensen's Beef-Peptone, or artificially digested beef in transparent scales, one ounce representing half a pound of completely dissolved beef, is another of the Jensen series of dietetic preparations exhibited by the same firm.

Messrs. W. R. Warner and Co. exhibited, through Messrs. F. Newbery and Sons, a collection of their Sugar-Coated Pills, Granules, etc. Parvules, designed for the administration of definite doses at short periodical intervals, were also on view, in elegant pocket-cases. Amongst the newer introductions of Messrs. Warner, may be mentioned Caffeine and Bromide of Potassium combined in the form of an effervescent Salt, Liqueur Coca (Wine of Erythroxylon Coca), in which the fine aroma of the coca leaf was a noticeable feature. The solubility of the pills and coating was demonstrated experimentally by the attendants in charge; and the Oval Pedestal Pill-Vases, with cut glass stoppers, gave a unique appearance to what, apart from this new feature, formed an exceptionally good exhibit. Pulvis Jacobi Verus, which is said to be still largely prescribed, was also exhibited by Messrs. Newbery and Sons.

Section B.—Surgical and Medical Instruments and Appliances.

Messrs. Arnold and Sons had a large exhibit of surgical instruments and appliances, foremost among those which attracted attention being their new Portable Stethoscope, made entirely of India-rubber. —New Folding Ambulance Chair (patented). This apparatus is arranged so that it can be used as a chair, and likewise as a stretcher, and by the addition of wire rope-slings, which are attached to shackles at either corner of the framing, can be suspended. By this arrangement, the chair can be hoisted in or out of a ship, or up and down the hatchways, and prove extremely useful in railway and colliery accidents.—New General Anæsthetic Inhaler, arranged for use with nitrous oxide gas, chloroform, ether, alcohol, or bichloride of methylene, given either separately, mixed, or successively, as desired. The construction of the inside of this inhaler is arranged with plates turned up on the free edge, which prevent the anæsthetic from dropping on the patient's face, and form a broad surface for volatilisation. —New form of Metallic Splints. These are extremely light and clean, being made of copper and nickel plated, and possess advantage over the ordinary splints, being adaptable to the limb.—Improved Glycerine Pad Pessaries. Being filled with glycerine they are softer, and do not evaporate, or become collapsed.—New Extension Splint (by George Shirres, M.B., C.M.).—New Empyema Tube (by Dr. Pearce). —Patent Hypodermic Syringe, self lubricating, having a chamber of oil between the two plungers, which renders them moist, and always ready for use.—New Patent Truss, with Spring Glycerine Pad, which does not become collapsed or evaporated, like water or air.—New Portable Operating-Table. The legs forming the table fold inside the body, and when closed, it is the size of a portmanteau, with two handles for carriage.

Messrs. G. Barth and Co. (54, Poland Street, Oxford Street, London, W.) exhibited a Portable Apparatus for the Administration of Nitrous Oxide Gas and Ether, either separately or in combination, devised by Dr. F. Hewitt. The advantages claimed for this method over other methods of administering gas and ether are as follows. 1. The apparatus is portable; the bag containing the gas may be filled outside the operating-room. 2. There is a gradual transition from the anæsthesia of nitrous oxide to that of ether. 3. No change of face-piece is necessary; hence there is no risk of too much air being admitted. 4. A very small volume of gas is required; a much smaller gas-cylinder is therefore necessary than under opposite circumstances. 5. By placing the gas-bag in connection with a gas-cylinder worked by the foot, and by removing the ether chamber, nitrous oxide can be administered alone, as for dental operations. Messrs. Barth and Co have lately introduced an extremely portable and convenient form of Gas-Cylinder, fitted with a new kind of valve, which is worked with the greatest ease and smoothness by means of a foot-key. Two small steel cylinders, each capable of holding twenty-five gallons of gas, are connected together in such a way that they may lie side by side upon the ground without the necessity for any stand. The valve-tap is placed, not at the top of the neck of the cylinder, but upon its side, so that when the cylinders are lying horizontally, the valves may be worked by the foot-key. Two steel cylinders (in case one may become exhausted) with a foot-key, and long India-rubber tube by which to fill the gas-bag, together with the apparatus above described, constitute all that is necessary for the efficient administration of gas and ether, either separately or in combination. The whole apparatus may be placed in a small hand-bag, and, in comparison to that generally employed, is light and far less cumbrous.

Messrs. Coxeter and Son (Grafton Street, Gower Street, London) exhibited a large assortment of instruments for diagnosis and treatment of disease, including the Students' Ophthalmoscope (illustrated in the British Medical Journal of July 10th, 1886).—Obstetric Vade-mecum, a bag containing all the requisites for the emergencies of midwifery; various forms of Silico-Carbon; Voltaic Batteries, small and large, and of varied construction; Combination Batteries; Practitioner's and Patient's Batteries; Faradaic Batteries, of various kinds; Dr. Steavenson's complete Electrical Cabinet (illustrated in the British Medical Journal, July 3rd, 1886); Galvano-Cautery Batteries and Cauteries for Nose, Throat, etc.; Batteries for Electrical Illumination; Dynamos and Electric Engines, suitable for surgical and dental work; Assortment of Accessories, including Instruments for the Electrolytic Treatment of Urethral Stricture, Removal of Hair-Follicles, etc.; Electric Lamps for internal examinations, etc.

Messrs. Danielsson and Co. (23, Southampton Buildings, Chancery Lane, W.C.) showed their Clinical Figures, Charts, and Medical Illustrations, which serve a useful purpose at trifling cost.

Messrs. F. Darton and Co. (of 45, St. John Street, E.C.) showed a varied and interesting collection of instruments for surgeons' and scientists' use, consisting of Clinical Thermometers (of which they have long made a speciality), the £5 5s. Histologists' and other Microscopes, Oculists' Trial-cases, Barometers, Electric Apparatus, Medical Batteries, and an assortment of Optical and Scientific Instruments generally. Messrs. Darton are makers for the various departments of the Government Service, and their lists and catalogues will well repay perusal.

Mr. A. De St. Dalmas (Leicester) exhibited specimens of the St. Dalmas's "Leicester" Selvedge Bandages; the St. Dalmas' Original Medical Plasters (formerly Moor's); "the Leicester" Improved Adhesive Plaster, on fine cambric (flesh colour), in rolls of 3 yards, usual width, in 1 yard tins 6 inches wide; also Tape Plasters, in tins, 6 yards long, ¼, ⅜, ½, ¾, 1, 1½, and 2 inches wide, and assorted Cases of eight Ribbons; the "Leicester," Salicylic Acid Plaster; Porous Capsicum Plaster, on felt; Porous Belladonna Plaster.

Messrs. Down Brothers (of St. Thomas's St., London) displayed an interesting collection of Surgical Instruments carefully arranged under their respective titles applying to the various departments of surgery. The following are selected as specially worthy of attention: Gowan's Osteotome and Set of Billcrank Retractors for resecting the head of femur, etc.—Bryant's Double Hip-Splint for securing parallelism of

the pelvis in cases of hip-disease, etc.—"Bryant's Pocket Case," a thoroughly useful and complete set of instruments for everyday uses.—Pedley's set of Instruments for applying wire-splint in cases of fractured jaw.—Gowan's Gag, extremely simple and easy of adjustment, and at the same time occupying so little room in the mouth as to be particularly suitable for operation, as well as for all other purposes for which a gag is required.—Easte's Tongue Depressor for protecting the spray-tube when spraying the throats of children in cases of diphtheria, etc.—Dr. Hale White's "Emergency Case" for Tracheotomy.—Lucas's Trachea Forceps for removing foreign bodies from the Trachea and Bronchi.—The short tubes designed by Mr. Symonds for wearing in the œsophagus in place of the old tubes hanging out of the mouth seem likely to command the increased attention of surgeons. They are introduced by means of a wire stilette, and are secured by a strong silken cord, which is usually worn round the patient's ear. The tube lodges securely in the œsophagus, and is worn with little discomfort, the patient being able to enjoy the pleasure of taste, denied to him with the old appliances.—Baber's Reflectors and Set of Ear Specula, for carrying in the pocket, are practical diagnostic aids.—Lucas's complete Set of Instruments for Operation on the Kidney are interesting, as showing the advance in recent years in this branch of surgery. They include Stiletto for diagnosing the existence of calculus, and Forceps, etc., for its extraction, and also Knife, Scissors, etc., for the complete removal of the diseased organ.—Manley's New Lithotrite, with a double lock designed to facilitate the conversion of the slide to the screw action by means of a second lock, when the stone proves to be of a size, or gripped in such a manner as to prevent the conversion by the usual or first locking arrangement.—Barnes's Midwifery Forceps with Simpson's Handles, as recommended by Dr. Galabin, are said to be an improvement on the original Barnes's, as giving greater traction-power, while the lock is further removed from the vulvæ than in the ordinary pattern of Simpson's.—A very useful Needle, intended to be carried in the midwifery bag for immediate operation in cases of ruptured perinæum was shown. It is designed to take a deep stitch, and thus avoid the too frequent necessity of subsequent operation.—A Double-Channel Vulcanite Pipe, by Mr. W. A. Duncan, for washing out the uterus, is a specially useful appliance.—The Scissors for Emmet's Operation, fitted with well-tempered and not too cumbersome shanks, are an improvement on some that appear to occupy too much space.—Mr. Tom Bird's New Ether Inhaler has an ingenious double valve, and is so arranged that the inhaled air passes through the ether-charged sponge, but the exhaled breath passes almost entirely direct to the expiratory valve.—A new Subcutaneous Syringe-case, for use with Solutions, was noticeable as being fitted with bottles with necks sufficiently wide to take the syringe, and thus enable the solution to be used to the last drop—a matter of frequent convenience.

The Electric Apparatus Company, Limited (4, Charing Cross, London), exhibited the new Victoria Battery, of the Leclanché type, specially manufactured for the electric light, for laryngoscopes, ophthalmoscopes, etc. Being charged with sal ammoniac and water there is little or no action except when the battery is in use; it gives work from half to three-quarters of an hour at one period, and wants, with ordinary use, attention about once or twice in six months, when fresh sal ammoniac and water is added. The whole is sealed down, so that it does not spill, and is in every way specially adapted for medical use.—Electric Cautery Battery. This is a new and much improved form, is fitted with two cells, charged with chromic acid crystals and water; each cell has enormous power, having plates so arranged that there is but little internal resistance; the two cells coupled, heat to a white heat burners of thick platinum wire, and maintain it thus even when in contact with moisture, etc.—They also exhibited a new improved Constant-Current Battery, with arrangements so that no break occurs in charging the number of cells given to a patient.—Improved Portable Faradaic Batteries; a large variety of Head Lamps, Photophores, Lamps for the Operating Table, worked by means either of their new Victoria set, or their improved bichromate batteries, calculated to give efficient light for at least four hours. They were also showing an improved self-starting Dental Motor, fitted with reversing-gear; also a large quantity of Electrodes, for applying the current to the several parts of the body; Invalid Bells, and several other novelties.

Messrs. Evans and Wormull (of Stamford Street), had a large exhibit of special instruments and appliances, including a variety of Stethoscopes and other articles for diagnosis.—Some Clinical Thermometers, which, by a special process in the making, have stood the Kew test for some years without variation in the reading.—Hay's Hip-Splint, a simple and cheap splint, which has been put into good test at the Royal Hospital for Women, and said to answer satisfactorily.—A Bandage-Winder, to clamp on to any table, and which could be regulated to size of any bandage, was also shown.

A most interesting exhibit, both to the professional and unprofessional visitor, was the complete collection of Aids for the Deaf, shown by Mr. Hawksley (of London), who appears to have taken advantage of the recent advances made in the science of acoustics and the demands of the aural surgeon. His collection of instruments comprised the history of otacoustic instruments, from the time of the great surgeon Heister down to the inventions of the last year, in the form of magnetic membranæ tympani, and invisible sound-conductors, the utility of which was explained to all inquirers. Mr. Hawksley divided this exhibit, which consisted of Natural, Artificial, Extemporised, and Concealed Aids, into eight classes, the distinctions being made in reference to the manner in which the sound reached the auditory nerve, whether by means of tubes, by reflection, or conduction through the bones of the head.—The Conversation or Whispering-Tubes shown are great improvements, and include in their construction the most recent researches of Lord Rayleigh upon the conduction of sound by means of tubes.—The Portable Aids, designed by Sir W. Dalby, attracted much attention, as did also the cornets, which are attached to the head in an ingenious manner.—For the dinner-table, Mr. Hawksley has perfected a binaural instrument, which, it is claimed, not only adds greatly to the power, but, by the method of attachment to the ears, allows the wearer perfect freedom of action with his hands.—Several of the inventions exhibited obtained the award of the Gold Medal at the recent Inventions Exhibition. Special attention was called to the adaptation of a vibrating plate to some of the instruments, instead of the usual nipple for inserting in the ear, many patients being unable to use the latter from the irritation which it causes. The Acoustic Parasol, Fan, Walking-Stick, and some very artistically designed miniature aids, attracted much attention.—The Audiphone, useful in certain cases of middle-ear deafness, was shown; also the Antiphone, an ingenious device for deadening sounds, the invention of Captain Plessner.—Mr. Hawksley showed some little bags made of thin rubber or membrane, and containing a clay-like substance, which were readily shaped to the concha and orifice of the auditory canal, and produced the best effect in deadening external sounds, besides being comfortable to wear.—Hughes's Electric Sonometer, used for measuring degrees of deafness, was shown, but no demonstration could be made owing to surrounding noises. It consists of an electrical balance, microphone, and telephone, and it can be used to ascertain the progress of improvement or otherwise of a case under observation, as also for testing the acuteness of hearing; for the latter purpose, perhaps, the whistles of Galton are more convenient ranging as they do from 2,000 to 80,000 vibrations per second.—A complete collection of instruments was shown for investigation and operation upon the ear, nose, pharynx, etc.—A very simple and efficient Knee-Truss was shown in use, suitable for cases of relaxation of ligaments of the knee-joint, and dislocated semilunar cartilage; for the latter purpose, it is largely used by football, racquet, and tennis players.—Sir W. Dalby's Ring Knives and Artificial Steel Nail for the removal of Adenoid Growths were much approved, as also the Transfusion Apparatus, and a very clever Nasal and Laryngeal Polypus Snare, or *Ecraseur*, designed by Mr. Carmalt Jones.

Mr. John Grinsted (Preston Park, Brighton) showed the Etak Accouchement Binder.

Mr. Ernest Hinton (12, Vorley Road, Upper Holloway, N.) showed a Student's Microscope, "The Diamond," and a Case of Preparations for the Microscope.

Messrs. Immisch (Electric Works, Ryland Road, Prince of Wales's Road, London, N.W.) showed their Patent Metallic Thermometer for clinical purposes. The advantages claimed for this little instrument are that it is more accurate, sensitive, and less liable to get out of order than those ordinarily in use; while, by being worn on the watch-chain, which its size well admits, it is always at hand. It consists of a semicircular tube filled with a mixture of alcohol, chloroform, and ether, or what is commonly known as the A. C. mixture, on the expansive nature of which, under heat or cold, the action depends.

Mr. Ernest Jahncke (Canonbury Works, Dorset Street, Essex Road, London) exhibited a Nickel-plated Urine Test Case, and a Hypodermic Syringe Case for the pocket, with Bottle Cases also for the pocket.

The Vapour-Pressure Injector (patent) was shown by Dr. Kirk (Partick, Glasgow). The motor power of this instrument is the pressure of ether vapour, which is sufficient, at 80° Fahr. and upwards, to drive ether, water, or a mixture of ether with alcohol or other liquids. Its object is, by the vaporisation of the injected ether, to distend and diffuse medicinal agents through closed cavities, as the sac

of a hydrocele and cysts in general, the urinary bladder, and abscesses, which have been evacuated by aspiration, etc.

Messrs. KROHNE and SESEMANN (8, Duke Street, Manchester Square, London, W.), Surgical Instrument Manufacturers by appointment to the London, German, St. Mary's, Cancer, Samaritan Free, Central Throat and Ear Hospitals, etc., showed a varied selection of modern and new Instruments of superior finish and workmanship. Amongst the many articles exhibited, we noticed Dr. B. W. Richardson's new Standard Sphygmograph; a Portable Midwifery Ba g(which no end of the members present availed themselves of), the price being a very low one; Clinical Thermometers, absolutely correct, with magnified indestructible index; new cheap Hypodermic Syringes; Nasal and Throat Sprays; Silver and Gold Clinical Surface Thermometers; Dr. Harrison's (Liverpool) Bladder Tumour Forceps; Whip-Bougies and Urethrotome; Mr. Bryant's Torsion Forceps; Pacqulin's Thermo-Cautery; Dr. Holland's new Traction Midwifery Forceps; Simpson Tarnier's Traction Forceps; Dr. Orwin's new Ear Forceps; Lister's Antiseptic Steam Sprays, with latest improvements; Celluloid Speculas, Probes, Powder Blowers, Catheters, and Bougies in large varieties; Ovariotomy Instruments, consisting of latest improved Trocars, Cyst-Forceps, and Junker's Inhalers, Spencer's Binaural Stethoscopes, Dudgeon's Sphygmograph, Martin's Pure Rubber Bandages, Dr. Hagedorn's improved Suture Needles, and Needle Holder, etc.

Messrs. MAYER and MELTZER (71, Great Portland Street, London) exhibited a new Nasal Speculum, by Dr. Muncaster, of Washington, U.S.A.; Mayer's Patent Electric Light, which can be used for examining the different cavities of the body, or as a reading-lamp; also a battery, in which the light is combined with a galvano-cautery; Crocker's new Electrolysis Needle-holder and Forceps combined; Black's new Stem-pessary and Introducer; Parker's new Tenotomy Knives; Mackenzie's Spirometer; Whistler's Nasal Inhaler and Naso-Aural Respirator; Mayer's Spinal Support, which is very light, being made entirely of leather; Woake's new *Ecraseur*, with a large collection of Laryngeal, Aural, and Gynæcological Instruments and Cases.

Messrs. J. T. MAYFIELD and Co. (41, Queen Victoria Street, London) displayed a collection of Electrical Apparatus, manufactured especially for medical purposes, consisting of Magneto-Electric Machines, for the application of medical galvanism without a battery; Medical Batteries and Coils, with various Electrodes for applying the current to different parts of the body, and complete Apparatus for an Electric Bath; the Schanschieff Primary Battery, for working Laryngoscopes, Photophones, etc., which were shown in action. This firm also showed some Electric Bells, complete in case, for the temporary use of invalids, very portable, and easily put in action; a "Wimshurst Induction Machine," for the application of static electricity for medical purposes. This machine works (unlike the old form of static machine) under any atmospheric condition, and is, it was stated, being much used by the profession.

Mr. J. B. MEDLAND (12, Borough Street, London, S.E.) exhibited Microscopic Object Cabinets; Practical Physiology Cabinet, containing scalpel, forceps, scissors, section lifter, three needles in handles, razor, spirit lamp, etc.; Microscopic Companion, containing apparatus and trays for specimens; also a very cheap and portable Electric Lamp and Battery for surgical, microscopical, and other purposes, giving a brilliant light for a period of from three to six hours.

Messrs. PICKARD and CURRY (195, Great Portland Street, London) made a good show of Ophthalmic Instruments. Among the number we would call attention to the great variety of ophthalmoscopes, such as Couper's, Morton's, Juler's, etc, well known to specialists. These were shown with Juler's electric adaptation. Apart from the novelty, it is claimed that with this illumination observations may be made much more easily and successfully than with any other mode of illumination.—Another novelty was an Instrument for Detecting Colour-Blindness, designed by Dr. Jeaffreson, of Newcastle-upon-Tyne. This consists of a japanned tin circle, about 10 inches in diameter, revolving on its axis, and carrying eighty different shades of wool. Each skein of wool is fastened on the circle separately, radiating from the centre towards the edge; the whole represents the spokes of a wheel. The test-wools are six in number, and are fastened on an arc immediately above the circle. The patient is simply asked to match one of the wools on the arc, and this he does by revolving the circle until the one he selects is opposite to the one to be matched.—Abbott's Lacrymal Syringe and Cucaine Hypodermic Injector is also a very simple instrument, and should be in the hands of every medical practitioner. The exact quantity of solution required can be injected without fear of waste.—Test types of every description, Oculists' Trial Cases, Perimeters, and every instrument required by the ophthalmic surgeon were comprised in this interesting exhibit.

Messrs. THOMAS ROWLEY and SON (128, St. James's Street, Brighton) showed an assortment of Optical Instruments, amongst which were to be seen their latest and most improved forms of medical electrical appliances, oculists' instruments, trial cases, etc.; also the "Visometer," an instrument made by them a few years since, to discover and give the corrections for the anomalies of refraction.

The Vaccinating Lancet (Maw, Son, and Thompson) was shown by Mr. J. R. SEYMOUR, L.R.C.P., of South Norwood.

Mr. W. S. STANLEY (Railway Approach, London Bridge, S.E.) exhibited his Students' Microscopes, specially adapted to animal and vegetable histology, also cases of apparatus for Practical Physiology, and boxes for holding microscopic preparations, together with loose material, such as glass slips, covers, etc., and Section Cutting Machines, etc., most of which are special forms, and the same a supplied by him to Guy's, St. Bartholomew's, and St. Thomas's Hospitals.

Mr. HENRY VIAL (Crediton) exhibited a number of Slides, Anatomical, Pathological, and Botanical, including stained specimens from human body, and injections from monkey, rabbit, cat, snake, etc.

A very complete selection of Surgical Instruments was that shown by Messrs. WEISS and SON (287, Oxford Street, and 62, Strand, London). Among the new instruments shown, we noticed a set of Instruments for Circumcision, by Dr. Horsfall, of Leeds, with barbed forceps and cannula for drawing out the prepuce.—A new Pocket Sphygmograph, by Dr. Mortimer Granville. Among the advantages claimed for this sphygmograph are, that it is smaller, and therefore more easily carried in the pocket than any other; that it is easier of application, and less influenced by the mode of use; and that it gives a tracing which shows more accurately the conditions of the artery, and the motion, volume, and force of the blood-current; that there is no spring to adjust, and that used is so nearly in a state of rest, that the up-stroke of the tracing is not produced by a jerk, as in the ordinary spring sphygmograph, which projects the needle much higher than the dilatation of the artery raises it, and this vitiates the tracing by making an acute angular apex when, perhaps, the head, to be accurate, should be flat; that the needle not being thrown up with a jerk by the spring, but raised by the artery, the up-stroke is not perpendicular (which must, of course, always be an error), but inclines in a direction opposite to the movement of the paper, so that the length of the base line of the triangle of obliquity indicates, by the proportion it bears to the total length of the interval between the starting point of one up-stroke and the next, the time occupied in the dilatation of the vessel, and they point out that this matter of proportional time—involving the distribution of time over the several component parts of the sphygmogram—is not less important in the study of the pulse than in the study of the movements of the heart.—Mr. Vesey's Electric Laryngoscope worked with battery, and also with a new accumulator, by Pitkin. Also some New Instruments for Intra-Uterine Medication, by Dr. Barnes. These, with a very complete Cabinet of Eye Instruments suitable for a Hospital, formed an attractive exhibition.

SECTION. C.—ANATOMICAL AND PATHOLOGICAL SPECIMENS.

Mr. W. MORRANT BAKER showed Two Models illustrating Charcot's disease.

Mr. N. P. BLAKER exhibited an interesting collection of pathological specimens from the museum of the Sussex County Hospital.

Dr. ROBERT L. BOWLES (Folkestone) had on view: 1. Several Specimens from the same patient of Chronic Contractions and Ulcerations of various parts of the Intestinal Canal, patient having lived six weeks without any action of the bowels, and without taking any food by the mouth. 2. Malignant Disease of the Ileum, which was attached to the abdominal wall in front. Patient had no natural motion for a month, and had taken no food by the mouth for the same period. In both these cases, colotomy was entertained, but rejected. Both cases were kept comfortable by opium, and the fæces were found in a semi-fluid state in the intestines. 3. A large Aortic Aneurysm, ulcerating through the Bronchus, in which the symptoms were throughout very obscure. 4. An Atheromatous Aorta, with ragged ulcerations. 5. Specimens of "Bots," attached to a portion of the stomach of a horse. 6. Some Casts from the bronchial tubes, vagina, and rectum.

Dr. BROOKE (Manchester) displayed several Models of rare Skin Disorders. 1. Syphilide of Face. 2. Lupus Verrucosus of Hand. 3. Lupus Deformans et Papillomatosus of Hand. 4. Keratosis Palmaris. 5. Tyloma of Sole. 6. Strumous Ulcer of Breast. 7. Hand and Foot of patient suffering from Symmetrical Disorganisation of Joints and Atrophy of Nails.

Dr. CHAFFEY (28, Cedars Road, Clapham Common, London, S.W.) showed the following specimens from the Museum of the Children's Hospital, Great Ormond Street, London, illustrating

Cardiac Thrombus. 1. Heart of a boy, aged 5½ years, who died from double pneumonia, probably pyæmic. There is a softening coagulum in the cavity of the right auricular appendix, with polypoid projections into the cavity of the right auricle; one of these had become detached, and so allowed the escape of puriform contents into the blood-stream. The pericardium was adherent. 2. Heart of a girl, aged 4 years, who died of phthisis. An old cystiform clot in the cavity of the right ventricle. The muscular structure of the heart fatty. 3. Heart of a boy, aged 5½ years, who died of diphtheria. Very large *ante mortem* fibrinous coagulum in the right auricle and ventricle and pulmonary artery. A narrow chink alone permits the passage of blood through the tricuspid orifice. The clot is interwoven with the columnæ carneæ of the right cavities, so as to be firmly adherent in most parts. The cavities on the left side contain a similar but less extensive clot. 4. Heart of a boy, aged 12 years, showing tricuspid vegetation and extreme stenosis of the mitral orifice, with funnel-shaped and much dilated left auricle. In the last named cavity, the globular clot shown was found lying loose. It is oval, and measures 1¼ by 1 inch. Its surface is uneven, but glossy. On section, the clot presents alternate laminæ of firm and softening fibrinous material, with bright yellow lines (? altered hæmatine) at their junctions. Presystolic and tricuspid *bruits* were heard during life. 5. Intestine from a girl, aged 6 years, showing commencing ulceration of Peyer's patches at lower end of ileum. Death occurred on the tenth day after attack of typhoid fever. 6. Extensive sacro-iliac disease in a girl, aged 7 years. Necrosis of the ileum nearly complete. Secondary inflammation of hip-joint. The ligamentum teres is thinned, and the cartilage of the head of femur superficially eroded. 7. Humerus from a child, aged 17 days, showing congenital syphilitic periostitis of the lower end of the bone. The upper end is unaffected. There was no effusion into the joint, which was natural in appearance. 8. Skull-cap from a child, aged 10 weeks, showing considerable cranio-tabes, the ulceration mainly affecting left parietal bone.

Mr. T. CHAVASSE (Birmingham) showed a Photograph of a case of Multiple Neuromata.

Dr. H. RADCLIFFE CROCKER exhibited some Drawings of rare Skin Diseases, including: 1. Pemphigus Foliaceus. 2. Lichen Ruber. 3. Scleroderma Pigmentosum (two, brother and sister). 4. Urticaria Pigmentosa (two). 5. Verruca Necrogenica. 6. Large Bulbous Hydroa. Skull-caps illustrating M. Parrot's changes in Congenital Syphilis.

Dr. JAMES GOODHART (20, Weymouth Street, W.) showed interesting Specimens from Guy's Hospital Museum.

Dr. W. S. A. GRIFFITH (114, Harley Street, London, W.) showed a specimen of Naegele Pelvis from the Museum of St. Bartholomew's Hospital. (See *Trans. Obstet. Soc.*, Part II.)

Dr. BEAVEN NEAVE RAKE (171, Norwood Road) exhibited Four Specimens of Leprosy.

From the ROYAL ALEXANDRA HOSPITAL FOR CHILDREN, BRIGHTON, were shown: 1. Heart of a boy who died of syncope, aged 4 (cyanotic from birth). Weighed 11 ounces. The right ventricle was much hypertrophied, the left atrophied; the foramen ovale was patent; and the pulmonary glands agglutinated, leaving only a narrow opening admitting a probe (referred to in BRIT. MED. JOURN., Oct. 11th, 1884, and Feb. 20th, 1886). (Dr. Mackey.) 2. Sequestrum from Tibia of a boy, aged 11, removed five months after injury. His grandfather and uncle suffered from necrosis. (Dr. Whittle.) 3. Large mass of Caseous and Hypertrophied Glands, weighing 4 ounces, from the axilla of a girl, aged 8. (Dr. Whittle.) 4. Sequestrum from Femur of a girl, aged 11. (Mr. Leigh.) 5. Caries of Cervical Spine: Destruction of Body of Axis, with Partial Loss of Odontoid Process. 6. Caries of Spine and Base of Skull: Destruction of Odontoid Process: Death from Basic Meningitis. (Mr. Leigh.) 7. Enlarged Lymphatic Gland containing Sanguineous Cyst. 8. Enlarged Glands removed from Neck. (Dr. Whittle.) 9. Fibrous Tumour from beneath the Scapula of a male infant at 9 months.

Mr. JAMES STARTIN (17, Sackville Street, W.) showed some interesting Drawings of rare Skin Eruptions. 1. Twenty-cell Bichromate Galvanic Battery, with sponge electrodes and needles, as used by him for the destruction of superfluous hair. 2. "A Skin Scraper and Lancet;" the scraper is used in the treatment of acne, to scrape out the comedones, the lancet to puncture or open any pustule or induration. 3. Erosion Curette and Scoops, for destroying and scraping out lupus tubercles and nodules. 4. A Steel Ring Compress, used for compressing injured blood-vessels in acne, whilst they are divided in the centre, and touched with nitrate of silver. 5. Diffuse Scleroderma or Morphœa in a child. 6. Xanthelasma in a child. 7. Leucoderma. 8. True Leprosy. 9. Xeroderma, palmare et plantare. 10. Eruption caused by wearing aniline dyed hose. 11. Acne pustulosa et indurata. 12. Lupus erythematosus. 13. Two New Works on Skin Diseases. 14. Pathological Specimen: Mouse with Favus Disease of Skin, which affected a family of children.

Mr. T. SYMPSON (Lincoln) exhibited: 1. Photographs showing the back of a boy, aged 7, affected with Myositis Ossificans. There are many lumps, apparently bony, along the margin of each latissimus dorsi; one in the trapezius, a little below the occiput; another in the right trapezius, midway down the neck; and a third, over the right supraspinous fossa; another, in the substance of the long head of the right triceps, reaches from the posterior margin of the axilla nearly to the insertion of the deltoid. A saddle of bone covers the erector spinæ on each side, and there are some bony lumps over the angles of the ribs and near the crest of the right ilium.

Dr. W. J. TYSON showed the following Pathological Specimens. 1. Cherry-Stone in Left Bronchus. Death in thirty-seven hours. A boy, aged 2 years 8 months, was suddenly seized with dyspnœa, became black in the face; nothing discovered by examination with finger in the mouth; but after this he breathed freely, and regained consciousness. A whistling noise could be heard with stethoscope placed over left bronchus. He was treated by emetics, shaking the chest violently, and suspending by the feet, all without success. Tracheotomy was performed thirty-seven hours after the initial attack, but nothing could be detected with instruments. Half an hour afterwards, the boy died. *Post mortem* examination. Right lung enormously gorged with blood; left lung pale and collapsed. A cherry-stone found firmly impacted in left bronchus, an inch and a quarter below bifurcation. 2. Bullet-wound of Abdomen and Bladder. Death in thirty-five hours. G. H., aged 14, on August 24th, 1885, at 1 P.M., was shot by a saloon-gun in the "stomach," at the distance of about fifteen to twenty yards. On admission, found small wound in abdomen two inches above pubes, and one inch to left of middle line; no foreign body discovered on probing. Next day, he was sick two or three times, became feverish and delirious, and passed a bullet, five-eighths of an inch by one-fourth of an inch, *per urethram*. He died in thirty-five hours after the injury. *Post mortem* examination. A clot of blood was found in abdomen at the seat of the wound. There was some peritonitis, extending four or five inches around the perforation, with some flakes of lymph. There was a wound in the posterior wall of the bladder.

Mr. HENRY VEVERS (Hereford) exhibited the upper part of a Humerus, with the greater Tubercle torn off, in a case of Dislocation of the Head of the Bone into the Axilla. The greater tubercle remained attached to the tendon of the muscles inserted into it, and the periosteum was torn away as far down as the inked line showed.

Dr. E. G. WHITTLE (Brighton) showed a Drawing of a case of Ectopia Vesicæ and Photographs of a case of Double Hare-Lip with Double Cleft Palate.

Dr. WYLIE (307, Clapham Road, S.W.) exhibited a case of Hydatiform Myxoma of the Placenta.

SANITARY APPLIANCES, ETC.

Messrs. JAMES ALLEN and Sons (21 and 23, Marylebone Lane, Oxford Street, W.), exhibited their Travelling and Nursery Convenience, which we recently noticed. (See BRITISH MEDICAL JOURNAL, July 24th, 1886).

Mr. W. BARLOW (Mealhouse Lane, Bolton) had an extensive exhibit of his Hygienic Boots, the chief of which, his Patent Souple Boot, came in for a good deal of attention and approval. With absolute resistance of damp, they combine great lightness, weighing only 1¾ lbs. per pair. They are recommended for their great pliability, softness, and durability, with the further advantage that they cannot creak in walking, as the cavity between the soles is filled with waterproof felt.

Messrs. BILLINGTON BROTHERS (Liverpool) exhibited specimens, in different parts of the building, of their patent Metallic Spring Mattresses, which we have already noticed in these columns.

Messrs. BOYD and Co. (of Belfast) exhibited the "Doctor's Great Coat" and Doctor's Ulster, the chief features of which were said to be their great warmth and comfort, with comparative lightness and softness. Special accommodation has been made for the carrying of obstetric and other instruments.

One of the novelties of the Exhibition was a most ingenious carriage: the "Excelsior" Patent Phæton-Gig, designed and built by Messrs. CLIFT and SON (of Wellington, Salop), to meet the requirements of the medical profession. The peculiarity of the carriage consists of its being so constructed that it forms, at will, either a two-wheeled gig or a four-wheeled phæton, thus enabling carriage-users, economically, to keep two carriages for one licence. This com-

bination principle was introduced by Messrs. Clift and Son in 1884, and seems to be a complete success in actual use, and, as it was awarded the Gold Medal at the Inventions Exhibition last year, it would appear to be a very valuable improvement. The carriage, as exhibited at the Museum, was fitted with leather hood and apron, and thus affords complete protection from the rain, while long elliptic springs and India-rubber bearings prevent any vibration in passing over rough roads. In our issue of August 7th was given a sketch of the carriage, and a commendatory account of it from the pen of Dr. Paget Thurston, of Tunbridge Wells, who, having driven it more than 1,000 miles, may be said to speak with some authority.

A Portable Apparatus for Disinfecting Bedding, Clothes, etc., by Heat, was exhibited by Messrs. FRASER and Co. (of Commercial Road East, London), who are the manufacturers. It is claimed for this process of disinfecting that it is cheap, simple, and effective, and the apparatus being portable, renders it particularly useful in country districts and camps. When it is required for use, the fire underneath is lighted with wood, etc., and the temperature inside is quickly raised to about 250° ; the larger doors are then opened, the racks inside withdrawn, and lightly spread with the bedding or clothes to be disinfected. The doors are then closed, and by means of the regulating dampers in the chimney the internal temperature is maintained for about an hour at 250°—275°, as registered on the pyrometer at the side of the machine. The doors are then opened, and the clothes withdrawn disinfected. There is a provision for burning sulphur, or other disinfectants, by opening a small door over the furnace and inserting the chemicals when severe cases require such additional aid. The fumes given off during the process of disinfection are, in this apparatus, burnt and destroyed by being conducted down from the interior of the chamber by side-pipes into the ash-pit of the furnace, and, passing through the fire, prevent the spread of disease when disinfection is going on.

Messrs. JOHN GIBBS and SON (Warming, Ventilating, and Consulting Engineers, of 27, South John Street, Liverpool) were well represented by a comprehensive collection of their Appliances, as used by them in the Ventilation of various Hospitals, Infirmaries, Prisons, Workhouses, etc., throughout the country, including Patent Weatherproof Extractor in various ornamental designs ; Patent Weatherproof Extractors for soil-pipes ; Improved Vertical Inlet Shafts for the admission and filtration of fresh air. They have, we understand, just completed and fitted the appliances required at the various infectious and workhouse hospitals lately erected in the outskirts of Liverpool, including the extensive scheme for the ventilation of the new Infectious Hospital for the Toxteth Local Board ; and are now engaged in carrying out the ventilation of the new addition to the Hospital for Incurables, Liverpool. These important commissions, and the commendations the work of this firm has evoked, speak strongly in their favour.

Messrs. HAMILTON and Co. (Ship Street, Brighton) showed his Invalid Couches, which he styles the "Grasshopper" 1 and 2, which is so constructed as to adapt itself to any position desired, by a patent screw movement.

Messrs. HIDES and Co. (16, Buckingham Street, Strand) exhibited their Patent Moulded Military and General Ambulance, made of cane ; a full-sized model of the human body.

The HYGIENIC AND SANITARY ENGINEERING COMPANY, Limited (of 23 and 24, Charing Cross, and Duke Street, Brighton) exhibited their now well known Bostel's Patent Excelsior Water-Closet, a great improvement being introduced by the flushing of the closet being done entirely automatically without the use of handles, wires, etc. In connection with this was also fixed Mr. Bostel's last new invention, namely, an Improved Intercepting Trap for Drains, with a Manhole for immediate access in case of stoppage or cleaning requirements, the whole appearing to us to be a very practical and simple sanitary appliance, and one which could be adopted in many cases with advantage.

Dr. JAEGER'S Woollen Clothing and Bedding, made of animal wool, with porous web, was shown in great variety, including Hygienic Boots, ventilated in the sole with an inlay of felt, said to be absolutely secure against risk of chill ; Camel-hair Bandages ; Ladies' Stockings and Socks with Toes ; Camels'-hair and Sheeps'-hair Dressing Gowns, Blankets, Corsets, etc.

Messrs. LEE and TAYLOR (Nichols Street, Leicester) exhibited a very excellent hand ambulance, simple in working, and having no parts requiring regulation by attendants. The frame-work is made of tubing, mounted on four spider wheels constructed of steel. The stretcher rests on three springs. A coupling in the centre of the connecting rod allows either pair of wheels to act independently of the other. The front spring rests on two rubber pads. The stretcher is fitted with an automatic pillow. There are two bows to form the frame of the covering ; these are jointed so as to fall clear of the stretcher when not in use. The two curtains meet in the centre at the top, and are attached to the framework by rings, which slide freely as required. Any part of the covering may be left open for ready access to the patient. The stretcher and carriage are so arranged as to lift together. Attached under the hind wheels is an emergency box, containing splints and bandages, antidotes to the most common poisons, remedies for burns and scalds, etc. On the left hand door is a card stating the uses for which it is intended ; on the right, a small case containing scissors, forceps, pins, needles, and thread.

Messrs. LEVESON and SON (90 and 92, New Oxford Street) had a large and attractive exhibit, including their handsome Merlin Chairs, for house or garden ; Recumbent Chairs with Leg-Rest ; excellent Invalid Out-door Chairs ; also a new patent Telescope Couch and Chair, the couch being capable of being instantly converted into a chair, and *vice versâ* ; this was much admired ; also a Spinal Carriage for Children ; Bed and Leg-Rests, and varied articles of invalid furniture.

Messrs. MCCONNELL (6, Pavilion Buildings, Brighton) showed a model of a Patent Bedstead, which is termed the "Turnover."

Mr. T. MCILROY (45, Grafton Street, Fitzroy Square) exhibited his well known specialties, in the form of Portable Operating Table, Gynæcological Operating Chair, Invalid Elevating and Fracture Bedstead combined, with almost imperceptible movement ; Fracture Extension Appliance ; Invalid Wheel Chair. Most of these have been constructed with considerable ingenuity, and are well adapted for the several purposes for which they are intended. A Convertible Couch or Sofa, which can in an instant be changed into a double bed with raised pillows, is an excellent thing of its kind, and met with general approval. An Improved Bed-rest, and an Invalid Tricycle worked by the hands alone, without any action of the feet, were among Mr. McIlroy's other exhibits.

MORRELL'S SANITARY COMPANY (4, St. Ann's Square, Manchester), showed a model of their Patent Ash-Sifting Earth-Closet ; Self-Acting Ash-Sifting Apparatus ready for fixing ; Portable Self-Acting Combined House Ash and Earth-Closet ready for use in any room or outhouse ; Portable (non-sifting) Earth-Closet for chamber floor use ; Ash-Sifting Apparatus for fixing up side or rear of an existing closet-seat ; Portable, Economic, Ash-Sifting Dust-Bin, with movable cinder-box, and compartments for ash-dust, bones, and rough refuse, etc. These we have more than once referred to as being all excellent in their way.

Messrs. JAMES NELSON and Sons (47, Briggate, Leeds) showed an "Economiser" Grate of white glazed fire-brick, constructed on the principles advocated by Mr. T. Pridgin Teale, F.R.C.S. ; also one formed of small levelled fire-bricks, and another with tiles and brass mouldings complete.

The "Premier" Brougham, exhibited by Messrs. J. PACK and Co. (Sussex Coach Works, George Street, Brighton), secured the admiration of both sexes. It is of handsome and light appearance, well ventilated and roomy, fitted with lever break, pole bar and shafts, suspended on India-rubber bearings, and almost noiseless in motion. Its chief recommendation, in addition to the above, is said to be the great ease and comfort it secures for invalids when travelling. It is conveniently and even luxuriously fitted, and is altogether highly creditable to the firm.

Messrs. PUGGAARD and GALSCHIOT (35, Eastcheap, London, E.C.) exhibited, on the lawn in the Pavilion grounds, one of the Dœcker Portable Fever Hospitals, containing two wards for four beds each, a nurse-room, a closet, and a small lobby. These hospitals are constructed of movable panels all over, joined by means of hooks and hinges. Each panel is made of a wooden frame covered on both sides with paper-felt lined with canvas. The air-space between these two coatings being a bad conductor of heat, protects the temperature of the hospital from the sudden changes of the outer air. The advantages claimed for the Dœcker system are that, in the case of a sudden outbreak of an epidemic, the hospital can be erected, ready for use, in from ten to twenty-four hours, according to the number of beds to be set up. The epidemic over, the structure can be taken down in a few hour's time, each section disinfected, and the hospital stored away till again wanted. The disinfection is very easy, as each panel may be treated by itself. The hospital is moved from one place to another with great ease, the walls and the roofs being packed up in cases, whilst the flooring, which is in sections, is screwed together. This portability is of great importance, as it makes it possible to bring the hospital to the very spot where the epidemic has broken out, or to carry it from one district to another within the union. Ventilation is amply provided for, there being ventilators not only at the top and

all round along the sides of the walls, but also under each bed, to be opened and shut at will. Though only a few years old, the Dœcker hospitals have already been adopted by many sanitary authorities, both in this country and abroad, partly by smaller communities having no permanent hospital, partly as fever wards in connection with large permanent buildings. When, last year, at the invitation of the Central Committee of the Red Cross, an International Competition for Ambulance-Barracks was held at Antwerp, where hospital structures of all kinds of material, as iron, wood, canvas, etc., were competing, the prize offered by the Empress of Germany, in the shape of a gold medal and 5,000 francs, was awarded to the Dœcker system.

In the Dœcker Portable Hospital, Messrs. W. P. WHITE and Co. (College Chambers, 249½, High Holborn, London) exhibited R. Nicholl's Patent Antiseptic Sanitary Appliances, for which they are the agents. The exhibit consisted of Closets, Covers for Commodes and Chambers, Dust-bins, House and Hospital Pails. The antiseptics used under the system are soot and salt, mixed together in certain proportions, and they are applied by a simple contrivance: a covered tray or box under the seat of the closets, or attached to the seat, or by a loose carbon-box for the seat-hole. In the case of the dust-bins and pails, the carbon-box is attached to, or rather forms part of, the lid. All mechanical complications have been carefully avoided, and the appliances can be attended to by any person, however inexperienced. The power of carbon as an absorbent of noxious gases is well known, as well as the properties of salt in preventing putrefaction. The effect of the mixture as applied to the closets, hospital-pails, and other receptacles, is to arrest putrefaction, and entirely absorb all the gases, and thus prevent any offensive smell which would otherwise arise from them. In addition to this, the advantages of the system are, that the materials, soot and salt, are at hand, and can be mixed in any house; that the trouble of drying earth is thus avoided; no water is used, and, therefore, no plumbers' work or fixing is required; and, further, that the cost of the appliances is less than under any other system. As the urine and the fæces are equally affected by the application of the deodorant employed, the disposal of the former, which causes so much difficulty, under any other "dry" system of closets, is avoided. The contents of the receptacles, therefore, contain all the qualities combined in the discharge from the human body, without the admixture of anything which would cause the slightest deterioration of its value as a manure. Further, as the contents of the receptacles can be dealt with without any offensive smell arising, they can be stored in casks or tanks until required for application, either in the private garden or upon the land generally. The advantage of this fact is self-evident to those who have experienced the difficulties and unpleasantness arising from the disposal of fæcal matter. We understand that the system can be applied, also, to catch-pits for house-waters. The promoters point out what they consider would be the far-reaching consequences of the adoption of this system, on a large scale, as regards the agriculture of the country, namely, that the land would receive back that which belonged to it, and without which it is being rapidly exhausted, and our water-springs and rivers would be, they consider, secured against the pollution which is the source of so much evil, under the present costly and wasteful system. By the addition of the carbon-box to the pails now in use under the "pail-system," in many large towns in the kingdom, the removal of these receptacles would, they contend, cease to give the offence which is caused thereby, as well as adding greatly to the comfort of each individual using them.

Mr. H. T. TALLACK (28, Hatton Garden, E.C.) showed his Patent Heat-Conductors for cooking the interior parts of flesh simultaneously with the outer parts. These consist of blades of tinned copper, with iron heads, left covered with the natural black oxide. One or two of these blades are inserted through the thickest parts of a joint, either for roasting, baking, or boiling; and the exterior heat is conducted to the interior parts. They are said to save about one-third of the time of cooking, thoroughly cook the interior parts, and preserve the gravy in the meat, which much improves its flavour, and renders it more digestible. About 10 per cent. waste of food is also saved in roasting a large joint. Also was exhibited his Patent Steak-tendering Press, consisting of a lever press, both surfaces of which are set thickly with small knives at right angles to each other. It renders a steak tender for eating, or in the best condition for extracting the gravy for beef-tea.

Mr. R. THORNTON (11, Goldsmith Street, Wood Street, London) exhibited Dr. Wright's Hygienic Down Bed-Quilt. This is nothing more or less than a ventilated quilt; and, as such, is a great improvement on the ordinary impervious coverlet. It is, we are told, stuffed with the purest down, and is quite as warm as the ordinary quilt, while the peculiarity of its construction secures perfect ventilation. We can highly recommend it.

Mr. W. W. WATSON (1, Temple Gardens, London) exhibited his Improved Combined Bedstead, Bed, and Commode. This bed can be used either when the patient is in a horizontal or upright position. The action is by means of the removal of the centre part of the middle of the bed, and the moving up in its place of a commode-pan, which is removed, and replaced by a washing-pan, after which the latter is withdrawn, and the bed-part replaced. There is another and distinct appliance, by means of which the middle of the bed can be moved sideways, and a commode introduced in its place, which, after it has been used and withdrawn, is replaced by the middle of the bed. There is a washing-pan in this, as in the other apparatus; and it can be used when the patient is sitting upright. There is also a lift apparatus.

Messrs. WOOD and Co. (of 27, Soho Square) exhibited a new non-intoxicating beverage, called "Primrose Cup." This is a kind of bitter lemonade, prepared and sold in the form of a powder. In preparing it for the table, all that is required is the addition of water. When cold, it is ready for immediate use, or may be kept for several days. By adding more or less of the powder, the bitter flavour may be increased or lessened to taste. The compact and portable form in which it is put up should make it convenient for tourists, yachtsmen, and others in want of a refreshing and harmless beverage. To what extent it will be favoured by temperance-societies, and be regarded as a suitable drink for our coffee-taverns, it is, of course, impossible to say. Its cheapness should be a recommendation, and doubtless many persons will be induced to give it a trial.

Among the miscellaneous exhibits were the following.

Messrs. CASSELL and Co., the well known publishers, exhibited their little excellent Manuals for Students and Practitioners of Medicine. Mr. H. K. LEWIS (136, Gower Street, London, W.C.) had on view a Set of Books and Atlases issued for the New Sydenham Society, together with Standard Works on Medicine, Surgery, Obstetrics, Bacteria and Microscopy, Insanity, and Hygiene by eminent authors.

Among the minor exhibits in this section were HAVILAND'S Health Guide Map for Brighton; HANDFORD'S (Nottingham) Graphic Clinical Chart for recording temperature, pulse, and respiration ratio on the same chart; by Dr. Jos. EWART (Brighton), Poisonous Snakes of India.

Dr. L. HEPENSTAL ORMSBY exhibited his Surgical Operation Chart, enumerating the instruments and appliances usually requisite for the performance of each of the ordinary major and minor operations in surgery. Designed for the use of house-surgeons, junior practitioners, and surgical dressers. 1. Preliminary arrangements to be made and requisites to be provided in the Operation Room or Theatre before operations. 2. Preliminary arrangements to be made, and articles to be provided for the sick-room or ward after operations. 3. Instruments and appliances required for operations about the head and neck. 4. Instruments and appliances required for operations about the trunk, including the chest and abdomen. 5. Instruments and appliances required for operations about the extremities. 6. Instruments and appliances to be provided for varied and special operations.

Mr. H. SILVERLOCK (92, Blackfriars Road, London, S.E.) exhibited his specialities, consisting of Silverlock's Medical Practitioners' Visiting Lists.—Visiting Lists and Diaries, with fixed dates.—The General Practitioners' Visiting-List, Journal, Almanack, and Memorandum Book, by C. M. Kempe, M.R.C.S., L.S.A.—Combined Visiting-List and Day-Book.—Medical Practitioners' Ledger, with printed headings, and containing additional ruled pages for Midwifery Cases, etc., indexed and paged.—Duplicate Prescription-Books; a prescription and fac-simile at one writing.—Obstetric Register, or Case-Book, with printed headings, suggested by Matthew Hamilton Taylor, M.D.—Midwifery Record-Book.—Cards for Midwifery Engagements.—Certificate Forms.—School-Board Forms.—The Bedside Record, or Note-Book, for use in private practice, suggested by C. E. Shelly, B.A., M.B.Cantab., etc.—Diagrams for Clinical use in Hospitals, etc.—The Repeat List (E. T. Aydon Smith, L.S.A.).—The Dispensing List and Calendar, as suggested by Robert Jalland, L.R.C.P.—Professional Bill-Heads, Receipt Forms, Temperature-Charts, etc.

THE DENBIGHSHIRE INFIRMARY.—Dr. Arthur E. Turnour, Senior Honorary Medical Officer to this Institution, gave a munificent donation of £700 to the Charity last week. The fund is to be applied to provide two free beds, the want of which in this hospital has been long felt. Dr. Turnour has rendered invaluable services to the Infirmary for nearly forty years; and it was mainly through his instrumentality that the Hospital has lately been re-constructed and a new wing added to it at considerable cost.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 4th, 1886.

SHIPS' SURGEONS AND SHIPS' PASSENGERS.

REFORMS, we are told, on high authority, are accomplished by "pegging away." The patience of the British public, under abuses which vested interests are concerned to maintain, is proverbial; from time to time, when some more than usually sensitive sufferer proclaims his grievance, the public becomes righteously indignant, and a general opinion is freely expressed that, if somebody do not do something, condign punishment will follow. These outbreaks of indignation are commonly too evanescent to lead to any tangible result; the threatened vested interest, with the wisdom of 'Brer Rabbit, will "lay low," until a scapegoat be found, or in some other way the danger be overpast; still matters do not return quite to the same position—some memory of the grievance remains in the public mind, and undoubtedly strengthens the hands of any body or organisation which will seriously and systematically attack the abuse in question. It may, therefore, be noticed with some satisfaction that the incomplete nature of the existing medical and sanitary arrangements on board many ocean-going ships, carrying passengers, has lately been discussed in the daily press. There appears to be an inclination to make a scapegoat of the ship-surgeon, whereas it is the system, or rather the scandalous want of system, under which he is appointed, that is at fault. Englishmen are not generally slow to take an interest in nautical affairs; and, if the true facts of the case were generally known, public opinion would unquestionably be in favour of the reforms frequently advocated in these columns.

It has been abundantly shown that the position of the medical officers in the Mercantile Marine is at present most unsatisfactory; the evils are, of course, least on well organised lines of steamboats, and greatest in the single ships, which are advertised to carry "a cow and a stewardess, and a surgeon if necessary;" but even on the best lines the bad elements of the system are rather hidden than removed. The root of the evil is that the surgeon has no official standing, bu is the mere nominee of the owners; the amount of his salary is governed entirely by their estimate of the value of his services, and his position and quarters on board depend almost entirely upon the caprice of the captain; his legal standing is exactly the same as a common sailor before the mast, and he is liable to be dismissed at the end of a voyage without reason assigned. He has, therefore, little or no authority on board, and he, who ought to be the sanitary officer of the ship, has no legal right even to tender advice to the commanding officer, much less has he power to enforce his recommendations.

In spite of these disadvantages such are the attractions presented by a sea-life, that competent men are to be found to accept berths on any line of boats where the traditions of the service assign to the surgeon a reasonably good social standing, and any approximation to fixity of tenure and adequate remuneration. Many men who are an honour to the profession continue, under such circumstances, to act for years as ship-surgeons, to the great advantage of the owners and of the travelling public. Equally true is it that there are many men whose conduct reflects no honour either on the ships to which they belong, or on the profession, which they have often entered by some back-door. This fact cannot, we fear, be disputed; it is established, not only by the testimony of travellers but by the official statements of the New York Board of Health. Complaints of this nature long ago induced the Australian Colonies to establish a medical service for the emigrant ships; and the complete success of this experiment demonstrates the feasibility of the plan, and effectually closes the mouths of those obstructives who meet every proposed reform by the unvarying objection that it would be impracticable. The medical officers in this service were responsible to the Colonial Governments for the sanitary condition of the ships, and for the health of the emigrants. No conflict of authority occurred, and no personal difficulties arose which could not be easily adjusted. The duties of the medical officers were strictly defined, and the captains soon perceived how great an advantage it was to them to be relieved of responsibility in medical and sanitary matters.

So long as the surgeon remains entirely in the power of the owners, so long as he is liable to be treated with indignity by captains who look upon him as an useless incumbrance, and to be dismissed without explanation by owners, so long will the inexperienced and the incompetent find their berths as surgeons. The evidence in support of the contention that some official system of appointment is necessity continues to accumulate; the conditions under which th appointments are at present made do not, to say the least, ensure the appointment of competent men. Shipping agents touting for passengers advertise that their clipper ship will carry "a competent surgeon, if necessary;" and, at the last moment, anybody who can be picked up, perhaps at a nominal salary, is sent on board, and entrusted with the care of the health of passengers, some of whom are making the voyage for the good of their health. Scandals such as now occur from time to time might be avoided if we had a properly organised mercantile marine medical service; such a service might be created in a few months without any great difficulty, or more than a comparatively trifling expenditure; a small capitation-fee paid on each ticket *pro ratâ*, and on each seaman, would, as the experience of the Marine Hospital Service of the United States has abundantly proved, furnish an annual sum which would suffice for the purpose. A medical service organised, let us say, for the sake of argument, under the Local Government Board, or under the Board of Trade, if that body can be aroused to the necessity of providing itself with a medica department, would afford a career which would suit the tastes of many Englishmen. The members of such a service would be responsible to a central authority, and they could be charged with the supervision of all the sanitary arrangements of the ship to which they were attached; fixity of tenure during good conduct, prospect of promotion and of retiring pay, would attract a competent and respectable class of men, and the owners would undoubtedly find the change redound to their advantage.

Meanwhile, it may not be impolitic to note that public opinion in the

United States is being rapidly educated on this question; already it has been demanded that the medical officers of all ships trading to ports in the United States should be required to obtain a certificate of competency granted by the American Health Authorities, after examination.

We are still the great carrying nation of the world, and it will be a disgrace to us if we allow another government to teach us how to conduct this traffic without endangering the lives of our passengers, and disseminating disease in the countries to which they are transmitted.

Common sense would appear to teach that the medical officer of a ship ought to be the servant, not of the owners, who run the ship as a commercial speculation, but of the public, who use it for business or pleasure, or in the pursuit of health; experience has abundantly proved that this is the case. The question is one in which the profession is concerned for its own honour, but to the travelling public it is of even greater importance, for to them it is often a matter of life and death.

THE PHYSIOLOGY OF SLEEP.

THE wonderful phenomenon of sleep, to which a life-long familiarity has so accustomed us as to blunt our powers of observation, is, nevertheless, at once so interesting, so important, and so ill understood a subject, that further information thereon cannot fail to be appreciated. The medical man, it is true, has generally, except in his own person, more to do with sleep as a diseased or absent condition; but, in his endeavours to cope with a symptom, which, like the pyrexia in fevers, may in itself determine a fatal result, he cannot but derive aid and assistance from a study of the details of processes which precede, accompany, and follow this condition.

Since attention was first turned to the investigation of the physiology of sleep, numerous contending and often absurd theories have been formulated, with a view of accounting for its rhythmical occurrence; the unconsciousness, in varying degrees, which accompanies it; and its bearing on the economy. The very nature of the subject, however, seems to have predisposed those who devoted themselves to its study to leave the arid path of scientific research and deduction in favour of the more flowery and popular method of dishing up recitals of the weird and the extraordinary, as exemplified in those aberrations or varieties of sleep known as somnambulism, hypnotism, etc.; and the result has been the publication of numerous treatises, containing much that is both curious and interesting, but which, from a physiological or a pathological point of view, are not of much value. The perusal of a really scientific work on the subject, however, only proves once more the truth of the adage that truth is stranger than fiction. To the methodical and careful observer, the proper means of research yield results which are incomparably more curious, and, at the same time, instructive, than the pseudo-facts with which some writers fill their books.

Each successive gradation in sleep is marked by the inclusion of a nervous system which is for the time being shut off, so to speak, from participating in the general life-function of the individual until, when the maximum intensity is attained, nothing is left but the purely animal—one might almost say the vegetative—life. Sleep of this degree of intensity, although a perfectly normal process, is not, in health, of long duration. After the lapse of a variable space of time, the systems one by one resume their function, until finally the sum of perceptions brings about the condition of awakening. As a natural consequence of these variations in perceptive powers, the character of the sleep is altered, according to the period. From the deep unconsciousness of complete repose, when every sense is in abeyance and the will rendered nugatory, the cerebrum is gradually aroused, first to the dim appreciation of the influences of external agencies, followed in due course by a return of perceptive power in the sensorium, and the cessation of sleep.

The brain shares in the need, which is everywhere apparent, of periods of rest. The products of cerebral activity accumulate more rapidly than they are eliminated, and a period therefore arrives when the tissues are no longer able to do their work. The result is an invincible feeling of indisposition to exertion, physical or mental. The temporary and involuntary cessation of activity is at once followed by a diminution of the blood-supply; the anæmia so induced being, therefore, a consequence, and not a cause, of the state of repose. The various parts of the nervous system are not all involved simultaneously or to the same extent. The centres governing voluntary movement are the first to be affected, as seen in the nodding of the head and the closure of the eyelids; and the body, if not prevented, tends to assume the position of repose, determined by the laws of gravity. The special senses soon follow; but here, again, they are not abrogated *en masse*. Sight is the first to go, the stimulus no longer reaching that portion of the cerebrum where it can give rise to a definite sensation even where the closure of the lids has not shut off external stimuli altogether. Hearing and smell are remarkably persistent, and, except in the deepest sleep, may be said to be only dulled, and not extinguished. Everyone is familiar with the ease with which sleep is put an end to by unaccustomed noise even of slight intensity, or, better still, by the cessation of any monotonous sound, as, for instance, the awakening of travellers by rail or steamboat on any stoppage of the train or machinery. Instances are on record, too, where the inhabitants of a house have been roused simply by the smell of the tobacco indulged in by inexperienced or incautious burglars. The persistent sensibility of these senses may to some extent be accounted for by the fact that they are not shut off from communication with the outside world, as are, for example, the eyes.

To allow sleep, or, at any rate, quiet sleep, a certain harmony must exist in the condition of all the organs, which must, so to speak, be tuned to the sleep tone. If one organ be in a state of activity, or, on the other hand, its condition be abnormal in some other way, the sensorium refuses to abdicate its control. This is familiar to us in the case of cerebral activity, or cold feet at bed-time, both being inimical to sleep. Inasmuch, therefore, as insomnia may result from either set of causes, we can either employ drugs, such as opium, which act directly on the nerve-centres, and so bring about sleep; or, we may resort to medicines like hypnone, which is said to favour sleep, rather than induce it, by allaying the irritable or hyperæsthetic condition of certain organs or parts. In this way, a little peppermint-water or brandy may be considered in the light of hypnotics, when taken for a nocturnal attack of stomach-ache. The pains of flatulence being assuaged, sleep comes as a matter of course. For this reason, many forms of insomnia are relieved by hot or cold douches, which stimulate or damp peripheral sensibility. The study of the causes and treatment of insomnia, however, does not enter into the compass of this article; but it is one which can only be satisfactorily pursued after competent knowledge has been acquired of the normal process in a

state of health, undisturbed by flatulence, dyspepsia, or cerebral disorganisation.

THE MEDICAL ASPECTS OF CONTINENTAL TOURS.

At the present season, a large number of our countrymen are enjoying their annual holiday. Many are at the seaside, finding renewed vigour from sea-air, sea-bathing, and an occasional cruise. Others are upon the moors, illustrating the remark of the cynical Frenchman, that, when an Englishman wishes to enjoy himself, he says, "Come and let us kill something." Others, again, are pursuing the more or less stereotyped continental tour, and deriving pleasure and profit therefrom just in proportion as such tours are wisely ordered or otherwise. That a well planned tour among the Swiss mountains or the Italian lakes and cities is capable of affording a very high order of enjoyment, and of conferring signal benefit to health, no one will presume to deny; but it is not less certain that the average continental tour too often gives little pleasure, and produces much physical and mental exhaustion. We do not always confess it even to ourselves, but it will hardly be denied that the retrospect of our continental tours is too often fuller of worries and disappointments than of satisfaction or delight, and that the mental wear and tear is too seldom without the compensation of any definite gain to health.

The first and most radical error in connection with this subject is our under-estimate of the fatigues of travel. The railway or steamboat journey, the anxiety about luggage, the worries incident to the frequent change of hotels, the interference with regular meals, and the disturbance of sleep—all these exhaust the organism, and test alike vitality and temper. When to such fatigues we add those produced by the daily round of sight-seeing and excitement, we cease to wonder at our own secret conviction that hard work is easy compared with the continental tour as commonly understood.

The "personally conducted tour," now so popular with our countrymen, exhibits in its most palpable form this abuse of what is capable of being both pleasurable and beneficial in a high degree. The programme of such tours shows each day weighted with an excessive allotment of travel and sight-seeing, scarcely an hour being appropriated to reflection or physical recuperation; and the end attained is very frequently the mere barren consciousness of having visited many famous scenes, and of having derived from the visit a maximum of physical and mental fatigue, and a minimum of pleasure and advantage.

A parallel error is the notion that it is possible fully to combine the sight-seeing expedition with the tour for health. While these two objects are by no means entirely incompatible, it is nevertheless true that they are, to some degree, antagonistic. The health-seeker in most cases, needs repose, immunity from worry and fatigue, and the utmost regularity in obtaining food and sleep; while the ardent sight-seer is constantly called upon to sacrifice these to the varying exigencies of rapid travel. In arranging a tour, one of two ideas—health or pleasure—must be allowed to predominate; and, in proportion as the former object is mainly contemplated, travel should be leisurely and tranquil, and preferably by lake or mountain, rather than through busy cities or crowded picture-galleries. The pure pleasure-seeker may gratify his taste, and increase his store of knowledge, by a rapid survey of all that is wonderful in nature and art; but he will be disappointed if he expects the process to confer any material benefit upon health.

Continental travel probably conveys the maximum of advantage to those who are organically sound, and merely in need of the tonic influences afforded by change of air and scene. To the jaded professiona worker, or man of business, no fillip to the overtaxed energies can surpass that to be derived from the contemplation of the fair lakes and solemn mountains of Switzerland, from a little judicious mountaineering, and from breathing the keen cold air, fresh from snow-fields or glaciers. But the full enjoyment of these implies a reserve of energy beyond the resources of the invalid or convalescent, who will find his needs better met by quieter and more accessible scenes.

The continental tourist is apt to be somewhat embarrassed by questions of dietary, and more especially by not unfounded suspicions regarding his water-supply. In Switzerland, the water is for the most part above reproach; but it is otherwise in many other parts of the Continent. The Englishman is almost morbidly sensitive on this point; and, when his fears are once excited, he shuns his natural beverage with perhaps undue alarm, and takes refuge in unlimited indulgence in wines and mineral waters. Here, as often, we shun Scylla to fall into Charybdis. It is well to avoid the typhoid germs possibly lurking in the water-bottle; but, to court dyspepsia by an unaccustomed indulgence in acid wines, or waters largely impregnated with mineral matter, is not well. A little claret or hock can do no harm, and, where the ordinary water-supply lies under any just suspicion, the tourist may with advantage use Apollinaris, St. Galmier, or other natural water, in which the proportion of saline material is small. The waters which contain a large percentage of carbonates, chlorides, or sulphates, are quite unsuitable for common use, especially with food.

As regards the ordinary dietary of the continental *table d'hôte*, but little warning is required. The French or Swiss dinner is often more varied than substantial, and the skilful cookery does not always successfully disguise the insipidity of the meat; but the tourist may in general safely eat what is set before him, asking no questions. The *hors d'œuvre*, especially when they take the form of raw ham or sausage, may, however, be advantageously shunned.

To sum up, the continental tour should be more leisurely and less ambitious; it should contemplate relaxation at least as much as distraction and excitement; and, in the ordering of food, as well as in all other matters requiring conformity to foreign usage, the tourist should obtain the best information in his power, and avoid panic on the one hand, and carelessness on the other.

We regret to hear that Dr. von Arlt, the eminent professor of Ophthalmic Surgery in the University of Vienna, is severely ill with gangrene of the leg.

Sir Spencer Wells has been elected, by the Section of Scientific Medicine, a Member of the Royal Leopold-Caroline German Academy of Naturalists in Hallé.

Dr. Arthur H. N. Lewers has been appointed a Member of the Court of Examiners of the Society of Apothecaries, to fill the vacancy created by the death of Dr. Robert Fowler.

The number of *Nature* for August 26th contains an interesting sketch by Dr. G. J. Allman, of the late Mr. George Busk, in which special reference is made to his contributions to biology.

The thirteenth annual meeting of the German Public Health Association will be held in the hall of the University of Breslau, on September 13th, 14th, and 15th.

We regret to hear that Dr. Oliver Wendell Holmes was quite ill on his arrival in New York on the *Aurania* on Sunday, his seventy-first birthday.

We have reason to believe that the regulations which the Privy Council are required to make for the election of direct representatives to the General Medical Council, have been prepared and approved of, and will shortly be published.

We understand that the address delivered by Mr. Erichsen, as President of the Section of Surgery at the annual meeting of the Association in Brighton, is being translated into Spanish, for publication in the *Revista de Medicina y Cirujia Praticas*, a medical journal published in Madrid.

The eminent obstetrician, Dr. Späth, Professor of Midwifery in the University of Vienna, has retired on a pension; and Dr. Breisky, Professor in the University of Prague, has been appointed in his room. The chair vacated by Dr. Breisky has been filled by the appointment to it of Dr. Ludwig Bandl, Professor Extraordinary of Obstetrics in the University of Vienna.

The Ventilation Committee of the House of Commons will, it is stated, commence practical work at once; and a meeting will be held on the Speaker's Green, for the purpose of making a thorough investigation into the best means for ejecting the sewage of the Houses of Parliament direct from its present channel into the low level sewers, thus isolating it from any other system.

At a recent meeting of the Académie de Médecine, M. Polaillon showed a fork that he had removed from the stomach of a professional swallower of forks and sabres, who swallowed the fork by mistake. The presence of the fork having been ascertained, by using M. Trouvè's œsophageal sound, the necessary operation was performed according to M. Labbé's method. The stomach was opened at the level of the ninth rib, and the fork, measuring twenty-one centimètres (8¼ inches), was extracted.

DEATH OF DR. CHADWICK.

Our readers will join with us in expressing deep regret at hearing of the death of Dr. Charles Chadwick, which occurred from acetonæmia, on Monday last, at Buxton, whither he had gone after the Brighton meeting. It will be remembered that, at the conclusion of that meeting, Dr. Chadwick moved the vote of thanks to the President. A detailed obituary notice of this eminent member of the profession, including the history of his long connection with the British Medical Association and the Leeds Infirmary, will appear in next week's Journal.

THE ASTLEY COOPER PRIZE.

The Astley Cooper Prize, of the value of £300, which is awarded triennially, has been gained by Mr. Anthony A. Bowlby, Surgical Registrar and Demonstrator of Surgical Pathology at St. Bartholomew's Hospital. The subject of the essay was "Diseases and Injuries of the Nerves, and their Surgical Treatment, together with the Operations performed upon Nerve-Trunks in the Treatment of Various Diseases, and Description of the Changes which ensue in other Structures, as well as in the Nerves themselves, from these Operations."

A CUSTOM REQUIRING REPEAL.

So much inconvenience has been experienced at Poplar during the last few days, from what is described as the fearful condition of the bodies awaiting inquest, consequent upon the excessive heat of the weather, that the coroner, Mr. Collier, took the very judicious course at five inquests of sparing the jury the duty of viewing the bodies, and expressed the hope, in which we heartily concur, that the time is not far distant when the custom of viewing the bodies, except in special cases, will be done away with.

EFFECTS OF THE HEAT IN PARIS.

The intense heat which has prevailed here during several days this week has been felt with increased force in Paris, where, we are informed, a large number of cases of sunstroke have occurred among the recruits taking part in the autumn manœuvres, and four deaths are said to have taken place. In the north of France, where the thermometer has stood in the shade at 104° Fahr., the troops have suffered very severely. From the official returns, it appears that on Wednesday, at Lille, six soldiers of the regular army had died from sunstroke, and that twenty-three, suffering from the same cause, were in the military hospital. Instructions have been issued to the commandant of army corps to suspend evolutions during the great heat of the day.

ACADEMY OF MEDICINE OF PARIS.

At the last meeting of this learned body, the commission charged with the task of selecting candidates for the vacant post of Foreign Corresponding Member submitted three names to the Academy, in the following order: Dr. Bateman, of Norwich; Dr. Ossian Bonnet, of Rio Janeiro; and Dr. Crocq, of Brussels. The result of the ballo was twenty-three votes for Dr. Bateman, and one vote for Dr. Ossian Bonnet. Dr. Bateman was, therefore, elected. Amongst the physicians upon whom this distinction has been conferred during the last quarter of a century, have been Professor J. Hughes Bennett, of Edinburgh; Sir Dominic Corrigan, Bart., of Dublin; and Dr. West and Si Joseph Fayrer, of London.

FRENCH VITAL STATISTICS.

It was stated by M. Bertillon, in a lecture recently delivered at the Hygienic Exhibition in Paris, that the movement of the population for the past year throughout France had been very unsatisfactory, the total number of births being 922,361, or, upon the average, 30,000 fewer than for the last fifteen years. Moreover, out of this total, 74,118 were illegitimate, or rather more than 8 per cent. of the whole, this being the largest number of illegitimate births ever recorded. Upon the other hand, there had been a slight reduction in the number of deaths, the total for 1885 being 836,897; but still, the excess of births over deaths was only 85,464.

FOOLHARDINESS.

To the long list of preventable causes of accidents which can b more or less attributed to want of thought and foresight, and th exercise of proper care, is that reprehensible practice which obtains among a class of excursionists and holiday-seekers, of flinging from the carriage-window of the train in which they are travelling a bottle or jar, for which, having been emptied of its contents, they have no longer any use. An illustration of the danger at all times attendant on such a reckless act occurred on Saturday last, when an empty bottle was flung by a careless passenger from the Manchester express train for Crewe, striking a platelayer named Dawson on the forehead, and inflicting a severe wound, which has since rendered his detention in the hospital necessary.

THE HOSPITAL FOR WOMEN IN LIVERPOOL.

With reference to the paragraph under this title, which appeared in last week's Journal, Mr. J. E. Burton, of Liverpool, has called ou attention to the fact that (as stated in our Liverpool correspondent's letter of the preceding week) the husband of his patient wrote to him eight months after the operation, thanking him for the benefit which his wife had received from the treatment; and, further, that the woman herself, about the same time, stated independently to another medical officer of the institution that she was fully informed beforehand of the nature of the operation, and was quite satisfied with the result. Mr. Burton also informs us that the defendant Hœffner was not committed for trial, as was at first proposed; but, having made, through his solicitor, an expression of regret, he was, with the consent of Mr. Burton, bound over to keep the peace. He also calls attention

to the fact that the methods of practice adopted by the surgeons of the hospital differ widely, and, therefore, cannot accurately be spoken of as one method; so that no general statement, of praise or dispraise, can be made respecting them. Mr. Noble has also written to state that the object of his letter to the *Liverpool Mercury* was not to condemn the practice of the surgeons of the hospital, but to denounce the general management of the institution.

ST. JOHN AMBULANCE ASSOCIATION.

MR. JOHN FURLEY, deputy chairman and honorary director of stores of the St. John Ambulance Association, has been appointed an honorary member of the German Samariterverein, "in acknowledgment of his services in the universal extension of the knowledge of first aid to the injured, more especially in recognition of the encouragement and assistance given by him towards the establishment of the German Sanitarian Society." The diploma bears the signatures of his Imperial Royal Highness Prince Henry of Prussia, Privy Councillor Professor Esmarch, and Consul von Bremen.

HOSPITAL SATURDAY FUND.

IT was stated at the last meeting of the Hospital Saturday Fund that about £4,800 would accrue to the fund from last Hospital Saturday—£500 less than in the preceding year. Subsequently to the corresponding time last year, £7,300 was received as the result mainly of the workshop collection; and, having regard to the diminution in the street collection last month, it was hoped and believed that greater exertions than usual would be made to increase the workshop collection, and thus more than supply the deficiency in the out-door collection. Mr. Hoffman having suggested that a special appeal for aid should be made to the aristocracy and wealthy classes of society, the council recommended that, in October next, a special appeal be publicly made, in the name of Lord Brabazon and other vice-presidents of the fund, "urging its claims upon all classes." After some criticism, the recommendation of the council was adopted.

MIDDLESEX HOSPITAL RESIDENTIAL COLLEGE.

WE have received a copy of the prospectus of a company formed fo the purpose of building a Residential College in connection with the Medical School of the Middlesex Hospital. An opportune time appears to have been chosen for initiating such a scheme, as the desirability of affording some safeguards against the dangers which surround medical students, and of imparting something of a collegiate spirit to their life in London, is now attracting considerable attention. We are glad to observe that, whilst the Earl of Lathom, and Major Ross, M.P., the Chairman of the Weekly Board of the Hospital, are amongst the directors of the company, the medical and surgical staff are also fully represented—an earnest, we take it, of that hearty co-operation of the lay and medical elements which has always been a pleasing feature of the hospital. The College, which will accommodate thirty students, under the superintendence of a resident warden, will overlook the hospital garden, and will immediately adjoin the new school buildings which are about to be erected. Such a scheme cannot but commend itself to many parents of students, and should conduce further to the best interests of the school. We heartily wish it success.

ACCOMMODATION FOR SMALL-POX PATIENTS.

AT a meeting of the Metropolitan Asylums Board held on Saturday, August 28th, under the presidency of Mr. E. H. Galsworthy, it was stated that the returns from the several hospitals for small-pox, and from the hospital-ships, showed that there was not a single case of the disease in any of their institutions; and it was resolved at once to lessen the establishments. In the last four weeks, there had only been 11 cases, and in the preceding four weeks, 9; and Sir Edmund Currie recommended the sending of the few cases to the Highgate Hospital rather than keep the ships up merely for a few cases. In respect of fever patients there was a large increase, 245 fresh cases having come in during the four weeks, and there were now 390 cases in the Eastern Western, and South-Eastern asylums. Of these cases, 40 came from one parish. Of the whole, 342 were scarlet fever cases, and showed an increase of 57 upon the number four weeks ago. The Managers then considered the subject of the proposed asylum for convalescent small-pox patients at Darenth, concerning which there had been much controversy between the guardians, the Managers, and the Local Government Board. The Managers had before them the text of the letter which the Local Government Board had communicated to the Islington guardians in answer to the report of the Managers' Committee, who, under Captain Douglas Galton, had reported strongly in favour of the Local Government Board's original proposal to erect a permanent small-pox hospital at Darenth. The letter in answer to this was dated August 24th, and was addressed to Mr. Jebb, the clerk. It concluded by stating that the Local Government Board, after full consideration of all the circumstances, and especially having regard to the experience of the last epidemic of small-pox, were o opinion that they would not be justified in authorising the erection of the permanent buildings which had been proposed by the Managers It was decided that the letter be referred to the same Committee who had previously dealt with the subject. Sir E. H. Currie remarked that the Managers' Committee were entirely wrong in setting their faces against wooden huts, and held that provision might be made, by the utilisation of the material left from the late camps, for 600 patients, at a cost of £20,000, the interest in four years of the £116,000 proposed to be expended.

SMALL-POX AND VACCINATION IN NEW YORK.

THE following is an extract from the Fifth Annual Report of the State Board of Health of New York (p. 454, April, 1885). The objections and occasional resistance to vaccination which are met with among immigrant passengers indicate a considerable scepticism in European communities, more particularly among English people, as to the protection afforded by it, or else a fear that constitutional disease will be introduced by that means. The groundless character of the fear that disease will be communicated by vaccination, when proper care is used in the selection of the vaccine virus, has been too often demonstrated to require any argument in this place. The result of the teachings and influence of the anti-vaccinationists is well illustrated by the fact, that in the hospitals of the city of New York, not a single case of small-pox exists at this time, while in the city of London, the reports have shown for months past an average of upwards of eleven hundred cases in hospital. In New York city, where a "from house to house" inspection and search among the tenement population for the unvaccinated is practised every year, small-pox is not met with, except as it was imported and developed by persons from other localities; in London, the weekly average of new cases, as indicated by bills of health and the number in hospital, has been from four to five hundred. The number of cases of small-pox on vessels that entered that port in 1883 and 1884, was twenty-five.

INTRAPERITONEAL INJECTION IN HÆMORRHAGE.

DR. RUTGERS, of Rotterdam, publishes, in the *Weekblad van het Nederlandsch Tijdschrift voor Geneeskunde*, a case of dangerous *post partum* hæmorrhage, which was attended by a midwife, and not seen by himself till four hours after delivery, when the woman was found to be pallid, cold, and almost unconscious. The external hæmorrhage had ceased, but coagula were filling the vagina, and internal hæmorrhage was still going on. A subcutaneous injection of Wernich's extract of ergotine was given, and the uterus manipulated externally. These measures immediately arrested the hæmorrhage, but did not improve the patient's condition of collapse. A little water was swallowed, but immediately vomited. An hour later, an injection of ether was given in the left arm, and some port wine was swallowed and retained. The condition then improved, and the pulse became

perceptible. A saline solution of 6 grammes of chloride of sodium and 0.3 gramme of hydrate of soda, in a litre of water, was prepared, and heated to the temperature of the body; 50 grammes were injected by means of an aspirator needle, into the right thigh, and both legs were raised so as to cause as much auto-transfusion as possible. No effect, however, was produced on the pulse or general condition. It was then proposed to attempt an intravenous injection of the saline fluid; but no distension of the veins of the arm could be obtained by compressing the upper part of the arm. Dr. Rutgers therefore introduced the solution into the peritoneal cavity, in the hope that it would be taken up by the vessels there, and so pass into the circulation. Half a litre was thus injected with great care, and very shortly afterwards the pulse improved, and the patient was able to speak. After this she did well. She complained the next day of pain in the abdomen, and the temperature was for three days below normal. The writer thinks that this case may show the possibility of intraperitoneal injections in desperate cases, and that such injections may not only be well borne, but may have a very rapid and satisfactory effect. He suggests, too, that perhaps this proceeding may be found of value in the collapse of cholera.

ANTISEPSIS BY BOTTLING.

EVERYBODY knows that M. Pasteur and his followers keep their sterilised bouillon from decomposition by introducing it into clean sterilised glass flasks, but it has been reserved for Dr. Strobell, of Vermont, to propose, in the New York *Medical Record*, to apply this system directly to the dressing of wounds. After an amputation, he suggests that a sterilised glass globe, with a large flanged mouth, should be slipped over the stump, and retained in place by an India-rubber bandage and isinglass strapping, which, at the same time, exclude the air; drainage-tubes, which are to be lightly plugged with antiseptic wool, pass through small necks in the globe; and a larger aperture, provided with a ground-glass stopper, allows the wound to be dressed when necessary; while it can be constantly inspected through the transparent globe without disturbing the limb. It does not appear that the inventor has any practical experience of the curious dressing which he recommends.

THE ACTION OF URETHAN.

DR. EMIL KRÆPELIN contributes an article to the *Neurologisches Centralblatt* (March 1st), on the action of urethan. The reports on this hypnotic have, up to the present, been uniformly favourable. Kræpelin's experience has been of a like character. He has given the drug in about 200 instances. Most of his cases were cases of insanity; but thirty-four instances of various other diseases were included. The dose ranged, as a rule, from 1 to 3 grammes; occasionally a dose of from 4 to 5 grammes was given. No unpleasant effect on the heart or nervous system, either during the action of the drug or afterwards, was ever noticed. In one case of alcoholic gastric catarrh, vomiting was produced by the larger dose. The appetite, however, was never in the smallest degree impaired, even by the continuous use of the drug for several weeks. Urethan acts as a genuine hypnotic. Ten or fifteen minutes after taking it, a quiet sleep comes on, which lasts for several hours, and from which the patient wakes up without any unpleasant feeling about the head. Should the sleep be interrupted by any external cause, the patient generally falls off to sleep again as soon as the disturbance is removed. The certainty of the drug's action depends upon the cause of the sleeplessness, and on the dose. It is not a hypnotic of great energy, and, in cases of great excitement, it is of little value. In such cases, it is far inferior to paraldehyde. It delirium tremens, especially, it failed. Perhaps, however, if higher doses were given in these cases, the result might have been more satisfactory. For the relief of pain, the author does not consider it of any use whatever. In cases of phthisis, the combination of a small quantity of morphine was found useful. When given in doses of 1 gramme, it acted sufficiently in 54 per cent. When the dose was 3 grammes, the result was favourable in 70 per cent. The form of mental ailment, in most cases, was general paralysis or melancholia. In the excited stages of general paralysis, small doses were frequently altogether without effect. The larger doses, in such cases, gave a satisfactory result in 60 per cent. of the cases. In the higher degrees of excitement, in mania, for example, as well as in delirium tremens, the author found himself obliged to have recourse to paraldehyde. In melancholia, the drug gave better results: it secured quiet sleep in 77 per cent. The patients were all women, and many of them were very anæmic. Amongst the most favourable indications for urethan, the author places exhausting diseases, feverishness, and lowered nutrition. One great advantage which this drug has over paraldehyde is, that it is not so unpleasant to the smell or taste; and it can, if necessary, be taken in simple solution, without any flavouring or disguising agent.

THE MORTALITY ON OUR RAILWAYS.

IT is satisfactory to note that there is, according to the report just issued by the Board of Trade, a large decrease in the number of railway accidents during the year. The total number of persons killed, according to the returns, made principally by the railway companies, was 957, and the number injured 3,467. Of these, 102 killed and 1,129 injured were passengers, and 451 killed and 2,117 injured were railway officers or servants. There were 51 suicides, 250 trespassers killed, and 126 injured; fifty-eight persons killed at level crossings, and 21 injured; whilst from other causes, 41 persons were killed and 74 injured. The total number of passenger journeys, exclusive of season ticket-holders, was 697,213,031 for the year; and, calculating on these figures, the proportions of passengers killed and injured during the year, from all causes, were approximately one in 6,835,421 killed, and one in 617,549 injured. Sixty accidents to railway trains have been reported on by inspecting officers, as compared with 105 for the previous year. These accidents are classified under several heads. The progress made in the adoption of the absolute block and interlocking systems is referred to as being, in England and Scotland, still short of what is necessary for safe working on some railways; whilst, in Ireland, the progress made is far from satisfactory. On the subject of continuous brakes, the report states that the total number of vehicles used in passenger trains that had been fitted at the end of the year 1885, either with continuous brakes, or with pipes only for running with vehicles so fitted, was 41,747, and that 9,500 remained to be so fitted. The different descriptions of brake, and the extent to which they are respectively used by the several companies, are given in detail. This improved state of things is attributed to the continued care and attention of the officers and servants of the railway companies; the laying of additional lines of railway; enlarging and rearranging stations; the extension of interlocking and block systems; the adoption, as yet only experimentally, of electrical contrivances for the prevention of mistakes in block working; and, lastly, the larger use of continuous brakes on passenger trains.

BACTERIOTHERAPY IN PULMONARY TUBERCULOSIS.

THE plan of treating pulmonary phthisis by the inhalation of spray containing bacterium termo, the organism of putrefaction, has received a severe handling from some of the fellow-countrymen of its advocate, Professor Cantani, of Naples. At a meeting of the Medico-Chirurgical Society of Pavia, held on March 20th, Professor Guiseppe Sormani read a paper on the subject. After criticising the principle from a theoretical point of view, he recorded three cases where the plan was carefully and rigorously carried out, and even for a longer time than had been recommended by Professor Cantani. The results in these three cases were altogether negative. The conclusion was that bacteriotherapy was not a remedy, either rational or practical, against tuberculosis. Professor Sormani thought, however, that the inhalation of the spray of fresh good meat-broth might act as a palliative against distressing cough, difficult expectoration, dyspnœa,

and other symptoms. He advised, therefore, recourse to this means in suitable cases; without, however, for a moment thinking of first putting in the broth a bacterium which was certainly useless and might be noxious. Professor Riva, in speaking on Sormani's paper, criticised the scientific basis of Cantani's method. The basis of the method was that there was a struggle for existence between the bacterium termo and the bacillus tuberculosis. The bacterium termo, however, subsisted only on dead substances; so that wherever one sent it, it would only take its nourishment from the excretions, or from mortified tissues, and would not attack the proliferating tissues of tubercle. The only result would consequently be the decomposition of the excretions, which, being in the neighbourhood of a large absorbent surface, might be carried into the circulation, and might act hurtfully on the organism. In answer to questions touching Sormani's three cases, it was stated that in one case only was there a rise of temperature of some tenths of a degree. Whether the urea increased or not was not known.

NITRO-GLYCERINE.

THE subject of the medicinal employment of this drug has been dealt with in the Report of Her Majesty's Inspectors of Explosives lately issued, which has been copied extensively into the lay press. From this report, which is touching in its simplicity, it would seem that the drug has been "irregularly" employed in the treatment of certain diseases for some years past; and so long as its employment was "irregular," and therefore presumably without legal sanction, no notice was taken of its manufacture by the authorities, although distinctly contrary to the law as established by recent legislation. Now, curiously enough, that its use has been officially recognised, the authorities have thought it desirable to make a formal declaration, "without prejudice," that its preparation for pharmaceutical purposes will be winked at, and no precautions are enjoined or enforced as to the conditions under which it may be manufactured for this purpose. It is ingenuously added that this supineness is justified by the fact that "a very large number of the tablets would have to be treated to enable a person to extract a sensible amount of explosive from them for practical purposes." This is all very well, so far as it goes; but it is odd that the fact should be ignored that the danger to the public consists in the manufacture of the article prior to its distribution into chocolate-tablets. A well-known chemist recently acknowledged, in a letter to a medical contemporary, that its preparation was attended with serious risk, and, in fact, that he always prepared it himself, "with his life in his hands." That gentleman was doubtless entitled to consider that his life could not be in better keeping; but, should he ever meet with an accident, he would unfortunately not, in all probability, be the only sufferer. One of these days, when one side of Portland Place is blown down, they will awake to the fact that its preparation, even for legitimate purposes, is not exempt from danger, and the chemist round the corner will shield himself with the explanation that he was only making a few ounces for medicinal purposes. The next time one of our Irish-American persecutors is detected *in flagrante delicto*, he will only have to say to the police, "Oh, it's all right; it's for a medical friend of mine; besides, I am expecting a large export order." He will call Drs. Dupré and Murrell, together with the editors of the *Pharmacopœia*, etc., to give evidence that the drug is used in medicine, and his acquittal will be ensured. Another item of the report deals with the question of the propriety of scheduling the drug as a poison, and this is stated to be "under consideration." It would, perhaps, be as well to call attention to the fact that the dose of nitro-glycerine is very much smaller than that of strychnine, arsenic, or oxalic acid. When a whole family has been killed by eating these, in appearance, harmless and toothsome chocolate-tablets, the propriety of classing nitro-glycerine as a poison will possibly proceed a stage further than that of "consideration." After chocolate-tablets flavoured with nitro-glycerine, and sanctioned by the *Pharmacopœia*, we are justified in looking forward to further pharmaceutical delicacies, in the shape of strychnine jujubes, or arsenical lollipops, or even oxalic acid jam! Seriously, it must be acknowledged that the adoption of unstamped chocolate tablets, as a vehicle for the administration of so potent a remedy, was an error on the part of the editors of the *Pharmacopœia*, the more so, as the alcoholic or aqueous solution is preferable from every point of view; and, in any case, almost any other material would lend itself less to mistakes or fatal accidents. As to the drug having been "irregularly" employed hitherto, the expression is absurd, since the sanction of the *British Pharmacopœia*, in reality, possesses only a very slight importance.

SCOTLAND.

UNIVERSITY PROFESSIONAL EXAMINATIONS.

AT the professional examinations recently held in Edinburgh University, 165 candidates passed the first professional examination in Botany, Chemistry, and Natural History, and, of these, ten passed with distinction. One hundred and one candidates passed the second professional examination in Anatomy, Physiology, Materia Medica, and Pathology, of whom only two passed with distinction.

PRECAUTIONS AGAINST HYDROPHOBIA IN EDINBURGH.

RECOGNISING the danger arising from allowing stray dogs to be at large in the city of Edinburgh, important action has, we understand, been taken by the magistrates; and, at a meeting held the other day, under the presidency of Bailie Cranston, it was resolved to issue an order authorising the police to seize all stray dogs that may be found in the city; and, if not claimed within three days, to destroy them. The question as to how long the order shall remain in force has not been finally determined.

IRELAND.

MR. JOHN FAGAN, F.R.C.S., is, we are informed, a candidate for the Chair of Surgery in the Queen's College in Belfast, now vacant.

IT is rumoured that the election of a medical officer for the Ahoghill Dispensary on August 10th is informal, owing to the Committee of Management not being properly constituted. One gentleman, who ought to have been on the Dispensary Committee, had not been summoned.

MIDLETON UNION.

A SPECIAL meeting of the guardians was held last week to consider a communication from the Local Government Board, who requested to be furnished with the plans, specifications, and estimate for the additions and improvements of the Workhouse Infirmary, at an estimated cost of £500. As it was shown that the accommodation was urgently required, a majority of the guardians signed a document consenting to the outlay.

DEATH OF DR. SAVAGE, OF NEWRY.

ON Saturday evening last, an accident took place at Newry, by which one of the oldest, if not the oldest, medical practitioner in that locality lost his life. The deceased, who was in his seventy-fourth year, went up a ladder to a hay-loft, but, when about to place his foot on the door-sill of the loft, the ladder slipped, and he fell heavily on his back into the yard. Three medical practitioners were shortly in attendance; but Dr. Savage never recovered sensibility, and succumbed from his injuries in an hour and a half after the accident.

THE Poplar Guardians recently increased the salary of Mr. Thomas Harvey, Medical Officer for the Western District, from £150 to £170 per annum; but the Local Government Board, "having regard to salaries paid to other district officers," have declined to confirm it.

DIRECT REPRESENTATION OF THE PROFESSION IN THE GENERAL MEDICAL COUNCIL.

THE movement begun somewhat tentatively in Brighton, with the object of securing efficient representation of the great body of the medical practitioners of England and Wales on the General Medical Council, has assumed large proportions, and will probably exercise an important and salutary influence on the ultimate choice of candidates.

The Committee, which, as we intimated in the JOURNAL of August 21st, was at first of a provisional character, is now established on a broad and firm basis. It embraces gentlemen from every part of the kingdom, and is representative of all the interests of the general medical practitioner, and excites growing confidence as the purity and unselfishness of its aims become more and more apparent. Its one object is to try, at this critical juncture in the history of English medicine, to secure to the utmost for the general practitioners in the kingdom the advantages offered to them of direct representation on the General Medical Council. It is impossible that candidates can be selected without some kind of organisation, and it seemed to those who originated this Committee that it would be better to frame an organisation absolutely untrammelled by any promise, and having for its single aim the selection and recommendation to the profession of the best men, rather than to start with certain names which, however strongly recommended by some, might not command general approval. Up to the present, they have only applied to individual members of the profession to join them, by means of circulars; but so general and warm an approval of their action has been sent to them from every part of the kingdom, that they feel that a wider statement is called for. It should be understood, then, that they are committed neither to person nor party. Though, from the accident of meeting at Brighton during the session of the British Medical Association, their first numbers were necessarily composed of members of that body, yet they are not confined to it; and the Committee desire to embrace, and actually do embrace, representatives of every section and every interest of the profession, so that they hope that their ultimate selection may be such as the entire profession is likely to approve.

A great number of letters have been received from gentlemen who have joined the Committee, some of them containing valuable practical suggestions, or proposing the names of gentlemen as representatives on the Council; and, what is very noteworthy, and not a little encouraging, is that, while nearly every considerable town in the kingdom is represented by one or more members of the profession, a large number of gentlemen have also joined the Committee from the smaller towns and many of the villages of England and Wales. It is the opinions of these latter gentlemen, who are often, from the necessity of their position, without any efficient organisation through which they can make their wishes known, that the Committee are desirous especially of ascertaining, as well as those of the residents in the larger centres, and they appeal to all alike to assist by their advice and co-operation in the work which they have undertaken.

A copy of the circular alluded to above has been forwarded to us, and we cannot give a better exposition of the aims of the Committee than is set forth in it, which we therefore reproduce nearly in its entirety; and we are requested to say that the invitation contained in it may be considered as addressed to every member of the profession who may read it in these pages.

The subjoined is a copy of the circular.

"Dear Sir,—The extreme importance of the present crisis in the history of English medicine, when, as you are aware, the Legislature has consented to grant to this division of the United Kingdom the right of electing three representatives on the General Medical Council, induced a few gentlemen to convene a small preliminary meeting of medical men (coming from various parts of England and Wales to attend the British Medical Meeting), at the Grand Hotel, Brighton, to discuss the propriety of forming an influential committee, that should comprise representative members of the profession from all parts, with the view of deliberating on the merits of any candidates who might be named, and of ultimately selecting three for recommendation to the profession. It was hoped that a committee thus constituted would command general confidence, owing to its widely representative character. The meeting, necessarily hastily summoned, was attended by all those who received invitations, with the exception of one gentleman, who was unavoidably kept away. The chair was taken by Dr. Strange, of Worcester; and there were also present: Dr. H. Ker, Dr. W. Carter, Mr. A. Jackson (Sheffield), Dr. T. Savage (Birmingham), Dr. Barron (Southport), Dr. A. Strange (Shrewsbury), Mr. Jones-Morris (Portmadoc), Dr. Parsons (Dover), Dr. Davidson (Liverpool), Mr. Garner (Birmingham), Mr. R. H. B. Nicholson Hull), Dr. Eyton-Jones (Wrexham), Dr. Lyle (Rubery Asylum), Dr. Leach (Manchester), Dr. Maury Deas (Exeter). Since the meeting, many other gentlemen have expressed their willingness to act on the Committee.....

"The following resolutions were unanimously adopted: 1. That the gentlemen present constitute themselves a provisional committee, for the purpose of securing the best representatives of the medical profession of England and Wales on the General Medical Council, with power to add to their number. 2. That Dr. William Carter, of Liverpool, and Dr. H. R. Ker, of Halesowen, be requested to act as honorary secretaries. It was further agreed that a very large number of gentlemen, most representative of the profession in their several districts, should be communicated with, and that, as soon as the committee was fully constituted, a meeting should be convened in Birmingham, with the view of making a final selection.

"We are requested earnestly to ask you to allow your name to be added to the Committee, and we trust that we may be favoured with your support, and with all the influence you can exercise in your neighbourhood. If you should be unable to attend the meeting, any suggestion from you as to the best means of carrying out the committee's aims, and any names of suitable candidates, will be gladly received. The time is very short, and the work to be done is most important.

"It is requested that all replies and other communications, from towns north of Derby and Nottingham, be sent to Dr. William Carter, of Liverpool; and those from places south of those towns, to Dr. Hugh R. Ker, of Halesowen."

Since the issue of this circular on August 23rd, and two or three following days, the number of the Committee, which is daily increasing, has been more than quadrupled.

It has been decided to hold a meeting at 5 P.M. on Tuesday, September 14th, at the Queen's Hotel, Birmingham, when all names submitted to the Committee will be duly deliberated on, and probably a final selection of three made as of those most deserving of all the support which the Committee can give.

THE BRITISH PHARMACEUTICAL CONFERENCE.

THE annual conference of Pharmaceutical Chemists commenced on Tuesday last, in Birmingham, under the presidency of Mr. T. Greenish, of London. In the course of his address, Mr. Greenish said that, in his opinion, the *British Pharmacopœia* of 1885 did not represent the advance which had taken place in pharmacy between that and the preceding issue. He thought that British pharmacists did not occupy the position which was their due in the preparation of such a work, and regretted, in common with all pharmacists, that their efforts for the advancement of pharmacy were not yet legally recognised as a sufficient basis for a claim of representation in the *Pharmacopœia* Committee of the General Medical Council. With regard to this point, it must be observed that Mr. Greenish's statement, as reported, appears to be somewhat incomplete. In the preface to the present edition of the *British Pharmacopœia*, the Medical Council acknowledge that the Pharmacopœia Committee has received the valuable aid, as editors, of Professors Redwood, Bentley, and Attfield, so that it can scarcely be said that no person connected with pharmacy had a share in the work. After a few remarks on the proposed International Pharmacopœia, Mr. Greenish called attention to the growing use of proprietary pharmaceutical preparations. He said: "There is an evil growing up in the very midst of us, and assuming large proportions, which should be grappled with, I think, by this Association. I will call it 'wholesale prescribing for the medical profession,' absolutely dictating to that body in what relative proportions a combination of well known drugs should be prescribed. These proprietary preparations, for the most part factory made, thrust upon the medical profession and unblushingly advertised, are sapping the foundations of true pharmacy and, at the same time, depriving the pharmacist of the legitimate practice of his calling. There can be no desire on the part of the pharmacist to limit the members of the medical profession in their choice of remedial agents for the treatment of disease; but that question is not involved in the consideration of this practice. Pharmacists with any dispensing business find it necessary to keep an extra light porter, technically termed a 'runner,' to find out which of his neighbours has been the unfortunate purchaser of a 4s. 6d. bottle of some nostrum required to enable him to complete a 1s. 6d. mixture. Mist. Magnesiæ et Bismuthi Comp., and (Jones) within brackets, is typical of a large number of them. Magnesia is well known; of bismuth the profession cannot be ignorant; but the charm lies in the 'Comp.,' which conceals the colouring and flavouring agents necessary for effect. In fact, these secret proportional combinations of ordinary drugs are accepted as if they were

more effective than the same drugs combined in a prescription adapted to the requirements of careful diagnosis. Pharmacists are harrassed by the demand for these proprietary prescriptions, which prescribers take up without thought, and without a second thought thrust aside, their unofficial pharmacopœia being mainly the advertisement pages of the medical journals. It is not the province of the pharmacist to call in question the therapeutic value of any medicine, but it does seem to him curious that a spirit said to be distilled from a non-volatile drug should possess any more medicinal value than ordinary spirit in a state of more or less dilution. What advantage can it be to therapeutic science to know that a certain compound has been found useful in a certain class of diseases, if the composition of the medicine be a trade-secret? The members of the medical profession are largely responsible for the growth of this evil. While in their collective capacity they strongly condemn 'nostrums,' yet individually many daily prescribe them. It is a practice perplexing to every pharmacist, and derogatory to the medical profession, which justifies the apprehension expressed by Dr. Quain in his Harveian Oration, that 'the art of writing a rational prescription is in danger of becoming lost; and may indeed, have a still more prejudicial influence, now that the furnishing of gratuitous medical advice is being made the means of pushing the sale of proprietary nostrums.' This phase of pharmaceutical business assumes many different forms; and I ask you now to determine, for your own protection, to grapple with this hydra-headed monster, before the knell of true pharmacy is sounding in your ears. It is by no means too early to make the effort, and it may not yet be too late. By-and-bye, you may cry like women for the loss of those privileges you have failed to defend like men. One way of doing this will be for us to see that we ourselves meet as far as possible the wants of the medical profession. If unofficial preparations of a certain type attain favour with the profession, why should we not, as soon as possible, place ourselves in a position to supply them? If, after careful examination of such compounds, *quasi* authoritative formulæ for their preparation were published, that portion of the medical profession which had seen such happy results from the use of the 'nostrums,' would, it might be hoped, if the formulæ were issued by the British Pharmaceutical Conference, be only too glad to prescribe them as Mist. Magnesiæ et Bismuthi Comp. B.P.C., etc., and every intelligent pharmacist could prepare them in his own pharmacy. This would apply to a long list of preparations of which mist. magnesiæ is typical."

The President of the Conference concluded his address with some remarks on pharmaceutical education. At the meeting on Wednesday, Mr. Reynolds (Leeds) proposed the following resolution:—"That, in order to secure greater uniformity of composition and strength in non-officinal remedies, and also to enable the medical profession to prescribe them with a definite knowledge of their qualities, and without indicating any particular maker, this Conference undertakes the preparation of a formulary of non-officinal remedies." Mr. Atkins seconded the resolution, which excited considerable discussion, but ultimately was carried without dissent. A committee was appointed to give effect to it.

THE INTERNATIONAL MEDICAL CONGRESS.

An important circular has recently been issued, containing the arrangements, so far as decided, for the holding of the International Medical Congress, in Washington, on September 5th, 1887, and following days.

The list of Patrons of the Congress consists of the names of the Hon. Grover Cleveland, President of the United States; the Hon. T. F. Bayard, Secretary of State; the Hon. J. Sherman, President of the Senate; the Hon. J. G. Carlisle, Speaker of the House of Representatives.

The following are the proposed officers of the Congress. *President:* Nathan S. Davis, M.D., LL.D., Professor of Medicine and Clinical Medicine in Chicago Medical College. *Vice-Presidents* (so far as appointed): Professor McCall Anderson (Glasgow); Professor Annandale (Edinburgh); Dr. Dujardin-Beaumetz (Paris); Mr. C. H. Golding-Bird (London); Professor Carl Braun (Vienna); Professor W. Brodie (Detroit); Professor W. W. Dawson (Cincinnati); Dr. T. M. Dolan (Halifax); Mr. J. E. Erichsen (London); Professor T. R. Fraser (Edinburgh); Dr. J. A. Grant (Ottawa); Dr. J. A. S. Grant Bey (Cairo); Professor A. L. S. Gurserow (Berlin); Dr. Hans von Hebra (Vienna); Dr. E. Klein (London); Baron H. Laney (Paris); Sir W. Mac Cormac (London); Professor G. H. B. Macleod (Glasgow); Dr. J. G. McGrew (Honolulu); Dr. E. M. Moore (Rochester, New York); Professor von Mosengeil (Bonn); Dr. Müller (Berlin); Dr. W. Murrell (London); Dr. C. D. F. Phillips (London); Mr. Richard Quain (London); Professor T. G. Richardson (New Orleans); M. P. Ricord (Paris); Professor J. Burdon Sanderson (Oxford); Professor L. A. Sayre (New York); Professor M. Semmola (Naples); Dr. L. Servais (Antwerp); Dr. J. M. Toner (Washington); Dr. P. G. Unna (Hamburg); Dr. F. Winckel (Dresden); the President of the American Medical Association; and the Surgeon-General of the United States Army and Navy. *Secretary-General:* Professor John B. Hamilton (Chicago). *Treasurer* Dr. E. S. F. Arnold (Newport, Rhode Island). *Chairman of the Finance Committee:* Dr. R. J. Dunglison (Philadelphia). *Chairman of the Executive Committee:* Dr. Henry H. Smith (Philadelphia). *Chairman of the Committee of Arrangements:* Dr. A. Y. P. Garnett (Washington). *Associate Secretaries:* Dr. W. B. Atkinson (Philadelphia); Dr. G. B. Harrison (Washington).

There will be eighteen Sections, the titles of which, with the proposed Presidents, are as follows. 1. General Medicine: Professor A. B. Arnold (Baltimore); 2. Surgery: Professor W. T. Briggs (Nashville); 3. Military and Naval Surgery and Hygiene: Professor Henry H. Smith (Philadelphia); 4. Obstetrics: Professor De Laskie Miller (Chicago); 5. Gynæcology: Professor James F. Harrison (Virginia); 6. Therapeutics and Materia Medica: Professor F. H. Terrill (San Francisco); 7. Anatomy: Professor W. H. Pancoast (Philadelphia); 8. Physiology: Professor J. H. Callender (Nashville); 9. Pathology: Professor A. B. Palmer (Ann Arbor, Michigan); 10. Diseases of Children: Professor J. Lewis Smith (New York); 11. Ophthalmology: Professor E. Williams (Cincinnati); 12. Otology: Professor S. J. Jones (Chicago); 13. Laryngocology: Dr. W. H. Daly (Pittsburg); 14. Dermatology and Syphilis: Professor A. R. Robinson (New York); 15. Public and International Hygiene: Professor Joseph Jones (New Orleans); 16. Medical Climatology: Dr. Albert L. Gibson; 17. Psychological Medicine: Professor John P. Gray (New York); 18. Dental and Aural Surgery: Professor J. Taft (Ann Arbor, Michigan).

Among the proposed Vice-Presidents of Sections, the following are resident beyond the limits of the United States. Section 2: Professor Tilanus (Amsterdam); Dr. W. H. Hingston (Montreal). Section 3: Dr. E. Warren Bey (France). Section 4: Professor Gustav Braun (Vienna); Dr. P. Budin (Paris); Dr. A. L. Galabin (London). Section 5: Dr. G. Gray (Castlewellan, Ireland). Section 10: Dr. W. H. Day (London); Dr. Cadet de Gassicourt (Paris); Dr. J. Grancher (Paris); Dr. E. Henoch (Berlin); Dr. Eustace Smith (London); Dr. C. West (London). Section 14: Dr. G. Thin (London). Section 15: Dr. B. W. Richardson (London); Mr. John Simon, C.B. (London); Dr. J. L. W. Thudichum (London). Section 16: Dr. A. Chervin (Paris). Section 17: Dr. J. Althaus (London).

The Congress will consist of such members of the regular medical profession as shall have registered and taken out their tickets of admission, and of such other scientific men as the Executive Committee of the Congress shall deem it desirable to admit. The book for the registration of members will be open from 9 A.M. to 5 P.M. on Thursday, September 1st, 1887, and on each subsequent day during the Session. Any member desiring to anticipate this registration, can apply by letter to the Secretary-General, and forward his dues, with his address in full, when a receipt will be returned. The dues of membership for residents of the United States will be ten dollars. *There will be no dues for members residing in other countries.* Each member will be entitled to receive a copy of the *Transactions* of the Congress when published.

The General Sessions of the Congress will be devoted to the transaction of business and addresses and communications of general scientific interest by members appointed by the Executive Committee. A printed programme of the sessions will be presented each member on registering. A printed Order of Business for each day will also be issued.

The work of the various Sections will be directed by the President of the Section, and the order will be published in a daily programme for each Section. Questions and topics that have been agreed upon for discussion in the Sections shall be introduced by members previously designated by the titular officers of each Section. Members who have been appointed to open discussions shall present to the secretaries of the Section, in advance, statements of the conclusions which they have formed as a basis for the debate.

Brief abstracts of papers to be read in the Sections shall be forwarded to the secretaries of the proper Section on or before April 30th, 1887. These abstracts shall be treated as confidential communications, and shall not be published before the meeting of the Congress. Papers relating to topics not included in the list of subjects proposed by the officers of the Sections, may be accepted after April 30th, 1887; and any member wishing to introduce a topic not on the regular list of subjects for discussion, shall give notice of the same to the Secre-

tary-General at least twenty-one days before the opening of the Congress. The titular officers of each Section shall decide as to the acceptance of such proposed communications, and the time for their presentation. No communication shall be received which has been already published or read before a society.

The official languages of the Congress shall be English, French, and German. Each paper or address shall be printed in the *Transactions* in the language in which it was presented. Preliminary abstracts of papers and addresses shall also be printed in the language in which each is to be delivered. All discussions shall be printed in English.

The officers of the Congress, and the officers of the Sections, including all foreign officers, will be nominated to the Congress by the Executive Committee, at the opening of the first session.

The Executive Committee cordially invites members of the regular medical profession, and men eminent in the sciences collateral to medicine, in all countries, to participate, in person or by papers, in the work of this great humanitarian assembly. Communications relating to appointments for papers to be read in the Congress should be addressed to Dr. John B. Hamilton, Secretary-General of the Ninth International Medical Congress, Washington, District of Columbia. All questions or communications connected with the business of the Executive Committee should be addressed to Dr. Henry H. Smith, Chairman of the Executive Committee of the Ninth International Medical Congress, Philadelphia, Pennsylvania.

Ladies in attendance with members of the Congress, and those invited by the Reception Committee, may attend the General Sessions of the Congress when introduced by a member. They will also be invited to attend the Social Receptions. The Executive Committee reserves the right to invite distinguished persons to any or all the meetings of the Congress. The attendance of medical students and others interested in the work of the various Sections, or in the general addresses delivered in the Congress, will be permitted, on the recommendation of the Secretary-General or the officers of a Section, on their taking out from the Registration Committee a general ticket of admission, fee one dollar; but such persons cannot take part in the proceedings.

All communications and questions relating to the special business of any Section must be addressed to the President or one of the Secretaries of that Section. As many details of the Congress and numerous appointments of officers are yet to be completed, other circulars will be issued from time to time, as circumstances may demand.

POISONING AT A WEDDING BREAKFAST.

An extraordinary case, in which the greater number of the guests at a wedding breakfast in Carlisle were attacked with symptoms of poisoning, which, in the case of the bride, unfortunately, terminated in death, has lately occurred. We are indebted to Dr. Henry Barnes, of Carlisle, for the following particulars of this distressing event.

The wedding was celebrated on August 19th, and the breakfast was supplied at the residence of the bride's aunt. There were sixteen guests at the wedding, and three other persons also partook of food from the breakfast table—namely, the cook, the waitress, and the domestic servant. Of these nineteen persons, four may be said to have escaped without any serious symptoms, although two of them have had slight gastro-intestinal irritation, which would not have excited their attention under ordinary circumstances. The remaining fifteen were more or less seriously affected; and, in the case of the bride, death unfortunately resulted. The bill of fare at the breakfast table was as follows: savoury pie, containing hare; wood-pigeon and beefsteak, cooked in an open dish without crust; boiled salmon, with mayonaise sauce; chicken; ham; grouse; pine apples; melons; apricots; apples; walnuts; grapes; Turkish delight; yellow jelly; red jelly; lemon whip; trifle with jelly; bread, tea, coffee; champagne, port, sherry; and bride-cake. The food was all cooked in the house by a professional cook, engaged for the purpose. No complaint of any kind was made, except that some of the jelly was remarked upon as being bitter. All the dishes were cold, and prepared on the previous day. The cellar in which they were kept was dry. The bride and bridegroom, Mr. and Mrs. Lawson, proceeded to Edinburgh after the breakfast, and were seized with illness the same evening; but medical aid was not obtained until the 21st, when Dr. Carmichael was sent for, and he and Dr. Affleck continued in attendance until the death of the bride on the 25th. No *post mortem* examination was obtained. In a note which I received from Dr. Carmichael, he states that he found both patients suffering from violent vomiting and purging; coldness of the surface of the body and extremities; thirst; more or less collapse, particularly in the case of the bride, whose eyes were much sunken, and she presented very much the appearance of a cholera patient. The bridegroom speedily rallied under treatment, and made a good recovery. Five of the cases have been under my observation, and two are still under treatment. In these, the symptoms have been violent sickness and purging; intense thirst; pain in the back and bowels; slight pyrexia (in one case, under the care of Dr. Maclaren, which I was asked to see, the temperature went up to 104°); great prostration of strength; the tongue has been brown and dry, and the secretion of urine scanty. In one case, menstruation appeared, and was very profuse, although the ordinary period had only passed about a week before. A noteworthy feature in the cases is the late appearance of the symptoms. The breakfast was at mid-day on a Thursday; one patient felt a little unwell in the course of the afternoon; two or three began about 8 o'clock; one about midnight; another did not feel any ill effects until mid-day on Friday; and I have heard of one who did not begin to be affected until Saturday. In all the cases, the ejecta and dejecta were of a bright green colour. They have been examined both by Dr. Carmichael in Edinburgh and by myself, and we have failed to find any indication of any metallic irritant. Five patients have been under the care of Dr. Moffatt, and I hear from him that the symptoms have been of a similar character. In the absence of all trace of metallic irritant, it was at first thought that the poison must have been some ptomaine, and several of the guests blamed the pie; but inquiry has elicited the fact that some of the worst sufferers never touched the pie. Various other articles have been blamed; but, up to the present time, no proof has been obtained of what the poison is, or in what food it was contained. Several articles have been submitted to Dr. Walker, of Newcastle, public analyst for Carlisle, and his report is looked for in a short time. The articles sent include some of the vomited matter, portions of the bride-cake, of the hare, and some articles used in cooking. The city authorities have taken the matter up, and no effort will be spared to solve the mystery at present surrounding the whole affair. As soon as any definite results are obtained, they will be published.

Dr. Carmichael, of Edinburgh, sends the following details.

I was requested on Saturday morning, August 21st, to visit Mrs. Lawson in a hotel in this city. She and her husband left Carlisle early in the afternoon, and, putting up at their hotel, went out to spend the evening at the Exhibition, where both were taken ill, and obliged to return to the hotel. Vomiting and purging, with griping pains, continued all that night and throughout Friday. On Saturday morning, when I first visited them, I found both affected with similar symptoms. Mrs. Lawson was evidently seriously ill. Her general appearance was very much like that of a cholera patient in the second stage. Her eyes were sunken and the cheeks hollow; the surface of the body was cold; the skin cold and perspiring; the lips and nails were livid. She had recurrent attacks of griping pain. No cramps were present. There was more or less constant purging of dirty watery coloured, extremely offensive, fluid, accompanied by regurgitant vomiting of mouthfuls of watery fluid, tinged with bile. The tongue was red, and covered with a brownish dorsal fur; there was no erosion of its mucous surface, or of that of the mouth or fauces. The pulse was 80, regular, slightly compressible; temperature 99°. The pupils were both somewhat contracted. She was perfectly sensible. Under treatment, she never showed any decided signs of improvement. During the course of Monday night the vomiting ceased, but the purging continued much as before. She now began to retain the nutrients which were administered, and there were temporary signs of rallying; the temperature of the surface was somewhat restored, and the griping pain became less frequent. During the course of Tuesday August 24th, she was much the same, but never lost the collapsed look, which she had from the first. On Wednesday morning, she was evidently much worse. The stimulants which were being regularly administered—brandy and ammonia—with subcutaneous injections of ether, seemed to have little effect, and the action of the heart, which, up to this time had been regular and strong, began to fail, and she sank in the evening between six and seven o'clock. Mr. Lawson, whose symptoms were of a much less serious character, steadily recovered under treatment. At the time of marriage, Mrs. Lawson is reported to have been in delicate health, although from the examination I made of her organs during life, there was no evidence of any disease.

Presentation.—Mr. Arthur Finegan, on his promotion to the superintendence of the Lunatic Asylum at Mullingar, was presented with an address and handsome oak and silver salad bowl, by the officers and attendants of the County Mayo Asylum. He was afterwards entertained at supper by the whole staff.

CHOLERA.

CHOLERA IN ITALY.

THE belief that has more than once been expressed, that the cases of so-called cholera in Northern Italy are really cases of fever of a typhoid character is also entertained by the two English medical men – Mr. C. S. Sherrington, of the University of Cambridge, and Mr. Rolla E. Rouse, M.B., of the University of London, sent out to investigate the epidemic. These gentlemen, writing to a leading newspaper in Milan, state that, during their sojourn, they have visited the principal foci of the disease, not only in Northern Italy, but also along the Southern Adriatic coast as far as Lecce. Of northern Italy, they make special mention of the towns of Vicenza, Padua, and Alessandria, and give the following as the result of their investigations. "In the lazarettos," they say, "we have examined the cases attributed to Asiatic cholera. We feel it our duty to affirm, publicly and shortly, that, to our own surprise, we have been forcibly brought to the opinion that the cases examined by us in Northern Italy are not examples of the same disease seen by us raging in the south-east of Italy. Our opinion is based upon the experience gained in past years at Marseilles and in Spain. The reasons by which we cannot admit that it is a question of cholera in the cases observed by us in Northern Italy, are summarily formulated in the following points of differential diagnosis. 1. The pulse was stronger than that observed in cholera. 2. The temperature was higher, and never presented in the persons observed by us the diminution characteristic of cholera. 3. The cramps and contractions of the muscles were wanting, which are one of the special symptoms of cholera. 4. Many of these patients had eruptions on the surface of the body due to local dilatation of the blood-vessels, such as happen sometimes in the fevers of typhoid character. 5. In the necropsies which we have performed, we found that the intestine had not the aspect characteristic of cholera, as in the cases examined by us in Spain and at Marseilles; instead, we found ulcers in the intestine resembling those of typhus. We agree completely with the public opinion that the cases in the south-east of Italy (as Bari, Brindisi, Lecce, etc.) are really cases of Asiatic cholera; but the cases in the valley of the Po are not, according to us, true examples of that disease." They conclude by adding: "While we admire the noble honesty of a country that does not hesitate to proclaim as true every case suspected of a disease whose name alone brings so much damage to commercial prosperity, we are sincerely glad to congratulate it on the immunity of the beautiful valley of the Po from the terrible Asiatic disease."

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1886.
ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary*.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.—The next meeting will be held at the George Hotel, Halstead, September 11th, 1886, at 3.30 P.M. Dr. R. G. Kellett, of Halstead, has kindly invited the members present to dinner at the George after the meeting. A special train will leave Halstead at 8.45 P.M. for the main line and for Haverhill. The following papers have been promised. 1. On some interesting Cases of Midwifery, by Dr. Kellett. 2. Pessaries, their Varieties, Uses, and Abuses, by Dr. Clement Godson. 3. The Treatment of Cancer by applying Arsenic, by Dr. Sinclair Holden. 4. Mr. John Taylor (Earl's Colne) will show a large Biliary Calculus, an interesting specimen of Fractured Femur, a Drawing of a Case of Ichthyosis. 5. Mr. Simpson (Coggeshall) will show a Drawing of a peculiar form of Skin-Disease. 6. Mr. W. T. Jackman will describe some recent improvements in ophthalmic instruments and models. Members wishing to read papers or exhibit cases, are requested to communicate with the Honorary Secretary, WM. THOS. JACKMAN, Coggeshall, Essex.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting will be held at the National Art Treasures Exhibition, Folkestone, September 23rd, at 3 P.M. Dr. Thomas Eastes in the chair. The chairman will be glad to see all members and their friends to luncheon, at the Exhibition, between 1 and 2. Members wishing to read papers, or send communications, should write to the Honorary Secretary at once.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

NORTH OF IRELAND BRANCH: NORTH-WEST DISTRICT.

A MEETING of the above District was held in the Round Room of the Corporation Hall, Londonderry, on August 4th, 1886. Twenty members were present.

President's Address.—Sir W. MILLER, President, gave the opening address, in which he dwelt on the advantages likely to arise from the interchange of ideas and from social intercourse with one another.

Papers.—The following papers were read:—

1. Dr. Bernard, of Londonderry, showed a patient suffering from Reynaud's Disease, and read an exhaustive paper on this subject.

2. Dr. Byrne, of Londonderry, read a paper on two cases of Tumours of the Breast. The first case was remarkable as being the subject of adenoma and carcinoma of the mamma, both growing at the same time. Both tumours were removed. There is now an abdominal tumour of obscure origin. The second case was a gelactocele of the breast.—An animated discussion followed on the treatment of adenomata, carcinomata, and galactoceles.

CHELSEA HOSPITAL FOR WOMEN.—An interesting meeting was recently held at the Chelsea Hospital for Women, when the late Secretary, Mr. J. S. Wood, was presented with a testimonial privately subscribed for by the Board of Management, Officers, and Medical Staff of the Hospital, and which consisted of a beautifully illuminated address on vellum, an English chiming clock, a purse of 70 guineas, and a silver salver, the latter being the gift of the Ladies' Committee. The presentation was made by Mr. James Deboe, the Treasurer of the Hospital, and there was a large attendance of friends and subscribers. Mr. Wood has also been unanimously elected a Life-Governor of the Hospital, and has accepted a seat on the Board of Management. Mr. J. H. Easterbrook, the present Secretary of the Hospital, is already well known in connection with the work of the St. John Ambulance Association, in the development of which he took a very active part for some years, and especially as Honorary Secretary of the City and Port of London District, of which H.R.H. The Duke of Connaught is President, and Sir Vincent Barrington, Chairman. Mr. Easterbrook successfully organised and carried out the work of the District, the classes being attended by some thousands of pupils of both sexes; and the crowded and enthusiastic meetings at the Guildhall and elsewhere, on the occasion of the distribution of certificates and medals by members of the Royal Family, fully testify to the popularity of his work. Mr. Easterbrook has also contributed to the literary work of the Association both by penand pencil, and still retains the Honorary Secretaryship of the British Ophthalmic Hospital at Jerusalem, established by the Order of St. John, of which he is a member.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Prolonged Somnolence.—False Diagnosis in Pregnancy.—Turpentine in Phosphorus Poisoning.—Delayed Development of Vaccine Vesicle.—Remarkable Injury of a Finger.—Acromegalia.—Diseases of Syria.—A New Method of Taking the Temperature of Children.—Cauterisation of Ulcers of the Tongue in Whooping-Cough.—General News.

EUDOXIE HEDOUIN, the patient at the Salpêtrière, who has just woke up after eighteen days' sleep, entered the Salpêtrière Hospital in 1862. Her mother died from cancer of the stomach. During six years she was subject to epileptic attacks, but these occurred after the birth of Eudoxie. This patient cannot give any information concerning her childhood, whether or not she had convulsions; all she remembers is, that she cried and laughed without knowing the cause. When she was 18 years of age, epileptic attacks came on, under what circumstances is not known; at the age of 19, she was treated for gastritis; at 21, she miscarried at the fifth month of pregnancy. During eight months, she suffered from frequent uterine hæmorrhage. During pregnancy, she suffered greatly from sickness, but her epileptic fits were not modified. After a series of these attacks, which occurred when she was 22 years old, she became paralytic, and remains so. She first entered the Salpêtrière to be treated for paralysis. Her lower limbs were perfectly rigid; she suffered acute pain in the knees, and the left knee was considerably swollen; she was treated by cupping. She then went from hospital to hospital, and, in 1865, was attacked by cholera. In 1866, she again entered the Salpêtrière Hospital. She had grown very stout; the abdomen was greatly enlarged; she scarcely ate anything. On the left side of the abdomen there was dulness on percussion. Examination produced pain, hence it was impossible to ascertain the cause of the symptoms. She could move her arms freely, but the lower limbs were paralysed. On May 7th, 1875, she fell asleep, after taking a purgative. The face was calm; the eyelids frequently quivered, and did not always close over the eyeball. When her head was shaken, she awoke, and said she did not dream. On the afternoon of the same day, she slept a long time; on the 8th, she frequently fell asleep, and was easily awoke. On the 12th, her sleep persisted, and continued until the 27th. The following day, the 28th, she made a meal, afterwards laughed violently, and then became delirious. The next morning (29th), her upper and lower limbs were rigid, but the feet were not. Last January, she slept during fifty days; she has now just awoke from a sleep of eighteen days. During her attack of somnolence, Dr. Voisin placed on her skin an emetic, well wrapped up, without saying anything. No effect followed. This was removed, and a piece of paper carefully folded and perfectly empty, was next placed on the patient's skin, Dr. Voisin remarking that "she would certainly vomit." Ten minutes afterwards, the patient was sick, which proved that, during her sleep, she heard. The day after she awoke, she was given an empty glass, which, she was told, contained champagne, and a piece of aloes, instead of sugar. Two or three times she simulated drinking from the glass, and then swallowed the supposed piece of sugar, which provoked a slight grimace. She showed all the symptoms of drunkenness. Since she awoke the last time, she eats, drinks, sleeps, and cuts her nails, but her mental condition is not normal. She is now 51 years of age.

At a recent meeting of the Surgical Society, M. Léon Le Fort communicated the case of a patient who had fibroma of the uterus, and who entered the Necker Hospital in order to be operated upon. The possibility of pregnancy being suspected, as there had been absence of menses during three or four months, auscultation, palpation, and vaginal examination were performed many times, and gave negative results. A final examination was made, immediately before operating, by M. Le Fort and his colleagues of the Necker Hospital, with the same results. The patient was, therefore, rendered unconscious by chloroform. At the moment when M. Le Fort was taking the bistoury to cut the abdominal wall, one of the assistant-surgeons (Dr. Bazy), having put his hand upon the abdomen of the patient, exclaimed: "I feel the movements of the fœtus!" M. Le Fort thinks that the excitement produced by the chloroform was transmitted from the mother to the fœtus, which manifested its movements, undoubtedly for the first time, for the mother declared she had never felt it move. It is remarkable that the movements of a fœtus, of four or four and a half months, can be felt through the abdominal wall, when auscultation and every kind of uterine examination failed to ascertain the fact of pregnancy.

M. Ed. Rondot, of Bordeaux, demonstrates, from clinical observations and experiments, the efficacy of turpentine in the treatment of poisoning by phosphorus, when taken either immediately or even some hours after the poison has been swallowed. The turpentine and phosphorus combine, and are eliminated without causing any other morbid phenomena than a local reaction on the alimentary and urinary organs. It is important to administer the turpentine at the outset, so as to neutralise the greatest quantity possible of the poison. Even if the poison be not completely neutralised, the essential oil of turpentine renders the symptoms milder, and favours recovery. Turpentine diminishes hæmorrhage and the nervous symptoms which follow poisoning by phosphorus.

Three children were vaccinated on the same day with heifer-vaccine on the leg. In two, the inoculation was efficacious. In the third, on the contrary, the vaccination appeared to be without result; on the eighth day, nothing had appeared. Therefore, the child was vaccinated again on the arm. Eight days after this second vaccination on the arm, and fifteen days after the first on the leg, M. Desplats found a typical vaccine pustule on this latter limb, corresponding to a pustule of the fifth day. The second inoculation on the arm was followed by no results. This fact of prolonged incubation of the vaccine is rare, and the interpretation is uncertain and difficult.

M. Thomas, of Tours, has described to the Paris Society of Surgeons a remarkable injury of the third finger which has come under his notice. One of his patients, going home late without his key, wished to climb an iron railing with sharp-pointed tops. When dropping down, he felt himself retained by his third finger, which gave way at last; and, going into his room, he found that his finger was completely stripped of its integuments. A medical man, called at once, found the finger caught on the railing by a ring. The finger appeared complete, but was without the bone. M. Thomas was called an hour after, and reintroduced the bone into the finger. He applied two sutures, and bandaged the hand. The extremity of the finger became gangrenous. However, the patient had from this attempt the benefit of preserving nearly a phalanx and a half of his finger. M. Thomas has not found any such case on record.

In the *Revue Médicale* for April, Dr. Marie gave an account of some singular characteristics he had met with in two cases of acromegalia, taking the form of noncongenital hypertrophy of the hands, feet, and head. The skeleton of the hands and feet was like a giant's; the soft parts had developed with the bones, consequently there was no apparent deformity. A singular contrast was observed in the forearms, the arms and legs retaining their ordinary size. The head was only large in some parts, although the skull was affected. Hypertrophy had especially developed in the bones of the face, the general aspect of which was that of an elongated ellipse. Minor characteristic deformities were noticeable. The vertebral column was bent forward; some of the bones had increased in size (clavicle, ribs, patella, and ilium); the long bones remained normal. The fibro-cartilages of the ear and larynx showed a tendency to become hypertrophied; the joints were only slightly altered in shape. The muscles were lessened in volume. There were slight blindness and deafness; sudden unexplained pains occurred, difficult to remove. There were a marked tendency to varicose veins and hæmorrhoids, and intense thirst. More than the normal quantity of urine was passed. The skin remained intact, but the patient presented cachexia in a mild degree. Acromegalia attacks both men and women between the ages of 15 and 35; its etiology is obscure; excepting the absence of menses, there are no definite symptoms. Dr. Marie believes that acromegalia is a bony malformation analogous to progressive primitive myopathy.

M. de Brun, Professor in the Medical Faculty of Beyrouth, stated, at a recent meeting of the Académie de Médecine, that malaria is the affection most frequently met with in Syria; it is observed both inland and on the coast; it is most prevalent on the plain of Becka. Dr. de Brun has seen infants attacked with acute paludism, accompanied with dyspnœa, which, within an hour, resembled croup at an advanced stage. On examining the throat, nothing was observed. Generally, after four or six hours' suffering, the condition suddenly and rapidly improves, and the little patient regains health without passing through a stage of convalescence. This form of malaria is sometimes accompanied with violent laryngeal œdema; and, in some instances, there is a nucleus of pulmonary œdema. Laryngeal symptoms may be absent. Apparently, when death ensues, it results from arrest of the functions of the medulla oblongata. Sulphate of quinine prevents a second attack of malaria. After malaria, syphilis is the most frequent affection. The Mahommedans, although they represent only the fourth part of the entire population, furnish the greatest proportion of the

cases. Hereditary syphilis is very frequent. Dr. Brun rarely met with the lesions described by Mr. Hutchinson. The prevalent affections of the alimentary canal are excessive and frequent diarrhœa, dysenteric affections, and especially dilatation of the stomach, resulting from unwholesome food and from indulgence in alcohol. Arack, or Raki, is the beverage generally drunk. Dr. de Brun has observed a considerable number of parasites in the alimentary canal, especially tænia inermis. He found that a preparation of cocoa was efficacious in many instances. The sufferers had taken vermifuges, but without benefit from them. Pulmonary emphysema is very general, in consequence of excess in smoking. Ophthalmia is also very frequent, also the following diseases: hepatic congestion, gravel, calculi of the bladder, leprosy, elephantiasis, the Aleppo boil, eruptive fevers, typhoid fever, whooping-cough, diphtheria, occasional epidemics of dengue fever, and, in summer, a special form of erythema, known as sweat-spot (*bouton de sueur*). Nervous disorders are very rare.

All medical men know how difficult it is, in some cases, to take the temperature in the arm-pit of children. Dr. Filatoff proposes a method of taking the temperature which, though not strictly correct, is said to be sufficiently so in most cases. The method consists in observing, not the rising of the mercury, but its descent. The mercury rises by warming the bulb of the thermometer, either with the hand or a blanket. When the temperature reaches 42° Cent. (107.6° Fahr.), the instrument is rapidly placed in the armpit, and the fall of the mercury that occurs in from one to two minutes is observed, especially in cases where the fever runs high. Thus the temperature obtained approaches, as nearly as possible, the true temperature.

Dr. Gay cures whooping-cough by cauterising ulcers that appear on the tongue. On June 10th, he examined an infant, whom he found to be suffering from whooping-cough. On lifting up the tongue, and taking it between his thumb and finger, he could easily see that on the frænum, and upon the sides, there were specific greyish white ulcers, which he cauterised with nitrate of silver. The mouth was then washed out with a mop of lint dipped in a mixture of 30 drops of dilute hydrochloric acid in 30 grammes of pure honey. The next day, recourse was had to the same treatment. After two days, the cough had ceased, the child was able to sleep, and there was no return of vomiting. The tongue was again cauterised, and the mouth washed, as previously stated. On June 26th, the little patient was completely cured. Dr. Gay adds that any other caustic may be used, according to the severity of the ulcer.

A Paris magistrate has recently decided that the presence of bugs in a house is not a reason for ranking it among unhealthy dwellings.

The *Progrès Médical* states that the Superintending Council of Public Assistance (Conseil de Surveillance de l'Assistance Publique) has decided that the hospital for sick children, the Forges Hospital, shall have lay nurses; also the Necker Hospital. This is the third time that the vote concerning the Necker Hospital has been passed.

MM. Gavarret, Hardy, and Sappey have retired from their professorial chairs in the Paris Medical Faculty, and are honorary professors.

The friends and pupils of the late Professor Ch. Robin have decided to collect the funds necessary to erect a monument in honour of the memory of that distinguished scientist. The subscription has been opened, and a goodly sum has already been realised.

Many complaints have been made concerning the delay occurring at the Municipal Laboratory in furnishing the results of the analyses for commercial purposes. The chief of the laboratory has modified the rules in order to shorten these delays, but reminds the public that, in order to keep faith, it is necessary that all receptacles containing samples should be scrupulously clean. It frequently happens that bottles containing samples of water are dirty, and contain wine-lees. Some samples are sometimes put in mineral water bottles. Sometimes the dregs of wine, filtered, are sent for analysis; and when the verdict "bad" is returned, a bottle properly drawn off is taken.

At a recent meeting of the Conseil d'Hygiène, M. Dujardin-Beaumetz drew attention to the subject of the removal of *débris* from butcher's shops, tripe-shops, and pork-butchers. He urged that the Prefecture of Police should be called upon to strictly enforce the regulations issued on September 1st, 1883. The carts used to remove these remains leave on their track a most offensive smell. Dr. Dujardin-Beaumetz suggests that these vehicles should be disinfected daily before being used. The Conseil has named a Commission to decide on the best disinfectant to be used for this purpose.

The fifteenth annual meeting of the French Association for the Advancement of Science took place, on August 17th, at Nancy. M. Frudel, Professor in the Paris Faculty of Sciences, and Member of the Institute, was elected President. Some interesting papers were read.

CORRESPONDENCE.

☞ To Correspondents. ☜

Our correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return and hold over a great number of communications, chiefly by reason of their unnecessary length.

M. PASTEUR'S PROPHYLACTIC.

Sir,—I have followed M. Pasteur's work with interest, hoping to read that the true remedy for hydrophobia would be found, and at last placed within the reach of medicine.

I made all allowances for the inherent difficulty in the quest, and I also allowed the fullest latitude to the eminent experimentalist; the theory is only good if the theorist be willing to abandon it for a better one. M. Pasteur has fully proved that he possesses this aspect of the scientific mind, for we have been treated to a succession of theories which do not harmonise one with another.

Had M. Pasteur only declared he was theorising, not a word could be raised against his methods; but, as we have been assured that a true remedy has been found, and that M. Pasteur has conquered a disease which has been for many ages the despair of medicine, we are justified in examining the grounds on which this claim rests. The profession would be untrue to itself did it accept the *dictum* of any experimentalist, no matter what may have been his past services, without submitting the results to the touchstone of reason.

We need not expect M. Pasteur's experiments to form an opinion on the merits of his method; time has solved part of the question. The deaths, after his preventive inoculation, are the saddest corollaries we could have on the falseness of the basis on which his prophylactic rested. I may here briefly point out some of the objections.

1. Control experiments were neglected. M. Pasteur produced a disease in rabbits which he called rabies. The same kind of affection in rabbits can be produced by injecting almost any kind of diseased material into the same region favoured by M. Pasteur. In man, the symptoms of hydrophobia can be also produced by irritating the medulla; and in certain states we find a disease simulating hydrophobia, produced by a tumour or by cysticerci pressing on the brain. (See *Practitioner*, 1881, for a case narrated by the writer.)

The first experiment can be easily tested.

2. M. Pasteur has treated a large number of persons, bitten by non-rabid dogs. He has also treated a number who were not even bitten, but who had been licked by dogs. He has even injected with his *bouillon* persons never bitten, but who submitted to the process through curiosity. He has ventured to treat these persons with a virus, said to be even more potent than the virus of the rabid stray dog. No ill results have followed, not even an abscess, only a slight erythematous redness at the end of the inoculations. This is not only strange, but it even reduces the value of his virus to an absurdity. If the virus had protective virtues, it should have manifested itself in some way. If the virus were injected, so as to counteract in any way another virus already in the system, then it would be of no use in the case of those persons bitten by non-rabid dogs, or in the case of those not bitten by a dog. Yet we are assured in the face of such manifest objections, that M. Pasteur continues his injections, and exposes all these persons to the dangers of a virus, so intense as to rival that of the wandering rabid dog. What is the explanation? M. Pasteur has been injecting all this time a *sterilised bouillon*. Hence the safety of his patients, and I may say it is fortunate for his patients that he has been so doing. I shall be answered that he tested the virus on rabbits. I answer yes, but not by simple inoculation into the skin, but into the rabbits' medulla; and were he to do the same with the human subject, he would infallibly kill his patients, who would die with symptoms of hydrophobia.

3. M. Pasteur has had numerous deaths, and now we are assured that it is a question of averages. He has had better results than any other hydrophobia curer. The ground has been so repeatedly shifted, that there is a great difficulty in dealing with M. Pasteur.

It is true that he shows us good results, simply caused by the large number who have rushed to him, some actuated by fear, some by curiosity, but the larger number bitten by non-rabid dogs. Consequently, any recovery, if given, might have the place of honour assigned to it as the result of the curative agent. I have for years given some attention to hydrophobia; in consequence, I have had applications from all parts, and patients from all parts, of England, who have sought my advice, owing to their fear of the disease. I have not posed as a

hydrophobia curer; I have not given a remedy, but had I given a pill of *panis* in each case, I could have shown better results than those of M. Pasteur, as not a single patient of mine has died from hydrophobia. Bites from rabid dogs are rare, for sometimes even through a year you cannot obtain a rabid dog, and thus my success has been due to the fact that the large number I have treated have been bitten by non-rabid dogs. The bite of a healthy dog cannot produce hydrophobia. It may cause erysipelas, pyæmia, death, but not hydrophobia. The success of Pasteur has depended on the fact that he has been treating patients bitten by non-rabid dogs.

4. It has been said that no scientific man of eminence has spoken on this subject. Mr. Vincent Richards is considered a scientific observer; he is well known in connection with snake-poisoning. He pronounces his opinion on M. Pasteur's work in his pamphlet (*Hydrophobia and Pasteur*, p. 20. Calcutta: Thaller and Spink. 1886.) "I have now advanced quite sufficient, and in language not too strong, to show that M. Pasteur's method of treatment, so far as the world has been enlightened, rests on no firmer basis than that which justified the vaunted powers of Holloway's Pills and Mother Siegel's Soothing Syrup."

5. In considering this question, we should leave on one side Pasteur's personality, and judge him, not by his past achievements, but by his results and arguments in favour of his present system. Homer sometimes nodded. Pasteur is but human. Some years ago, Villemin startled us by his experience on tubercle. We know now that Villemin was not correct in his deductions; and, if we now find M. Pasteur in error, it will not lessen the value of the work he has done in other departments of science.

6. The question of the future is comparatively simple. Abolish rabies in the dog, and hydrophobia will be then unknown.

Great stress is laid on Pasteur's work done in his laboratory, in rendering dogs insusceptible. Why are not these experiments repeated, and why has not this principle been applied universally? This method would go to the origin of the evil. We have encouraging reports from Germany, on the value of stringent police measures. Germany, we know, has not embraced Pasteurisation with the same ardour as England or America. The reason is hardly to be assigned to jealousy. The Germans, I think, are capable of rising above such pettiness. The causes for their attitude are not far to seek, namely—weak data, insufficiency of evidence, assumption in place of proof, etc. We might copy from the German and Danish Dog Acts. Our Dog Act is imperfect.

Apologising for the length of this letter, I remain, yours faithfully,

T. M. DOLAN, M.D.

Horton House, Halifax.

CONSULTANTS AND GENERAL PRACTITIONERS.

SIR,—There is little doubt that your correspondent receives the sympathy of most of the general practitioners, especially as one of his complaints is theirs.

Some consulting physicians and surgeons do not or will not know the meaning of the word consultant, and it would be well if they followed the practice of the Bar, namely, not to receive clients unless through their medical attendants, and if they have none, to name one to whom they could communicate.

It is extremely hard on the hard-worked practitioner, when persons, for one guinea, can get advice and a prescription which could be made up for a few pence; or, on the other hand, it may contain a drug which can only be obtained from a certain druggist; no wonder they "come again in a month," and the practitioners are the losers.

Surely it is to the consultants that the profession looks to raise its status; but this can hardly be done by guinea fees and monthly prescriptions. No wonder struggling practitioners charge a shilling a visit and half a guinea midwifery fees, when such a state of affairs exist.

It will be the duty of general practitioners to be alive to their interests, and only recommend those who are consultants in deed as well as in word.—I am, yours faithfully,

WALTER BUCHANAN.

Chatham.

SIR,—I have read with great interest the correspondence in the BRITISH MEDICAL JOURNAL upon this subject; and, as a general practitioner, should like to say a word on behalf of the consultants. I have had considerable experience of consultations, and have never had occasion to regret having introduced a consultant to one of my patients. Consultants are often placed in very delicate positions, and must, in their daily work, frequently meet with cases in which their own opinion cannot coincide with that of the practitioner in attendance. A faulty or careless diagnosis by the latter, leading to a different view of the case by the consultant, is often at the bottom of the instances in which complaint is made against consultants, patients having their suspicion aroused that something has been overlooked or omitted, and possibly communicating again, of their own accord, with the second opinion. If this correspondence lead to general practitioners being more careful in the diagnosis and treatment of their cases, it will be of great benefit; but, if it is only to lead to the formation of a so-called Association of General Practitioners, but little good will come of it. Let those who feel aggrieved be careful in their selection of a further opinion, and avoid those, if there be any amongst the real consultants (which I very much doubt), whom they have good grounds for considering to have acted dishonourably. There are already too many associations, and surely the time has not come when we require another to protect us from our professional brethren. For, what else are consultants? We are all educated at the same schools; but, some who may have had more time and means at their disposal, or have shown greater talent than their colleagues, have ultimately elected to follow a consulting career. But they are still our brethren; and I, for one, do not require an association to protect me from them. I fully endorse the letter of a "Country Doctor," and feel sure that the time is fast approaching when the practitioner, who makes so much fuss when a patient changes his medical man, will be an object of ridicule. Let us all do our best for our patients, and act honourably to each other; and not give out that a patient has been "stolen" from us, when we hear that a change has been made.—I am, sir, your obedient servant,

H. FRASER STOKES.

2, Highbury Crescent, N.

SIR,—In the JOURNAL of August 7th, Messrs. Verdon and Bott as good as state that "consultants" know nothing of their business; and that, consequently, there is no need for them. Undoubtedly, in a large majority of cases, the general practitioner has a great advantage over the consultant, who is called upon in an interview, say, of ten minutes' to half an hour's duration, to make a diagnosis and prognosis of, and advise treatment for, a case which he then sees for the first time. But the necessity for "consultants" is exacted, directly by the mass of ordinary "practitioners;" indirectly, by the licensing bodies who admit them to practice; and, until a "one portal system" is perfected, and we are all educated up to a minimum but efficient standard, consultants must exist; and, so long as so many "side doors" exist for entering the profession, so long will empiricism flourish, and the "second opinion" (if it be worth having) prove a true harbour of refuge to the long-suffering patient.

Let me quote a few cases under which my advice has been sought, together with the circumstances that led up to the necessity for a "second opinion."

1. A comparatively healthy man, about 46 years of age, who had been a somewhat free liver in his younger days, came to me, in fear and trembling, hoping for but almost despairing of relief. I need not detail his symptoms; but he had been told by a young L.K.Q.C.P.I. (a *locum tenens*) that he was suffering from "Bright's disease;" and for three-quarters of a year he had had this "skeleton in his cupboard." I treated his gouty dyspepsia, and banished the spectre.

2. A stout, healthy-looking woman (with three children), had for some years been ailing, and unable to walk more than a few hundred yards at a time. After "paying several big bills, without getting a bit better," she hinted to her medical man the desirability for seeking further advice. She was told that she would get better if she continued under his treatment, and that she "had a stone in her kidney, and he would give her some medicine to dissolve it!" The lithontriptic "nearly griped her double;" and she came to me. The reposition of a retroverted uterus, and the reduction of a chronically inflamed cervix, in six interviews, effectually dissolved the renal calculus.

3. A young woman (a patient of the same medical man), aged 28, came to my out-patient room with a history of metrorrhagia, of six years' standing; she was greatly blanched, could scarcely crawl across the room, and exhibited unmistakable signs of cerebral anæmia. "Had she any children?" I asked. "No, except one 'miscarry' soon after I was married, which the doctor told me came the wrong way." "What do you mean by 'coming the wrong way!'" "Why, at one of my monthly times I threw up a lot of blood, and the doctor told me I had miscarried; but the blood had come that way, instead of the other." I replaced the most markedly retroverted uterus I have yet met with; inserted a Smith's pessary; and, nine days afterwards, saw the patient at her own home, busy about her household duties, all hæmorrhage having ceased.

I could multiply the above by many examples observed in the short course of barely three years' practice.

If ignorance or jealousy debar the ordinary practitioner of medicine from meeting, and taking counsel of, his professional brother, then the latter must not be blamed if the former's patients not only come to him, but stick to him.

I fully echo the hope of a "Country Doctor," that the "Association of General Practitioners" may be nipped in the bud. The whole matter rests upon the presence or absence of professional and gentlemanly instinct, and no "Association" will remedy the deficiency wherever it may exist.

Our "noble profession" resolves itself into one great struggle for existence; and amply illustrates the Darwinian law as to the survival of the fittest.—I am, Sir, yours faithfully,

AN ASSISTANT HOSPITAL PHYSICIAN.

UNSATISFACTORY INQUESTS.

SIR,—From the letters in late numbers of the JOURNAL, it seems that one of your correspondents has written to the Registrar-General upon the subject of unsatisfactory inquests; and, in reply, he has been told that the practitioner in attendance during the last illness of a patient cannot withhold the certificate of death which is now required by the Registration Act, and that the duty of communicating with the coroner may be safely left to the registrar.

To these two points, I beg the attention of your readers.

Under the Registration Act, no period is named for the practitioner in attendance to sign and give the certificate. Five days are allowed for the friends of the deceased person to give information of the death to the registrar, taking with them the certificate from the practitioner. Few of your readers will, I think, be inclined to doubt that the practitioner would be acting within the terms of the law if he paused for five days before giving the certificate, in a case where he had any suspicion that the death did not happen from natural causes, by the visitation of God, or until he had assurance that the coroner did not require an inquest.

The registrars, for the most part, do well what is often an unpleasant part of their duty; but my experience as a coroner does not enable me to agree in the opinion that the duty of communicating with the coroner may be safely left to the registrars in all cases, though I think it may be well left to many of them. Some registrars think that, when information of the death is given by the friends of the deceased person, with the certificate from a practitioner, their duty under the Registration Act is to register the death, and the cause of it as stated in the certificate, without further question; and such registrars will do so, whatever the terms of the certificate.

In a case of doubt or suspicion, few practitioners will be found to certify the death from an unknown cause; hardly any, I think, will add that an inquest is necessary, a thing for the coroner's opinion, not the practitioner's.

In cases of sudden death, and in cases of death after violence, information generally reaches the coroner quickly. Open violence is a matter of public notoriety; the circumstances of the death cannot be kept private.

The difficulty is to know what should be done in cases where an act of violence has not become public, or where the practitioner in attendance sees the circumstances of suspicion which are not so open to others. There cannot, I think, be a doubt that the proper course for the practitioner to take, in the interest of all parties, for his own satisfaction, as well as that of others, is to put himself in communication with the coroner, and to withhold the certificate of the cause of death until he has the sanction of the coroner to give it. An examination of the body might be desirable, but the body should not be opened without communication being made to the coroner.—I am, sir, your obedient servant,

E. L. HUSSEY.

Oxford.

HOSPITAL FOR WOMEN AND CHILDREN, CORK.—Recently, at the Queen's College, Cork, a chess tournament was held, of a novel and interesting kind, in aid of the funds of the Cork Hospital for Women and Children. The tournament took place in the examination-hall of the College, the chess-pieces being ladies and gentlemen, attired in handsome costumes of the Elizabethan period. Several of Stanton's games were played, the moves being announced by the players, and executed with remarkable promptitude and precision by the pieces. It is satisfactory to learn that, by means of the entertainment, the first of the kind, we believe, in Ireland, a very substantial sum will be obtained for a very deserving charity.

NAVAL AND MILITARY MEDICAL SERVICES.

THE MEDICAL DEPARTMENT OF INDIA.

WE publish below the new scheme for the organisation of the administrative staff of the Indian Medical Service. It will be in the recollection of our readers that, some years ago, the Government of India ruled that the Sanitary Commissioners of the various provinces were entitled to the rank and privileges of Deputy Surgeons-General, a measure not by any means popular beyond the ranks of those who benefited by the rule. This regulation is now, it will be seen, abrogated. This will not, of course, be pleasing to some; but those who felt aggrieved by the rule now abolished should be satisfied, and we are glad to see the new order of things is not to have a retrospective effect; it only came into force after March 19th in this year. We think the scale of pay to the administrative ranks, as contained in the new rule, on the whole liberal. We are a little at a loss for the reason of the different rates of pay given to officers holding the same rank and doing the same duty. Thus, the Deputy Surgeon-General for the North-western Provinces and Oudh is to receive 2,250 rupees per month, the same officer for the Punjab gets 2,000 rupees, and the Deputy Surgeon-General for the Central Provinces 1,800 rupees. We suppose the officers drawing the larger salaries have, or are supposed to have, more arduous duties to perform.

The following is a summary of the order.

"The Indian Medical Service administrative appointments are the following: One Surgeon-General and Sanitary Commissioner, with the Government of India, 2,700 rupees; one Secretary to the Surgeon-General and Special Assistant to the Sanitary Commissioner, with the Government of India, 1,200 rupees, rising to 1,400 rupees; one Deputy Surgeon-General, with the title of Inspector-General, Civil Hospitals, for Civil Medical Administration in Bengal, 2,250 rupees; one Deputy Surgeon-General, with the title of Inspector-General, Civil Hospitals, for Civil Medical Administration for North-Western Provinces and Oudh, 2,250 rupees; one Deputy Surgeon-General, with the title of Inspector-General, Civil Hospitals, for Civil Medical Administration for the Punjab, 2,000 rupees; one Deputy Surgeon-General for Civil Medical Administration in the Central Provinces, 1,800 rupees; one Surgeon-General with the Government of Madras, 2,500 rupees; one Secretary to the Surgeon-General with the Government of Madras, 800 rupees consolidated; one Surgeon-General with the Government of Bombay, 2,500 rupees; one Secretary to the Surgeon-General with the Government of Bombay, 800 rupees consolidated. Surgeons-General with the Government of India, and with the Government of Madras and Bombay, will, in addition to performing civil administrative duties, be heads of the Indian Medical Departments in their respective presidencies. It will be their duty, among other matters, to propose transfers between military and civil departments; to recommend for promotion to administrative grades, and to advise Government on all questions relating to the admission of officers and subordinates to the Indian Medical Service; to conduct the services of Indian medical officers of all grades, and to the supply of medicines and hospital stores. The Surgeon-General, with the Government of India, will be entitled to receive any information he desires from Deputy Surgeons-General attached to local Governments and administrations, and to communicate with these officers in regard to the operation of departmental rules and orders; but he will exercise no direct authority over these officers, who will be solely under orders of the local Government of the administration to whom each belongs. In all the provinces for which a separate Sanitary Commissioner is sanctioned, the Sanitary Department will accept, in regard to leave, pensions and such questions which remain distinct from, and not subordinate to, the Medical Department, and in selection for such posts knowledge and experience as sanitary officer will be specially considered. Sanitary Commissioners of such provinces shall no longer, in virtue of their appointments as such, have the rank and privileges of Deputy Surgeon-General. This rule will apply to all officers appointed as Sanitary Commissioners after March 19th, 1886. Indian medical officers will remain as now military officers, those in civil employment being only lent to civil departments, and being liable to be called on for military duty in the event of their services being required."

MIDLAND VOLUNTEER MEDICAL ASSOCIATION.

THIS Association, which has been formed with the object of increasing the efficiency of the Volunteer Medical Service in the Midlands, more especially as regards the training of regimental bearers, has decided to hold ambulance manœuvres each year, at the various regimental camps. The first of these annual manœuvres took place on Tuesday, August

17th, at the camp of the 1st Volunteer Battalion Royal Warwickshire Regiment, in Streetly Wood, Sutton Coldfield, by invitation of the President of the Association (Surgeon-Major Thompson), and Acting-Surgeons Freer and Richards, the medical officers of the battalion. In addition to the "home" detachments, the following regiments were represented: 1st Volunteer Battalion South Staffordshire Regiment, under Surgeon-Major Pearse; 3rd Volunteer Battalion South Staffordshire Regiment, under Surgeon Manby; and the Shropshire and Staffordshire Volunteer Artillery, under Acting Surgeon Massingham, in all numbering about fifty men. The manœuvres were carried out according to a "general idea," previously printed and circulated. The regimental bearers were under the command of Surgeon-Major Pearse and Surgeon Manby, while Surgeon Massingham directed the operations at the Collecting Station, and Surgeon Richards those at the Dressing Station. Surgeon-Major Thompson was in command of the whole of the detachments, Surgeon Freer performing the duties of adjutant. The battalion was extended for an attack against a supposed enemy, and, by the kind co-operation of the company officers, a good supply of "wounded," with labels denoting the character of injury, was provided. The operations, although carried out by men who were not in the habit of working together, were, on the whole, highly satisfactory and instructive. After the manœuvres, pontoon rations were provided for the men of the different detachments, the medical officers (together with several others who were present as spectators) being entertained by the officers of the battalion.

NAVAL MEDICAL DEPARTMENT.—At the competition for commissions in the Medical Service of the Royal Navy, held on August 9th and following days, in the Hall of the University of London, the undermentioned gentlemen were the successful candidates.

	Marks.		Marks.
G. H. Milnes	2960	W. G. Axford	2265
A. E. Weightman	2885	W. C. Spiller	2240
J. W. O. Underhill	2580	G. T. Broatch	2210
C. H. Upham	2525	W. Bett	2200
F. J. Burns	2495	H. W. Rickards	2150
A. T. Rimell	2485	F. A. Brice	2110
D. J. P. M'Nabb	2465	J. W. Slaughter	2110
C. Strickland	2440	C. H. Foott	2050
J. M. France	2270	H. E. L. Earle	2040
J. Menary	2270		

THE NAVY.

MR. G. H. FOOTE, M.D., and Mr. H. E. L. EARLE, being qualified candidates for the Naval Medical Service, have been appointed to be Surgeons in Her Majesty's Fleet.

The following appointments have been made at the Admiralty during the past week: J. J. M'DONELL, Surgeon to the *Defiance*; C. E. GEOGHEGAN, Surgeon to the *Asia*; E. APTHORP, Surgeon to the *Excellent*, additional; THOMAS H. ATKINSON, Fleet-Surgeon to the *Duncan*, additional; CHARLES C. GODDING, Staff-Surgeon to the *Northampton*, additional, for temporary service; GEORGE H. FOOTE, M.D., and HAMILTON E. L. EARLE, Surgeons, additional, to the *Duke of Wellington*, for Haslar Hospital; JOHN F. BATE, Surgeon to the *Pembroke*, additional; G. E. KENNEDY, Surgeon to the *Royal Adelaide*, additional; J. E. WEBB, M.B., Surgeon to the *Lion*, additional; M. H. ATOCK, M.D., Surgeon to the *Indus*, additional; J. D. A. HARVEY, Staff-Surgeon to the *Boscawen*; ALEXANDER FLOOD, Staff-Surgeon to the *President*, additional, for temporary service.

THE MEDICAL STAFF.

SURGEON-MAJOR G. B. SANDERS is granted retired pay, with the honorary rank of Brigade Surgeon. He entered the service as Assistant-Surgeon, March 31st, 1865; became Surgeon, March 1st, 1873; and Surgeon-Major, March 31st, 1877. Mr. Sanders is without war experience.

The undermentioned Surgeons, on probation, are appointed to be Surgeons:—JOHN STEWART DAVIDSON, M.B., JAMES WILL, M.B., JAMES MOIR, M.B., JAMES FALLON, JOHN VALENTINE SALVAGE, M.B., JOHN FRANCIS SCOTT FOWLER, M.B., ARTHUR RUSSELL ALDRIDGE, M.B., ROBERT ASHTON BOSTOCK, JOSEPH FAYRER, CHARLES POPE WALKER, M.B., CHARLES JOSEPH MACDONALD, M.D., CHARLES JOHN WILLMER TATHAM, THOMAS HARRY FREDERICK CLARKSON, HERBERT WARD AUSTIN, CATHCART GARNER, M.B., ROBERT WALLACE WRIGHT, WILLIAM FREDERICK BAILEY, M.D., EDWIN ECKERSLEY, M.B., REGINALD JAMES COPE COTTELL, JOHN GILLESPIE DEACON, M.D., DAVID MIDDLETON GREIG, M.B., JAMES ROGERS BURROWS, M.D., JOHN KEATLY, DANIEL HENNESSY, M.D., DAVID MICHAEL SAUNDERS, M.D., WALTER KIDDLE, M.B., DENIS MORIARTY O'CALLAGHAN, MICHAEL JOSEPH WHITTY, M.D., HENRY ALFRED CUMMINS, M.D., RICHARD EDMUND KELLY, M.D., JAMES FRANCIS DONEGHAN, JOHN DONALDSON, HUGH BRODERICK MATHIAS, GEORGE BENT, GEORGE HENRY BAREFOOT, FOSTER REUSS NEWLAND, M.B., REGINALD JOSCELYN WINDLE, M.B., ROBERT JOHN DRAPER HALL, EDWARD SWAN MARDLE, CHARLES WILLIAM ALLFORI, M.D., JOHN JOSHUA RUSSELL, M.B., ARTHUR JOSEPH JOHN SIMPSON EDYE, GEORGE SCOTT, M.B., THOMAS BROWNING, ALBERT L. F. BATE, WILLIAM JOHN TROTTER, ANDREW HOSIE, M.B., GEORGE FREDERICK HANDEL MARES, M.D., RALPH HOLYOAKE, ROBERT NAPIER REISE, M.B., JOHN JAMES CARL WATSON, M.D., THOMAS WAITE, M.B., HENRY THOMAS KNAGGS, FERDINAND SIMEON LE QUESNE, VICTOR EDWIN TRAVERS SMITH, M.D., NORMAN SMYTH, M.D., CECIL SPENCER CRONIN, WILLINGTON DOWMAN, RICHARD ERNEST FOOTT, M.D.

The undermentioned gentlemen are transferred from the Bengal Presidency, to do duty as specified:—Surgeon-Major A. MINIO, M.B., Surgeon W. H. BENNETT, M.B., and Surgeon S. C. PHILSON, under the order of the Principal Medical Officer, Burmah Field Force, Mandalay; Surgeons J. OSBURNE and A. E. TATE, at the Station Hospital, Secunderabad, Madras; and Surgeon W. B. DAY, M.B., in the Eastern District, Madras.

Surgeon H. S. PARKER, F.R.C.P. and F.R.C.S.Edin., M.R.C.S.Eng., died on August 1st, at Ferozepore, in the Punjab, at the early age of 28; he was the last surviving son of Major C. W. Parker, late of the 69th Regiment. Mr. Parker entered the service, February 5th, 1881.

THE INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON J. H. THORNTON, M.B., C.B., who entered the service, January 7th, 1856, is promoted to be Deputy Surgeon-General, from June 30th last, *vice* Deputy Surgeon-General A. J. Dale, M.B., whose term of service has expired. Deputy Surgeon-General Thornton served in the Indian Mutiny campaign in 1857-58, and was present in the actions at Benares, Arrah, Jugdespore, and Sooroojpore, the defence of the Alumbagh, the capture of Lucknow, and the operations in Oude and Goruckpore (medal with two clasps, and a year's service). He was engaged in the China war in 1860, and was present at the action of Sinho, the capture of the Taku Forts, and the occupation of Pekin (medal with two clasps); in the campaign on the Cossyah and Jyntiah Hills, where he was wounded at the capture of a stockade; with the Bhootan Expedition in 1865-66, including the recapture of Dewangiri (medal with clasp); in the Egyptian war of 1882 (medal, and Khedive's star); and in the Soudan campaign in 1885, when he was Principal Medical Officer with the Indian contingent (mentioned in despatches, C.B., and clasp).

Surgeon D. F. BARRY, M.D., Bengal Establishment, is appointed to the medical charge of the 15th Native Cavalry, *vice* Surgeon-Major H. P. Yeld.

Brigade-Surgeon J. FAIRWEATHER, M.D., Bengal Establishment, is ordered to officiate as Inspector-General of Prisons, Punjab, during the absence on leave of Surgeon-Major R. Gray, M.B.

Surgeon W. W. WEBB, Bengal Establishment, officiating medical officer Maywar Bheel Corps, is appointed to officiate as Residency Surgeon, Maywar, during the absence on furlough of Surgeon D. Mullen, M.D.

The services of Surgeon-Major C. E. M'VITTIE, Madras Establishment, Medical Officer 3rd Cavalry Hyderabad Contingent, and officiating Residency Surgeon, Hyderabad, are replaced at the disposal of the Military Department.

Surgeon-Major J. H. RITCHIE, Madras Establishment, in medical charge of the district gaol at Tanjore, is appointed to act as Superintendent of that gaol, during the employment of Mr. Cavendish, on other duty.

Surgeon R. H. CAMA, Madras Establishment, is appointed to the medical charge of the 9th Native Infantry, and the station hospital at Port Blair.

Surgeon A. MILNE, M.A., M.B., Bombay Establishment, is directed to act as Professor of Chemistry in the Elphinstone College, in addition to his other duties, during the absence of Surgeon-Major I. B. Lyon.

The services of Surgeon W. H. BURKE, M.D., Bombay Establishment, are replaced at the disposal of the Commander-in-Chief, and he is ordered to proceed on service in Burmah.

Surgeon H. A. F. NAILER, Madras Establishment, is directed to act as Professor of Pathology at the Medical College, during the employment of Surgeon Dymott on other duty.

OBITUARY.

JAMES GOODCHILD WAKLEY, M.D., M.R.C.S.

WITH great regret, we announce the death of Dr. James Wakley, which occurred on Monday last, August 30th, at Heathlands Park, Long Cross, near Chertsey, the country residence of the deceased. He was the youngest of the three sons of the celebrated Mr. Thomas Wakley, for eighteen years M.P. for Finsbury, and for nearly twenty-four years coroner for Middlesex, which latter office is now so important that its duties are at the present day fulfilled by three coroners. Mr. Thomas Wakley will, perhaps, be best remembered in medical circles as the founder of the *Lancet*, of which he remained the editor until his death, in his sixty-eighth year, in 1862. Since then, the proprietors of that paper have been the eldest son, Mr. T. H. Wakley, and the third son, the subject of this memoir; the latter of whom acted as editor until his death. His elder brothers, Mr. Thomas H., and Mr. H. Membury Wakley, survive him.

Dr. James G. Wakley was born in London about the year 1826, and was consequently 60 years old at his decease. His early education was conducted at first privately, then at University College, London; and he received his medical education also at University College. He passed the examination for the M.R.C.S.Eng. in 1849, and graduated as M.D. at King's College, Aberdeen, in 1852. Becoming editor of the *Lancet* in 1862, upon the death of his father, he actively discharged the duties of the post until last Easter, when his severe illness incapacitated him from attendance at the office. Dr. James Wakley's editorial functions naturally gave him an important position in all medical matters, both those relating to the general public, and also those more closely associated with the profession itself; and his death removes a staunch friend both of the public and of the profession. To show how well he served the former, it is only needful to allude to the part which he played in the foundation of the Metropolitan Hospital Sunday Fund; and to the two munificent donations of £1,000 each which he made to the Fund—one in 1885, and the second during the present summer, although the condition on which the latter donation was promised (namely, that four other donors should give like sums before the end of July) was not fulfilled.

For the last three years, Dr. Wakley had suffered from epithelioma of the tongue, for which he had been seen by many members of the pro-

fession. His sufferings, particularly at the last, were very great. Laryngotomy was performed on Monday morning last, but did not long avert death, which occurred somewhat suddenly on the same day. He bore his sufferings with much fortitude, and received the greatest consolation from his firm faith in the tenets of the Christian religion. The members of the staff of the *Lancet*, both past and present, last week presented him with an illuminated address, expressive of their sympathy and esteem, which naturally gave the recipient much satisfaction.

Dr. Wakley's presence was, of course, familiar in metropolitan professional circles. His chief inclinations, however, during his leisure, were in the direction of occupations that compose the outdoor life of an English gentleman. These he thoroughly enjoyed, for he was a keen sportsman. But, although he will be missed in many ways, it is certain that his loss will by none be more keenly felt than by the poor of his neighbourhood, for whose wants and hardships he had ever constant care and consideration. Of him, it might be said, in words which have been applied to his father: "Indeed, in all subjects relating to the poor and helpless, no champion who ever rose for them was more chivalrous than the founder of the *Lancet*. The people were his care. He inquired into the condition of their homes; he sent his commissioners into the workhouses; he supported the parochial medical officers in all that was fair, laudable, and humane." Certainly, in all these respects, the deceased was the worthy son of a worthy father.

For it is probable that his benevolence to the poor will remain to be remembered as his chief characteristic. Men will for long tell, as is now done by those who knew him intimately, of the stream of active benevolence which he constantly dispensed. For instance, he would start off on a Sunday morning on horseback, armed with a large number of orders for groceries, bread, flour, meat, coals, etc., which he would distribute to those whom he considered necessitous. He constantly paid the rents of many poor; and, that they might not altogether lose his benefactions after his decease, he has arranged that the rents of fifty or sixty elderly persons shall be paid during their lives out of his estate.

We are informed that the funeral will take place this day (Saturday) at the parish church of Chobham, at 3 P.M.

CHARLES EVANS, F.R.C.S.Eng., of Bakewell.

Born at Derby in 1816, the youngest son of a large family, Mr. Evans was early entered as a pupil with Messrs. T. and H. Lomas, of Belper, a firm which, for fifty years, turned out a succession of energetic and well-trained practitioners, now scattered over London and the provinces. He studied at University College, London, and passed the examinations at the College of Surgeons and Apothecaries' Hall in 1839.

In 1840, he settled in Winster, where he soon acquired an extensive country practice. In 1852, on the retirement of Mr. Ellis, he removed to Bakewell, and was at once appointed surgeon to the local dispensary. This appointment he held till his death. He was also medical officer to the workhouse. In 1872, he was elected a Fellow of the Royal College of Surgeons.

For many years he had been subject to bilious attacks, which prostrated him for a day at a time; and it was as a consequence of one of these, attended by an attack of diarrhœa, that he succumbed, little more than two days from its commencement. He was a regular attendant at the annual meetings of the British Medical Association, which he much enjoyed. He died on August 1st, and on August 5th was followed to his final resting place, in the picturesquely situated churchyard in the old Peak town, by the local medical men, as well as by four other medical relatives, including the only surviving partner, now over 80, of the firm to which he had, fifty years ago, served his pupilage. He leaves a widow and a numerous growing-up family, and is succeeded in his practice by his eldest son.

MEDICO-LEGAL AND MEDICO-ETHICAL.

COTTAGE HOSPITALS AND CORONERS' FEES.

Sir,—A somewhat similar incident having occurred to me as that quoted in the Journal of August 28th, 1886, by Mr. E. J. Parrott, of Hayes, it may be useful, as a precedent, to mention it.

I was summoned, by the coroner, to give evidence in a case of accidental death, which occurred in the High Wycombe Cottage Hospital, to which I am one of the medical officers. On completing my evidence, I was informed by the coroner, Mr. Charsley, that he was unable to hand me the usual fee, in consequence of my connection with the hospital as surgeon. I protested against it, with the result that the coroner promised to mention the matter at the next meeting of Quarter Sessions. The inquest was held on June 10th, 1882, and on June 26th, Mr. Charsley handed me the fee, saying it was decided, after taking into consideration the fact that my services were gratuitous, and also that the patients paid a small sum towards their maintenance whilst in the hospital, that the county was justified in allowing the ordinary fee. The two cases appear to me identical.—Yours faithfully, Lewis W. Reynolds.

High Wycombe.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, August 26th

Ventilation of the House.—Mr. Plunket, in answer to Mr. R. Cooke, said: The Committee on the Ventilation of the House has been reappointed, and has held its first meeting to-day. I am authorised to state that the Committee is satisfied that it recommendations are now being carried out with as little delay as possible, and I hope that the necessary works will be in the main completed before Parliament reassembles next year.

The Pasteur System.—Sir J. Lubbock asked the President of the Local Government Board what progress was being made by the Committee appointed last session to inquire and report on the subject of M. Pasteur's researches with reference to the prevention of hydrophobia, and whether the report of the Committee would be shortly presented to the House.—Mr. Ritchie: I am informed that considerable progress has been made by the Committee. A subcommittee visited Paris, and had several long interviews with M. Pasteur, who explained to the members most fully and unreservedly the whole details of his treatment. The Committee examined a large number of the persons who had undergone treatment; and, so far as this investigation is concerned, the Committee were fully satisfied that M. Pasteur's treatment had been effective. They hope before long to be in a position to report the results of their investigation to the Local Government Board; but, before doing so, they are most anxious that time should be allowed for the Committee to ascertain that experiments on animals, conducted on behalf of the Committee, have yielded the same results as those detailed and demonstrated to them by M. Pasteur.

Monday, August 30th.

Inoculation for Swine-Fever.—Sir R. Paget asked the Chancellor of the Duchy of Lancaster whether he would be good enough to inform the House what progrees had been made in the scientific investigations by the veterinary staff of the Agricultural Department of the Privy Council with regard to inoculation with attenuated virus in cases of swine-fever, which were ordered to be commenced in the month of May last; and whether he was able to state when the report of Professor Brown on swine-fever, presented to Parliament on June 24th last, would be delivered to members.—Lord J. Manners: The scientific investigations by the veterinary staff of the Agricultural Department of the Privy Council with regard to inoculation with attenuated virus in cases of swine-fever have not yet been commenced, in consequence of the difficulty experienced in obtaining suitable premises (which have to be registered under the Act 39 and 40 Vict., c. 77) in which the investigations are to be carried on, and in obtaining the necessary licence for the performance of the experiments on living animals. The report of Professor Brown on swine-fever, presented to Parliament on the 24th of June last, is in the hands of the printer, and will shortly be issued.

The Metropolitan Asylums Board.—In answer to Mr. Pickersgill, Mr. Ritchie said: It is the fact that the accommodation provided for imbecile children by the Metropolitan Asylums Board is at present insufficient for the needs of the metropolis; but the managers are now extending the schools for imbecile children at Darenth. I understand that the buildings will be completed this summer; and it is expected that, when finished, they will afford the accommodation required for children of this class. The managers have an asylum at Hampstead which is not at this moment occupied; but, in the event of any serious increase of fever in the metropolis, it would, no doubt, be necessary to use that asylum for fever-patients.

Hats and Hygiene.—Apropos of the article which appeared on this subject in our issue of last week, Mr. W. H. Spurgin, of Maryport, writes advocating the use of "Wall's Patent Sanitary Lining" for the prevention of headache and baldness. He has had this material applied both to a felt hat (made of the shape of a skull-cap) and to a "chimney-pot" silk hat, with the most beneficial results. He recommends its general adoption, both by gentlemen and ladies. Mr. D. W. Wall, 2, Camberwell Gate, the patentee, is to be commended for the direction his effort has taken, and apparently with successful results.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE WEEKLY DEATH-RATE.

DR. M. R. O'CONNOR (Limerick) writes: Some years since, I suggested to the Irish Registrar-General that, in place of giving a weekly death-rate per thousand, he would give the average age of those who died during the week. Then a low average would show that zymotic diseases were prevalent, as it is the young who are chiefly attacked, and a high average would show a healthy district, no matter how many died. Thus, when a number of old people die from climatic causes, the death-rate per thousand would lead people to believe that the city was in an unsanitary condition; and so in summer, when zymotic disease may be prevalent, you usually have a low death-rate, the climatic influences being favourable to the old. If the average age at death is adopted, you exclude climatic influence, and so acquire a fair weekly death-rate.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, August 28th, 5,494 births and 3,497 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had been 18.9 and 19.5 per 1,000 in the two preceding weeks, further rose during the week under notice to 20.1. The rates in the several towns, ranged in order from the lowest, were as follow:—Bristol, 13.9; Plymouth, 15.7; Bradford, 16.6; Hull, 17.4; London, 18.3; Bolton, 18.3; Sunderland, 18.4; Huddersfield, 18.8; Blackburn, 19.1; Nottingham, 19.2; Oldham, 20.4; Birmingham, 21.0; Leeds, 21.2; Halifax, 21.3; Norwich, 21.5; Wolverhampton, 21.5; Derby, 21.6; Sheffield, 22.0; Brighton, 22.4; Manchester, 23.7; Portsmouth, 24.1; Liverpool, 24.6; Birkenhead, 24.6; Leicester, 24.7; Salford, 24.9; Cardiff 25.4; Newcastle-upon-Tyne, 25.6; and the highest rate during the week, 26.8, in Preston. The death-rate in the twenty-seven provincial towns averaged 21.5 per 1,000, and exceeded by 3.2 the rate recorded in London, which, as before stated, was 18.3 per 1,000. The 3,497 deaths registered in the twenty-eight towns during the week under notice included 778 which were referred to the principal zymotic diseases, against 717 and 806 in the two preceding weeks; of these, 562 resulted from diarrhœa, 57 from measles, 49 from scarlet fever, 48 from whooping-cough, 35 from "fever" (principally enteric), 27 from diphtheria, and not one from small-pox. These 778 deaths were equal to an annual rate of 4.5 per 1,000. The zymotic rate in London during the week under notice was equal to 3.7 per 1,000, while in the twenty-seven provincial towns it averaged 5.1, and ranged from 0.7 and 1.2 in Plymouth and Huddersfield, to 7.8 in Leicester and in Cardiff, 8.9 in Salford, and 11.8 in Preston. The deaths referred to diarrhœa, which had been 530 and 607 in the two preceding weeks, declined during the week under notice to 562, and showed the largest proportional fatality in Sheffield, Birkenhead, Salford, Preston, and Leicester. The fatal cases of measles, which in the seven previous weeks had steadily declined from 116 to 49, rose again last week to 57, and caused the highest death-rates in Preston and Blackburn. The 49 deaths from scarlet fever exceeded by 17 the number in the preceding week; this disease was proportionally most fatal in Cardiff, Derby, and Salford. The fatal cases of whooping-cough, which had been 33 and 52 in the two preceding weeks, declined to 48, and caused the highest death-rates in Norwich and Preston. The deaths referred to different forms of "fever," which in the two previous weeks had been 44 and 40, further declined during the week under notice to 35, and showed the highest proportional fatality in Cardiff and Portsmouth. The 27 fatal cases of diphtheria slightly exceeded the numbers returned in recent weeks, and included 22 in London, and 2 in Liverpool. No death from small-pox was registered during the week under notice, either in London or in any of the twenty-seven provincial towns. No small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals during the week. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.0 per 1,000, and was slightly below the average. The causes of 68, or 1.9 per cent., of the 3,497 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

IN the eight principal Scotch towns, having an estimated population of 1,233,977 persons, 852 births and 436 deaths were registered during the week ending Saturday, August 28th. The annual rate of mortality, which had been 17.4 and 17.9 per 1,000 in the two preceding weeks, declined again during the week under notice to 17.7, and was 2.4 per 1,000 below the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 13.1 in Perth, 13.7 in Dundee, 14.8 in Leith, 16.5 in Edinburgh, 18.6 in Glasgow, 19.5 in Greenock, 19.9 in Aberdeen, and 23.4 in Paisley. The 436 deaths registered during the week in these Scotch towns included 36 which were referred to diarrhœa, 19 to whooping-cough, 16 to scarlet fever, 6 to "fever," 3 to measles, 3 to diphtheria, and not one to small-pox; in all, 83 deaths resulted from these principal zymotic diseases, against 68 and 72 in the two preceding weeks. These 83 deaths were equal to an annual rate of 3.4 per 1,000, which was 1.1 below the average zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic death-rates in the Scotch towns during the week under notice were recorded in Leith, Paisley, and Glasgow. The deaths referred to diarrhœal diseases, which had been 18 and 23 in the two preceding weeks, further rose during the week under notice to 36, of which 14 occurred in Glasgow, 5 in Dundee, and 4 in Paisley. The fatal cases of whooping-cough showed a decline of 5 from the number in the previous week, and included 16 in Glasgow. The deaths from scarlet fever which had declined in the three preceding weeks from 15 to 8, rose again last week to 16; 12 occurred in Glasgow, and 2 in Edinburgh. The 6 fatal cases of "fever," showed a slight further increase upon recent weekly numbers, and included 3 in Glasgow, and 2 in Paisley. The 3 deaths referred to measles showed a decline of 9 from the number in the preceding week, and included 2 in Leith. Of the 3 fatal cases of diphtheria, 2 occurred in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 2.8 per 1,000, against 2.0 in London. As many as 42, or 14·1 per cent., of the 436 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

IN the week ending August 21st, the total number of deaths registered in the sixteen principal town-districts of Ireland was 346. The average annual death-rate represented by the deaths registered was 20.8 per 1,000. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 0.0; Belfast, 27.0; Cork, 18.6; Drogheda, 8.5; Dublin, 21.4; Dundalk, 21.8; Galway, 20.2; Kilkenny, 4.2; Limerick, 14.8; Lisburn, 19.3; Londonderry, 23.2; Lurgan, 25.7; Newry, 14.6; Sligo, 9.6; Waterford, 6.9; Wexford, 25.7. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2.7 per 1,000, the rates varying from 0.0 in ten of the districts to 5.1 in Lurgan; the 5 deaths from all causes registered in that district comprising 1 from whooping-cough. The 115 deaths from all causes registered in Belfast comprised 1 from scarlatina, 1 from whooping-cough, 1 from ill-defined fever, and 16 from diarrhœa; and the 21 deaths in Cork comprised 1 from scarlatina and 1 from enteric fever. In the Dublin Registration District, the deaths registered during the week amounted to 148. Twenty-five deaths from zymotic diseases were registered in Dublin; they comprised 1 from measles, 4 from scarlatina, 2 from typhus, 1 each from whooping-cough, diphtheria, and ill-defined fever, 2 from enteric fever, 8 from diarrhœa, 1 from dysentery, etc. Twelve deaths from diseases of the respiratory system were registered; they comprised 7 from bronchitis and 2 from pneumonia. The deaths of 12 children (including 9 infants under 1 year old) were ascribed to convulsions. Twelve deaths were caused by diseases of the brain and nervous system (exclusive of convulsions), and 10 by diseases of the circulatory system. Phthisis caused 21 deaths, mesenteric disease 5, and cancer 5. Three accidental deaths were registered. In 18 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

IT appears from statistics published in the Registrar-General's return for the week ending August 14th, that the annual death-rate recently averaged 26.1 per 1,000 in the three principal Indian cities; it was 17.3 in Calcutta, 23.9 in Bombay, and 34.3 in Madras. Cholera caused 4 deaths in Calcutta, measles 14 in Bombay, and diarrhœal diseases 68 in Madras; the mortality from "fever" showed the largest excess in Bombay. According to the most recently received weekly returns, the annual death-rate averaged 26.6 per 1,000 persons estimated to be living in twenty-two of the largest European cities, and exceeded by as much as 7.7 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 27.1, and slightly exceeded the rate in the preceding week; the 483 deaths included 14 from scarlet fever, 10 from typhus and typhoid fever, and 120 from diarrhœal diseases. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 25.7, and ranged from 23.5 in Stockholm, to 31.8 in Christiania; diphtheria and croup caused 6 deaths in Copenhagen, and 5 in Christiania; and diarrhœal diseases were fatally prevalent both in Stockholm and Christiania. In Paris, the death-rate was equal to 22.2, and exceeded the rate that prevailed in London by 2.3; the deaths included 28 from typhoid fever, and 146 from infantile diarrhœa. The 233 deaths in Brussels, of which as many as 68 resulted from diarrhœal diseases, gave a rate of 28.0. In Geneva the rate of mortality did not exceed 10.8, and only 1 death from zymotic disease was recorded. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 21.8, the several rates being 17.8 in Rotterdam, 22.5 in Amsterdam, and 25.1 in the Hague; measles caused 5 deaths in the Hague, and 2 in Amsterdam. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 29.6, and ranged from 20.7 in Vienna, and 27.2 in Hamburg, to 32.0 in Dresden and 33.8 in Buda-Pesth. Small-pox caused 17 deaths in Buda-Pesth, and 5 in Prague; diphtheria was proportionally most prevalent in Hamburg and Breslau; while the mortality from diarrhœal diseases was excessive in Berlin, Breslau, and Munich. In Venice the death-rate was equal to 30.0; the 84 deaths included 9 cases of cholera, against 6 and 12 in the two preceding weeks. The rate of mortality was as high as 53.9 in Cairo and 57.3 in Alexandria; diarrhœal diseases caused 159 deaths in Cairo and 75 in Alexandria; typhoid fever 18 deaths in Cairo and 5 in Alexandria. In three of the largest American cities, the recorded death-rate averaged 31.3, and ranged from 23.4 in Baltimore to 34.3 in New York. Diarrhœal diseases showed very fatal prevalence in each of these American cities, and diphtheria caused 21 deaths in New York and 14 in Brooklyn.

It appears from statistics published in the Registrar-General's return for the week ending August 28th, that the annual death-rate recently averaged 27.8 per 1,000 in the three principal Indian cities; it was 18.6 in Calcutta, 23.0 in Bombay, and 41.5 in Madras. Cholera caused 7 deaths in Calcutta, measles 8 in Bombay, and the greatest mortality from "fever" occurred in Madras. According to the most recently received weekly returns, the annual death-rate averaged 25.9 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded by 5.8 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 27.5, and showed a decline from the rate in the preceding week; the 490 deaths included 15 from scarlet fever, 8 from typhoid fever, and 104 from diarrhœal diseases. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 24.4, and ranged from 23.4 in Stockholm, to 25.8 in Christiania; small-pox caused 2 deaths in Copenhagen, diphtheria and croup 7 in Christiania, while diarrhœal diseases were fatally prevalent in each of these three cities. In Paris, the death-rate was equal to 21.2, and exceeded the rate that prevailed in London by 2.9; the deaths included 23 from typhoid fever, 10 from diphtheria and croup, and 153 from infantile diarrhœa. The 173 deaths in Brussels, of which 41 resulted from diarrhœal diseases, gave a rate of 20.7. The rate in Geneva was 18.7. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 20.8, the several rates being 13.6 in Rotterdam, 22.9 in the Hague, and 23.5 in Amsterdam; measles caused 8 deaths in the Hague, 3 in Amsterdam, and 2 in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 28.6, and ranged from 22.3 and 26.4 in Vienna and Hamburg, to 32.4 and 33.5 in Breslau and Buda-Pesth. Small-pox caused 14 deaths in Buda-Pesth, 8 in Prague, and 2 in Vienna; 23 deaths were referred to diphtheria in Berlin, and diarrhœal diseases were fatally prevalent in most of these cities. The mean death-rate in three of the principal Italian cities was 26.2, the rates ranging from 24.6 in Rome, to 28.9 in Venice; small-pox caused 5 deaths in Rome, scarlet fever 4 in Turin; and the fatal cases of cholera in Venice, which had declined from 12 to 7 in the three previous weeks, increased to 20 during the week ending August 7th. The death-rate was 54.6 in Alexandria, and 58.0 in Cairo; diarrhœal diseases caused 150 deaths in Cairo, and 71 in Alexandria; and typhoid fever 19 deaths in Cairo and 3 in Alexandria. In

four of the largest American cities, the recorded death rate averaged 28.4, ranging from 22.4 in Philadelphia to 34.1 in New York. Diarrhœal diseases were very fatally prevalent in all these American cities; diphtheria caused 28 deaths in New York, and typhoid fever 10 deaths in Philadelphia and 9 in Baltimore.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

HALIFAX.—Mr. Ainley devotes a considerable portion of his Annual Reports for 1884 and 1885, to the working out of various rates of mortality in the boroughs during the year. In the result, he shows that from all causes the death-rate for 1884 was no less than 23.4 per 1,000 of the population, inclusive of a mortality from zymotic diseases at the rate of 2.41 per 1,000. These figures are not, as Mr. Ainley admits, altogether satisfactory, but they go to prove the uselessness of relying on the statistics of any single year as an estimate of the general healthiness or otherwise of a district. The statistics for 1885 are somewhat more favourable, the death-rates being respectively 19.5 and 1.1 per 1,000. Six and seven per cent. respectively of the deaths during 1884 and 1885 were uncertified—an exceptionally large proportion—although somewhat lower than that for either of the two preceding years. There was a wide difference in the mortality from measles and diarrhœa in the two years under notice. In 1884 there was marked prevalence of each disease, and the 57 deaths from measles (out of some 2,000 cases) considerably exceeded the aggregate number returned in the six previous years; while in 1885 there was not a single death from that cause, and there was also a diminution in the deaths from diarrhœa. In the earlier report, Mr. Ainley had reason to condemn the practice of some people in Halifax of treating fever patients at home until recovery is almost hopeless, and of then "rushing off to the authorities to relieve them of their troubles by taking a half-dead patient into hospital." He points out that for the sake of the patient as well as of others, the sooner a person attacked is in the hospital the better. He gives an instance in which a man stayed at home to nurse his wife, forfeiting thereby double the amount he would have had to pay if he had sent her into the hospital; and, worse than this, one of his children took the disease and died. The advice then given was acted upon last year, and patients were sent in when there was a reasonable chance of doing them good, and the result is that the death-rate from typhoid fever has been reduced from 30.4 per cent. to a little over 6 per cent.

LLANELLY RURAL DISTRICT.—An unusually large number of scarlatina outbreaks, and the almost constant presence of typhoid fever, form the special subjects of Dr. J. Raglan Thomas's report for 1885. There was no extensive outbreak of the latter disease, unless a number of cases be grouped, which occurred in one neighbourhood, but apparently had separate causes. In many instances the wells were found in a bad state, or dangerously liable to be poisoned, and the sale of milk from fever-infected houses, had to be forbidden, though in no case was the spread directly traced to milk. An epidemic or series of outbreaks of scarlatina in the Berwick district, was very tedious, dragging over several months. When first reported, more than a fortnight had elapsed from the commencement of the disease, and numerous cases had resulted; moreover, Dr. Thomas is of opinion that the delay in closing the schools, which had quickly become the foci of disease, largely discounted his efforts in preventing its spread. In a previous epidemic, where the conditions as to notification were the same, but the schools were at once closed, the effect was immediate and striking. A tabulated list, summarising the causes, distribution, and extent of the principal zymotic outbreaks, is both instructive and interesting. In about half the number, the disease was confined to a single case; in a still larger proportion to one family. The deaths from these causes numbered 42, of which scarlatina claimed 19, and typhoid fever 11 victims. The gradual improvement in the rate of mortality is indicated by the decrease from year to year, that for 1885 of 14.90 per 1000, being the lowest yet recorded.

BRADFORD.—Dr. Whiteside Hime is abundantly justifying his selection by the Town Council of Bradford as health officer of this important manufacturing town. His report for 1884 must surely carry conviction even to the least impressionable of councilmen and ratepayers. He uses the completion of ten years of hygienic work under the Public Health Act as the text for a masterly and most interesting retrospect of the improvements effected in the sanitary state of the borough since 1875. The death-rate of the population from all causes for 1884 was equal to 20.1 per 1,000, as compared with 21.3 and 18.3, the respective rates for each of the two preceding years, and 22.4, the mean rate for the preceding ten years. Compared with the other large towns of England, this is the lowest death-rate recorded, next to Bristol. The zymotic death-rate of 2.5 is also the most favourable, next to Bristol. During the past ten years, the mortality from these diseases in Bradford has only been as low on three occasions as it was in 1884, and the mean rate was 3.1 per 1,000. In the two halves of the decade, it was respectively 3.5 and 2.6 per 1,000, so that during the latter half there has been a considerable decrease in the deaths from zymotic diseases. Dr. Hime notes with satisfaction that consumption, a chronic, infectious disease which causes over 400 deaths a year in Bradford, declined 16 per cent. during 1875-79. Since 1874, it has killed 5,275 persons, and in 1884 alone it caused 457 deaths. The high rate of mortality among wool and worsted workers makes consumption specially deserving of notice in the West Riding. Dr. Hime appends to his remarks on this subject a useful table of precautions against the spread of this disease. He particularly deals with its infectious nature, and urges that the public should be made better acquainted with this fact and with the means for its prevention. Three deaths occurred from woolsorters' disease. As they excited considerable interest, and with a view to prevent the recurrence of such cases, a code of precautionary regulations was drawn up by Dr. Hime, and agreed to by the Sanitary Committee, the Council of the Borough, and the manufacturers and woolsorters. No doubt, deaths attributed to other causes, notably blood-poisoning, are not seldom due in this district to the effects of specifically-infected wool. In an able article on the prevention of diseases, Dr. Hime brings strongly into relief the indifference of the public as to the propagation of disease from their homes. He also contrasts the stringency of the sanitary measures adopted in the case of disease among animals, with the apathy shown in the protection of their masters. "Were human lives valued as highly as cattle, and equally energetic steps taken to protect them, there would be an enormous saving in disease, misery, and deaths." The sanitary condition of factories, schools, etc., has been treated with unusual care in this report, though Dr. Hime complains of the want of knowledge of hygiene among the inspectors, and thinks the work could be more successfully carried out by the sanitary authority. There is great need of improvement in the matter of smoke abatement. The burial grounds give also grave cause for anxiety, 107,800 persons having been buried, within or immediately adjacent to the borough, during a little over thirty-three years.

HOSPITAL AND DISPENSARY MANAGEMENT.

WILTS COUNTY ASYLUM.

THIS is one of the comparatively few institutions from which there is no cry of increasing numbers, or of overcrowding. The admissions in 1885 were 28 fewer than in 1884, while there was an increase of 15 in the number of deaths; the total number remaining on December 31st, 1885, was 621, as compared with 642 at the beginning of the year. There were vacant beds for 25 men and 28 women; it is proposed to use some at least of this spare accommodation for the reception of "out-county patients." With reference to the diminished number of admissions, Mr. Bowes remarks: "An asylum population always varies by fits and starts; and it would not, on these figures, be right to pronounce a decrease of insanity in the county. The most favourable feature in the decrease is noticeable in its continuance, there having been a gradual falling off for three successive years. Probably, there has been a greater reluctance to send cases to asylums; and this is, no doubt, due to a fuller recognition of the responsibility incurred, and risk run, in making orders for admission." Only too many medical superintendents will sympathise with Mr. Bowes in his complaint that "the medical certificates, in many cases, were extremely weak, and showed a want of care in conducting the examination, or an inability to state facts; and one case had to be discharged, and re-certified, for this reason." It is, perhaps, not entirely the fault of medical practitioners that they sometimes examine a case of supposed insanity without having a definite idea of what they should look for, or of the accurate meaning of many of the words which they use in their certificates.

The recoveries in 1885 were 34 per cent. of the admissions. The death-rate was rather high, being 12.2 per cent. of the average numbers resident. During the thirty-four years the asylum has been open the average annual death-rate has been 11.2 per cent.

The water-supply of this institution can scarcely be regarded as satisfactory; and we are glad to find that the matter is receiving the attention of the committee. The sole source of supply is a well, only sixty feet deep, which must evidently be chiefly fed by surface-drainage, and which was at times during the year pumped almost dry. When it is added, that there appears to be some risk of contamination from the asylum sewage-farm, we think enough has been said to show the desir-

ability of resorting to some other source of water-supply. The rate of maintenance here is very low, being only 7s. 7d. a week per head. There are several reasons why no attempt should be made to reduce this any further, not the least important being the consideration that, the lower the rate of asylum-maintenance is reduced, the greater is the inducement to secure the 4s. grant by sending chronic cases from the workhouses. Beer is still included in the dietary of patients and attendants. In our opinion, three pints of beer for male attendants, and two pints for nurses, is an undesirably large daily allowance. From the statistical tables, we miss Tables I A and II A. Tables VI, VIII, IX, and XI are incomplete.

MEDICAL NEWS.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, August 26th, 1886.

Boxall, Frank, 19, Oakley Square, N.W.
Brodie, Frederick Carden, Fernhill Park, Wootton, Isle of Wight.
Haring, Nathan Charles, 334, Upper Brook Street, Manchester.
Hounsell, Frederick Claud Wright, Woodlands, Torquay.
Jennings, Edgar, 21, Sherriff Road, West Hampstead, N.W.
Miller, Frederic Richard, Ivy House, West Firs, Hants.
Orton, Francis Joseph Johnson, Vine Cottage, Longford, near Coventry.
Sawell, Frank Leslie Pownall, 39, Royal Crescent, Holland Park, N.
Tidey, Stuart Alexander, Glenely, Springfield Park, Acton, W.

At the recent examination for the competitive examination for the Prizes in Materia Medica and Pharmaceutical Chemistry, annually given by the Society, the following were the successful candidates.

Toller, Seymour Graves, of St. Thomas's Hospital, The Gold Medal.
Cowen, Thomas Philip, of St. Thomas's Hospital, The Silver Medal and Books.

MEDICAL VACANCIES.

The following vacancies are announced.

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House-Surgeon. Salary, £65 per annum, with board, etc. Applications by September 13th to the Secretary.

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester Street, Warwick Square.—House-Surgeon. Applications by September 4th to the Senior Physician at the Hospital.

BRECON INFIRMARY.—Resident House-Surgeon. Salary, £80 per annum, with board, etc. Applications by September 15th, to W. P. Price, Esq., 6, Bulwark, Brecon.

BRISTOL GENERAL HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications by September 8th to the Secretary.

BRISTOL ROYAL INFIRMARY.—Assistant Resident Medical Officer and Pathologist. Salary, £80 per annum, with board, lodging, and washing. Applications by September 10th to the Secretary.

COUNTY DOWN INFIRMARY.—Registrar, Compounder of Medicine, and Assistant to Surgeon. Salary, 60 guineas, with board, fuel, and washing. Candidates must have a diploma in surgery. Election on September 11th.

GENERAL HOSPITAL, Birmingham.—Four Assistant House-Surgeons. Residence, board, and washing. Applications by September 11th, to H. Fox, Esq.

GENERAL HOSPITAL, Birmingham.—Resident Medical Assistant. Residence, board, and washing. Applications by September 11th, to H. Fox, Esq.

HOSPITAL FOR WOMEN, Soho.—House-Physician. Salary £75 per annum, with board, etc. Applications by September 18th, to D. Cannon, Esq.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Board and lodging. Applications to C. W. Carver, Esq.

LONDON HOSPITAL.—Physician. Personal application on September 7th.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer. Salary, £150 per annum, with board and residence. Applications by September 18th, to the Chairman of the Board.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer. Salary, £150 per annum, with board and residence. Applications by September 18th, to the Chairman of the Board.

QUEEN'S COLLEGE, Belfast.—Professorship of Surgery. Applications to Under-Secretary, Dublin Castle, on or before September 7th. The gentleman elected will have to enter upon his duties early in October.

RICHMOND HOSPITAL, Surrey.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by September 13th to G. C. Rowland, Esq.

ROYAL BERKS HOSPITAL, Reading.—Assistant House-Surgeon. Board and lodging. Applications by September 14th to J. T. Hugo, Esq.

ROYAL UNIVERSITY OF IRELAND.—Medical Fellow. Salary not to exceed £100 per annum, and appointment to last for seven years. Applications to Secretaries of University on or before October 1st.

ST. PETER'S HOSPITAL FOR STONE.—House-Surgeon. Honorarium 25 guineas, with board, lodging, and washing. Applications by September 25th, to W. E. Scott, Esq.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay.—Junior House-Surgeon and Dispenser. Salary, £90 per annum, with board, lodging, and attendance. Applications by September 4th to W. H. Kitson, Esq., Shiphay, Torquay.

TYRONE COUNTY INFIRMARY.—House-Surgeon. Particulars on application to Dr. Thompson, Omagh, co. Tyrone.

WESTMINSTER HOSPITAL.—Assistant Surgeon. Applications by September 21st, to S. M. Quennell, Esq.

WESTMINSTER HOSPITAL.—Aural Surgeon. Applications by September 21st to S. M. Quennell, Esq.

WESTERN GENERAL DISPENSARY, Marylebone Road.—House-Surgeon. Salary, £120 per annum, with residence, fuel, and attendance. Applications by September 6th to the Secretary.

MEDICAL APPOINTMENTS.

EVANS, W. G., F.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Convalescent Home, Cheadle, Manchester, *vice* W. W. Jones, M.B., resigned.

HORNE, T., L.R.C.S., L.R.C.P.Ed., appointed Medical Officer for the Stockton District and the Workhouse of the Stockton Union.

LEWERS, A. H. N., M.B.Lond., appointed Examiner by the Society of Apothecaries, *vice* R. Fowler, M.D., deceased.

LICHFIELD, J. W., L.R.C.P.Lond., appointed Resident Clinical Assistant to the Birmingham Borough Asylum, *vice* J. S. Law, M.B., resigned.

LOGAN, J. R., M.B., C.M., appointed Honorary Assistant Medical Officer to the Liverpool Infirmary for Children, *vice* P. Davidson, M.A., M.B., appointed Honorary Physician.

LYDEN, M. A., L.R.C.P., appointed Medical Officer to the Spiddale Dispensary, Galway, *vice* T. B. Brodie, L.R.C.P., resigned.

MACKAY, A., M.B., C.M., appointed Junior House-Surgeon to the Ancoats Hospital, Manchester, *vice* J. T. Winter, L.R.C.P.&S., resigned.

MATHESON, Augustus A., M.D., appointed Assistant Medical Officer to the Edinburgh Provident Dispensary, *vice* T. Bairstow, L.R.C.P.&S.Ed., resigned.

OPENSHAW, T. H., M.B.Durh., M.R.C.S., appointed Assistant Demonstrator of Anatomy to the London Hospital Medical College, *vice* F. C. Vinrace, M.D resigned.

WALES, Arthur Wellesley, L.R.C.S. and L.R.C.P.Ed., appointed House-Surgeon to the County Antrim Infirmary.

WHISHAW, R., B.A., M.B.Cantab., M.R.C.S., appointed Resident Clinical Assistant to the Hospital for Consumption, Brompton, *vice* G. Melson, M.B., resigned.

WHITE, E. A., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Fifth District of the Leeds Union.

WILLIAMS, H. L., M.R.C.S., L.R.C.P.Edin., appointed Assistant Medical Officer to the Monsall Fever Hospital (Manchester Infirmary), *vice* J. D. Howe, M.R.C.S., L.S.A., resigned.

WOODWARD, W., M.D.St.And., M.R.C.S., appointed Medical Officer for the Third District of the Worcester Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

BIRTHS.

MORIER.—At Nairne, South Australia, on June 19th, the wife of C. G. Drummond Morier, L.R.C.S.I. and L.K. and Q.C.P.I., of a daughter.

THATCHER.—At 13, Albany Street, Edinburgh, on July 30th, the wife of Charles H. Thatcher, F.R.C.S.E., of a daughter.

DEATHS.

CARTER.—On August 26th, at 21, Temple Row, Birmingham, Constance Mary, the dearly loved wife of Alfred H. Carter, M.D.

GREANY.—At Mallow, County Cork, on August 25th, Michael Upington Greany, Staff-Surgeon R.N., retired list.

SMITH.—On August 22nd, at Bournemouth, George Smith, of the Coombe, Westbury-on-Trym, Bristol, aged 59.

ROYAL METEOROLOGICAL SOCIETY.—The usual monthly meeting of this Society was held on Wednesday evening, August 17th, at the Institution of Civil Engineers, Mr. W. Ellis, President, in the chair. The President gave a historical sketch of the barometer. After remarking on the accidental nature of the discovery of the instrument, in 1643, he gave a brief account of many early kinds of barometers, the first endeavour being, in consequence of difficulties experienced with the ordinary mercurial form, to enlarge the scale of variation. The desire to experiment on elevated positions, induced the construction of an early form of portable barometer; one such, with cistern completely closed, leaving the air to communicate through the pores of the wood, having been made above 200 years ago. The President further described various points in the arrangement of the Ramsden, Gay Lussac, and other barometers, including also mention of some modern patterns of long-range barometers, standard barometers, and such barometers as are more commonly used. The practice of driving out air from the mercury by heating or boiling appears to have been in use early in the last century. Engraved plates, indicating the weather to be expected, with different heights of the mercury, were used as early as 1688. Reference was made to the employment of water (as in the well-known Royal Society barometer) and other liquids instead of mercury, also to various kinds of floating and other barometers, not at all, or not entirely mercurial, and to metallic barometers. The President concluded his account with a sketch of the history of recording barometers or barographs, including a notice of the application of photography and electricity to recording purposes.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30; Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

EFFECT OF SHARP-POINTED BOOTS.

MR. J. R. PURDY (Oulton, Leeds) writes: Having a patient suffering from wearing sharp pointed boots, I would be glad to know where I could get stockings made to fit the toes, also where one could get a slide put in a boot to keep the great toe straight.

EDUCATION OF YOUNG CHILDREN.

TENAX, F.R.C.S.Ed., asks for information as to the best paper or book on "The education of young children, including the kindergarten system, from a medical aspect."

M.R.C.S. asks: Whether any member can tell him if there is any paying hospital or institution which will receive an advanced case of coxalgia in a lad 15 years of age. The boy wants careful nursing and attendance.

ANSWERS.

A QUESTION OF TREATMENT.

IN answer to M.B.A. (JOURNAL, August 28th, page 444), M.D. writes: As long as the constipation continues, there will, of course, be an increasing tendency to an aggravation of matters. After a hospital experience of some years in treating children, I have found nothing so generally useful in bad conditions of nutrition, with constipation, enlarged tonsils, poor appetite, and pulmonary weakness, as cod-liver oil. Under its administration the constipation is usually relieved within a day or two, and the assimilative functions are supplied with that, without which it is supposed cell-growth cannot go on. The best form for administration of cod-liver oil, is the Kepler solution of oil in malt-extract, which children usually like. It may be possibly found advantageous to give simultaneously one-hundredth of a grain of corrosive sublimate, in bitter infusion, with ammonia, as a powerful alterative tonic.

MR. P. G. LEWIS (Folkestone) recommends M.B.A. to try a juicy pear or other fruit, followed by a half-hour's walk before breakfast. If this be insufficient, he can confidently recommend the extractum cascaræ sagradæ liquidum.

[illegible] SEA-VOYAGES.

G. F. R. asks for information as to the best book or books to consult in regard to a sea-voyage for a patient with a weak chest.

*** Short notices of sea-voyages are to be found in *Otter*, and other books on health-resorts, also in the neat little guide-books to the Cape and to Australasia. An useful set of papers by a ship-surgeon appeared in the *Practitioner* about three years ago; we believe they were republished in a single volume. A German book on sea-voyages has lately been published, but we have not seen either of these works.

THE CAUSE OF HERNIA.

MR. E. SCUDAMORE ANGOVE (Rugby) writes: With respect to a paragraph in the JOURNAL of August 21st, on a supposed cause of hernia, I must say that I cannot agree with M. Aubert, as to the cause of the frequency of hernia amongst the natives of le Bocage. I practised for some years in Cornwall, where one finds high hedges and small fields. I expect there is as much climbing and jumping over them done as over any hedges in any other part of the world. A large proportion of the labouring classes there are miners; their work is heavy, and necessitates much straining. I did not find hernia more frequent than one would expect, considering the work done. My impression is, that hernia is hereditary, to a much greater extent than is generally supposed.

NOTES, LETTERS, ETC.

BONE-SETTERS.

MR. C. S. REDMOND (Gateshead) writes: On August 17th, when visiting a patient who had recently been confined, I was asked to look at a child, aged 3 years, who, I was informed, had fallen down the doorsteps (three in number) and hurt her elbow on the previous day. I found a bran poultice had been applied over night. On examination, I noticed considerable swelling around the joint, but was unable to find any evidence of luxation or fracture, and told the parents so. All natural movements of the joint were practicable—though causing considerable pain—flexion causing the most, and extension the least. I ordered an evaporating lotion, containing liniment of belladonna, to be constantly applied, and the arm to be placed in a sling. I saw the case again on the 19th, there still being a good deal of swelling. I called again on the 21st, and was told the child was out, and was getting much better. On calling on the 24th, the father informed me that, as he could see that the child's arm was not right, he had taken it, yesterday, to a local bone-setter, who had put it right, and, further, told him that the medical man who had been attending should go back to college to learn his business, and to tell him he had said so. I at once offered to take the child and father, in a cab, to a leading Newcastle consulting surgeon, or else to bring one, to see the child, and give his opinion without any previous consultation or examination with me; and, further, offered to pay his fee if his opinion differed from mine. This was declined, the reason given being that "the arm was all right now, and, of course, another medical man would say so."

Have I any remedy as against this bone-setter? Is there no law to punish him, for what is practically acting as an illegal practitioner, besides using language of a libellous nature against a duly qualified surgeon?

It is impossible for me to estimate the amount of injury which may accrue to my professional reputation from the circulation of such a statement, as the patient keeps a "bar," and no doubt the circumstances will be freely discussed by the frequenters thereof, and we never can know with what additions and exaggerations.

Our correspondent should consult his legal adviser as to the proceedings, if any, to be taken with respect to the expressions used by the bone-setter. There is no law to prevent practice by bone-setters, as long as they do not use titles implying that they are duly registered practitioners of medicine.

STATE HONOURS FOR THE MEDICAL PROFESSION.

MR. J. R. HUMPHREYS (Shrewsbury) requests a correction of our report of his remarks, in bringing forward the memorial regarding State honours for members of the medical profession (JOURNAL, August 21st, page 366). In reference to

the illness of the Prince of Wales, he remarked that "Sir William Jenner, who was the Prince's chief adviser, instead of being made a Peer, was awarded a K.C.B. only. Sir W. Gull had a baronetcy conferred on him."

An Appeal.

Mr. W. Brook (Fareham) writes: Will you insert the following list of subscriptions received since the last list published in aid of the Rawle fund? For full particulars of this distressing case see Journal of July 3rd. With a little more help I hope to save him from ending his days in the Union-House.

Miss Greene, £5; W. H. Deene, Esq., £1 1s.; E. Goble, Esq., coroner, £1 1s.; — Kirswell, Esq., 10s.

Medical Defence.

At the Brighton meeting a Provisional Committee was constituted to work on the above question, and I was appointed Honorary Secretary, *pro tem.* I shall be glad to add the names of any members of the British Medical Association to the Committee, a meeting of which will be held shortly.

Harpurhey, Manchester. William Armstrong.

A Correction.

In the Section of Public Medicine, of the British Medical Association, at Brighton, the Rev. Dr. Merille de Colleville, representative of the Royal Society of Public Medicine of Belgium, read, on August 13th: 1. An address on behalf of that Society. 2. A paper, chiefly statistical, showing the advantages Continental Europe derived from Vaccination, since the year 1796 up to the present time. The name of this delegate should have been mentioned, as that of a visitor, in the list published at page 431.

Medical Work among the Gonds.

Mr. W. Johnson (Jabalpur, Central India) writes: In thanking you for your notice in the issue of July 10th, of my report of work under the above heading, may I call your attention to a little slip in regard to the results of cataract operations?

In my pamphlet, the cases of suppuration and destruction of sight were given as 2 in a total of 52, which would equal about 3.8 per cent., and not 7 cases, as you have given it, which would be about equal to 13.4 per cent., a result which I should hold to be utterly inexcusable in these days of antiseptic surgery, even when obtained among such a notoriously dirty people as the Gonds are, and under the rough conditions of itinerating.

Royal College of Surgeons of England.

The following were the questions in Physiology and Anatomy submitted to the candidates at the recent primary examination for the membership. Candidates were required to answer at least four questions in each department.—*Physiology.* Wednesday, June 30th. 1. Describe the Muscular Structures contained within the Eyeball, their relations to the nervous system, and their functions. 2. Give an account of the changes undergone by Nitrogenous Food in the Alimentary Canal. How are the products absorbed, and what is their destination in the organism? 3. Give the Structure and Development of a Long Bone. 4. What are the forces by which the Circulation of the Blood is maintained? Describe their mode of action. 5. Describe the Microscopical Structure of the Lung. What are the changes which occur in the Air and Blood respectively in Respiration? How are these changes effected? 6. What is meant by the term Inhibition? Give examples of its occurrence.—*Anatomy.* Friday, July 2nd. 1. Describe the Trachea, and give its relations to surrounding parts. 2. Give the dissection to expose the whole of the Brachial Artery. 3. Give the origin, insertion, and nerve-supply of the various Muscles acting on the Thumb. 4. Describe the Corpus Callosum, giving its connections, and the arrangement of its fibres. 5. Describe the Structures found in a typical Intercostal Space. 6. Describe the formation of the Sacro-sciatic Foramina, and give the relative position of the structures passing through each.

The "Strangers' Cold."

Mr. R. Augustine Chudleigh writes: Under its Maori name of murri-murri, I have been for eighteen years much interested in the St. Kilda cold, and everything connected with it. When Boswell and Johnson visited the Hebrides, in 1773, the disorder was evidently an article of popular belief, though the medical man himself had as little respect for the mysterious cold as for the Rev. Kenneth McAulay, who vouched for its existence. In *Tour to the Hebrides*, Boswell says, at page 126, that, from his conversation, Dr. Johnson was persuaded that McAulay was not capable of writing the book on St. Kilda, which goes by his name. And, at page 343, he waxes merry over the idea of people catching cold merely because strangers came; for, says he, if one stranger gave them one cold, two would give them two colds, and a shipload would kill them. He further adds that the evidence was not adequate to the improbability of the thing; and not till a physician should go to St. Kilda and report the fact, would he believe in its existence.

It appears from your Journal that several physicians have visited St. Kilda since 1773, but they have not quite settled the question of *cnatan na gall* either way. May I, therefore, cite the case of the island of Wharekauri, one of the Chatham group, about 480 miles east of New Zealand, nearly at the antipodes of St. Kilda, where, under the name of murri-murri, an identical disorder, with a similar alleged origin, is now frequent. In its main features, murri-murri is indistinguishable from a severe influenza cold. Its invasion may occupy four hours; the patient remains "intensely miserable" for about four days, when the disorder gradually dies away. No period of incubation precedes, and no permanent effects are observed to follow. One attack does not preclude the recurrence. All Europeans residents, as well as Maori and Murriori natives, are liable to the disorder. In order to be infected, a person need not know that a ship has come; indeed, the mere appearance of murri-murri is proof to the inhabitants—even at certain parts of the island, which is thirty miles long,—that a ship is in port, insomuch that, on no other evidence, people have actually ridden off to Waitangi to fetch their letters. There is a hill, whence one can see across the island into Waitangi Bay; and people are wont to climb this hill, and scan the bay for a ship, on no other evidence than the occurrence of murri-murri. It is very curious that the name of that hill is Mount Dieffenbach (see Mr. Dixon's letter, British Medical Journal, page 286, "Darwin quotes *Dieffenbach*, etc."), and that the ship which would have been descried thence would almost certainly have been the *St. Kilda*, which, for many years, did the trade of the islands. There may have been connection between St. Kilda and Wharekauri.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. Barnes, Carlisle; Dr. Gairdner, Glasgow; Dr. Maxwell, Woolwich; Mr. J. G. Scroggie, Aberdeen; Mr. T. Frampton, Milton; Mr. S. S. Hoyland, Ipswich; Dr. C. M. Chadwick, Buxton; Mr. C. Henry Elliott, Evandale, Tasmania; Mr. W. T. Jackman, Coggeshall; Dr. Styrap, Shrewsbury; Mr. George St. George, Lisburn; Mr. J. R. Purdy, Oulton, Leeds; Mr. W. V. Barré, Ellesmere Port; Mr. H. C. H. Oliver, West Malling; Mr. John Bellamy, London; Mr. T. S. Hutchinson, Newington; Mr. A. F. Stevens, Ixworth; Dr. K. Burrows, Ambleside; Dr. R. Wood, Driffield; Mr. A. Pierson, Bolan Pass, India; Mr. E. L. Freer, Birmingham; Mr. J. A. Noble, Southport; Dr. Sidney Martin, London; Dr. H. Handford, Nottingham; Mr. J. E. Burton, Liverpool; Dr. C. H. Allfrey, St. Mary Cray; Mr. M. Greenwood, jun., Haggerston; Mr. Luck, Lewes; M.R.C.S.; Mr. W. Eddowes, Shrewsbury; Mr. J. B. Humphreys, Shrewsbury; Mr. Weightman, Gosport; Mr. L. M. Griffith, Clifton; Dr. G. Johnson, London; Mr. C. S. Spong, Greenwich; M.R.C.S.; Mr. Wheelhouse, Leeds; Mr. W. Armstrong, Manchester; Dr. Robertson, Buxton; Mr. Brook, Fareham; The Medical Secretary, St. Thomas's Hospital; Tenax, F.R.C.S.Ed.; Mr. L. W. Reynolds, High Wycombe; Dr. James Oliver, London; Dr. A. H. N. Lewers, London; Dr. F. H. Spooner, Clapton; Volunteer Surgeon of Fifteen Years; G. F. R.; Mr. T. E. Lovegrove, Nottingham; Mr. E. S. Angove, Rugby; St. John's; Dr. W. R. O'Connor, Limerick; Dr. William Carter, Liverpool; Dr. J. S. Bristowe, London; Dr. Taaffe, Brighton; Dr. Spender, Bath; Dr. J. Attfield, London; Mr. A. S. Gubb, London; Rev. Dr. M. de Colleville, Brighton; Mr. W. Duncan, Frome; Dr. J. F. Churchill, London; Dr. Joseph Rogers, London; Dr. Lindsay, Belfast; The Director-General of the Medical Department of the Navy; Mr. C. H. Cuming, Plymouth; Bitters; Dr. A. Wylie, London; Y. Z.; Messrs. G. W. Wheatley and Co., Liverpool; Mr. D. S. Davies, Clifton; Mr. P. G. Lewis, Folkestone; Mr. Josiah Williams, Sheffield; In the Dark; Mr. Davies-Colley, London; Mr. J. E. Erichsen, London; Mr. Mark Wardle, Bishop Auckland; Mr. R. N. Bower, Sandy; X.; Our Paris Correspondent; Our Liverpool Correspondent; Mr. C. H. Thatcher, Edinburgh; Sir E. Lechmere, London; Dr. Carmichael, Edinburgh; Surgeon-Major A. B. R. Myers, Inslow; Mr. E. M. Wrench, Baslow; Mr. J. S. Withers, Sale; Mr. R. Urquhart, Edinburgh; Sir J. Lentaigne, Dublin; Mr. S. W. Woollett, Southwold; Dr. H. H. Vernon, Southport; Mr. J. Bellingham, Dudley; Dr. J. Dreschfeld, Manchester; Mr. J. T. Carter, Glasgow; Dr. Delahoyde, Dublin; Dr. Yarrow, London; Mr. J. J. Langston, Strood; Mr. Eastes, London, etc.

BOOKS, ETC., RECEIVED.

Diseases of the Ear; for the use of Students and Practitioners. By U. Pritchard, M.D. London: H. K. Lewis. 1886.

Massage as a Mode of Treatment. By Wm. Murrell, M.D. London: H. K. Lewis. 1886.

The Equine Hospital Prescriber. By J. B. and A. Gresswell. London: Baillière Tindall, and Cox. 1886.

What I Believe. By Leon Tolstoi. Translated from the Russian by C. Popoff. London: Elliot Stock. 1886.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE "BRITISH MEDICAL JOURNAL."

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Post-Office Orders should be made payable to the British Medical Association, at the West Central Post-Office, High Holborn. Small amounts may be paid in postage-stamps.

REGULATIONS
OF
THE GENERAL MEDICAL COUNCIL AND MEDICAL LICENSING BODIES.

SESSION 1886-87.

REGULATIONS OF THE GENERAL MEDICAL COUNCIL REGARDING REGISTRATION OF MEDICAL STUDENTS.

PRELIMINARY EXAMINATION.—1. No person is allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as hereinafter provided.—2. The Executive Committee is to prepare and issue from time to time a list of examining bodies whose examinations fulfil the conditions of the Medical Council as regards general education.—3. Testimonials of proficiency granted by educational bodies, according to the subjoined list, are accepted; the Council reserving the right to add to or take from the list.—4. (A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient testimonial of proficiency.)—5. The following is a list of examining bodies whose examinations fulfil the conditions of the Medical Council: I. *Universities in the United Kingdom. Oxford:* Responsions; Moderations. *Cambridge:* Previous Examination; Higher Local Examinations. *Durham:* Examinations for Certificate of Proficiency; Examination for Students at the end of the first year. *Oxford, Cambridge, and Durham:* Examination for Degrees in Arts. *Oxford and Cambridge:* Senior Local Examinations, Certificates to include Latin and Mathematics; Junior Local Examinations, Certificate to include Latin and Mathematics, and also one of the following optional subjects: Greek, French, German.—*Oxford and Cambridge Schools' Examination Board:* Certificate to include Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, including the first two books of Euclid; Latin, including Translation and Grammar; and one of the following optional subjects: Greek, French, German.—*London:* Matriculation Examination; Preliminary Scientific (M.B.) Examination; Examination for a Degree in Arts or Science.—*Victoria:* Preliminary Examination, Latin to be one of the subjects; Entrance Examination in Arts to include all the subjects required.—*Aberdeen, Edinburgh, Glasgow, and St. Andrew's:* Examination for a Degree in Arts; Local Examinations (Junior and Senior); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of the following optional subjects: Greek, French, German; Preliminary Examination for Graduation in Medicine or Surgery.—*Edinburgh:* Preliminary Examination for Graduation in Science.—*Dublin:* Entrance Examination; General Examination at end of Senior Freshman's Year; Examination for a Degree in Arts.—*Queen's University (Ireland):* Local Examinations, Certificates to include all the subjects required by the General Medical Council; Entrance or Matriculation Examination; Previous Examination for B.A. Degree; Examination for a Degree in Arts.—*Royal University of Ireland:* Matriculation Examination. II. *Other Bodies named in Schedule (A) to the Medical Act.—Society of Apothecaries in London:* Examination in Arts.—*Royal Colleges of Physicians and Surgeons of Edinburgh:* Preliminary (combined) Examination in General Education.—*Faculty of Physicians and Surgeons of Glasgow:* Preliminary Examination in General Education.—*Royal College of Surgeons in Ireland:* Preliminary Examination; Certificate to include Mathematics.—III. *Examining Bodies, in the United Kingdom, not included in Schedule (A) to the Medical Act.—College of Preceptors:* Examination for a First-Class Certificate, or Second-Class Certificate of First or Second Divisions, Algebra, Geometry, Latin, and a Modern Language, having been chosen.—*Intermediate Education Board of Ireland:* Junior, Middle, and Senior Grades; the Certificate to include all the subjects required.—*Queen's Colleges of Belfast, Cork, and Galway:* Matriculation Examinations.—*St. David's College, Lampeter:* Responsions Examinations, to include all the subjects required.—*Educational Institute of Scotland:* Preliminary Medical Examination.—IV. *Indian, Colonial, and Foreign Universities and Colleges.—Universities of Calcutta, Madras, and Bombay:* Entrance Examination; Certificate to include Latin.—*Ceylon Medical College:* Preliminary Examination (Primary Class).—*Universities of McGill College, Montreal; Bishop's College, Montreal; Toronto; Trinity College, Toronto; Queen's College, Kingston; Victoria College, Upper Canada; Fredericton, New Brunswick; Halifax, Nova Scotia; Melbourne; Sydney; Adelaide:* Matriculation Examination.—*University of Manitoba:* Previous Examination.—*University of King's College, Nova Scotia:* Matriculation Examination; Responsions.—*University of Otago:* Preliminary Examination.—*University of the Cape of Good Hope:* Matriculation Examination; Examination for a Degree in Arts.—*University of New Zealand:* Entrance Examination.—*Codrington College, Barbadoes:* English Certificate for Students of two years' standing, and Latin Certificate or "Testamur."—*Tasmanian Council of Education:* Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.—*Christ's College, Canterbury, New Zealand:* Voluntary Examinations, Certificates to include all the subjects required.—*Dalhousie College and University, Halifax:* Matriculation and Sessional Examinations.—*University of California:* Examination in Department of Letters.—*Germany and other Continental Countries:* Gymnasial Abiturienten Examen in Germany, and other corresponding entrance examinations to the Universities.—*Gymnasium of the Circuit of Dorpat:* Examinations of Maturity.—6. No person will be allowed to be registered as a Medical Student unless he shall have previously passed (at one or more examinations) a Preliminary Examination in: 1. English Language, including Grammar and Composition; 2. Latin, including Grammar, Translation from specified authors, and Translation of easy passages not taken from such authors; 3. Elements of Mathematics, comprising (*a*) Arithmetic—including Vulgar and Decimal Fractions (*b*) Algebra—including Simple Equations; (*c*) Geometry—including the first book of Euclid, with easy questions on the subject matter of the same; 4. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics; 5. One of the following optional subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) any other modern language; (*f*) Logic; (*g*) Botany; (*h*) Zoology; (*i*) Elementary Chemistry.[1]

REGISTRATION OF MEDICAL STUDENTS.—7. Every medical student shall be registered in the manner hereinafter prescribed by the General Medical Council.—8. No medical student shall be registered until he has passed a preliminary examination, as required by the General Medical Council,[2] and has produced evidence that he has commenced medical study.—9. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration.—10. The registration of medical students shall be placed under the charge of the Branch Registrars.—11. Each of the Branch Registrars shall keep a register of medical students, according to a form indicating the name; the preliminary examination, with date thereof; the date of registration; and the place and date of commencement of medical study, as certified by a master, or a teacher, or an official in a medical school or hospital.—12. Every person desirous of being registered as a medical student shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to a form which may be had on application to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and evidence that he has commenced medical study.[3]—13. The Branch Registrar shall enter

[1] Examinations in General Education conducted by Universities will be accepted as heretofore; but if, in any of these examinations, the subject of Elementary Mechanics be not included, a knowledge of that subject will be required at a separate Preliminary Examination.

[2] Exception may be made in the case of a Student from any Indian, Colonial, or Foreign University or College, who shall have passed the Matriculation or other equivalent Examination of his University or College, provided such examination fairly represents a standard of general education equivalent to that required in this country.

[3] *Form of Application for Registration as a Medical Student.*—I hereby apply to be registered a Student in Medicine, in conformity with the Regulations of the General Council of Medical Education and Registration of the United Kingdom, for which purpose I submit the following particulars. [Name of applicant (to be written in words at length); Surname; Christian name; Preliminary examination, with date thereof; Place and date of commencement of medical study Applicant's signature; Address; and Date of application.]

Certificate of Commencement of Medical Study. I hereby certify that Mr. —— has commenced the study of medicine in (insert name of School, or Hospital, or place of apprenticeship, as the case may be); Signature of Master, Teacher, or Official in a Medical School or Hospital; Place and date. To the Registrar of the Branch Council for ——.

N.B.—The word "Master" or "Teacher" will be held to include any registered practitioner whose pupil the applicant may be at the time. The certificate of

the applicant's name and other particulars in the *Students' Register*, and shall give him a certificate of such registration.—14. Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is Registrar, a sufficient number of blank forms of application for the registration of medical students.—15. The several Branch Councils—and in England the Executive Committee, if its meeting be more convenient and the case be urgent—shall have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory.—16. A copy of the *Medical Students' Register*, prepared by each of the Branch Registrars, shall be transmitted, on or before the 31st of December in each year, to the Registrar of the General Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply a copy of such authorised list to each of the bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to each of the several medical schools and hospitals.—17. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts any candidate (not exempted from registration) whose name has not been entered in the *Medical Students' Register* at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.

RECOMMENDATIONS OF THE GENERAL MEDICAL COUNCIL ON PROFESSIONAL EDUCATION AND EXAMINATION.

AGE FOR LICENCE TO PRACTISE, ETC.—1. The age of twenty-one should be the earliest age at which a candidate should obtain a licence to practise, and the age should, in all instances, be certified. 2. The course of medical study after registration should occupy at least five years, if the subjects of Elementary Physics, Chemistry, and Biology be included in that period, or at least four years if a satisfactory examination in these subjects have been passed previous to registration.[4]

PROFESSIONAL EDUCATION.—3. At least four winter and three summer sessions should be passed at a school or schools recognised by any of the licensing bodies mentioned in Schedule (A) of the Medical Act. 4. The following are the subjects without a sufficient knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered: (1) Chemistry, including the principles of the science, and the details which bear on the study of Medicine, and the rudiments of Heat, Light, and Electricity; (2) Anatomy; (3) Physiology; (4) Materia Medica and Pharmacy; (5) Pathology; (6) Medicine, including Medical Anatomy, Clinical Medicine, and Therapeutics; (7) Surgery, including Surgical Anatomy and Clinical Surgery; (8) Midwifery, including Diseases peculiar to Women and to Newly Born Children; (9) Theory and Practice of Vaccination; (10) Forensic Medicine; (11) Hygiene; (12) Mental Disease.[5]

PROFESSIONAL EXAMINATION.—5. The Professional Examinations should be so framed as to secure that the knowledge of every practitioner whose name appears in the *Medical Register* has been tested in all the subjects of professional education which the Council deems essential (see Recommendation No. 4). 6. There should be at least three Professional Examinations. 7. The Examinations, and the subjects included in each, should be such, and in such order, as may ensure, as far as possible, a due continuity and sequence of study. 8. The Final Examination should not take place till the termination of the full period of medical study. 9. The Professional Examinations should be conducted both in writing and orally; and they should be practical in all branches in which they admit of being so. 10. Two Examiners at least should take part in every oral and clinical examination. 11. A candidate should not be rejected on any written examination unless his answers have been submitted to at least two Examiners. 12. Excellence in one or more subjects should not be allowed to compensate for failure in other subjects. 13. The Professional Examinations should be held by the several licensing bodies at stated periods, to be publicly notified. 14. In no case should the Examination of a candidate in any subject be conducted exclusively by his teachers in that subject in the school in which he has been educated. 15. Every candidate for the Final Professional Examination should be required to give evidence that he has had sufficient opportunities of practical study, with care of patients, medical, surgical, and obstetrical, in hospital, dispensary, or elsewhere.

[4] Application must testify that the student has been examined in the subjects required by the General Medical Council.

The above form of Application, duly and legibly filled up, and accompanied by a Certificate of the applicant's having passed a preliminary examination, as required by the General Medical Council, must be forwarded post paid to the Registrar of one of the Branch Councils.

A less term may be allowed in the case of any graduate in medicine of an English, Colonial, or Foreign University, or of any student who, having completed the full time required by the Medical Council, and having given satisfactory evidence of general education, shall have spent the whole or three-fourths of that period at an Indian, Colonial, or Foreign University, the several licensing bodies being requested to communicate to the Council annually, in the month of January, a statement of the action taken by them respectively during the last preceding calendar year, in regard to such exceptional cases.

[5] It is to be understood, as regards the above-mentioned subjects, that the Council offers no opinion as to the manner in which the subjects should be combined or distributed for purposes of teaching or of examination.

ROYAL COLLEGE OF PHYSICIANS OF LONDON AND ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DOUBLE QUALIFICATION.

THE regulations for the Conjoint Examination, entitling the candidate who passes it to obtain both the Licence of the Royal College of Physicians of London and the Diploma of Member of the Royal College of Surgeons of England, are applicable to candidates commencing professional study on or after October 1st, 1884. For a synopsis of the regulations, see pages 488 and 489.

Professional Studies commenced before Registration, except in the cases of Chemistry and Chemical Physics, Materia Medica, and Pharmacy, will not be recognised. One winter session and two summer sessions may be passed in one or more of the ways as recognised in the regulations for the Licence of the Royal College of Physicians.

The instruction in Practical Pharmacy must be given by a registered Medical Practitioner, or by a Member of the Pharmaceutical Society of Great Britain, or in a Public Hospital, Infirmary, or Dispensary.

The systematic practical instruction in Medicine, Surgery, and Midwifery, includes: 1, the applications of anatomical knowledge to the investigation of disease; 2, the methods of examining various organs and other parts of body, in order to detect the evidence of disease or the effects of accidents; 3, the employment of instruments and apparatus used in diagnosis or treatment; 4, the examination of diseased strictures, whether recent or in a museum; 5, the chemical examination of morbid products; 5, the performance of operations on the dead body; 7, *post mortem* examinations.

No Metropolitan Hospital is recognised which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients. A three months' course of Clinical instruction in the wards of a recognised lunatic hospital or asylum may be substituted for the same period of attendance in the medical wards of a general hospital.

The Clinical Lectures must be attended after the Candidate has passed the second examination.

The duties of Clinical Clerk and Surgical Dresser may be discharged at a general hospital, infirmary, or dispensary, or parochial or union infirmary, recognised for this purpose, or in such other similar manner as shall afford sufficient opportunity for the acquirement of practical knowledge.

Students must attend the examinations held in the several classes.

Exemption from any of the regulations can only be granted by the Committee of Management.

Professional Examination.—The Examinations will be partly written, partly oral, and partly practical, and will be held in January, April, July, and October, unless otherwise appointed. Every candidate intending to present himself for examination must give notice in writing to the Registrar of the Royal College of Physicians, or to the Secretary of the Royal College of Surgeons, fourteen clear days before the day on which the Examination commences, transmitting at the same time the required Certificates. All fees must be paid three days prior to the day on which the Examination commences.

Synopses indicating the range of subjects in the Examinations in Chemistry and Chemical Physics, Materia Medica, Pharmacy, Elementary Anatomy, and Physiology, may be obtained together with the Regulations.

A candidate will be admitted to the Examination on Chemistry and Chemical Physics, Materia Medica, and Pharmacy, on producing evidence of having been registered as a Medical Student by the General Medical Council, and of having received instruction in each of these subjects, or he may take Materia Medica and Pharmacy as part of the Second Examination: but he will not be admitted to the Examination on Elementary Anatomy, and Elementary Physiology, earlier than the end of his first winter session at a Medical School. Each of the three parts of this examination may be taken at different times, or the candidate may present himself for the whole at one time.

A candidate will be admitted to the Third or Final Examination on

producing evidence: 1, of being twenty-one years of age; 2, of having studied Medicine, Surgery, and Midwifery.

SPECIAL REGULATIONS.

1. Any candidate for the Licence of the Royal College of Physicians and the Membership of the Royal College of Surgeons, who shall have commenced his professional study before October 1st, 1884, shall, on production of the certificates required by both Colleges when he commenced his professional study, and on payment of the required fees, be admissible to either or all of the examinations of the Examining Board. 2. Any candidate who shall have passed before October 1st, 1884, at either of the two Colleges, the first or second examination, or the first and second examinations, will be exempt from the equivalent examinations of the Examining Board. 3. Any Member of an English University, or of a Scotch or Irish University, where it is required that not less than two of the four years' curriculum of professional education shall have been spent in residence at the University, who shall have passed such an examination or examinations at his University as shall comprise the subjects of the first and second examinations of the Examining Board in England, and who shall have completed not less than four years of medical study according to the regulations required by his University, will be eligible for admission to the third or final examination of the Board, two years after his having passed all the other required examinations; any candidate so admitted to examination will be required to pay a fee of £5 5s.; and any such candidate who shall have passed such third or final examination shall, on the further payment of not less than 25 guineas, and subject to the by-laws of each College, be entitled to receive the Licence of the Royal College of Physicians of London and the Diploma of Member of the Royal College of Surgeons of England.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

MEMBERS.

EVERY candidate for the membership of the College must furnish proof that he has attained the age of twenty-five years, and must produce a testimonial from a Fellow or Member of the College, satisfactory to the Censors' Board, to the effect that, as regards moral character and conduct, he is a fit and proper person to be admitted a member of the College.

No candidate shall be admitted to examination who is engaged in trade; or who dispenses medicine, or makes any engagement with a chemist or any other person for the supply of medicines; or who practises Medicine or Surgery in partnership, by deed or otherwise, so long as that partnership continues; or who refuses to make known, when so required by the President and Censors, the nature and composition of any remedy he uses.

A candidate for the membership is inadmissible to the Professional Examination who is unable to satisfy the Censors' Board of his general culture.

All candidates for the membership shall exhibit to the Censors' Board such diplomas or other evidence of their general education as they may possess, that it may be recorded by the Registrar for future consideration of their claims to the Fellowship of the College.

All candidates for membership under the age of forty shall be required to prove a knowledge of Latin, and of either Greek, French, or German, by examination before the Censors' Board, unless they have obtained a Degree in Arts in a British University.

Any candidate who has already obtained the degree of Doctor or Bachelor of Medicine at an University in the United Kingdom, in India, or a British Colony, or who shall have obtained a Foreign Qualification entitling him to practise Medicine or Surgery in the country where such qualification has been conferred, wherein the Courses of Study and the Examinations to be undergone previously to graduation shall have been adjudged by the Censors' Board to be satisfactory, shall, if the Censors think fit, be admitted to the Pass Examination. The nature and extent of this examination shall, in the case of each candidate, be determined by the Censors' Board.

Pass Examination for Membership.—The Pass Examination shall be conducted as follows:—Thursday: from 2 till 6, by written questions on Medical Anatomy, and on the Principles of Medicine. Friday: from 2 to 6, by written questions on the Practice of Medicine, including the Principles of Public Health, and on Psychological Medicine. Saturday or Monday: the candidate's practical knowledge will be tested, either at the College or in the Medical Wards of an Hospital. Tuesday and Wednesday: by Examination *vivâ voce*. This examination will commence on the last Thursday but one in January, April, July, and October.

Any candidate who has attained the age of forty years, and who can produce testimonials as to his moral character and conduct, his general and professional acquirements, and that he has improved the art or extended the science of Medicine, or has at least distinguished himself highly as a medical practitioner, shall submit such testimonials to the Censors' Board, who may, if they see fit, submit them to the Fellows at a general meeting, and it shall be determined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the candidate shall be admitted to examination.

The fee to be paid for examination for membership shall be £6 6s., and such examination fee shall be reckoned as part of the fee for admission as a member, in the event of the candidate satisfying the Censors' Board of his competency.

Every candidate (except those holding the qualifications above mentioned, or above forty years of age) shall produce proof of his having passed the examinations required for the Licence of the College.

If the Censors' Board doubt the sufficiency of the certificates and testimonials produced by any candidate, or his fitness for admission to examination, they may submit the case to a general meeting of the Fellows.

Every candidate (except in cases specially exempted as above) shall give proof of his acquirements by written answers to questions, and shall also be examined *viva voce*.

Every candidate approved by the Censors' Board shall be proposed, at the next general meeting of Fellows, as qualified to become a member of the College; and if the majority of the Fellows present shall consent, he shall, on engaging to obey the By-laws and Regulations, be admitted a member of the College.

The fee to be paid for admission as a member of the College shall be £31 10s., except when the candidate for membership is a Licentiate of the College, in which case the fee for admission as a member will be £15 15s.

Any candidate not approved by the Censors' Board shall not (except by special permission of the College) be readmitted to examination until after the lapse of a year.

Every candidate is required to give fourteen days' notice in writing to the Registrar of the College of his intention to present himself for examination, at the same time transmitting—1. Such diplomas or other evidence of his general education as he may possess; 2. Such Medical and Surgical Qualifications as he may have obtained, unless such qualifications are registered in the *Medical Register*; 3. Proof that he has attained the age of twenty-five years; and 4. A testimonial from a Fellow or Member of the College.

LICENTIATES.

The licence of the College is a qualification to practise Medicine, Surgery, and Midwifery. The regulations here given (for synopsis, see pp. 488 and 489) are applicable to candidates who commenced their professional studies after March 25th, 1880.

Of the forty-five months of professional study, one winter and two summer months may be passed in either of the following ways: 1. Attending the practice of a hospital, infirmary, or other institution, recognised by the College; 2. Receiving instruction as the pupil of a legally qualified practitioner, having opportunities of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced *before* registration, except in the cases of Chemistry, Materia Medica, and Pharmacy, will not be recognised.

Certificates required: First Examination. Evidence of having been registered as a Medical Student by the General Medical Council; and of having received instruction in Chemistry, including Chemical Physics, in Practical Chemistry, in Materia Medica, and in Practical Pharmacy.

Second Examination.—Evidence of having completed, after registration as a student, eighteen months of professional study at a recognised school or schools; and of instruction in Anatomy and Physiology. (*See* Table.)

Third Examination.—Evidence of being twenty-one years of age; of moral character; of having passed the second examination; of having been engaged in professional study not less than forty-five months (*see* Table); and of instruction in the remaining subjects of study mentioned in the Table.

The systematic practical instruction in Medicine, Surgery, and Obstetric Medicine comprises the same subjects as in the regulations for the double qualification of the Colleges of Physicians and Surgeons (see p. 486).

No metropolitan hospital is recognised which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients. A three months' course of clinical instruction in the wards

TABULAR VIEW OF THE REGULATIONS OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, AND OF THE SOCIETY OF APOTHECARIES IN LONDON.

	ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.	ROYAL COLLEGE OF PHYSICIANS OF LONDON.	ROYAL COLLEGE OF SURGEONS OF ENGLAND.		APOTHECARIES' SOCIETY.
	DOUBLE QUALIFICATION.	LICENTIATES.	FELLOWS.	MEMBERS.	LICENTIATES.
AGE REQUIRED	Twenty-one.	Twenty-one.	Twenty-five.	Twenty-one.	Twenty-one.
EVIDENCE OF GENERAL EDUCATION BEFORE COMMENCEMENT OF PROFESSIONAL STUDY.	Certificate of Registration as a Student by the General Medical Council.	Certificate of having passed examination in subjects of General Education recognised by the General Medical Council, and of being registered as a student.	Certificate of Registration by the General Medical Council.	Certificate of Registration by the General Medical Council.	Certificate of Registration as a Medical Student by the Medical Council, and of examination in Elementary Mechanics, recognised by the Council.
DURATION OF PROFESSIONAL STUDY	Forty-five months; at least three winters and two summers at a recognised school or schools.	Forty-five months; at least three winters and two summers at a recognised school or schools.	Six years; or members, two years in addition to the certificate for the diploma of member.	Four years, or not less than four winter and four summer sessions.	Forty-five months; not less than three winter and two summer sessions at a recognised hospital and school of medicine.
COURSES OF LECTURES, ETC., REQUIRED.					
Anatomy and Dissections	Lectures, six months; dissections, twelve months.	A course of Anatomy; Dissections twelve months.	Lectures during two winters; dissections three winters.	Lectures, two winters; dissections, two winters.	Six months: Practical Anatomy and Demonstrations, two winter sessions.
Physiology	Lectures, six months; Practical Physiology, three months	Physiology & Practical Physiology, each one course.	Lectures one winter; & Practical Physiology, another session.	Lectures, one winter; Practical Physiology, another session.	Six months: Histology with Demonstrations, three months.
Chemistry	Instruction.	Instruction; time not specified.	One course.	One course.	Six months.
Practical Chemistry			Three months.	Three months.	Three months.
Materia Medica ...			One course.	One course.	Three months.
Practical Pharmacy			Three months.	Three months.	Three months.
Botany	Not required.	Not required.	Not required.	Not required.	Three months.
Morbid Anatomy	Three months; Demonstrations in *post mortem* room during clinical study.	One course; demonstrations in *post mortem* room during clinical study.	Lectures, three months; demonstrations, three winter and two summer sessions.	Lectures, three months; demonstrations in *post mortem* room.	Three months: *post mortem* examination during hospital practice.
Medicine	Six months.	One course.	One course.	One course.	Six months.
Clinical Medicine ...	Nine months.	Nine months.	One winter and one summer session.	One winter and one summer session.	Nine months.
Surgery	Six months.	One course.	One winter session.	One winter session.	Six months.
Clinical Surgery	Nine months.	Nine months.	Two winter and two summer sessions. Observation and examination of patients for three months.	Two winter and two summer sessions. Observation and examination of patients, three months.	Nine months.
Practical Surgery ...	Required.	Required.	Six months.	Six months.	Three months.
Midwifery and Diseases of Women	Three months; attendance on twenty labours.	One course; not less than twenty labours.	One course; not less than ten labours.	One course; not less than ten labours.	Three months; twenty cases of labour.
Clinical Study of Diseases of Women	Three months.	Three months.	Not stated.	Not stated.	Three months.
Forensic Medicine ...	Three months.	One course.	One course.	One course.	Three months.
Hospital Practice	Medical and Surgical Practice; three winter and two summer sessions.	Medical and surgical practice, three winter and two summer sessions.	Surgical practice, four winter and four summer sessions; medical practice, one winter and one summer.	Surgical practice, three winters and two summers: Medical practice, one winter and one summer.	Medical and surgical practice, three winter and two summer sessions.
Hospital Appointments	Medical clinical clerk, six months; surgical dresser, six months.	Clinical clerk, six months; dresser, six months.	House-surgeon or dresser, six months.	Dresser, or (after a year of study) charge of patients under superintendence of a surgeon, six months.	Clinical clerk, three months; surgical dresser, three months.
Other Certificates	Systematic Practical Instruction in Medicine, Surgery, and Midwifery. Instruction in Vaccination.	Systematic Practical Instruction in Medicine, Surgery, and Obstetric Medicine. Instruction & proficiency in Vaccination. Moral character.	Instruction and proficiency in Vaccination. Comparative Anatomy, one course. Operations on Dead Body.	Instruction and proficiency in Vaccination. Examinations in Elementary Anatomy and Physiology at medical school.	Having been examined at class examinations. Instruction in Vaccination. Moral character.

NUMBER OF EXAMINATIONS	Three.	Three.	Two.	Two.	Two.
FIRST EXAMINATION; WHEN IT MAY BE PASSED; SUBJECTS.	After registration: (1) in Chemistry and Chemical Physics; (2) Materia Medica and Pharmacy; at end of first year, (3) Elementary Anatomy and Physiology.	After registration as a student; Chemistry and Chemical Physics; Materia Medica and Pharmacy; and Osteology.	After third winter session; in Anatomy and Physiology.	After second winter session; Anatomy and Physiology.	After second winter session; Chemistry and Chemical Physics, Practical Chemistry, Botany, and Materia Medica, Pharmacy and Prescriptions, Anatomy, Physiology, and Histology, Examinations on living body.
SECOND EXAMINATION; AT WHAT PERIOD IT MAY BE PASSED; SUBJECTS.	Six months after first examination. After eighteen months of study, subsequent to registration: (1) Anatomy; (2) Physiology. Each may be taken separately. Materia Medica and Pharmacy may be taken at this examination.	After eighteen months of study subsequent to registration as a medical student; Anatomy and Physiology.	After six years of professional study; in Surgery, including Surgical Anatomy and Pathology, Medicine, & Midwifery (Medicine and Midwifery not required if passed for the membership, nor from candidates holding approved diplomas, degrees, or licences, or from those intending to obtain a qualification in Medicine and Midwifery; the diploma of the College is not issued until proof of having passed the required examination is produced).	After end of fourth year of professional education; in Surgical Anatomy, and Principles and Practice of Surgery, Medicine, and Midwifery.	At end of forty-five months of medical studies (1) in Surgery, Surgical Anatomy & Pathology, Instruments & Appliances, Clinical Examination of Surgical Cases; (2) in Principles and Practice of Medicine, including Therapeutics, Examination of Medical Cases, Pathology and Morbid Histology, Midwifery (including Obstetric Instruments) and Diseases of Women and Children, Forensic Medicine, Toxicology, Hygiene, & Psychological Medicine.
THIRD EXAMINATION; AT WHAT PERIOD IT MAY BE PASSED; SUBJECTS.	Two years after second examination; 45 months after registration. (1) Medicine; (2) Surgery; (3) Midwifery and Diseases of Women. (Forensic Medicine and Public Health are included.) Each part may be taken separately, or at one time.	Forty-five months after registration; two years after second examination; (1) Medical and Surgical Anatomy and Pathology; (2) Medicine and Surgery; (3) Midwifery and Diseases of Women. (Forensic Medicine and Public Health are included.) Each part may be taken separately.			
FEES PAYABLE	At first or second examination, £10 10s.; re-examination after rejection, in either part of examination, £3 3s. At third examination, £15 15s.; re-examination, after rejection in Medicine or Surgery, £5 5s.; in Midwifery, £3 3s.	£5 5s. for admission to each examination. Candidate rejected at any examination must pay additional £3 3s. before readmission to examination. Total fee for Licence, £15 15s.	At first examination, members £5 5s.; non-members £10 10s.; £5 5s. returned if rejected. At second examination, member, £10 10s. (above charge for stamps); if not a member, £21 (over & above charges for stamps). In each case £10 10s. is retained in case of rejection.	Preliminary examination at Med. School £2; Diploma of College £22; £5 5s. at first examination; after failure at this examination, candidate must pay an additional £3 3s. before being again admitted. At Pass Examination, £16 15s. paid and £5 5s. retained on each failure.	For the Licence, £6 6s. In the event of failure, the fee is retained, but no extra fee is required on re-examination.
REJECTED CANDIDATES	After first or second examination, readmitted after three months; after third, six months. Candidates are re-examined in subjects in which they have been rejected.	After rejection at first or second examination, not again admitted until end of three months; after third examination, not till end of six months. Candidates are re-examined in subjects of rejection.	After rejection at first examination, candidates not again admitted for six months; after second examination, not till end of one year, unless Court of Examiners shall otherwise determine.	After rejection at primary examination, three or six months; after rejection at second examination, six months or longer.	After rejection at primary & Part I of final examination, candidate cannot be again admitted till after three months; after Part II final examination, not till after six months.
CANDIDATES (1) EXEMPTED FROM CERTAIN PORTIONS OF THE EXAMINATIONS, OR (2) ADMITTED UNDER SPECIAL REGULATIONS	(1) At first examination, candidates who have passed an University examination in any subject of the first and second parts. (2) Holders of Colonial, Indian, or Foreign Qualifications entitling to practice, admitted to second and third examinations on production of evidence of age and of proficiency in vaccination.	(1) Candidates who have elsewhere passed examinations in the subjects of the first and second examinations; who have obtained Degree in Surgery at a recognised University; who have passed an examination in Surgery at a College of Surgeons; who have obtained foreign qualifications entitling them to practise Medicine or Surgery.	(2) Members are admitted to first examination at any time after receiving diploma; to second examination at any subsequent time, if engaged not less than six years in study (or practice) of profession; in case of graduates in Arts of a recognised University, five years.	(2) *a*. Candidates who have studied in Scotland or in Ireland, or at recognised Foreign or Colonial Universities; *b*. members or licentiates of the other Colleges of Surgeons; and Graduates in Medicine or Surgery of a recognised University, admitted to professional examination on production of the necessary certificates or diplomas.	See page 491.

of a recognised Lunatic Hospital or Asylum may be substituted for the same period in the medical wards of a General Hospital.

Exemptions.—Any candidate who shall produce satisfactory evidence of having passed an examination in any of the subjects of the first examination, or an examination in Anatomy and Physiology as required for a degree in medicine or surgery, at an university in the United Kingdom, in India, or in a British Colony; or an examination in Anatomy and Physiology conducted by either of the Royal Colleges of Surgeons in the United Kingdom, or by the Faculty of Physicians and Surgeons of Glasgow, will be exempt from re-examination in the respective subjects. Any candidate who shall have obtained a Degree in Surgery at an University in the United Kingdom, or who shall have passed the Examination in Surgery conducted by a Royal College of Surgeons of the United Kingdom, or the Faculty of Physicians and Surgeons of Glasgow, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and Pathology, and on the Principles and Practice of Surgery. Any candidate who shall have obtained a Foreign Qualification which entitles him to practise Medicine or Surgery in the country where such qualification has been conferred, after a course of study and an examination equivalent to those required by the regulations of the College, shall, on production of satisfactory evidence as to age, moral character, and proficiency in vaccination, be admissible to the Pass Examination, and shall be exempt from re-examination on such subjects as shall in each case be considered by the Censors' Board to be unnecessary.

The examinations will commence in January, April, July, and October, unless otherwise appointed.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DIPLOMA OF MEMBER.

FOR synopsis of Regulations, *see* pages 488 and 489.

I. *Preliminary General Education and Examination.*—Candidates are required, before the commencement of their professional education, to pass a Preliminary Examination recognised by the General Medical Council, and to obtain a certificate of having been registered by the General Medical Council. In the case of any Colonial, Indian, or Foreign student, not registered by the General Medical Council, the conditions of admission to the professional examination for the diploma will be determined by the Council of the College.

II. *Professional Education.*—The following are recognised modes of commencing professional education. 1. Attendance on the practice of a Hospital or other public institution recognised by this College. 2. Instruction as the pupil of a legally qualified surgeon, holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council. 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lectures recognised by this College.

a. By the Practical Course of General Anatomy and Physiology, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.; but it is not intended that the learners shall perform vivisections.

b. The certificates of attendance on Lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

c. The Course of Practical Surgery is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to Surgery, on the living person or on the dead body; the methods of proceeding and the manipulations necessary in order to detect the effects of diseases or accidents on the living person or on the dead body; the performance, where practicable, of the operations of Surgery on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated in the contents of a museum of Morbid Anatomy and otherwise.

d. The course of lectures on Chemistry is not required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

e. The certificate of instruction in Vaccination must be such as will qualify its holder to contract as a Public Vaccinator under the Regulations at the time in force of the Local Government Board.

III. *Certificates, etc.*—Certificates of attendance upon the practice of a recognised Provincial or Colonial Hospital, unconnected with, or not in immediate proximity to, a recognised Medical School, will not be received for more than one Winter and one Summer Session of the Hospital Attendance required by the Regulations of this College; and in such case Clinical Lectures will not be necessary, but a Certificate of having acted as Dresser for at least six months will be required.

IV. *Professional Examinations.*—The First or Primary Examination is partly written and partly demonstrative. The Second or Pass Examination is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients. A candidate, having entered his name for either the Primary or the Pass Examination, who shall fail to attend the meeting of the Court for which he shall have received a card, cannot present himself for examination within three months afterwards.

Primary Examination.—Candidates who commenced their professional studies on or after the 1st of October, 1882, and have pursued those studies in recognised Medical Schools in England, are required, before presenting themselves for the Primary or Anatomical and Physiological Examination for the Diploma of Member, to produce certificates of having passed an examination in Elementary Anatomy and Physiology, conducted by their teachers at the Medical Schools. 1. The periods at which the examinations are held are determined by the teachers at the Medical Schools, provided that an interval of not less than six months elapse between the date at which the candidates have passed the examination, and the date of their presenting themselves for the Primary Examination of the College. 2. The teachers at the Medical Schools determine the nature and extent of the Examination in Elementary Anatomy and Physiology.

Pass Examination.—Candidates who commenced their professional education on or after October 1st, 1882, are not admitted to the Second or Pass Examination until after the expiration of two years from the date of passing the Primary Examination, except in the following cases. 1. When a candidate, before presenting himself for the Primary Examination, shall possess a recognised Degree or Diploma in Medicine or Surgery, or shall have completed the curriculum of professional education for the diploma. 2. In the case of a candidate who, being desirous of obtaining the Fellowship, shall fail to present himself for the Primary Examination for the Membership at the end of his second year of professional study, but who shall pass at the end of his third winter session the Primary Examination for the Fellowship; it being required in such case that not less than one year's attendance on the Surgical Practice of a recognised Hospital shall intervene between the date of his passing the Primary Examination for the Fellowship and the date of his presenting himself for the Second or Pass Examination for the Diploma of Member. 3. In the case of a candidate who, having commenced his professional studies by attendance on the practice of a recognised provincial or colonial hospital, shall have completed a year of such attendance before entering at a recognised Medical School, it shall be sufficient that not less than one year shall elapse between the date of his passing the Primary Examination and the date of his presenting himself for the Second or Pass Examination for the Diploma of Member, provided that his curriculum of four years' professional education shall then have been completed. 4. When a candidate, owing to illness, duly certified by one or more of the teachers of his Medical School, shall be prevented from presenting himself for the Primary Examination on the completion of his second year of professional study. 5. In the case of a candidate who, from some unforeseen circumstances, shall fail to present himself for the Primary Examination on the completion of his second year of professional study, it being left to the Court of Examination to determine whether, in such case, the candidate shall or shall not be required to comply with the regulation.

Candidates can claim exemption from examination in Medicine and Midwifery under the following conditions; viz.:

1. The production by the candidate of a Degree, Diploma, or Licence in Medicine and Midwifery, entitling him to register under the Medical Act of 1858; or a Degree, Diploma, or Licence in Medicine and Midwifery of a Colonial or Foreign University approved by the Council of the College.

2. A declaration by the candidate, prior to his admission to the Final Examination for Membership or Fellowship, that it is his intention to obtain either of the Qualifications in Medicine and Midwifery mentioned in the foregoing paragraph, in which case the Diploma of the College will not be issued to him until he shall produce either the said Medical Qualification or proof of having passed the several examinations entitling him to receive the same.

"Referred" Candidates.—A candidate referred on the Primary Examination is not readmitted to examination until after a period of not less than three months, and, if he shall not have obtained more than half of the total minimum number of marks, is not readmitted to examination until after the lapse of six months. A candidate referred on the Pass Examination is required, unless the Court of Examiners shall otherwise determine, to produce, prior to his admission

to re-examination, a certificate of at least six months' further attendance on the Surgical Practice of a recognised Hospital, subsequently to the date of his reference. A candidate, referred on the Pass Examination, who shall have exhibited such extreme ignorance as, in the opinion of the Court of Examiners, to render it desirable that he should be referred for a longer period than six months, is required, before his admission to re-examination, to produce a certificate of having attended the Surgical Practice of a recognised Hospital for a further period of nine or twelve months, as the Court shall determine.

The candidates under the special regulations referred to in the Table at page 489 are admitted to examination on producing, (*a*) the several certificates required for the degrees or diplomas in the respective countries: (*b*) the diploma, licence, or degree of the College or University; together with, in each case, a certificate of instruction and proficiency in Vaccination, and satisfactory evidence of having been occupied, after passing the Preliminary Examination, at least four years, or during four Winter and four Summer Sessions, in the acquirement of professional knowledge.

DIPLOMA OF FELLOW.

For synopsis of Regulations, *see* pages 488 and 489.

The paragraphs marked *a*, *b*, *c*, *d*, *e*, in the Regulations for the Membership are also applicable to the Fellowship.

SOCIETY OF APOTHECARIES, LONDON.

MEDICAL EXAMINATIONS FOR THE LICENCE.

For synopsis of Regulations, *see* pages 488 and 489.

The Examinations required for the Licence are two, each divided into written, practical, and oral. The Primary is held on the first Wednesday and following day of every month. The Final is divided into two parts. Part I is held on the second and fourth Wednesday and following day of every month. Part II is held on every Wednesday and Thursday. Both may be passed at the end of the prescribed curriculum.

Candidates intending to offer themselves for examination must give seven days' notice, and deposit, at the same time, all the required certificates, with the fee, at the Office of the Beadle, where attendance is given daily, from 10 to 4, Saturdays excepted.

Candidates who have passed the Preliminary Scientific Examination of the University of London are exempt from examination in Chemistry, Practical Chemistry, and Botany.

Part II. of the Second Examination may be passed at any time after Part I. Candidates must attend on Wednesday in the preceding week, for the Clinical Examinations, and for the written examination in Midwifery.

Course of Medical Study.—For Primary Examination; Chemistry and Chemical Physics; Practical Chemistry; Botany; Materia Medica; Practical Pharmacy and Dispensary (evidence in instruction in any of these subjects before registration as student is received); Anatomy, Practical Anatomy, and Demonstrations; Physiology; Histology with demonstrations. For Final Examination; the remaining subjects mentioned in the table (page 488); also Hygiene and Psychological Medicine (three months).

Exemptions.—1. The following are exempt from the written part of the Primary Examination in Anatomy and Physiology: Members of the Royal College of Surgeons of England; Licentiates of the Royal Colleges of Surgeons of Edinburgh or of Ireland; those who have passed the First Examination of the Royal Colleges of Surgeons of England, Edinburgh, or Ireland; those who have passed the Second Examination of the Conjoint Examining Board in England. 2. The following are exempt from the Primary Examination; those who have passed: the First Examination for M.B. Oxford; the Intermediate Examination in Medicine, London and Victoria; the First and Second Examinations for M.B. at Cambridge, Durham, Edinburgh, Glasgow, Aberdeen, St. Andrew's, Dublin, and the Royal University of Ireland; the First and Second Examinations for L.R.C.P. London; the First and Second Examination of the Conjoint Examining Board of the Royal Colleges of Physicians and Surgeons in England, or of the Conjoint Examination Board of the Colleges of Physicians and Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow; the First Examination for the Licence of the Royal College of Physicians of Edinburgh; the Royal Colleges of Physicians and Surgeons of Edinburgh; the Faculty of Physicians and Surgeons of Glasgow; the King and Queen's College of Physicians in Ireland; the Apothecaries' Hall of Ireland. Those Candidates who have not undergone an Examination in Materia Medica and Pharmacy will also be examined *viva voce* in these subjects. 3. The following are exempt from the Examination in Surgery: Candidates who have passed in Surgery at one of the Royal Colleges of the United Kingdom, or at a British University, or such other examining body as may be deemed satisfactory to the Court of Examiners. 4. The following are exempt from the Primary Examination and from the written part of the Final Examination: Graduates in Medicine of British Universities; Licentiates of the Royal Colleges of Physicians of London and Edinburgh, of the Faculty of Physicians and Surgeons of Glasgow, of the King and Queen's College of Physicians in Ireland, and of the Apothecaries' Hall in Ireland. 5. The cases of Graduates of Colonial and Foreign Colleges and Universities will be considered on their respective merits. Examinations passed must be certified.

Qualified Candidates must produce their Diplomas or Certificates of Registration under the Medical Act (1858).

Prizes.—Registered Medical Students, prior to the close of their third year, are permitted to compete for the Society's prizes in Botany, and in Materia Medica and Pharmaceutical Chemistry. Tickets of admission to the Society's Botanic Garden at Chelsea, and to the Lectures on Botany when there given, can be had on application at the Hall of the Society.

UNIVERSITY OF OXFORD.

BACHELOR OF MEDICINE.

ANY person who has been admitted to the Degree of Bachelor of Arts may supplicate for the Degree of Bachelor of Medicine, provided that he shall have passed the Examinations hereinafter prescribed.

Examinations.—There are two Examinations for the Degree of Bachelor of Medicine. The subjects of the First Examination are: 1. Organic Chemistry in its special relation to Physiology and Medicine; 2. Human Anatomy; 3. Human Physiology. The subjects of the Second Examination are: 1. Medicine; 2. Surgery; 3. Midwifery; 4. Pathology; 5. Forensic Medicine and Public Health; 6. Materia Medica and Pharmacy.

No candidate in the First Examination is required to offer Organic Chemistry, whose name has been placed in the first or second class by the Examiners in the School of Natural Science in the subject of Chemistry. No candidate in the First Examination is required to offer Human Physiology, whose name has been placed in the first or second class by the Examiners in the School of Natural Science in the subject of Animal Physiology.

Candidates may offer Organic Chemistry alone; and candidates who have passed in that subject may offer the remaining subjects of the First Examination at a future Examination.

Candidates may offer Materia Medica and Pharmacy alone; and candidates who have passed in that subject may offer the remaining subjects of the Second Examination at a future Examination.

The Examinations are conducted by Boards of Examiners, of each of which the Regius Professor shall be a member; provided that the Vice-Chancellor may nominate some other Professor in the Faculty to act, in case of his absence, as his deputy. The other Examiners shall be as follows. For the First Examination, five Examiners, of whom one shall be appointed to examine in Organic Chemistry, two to examine in Human Anatomy, and two to examine in Human Physiology. The Examiners in Human Physiology shall take part, if required, in the examination in Organic Chemistry. For the Second Examination, eight Examiners, of whom two shall be appointed to examine in each of the subjects of Medicine, Surgery, and Midwifery, one to examine in Pathology, and one to examine in Materia Medica and Pharmacy. The Examiners appointed for Medicine, Surgery, and Midwifery, shall also examine in Forensic Medicine and Public Health, and shall take part, if required, in the examination in Pathology, and in Materia Medica and Pharmacy. The Regius Professor, or his deputy, shall always be deemed to be Senior Examiner. The Examiners shall be nominated in each case for three years; the names of the persons so nominated to be approved by Convocation.

The Examinations for the Degree of Bachelor of Medicine will take place once in every year in Trinity Term, on a day and at a place or places to be fixed by the Regius Professor of Medicine, subject to the approval of the Vice-Chancellor.

No candidate will be admitted to any Examination unless he shall have given in his name to the Secretary to the Board of Faculties at least fourteen days before the first day of the week in which the Examination is to be held. The fee for admission shall at the same time be paid.

Every candidate in the First Examination must at the same time produce a certificate that he has satisfied the Examiners in the School of Natural Science in the Preliminary Examination in Mechanics and Physics, in Chemistry, in Animal Morphology, and in Botany; or a

certificate that he has passed some examination of the University in Physics and Chemistry, and elementary Animal Morphology and elementary Botany, approved by the Board of the Faculty of Medicine.

Every candidate in the Second Examination, except candidates who offer Materia Medica and Pharmacy only, must produce a certificate that he has passed the First Examination.

The Examination will be conducted partly in writing, partly *viva voce*, and will in each subject be partly practical.

A list of the names of those who have satisfied the Examiners will be made in a book to be kept for the purpose, and will be signed by the Examiners. This book will, after the close of the Examination, be placed in the custody of the Registrar of the University; and any question thereinafter arising with respect to any certificate will be decided by reference to such book.

DOCTOR OF MEDICINE.

1. Any person who has been admitted to the Degree of Bachelor of Medicine may supplicate for the Degree of Doctor of Medicine, provided that he has entered upon the thirty-ninth Term from his Matriculation, and that his name has been on the books of some College or Hall, or on the register of Non-Collegiate Students, for twenty-six Terms, and that he has written a dissertation on a subject connected with the Science of Practice of Medicine, and must include the History and Literature of the subject treated of.

2. The dissertation must be delivered to the Regius Professor of Medicine, and will be submitted by him to, and be subject to the approval of, those Professors of the Faculty and Examiners for the Degree of Bachelor of Medicine for the time being whose special subjects are dealt with in it.

3. The dissertation will, if the Regius Professor of Medicine so direct, be publicly read on a day appointed by him. If the dissertation shall appear to the Regius Professor, and the persons to whom it has been submitted by him, to be a work of exceptional excellence, it shall be lawful for them to recommend, as a mark of distinction, that it be printed and published by the Delegates of the Press, at the expense of the University. Twenty-five copies of every dissertation so printed shall be furnished to the Secretary to the Board of Faculties for presentation to learned societies and institutions connected with Medicine, and named by the Board of the Faculty. If a dissertation be printed by the candidate, he shall be required to furnish twenty-five copies for presentation in like manner.

4. A candidate for the Degree of Doctor of Medicine may offer as his dissertation a work already printed or published, if written by him since taking his Degree of Bachelor of Medicine, and if such printing and publication shall have taken place within the two years immediately preceding.

BACHELOR OF SURGERY.

Every person admitted to the Degree of Bachelor of Medicine shall *ipso facto* be admitted also to the Degree of Bachelor of Surgery.

MASTER OF SURGERY.

Any Bachelor of Surgery may supplicate for the Degree of Master of Surgery in the twenty-seventh Term from his Matriculation, provided that he has passed the Examination hereinafter prescribed, and has had his name on the books of some College or Hall, or on the Register of the Non-Collegiate Students for twenty-six Terms. The subjects of the Examination are the Practice of Surgery, Surgical Anatomy, and Surgical Operations.

The Examination will be held once in every year in Trinity Term, after the completion of the Second Examination for the Degree of Bachelor of Medicine. It will be conducted by the Regius Professor of Medicine, together with the two Examiners appointed to examine in Surgery for the Degree of Bachelor of Medicine.

The candidate must give notice, and pay his fee, at least fourteen days before the first day of the week in which the Examination is to be held. Every candidate who is not already a member of the Surgical Staff of a recognised Hospital must produce a certificate, countersigned by the Regius Professor of Medicine, of having acted in such a Hospital as Dresser or House-Surgeon for six months.

No candidate will be admitted to the Examination unless he shall have passed the Second Examination for the Degree of Bachelor of Medicine.

A list of the names of those who have satisfied the Examiners will be kept.

Every Master of Surgery, being otherwise duly qualified, shall be entitled, without further payment of fees, to supplicate for the Degree of Master of Arts.

Special Degrees.—1. Any person who has been admitted to the Degree of B.M. before the end of Trinity Term, 1886, shall be permitted to proceed to the Degree of D.M. under the provisions of the statutes in force before March 16th, 1886. 2. Any person admitted to the Degree of B.A. before March 16th, 1886, or whose name has been placed in the Class List in the School of Natural Science for one of the subjects of Animal Morphology, Physiology, or Botany, up to Act Term, 1887, inclusive, may offer himself for the First Examination in Medicine on the production of a certificate that he has satisfied the Examiners in the School of Natural Science in the Preliminary Examination in Mechanics and Physics, and in Chemistry, or some examination of the University in those subjects approved by the Board of the Faculty of Medicine. 3. Medical students who have passed the Examinations required by the University for the Degree of Bachelor of Arts before the end of Trinity Term, 1886, and who were on March 16th, 1886, registered as medical students, will be excused from the Examination in Organic Chemistry, forming part of the First Examination to be held under the new Medical Statute, in the years 1887, 1888, and 1889.

Fees.—The following fees are payable to the University in respect of the several examinations: before the Examination for the Degree of Master of Surgery, £5; before Examination in Medicine: for each of the subjects of Organic Chemistry and Materia Medica, 15s.; for the remaining subjects in either Examination for the Degree of Bachelor of Medicine, £1 10s.

UNIVERSITY OF CAMBRIDGE.

BACHELOR OF MEDICINE.

A STUDENT proceeding to this degree must (1) reside in the University during the required portion of each of nine Terms; (2) pass (or obtain exemption from) the previous examination; (3) pursue medical study for five years, unless he have obtained Honours in any Tripos, in which case four years only are required.

There are three examinations for the degree of Bachelor of Medicine. They are partly in writing, partly oral, and partly practical. The examinations take place twice in the year, in the Michaelmas and Easter terms.

The first examination is divided into two parts: 1. Chemistry and other branches of Physics; 2. Elementary Biology. These two parts may be taken together or separately. Before admission to this examination, the candidate must have passed (or obtained exemption from) the Previous Examination. He must also produce certificates of diligent attendance on a course of lectures in Chemistry, and on practical instruction in Chemical Manipulations.

The second examination is divided into two parts, which may be taken together or separately: 1. Human Anatomy and Physiology; 2. Pharmacy and Pharmaceutical Chemistry. Before admission to this examination, the student must have passed both parts of the first examination, must have attended Hospital Practice, and have practised Dissection, during six months, and must produce certificates of diligent attendance on a course of lectures on each of the following subjects: 1. Human Anatomy; 2. Physiology; 3. Pharmacy and Pharmaceutical Chemistry.

The third examination is divided into two parts, called the first part and the second part respectively. Before presenting himself for either part, the student must have passed both parts of the second examination. The first part includes Principles of Surgery, and Midwifery and Diseases peculiar to Women. The second part includes Pathology, Principles and Practice of Physic, Elements of Hygiene, and Medical Jurisprudence. The student, before admission to the first part, must produce certificates of attendance on one course of lectures in each of the following subjects: Pathological Anatomy, Principles of Surgery, Midwifery; he must have attended the Surgical practice of a recognised hospital (with lectures in Clinical Surgery) during one year at least; must have attended ten cases of Midwifery; and must have obtained a certificate of proficiency in Vaccination from an authorised vaccinator appointed by the Local Government Board. Before admission to the second part, he must produce evidence that he has completed the course of Medical Study and certificates of diligent attendance on one course of lectures in each of the following subjects: Principles and Practice of Physic, Physiological Actions and Therapeutic Uses of Remedies, and Medical Jurisprudence; he must also have attended the Medical Practice of a recognised hospital (with lectures in Clinical Medicine) during three years at least; must have been Clinical Clerk at a recognised hospital for six months at least, or have, subse-

quently to the completion of his attendance on Hospital Practice, attended to Practical Medicine or Surgery with special charge of patients in a hospital, dispensary, or parochial union, under superintendence of a qualified practitioner, unless the student himself be duly qualified.

After these examinations have been passed, an Act must be kept in the Schools in the following manner. The Regius Professor of Physic assigns a day and hour for keeping the Act, of which public notice has to be given eight days before. The candidate reads a thesis, composed by himself, on some subject approved by the professor; the professor brings forward arguments or objections for the candidate to answer, and examines him orally, as well as on questions connected with his thesis as on other subjects connected with Medicine of a more general nature.

DOCTOR OF MEDICINE.

This degree may be taken by a Bachelor of Medicine in the ninth term after his inauguration (this occurs on the commencement day next following the admission to the degree). He is required to produce certificates of having been engaged five years in medical study, to keep an Act in the same manner as that for M.B., and to write a short extempore essay on some one (at his choice) of four topics relating severally to Physiology, Pathology, Practice of Medicine, and State Medicine.

A Master of Arts may proceed to the degree of M.D. in the twelfth term after his inauguration as M.A., without having taken the degree of M.B. He must pass all the examinations for M.B., and keep the Act and write the extempore essay for the M.D. degree. He must produce certificates of having been engaged five years in medical study, and the same certificates of attendance on lectures and hospital practice as are required of the candidate for the degree of M.B.

BACHELOR OF SURGERY.

The subjects of examination are—1. Surgical Operations and the Application of Surgical Apparatus; 2. The Examination of Surgical Patients.

A Student is admissible to the examination for this degree at any time after he has passed the First Part of the Third Examination in accordance with the regulations for the degree of Bachelor of Medicine. The examination takes place twice in the year, soon after that for the first part of the third examination for the degree of M.B., and is conducted in a similar manner.

Before admission to the examination, the student must produce certificates: 1. Of having attended the Surgical Practice of a recognised Hospital during two years at least, and of having acted as Dresser or House-Surgeon for six months; 2. Of having diligently attended a course of instruction in Practical Surgery.

Before admission to the degree of Bachelor of Surgery, the candidate must also have passed the second part of the third examination for the degree of M.B.

MASTER IN SURGERY.

The subjects of the examination for this degree are—1. Pathology; 2. Principles and Practice of Surgery; 3. Surgical Anatomy and Surgical Operations; 4. A Surgical Case and a Topic relating to Surgery will be submitted in writing to the candidate, on one or both of which, at his option, he will be required to write a short extempore essay.

The candidate must have completed all that is required for the degree of Bachelor of Surgery two years at least before admission to the examination for the degree of Master in Surgery.

A notice is published early in the Michaelmas and Easter Terms stating when the examinations for Medical and Surgical degrees commence, and the dates when candidates are required to send their names and the necessary certificates to the Secretary of Honours Examinations.

Each candidate pays £3 3s. to the Registrary of the University on giving notice of his intention to offer himself for the first or the second examination for M.B. He pays £2 2s. before the examination for B.S.; and £3 3s. before that for M.S.

Schedules defining the range of subjects in the first M.B. examination, and of the Pharmacy and Pharmaceutical Chemistry in the second examination, also schedules for the necessary certificates, and a list of the Schools of Medicine and Hospitals recognised by the University, may be obtained, on application to the Registrary of the University, or to Mr. English, at the Anatomical Museum.

UNIVERSITY OF LONDON.

THE following examinations will be held in the University of London in 1886 and 1887.

Preliminary Scientific Examination: Monday, January 17th, 1887; and Monday, July 19th, 1887.

Intermediate Examination in Medicine: Monday, July 26th, 1887.

Bachelor of Medicine (M.B.): Monday, October 26th, 1886; and Monday, October 25th, 1887.

Bachelor of Surgery (B.S.): Tuesday, December 8th, 1886; and Tuesday, December 7th, 1887.

Master in Surgery (M.S.) and Doctor of Medicine (M.D): Monday, December 7th, 1886; and Monday, December 6th, 1887.

Subjects relating to Public Health: Monday, December 14th, 1886; and Monday, December 13th, 1887.

The certificates in each case must be transmitted to the Registrar at least fourteen days before the examination. In the case of the Preliminary Scientific Examination, one month's notice is required.

The fee for each examination is Five Pounds.[1] If a candidate withdraw, or fail to pass either of the examinations, the fee is not returned; but he is admitted to a subsequent preliminary scientific, intermediate M.B. or B.S. M.S. or M.D. examination, on payment of an additional fee of Two Pounds Ten Shillings, provided that he gave notice to the Registrar at least fourteen days (or in the case of the Preliminary Scientific Examination, one month) before the commencement of the examination.

BACHELOR OF MEDICINE.

Every candidate for the degree of Bachelor of Medicine is required—1. To have passed the Matriculation Examination; 2. To have passed the Preliminary Scientific Examination; 3. To have been engaged in his professional studies during four years subsequently to matriculation or graduation in Arts, in one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom; 4. To pass two examinations in Medicine.

Preliminary Scientific Examination.—Candidates for the degree of M.B. are required to pass the Preliminary Scientific Examination before commencing their regular medical studies. The examination in July is for pass and honours: that in January for pass only. Candidates for the Pass Examination may take all the subjects, namely, (1) Inorganic Chemistry; (2) Experimental Physics; and (3) General Biology, at the same examination, or at two separate examinations; that is, two at the first examination and one at the second; or one subject at the first and two at the second examination. Candidates who enter for the whole examination in July are examined for a pass or for honours in Inorganic Chemistry and Experimental Physics, and for a pass in General Biology. Candidates who have entered for the whole examination may also be examined for honours in Botany and in Zoology. Every candidate, on sending in his name for the examination, must state whether he intends to compete for Honours in any subject or subjects; and, if he does so intend, must specify the subject or subjects. No candidate will be allowed to take both the Pass and the Honours Papers in the same subject;[2] but every candidate must take the Pass Papers in those subjects in which he does not offer himself for honours. A candidate who enters for, but fails to obtain, honours in Inorganic Chemistry or Experimental Physics may be recommended by the examiners for a Pass in these subjects respectively, if they are satisfied that he has shown such a competent knowledge thereof as is required for the Pass Examination.[3]

Intermediate Examination in Medicine.—This examination will take place twice in each year; once for Pass and Honours, commencing on the second Monday in July; and once for Pass candidates only, commencing on the third Monday in January.[4] The candidate must have passed the Preliminary Scientific Examination at least two years previously, and must produce certificates—1. Of having completed his nineteenth year; 2. Of having been a student during two years at

[1] For the degree of Doctor of Medicine, the fee will continue to be Ten Pounds to all such as, having taken their M.B. degree under the former regulations, shall not have paid the fee of Five Pounds at the Preliminary Scientific Examination.

[2] This rule does not apply to the Honours Examinations in Botany and Zoology, which do not stand in the same relation to the subjects of the Pass Examination as is the case in the other Branches. Every candidate must take the Pass Examination in General Biology.

[3] Candidates must bear in mind that the standard of attainment for the Honours Examination is much higher than that for the Pass Examination; and they should therefore exercise due caution in making their choice to which they will be required to adhere. A candidate who has entered for the Pass Examination will not be allowed to take the Honours Papers; and only under special circumstances will a candidate who has entered for Honours in any subject be transferred to the Pass Examination in that subject.

[4] The January Examination will be held for the first time in 1888.

one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the following subjects: Descriptive and Surgical Anatomy, Physiology and Histology, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine; 3. Of having dissected during two winter sessions; 4. Of having attended a course of Practical Chemistry; 5. Of having attended to Practical Pharmacy, and having acquired a practical knowledge of the preparation of Medicines.[5] Candidates are examined in Anatomy, Physiology, and Histology,[6] Organic Chemistry, Materia Medica and Pharmaceutical Chemistry. Candidates must show a competent knowledge in all the subjects. The examinations are conducted by printed papers and *viva voce* interrogations, by preparations and specimens, and by dissections.

Candidates at the July Examination will be examined for a Pass or for Honours in each of the following subjects:—1. Anatomy; 2. Physiology and Histology;[6] 3. Organic Chemistry; 4. Materia Medica and Pharmaceutical Chemistry. Those candidates only who take all the subjects at one time can be examined for Honours. Every candidate for the July Examination, on sending in his name for the examination, must state whether he intends to compete for Honours in any subject or subjects; and, if he do so intend, must specify the subject or subjects. No candidate will be allowed to take both the Pass and the Honours Papers in the same subject; but every candidate must take the Pass Papers in those subjects in which he does not offer himself for Honours. A candidate who enters for, but fails to obtain, Honours in any subject, may be recommended by the Examiners for a Pass in that subject, if they are satisfied that he has shown such a competent knowledge thereof as is required by the regulations. The examiners will make no report upon the Examination for Honours of a candidate who has failed in any part of the Pass Examination. On Tuesday, at two o'clock in the week after that in which the examination ends, the examiners shall publish (*a*) a list of the candidates entered for the Pass Examination only who have passed, arranged in two divisions; also, after the July Examination, (*b*) a list of the candidates who have passed an Examination for Honours in any one or more subjects, arranged by the examiners in the several departments under their respective heads in three classes, according to their respective degrees of proficiency, candidates being bracketed together if the examiners are of opinion that there is no clear difference between them; and (*c*) a list of the candidates who have failed to obtain Honours, but are recommended for a Pass. As soon as the reports of the examiners shall have been approved by the Senate, a Pass Certificate signed by the Registrar shall be delivered to each candidate who is in the Pass-List; a Honours Certificate shall be delivered to each candidate in the Honours List in respect of each subject in which he shall have obtained honours. If, in the opinion of the Examiners, sufficient merit be evinced, the candidate who distinguished himself most in each of the first and second divisions receives an exhibition of £40 *per annum*, and in each of the others £30 *per annum*, for the next two years, payable in quarterly instalments; provided that, on receiving each instalment, he declare his intention of presenting himself at the M.B. examination within three academical years from the time of passing the intermediate examination in Medicine. Under the same circumstances, the first and second candidates in divisions 1 and 2, and the first candidate in divisions 3 and 4 receive each a gold medal of the value of £5.

M.B. Examination.[7]—No candidate is admitted to this examination within two academical years of the time of his passing the intermediate examination, nor without certificates: 1. Of having passed the intermediate examination in medicine; 2. Of having subsequently attended a course of lectures on each of two of the subjects for which he had not presented certificates at the intermediate examination; 3. Of having conducted at least twenty labours;[8] 4 and 5. Of having attended the Surgical and the Medical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery and Clinical Medicine; 6. Of having, after having attended Surgical and Medical Hospital Practice[9] for at least twelve months subsequently to passing the intermediate examination in Medicine, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients in a Hospital, Infirmary, Dispensary, or Parochial Union, during six months—such attendance not to be counted as part of the hospital practice prescribed in 4 and 5; 7. Of having acquired proficiency in Vaccination.[10] The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. Candidates are examined in General Pathology, General Therapeutics, and Hygiene, Surgery, Medicine, Obstetric Medicine, and Forensic Medicine. The examinations include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. The examinations are conducted by printed papers and *viva voce* interrogations; by practical examinations in obstetric preparations and apparatus; by examination, and report on cases, of medical patients in the wards of a hospital; demonstrations from specimens and preparations. Candidates are expected to write prescriptions in Latin, without abbreviations.

Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine.

Examination for Honours.—Any candidate who has passed the M.B. examination may be examined for Honours in—1. Medicine; 2. Obstetric Medicine; and 3. Forensic Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in Medicine receives £50 *per annum* for the next two years, with the style of University Scholar in Medicine; and the candidates who distinguish themselves the most in Obstetric Medicine and in Forensic Medicine receive each £30 *per annum* for the next two years, with the style of University Scholar in Obstetric Medicine and in Forensic Medicine respectively. The first and second candidates in each of the preceding subjects each receive a gold medal of the value of £5.

BACHELOR OF SURGERY.

The candidate must produce certificates—1. Of having passed the examination for the degree of Bachelor of Medicine in this University; 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. The examinations are conducted by printed papers on Surgical Anatomy and Surgical Operations; by examination, and report on cases of surgical patients, by performance of operations upon the dead subject; by application of surgical apparatus; and by *viva voce* interrogation.

Examination for Honours.—Any candidate who has passed the B.S. examination may be examined for Honours in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives £50 *per annum* for the next two years, with the style of University Scholar in Surgery; and the first and second candidates each receive a gold medal of the value of £5.

MASTER IN SURGERY.

The candidate must produce certificates—1. Of having taken the degree of Bachelor of Surgery[11] in this University; 2. Of having attended subsequently—(*a*) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; (*b*) or to Clinical or Practical Surgery during one year in a recognised hospital or medical institution, and of having been engaged during three years in the practice of his profession; (*c*) or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University.[12] 3. Of moral character, signed by two persons of respectability. The examination is conducted by means of

[5] The subjects numbered 2, 3, and 4, must be attended after passing the Matriculation Examination.

[6] Any candidate, on giving notice at the time of registration, may postpone his examination in Physiology and Histology from the Intermediate Examination in Medicine at which he presents himself for examination in the remaining subjects, until the Intermediate Examination in Medicine in any subsequent year; but he cannot compete for honours on either occasion; and he cannot be admitted as a candidate at the M.B. Examination until at least twelve months after he has passed his examination in Physiology and Histology.

[7] Any candidate for the M.B. Examination who has passed the Intermediate Examination in Medicine under the former regulations, is required to have also passed the Examination in Physiology at some previous Intermediate Examination in Medicine carried on under the present regulations; at which examination he is not allowed to compete for honours.

[8] Certificates will be received from any legally qualified practitioner.

[9] The student's attendance on the Surgical and on the Medical Hospital Practice specified in Regulations 4 and 5, may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the Intermediate Examination in Medicine. Attendance during three months in the wards of a Lunatic Asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.

[10] Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council.

[11] Candidates who have obtained the degree of Bachelor of Medicine previously to 1866, will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and their attendance on surgical practice required by Regulation 2, may commence from the date of the M.B. degree.

[12] One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division.

printed papers and *viva voce* interrogation; and the candidates are examined in Mental Physiology, especially in its relations to Mental Disorder,[13] and in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in Surgery receives a gold medal of the value of £20.[14]

DOCTOR OF MEDICINE.

The candidate must produce certificates analogous to those required for candidates for the degree of Master in Surgery, but having special relation to Medicine. The examination is conducted by printed papers and *viva voce* interrogations; and candidates are examined in Mental Physiology, especially in its relation to Mental Disorders, and in Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in Medicine receives a gold medal of the value of £20.[14]

UNIVERSITY OF DURHAM.

THERE are two Licences and three degrees conferred; namely, a Licence in Medicine and a Licence in Surgery, and the Degrees of Bachelor of Medicine, Master in Surgery, and Doctor of Medicine. A certificate of proficiency in Sanitary Science is also awarded.

The regulations for the licence and degree of Bachelor, so far as regards the course of study, the subjects of each examination, and the certificates required, are similar; but the candidate for a degree must produce evidence of general education in addition to that implied in the certificate of registration as a medical student.

The examinations for the licences and degrees above named are conducted at the College of Medicine, and in the Infirmary, at Newcastle-on-Tyne. Candidates are examined—(1) by printed papers of questions, (2) practically, (3) *viva voce*. Every candidate who intends to present himself for any of the above-named examinations must give at least twenty-eight days' notice to the Registrar of the College, and must at the same time send the fee (£5) and the necessary certificates. If, after payment of the fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, he shall not receive back the fee, but shall be allowed to enter for one subsequent examination of the same kind without the payment of any additional fee.[1]

BACHELOR OF MEDICINE.

A Candidate for the Degree of Bachelor in Medicine must produce the following certificates: 1. Of being 21 years of age; 2. Of registration in the books of the General Medical Council as a medical student; 3. Of good moral conduct; 4. Of attendance on Lectures and Hospital Practice. In addition to the certificate of Registration, the candidate must produce a certificate—(*a*) Of having passed the Preliminary Examination in Arts for Degrees in Medicine of the University of Durham; or (*b*) of Graduation in Arts at one of the following Universities, namely, Durham, Oxford, Cambridge, London, Dublin, Queen's (Ireland), Edinburgh, Glasgow, St. Andrew's, Aberdeen, Calcutta, Madras, Bombay, McGill College (Montreal), Queen's College (Kingston), Victoria (Manchester), and Royal (Ireland); or (*c*) of having passed the Preliminary or Extra-professional Examination for Graduation in Medicine at one of the following Universities—Cambridge, London, Edinburgh, Glasgow, St. Andrew's, Aberdeen, Queen's (Ireland), Victoria (Manchester), and Royal (Ireland); or (*d*) of having passed the Preliminary Examination in Arts which, before 1881, qualified for the Fellowship of the Royal College of Surgeons of England, or that qualifying for the Membership of the Royal College of Physicians of London. The Preliminary Examination in Arts in the University of Durham is held twice yearly, in April and September, at the same time as the Registration Examination.[2] Application for admission must be made at least one month before the Examination. The Fee is £1. Candidates who, at the commencement of their professional education, passed the Arts Examination for Registration only, may pass in the extra subjects required, either *before or after* presenting themselves for the First or Second Examinations for the Degree, but must do so before presenting themselves for the Third Examination.

For the Degree of Bachelor of Medicine there are three Professional Examinations, the first and second being held in September and April, the third in June and December. The first will commence on September 13th, 1886, and April 18th, 1887; the second on September 20th, 1886, and April 25th, 1887; and the third on December 6th, 1886, and June 13th, 1887.

The subjects of the First Examination are Elementary Anatomy, Elementary Physiology, Chemistry and Chemical Physics, Botany and Medical Botany. The subjects of the Second Examination are Anatomy, Physiology, and Materia Medica, with Pharmacy. The subjects of the Third Examination are Medicine, Surgery, Midwifery and Diseases of Women and Children, Pathology, Medical Jurisprudence, Therapeutics, and Public Health.

Candidates will be admitted to each of these Examinations after duly certified attendance at a recognised Medical School on Courses of Instruction in the various subjects of the Examination, as set forth in the Schedules of Certificates issued by the University. These may be obtained on application to the Registrar of the University of Durham College of Medicine.

Each Examination must be passed before the next can be proceeded with, and each must be passed in its entirety, except the First Examination, which may be taken in two parts at different times, one part comprising Elementary Anatomy and Elementary Physiology, and the other part of Chemistry, Chemical Physics, Botany, and Medical Botany. Failure in one of the subjects comprised in either part of this Examination will entail rejection in that part.

A candidate who has passed the First Examination of the Conjoint Board in England of the Royal College of Physicians of London and the Royal College of Surgeons of England, will be exempt from the First Examination of the University of Durham except in the subjects of Chemistry with Chemical Physics, and Botany with Medical Botany, on which he will be re-examined.

A candidate who has passed the First and Second Examinations of the University will be exempt from the First and Second Examinations of the Conjoint Board in England, and will be entitled to present himself for the Final Examination of the Board on the completion of the necessary curriculum.

One of the four years of professional education must be spent in attendance at the College of Medicine, Newcastle-upon-Tyne. During the year so spent, the candidate must attend at least two courses of lectures in the Winter Session, and two in the Summer Session, together with the Class and Test Examinations held in connection with those classes; and must also attend Hospital Practice and Clinical Lectures at the Infirmary. Candidates may fulfil this portion of the curriculum at any period before they present themselves for the Final Examination for the Degree. They are not required to reside at Durham. The other three years of the curriculum may be spent either at Newcastle-upon-Tyne, or at one or more of the Schools recognised by the Licensing Bodies.

The successful candidates for the Second and Third Examinations for the Degree of Bachelor in Medicine will be arranged in three classes in the first and second (honours) according to merit, and in the third or pass, in alphabetical order.

Candidates who have completed part of their curriculum elsewhere may pass their First Examination previously to entering at Newcastle-on-Tyne, and are recommended to commence their year of residence at Newcastle at the beginning of the Winter Session.

DEGREE OF DOCTOR OF MEDICINE.

Candidates must not be less than twenty-four years of age, must have obtained the Degree of Bachelor of Medicine at least two years previously, and have been subsequently engaged in attendance on the practice of a recognised hospital, in the naval or military services, or in medical and surgical practice. Each candidate must write an essay on some medical subject selected by himself and approved by the Professor of Medicine, and pass an examination thereon; and must be prepared to answer questions on the other subjects of his curriculum, so far as they are related to the subject of the essay. A Gold Medal will be awarded to the candidate who presents the best essay (provided that the essay is judged to be of sufficient merit). The

[13] In 1886 and 1887, candidates will be allowed, on giving notice of their wish when they enter for the examination, to take a paper in Logic and Psychology, as under the former regulations, in lieu of the paper in Mental Physiology; and candidates who have already passed the Examination in Logic and Psychology will be exempted from the Examination in Mental Physiology.

[14] In and after 1888, the Gold Medal will be awarded only on the result of the entire examination.

[1] There are special regulations in the case of practitioners of fifteen years standing.

[2] The next examination will commence on September 21st, 1886, and will include the following subjects, viz.: *Necessary:* Greek: Xenophon's *Anabasis*, Book I. Euclid: Books III and IV. *Optional Subjects (two to be taken):* Latin: Cicero, *De Amicitiâ*. French: Voltaire's *Louis XIV*, chap. i-xiii. German: Immerman's *Der Oberhof*. Mechanics, Hydrostatics, and Pneumatics. English History: Henry VII to Elizabeth. In 1887, the examination will be commenced on March 22nd, and again on September 20th. The subjects will be as follows, viz.: *Necessary:* Greek: Xenophon's *Anabasis*, Book II; Euclid, Books III and IV. *Optional Subjects (two to be taken):* Latin: Cicero, *De Senectute*. French: Lemercier's *Frédégonde et Brunehaut*. German: Goethe's *Knabenjahr*. Mechanics, Hydrostatics, and Pneumatics. English History: James I to James II. In 1888, the subject will be the same as for 1886, except the following, viz.: Greek: *Anabasis*, Book III; and English History: William III to George III.

successful candidate will be permitted to publish his essay. The essays will be retained by the Faculty of Medicine.

DEGREE OF MASTER IN SURGERY.

Candidates must have passed the Examination for the Degree of Bachelor in Medicine, and must have attended one Course of Lectures on Operative Surgery. Candidates will have an additional Paper on Surgery, and will have to perform operations on the dead body, and will have a special clinical examination.

Every candidate who intends to present himself for any of the above-named examinations must give *at least twenty-eight days' notice* to the Registrar of the College, and must, at the same time, send the fee and the necessary certificates. If, after payment of the fee, a Candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, he shall not receive back the fee, but shall be allowed to enter for one subsequent examination of the same kind without the payment of any additional fee.

THE DEGREE OF DOCTOR OF MEDICINE FOR MEDICAL PRACTITIONERS OF FIFTEEN YEARS' STANDING, WITHOUT RESIDENCE.

Practitioners of fifteen years' standing are admitted to examination for the Degree of Doctor of Medicine under the following regulations. 1. The candidate must be registered by the General Council of Medical Education and Registration of the United Kingdom. 2. He must have been in the active practice of his profession for fifteen years as a qualified practitioner. 3. He must not be under forty years of age. 4. He must produce a certificate of moral character from three registered members of the medical profession. 5. If the candidate shall not have passed, previously to his Professional Examination (in virtue of which he has been placed on the *Register*), an Examination in Arts, he must pass an Examination in Classics and Mathematics.[3] 6. If the candidate shall have passed previously to his Professional Examination (in virtue of which he has been placed on the *Register*), a Preliminary Examination, he must translate into English passages in any of the parts specified below of any one of the Latin authors mentioned:—Cæsar, *De Bello Gallico*, first three books; Virgil—first three books of the *Æneid*: Celsus—first three books. The candidate has an opportunity of showing proficiency in Greek, Moral Philosophy, or some modern language. 7. He must pass an Examination in the following subjects: i. Principles and Practice of Medicine, including Psychological Medicine and Hygiene; ii. Principles and Practice of Surgery; iii. Midwifery and Diseases peculiar to Women and Children; iv. Pathology, Medical and Surgical; v. Anatomy, Medical and Surgical; vi. Medical Jurisprudence and Toxicology; vii. Therapeutics. The examination is conducted by means of printed papers, clinically, in the Newcastle Infirmary, and *vivâ voce*. 8. The fee is Fifty Guineas. 9. If the candidate shall fail to satisfy the Examiners, Twenty Guineas are retained; but, if he again offer himself for the Examination, Forty Guineas only are then required.

Examinations, in accordance with the above regulations, will commence on December 6th, 1886, and June 13th, 1887, in the College of Medicine, Newcastle-on-Tyne. Gentlemen intending to offer themselves as candidates are required to forward their names to Dr. Luke Armstrong, Registrar of the University of Durham College of Medicine, Newcastle-on-Tyne, at least twenty-eight days before the commencement of the examination, together with the fee and the before-mentioned certificates.

Fees.—The Fees for the Examinations, Licences, Degrees, and Certificates are:—Registration Examination, £1; Extraordinary Registration Examination, £2; Preliminary Arts' Examination for Degrees, £1; First or Second Examinations for Degrees in Medicine, each £5; third Examination for Degrees in Medicine, £10; Licence in Medicine or in Surgery, £3; Degree of Master in Surgery, Bachelor in Medicine, or Doctor in Medicine, each £6; Degree of Doctor in Medicine, for Practitioners of fifteen years' standing, £52 10s. The fee of Ten Pounds for the Third Examination will be required from Candidates who entered at the University of Durham College of Medicine, Newcastle-upon-Tyne, on and after May 1st, 1885, and from candidates from other Schools of Medicine who commenced their professional studies on or after October 1st, 1883.

[3] The subjects for this examination are:—1. An English Essay. (A short essay on some subject to be specified at the time of the examination.) 2. Arithmetic. 3. Euclid—Books I and II. 4. Latin—Translation from Virgil, *Æneid*, Books I and II, together with Grammatical Questions. 5. One of the following subjects: i. Greek Translation from Xenophon's *Memorabilia*, Books I and II, with Grammatical Questions; ii. French Translation from Voltaire's *Charles XII*, with Grammatical Questions; iii. German Translation from Goethe's *Dichtung und Wahrheit*, Book I, with Grammatical Questions; iv. Elements of Mechanics, Pneumatics, and Hydrostatics; v. Some Treatise on Moral, Political, or Metaphysical Philosophy.

VICTORIA UNIVERSITY.

THE Degrees in the Faculty of Medicine are Bachelor of Medicine (M.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). All candidates for Degrees in Medicine and Surgery are required to have passed the Entrance Examination in Arts, or to have passed such other Examination as may from time to time be recognised for this purpose by the University. This examination can be passed before matriculation, if desired, in which case the candidate is required to present a certificate from his last instructor to the effect that he is a proper person to be admitted to the examination, and to pay a fee of £1.

Matriculation must *precede* admission to any University Examination other than the Entrance Examination in Arts. Matriculation consists in signing the University Register, and paying a fee of £2. If, however, the candidate has passed the Entrance Examination in Arts before matriculating, a fee of £1 only is charged. Before matriculating, candidates must produce proof that they are at the time registered students of a College of the University, or of some medical school recognised by the University.

Entrance Examination in Arts.—The subjects of the Entrance Examination in Arts shall be:—(1) Latin; (2) Elementary Mathematics; (3) Elementary Mechanics; (4) English. (5 and 6) Two of the following: *(a)* French; *(b)* German; *(c)* Greek; *(d)* Mathematics (more advanced); *(e)* English History and Elements of Modern Political Geography.[1]

BACHELOR OF MEDICINE.

Before admission to the Degree of Bachelor of Medicine a candidate is required to present certificates that he will have attained the age of twenty-one years on the day of graduation, and that he has pursued the courses of study required by the University Regulations during not less than four years subsequently to the date of his registration as a Medical Student, two of such years having been passed in a College of the University,[2] and one year at least having been passed in a College of the University subsequently to the date of passing the Preliminary Examination in Science. All candidates for the Degree of Bachelor of Medicine must pass three examinations, namely—the Preliminary Examination in Science; the Intermediate Examination; and the Final Examination.

Preliminary Examination in Science.—The subjects of the Examination are:—1. *Chemistry:* (1) Laws of Chemical Combination; non-metallic elements and their compounds; metals; introduction to Organic Chemistry; (2) Elementary Qualitative Analysis. 2. *Elementary Biology:* (1) Animal Morphology; (2) Vegetable Morphology, Physiology, and Elements of Classification; (3) Laboratory Work. 3. *Physics:* (1) General Physics: The chief phenomena of Heat, Electricity, and Magnetism, treated in an elementary manner; Geometrical and Physical Optics; Acoustics; (2) Methods employed in the Physical Laboratory.

Candidates for the Preliminary Examination in Science must have attended, during at least one year, courses, both of lectures and of laboratory work, in each of the above-named subjects.

Intermediate M.B. Examination.—The subjects of Examination are:—1, Anatomy; 2, Physiology (including Physiological Chemistry and Histology); 3, Materia Medica and Pharmacy. Candidates must have passed the Preliminary Examination in Science, and have attended courses of instruction in Anatomy for *one* winter session, in Physiology for *two* winter sessions,[3] in Materia Medica and Pharmacy for *one* summer session. The certificates must show (1) that the human body has been dissected twice at least; (2) that laboratory instruction has been received in Physiology; (3) that practical instruction has been received in Materia Medica and Pharmacy.

Final M.B. Examination.—The examination is divided into two parts, called the First Part and the Second Part respectively, which may be passed separately or on the same occasion; but the First Part cannot be taken before the end of the third year, and the Second Part cannot be taken before the end of the fourth year of medical study. The subjects of examination are as follows:—Part I.—1, Systematic Surgery; 2, Pharmacology and Therapeutics; 3, General Pathology. Part II.—1, Systematic and Clinical Medicine, including Mental Diseases; 2, Practical and Clinical Surgery; 3, Obstetrics and Dis-

[1] The Special Books for the Entrance Examination in Arts in 1886 are: *Latin:* Ovid, *Tristia*, Book I; Livy, Book XXII. *Greek:* Xenophon, *Anabasis*, Book VI. *French:* Mme. de Witt, *Derriere les Haies*. *German:* Chamisso, *Peter Schlemihl*. In 1887: *Latin:* Cicero, *De Senectute*; Virgil, *Æneid*, Book XII. *Greek:* Xenophon, *Anabasis*, Book II. *French:* J. T. de Saint Germain, *Pour une Epingle*. *German:* Goethe, *Italienische Reise*.

[2] The Colleges of the University are Owens College, Manchester, and University College, Liverpool.

[3] One session of Physiology will suffice, if the candidate present not less than 100 class attendances.

eases of Women and Children; 4, Morbid Anatomy; 5, Forensic Medicine; 6, Hygiene.

Candidates, before presenting themselves for the first part of the Final Examination, are required to have passed the Intermediate Examination, and to furnish certificates of having attended courses of instruction, approved by the University, in a College of the University, or in a Medical School recognised for this purpose, in the following subjects: Systematic Surgery, one winter session; Pharmacology and Therapeutics, one winter session or two summer sessions; General Pathology.

Candidates, on presenting themselves for the second part of the Final Examination, must furnish certificates 1. Of having attended the medical and surgical practice of a hospital or hospitals, approved by the University, during at least three years, of which years two at least must be subsequent to the date of passing the Intermediate Examination, except when exemption has been granted by the General Board of Studies, after report from the Departmental Board of Medical Studies. 2. Of having attended, during at least twelve months, demonstrations in the *post mortem* theatre of a hospital; 3. Of having attended, under proper supervision, at least twenty cases of labour; 4. Of having, during at least three months, received, in either a general or a special hospital, approved by the University, such clinical instruction in the diseases peculiar to women as shall be approved by the University; 5. Of having acquired proficiency in vaccination; 6. Of having attended courses of instruction, approved by the University, in a College of the University, or in a College or Medical School recognised for this purpose by Statute of the University, in the following subjects: Systematic Medicine, two winter sessions; Clinical Medicine, two years; Practical Surgery, one winter session; Clinical Surgery, two years; Obstetrics and Diseases of Women and Children, two summer sessions, or one winter session; General Pathology and Morbid Anatomy, one winter session and one summer session; Forensic Medicine, one summer session; Hygiene, one summer session.

DOCTOR OF MEDICINE.

Candidates are not eligible for the Degree of Doctor of Medicine unless they have previously received the Degree of Bachelor of Medicine, and at least one year has elapsed since they passed the examination for that degree. Candidates for the Degree of Doctor of Medicine must present a printed dissertation embodying the results of personal observations or original research, either in some department of medicine or of some science directly relative to medicine. No candidate will be admitted to the degree unless his dissertation, after report from the Departmental Board of Medical Studies, shall have been recommended by the General Board of Studies to the Council for acceptance. Candidates may be examined on any subject connected with their dissertations.

MASTER OF SURGERY.

Candidates are not eligible for the Degree of Master of Surgery unless they have previously received the Degree of Bachelor of Medicine, and at least one year has elapsed since they passed the examination for that degree. The subjects of examination are—1. Surgical Anatomy; 2. Surgical Pathology; 3. Practical Surgery, including the performance of operations on the dead body; 4. Clinical Surgery; 5. Ophthalmology. Candidates must furnish certificates that they have been engaged, since taking the Degree of Bachelor of Medicine, in the study of Practical Surgery; and that they have held, for not less than six months, a surgical appointment in a public hospital or other public institution affording full opportunity for the study of Practical Surgery. They must also furnish certificates—1. Of having attended a special course of instruction in Operative Surgery approved by the University, and of having personally practised the principal surgical operations on the dead body; 2. Of having attended a systematic course of instruction, including practical work, approved by the University, on Surgical Pathology, or a course of the same kind of which Surgical Pathology forms part; 3. Of having attended a course of Ophthalmology, and of having received instruction in Ophthalmic Surgery, approved by the University.

Fees.—No fee entitles to admittance to more than one examination. The fee for matriculation is £2, and includes the fee for the Entrance Examination in Arts. A fee of £1 is payable for any subsequent Entrance Examination; for the Preliminary Examination in Science is £1, or for the Intermediate Examination for the Degree of M.B. The fee for the Final Examination for the Degree of M.B., for the Examination for the Degree of Ch.M., and on sending in the dissertation for the Degree of M.D., is £2. A fee of £5 is payable on the conferring of the Degree of M.B. A fee of £10 is payable on the conferring of the Degree of M.D., or that of Ch.M.

The Entrance Examination in Arts is held twice in each year, about the middle or end of June, and about the beginning of October. The Preliminary Examination in Science, the Intermediate Examination, and the Final Examination, are held in July and in October. Those candidates only can present themselves in October who have matriculated since the corresponding examination in July, or have failed in that examination, or have been prevented from attending that examination by reasons satisfactory to the General Board of Studies. The Examination for the Degree of Master of Surgery is held in October.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

REGULATIONS FOR THE LICENCE.

THE College grants its Single Qualification in Medicine to Candidates who already possess a recognised British or Irish Qualification in Surgery.

Candidates must pass a written and oral Examination before the Examining Board of the College, in Medicine, Clinical Medicine, Materia Medica, Midwifery, and Medical Jurisprudence.

The Examinations are held on the first Wednesday, and succeeding days, of every month, except September and October.

No one is admissible to examination who has within the previous three months been rejected by any licensing board, and every candidate must sign and send in along with his certificates a declaration, stating that he has not been rejected within that period.

The Fee for the Licence is £15 15s. In the event of a candidate being unsuccessful, the sum of £6 6s. will be retained; and this regulation will also apply to cases in which the candidate may have been previously rejected on one or more occasions.

Candidates may be admitted to special examination, on days other than those appointed above, on bringing forward reasons satisfactory to the Council, and on paying an extra fee of £5 5s. Should the candidate be unsuccessful, the sum of £11 11s. will be returned to him.

All candidates for Examination are required to communicate with the Secretary to the College, not less than eight days before the date of Examination at which they propose to appear; and the fees must be lodged with the Secretary at least four days before the date of the Examination.

FELLOWSHIP AND MEMBERSHIP.

No one can be elected a Fellow of the College until he has been at least one year a Member, and has attained the age of twenty-five years.

Any Licentiate of a College of Physicians, or Graduate of a British or Irish University, with whose knowledge of Medical and General Science the College may be satisfied, may be admitted a Member of the College, provided he shall have attained the age of twenty-four years.

Every motion for the election of a Fellow or Member shall be made at a quarterly Meeting of Fellows by one of the Fellows present, and seconded by another; and this motion shall be determined by ballot at the next quarterly meeting—a majority of three-fourths being necessary to carry it in the affirmative.

Every candidate for the Membership (except such as are admissible under the provisions for candidates above forty years of age) must pass an examination:—(1) On the Principles and Practice of Medicine, including Therapeutics;—(2) On one of the following subjects, to be selected by the candidate: (*a*) Pathology, including Morbid Anatomy; (*b*) Medical Jurisprudence and Public Health; (*c*) Midwifery and the Diseases of Women; (*d*) Psychological Medicine.

Application for the Membership must be made through the Secretary, who will transmit to the candidate a copy of the Regulations and plan of examination, together with a form of petition. The candidate must return the petition duly filled up to the Secretary, and at the same time transmit testimonials of recent date from well known members of the profession, certifying as to his professional and social standing. If satisfied as to the eligibility of the candidate, the Council authorise his examination by the Board of Examiners. If the report of the Examiners be satisfactory, the Council report the same to the College at the next quarterly meeting, when a motion may be made for the election of such candidate to the Membership of the College.

If any candidate who has attained the age of forty years, and has been a Registered Practitioner for not less than ten years, produce testimonials showing that he has been distinguished for his scientific attainments, or eminence as a Medical Practitioner, the Council may, if they see fit, exempt him from the whole or any part of the prescribed examination.

TABULAR VIEW OF THE REGULATIONS OF THE MEDICAL EXAMINING BODIES IN SCOTLAND.

	ROYAL COLLEGE OF SURGEONS OF EDINBURGH.	COLLEGES OF PHYSICIANS & SURGEONS OF EDINBURGH, & FACULTY OF PHYSICIANS & SURGEONS OF GLASGOW.	FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.		UNIVERSITIES OF SCOTLAND.
	Diploma.	Conjoint Examination.	Licence.	Fellowship.	Bachelor of Medicine and Master in Surgery.
Age Required	Twenty-one.	Twenty-one.	Twenty-one.	Twenty-four.	Twenty-one.
Evidence of General Education before commencement of Professional Study.	Having passed a preliminary examination, and being registered as a student by Medical Council.	Having passed a preliminary examination, and being registered as a student by the Medical Council.	Having passed a preliminary examination, and being registered as a student by the Medical Council.	Registration as a student by the General Medical Council.	Preliminary examinations by University; or Degree in Arts or equivalent examinations.
Duration of Professional Study.	Forty-five months, including four winter sessions, or three winter and two summer sessions at a recognised school.	Forty-five months, including not less than four winter sessions at a recognised school.	Four years; including four winter sessions, or three winter and two summer sessions at a recognised school.	Six years; graduates in Arts or Science, five years.	Four years; one year being in the University, and another in the same or some other University (see page 503).
Courses of Lectures, etc., required.					
Anatomy	A., two courses of six months, and P.A. twelve months; or A. six months, and P.A. eighteen months.	Six months.	Six months.	Two winter sessions.	One hundred lectures.
Practical Anatomy ...		Twelve months.	Twelve months.	Eighteen months.	Course of same duration.
Physiology	Fifty lectures.	Six months.	Fifty lectures.	One winter.	One hundred lectures.
Practical Physiology ...	—	—	—	Three months.	—
Chemistry	Six months.	Six months.	Six months.	One winter.	One hundred lectures.
Practical Chemistry ...	Three months.	Three months.	Three months.	Three months.	Three months.
Materia Medica	Three months.	Three months.	Three months.	Three months.	One hundred lectures.
Practical Pharmacy ...	Three months.	Three months.	Three months.	Three months.	(See page 503).
Natural History (Zoology)	—	—	—	—	Fifty lectures.
Botany	—	—	—	—	Fifty lectures.
Pathology	Or attendance in *post mortem* room, three months.	Three months; lectures or attendance in *post mortem* room.	Three months; lectures or attendance in *post mortem* room.	Three months; and Practical Pathology three months.	One hundred lectures; or Pathological Anatomy three months, with supplementary course of Medicine or Clinical Medicine.
Medicine	Six months.	Six months.	Six months.	Six months.	One hundred lectures.
Clinical Medicine ...	Six months.	Nine months.	Six months.	Twelve months.	Six months (100 lectures, Edin.), or two courses of three months.
Surgery	Six months.	Six months.	Six months.	Six months.	One hundred lectures.
Clinical Surgery	Six months; and a third course, either systematic or clinical.	Nine months.	Nine months.	Twelve months.	Six months (100 lectures, Edin.), or two courses of three months.
Practical Surgery ...	—	—	—	Three months.	—

Midwifery and Diseases of Women.	Three months; six cases of labour.	Three months; six cases of labour.	Three months; at least six cases of labour.	Three months; six cases of labour.	One hundred lectures; three months' Midwifery Hospital, or six cases of labour.
Medical Jurisprudence Hospital Practice and Hospital Appointments.	Three months. General Hospital twenty-four months; Public Dispensary six months, or Visiting Assistant six months.	Three months. General Hospital twenty-four months; Public Dispensary, six months; or three months with three months' hospital clerkship.	Three months. Public Hospital twenty-four months.	Three months. Twenty-four months.	Fifty lectures. General Hospital, two years; Out-practice of hospital, or of dispensary or registered practitioner, six months.
NUMBER OF EXAMINATIONS.	One; final only. Candidate must have qualification in Medicine.	Three.	One; final only. Candidates must have qualification in Medicine.	Two; each examination may be divided.	In Edinburgh and Glasgow, four; in Aberdeen and St. Andrews, three. For the subjects of these examinations, and the periods of study at which they may be passed in the respective universities, see pages 503 and 504.
FIRST EXAMINATION; WHEN IT MAY BE PASSED; SUBJECTS.	—	End of first complete year; Chemistry, Elementary Anatomy, and Histology.	—	Anatomy and Physiology (including Histology and Embryology); Chemistry (unless already passed).	
SECOND EXAMINATION: WHEN IT MAY BE PASSED; SUBJECTS.	—	End of summer session of second complete year; Anatomy, Physiology, Materia Medica and Pharmacy.	—	—	
FINAL EXAMINATION; WHEN IT MAY BE PASSED; SUBJECTS.	After last winter session; Surgery, Clinical Surgery, and Surgical Anatomy, Medicine, Midwifery, and Gynæcology, Materia Medica, and Medical Jurisprudence.	End of full period of study; Medicine, Clinical Medicine, Surgery, Clinical Surgery, Midwifery and Gynæcology, Medical Jurisprudence, and Hygiene.	Surgery and Clinical Surgery, Medicine, Midwifery, and Medical Jurisprudence.	Pathology, Medicine (Systematic and Clinical), Surgery (Systematic, Operative, and Clinical), Materia Medica, Midwifery, Medical Jurisprudence.	—
FEES PAYABLE	£15 15s.; in case of rejection, £4 4s. retained.	First and Second Examinations, each £5 5s.; additional, after rejection in all subjects, £3 3s.; after partial failure, £2 2s. Third Examination, £15 15s.; after rejection, additional, £5 5s.	£15 15s.; in case of rejection, £4 4s. retained.	First Examination, £8 8s.; Second, £12 12s.; Licentiates of Faculty or Graduates in Medicine, First, £6 6s.; Second, £9 9s.	£21: £5 5s. each of two examinations, £10 10s. at last examination of three.
DATES OF EXAMINATION	October 7th, 1886; January 6th, April 21st, July 21st, 1887.	First; in Edinburgh, October 13th to 16th, 1886; January 12th to 15th, April 27th to 30th, July 6th to 9th, 1887; in Glasgow, April 13th to 16th, and July 20th to 23rd, 1887. Second: Monday, Tuesday, and Wednesday next after First Examination. Final: Days next following Second Examination.	October 19th, 1886; January 11th, April 19th, and July 19th, 1887.	Second week in April and third week in October.	Aberdeen and Edinburgh: end of winter and summer sessions. Glasgow, July and October. Clinical Examination: Edinburgh, May; Glasgow, June. Final in Edinburgh, June. St. Andrew's, end of April.
REJECTED CANDIDATES	Not readmitted under three months.	At either examination, not readmitted for three months: not re-examined in subjects in which he has passed.	Not readmitted under six months.	—	Not readmitted until after another year of medical study, or such portion of a year as may be prescribed by the examiners (unless he have studied during another year two of the subjects—*Edinburgh*).
ADDITIONAL INFORMATION.	See page 500.	See page 501.	—	See page 501.	See page 502.

Examinations will be held on October 12th and 13th, 1886, January 11th and 12th, April 12th and 13th, and July 12th and 13th, 1887. Application must be made to the Secretary not less than one month previous to the date of the Examination.

Fees.—The fee to be paid by a Member is £31 10s. A Licentiate who has obtained the Licence prior to the 1st August, 1876, when raised to the rank of Member, pays £21; a Licentiate obtaining the Licence subsequently to that date, when raised to the rank of Member, pays £15 15s. When a Member is raised to the rank of Fellow, he pays £31 10s., exclusive of stamp-duty (£25). All candidates for Fellowship or Membership must lodge their fees and the amount of stamp duty payable with the Treasurer previously to presenting their petitions.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS FOR CANDIDATES FOR THE LICENCE.

THE Regulations in the Tables at pages 498 and 499, and below, are applicable to candidates who are already registered Licentiates of one of the Colleges of Physicians in the United Kingdom, or Graduates in Medicine of a British or Irish University mentioned in Schedule A of the Medical Act, 1858. Female practitioners are admitted to the Licence of the College, but not to the Fellowship.

Professional Education.—In addition to the subjects enumerated in the Table, the candidate must have been instructed in Vaccination. Two courses of Clinical Medicine, or of Clinical Surgery, of three months each, if not simultaneous, will be held equivalent to one course of six months. They must be attended during the attendance at the Hospital where they are delivered. The six months' courses delivered in Scotland must consist of not fewer than 100 lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' course must consist of not fewer than fifty lectures. It is strongly recommended to students to avail themselves of opportunities of attending lectures on Ophthalmic and Mental Diseases, also on Botany, Zoology, and Comparative Anatomy; and of obtaining practical instruction in the use of the Microscope.

Professional Examination.—Candidates must apply to the Secretary of the College of Surgeons, Mr. Joseph Bell, Melville Crescent, Edinburgh, on or before the Monday preceding the day of examination;[1] and must produce—1. Satisfactory evidence of having attained the age of twenty-one years, and of having been duly registered; 2. Certificates of having attended the classes enumerated under Professional Education; 3. A tabular statement (for which a printed form will be furnished), exhibiting the whole of his or her professional education, and distinguishing the classes, hospitals, dispensaries, and schools attended during each session; 4. A diploma in Medicine, or certificate of registration as a medical practitioner. If he or she have been apprenticed to a Fellow of the College, he or she must also produce his or her discharged indenture. The fee of £15 15s. must be lodged with the Treasurer not later than the Monday preceding the examination. The sum of £11 11s. will be returned to unsuccessful candidates. In regard to registered practitioners, if any of the three subjects—Anatomy, Physiology, and Chemistry—have been omitted, the candidate must undergo an examination on the omitted subjects; and none of the subjects of the final examination are omitted.

Candidates desirous of Special Examinations, on other days than those fixed, must prepare a case to be submitted to the consideration of the authorities of the College, with evidence to show why it is impossible for them to avail themselves of the ordinary examination. They must, at the same time, produce certificates of the whole of the prescribed Course of Study, and of having passed the Preliminary Examination, and must state the earliest and the latest days within which they can present themselves. The fees, which must be lodged two days before the Examination-day, are £20 for Examination, of which £12 will be returned to candidates remitted on Examination.

Recent dissections, anatomical specimens, and articles of the Materia Medica, are employed during the examinations; and all candidates must write out formulæ of prescription. They are also subjected to a practical clinical examination in the Surgical Hospital, including the application of surgical apparatus, bandages, etc. No candidate is admissible to examination who has been rejected by any other Licensing Board within the preceding three months.

LAWS RELATING TO THE FELLOWSHIP.

1. No person is received as a candidate for the Fellowship who has not the Diploma of the Royal College of Surgeons of Edinburgh, or of the Royal College of Surgeons of England, or of the Royal College of Surgeons of Ireland, or of the Faculty of Physicians and Surgeons of Glasgow. 2. Every candidate for the Fellowship, with the exception of those admissible under the old constitution, with right to the Widows' Fund, and those hereinafter mentioned, must show that he is twenty-five years of age, and that he has for at least two years subsequently to the date of his licence been engaged in the study or practice of his profession; and, before having his petition laid before the College, must pass an examination as follows. A. Those who are already Licentiates of the College: on Clinical and Operative Surgery, and one optional subject. B. Those who are not Licentiates of the College: on Clinical and Operative Surgery, Surgical Anatomy, and one optional subject; and in such supplementary subjects as have not, in an adequate manner, been included in the examination for the registrable surgical qualification possessed by such candidate, and which are required in the examination of licentiates of this College. The optional subjects embrace—*a.* Surgery in any one of its Ophthalmic, Aural, Laryngeal, or other special branches; *b.* Advanced Anatomy and Physiology; *c.* Pathology and Morbid Anatomy; *d.* Midwifery and Gynæcological Medicine and Surgery; *e.* Medical Jurisprudence and Hygiene; *f.* Practice of Medicine and Therapeutics. In the case of registered practitioners of not less than forty years of age, who have been in practice for not less than ten years, the President's Council may consider their claims; and if these and the registrable surgical qualification they possess seem of a sufficiently high order, they may recommend such candidates to the College for ballot without examination. 3. Every candidate for the Fellowship (with the exception of those entitled to enter under the old constitution of the College, and having right to its Widows' Fund) must lodge with the Secretary a petition for examination with a view to admission, and must be recommended by two Fellows, of whom one at least shall be resident in Edinburgh. 4. Candidates for the Fellowship (not embraced under the exception to Law 3) pay £30 to the College funds, including all fees. The money is payable to the Treasurer immediately upon the presentation of the petition. The fee paid by any candidate not admitted is returned to him; but in the case of candidates by examination not being successful, £5 is retained as examination expenses. 5. The billets calling the meetings at which the petition is to be laid before the College must intimate the name and surgical qualification of the candidate, his professional appointments (if any), and the names of his proposer and seconder, and whether such petition is presented after or without examination. 6. The petition will be considered at a subsequent meeting, to be held not earlier than four weeks after the first; and, in the meantime, the petition, with the names of the proposer and seconder, must have been hung up in the Library; and the billets calling the second meeting must contain an intimation in the same form as those of the first. 7. At the meeting for finally considering the petition of the candidate, except in the case of those eligible for the Widows' Fund, the result shall be ascertained by ballot. Three-fourths of the votes are required for admission; and the number of those voting shall not be less than twenty. 8. The candidate is informed of the result of the ballot; but, before taking his seat as a Fellow, he must make a declaration to the following effect, and subscribe the same in the Sederunt-book: "I hereby promise faithfully to maintain and defend all the rights, liberties, and privileges of the Royal College of Surgeons of Edinburgh, and to promote the interests thereof to the utmost of my power. I also promise faithfully to obey all the laws of the said Royal College, made and to be made." 9. Candidates who do not find it convenient to repair to Edinburgh may, by a vote of the College, be enrolled as Fellows in absence, if they transmit letters of obligation to conform to No. 8 before taking their seats. 10. Every Fellow, on admission, receives a diploma with the seal of the College appended; and, as regards Fellows admitted after examination, the diploma bears that such has been the case. 11. Every Fellow is entitled to attend the meetings of the College, and to take part in the proceedings, and in the election of office-bearers. 12. No Fellow of the College must keep an open shop for the sale of drugs or other merchandise. 13. No Fellow of the College must allow his name to be connected with advertisements or publications of an indelicate or immoral nature. 14. No Fellow of the College must practise, or profess to practise, by the use of or according to any secret remedy or method of treatment; or allow his name to be connected with advertisements for the sale of any secret remedy, or for practise by the use of any secret remedy, or method of treatment; or connect himself in partnership or otherwise, or continue in connection with, any person practising by means of or advertising the sale of any secret remedy. 15. No Fellow must be guilty of any deception or other immorality in the practice of his profession, or in any other way

[1] Candidates at a distance are requested to send their certificates much earlier, so as to give sufficient time for the exchange of one or two explanatory letters, as much disappointment has been occasioned by the discovery of defects in their course of study when it was too late to rectify them by the production of documents. Candidates should attend punctually to the dates fixed by the Regulations for lodging their Certificates and for paying their money

conduct himself inconsistently with the honour and decorum which become his position as a Fellow of the College.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

DIPLOMA OF FELLOW.

THE Regulations in the Tables, at pages 498 and 499, and below, are applicable to candidates not previously qualified.

Professional Examination.—Every candidate is admissible to the First Professional Examination on producing certificates of registration as a student, and of having studied (as defined in the Table) Anatomy, Physiology and Practical Physiology, and Chemistry and Practical Chemistry. A candidate for the Second Professional Examination for the Fellowship must produce certificates of the remaining courses of instruction mentioned in the Table, and of having been instructed in Vaccination by a Public Vaccinator under the regulations of the Local Government Board.

Graduates in Medicine or Surgery of recognised Universities, Licentiates of Faculty or of any of the Colleges of Physicians or Surgeons of the United Kingdom, qualified in Medicine and Surgery, are admissible to the First Professional Examination. Candidates so qualified, having passed the First Professional Examination, are admissible to the Second Professional Examination on producing satisfactory evidence of having been engaged for not less than six years (or, in the case of graduates in Arts or Science of a recognised university, five years) in the study and practice of the profession.

The two examinations shall be passed in their order first and second; but a candidate may enter for or may pass in only one of the subjects special to the Fellowship, either at the First or the Second Examination; and he will not be required to pass again in any of these subjects in which he has formerly passed.

A candidate qualified in Medicine and Surgery, whose diplomas have been received not less than ten years previously from the Faculty, or from any of the Universities or Colleges of Physicians or Surgeons of the United Kingdom, may be admitted to an Examination embracing two subjects—(1) Surgery, or, as an alternative, Medicine; and (2) one of the subjects to be selected by the candidate from the following list: *(a)* Human Anatomy; *(b)* Comparative Anatomy; *(c)* Physiology; *(d)* Pathology; *(e)* Midwifery and Diseases of Women; *(f)* Medical Jurisprudence; *(g)* State Medicine; *(h)* Psychological Medicine.

Election.—There may be admitted yearly to the Fellowship without examination, should the Faculty see fit, not more than two legally qualified medical practitioners, who have been at least ten years qualified, and who shall have highly distinguished themselves by original medical investigations. Candidates must be proposed in writing by not less than six Fellows of the Faculty, and the proposal must be submitted at an ordinary meeting of the Faculty. The proposal must be intimated on the billets calling the next three ordinary meetings of the Faculty, and at the third meeting the election shall be determined by ballot. Before the ballot is taken the Council shall report whether in their opinion the applicant has so distinguished himself as to render him admissible under this Section. For the election, two-thirds of those voting must be in favour of admission.

Fees.—These are, in the case of a candidate, a Licentiate of the Faculty, or a Graduate in Medicine of a recognised University, First Examination, £6 6s.; Second Examination, £9 9s.; in the case of a not previously qualified candidate, or a previously qualified candidate not a Licentiate of the Faculty, nor a Graduate in Medicine of a University, First Examination, £8 8s.; Second Examination, £12 12s.; in the case of a qualified candidate of more than ten years' standing, at entry for examination, £10; before admission: in the case of a resident Fellow, £10; of a non-resident Fellow, £15 (by a "resident" Fellow is meant one whose ordinary place of residence is within five miles of the Faculty Hall). The fees in the case of a candidate admitted by election are: resident Fellow, £50; non-resident Fellow, £25.

Candidates must give notice to the Secretary not later than the second Monday of March and the third Monday in September. Not later than one week prior to the Examination they must submit to the Secretary the certificates required, and pay the entry fee.

Admission.—1. A Candidate, though he may have passed all the necessary examinations, shall not be admitted to the Fellowship till he has attained the age of 24 years. 2. A Fellow may be admitted at any ordinary meeting of the Faculty, or of the Council thereof, after it has been reported to the Faculty by the Board of Examiners that he has passed the necessary examinations, and has produced to the Secretary evidence that he has attained the requisite age. 3. An elected Fellow may be admitted at any ordinary meeting of the Faculty subsequent to his election. 4. Previously to admission, the Candidate shall subscribe the following Declaration:—"I, A. B., do solemnly and sincerely declare that I shall be a faithful Fellow of this Faculty, promote its interest, and be obedient to all lawful Acts made, and to be made, for the good of the lieges and of this Faculty, and shall not willingly do prejudice to any person by my application or advice. And I make this solemn Declaration by virtue of the provisions of an Act passed in the sixth year of the reign of his late Majesty King William the Fourth, entituled, 'An Act to repeal an Act of the present session of Parliament, entituled, an Act for the more effectual abolition of Oaths and Affirmations taken and made in various Departments of the State, and to substitute Declarations in lieu thereof, and for the more entire suppression of voluntary and extra-judicial Oaths and Affidavits, and to make other provisions for the abolition of unnecessary Oaths.'" 5. A Candidate who has passed the necessary Examinations, or who has been elected, may be permitted by a vote of the Faculty to be enrolled in absence, provided he transmits to the Clerk a copy of the above Declaration duly signed by him in the presence of a Justice of the Peace, by whom the signature shall be attested.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW: CONJOINT EXAMINATION.

THE Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, have made arrangements by which, after one series of Examinations, the student may obtain the diplomas of the three Co-operating Bodies.

This Joint Examination is conducted by a Board, in which each Body is represented in those branches which are common to both Medicine and Surgery; but the College of Physicians takes exclusive charge of the Examination in Medicine; and the College of Surgeons, along with the Faculty of Physicians and Surgeons of Glasgow, of the Examination in Surgery. Students passing the Examination are enabled to register three Diplomas under the Medical Act,—Licentiate of the Royal College of Physicians of Edinburgh, Licentiate of the Royal College of Surgeons of Edinburgh, and Licentiate of the Faculty of Physicians and Surgeons of Glasgow.[1]

Every candidate must have followed his course of study in an University; or in an Established School of Medicine; or in a Provincial School specially recognised by the Colleges of Physicians and Surgeons of that division of the United Kingdon in which it is situate. Under the title Established School of Medicine are comprehended the Medical Schools in those cities of Great Britain and Ireland in which Diplomas in Medicine and Surgery are granted, and such Colonial and Foreign Schools as are similarly circumstanced in the countries in which they exist.

Preliminary Examinations.—All students who intend becoming candidates for the Diplomas of the three Bodies must pass the complete Examinations in General Education, and have their names registered by the General Medical Council at the commencement of their professional studies. The Preliminary Examination may be passed before any of certain recognised Boards, of which a list may be obtained on application. Preliminary Examinations are conducted in Edinburgh by the Educational Institute of Scotland on behalf of the Royal Colleges of Physicians and Surgeons; and in Glasgow by a Board chosen by the Faculty of Physicians and Surgeons. Copies of the Regulations respecting this Examination may be had on application to Thomas Morrison, LL.D., Free Church Training College, Glasgow; the Officer of either of the Royal Colleges in Edinburgh, and to the Secretary of the Faculty of Physicians and Surgeons in Glasgow.

Professional Education.—For particulars, see pages 498 and 499. The two courses of Anatomy and Practical Anatomy must not be attended in the same session. In those schools of England and Ireland in which two separate Courses of Lectures are delivered at separate hours, one on Anatomy, the other on Anatomy and Physiology, the former of these courses will be received as a Course of Anatomy, and the other as a Course of Physiology. Two Courses of

[1] The three Co-operating Bodies grant their Single Qualifications only to Candidates who are already registered as possessing another and opposite Qualification in Medicine or Surgery, as the case may be. The Royal College of Physicians of Edinburgh may, notwithstanding this agreement, grant its Licence on Examination to candidates already possessed of one or other of the Surgical Qualifications mentioned in Schedule (A) of the Medical Act, 1858; and the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, may each grant its Licence on Examination to candidates, already Licentiates of one of the Colleges of Physicians of the United Kingdom, or Graduates in Medicine of a British or Irish University. Copies of the Regulations for the Single Qualification of any of the Bodies may be had on application to the respective Secretaries.

Clinical Medicine, of three months each, if not simultaneous, are held equivalent to one Course of six months. They must be attended during the period of attendance at the Hospital where they are delivered. The same rules apply to Clinical Surgery. The six months' Courses delivered in Scotland, with the exception of Clinical Medicine and Clinical Surgery, must consist of not fewer than 100 Lectures. The three months' Courses must consist of not fewer than 50 Lectures. The teacher signing the certificate of Practical Pharmacy must be a Member of the Pharmaceutical Society of Great Britain, or the superintendent of the laboratory of a public hospital or dispensary, or a registered practitioner who dispenses medicine to his own patients, or a teacher of a class of Practical Pharmacy. The candidates must have been instructed in vaccination; the teacher signing the certificate must be a registered practitioner. It is strongly recommended to students to avail themselves of opportunities of attending lectures on Ophthalmic and Mental Diseases; also on Natural History and Comparative Anatomy; and of obtaining practical instruction in the use of the Microscope.

Professional Examinations.—See Table, pages 498 and 499. A candidate may present himself either in Edinburgh or in Glasgow, irrespectively of the place at which he may have been previously examined. An applicant for admission to any of the Examinations is required, on entering, to lodge with the Inspector of Certificates a schedule (forms for which are supplied) showing the Courses he has attended qualifying for admission. No candidate can be held to be entered for any Examination till he has sent in the proper schedule, proved his course of study, and paid the fee, or the part of it payable on entry. At all the Examinations, candidates shall be examined orally, as far as possible, in the order of their entry. Candidates, qualified by having attended the necessary courses of study, may enter for two or more Examinations, to be passed successively at the same period; the condition being that failure to pass in all the subjects of any Examination precludes the candidate from admission to the succeeding Examination. The necessary schedule and certificates must be lodged, and the fees for these respective Examinations paid, at the period of entering for the earliest of them. In the event of failure, the fee paid for any Examination to which a candidate had not been thereby admissible, will either be held over to a subsequent period or returned to the candidate, at his option.

Any Graduate in Medicine of a British or Irish University, or any Graduate or Licentiate in Medicine of recognised Universities and Colleges,[2] who shall have passed at his University such an Examination or Examinations as shall comprise the subjects of the First and Second Examinations of this Board, and who shall have completed not less than four years medical study, including all the subjects of the curriculum, will be admissible to the Final Examination. Any candidate so admitted shall pay a fee of £5 5s., and, in the event of his passing the Examination, he shall be admitted a Licentiate of each of the Co-operating Bodies on his making a further payment of £15 15s.

Any candidate who shall have passed in any of the subjects of the Second Examination, before any of the recognised Boards, is exempt from examination in such subject or subjects; but no Examination before such Boards is recognised as giving exemption, unless it is co-extensive in its scope with the equivalent Examination of this Board, and is the only or the Final Examination on the subject or subjects required by the Board at which it was passed.

At the First Examination, the examination in Chemistry embraces Chemical Physics and the principal Non-metallic and Metallic Elements, and their more common combinations; also the leading Alcohols, Organic Acids, Ethers, Carbo-hydrates, and Alkaloids. The candidate is also examined practically in testing. By Elementary Anatomy is meant Anatomy of the Bones, Joints, and Muscles, and chief Blood-vessels, and Nerves of the Limbs. Candidates who desire to pass this must apply to the Inspector of Certificates on or before the Friday preceding the day of Examination,[3] and must produce certificates of attendance on one course each of Chemistry, of Practical Chemistry, and of Anatomy, and six months' Practical Anatomy. The fee of £5 5s. must be paid to the Inspector of Certificates not later than 4 P.M. of the Friday preceding it.

At the Second Examination, the candidate must produce certificates of attendance on Anatomy, Practical Anatomy, Physiology, and Materia Medica, and Pharmacy. The fee must be paid to the Inspector of Certificates not later than one week before the day of examination.

At the Final Examination, every candidate must produce to the Inspector, Mr. James Robertson, solicitor, 4, Lindsay Place, Edinburgh; or to Mr. Alexander Duncan, Faculty Hall, St. Vincent Street, Glasgow, 1st, satisfactory evidence of his having attained the age of twenty-one years; 2nd, a certificate of his registration in the books of the General Medical Council; 3rd, the certificates enumerated under Professional Education.

The fees payable for the second examinations must be lodged with the Inspector not later than one week prior to the examination-day. Of the fee (£15 15s. for the final examination), £5 5s. must be paid one week before the examination-day, and the remaining £10 10s. before admission as a licentiate.

Candidates who have passed the Professional Examination in the subjects of the First and Second Examinations, at any of the recognised boards, will be admissible to the Final Professional Examination. No candidate is exempted from examination in any of the subjects of the Final Examination. The certificates of examination, upon which any candidate may claim exemption from any of the subjects of the First and Second Examinations, must, in every case, specify the subjects embraced in such Examination.

The fee payable by such candidates is £26 5s.

In addition to the written and oral examinations, all candidates will be subjected to practical clinical examinations in medicine and surgery, which shall include the examination of patients, physical diagnosis, the use of the microscope, surgical appliances, bandages, etc.

No candidate is admissible to examination who has been rejected by any other licensing board within the three preceding months.

UNIVERSITIES OF EDINBURGH, GLASGOW, ABERDEEN, AND ST. ANDREW'S.

REGULATIONS RESPECTING DEGREES IN MEDICINE.

[THE Regulations of these Universities are nearly similar. We therefore give but one statement, noticing points of difference when necessary.]

Three Medical Degrees are conferred by each University: viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The Degree of C.M. is conferred only on those who at the same time obtain the Degree of Bachelor of Medicine.

Preliminary Education.—The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and candidates must also pass an examination in at least two of the following subjects: Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy.[1] The examination in the first class of subjects takes place before the commencement of medical study, and in the second, before admission to the first professional examination.[2]

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[2] The following is a list of Licensing Boards recognised by the Co-operating Authorities. 1. The Royal College of Physicians of London; 2. the Royal College of Physicians of Edinburgh; 3. King and Queen's College of Physicians in Ireland; 4. the Royal College of Surgeons of England; 5. the Royal College of Surgeons of Edinburgh; 6. the Faculty of Physicians and Surgeons of Glasgow; 7. the Royal College of Surgeons in Ireland; 8. the Universities of the United Kingdom; 9. the Universities and Colleges in India and the British Colonies whose Matriculation Examinations have been recognised by the General Medical Council, whose curriculum of study extends to not less than four years, and whose diplomas entitle to practise in the Indian or Colonial dependency in which the Institution is situated; 10. such Foreign Universities as grant Medical Degrees entitling to practise in the country in which they are granted, as shall from time to time be recognised by the Bodies, on a course of study equivalent both as regards duration and subjects to that required by this Board, and preceded by the passing of an Examination in Arts recognised by the General Medical Council, or which may, on special application, be recognised by any of the Branch Medical Councils.

[3] Candidates at a distance are requested to send their certificates much earlier, so as to give sufficient time for the exchange of one or two explanatory letters, as much disappointment has been occasioned by the discovery of defects in their Course of Study when it was too late to rectify them by the production of documents.

[1] The Universities of Aberdeen and St. Andrew's include Natural History. Natural History is included in the first professional examination in all the four Universities.

[2] In Edinburgh, examinations will be held on October 5th, 6th, 7th, and 8th, 1886, and March 8th, 9th, 10th, and 11th, 1887. 1. English: Writing a passage from dictation; Composition, with correction of sentences of bad English: Grammar, with analysis of sentences and derivation and definition of some common English words; History and Geography, especially the History of the British Islands and of English Literature. 2. Latin: for October, 1886 and March, 1887, Cicero *De Amicitiâ*; for October, 1887 and March, 1888, Livy, Book XXII; an easy passage from a Latin prose author, and a single passage of English (translated from a Latin author) to be re-translated into Latin, the more difficult Latin words being given. 3. Arithmetic: The Common Rules, including Vulgar and Decimal Fractions. 4. Elements of Mathematics: Euclid, Books I, II, and III; or Wilson's *Elementary Geometry*, Books I, II, and III; and the Elementary Rules of Algebra, including Simple Equations. A knowledge of Geometry alone or of Algebra alone will not be sufficient. 5. Elements of Dynamics (Mechanics): Elementary Kinematics, Statics, Kinetics, and Hydrostatics; Text-Book, Blaikie's *Elements of Dynamics*. At least two of the following subjects. 1. Greek: for October, 1886 and March, 1887, Xenophon, *Hellenics*, Book I; for October, 1887 and March, 1888, Xenophon, *Cyropædia*, Book IV. 2. French: for October, 1886, and March, 1887, Saintine, *Picciola*, Book I; for October, 1887 and March, 1888, E. Fon

A Degree in Arts (not honorary) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University specially recognised by the University Courts, exempts from preliminary examination. The Universities also recognise examination in Arts by any corporate body whose examination has been recognised by the General Medical Council, and also approved by the University Court, so far as regards all subjects comprised in the examination of the said corporate body.

DEGREE OF BACHELOR IN MEDICINE AND MASTER IN SURGERY.

The principal regulations to be observed by candidates for the Degree of Bachelor in Medicine or Master in Surgery are given in the Tables at pages 498 and 499. Each *Annus Medicus* is constituted by at least two courses of not less than 100 lectures each, or by one such course, and two courses of not less than 50 lectures each: with the exception of the clinical course, in which lectures are to be given at least twice a week.

Two courses of Midwifery, of three months each, are reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses.

Practical Pharmacy may be attended in either of the following ways: A course of not less than fifty hours' instruction in the Class of Practical Materia Medica in the University of Edinburgh, or a similar class conducted in an University or recognised School of Medicine, or a similar class conducted by a Teacher recognised by the University Court; or, for at least three months, compounding and dispensing drugs at the Laboratory of a Hospital, Dispensary, Member of a Surgical College or Faculty, Licentiate of the London or Dublin Society of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain. Evidence of a practical knowledge of vaccination is required in Edinburgh and Glasgow.

One of the four years of medical and surgical study must be in the University granting the degree sought. Another year must be either in the same University, or in some other University entitled to give the Degree of Doctor of Medicine.[3] [At St. Andrew's no one can be received as a candidate for the Degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following Universities and Colleges, viz.: the Universities of St. Andrew's, Glasgow, Aberdeen, Edinburgh, Oxford, or Cambridge; Trinity College, Dublin; and Queen's College, Belfast, Cork, or Galway.] Of the other two years, one may be constituted by attendance during at least six winter months on the medical or surgical practice of a General Hospital which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy; and one year's attendance, to the extent of four of the departments of medical study required, on the lectures of teachers in the hospital schools of London, or in the school of the College of Surgeons in Ireland, or of such teachers of medicine as shall be recognised by the University Court, may be reckoned as one of the four years.[4] All candidates not students of the University attending the lectures of Extra-academical Teachers, must at the commencement of each year of attendance enroll their names in a book to be kept by the University for that purpose, paying a fee.

Every candidate must deliver, at such time of the year as may be fixed by the Senatus Academicus—1. A declaration, in his own handwriting, that he is twenty-one years of age, or that he will be so on or before the day of graduation; and that he will not be, on the day of graduation, under articles of apprenticeship. 2. A statement of his studies, general and professional, accompanied with proper certificates.[5]

The examinations are conducted in writing and *vivâ voce*, and, as far as possible, by demonstrations of objects and other practical tests. They are divided as follows.

EDINBURGH: 1. Chemistry, Botany, and Natural History; 2. Ana-

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Comte's History, etc. 3. German: for October, 1886 and March, 1887, M. Heumann, *Deutsch Reader*; for October 1887 and March 1888, Zschokke, *Jud Süss*. 4. Higher Mathematics: Geometry, Euclid, Books I to IV, Book VI, and the Propositions of XI usually given in the modern editions, or Wilson's *Elementary Geometry*, Books I, II, III, and V, and Wilson's *Solid Geometry and Conic Sections*, Book IV, Section 1; Algebra, Elementary Trigonometry and Conic Sections, Wilson's *Solid Geometry and Conic Sections*, Book V. 5. Natural Philosophy: Balfour Stewart's *Elementary Physics*. 6. Logic: for October, 1886 to March, 1888, Fowler's *Deductive Logic, Introduction*, Parts I, II (chap. i to iv, vii, viii), III (chap. i, ii, iii, and viii), and *Inductive Logic*, chap. i, ii, (sect. 1 and 2), iii, iv; or Fraser's *Selections from Berkeley*, Editor's "Introduction" and "Principles of Human Knowledge," Part I, sect. 1 to 44. 7. Moral Philosophy: for October, 1886 and March, 1887, Macintosh's *Dissertation*—"Hobbes," "Cudworth," "Clarke," "Shaftesbury," "Butler," "Hutchinson," "Hume," "Smith," "Price," "Paley," "Bentham," "Stewart;" Professor Calderwood's *Handbook*, pp. 1-45, 77-97; for October, 1887, and March, 1888, Bishop Butler's *Sermons*, and Professor Calderwood's *Handbook*, pp. 1-43, 123-152, and 165-202. In answering the questions in Arithmetic, Mathematics, and Dynamics (Mechanics), the steps of the reasoning, as well as the final result, must be exhibited. In Latin, Greek, French, and German, mere translation is not sufficient; there must be translation of an English passage into each of the languages taken up by the candidate.

In Glasgow, examinations will take place on October 6th, 7th, 8th, and 9th, 1886; and on March 30th and 31st, April 1st, 2nd, 1887. *Registration Subjects:* The candidate must pass in all the subjects of this division before registration by the Branch Registrar of the General Council. 1. English: Writing correctly a passage to dictation; Composition of a short Essay on a given theme; Questions in Grammar, with analysis of sentences and the derivation and meaning of some common English words. 2. Latin: Virgil, *Æneid*, Book III, and Cæsar, *De Bello Gallico*, Book V. Translations of passages from authors not prescribed, and of English passages into Latin, the principal Latin words being supplied; Questions in Grammar and Construction. 3. Arithmetic: The Common Rules, including Vulgar and Decimal Fractions. 4. Elements of Mathematics: Euclid, Books I, II, and III (Books II and III may be passed at a subsequent examination, before the first professional); Algebra, as far as Simple Equations. 5. One optional subject, Greek, French, German, or Logic, as prescribed in the second part. 6. Elements of Dynamics (Mechanics): Elementary Kinematics, Statics, Kinetics, and Hydrostatics. Text-books: Bottomley's *Dynamics* (Collins's series); Blaikie's *Elements of Dynamics*. *Optional Subjects for M.B. and C.M.:* The candidate must pass in a second optional subject in addition to the one passed for registration, before he can be admitted to the first professional examination. 1. Greek: Xenophon, *Memorabilia*, Book I, and the Gospel according to St. John; Translations of passages from Greek authors not prescribed, and of English passages into Greek—the principal Greek words supplied; Questions in Grammar. 2. French: Montesquieu, *Considérations sur les Causes de la Grandeur des Romains et de leur Decadence.*—Translations and Exercises. 3. German: Schiller's *Maria Stuart*—Translations and Exercises. 4. Higher Mathematics: Euclid, Books I to VI; Algebra, including Quadratic Equations, and the Rudiments of Trigonometry. 5. Natural Philosophy: Todhunter's *Natural Philosophy for Beginners*, Part II, Sound and Heat, omitting chapters xii and xiii on Sound and in Heat from Sect. 732 to 746; Bottomley's *Handbook of Natural Philosophy*. 6. Logic: Jevons's *Elementary Lessons in Logic*. 7. Moral Philosophy: Herbert Spencer's *Data of Ethics*. A Certificate of having passed, at the examinations for the Degree of M.A. or B.Sc., in English, Latin, Mathematics, Natural Philosophy, Greek, Logic, or Moral Philosophy, will be accepted instead of examination in these subjects.

In Aberdeen, examinations will take place on October 18th and 19th, March 26th, and April 23rd and 24th. Part I.—The examination on the following subjects takes place prior to the commencement of the Medical Curriculum, viz.: 1. English: Composition, Grammar, and Writing to Dictation. 2. Latin: the First Book of Cæsar's Commentaries, *De Bello Gallico*, Book I, and Virgil, *Æneid*, Book III, with Grammatical Questions. 3. Arithmetic: the Common Rules, Vulgar and Decimal Fractions, and Proportion. 4. Elements of Mathematics: the First Three Books of Euclid; Algebra: as far as and inclusive of Simple Equations. 5. Elements of Mechanics: Blaikie's *Elements of Dynamics*. Part II. Additional Subjects, on two of which, at the option of candidates, a further examination has to be undergone, before admission to the First Professional Examination for the degrees of M.B. and C.M., namely: 1. Greek: Xenophon, *Anabasis*, Book II, with Grammatical Questions. 2. French: Voltaire, *Histoire de Pierre le Grand*. 3. German: Schiller's *Wilhelm Tell*. 4. Higher Mathematics: Euclid, Books I to VI inclusive, Plane Trigonometry, Solution of Triangles, Quadratic Equations, Binomial Theorem, Logarithms. 5. Natural Philosophy: (Balfour Stewart's *Elementary Physics*, recommended). 6. Natural History: General Classification of the Animal Kingdom, Characters and Subdivisions of the Vertebrata (Nicholson's *Text-Book of Zoology*, recommended). 7. Logic: (Jevon's *Elementary Lessons in Logic*, recommended). 8. Moral Philosophy: (Reid's *Active Powers*, recommended).

At St. Andrew's, the examination takes place during the first week of the session. The following are the subjects. 1. English Language, including Grammar and Composition. 2. Latin, Cicero, *De Officiis*, Book I; Virgil, *Æneid*, Book II. 3. Elements of Mathematics, comprising Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, including the first book of Euclid, with easy questions on the subject-matter of the same. 4. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics. Candidates will be expected to have a knowledge of one or other of the following works: Garnett's *Elementary Dynamics*, Blaikie's *Elements of Dynamics*, Besant's *Hydrostatics*, Parkinson's *Elementary Dynamics*, etc. One of the following optional subjects: (*a*) Greek, Xenophon's *Anabasis*, first two books, or any one book of Herodotus or two books of Homer that the candidates like to select; (*b*) French: Voltaire's *Charles XII*; (*c*) German: Schiller, *Thirty Years' War*, or any one of his dramas; (*d*) Italian: Tasso's *Gerusalemme*, Canto I, or Manzoni's *I Promessi Sposi*; (*e*) any other modern language; (*f*) Logic: Jevons's *Elementary Lessons in Logic*; (*g*) Botany: Hooker's *Catechism of Botany*, Maclagan's *Elementary Botany*, (*h*) [illegible]; Huxley's *Manual of Zoology*, [illegible].

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[3] Entitled to grant Degrees in Medicine.—*Glasgow*.

[4] Students of Medicine in the London Schools and in the School of the College of Surgeons in Dublin can obtain there two *Anni Medici* out of the four required for the Edinburgh Degrees in Medicine. Courses of Lectures in these Schools are regarded as equivalent to Lectures on the corresponding subjects in this University, except Materia Medica and Midwifery, which, being only three months' courses in them, are not equivalent. One *Annus Medicus* may be constituted by attendance on Practical Anatomy and Hospital Practice during the winter session. Another *Annus Medicus* by attending either (*a*) full winter courses on any two of the following subjects: Anatomy, Physiology, Chemistry, Pathology, Surgery, Medicine, Clinical Surgery, Clinical Medicine; or (*b*) such courses and two three months courses on any of the following subjects: Botany, Practical Chemistry, Natural History, Medical Jurisprudence. If the student selects the arrangement prescribed in (*a*), attendance on a third course will be accepted. The other subjects, and the additional courses, not given in London or Dublin, required for the degrees of the University, will have to be attended at the University. In Provincial Schools where there are no Lecturers recognised by the University Court, a candidate can have only one *Annus Medicus* so constituted by attendance on a qualified Hospital along with a course of Practical Anatomy; but in a Provincial School where there are two or more Lecturers recognised by the University, a Second *Annus Medicus* may be obtained by attendance on at least two six months', or one six months' and two three months', recognised courses.—*Edinburgh*.

[5] The University of St. Andrew's requires each Graduand Dissertation to be presented privately to the final examiner, not less than [illegible] before the Thesis is to be read, and the candidate [illegible] of the Thesis.

tomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; 3. Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; 4. Clinical Medicine and Surgery in a hospital. Students may be admitted to examination on the first division at the period of examination next preceding their second winter session, and on the second division at the end of their third year. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *Annus Medicus*. Candidates may be admitted to examination on the first two divisions at the end of their third year, or to the four examinations at the end of the fourth year.

GLASGOW: 1. Chemistry, Botany, and Natural History; 2. Anatomy and Physiology; 3. Regional Anatomy, Materia Medica and Pharmacy; 4. Surgery, Clinical Surgery, Medicine, Clinical Medicine, Pathology, Midwifery, and Forensic Medicine. Students may be examined in the first division of subjects at the period of examination next preceding the second winter session; in the second division, after two winter and three summer sessions, or, for those who commenced in a winter session, two winter and two summer sessions, from the time of the commencement of studies; in the third division, after the conclusion of the third winter session of attendance upon medical classes; in the fourth division, at the first term for the final examination after the conclusion of the curriculum of study.

ABERDEEN: 1. Botany, Natural History, Chemistry, and Anatomy; 2. Regional Anatomy, Institutes of Medicine, Materia Medica, and Surgery; 3. Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, Pathological Anatomy, and Medical Jurisprudence.

ST. ANDREW'S: 1. Chemistry, Botany, Elementary Anatomy, and Materia Medica; 2. Advanced Anatomy, Zoology with Comparative Anatomy, Physiology, and Surgery; 3. Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, General Pathology, and Medical Jurisprudence.

At the Universities of Aberdeen and St. Andrew's, the examination in the first division of subjects may be passed at the end of the second year (except that at Aberdeen the examination in Botany and Natural History may be passed at the examination term preceding the second winter session); the examination in the second division at the end of the third year; and that in the third division at the end of the fourth year. Candidates may be admitted to examination on the first two divisions at the end of the third year, or to the three examinations at the end of the fourth year.

DEGREE OF DOCTOR OF MEDICINE.

The Degree of Doctor of Medicine may be conferred on any candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of twenty-four years, and has been engaged, subsequently to having received the Degree of Bachelor of Medicine, for at least two years in attendance on a hospital, or in the Military or Naval Medical Service, or in Medical and Surgical Practice. The candidate must be a graduate in Arts, or must before or at the time of obtaining his Degree of Bachelor of Medicine,[6] or thereafter, have passed a satisfactory examination in Greek, and in Logic or Moral Philosophy, and in one at least of the other optional subjects of the examination in general education (see page 503). At Aberdeen, Edinburgh, and Glasgow, he must submit to the Medical Faculty a thesis composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the degree of Bachelor of Medicine, which he may have made a subject of study after having received that degree.[7]

Candidates who commenced their medical studies in Edinburgh before February 4th, 1861, in Aberdeen before the first Tuesday in November, 1861, and in Glasgow before October 1st, 1861, are entitled to be examined for the Degree of Doctor of Medicine under the regulation then in force in each University. At Edinburgh, candidates settled for a period of years in foreign parts, who have complied with all the regulations for the Degree of M.D. (under the new statutes), but who cannot appear personally to receive the degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the degree conferred on them in absence.

The Degree of Doctor of Medicine may be conferred by the University of St. Andrew's on any Registered Medical Practitioner above the age of forty years, whose professional position and experiences are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on examination, satisfy the Medical Examiner of the sufficiency of his professional knowledge, provided always that such degrees shall not be conferred on more than ten in any one year. The candidate must produce a certificate of age, and three certificates from medical men of acknowledged reputation as to his professional position and experience. The examination is conducted in writing and *vivâ voce* on Materia Medica and General Therapeutics, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery and Diseases of Women and Children.

The Graduation Fees in each of the Universities are—for the Degree of M.B., three examinations, each £5 5s. = £15 15s.; for the Degree of C.M., £5 5s. additional; for the Degree of M.D., £5 5s. additional to that for M.B., together with Government stamp-duty (£10).

The fee for graduating under the old Regulations in Edinburgh is £25. At St. Andrew's, the fee for the Degree of M.D. under the Section relative to Registered Medical Practitioners is 50 guineas; if the candidate fail to pass, £10 10s. (which is to be paid before the examination) is retained. Stamp-duty is included in both cases.

[6] Or within three years thereafter. *St. Andrew's.*

[7] No Thesis will be approved by the Medical Faculty which does not contain either the results of original observations in Practical Medicine, Surgery, Midwifery, or [illegible] sciences embraced in the curriculum for the Bachelor's Degree, or a full digest and critical exposition of the opinions and researches of other authors upon the subject selected by the candidate, accompanied by precise reference to the sources consulted, so that due verification may be facilitated. *Edinburgh.* There is a similar regulation in the University of Glasgow.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

STATED Examinations for the Licences of the College in Medicine and Midwifery are held in the week following the first Friday in each month, except August and September.

LICENCE IN MEDICINE.

Every candidate for the Licence of the College to practise Medicine must produce satisfactory evidence—1. Of character, from a Fellow of the College, or from two registered practitioners. 2. Of having passed an examination in general education, held by some one of the examining bodies recognised by the General Medical Council. 3. Of having been engaged during four years in the study of Medicine. 4. Of having attended courses of lectures on the following subjects, at Schools recognised by the College: Practical Anatomy, two courses; Physiology or Institutes of Medicine, Chemistry, Practical Chemistry, Materia Medica, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery—each one course. 5. Of having attended for twenty-seven months a recognised Medico-Chirurgical Hospital in which clinical lectures and clinical instruction in Medicine are given; the attendance not to be for more than nine months in any one year, namely, six winter and three summer months. 6. Of having discharged the duties of Medical Clinical Clerk during six separate months, or of having taken notes, to the satisfaction of the Physician in charge of the case, and certified under his hand, of at least six Medical Cases—including different varieties of acute and chronic disease—in the wards of a recognised Hospital; and of having attended, during the whole period of his attendance on Hospital Practice, Demonstrations in the *post mortem* room of a recognised hospital.[1] 7. Of having, for not less than three months, studied Fever (including also typhus, typhoid or enteric fever, scarlet fever, small-pox, and measles) in a recognised Clinical Hospital containing fever-wards, and of having recorded, from daily personal observation, at least five cases of fever, to the satisfaction of the attending Clinical Physician.[2] 8. Of having attended Practical Midwifery and Diseases of Women for six months at a Lying-in Hospital or Maternity recognised by the College; or, where such hospital attendance cannot have been attained during the course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding public appointments; in either case, not less than twenty labour-cases must have been actually attended. 9. Of having been engaged in the practical study of Vaccination. 10. Of having lodged the admission-fee in the Royal Bank of Ireland to the credit of the College.

Examinations.—The professional examination is divided into two parts: 1. Anatomy, Physiology, Practical Histology, Chemistry, and Materia Medica; 2. Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics. Candidates may be examined in the subjects of the first part at the

[1] This rule is enforced in the case of all Candidates who shall have commenced their professional studies after September 30th, 1883.

[2] Certificates of attendance on Fever Cases will not be received from any Hospital, except it be a Clinical Hospital already recognised by the College, or a Clinical Hospital which shall in future be specially recognised by the College as authorised to grant Fever Certificates. The Cork Street (Fever) Hospital, Dublin, the London Fever Hospital, the City of Glasgow Fever Hospital (Belvedere), the Netherfield Fever Hospital, Liverpool; the Workhouse Fever Hospital, Liverpool; the Borough Hospital for Infectious Diseases, Sheffield; the Borough Fever Hospital, Leeds; and the Monsall Fever Hospital, Manchester are specially recognised by the College for Fever Certificates only.

termination of the second year of study, on producing the certificates in these subjects, or in all the subjects of their education on the completion of their medical studies. No candidate can be examined in all the subjects of the first and second parts in the same month. The examinations are conducted by printed papers, orally, and at the bed-side.

Exempted Cases. Candidates qualified as follows are required to undergo the second part only of the professional examination, namely, 1. Graduates in Medicine of any University in the United Kingdom, or of any Foreign University approved by the College; 2. Fellows, Members, or Licentiates of the Royal College of Physicians of London or Edinburgh; 3. Graduates, Members, or Licentiates in Surgery; 4. Candidates who, having completed the curriculum laid down above, shall have passed the previous professional examination or examinations of any of the licensing medical authorities in the United Kingdom. Candidates thus qualified, as specified in Sections 1, 2, and 3, must fill up a schedule and present their registration-certificate (or their medical or surgical qualification), as well as certificates of character, of practical midwifery, and of attendance on a clinical hospital which receives cases of fever. Candidates whose case is met by Section 4 must produce, in addition to the certificates required from candidates for the licence, a certificate from the licensing medical authority to the effect that such previous professional examination has been successfully passed.

Any registered practitioner of five years' standing may be admitted to examination for the licence of the College on producing his certificate of registration, with satisfactory reference, and is exempted from the examination by printed questions.

Unsuccessful candidates may be admitted to re-examination after not less than two months.

LICENCE IN MIDWIFERY.

Candidates for the licence in Midwifery, who are not licentiates in Medicine, may be admitted to examination on the following qualifications: 1. The degree or licence in Medicine or Surgery from any University or College of Physicians or Surgeons in the United Kingdom; 2. Testimonials as to character; 3. Certificates of having attended (*a*) a course of lectures on Midwifery in a school recognised by the College; (*b*) Practical Midwifery and Diseases of Women, as in Section 8 of the Regulations for the Licence in Medicine.

Candidates who are licentiates in medicine of the College, or who have passed the examination for such licence, may be admitted to examination for the licence in Midwifery on lodging their fees, and signifying their wish to the Registrar a week at least before such examination.

Registered practitioners of five years' standing are admitted to examination for the licence in Midwifery on producing their certificate of registration, with satisfactory reference, and are exempted from the examination by printed questions.

Fees.—The fees are: For the licence to practise medicine, £15 15s., which may be divided as follows: Examination at the termination of the first period of study, £5 5s.; final examination, £10 10s. Examination for the licence to practise midwifery, £3 3s. Examination for the licences in medicine and midwifery, if obtained within a month, to be lodged in one sum, £16 16s. Special examination for the licence to practise medicine, £21; for the licence to practise midwifery, £5 5s. The admission fee, less the sum paid to the examiners, is returned to any candidate rejected at any of the College examinations.

MEMBERSHIP.

Every candidate for the Membership of the College (not admitted before December 12th, 1878), is required to produce satisfactory evidence—1. Of having attained the age of twenty-five years. 2. Of being a Licentiate of this College for three years at least, computed from the day on which he shall have subscribed his name on admission as a Licentiate; or a Licentiate of one year's standing, who shall be a Graduate of Arts of an University in the United Kingdom at the time of his obtaining the licence; or a Licentiate of one year's standing, who shall be a registered practitioner of seven years' standing at the time of his obtaining the licence. 3. Of moral character and professional conduct from a Fellow or Member of the College, or from a Fellow of one of the Colleges of Physicians of London or of Edinburgh. 4. That he is not engaged in trade; and that he does not dispense medicine, or make any engagement with a chemist or other person for the supply of medicines; and that he does not practise medicine or surgery in partnership. 5. Of having held during at least six months the office of resident physician or resident medical pupil, or of having acted during the same period as medical clinical clerk, in a recognised hospital; or of having been in medical charge for at least twelve months of a public institution for the treatment of the sick.

Every candidate must pass an examination in: 1. Principles of Medicine, including Pathology, Morbid Anatomy, and Medical Chemistry; 2. Practice of Medicine, including Principles of Public Health; 3. Clinical Medicine. The fee for the examination is £21, which must be lodged in the Royal Bank, Dublin, before the applications and certificates are sent in. The examinations are held in January, April, July, and October.

Candidates who were admitted Licentiates of the College before December 12th, 1878, may be admitted Members of the College, under the following conditions. They shall comply with Clauses 1, 2, 3, and 4, as above stated. 2. They shall satisfy the College that they have, since their admission as Licentiates, obeyed the by-laws of the College. Should the College be satisfied that they have complied with the above regulations, they shall be admitted Members without fee or examination, on taking the declaration required of Members. Should the candidate wish to obtain the parchment diploma of Membership, he shall pay one guinea.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

LETTERS TESTIMONIAL (LICENCE).

THE following regulations are applicable to students who commenced their study after May 1st, 1882.

Every candidate for the Letters Testimonial of the College must produce evidence—*a.* Of having, before entering on medical studies, passed the Preliminary Examination of the College, or an equivalent examination in general education, recognised by the General Medical Council; and *b.* Of having been registered by that Council as a student of medicine.

The College recognises as the commencement of professional study: 1. Attendance on the practice of a hospital, or other public institution recognised by the College for that purpose; or 2. Instruction as pupil of a legally qualified surgeon, holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council; or 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

The Letters Testimonial of the College will not be granted to any candidate at an earlier period than forty-five months subsequent to his registration as a medical student; nor to anyone who has not attained the age of twenty-one years.

Every candidate must pass a Preliminary Examination and four Professional Examinations.

Professional Examinations.—The First, Second, Third, and Fourth Professional Examinations are held in July and October of each year. Should the student fail to pass in July, he may present himself at the examination held in October. The examination of each year must be passed before a new session can be entered on, but, in special cases, the Council of the College may permit the student to commence a new year of study, and subsequently present himself for a supplemental examination.

First Professional Examination.—Candidates must produce evidence of having passed the Preliminary Examination, and of having been registered as medical students, at least nine months before the date of examination. Candidates are recommended to attend a course of lectures on Practical Anatomy, and one on Chemistry, before the First Professional Examination. The examination includes:—1. Physics (the subjects not passed at the Preliminary Examination); 2. The Elements of Chemistry; 3. Botany; 4. Anatomy (Human Osteology); 5. Practical Pharmacy (Elementary). The candidates are examined in numerical order, one day by printed questions, and the next day orally.

Second Professional Examination.—Candidates must produce evidence of having passed the First Professional Examination; also certificates of having subsequently attended: Medico-Chirurgical Hospital, nine months (unless attended in the first year); winter courses of Practical Anatomy, with Demonstrations and Dissections (unless attended in the first year); Physiology; Surgery; Chemistry (unless attended in the first year); and summer courses (three months) of Practical Chemistry; Practical Physiology; and Materia Medica (unless attended in the first year). Candidates are examined in: 1. Anatomy (Bones, Joints, Muscles, and Topographical Anatomy of the Viscera of the Chest, Abdomen, and Pelvis); 2. Histology; and the Physiology of the Circulatory, Respiratory, and Digestive Systems;

3. Surgery (the Signs, Terminations, and Treatment of Inflammation; Wounds; Hæmorrhage; Burns and Scalds; Ulcers; Bandaging); 4. Chemistry; 5. Materia Medica. The candidates are examined in numerical order; the first day orally, and the second on Dissections and Histology. Each candidate must dissect a region allotted to him; half an hour, at least, being allowed for this purpose. He is examined on the anatomy of that part; and may also be examined on regions dissected by other candidates. He is also examined on microscopic preparations.

Third Professional Examination.—Candidates must produce evidence of having passed the Second Examination; also certificates of having subsequently attended a Medico-Chirurgical Hospital, nine months as an extern pupil, or six months as a resident pupil; winter courses of Demonstrations and Dissections, Practical Anatomy (unless attended in the first year), Surgery, and Medicine; and a three months' summer course of Medical Jurisprudence. Candidates will be examined in: 1. Anatomy; 2. Physiology; 3. Surgery (not including Operative, Clinical, and Ophthalmic Surgery). Candidates are examined in numerical order; the first day by printed questions, the second day orally. On the third day, each candidate must dissect a region allotted to him. He is examined on the anatomy of that part, and may also be examined on regions dissected by other candidates.

Fourth Professional Examination.—Candidates must produce evidence of having passed the Third Professional Examination; also certificates of having subsequently attended a Medico-Chirurgical Hospital, nine months as extern pupil (or six months as resident pupil, unless a certificate to that effect has been accepted in the third year); winter courses of Dissections and Demonstrations, and of Midwifery; of having attended a Midwifery Hospital, or Maternity, for six months, and of having been present at thirty labours; of Clinical Ophthalmology, three months, if the student commenced study between July, 1879, and February, 1882; of Operative Surgery (between April 1st and October 1st); and of Practical Instruction in Vaccination. Candidates are examined in: 1. Surgery—Clinical, Ophthalmic, and Operative, with Surgical Anatomy; 2. Medicine; 3. Midwifery and Diseases of Women; 4. Medical Jurisprudence. The candidates are examined in numerical order, and the examination occupies four days. On the first day, it is by written questions, and on the second oral. On the third day, the examination is in ophthalmic surgery[1] (in the morning) and clinical. Each candidate must make a diagnosis in, at least, two surgical cases, examining the patients in the presence of the Examiners. He is questioned upon these cases, and upon others, if necessary. He also takes notes of another case, to test his accuracy in case-taking. He is required to bandage, adjust some surgical appliance, or perform some clinical surgical duty. On the fourth day, there is an examination in Operative Surgery. Each candidate performs a major and a minor operation, the names of which he will draw by ballot. He is questioned upon these, and on surgical instruments and appliances, and on the relative anatomy of the parts implicated in the operations performed by himself or other candidates.

Rejected Candidates.—No candidate can present himself for examination on the second or following days who has not satisfied his examiners upon the previous days: a candidate who has passed any day's examination gets credit for such day, only if he have passed in all the subjects of the day's examination.

Candidates who obtain the minimum standard of marks at an examination in all subjects but one, may, if the Court of Examiners so decide, be re-examined in that subject. The re-examination, if granted, will be held before the term Examination is concluded. Candidates who fail to attain the passing mark in more than one subject shall be rejected. Candidates who fail at the First and Second Professional Examinations, in one subject only, and obtain passing marks in Anatomy, Physiology, Histology, and Surgery, may proceed with their lectures, and present themselves for re-examination, at the Examinations of the following year, in the subjects in which they had failed.

Exemptions from Examination.—Licentiates of a College of Physicians or Graduates in Medicine of an University recognised by the College, and Candidates who have passed the examinations required for such qualifications, shall be entitled to be examined only in General and Descriptive Anatomy, Histology, Physiology, the Theory and Practice of Surgery, Operative Surgery, and Surgical Appliances. Candidates who produce evidence of having passed the Primary Examination of the Royal College of Surgeons of England, or the First and Second Medical Examinations of the Royal University of Ireland, are entitled to be exempted from the Junior Class Examination under the old scheme, or from the First and Second Professional Examinations under the new scheme. Candidates who produce the M.B. of the same University are exempted from the First, Second, and Third Examinations, provided that all such candidates shall produce certificates of all the courses required for the examinations for which they present themselves. No such exemptions from examination are granted in respect of any part examination which may have been passed. The Council may admit to the Letters Testimonial or Fellowship, without examination, on such conditions, and on the payment of such respective fees, as the Council may determine, the Members and Licentiates of the Royal College of Surgeons of England and the Royal College of Surgeons in Edinburgh, provided they shall be at the time in the *bona fide* practice of the profession of a surgeon in Ireland.

Special Examinations.—Candidates seeking a Special Examination must make application to the Council (and show special cause), and, if admitted thereto, must pay five guineas in addition to the fees of the examination which they seek. The subjects for examination, the fees, and the mode of carrying out a special examination, are the same as those above laid down for the scheme under which the candidate presents himself.

Fees.—There is a matriculation fee of £5 5s.; and for each of the Professional Examinations, the fee is £5 5s., no part of which will be returned on rejection. Rejected candidates are admitted to re-examination on paying an additional sum of £3 3s. Enrolment fee on issue of diploma, £1 1s. The fee for a Supplementary Examination, or for a Special Examination, is £5 5s. Candidates for any examination must return their names to the Registrar of the College, and lodge their fees and certificate schedule, at least fourteen days before the day specified for examination; each candidate, on his first enrolment, shall have a number assigned to him, by which alone he is recognised during all the subsequent examinations. All fees for matriculation or examination must be paid into the Bank of Ireland to the credit of the College, and the Bank receipt for such lodgment must be produced to the Registrar. Fees for instruction in the School of the College should not be lodged to this account, but should be handed to the Registrar.

FELLOWSHIP.

A candidate is admitted to the examination for the Fellowship if he have laid before the Council—(*a*) a receipt showing that he has lodged in the Bank of Ireland the fees as hereafter stated; also (*b*) a certificate that he is twenty-five years of age; (*c*) a certificate of general good conduct during his professional education, to be signed by two or more Fellows of the College; (*d*) certificates of attendance on the courses of lectures required for Letters Testimonial, together with one course of lectures on Comparative Anatomy and one course of lectures on Natural Philosophy; also (*e*) a Thesis on some medical subject, or Clinical Reports, with observations, of six or more Medical or Surgical cases, taken by himself. He must also produce certificates that he has been engaged in the acquisition of professional knowledge for not less than six years, during three of which he must have studied in one or more of the Schools and Hospitals recognised by the Council. He may have studied for the other three years in any School or Schools of the United Kingdom which shall be approved by the Council, or in any foreign School of repute. The candidate must also have been House-Surgeon or Dresser in a recognised Hospital.

Licentiates of the College, who may not be able to show that they have followed the course of study specified in the preceding regulations, may, at the expiration of ten years from the date of their diploma, be admitted to the examination required for the Fellowship, provided they produce such evidence as shall be satisfactory to the Council that they have conducted themselves honourably in the practice of their profession.

Examinations for the Fellowship shall be held from time to time as the Council may direct. Candidates are arranged in five grades.

Grade I.—Candidates possessing no qualification are examined on at least three days, the first two of which are devoted to the examination for the Letters Testimonial of the College; the third, to additional subjects required for the Fellowship. Candidates who do not pass the first two days' examination are not allowed to proceed to the third; but those who do pass are entitled to receive the Letters Testimonial of the College, although they may not have passed the third day's examination. No credit will be given, on a subsequent occasion, for passing a part only of either examination. The examination on the first day is written and oral, in Anatomy, Physiology and Histology, and Chemistry and Materia Medica, with Dissections; second day,

[1] Students who commenced study before July, 1879, are exempt from both the Certificate and the Special Ophthalmic Examination, but are liable to be examined by the Surgical Examiners in Ophthalmic Surgery; those who commenced before February, 1882, are exempt from the Special Examination, on producing the Certificate of three months' Clinical Ophthalmology required before that date; those who commenced after February, 1882, must pass the Special Examination.

clinical, in Surgery and Ophthalmic Surgery; written, in Surgery, Medicine, Medical Jurisprudence, and Prescriptions; oral, in Surgery and Medicine; and Operations; third day, clinical, in Surgery; written, in Pathology and Comparative Anatomy; and oral, in Surgery and Pathology, Comparative Anatomy, Histology and Pathology, and Therapeutics. The fees are: registration, £5 5s.; special licence examination, £5 5s.; letters testimonial, £21; additional for Fellowship, urban, £31 10s.; rural, £21. The fees for registration and special licence examination are retained in case of rejection.

Grade II.—Licentiates of the College of less than ten years' standing are examined one day orally in Anatomy, Comparative Anatomy, and Histology and Pathology, with Dissections; on the second day, clinically, and by written and oral examination, in Surgery, and orally in Pathology and Practice of Medicine and Therapeutics; they also perform operations on the dead subject. The fee is: for urban practitioners, £31 10s.; rural, £21; £10 10s. being retained in case of rejection.

Grade III.—Candidates of less than ten years' standing, possessing qualifications in surgery of other bodies, which the Council consider satisfactory, are, if admitted to examination, examined according to Grade II. The fees are the same.

Grade IV.—Licentiates of the College of more than ten years' standing are examined on the first day, orally, in Surgical Anatomy; and perform Operations on the dead subject. On the second day, they are examined clinically in Surgery and Medicine, and undergo a Written Examination in Surgery, and are examined orally in Theory and Practice of Surgery, and in Morbid Anatomy. The fees are as in Grade II.

Grade V.—Candidates of more than ten years' standing, possessing qualifications in surgery of other bodies, are, if admitted to examination, examined according to Grade IV.

Candidates may present themselves for examination in any grade junior to that under which they are classed, but pay the fees of the senior grade.

DIPLOMA IN MIDWIFERY.

Any Fellow or Licentiate of the College is admissible to the examination for a Diploma in Midwifery, on producing certificates of having attended a course of Lectures on Midwifery and Diseases of Women and Children; the Practice (for six months) of a Lying-in Hospital, or of a Dispensary for Lying-in Women and Children; and that he has attended at least thirty labours.

Candidates are examined on the Organisation of the Female; the Growth and Peculiarities of the Fœtus; the Practice of Midwifery, and the Diseases of Women and Children; and, if approved of, receive a licence or diploma.

A rejected candidate is not again admitted to examination within three months, nor unless he produce satisfactory evidence of having been engaged in the study of Midwifery subsequently to his rejection.

The fee is £1 6s. if the Midwifery Diploma be taken out within one month from the date of the Letters Testimonial; afterwards it is £2 2s.

APOTHECARIES' HALL OF IRELAND.

Professional Education and Examinations.—Every Candidate for the Licence to Practise Medicine and Pharmacy must produce certificates: 1. Of having passed an Examination in Arts recognised by the General Medical Council previously to entering on professional study. 2. Of registration in the *Medical Students' Register*; 3. Of medical study, after registration, for at least five years; 4. Of being 21 years of age, and of good moral character. 5. Of apprenticeship or pupilage to a qualified apothecary, or of having been otherwise engaged at Practical Pharmacy for twelve months subsequently to having passed the examination in Arts. 6. Of having attended the following courses, namely: Chemistry, Anatomy and Physiology, Principles and Practice of Medicine, Surgery, and Midwifery and Diseases of Women and Children, each six months; Demonstrations and Dissections, twelve months; Materia Medica and Pharmacy, Botany and Zoology, Practical Chemistry (in a Laboratory), Pathology, and Forensic Medicine, and Mental Diseases, each during three months; one course of Hygiene; Practical Midwifery at a recognised Hospital (twenty cases); instruction in Vaccination by a Public Vaccinator. 7. Of having attended the practice of a recognised Medico-Chirurgical Hospital or Hospitals, with Clinical Instruction, during at least four winter and three summer sessions. 8. Of Practical instruction, with care of patients, as apprentice, pupil, clinical clerk, or assistant in a Hospital or Dispensary.

The Examination for "the Licence to Practise the Profession of Apothecary" is divided into three parts. The first part comprehends Materia Medica and Pharmacy, Elementary Chemistry, Botany, Zoology, and Human Osteology; the second part, Anatomy, Physiology, Histology, and Practical Analytical Chemistry; and the third part, Medicine, Surgery, Midwifery, Mental Disease, Forensic Medicine, and Hygiene.

The Examinations commence on the first Monday in the months of January, April, July, and October, and are conducted by printed papers and orally.

A Hospital Physician, who is also an M.D. of a British University, is co-opted with the Examiners of the Court in conducting the Clinical Examination.

Candidates are eligible for the first part of the Professional Examination at the termination of the second year of study; and candidates for the second part, after having passed the first successfully, at the end of the third year of study; and candidates for the Final, after having passed the previous Examinations successfully, at the completion of the prescribed course of Professional Study.

Fees.—The fee for every examination and re-examination is £2 2s., half to be returned in case of failure. Ten shillings is the charge for "the Licence of the Hall."

Candidates for the Licence of the Hall, who have entered upon their Medical Studies on and after the 1st of October, 1884, will be required to comply with the new and amended Rules and Regulations; and all who have commenced their Professional Studies prior thereto will be admitted to examination for the Licence in accordance with the Regulations previously in force, if they prefer it; but in every case the candidate must, in future, pay the full fees above specified.

Candidates who fail to pass the First or the Second Part of the Examination will be remitted to their studies for three months, and unsuccessful candidates at the Final Examination for six months.

Doctors of Medicine of any of the Universities of the United Kingdom, and Licentiates of a Royal College of Physicians, or of any of the Royal Colleges of Surgeons, whose qualifications as such appear in the *Medical Register*, and who have spent twelve months at Practical Pharmacy with a duly qualified Apothecary or a registered Medical Practitioner holding a public medical appointment, may obtain the Licence of the Hall by undergoing an examination—the former two in Pharmacy, and the latter in Medicine and Pharmacy. Registered Licentiates of the London Society of Apothecaries may obtain the Licence on the payment of £6 6s.

Candidates for the Professional Examination must give seven days' notice, and at the same time lodge their certificates and the fees, with Mr. Charles Wright, the Clerk, at the Hall, in Mary Street, Dublin.

UNIVERSITY OF DUBLIN.

THE degrees in Medicine and Surgery granted by the University of Dublin are; 1. Bachelor of Medicine; 2. Doctor of Medicine; 3. Bachelor in Surgery; 4. Master in Surgery; 5. Master in Obstetric Science. It also grants Licences in Medicine, Surgery, and Obstetric Science, and a qualification in State Medicine.

BACHELOR IN MEDICINE.

A candidate for the Degree of Bachelor in Medicine must be a Graduate in Arts, and may obtain the Degree of Bachelor in Medicine at the same commencement as that at which he receives his Degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education is of four years' duration, and comprises attendance on a course of each of the following lectures: *Winter*—Anatomy; Practical Anatomy; Theoretical Surgery; Chemistry; Institutes of Medicine (Physiology); Practice of Medicine; Midwifery. *Summer*—Botany; Institutes of Medicine (Practical Histology); Comparative Anatomy; Materia Medica and Pharmacy; Medical Jurisprudence; Practical Chemistry. *Term Courses*—Heat (Michaelmas); Electricity and Magnetism (Hilary). Three courses of nine months' attendance on the clinical lecturers of Sir Patrick Dun's or other metropolitan hospital recognised by the Board.[1] A certificate of personal attendance on fever cases, with names and dates of cases. Six months' instruction in Practical Midwifery,[2] including clinical lectures. Practical instruction in Vaccination. Any of the winter or summer courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fel-

[1] The following Hospitals are recognised: Sir Patrick Dun's Hospital, Meath Hospital, Dr. Steevens' Hospital, Jervis Street Infirmary, City of Dublin Hospital, Mercer's Hospital, St. Vincent's Hospital, Adelaide Hospital, House of Industry Hospitals, Mater Misericordiæ Hospital, St. Mark's Ophthalmic Hospital, and the National Eye and Ear Infirmary.

[2] Certificates of Practical Midwifery are received from the Rotunda Hospital, the [illegible] Hospital, and St. Peter's Home for Lying-in.

lows.[3] Students who shall have diligently attended the practice of a recognised London or Edinburgh hospital for one year, or of a recognised county infirmary for two years previous to the commencement of their metropolitan medical studies are allowed to count those two years as equivalent to one year spent in a recognised metropolitan hospital.

Candidates for the degree of M.B. must pass the Previous Medical Examination and the Bachelor of Medicine Examination.

The *Previous Examination* comprises Botany and Comparative Anatomy; Physics and Chemistry; Descriptive Anatomy and Institutes of Medicine (Practical Histology and Physiology). The examination in Descriptive Anatomy includes examination on the dead subject. It is not necessary that the student should pass in all these subjects at the same examination.

A stated Half M.B. examination is held at the close of the summer session in each year; in addition to which there is an examination in last term before the M.B.

Bachelor of Medicine Examination.—The candidate for the M.B. examination must have previously passed the Previous Medical Examination in all the subjects, and have lodged with the Medical Registrar, on a certain day to be duly advertised, certificates of attendance upon all the courses of study above prescribed.

Candidates must pass a final examination in the following subjects: Physiological Anatomy; Practice of Medicine; Surgery; Midwifery; Medical Jurisprudence; Institutes of Medicine (Pathology and Hygiene); Clinical Medicine; Therapeutics. The fee for the *Liceat ad Examinandum* is £5; for the Degree of M.B., £11.

DOCTOR IN MEDICINE.

A Doctor in Medicine must be a Bachelor in Medicine of three years' standing, or have been qualified to take the Degree of Bachelor in Medicine for three years. He must also read a Thesis publicly before the Regius Professor of Physic, or must undergo an examination before the Regius Professor of Physic. The total amount of fees for this degree is £13.

BACHELOR IN SURGERY.

A Bachelor in Surgery must be a Bachelor in Arts, and have spent four years in the study of Surgery and Anatomy. He must have passed the M.B. examination before presenting himself at the B.Ch. examination, having previously completed the prescribed curriculum of study. The curriculum of study comprises the following, in addition to the complete Course for the Degree of Bachelor in Medicine: Operative Surgery and Ophthalmic Surgery, each one course; Dissections, two courses. Candidates are required to perform surgical operations on the dead subject, and are examined in Bandaging and Minor Surgery, and in Surgical Pathology. Fee for the *Liceat ad Examinandum*, £5; for the Degree of Bachelor in Surgery, £5.

MASTER IN SURGERY.

A Master in Surgery must be a Bachelor in Surgery of three years' standing, or have been qualified to take the Degree of Bachelor in Surgery for three years; and must read a Thesis publicly before the Regius Professor of Surgery, or undergo an examination before the Regius Professor. Fee for the Degree of Master in Surgery, £11.

MASTER IN OBSTETRIC SCIENCE.

A Master in Obstetric Science must have passed the M.B. and B.Ch. Examinations, and produce certificates of having attended—1. One winter course in Midwifery; 2. Six months' practice in a recognised Lying-in Hospital or Maternity; 3. A summer course of Obstetric Medicine and Surgery; 4. Two months' practice in the Cowpock Institution. Existing Graduates in Medicine, of the standing of M.D., may present themselves for examination without producing certificates of attending 3 and 4. Fee for the Degree of Master in Obstetric Science, £5.

UNIVERSITY LICENCES.

Candidates for the Licences in Medicine, Surgery, or Obstetric Science, must be matriculated in Medicine, and must have completed two years in Arts and four years in Medical Studies.

Licentiate in Medicine.—The Medical course and examination necessary for the Licence in Medicine are the same as for the Degree of M.B. A Licentiate in Medicine, on completing his Course in Arts, and proceeding to the Degree of B.A., may become a Bachelor in Medicine, on paying the degree fees, without further examination in Medicine.

Licentiate in Surgery.—The surgical course and examination are the same as for the Degree of Bachelor in Surgery.

Licentiate in Obstetric Science.—The course of study and examination are the same as for the Degree in Obstetric Science.

Fee for the *Liceat ad Examinandum* in Medicine or Surgery, £5.; for the Licence in each of the three cases, £4.

MEDICAL AND SURGICAL TRAVELLING PRIZES.

A Prize of £100 is awarded by the Board, in alternate years, to the best answerer at a special Examination in Medicine and in Surgery, provided that the merit be deemed sufficient. The successful candidate is required to spend three months in the study of Medicine or Surgery, as the case may be, in Berlin, Paris, or Vienna. Before he can obtain the first instalment of £50, he must satisfy the Senior Lecturer that he possesses sufficient knowledge of a Continental Language to derive full benefit from the prize. The Examination is held in June, and is open to students who have graduated in Medicine or in Surgery, as the case may be, within two years of the Examination. The subjects of the Medical Travelling Prize Examination are Clinical Medicine, Practice of Medicine, Therapeutics, Pathology, Obstetric Medicine, and Toxicology. The subjects of the Surgical Travelling Prize Examination are Clinical Surgery, Operative Surgery, Pathology, Surgical Anatomy, and Ophthalmic Surgery. A Travelling Prize in Medicine will be competed for in June, 1887.

ROYAL UNIVERSITY OF IRELAND.

DEGREE OF BACHELOR OF MEDICINE.

CANDIDATES must, in addition to attending the lectures and complying with the other conditions prescribed, pass the following examinations: the Matriculation Examination; the First University Examination; the First Examination in Medicine; the Second Examination in Medicine; the Degree Examination.

A medical student from one of the Queen's Colleges, the Queen's University, or any other institution approved by the Senate, matriculated therein before October 1st, 1881, who has completed at least one year of the medical curriculum in any of the said institutions, is exempted from passing the First Examination in Arts.

The course of medical studies extends over at least four years, and is divided into periods of at least two years each.

The first period comprises attendance on the following courses: Botany and Zoology; Chemistry, one course of at least six months; Practical Chemistry, at least three months; Anatomy; Practical Anatomy; Physiology, including Histology; Materia Medica.

The second period comprises attendance on the following courses: Anatomy; Practical Anatomy; Physiology (including Practical Physiology and Histology); Theory and Practice of Medicine; Theory and Practice of Surgery; Midwifery and Diseases of Women, a six months' course; Mental Diseases; Medical Jurisprudence.

Candidates must also attend, in the first period, during a winter session of six months, the Practice and Clinical Lectures at a Medico-Chirurgical Hospital, recognised by the Senate, containing at least sixty beds; and, during the second period, the Practice of a recognised Medico-Chirurgical Hospital during eighteen months, including either three winter sessions of six months each, or two winter sessions of six months each and two summer sessions of three months each. The certificate must include three months' attendance in either a Fever Hospital of repute, or the Fever wards of a General Hospital. Candidates must also have attended, for six months, a recognised Midwifery Hospital or Midwifery Dispensary, at either of which clinical instruction in Midwifery and Diseases of Women and Children; the certificate in either case stating that the candidate has attended twenty labours.

Candidates must also, before presenting themselves for the Degree Examination, produce certificates: 1. Of three months' attendance on a fever hospital or the fever wards of a general hospital, and of personal attendance on at least ten fever cases; 2. Of having compounded medicine under an apothecary or pharmaceutical chemist for at least three months; 3. Of having received practical instruction in vaccination; 4. Of having attended for three months in a recognised Lunatic Asylum, where clinical instruction on Mental Diseases is given.

The Senate further recommend that students should avail themselves of opportunities of attendance on lectures on Diseases of the Eye, Ear, and other special departments. Candidates for the degree of M.B. will be required to exhibit proficiency in the use of the Ophthalmoscope and Laryngoscope.

First Examination.—Students are admitted to this examination

[3] The following schools, in addition to the School of Physic, are recognised:—The School of the Royal College of Surgeons in Ireland, the Carmichael School, the Ledwich School of Medicine and Surgery, the School of the Catholic University.

The subjects of this examination are Zoology,[1] Botany,[2] and a Modern Language (French or German). Candidates who have passed in a Modern Language at the ordinary First University Examination are exempt from presenting this subject, unless they wish to qualify for admission to the Honours Examination and for an Exhibition.

Second Examination.—Students are admitted to this examination after one academical year from the time of passing the First Examination in Medicine, provided they have completed the first period of the course of medical studies.

The subjects for this examination are: Anatomy, Physiology, Chemistry, and Materia Medica.

Examination for the Degree of M.B.—Students are admitted to this examination after one academical year from the time of passing the Second Examination in Medicine, provided that they have completed the second period of the course of medical studies. Students who have commenced their medical studies since January 1st, 1884, must furnish evidence of having been registered by the Medical Council, as Students in Medicine, for at least forty-five months, before being admitted to the final examination for M.B.

The subjects for this examination are: Anatomy, including Practical Anatomy; Physiology, including Practical Physiology and Histology; Theory and Practice of Medicine; Mental Diseases; Therapeutics; Pathology; Surgery; Midwifery and Diseases of Women and Children; Vaccination; Medical Jurisprudence; Hygiene.

No one can be admitted to a degree in medicine who is not fully twenty-one years of age.

DEGREE OF DOCTOR OF MEDICINE.

Candidates may be admitted to this Degree after two academical years from the time of obtaining the Degree of M.B. All persons who were students in Medicine in the Queen's University at the date of its dissolution are entitled to obtain the Degree of M.D. upon passing the examination for the M.B. Degree.

Candidates must give notice in writing of their intention to present themselves, and must pay the fee of £1 at least one month before the examination, and must produce a certificate of having been, for at least two years, engaged in Hospital or Private Medical or Surgical Practice, or in the Military or Naval Medical Service.

Every candidate will be examined at the bedside, and required to diagnose at least six cases, medical and surgical, and prescribe treatment; to write detailed reports on at least two cases to be selected by the examiners, and to discuss all the questions arising thereon. Every candidate must submit to the Medical Examiners a Thesis certified by him (or her) to have been composed by himself (or herself). No Thesis will be approved which does not contain some original or personal observations in Practical Medicine, Surgery, or Midwifery, or in some of the Sciences embraced in the curriculum; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted.

Persons holding the degree of M.B. of this University who have been settled for two years in the Colonies or Foreign Countries, may, upon furnishing papers on medical subjects written by them, or official reports dealing with subjects of Medical Science, with evidence of the papers or reports being their own original composition, have the Degree conferred on them in absence.

DEGREE OF MASTER IN SURGERY (M.CH.).

This Degree is conferred only on Graduates of Medicine of the University.

The examination for this Degree comprises the Theory and Practice of Surgery, including Operative and Clinical Surgery. Candidates must produce a certificate of having attended a three months' course of Operative Surgery.

Candidates may enter for this examination when entering for the examination for the M.B. degree; but no candidate can present himself for the M.Ch. Examination unless he have passed the M.B. Examination after one academical year from matriculation. They may pass this examination at the same time as the First University Examination.

DEGREE IN OBSTETRICS.

Instead of a Diploma in Obstetrics, the University will grant the Degree of "Master of the Art of Obstetrics" (M.A.O.).

The degree is conferred only on Graduates in Medicine of the University. The examination comprises the Theory and Practice of Midwifery, and the use of Obstetric Instruments and Appliances, Gynæcology, and Diseases of Children.

Candidates may enter for this Examination when entering for the Examination for the M.B. Degree; but no one will be allowed to present himself for the Examination for the Degree in Obstetrics unless he has previously satisfied the Examiners at the M.B. Examination.

Fees, etc.—Candidates must give notice in writing to the Secretaries, at least one month before each examination, of their intention to present themselves. They must, at the same time, produce evidence of having completed the required courses of study, and pay the prescribed fees, namely: First Examination and Second Examination in Medicine, each £1; Examination for the Degree of M.B., £3; Examination for the Degrees of M.D. and M.C., £5; Examination for the Diploma in Obstetrics, £2.

If any candidate fail to attend for, or to pass, any University Examination (other than the Matriculation Examination) in respect of which any fee was paid, such candidate is not entitled to have the fee returned, but may, within three years, enter on any two subsequent occasions for the same examination, without the payment of an additional fee; provided that he give notice to the Secretaries at least one month before the commencement of the examination.

Exhibitions.—The following Exhibitions may be awarded annually by the Senate. At the first Examination in Medicine, Two First Class at £30, and Two Second Class at £15. At the Second Examination in Medicine, Two First Class at £40, and Three Second Class at £20. At the M.B. Degree Examination, Two First Class at £50, and three Second Class at £25. An Exhibition will not be awarded to any candidate at the First Examination in Medicine, if a longer interval than three Academical years shall have elapsed from the time of Matriculation; nor at the Second Examination in Medicine, if a longer interval than two Academical years shall have elapsed from the time of passing the First Examination in Medicine; or at the M.B. Degree Examination, if a longer interval than three Academical years shall have elapsed from the time of passing the First Examination in Medicine.—Hutchinson Stewart Scholarships, each tenable for three years, in the autumn of 1886: one, value £10 per annum, for competition in the subject for the second examination in Medicine; the other, annual value £50, to graduates of not more than two years' standing, for proficiency in Mental Diseases.—A sum of £95 may be placed annually at the disposal of the Examiners in Medicine, to be awarded in Prizes for superior answering in special subjects.

[1] The examination in Zoology will consist of questions on the Anatomy and Classification of the Vertebrate and Invertebrate Animals.

[2] The examination in Botany will comprise the general principles of the Structure and Classification of Plants. Candidates will be expected to possess a practical acquaintance with the following natural orders, namely: Ranunculaceæ, Cruciferæ, Papaveraceæ, Fumariaceæ, Malvaceæ, Caryophyllaceæ, Leguminosæ, Rosaceæ, Valerianaceæ, Umbelliferæ, Compositæ, Scrophulariaceæ, Solanaceæ, Boragineæ, Labiatæ, Euphorbiaceæ, Cupuliferæ, Coniferæ, Aroideæ, Orchideæ, Liliaceæ, Gramineæ, in addition to what they may learn from Oliver's *Lessons* as to the structure of these and other orders described in Part II of that work. Candidates must be able to distinguish the orders named from the principal allied orders.

NOTES CONCERNING THE HOSPITALS AND MEDICAL SCHOOLS IN LONDON.

In addition to the Tables of the Classes, hours of attendance, and fees, given at pages 510, 511, we subjoin the points of most interest in the Programmes issued by the several Medical Schools. At each hospital, clinical instruction in Medicine, Surgery, and Midwifery is given in the wards and in the out-patient department; and also in various special departments, as stated in the tables at pages 510, 511, and in the subjoined notes. All hospital appointments, except where otherwise specified, are made without extra fee.

ST. BARTHOLOMEW'S HOSPITAL.—*The Hospital* comprises 750 beds; 227 for Medical cases, 353 for Surgical cases, 26 for Diseases of the Eye, 20 for Diseases of Women, and 50 for Syphilitic cases; while 75 are at the Convalescent Hospital at Swanley. Children are admitted into both the medical and the surgical wards.

Museums, etc.—The Anatomical Museum, and the Museums of Materia Medica and of Botany, are open to students daily from 10 A.M. to 4 P.M. The Library is open every day from 9 to 5, except one week of the Christmas vacation and one month in the long vacation.

College.—Students attending the hospital or medical school are admitted to residence on the recommendation of a medical officer of the hospital; and such recommendation may be obtained by commencing students on adducing satisfactory evidence of good moral character.

(continued at page 511)

GUIDE TO THE LONDON HOSPITALS AND MEDICAL SCHOOLS: 1886-87.

For further particulars regarding each Hospital and Medical School, see pp. 509, 514, et seq.

	St. Bartholomew's Hospital.	Charing Cross Hospital.	St. George's Hospital.	Guy's Hospital.	King's College and Hospital.
Physicians	Dr. Andrew..dy. ex. Th., 1.30 Dr. Church.....daily, exc. W., 1.30 Dr. Gee..Tu. Th. S., 1.30 Sir D. Duckworth..daily, exc. Tu., 1.30	Dr. Pollock..M. Th., 2 Dr. Green..W. S., 2 Dr. Bruce..Tu. F., 2	Dr. Wadham..M. F., 1 Dr. Dickinson.....M. Tu. Th., F., 1 Dr. Whipham..Tu. W. S., 1 Dr. Cavafy..Tu. S., 1	Dr. Pavy..Tu. F., 1.30 Dr. Pye-Smith..M. Th. S., 1.30 Dr. Taylor..M. Tu. Th. F., 1.30	Dr. Beale..Tu. F., 2 Dr. Duffin..W. S., 2 Dr. J. B. Yeo..T. F., 1.30 Dr. Ferrier..M. Th., 1.30 Dr. Curnow.....W. S., 1.30 (alt. pp.)
Assistant-Physicians	Dr. Hensley..M. Th., 11 Dr. Brunton..T. F., 11 Dr. Legg..W. S., 11 Dr. N. Moore...Tu. W. Th. S., 9	Dr. Abercrombie..Tu. F., 1.30 Dr. Lubbock..W. S., 1.30 Dr. Willcocks..M. Th., 1.30 Dr. H. M. Murray..W., 12 and 1.30; S., 1.30	Dr. Ewart..M. F., 12 Dr. J. Owen..Tu. S., 12	Dr. Goodhart..F., 12.30 Dr. Carrington..W., 12.30 Dr. White..M., 12.30	Dr. Tirard..Tu. F., 1.30 Dr. Dalton..W. S., 1.30
Obstetric Physicians *Assist. Obstetric Physicians*	Dr. M. Duncan..Tu. Th. S., 2 Dr. Godson..W. S., 9	Dr. J. W. Black..Tu. F., 2 Dr. A. Routh..Tu. F., 1.30	Dr. Champneys..Tu. F., 2	Dr. Galabin..M. F., 1.30 Dr. Horrocks..Th. F., 1.30; (o.-p.), Th. S., 12.30	Dr. Playfair..Tu. Th. S., 2 Dr. Hayes (o.-p.).....M. W. F., 12.30
Diseases of the Skin	Mr. H. Cripps..F., 1.30	Dr. Sangster..M., 2	Dr. Cavafy..W., 2	Dr. Pye-Smith and Dr. White..Tu., 12	Dr. Duffin..F
Surgeons	Mr. Savory..daily, 1.30 Mr. T. Smith....daily, exc Tu., 1.30 [1.30 Mr. Willett..daily, exc. F., Mr. Langton..daily, 1.30 Mr. M. Baker...daily, 1.30	Mr. Barwell..Tu. W. Th. F., 2 Mr. Bellamy..M. W. Th., 2 Mr. Bloxam..W. Th., 2; S., 10	Mr. Holmes..M. Th. F., 1; W., 1.30 Mr. Rouse, M. Th. F., 1; W 1.30 Mr. Pick, T. Th. S., 1; W., 1.30 Mr. Hawarth..Tu. Th. S., 1; W., 1.30	Mr. Bryant..M. Th, 1.30 Mr. Durham..M. Th. F., 1.30 Mr. Howse..W. S., 1.30 Mr. Davies-Colley..M. Th., 1.30	Mr. Wood..Tu. Th. S., 1.30 Sir J. Lister..M. W. F., 1.30 Mr. H. Smith..M. W. F., 1.30 Mr. Rose (o.-p.), Tu. F., 1.30
Assistant-Surgeons	Mr. Marsh..Tu. F., 12.30 Mr. Butlin..M. Th., 12.30 Mr. Walsham..W. S., 12.30 Mr. Cripps, Mr. Clarke, 9	Mr. Cantlie..M. Th., 1.30 Mr. Morgan..Tu. F., 1.30 Mr. Boyd..W. S., 1.30	Mr. Bennett..M. F., 12 Mr. Dent..Tu. S., 12	Mr. Lucas..Th., 12.30 Mr. Golding-Bird..S., 12.30 Mr. Jacobson..W., 12.30 Mr. Symonds..M., 12.30	Mr. Cheyne..W. S., 1.30 Mr. Barrow..M. Th., 1.30
Ophthalmic Surgeons	Mr. Power (i.-p.), Tu. Th., 1.30 Mr. Vernon (i.-p.) M. Th. S., 2	Royal Westminster Ophthalmic Hospital, 1	Mr. B. Carter M. Th., 2; F. 1.15 Mr. Frost, (asst.)..W. S., 2	Mr. Higgens Dr. Brailey (Asst.)	Mr. McHardy..M. W. Th., 1.30
Aural Surgeons	Mr. Cumberbatch..Tu. F., 2	Mr. Cantlie..F. 9	Sir W. B. Dalby..Tu., 2	Mr. Purves..Tu. F., 12.30	Dr. U. Pritchard..Th., 2.30
Dental Surgeons	Mr. Ewbank..Tu., 9; Mr. Paterson, F., 9	Mr. Fairbank..M. W. F., 9	Mr. Winterbottom Tu. S., 9	Mr. Moon and Mr. Pedley ..Tu. Th. F., 12.30	Mr. Cartwright..Tu. F., 10
Clinical Medicine	The Physicians..F., 1	The Physicians, 2	The Physicians..M., 2	The Physicians (Win.)..S., 1.30; the Assistant-Physicians (Sum.)..W., 1.30	Dr. Beale..alt. Tu., 3 Dr. Duffin..alt. F., (Win.) 3 Dr. B. Yeo, alt. Tu., (Sm.) 3
Clinical Surgery	The Surgeons..M., 2.45 (winter); S., 12.45 (Sum.)	The Surgeons, 2	The Surgeons..Tu., 2	The Surgeons (Win.)....W., 1.30; the Assistant-Surgeons (Sum.)..F., 1.30	Mr. Wood..Tu. Th., 1.30 Sir J. Lister..M. W., 2
Clinical Midwifery and Diseases of Women	Dr. M. Duncan....(Dis. of Women) alt. Th., 1	Dr. J. W. Black..Twice a week	Dr. Champneys..W., 2	Dr. Galabin (Win.) W., 1.30; Dr. Horrocks (Sum.) Tu. 1.30	Dr. Playfair..alt. Th. in Winter 3
Operations	Mon., Tu., Wed., and Sat., 1.30; on Eye, Tu. Th., 1.30	Thursday and Saturday..2	Thursday, 1; Eye, F., 1.15	Tuesday and Friday, 1.30; Eye, M. Th, 1.30	Mr. Wood..S., 2; Sir J. Lister..F., 2; Mr. Smith..W., 3; S., 1
WINTER LECTURES.					
Physiology	Dr. Klein..Tu. Th. S., 10	Mr. F. W. Mott..M. Tu. W. F., 3; S., 10	Dr. Delépine..dail, exc. W., 12; and (1st yr.), Th., 3	Mr. Golding-Bird....M. W. F., 4.15	Dr. G. F. Yeo..Daily, 12.15
Anatomy, Descriptive & Surgical	Mr. Langton & Mr. Marsh ..Tu. W. Th. F., 9	Mr. Bellamy..M. W. F., 9	Mr. Bennett..M. W. F., 9.15	Mr. Howse and Mr. Davies-Colley..Tu. W. Th. F., 9	Dr. Curnow (sen.)..M. Tu. W. Th., 9; (Jun.) W. Th., 11.15
Anatomical Demonstrations	Mr. Bruce Clarke, Mr. Lockwood, Mr. Jessop, and Assistants..10 to 4	Mr. Cantlie..daily, 9 to 4; (S. and Sum., 9 to 1 daily)	Mr. Turner, Mr. Ross, and Mr. Allingham	Mr. Lane, Mr. Poland, and Mr. Dunn..daily, 10 to 4	F.S., 9 Dr. Curnow and Mr. Kenny
Chemistry	Dr. Russell...M. W. F., 10	Mr. Heaton..M. W. F., 4	Mr. Donkin....Tu. Th. S., 11.30	Dr. Debus and Dr. Stevenson..Tu. Th. S., 11	Mr. Bloxam..M. W. Th., 10.15
Medicine	Dr. Andrew and Dr. Gee.. M. Tu. Th., 3.30	Dr. Pollock..M. W., 4; Th., 3	Dr. Dickinson..M. Th. F., 3	Dr. Pye-Smith..M. W. F., 3	Dr. Beale..M. F., 4; W., 5
Surgery	Mr. Savory..W. Th. F., 2.30	Mr. Barwell..Tu. Th. F., 4	Mr. Pick..Tu. Th. S., 9.15	Mr. Bryant & Mr. Durham ..Tu. Th., 3.30; F., 1.30	Mr. H. Smith..Tu. W. Th., 4
SUMMER LECTURES.					
Materia Medica	Dr. Lauder Brunton....Tu. W. Th. S., 10	Dr. Bruce (Therapeutics)..Tu. Th. S., 9	Dr. Owen..M. W. F., 2	Dr. F. Taylor..M. Tu. Th., 2	Dr. Tirard..Tu. W. Th. F., 8.45
Botany	Rev. G. Henslow....M. F., 10; W., 11.30	Dr. Willcocks (with Materia Medica)..M. W. F., 9	Mr. G. Murray..Tu. Th. S., 10	—	Mr. Bentley, M. Tu. Th. F., 12.15
Midwifery	Dr. Matthews Duncan.....daily, 9	Dr. J. W. Black..M. Tu. W. F., 3	Dr. Champneys..M. W. F., 9	Dr. Galabin..Tu. W. Th. F., 9	Dr. Playfair..Tu. W. Th. F., 9
Forensic Medicine	Dr. Hensley..Tu. Th., 3.30 F., 2.30	Dr. Abercrombie..W. F., 9; Tox., Mr. Heaton, Tu., 12	Dr. Wadham..Tu. Th. S., 9	Dr. Stevenson..Tu. Th. S., 10	Dr. Ferrier..M. Tu. W. Th., 4
Practical Chemistry	Dr. Russell...M. Tu. F., 11	Mr. Heaton..M. Th., 3	Mr. Donkin..daily, 11	Mr. Groves..M. W. F., 10 to 1	Mr. Bloxam and Demonstrators..M. W. Th., 10.15
Comparative Anatomy	Dr. T. W. Shore (Summer Tu. Th., 11.15)	Dr. Garson (Sum.)	Dr. Howes (Sum.)..M. F., 4	Mr. Beddard..M. W., 1.45	Mr. F. J. Bell..(Win.) M. Tu. F., 4
Practical Physiology & Histology	Dr. Harris, Dr. Tooth, and Mr. Shore, daily	Mr. Mott...(Sum.)...M. W. F., 11; (Win.)..Tu. Th., 4	Dr. Delépine (Histology).. M. Tu. Th. F., 10; Mr. Lancaster (Pract. Phys.), daily, exc. S., 3.30	Dr. Wooldridge (Win.)..Tu. Th., 10	Dr. G. F. Yeo and Demonstrators (Sum.)..Tu. F. S., 10.15
Pathology and Morbid Anatomy	Dr. Legg (lect.)..W. S., 10; (demons.), Medical, 1; Surgical, 1.45	Dr. Green (Sum.)....Tu. W. F., 4; Mr. Morgan, Surgical (Win.)	Dr. Whipham (Winter)....W., 3; Dr. Sisley (demons.), W., 12	Dr. Goodhart (lect.) (Sum.) S., 9; Dr. Goodhart and Dr. Carrington (dem.)..2.30	Dr. Duffin (Sum.)..W. Th. F., 3
Psychological Medicine	Dr. Claye Shaw (Sum.)..... Th., 12.30	—	Dr. Blandford	Dr. Savage (Sum.)..Tu., 11; F., 10.30	Dr. Sheppard
Public Health	Dr. Thorne Thorne (Sum.) M., 10	Mr. Heaton	Dr. Bridges	Mr. G. Turner..M. F., 11.30	Dr. Kelly (Win.)..F., 3
Practical and Operative Surgery	Mr. Butlin and Mr. Walsham..M., 4.30; W., 3.45; F., 3.30	Mr. Bloxam (Win.), Tu. W. F., 3; (Sum.)..daily, exc. M., 9	Mr. Dent (Pract.) (Sum.) M. W. F., 3; Tu., 3.30; Mr. Turner (Oper.) M. W. F. 9.30	Mr. Clement Lucas..Pract. Surg. in Win.; Oper. Surg. in Sum.	—
Ophthalmic Medicine & Surgery	Mr. Power..Tu. Th., 9; Mr. Vernon (dem.), (Win.).. M., 2	—	Mr. R. B. Carter and Mr. Frost (Win.)....W., 4; (Clin.) W. S., 2	Mr. Higgens, W., 3 (Winter); Dr. Brailey, W., 2 (Summer).	Mr. McHardy....(clin. lect.) (Win.)..alt. M., 3
Dental Surgery	Mr. Ewbank and Mr. Paterson	Mr. Fairbank....Jan. Feb. March	Mr. Winterbottom (Sum.) Tu., 10	Mr. Moon (Summer)	Mr. Cartwright (clinical lect.) (Win.)..alt. Tu., 10.30
Aural Surgery	—	—	Sir W. B. Dalby (Sum.).... Tu., 2	—	Dr. U. Pritchard..W., 9 (Sum.)
Diseases of Skin	—	—	...vafy (Win.), W., 2	—	—

GUIDE TO THE LONDON HOSPITALS AND MEDICAL SCHOOLS: 1886-87.

For further particulars regarding each Hospital and Medical School, see pp. 509, 514, et seq.

London Hospital.	St. Mary's Hospital.	Middlesex Hospital.	St. Thomas's Hospital.	University College and Hospital.	Westminster Hospital.
Sir A. Clark..M.Th.,2 Dr. Down Tu F.,2 Dr. H. Jackson..M.Th.,2 Dr. Sutton..M.Th.,2 Dr. Fenwick..Tu F.,2 Dr. S. Mackenzie..Tu. F., (o.-p.)W.S., 1.30 Dr. Sansom, W.,2(o.-p.)M.Th., Dr. Turner..W.,9.30; S.,1.30; (o.-p.) Tu. F., 1.30 Dr. G. Smith..Tu.F.,2 (o.-p.) W.S., 1.30 Dr. Warner..M.Th.,2; (o.-p.) Tu.F., 1.30 Dr. Ralfe..(op.) M. Th., 1.30	Sir E. Sieveking..Tu.F.,1.45 Dr. Broadbent..M.Th., 1.45 Dr. Cheadle..W.1.45, S.,9.30 Dr. Lees..W.S.,1.30 Dr. S. Phillips..M.Th., 1.30 Dr. Maguire..Tu.F.,1.30	Dr. Cayley....M.Th., 1.30 Dr. Coupland..Tu.F.,1.30 Dr. D. Powell..M.Th., 1.30 Dr. Finlay..Tu.F.,1.30	Dr. Bristowe..Tu.F.,2 Dr. Stone..M.Th.,2 Dr. Ord..M.Th.,2 Dr. J. Harley..Tu.F.,2	Dr. Wilson Fox Dr. Ringer Dr. C. Bastian Dr. F. T. Roberts Dr. Gowers Dr. Poore Dr. T. Barlow } 1 and daily.	Dr. Sturges..M.Th.,1.30 Dr. Allchin..Tu.F.,1.30 Dr. Donkin..W.S., 1.30
Dr. Herman..Tu. F., 2 Dr. Lewers..M. Th., 2 Dr. S. Mackenzie..Th., 9 Mr. Couper..M.Th.,1.30	——	Dr. Fowler..Tu.F., 3.30 Dr. Biss..M.Th.,1.30 Dr. Pringle....W. S., 1.30; Electr. Dep...M.Th.,3; F. 1.30	Dr. Payne..Tu.F.,1.30 Dr. Sharkey..M.Th.,1.30 Dr. Gulliver..W.S.,1.30		Dr. Hall..M.Th.,1.30 Dr. A. H. Bennett, Tu. F.,1.30 Dr. Murrell..W.S.,1.30
Mr. Rivington..Tu.F., 2 Mr. Tay..M.Th., 2 Mr. McCarthy..W.S.,1.30 Mr. Treves..Tu.F., 2 Mr. Reeves..Tu.S., 1.30 Mr. C. Mansell Moullin..M. Th., 1.30 Mr. H. Fenwick..Tu.F., 1.30 Mr. F. S. Eve..M.W., 1.30 Mr. W. Tay & Mr. Eve..Tu.S.,9	Dr. Meadows..M.Th.,9.30 Dr. Handfield-Jones..M. Th.,1.30 Mr. M. Morris,..M.Th.,9.30 Mr. Norton..M.Th.,1.45 Mr. Owen..Tu.F.,1.45 Mr. Page..W.S.,1.45 Mr. Pye..M.Th.,1.30 Mr. Pepper..W.S.,1.30 Mr. Silcock..Tu.F.,1.30 —— Mr. A. Critchett Tu.F.,9.30 Mr. H. Juler..Tu.,9.30	Dr. Edis..Tu. F., 1.30 Dr. W. A. Duncan...(o.-p.) W.S., 1.30 Dr. R. Liveing..F.,4 Mr. Hulke..M.Th.,1.30 Mr. Lawson..M.Th.,1.30 Mr. Morris..Tu.F.,1.30 Cancer..Th.,1.30 Mr. A. Clark..M.Th.,1.15 Mr. Pearce Gould..Tu.F., 1.30 Mr. J. B. Sutton..W.S.,9 Mr. Lang....Tu.F. (o.-p.) 9 (in-p.) 10	Dr. Gervis..Tu.F.,2 Dr. Cory..W.S.,1.30 Dr. Payne..W. 1.30 Mr. S. Jones..Tu.F.,2 Mr. Croft..M.Th.,2 Sir W. Mac Cormac..M.Th., 2 Mr. —— ..Tu.F.,2 Mr. MacKellar..M.Th.,1.30 Mr. Clutton..Tu.F.,1.30 Mr. Anderson..W. S.,1.30 Mr. Pitts..M.Tu.,1.30 Mr. Nettleship..M. Th., 2; (o. p.) M.Tu.W.Th.F.,1.30	Dr. Graily Hewitt Dr. J. Williams Dr. Crocker..W.1.30.; S.9.15 Mr. Berkeley Hill Mr. C. Heath Mr. Marcus Beck Mr. A. E. Barker Mr. R. J. Godlee } 1 & 2 daily Mr. V. Horsley Mr. Tweedy..M.Tu.Th.F.,2 Mr. Barker..S.,1.30 Mr. S. Hutchinson..W.,9.30	Dr. Potter..Tu.F.,2 Dr. Grigg..Tu.F.,9 Dr. T. C. Fox..W.,1.30 Mr. Cowell..M.Th.,1.30 Mr. Davy..Tu.,F.,1.30 Mr. Macnamara..W., 1.30; S.,9.30 Mr. T. Cooke..M.Th.,1.30 Mr. Bond..Tu.F.,1.30 Mr. B. Barrow..W.S.,1.30 Mr. Cowell..M.Th.,2.30 Mr. Barrow..Tu.F.,9 Dr. Walker..W.,9.15; Mr. Smale..S.,9.15
Dr. Woakes, Mr. Hovell. S.,9.30 Mr. Barrett..Tu., 9	Mr. Field..W.S.,9.30 Mr. H. Hayward..W.S.,9.30	Mr. Hensman..Tu.,9 Mr. Bennett..M.9.30; W.9 Mr. Hern..W., 9; F. 9.30	Mr. Clutton..M.,1.30 Mr. Truman..Tu.F.,10	Mr. Barker..S.,1.30 Mr. S. Hutchinson..W.,9.30	Dr. Walker..W.,9.15; Mr. Smale..S.,9.15
The Physicians	The Physicians	The Physicians..F.,3	The Physicians..weekly	Dr. W. Fox (Holme Prof.), Dr. Ringer, Dr. Bastian, Dr. Roberts, Dr. Gowers, Dr. Barlow, Dr. Maudsley	Dr. Sturges..Th.(aft. Xms.) Dr. Allchin..F.(bef. Xms.) Dr. Donkin..W. (Sum.)
The Surgeons	The Surgeons	The Surgeons..Tu.,3	The Surgeons..weekly; Mr. Croft, special (Win.)Tu.9; (Sum.) M., 9	Mr. Hill, Mr. Heath (Holme Prof.), Mr. Beck, Mr. Barker, Mr. Godlee	Mr. Cowell..Th.(aft. Xms. Mr. Davy..F. (Sum.) Mr. Macnamara W.(bf. Xms.
Dr. Herman..(Win.) 2nd F. in mon.; (Sum.) alt. Tu., 2.30	Dr. A. Meadows and Dr. Wiltshire	Dr. Edis, Dr. Duncan... (sum.), W.S., 1.30	Dr. Gervis	Dr. G. Hewitt..fortnightly	Dr. Potter..F.
Daily, except Saturday, 2	Wednesday..2; Eye, Tu.F., 9	Wednesday, 1; Saturday, 2	Wednesday and Saturday, 1.30; Eye, Tuesday, 4; Friday 2	Wednesday, 3	Tuesday and Wednesday, 2
Mr. McCarthy, 1st year, M.W. 9; 2nd year, Tu. Th. S., 9	Dr. A. Waller..M.W.Th.,12	Mr. Lowne..M.W.F.,9	Dr. J. Harley and Dr. T. C. Charles..Tu.W.F., 4	Mr. Schafer & Dr. Halliburton..M.Tu.Th.F.,10	Dr. Heneage Gibbes..M.W.F., 1.30
Mr. Treves, 1st year..Tu.Th., 9; 2nd year..M.W.F., 9	Mr. Owen..M. Tu. Th. F.,9	Mr. Hensman..M, Tu. Th., F.,1	Mr. Reid and Mr. Anderson ..daily exc.Sat.,9.30	Mr. Thane..daily, exc.S..12	Mr. Black..Tu.W.Th.F.S., 9; also Sum, Tu.Th.9
Dr. Moullin & Demonstrators ..10 to 5, excepting Sat. aft.	Mr. J. E. Lane and Mr. J. J. Clarke..daily 9 to 5	Mr. Sutton, Mr. Wynter, and Mr. Brodie, daily, 9 to 4	Mr. Reid, Mr. Anderson, Dr. Taylor, Mr. Ballance.. daily, 10	Mr. Bradford, Mr. Flemming and assistants, 8 to 5; Sat., 8 to 2	Mr. Hebbert and Mr. Plant ..M., 9.30 to 1, other days 10 to 1
Dr. Tidy..M.W.F., 10.30	Dr. Wright..W.S.9; Th.,10	Mr. Foster..M.W.Th.F., 3	Dr. Bernays..Tu. Th. F., 10.30	Dr. Williamson..M. W. F., 11; (exerc.) Tu., Th., 6	Dr. Dupré..M.Th.F.,3
Dr. S. Mackenzie..M.W.F., 4	Dr. Broadbent and Dr. Cheadle..M.W.F.5	Dr. Cayley..Tu.Th.S.,9	Dr. Bristowe and Dr. Ord ..M.Th. F., 4; after Jan. 1, 9 A.M.	Dr. Ringer and Dr. Buxton ..Tu.W.Th.F., 9	Dr. Sturges & Dr. Allchin before Xms., M. Th.F., 3; after Xms., Tu.W.Th., 9
Mr. Rivington..Tu. Th., 4; S., 10	Mr. Norton and Mr. Page ..M.Tu.Th.,4	Mr. Morris..M. W.Th., 3	Mr. Jones & Sir W. MacCormac..to Dec.31, M.Th.F., 9 A.M.; after Jan. 1, 4	Mr. Marcus Beck..M.S., 9; W., 4	Mr. Cowell and Mr. Macnamara....Tu. W. Th., 4
Dr. Prosser James, Tu.Th.F.,3	Dr. Lees..Tu.W.F.S.,10	Dr. Thorowgood..M.W. F., 4	Dr. Stone..M. F., 12; W., 12.30	Dr. F. T. Roberts....M.,9; Tu.W.Th.F.,10	Dr. Murrell..M.W.F.,9
Dr. F. Warner..M.W.F.,12	Rev. J. M. Crombie..M.W. F.,11	Dr. Biss..Th., 10	Mr. A. W. Bennett..Tu.W. S.,10	Mr. Oliver..daily, exc.S., 8 a.m.	Mr. Worsley-Benison
Dr. Herman..M.W.F.,9	Dr Meadows and Dr. Wiltshire..Tu.W.Th.F.,9	Dr. Edis..M. W. F., 9	Dr. Gervis..M. Tu.Th.F.,4	Dr. Graily Hewitt and Dr. J. Williams, Tu.W.Th.F.,9	Dr. Potter..Tu. Th. S., 9
Dr. Tidy....W. F.,10.30; Dr. Sansom, M.Th.,3.30	Dr. Randall..M.Tu. Th., 10	Dr. Finlay..Tu. Th. F., 9	Mr. Clutton, Dr. Bernays, and Dr. Cory..Tu.Th.S.,9	Dr. Poore..Tu. W.Th.F.,10	Dr. Hall and Dr. Dupré.. Tu.W.F., 3
Mr. Page (Summer)	Dr. Wright..W. F.S.,9; organic, W.F.,11	Mr. Foster..M.W.F.,3	Dr. Bernays..M. Th. F., 10	Dr. Williamson..Tu. Th.,11	Dr. Dupré and Mr. Hake ..M.W.F.,11
Dr. Mansell Moullin..Tu.Th. 10	Mr. Poulton (Sum.)..Tu.F., 11	Mr. J. B. Sutton (Sum.).. Tu.Th.,4	Dr. Gulliver..(Sum.) M.Th., 9	Mr. Lankester (Win. and Sum.)	Dr. L. Ogilvie....Jan. to July
Mr. McCarthy (Sum.) Tu. Th., 9.15; see also Physiology above	Dr. Waller, Mr. Read, and Mr. Evans..Tu.Th.S.,10	Mr. (Sum.)..M. W. F. 9	Dr. Charles..(Sum.) M. Tu. W. F., 2; Demonst. Mr. Copeman (Win.)..M.Th. 2	Dr. Halliburton and Demonstrators.	Dr. H. Gibbes..Th., 1.30; Hist. (Sum.) M. W. F., 1.30
Dr. Sutton (Sum.)..Th., 12.30; S., 10; ditto or Dr. Turner (dem.) daily, 3.30	Mr. Silcock and Dr. Maguire ....Tu. F., 12; daily, 2.30 Sir J. Crichton Browne	Dr. Fowler (Sum.)..Tu.Th. S.,9; Dr. Fowler (demons.) weekly Mr. H. Case (Sum.)..Th., 12	Drs. Payne & Sharkey W.F., 9; Dem., Drs. Sharkey & Hadden..M. 4 Dr. H. Rayner (Sum.)..F., 12	Dr. Bastian (Sum.)..M. S., 10; Th., 4; Pract., Tu.F., 4; Mr. Barker (Surg.) Tu. F., 9	Dr. Allchin..M. W. Th., 9; Morbid Hist., Dr. Gibbes ..Tu.Th.,11 Dr. Sutherland (June)..Tu. Th.F.,3
With Forensic Medicine	With Forensic Medicine	Dr. Finlay (Sum.)	Dr. E. Seaton (Sum.)..W., 4	Dr. Corfield (Sum.)....Tu. Th.F.,4	With Forensic Medicine
Mr. Reeves and Mr. Rivington (Sum.)	Mr. Pepper..Tu.Th.,5	Mr. A. Clark..W. F., 9; Oper. Surg., April	Mr. MacKellar, Mr. Clutton, and Mr. Pitts (Win.)..S.,9; (Sum.) F.,4	Mr. Hill (Oct. Nov. Dec.) ....M. Th.,4; Mr. Godlee (Win. and Sum.)	Mr. Davy; Minor Surg., Mr. Barrow
Mr. Tay, W., 3	Mr. G. A. Critchett	Mr. Lang (Clin.)..Tu. F., 9	Mr. Nettleship..(Oct. Nov. Dec.) M.Th.F.,5	Mr. Tweedy (Sum.) M. W., 4; (clin.), Mr. Tweedy	Mr. Cowell (Sum.), M., 3
Mr. Barrett (Sum.)	Mr. H. Hayward	Mr. S. Bennett..W.,9	——	Mr. Hutchinson, Nov. Dec.	Dr. J. Walker..(Oct. Nov., Dec.), W.,9.30
Dr. Woakes (Sum.)..Tu., 4	Mr. Field	——	——	——	Mr. Barrow..(June)
—	Mr. M. Morris	——	Dr. Payne, W., 4.30	Dr. Croeker....(clin. lect. alt. weeks)	Dr. Colcott Fox..(Feb. Mar. Th., 2.30

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES.

(The letter "s" denotes single course; "p" perpetual or unlimited attendance.)

	St. Bartholomew's.	Charing Cross.	St. George's.	Guy's	King's College.	London.	St. Mary's.	Middlesex.
Composition Fee for all Lectures and Hospital Practice required by Examining Boards	£131 5s.; or 1st win. £42 1st sum. £48 6s. 2nd win. £48 6s.	£94 10s. or 1st win. £30 9s. 1st sum. £18 18s. 2nd win. £17 17s. 2nd sum. £18 18s. 3rd win. £18 18s.	1st year £45 2nd year, £45 3rd year, £20 Each subsequt. year £15 (See note.)	£131 5s.; or 1st win. and 1st sum., each £66; or 1st and 2nd year, each £50; 3rd yr. £37 10s.	£126 11s. 6d.; or two years, £66 each year; or three years £46 each year	£94 10s.; or 1st year, £47 5s. 2nd yr. £42 3rd yr. £15 15s. (See note.)	£106 1s.; or 1st year, £52 10s. 2nd year, £42 3rd year, £17 17s.	£100; or 1st win. £45 2nd win. £40 3rd win. £20 4th win. £5
Hospital Practice	*Medical.* 3 mos. £10 10s. 6 mos. £15 15s. 2yrs. £23 12s. 6d. Unlim. £33 1s. 6d *Surgical* 3 mos. £13 2s. 6d 6 mos. £19 19s. 12 mos. £26 5s. Unlim. £33 1s. 6d	*Med. or Surg.* 3 mos. £5 5s. 6 mos. £7 7s. 12 mos. £10 10s. Full period £21 *Med. and Surg.* 3 mos. £8 8s. 6 mos. £10 10s. 12 mos. £15 15s. Full p. £31 10s.	*Med. or Surg.* 1 year, £10 10s. 2 years, £21 Perp. £31 10s.	*Med. or Surg.* 3 mos. £10 10s. 6 mos. £15 15s. 1 year £24 3s. Perp. £31 10s. *Med. and Surg.* 3 mos. £15 15s. 6 mos. £24 3s. 1 year £31 10s. Perp. £47 5s.	*Med. or Surg.* 1 sum. £5 5s. 1 win. £9 9s. 1 year, £12 12s. Perp. £31 10s. *Med. and Surg.* 1 sum. £8 8s. 1 win. £14 14s. 1 year £18 18s. Perp. £42	6 mos. £10 10s. Perp. £52 10s. *Medical.* 6 mos. £10 10s. 12 mos. £15 15s. Perp. £26 5s. *Surgical.* 6 mos. £10 10s. 12 mos. £15 15s. 18 mos. £21 Perp. £26 5s.	*Med. or Surg.* 6 mos. £5 5s. 12 mos. £10 10s. Perp. £21 *Med. and Surg.* 6 mos. £8 8s. 12 mos. £15 15s. Perp. £36 15s.	*Med. or Surg.* Perp. £15 15s. 1 year, £8 8s. 6 mos. £5 5s. *Med. and Surg.* Perp. £26 5s. 1 year, £12 12s. 6 mos. £7 7s.
Fees for Students of Dental Surgery	£63; or 1st win. & 1st sum each £33 1s. 6d.	1st Oct. £22 2s. 2nd Oct. £20 —	£55; or 1st year, £30 2nd year, £25	£66 3s.; or 1st year, £42 2nd yr. £24 3s.	*Hospital.* 1 year £10 10s. 2 years, £15 15s.	£40 Dent. pr. gen., £10	£55; or 1st year, £30 2nd year, £25	£42; or 1st win. £30 2nd win. £15
Anatomy	*s.* £9 9s. *p.* £13 2s. 6d.	1st year £5 5s. 2nd year £3 3s.	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £6 6s. *p.* £9 9s.	*s.* £5 5s. —	*s.* £7 17s. 6d.	*s.* £10 10s. Subs. c. £4 4s.
Demonstrations and Dissections	*s.* £7 7s. — —	1st year £5 5s. Subs. c. £3 3s. — —	*s.* £3 3s. — —	*s.* £7 7s. — —	*s.* £7 7s. — —	*s.* £5 5s. — —	*s.* £4 4s. — —	*s.* £6 6s. Subs. c. £3 3s. — —
Physiology	*s.* £9 9s. *p.* £13 2s. 6d.	£6 6s. Subs. c. £3 3s.	*s.* £7 7s. *p.* £8 16s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £11 11s.	*s.* £4 4s. —	*s.* £4 4s. —	*s.* £8 8s. Subs. c. £3 3s.
Practical Physiology and Histology	(P. P.) *s.* £7 7s.; (H.) *s.* £2 12s. 6d	*s.* £6 6s. —	— (H.) *s.* £3 3s.	*s.* £7 7s. —	*s.* £6 6s. ext. c. £2 2s.	*s.* £3 3s. —	*s.* £4 4s. —	*s.* £5 5s. Subs. c. £2 2s.
Comparative Anatomy	*s.* £2 12s. 6d. *p.* £4 4s.	*s.* £3 3s. —	*s.* £4 4s. —	— —	*s.* £4 4s. *p.* £6 6s.	*s.* £3 3s. —	*s.* £2 12s. 6d. —	*s.* £2 2s. Subs. c. £1 1s.
Botany	*s.* £4 4s. *p.* £5 5s.	*s.* £3 3s. —	*s.* £3 13s. 6d. *p.* £4 14s. 6d.	— —	*s.* £4 4s. *p.* £6 6s.	*s.* £3 3s. —	*s.* £4 4s. —	*s.* £2 2s. Subs. c. £1 1s.
Chemistry	*s.* £6 16s. 6d. *p.* £9 9s.	*s.* £6 6s. —	*s.* £6 6s. *p.* £7 17s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £11 11s.	*s.* £7 7s. —	*s.* £6 16s. 6d. —	*s.* £6 6s. Subs. c. £3 3s.
Practical Chemistry	*s.* £3 3s.	*s.* £5 5s. —	*s.* £4 4s. —	*s.* £5 5s. —	*s.* £6 6s. ext. c. £2 2s.	*s.* £5 5s. —	*s.* £4 4s. —	*s.* £3 3s. —
Materia Medica	*s.* £6 16s. 6d. *p.* £7 17s. 6d.	*s.* £4 4s. —	*s.* £4 14s. 6d. *p.* £5 15s. 6d.	*s.* £5 5s. —	*s.* £5 5s. *p.* £6 6s.	*s.* £3 3s. —	*s.* £5 5s. —	*s.* £2 2s. Subs. c. £1 1s.
Practical Pharmacy	— — —	*s.* £3 3s. — —	*s.* £3 3s. — —	*s.* £3 3s. — —	— — —	*s.* £4 4s. — —	3 mos. £3 3s.; 6 mos. £6 6s.	£3 3s. —
Pathology and Morbid Anatomy	*s.* £2 12s. 6d. *p.* £4 4s.	*s.* £4 4s. (See note.) —	*s.* £3 3s. —	P. £3 3s. M.A. £7 7s.	*s.* £3 3s. *p.* £4 4s.	*s.* £3 3s. —	*s.* £4 4s. —	*s.* £4 4s. Subs. c. £2 2s.
Medicine	*s.* £6 16s. 6d. *p.* £9 9s.	£7 7s. —	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £9 9s.	*s.* £5 5s. —	*s.* £5 5s. —	*s.* £8 8s. Subs. c. £3 3s.
Surgery	*s.* £6 16s. 6d. *p.* £9 9s.	*s.* £7 7s. —	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £9 9s.	*s.* £5 5s. —	*s.* £5 5s. —	*s.* £8 8s. Subs. c. £3 3s.
Practical Surgery	*s.* £6 16s. 6d. *p.* £9 9s.	*s.* £5 5s. —	*s.* £4 4s. —	*s.* £4 4s. —	*s.* £3 3s. ext. c. £2 2s.	— —	*s.* £4 4s. —	*s.* £6 6s. Subs. c. £2 2s.
Operative Surgery	*s.* £3 3s.	(See note.)	*s.* £2 2s.	*s.* £5 5s.	—	£5 5s.	£4 4s.	*s.* £5 5s.
Ophthalmic Surgery	*s.* £2 12s. 6d. *p.* £4 4s.	— —	inc. in Surg. —	— —	— —	*s.* £2 2s. —	*s.* £2 12s. 6d. —	*s.* £2 2s. —
Dental Surgery	*s.* £2 12s. 6d. *p.* £4 4s.	— —	— —	— —	— —	*s.* £2 2s. —	*s.* £2 12s. 6d. —	*s.* £2 2s. —
Midwifery	*s.* £6 16s. 6d. *p.* £7 17s. 6d.	*s.* £4 4s. —	*s.* £4 14s. 6d. *p.* £5 15s. 6d.	*s.* £5 5s. —	*s.* £5 5s. *p.* £6 6s.	*s.* £4 4s. —	*s.* £5 5s. —	*s.* £5 5s. Subs. c. £2 2s.
Forensic Medicine	*s.* £4 4s. *p.* £5 5s.	*s.* £4 4s. —	*s.* £4 14s. 6d. *p.* £5 15s. 6d.	*s.* £5 5s. —	*s.* £5 5s. *p.* £6 6s.	*s.* £3 3s. —	*s.* £4 4s. —	*s.* £4 4s. Subs. c. £2 2s.
Psychology	*s.* £2 12s. 6d. *p.* £4 4s.	— —	inc. in For. Med. —	*s.* £3 3s. —	— —	— —	— —	*s.* £2 2s. —
Public Health or Hygiene	£2 12s. 6d.	£2 2s.	—	*s.* £3 3s. —	*s.* £1 1s. Small fee	— —	—	*s.* £2 2s.
Instruction in Vaccination	—	Not stated	—	—	—	—	£1 1s.	£1 1s.
Library	Free	£1 1s.	Each yr. 10s. 6d. comp. £2	£1 1s.	£1 1s.	£1 1s.	£1 1s.	£1 1s.

ADDITIONAL NOTES.

St. Bartholomew's Hospital.—The composition fee includes Ophthalmic and Dental Surgery, Mental Diseases, and Public Health. University students who have passed their Anatomical and Physiological Examinations pay £68 5s., or instalments of £31 10s. and £42. Fee to Qualified Practitioner, for courses of instruction, £15 15s. Extra in-patient dresserships; 3 months, £10 10s.; second period of 3 months, £6 6s. Advanced Physiology, £4 4s.

Charing Cross Hospital.—Anatomical parts, each 12s. 6d. Operative Surgery, each part, 15s. Use of Dissecting-Room in summer, £1 1s.; use of Microscopes, £1 1s. Therapeutics, £4 4s. Comparative Anatomy, general students, £3 3s. Second course of practical classes, £2 2s. Students rejected at first or second examination of conjoint board, £1 1s.; at final examination, £2 2s. Practical Medicine, winter course, £4 4s.; summer course, £3 3s.

St. George's Hospital.—Perpetual students pay £125 at entrance; or 1st and 2nd years, each £45, 3rd year £20. Second year students pay £90, or instalments of £50 and £45. Third year students pay £65, or instalments of £40 and £30. The payments for courses required by the examining boards do not confer the privileges of perpetual students. Practical Medicine, *s.* £4 4s. Extra payment is required for Practical Pharmacy; Practical Chemistry; Subjects for Dissection (£2 2s.); Operative Surgery; Library; and Comparative Anatomy.

Guy's Hospital.—Students entering in second year, £69 15s.; or, first year, £50; second year, £40; third year, £20; in third year, £68 5s.; or, first year, £50 second year, £30; in fourth year, £52 10s.; or, first year, £50; second year, £30; in fourth year, £52 10s.; or, first year, £50; second year, £5.—Biology, £7 7s.; Experimental Physics and Morbid Histology, each £5 5s.; Practical Medicine, £4 4s.—Extra fees: Practical Chemistry, £1 10s.; Operative Surgery, £2 2s. (both included in fee in table). The library fee (£1 1s.) is returned when the student leaves the hospital. Medical Graduates of an University, and doubly qualified Practitioners, are admitted to Hospital Practice on following terms: three months, £7 7s.; six months, £10 10s.; unlimited, £15 15s.

King's College.—If a course of Preliminary Science be included, the Composition Fee is one sum, £143 7s. 6d.; or two yearly instalments of £74; or three of £51; or four of £40 each. The Composition Fee includes perpetual attendance on Anatomy, Physiology, Chemistry, Medicine, Clinical Medicine, Surgery, Clinical Surgery (one Professor), Obstetric Medicine, Botany, Forensic Medicine, Materia Medica, Comparative Anatomy, Pathological Anatomy, and Hospital Practice; and one course each of Natural Philosophy, Practical Surgery, Practical Chemistry, Practical Pathology, and Practical Physiology. Extra courses of these subjects are charged £2 2s. each. A reduction of 20 per cent. is made to pupils who have attended at least five terms in King's College School.—Clinical Surgery (win.), one professor, *s.* £6 6s.; *p.* £8 8s.; both professors, *s.* £8 8s.; *p.* £11 11s.; (sum.), one professor, *s.* £4 4s.; *p.* £5 5s.; both, *s.* £5 5s.; *p.* £6 6s.—Anatomy and Practical Anatomy, together, *s.* £9 9s.; *p.* £12 12s. Students of Practical Physiology pay £1 1s. for use of apparatus, etc. Practical Biology and Experimental Physics, 3 terms, each subject, £8 8s.; second year, each £3 3s. Practical Pathology £5 5s.; Natural Philosophy, £2 2s. Analytical and Experimental Chemistry (exclusive of material) 1 month, £4 4s.; 3 months £10 10s.; 6 months,

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES.

(The letter "s" denotes single course; "p" perpetual or unlimited attendance.)

St. Thomas's.	University College.	Westminster.	Queen's Coll., Birmingham.	Bristol Medical School.	Leeds.	Univers. Coll., Liverpool.	Owens Coll., Manchester.	Coll. of Med., Newcastle.	Sheffield.
£125; or On entr. £75 2nd win. £63; or 1st year, £60 2nd year, £50 3rd year, £30	£131 5s.; or 1st year, £63 2nd yr. £52 10s. 3rd yr. £21	£100; or 1st win., £52 10s. 2nd win., £52 10s. or 5 payments of £23 each	Lect. £63; or 1st yr. £31 10s. 2nd yr. £31 10s.	Lect. £63; or 1st sess. £42 2nd sess. £21	Lect. £63; or 1st yr. £31 10s. 2nd yr. £31 10s.	Lectures, £63; or 1st yr. £31 10s. 2nd yr. £31 10s.	Lect. £63; or 1st yr. £31 10s. 2nd yr. £31 10s.	£63; or 2 instalments, each £36 15s.; or 3 instalments: 1st, £31 10s.; 2nd, £20 5s.; 3rd, £21	Lectures, £45
Med. and Surg. 3 mos. £15 6 mos. £26 9 mos. £36 12 mos. £40 Perp. £55	*Med. and Surg.* Perp. £36 15s. 1 year, £21	*Med. or Surg.* 3 mos. £6 6s. 6 mos. £10 10s. Each subseqnt. 6 mos. £5 5s. 3 yrs. £24 3s. *Med. and Surg.* 3 mos. £10 10s. 6 mos. £14 14s. Each subseqnt. 6 mos. £7 7s. 3 yrs. £36 15s.	*General and Queen's Hospitls.* 4 years, £42, or in two equal sums. 1 year, £21 6 mos. £14 3 mos. £10	*Royal Infirm. Med. or Surg.* 6 mos. £7 7s. 1 year, £12 12s. Perp. £21 *Med. and Surg.* 1 year, £21 Perp. £36 15s. *Gen. Hosp. Med. or Surg.* 6 mos. £6 1 year, £10 Perp. £20	*Infirmary. Med. or Surg.* 1 win. £7 7s. 1 sum. £6 6s. 12 mos. £12 12s. 18 mos. £15 15s. 3 years, £21 Perp. £26 5s. *Med. and Surg.* Perp. £42; or 1st year, £22; 2nd year, £22	*Royal Infirm.* Perp. £42, or in two equal instalments. *Medical.* 3 mos. £3 15s. 6 mos £6 6s. 12 mos. £7 7s. *Surgical.* 3 mos. £5 5s. 6 mos. £7 7s. 12 mos. £10	*Royal Infirm.* Full per. £42; or 2 instlmnts. £22 *Medical.* 3 mos. £4 4s. 6 mos. £8 8s. 12 mos. £12 12s. Full per. £18 18s. *Surgical.* 3 mos. £6 6s. 6 mos. £9 9s. 12 mos. £18 18s. Full per. £31 10s	*Infirmary.* 3 mos. £5 5s. 6 mos. £8 8s. 12 mos. £12 12s. Perp. £26 5s.; or 1st year £12 12s.; 2nd, year, £10 10s.; 3rd yr. £6 6s.; or, 1st year £14 14s.; 2nd year, £12 12s.	*Gen. Infirm., or Public Hospitl. Med. or Surg.* Wln., £6 6s. Sum., £3 3s.
£55; or 1st year, £50 2nd year, £10	£63 —	£50; or 1st yr. £32 10s. 2nd year, £20	£63; or 1st yr. £42 2nd yr. £21	—	—	—	—	—	—
s. £7 7s. *p.* £10 10s. 3 mos. £4 4s. 6 mos. £6 6s. Perp. £10 10s.	*s.* £8 8s. *p.* £10 10s. 3 mos. £1 4s. 1 yr. £6 6s. Ea. add. yr. £1 1s.	1 c. £7 7s. Subsq. c. £2 2s. 3 mos. £5 5s. Subsequent 3 mos. £3 3s.	*s.* £6 6s. — *s.* £5 5s. —	*s.* £5 5s. — £3 3s. —	*s.* jun. or sen., [each £5 5s. 3 mos. £2 2s. 6 mos. £3 3s.	2 cs. each, £5 5s. 3rd. c. £2 12s. 6d. *s.* £3 3s. Sum. £2 2s.	*s.* £5 5s. — 6 mos. £3 3s. 3 mos. £2 2s. Sum. £2 2s.	*s.* £5 5s. — — — —	1st c. £4 4s. 2nd c. £2 2s — — —
s. £7 7s. *p.* £10 10s. *s.* £6. 6s. (extras) —	£7 7s. Elem., £5 5s. (See note below.)	1 c. £6 6s. Subsq. c. £2 2s. 1 c. £2 2s. H. alone £5 5s.	*s.* £6 6s. — *s.* £4 4s —	*s.* £5 5s. — *s.* £3 3s. —	*s.* jun. or sen., [£5 5s. *s.* £6 6s. —	2 cs. ea. £5 5s. 3rd c. £2 12s. 6d. — —	£5 5s. — *s.* £5 5s. (See note.)	*s.* £5 5s. — — —	1st c. £3 3s. 2nd c. £2 2s *s.* £3 3s. —
s. £4. 4s. *p.* £5 5s. *s.* £4 4s. *p.* £5 5s.	(See note below.) *s.* £3 13s. 6d. *p.* £5 5s.	Subseq. c. £2 2s. 1 c. £4 4s. —	*s.* £4 4s. —	*s.* £4 4s. *s.* £3 3s. —	*s.* £2 2s. — *s.* £4 4s. —	(See note.) — 1st c. £4 4s.; 2 & 3, £2 2s. 1st c. £5 5s.; 2	*s.* £2 12s. 6d. — *s.* £2 12s. 6d. —	— — *s.* £5 5s. —	(See note.) — *s.* £3 3s. —
s. £7 7s. *p.* £10 10s. *s.* £6 6s. (extras) —	*s.* £7 7s. *p.* £9 9s. *s.* £5 5s Sec. c. £3 3s.	1 c. £6 6s. Subseq. c. £2 2s. *s.* £4 4s. Subs. c. £2 2s.	*s.* £5 5s. — *s.* £4 4s. —	*s.* £5 5s. — *s.* £3 3s. —	*s.* £5 5s. — *s.* £4 4s. —	& 3 ea. £2 12s. 6d. — *s.* £4 4s.; 2nd c. [£3 3s.	(See note.) — *s.* £4 4s. (See note.)	*s.* £5 5s. — — —	(See note.) — *s.* £3 3s. —
s. £4 4s. *p.* £5 5s. 3 mos. £5 5s. —	*s.* £6 6s. *p.* £7 7s. 3 mos. £5 5s. —	1 c. £3 3s. 2 cs. £4 4s. 3 mos. £3 3s. 6 mos. £5 5s.	*s.* £4 4s. — — —	*s.* £3 3s. — — —	*s.* £4 4s. — — —	1st c. £4 4s. 2 & 3 each £2 2s. £3 3s. —	*s.* £4 4s. — 3 mos. £3 3s. —	*s.* £5 5s. — £2 2s. —	*s.* £3 3s. — — —
s. £4. 4s. *p.* £5. 5s. *s.* £7 7s. *p.* £10 10s.	*s.* £6 6s. *p.* £7 7s. *s.* £9 9s. *p.* £11 11s.	1 c. £3 3s. 2 cs. £4 4s. 1 c. £6 6s. Subsq. c. £2 2s.	— — *s.* £6 6s. —	*s.* £3 3s. — *s.* £5 5s. —	*s.* £4 4s. — *s.* £6 6s. —	1st c. £3 3s.; 2 & 3, ea. £1 11s. 6d. 1st & 2nd cs. £5 5s. 3d £2 12s. 6d.	*s.* £4 4s. — *s.* £5 5s. —	*s.* £5 5s. — *s.* £5 5s. —	— — 1st c. £4 4s. 2nd c. £2 2s.
s. £7 7s. *p.* £10 10s. *s.* £6 6s. (extras)	*s.* £7 7s. *p.* £8 8s. *s.* £6 6s. Sec. c. £4 4s.	1 c. £6 6s. Subsq. £2 2s. 1 c. £3 3s. Subs. c. £2 2s.	*s.* £6 6s. — — —	*s.* £5 5s. — £3 3s. —	*s.* £6 6s. — — —	1st c. £5 5s.; 2nd & 3rd ea. £1 1s. 1st c. £4 4s.; 2 & 3 each £2 2s.	*s.* £5 5s. — *s.* £4 4s. —	*s.* £5 5s. — — —	*s.* £4 4s. — *s.* £3 3s. —
s. £5 5s. *s.* £2 2s. *p.* £3 3s. *s.* £2 2s. *p.* £3 3s.	*s.* £5 5s. *s.* £2 2s. — *s.* £2 2s. —	£6 6s. *s.* £1 1s. — *s.* £2 2s. —	— — — — —	£3 3s. — — — —	*s.* £3 3s. *s.* £2 2s. — —	*s.* £4 4s. *s.* £1 1s. — 1st c. £3 3s.; 2nd £2 2s.	*s.* £4 4s. *s.* £3 3s. — —	*s.* £5 5s. — — —	— — — — —
s. £5 5s. *p.* £6 6s. *s.* £4 4s. *p.* £5 5s. *s.* £2 2s. *p.* £3 3s. *s.* £2 2s. £1 1s. £1 1s.	*s.* £6 6s. *p.* £7 7s. *s.* £5 5s. *p.* £6 6s. — — *s.* £3 3s. £1 1s. —	1 c. £4 4s. 2 cs. £5 5s. 1 c. £3 3s. 2 cs. £4 4s. *s.* £1 1s. — — £1 1s. £1 1s.	*s.* £5 5s. — *s.* £4 4s. — — — — — £1 1s.	*s.* £4 4s. — *s.* £3 3s — — — *s.* £2 2s. — £1 1s.	*s.* £4 4s. *s.* £5 5s. *s.* £3 3s. *s.* £2 2s. — *s.* £2 2s. £1 1s. £1 1s.	1st c. £4 4s.; 2 & 3 ea. £2 12s. 6d. 1st c. £4 4s.; 2 & 3 ea. £2 2s. — — — £1 1s. s. 10s. 6d. *p.* £1 1s.	£4 4s. *s.* £3 3s. — *s.* £1 11s. 6d. — £2 2s. A fee —	*s.* £5 5s. *s.* £5 5s. — *s.* £5 5s. — *s.* £5 5s. £1 1s. 1 yr. 10s.; longer, 15s.	*s.* £3 3s. — *s.* £3 3s. — — — — £1 1s. —

£18 18s. Medical Tutor, three terms, £5 5s.; second year, £3 3s. Each second year student contributes £1 1s. towards the "Domus" fund of the College.

London Hospital.—The General Fee for Lectures and Hospital Practice covers four years, and includes two years' Practical Anatomy. For students entering at or before beginning of second winter, £78 15s.; or two instalments of £47 5s. and £31 10s. This fee cover three years from the date of entry. Students in Arts of Universities where residence is required, may become Pupils of the Hospital, eligible for all Appointments, on payment of £52 10s. Graduates of any Indian, Canadian, or other Colonial or American University or Medical College, may be admitted to three months' Clerkship or Dressership and twelve months' Hospital Practice for £10 10s. The fees for Hospital Practice include Clerkships and Dresserships for one-half the term, not exceeding 6 months' Clerkship and 9 months' Dressership. Maternity Department, one year, £4 4s.; including Midwifery Lectures, £6 6s. Perpetual Fee for Lectures or Hospital Practice alone, £52 10s. Diseases of Throat and Aural Surgery, each, *s.* £2 2s.; Pathological Histology, £3 3s. Experimental Physics, £3 3s. Extra for use of Apparatus, etc., in Practical Chemistry, £2 2s., in Practical Physiology, £1 1s. Students' Club, £1 1s. The Subscription to the Library, and the fees for Practical Pharmacy and Apparatus in Practical Chemistry, are extra. Candidates rejected at the Final Examination, and requiring a further surgical certificate, pay £3 3s.

St. Mary's Hospital. Entrance Fees for unlimited attendance on Hospital Practice and Lectures (including one course of Practical Chemistry), £131 5s., in instalments, or £124 19s. in one sum. Students who have kept a portion of the course of Medical Study elsewhere are admitted as Perpetual Pupils at a reduction, or on payment of £26 5s. for each year of attendance at the school. Students who have not entered to the Anatomical and Physiological classes, can dissect on the payment of £4 4s. for each session. Inorganic Practical Chemistry is included in the General Fee. Organic Practical Chemistry £4 4s. Aural Surgery, Diseases of Skin, each £2 12s. 6d. Practical Pathology, £2 2s. Practical Pharmacy, twelve months, £10 10s.

Middlesex Hospital.—The Composition Fee includes all the Lectures required by the London licensing boards, one course of Practical Chemistry, and two courses of Dissections, the use of the Library, and the instruction of the Tutor. When payment is made by instalments, additional fees must be paid after the fourth year. Members of English Universities who have completed one year of medical study in University, are admitted to all lectures and hospital practice required (except Practical Chemistry, and including only one course of Dissections), for £60 on entrance, or instalments of £40, £20, and £5 at the beginning of each year; separate fees in the latter case being required after the third year. For students who have paid the fee of £35 on entrance upon the course of instruction in Science for the Preliminary Scientific (M.B.) Examination, the Composition Fee payable on their entrance upon the medical curriculum is £80; or by instalments, on entrance and at commencement of second winter session, £35; third winter session, £15; fourth winter session, £5. In the case of students who do not require instruction in Chemistry and Materia Medica, a deduction of £5 is made from the Composition Fee or First Instalment. Occasional pupils entering to the Hospital Practice pay a registration fee of £1 os. Parts for dissection, each

[*Continued on next page.*

(Continued from page 509.)

The entrance fee is £2 2s.; and a deposit of £3 3s. is required, which will be returned to the student on leaving the College, subject to deduction of whole or part for wilful damage of furniture. Resident students are expected to dine in the hall every day.

Special Departments, etc.—Surgical consultations are held on Thursdays at 1.30. Medical casualty patients are attended by the Junior Assistant-Physician, the Casualty Physicians (Dr. Davies, Dr. Nias, and Dr. O. Browne), and the House-Physician; the surgical casualty patients, by the two Junior Assistant-Surgeons and the House-Surgeons and Dressers. In addition to the courses mentioned at page 510, Dr. Matthews Duncan teaches Practical Gynæcology in the Wards for Diseases of Women on Tuesdays, Thursdays, and Saturdays, at 2 P.M. The Demonstrator of Morbid Anatomy gives a demonstration of morbid specimens (medical) at 11 on Fridays. The Surgical Registrar gives a demonstration of Surgical Morbid Specimens every Tuesday at 11. Inspections are made in the Pathological theatre: medical cases by Dr. Norman Moore, at 1 P.M.; surgical cases by Mr. Bowlby, at 1 45. Microscopic specimens are demonstrated every Friday at 4.15 by the Demonstrator of Morbid Anatomy and the Surgical Registrar. The Ophthalmic Wards are visited at 1.30 on Tuesdays and Thursdays by Mr. Power, and at 2 on Mondays, Thursdays, and Saturdays by Mr. Vernon; the ophthalmic out-patients are seen at 2 o'clock on Tuesdays and Thursdays by Mr. Power, and at 2.30 on Tuesdays and Saturdays by Mr. Vernon. Mr. Vernon gives Ophthalmoscopic Demonstrations at 2 P.M. on Mondays in the winter session. Mr. Walsham sees orthopædic cases at 2.30 on Mondays, and Mr. Butlin patients with diseases of the larynx at 2.30 on Fridays. Demonstrations of Operative Surgery are given by the demonstrators of Anatomy and Operative Surgery throughout the year. Mr. Mills gives three months' courses of instruction on the administration of anæsthetics. Dr. Steavenson attends in the Electric Department at 1.30 P.M. on Monday, Tuesday, Thursday, and Friday, and gives systematic instruction.

Appointments.—Four House-Physicians and ten House-Surgeons (who must be qualified to practise), and a Senior and a Junior Assistant-Chloroformist, are appointed annually. A Resident Midwifery Assistant and an Ophthalmic House-Surgeon are appointed every six months. Each of these officers receives a salary of £25 a year, except the Senior Assistant Chloroformist, who receives £50. All, except the five Junior House-Surgeons, are provided with rooms. The Clinical Clerks to the medical in-patients, and the Clerks to the Physician-Accoucheur, are chosen from the most diligent students. Clerks and dressers are also selected to attend in the out-patient rooms and in the special departments and in the *post mortem* room. Dressers to the surgical in-patients and the surgical casualty department are selected, to the number of forty in each year, from the students (of the first year) who pass the best examination in the subjects of the first year. Other in-patient dresserships may be obtained by payment of the usual fees (see p. 512).

Exhibitions, Scholarships, and Prizes.—Two open Scholarships in Science, value of each £130, tenable for one year, to be competed for on September 25th. For one of the scholarships, candidates must be under twenty; for the other, under twenty-five years of age. The subjects are Physics, Chemistry, Botany,

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session, £2 2s. Practical Medicine, one course, £6 6s.; subsequent course, £2 2s. Practical Midwifery, one course, £3 3s.; subsequent course, £1 1s. Instruction in Anæsthetics, £1 1s.

ST. THOMAS'S HOSPITAL.—Perpetual Fee for students entering in second year, £85 in one sum; or, 2nd year £65; 3rd year £25; for students entering in third year, £55 on entrance; or £40 and the next year, £20. Qualified Medical Practitioners are admitted to Hospital Practice and Lectures on payment of £12 10s. for unlimited attendance. Practical Pharmacy is not included in the perpetual fee. Students Dissecting, or attending Operative Surgery, pay for the parts they use. Midwifery Practice, £5 5s.; Obstetric Demonstrations, £3 3s.; Ophthalmic Practice, £2 2s.; Operative Surgery (voluntary class), £5 5s.; Operations on Eye (voluntary class), £2 2s. Pathological Anatomy (including practical course), £6 6s., with 10s. 6d. (extra) for apparatus, etc. Laryngology, £3 3s.; Experimental Physics, *s.* £4 4s.; *p.* £5 5s.

UNIVERSITY COLLEGE.—Composition Fees for students who do not require to attend Botany, Chemistry, Pharmacy, and Materia Medica at a Medical School (under the regulations of the Examining Board in England), £105; or first year, £52 10s.; second year, £36 15s.; third year, £21. The student is strongly advised to attend, in addition, a course of Therapeutics, which is not included in the above Composition Fee. Fee, £5 5s. For the whole course of instruction for the Intermediate Examination in Medicine of the University of London, £52 10s., in one sum. For the course of instruction for the Final M.B. Examination of the University of London, £73 10s. in one sum; or first year, £42; second year, £33 12s. The Composition Fee admits to attendance for five years on Hospital Practice and Systematic Lectures, and to three years' Practical Anatomy; and to one term of the tutorial class of Chemistry.—Physiology: General Course of Physiology, *s.* £7 7s.; Elementary part, £4 4s., each additional, £1 1s.; General Course of Practical Physiology, one course, £2 2s.; each additional, £1 1s.; Advanced Practical Physiology, *s.* £5 5s.; General Course of Histology, *s.* £4 4s.; each additional, £1 1s.; General Course of Practical Histology, one course, £5 5s.; each additional, £1 1s.; tutorial class, each term, £1 1s. Special instruction in Laboratory, £3 3s. each term, with fee to instructor. Chemistry: General Course, half winter session, £3 3s.; third term, £2 2s.; Special Course of Organic Chemistry (summer), £2 12s. 6d. Senior Practical Class, one course, £5 5s.; second course, £3 3s.—Anatomy: Lectures and Practical Anatomy, Course, £11 11s.; three years, £16 16s.; each year after third, £1 1s.—Pathological Anatomy: Practical Course, £2 2s.—Hygiene and Public Health: Laboratory Instruction (exclusive of materials), six months, £18 18s.; three months, £10 10s.; one month, £4 4s.; two months, working every other day, £5 5s., exclusive of materials; Practical Class for Detection of Poisons, £2 2s.

WESTMINSTER HOSPITAL.—The payments include all extras except parts for Dissection, and Lectures on Experimental Physics.—Students who have completed a year of study elsewhere pay £72 on entrance, or two instalments of £37 16s. each, or three payments of £30, £30, and £20. Students who have completed their Anatomical and Physiological Studies can enter to hospital practice and lectures on practical subjects by paying £60 on entrance, or two instalments of £31 10s. each. These payments do not include Lectures on Experimental Physics or Comparative Anatomy, nor the special course of Operative Surgery. Graduates of Medicine of Colonial and Foreign Universities are admitted to Hospital Practice and Lectures on payment of £12 12s. Experimental Physics, one course, £3 3s.; each subsequent course, £2 2s. Elementary Anatomy in summer, £2 2s.; Morbid Histology (in summer) one course, £5 5s.; Minor Surgery and Bandaging, £1 1s. Diseases of Skin £1 1s. Aural Surgery, £1 1s. Obstetric, Ophthalmic, Aural, Skin, or Dental Clinical Departments, 3 months, £2 2s.; 6 months, £3 3s. General students may attend additional courses of lectures on all subjects except Histology (Normal and Morbid) and Practical Chemistry, for a second course of which a half fee is charged. Special Clinical Departments, and Lectures on Comparative Anatomy, Psychological Medicine, Ophthalmic, Aural, and Dental Surgery, Diseases of Skin, and Comparative Anatomy, are free to general students, unless a special certificate is required.

QUEEN'S COLLEGE, BIRMINGHAM. Students who have paid the composition fee, and desire to repeat attendance in any class beyond the ordinary requirements of the examining bodies, can do so on payment of half the stated fee for each class. Dissection after second winter, 3 months, £2 2s.; 6 months £3 3s. (including parts for dissection). A fee of £1 1s. is charged for apparatus in the class of Practical Physiology, and 15s. in the class of Practical Chemistry. Advanced Practical Physiology, £2 2s. Elementary Physiology, £1 1s. Every dissecting student pays a fee of £1 10s. at the beginning of each winter session.

BRISTOL MEDICAL SCHOOL.—Students of Anatomy or Physiology pay a Medical Tutor Fee of £2 2s. *per annum*; this (for 2 years) is included in the Composition Fee. Students not belonging to the Anatomical Class may dissect on paying £3 3s. each session, besides Tutor's fee.—*Royal Infirmary*: Entrance fee, £2 2s.; and £1 1s. *per annum* to Library; Clinical Clerk, 6 months, £5 5s.; 1 year, £8 8s.; Dresser, each 6 months, £5 5s.; Obstetric Clerk, each 3 months, £3 3s. *General Hospital*: Extra fee for Clerk or Dresser, £5 5s. for 6 months; for Obstetric Clerk, £3 3s. for 3 months. Library, £1 1s. *per annum*.

YORKSHIRE COLLEGE: LEEDS SCHOOL OF MEDICINE.—An Entrance Fee of £1 1s. is paid by students who do not pay a composition fee. The composition fee admits for six years to the lectures required by the English medical corporations and to one course each of Mental Diseases, Ophthalmology, and Hygiene. Diseases of Women and Children, £2 2s.; with Midwifery, £5 5s. Morbid Histology, £3 3s. Dissecting-room for students not attending the course on Descriptive Anatomy, 3 months, £2 2s.; 6 months, £3 3s.

LIVERPOOL UNIVERSITY COLLEGE (ROYAL INFIRMARY) SCHOOL OF MEDICINE.—The Composition Fee includes Library and Ophthalmology. The aggregate fee of £105 for Lectures and Hospital Practice is exclusive of Vaccination (£1 1s.); Dissecting-room expenses (about £3 3s.); Practical Anatomy in summer (£2 2s.); and Practical Pharmacy (£3 3s.); Six months' Gynæcological Practice and Lectures at the Infirmary, £5 5s.; Practical Midwifery at the Ladies' Charity and Lying-in Hospital, £2 2s. Elementary Biology, Elementary Zoology, Practical Biology, Practical Zoology, one course of each, £2. General Zoology, £3. Composition fee for first year of above, £7 10s.; with General Zoology, £9 10s. Embryology, £1 5s. Comparative Osteology, £2. Practical Pathological Histology, each course, £2 2s. Diseases of Children, first course, £2 2s.; second and third, each £1 1s. Physics, first course, £6; second, £4; both together, £8 15s. Organic Chemistry, each course. £1 10s. Practical Toxicology, £3 3s.

OWENS COLLEGE, MEDICAL DEPARTMENT.—The Composition Fee admits to four years of study. It does not include Hospital Practice, Practical Anatomy, after two sessions, 3 months, £2 2s.; 6 months, £3 3s.; Operative Surgery (special course), £4 4s.; Practical Pharmacy, £3 3s.; Practical Zoology and Comparative Anatomy, fees according to length of course and number of days per week; Practical Toxicology, £3 3s. Comparative Embryology, £5 5s.; Comparative Osteology, £2 2s.; Botany (Practical Course), £1 11s. 6d.; Demonstration class in Anatomy, £2 2s., to members of Practical Anatomy Class, £1 1s.; Tutorial classes in Materia Medica, £1 1s.; Tutorial classes in Chemistry and Botany, each 10s. 6d.; Deposit Fee (Dissection), £2 5s.; Practical Chemistry, for chemicals, £1 1s. Pathological Laboratory (6 hours weekly), 3 months, £3 3s.; 6 months, £5 5s.—Practical Physiology and Histology, extended course (October to end of July), six days per week, £17 17s.; four days, £13 13s.; three days, £10 10s.; two days, £7 7s.; one day £4 4s. Students entering at or after Christmas pay two-thirds of the fees, if they enter for not less than two days a week. For shorter periods, the fees, entitling the student to work every day in the week, are, six months, £15 15s.; three months, £9 9s.; one month, £4 4s.—Practical Histology, £5 5s.; Chemistry, Preliminary Scientific, of Victoria University, £4 4s., of University of London, £4 14s. 6d.; junior and senior lectures, each £3 10s.; both, £5 5s.; Organic Chemistry, lectures, £3 10s.; Laboratory classes according to length of course and number of days.—Zoological Laboratory special courses, fees as for extended course of Practical Physiology.—Obstetric Practice at St. Mary's Hospital, £2 2s.—Diseases of Children, £2 2s.—Practical Morbid Histology (summer), £2 2s.—Practical Pathology for Medical Men (summer), £2 2s.—Surgical Pathology, £2 2s.; Advanced, £2 2s.—Registered medical practitioners wishing to qualify as officers of health can attend the Hygiene course free.—Practical Anatomy in summer, £2 2s. An extra charge of 5s. is made for use of microscopes in several of the practical classes.

NEWCASTLE-ON-TYNE COLLEGE OF MEDICINE.—Physics, £2 2s.; Chemical Apparatus, £1 1s. (to be returned at end of session); Use of Bones, 5s.; Use of Books for home-reading, 10s. Hospital for Infectious Diseases, £2 2s. The perpetual fee does not include Chemistry and Practical Physiology beyond one course.

Zoology, and Physiology. No candidate may take more than four subjects. The successful candidates must enter at St. Bartholomew's Hospital in the October succeeding the examination. Jeaffreson Exhibition: £50; examination on September 28th; subjects, Latin, Mathematics, and any two of the following languages—Greek, French, German. Candidates for the Open Scholarships and the Jeaffreson Exhibition must not have entered to the hospital practice of any metropolitan medical school. Preliminary Scientific exhibition, £50, for one year, on October 20th, for students of less than six months' standing; subjects, the same as for the open scholarship. *First Year:* Three Junior Scholarships, of the value of £50, £30, and £20, after the general examination in first year's subjects at the end of the winter and summer sessions. Candidates, who must not have previously entered at a Metropolitan Medical School, must have been students at the Hospital for less than fifteen months. Prize Dresserships are awarded to the succeeding forty candidates, if of sufficient merit, provided that they pass the first professional examinations before the end of the second year. Treasurer's Prize for Practical Anatomy, junior. *Second Year:* Foster Prize for Practical Anatomy, senior. Harvey Prize for Practical Physiology. *Second or Third Year:* Senior Scholarship, value £50, in Anatomy, Physiology, and Chemistry. Shuter Scholarship, value £50; subjects, Anatomy, Physiology, and Materia Medica. Candidates must be Graduates in Arts of the University of Cambridge, who have not graduated in Medicine or Surgery. Wix Prize: subject, The Life and Works of Boerhaave. Hichens Prize: subject, Bishop Butler's *Analogy*. Skinner Prize, for students of not longer standing than one year from qualification: subjects, Regional and Morbid Anatomy, including reference to Scarlet Fever and Rheumatic Fever. Two Brackenbury Scholarships (interest of £2,000) in Medicine and Surgery. Bentley Prize, for the best report of not less than twelve medical or twelve surgical cases occurring in the Hospital during the previous year. The Kirkes Scholarship of £30, with Gold Medal, for Clinical Medicine, open to students of not less than two or not more than four years' standing. *Third or Fourth Year:* Lawrence Scholarship and Gold Medal, value £42; subjects, Medicine, Surgery, and Midwifery. Candidates for the Lawrence and Brackenbury Scholarships may compete after the end of the third winter session, within a limited period after receiving qualification to practise.

Examinations.—Students preparing for their examinations are arranged in classes, and examined by the lecturers, demonstrators, and tutors. All students of the first year are examined at the close of the first winter and first summer sessions. Classes are held to prepare candidates for the examinations of the University of London.

The Abernethian Society, composed of the teachers and students of the Hospital, meets every Thursday at 8 P.M. during the winter. The Abernethian Reading Room is for the exclusive use of members of the Society.

Communications regarding the Hospital and Medical College must be addressed to Dr. Norman Moore, the Warden of the College, St. Bartholomew's Hospital.

CHARING CROSS HOSPITAL.—*The Hospital* contains 180 beds. Students are also admitted to the practice of the Royal Westminster Ophthalmic Hospital, which contains 50 beds.

The Library is open daily from 10 A.M. to 4 P.M., except on Saturdays, when it is closed at 1 P.M. The *Museum* is open from 10 to 4.

Special Courses.—Lectures on Diseases of Children are given by Dr. Murray at 12 noon on Wednesdays; and clinical instruction at 1.30 P.M. on Wednesday and Saturday.—Dr. Willcocks and Dr. Murray will give a course of Practical Medicine on Mondays and Thursdays, at 12.30, and on Fridays and Saturdays, at 12 noon, during the winter; and on Mondays and Thursdays at 12.30; and on Tuesdays and Fridays at 10 A.M., during the summer.—Mr. Woodhouse Brain and Dr. F. Hewitt give instruction in the administration of Anæsthetics in the operating theatre every Thursday. Instruction in Practical and Operative Surgery is given by Mr. Bloxam on Tuesdays, Wednesdays, and Fridays, at 3 P.M., in the winter, and daily, except Monday, at 9 A.M., in the summer; and in Surgical Pathology by Mr. Morgan. Instruction in the Clinical uses of Electricity is given by Dr. Murray at 12 noon on Mondays; and by the Electrical Assistant on Wednesdays and Fridays. An Elementary and an advanced course of Physiology will be given.

Appointments.—A Medical and a Surgical Registrar, each with a salary of £40 a year, are appointed for 12 months. Two House-Physicians, two House-Surgeons, and a resident Obstetrical Officer, are appointed by competitive examination for six months. They are entitled to rooms and commons in the hospital. An Electrical Assistant is appointed every six months, and receives £12 12s. at the end of his term of office. Clinical Clerks and Surgeons' Dressers, Surgical Ward Clerks, and Pathological Assistants are appointed for three months. Each student must hold an In-patient Clerkship and In-patient Dressership, after the first professional examination, in order to obtain certificates of hospital attendance. Students may serve as assistants to the Dental Surgeon for three months.

Scholarships, Medals, and Prizes.—Two Entrance Scholarships, value £30 and £20, tenable for one year, awarded in October, after examination in English, Latin, Mathematics, and Mechanics, with either Chemistry, German, or French. Intending candidates must give notice before September 20th. The successful candidates must enter for their complete medical education at the hospital, either immediately, or at the commencement of the next summer session. The Llewellyn Scholarship of £25, open to all matriculated students who have completed their attendance on lectures; examination in Descriptive and Surgical Anatomy, Physiology, Materia Medica, Medicine, Surgery, and Midwifery. The Golding Scholarship, £15, open to all matriculated students who have just completed their first year; subjects of examination, Descriptive Anatomy, Physiology, Materia Medica, and Chemistry. The Pereira Prize of £5, to matriculated students who have completed the third year, for the best clinical reports of cases in the hospital (medical in 1887). The Governors' Clinical Gold Medal; examination on subjects of clinical lectures during the session, and on medical and surgical cases in the hospital. Silver and Bronze Medals and Certificates of Honour in all the classes. Prizes of six guineas and four guineas are given by the lecturer on Dental Surgery. A Surgeon's Operating Case will be given by the Lecturer on Practical and Operative Surgery, at the end of the third winter session, for general practical knowledge and manipulative skill. The Lecturer on Physiology will give a prize for the best note-book and set of specimens.

Examinations.—Classes are held to prepare students for the Preliminary Scientific Examination of the University of London, the Primary Fellowship Examination of the Royal College of Surgeons of England, and the Pass Examination for the Licence of the Royal College of Physicians, and the Membership of the Royal College of Surgeons.

Residence.—Arrangements have been made with several members of the hospital staff to receive resident pupils.

Information may be had of the Dean, Dr. Mitchell Bruce, or the Subdean, Mr. Cantlie.

ST. GEORGE'S HOSPITAL.—*The Hospital* contains 351 beds, of which 205 are devoted to Surgical, and 146 to Medical cases. There are special wards for cases of Diseases of the Eye (19 beds) and Diseases of Women. Children are received into the women's wards.

The Library and Reading Room and the Museum are open daily.

Special Subjects.—Surgical consultations are held on Wednesdays at 1.30. Orthopædic out-patients are seen by Mr. Bennett every Wednesday at 2. Dr. Whipham sees patients with Diseases of the Throat on Thursdays at 2, and gives instruction in the use of the laryngoscope, etc. Mr. Turner will give demonstrations on the Bones, and Mr. Ross on the Joints and Muscles. A course of demonstrations in Histology will be given by Mr. E. Le Cronier, Lancaster. A course of Practical Medicine will be given by Dr. Whipham to students of the second summer session, at 9 A.M. on Tuesdays, Thursdays, and Saturdays. Mr. Dent gives a course of Practical Surgery (including minor surgery, bandaging, case-taking, etc.) for second year's students, at 3 P.M. on Mondays, Wednesdays, and Fridays, and 3.30 P.M. on Tuesdays, in the summer, and Mr. Turner a course of Operative Surgery for third year's students, at 9.30 on Mondays, Wednesdays, and Fridays. Dr. Champneys holds a class of Practical Midwifery in the winter and summer sessions. Dr. Délépine gives a course of Practical Pathology, at 4 on Mondays, and 3.30 on the next four days, in the summer; and Dr. Sisley gives demonstrations in Morbid Anatomy at 12 noon on Wednesdays.

Hospital Appointments.—House-Physicians, House-Surgeons, an Assistant House-Physician, and an Assistant House-Surgeon, are appointed, half-yearly, from among the perpetual pupils.[1] The House-Physicians and House-Surgeons are appointed by the Weekly Board, on the nomination of the Medical School Committee; they hold office for twelve months, and reside and board in the hospital free of expense. They must each deposit £50 with the Treasurer,

[1] All perpetual pupils are eligible for the office of House-Physician and House-Surgeon. All pupils of the hospital may become candidates for the offices of Medical and Surgical Registrar, Obstetric Assistant, Curator of the Museum, and Demonstrator of Anatomy. They are also entitled to attendance on the Maternity Department, and the practice of Ophthalmic and Dental Surgery, without additional fee.

which will be returned on the expiration of their term of office, if they have satisfactorily performed their duties. An Obstetric Assistant is appointed annually; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a yearly salary of £100. A Curator of the Pathological Museum, and a Medical and a Surgical Registrar, are appointed annually from among the senior pupils, each with a salary of £50. A Demonstrator of Histology and Practical Pathology is appointed annually, with a salary of £100. Two Assistant Medical Registrars are appointed every six months by competition. This office must be held before competing for that of Assistant House-Physician. An Assistant Surgical Registrar is also appointed; this office must be held, alternately with that of Ophthalmic Assistant, before competing for the office of Assistant House-Surgeon. Two Demonstrators of Anatomy and a Demonstrator of Physiology, are appointed annually, each with a salary of £50. Each pupil of the hospital must act as Clinical Clerk and Dresser before a certificate of attendance on hospital practice can be signed.

Exhibitions and Prizes.—The following Entrance Scholarships are offered for competition: 1. A Scholarship, value £125, for the sons of medical men who have entered the school during the current year.[2] 2. Two Scholarships, each of £50, open to all students commencing their studies. The subjects for these three Scholarships will be Latin, French or German, and Elementary Physics, and the examination will be held in October. 3. A Scholarship, value £90, open to all students who have entered the school during the current year, and who have passed the Cambridge First M.B. since the previous October. Subjects: Elementary Biology, Anatomy, and Physiology, and Practical Chemistry. 4. A Scholarship, value £65, for students who have entered during the current year, and have passed the Oxford First M.B. or the Cambridge Second M.B. Subjects: Anatomy and Physiology. The examination for these Scholarships will be held during October; subjects, the same as for the £125 Scholarship. The William Brown Exhibitions: 1. £100 *per annum* for two years, open to perpetual pupils of the hospital under the age of 25, who have become entitled to be registered under the Medical Act within two years previously; examinations in July; subjects, Clinical Examination of three Medical and three Surgical cases (including one case of Obstetric Medicine and one of Ophthalmic Surgery), with written or *viva voce* examinations in Medicine and Surgery. 2. £40 *per annum* for three years, to perpetual pupils of the third and fourth winter sessions. Subjects as above; the second candidate will receive the Treasurer's Prize (value £10 10s.), and the third the Thompson Silver Medal. Brackenbury Prizes in Medicine and in Surgery (value of each £32 5s. 11½d.), open to all pupils who have been for eighteen months students of the hospital, and who have not completed the fourth year on April 1st; examinations in June. Sir Charles Clarke's Prize (value £6 5s. 9d.) for good conduct; awarded at end of summer session. Sir Benjamin Brodie's Clinical Prize in Surgery (value £6) for the best report with notes of not more than twelve surgical cases in the hospital during the preceding twelve months. Sir H. W. Acland's Clinical Prize in Medicine (value £5) for the best record of not more than twelve cases of disease in the hospital during the preceding twelve months. (The Clinical Prizes are open to fourth year's students. Reports must be sent in on or before May 1st). The Henry Charles Johnson Memorial Prize (value £10 10s.) for Practical Anatomy. The Pollock Prize in Physiology (value £18 12s. 6d.). These two prizes are for second year's students. General Proficiency Prizes, £10 10s., for students of each year: first year, Elementary Anatomy and Materia Medica, Elementary Physiology and Chemistry; second year, Anatomy, Physiology, including Histology, and Physiological Chemistry; third year, Medicine, Surgery, Pathology, and Midwifery.

The Medical Society meets once a week at the hospital during the winter session.

Residence of Students.—Dr. Delépine, 6, Chapel Place, Cavendish Square, receives pupils to reside with him, and superintends their professional education. The Dean has a list of medical gentlemen living in the neighbourhood, who receive pupils to reside in their families.

Further Information may be obtained from Dr. Wadham, the Dean of the School; from any of the Lecturers; or from Mr. F. J. Marshall, the Resident Medical Officer at the Hospital.

GUY'S HOSPITAL.—*The Hospital* contains 695 beds. There are 50 beds for Ophthalmic and 26 for Obstetric cases. Children are received into the female wards. Detached wards, containing forty patients, are set apart for the purpose of instruction in Clinical Medicine.

Museums, etc.—The Museums of Human Anatomy, Comparative Anatomy (above 2,000 specimens), Pathological Anatomy (above 5,000 specimens), and Materia Medica, are open to the students. The Library is open to the students daily from 9.30 A.M. to 5.30 P.M., except on Saturdays, when it is closed at 4 P.M.

Special Courses.—The Dissecting-room is open from the beginning of September to the end of July. Students are allowed to visit Bethlem Hospital on fixed days in the summer; and gentlemen can enter as extern students for three months by arrangement with Dr Savage. A course of Lectures on Experimental Physics is given by Mr. Reinold at 12 on Mondays and Wednesdays during the winter session.—Mr. Symonds gives a course of practical demonstrations in Morbid Histology two days in the week. Dr. G. N. Pitt gives instruction in Practical Medicine throughout the year. Mr. Clement Lucas gives a course of demonstrations of Practical Surgery (including Minor Surgery and Surgical Pathology) in the winter; and in summer a course of Operative Surgery, at 4 P.M. on Mondays, Wednesdays, and Fridays.—Mr. Jacobson will hold a surgical class daily before each pass examination of the Royal College of Surgeons.—Ophthalmic out-patients are seen at 1.30 by Mr. Higgens on Tuesdays, and on Tuesdays and Fridays by Dr. Brailey; in-patients at 1.30 P.M. on Fridays by Mr. Higgens, and on Tuesdays and Fridays by Dr. Brailey.—Dr. Horrocks gives courses of practical instruction in Obstetrics.—Mr. Symonds sees patients in the Throat Department at 1 P.M. on Thursdays.

Addison Lectures.—These lectures are to be delivered annually by a member of the Consulting Staff. They will be commenced in 1887, by Sir William Gull, who will give three lectures, on Pathology, Diagnosis, and Treatment, at 5 P.M., on June 2nd, 9th, and 16th.

Appointments.—All appointments are given according to the respective merits of the candidates. There are appointed annually House-Physicians, House-Surgeons, Surgeons' Dressers, and Medical Clinical Clerks, for six months; Dressers in the Eye Wards, for four months; Clinical Assistants, Assistant-Physicians' Clerks, Assistant-Surgeons' Dressers, Dressers in the Surgery, Obstetric Ward Clerks, Surgical Clinical Clerks, Assistant-Surgeons' Clerks, for three months; Obstetric Residents, *Post Mortem* Clerks, Dental Surgeons' Dressers, Aural Surgeons' Dressers, for two months; Obstetric Out-Patient Clerks, six weeks; Extern Obstetric Attendants, one month; also Clerks in the Room for applying Electricity. A special honorary certificate is given to every gentleman who has diligently performed the duties of not less than three of the various offices; and special certificates are given to those who have attended one hundred cases of midwifery.

Scholarships and Prizes.—Two Entrance Scholarships, each 125 guineas, to be competed for on September 27th, 28th, and 29th: one in Arts,[3] and one in Science.[4] Candidates must be under twenty-five years of age, and must not compete for both Scholarships. Notice must be given to the Dean before September 24th. The successful candidates must enter at the Hospital in the October immediately following. *First Year*: At the end of the summer session, two prizes of £50 and £25; subjects, Anatomy of Bones, Ligaments, and Muscles, Physiology, Materia Medica, and Chemistry (including Practical Chemistry). *Second Year*: At end of the summer session, prizes of £25 and £10; subjects, Anatomy and Physiology (including Practical Physiology). At end of the winter session, the Michael Harris Prize of £10 for Human Anatomy (including Minute Anatomy); the Sands Cox Scholarship (every third year, next in 1889), value £15, tenable for three years; subjects, Physiology (including Physiological Physics), Histology, and Physiological Chemistry. *Third Year*: At end of the summer session, two prizes of £25 and £10; subjects, Medical Anatomy and Methods of Diagnosis, Surgical Anatomy and Diagnosis, Operative and Minor Surgery, Midwifery, and Therapeutics. *Fourth Year*: At end of the summer session, two prizes of £25 and £10, in Medicine, Surgery, Diseases of Women, and Medical Jurisprudence. *Fourth and Fifth Years*: Treasurer's Gold Medals in Clinical Medicine and Clinical Surgery; Gurney Hoare Prize of £25, for best reports of three Medical and three Surgical cases, with commentaries; Beaney Prize of 30 guineas in Pathology. *Fourth, Fifth, and Sixth Years*: Mackenzie Bacon Prize, value £10 10s., for proficiency in Medical Ophthalmoscopy; Mackenzie Bacon Prize, value £15, for Nervous

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[2] Subjects: Latin, Cæsar, *De Bello Gallico*; Horace, *Odes*, Books iii and iv. French, Molière, *Le Malade Imaginaire*, Voltaire, *Charles XII.* German, Schiller, *Geschichte des Abfalls der Niederlande*; Heine, *Buch der Lieder*. The examination in Elementary Physics will include Mechanics, Hydrostatics, Light, Heat, and Electricity.

[3] The subjects are—Latin: Livy, Book xxii. Greek: Xenophon, Euripides, *Hercules Furens*. French. German. Euclid, the first four Books; Algebra to Quadratic Equations; Arithmetic. Candidates may choose Greek or German, but will not be allowed marks in more than one of these subjects.

[4] The subjects are: Inorganic Chemistry; Zoology; Botany; Physics, including general properties of solid, liquid, and gaseous bodies; Acoustics, Heat, Magnetism, Electricity, and Optics. There will be a practical examination in Chemistry, and specimens will be given with the papers in Botany and Zoology.

Diseases. Honorary certificates are given to those candidates who pass creditable examinations.

The Registrars and the Demonstrators of Anatomy and Chemistry assist the pupils in their studies. Classes for the preparation of candidates for the Examinations of the University of London are held.

The Pupils' Physical Society meets on alternate Thursdays at 7.30 P.M. A prize of £5 is given for the best essay on a selected subject; £10 is divided between two other prizes for the best papers read. The Treasurer gives a prize of £5 for Clinical Research.

Several of the Lecturers have vacancies for Resident Private Pupils.

Information may be obtained from the Dean, Dr. F. Taylor, at the hospital.

KING'S COLLEGE AND HOSPITAL.—*The Hospital* contains 170 beds in use.

The Museums of Anatomy, Materia Medica, Natural History, etc., are open daily from 10 till 4. *The Medical Library* is open daily from 10 till 5.

Special Courses.—Clinical Instruction is given daily by the Physicians and Surgeons; and Special Demonstrations in Operative Surgery, Minor Surgery and Bandaging, and Surgical Pathology, by the out-patient Surgeons and Assistant-Surgeons. Instruction is given in the Diseases of Women and Children; and in Throat-Diseases (with Laryngoscopic Demonstrations), by Dr. Tirard, every Wednesday, at 2 Demonstrations and Practical Instruction in Morbid Anatomy are given in the *Post Mortem* Theatre. Special Instruction is given in Medical Chemistry and the Microscope by the Physicians. A course of Osteology is given at 2 P.M. on Mondays and Fridays in the summer. Lectures on Natural Philosophy are given in the summer, at 2 P.M. on Tuesdays.

Appointments.—Resident Medical Officers, Clinical Clerks, and Dressers are chosen by examination from matriculated students, who are pupils at the hospital.

Scholarships and Prizes.—Two Warneford Scholarships, for the encouragement of previous education,[5] each £25 *per annum*, for three years; and one Warneford Scholarship of £25 *per annum* at the close of the winter session, for two years, for third year matriculated students. Medical Scholarships given yearly to matriculated students—one of £40 for two years, open to students of the third and fourth year; one of £30 for one year, to students of the second and third year; three of £20 for one year, to students of the first year. Daniell Scholarship, open to students who have worked in the laboratory six months, £20 *per annum*, for two years. Two Sambrooke Registrarships, of the annual value of £50 each, open to matriculated students who have filled any of the higher appointments at the hospital. Two Sambrooke Exhibitions, one £60 and one £40, open to all matriculated students at the commencement of their course of study; subjects of examinations, Mathematics, Elementary Physics, Inorganic Chemistry, Botany, and Biology. Rabbeth Scholarship, value £20, in July, for best evidence of early scientific training. Two Science Exhibitions, given by the Clothworkers' Company, one of £50 and one of £25 *per annum*, each tenable two years, for proficiency in any four of the following subjects: Mathematics, Mechanics, Physics, Chemistry, Botany, Geology, Mineralogy, and Zoology; open to all candidates under 19 on October 1st, 1886. Inglis Scholarships: two annually, £50 each, for proficiency in Modern History and English Literature. Leathes' Prizes: Interest of £300 applied in purchase of a Bible and Prayer-Book, as annual prizes to two matriculated medical students. Warneford Prizes: £40 in medals and books, to two matriculated medical students. Class Prizes: Books of the value of £3, and certificates of honour, are awarded annually for proficiency in each of the several subjects taught in the classes. Two Medical Clinical Prizes, one of £3 for the winter session, and the other of £2 for the summer session; and two Surgical Clinical Prizes of £3 each for the winter session. Todd Medical Clinical Prize: Bronze Medal and Books, value £4 4s. Jelf Medal, to the candidate at the senior scholarship examination who is second in order of merit. Tanner Prize, value £10, for proficiency in Diseases of Women and Children, and in Obstetrics. Carter Prize: Gold Medal and Books, value £15, for proficiency in Botany. The Carter (English Original Verse), Stephen (English Essay), Trench (Greek Testament), and McCaul (Hebrew) Prizes are open to students of the medical department.

Medical Tutors are appointed to assist, by instruction and examination, all students in the subjects of all examinations.

Associate of King's College.—At the end of each winter session, the professors recommend to the Council the names of medical students to be elected associates.

Residence.—Rooms are provided within the College for a limited number of matriculated students under the supervision of the Censor The cost of the academical year varies from £50 to £60.

The Medical Society meets on Thursdays, at 8.30 P.M.

Information.—The Dean of the Medical Department, Professor Curnow, attends daily (Saturday excepted), at King's College, from 11.30 A.M. to 1 P.M., for the purpose of seeing students and their friends. Any letter addressed to the Dean during the vacation will receive early attention.

LONDON HOSPITAL.—The *Hospital* contains 786 beds, approximately thus allotted: Accidents and Surgical cases, 343; Medical cases, 290; Diseases of Women, 26; Children under seven years of age, 70; Ophthalmic cases, 12; Erysipelas and Isolation Cases, 45.

Museum, etc.—The Anatomical and Pathological Museum, the Materia Medica Museum, and the Library are open daily.

Special Courses.—Mr. Jonathan Hutchinson will give in the winter and summer sessions courses of six lectures on Clinical Surgery. Students desirous of obtaining a practical knowledge of Mental Diseases can attend, without additional fee, the practice of Mr. Millar, at the Bethnal House Asylum, every Wednesday from 10 to 12. Mr. T. Mark Hovell will give a course of lectures in the summer on Diseases of the Throat. Mr. H. A. Reeves gives a course of Practical Surgery (bandaging, etc.), and Mr. Rivington a course of Operative Surgery, in the summer session. Dr. Herman gives a clinical lecture on Diseases of Women and Children twice a month during the winter. Mr. T. Mark Hovell is Junior Surgeon to the Aural department. Mr. F. J. M. Page gives a course of Experimental Physics at 10.30 on Thursday and Saturday, in January, February, and March. Mr. McCarthy gives instruction to first year's students in Practical Histology, at 9.15 A.M. on Tuesday and Thursday in the summer. Dr. Hewitt gives instruction in the Administration of Anæsthetics.

Appointments.—Five House-Physicians, five House-Surgeons, and a Resident Accoucheur, are appointed every six months, renewable for two further periods of three months each. They must possess a degree or diploma. Clinical Clerks, Surgical Dressers, and Clinical Obstetric Clerks are appointed for three months. They must have passed the primary examination of the College of Surgeons, or an equivalent examination. Every student must act as Clinical Clerk for six weeks in the medical out-patient department, after passing the first College of Surgeons examination. Maternity pupils must have passed the primary examination of the College of Surgeons, or an equivalent examination. Two reside in the hospital every week. Each student must attend at least twenty cases of Midwifery; those who have attended one hundred are entitled to a special certificate. Four Dressers reside and board in the hospital every week. Every student must act as Dresser in the Surgical out-patient department for at least three months after the end of the first winter session. Three Clinical Assistants are appointed every three months for the Medical out-patients, and are eligible for re-election. Each receives a salary at the rate of £80 *per annum*. An unpaid Clinical Assistant is appointed in the Ophthalmic department. A Medical Registrar and a Surgical Registrar are appointed annually; each receives £100. An Instructor in Anæsthetics is appointed annually, and receives £50. Every student must act as *Post mortem* Clerk for three months. A Dental Assistant, Prosectors of Anatomy, and Dressers in the Ophthalmic and Aural departments, are also appointed. Full pupils, and those who, having commenced elsewhere, pay the general fee to the hospital and college, at or before the beginning of the second winter, are eligible for appointments. The holders of resident appointments are provided with rooms and board.

Scholarships and Prizes.—Nine scholarships will be offered for competition. 1 and 2. Two Entrance Scholarships, value £60 and £40; examination on September 20th, 21st, and 22nd; subjects: Physics, Botany, Zoology, and Inorganic Chemistry. Successful candidates must forthwith become pupils of the hospital and school. 3 and 4. Two Buxton Scholarships, value £30 and £20, open to full students of less than six months' standing; examination on September 27th, 28th, and

[5] Candidates for these Scholarships must be matriculated students of the Medical Department, and perpetual pupils of the Hospital, commencing their first winter session. The examination will be in the following subjects. 1. Divinity: The Books of Numbers and Deuteronomy; the Gospel according to St. Mark; The Church Catechism. 2. English Language and Literature: Shakespeare, *Coriolanus*. 3. History—The History of England from 1603 to 1642. 4. Latin: Livy, Book xxii. 5. Greek: Euripides, *Hercules Furens*. 6. French: Molière, *L'Avare*. 7. German: Schiller, *Jungfrau von Orleans*. 8. Mathematics: Arithmetic, the ordinary rules, with Vulgar and Decimal Fractions; Algebra, as far as and including Quadratic Equations; Euclid, Book I, Book II (except props. 8, 9, 10), Book III. Candidates may omit any subject except Divinity. Names of candidates must be sent to the Secretary before 2 P.M. on September 27th, and the examination will be held on September 28th, 29th, and 30th, and October 1st.

29th.[1] 5. A Scholarship at the end of the summer session, value £20, to a first year's student; subjects: Human Anatomy and Physiology. 6. A Scholarship, value £25, to a first or second year's student, at the end of the winter session; subjects: Anatomy, Physiology, and Chemistry. 7, 8, 9. Hospital Scholarships, value each £20, for proficiency and zeal in Clinical Medicine, Surgery, and Obstetrics. The Letheby Prize, value £30, for Chemistry; open to all full students from the end of the second summer session to the end of the fourth year. The Duckworth Nelson Prize, value £10, awarded biennially, at the end of the winter session; subjects: Practical Medicine and Surgery. For the Hospital Scholarships and the Duckworth Nelson Prize, full students of the Hospital are eligible up to the end of their fourth year, with or without a diploma; qualified officers of the Hospital are not eligible. The Hutchinson Prize, value £35, awarded triennially to the author of the best essay on a subject in Clinical Surgery; open to full students of the Hospital who have not been registered as medical students more than ten years. Six prizes, of the aggregate value of £60, by competition among the Dressers in the out-patient rooms. Two prizes, value £6 and £4, for Dissections, for full students up to the end of the fourth year. Special certificates to those gentlemen who have faithfully performed their duties in the Hospital, and to those who have distinguished themselves at the examinations.

Special attention is paid to the preparation of students for the examinations of the Colleges of Physicians and Surgeons, the Apothecaries' Hall, and the University of London.

The Medical Society meets for the reading and discussion of papers at 7.30 P.M. on alternate Wednesdays during the winter session.

Residence.—Students wishing to reside with a member of the medical profession, within easy access to the Hospital, can obtain information by application to the Warden. Several members of the Hospital staff receive resident pupils. A list of approved lodgings is kept by the Warden. A Refreshment Room has been provided in the buildings, where luncheons or dinners can be obtained.

Information may be obtained from the Warden, Mr. Munro Scott, at the College.

ST. MARY'S HOSPITAL.—*The Hospital* contains 270 beds; 130 Medical, and 140 Surgical. Two wards are appropriated to Diseases of Children, and one to those of Women; there are also beds for Ophthalmic, Aural, Cutaneous, and Dental cases.

The Reading Rooms and Library are open daily. The *Museum* is open daily to students. It contains about 3,000 specimens of healthy and morbid anatomy. There are also a Materia Medica Department and a collection of specimens illustrative of Comparative Anatomy. There are a Physiological and a Chemical Laboratory. A new Pathological Laboratory will be open in October.

Special Courses.—Clinical Lectures on special selected subjects are given by the Physicians and Surgeons, at 4 P.M. on Fridays, in the winter and summer sessions. Medical Practitioners are invited to attend these lectures. Clinical Demonstrations on Diseases of the Skin and of the Throat are given. The students are carefully trained to the use of the Microscope. Dr. Alder Wright gives a course of Physics at 10 A.M. on Saturdays. Dr. de Watteville gives Instruction in the Practical Application of Electricity. Mr. Pepper gives a course of Operative and Practical Surgery at 5 on Tuesdays and Thursdays during the winter.

Appointments.—Four Resident Medical Officers are appointed for twelve months, and an Obstetric Officer for six months; all live free of expense in the hospital. All students must act as clinical clerks and dressers for eight months after passing the Primary Examinations, and after having acted as dressers two months in the Casualty Department, and one month as Assistants in the Electrical Department. A Demonstrator of Anatomy is appointed at a salary of £70, and a junior demonstrator at £50 a year. Two Prosectors are appointed annually; each receives a certificate and £5. A Demonstratorship in Pathological Anatomy, value £15, tenable for six months, is given after competitive examination in Pathology and Morbid Anatomy.

Scholarships and Prizes.—One Scholarship in Natural Science, value £105, and three of the value of £50 each; subjects, Inorganic Chemistry, Experimental Physics, and Elementary Biology. There will be a practical examination in each subject. The examination will take place on September 22nd and following days. The candidates must not have completed a winter session of study at a medical school in London. The successful candidates must enter as perpetual pupils of the hospital, and pursue the full course of study there. A scholarship of £105, open for competition to students of Epsom College, who are sons of medical men. Two scholarships, each of £52 10s., open to students from an University, who have not entered at any London Medical School. Three scholarships, value £20, £25, and £30, one at end of each year, after examination in class subjects. *First Year:* Winter Session: Prizes of £3 3s. each in Anatomy and Histology, and in Chemistry. Summer Session: Prizes, value £2 2s. each, in Comparative Anatomy, Materia Medica, Botany, and Inorganic Practical Chemistry. *Second Year:* Winter: Prizes of £3 3s. each for Anatomy and General Physiology. Summer: Prizes, value £2 2s. each, for Midwifery and Medical Jurisprudence. *Third Year:* Winter: Prizes of £3 3s. each for Medicine, Surgery, Pathology, and Operative Surgery. At end of each year, prizes of £5 5s. each for Clinical Medicine and Clinical Surgery. A prize of £10 10s. in Ophthalmology.

Tutorial Classes are held by Dr. Phillips, Mr. Pye, and Dr. M. Handfield-Jones, to assist students in preparing for their final examinations.

Special Classes are held for the Preliminary Scientific Intermediate M.B., and final M.B. Examinations of the University of London, and for the Examinations for the Fellowship of the Royal College of Surgeons.

The Medical Society meets on alternate Wednesday evenings, during the winter session, at 8 P.M.

Residence for Students.—Students may reside in the College under the supervision of the Warden, Dr. R. Maguire. Terms, £94 10s. for the academical year, including the assistance of the demonstrators on three evenings in the week.

A Students' Club has been founded. The rooms (in the basement of the "Mary Stanford" wing) comprise a library, reading-room, and dining-rooms. The annual subscription is 7s. 6d.

Further Information may be obtained from Mr. G. P. Field, Dean of the School; from the Subdean, Dr. Sidney Phillips; from any of the lecturers; or from the Medical Superintendent, Mr. Walter Pearce at the Hospital.

MIDDLESEX HOSPITAL.—*The Hospital* contains upwards of 300 beds, of which 185 are devoted to Surgical and 120 to Medical cases. There are 33 beds for cases of Cancer; also wards for cases of Uterine Disease and of Syphilis, and beds for cases of Diseases of the Eye.

The Museum is open to students daily from 9 to 5. It contains above 5,000 specimens.—*The Library and Reading-Room* are open to all general students from 9 to 5; on Saturday, from 9 to 2.

Special Subjects.—A course of Practical Medicine and Therapeutics is given in the winter by Dr. Coupland and Dr. Douglas Powell on Monday, Wednesday, and Friday, at 10 A.M. Dr. Douglas Powell also gives a short course of lectures on Therapeutics in the summer, at 3 P.M. on Mondays and Thursdays. Mr. Morris sees out-patient cancer cases at 1.30 on Thursdays. Practical Instruction in Mental Diseases is given at the Leavesden Asylum. A class of Practical Surgery is held in the winter session. Mr. Andrew Clark will also commence a class of Practical Instruction in Operative Surgery in April. Each student will personally perform all the operations. Dr. W. A. Duncan gives a course of Practical Midwifery in the winter. Instruction in the administration of Anæsthetics is given every Wednesday and Saturday by Mr. G. E. Norton and Mr. Davis. Dr. Pringle gives instruction in the practical application of Electricity. In connection with the class of Pathological Anatomy, a practical class of Pathological Histology is formed in the winter and summer sessions, under the direction of Mr. C. L. Hudson.

Appointments, etc.—Fourteen Resident Appointments are open annually to competition among pupils of the hospital. The officers reside and board in the hospital free of expense. Six House-Surgeons are appointed every year after examination. The Senior House-Surgeon must have a legal qualification. The Junior House-Surgeon is eligible for appointment as Senior House-Surgeon if he have performed his duties satisfactorily. Six Resident Physicians' Assistants are appointed from time to time for six months. They must have a legal qualification, or hold a Broderip Scholarship. A Resident Obstetric Physician's Assistant (qualified to practise) is appointed for six months. Each of the above mentioned resident officers pays £10 10s. on appointment. Non-Resident Physicians' Assistants are appointed in the out-patient department. Clinical Clerks and Dressers are appointed for six months. An Obstetric Physician's Clerk is appointed. In the out-patient department, the appointments are: Dresser to the Assistant Surgeon and to the Dental Surgeon; Clerk

[1] The Subjects are: 1. The English Language and Literature, inclusive of writing from dictation, the English Grammar, and the Composition of a short Essay; 2. Arithmetic, including the first four rules, simple and compound, Vulgar Fractions, and Decimals; 3. Algebra to Simple Equations inclusive; 4. The first four Books of Euclid; 5. Latin: Sallust, *Catalina*, and Horace's *Odes*, Book 1. And one of the following optional subjects: Greek: Homer's *Iliad*, Book 1. 2. French: X. B. Saintine's [illegible]. 3. German: Schiller's *Wilhelm Tell*. 4. Natural Philosophy, including Mechanics, Hydrostatics, and Pneumonics. *Books*: the translation into English [illegible] will be required to ensure correctness in the Grammar of the original, [illegible] supervision of a friend.

and Assistant Physician; Dresser to Ophthalmic Surgeon; Clerk to the Physician of the Skin Department, to the Assistant Obstetric Physician, and to the Surgeon to the Throat and Ear Department. There are also extern and Midwifery Clerks, and *Post Mortem* Clerks. The appointments are so arranged that every student may take both a clerkship and a dressership. Each student must be an out-patient clerk or an out-patient dresser, before being eligible to an in-patient clerkship or dressership. No student can be appointed to any office until he has passed the second examination of the Examining Board in England, or its equivalent.

Scholarships and Prizes.—Two Entrance Scholarships, value £50 and £30, tenable for two years,[6] open to all gentlemen commencing their medical studies at the Hospital in October 1886. The successful candidates must become general pupils of the school. Examination on September 30th and following days. Candidates must send in their names to the Dean, stating the subjects they select, on or before September 18th. John Murray Scholarship and Gold Medal open to competition, in May 1889, among students in actual attendance who have entered since April 30th, 1885. Subjects: Medicine, Surgery, and Obstetrics. Hetley Clinical Prize, value £25, at end of summer session, to students who have completed the third and not commenced the fourth winter session: *viva voce* examination in Medicine, Surgery, and Obstetric Medicine. Lyell Medal, value £5 5s., at end of second winter, for proficiency in Surgical Anatomy and Practical Surgery. Exhibition, value £10 10s., at end of first winter session. Subjects: Elementary Anatomy and Physiology. Two Broderip Scholarships, value £30 and £20, tenable for two years, to students who have completed the fourth year, for reports or comments on selected medical and surgical cases. The Governor's Prize, value £21, to the student who, at the end of the third winter session, shall have been out-patient clerk and dresser, and shall pass the best examination in the subjects of the out-patient department. Prizes and Certificates of Honour are given in each class.

Tutors.—Mr. Pearce Gould and the Demonstrators assist all general students of the Hospital, especially those who are preparing for primary examination before the Licensing Boards. Special classes are held for the Preliminary Scientific Examination of the University of London.

The Preliminary Scientific M.B. Examination.—Arrangements have been made by which candidates for this examination can attend the Lectures and Practical Instruction in Biology, and a portion of the ordinary courses in Physics and Chemistry, at the Normal School of Science, South Kensington.

The Students' Medical Society meets in the Board Room of the Hospital on alternate Thursdays at 8 P.M. during the Winter Session. Prizes are given to the reader of the best paper, to the exhibitor of the best histological specimens, and to the exhibitor of the best pathological specimens.

Information may be obtained from Mr. Andrew Clark, the Dean; from Dr. Cayley, Treasurer of the College; from any of the Lecturers; or from the Resident Medical Officer at the Hospital.

ST. THOMAS'S HOSPITAL.—*The Hospital* contains 572 beds, of which about 180 are appropriated to ordinary Medical, and 230 to ordinary Surgical cases. There are also special wards for Diseases of Women, Diseases of the Eye, Venereal Affections, Children under six years of age, and (in a separate block) Infectious Diseases.

Museum, etc.—Students have access to the Library, and to the Museums of Human Anatomy, of Comparative Anatomy, of Materia Medica, of Botany, and of Chemistry and Mineralogy, and to the Laboratories of Practical Physiology and Practical Chemistry.

Special Subjects.—A Course of Lectures on Physics and Natural Philosophy is given by Dr. Stone at 12 noon on Saturdays in the winter. Physiological Demonstrations are given at 2 P.M. on Mondays and Thursdays in the winter session; and Demonstrations of Pathological Anatomy at 2 P.M. daily by Dr. Sharkey and Dr. Hadden; and Dr. T. D. Acland gives demonstrations in Morbid Histology. Dr. Cory sees cases of Diseases of Women and Children at 1.30 on Wednesdays and Saturdays. Out-patients with Diseases of the Throat are seen by Dr. Semon at 1.30 on Tuesdays and Fridays. Dr. Semon gives a short course of Clinical Lectures on Throat-Diseases. Mr. McKellar, Mr. Clutton, and Mr. Pitts give instruction in Practical and Manipulative Surgery. Practical instruction in the Administration of Anæsthetics is given by Mr. Tyrrell and Mr. White.

Appointments.—Two resident and one non-resident House-Physicians, an Assistant House-Physician, two House-Surgeons, an Assistant House-Surgeon, and a Resident Accoucheur, are selected from gentlemen who have obtained their professional diplomas; they hold office for three or six months. An Ophthalmic Clinical Assistant, chosen from qualified students, is appointed for six months, with a salary at the rate of £50 *per annum*. The House-Physicians, the House-Surgeons, the Resident Accoucheur, and Dressers and Obstetric Clerks, are provided with rooms and commons. The Ophthalmic Assistant has board, but not residence. Clinical Clerks and Dressers are selected each year, to the number of at least one hundred for in-patients, and eighty to one hundred for out-patients. Clinical Assistants in the departments for Diseases of the Skin, Throat, and Ear, are appointed every three months. Obstetric Clerks are from time to time appointed; also Assistants in the Physiological Laboratory and in the Dissecting-room, Prosectors, and Assistants to the Demonstrator of Pathological Anatomy. All students have the opportunity of being engaged in the performance of practical duties in connection with the Medical, Surgical, Obstetrical, Ophthalmic, and Pathological Departments of the Hospital. Two Hospital Registrars are appointed, at an annual salary of £100.

Scholarships and Prizes.—Two Open Scholarships in Natural Science, value £100 and £60, open to students who have passed a Preliminary Examination in Arts; subjects, Physics, Chemistry, and either Botany or Zoology; examinations on October 4th, 5th, and 6th. Notice must be given not later than September 30th. Successful candidates must become students of the Hospital. The William Tite Scholarship, £30, to the student highest on the first-class list at the examination at the end of the first winter session. The Musgrove Scholarship, value £42 *per annum* for two years, biennially, to the student highest on the first-class list at the end of the second winter session. The Peacock Scholarship, of the same value as the Musgrove Scholarship, and given alternately with it, on the same terms. College Prizes each winter for first and second years' students, of £20 and £10 each winter; and for third year's students, of £20, £15, and £10; and £15 and £10 each of three summers. The Cheselden Medal, annually, to a fourth year's student, for Surgery and Surgical Anatomy. The Mead Medal, annually, to a fourth year's student, after practical examination in Medicine, Pathology, and Hygiene. The Treasurer's Gold Medal, annually, at end of fourth winter session, for general proficiency and good conduct. The Grainger Testimonial Prize, value £20, biennially, to students of from three to six years' standing, for an Anatomical or Physiological Essay, explanatory of preparations and dissections. The Solly Medal, with a Prize in money, every two years, for Reports of Surgical Cases, to a third, fourth, fifth, or sixth year's student.

Residence of Students.—A Register of Lodgings suitable for Students is kept in the Secretary's Office. Information as to terms, accommodation, etc., can be obtained on application. This Register has been especially prepared with a view to the convenience of gentlemen newly arriving in town, without definite arrangements having been made for their accommodation in lodgings or otherwise. Several Medical Practitioners and Private Families, residing in the neighbourhood, receive Students for residence and supervision. There is a Restaurant in the Medical School, where Students can take their meals at moderate charges.

University of London.—Classes in the subjects required for the Preliminary Scientific Examination are held from October to July, and for the Intermediate M.B. Examination from January to July.

The Medical and Physical Society meets on alternate Thursdays, at 8 P.M.

Further information may be obtained from Mr. G. Rendle, the Secretary to the Medical School, at the Hospital.

UNIVERSITY COLLEGE AND HOSPITAL.—*The Hospital* contains 209 beds available for clinical instruction and study. In addition to the Physicians' and Surgeons' wards, there are special wards for Diseases of Women, for Children's Diseases, for Ophthalmic affections, and for Skin-disorders. In connection with the Skin department, there is a complete system of medical baths.

Libraries, Museums, etc.—The General and Medical Libraries, the Museums of Anatomy and Pathology, of Comparative Anatomy, of

[6] The Examination will take place on September 29th and following days. The following are the subjects for examination. Latin: Passages for translation into English; short passages for translation from English into Latin; and questions in Grammar. 1886: Livy, Book xxii. 1887. Virgil, *Georgics*, Book ii, and *Æneid*, Book xii.—Greek: Easy passages for translation into English; questions in Grammar. 1886: Euripides, *Hercules Furens*. 1887. Xenophon, *Anabasis*, Book ii.—French or German: Passages for translation into English; short passages for translation from English into French or German; and questions in Grammar.—Mathematics: Arithmetic; Algebra up to and including Quadratic Equations; and Euclid, Books i, ii, iii.—Mechanics and Experimental Physics.—Chemistry.—Botany.—Zoology.—The general range of subjects in Mechanics and Physics, Chemistry, Botany, and Zoology, will be that for the Preliminary Scientific Examination of the University of London.—Candidates will be examined in any three, and not more, of the above subjects which they may select.

Materia Medica and Chemistry, of Geology, and of Natural Philosophy, are open daily. There are also a Chemical, a Physiological, a Zootomical, and a Hygienic Laboratory, where instruction is given under the superintendence of the Professors.

Practical Instruction.—Dr. Wilson Fox, Holme Professor of Clinical Medicine, delivers Clinical Lectures every Tuesday and Thursday at 2, and trains the pupils in the practical study of disease. Lectures are also given by Dr. Ringer, Dr. Bastian, and Dr. Roberts. Dr. Gowers, Assistant-Professor of Clinical Medicine, gives instruction and demonstration on the Modes of Investigation and Diagnosis of Diseases of the Nervous System; and Dr. Barlow, Assistant-Professor of Clinical Medicine, and Dr. Maudsley, instruct in the Examination of the Lungs and Physical Examination, in the Diagnosis of the Diseases of the Heart and Blood-vessels, and of the Urine. Lectures are given every Monday at 2 by Mr. Christopher Heath, the Holme Professor of Clinical Surgery; once a fortnight, or oftener, by Mr. Beck and Mr. Berkeley Hill. The Holme Professor will hold a Clinical Examination every Friday at 3. Mr. Barker and Mr. Godlee, Assistant-Professors of Clinical Surgery, will hold examinations, and instruct students in the observation and examination of patients. Dr. Poore attends on Thursdays at 1.30 to see patients with throat-diseases, and to give instruction in the use of laryngeal instruments. A class for the study of Practical Gynæcology meets twice a week under the direction of Dr. John Williams. A course of Practical Surgery is given during the winter. It consists of three divisions: 1. The use of Surgical Apparatus, etc., by Mr. Berkeley Hill and Mr. Stonham, on Mondays and Thursdays, at 4, in October, November, and December; 2. Operative Surgery, by Mr. Godlee, during the latter part of the winter session; 3. Demonstrations of Surgical Preparations, by Mr. Barker, on Tuesdays and Fridays, at 9, from October to July. Mr. Godlee also gives, in the summer, a course of Operative Surgery intended for candidates for the public services, for the surgical degrees of the University of London, and the Fellowship of the Royal College of Surgeons. A practical course of instruction in Pathological Anatomy is given in January, February, and March. A practical class for the detection of Poisons is held by Dr. Plimpton, at 11 A.M., on Mondays, Wednesdays, and Fridays, in October. Practical instruction in Hygiene and Public Health is given by Dr. Corfield and Mr. Cassal.

Biological Courses.—Elaborate courses of instruction are given in this College in the class of Physiology, by the Jodrell Professor, Mr. Schäfer, and assistants; and in the class of Comparative Anatomy and Zoology, by Mr. Ray Lankester, Jodrell Professor, and assistants.

Offices.—Eight House-Physicians, six House-Surgeons, four Obstetric Assistants, Out-patient Physicians' and Surgeons' Assistants, Clinical Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants, are selected from among the pupils. The House-Physicians, the House-Surgeons, and the Obstetric Assistants, reside in the hospital, paying for their board.

Scholarships, etc.—Three Entrance Exhibitions, value £100, £60, and £40 *per annum*, to gentlemen who are about to commence their first winter's attendance. Subjects: Chemistry, Physics, and Biology. The examination will take place on September 29th and 30th. Notice of intention to compete must be given on or before September 23rd. The Atkinson-Morley Surgical Scholarship, £45, tenable for three years, for proficiency in Surgery. Atchison Scholarship, about £60 per annum, tenable for two years, for general proficiency. The Sharpey Physiological Scholarship, annual value about £105. The Filliter Exhibition of £30, annually in July, for proficiency in Pathological Anatomy. Dr. Fellowes' Clinical Medals, one Gold and two Silver, at the end of each winter and each summer session. The Liston Gold Medal, with Certificates of Honour, at the end of the winter session, for reports and observations on Surgical Cases in the hospital. The Alexander Bruce Gold Medal, for proficiency in Pathology and Surgery. The Tuke Silver Medal, awarded annually at the discretion of the Professor of Pathological Anatomy. The Cluff Memorial Prize, value about £15, every second year, to the most proficient in Anatomy, Physiology, and Chemistry: next award in 1887. Erichsen Prize, a Surgeon's Operating Case, value £10 10s., awarded yearly in the class of Practical Surgery. Morris Bursary of £25 a year, tenable for two years. Gold and Silver Medals or other Prizes, as well as Certificates of Honour, after competitive examinations in the classes. Prizes to the value of £10 in the class of Hygiene. A prize of Instruments in the class of Dental Surgery.

Private Instruction.—Gentlemen may obtain assistance in their studies within the College, on application to the respective Professors.

The Medical Society meets fortnightly to discuss subjects connected with medicine, and for the exhibition of microscopical specimens.

Residence of Students.—University Hall (Professor Henry Morley, Principal) adjoins the College. Full information as to cost and conditions of residence may be had by application at the office of the College. Several professors and other gentlemen connected with the College receive students to reside with them; and, in the office of the College, there is kept a register of persons unconnected with the College who receive boarders into their families.

Information respecting the College may be obtained from the Dean, Dr. Poore; the Vice-Dean, Mr. Marcus Beck; the Sub-Dean, Mr. Thane; or the Secretary, Mr. Talfourd Ely.

WESTMINSTER HOSPITAL.—*The Hospital* contains upwards of 200 beds. There are separate departments for Diseases of the Eye, Ear, Skin, Teeth, and Throat, for Diseases of Women, and for Orthopædic Practice.

Museums, etc.—The Anatomical Museum is constantly open to the students. A cabinet containing a valuable collection of microscopical preparations, chiefly histological, has been presented to the Museum. There are also a Pathological Museum and a Materia Medica Museum. The Library is open daily from 9 to 5.

Special Subjects.—In addition to the practice of the Hospital, general students may attend, without further fee, the practice at the Royal Westminster Ophthalmic Hospital; and the practice of the National Hospital for Paralysis. Instruction in the physical examination of the Chest is given by the Physicians and Assistant-Physicians, and in the use of the Laryngoscope, at 9 A.M. on Wednesdays, by Dr. De Havilland Hall. Mr. R. Davy gives demonstrations on Orthopædic subjects at 2.30 on Fridays. A course of Practical Surgery is given by Mr. Davy in three divisions: 1. October to December, Surgical Anatomy and Diagnosis and Use of Apparatus; 2. January to March, Examination of Pathological Specimens, the Use of the Ophthalmoscope, Laryngoscope, etc.; 3. May to July, Surgical Instruments; Operations on the Dead Subject. In the summer, Mr. Davy gives a course of Operative Surgery. Mr. Hebbert will give special demonstrations in Anatomy for junior students, at least twice a week in the summer. Dr. Heneage Gibbes will give in the summer a course of Histology, at 1.30 P.M. on Mondays, Wednesdays, and Fridays; and a course of Morbid Histology, at 11 A.M. on Tuesdays and Thursdays. Mr. G. Ogilvie will give a course of lectures on Experimental Physics, commencing in January.

Appointments.—A Curator of the Museum and Pathologist is appointed annually, with a salary of £52 10s.; and a Medical and a Surgical Registrar, each with a salary of £40. Two House-Physicians, a House-Surgeon, and a Resident Obstetric Assistant are appointed for six months, after examination, and are provided with rooms and commons. The Senior House-Physician, who is also Chloroformist, and the Senior House-Surgeon, receive in addition £21 each. The Surgeon's dresser of the day is provided with commons at the hospital table. Clinical Assistants to the Assistant-Physicians and Assistant-Surgeons, and to the officers in charge of special departments, are appointed from students of the fourth year. Every student must perform the duties of out-patient Dresser for three months during the first year; and afterwards hold the office of in-patient Dresser for four months, and Clinical Clerk for three months. No student is eligible as In-patient Dresser or Clinical Clerk until he has passed the Second Examination of the Conjoint Board, or an equivalent examination.

Scholarships and Prizes.—Two Entrance Scholarships, each £40 a year for two years; and two Entrance Scholarships, value £20 each, tenable for two years;[7] also two Entrance Scholarships, value £20 each, tenable for two years, after examination in Chemistry and Experimental Physics. Treasurer's Exhibition in Anatomy, Physiology, and Chemistry, value £10 10s., tenable for one year for first year's men. The President's Scholarship in Anatomy, Histology, and Physiology, value £21, to students of second year (to be styled Assistant-Demonstrator). After end of fourth winter, Prizes of £5 each (books or instruments) in Clinical Medicine and Clinical Surgery.

[7] The next Examination will be held at the Hospital on October 1st and 2nd. The following are the subjects. Latin: 1886, Livy, Book XXII; 1887, Virgil, *Georgics*, Book II, and *Æneid*, Book XII. The paper will contain passages for translation, questions in Grammar, and easy English sentences for translation into Latin. French and German. The papers will contain passages for translation into English, and questions in Grammar. Mathematics: Arithmetic—including Vulgar and Decimal Fractions, and extraction of Square Root. Algebra—Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Proportion, Arithmetical and Geometrical Progression, Simple Equations. Geometry—First Four Books of Euclid, or the subjects thereof. Experimental Physics and Chemistry—The questions in these will be elementary, and in the latter will be confined to the Non-Metallic Elements. The examination is by written papers. Notice of intention to compete, with a statement of the languages in which the candidate wishes to be examined, and a certificate of moral character, must be sent to the Dean not later than September 25th.

Frederic Bird Medal and Prize, value £15, to students who have completed their fourth winter; subjects of examination: Medicine, Midwifery, Diseases of Women and Children, and Pathology. Chadwick Prize for General Proficiency, £21 (books or instruments), to the most meritorious student or students of any year not exceeding the fifth; subjects of examination: Anatomy, Physiology, Histology, Medicine, Surgery, and Midwifery. In most of the Classes, Special Prizes are given by the Lecturers; and Certificates of Honour are awarded in each Class.

Tutors assist and guide the students in their work, and hold Senior and Junior Classes. Students are examined by the Tutors before the examinations of the Colleges at the Apothecaries' Hall.

Students' Club.—Three of the rooms in the new School are devoted to a Club for the students, comprising reading-room, smoking-room, and restaurant. It is managed by a committee of four members of the staff and five students, and all students are eligible for admission. The annual subscription is half a guinea.

Communications respecting the Medical School should be addressed to Dr. De Havilland Hall, the Dean of the School, from whom all particulars may be obtained. Information may also be obtained from any of the Lecturers, or from the Secretary at the Hospital.

London School of Medicine for Women.—The Winter Session will commence on October 1st.

The following courses of Lectures are delivered at this school: Anatomy and Practical Anatomy, by Mr. Stanley Boyd; Physiology and Histology, by Dr. W. D. Halliburton; Chemistry, by Mr. Heaton; Botany, by Dr. P. H. Stokoe; Materia Medica and Therapeutics, by Dr. Sainsbury; Practice of Medicine, by Mrs. Garrett-Anderson, M.D., and Dr. H. Donkin; Midwifery and Diseases of Women, by Dr. Ford Anderson and Dr. Louisa Atkins; Forensic Medicine, by Dr. Dupré and Mr. T. Bond; Surgery, by Mr. A. T. Norton; Ophthalmic Surgery, by Mr. J. Grosvenor Mackinlay; Pathology, by Dr. A. Q. Silcock; Hygiene, by Dr. Sophia Jex-Blake; Mental Pathology, by Dr. W. H. O. Sankey.

The Dissecting-Room, the Physiological Laboratory, the Chemical Laboratory (in summer), the Library, and the Museum of Anatomy, Pathology, and Materia Medica, are open daily.

Clinical Instruction is given at the Royal Free Hospital, which contains 156 beds; 74 for surgical, 64 for medical, 12 for gynæcological, and 6 for ophthalmic cases. *Physicians:* Dr. Cockle and Dr. Samuel West; *Assistant-Physician:* Dr. Sainsbury; *Surgeons:* Mr. Gant and Mr. W. Rose; *Assistant-Surgeon:* Mr. A. B. Barrow; *Physician for Diseases of Women:* Dr. T. C. Hayes; *Ophthalmic Surgeon:* Mr. Grosvenor Mackinlay; *Pathological Demonstrator:* Dr. Sainsbury.

Clinical Lectures are given once a fortnight by each of the four senior members of the staff. Instruction is also given at the Hospital as follows. Practical Pharmacy, by Mr. S. Barber; Pathological Demonstration twice a week, by Dr. Sainsbury; Minor Surgery, ten demonstrations, by Mr. A. B. Barrow; Auscultation and Physical Examination by Dr. Sainsbury. Students are appointed to the posts of Clinical Clerks, Surgical Dressers, and Pathological Registrar without further fee.

Fees.—The fee for the ordinary curriculum of non-clinical Lectures is £80 if paid in one sum, or, if paid in instalments, £40 for the first year, £30 for the second, and £15 for the third. The courses of Lectures included in this fee are as follows: Two courses each of Anatomy, Practical Anatomy, Physiology, and Practice of Medicine, and one course each of Practical Physiology, Chemistry, Practical Chemistry, Materia Medica, Surgery, Pathology, Midwifery, Diseases of Women and Forensic Medicine. Any student having paid the above compounding fees, on a further payment of £6 6s., may attend additional courses of the classes mentioned above. Materials for the practical classes will be charged extra when additional courses are taken. Practical Pharmacy costs £3 3s. extra. The fees for the courses are: Anatomy, Practical Anatomy, Physiology, Chemistry, Medicine, Surgery, and Midwifery, one course of each, £8 8s; Practical Chemistry, Botany, Materia Medica, Forensic Medicine, Pathology, each £5 5s.; Ophthalmic Surgery, Mental Pathology and Hygiene, each £2 2s. Students who do not hold a perpetual ticket, and who have attended regularly, can repeat any course on payment of £2 2s. for each course. Materials for the practical classes will, in such cases, be charged according to a fixed scale. Practical Midwifery, £3 3s. for one month; £12 12s. to £26 5s. for six months; and Vaccination, £1 1s. The fee for four years' Clinical instruction at the Royal Free Hospital is £45 in one sum, or £20 the first year, £15 the second, and £15 the third year; the fourth year is free. The Fee for attendance at the London Fever Hospital for three months is £3 3s.

Scholarships and Prizes.—1. An Entrance Scholarship, value £30, is offered for competition at the end of September in each year. Candidates must have passed a Preliminary Examination in Arts, and the successful candidate must enter on a full course of medical study at the School.[a] 2. The John Byron Scholarship, value £25 a year for four years, is offered to ladies requiring assistance for the prosecution of their medical studies. The next award will probably be in 1889. 3. Scholarships are offered from time to time by the National Association for the Promotion of the Medical Education of Women, and by the Birmingham Ladies' Association. 4. The Zenana Medical Mission Society assists ladies who wish to go to India as missionaries. 5. Income of the Helen Prideaux Memorial Fund, as a prize every second or third year. 6. Prizes and Certificates of Honour are awarded in each Class at the end of the Session.

Besides the above, students and practitioners are admitted to attend the practice of several of the general and special hospitals and infirmaries. Information may be obtained on application to the secretaries of the respective institutions.

NOTES CONCERNING THE PROVINCIAL HOSPITALS AND MEDICAL SCHOOLS.

University of Cambridge.—The following Lectures and Courses of Practical Instruction in the subjects of the Examinations for Medical and Surgical Degrees will be given during the ensuing year. The courses are given at the New Museums and University Laboratories, unless another place is mentioned.

Michaelmas Term, 1886.—Chemistry and Other Branches of Physics: Elementary: Professor Liveing, Chemistry for First M. B. Examination, T. Th. S., 12; Dr. Ruhemann, Organic Chemistry, M. W. F., 1; Mr. Main (St. John's), Revision Course for First M. B. Examination, T. Th. S., 10; Mr. Muir (Caius Laboratory), Principles of Chemistry (non-metals), M. W. F., 10; Mr. Heycock (King's), General Principles of Chemistry (non-metals) for Natural Sciences Tripos Part I, M. W. F., 10; Mr. Lewis (Downing), Organic Chemistry, T. Th. S., 9; Mr. Glazebrook, Statics and Hydrostatics for First M.B., M. W. F., 12; Mr. Shaw, Physics for Natural Sciences Tripos Part I, M. W. F., 9; Mr. Hart (St. John's), Mechanics and Heat for First M. B. Examination, T. Th. S., 11; Mr. Hart (St. John's), Electricity for Natural Sciences Tripos Part I, T. Th., 12½. Advanced: Professor Liveing, General Principles of Chemistry, T. Th. S., 1½; Professor Dewar, Dissociation and Thermal Chemistry, M. W. F., 12; Mr. Main (St. John's), Thermo-chemistry, M. W. F., 10; Mr. Muir (Caius Laboratory), General Principles of Chemistry, T. Th. S., 10; Mr. Glazebrook (Trinity), Physics, S., 9; Mr. Shaw (Emmanuel), Physics, T. Th., 9. Practical Work and Demonstrations: Mr. Sell and Mr. Fenton, Chemistry with explanatory Lectures for First M.B., M. W. F., 9¾ and 11¼; Chemistry with explanatory Lectures for Natural Sciences Tripos Part I, T. Th. S., 9¼ and 11¼; Mr. Robinson, Analysis of Food and Water, M. W. F., 11; Mr. Neville (Sidney Laboratory), Chemistry for First M.B. Examination, M. W. F., 10; Mr. Lewis (Downing), Chemistry for First M.B. Examination, M. W. F., 2; Mr. Glazebrook and Mr. Shaw, Mechanics and Heat (elementary), M. W. F., 10 and 3, Heat (advanced), M. W. F., 10 to 12; Electricity and Magnetism (advanced), T. Th. S., 10 to 12.—Biology: Elementary: Mr. Sedgwick, Animal Morphology *(Invertebrata)*, M. W. F., 9; Mr. Vines, General Course of Botany, M. W. F., 10. Advanced: Professor Newton, Evolution in the Animal Kingdom, M. W. F., 1; Mr. Harmer, Invertebrate Morphology, T. Th. S., 11; Mr. Gadow, Morphology of Ichthyopsida, M. W. F., 10; Mr. Gadow, Autogenetic Development of Man, T. Th. S., 10; Mr. Vines, Physiology of Plants, T. Th. S., 12; Mr. Potter, Geographical Distribution of Plants, M. F., 12.—Pharmacy, and Anatomy and Physiology: Professor Latham (Downing), Pharmacy and Pharmaceutical Chemistry, M. W. F., 9; Professor Macalister, Elementary Human Anatomy, T. Th. S., 1; Professor Macalister, Demonstrations in Topographical Anatomy, M. W. F., 12; Professor Foster, Elementary Physiology, T. Th. S., 9; Mr. Langley, Advanced Physiology and Histology, T. Th., 9 and 2; Mr. Langley, Physiology for Natural Sciences Tripos Part II, S., 9; Mr. Lea, Chemical Physiology, W. F., 11; Dr. Hill, Central Nervous System, T. S., 12.—Medicine and Surgery: Professor Roy, General Pathology, M. W. F., 9; Professor Roy and Mr. Griffiths, Practical Course in Morbid Anatomy and Histology, T. Th. 2 to 4; Professor Roy and Mr. Griffiths (Hospital), Demonstra-

[a] The subjects of examination are: 1, English; 2, Latin—Sallust's *Catiline*; 3, Arithmetic; 4, Elements of Mathematics; 5, Elementary Physics.

tions in Morbid Anatomy, occasionally, at 10; Professor Latham (Hospital), Demonstrations in Practical Therapeutics, M. W. and alternate F., 10; Professor Humphry, Surgery, T. Th. S., 12; Professor Humphry, Surgical Anatomy, M. W. F., 9; Mr. Wherry, Practical Surgery, T. Th. S., 9; Dr. MacAlister, Principles of Medicine, T. Th. S., 9; Dr. Anningson, Demonstrations in Practical Hygiene, W.; The Physicians (Hospital), Clinical Medicine, daily 10, and T. Th. S., 11; the Surgeons (Hospital), Clinical Surgery, daily 11, and T. Th. S., 10.

Lent Term, 1887.—Chemistry and other Branches of Physics: Elementary: Professor Liveing, Chemistry for First M.B. Examination (continued), T. Th. S., 12; Dr. Ruhemann, Analysis and Principles of Organic Chemistry, M. W. F., 1; Mr. Main (St. John's), General Course of Chemistry, M. W. F., 10; Mr. Muir (Caius Laboratory), Principles of Chemistry, M. W. F., 10; Mr. Neville (Sidney), Chemistry for First M.B. Examination, M. W. F., 9; Mr. Heycock (King's), Chemical Philosophy for Natural Sciences Tripos Part I, M. W. F., 1; Mr. Lewis (Downing), Chemistry for First M.B. Examination; Mr. Glazebrook, Physics for First M.B. Examination, M. W. F., 12; Mr. Shaw, Physics for Natural Sciences Tripos Part I (continued), M. W. F., 9; Mr. Shaw (Emmanuel), Physics for First M. B. Examination, T. Th. S., 12; Mr. Hart (St. John's), Light and Electricity for First M.B. Examination, T., Th. S., 11; Mr. Hart (St. John's), Electricity (continued), T. Th., 12½; Mr. Atkinson (Trinity Hall), Experimental Course in Heat, M. W. F., 10. Advanced: Professor Liveing, Spectroscopic Chemistry, T., 1½; Professor Dewar, Organic Chemistry, M. W. F., 12; Mr. Muir (Caius Laboratory), General Principles of Chemistry (continued), M. W. F., 10; Mr. Glazebrook (Trinity), Physics (continued), S., 9; Mr. Shaw (Emmanuel), Physics (continued), T. Th., 9; Practical Work and Demonstrations: Professor Liveing, Spectroscopic Chemistry, Th. S., 1½; Mr. Sell and Mr. Fenton, Chemistry with explanatory Lectures for First M.B., T. Th. S, 9¼ and 11¼, Chemistry with explanatory Lectures for first M.B., M. W. F., 9¼ and 11¼; for Natural Sciences Tripos Part I., T. Th. S., 9¼ and 11¼, for Natural Sciences Tripos Part II; Mr. Neville (Sidney Laboratory), Chemistry for First M.B. (continued), M. W. F., 10; Mr. Neville (Sidney Laboratory), Chemistry for Natural Sciences Tripos Part I, T. Th. S., 10; Mr. Lewis (Downing), Practical Course for First M.B. Examination, T. Th. S., 9; Mr. Glazebrook and Mr. Shaw, Mechanics and Heat (elementary) T. M. S., 12; Optics and Electricity (elementary), T. Th. S., 10 and 3; Electricity and Magnetism (advanced), T. Th. S., 10. Biology: Elementary: Mr. Sedgwick, Animal Morphology and Embryology (*Vertebrata*). M. W. F., 9; Mr. Vines and Mr. Sedgwick, Elementary Biology, T. M. S., 10; Mr. Vines, General Course of Botany (continued), M. W. F., 10; Mr. Hicks (Sidney), Botany (chiefly morphological), T. Th. S., 11; Advanced: Professor Newton, Geographical Distribution of Vertebrates, M. W. F., 1; Mr. Weldon and Mr. Harmer, Invertebrate Morphology, T. Th. S., 11; Mr. Gadow, Morphology of Amniota, M. W. F., 10; Mr. Darwin, Biology of Plants, T. S., 12; Mr. Gardiner, Anatomy of Plants, M. W. F., 12; Mr. Potter, Demonstrations in Systematic Botany.—Anatomy and Physiology: Professor Macalister, Elementary Human Anatomy, T. Th. S., 1; Professor Macalister, Demonstrations in Topographical Anatomy, M. W. F., 12; Professor Foster, Elementary Physiology (continued), T. Th. S., 9; Dr. Gaskell, Advanced Physiology (Vascular System, etc.), M. 11, S. 12; Mr. Langley, Advanced Physiology and Histology (continued), T. Th., 9 and 2; Mr. Lea, Chemical Physiology, W. F., 11; Mr. Hill (Downing), Physiology for Second M.B. Examination, T. Th. S., 12.—Medicine and Surgery: Professor Roy, General Pathology, M. W. F., 9; Professor Roy, and Mr. Griffiths, Morbid Anatomy, thrice weekly; Professor Roy and Mr. Griffiths, Practical Morbid Histology, Bacteriology, etc., T. Th., 2 to 4; Professor Roy and Mr. Griffiths (Hospital), Demonstrations in Morbid Anatomy, occasionally, at 10; Professor Latham (Downing), Physiological Actions and Therapeutic uses of Remedies, T. Th. S., 9; Professor Latham (Hospital), Demonstrations in Practical Therapeutics, M. W. and alternately F., 10; Professor Humphry, Surgery, T. Th. S., 12; Professor Humphry, Surgical Anatomy, M. W. F., 1; Mr. Wherry, Practical Surgery, T. Th. S., 9; Mr. Ingle, Midwifery, M. T. Th. S.; Professor Paget, Principles and Practice of Physic, M. F., 12; Dr. MacAlister, Introduction to Clinical Medicine, T. Th. S., 9; Dr. Anningson, Demonstrations in Practical Hygiene, W., 1; The Physicians (Hospital), Clinical Medicine, daily 10, and T. Th. S., 11; The Surgeons (Hospital), Clinical Surgery, daily 11, and T. Th. S., 10¼.

Easter Term, 1887. Chemistry and other Branches of Physics: Elementary: Professor Liveing or Mr. Sell, Chemistry for Beginners, M. W. F., 12; Mr. Main (St. John's), General Courses of Chemistry (continued), M. W. F., 10; Mr. Muir (Caius Laboratory), General Course, chiefly Carbon-compounds, M. W. F., 10; Mr. Heycock (King's), Revision-class in Chemistry for Natural Sciences Tripos, Part I; Mr. Lewis (Downing), Chemistry for First M.B. Examination; Mr. Glazebrook, Physics for First M.B. Examination (continued), M. W. F., 12; Mr. Shaw, Physics for Natural Sciences Tripos, Part I, M. W. F., 9; Mr. Hart (St. John's), Revision Course of Physics for First M.B., M. W. F., 9. Advanced: Dr. Ruhemann, Gas Analysis, M. W. F., 10; Dr. Ruhemann, Aromatic Bodies, T. Th. S., 10; Mr. Glazebrook (Trinity), Physics (continued), S., 9; Mr. Shaw (Emmanuel), Physics (continued), T. Th., 9. Practical Work and Demonstrations: Mr. Sell and Mr. Fenton, Chemistry for First M.B., M. W. F., 9¼ and 11¼, Chemistry for Natural Sciences Tripos, Part I, T. Th. S., 9¼ and 11¼; Chemistry for Natural Sciences Tripos, Part II; Mr. Neville (Sidney), Chemistry for First M.B. (continued), M. W. F., 9; Mr. Neville, Chemistry for Natural Sciences Tripos, Part I (continued), T. Th. S., 10; Mr. Glazebrook and Mr. Shaw, Optics and Electricity (elementary), T. Th. S., 10 to 12; Light (advanced), M. W. F., 10 to 12; Sound (advanced), M. W. F., 10 to 12.—Biology: Elementary: Professor Babington, Structural and Systematic Botany, M. W. F., 1; Mr. Vines, General Course of Botany, M. W. F., 10; Mr. Sedgwick, Morphology and Embryology (*Vertebrata* continued), M. W. F., 9; Mr. Sedgwick, Elementary Biology (continued), T., Th. S., 10; Demonstrator of Comparative Anatomy, Osteology. Advanced: Mr. Weldon and Mr. Harmer, Invertebrate Morphology (continued), T. Th. S., 11; Mr. Vines, Embryology of Plants, T. Th. S., 10; Mr. Darwin, Physiology of Plants, T. S., 12; Mr. Potter, Demonstrations in Systematic Botany (continued).—Pharmacy, and Anatomy and Physiology: Professor Latham (Downing), Pharmacy and Pharmaceutical Chemistry, M. T. W. Th., 11; Professor Macalister, History of Human Anatomy, T. Th. S., 1; Professor Macalister, Demonstrations in Topographical Anatomy, M. W. F., 12; Professor Foster, Elementary Physiology (continued), T. Th. S., 9; Dr. Gaskell, Advanced Physiology (Respiration, etc.), W. F., 11; Mr. Langley, Central Nervous System (elementary), T. Th., 9, and W. Th., 2; Mr. Langley, Physiology for Natural Sciences Tripos, Part II, S., 9; Mr. Hill (Downing), Physiology for Second M.B. Examination (continued), T. Th. S., 12.—Medicine and Surgery: Professor Roy, General Pathology, M. W. F., 9; Professor Roy, and Mr. Griffiths, Morbid Anatomy, thrice weekly; Professor Roy and Mr. Griffiths, Practical Morbid Histology and Bacteriology, etc., T. Th., 2 to 4; Professor Roy and Mr. Griffiths (Hospital), Demonstrations in Morbid Anatomy, occasionally, at 10; Professor Latham (Hospital), Demonstrations in Practical Therapeutics, M. W. and alternate F., 10; Professor Humphry, Surgery, T. Th. S., 1; Mr. Wherry, Practical Surgery, T. Th. S., 9; Professor Paget, Principles and Practice of Physic (continued), M. F., 12: Dr. MacAlister, Physical Methods of Diagnosis, T. Th. S., 9; Dr. Anningson, Medical Jurisprudence, T. Th. S., 12; The Physicians (Hospital), Clinical Medicine, daily 10, and T. Th. S., 11; The Surgeons (Hospital), Clinical Surgery, daily 11, and T. Th. S., 10.

Throughout the three terms, the Chemical Laboratories of the University, St. John's, Caius, and the Cavendish Laboratory, are open for practical work daily from 10 to 5; the Dissecting-room. The Anatomical Museums are open daily from 9 to 5. Clinical Instruction in Mental Disease is given weekly at Fulbourn County Asylum.

Instructions in various subjects will also be given during the Long Vacation in 1887.

The Clinical Laboratory and the Cavendish Laboratory are open for practical work daily.

BIRMINGHAM.—QUEEN'S COLLEGE.—The classes of Physiology, Chemistry, Chemical Physics, Comparative Anatomy, and Botany, are held in Mason Science College.

During the past year, the Anatomical Portion of the Museum has been largely increased, and a Materia Medica Museum, and Laboratories for Practical Pathology and for Practical Pharmacology and Toxicology, have been opened.

Clinical Lectures and Lectures in special departments are given in the General Hospital and the Queen's Hospital, which have a total of upwards of 400 beds. Practical instruction is given in the use of the microscope, laryngoscope, opthalmoscope, and surgical appliances; also in case-taking and bandaging, with minor surgery and prescribing. Students must attend each hospital alternately for six months. No student may enter for hospital medical practice or lectures during the first year. Clinical instruction in Lunacy and Mental Disease is given at the Borough Asylum, where a lecture is given by Mr. Whitcombe at 3 P.M. on Wednesday. A course of Chemical Physics is given by Mr. J. H. Poynting, at 3 P.M., on Tuesdays and Fridays.

GUIDE TO HOSPITALS AND MEDICAL SCHOOLS IN THE PROVINCES: 1886-87.

For further particulars regarding each Hospital and Medical School, see pp. 522 and 524.

Lectures, etc.	Birmingham Queen's College.	Bristol University College: Medical School.	Yorkshire College: Leeds School of Medicine.	Liverpool University College: Medical Faculty.	Owens College (Manchester Royal) School of Medicine	Firth College: Sheffield School of Medicine.	University of Durham College of Medicine, Newcastle.
WINTER SESSION.							
Anatomy & Physiology.	Mr. Haycraft, Elementary, F., 4.30; Advanced, M. Tu. W. Th. F., 12	Dr. R. S. Smith..M. W. F.,10	Dr. Birch and Dr. Barrs.. daily exc. S., 9.15	Dr. Caton..Tu.Th.F.S., 9.15	Dr. Stirling..M. Tu. W. Th. F., 11.30	Dr. S. White & Dr. Porter ..W.,12.30; F.,4	Mr. Williamson and Dr. Oliver. M.W.F..
Anatomy, Descriptive & Surgical.	Dr. Windle..M. Tu. W.Th. F., 12	Mr. F. R. Cross..Tu.Th. S.,9; F.,11	Mr. McGill (senior) Tu.W. F. 2; Mr. Robinson (junior) M.Th.S., 10	Mr. W. M. Banks .M. Tu. W.Th.F.,11; (Sum.) W. Th.S.,11	Mr. Young..M.Tu.W.Th. F.,1	Mr. E. Skinner and Mr. Atkin .M.Tu.W.Th., 4; F.,6 (before Xmas.)	Dr. Mears 1st. year, M. 9.15; Tu.Th.,1; 2nd. year, Tu.W.Th.S.,9.15
Demonstrations & Dissections.	Mr. Hogben, Mr. J. Lloyd, Mr. Haslam, and Mr. Foxwell, daily.	Mr. Harsant	Mr. Travis and assistants ..daily from 9	—— ..daily, 9 to 5, S., 9 to 1	Mr. Young and demonstrators..daily, 9.30 to 4.30; S., 9.30 to 12	Mr. Atkin, Mr. Kilham, Dr. Roberts..M.Th., 9 to 5, W.Th.F., 10 to 5	Dr. Mears
Chemistry	Dr. Tilden..M.Tu.W.Th.F., 9.30	Mr. Coomber..M.W.F., 9 A.M.	Mr. A. Smithells..M.Tu. Th.F., 4	Dr. J. C. Brown..M.Tu. W.Th.F., 3	—— and Mr. Schorlemmer..daily 9.30	Mr. Williams (at F. C.). M.W.F., 10; Tu.Th.S., 11	Dr. Bedson..M.W.F. 9.30
Medicine	Sir B. Walter Foster and Sir J. Sawyer..Tu. W. F., 3	Dr. Spencer and Dr. Skerritt M.W.F., 9	Dr. Eddison and Dr. Churton. M. W. F., 1	Dr. Glynn..Tu. Th. S., 9 15	Sir W. Roberts and Dr. Morgan M. Tu Th., 3	Drs. Bartolomé, Thomas, and Dyson..M.W.F., 5	Dr. Philipson..M.W.F. 5
Surgery	Mr. Pemberton and Mr. F. Jordan..Tu.W.F., 4	Mr. Dobson..Tu.Th.S., 9	Mr. Jessop & Mr. Atkinson M.W.F., 3	Mr. Rushton Parker M W.Th., 3	Mr. Lund and Mr. Southam M.W.F., 1	Mr. A. Jackson .M.W. F., 8 A.M.	Dr. Heath and Dr. Ar... M.W.F.,
Hospital Practice	General Hospital (*a*). Queen's Hospital (*b*).	Royal Infirmary (*c*). General Hospital (*d*).	Leeds General Infirmary (*e*).	Liverpool Royal Infirmary (*f*).	Manchester Royal Infirmary (*g*).	Sheffield Infmy. (*h*). Sheffield Hptl. (*i*).	Newcastle Infirmary (*k*).
Clinical Medicine	Physicians of Hospitals	Physicians (*c*) S. 12; (*d*) M.Tu.F., 2	Physicians of Infirmary Tu., 1	Physicians, Royal Infirmary..weekly	Physicians, Royal Infirmary, W., 9.15	Physicians of Infirmary and Hospital.. Tu., 3 P.M.	Physicians of Infirmary M.
Clinical Surgery	Surgeons of Hospital	Surgeons (*c*) F., 12; (*d*) W., 12	Surgeons of Infirmary.. Tu., 3	Surgeons, Royal Infirmary weekly	Surgeons, Royal Infirmary..Th., 9.15	Surgeons of Infirmary and Hospital... Th., 3 P.M.	Surgeons of Infirmary Th.
SUMMER SESSION.							
Materia Medica	Dr. Rickards and Dr. Suckling. Tu.W.Th., 12	Dr. Shaw..Tu.Th.S., 9	Dr. Hellier Tu. Th. F., 9	Dr. Carter..Tu.Th.F.S., 9 A.M.	Dr. Leech & Mr. Elborne ..M.Tu.W.Th. 12 & 1	Dr. Young .M. W. F., 8 A.M.	Mr. McBean M.W., 4; F.
Midwifery, etc.	Mr. Clay and Dr. Bassett.. Tu.W.Th.F., 1	Dr. Swayne & Dr. Aust Lawrence ...daily exc. S., 8 A.M.	Mr. Wright, M.W.F., 11.30 Diseases of Women, Dr. Braithwaite, Tu.Th., 4	Dr. Wallace..(Win.). M W.F., 9.15; S., 10	Dr. Cullingworth .M.Tu. Th.F., 1	Dr. Keeling, Mr. R. Favell Mr. Laver..M. W. F., 9 P.M.	Dr. Gibson and Dr. ... daily, 9 A.M.
Botany	Mr. Hillhouse .M.F., 10.30; W., 8	Mr. Leipner Tu.Th.S., 8 A.M.	Mr. Miall .M.Th.F., 2	Dr. Shearer M. Tu. W. F., 3	Mr. W. C. Williamson and Mr. Hick. M. Tu W.Th.F., 2.30	Mr. Birks. Tu.Th., 8 A.M.	Dr. J. Murphy T. Th. F.
Forensic Medicine	Mr. Wilders .M., 1; Tu., 2.30	Dr. Eager and Dr. Harrisson M.Th.S., 10	Mr. Scattergood..M.Tu. Th.F., 12.30	Mr. F. T. Paul..M.W.F.	Dr. Dixon Mann. M. W Th., 3	Mr. Harrison Tu.Th., 5 Toxicol. M.F., 9.30	Dr. F. Page Tu.Th.
Practical Chemistry	Dr. Tilden..Tu.Th., 4	Mr. Coomber M.W.F., 4	Mr. Smithells..Tu.Th., 10	Dr. J. C. Brown .W.Th. 4; F., 10	—— ..M.W. 10.30	At Firth College	Dr. Bedson M.W. 9.30
Comparative Anatomy	——	Mr. Morgan Tu.W.F., 10	Mr. Miall..M.Th.,	Dr. Herdman (Sum.) Tu.W.Th.F., 9.30	Dr. M. Marshall & Mr. Hurst..M.W.F., 10.30	——	Dr. G. S. Brady
Practical Physiology	Mr. Haycraft (Sum.) .M. W. F., 9, 10.30, or 11	Mr. Atchley..M.W. F., 8 A.M.	Dr. Birch and Dr. Barrs (Sum.) M.W.F., 10	Dr. Caton and Mr. Larkin (Win.). M.W., 2	Dr. Sturling, etc.. Tu.Th F., 10.30	Mr. Pye-Smith..Tu., 12	Dr. Oliver Tu.W.Th., 2.30
Pathology	Mr. Barling, M.W., 3; F. 3.30	Dr. Spencer & Dr. Skerritt (Sum.). M.W.F., 4	Dr. Jacob..S., 10	Dr. Davidson (Win.)..Tu. F., 3; Mr. Paul (Sum.)	Dr. Dreschfeld & Dr. Harris (Win.)..M.W.Th., 3	Mr. Coombe, Mr. Lockwood (Sum.)	Dr. Drummond (Sum.) M.W. Th., 2; Pract. Tu.F., 4
Practical Surgery	Mr. Bartleet and Mr. May	Mr. A.W. Prichard (Sum.) Tu.Th.S.,	Mr. Jessop and Mr. Atkinson	Mr. Parker (Win.) M. Th 4; oper. course in sum.	Mr. Jones (Win.). Tu. 12; (Sum.) W., 1; F., 12	Vacant.	Dr. L. Armstrong (Sum.)
Ophthalmic Surgery	Mr. J. V. Solomon..W.,	——	Mr. Nunneley..Tu.F., 2	Mr. E. A. Browne..W., 4	Dr. Little (Sum.) ...W. F., 4; clin. M.Th. 10	Mr. Snell (Sum.) W. 12.30	Demonstr. M., 1; Th. 9
Vaccination	——	——	Mr. Holmes	——	Mr. E. Guest	Mr. Skinner	Mr. Hawthorn

(*a.*) *Physicians:* Dr. Wade, Sir Walter Foster, Dr. Rickards, Dr. Saundby. *Assistant-Physicians:* Dr. Simon, Dr. Foxwell. *Surgeons:* Mr. O. Pemberton, Mr. T. H. Bartleet, Mr. R. Jolly, Mr. T. F. Chavasse. *Assistant-Surgeons:* Mr. Archer, Mr. W. F. Haslam. *Obstetric Surgeon:* Dr. E. Malins.

(*b.*) *Physicians:* Sir James Sawyer, Dr. Carter, Dr. Suckling. *Surgeons:* Mr. F. Jordan, Mr. J. St. S. Wilders, Mr. B. May, Mr. Jordan Lloyd. *Obstetric Officer:* Mr. A. Hawkins. *Ophthalmic Surgeon:* Mr. P. Smith. *Dental Surgeon:* Mr. C. Sims. *Casualty Surgeons:* Mr. J. W. Moore, Mr. W. Fowler.

(*c.*) *Physicians:* Dr. Spencer, Dr. R. S. Smith, Dr. Waldo, Dr. Shaw. *Assistant-Physician:* Dr. Prowse. *Surgeons:* Mr. Board, Mr. Dowson, Mr. A. W. Prichard, Mr. Cross, Mr. J. G. Smith. *Assistant-Surgeon:* Mr. Harsant. *Operations:* Tu. F., 1.30.

(*d.*) *Physicians:* Dr. Skerritt, Dr. Harrison, Dr. B. J. Baron. *Surgeons:* Mr. P. P. Lansdown, Mr. Dobson, Mr. Keall, Mr. Pickering. *Physician-Accoucheur:* Dr. Aust Lawrence. *Diseases of Skin:* Dr. Harrison. *Diseases of Eye:* Mr. Keall. *Diseases of Ear and Throat:* Mr. Pickering. *Dentist:* Mr. Parson. *Operations:* Th., 1.30.

(*e.*) *Physicians:* Dr. Eddison, Dr. Churton. *Surgeons:* Mr. T. R. Jessop, Mr. E. Atkinson, Mr. McGill, Mr. Mayo Robson. *Ophthalmic and Aural Surgeons:* Mr. J. A. Nunneley, Mr. H. B. Hewetson. *Assistant-Physicians:* Dr. A. G. Barrs, Dr. E. H. Jacob. *Assistant-Surgeons:* Mr. E. Ward, Mr. W. H. Brown. *Dental Surgeon:* Mr. T. Carter. *Operations:* Th., 1; Eye, W., 1.

(*f.*) *Physicians:* Dr. Waters, Dr. Glynn, Dr. Davidson. *Surgeons:* Mr. Bickerstteth, Mr. Harrison, Mr. Banks. *Assistant-Surgeon:* Mr. Rushton Parker. *Obstetric Physician:* Dr. Wallace. *Assistant-Surgeon:* Mr. Phillips. *Pathologist:* Dr. Rich. *Surgeons to Eye Hospital:* Mr. T. W. Lowndes and Dr. Bernard. *Operations:* Tu. W., 1.

(*g.*) *Physicians:* Dr. Simpson, Dr. J. E. Morgan, Dr. D. J. Leech, Dr. Dreschfeld. *Assistant-Physicians:* Dr. Ross, Dr. G. Steell. *Surgeons:* Mr. F. A. Heath, Mr. W. Whitehead, Mr. T. Jones, Mr. Hardie. *Assistant-Surgeons:* Mr. F. A. Southam, Mr. G. A. Wright. *Obstetric Physician:* Dr. Lloyd Roberts. *Ophthalmic Surgeon:* Dr. D. Little. *Dental Surgeon:* Mr. Smith. *Operations:* S., 10.30; Eye, M., 11; Gynæcological, M., 11.

(*h.*) *Physicians:* Dr. De Bartolomé, Dr. Law, Dr. Dyson. *Surgeons:* Mr. W. F. Favell, Mr. A. Jackson, Mr. G. H. Shaw. *Ophthalmic Surgeon:* Mr. Snell. *Operations:* Th., 12.30; Eye, M., 12.30.

(*i.*) *Physicians:* Dr. Thomas, Dr. Porter, Dr. Roberts. *Surgeons:* Dr. Keeling, Mr. Thorpe, Mr. Pye-Smith. *Operations:* F., 12.30.

(*k.*) *Physicians:* Dr. Philipson, Dr. Drummond, Dr. Oliver, Dr. Limont. *Surgeons:* Dr. Arnison, Dr. L. Armstrong, Dr. Hume, Dr. Page. *Assistant Surgeons:* Mr. Dodd, Mr. Williamson. *Pathologist:* Dr. Drummond. *Dental Surgeon:* Mr. E. Fothergill.

Appointments.—General Hospital: Resident Medical and Resident Surgical Assistant, two Resident Dressers, tenable for six months. *Queen's Hospital:* Resident Obstetric Assistant, tenable for six months; Resident Dresser, tenable for three months.

Prizes.—The Sands Cox Prize, value £20, annually, to students who have completed their curriculum, after examination in Medicine, Surgery, and Midwifery. Candidates must produce certificates of good conduct from the Warden. The examinations in 1887 will be held in the last week in March. Two Ingleby Scholarships, after examination in Obstetric Medicine and Surgery and the Diseases of Women and Children; open to students who have completed two years. One or more Sydenham Scholarships, £31 10s. each, awarded annually. One or more Queen's Scholarships, value £31 10s. each, awarded annually after examination in October. The Sydenham and Queen's Scholarships are open to students entering at the College. Medals and Certificates of Honour, annually, in each class after examination. A Senior Medical and a Senior Surgical Clinical Prize (third and fourth years), value in each department, £5 5s.; a Junior Medical and a Junior Surgical Prize (first and second years), value of each £3 3s.; Midwifery Prize (third and fourth years), £4 4s.

The Medical Tutor holds classes for Junior Students.

Further particulars may be obtained by application to the Rev. the Warden; or to Dr. Windle, at the College. Information regarding Hospital Practice may be obtained from Dr. Malins, 8, Old Square; or Mr. Jordan Lloyd, 21, Broad Street, Birmingham.

BRISTOL MEDICAL SCHOOL, AFFILIATED TO UNIVERSITY COLLEGE, BRISTOL.—The Medical School provides all the courses of Lectures required for the diplomas of the various Licensing Bodies and the degrees of the University of London. Practical instruction is further provided by the Medical Tutor and Demonstrators in Anatomy, Physiology, and Pathology. Clinical instruction is given at the Royal Infirmary and General Hospital. The Royal Infirmary contains 264 beds, a large Library and Museum. The General Hospital contains 164 beds, a Library, and Museum. Both institutions have special departments for Diseases of Women, the Eye, etc.

Appointments.—Royal Infirmary: Students are appointed to Dresserships after the first year of study. Resident Dressers are appointed in weekly rotation. Clinical Clerks are appointed in the third and fourth years of study. A Pathological Clerk is appointed every four months. Obstetric Clerks are appointed from students who have attended lectures on Midwifery and entered to the Surgical Practice. *General Hospital:* Clinical Clerks, Dressers, and Obstetric Clerks are appointed. The Dressers reside in the Hospital in rotation, free of expense. Resident pupils are received at the Hospital.

Prizes.—Prizes and Certificates of Honour are awarded at the Medical School after examination in the subjects of each year. Certificates alone are given for Comparative Anatomy and Hygiene.—*Royal Infirmary:* Two Entrance Scholarships (after examination in general subjects), value £36 15s. and £10 10s. Suple's Medical Prize, and Suple's Surgical Prize, each a Gold Medal, value £5 5s., and about £7 7s. in money, awarded after examination in Medicine and in Surgery respectively. Clark's Prize (interest of £500) to the most successful student in the third year in the Medical School, if he have attended the Royal Infirmary. Tibbits Memorial Prize (interest on £315), annually, for proficiency in Practical Surgery. Crosby Leonard Prize (interest on £300), to third year's surgical students, for best written report of ten surgical cases (excluding those taken for the Suple Prize). A prize of £3 3s. to the Pathological Clerk, if he have performed his duties satisfactorily.—*General Hospital:* Martin Memorial Entrance Scholarship, £20, at beginning of winter session, after examination in subjects of general education. Clarke Surgical Scholarship, £15, annually. Sanders Scholarship (interest of £500); and Lady Haberfield Prize (interest of £1,000 annually); each after examination in Medicine, Surgery, and Diseases of Women. The Martyn Memorial Scholarship and the Lady Haberfield Prize, when not awarded, are available for the remuneration of a Museum Curator, appointed from among the students after competitive examination.

Further particulars respecting the Infirmary may be known on application to Dr. Spencer; respecting the Hospital, on application to Dr. Markham Skerritt. Information regarding the Medical School will be afforded by the Honorary Secretary, Dr. E. Markham Skerritt.

LEEDS SCHOOL OF MEDICINE: MEDICAL DEPARTMENT OF YORKSHIRE COLLEGE.—There are Anatomical, Pathological, Chemical, Botanical, and Materia Medica Museums. The Library is open to students. The Museum of the Literary and Philosophical Society is open to students at a nominal charge.

The instruction in Chemistry and Physics, Practical Chemistry, Practical Toxicology, Biology, and Botany, is given in the new buildings of the Science and Art Department of the Yorkshire College.

Clinical Instruction, etc.—The General Infirmary has 320 beds; viz., medical cases 70; surgical, 208; ophthalmic, 30; gynæcological, 12. Clinical lectures are delivered by the Physicians and Surgeons, and classes meet in the wards for practical instruction. Courses of Practical Physiology are held. The Systematic and the Practical courses of Surgery are delivered in alternate winter sessions. A course of lectures on Diseases of Women and Children is given by Dr. James Braithwaite. Demonstrations of Eye and Ear Diseases, and instruction in the use of the Ophthalmoscope, and in the application of electricity, are given. A Maternity Department has been established in connection with the Infirmary. The West Riding Lunatic Asylum at Wakefield is open for the study of Mental Diseases, and a course of lectures is given by Mr. Bevan Lewis during the summer; the systematic lectures being given at the school, and the clinical at the asylum, in alternate weeks. Students can also attend the practice of the Leeds Public Dispensary, the Fever Hospital, and the Hospital for Women and Children.

Hospital Appointments.—House-physicians, house-surgeons, physicians' clerks, surgeons' dressers, ophthalmic and aural surgeons' dressers, gynæcological ward clerks, assistant-physicians' clerks, assistant-surgeons' dressers, dressers in the Casualty Room, and *Post Mortem* Room Clerks, are appointed during the year. The house-physicians and surgeons' dressers hold office for six months; the house-surgeons for twelve months; the others for three months. The house-physicians and house-surgeons must have at least one legal qualification.

Prizes.—The Hardwick Clinical Prize, value £10, is given annually for the best reports of medical cases, and the Surgeons' Clinical Prizes of £8, £5, and £3, for the best reports of surgical cases during the winter session. These prizes are open to students who have completed the first year. The Thorp Scholarship in Forensic Medicine (£10) at the close of each summer session. At the close of each session, Silver and Bronze Medals, Books, and Certificates of Honour are awarded according to merit.

UNIVERSITY COLLEGE, LIVERPOOL: MEDICAL DEPARTMENT (ROYAL INFIRMARY SCHOOL OF MEDICINE).—There are a Museum containing specimens of Morbid and Comparative Anatomy, a collection of Wax Models, and a collection of Materia Medica, a Library, and a Reading-Room.

Instruction.—Clinical lectures are given weekly at the Royal Infirmary, which contains nearly 300 beds; the Lock Hospital adjoining contains 60 beds. Medical and Surgical Tutors attend in the wards from 10 to 12, daily. Dr. Glynn gives practical instruction in Clinical Medicine and the Methods of Physical Diagnosis at 11.15 on Tuesdays, during the winter. Besides a winter course of Practical Surgery, a course of Operative Surgery is given in the summer for candidates for the Fellowship of the Royal College of Surgeons and the University degrees in Surgery. Dr. Wallace gives practical instruction in Midwifery during the winter session to third and fourth year's students. Dr. Gee lectures on Diseases of Children. Students of Midwifery attend the practice of the Ladies' Charity and Lying-in Hospital on payment of a fee of £2 2s. The Dissecting-room will be open during the summer. In May, a series of twelve lectures on the Organs of Respiration, and afterwards a course of twenty-four demonstrations on Surgical Anatomy, will be given. There will also be a tutorial class of Osteology and an examining class in the summer. Dr. Lodge gives a complete course of Physics, beginning in October and ending in June. A course of Practical Pathological Anatomy will be given during the summer.

Appointments.—Royal Infirmary: Two House-Physicians and three House-Surgeons are appointed for six months, after (if there be more applicants than vacancies) competitive examination. Candidates must have a legal qualification. Three Clinical Clerks for each Physician, three or more Dressers for each Surgeon, and two Clerks to the Thornton Wards for Diseases of Women, are appointed for three months in October, January, and May. *Post mortem* Clerks are appointed for six weeks. All students must perform this duty before the Schedule for the final examination is signed.

Exhibitions and Prizes.—Roger Lyon Jones Scholarships (each £21 for two years); one as an entrance scholarship to the candidate who has passed the Entrance Examination of the Victoria University. If there be more than one candidate in the first division, a further ex-

amination is held by the College. The successful candidate must become a composition ticket-holder in the school. Another of the scholarships to a student who has completed two years in July after examination in Anatomy, Physiology, Chemistry, Botany, Materia Medica, and Practical Chemistry, on condition of his remaining a pupil of the School. Derby Exhibition of £15, awarded after examination; open to third and fourth years' students; examinations in March. Gold Medal for Anatomy and Physiology, presented by Mr. Torr, M.P., for second year's students; and one, also for Anatomy and Physiology, presented by Dr. J. Bligh, for students of the first year; also a bronze medal and certificates in each case. Medals and Certificates of Honour for groups of subjects: namely, second year, Advanced Anatomy and Physiology; first year, Elementary Anatomy and Physiology, and Chemistry. Silver Medal and Certificates in each of the following: Medicine, Surgery, Pathology, Midwifery, Botany, Materia Medica, Practical Chemistry, and Medical Jurisprudence (including Toxicology). Two prizes for the best sets of Microscopical Preparations made in the Physiological Laboratory during the winter.

The *Debating Society* meets eight or ten times during the winter session on Saturday evenings for the reading and discussion of papers. Prizes are given for the best papers, and for the best collection of clinical reports.

Communications should be addressed to the Vice-Dean, Mr. F. T. Paul.

Owens College, Manchester: Medical Department.—The Department of Medicine comprises a very complete series of laboratories, museums, and lecture-rooms. On the ground-floor of the Medical Buildings are situated the rooms in which are located the Library of the Medical Society of Manchester. These include (1) the library, containing above 27,000 volumes; (2) a Student's Library; (3) a Reading-room, reserved for members of the Medical Society. The Medical Buildings also comprise a Student's Common Room, besides rooms for Professors and Lecturers, Offices, etc.

Instruction.—In the College, the following courses (in addition to those mentioned in the table) are given in the summer: Diseases of Children, by Dr. H. Ashby (W. and F., 3 P.M.); Mental Diseases, by Mr. G. W. Mould (Tu. and Th., 4 P.M.); Hygiene, by Dr. A. Ransome (Tu. and F., 2 P.M., summer); and Embryology (lectures and laboratory work) by Dr. A. M. Marshall (M., W., and F., 1.30 P.M., in the summer); Comparative Osteology by Mr. Hurst (M., W. F., 9.30). Practical Pathology is taught by Dr. Harris, under the superintendance of Dr. Dreschfeld. In the summer, Dr. Harris will conduct a course of Pathology for medical men. Mr. Thomas Jones gives a course of Practical Surgery (Tu. and Th., 12 noon in the winter, and W. 1, and F. 12 in the summer); and a course of Operative Surgery in the summer at 4 P.M. on Mondays. Mr. A. H. Young gives a course of Surgical Pathology in the winter, at 2 P.M. on Tuesdays; also an elementary course in the summer (Tu. and Th., 1 P.M.) Two courses of Materia Medica and Therapeutics are given at separate hours on the same day; one being devoted to Materia Medica proper, and the other to the Action of Drugs. A special course of demonstrations in Medical Jurisprudence and Practical Toxicology will be given in the summer. A special course of Anatomical Demonstrations will be given on three days a week at 4 P.M., if a sufficient number of students offer themselves.

The Royal Infirmary contains 298 beds. Associated with it are the Monsall Fever Hospital (220 beds), and the Convalescent Hospital (136 beds), and the Royal Lunatic Asylum at Cheadle, which accommodates 200 patients.

Clinical Instruction is given by the Physicians and Surgeons of the Infirmary. Clinical classes are formed in October, January, and May; also Advanced Clinical Classes for students of the last two years. Medical and Surgical Demonstrations are given each at 9.15 A.M. one morning weekly in the summer. Dr. Simpson gives instruction in the use of the Laryngoscope (W., 10); Dr. Dreschfeld in Electro-Therapeutics (W., 11, in summer); Mr. Wright in Aural Surgery (M., 12). Dr. Steell gives Clinical instruction at the Fever Hospital; also a series of Clinical Lectures on Fever, in the College. Mr. Wright gives instruction in Diseases of the Ear. Clinical Lectures on Diseases of Women and Obstetrics will be given at the Royal Infirmary, and at St. Mary's Hospital by Dr. Lloyd Roberts and Dr. Cullingworth. Clinical instruction in Diseases of the Eye, and Ophthalmoscopic Demonstrations will be given at the Royal Infirmary by Dr. Little, and at the Royal Eye Hospital by Dr. Glascott.

Appointments.—The following appointments are made: A Surgical Registrar, at £70 or £80 *per annum*; a Pathological Registrar, at £80 *per annum*; a Medical Registrar, at £50 *per annum*; two Assistant Medical Officers, each at £100 *per annum*; a Chloroformist, at £50 *per annum*. Resident Medical Officer, two years, £150 *per annum*; ditto, at Cheadle, one year, £150 *per annum*; ditto, at Monsall, one year, £200 *per annum*; Resident Surgical Officer, one year, £150 *per annum*; eight House-Surgeons and four House-Physicians, a Resident Assistant at Monsall (salary £50 *per annum*); and one at Cheadle, each for six months. The House-Physicians, House-Surgeons, and the Resident Assistant at Monsall, must be qualified. Two or more Clinical Clerks are attached to each Physician and Assistant-Physician, and two or more Dressers to each Surgeon and Assistant-Surgeon. Two Clerks to the Pathological Registrar, and Accident-room Dressers, are appointed for three months.

Scholarships, Exhibitions, and Prizes.—Dauntesey Medical Scholarship, value about £100, tenable for one year. Candidates must not have attended lectures in a medical school. Subjects of Examination: General and Comparative Anatomy, with Dissections and Description of Preparations illustrating Typical Forms of Animals; Outlines of Physiological Botany; Chemistry; and either Mathematics or Latin. The successful candidate must enter to the full course of medical studies at the College. Examination will commence on October 5th. A Gilchrist Scholarship of £50 *per annum*, tenable for three years in the College, awarded biennially, to the candidate standing highest in the Matriculation Examination of the University of London in June, if in the Honours Division; also one, biennially, upon the results of the June Preliminary Examination of the Victoria University. Grammar School Scholarship, value £18, tenable for three years, open to scholars of the Manchester Grammar School between the ages of 15 and 21. Examination on October 1st and 2nd; subjects in 1886, Mathematics and Physical Science; in 1887, Classics and Mathematics. A subject for an English Essay will also be set each year. The successful candidate must enter to one of the departments of Owens College. Medical and Surgical Clinical Prizes (books or instruments to the value of £6 6s. in each department) are given for reports of cases in the Infirmary. Platt Physiological Scholarship, value £50, tenable for two years, open to all persons between the ages of 18 and 25, after a written and practical examination in Physiology and Histology, and Comparative Anatomy. The examiners will take into favourable consideration any original observation submitted to them. The successful candidate must attend for one year of his tenure the class of Practical Physiology in the Laboratory of the College, and in the other year in the same or some other approved Physiological Laboratory. Examinations on October 12th, 13th, and 14th. Notice of intention to compete must be given on or before September 25th. Two Platt Exhibitions, £15 each, for first and second years' students in Physiology. Turner Scholarship of £25, to students who have completed four years of study in the College, after examination in the subjects of the third and fourth years' courses. Dunville Surgical Prize, value £20 (in books or surgical instruments), at the end of winter session, to students of two years who have attended four courses, including one at least in Surgery. Subjects of Examinations (about middle of July, 1884): Principles and Practice of Surgery, including Surgical Anatomy or Surgical Pathology, and, at option of Examiners, examination of patients and operations on dead subject, with reports of cases. A prize of the value of £5 5s. is offered on the results of the Final Class Examinations in each of the following subjects: Anatomy (first and second years), Physiology (first and second years); Pathology and Morbid Anatomy, Medicine, and Surgery and Midwifery and Diseases of Women and Children; one of the value of £3 3s. in each of the following: Midwifery, Botany, Practical Chemistry, Materia Medica and Therapeutics, Medical Jurisprudence, Hygiene, Practical Surgery, Ophthalmology, and Practical Physiology; and one of the value of £2 2s. each of the following subjects: Practical Anatomy (senior and junior), Surgical Pathology, Diseases of Children, Mental Diseases, Materia Medica (first year's course) and Gynæcology. Bishop Berkeley Fellowships. The Council of Owens College propose, in December 1886, to appoint to two Fellowships of £100 each, capable of renewal for a second year. Candidates are invited to apply, before November 15th, in any one of fifteen departments, including Chemistry, Botany, Zoology, Physiology, Pathology, and Pharmacology. The Bradley Memorial Scholarship in Clinical Surgery, and two Clinical Prizes, value £6 6s. each, are awarded annually to students of the Royal Infirmary, is offered annually in the summer session. Candidates must be in their fourth year of study, have completed their Dresserships, and have spent their whole period of studentship at the Manchester Royal Infirmary.

Tutorial Classes in Medicine and Surgery are formed before each examination at the College of Surgeons. There are also tutored classes in Anatomy and Physiology.

Prospectuses may be obtained from the Registrar, Mr. J. H. Nicholson.

FIRTH COLLEGE: SHEFFIELD SCHOOL OF MEDICINE.—The General Infirmary contains 200 beds, including two ophthalmic wards. The Public Hospital and Dispensary contains 101 beds. Students are also admitted to the practice of the Jessop Hospital for Diseases of Women.

Besides the lectures mentioned at page 523, a course of Public Medicine is given by Dr. Drew. The instruction in Chemistry and in Biology is given at Firth College.

The Library of the Medical School is open to students under certain regulations.

Prizes and certificates of honour are given at the end of each session.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.—Students have access to the Reading Room and the Museums of Anatomy and Pathology, and of Materia Medica, in the College; the Museum of Pathology and the Medical Library of the Infirmary; the Libraries of the College of Physical Science and of the Literary and Philosophical Society; and the Chemical and Physical Laboratories in the College of Physical Science.

Appointments.—An Assistant-Curator of the Museum is annually appointed from among the senior students. Assistant Demonstrators of Anatomy, Prosectors for the Lecturer on Anatomy, Assistant Physiologists, Pathological Assistants, Assistants to the Dental Surgeon, and an Assistant in the Eye Department, are also elected. The Assistant Demonstrators of Anatomy receive £5 each; the others are unpaid. Four times in the year, two Resident Medical Assistants, two Resident Surgical Assistants, three Non-resident Clinical Clerks, and sixteen Non-resident Dressers, are nominated by the Medical Board, and, if approved, appointed by the House Committee for three months. The Medical and Surgical Assistants are provided with apartments and board in the Infirmary, on payment of £5 5s. for three months.

The Infirmary contains 300 beds. There are special wards for diseases of the eye, for lock cases, male and female, and for children. Pathological Demonstrations are given as opportunity offers. Practical Midwifery can be studied at the Newcastle Lying-in Hospital. Opportunities for practical study are also afforded by the Dispensary, Hospital for Infectious Diseases, Eye Infirmary, Children's Hospital, and Coxlodge and Dunston Lunatic Asylums. Instruction in Psychological Medicine is given at the Coxlodge Lunatic Asylum at 11 A.M. daily by Mr. R. H. B. Wickham, Medical Superintendent. Three months' Resident Clinical Clerkship at this Asylum may be substituted (in the University of Durham Degrees) for three months' Hospital Practice. Mr. H. E. Armstrong gives a course of lectures on Public Health at 3 P.M. on Tuesday, in winter; also practical instruction in the duties of a Medical Officer of Health, and a summer course of clinical instruction at the Hospital for Infectious Diseases. Dr. Gibson lectures on Diseases of Women and Children daily, at 9 A.M.; and Dr. Nesham on Midwifery daily at the same hour. Courses of Anatomical Demonstration are given in the summer at 12.15 daily. Mr. Herschel gives a course of six or eight lectures on Physics in the winter (Tu., Th., 10).

Scholarships, etc.—An University of Durham Scholarship, value £25 a year, for four years, for proficiency in Arts, open annually at beginning of winter session to intending students, and to those who have attended only one winter and one summer session.[1] The Dickinson Memorial Scholarship, value £15, with a gold medal, for Medicine, Surgery, Midwifery, and Pathology; open to perpetual students who have passed the primary examination of a licensing body. The Tulloch Scholarship, interest of £400 annually, for Anatomy, Physiology, and Chemistry. The Charlton Memorial Scholarship, interest of £700 annually, with Gold Medal, open to full students entered for the class of Medicine, at end of winter session. The Gibb Scholarship, interest of £500 annually, for Pathology, at end of summer session. The Goyder Memorial Scholarship, proceeds of £325; subjects, Clinical Medicine and Clinical Surgery. At the end of each session, a Silver Medal and Certificates of Honour are awarded in each of the regular classes.

Further information may be obtained from the Registrar, Dr. Luke Armstrong, Newcastle-on-Tyne.

[1] The subjects of examination, which will commence on October 13th, will be Greek: *The Gospel of St. Luke*; Latin Grammar; Cæsar, *De Bello Gallico*, Book IV; Virgil's *Æneid*, Book IV; Euclid, Books I and II; English History: from the beginning of the reign of Richard I to the end of the reign of Henry III. In 1887, the English History will comprise the period from the beginning of the reign of Richard II to the end of the reign of Richard III.

The following hospitals are also recognised by the Royal College of Surgeons for the purpose of professional education: Bath United Hospital; Bedford General Infirmary; Berkshire Royal Hospital, Reading; Bradford Infirmary; Addenbrooke's Hospital, Cambridge; Derbyshire General Infirmary; Devon and Exeter Hospital; Gloucester General Infirmary; Hants County Hospital; Hull Infirmary; Kent and Canterbury Hospital; Leicester Infirmary; Liverpool Northern Hospital and Royal Southern Hospital; Norfolk and Norwich Hospital; Northampton General Infirmary; Nottingham General Hospital; Radcliffe Infirmary, Oxford; Salisbury General Infirmary; Salop Infirmary; Staffordshire General Infirmary; North Staffordshire Infirmary; Wolverhampton and Staffordshire General Hospital; Sussex County Hospital; Worcester Infirmary.

NOTES ON THE MEDICAL SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF ABERDEEN.—Additional opportunities for practical instruction are afforded in the Chemical, Anatomical, Physiological, and Pathological Laboratories, and Anatomical and Pathological Museums, throughout the day, under the direction of the Professors. Practical instruction is given also in the Toxicological, Pharmaceutical, Botanical, and Zoological Laboratories, and in the Surgical Museum and Laboratory. Courses of practical instruction are given, in summer, in Medical Jurisprudence and Hygiene, by Dr. Hay; in Insanity, by Dr. Reid, at the Royal Asylum; in Diseases of the Ear and Larynx, by Dr. McKenzie Booth, at the Dispensary; in Diseases of the Skin, by Dr. Garden, at the Royal Infirmary and Sick Children's Hospital. The General Dispensary and the Lying-in, Vaccine, and Eye Institutions, and the Sick Children's Hospital, are open daily. Fee to each class, £3 3s., except Anatomical Demonstrations, Practical Natural History, Practical Midwifery and Gynæcology, Practical Pharmacy, Operative Surgery, Practical Medical Jurisprudence and Hygiene, each £2 2s.; Practical Ophthalmology, Insanity, Public Health, Diseases of the Ear and Larynx, and Diseases of the Skin, each £1 1s.; Matriculation fee, both sessions, £1; summer session alone, 10s.; Royal Infirmary: Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 3s.

UNIVERSITY OF EDINBURGH.—Minimum expenses for Lectures and Hospital Practice, with Examinations, £107 18s.; or, first summer, £9 8s.; first winter, £18 17s.; second summer, £8 8s.; second winter, £15 14s.; third summer, £3 3s.; third winter, £18 17s.; fourth summer, £6 6s.; fourth winter, £16 15s.; final examination, £10 10s.; Sessional Fee for Materia Medica, Chemistry, Surgery, Institutes of Medicine, Midwifery, Clinical Surgery (winter), Clinical Medicine (winter), Anatomy, Practice of Physic, Pathology, Botany (with Garden Fee of 5s.), Natural History, Medical Jurisprudence, each £4 4s.; Practical Anatomy, Practical Physiology, Practical Chemistry, Practical Pathology, Clinical Medicine (summer), Clinical Surgery (summer), Operative Surgery, Mental Diseases, Diseases of the Eye, Practical Materia Medica and Pharmacy, Obstetric and Gynæcological Operations, each £3 3s.; Anatomical Demonstrations, Organic Chemistry (advanced), Practical Natural History, each £2 2s.; Clinical instruction in Diseases of Children (winter and summer), £1 1s.; Vaccination, £1 1s. The fee for a second course of any lectures is £3 3s.; any subsequent course is free. For a perpetual ticket at the beginning of the first course, the fee is £6 6s. Every student, before entering with any Professor, must produce a matriculation-ticket for the ensuing session, for which a fee of £1 is paid at the beginning of each winter session. Students first entering in the summer session pay a fee of 10s.—The Library is open every lawful day during the winter session, from 10 A.M. till 4 P.M.; on Saturdays, till 1 P.M.

The following means are afforded for practical instruction, in addition to those mentioned in the table at page 528: Practical Pathology and Morbid Anatomy, under the superintendence of Dr. Greenfield, assisted by Dr. Woodhead and Mr. Barrett; Tutorial Class of Clinical Medicine, in the Royal Infirmary, by Dr. Murdoch Brown, under the superintendence of the Clinical Professors; Tutorial Class of Clinical Surgery, by Mr. James Bennet, under the superintendence of the Clinical Professor; Practical Surgery, under the superintendence of Mr. Chiene and Mr. A. M. Hare; Tutorial class of Practical Physic, by Mr. R. W. Philip, under the supervision of the Professor; Obstetric Operations, by Dr. Simpson and Dr. Ballantyne; Organic Chemistry (advanced class), by Dr. Crum Brown; Practical Instruction in Mental Diseases, at Morningside Asylum, by Dr. Clouston, on Mondays, Wednesdays, and Fridays at 3 (summer); Practical Botany and

Vegetable Histology, by Dr. Dickson, assisted by Mr. Geddes. The Dissecting Rooms and the Anatomical Museum, under the superintendence of Sir William Turner; Chemical Laboratories, under Dr. Crum Brown, assisted by Dr. Gibson and Mr. J. Walker; Physiological Laboratory, under Dr. Rutherford, assisted by Mr. Ashdown and Mr. Mackay; Physical Laboratory, under Mr. Tait; Natural History Laboratory, under the superintendence of Dr. Cossar Ewart and Mr. W. Smith; Medical Jurisprudence Laboratory, under the superintendence of Sir Douglas Maclagan and Mr. C. H. Stewart; Royal Botanic Garden, Herbarium, and Museum, under the superintendence of Dr. Dickson, assisted by Mr. Geddes and Dr. Macfarlane; Materia Medica Museum and Laboratory, under the superintendence of Dr. Fraser, assisted by Mr. Atkinson and Mr. Stockman, are open to students.

Fees for Research.—In the Laboratories of Chemistry, Natural History, Institutes of Medicine, Materia Medica, Pathology, and Medical Jurisprudence, the Fees chargeable for Research, under the Superintendence of the respective Professors and their Assistants, are £10 10s. for the Winter Session, and £6 6s. for the Summer Session.

Fellowships, etc.—Falconer Memorial Scholarship, for the encouragement of the study of Palæontology and Geology, value £111 4s., for two years, but renewable under certain conditions, open to Graduates in Science or Medicine of the University of not more than three years' standing; next competition probably in July, 1887. Syme Surgical Fellowship, value about £106 8s. 8d., tenable for two years, open to Bachelors of Medicine of not more than three years' standing, for the best Thesis on a Surgical subject. Leckie-Mactier Fellowship, value £70 *per annum*, tenable three years, open to Bachelors of Medicine of not more than three years' standing; next award in November, 1886. The examination will comprise written Reports and Commentaries on three Medical, three Surgical, and one Gynæcological case in the University Wards in the Royal Infirmary; a Written Examination in Midwifery, Medical Jurisprudence, and Public Health; and an Oral Examination in Medicine, Surgery, Midwifery, Medical Jurisprudence, and Public Health. Sibbald Scholarship, £40, tenable for three years; subjects: Chemistry, Botany, and Natural History; next competition in October 1886. Hope Prize Scholarship, about £35, to the most distinguished junior student in the Chemical Laboratory during the winter. Thomson Scholarship, value £40, tenable four years, in October 1886; subjects: Botany, Zoology, and Elementary Mechanics. Eight Vans Dunlop Scholarships, each £100, tenable for three years, one, in March 1887, for highest marks at Preliminary Examinations; one, in July 1887, for highest marks (not less than 60 per cent.) in first year's subjects—Botany, Zoology, Chemistry, and Anatomy; one, in March 1887, for highest marks (as above) in Physiology and Surgery; three (one each year) at end of third winter, for highest marks at a special examination on Anatomy, Physiology, Materia Medica, and Pathology; one in Chemistry and Clinical Pharmacy, and one in Natural History, Botany, and Geology. Coldstream Memorial Medical Missionary Scholarship, proceeds of at least £470, tenable for four years, to the students who intend to become medical missionaries; next award at Preliminary Examination in October 1887. Buchanan Scholarship, annual proceeds of £1,000, yearly, for proficiency in Midwifery and Gynæcology. Murchison Memorial Scholarship, for proficiency in Clinical Medicine, annual proceeds of about £1,000; alternately in Edinburgh and London; competition in Edinburgh in July 1887; open to candidates from London and from Edinburgh. Stark Scholarship in Clinical Medicine, value about £100, tenable one year; awarded every alternate year; next competition in 1888. James Scott Scholarship, value £50, for proficiency in Midwifery. Ettles Medical Scholarship, value about £40, to the most distinguished Bachelor of Medicine and Master in Surgery of the year. Abercrombie Bursary of £20, for four years, to students who have been brought up in Heriot's Hospital. Two Sibbald Bursaries, value £30 each. Eight Thomson Bursaries, value £25 each, tenable for four years, in March and October, at Preliminary Examination in the subjects of General Education. Four Grierson Bursaries, each £20 *per annum*; in the absence of certain preferential candidates, open to competition; one to the student who shall pass the best examination in the subjects of Preliminary Education; one open to student commencing the second winter session; after examination in Chemistry, Botany, and Natural History; one to student commencing the third winter session; after examination in Anatomy and Physiology; one to student commencing the fourth winter session; after examination in Materia Medica and Pathology. Two Dr. John Aitken Carlyle's Medical Bursaries, £32 each, for one year, for proficiency in ordinary class-examinations; one to a first year's student, in Anatomy and Chemistry; one to a second year's student in Anatomy and Physiology. Two Mackenzie Bursaries, annual proceeds of £1,000, to students in junior and senior classes of Practical Anatomy, for industry and skill. Competitors for the Bursaries must have studied the subjects of examination at the University of Edinburgh. Gold medals are given on graduation to Doctors of Medicine whose theses are deemed worthy. Beaney Prize, value £35, to the candidate for degrees of M.B. and C.M., who shall obtain most marks in Anatomy, Surgery, and Clinical Surgery. Hope Chemistry Prize, value £100, open to all students of the University not more than twenty-five years of age, who have worked for eight months, or for two summer sessions, in the chemical laboratory. Neil Arnott Prize, about £50, to the candidate who, having been a medical student of the University during either a summer or a winter session, shall pass with the greatest distinction the ordinary examination in Natural Philosophy for the degree of M.A. The successful candidate must continue a medical student of this University during the winter session. Ellis Prize, value about £60, every three years, for an Essay or Treatise in some subject of Animal or Vegetable Physiology; next award in April 1888. Goodsir Memorial Prize, £60, awarded triennially. Wightman Prize, £10 10s., to student of class of Clinical Medicine for best report and commentary on cases treated in the wards. Cameron Prize, income of £2,000 yearly, to the member of the medical profession who shall have made the most valuable addition to Practical Therapeutics during the preceding year. Dobbie-Smith Gold Medal in Botany, in alternate years, for an Essay on a Botanical subject.

EDINBURGH ROYAL INFIRMARY.—Fees: three months, £2 2s.: six months, £4 4s.; one year, £6 6s.; perpetual, £12. Separate payments, mounting to £12 12s., entitle to a perpetual ticket. Clinical Medicine and Clinical Surgery, each £4 4s. for the course in winter, and £3 3s. in summer. Resident Physicians and Resident Surgeons are appointed; they live in the house for six months free of charge. Candidates must be registered as legally qualified practitioners. Non-resident Clinical Clerks are appointed. Each Surgeon appoints from four to nine Dressers for six months. Assistants in the Pathological Department are appointed by the Pathologist. Instruction is given in special departments.

SCHOOL OF MEDICINE, EDINBURGH.—Of the Extra-academical lecturers, some give their instruction in Surgeons' Hall; others at Minto House; others at other places. The following courses of instruction are given, in addition to those mentioned at page 528: Tutorial Classes of Physical Diagnosis and of Practical Surgery at the Royal Infirmary; Diseases of the Ear, Dr. Kirk Duncanson, lectures, 4 P.M. Tuesdays and Fridays (winter), and Fridays (summer), with clinical instruction Mondays, Thursdays, and Saturdays, 12 (winter and summer); Diseases of the Ear and Throat, Dr. P. McBride, Mondays, Wednesdays, and Thursdays, 10 (summer); Laryngology and Medical Ophthalmology, Dr. Wyllie, 9 A.M. (summer); Vaccination, six weeks' courses in winter and summer, Dr. Husband; Public Vaccination (England) Dr. J. B. Buist, 3 P.M. on Thursdays, winter and summer; Diseases of Children, Dr. Underhill and Dr. Playfair, three months' Clinical courses in winter, and Mondays, Wednesdays, and Saturdays at 10 in summer; Practical Medicine and Diagnosis, Dr. Byrom Bramwell, daily, 9 A.M. (summer); Practical Midwifery, Dr. ———, February, March, April, 5 (winter); Practical Gynæcology, Dr. Halliday Croom, at 5 (winter); Clinical Midwifery, Dr. Croom, 9.30 A.M. daily (summer); Clinical Gynæcology, Dr. C. Bell, Tuesdays and Fridays, 4 P.M. (winter), and 1.30 P.M. (summer); Practical Midwifery, with clinical instruction, Dr. C. Bell, throughout year; Practical Midwifery and Clinical Gynæcology, Dr. P. Young, Fridays, 1 P.M., throughout the year; Practical Gynæcology, Dr. D. B. Hart, 5 P.M. (winter); Diseases of the Skin, Dr. A. Jamieson, Saturday, 10, throughout year; Insanity, Dr. Batty Tuke, Tuesdays and Fridays, 3 (summer); Diseases of the Tropics and Climatology, Dr. R. W. Felkin, Mondays and Thursdays, 5, throughout year. Dr. Littlejohn and Mr. Aubrey Husband lecture on Public Health in conjunction with Medical Jurisprudence.

Fees.—For a first course of lectures, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh, the perpetual fee is £2 4s. Practical Anatomy (six months), £3 3s.; Anatomical Demonstrations, £2 2s.; perpetual, £4 4s.; Practical Anatomy with Demonstrations, £4 4s.; Practical Chemistry, £3 3s.; Analytical Chemistry, £2 a month, £5 for three months, or £10 for six months; Practical Materia Medica (including Practical Pharmacy), Diseases of the Eye, Diseases of the Ear, Diseases of Children, Diseases of the Skin, and Diseases of the Tropics and Climatology, each £2 2s.; Vaccination, £1 1s.; Summer Courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy, including Demonstrations, Operative Surgery, and Practical Medicine and Medical Diagnosis, each £2 2s.; Insanity,

TABLE OF THE MEDICAL OFFICERS, PROFESSORS, AND LECTURERS IN MEDICAL SCHOOLS OF SCOTLAND.

For further particulars regarding each Hospital and Medical School, see p. 526 et seq. The letters (W.) *and* (S.) *in this Table denote respectively Winter and Summer Courses.*

Lectures, etc.	Aberdeen University.	Edinburgh University.	School of Medicine, Edinburgh.	Glasgow University.	Glasgow, Anderson's College.	Glasgow Royal Infirmary School.	Glasgow Western Medical School.
Anatomy (Lectures).	Dr. Struthers 11 (W.)	Sir W. Turner, 1 (W.)	Mr. Symington 1 (W.); & Mr. Macdonald Brown 9 (W.)	Dr. Cleland, 2 and 11 (W.); 11 (S.)	Dr. A. M. Buchanan (jun.), 4 (W.)	Mr. H. E. Clark, 11 (W.); 12 (S.)	Mr. F. Carter 11 (W. and S.)
Anatomical Demonstrations.	Dr. Struthers, 9 (W. and S.)	Sir W. Turner, 4 (W.); 11 (S.	Mr. Symington and Mr. M. Brown, 4 (W.); 11 (S.)	Dr. Cleland, 11 (W.)	Dr. A. M. Buchanan, 12.30 (W.), 11 (S.)	Mr. Clark and Mr. Macintyre, 4 (W.)	Mr. Carter 2 and 4 P.M. (W.)
Dissections	9 to 4 (W. and S.)	Daily, (W. and S.)	9 to 5 (W. and S.)	9 to 4 (W.); 8 to 2 (S.)	9 to 5 (W.); 6 A.M. to 5 P.M. (S.)	10 to 5 (W.); 7 A.M. to 1 P.M. (S.)	9 to 4
Physiology	Dr. McWilliam, 2 (W.)	Dr. Rutherford, 11 (W.)	Dr. James and Mr. J. Hunter, 11 (W.)	Dr. McKendrick, 12 (W.)	Dr. Christie, 5 (W.)	Dr. J. Barlow, 3 (W.)	Dr. Limont, 12 (W.)
Practical Physiology.	Dr. McWilliam, 2 (S.)	Dr. Rutherford (W. and S.)	Dr. James (S.) and Mr. J. Hunter, 9 to 4 (W.); also Sum.	Dr. McKendrick and Dr. Muirhead, 12 (S.)	Dr. Christie, 1 (S.)	Dr. J. Barlow, (S.)	Dr. Limont, 3 (W. and S.)
Chemistry	Mr. Brazier, 3 (W.)	Dr. Crum-Brown, 10 (W.) 1 (S.	Dr. S. Macadam, Mr. F. King, Dr. Drinkwater, 10 (W.)	Mr. Ferguson, 10 (W.)	Mr. Dittmar, 10.15 (W.)	Dr. Milne, 10 (W.)	—
Practical Chemistry.	Mr. Brazier, 10 (S.)	Dr. Crum-Brown, 2 (W.) 10 (S.	Dr. S. Macadam, etc. (as above), and Mr. I. Macadam, 9 to 5 (W. and S.)	Mr. Ferguson, 10 (W.); 9 (S.)	Mr. Dittmar, Tu. and W. 3.30 (S.)	Dr. Milne, Wed., F. 10.30 (S.)	—
Materia Medica	Dr. A. D. Davidson, 4 (W.)	Dr. Fraser, 2 (W.)	Dr. Craig, 2 (W.), 9 (S.); Dr. G. A. Gibson, 9 (W. and S.)	Dr. Charteris, 12 (W.)	Dr. Morton, 4 (W.)	Dr. Dougall, 1 (W.)	Dr. Carmichael, 3 (W.)
Pharmacy	Dr. A. D. Davidson, 4 (S.	Dr. Fraser 10 (W. and S.	Dr. Craig, 9 and 3 (W.); 10 (S.)	Dr. Charteris, 12 (S.)	—	—	Dr. Carmichael, 12 (S.)
Botany	Dr. Trail, 8 A.M. (S.)	Dr. Dickson, 8 (S.)	Mr. A. N. McAlpine, M. W. F. 11 (W.). 9 (S.); Pract., 10 (S.	Mr. Bower, 8 A.M. (S.)	Mr. A. S. Wilson, 3 (S.)	—	—
Natural History.	Dr. H. A. Nicholson, 1 W. & S.); Practical, 3 (S.	Dr. Cossar Ewart, 2 (S.)	Dr. A. Wilson, 2 (S.); Mr. J. A Thomson, 3 (W. and S.)	Dr. Young 9 (W.)	—	—	—
Medicine	Dr. Smith-Shand, 3 (W.)	Dr. Grainger Stewart, 1 (W.)	Dr. J. Wyllie, Dr. Affleck, Dr. B. Bramwell and Dr. G. Brown, 9 (W.	Dr. Gairdner, 11 (W.); Tu.Th., 1 (S.)	Dr. Gemmell, 5 (W.)	Dr. J. W. Anderson, 12 (W.)	Dr. McVail, 11 (W.)
Surgery	Dr. A. Ogston. 10 (W.)	Mr. Chiene, 10 (W.)	Mr. Miller, Dr. MacGillivray, Mr. Cathcart and Mr. Caird 10 (W.)	Dr. Macleod, 1 (W.)	Dr. Dunlop, 11 (W.)	Dr. Macewen, 11 (W.)	Mr. Knox, 12 (W.)
Practical & Operative Surgery.	Dr. A. Ogston, 10 (S.)	Mr. Chiene, M.Tu.Th.F., 11 (S.)	Mr. Miller, etc. (as above) (S.)	Dr. Macleod, Mon. Wed. Fr., 1 (S.)	Dr. Dunlop, Mon. W. Fr., 11 (S.)	Dr. Macewen 12 (S.)	Mr. Knox.
Ophthalmic Surgery.	Dr. A. D. Davidson (S.)	Dr. D. A. Robertson, 9 (S.)	Dr. J. Robertson, Tu. Th., 4 (W.); M W.F., 3 (S.); Mr. G. Berry, Tu.W.Th F., 9 (S.)	Dr. T. Reid, Tu. Th., 2 (S.)	Dr. Wolfe, Sat., 1 (W.); Wed., 12 (S.)	Mr. H. E. Clark, Tu.Fr., 4 (S.)	—
Midwifery & Diseases of Women etc.	Dr. Stephenson, 4 (W.) Practical, 11 (S.	Dr. Simpson, 11 (W.); Practical, Tu.F., 10 (S.	Dr. Bell, 11 (W.), 10 (S.); Dr. Young, Dr. Murray 11 (W.); Dr. Croom, Dr. Hart, Dr. Barbour 10 (S.)	Dr. Leishman, 2 (W.)	Dr. A. Wallace, 1 (S.)	Dr. Stirton, 3 (W. and S.)	Dr. W. L. Reid, 12 (W.); Practical 12 (S.)
Pathology	Mr. D. J. Hamilton, 1 W.); Practical (W. & S.	Dr. Greenfield, 3 (W.); 11 (S.	Dr. A. Bruce, 11 (W.); Pract., 9 (S.) Dr. W. Russell, 2 (S.) Pract. 10 (S.	—, 3 (W.)	In Infirmary	Dr. D. Newman. 10 (S.); Pract. 8 A.M. (S.)	In Western Infirmary.
Medical Jurisprudence.	Dr. M. Hay, (S.), (with Medical Logic).	Sir D. Maclagan, 11 (S.)	Dr. Littlejohn, 2 (W.); 11 (S.); Mr. Aubrey Husband, 1	Dr. P. A. Simpson, 11 (S.)	Dr. A. Lindsay, 3 (S.)	Dr. Glaister, 11 (S.)	Dr. Eben Duncan, (S.)
Hospital	Royal Infirmary (*a*) daily, noon	Royal Infirmary (*b.*)	Royal Infirmary (*b*).	Western Infirm. (*c*). 9; Royal Infirmary (*d*)	Royal Infirmary (*d*), 9	Royal Infirmary (*d*), 9	Western Infirmary (*c*)
Clinical Medicine	Dr. Smith-Shand, Dr Beveridge, and Dr. A Fraser.	Drs. T. Grainger Stewart, Fraser, Greenfield, and Simpson (Dis. of Women), Tu. F., 12	Drs. Muirhead, Brakenridge, Wyllie Affleck, H. Croom (Obst.), Tu. F., 12 (W. and S.)	Dr. McCall Anderson and Dr. Gairdner, 9 (W. and S.)	Physicians of Royal Infirmary.	Physicians of Royal Infirmary.	Physicians of Western Infirmary
Clinical Surgery	Dr. A. Ogston, Dr. Will and Dr. Garden.	Mr. Annandale, M.Th., 12 (W. and S.)	Mr. Duncan, M.Th., 12 (W. and S.)	Dr. G. Buchanan and Dr. Macleod, 9 (W. & S.)	Surgeons of Royal Infirmary.	Surgeons of Royal Infirmary.	Surgeons of Western Infirmary

a. Aberdeen Royal Infirmary.—*Physicians:* Dr. Smith-Shand, Dr. Beveridge, and Dr. A. Fraser. *Surgeons:* Dr. A. Ogston, Dr. Will, and Dr. Garden. *Ophthalmic Surgeon:* Dr. A. D. Davidson. *Dental Surgeon:* Dr. Williamson. *Pathologist:* Dr. Rodger.

b. Edinburgh Royal Infirmary.—*Consulting Physicians:* Dr. D. R Haldane, Dr. G. W. Balfour, Sir D. Maclagan, and Dr. A. Keiller. *Physicians:* Dr. A. R. Simpson, Dr. T. Grainger Stewart, Dr. T. R. Fraser, Dr. Greenfield, Dr. C. Muirhead, Dr. Brakenridge, Dr. J. Wyllie, and Dr. Affleck. *Extra Physician and Lecturer on Diseases of Women:* Dr. J. H. Croom. *Assistant Physicians:* Dr. A. Smart, Dr. A. James, and Dr B. Bramwell. *Assistant-Physicians for Diseases of Women:* Dr. Berry Hart; Dr. H. F. Barbour. *Physician for Diseases of the Skin:* Dr. W. A. Jamieson. *Consulting Surgeons:* Dr. J. Dunsmure and Dr. J. D. Gillespie. *Surgeons:* Mr. J. Chiene, Mr. Annandale, Dr. J. Bell, Dr. Duncan, and Dr. A. G. Miller. *Extra Surgeon:* Dr. P. H. Watson. *Ophthalmic Surgeons:* Dr. D. A. Robertson, Dr. G. A. Berry. *Surgeon for Ovarian Diseases:* Dr. T. Keith. *Surgeon for Diseases of the Ear and Throat:* Dr. P. McBride. *Assistant Surgeons:* Dr. P. H. Maclaren, Dr. MacGillivray, Dr. Cotterill, Mr. Cathcart, Mr. Caird. *Assistant-Surgeon for Ovarian Disease:* Mr. S. Keith. *Pathologists:* Dr. Woodhead, Mr. Bruce. *Dental Surgeon:* Dr. J. Smith.

c. Glasgow Western Infirmary.—*Physicians:* Dr. Gairdner, Dr. McCall Anderson, Dr. Finlayson, Dr. G. P. Tennent. *Assistant Physicians:* Dr. J. Coats, Dr. Christie, Dr. McVail. *Physician for Diseases of Women:* Dr. Leishman. *Surgeons:* Dr. Macleod, Dr. G. Buchanan, Dr. A. Patterson, Dr. H. C. Cameron. *Ophthalmic Surgeon:* Dr. T. Reid. *Dispensary Physicians:* Dr. S. Gemmell, Dr. J. Alexander, and Dr. W. G. Dun. *Extra Dispensary Physicians:* Dr. R. Thomson; Dr. G. Dickson. *Out-door Physician Accoucheurs:* Dr. R. Kirk, Dr. W. L. Reid, Dr. M. Cameron. *Dispensary Surgeons:* Dr. Renton, Dr. Beatson, and Dr. Newman. *Dispensary Surgeon for Diseases of the Ear:* Dr. T. Barr. *Extra Dispensary Surgeons:* Mr. A. E. Maylard, Mr. J. Parker. *Dental Surgeon:* Mr. J. R. Brownlie. *Pathologist:* Dr. Coats.

d. Glasgow Royal Infirmary.—*Physicians:* Dr. Perry, Dr. Wood Smith, Dr. Robertson, Dr. W. Anderson. *Physician for Diseases of Women:* Dr. Stirton. *Surgeons:* Dr. Macewen, Dr. Dunlop, Mr. Clark, Dr. Lothian, Dr. Knox, Dr. Fleming. *Aural Surgeon:* Dr. J. Macfie. *Dental Surgeon:* Dr. J. C. Woodburn. *Assistant-Physicians:* Dr. Dougall, Dr. Middleton, Dr. T. B. Henderson, Dr. Campbell Black, Dr. Macphee, Dr. Steven. *Assistant-Surgeons:* Dr. Barlow, Dr. J. A. Adams, Dr. Muir, Dr. Shaw, Dr. Whitson, Dr. Macintyre. *Surgeon for Diseases of the Throat:* Dr. Newman. *Diseases of the Skin:* Dr. Provan. *Electrician:* Dr. Macintyre

£1 1s. The minimum cost of education in this school for the triple qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, including the fees for the joint examination, is £100, payable by yearly instalments.

Practical instruction in various subjects may also be obtained on payment of moderate fees at the Sick Children's Hospitals, Royal Public Dispensary and New Town Dispensary, Royal Maternity Hospital, and the Edinburgh Eye Infirmary.

University of Glasgow.—Dr. Gairdner will give a special course of lectures on Diseases of the Liver, Spleen, and Kidneys on Tuesdays and Thursdays at 1 P.M. in summer. Dr. Leishman lectures on Diseases of Women at 2 P.M. on Mondays, Wednesdays, and Fridays in the summer; and Dr. Yellowlees on Insanity at 12 A.M. on Wednesdays in the College, and at 10 A.M. on Saturdays in the Gartnavel Asylum.

The Chemical Laboratory is open from 10 A.M. to 4 P.M. (fee £10 10s. in winter, and £5 5s. in summer); the Physiological Laboratory from 9 A.M. to 4 P.M. winter and summer; the Zoological Laboratory from 10 A.M. to 1 P.M. in summer (fee £3 3s.); and the Botanical Laboratory from 9 A.M. to 4 P.M. in summer (fee £2 2s.) Demonstrations in the Botanical Gardens are given in the summer.

Fees, each course, £3 3s., except summer courses of Anatomy, Insanity, Diseases of Women, and Operative Surgery, each £2 2s., and Lectures on the Eye, £1 1s. In most of the courses for which £3 3s. is charged, the fee for a second session is £2 2s.; for a third session, £1 1s.

Glasgow.—Anderson's College.—The following courses are given in addition to those at p. 516. In winter, Senior Anatomy, Dr. Buchanan, 12.30 P.M.; in summer, Osteology, Dr. Buchanan, as may be arranged; Public Health, Dr. Christie, 4 P.M.; Aural Surgery, Dr. Barr, Thursday, 3 P.M. The Chemical Laboratory is open daily from 10 to 5. Students of the College are admitted to the practice of the Ophthalmic Institution on the payment of a matriculation fee of 5s.

Fees—Each course of lectures (except Anatomy), first session, £2 2s.; second session, £1 1s.; afterwards free. Anatomy (including Dissecting-room), first session, £4 4s.; second session, £4 4s.; third session and perpetual, £1 1s.; summer (including Practical Anatomy) £1 11s. 6d.; Osteology, £1 1s. Students who have attended classes at other schools will be admitted to such classes as they may have attended elsewhere at reduced fees. Fees for all the Lectures and Hospital Practice required of candidates for the diplomas of Physician and Surgeon, £48.

A Dispensary is connected with Anderson's College. Students have the privilege of visiting and treating patients at their own homes, being assisted by a specially appointed qualified practitioner.

Glasgow Royal Infirmary School of Medicine.—In addition to the subjects mentioned in the table at page 498, lectures are given in the summer on Aural Surgery, by Dr. Johnston Macfie, at 4 on Thursdays; and on Mental Diseases by Dr. A. Robertson at 12 noon, on Mondays and Thursdays, at the City Parochial Asylum.

Fees.—For each course, first session, £2 2s.; second session and perpetual, £1 1s. Students who have attended a first course elsewhere can enter on the second course on payment of £1 1s. Anatomy: first winter session, £4 4s.; summer session, £1 11s. 6d.; second winter session, £4 4s.; afterwards for Lectures and Practical Anatomy, £1 1s. per session. Lectures on Diseases of the Ear, £1 1s.; with Clinic instruction to those who are not students of the hospital, £2 2s. Lectures on Diseases of the Eye, £1 1s.

Prizes, etc.—Prizes and Honorary Certificates are awarded at the close of each session to those students who excel in the Oral and Written Class Examinations. David Foulis Memorial Scholarship, value £25, tenable by a graduate or licentiate whose professional education has, to the extent of not less than two years, been received at the University or one of the extramural schools in Glasgow, and who shall, in the opinion of the trustees, have manifested a capacity for original work in Pathology. John Reid Bursary, value £25, tenable for three years, open for competition to all students in the University or Extramural Schools of Medicine in Glasgow, for the best original research in medical science in the wards or scientific laboratories of the hospitals.

Glasgow Western Medical School.—This school is situated near the Western Infirmary, where students obtain their hospital practice and clinical lectures. The class-rooms have been newly arranged and enlarged. The attention of students is directed to the facilities for the study of Practical Anatomy and Operative Surgery, the supply of subjects being practically unlimited. The Dissecting-rooms are open from the beginning of October till the end of July.

Fees.—For each course of Lectures, first session, £2 2s.; second session, £1 1s. Students who have attended a first course elsewhere pay £1 1s. Anatomy, including Practical Anatomy, £4 4s.; summer session, £1 11s. 6d.

Glasgow Royal Infirmary.—The number of beds is 542; 212 for Medical and 330 for Surgical cases; and there are special wards for the treatment of Diseases of Women, and of Venereal Diseases in Males. Dr. Newman sees cases of Diseases of the Throat at the Dispensary at 11 A.M. on Tuesdays and Fridays. Dr. Macfie attends cases of Disease of the Ear at 3.30 on Thursdays and Saturdays. Dr. Provan sees cases of Diseases of the Skin at 12.30 on Wednesdays. Ophthalmoscopic demonstrations are given by Mr. H. E. Clark at 10 on Saturdays. Courses of Clinical Medicine and Surgery are given by the Physicians and Surgeons, and *post mortem* examinations are conducted by the Pathologist. Operations on Wednesdays and Saturdays at 9 A.M.

Appointments.—Four Physicians' and six Surgeons' Assistants reside in the hospital. These appointments can be held for one year, and are open to students who have passed all their examinations except the last, or to gentlemen who have a qualification in Medicine or Surgery. Clinical Clerks and Dressers are selected from the students without additional fee.

Fees for Hospital Practice and Clinical Lectures: first year, £10 10s.; second year, £10 10s.; afterwards free: for six months, £6 6s., three months, £4 4s. To perpetual students of other hospitals where the perpetual fee is equal to that of the Infirmary, £2 2s. for six months. For Vaccination certificate, £1 1s.

Glasgow Western Infirmary.—This Hospital adjoins the University of Glasgow. Number of beds 400. Special wards are set apart for Diseases of Women and for Cutaneous Affections. In the Out-patient Department there are special cliniques for Diseases of Women and for Disease of the Throat, Ear, and Teeth. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students may attend whichever they select at the beginning of the session. Special instruction is given to Junior Students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. All the courses of clinical instruction are recognised by the University of Glasgow and the other Boards in the Kingdom. In the Pathological Department, a systematic course is given in the winter, and a practical course in the summer; these are likewise recognised by the University for graduation. Eight resident assistants are appointed annually without fee, from those who have completed their course. An Out-door Obstetric Department is connected with the Infirmary.

Fee for the hospital practice, including the various courses of Clinical Instruction, is £21 in one payment, or in two equal instalments for the first and second years; for six months, £7 7s.; and for three months, £4 4s. For attendance in the Obstetric Department, the fee is £1 1s.

Glasgow Eye Infirmary.—Fee, six months, £2 2s.; for pupils of the Ophthalmic class in the University, £1 1s: three months, £1 1s.

Instruction may also be obtained at the Dispensaries for Diseases of the Skin and Ear; and at the Royal Lunatic Asylum, Gartnavel, Clinical Instruction in Insanity is given to students on payment of a small fee.

REGULATIONS TO BE OBSERVED BY CANDIDATES FOR ADMISSION INTO THE NAVAL, ARMY, AND INDIAN MEDICAL SERVICES.

ARMY MEDICAL STAFF.

1. Every candidate for a commission in the Army Medical Staff must be 21 years of age and not over 28 years at the date of commencement of the competitive examination. He must produce an extract from the register of his birth, or, in default, a declaration made before a magistrate by one of his parents or guardians, giving his exact age. He must produce a recommendation from some person of standing in society—not a member of his own family—to the effect that he is of regular and steady habits, and likely in every respect to prove creditable to the department if a commission be granted; and also a certificate of moral character from the parochial clergyman, if possible. 2. The candidate must sign a declaration on honour that both his parents are of unmixed European blood, and that he labours

under no mental or constitutional disease, or any hereditary tendency thereto, nor any imperfection or disability that can interfere with the efficient discharge of the duties of a medical officer in any climate; also that he does not hold, and has never held, any commission or appointment in the public services. His physical fitness will be determined by a board of medical officers, who are required to certify that his vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia will not be considered a disqualification, provided it does not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes exists. The board must also certify that he is free from organic or other disease, and from constitutional weakness or tendency thereto, or other disability of any kind likely to unfit him for military service in any climate. 3. Certificates of age, registration of diplomas, etc., and of character, must accompany the declaration when signed and returned. 4. Candidates will be examined by the examining board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows: *a*. Anatomy and Physiology, 1,000 marks; *b*. Surgery, 1,000 marks; *c*. Medicine, including Therapeutics, the Diseases of Women and Children, 1,000 marks; *d*. Chemistry and Pharmacy, and a Practical Knowledge of Drugs, 1,000 marks. The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and examination of medical and surgical patients at the bedside. The examination in Chemistry will be limited to the elements of the science, and to its application to Medicine, Pharmacy, and Practical Hygiene. No candidate will be considered eligible for the Army Medical Staff who shall not have obtained at least one-third of the marks obtainable in each of the above compulsory subjects. 5. Candidates may be examined in the following voluntary subjects, for which the maximum number of marks obtainable will be—French and German (150 each), 300 marks: Natural Sciences, 300 marks. A number less than one-third of the marks obtainable in each of these voluntary subjects will not be allowed to count in favour of the candidate who has qualified in the compulsory subjects. The knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. The Natural Sciences will include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to Materia Medica. 6. The appointments announced for competition will be filled up from the list of qualified candidates arranged in the order of merit, as finally determined by the total number of marks each has obtained in both the compulsory and the voluntary subjects. 7. After passing this examination, every successful candidate will be required to attend one course of practical instruction at the Army Medical School as a surgeon on probation on (1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of Diseases and Injuries incident to Military Service. 8. All surgeons on probation will be required to conform to such rules of discipline as the Senate may from time to time enact, and provide themselves with uniform; namely, the regulation undress and mess-uniform of a surgeon, but without sword. 9. They will be required to attend the medical staff mess at Netley, and to conform to the rules and regulations thereof.

Every candidate for appointment to the medical ranks of the Army Medical Staff must possess two diplomas or licences recognised by the General Medical Council—one to practise medicine, and the other surgery, and shall be registered under the Medical Act in force in the United Kingdom at the time of his appointment. A public and open competition will be held twice in the year for the admission of qualified candidates as probationers. The number of appointments so competed for will be not less than half of the number of vacancies which shall have arisen in the last completed half-year ending on June 30th or December 31st. Not less than half the number of vacancies will be filled up by competition, and it will be competent for the Secretary of State to fill up the remaining number from such qualified candidates as may be proposed by the governing bodies of public schools of medicine in the United Kingdom, or in the colonies, as he may think proper. Every candidate so proposed must be certified by the governing body proposing him to be duly qualified according to a standard to be laid down by the Secretary of State, and must be approved by the Director-General. The Secretary of State will from time to time fix the order of precedence and the proportion in which the several schools of medicine shall be offered the nomination of candidates. A surgeon on probation, on being so nominated, will be sent to some large station for instruction in ambulance and hospital corps duties, until the commencement of the next course of study at the Army Medical School. After passing through such course at the Army Medical School as the Secretary of State shall decide, the surgeon on probation, after passing a qualifying examination in the military medical subjects taught there, and satisfying the Director-General that he is a person of proper skill, knowledge, and character for permanent appointment in the Army Medical Staff will be commissioned as surgeon. The surgeons on probation who pass out of the Army Medical School at one qualifying examination will take precedence among each other as surgeons as follows: (*a*) Those appointed on nomination according to their date of joining on probation; (*b*) Those appointed on competition according to the last day of the competitive examination, and in the order of merit at such examination, with priority over any joining under subsection (*a*) on the last day of the competitive examination. A surgeon's commission will bear the date of the day of his passing out of the Army Medical School.

INDIAN MEDICAL SERVICE.

1. All natural-born subjects of Her Majesty, between twenty-two and twenty-eight years of age at the date of the examination, and of sound bodily health, may be candidates. They may be married or unmarried. They must possess a Diploma in Surgery, or a licence to practise it, as well as a Degree in Medicine, or a licence to practise it in Great Britain or Ireland. 2. The candidate must subscribe and send in to the Military Secretary, India Office, Westminster, so as to reach that address at least a fortnight before the date fixed for the examination, a declaration, stating his readiness to engage for the service and to proceed to duty immediately on being gazetted; also that he labours under no mental nor constitutional disease; nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer. A schedule of the degrees or licences possessed by the candidate, with the sources and dates thereof, must be appended. 3. This declaration must be accompanied by the following documents: (*a*) proof of age, either by extract from the register of the parish in which the candidate was born, or, where such extract is unattainable, by his own declaration (pursuant to the Act 5 and 6 Will. IV, c. 62), form of which can be obtained at the India Office; a certificate of baptism, which does not afford proof of age, will be useless; (*b*) a recommendation from some person of standing in society—not a member of his own family—to the effect that he is of regular and steady habits and likely in every respect to prove creditable to the service if admitted; and a certificate of moral character from a magistrate, or a minister of the religious denomination to which the candidate belongs; (*c*) a certificate of registration, in accordance with the Medical Act of 1858, of the degrees, diplomas, and licences possessed by the candidate. 4. The physical fitness of candidates will be determined previous to examination by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia will not be considered a disqualification, provided it do not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes exists. Every candidate must also be free from all other organic disease, and from constitutional weakness, or other disability likely to unfit him for military service in India. 5. On producing the foregoing qualifications, the candidate will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows: (*a*) Anatomy and Physiology, 1,000 marks; (*b*) Surgery, 1,000; (*c*) Medicine, including Therapeutics, the Diseases of Women and Children, 1,000; (*d*) Chemistry and Pharmacy, and a Practical Knowledge of Drugs, 1,000. The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The examination in chemistry will be limited to the elements of the science, and to its application to medicine, pharmacy, and practical hygiene. No candidate will be considered eligible who shall not have obtained at least one-third of the marks obtainable in each of the above compulsory subjects. 6. Candidates may be examined in the following voluntary subjects, for which the maximum number of marks obtainable will be: French, German, and Hindustani (150 each), 450 marks; Natural Sciences, 300 marks. The Natural Sciences will include comparative anatomy, zoology, natural philosophy, physical geography, and botany with special reference to materia medica. A number less than one-third of the marks obtainable in any of these voluntary subjects will not be allowed to count in favour of a candidate who has qualified in the compulsory subjects. The knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. 7. The ap-

pointments announced for competition will be filled up from the list of qualified candidates arranged in order of merit, as finally determined by the total number of marks each has obtained in both the compulsory and voluntary subjects. The Examiners in London will prepare a list in order of merit, with the marks affixed in the different subjects, to be transmitted to the Director-General, and communicated to the Professors of the Army Medical School. If any candidate is found to be deficient in any particular subject, this shall be stated, in order that he may receive special instruction on the point at Netley. 8. After passing their preliminary examination, candidates will be required to attend one entire course of Practical Instruction at the Army Medical School, as surgeons on probation, on 1. Hygiene; 2. Clinical and Military Medicine; 3. Clinical and Military Surgery; 4. Pathology of Diseases and Injuries incident to Military Service. These courses are to be of not less than four months' duration; but candidates who have already gone through a course at Netley as candidates for the Army or Navy Medical Service may, if thought desirable, be exempted from attending the School a second time. 9. During the period of his residence at the Army Medical School, each candidate will receive an allowance of eight shillings per day, with quarters, or, when quarters are not provided, with the usual lodging and fuel and light allowances of subalterns, to cover all costs of maintenance; and he will be required to provide himself with uniform (namely, the regulation undress uniform of a surgeon of the British service, but without the sword). 10. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact. 11. At the conclusion of the course, candidates will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the Professors of the School. The Director-General, or any medical officer deputed by him, may be present and take part in the examination. If the candidate give satisfactory evidence of being qualified for the practical duties of an Army Medical Officer, he will be eligible for a commission as surgeon. 12. The position of the candidates on the list of surgeons will be determined by the combined results of the preliminary and of the final examinations; and, so far as the requirements of the service will permit, they will have the choice of Presidency in India, according to their position in that list.

MEDICAL DEPARTMENT OF THE ROYAL NAVY.

1. EVERY Candidate for admission into the Medical Department of the Royal Navy must not be under 21 nor over 28 years of age on the day of the commencement of the competitive examination. He must produce an extract from the register of the date of his birth; or, in default, a declaration made before a magistrate, from one of his parents or other near relative, stating the date of birth. He must also produce a certificate of moral character, and a recommendation, signed by a clergyman or magistrate, to whom he has been for some years personally known, or by the president or senior professor of the college at which he was educated. 2. He must be registered, under the Medical Act in force, as possessing two diplomas or licences recognised by the General Council, one to practise Medicine, and the other Surgery, in Great Britain and Ireland. 3. He must sign a declaration that he is a British subject, the son of parents of unmixed European blood, that he labours under no mental or constitutional disease or weakness, or any other imperfection or disability which may interfere with the most efficient discharge of the duties of a medical officer in any climate; and that he does not hold, and has never held, any commission or appointment in the public services. He must also declare his readiness to engage for general service at home or abroad as required. He must be free from organic or other disease, and his physical fitness will be determined by a Board of Medical Officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's Test Types. The certificates of registration, character, and birth, must accompany the declaration, which is to be filled up and returned as soon as possible, addressed as above. 4. Candidates will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows: *a*, Anatomy and Physiology; *b*, Surgery; *c*, Medicine, including Therapeutics and the Diseases of Women and Children; *d*, Chemistry and Pharmacy, and a practical knowledge of drugs, each 1,000 marks.

The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The examination in Chemistry will be limited to the elements of the science, and to its application to medicine, pharmacy, and practical hygiene.

No candidate will be considered eligible who shall not have obtained at least one-third of the marks obtainable in each of the above compulsory subjects. 5. Candidates may be examined in the following voluntary subjects, for which the maximum number of marks obtainable will be: French and German (150 each), 300 marks; Natural Sciences, 300 marks. A number less than one-third of the marks obtainable in each of these voluntary subjects, will not be allowed to count in favour of the candidate who has qualified in the compulsory subjects. The knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. The Natural Sciences will include Comparative Anatomy, Zoology, Natural Philosphy, Physical Geography, and Botany, with special reference to Materia Medica. 6. The appointments announced for competition will be filled up from the list of qualified candidates arranged in the order of merit, as finally determined by the total number of marks each has obtained in both the compulsory and voluntary subjects. 7. Successful candidates, immediately after passing the examination, will receive Commissions as Surgeons in the Royal Navy, and will undergo a course of practical instruction in Naval Hygiene, etc., at Haslar Hospital.

PROPOSED CONJOINT SCHEME OF THE IRISH COLLEGES.

THE Combined Committee of the King and Queen's College of Physicians and the Royal College of Surgeons in Ireland, appointed with a view to the establishment of a Conjoint Examining Board between the Colleges, have had nine meetings; and the following arrangements have been agreed to in reference to the proposed scheme.

Examiners shall be appointed by the two Colleges, in equal proportion, to examine in the following subjects, namely, Chemistry, Physics, Materia Medica, Pharmacy, Anatomy, Physiology and Histology, Medicine, Surgery, Midwifery, Therapeutics, Forensic Medicine and Hygiene, Pathology, and on such other subjects as may hereafter be required. A Committee of Management shall be appointed, to consist of three representatives from each College, to be elected annually, whose duties shall be as follows: To arrange examinations, in accordance with regulations approved by the Colleges; to consider such questions relating to the examinations as may be referred to them by either College, and to report upon the same; and to make periodical reports to the Colleges regarding the examinations, to be accompanied by any suggestions which the Committee may deem advisable regarding the conduct of the examinations. There shall be four examinations, while the fees shall remain as heretofore, and each College shall pay its own examiners. Each candidate who passes the final examination shall receive the licence in medicine of the College of Physicians, and the licence in surgery of the College of Surgeons.

Each College shall be at liberty to withdraw from this scheme after a certain time, on giving one year's notice in writing of their intention of doing so. The examinations shall be held in April, July, and October. There shall be four examinations, the subjects for examination being distributed as follows: *First Examination:* Physics, Chemistry, Anatomy, Practical Pharmacy. *Second Examination:* Anatomy, Histology and Physiology, Chemistry, Materia Medica. *Third Examination:* Anatomy, Physiology, Medicine, Surgery. *Fourth Examination:* Medicine, Surgery, Therapeutics, Pathology, Midwifery and Diseases peculiar to Women, Forensic Medicine, and Hygiene.

Every candidate for the conjoint diploma must show satisfactory evidence of having attended courses of instruction in the following subjects, and for the time specified in each: Demonstrations and Dissections, three courses of six months each; Practical Anatomy, two courses of six months each; Physiology or Institutes of Medicine, Chemistry, Practice of Medicine, Surgery, and Midwifery, each one course of six months; Practical Physiology or Histology, one course; Practical Chemistry; Materia Medica; Medical Jurisprudence, each one course of three months; Operative Surgery, one course in summer session; Hospital twenty-seven months, and six months as clinical clerk or notes of six cases, and attendance upon demonstrations in the *post mortem* room of a recognised hospital; Practical Midwifery, six months, with a certificate of having attended thirty cases of labour.

The following members will constitute the Committee of Management: for the King and Queen's College of Physicians, Drs. Atthill, Gordon, and Grimshaw; and for the Royal College of Surgeons, Messrs. Barton, Hamilton, and Kidd. The fees for the conjoint diploma will amount to £42, of which £26 5s. will go to the Royal College of Surgeons.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 11th, 1886.

PRELIMINARY EDUCATION.

H theory of education has played a considerable part in all systems philosophy since that of Plato, and, of late, has received even more general attention than hitherto; but, though fashions have often changed, yet few stable conclusions have been reached, and there is much ground left as yet for eager debate. During the last few generations, the rapid growth of knowledge has changed the conditions, and made such an encyclopædic education as Milton sketched out more than two centuries ago quite too extensive to be possible now-a-days; nevertheless, the practice of laying some broad foundation of non-professional training to professional knowledge gains ground, and wins approval on all sides. The subject matter of the medical profession is growing more difficult, or, rather, we realise its many difficulties more fully, and feel more bound to attempt to train its younger members to grapple with them; the profession, moreover, stands, on the whole, better in credit with its bankers and with the world, and is inclined to think it worth while to use some of its opportunities wisely enough in obtaining a more thorough general education.

The character of the general education to be sought after is not so easily determinable. After some warm controversy between the partisans of the old knowledge and the new as to the subjects to be taught, most of the best judges have arrived at a compromise, which one of them happily expresses by saying that science must come in, and language must not go out. More widely trained teachers, better schools, or "modern school" departments are necessary to carry out such a compromise, and are being slowly but steadily manufactured to meet the demand. But the teacher's profession, like most others that need skill and knowledge, is as a profession very conservative, and does not easily adapt itself to new moulds; and in this matter the public has not clear enough perception of what it wants to be able to hurry on the supply. It is gradually becoming plain that we need not imagine all the advantages of a training in language to be bound up with Latin and Greek. The grammar of the classical languages may be the most reasonable and complete, but it is not the only grammar; and, at the outset of an education in language in England, it is much more rational to begin by teaching English grammar (for, indeed, there is such a thing, and it is well worth study), to pupils who have probably gained—they know not how—a considerable volubility in English sentences. It probably does not alter their speech much, but it may serve to introduce them to system, and show them that it is applicable to the most familiar things, namely, the words of daily life. So, too, any of the simpler branches of the sciences of observation of the outside world of Nature may serve as the introduction to another field of system. Both paths lead on to abundant and profitable learning; the study of the English grammar leads on to the English literature, of which many of the treasures are now habitually passed by; the elementary science to the great generalisations of natural science which have had so strong an influence on our age.

It is, fortunately, not so often the case now as it used to be, that purely professional education is begun in boyhood. There are not so many country apprenticeships served, not so many entrances made at medical schools before the age of 17, but more cases where a non-professional education has been allowed to run on to twenty-one, or even later, and the paths of barrister, doctor, and divine have lain together till they have come of age. Those who have intended throughout to seek medicine as a profession, and have had any capital to invest in themselves, have found a public school and University career a profitable as well as a pleasant investment.

The eagerness with which university degrees are sought, show that the public like to see something that they may fancy is evidence of an University life. The elder English Universities (and of them Cambridge most readily and freely) have opened their doors and arranged their teaching so as to make themselves comfortable homes of learning for medicine as well as the other arts and sciences. If an University be doing its duty, it should make itself a focus of all kinds of knowledge, and always be able to hold up before its pupils the dry flame of truth, the pursuit of knowledge for its own sake, and offer thus what may prove to be one of the very few chances in life of coming into contact with true student habits that have for some people a rare fascination.

The education of the chief public schools, as it stands at present, may perhaps be thought too apt to lead along the old established paths of learning exclusively. That, however, is being quickly altered even at the most conservative schools. A boy's classical education may fade easily, but it is no small addition to the knowledge of human nature and capacity to have gained some dim idea of the genius of Hannibal and the personality of Socrates, of the tale of Troy and the rhythm of Virgil; and what remains of any early education most deeply fixed is not mainly the facts and figures,—whether they be of the natural sciences or of grammar and language, or of the history of the world,—but some notions, vague perhaps, but strong, of the extent of knowledge in this direction or that, and some generalisations that it may have cost the world centuries to supply, and along with these some love of knowledge, or at least some respect for it, based most probably on the recollection of the trouble that was necessary to acquire some small portion of it.

But we cannot be satisfied with only a strong "bookmindedness," as Wordsworth called it; we want a practical education also, for we have to deal with living human beings, and it is of the first importance that as many lessons as possible should be learned of the varieties of human nature; and of such lessons the life at a public school and a University, apart from the knowledge taught there, supplies a noteworthy abundance, and affords a large contribution to one form of the *tactus eruditus* which the world specially appreciates and admires and calls, in short, tact.

BEQUEST.—Miss Maria A. J. Nightingale, of Ludlow, Salop, has bequeathed £2,000, free of duty, to the Salop Infirmary.

CHANGES IN THE EXAMINATIONS AND IN THE MEDICAL SCHOOLS.

THE following are the principal changes which have taken place during the year in the regulations of examining bodies.

The University of Oxford has been the scene of an important and salutary change as regards Medicine. Up to the present year, Medicine has been only a part of the Faculty of Natural Science. Now, however, it has been formed into a distinct Faculty, comprising a Sub-faculty of Surgery; and a series of regulations for degrees in medicine and surgery have been adopted. They are printed at page 491. The means of teaching the elementary branches of medical science has been augmented and improved; and the University has also instituted an examination in Public Medicine.

In the University of London, the Intermediate Examination for the degree of Bachelor of Medicine will in future be held twice a year—in January and July. The January examination will be for pass candidates only; the July examination for both pass and honour candidates. There will be no separate examination for honours. The arrangements respecting this examination, which are analogous to those adopted last year with reference to the Preliminary Scientific Examination, will come into force in July, 1887. They will be found in detail at page 493. In the examinations for the degrees of Doctor of Medicine and Master in Surgery, for Logic and Psychology, is substituted Mental Physiology, especially in its relations to Mental Disorders; and, in and after 1888, the gold medals for the most distinguished candidates for these degrees will be awarded on the result of the entire examination, including Mental Physiology.

After several unsuccessful attempts, extending over many years, the Colleges of Physicians and Surgeons in Dublin are at last in a fair way of forming a conjoint-board for examination. The details of the scheme, so far as have been agreed on by the committee appointed by the two Colleges, are given at page 531. The scheme will, under the provisions of the Medical Act, not come into force until it has received the sanction of the General Medical Council. The Apothecaries' Hall of Ireland is not included, at present, in the scheme. In England, the Society of Apothecaries of London has applied to be admitted to participation in the conjoint scheme of examination; and the proposal is under consideration by the Colleges of Physicians and Surgeons.

In the Medical Schools, the following changes have been made.

At St. Bartholomew's Hospital, Dr. T. W. Shore lectures on Comparative Anatomy, in place of Dr. Norman Moore.

At St. George's Hospital, Dr. Delépine lectures on Physiology, in place of Dr. W. Ewart, and teaches Practical Physiology in the summer; Mr. E. Le Cronier Lancaster having charge of this department in the winter. Mr. D. M. Ross and Mr. H. W. Allingham have been appointed Demonstrators of Anatomy.

At Guy's Hospital, there is a vacancy in the staff of physicians, in consequence of the death of Dr. Moxon. Dr. Hale White is associated, in place of Dr. Carrington, with Dr. Pye-Smith in the department of Diseases of the Skin. Mr. Beddard lectures on Biology, in place of Dr. Brailey and Dr. Shaw. Provision for a course of lectures on Botany is absent from the programme for 1886-87.

At King's College Hospital, Dr. George Johnson has retired from the office of Physician, and has been appointed Consulting Physician. Dr. R. Dalton has been appointed an Assistant-Physician. Mr. Royes Bell, one of the surgeons, has died; Mr. W. Rose has become Surgeon, with care of out-patients; and Mr. Boyce Barrow has been appointed an Assistant-Surgeon.

At the London Hospital, there is no change, except that Mr. Waren Tay lectures on Diseases of the Eye, in place of Mr. James Adams.

At St. Mary's Hospital, Mr. Haynes Walton, the senior surgeon, has retired, and has become a consulting surgeon. Mr. Herbert Page has been promoted to the Surgical in-patient department; and Mr. A. Q. Silcock has been appointed a Surgeon, with care of out-patients. Dr. Wiltshire, lately Physician-Accoucheur in charge of out-patients, has retired, and Dr. Montagu Handfield-Jones has been appointed in his room. Dr. R. Maguire is associated with Dr. Silcock in teaching Pathology and Morbid Anatomy.

At the Middlesex Hospital, Mr. J. Bland Sutton has been appointed an Assistant-Surgeon. Dr. Finlay gives a short course of lectures on Hygiene.

At St. Thomas's Hospital, one of the surgeons, Mr. Francis Mason, has died; and Mr. Ranger has retired from the office of Dental Surgeon. Mr. Copeman has been appointed Demonstrator of Physiology and Practical Physiology. Dr. E. Seaton succeeds Dr. Alfred Carpenter as Lecturer on Public Health.

In University College, Dr. W. D. Halliburton has been appointed Assistant Professor of Physiology, in place of Dr. McWilliam, who has gone to Aberdeen. Mr. Flemming has succeeded Mr. Thring as a Demonstrator of Anatomy. Mr. John Tweedy has become Professor of Ophthalmic Surgery and Ophthalmic Surgeon to the Hospital, in place of the late Mr. Streatfeild.

At the Westminster Hospital, Mr. Plant has succeeded Mr. Powel as a Demonstrator of Anatomy.

In Queen's College, Birmingham, Mr. Barling teaches Pathology, in place of Dr. Rickards.

In Owens College, Manchester, Dr. William Stirling, Professor of Physiology in the University of Aberdeen, has succeeded to the Brackenbury Professorship of Physiology, vacated last year by Dr. Arthur Gamgee. Sir Henry E. Roscoe has resigned the chair of Chemistry, which is at present vacant.

In the Sheffield School of Medicine, connected with Firth College, Mr. Atkin takes the place of Mr. Simeon Snell as Lecturer on Anatomy. In the Sheffield Infirmary, Mr. Barber has retired from the office of Surgeon, and has been appointed Consulting Surgeon; and the vacant office of Surgeon has been filled by the appointment of Mr. G. H. Shaw.

In the Newcastle-on-Tyne Infirmary, Dr. Limont has been appointed an additional physician.

In the University of Aberdeen, Dr. McWilliam, Assistant-Professor of Physiology in University College, London, has been appointed Professor of Physiology in place of Dr. William Stirling, transferred to Owens College, Manchester.

In the Edinburgh Royal Infirmary, Dr. D. Berry Hart has been appointed Senior Assistant-Physician, and Dr. H. Freeland Barbour Junior Assistant-Physician, for Diseases of Women. Dr. Halliday Croom has been appointed Extra Physician and Lecturer on Diseases of Women, in place of Dr. Angus Macdonald. Dr. Affleck has been appointed Physician, and Dr. Byrom Bramwell an Assistant-Physician. Mr. Caird has been appointed Assistant-Surgeon in place of the late Dr. John Bishop. Dr. Sims Woodhead and Mr. A. Bruce

have been appointed Pathologists. Mr. Skene Keith has been appointed Assistant-Surgeon for Ovarian Diseases.

In the Extra-academical School of Edinburgh, Dr. Berry Hart has been appointed Lecturer on Midwifery and Diseases of Women, in place of the late Dr. Angus Macdonald. Dr. H. F. Barbour has also been appointed a Lecturer on the same subject. Mr. Caird has been appointed a Lecturer on Surgery. Dr. R. W. Felkin has been appointed Lecturer on Diseases of the Tropics and Climatology.

In the Glasgow Royal Infirmary, Dr. Macintyre has been appointed Electrician.

In the Glasgow Western Infirmary, Dr. McVail has been appointed an Assistant-Physician, Dr. W. G. Dun a Dispensary Physician, and Dr. R. Thomson and Dr. G. Dickson Extra Dispensary Physicians. Dr. T. Reid has been appointed Ophthalmic Surgeon.

OPENING OF THE MEDICAL SCHOOLS.

THE subjoined is a list of the Medical Schools in England and Scotland, with the date of their opening, and a statement of the ceremony, if any, which will take place on the occasion.

St Bartholomew's Hospital—October 4th; annual dinner of old students.

Charing Cross Hospital—October 1st.

St. George's Hospital—October 1st, 4 P.M.; address by Dr. Wadham; annual dinner at the Criterion Restaurant, Dr. Clifford Allbutt, F.R.S., in the chair.

Guy's Hospital—October 4th; *soirée* at 8.30 P.M.; distribution of medals and prizes.

King's College—October 1st, 4 P.M.; address by Dr. G. Johnson, F.R.S.; distribution of prizes.

London Hospital—October 1st, 8 P.M.; distribution of prizes; *conversazione.*

St. Mary's Hospital—October 1st, 3 P.M.; address by Mr. Malcolm Morris; annual dinner at the Holborn Restaurant at 6 for 6.30 P.M., Mr. E. Owen in the chair.

Middlesex Hospital—October 4th, 3 P.M.; address by Dr. C. Y. Biss; distribution of prizes; dinner at the Holborn Restaurant at 6.30.

St. Thomas's Hospital—October 1st, 3 P.M.; address by Dr. Bristowe, F.R.S.; annual dinner in Governors' Hall at 6 for 6.30.

University College—October 4th, 4 P.M.; address by Mr. A. E. Barker; annual dinner at Freemasons' Tavern on October 4th, at 6.30, Sir William Roberts in the chair.

Westminster Hospital—October 4th, 3.30 P.M.; address by Mr. James Black; distribution of prizes; annual dinner at the Holborn Restaurant at 7 P.M.

London School of Medicine for Women—October 1st.

Birmingham Queen's College—October 1st; distribution of prizes; *conversazione.*

Bristol University College Medical School—October 1st.

Yorkshire College, Medical Department (Leeds School of Medicine)—October 1st, 4 P.M.; address by the Rev. F. J. Jayne, M.A., Vicar of Leeds; annual dinner at 6 P.M.

Liverpool University College, Medical Department—October 4th.

Owens College, Manchester, Medical Department—October 1st.

Firth College (Sheffield School of Medicine)—October 1st, 5 P.M.; address by Dr. W. S. Porter.

University of Durham College of Medicine, Newcastle-on-Tyne—October 1st, 2 P.M.; presentation of scholarships and prizes.

Aberdeen University—October 27th.

Edinburgh University—October 19th.

Edinburgh School of Medicine—October 20th.

Glasgow University—October 26th; address by Professor Macleod.

Glasgow, Anderson's College—October 26th, 2 P.M.; address by Dr. J. R. Wolfe.

Glasgow Royal Infirmary School of Medicine—October 26th, 1 P.M.; address by Dr. John Barlow.

Glasgow Western School of Medicine—October 26th.

WE are requested to state that a meeting in connection with the subject of Medical Defence will be held at the Queen's Hotel, Birmingham, on September 14th, at 4 P.M.

THE meeting to consider the subject of Direct Representatives of the Profession in the General Medical Council will be held in the same place, also on September 14th, at 3 P.M.

THE fifty-ninth annual meeting of the Association of German Naturalists and Physicians will be held in Berlin during the week from September 18th to 24th. The Sections will assemble in the University and neighbouring buildings.

REPRESENTATION OF THE PROFESSION IN THE GENERAL MEDICAL COUNCIL.

THE Lords of the Privy Council have issued a schedule of regulations for conducting the election of direct representatives of the medical profession, in accordance with the Medical Act of 1886. The returning officer is to issue his precept to each Branch Council within the period of seven days ending on November 13th. The great pressure on the space of the JOURNAL prevents the publication of the regulations in the present number. They shall appear next week.

ST. MARY'S HOSPITAL.

THE Governors of St. Mary's Hospital have made arrangements for the complete reconstruction of the drainage and sanitary fittings. This has become necessary owing to the rapid development of and recent additions to the institution. The School was enlarged some three years ago, but there is already necessity for its further increase. A new wing is being built to meet the increasing requirements of students, and it is hoped that every arrangement will be completed at the opening of the Winter Session.

CHARGE AGAINST A MEDICAL MAN.

A SURGEON named Oldfield, residing in Walworth, has been charged at the Lambeth Police Court with indecent conduct towards a girl named Jane Onley, who consulted him on account of a poisoned finger; he has been committed for trial. The magistrate, Mr. Chance, is reported to have said, in giving his decision, "that there were very unsatisfactory elements in the prosecution; but it was a case which, in justice to all parties, he must leave to a jury to decide."

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

DURING the meeting of this association in Birmingham, several interesting papers bearing on medicine and the collateral sciences have been read and discussed. On Friday, September 3rd, there was a combined meeting of the Mathematical and Physical Section, and the Biological Section, to discuss the subject of colour-vision. After some opening remarks from the president, Mr. Darwin, the discussion was continued by Lord Rayleigh, Dr. König, Professor Michael Foster, Mr. J. Tennant, and Professor Haycraft. In the Subsection of Physiology, a discussion on Cerebral Localisation was opened by Mr. Victor Horsley, and was continued by Professor Schäfer, Dr. Donaldson,

and Professor Haycraft. Dr. James Blake read a paper on the connection between Molecular and Biological Action. Mr. G. W. Hambleton read a paper on the Scientific Prevention of Consumption; and Dr. R. W. Felkin one on Acclimatisation of Europeans in Tropical Africa. In the same subsection, Professor Windle, of Birmingham, read a paper on Man's Lost Incisors. On Monday, September 6th, Professor Rutherford, of Edinburgh, delivered a lecture on the Sense of Hearing.

AN UNDESIRABLE EXPERIMENT.

A RECENT incident in the Michigan College of Medicine has been a source of much anxiety to more than one of the parties concerned. One of the professors of clinical medicine was giving his final lecture to the class on the subject of venæsection. No patient being at hand upon whom the operation could be performed, the lecturer asked for a volunteer. One of the students responded, and was bled. The demonstration was successful; but subsequently inflammation of the wound supervened, followed by abscess, erysipelas, etc., and caused the gravest anxiety to the student, his parents and fellows, and to the operator himself. Fortunately, the patient is convalescent. The incident is one which may well be borne in mind by would-be observers. We are already familiar with experiments on the human subject, which, whatever their value as arguments, have led to more or less serious consequences. The experimenters were in many cases students, and were, therefore, probably undeterred by consideration for their wives and families; but certainly some caution is desirable, since a fatal result would, in all probability, result in a verdict of manslaughter against the victim's accomplices.

AMERICAN PUBLIC HEALTH ASSOCIATION.

THE Fourteenth Annual Meeting of this Association will be held at Toronto, on October 5th, 6th, 7th, and 8th, 1886. The Executive Committee have selected the following topics for consideration at the meeting:—1. The disposal of the refuse matters of cities and towns. 2. The condition of stored water-supplies, and their relation to the public health. 3. The best methods and the apparatus necessary for the teaching of hygiene in the public schools, as well as the means for securing uniformity in such instruction. 4. Recent sanitary experiences in connection with the exclusion and suppression of epidemic disease. 5. The sanitary conditions and necessities of school-houses and school-life. 6. The preventable causes of disease, injury, and death in American manufactories and workshops, and the best means and appliances for preventing and avoiding them. 7. Plans for dwelling-houses.

VENTILATION OF THE HOUSE OF COMMONS.

THE Ventilation Committee of the House of Commons held their final sitting for this session on Thursday, September 2nd, and carefully inspected the works now in progress at Speaker's Green. We may remind our readers that, after hearing a considerable variety of evidence, and taking the opinions of several distinguished experts, the Committee unanimously decided to adopt the pneumatic process of Mr. Shone, which has worked with complete success at Eastbourne and elsewhere, and which, whilst extracting and ejecting the drainage proper of the House, cuts off all communication between its system and that of the metropolitan main sewer. Mr. Shone was present to explain his plans, and to assure those most immediately concerned that, in spite of the yawning chasms, gigantic cranes, and general confusion, which make chaos supreme in the once quiet court, his work will be effectually finished when the House meets in February, and all traces of it removed, save a small and not unornamental window flush with the ground near the Embankment end. In addition to this, the unnecessarily large size of the old sewer will be curtailed by a twelve-inch iron pipe coated with Dr. Angus Smith's material; and, still more important, a stop has been put to the mischievous practice of injecting steam from the laundry and heating apparatus into the sewers, and thus liberating sewer-gas, which found its way into the House. The laundry is to be removed from its present very inconvenient position; a better system of ventilation will be contrived for the various lobbies; and the water-closets on the basement, which are now far behind the progress of sanitation, are to be entirely removed, and placed where they cannot be, as at present, a source of general annoyance. When the Committee meets again in February, they will take up the subject of the drainage of the residences of the officials of the House, which, there is reason to believe, is far from satisfactory. Meanwhile, careful investigations are being made, and all the necessary information procured, to enable the work of reconstruction to be vigorously taken up when a suitable opportunity offers. The Committee has been much hampered throughout by the absence of any detailed plan of the sewerage of the House. It appears that, in consequence of a dispute with the authorities, Sir Charles Barry retained, and refused to give up, the drawings which he had prepared; and no trace of them can be found in the possession of his representatives. Much labour has, therefore, devolved on Mr. Taylor and the department which he ably directs; but the result will be satisfactory, and will place in the possession of the Office of Works complete details of where the drains are, how they run, and what improvements are required; and, finally, we hope that Mr. Plunkett, who has taken a deep personal interest in the inquiry, may see his way to adopt the recommendations of the Committee, and place the ventilation and sanitation of the House under one single responsible head. At present, the system of dual control, although worked by able and experienced officers, leaves much to be desired.

SCOTLAND.

CITY FEVER HOSPITAL, EDINBURGH.

THE appointment of Visiting Physician to the Edinburgh Fever Hospital has at length been filled up by Dr. Littlejohn, Medical Officer of Health, who has appointed Dr. William Allan Jamieson, F.R.C.P.E., at present Lecturer on Diseases of the Skin in the Edinburgh School, to it. This is the first appointment of the kind in Edinburgh, and the salary is £20 *per annum*. The subject of a convalescent home for fever patients is at present being mooted; and at a meeting of the Town Council, held on Monday, notice was given of a motion that it be remitted to the Public Health Committee "to consider as to whether donations made by patients, or friends of patients who have been treated in the Fever Hospital, could be applied towards carrying on a convalescent home for patients, so as to complete their recovery," and report.

GLASGOW PHILANTHROPY.

A GLASGOW merchant, who has succeeded, by dint of tremendous energy, backed by advertising, in building up an immense business in a comparatively few years, has lately been spending some of his money in a very laudable way. Some weeks ago, he chartered a steamer, and took 1,000 poor children a trip down to the sea-coast, to one of the Clyde watering-places, where they enjoyed themselves for an afternoon, being well looked after and hospitably entertained, and were brought back to the city in the evening. A week ago, another large detachment were treated to the same enjoyment. The scoffers allege that it is a new form of advertisement. If so, it can easily be made of little value as an advertisement by other merchants with as large businesses doing likewise. Another Glasgow citizen has recently benefited the city in another way. He has intimated through his law-agent, his own name being kept back, that he is prepared to give to the city fifty acres of ground situated on the Cathkin "braes," provided they "be kept and maintained in perpetuity as a place of resort by the inhabitants of Glasgow," but kept in the natural state without embellishment, and preserved from cricket, football, and sports of a similar kind, for which it is not suited. The ground is situated over 600 feet above sea-level, and commands extensive views of the valley

of the Clyde, and of the whole range of the Campsee Fells and the Allpatrick Hills, with the background of Ben Lomond and the ranges of Argyllshire. It is within easy walk of the city. The gift has been gratefully accepted by the Town Council for the citizens.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1886.

ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary*.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting will be held at the National Art Treasures Exhibition, Folkestone, September 23rd, at 3 P.M. Dr. Thomas Eastes in the chair. The chairman will be glad to see all members and their friends to luncheon, at the Exhibition, between 1 and 2. Members wishing to read papers, or send communications, should write to the Honorary Secretary at once.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

NORTH OF ENGLAND BRANCH.—The next meeting will be held at the Newcastle-on-Tyne Infirmary on September 28th. Members wishing to read papers are requested to write to the Honorary Secretary at once.—G. E. WILLIAMSON, 22, Eldon Square, Newcastle-on-Tyne.

LANOLIN.—On the occasion of the reading of a paper by Dr. Thomas G. Morton, on "Lanolin," before the Royal College of Physicians, Philadelphia, Dr. Keen bore the following testimony to its use and value. He observed, "I have used lanolin in several instances during the last week or ten days. One case was that of a child, eight years of age, with an enlarged gland under the jaw, the size of an English walnut. I prescribed iodine, two grains to the drachm of lanolin. I saw the child a week ago, and the gland had almost entirely disappeared. There was a more rapid disappearance than I have ever seen from other iodine applications. "This," he observes, "is the only case in which I have had any results, although I have used it in a number of instances, and like it very well."

OBITUARY.

CHARLES CHADWICK, J.P., M.D., F.R.C.P.Edin. (1845); F.R.C.P.Lond. (1866).

Consulting Physician to the General Infirmary at Leeds; Physician to the Leeds Fever Hospital; late Lecturer on the Principles and Practice of Physic at the Leeds School of Medicine; and formerly President of the British Medical Association (1869).

BORN at "Chadwick Lodge," Leeds, March 19th, 1815.
DIED of Acetonæmia, somewhat suddenly, at the Palace Hotel, Buxton, August 30th, 1886.

So runs the short record of one of the most useful among the many distinguished lives that Leeds has known; a life, complete in its professional roundness; which has been an honour to the profession it has adorned; and which will leave behind it nothing but the kindliest of kindly recollections.

To have been one of the band of the Heys, and Smith, and Teale; of Chadwick and of Heaton; of the men, that, is, who, by the exceptional brilliancy of their work in life, have shed lustre upon Leeds, and made its reputation what it is, is in itself sufficient to cover any name with honour, and so the name of Charles Chadwick will pass into the possession of posterity.

Born in Leeds, in 1815, he was essentially a Leeds man; and, for many years, he occupied a foremost place amongst its best known and most philanthropic citizens.

In all good works, whether affecting the borough of Leeds only or the wider sphere of the West Riding of Yorkshire, he was always to be found occupying a leading position, and his sagacity and judgment were rarely at fault in the selection of the objects which he deemed worthy of encouragement and support.

As a medical man, Dr. Chadwick won for himself a reputation on which the boundaries of Yorkshire placed no limitation; and, at the same time, he bestirred himself nobly on behalf of the needy about his own doors. For close upon forty years, he followed his profession in Leeds, and no public medical charity existed during that long period that was not benefited by his advice, or by his skill, or by substantial aid from his purse.

Twelve years ago, when removal was necessitated by failing health, he regretfully left Leeds and took up his residence at Tunbridge Wells. For a time he appeared greatly to benefit by the change, and comparatively more restful life; and he was consequently enabled, to his great satisfaction, to continue to take a fairly active part in some of the labours which he considered to be among the great works of his life.

To the last he took a steadily active part, as an Honorary Vice-president, in the conduct of the affairs of the British Medical Association, and, so lately as the Brighton meeting, he was to be seen actively taking part in the business.

His death came upon his friends as a surprise, although the ailment (diabetes) from which he suffered has frequently a somewhat sudden termination.

Only a few weeks ago, Dr. Chadwick visited his native town, and then manifested a degree of robustness which led his family and his former friends to hope that, for a time, at any rate, his life might yet be spared to them.

He received the major part of his medical education in Edinburgh, and the first degree taken by him was that of M.D. of the University of Edinburgh. In later life, he became a Fellow of the Colleges of Physicians both of Edinburgh and of London; and the honorary degree of D.C.L. was conferred upon him by the University of Durham.

It is known also to his friends that Dr. Chadwick was the first provincial physician ever proposed for a seat in the Council of the Royal College of Physicians of London. This was an honour which he deemed the highest that had ever been offered to him; but, in consequence of the great uncertainty of his failing health, and in fear lest he should not be, at all times, able to undertake or adequately to fulfil all the duties such a position would have entailed upon him, he felt himself constrained in honour, and to his intense regret and sorrow, to decline.

For, of all the personal qualities by which Dr. Chadwick was cha-

racterised, a thorough loyalty to anything he undertook was, perhaps, the strongest and most marked.

As a friend, he could be depended upon through the darkest, as surely as through the sunniest of times; and, as a colleague, none know so well as those with whom he worked in Leeds, how loyal and how true he was; and yet, those with whom he has been associated in other great undertakings, such as the work of the British Medical Association, and others, will readily call to mind many an apt illustration of this quality.

The success which attended his practice brought him early into notice, and, whilst comparatively young, he was elected Physician to the General Infirmary at Leeds, and he continued to hold that office for eight-and-twenty years. During those years, his attention to the duties of his office were unremitting, and on only one occasion, from any cause whatsoever, was he ever absent from his charge for a longer period than fourteen days. At the same time, he held various lectureships in connection with the Leeds School of Medicine, a subordinate institution to the Infirmary, but one in whose welfare and prosperity he took a lively and a very active interest. It was very largely to the interest taken by Dr. Chadwick in all the medical charities of the town, that Leeds is indebted for the truly noble hospital with which it is adorned.

For long years the "Old Infirmary" was inadequate to meet the requirements of the growing population of which it was the centre; and many plans, at various times, were under consideration for its extension and enlargement. Members of the old "board" of many years' standing, of great local influence, and from whose wealth much was expected in the way of help, fought long and strenuously for mere enlargement, addition of new wings, and general improvement; but, mainly at the instigation of the then existing staff of which Dr. Chadwick was an active and a leading member, it was finally determined that nothing short of an entirely new building would adequately meet the requirements of the time, and it was decided that, if £30,000 could be raised, an entirely new hospital, on a freer and more open site, should be erected.

To the great credit of the community, no sooner had the need for the fulfilment of this scheme been made clear, through the advocacy of Dr. Chadwick and his colleagues, than double that sum was immediately forthcoming, and the undertaking was entered on at once.

An architect was found in Gilbert Scott, R.A., and that gentleman, in conjunction with Dr. Chadwick, as Senior Physician, and the late Mr. James Kitson, gave their best thoughts to the subject. In furtherance of their object, they travelled extensively, visited all the best continental hospitals, and finally succeeded in producing a hospital second to none in existence.

Dr. Chadwick's professional talents were further beneficially exercised in aid of the other Leeds Medical Charities besides the Infirmary. He was for many years a member of the staff of the Dispensary also, and of all the others he was proudest of his connection with the Fever Hospital.

To this "charity" (as it was at that time), he was a true friend and faithful servant. For year after year, when others gave it somewhat of the "cold shoulder," he served it faithfully and well; no trouble was too great for him to undertake cheerfully in its interest, and no object in life was more assiduously cherished.

His sympathies were also largely enlisted in other great public movements and charitable efforts connected with the district. A devoted churchman, he was in full sympathy with the work of church extension in the borough, initiated by the late Dr. Hook during his vicariate; he contributed largely, on more than one occasion, to the fund raised, and, at the first annual meeting of the Society, the adoption of the report was moved by Dr. Chadwick.

In the annals of another charity, in which Dr. Chadwick took for many years a more than fatherly interest—the West Riding Medical Charitable Society—his name will ever remain a household word and an endearing memory. Of this Society, which exists for the assistance of the widows and orphans of such of its members as have died before they have succeeded in making provision for them, as well as for the help of disabled members themselves, he was for long years the chief and sole director, and the heartiest friend. He found no labour too great to bestow upon it, and he contributed largely to its funds in money, as well as in time and labour; and when, in consequence of failing health, he was compelled to retire from its active management, the members, in recognition of his invaluable services, presented him with a substantial gift of silver-plate, as a token of their regard and esteem, and as a proof of their appreciation of his devoted services.

He was a Justice of the Peace for both the Borough of Leeds and for the West Riding of the County of York, and he was also one of the twenty-five patrons of the Parish Church of Leeds.

And yet, notwithstanding these various calls upon him, he could find time to devote to those broader interests of his profession which are represented by the British Medical Association; and the Council of that body knows how loyally and faithfully he always served it. As its President in 1869, when the annual meeting was held in Leeds, his efforts to promote the success of that meeting were unwearied; and though, since he became a Vice-president, he might have been excused had he relaxed a little in his efforts, he never did so; to the end, and to the very last, he has been amongst its most active and most loyal supporters.

By his death, the Association has lost a faithful friend, a wise counsellor, and a staunch supporter, and his presence at the meetings of the Council will be sorely missed.

Dr. Chadwick died in his seventy-second year, and he leaves a family of two sons and seven daughters; and with these, and in the hearts of all who knew him well, he will live long in the memory of good works faithfully performed; and will be remembered as the tenderest of parents, the most faithful and loyal of true friends, and as a truly Christian man, whose life is well worthy the imitation of the wise.

NAVAL AND MILITARY MEDICAL SERVICES.

PAY OF BRITISH ARMY SURGEONS IN INDIA.

SIR,—I notice, in your issue of May 22nd, some remarks of yours on a letter received from "A Father." "Father" is not correct in his statements, however. I wish he was, and then there would not be so much to grumble about. The son of his father is not receiving Rs.417 8, but Rs.317 8 instead of Rs.450 per mensem, a difference of not £3 2s. 6d., but £13 7s. 0d., if the rupee were worth 2s. But, with the exchange at 1s. 5¼d. per rupee, which it is now, it is too awful to think of; it is enough to cause sleepless nights for the next month. But this is not all. On the completion of five years' commissioned service, the surgeon in India gets the munificent rise of Rs.17 per mensem, whilst his English pay at the same date would have increased £50 per annum. It is not until the completion of his sixth year of service that he gets the captain's pay of Rs.450 per month, the pay which his rank should have entitled him to from the first day he landed in India.

At the present time, there are 121 surgeons serving in the Bengal Presidency alone, of whom 106 have under six years' service. Most of these were sent out almost immediately they were commissioned, and, consequently, will never get the Rs.450 during their term of five years. A few who were fortunate enough to have a year's service at home before going out will probably enjoy the increased pay for a few months at most before their tour expires. Consequently, by getting these young surgeons out at once, the Indian government saves about 8,000 rupees per man in the five years, the difference between the actual pay and the pay they ought to get.

The above is a plain statement of the facts of the case, but I think, in all fairness, we have no cause to grumble, as the fault is our own. In the warrant of 1879, not a word was said about India; and, in the blind rush into the department that followed its publication, the young surgeons did not pause to inquire as to their Indian pay, though the matter ought to have been fully explained in the schedules which were issued from the War Office. I am afraid any appeal to the Indian Government, in its present "hard up" condition, to set matters right, would be futile, and the only course open seems to be that which the schools followed with such success previous to the warrant of 1879. But, let me add, for the information of "Father," that it is a great deal easier to live in comfort in India on Rs.317 8 per mensem, than it is to scrape along at home on £290 per annum, the pay, with allowances, for the first five years. I enclose my card, and am, sir, yours truly, MEDICAL STAFF.

ARMY SURGEONS AND PRIVATE PRACTICE.

SIR,—I have read with some interest your article on the above subject in the JOURNAL of July 3rd. Will you permit me, as an officer of some experience in the service, to express an opinion on this matter, as you say the question as to whether army medical officers ought to engage in private practice or not is one deserving of some consideration?

A good deal might be said both for and against. I think that when I say that they ought not to do so, except under exceptional circumstances, that I am expressing the opinion of the great majority of the medical officers of the army. The exceptions which I would make to this rule would be, first, that army medical officers might be allowed at all times to act as consultants whenever their assistance might be desired by the local practitioner; and, secondly, in such cases as occasionally happens abroad, where the services of a civilian practitioner are not procurable, or only from a long distance; such cases have occurred in South Africa.

The reasons given by Lord Herbert's commission for allowing army medical officers to engage in private practice no longer exists. In the first place, their pay is much better even than it was in those days, and is quite sufficient to enable them to live without encroaching on the rights of their civilian brethren. In the second, they have a much larger field for keeping up and improving their professional knowledge than was available in the days of regimental hospitals. Under the present system of station-hospitals, army medical officers have much better opportunities of seeing a large and varied practice than most civilian practitioners.

It is highly desirable that a feeling of good fellowship should exist between military surgeons and their civilian brethren, and that state of things is not likely to exist if there is any rivalry between them. It very rarely happens that army medical officers have an opportunity of engaging in private practice, and still more rarely that they wish to do so; but, as cases do occasionally occur, I feel confident that the majority of the officers of the medical staff would be very glad to see a distinct order issued on the subject. Such an order has, I understand, been recently issued by the authorities to naval medical officers, whose opportunities for doing private practice are decidedly fewer than in the case of the army.—Yours, etc., SURGEON-MAJOR, Medical Staff.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Saturday, September 4th.

Prescriptions by Druggists.—Sir T. ESMONDE asked the Vice-President of the Committee of Council whether the Government were aware that numbers of druggists in London prescribed medicinally for all sorts of diseases; whether it was legal for druggists who had no medical or surgical degree to prescribe and make up medicines in many of which poisonous drugs were used, and whether the Government would take steps to put an end to this practice now that proper medical advice could be obtained for small fees.—Sir H. HOLLAND: The Government have no special information upon the subject referred to in the first part of the question, though it is very probable that druggists are in the habit of prescribing medicinally to persons coming to their shops. As to the second part of the question, I would refer the hon. member to the provisions of the Pharmacy Act, 1868, by which it is made unlawful for persons since 1868, unless registered under that Act, to retail, dispense, or compound the poisons referred to in the schedule of that Act, and in subsequent resolutions of the Pharmaceutical Society approved by the Privy Council. I have only to add that the Government have under consideration the question of further regulating the sale of poisons.

The Indian Medical Service.—Mr. T. RUSSELL asked the Under-Secretary of State for India whether it was the case that the recent improvement in the pay and allowances of the Army Medical Service, on the faith of which the former dearth had now given place to an ample supply of highly qualified candidates, did not extend to India; whether in every branch of the military service the increased cost of living in India was met by largely increased pay and allowances; whether there was any corresponding increase in the pay or allowances of army surgeons serving in India, and whether it was true that they were subjected to many expenses in the discharge of their duties from which other officers were exempt; and whether he would cause inquiry to be made as to the facts, with a view to the redressing of any grievance that might exist.—Sir J. GORST: In 1884, when the home-rates of pay of the Army Medical Service were raised, no change was made in the Indian rates of pay, which were considered already adequate. In every branch of the military service, Indian rates of pay of officers are higher than home-rates, to meet the increased cost of living in India. The medical branch is no exception; the rates of pay in India are higher than at home. I am not aware that army surgeons serving in India are subjected to expenses in the discharge of their duties from which other officers are exempt. As the facts of the case are well known, it is not intended to make any inquiry into the subject.

The Chief Medical Officer of the Post Office.—Mr. PICKERSGILL asked the Postmaster-General whether recently a telegraph clerk, who had been absent from duty for a week under a medical certificate of sickness, was peremptorily ordered, a few days after a fresh medical certificate had been furnished, to present himself for examination by the chief medical officer of the Post Office; whether he had been advised by his medical attendant to confine himself to the house; whether, on presenting himself as directed, he was told that he was "making a lot of fuss about nothing," and that he must resume his duty on the following Monday; whether he resumed his duty accordingly; whether he was placed on one of the heaviest wires in the division; and whether, within a fortnight from the day of resuming duty, he was dead.—Mr. RAIKES: I have endeavoured to identify the case to which the hon. member refers, and think he must allude to a telegraphist named Billinghurst, who died on August 9th. The circumstances respecting his illness are not stated accurately in the question. The facts are as follows: Mr. Billinghurst was absent from duty from July 10th to the 23rd, on account of deranged liver. He attended to see the medical officer on July 23rd, said "he was feeling much better," and should be able to resume duty on Monday, July 26th, when he took his ordinary circuit in accordance with the duty list. He remained on duty till Saturday, July 31st, but consulted the medical officer on July 27th, and again on the 30th, which was the last occasion on which he saw the medical officer. He did not ask for further leave of absence, but for a change to Dover as soon as could be arranged. On Monday, August 2nd, he sent a medical certificate, stating that he was not fit to attend. On August 5th he was written to to attend to see the medical officer if well enough. He did not attend, but sent a certificate to say he was suffering from fever. On August 9th he was asked to forward a certificate of the nature of the fever. The reply was a certificate stating he died on the 9th, of typhoid fever. The words imputed to the medical officer are absolutely denied.—Mr. PICKERSGILL gave notice that in Committee of Supply he would call attention to this case, and also to other cases of alleged misconduct on the part of the chief medical officer of the Post Office.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE COOMBE LYING-IN HOSPITAL.

THE fifty-seventh annual meeting of the supporters of this institution was held lately. The Right Hon. the Lord Mayor of Dublin, M.P., occupied the chair. The report showed that during the past year 567 patients were treated in the labour wards, and 209 were admitted to and treated in the chronic wards of the hospital, whilst, through the Extern Maternity Department, 2,268 were attended at their own homes. The attendance at the Special Dispensary was 2,859; and, at the General Dispensary, 10,281, thus showing the great value of this branch of the institution.

The Very Rev. Canon Daniel, P.P., in moving the adoption of the report, observed that he would avoid saying anything on what might be called the past domestic management of the hospital, as he believed the most expressive and dignified comment on it was furnished in the gratifying and incontestable statistical fact that their expenditure during the past year was about £15 per bed less than in the preceding year, and was, on an average, nearly £16 per bed less than in any of the preceding ten years of the existence of the hospital. He was proud to have borne his part in effecting this very considerable economy, and he was still prouder and happier to say that, in conjunction with this economy, the patients were better treated, the discipline of the hospital was more strictly enforced and observed, and the prospects of a vastly improved future for the institution were greatly increased. He need hardly say that, if it had been otherwise, neither he nor any of his brother governors would have suggested or tolerated the economy.

Such a statement, coming from a gentleman who has only been a member of the Board of Directors of the hospital for one year, is a tribute to the good the Council of the Dublin Hospital Sunday Fund has done, by calling special attention to the way in which some of the Dublin hospitals were managed.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

ROMFORD RURAL DISTRICT.—The sanitary condition of the villages composing this district is of more than local importance, since they are coming to be availed of more and more, for residential purposes, by Londoners anxious to get a breath of fresh air after their day's work. The local authority seem to be proceeding, with satisfactory vigour, to rid the villages of offensive accumulations of filth and other unwholesome conditions; and in this task they have an excellent adviser in Mr. Alfred Wright, their health-officer. Mr. Wright takes, indeed, a large and generous view of his functions, and is evidently the pioneer of sanitary reform in the area under his charge. He reports for 1885 the satisfactorily low death-rate of 14.6 per 1,000, as compared with 18.3 in 1884, and 16.3 in 1883. Zymotic diseases were fatal to 34 persons, out of a total of 287 deaths. Mr. Wright gives in detail the circumstances of each case of zymotic disease which came to his knowledge, the action taken thereon, and the result. He also describes the sanitary wants of each locality, and the improvements which have lately been effected by the authority. We cannot set these out at length, but we may perhaps make an exception in the case of Dagenham, which, from being a tumble-down, sleepy, untidy village, bids fair, now that it is on the direct line from London to Southend, to become the future healthful dwelling-place of many a hard-worked London artisan, who is now condemned to stuffy and unwholesome quarters in central London. It is within half an hour of Fenchurch Street; and the Tilbury and Southend Railway are, with judicious foresight, offering large facilities for cheap and easy transit to town. The air is pure and bracing, the soil is gravel; water from the South Essex Waterworks is already laid on; the death-return is unusually low; and, as houses are being specially planned with a view to the accommodation of East-end clerks and the better-class artisans, we may expect that the place will soon have a considerable development.

PONTEFRACT.—Dr. Alexander Buncle has not been long in office as Sanitary Adviser to the Local Board of Pontefract. He has, however, already entered in good earnest upon the work before him. He reports, for 1884, a birth-rate of 37.7, and a death-rate of 22.6. It appears that in particular years the infantile mortality has been excessive; in 1884 it stood at 148. The zymotic death-rate was 1.7; there were six deaths certified as due to measles, 3 to enteric fever, and 7 to diarrhœa. It is yet more satisfactory to read that the borough is now thoroughly drained, that nuisances are being fast abolished, and that the water-supply of the place is now under the consideration of a sub-committee of the Local Board.

MEDICAL NEWS.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, September 2nd, 1886.

Gibbon, Henry Ernest, Marlborough House, Seaham.
Gillmon, John Charles, 3, Oxonian Street, East Dulwich Grove.
Gregory, Seth, 55, Birchanger Road, South Norwood.
Hughes, Hugh Lewis; Bridge Street, Llanbadarn, Aberystwyth.
Todd, Henry, 301, Mile End Road, E.

MEDICAL VACANCIES.

The following vacancies are announced.

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House-Surgeon. Salary, £65 per annum, with board, etc. Applications by September 15th to the Secretary.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House-Surgeon. Salary, £70, with board and residence. Applications by September 20th to the Chairman of the Weekly Board.

BRECON INFIRMARY.—Resident House Surgeon. Salary, £80 per annum, with board, etc. Applications by September 15th, to W. P. Price, Esq., 6, Bulwark, Brecon.

COUNTY DOWN INFIRMARY.—Registrar, Compounder of Medicine, and Assistant to Surgeon. Salary, 60 guineas, with board, lodging, and washing. Candidates must have a diploma in surgery. Election on September 11th.

EASTERN DISPENSARY, Bath.—Resident Medical Officer. Salary, £100 per annum, rising to £120, lodging, etc. Applications by September 20th to T. H. Plowman, M.A., 1, Russell Street, Bath.

EAST LONDON HOSPITAL FOR CHILDREN.—Resident Clinical Assistant. Board and lodging. Applications by September 23rd to A. Warner, Esq.

GENERAL HOSPITAL, Birmingham.—Four Assistant House-Surgeons. Residence, board, and washing. Applications by September 11th, to H. Fox, Esq.

GENERAL HOSPITAL, Birmingham.—Resident Medical Assistant. Residence, board, and washing. Applications by September 11th, to H. Fox, Esq.

HOSPITAL FOR WOMEN, Soho.—House-Physician. Salary £75 per annum, with board, etc. Applications by September 18th, to D. Cannon, Esq.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer. Salary, £150 per annum, with board and residence. Applications by September 18th, to the Chairman of the Board.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer. Salary, £150 per annum, with board and residence. Applications by September 18th, to the Chairman of the Board.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT.—Resident Medical Officer. Salary, £60 per annum, with board and lodging. Applications by September 27th to G. Keating, Esq.

MIDDLESEX COUNTY LUNATIC ASYLUM, Colney Hatch.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications by September 23rd to R. A. Burrows, Esq.

NORWICH FRIENDLY SOCIETIES MEDICAL INSTITUTE.—Medical Officer. Salary, £250 per annum. Applications by September 30th to the Secretary, Ivy House, Lady Lane, Norwich.

RICHMOND HOSPITAL, Surrey.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by September 15th to G. C. Rowland, Esq.

ROYAL BERKS HOSPITAL, Reading.—Assistant House-Surgeon. Board and lodging. Applications by September 14th to J. T. Hugo, Esq.

ROYAL SURREY COUNTY ASYLUM, Guildford.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by October 4th to Thomas Taunton.

ROYAL UNITED HOSPITAL, Bath.—House-Surgeon. Salary, £60 per annum, with board and lodging. Applications by September 17th to the Secretary Superintendent.

ROYAL UNIVERSITY OF IRELAND.—Medical Fellow. Salary not to exceed £100 per annum, and appointment to last for seven years. Applications to Secretaries of University on or before October 1st.

ST. PETER'S HOSPITAL FOR STONE. House-Surgeon. Honorarium 25 guineas, with board, lodging, and washing. Applications by September 25th, to W. E. Scott, Esq.

WESTMINSTER HOSPITAL.—Assistant Surgeon. Applications by September 21st, to S. M. Quennell, Esq.

WESTMINSTER HOSPITAL.—Aural Surgeon. Applications by September 21st to S. M. Quennell, Esq.

MEDICAL APPOINTMENTS.

CORKHILL, J. G. G., L.R.C.P.E., L.R.C.S.E., M.R.C.S., appointed Senior House-Surgeon to the Stanley Hospital, Kirkdale, Liverpool, *vice* Dr. Owen, resigned.

FOUNTAIN, E. O., B.A.Camb., M.R.C.S., appointed House-Surgeon to the Western General Dispensary, Marylebone Road, *vice* F. P. Wightwick, L.R.C.P.Lond., resigned.

FREEMAN, W. T., L.R.C.P.Lond., appointed House-Surgeon to the Royal Portsmouth (Portsea) and Gosport Hospital, *vice* P. H. Gardner, L.R.C.P.Edin. resigned.

HASWELL, J. F., M.B., C.M., appointed Assistant House-Surgeon to the Liverpool Infirmary for Children, *vice* H. W. Gardner.

WIGHTWICK, F. P., M.B.Durh., M.R.C.S.Eng., appointed Medical Officer of the St. Olave's Union, and District Medical Officer, Bermondsey, *vice* J. Gittins L.R.C.P., deceased.

WOOD, Arthur, M.B., appointed Junior House-Surgeon to the Stanley Hospital, Kirkdale, Liverpool, *vice* J. G. G. Corkhill, L.R.C.P.E., L.R.C.S.E., M.R.C.S.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

BIRTHS.

BROCK.—At Urlar, Rouxville, Orange Free State, on July 7th, the wife of George Sandison Brock, M.B.Ed., C.M., of a son.

MURPHY.—At Holly House, Sunderland, on September 7th, the wife of Dr. Murphy, of a daughter.

MARRIAGES.

BULL—GARDE. On September 7th, at St. Mary's, Shenley Mansel, by the Rev. John Wood, Vicar, of Old Wolverton (Rural Dean), William H. Bull, F.R.C.S., St. Oswald's House, Stony Stratford (second son of W. J. Bull, solicitor, Oswestry), to Emma E. Cherry Garde, youngest daughter of the late Edward Hoare Garde, Esq., Ballinaccurra House, co. Cork, and sister of the Rev. J. H. Garde, Rector of Shenley Mansel, Bucks.

MACDONALD RANSOME.—On September 1st, in Kirk Oswald Church, Cumberland, by the Rev. Reginald Remington, M.A., uncle, assisted by the Rev. H. A. Ransome, M.A., and the Rev. M. J. Ransome, B.A., brothers of the bride, Alexander Macdonald, L.R.C.P., L.R.C.S., L.M.Edin., to Emily Susan, eldest daughter of the Rev. Canon Ransome, M.A., Vicar of Kirk Oswald.

WALKER—BRIDGE.—September 2nd, at the parish church of St. John, Clapham Rise, by the Rev. W. J. Bettison, M.A., Vicar of Leytonstone, Charles Rotherham Walker, M.D., L.R.C.P., of Leytonstone, Essex, eldest surviving son of Henry Walker, of Mosborough Hall, near Chesterfield, to Lillia Gertrude Mary, third daughter of the late Alexander Bridge, M.D., F.R.C.S., of Argyle Place, W.

DEATH.

THORNTON.—September 7th, at Hinxton Grange, Saffron Walden, Eleanor Philippa, the beloved wife of J. Knowsley Thornton, M.B., C.M., of 22, Portman Street, London, W.

ST. JOHN AMBULANCE ASSOCIATION.—The half-yearly report of the North Yorkshire and Cleveland Miners' Association, just issued, makes very gratifying reference, at some length, to the advantages of the instruction afforded by the St. John Ambulance Association. It is stated that classes have now been established at nearly every mine, and over 1,800 men have become thoroughly qualified to render first aid in case of accident. An instance is reported where a miner had his leg crushed in one of the Cleveland (not associated) mines. There is no Ambulance Corps at this mine, and the poor fellow was put into a common cart, and conveyed a distance of four miles. Nearly all the blood in his body was drained away *en route*, and when the services of a surgeon were obtained it was too late. The timely application of a bandage, by a person qualified to render first aid, would have stopped the bleeding, and, in all probability, saved the man's life. The report continues: "A few years ago, cases of this kind were of frequent occurrence in our district. They are now, happily, almost entirely unknown; and it is due to the owners and managers of the mines, and the members of the St. John Ambulance Association, to say that we do not think that there is one mine, in what is popularly termed 'Cleveland,' where this could have occurred."

MEDICAL MISSION AT CAIRO.—The medical mission at Cairo, over which Miss M. L. Whately presides, and which is the only agency in that part of the country, where gratuitous help and remedies are supplied to the poor, is greatly in need of funds. In a letter addressed to a contemporary by her sister, attention is called to the fact that, after the annual fast of Ramadan, especially when observed in the hottest season, there is always a great increase of sickness. The weather, she adds, is even exceptionally hot, and the eye cases are terribly frequent. Only quite lately a poor young creature came to the dispensary with her eyes in danger of being totally destroyed by inverted lashes. She was kept several days in the dispensary, had a series of trying operations, and required nourishing food, which was supplied by Miss Whately. The eyes are saved, and the gratitude of the poor sufferer and her family most touching.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30; Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

SOIL OF SUBURBS OF LONDON.

I. W. writes: I am seeking another residence in a suburb of London, and, having a child who has suffered two attacks of rheumatic fever, I am anxious to pitch upon a gravel soil, or, at least, to avoid clay. I shall be much obliged if you can refer me to a general and reliable source of information on this important point.

NOTES, LETTERS, ETC.

THE CUSTOM OF APPLYING ESCHAROTICS TO EXUBERANT GRANULATIONS.

Dr. HERBERT SNOW (Norfolk Terrace) writes: As the result of some twenty years' experience, I should like to be permitted to enter a strong protest against this time-honoured practice, which I have long since abandoned, as unnecessary and barbarous. The surgeon who has recourse to it causes his patient more or less acute pain, amounting, in the case of extensive burns, to absolute agony, and the healing of the wound is in no way promoted; indeed, I have seen small ulcers made larger by the destruction of new tissue at their margin. Exuberant granulations simply indicate local vitality, and a healthy process of repair; if severely let alone, the wound will heal quite as quickly, under suitable dressings, as after any amount of cauterising, and I feel sure that no surgeon who has courage once to abandon an antiquated tradition still current in the schools will ever recur to it.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. J. J. O'Bryen, Bath; Dr. J. L. Porteous, Kirkcaldy, N.B.; Mr. W. Rawes, London; Baffled; Mr. H. Bullock, Isleworth; Mr. W. J. Reed, Wolverhampton; Mr. C. Norman, Monaghan; Mr. J. Bridger, Cottenham; Mr. C. H. Callanan, Dublin; Mr. G. P. Field, London; Dr. R. Sinclair, Tain, Ross-shire; The Secretary of the Cumberland Infirmary; Mr. G. Sturge, London; Dr. Tatham, Salford; Mr. J. Prince Stallard, Manchester; Dr. V. Idelson, Berne, Switzerland; Mr. A. M. Stalker, Dundee; Mr. St. V. Mercier, London; Mr. Craven, Southport; Dr. Muirhead, Edinburgh; Mr. W. B. Barré, Chester; Mr. M. D. Makuna, Treherbert; Mr. T. S. Hutchinson, Sittingbourne; Dr. I. Massey, Nottingham; The Secretary of the Sussex County Hospital, Brighton; Mr. E. Davies, Treherbert; Mr. J. Brown, New Wandsworth; Dr. Farquharson, Aboyne, N.B.; Mr. Wookey, London; Professor Gairdner, Glasgow; Mr. C. Spurrell, Carmarthen; Dr. J. E. Eylandt, Bournemouth; Mr. W. J. Mackie, Freshwater; Mr. S. Burrows, Witheridge: Mr. A. H. Thompson, Great Ouseburn; Our Dublin Correspondent; Miss A. G. Howes, Paris; Mr. C. G. Campbell, Saddlesworth; Dr. Struthers, Aberdeen; Mr. T. S. Hardwell, Sittingbourne; Mr. G. Davidson, London; Mr. D. Thompson, Feeny, Londonderry; Dr. Myers, London; Mr. C. W. Johnson, Ramleh, Egypt; Mr. T. Rose, Norwich; Dr. Mapother, Dublin; Dr. Fishbourne, Lewisham; Miss Surman, Forest Hill; Mr. Gubb, London; Mr. A. W. M. Robson, Leeds; Mr. J. E. Cooney, London; Dr. R. C. Lofthouse, London; Dr. Dolan, Halifax; Mr. H. C. Ensor, Birmingham; Dr. T. Laffan, Cashel; Dr. C. R. Illingworth, Clayton-le-Moors; Mr. H. A. Keegel, Kalutara, Ceylon; Dr. J. C. Thorowgood, London; Mr. J. Langston, jun., Stroud; Messrs. Burroughs and Wellcome, London; Dr. Hasler, Blackburn; Mr. G. Hodgson, Brighton; Dr. W. F. Wade, Birmingham; X.; Mr. E. A. White, Wolverhampton; Mr. H. A. Smith, Ealing; Dr. Lumley, Heaton-Chapel; Mrs. Morison, Maryhill; Mr. G. Keating, Manchester; Messrs. Reid and Donald, Perth; Dr. Orton, Newcastle-under-Lyme; Messrs. Burgoyne and Co., London; Dr. Imlach, Liverpool; Mr. T. G. Parrott, Bournemouth; Dr. Barnes, Carlisle; Mr. Victor Horsley, London; Mr. F. Manser, Tunbridge Wells; Mr. F. Oldfield, London; F. S. A., etc.

BOOKS, ETC., RECEIVED.

Diseases and their Commencement; Lectures to Trained Nurses Delivered at the West London Hospital. By Donald W. Charles Hood, M.D. London: J. and A. Churchill. 1886.

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BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

CASE OF ORBITAL ANEURYSM.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association, in Brighton.

By ALEXANDER DEMPSEY, M.D., L.R.C.S.I.,
Physician to the Mater Infirmorum Hospital, Belfast.

ORBITAL aneurysm is a disease of comparative rarity, and though in recent years its nature has been more correctly described, there is still something to be learned about it.

Until Busk and Nunneley pointed out the error, all pulsating swellings of the orbit were regarded as erectile tumours. They are now shown to be only of this nature when congenital, or appearing in early infancy, or when associated with the presence of nævoid tissue on the eyelids. Occurring under other circumstances, pulsating tumours of the orbit have been shown to depend upon an aneurysm or aneurysmal varix of the internal carotid artery, or of some of its orbital branches. In his article on this disease in the *Dictionary of Practical Surgery*, Mr. Rivington has collected and tabulated the results of fourteen cases of orbital aneurysm in which *post mortem* examinations were made. "1. In one bilateral case (Guthrie) an aneurysm of the ophthalmic artery was found in each orbit, but no examination was made of the cavernous sinuses or of the internal carotid arteries. 2. In three idiopathic cases (Baron, Gendrin, and Nunneley), there was a ruptured aneurysm in the cavernous sinus. 3. In four traumatic cases (Nelaton (2), Herschfeld, and Schlaefke) there were arterio-venous communications between the carotid and cavernous sinus. 4. In four cases, one traumatic and three idiopathic (Bowman and Hulke, Aubry, Oettingen, and Morton), there were blocked orbital veins and cranial sinuses. 5. In one idiopathic case (Nunneley) there was an old aneurysm of the ophthalmic artery within the cavernous sinus. 6. In one idiopathic case (Wecker and Richet), there were dilatation and atheroma of the carotid."

The case which, unfortunately for my patient, I have to add to this list, presents a condition of things not exhibited by any of the recorded cases. In addition to there being a large circumscribed aneurysm of the ophthalmic in the orbit, there was a fusiform aneurysm of the internal carotid within the cranium; and, on careful dissection, we could find no communication whatever between the artery and sinus. But I will first give a history of the case, and the treatment adopted, and then state more fully the result of the *post mortem* examination.

CASE.—Mrs. McA., aged 22, thin and fair, was admitted into the Mater Infirmorum Hospital on February 25th of the present year (1886), being transferred from the Ulster Eye, Ear, and Throat Hospital, where she had been under Dr. McKeown's treatment for a short time.

The left eyeball was almost quite protruded from the orbit; the upper eyelid was swollen, and traversed by large veins; the lower eyelid was hidden by a very large cushion of chemosed conjunctiva. The pupil was fixed, semi-dilated, and insensible to light. There was paralysis of the ocular muscles. She could only impart the most feeble motion to the eyeball or eyelids. She was unable to close the eye, and vision was completely absent. The cornea was clear, but a slightly purulent discharge was issuing from under the lids. Distinct pulsation and a vibratory thrill were communicated to the fingers placed upon the globe. Pulsation and thrill were most distinctly felt at the inner angle of the orbit. A loud whizzing *bruit*, synchronous with the cardiac systole, was heard on applying the stethoscope over the orbital arch and forehead; less distinct over the temple and malar bone. Compression of the left common carotid immediately and completely arrested this *bruit*. I may say, in passing, that the character of the *bruit* led us to conclude from the first that the disease was not an aneurysmal varix. She complained of pain in the eye, around the orbit, and in the head; numbness of the face and head on the side affected; and loud noises in the head and eye, which prevented her from sleeping at night.

She stated that she was in good health until she was confined of her first baby on November 3rd, 1885. She had been employed as a weaver in one of the factories, and had worked up to a few days before her confinement, which was a tedious but natural one. After delivery she slept for some hours, and, when she awoke, she heard slight noises and singing in her head, and she had a headache.

A beef-steak was given her for breakfast, which made her very sick; and, during a fit of vomiting, she felt a sudden rush of something coming up from the left side of her neck and chest, and settling in her eye with a "snap." This was immediately followed by intense pain in the eye and head, and numbness of the side affected. She became faint, and was unable to articulate for some time. Her friends thought she was dying, and sent for a clergyman, who remarked the eye swollen and inflamed. It protruded more and more every day; but it was not until she went to the Eye Hospital, two months afterwards, that she was made aware of the total loss of vision in that eye.

The treatment I adopted at first was rest in bed, low diet, and the administration of iodide of potassium. At the same time, digital compression of the common carotid artery was methodically kept up, at intervals of a few minutes, for half an hour to an hour at the time, three or four times a day. This operation was at first badly borne. Its application, after a minute or so, brought on chattering of the teeth, icy coldness of the extremities, profuse perspiration from the soles of the feet and palms of the hands (which extended upwards towards the trunk), faintness, aphasia, and comatose symptoms if compression were continued. The first time it was applied, she was aphasic for half an hour, and partly unconscious. She always recovered from this condition with a few deep sighs, and was then able to articulate. For the first week or so, compression of the carotid completely arrested the *bruit;* but, after that time, she was able to bear the operation much longer; and then it was found that the *bruit* was not entirely stopped, but only diminished in intensity. The pain became most severe at the back of the head, and it was necessary to give a sedative at night to procure sleep; but, notwithstanding, the protrusion of the eyeball diminished somewhat, and slightly increased motility returned to the ocular muscles.

On March 26th, one month after the commencement of this treatment, she felt a sudden rush into the left ear, accompanied by a crack similar to what occurred in the eye. She became faint; the pain was intense; and deafness of the left ear resulted, which, however, returned in a few days. A loud *bruit* was now heard above the ear, and also less intense all over the head. Pain became more severe and constant, the noises louder, and the general symptoms more alarming.

It was now considered that compression had failed, and should not be further trusted to, and that ligature of the common carotid should be tried. Accordingly, on April 12th, with the assistance of Mr. Fagan, our consulting surgeon, and the other members of the staff, a silk ligature was applied on that vessel above the superior belly of the omo-hyoid muscle. Only one other vessel required attention. A drainage-tube was inserted, and the wound closed by four carbolised silk sutures, and dressed with iodoform gauze and absorbent wool. She became cold and faint after the operation; tremors and chattering set in, and it was necessary to give her brandy, and to apply hot water bottles around her.

For a few days before the operation, she had complained of a beating pain in the right ovarian region; it disappeared on that evening with the onset of profuse metrorrhagia, which continued for six days, and necessitated the application of cold to the vulva, and the administration of ergot. The pulsation and thrill, though very much diminished, were not arrested. The eye became gradually less prominent, and chemosis subsided considerably. Motility of the globe returned; she was able to close the eyelids, and once or twice she thought she was able to see a glimmer of light. The *bruit* became very faint, and was only heard over the orbital arch. There was no elevation of temperature until the fifth day after the operation, when it reached 100.2°. I changed the dressings for the first time. The wound had healed by the first intention, except at the point of exit of the ligatures and drainage-tube. There was some swelling at the upper part of the wound, and she complained of difficulty of swallowing. I changed the drainage-tube, and squeezed out some pus which had collected. Next day, the pulse was 126 and the temperature 102°; vomiting had set in, and pain and difficulty of swallowing had increased. I again changed the dressings, and removed the drainage-tube altogether. Some pus followed, which gave immediate relief. Ice, bismuth, and hydrocyanic acid checked the vomiting; and, on the following day, the 7th, temperature was normal, and she felt very comfortable. Everything now

went on satisfactorily until nearing the end of the third week, when a small quantity of sanious pus began to appear on the dressing, which made me anxious about the separation of the ligature.

On the night of May 2nd, at 11.30 P.M., which was the twenty-first day after the operation, she was awakened from sleep with a violent beating of the heart, followed by a sudden gush of hæmorrhage from the wound. The bleeding was arrested by pressure as soon as discovered. When I saw her, she was quite blanched, faint, and almost pulseless. I fixed a firm compress of lint, saturated with solution of perchloride of iron, on the opening, and waited by her. At 2.30, owing to the shifting of the compress, another slight gush occurred. Digital compression was then kept up, with the assistance of Dr. O'Connell and Dr. Meenan, until daylight, when she had rallied a bit, and when the facilities for operation were more favourable. We again availed ourselves of Mr. Fagan's services, and, at my request, he performed the operation. Under chloroform, at 8 o'clock in the morning, a bold incision was made on the line of the former one. This was followed by a deluge of blood. Firm pressure was made on the course of the large vessels, and also by sponges on the line of incision, and on the removal of these the bleeding points were quickly seized by Péan's forceps. The wound had to be extended from the angle of the jaw to the clavicle, so as to reach the vessels, which, owing to the matting of the tissues, was a work of great difficulty. In spite of every effort to control it, blood gushed and flowed in torrents during the operation. Several times the chloroform was withdrawn, believing her to be dying. Still we persevered, and, with the aid of Péan's forceps, secured the vessels, and arrested the hæmorrhage. Five vessels were tied altogether, including the internal jugular vein, which was cut during the operation. As before, the material used was silk. After swabbing out the wound—which was a very deep one—with solution of chloride of zinc, it was filled up from the bottom with carbolised gauze. She was in a collapsed condition after the operation, quite pulseless, and with cold extremities.

Hot jars were again packed around her, and enemata of brandy and egg-mixture were administered. Ice was given her to allay her thirst, and the obstinate vomiting which set in, and which nothing seemed to have any effect upon. Bismuth in various forms, hydrocyanic acid, morphine by mouth and hypodermically, ingluvin, pepsin peptonised milk, blistering behind the ears and over the stomach, bromide of potassium and chloral, were all tried and failed; violent retching and hiccough continued, in spite of everything, until May 12th, or the tenth day after the operation. These straining efforts had a very injurious effect upon the aneurysm, which began to enlarge more and more every day, causing intense agony. Large hypodermic injections of morphine had to be given to produce sleep, but they caused so much delirium and excitement, that they had to be discontinued. During those ten days of constant vomiting, she was fed entirely by enemata of eggs, beef-tea, etc., with laudanum to prevent purging and to relieve pain. The noises in the head increased after the operation, and the *bruit* became louder. The wound, which was first dressed on the fourth day after the operation, and every second day afterwards, began at once to heal up and do remarkably well. The temperature, from the day after the operation until the tenth day, ranged between 100° and 102°, except on the fifth day, when it reached 104°. After the tenth day, when the vomiting ceased, it fell to 99°, and kept about that and 100° until the end. On the tenth day, the pulse, which became perceptible in the evening of the operation, and ranged between 120 and 130, fell to 80, and remained about that to the end. The eyeball became very prominent, and the cavity of the orbit quite filled with this tense pulsating swelling. Chemosis increased to such an extent, that I was obliged to puncture both the upper and under eyelids to relieve it. On May 19th, which would be the seventeenth day after the operation, the eyeball had become protruded so much as to lie on a plane with the point of the nose. The cornea was hazy, and the pulsation very marked. There was an inflammatory swelling, extending from the outer angle of the orbit towards the temple, and we thought it possible, owing to the rapid enlargement of the eye, that an abscess might have formed in the orbit. A grooved needle was passed in; a few drops of pus came at first, followed by a squirt of arterial blood, which required a compress with perchloride solution to arrest. The pulsations were now very marked, and it appeared every moment as if the aneurysm would burst. Two operations were suggested to her, but both her husband and herself absolutely refused to consent to anything further being done. One was the opening into the aneurysm, and rapidly plugging the orbital cavity with puff-ball, and enucleating the eyeball. The other was the injection into the aneurysm of a solution of iron, in the hope of coagulating the contents. Fortunately for what afterwards occurred, she would consent to neither.

On the morning of May 21st, the eighteenth day after the last operation, violent hæmorrhage took place through the cornea. Dr. Meenan promptly arrested it by applying a compress of lint saturated with perchloride solution, but not until she was again pulseless and faint. The same evening, after a violent beating of the heart and throbbing of the arteries, a sudden gush of blood came from the neck, saturating everything about her. Pressure had been applied, and it had ceased when I arrived, but she was in a dying condition. Even if we had the consent of the patient, I considered all operative interference completely out of the question, and gave directions to the sister in charge to renew the compresses if bleeding recurred.

May 22nd. She was better. No return of hæmorrhage. She was able to converse freely up to 10 P.M., when it again took place from the neck, and continued to recur at intervals until she died at noon on the following day, May 23rd. Towards the last, blood came again from the aneurysm.

May 24th. With the assistance of Dr. Meenan, I made a *post mortem* examination twenty-seven hours after death. Rigor mortis was passing off, and the body was quite bloodless. The wound was nearly healed, and there was a small clot at the upper angle. All the ligatures had separated but one, which, on dissection, was found attached to the internal jugular vein. This vessel was quite empty on the side next the heart. On the distal side of the ligature, there was some fluid blood, but no clot. The proximal end of the common carotid artery was a firm fibrous cord down almost to its origin from the aortic arch. The distal end was open, and contained no clot. It had been ligatured just at the bifurcation into the external and internal carotids. The superior thyroid artery also sprang from the common trunk at the bifurcation, so that all three arteries were immediately above the ligature. The pneumogastric nerve was uninjured. There was a rent in the cornea, and there was a communication through the globe with the aneurysm.

We now removed the calvarium. The dura mater was generally adherent and thickened at the frontal region; and underneath it, in the middle fossa of the skull in front and by the side of the petrous portion of the temporal bone, about two drachms of pus were found, and the bone was roughened at this place.

On the side of the sella turcica we found an aneurysm of the internal carotid artery, which commenced just at the entrance of this vessel into the cranial cavity, and it extended to the anterior clinoid process, where the ophthalmic artery was given off. It was a fusiform aneurysm, but was slightly sacculated at the side of the body of the sphenoid; and at this dilatation there was a small shrivelled *ante-mortem* clot, which occupied a very small space of the calibre of the vessel. In the remainder of its extent, the aneurysm was quite empty. There was no communication with the cavernous sinus. The diameter of the aneurysm, at its widest part, must have been from one-half to three-fourths of an inch. Its walls were hard and unyielding, but there did not appear to be any atheromatous degeneration.

The ophthalmic artery, from its origin, was also very considerably dilated, I should say to fully four times the size of the opposite one; and, on tracing it into the orbit, we found an immense saccular aneurysm developed on its superior aspect. The sac would contain easily a mandarin orange. In its centre, there was a *post mortem* clot; but, around its circumference, there was a firm, laminated, fibrous *ante-mortem* clot, which was a complete cast of the sac, except at its anterior part, where it was open, and communicated with the eyeball by a large opening at the upper back and outer part of the globe. The contents of the globe had escaped, when hæmorrhage had taken place, through the cornea. The superior petrosal sinus of the opposite side was distended, but the other sinuses of the brain appeared normal. The arteries of the circle of Willis were all dilated, and especially the anterior communicating. The veins of the orbit were all very much enlarged, especially those at the inner angle of the eye.

So far as I can see, there is no other case on record in which a large saccular aneurysm of the ophthalmic, at the back of the globe, was associated with a fusiform and sacculated aneurysm of the internal carotid within the cranium. In Guthrie's case, there was a circumscribed aneurysm of both ophthalmic arteries within the orbit; but no examination was made of the vessels in the skull.

Another point of interest in the case was the rapid development of the symptoms of aneurysm, and their close simulation of arterio-venous communication between the internal carotid and cavernous sinus. The most careful dissection failed to discover any such communication.

Now, with regard to treatment, I think digital compression was too long persevered with, because it permitted the too free establishment of the collateral circulation. Even if secondary hæmorrhage had not occurred, I am afraid the success of the operation would not have

been complete. The use of digital compression prepares the brain for ligature of the carotid, if it do not itself cure; but the nice point to decide is, when to leave off the one and adopt the other. I say nothing about the question of secondary hæmorrhage; of the character of the ligatures employed; or of the possible advantage of applying two ligatures on the carotid at the first operation, and dividing the vessel between them. I have confined myself to a simple statement of the facts of the case.

ALBUMINURIA IN DIABETES.

Read in the Section of Pathology at the Annual Meeting of the British Medical Association in Brighton.

By ROBERT MAGUIRE, M.D.Lond., M.R.C.P.,
Physician to Out-Patients, and Joint Lecturer on Pathology, St. Mary's Hospital.

ALBUMINURIA is a complication of diabetes which is frequently overlooked, and which may be of grave or of insignificant import, according to the various conditions under which it may arise. It may occur as a chronic or as an acute albuminuria. In the chronic form, the albuminuria is associated with an organic change in the kidneys and urinary tract, or it may be due to derangement of the circulatory apparatus of the kidney.

In *post mortem* examinations made in long-standing cases of diabetes, it is common to find the kidneys hard and tough; and, when examined microscopically, they show an overgrowth of the interstitial tissue round the vessels and glomeruli and between the tubules. The capsule of the kidney may be slightly adherent; but it is rare to find a condition which could be called granular kidney. Doubtless, this interstitial overgrowth has for its cause the irritation of the kidney by continuous overwork. It is a condition which, as might be expected, is occasionally associated with the presence of albumen in the urine, but in only small amount. Such albuminuria has usually little or no influence upon the course of the diabetes; this goes its way as if no such complication had arisen. It must be remembered that one is now speaking of diabetes complicated by interstitial overgrowth in the kidney, and not of those cases of gouty interstitial nephritis, which may present at times an insignificant glycosuria, in addition to the persistent albuminuria. The albuminuria has in these two conditions an essentially different prognosis. Occasionally, however, as Dr. Pavy has pointed out, albuminuria may, to a certain extent, displace a glycosuria, and become the prominent symptom of the case.

Fatty degeneration of the kidney may, again, occur in diabetes, and give rise to an albuminuria, which exerts little influence on the progress of the case.

There is another organic change which I have sometimes seen in *post mortem* examinations on diabetics, and which may conceivably give rise to albuminuria, although I offer this as a suggestion, and without proof of any kind. I allude to a thickening of the walls of the bladder, and with this—in all probability, in consequence of this—a dilatation of the ureters and of the pelvis of each kidney; in fact, a mild condition of hydronephrosis. We know from experimental evidence that ligature of the ureters will cause albuminuria, and it is possible that continuous high pressure in the pelvis of the kidney, produced in the way I have mentioned, might determine an albuminuria in diabetes.

Such are the organic kidney-changes under which diabetic albuminuria may occur; and it is somewhat remarkable that these, which under other conditions would be considered grave lesions, are here commonly of so little consequence. This becomes almost a paradox, when we find that one form of functional albuminuria which may occur in diabetes is a very bad omen. In the later stages of diabetes, as asthenia progresses, the heart begins to fail, and one of the early signs of this is a slight albuminuria, due to the deficient circulation of blood through the kidneys. At the same time, we find, of course, general asthenia, and not unfrequently nervous symptoms, such as great depression of spirits with hysterical phenomena, mental torpor, and drowsiness. This, however, is not true diabetic coma, and must not be confused with it. The albuminuria is in itself of little consequence, but the general condition producing it is very serious. The cardiac asthenia may in some cases be recovered from, under the influence of cardiac tonics, but in the majority of cases it is a near precursor of the final break-up.

I wish to call the special attention of the meeting to an acute form of albuminuria, which occurs in connection with diabetic coma, and which is of very serious prognosis. In pursuance of a complete examination of the urine of a patient suffering from diabetic coma of the dyspnœic type, I found a considerable quantity of albumen, which had certainly not been present before the coma set in. The patient died, and at the *post mortem* examination there was seen, in well marked form, the "necrosis" of the epithelium lining the convoluted tubes and Henle's loops, described by Ebstein. Another patient, under the care of Dr. Morgan in the Manchester Royal Infirmary, showed albuminuria about twenty-four hours before noticeable signs of diabetic coma appeared. I mentioned this in a note to a review in the *Medical Chronicle* for December, 1884, and since then I have never failed to find albumen in the urine of those patients suffering from diabetic coma of the true "Kussmaul's" type, with whom I have met. I have not a large number of cases to record, about eight or nine in all, but I find that Stokvis, of Amsterdam, at the Wiesbaden Congress of this year, has stated as his experience also that albuminuria is of very frequent occurrence in diabetic coma.

A case which came under my notice recently may be mentioned, in that it not only illustrated this point, but was also of medico-legal importance. A gentleman's coachman, who had previously been in apparently good health, although it was afterwards elicited that he had been losing flesh for about a year, complained one day of a slight pain and uneasiness in the abdomen. For this, a druggist gave him a bottle of medicine, of which he took one dose, and died comatose four hours afterwards. The medical gentleman who was called in invited me to make the *post mortem* examination. On opening the skull, a strong sweet smell of aceto-acetic acid was perceived, which became almost overpowering when the thoracic and abdominal cavities were opened. The liver was enlarged and congested, the kidneys large, in colour mottled yellow and red, and on section the cortex was found to be greatly increased in extent. A quantity of urine drawn off from the bladder gave the ferric chloride reaction of aceto-acetic acid, contained a large quantity of sugar, and in addition a considerable amount of albumen. A small amount of albumen is frequently found in urine drawn from the bladder after death, but such could not be the origin of the large amount found in the above case. On microscopic examination of the kidneys, I found the glomeruli intact, but the epithelium of the convoluted tubes was greatly swollen, in some parts hyaline, in others appearing as a confused granular mass, which was very difficult to stain, and which showed very few nuclei. In many parts, too, the epithelium was detached from the walls of the tube. This condition of the kidneys was, therefore, the probable cause of the albuminuria. The pathological signs showed that the case was one of diabetic coma, and it was afterwards proved that the medicine the man had taken contained nothing harmful.

Recently, in a case of diabetic coma, I analysed the albumen which was present in the urine, and found that it consisted of 2½ parts of serum-albumen to 1 part of serum-globulin, a proportion which I have observed to be a common one in severe organic lesions of the kidneys.

The relation of this albuminuria, and its accompanying kidney-change, to the diabetic coma, is of great importance, but uncertain. The coma is certainly not uræmic coma, but all the later researches prove that it is due to the circulation of some poisonous matter in the blood, whether this be acetone, aceto-acetic ether, aceto-acetic acid, or oxybutyric acid. Two possibilities seem open: one is that the poisonous matter in the blood irritates the kidneys, and so produces the change in the epithelial cells, which change is quite analogous, as far as the convoluted tubes are concerned, to that produced by a large dose of cantharides. In support of this, it should be noted that, in the experiments in which attempts have been made to produce diabetic coma by injecting into the blood the various substances mentioned above, albumen has occasionally appeared in the urine. The other possibility is that something more than the presence of the poisonous matter in the blood is necessary to produce coma. It may be that this further determining influence is the epithelial change in the kidney, the sign of which is the albuminuria described. It will be remembered in this connection that, in the researches hitherto published, the complete symptomatology of diabetic coma as seen in man has not been produced in animals, by the injection of any poisonous matter into the blood, so long as the kidneys have been intact.

These, however, are mere speculations, requiring actual proof by experiment, and it would be out of place to pursue them further here, especially as Dr. Dreschfeld will, I believe, enlighten us on the subject in his forthcoming Bradshawe lecture.

VACCINATION.—Dr. C. R. Illingworth, of Clayton-le-Moors, has been awarded a grant of £29 17s. 6d. for efficient vaccination in the Rishton District of the Blackburn Union. This is the second time in succession.

THE ANATOMY OF KELOID IN AN EARLY STAGE.

Read in the Section of Pathology at the Annual Meeting of the British Medical Association in Brighton.

By H. RADCLIFFE CROCKER, M.D., M.R.C.P.,

Physician to the Skin Department of the University College Hospital, and Physician to the East London Hospital for Children.

THE anatomy of both spontaneous and scar-keloid has been investigated by many observers, of whom Rokitansky, Virchow, and Warren, sen., may be specially mentioned among older writers, and Langhans, Warren, jun., Neumann, and Kaposi in more recent times. In none of these cases, however, was the tumour of recent formation; and I have therefore thought that the investigation of a tumour of a few weeks' duration, of which the life-history was known, would be of interest, and, to some extent, fill a gap left in previous inquiries in this direction.

The tumour from which the following observations were made was obtained from a man, aged 33, who had a large number of fibromatous tumours all over the body. A group of three small tumours was excised from the right side of the chest, and the incision sewn up, on March 3rd. On March 8th, the stitches were removed, and there remained a linear scar with no redness or hardness round it. My clinical clerk, Mr. Bernard Robinson, noticed some redness about ten days later, but it was not until April 1st that my attention was drawn to it, and there was then a distinct keloid formed round the linear cicatrix, the tumour being about three-quarters of an inch long, and a third of an inch wide, and raised about an eighth of an inch above the surface. It was removed on April 4th; consequently, the duration of the keloid can scarcely have exceeded three weeks. It was hardened in a one-third per cent. solution of chromic acid and alcohol in equal proportions, and, subsequently, in alcohol only. The tumour shrank somewhat in the process of hardening, and was no longer raised above the surface of the normal skin. It was divided transversely into two parts, and in one half sections were made parallel to the long axis of the tumour, and, in the other, transversely to it.

Even with the naked eye, or a lens, the tumour could be easily made out, imbedded in the corium, with its upper border lying close to the rete. With an inch object-glass, in the transverse section, the growth was seen to consist of two unequal lobes, with narrow bands of fibres between the lobes, passing perpendicularly upwards towards the rete. This, from its position, is doubtless the site of the line of union of the edges of the wound, corresponding to the linear cicatrix, which is, however, no longer visible on the surface. The tumour was surrounded, except at the ends, by fibrous tissue, probably the compressed corium fibres; the fibres running parallel to its border, and forming a sort of capsule.

The substance of the tumour was divided up in all directions into irregular pseudo-lobules by narrow branching channels, which a higher power showed to be blood-vessels, with a fibrillar tissue running parallel with, and attached to, their outer walls, which were very rich in well stained cells. The interval between the vessels was filled with a finely cribriform tissue, with fibrous tissue framework, many of these apertures containing a cell attached to the tissue bounding them. The tumour proper did not go right up to the rete in every part, stopping just below the papillary layer; here there were very delicate and separate fibrils, running horizontally beneath the rete, containing numerous dilated vessels, and forming a part of the pseudo-capsule. The papillæ were quite absent, the palisade layer of the rete forming a sharply defined horizontal perfectly even line, all along above the tumour. The palisade cells of the rete were not so perfectly formed as usual, but the rete above and the horny layers were normal, except that, as a whole, the epidermis was slightly thickened. Although the limits of the keloid were pretty sharply defined, the changes were not limited to it. Just beyond it, the papillæ were enlarged, and the interpapillary processes of the rete were prolonged downwards; but more important, for a considerable distance, both laterally and below the tumour, the blood-vessels were dilated and surrounded by round cells, presumably leucocytes, very copious close to the tumour, and diminishing as the distance from it increased, going quite down into the fat in some parts. Round the hair-follicles, the sebaceous and sweat-glands, this cell-infiltration was especially abundant, obscuring and sometimes even breaking up those structures, more or less, by their pressure.

In the sections cut parallel to the longitudinal axis of the tumour, the aspect was somewhat different; it was then seen to be made up of loosely arranged delicate wavy fibrils, or small bundles of fibrils, each with a clear outline, which ran in the direction of the long axis of the tumour, and formed a fine network, with narrow flattened meshes lying horizontally, and containing many flattened or fusiform cells attached to the border of the mesh. These cells were everywhere numerous, but were always most abundant round the vessels. On the other hand, the fibres in the papillary layer ran at right angles to those in the tumour, and formed a narrow band of cribriform tissue. In many of the sections, the papillæ and rete pegs were quite normal over the tumour in some parts, and quite obliterated in others even in the same section; and it appeared to depend upon whether the tumour was farther from or nearer to the surface whether the papillæ were obliterated, or damaged, or normal.

On comparing these observations with those of Langhans, Warren, junior, Neumann, Kaposi, etc., who examined older tumours—the former two of spontaneous keloid, the latter two of scar-keloid—we find that some further changes are produced. When the tumour has lasted for some time, a large number of the vessels, especially in the centre of the tumour, become obliterated by the pressure of the connective tissue round it, and converted into fibrous bands; these are the oblique bands that Langhans described as going in a different direction to the rest of the fibres. The cells and nuclei disappear for the most part; and the new fibrous tissue contracts, and forms close bands, which still remain parallel to the long axis of the tumour. In these respects, the anatomy of spontaneous or true and scar or false keloid is identical; but they differ, it is said, in that in true keloid the papillæ and rete-pegs over the tumour are said to be intact, while in scar-keloid they are obliterated. This alleged difference has been considered a proof that spontaneous keloid was a true new growth of the corium, while the false kind was only a hyperplasia of scar-tissue. Babes, however, examined a case of Schwimmer's which was supposed to be of spontaneous origin, and found the same obliteration of the papillæ and rete-processes as in scar-keloid. From this we must infer that either Babes really examined scar-keloid, or that the papillæ, etc., had been obliterated by the pressure of the growth. That this may occur is, I think, demonstrated by the anatomy of my case. The cicatrix of origin was linear; and the rete and papillæ were presumably, therefore, normal on each side until the keloid formed, and that evidently developed by two lobes, one on each side of the cicatrix, and, as it grew upwards, obliterated the papillæ in some parts, while in others they are quite normal. We have, therefore, on the one hand, Babes finding this supposed reliable distinction absent in a case of spontaneous keloid, while in my sections it is present in a scar-keloid. The sole difference being thus shown to be fallacious, the true and false keloid must be considered anatomically identical.

The labours of the Keloid Committee of the Clinical Society threw much doubt, on clinical grounds, as to whether the difference between the two kinds was really much more than a theoretical one; for it can be shown that keloid may in some persons arise from very small lesions, such as those of acne, the application of a blister, herpes zoster, etc. Moreover, it is not even necessary that there should be any visible lesion of the surface, mere pressure or friction being sufficient to excite it in the predisposed. It is obvious, therefore, that the origin of many tumours from such trifling injuries must be overlooked or forgotten; and we may well doubt whether the tumour is ever really spontaneous. The frequency of the so-called spontaneous keloid over the sternum, occurring there in over half the cases, may be explained in women by the pressure and friction to which that part is exposed from the stay-bone, while in men many of their occupations are of such a kind as to expose them to similar slight injuries.

I would contend, therefore, that the division into true and false keloid is unsound both on clinical and on anatomical grounds; and, though it might be convenient to still use the term "spontaneous" for cases that are not known to spring from scars, it should be always done with the understanding that it is for clinical convenience, not to express a pathological difference. One practical inference must be drawn from Warren's observations and my own: that the blood-vessels which form the starting-point of the new growth are affected far beyond the tumour. This accounts for recurrence after removal; and, to avoid this, therefore, it is essential to cut very wide of the keloid, so as to get beyond the diseased vessels, in the very moderate proportion of cases in which it is necessary to interfere at all; for it must be borne in mind that spontaneous evolution occurs in a considerable number of cases.

The tumour which was the subject of the above observations was removed with a wide margin of healthy skin; and, when I examined the man last week—that is, four months after excision of the keloid—there was no sign of recurrence. There was also no keloid where two other fibromatous tumours had been removed.

AN UNRECORDED DANGER FROM CONTINUED LARGE DOSES OF IRON.

Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association in Brighton.

By J. STRAHAN, M.D., Belfast.

Intestinal concretions of various kinds have been described: concretions of magnesia, of cocoa-fibre, of oatmeal, and hosts of other substances bound together by mucus, which probably exists in too large quantity when such concretions form; that is to say, a state of intestinal catarrh assists the formation very much. Mr. Treves, in his *Intestinal Obstruction*, p. 336, gives many curious cases of obstruction by intestinal concretions of magnesia and oxide of iron, which the patient had been in the habit of taking; but he says that such rarely occasion sudden occlusion of the bowel, that the symptoms are distinctly chronic. This is the only mention I can find of iron as an obstructive agent, and what I have to record differs altogether from the cases described by Mr. Treves.

Dr. J. C. Thorowgood (*Medical Times and Gazette*, June 30th, 1883, p. 725) shows how bismuth can cause obstruction, but he merely gives us *post mortem* appearances, and not the symptoms during life. He says that subnitrate of bismuth has been given in such quantity that, after death, large, hard, black masses of concrete sulphide of bismuth have been found blocking the intestine, and resembling lumps of metal.

There can be no doubt about the usefulness of large doses of iron in many different states and disorders. Mr. de Morgan, at the Middlesex Hospital, gave at least one, or one and a half, drachms of tincture of iron daily, sometimes as much as one and a half to two ounces, for erysipelas. He speaks highly of it in these doses, saying it reduces the duration to from two to four days, instead of from seven to ten (Holmes's *System of Surgery*, vol. i, p. 265, *et seq.*). Dr. Squire gives as much as half an ounce of the tincture daily in diphtheria to young children, and much more to adults. It often happens that anæmic people are also dyspeptic; have a pale, teeth-indented tongue, nausea, vomiting, and even pain after food. This dyspepsia is dependent on the anæmia, and it is wonderful how such stomachs bear large doses of the chloride and sulphate. It is the best and quickest way of cure for both dyspepsia and anæmia, but I think it requires a precaution which I shall explain presently. Large doses of iron act as an immediate stimulant, rapidly remove anæmia, remove gastro-intestinal catarrh, renew appetite and digestion; but, unfortunately, if continued more than a week or two, they cause a gastro-intestinal catarrh of their own, and, if this be not attended with diarrhœa, or if a purgative be not given, serious symptoms may ensue.

The preparations I have found to cause symptoms of obstruction are as follows, namely: Ringer's pill of 5 grains of dried sulphate of iron = 9 grains of ordinary sulphate; half-drachm and whole drachm doses of tincture; mistura ferri composita, *P.B.*, made so strong as to contain 8 or 10 grains of sulphate of iron and carbonate of potash in each dose. Any of these, if given three times, or even twice, daily, for from one to two weeks, and if natural or artificial diarrhœa do not in the meantime wash out the quantities of insoluble sulphide, will cause severe colic and constipation, which morphine and turpentine stupes seem unable even to alleviate, and which, it seems to me, would continue indefinitely, or till death, if not removed by a smart saline purge, or other means. I have seen twenty-four hours of rhythmic agonising pain, very like labour, with nearly constant vomiting, no sleep or ease, after a grain of morphine by the mouth, the temperature rising to 101° Fahr., and great depression of all the powers of life, from a couple of weeks' course of Ringer's pill, which had done immense good to the system at large. This has not occurred once only, but dozens of times, so that I now expect it, and provide against it. As soon as ever a large dose of any saline—I prefer an ounce of sulphate of magnesia—has well acted, all symptoms rapidly disappear. At this time, and for twenty-four hours after, the stools seemed composed half of dirty water and half of black sand. I think this latter fact explains the pathology of the matter. In fact, it is a real obstruction—an acute one, too—by quantities of insoluble sulphide of iron. The quantity of this black sand, which comes away when severe constipation and colic have occurred, is surprising. It seems to be much more in quantity than the whole iron ingested, although the stools have been jet black all along, through excreting the sulphide. So, it seems to me, it must lodge somewhere; perhaps in the cæcum and appendix. Then when the iron begins to sicken the patient (gastric catarrh), the sulphide, I suppose, concretes by mucus, and forms an obstruction which brings matters to a crisis. The length of time that a patient can take large doses of iron, depends on the state of the bowels; if they be kept, or remain, slightly loose, he does not suffer at all; if he becomes constipated, the iron soon sickens, and the horrible pains begin; if he were to take a smart saline purge once a week, I believe he could go on indefinitely. The saline gives the quickest relief, because it produces such a vast exosmosis of water from the intestinal wall at all points, as to dissolve the mucus which binds the sand, and then washes it out. In extreme constipation, it dissolves fæcal lumps in the same way, except when the masses are enormous. It is thus the best purgative where there is a stricture in the bowels, with dilatation above, as it melts the fæces into a fluid, when they can run through the narrow part.

It is also well known to be the only safe purgative if any inflammatory lesion exist, enteritis or peritonitis. Mr. Lawson Tait takes advantage of this property of salines in his modern treatment of peritonitis ensuing on abdominal section. The principle here seems to be that of giving true and perfect physiological rest by dissolving and washing out all irritants.

Another great advantage the salines have, is that they cause no pain, no griping. A teaspoon of Epsom salts every two or three hours will put an end to many a case of fæcal obstruction in old people, and that without pain, where croton-oil, and drachm-doses of jalap, have only given rise to unendurable pain and collapse.

I daresay copious enemata would succeed even in a shorter time than the saline takes to act (about two hours); but as the latter acts so well, I have not tried the former.

I cannot, of course, say that large doses of iron will affect everyone in the way I have described, but in the nature of things I believe it to be highly probable. I think this obstruction by iron worth calling attention to, as many medical men are as fond of giving large doses of iron as I am. There is excellent reason for the practice too. Laache, in "The Relation of recent Researches on Blood-corpuscles to Anæmia and Leukæmia" (*Deutsche Med. Woch.*, October 23rd, 1884) shows that in anæmia it may be both corpuscles and hæmoglobulin in proportionate quantity which are deficient, or, as in true chlorosis, while the red cells are diminished, the hæmoglobin is reduced out of all proportion to the loss of red cells. In fact, in the latter condition, what red cells remain are individually "chlorotic," are not red, or, at least, not red enough. Again, after bleeding, the red cells increase much more rapidly than the hæmoglobin, until, assuming it to be evenly distributed among the corpuscles, it has sunk to 70 per cent. of the healthy standard. Now, in such cases, the value of large doses of iron is seen. According to Laache, small doses of iron chiefly stimulate the numerical increase of red cells; large doses restore both the number of cells and the amount of hæmoglobin in each. This explains the difference which most men have noticed in practice between the large and the small dose.

USE OF ICE AND CARBOLIC ACID IN THE TREATMENT OF INJURIES AND INFLAMMATION OF THE EYES AND EYELIDS.*

Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association, in Brighton.

By HENRY GREENWAY, M.R.C.S., Plymouth.

Having been requested to assist in the work of this Section, I think I cannot do better than give a short communication on the above subject.

At our annual meeting in 1879, I contributed a paper on my treatment of glaucoma by the application of ice. I therein stated that, as the bladder containing the ice became offensive, "I found it necessary to place in it, also, a small quantity of carbolic acid solution." I also hinted the possibility of the acid playing a part in the cure. Not long after the reading of that paper, I was called on to attend a case of chronic catarrhal ophthalmia, in a middle-aged woman. In the progress of the disease, various structures of the eye had become involved, and the medical treatment—including tincture of iron, occasional doses of pil. hydrarg. and pulv. ipecac. comp., and warm poppy fomentations—was producing but little effect. I then tried the application of ice and carbolic acid, not omitting the iron mixture, and in the course of a few days, marked improvement had taken place. The case continued to improve, and was cured within three weeks from the commencement of the altered treatment. I have since treated various in-

flammatory affections of the eyes in a similar manner, with success. They include phlyctenular ophthalmia, keratitis, sclerotitis, and non-specific iritis. Within the past month, I attended a young child for an acutely inflamed cornea, with an elongated ulcer in the centre, the result of measles. The ice and carbolic application, and five minim doses of tincture of iron every four hours, proved a cure in a comparatively short period.

As an example of the value of this treatment in wounds, and certain other injuries of the eye, I will quote the following case. W. H., a carpenter's apprentice, received a blow on his left eye, from the splintered end of a stick, on September 30th, 1884. I saw him very shortly after the accident, and found a vertical wound of the cornea, about three-eighths of an inch long, and slightly external to the centre, and, through this wound, a portion of the iris was protruding. On the outer side of the eye, about a quarter of an inch beyond the junction of the cornea and sclerotic, could be seen a bluish-black spot, where the free end of the splinter had almost protruded. I dropped a solution of atropine on the eye, and ordered the patient to bed in a darkened room. A small bladder, containing ice and solution of carbolic acid, was then placed on the eyelids and brow. On the following day, I found the iris had receded, and that the patient was fairly comfortable. On October 4th, there was some feverish disturbance, and I prescribed the sulphate of iron and magnesia mixture, recommended by Mr. Henry Power for certain inflammatory affections of the eye. This was continued some time, with occasional intermissions. On October 19th, there was sympathetic irritation of the right eye, and I prescribed small doses of calomel and opium night and morning. At no time were these unwelcome symptoms of an alarming character, and it was evident they were chiefly kept in abeyance by the external treatment, which I think was continued for about a month. The right and left eyes are now equally useful, and it is only by a close examination that the seat of the late injury can be detected. The young man is now a subinspector on a railway line, an office he could not hold if there were defective vision. Operation wounds of the eye, as well as those caused by accident, heal kindly under the use of ice and carbolic acid.

The mode of applying the ice and acid solution, is to place those ingredients in a small pig's or sheep's bladder, suspended from a band passing across the patient's forehead, and encircling the head, the bladder lying in front of the affected eye, fresh supplies of ice and acid to be added as often as required. In order to prevent injurious effects by a too prolonged application of extreme cold, the bladder should be removed occasionally, and reapplied when returning warmth is perceptible. The acid solution is made by adding half a fluid ounce of the glycerine of carbolic acid, *B.P.*, to a pint of water. A tablespoonful of this solution will be sufficient to place in the bladder at a time.

IS IT DESIRABLE, IN CERTAIN CASES, TO SUBSTITUTE RESECTION OF THE OPTIC AND CILIARY NERVES FOR ABLATION OF THE EYEBALL?

Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association in Brighton.

By CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,
Surgeon to the Nottingham and Midland Eye Infirmary.

Notwithstanding the great advance effected by the substitution of enucleation for the ancient and formidable practice of scooping out the whole contents of the orbit, it cannot be denied that the operation of ablation of the eyeball still leaves much to be desired. The practice of exenteration—an operation which, I may remark in passing, has recently, in Dr. Knapp's practice, given rise to most alarming symptoms—the substitution of a glass vitreous chamber, and the late Mr. Streatfeild's proposal to destroy the whole conjunctival surface after enucleation, may, I think, be fairly taken as evidence that modern surgeons are not altogether satisfied with the existing state of things; and, indeed, it would be strange if it were not so, for, when an eye is excised, it frequently happens that excessive absorption of orbital fat and tissue gives the patient a ghastly appearance, which is only partially relieved by the insertion of a glass eye. The artificial substitute itself, in many cases, gives rise to traumatic conjunctivitis, accompanied by profuse discharge; and if, as common sense dictates, we withhold the eye for a time in order to treat this affection, the orbit is apt to retract, vegetations spring up, the eyelids turn inwards, adhesions form, and it is difficult, sometimes impossible, to replace it. At best, the patient is most unpleasantly reminded every night and morning of his misfortune; and, in some cases, photophobia, lacrymation, and sympathetic irritation of the fellow eye, accompany each insertion; all these disagreeables are intensified and aggravated in the case of the working-man, the most frequent subject of enucleation. To him the annual expense of an artificial eye is a serious tax, which is increased by occasional breakage. If he wears it at work, it becomes encrusted with dirt and mucus, the surface is abraded, and it is apt to drop out; if he leaves it at home, the orbit becomes a miniature dustbin and receptacle of all kinds of foreign bodies, a state of things which is only slightly mitigated, if at all, by the use of a dirty shade.

Now, it cannot be denied that these are very great and very serious objections to enucleation of the eyeball; nevertheless, when an eye has been crushed by a blow that has probably felled the patient, when it has been penetrated by a foreign body, when it is the site of a neoplastic growth which may prove malignant, and when it belongs to a patient who cannot be trusted to take care of himself, or to return if threatened with sympathetic ophthalmia, I think that it is the best, because the safest practice, to excise the globe. When, however, the eye, although sightless, is an ornamental appendage, when it is merely affected by neuralgia, by attacks of recurrent inflammation, or luminous spectra, which torment the sufferer, or when it belongs to a patient who, although threatened with sympathetic ophthalmia, refuses to submit to enucleation, I think the very best thing we can do for him is to divide the optic and ciliary nerves, an operation which I am in the habit of performing in the following way. I pinch up the conjunctiva immediately over the insertion of the internal rectus tendon, draw up the muscle with a blunt hook, and divide it close to its insertion. I then seize the eyeball with sharp-pointed forceps or hook, pull it well forwards, turn it inwards, and sever the optic nerve as far back in the orbit as possible, the globe is then turned completely round, and the stump of nerve left attached to its surface shaved off close to the sclerotic.

During the last six years, I have treated thirty-one patients in this way, and the results have been most gratifying; relief has been complete, motion in all directions is perfect, and, in point of fact, it is difficult in some cases to tell which eye has been done. Herein, it appears to me, is the solution of Mr. Adams Frost's pertinent question, "What shall we do with a lost eye?" Enucleation is mutilating and unsatisfactory, exenteration is dangerous, and, moreover, apt to excite sympathetic ophthalmia, a glass vitreous appears to me likely to aggravate the evils of a foreign body by its constant presence in the orbit, and destruction of the conjunctiva is merely the expression of despair.

Gentlemen, we are bound in all honour, and by every law, not to remove or destroy any portion of the organism which can by any possibility be saved, and I think we shall best fulfil this injunction, this first canon in surgery, by adopting in suitable cases an operation which, as Professor Schweigger has remarked, "is quite as effectual as enucleation, and has this great advantage, that it does not sacrifice the eyeball, or render an artificial eye necessary."

Tympanites in Hysterical Women.—Professor Talma, of Utrecht, writing on tympanites in hysterical women, relates some interesting facts concerning three of his patients. He believes the cause of this condition to be spasmodic contraction of the diaphragm. The first case mentioned is that of a servant, aged twenty-three, who presented, with exception of paralysis, all the symptoms common to hysterical girls. She sought advice for an eruption on the breast, and whilst under Professor Talma's treatment mentioned that she had suffered some months previously from enlargement of the abdomen. The abdomen was even then greatly enlarged, and the girl suffered terribly from hiccough, which increased in violence when any of the students approached her. During sleep the size of the abdomen decreased considerably, and when the patient was put under chloroform it resumed its normal proportions. A tube was passed into the stomach, but no abnormal amount of gas was discovered, nor was any undue quantity found in the intestines. As the effect of the chloroform passed off, the abdomen again increased in size, and Professor Talma noticed that the patient took four or five inspirations without any corresponding expirations. During respiration the abdomen was immovable, and the breathing entirely thoracic; the lower border of the lungs was depressed to the tenth rib. Professor Talma was convinced that the enlargement of the abdomen was the result of spasmodic contraction of the diaphragm. The two other cases were those respectively of a servant, aged thirty-five, and a girl, aged fifteen, who had not menstruated. The cases were somewhat similar, and Professor Talma came to the same conclusion as in the first case as to the cause of the tympanites.

PUBLIC HEALTH OR STATE MEDICINE.

SUBJOINED are the regulations of the Examining Bodies which grant degrees or certificates in Public Health or State Medicine.

UNIVERSITY OF OXFORD.—There will be holden every year, in Michaelmas Term, an examination in subjects bearing on Preventive Medicine and Public Health, for the purpose of granting certificates of proficiency therein. No person will be admitted thereto who shall not have obtained the degree of Bachelor of Medicine in the University. There shall be five examiners, namely, the Regius Professor of Medicine, who shall preside over the examination, and four other persons nominated to serve for three years, subject to the approval of Convocation. These four, if members of the University, shall be members of Convocation, or Bachelors of Civil Law or of Medicine, at the least, or they may be persons not members of the University. The subjects of examination shall be Hygiene, Sanitary Law, Sanitary Engineering, and Vital Statistics. At the close of the Examination, a list of the candidates who shall have received certificates shall be made in a book to be kept for that purpose, and shall be certified by the signature of the Examiners. Such book shall remain in the custody of the Registrar of the University. The Examination shall be under the supervision of the Board of the Faculty of Medicine. The fee to be paid before examination is £5; for the Certificate of Proficiency, £10.

UNIVERSITY OF CAMBRIDGE.—Any person whose name is on the *Medical Register* of the United Kingdom may present himself for examination, provided he be in his twenty-fourth year at least when he presents himself for the first part of the examination, and have attained twenty-four years of age before he presents himself for the second part. The applications of candidates whose names have not been on the *Medical Register* three years, must be accompanied by a certificate of birth or other proof of age.

Part I comprises Physics and Chemistry; the Principles of Chemistry, and methods of analysis, with especial reference to analyses of air and water; application of the microscope; the laws of heat and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage; construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general; statistical methods.

Part II comprises laws of the realm relating to public health; origin, propagation, pathology, and prevention of epidemic and infectious diseases; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water-supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

The examination in both parts is oral and practical as well as in writing. Candidates may present themselves for either part separately, or for both together.

Every candidate must pay a fee of £4 4s. before admission to *each part* of the examination.

Every candidate who has passed both parts of the examination will receive a certificate testifying to his competent knowledge of what is required for the duties of a Medical Officer of Health.

The following suggestions have been drawn up as some guide to candidates preparing for the examination. Part I. Candidates will be expected to understand the application of the general laws of Chemistry to such cases as occur in the practice of an Officer of Health. It is not expected that Officers of Health will in general be able to act as public analysts, but that they will know the methods of analysis, and be able to interpret correctly the results of professional analysts. The kinds of applications of the several sciences of which the candidates are expected to show a competent knowledge will be best understood by a perusal of Parkes's *Manual of Practical Hygiene*. In the actual analysis of water and air, candidates will not be expected to make complete quantitative analyses, but to know how to apply ordinary chemical methods for the detection and discrimination of mineral and organic substances in the samples. Candidates must show a practical acquaintance with the use of the microscope. Part II. Candidates must show an acquaintance with the sanitary laws in force in England; but if any candidate have information respecting alternative laws in force in the metropolis or in Scotland or in Ireland, opportunity will be given him, alternatively, of showing his acquaintance with such laws. The rest of Part II, besides the subjects expressly mentioned, is to be understood as including those of Vaccination, Disinfectants, the management of outbreaks of Infectious Diseases, with the construction of Hospitals, temporary or permanent; Endemic Diseases; Birth-rates and Death-rates; the qualities and suitableness of various Waters used for domestic purposes; the inspection of factories, mines, workshops, and common lodging-houses.

The following list of works will probably be found valuable to some of the candidates, but the necessity of reading all or any one of them is not urged upon them.

Parts I and II.—Parkes's *Manual of Practical Hygiene;* G. Wilson's *Handbook of Hygiene;* Grimshaw and others, *Manual of Public Health for Ireland;* Cameron's *Manual of Hygiene;* Seaton's *Handbook on Vaccination;* *Army Medical Reports; *Reports on Hygiene;* *Reports to Privy Council and Local Government Board by their Medical Officer. Chemistry: General Principles: Fownes' *Manual of Chemistry;* Bloxam's *Chemistry;* Roscoe's *Lessons in Elementary Chemistry;* Attfield's *Chemistry.* Analysis: Bloxam's *Laboratory Teaching;* Bowman's *Practical Chemistry;* Sutton's *Systematic Handbook of Volumetric Analysis;* Frankland's *Water-Analysis for Sanitary purposes;* Wanklyn and Chapman's *Water-Analysis;* Hartley's *Air and its Relations to Life;* Wanklyn's *Milk-Analysis;* Wanklyn and Cooper's *Bread-Analysis;* C. Fox, *Sanitary Examinations of Water, Air, and Food.* Physics: Todhunter's *Natural Philosophy for Beginners;* Ganot's *Physics;* Everett's *Textbook of Physics.* Microscopy: Carpenter's *Microscope and its Revelations;* Macdonald's *Guide to Microscopical Examination of Drinking Water;* *Hassall's *Food and its Adulterations.* Sanitary Engineering, Water-Supply, Sewage, etc.: Eassie's *Sanitary Arrangement for Dwellings;* Galton's *Healthy Dwellings;* Corfield's *Dwelling Houses, their Sanitary Construction and Arrangement;* *Bailey-Denton, *Sanitary Engineering;* *Latham's *Sanitary Engineering;* *Bayles' *House-drainage and Water-service;* Tomlinson's *Warming and Ventilation;* Corfield's *Treatment and Utilisation of Sewage;* *Report of Committee appointed by President of Local Government Board on modes of treating Town Sewage; *Reports of Royal Commission on Pollution of Rivers, especially the sixth, on Domestic Water-Supply; *Report from Select Committee on Public Health Act (1875) Amendment Bill, with the Evidence; *R. Angus Smith's *Air and Rain;* *Ure's *Dictionary of Arts, Manufactures, and Mines.* Laws of the Realm and By-laws relating to Public Health. For England: Public Health Act, 1875, and the Acts of Parliament relating to the various subject-matters within the domain of Hygiene passed since that date; Artisans' and Labourers' Dwellings Acts; Vaccination Acts. For the Metropolis, or for Scotland, or for Ireland: Laws dealing with the same subject-matters as the above, and having application to the particular part of the United Kingdom; Model By-laws of the Local Government Board; Adulteration of Food and Drugs Act. Statistics: Lewis's *Digest of the English Census;* the article on "Statistics" in the *Cyclopædia of Anatomy and Physiology;* *Dr. Farr's letters to the Registrar-General in the early Reports of the Registrar-General; *Reports of the Registrar-General; *Deaths in England. Average Annual Proportion of Deaths, etc., 1861-70. Parliamentary Paper C. 874, Session 1873. Construction of Hospitals: Miss Nightingale's *Notes on Hospitals;* Oppert's *Hospitals, Infirmaries, and Dispensaries, their construction, interior arrangement, and management;* Galton, *On the Construction of Hospitals;* Burdett, *Cottage Hospitals:* *De Chaumont, *Hospitals,* in the *Encyclopædia Britannica,* last edition. The books thus marked * are books of reference.

The names of candidates must be sent, with the fees, on or before September 28th, to the Registrary, University of Cambridge. Application for information should be made to Professor Liveing, Cambridge.

UNIVERSITY OF LONDON.—A special examination is held once in every year in subjects relating to Public Health, and commences on the second Monday in December. No candidate is admitted to this examination unless he have passed the second examination for the degree of Bachelor of Medicine in this University at least one year previously, nor unless he have given notice of his intention to the registrar at least two calendar months before the commencement of the examination. The fee for the examination is £5, which must be previously paid to the registrar. If, after payment of his fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, the fee is not returned to him; but he may enter for any subsequent examination upon payment of an additional fee of £2 10s., provided that he give notice to the registrar at least two calendar months before the commencement of the examination. Candidates are examined in the following subjects: 1. *Chemistry and Microscopy,* as regards the examination of air, water, and food; 2. *Meteorology,* as regards general knowledge of meteorological conditions, and the reading and correction of instruments; 3. *Geology,* as regards general knowledge of rocks, their conformation and chemical composition, and their relation to underground water, and to drainage and

sources of water-supply; 4. *Physics and Sanitary Apparatus*: the laws of heat, mechanics, pneumatics, hydrostatics, and hydraulics, in relation to the construction of dwellings, and to warming, ventilation, drainage, and water-supply, and to apparatus for these and other sanitary uses; the reading of plans, sections, scales, etc., in regard of sanitary constructions and appliances; 5. *Vital Statistics*, as regards the methods employed for determining the health of a community; birth-rate; death-rate; disease-rate; life-tables; duration and expectancy of life; present amount of mortality at the various stages, and its causes, in different classes and communities: practical statistics of armies, navies, civil professions, asylums, hospitals, dispensaries, lying-in-establishments, prisons, in-door and out-door paupers, friendly societies, sick-clubs, medical and surgical practice; towns; 6. *Hygiene*, including the causation and prevention of disease. Reference shall be had to such matters as the following: parentage, temperaments; morbid diatheses: congenital diseases and malformations; effects of close interbreeding; special liabilities at particular periods of life; physical regimen of different ages; earth and climate and changes of season; dampness of soil; malaria; conditions of healthy nourishment; conditions of healthy lodgment; conditions of healthy activity; hygiene of particular establishments and particular classes of population; disease as distributed in England; particular diseases, as regards their intimate nature, causation, and preventability; processes of contagion in different diseases; incubation; particular dangers of infection, etc.; disinfectants, and establishments for disinfection: quarantine; hospitals for infectious disease; conveyance of the sick; vaccination; prostitution; diseases of domestic animals in relation to the health of man; rabies; diseases of the vegetable kingdom, and failures of vegetable crops in relation to the health of man; famine diseases; poisons in manufacture, and commercial and domestic use; 7. *Sanitary Law*, as regards the Public Health Act, 1875; the Vaccination Acts; the Rivers Pollution Prevention Act; the Sale of Food and Drugs Act; the Artisans and Labourers Dwellings Improvement Act, 1875; the Acts regulating the Medical Profession and the Practice of Pharmacy; the Acts relating to Factories and Workplaces, and to the Detention and Care of Lunatics. The examination is written and practical, and extends over four days. Candidates are not approved by the examiners unless they have shown a competent knowledge in all the principal subjects. In the week following the examination, the examiners publish the names of the candidates who have passed, arranged in alphabetical order. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives a gold medal of the value of £5. A certificate under the seal of the University, and signed by the Chancellor, is delivered at the public presentation for degrees to each candidate who has passed.

UNIVERSITY OF DURHAM.—Certificates of proficiency in Sanitary Science are granted under the following regulations.

Candidates must give at least twenty-eight days' notice to the Registrar, and send the fee and the necessary certificates.

A. *Certificate of Proficiency in Sanitary Science.*—1. The candidate must be a registered medical practitioner. 2. He must have attended one Course of Lectures on Public Health at the University of Durham College of Medicine, Newcastle-on-Tyne, during one winter session. 3. He must pass an examination in the following subjects: *a. Physics.*—Laws of light, heat, hydrodynamics, and pneumatics; *b. Chemistry.*—As applied to the detection of noxious gases and atmospheric impurities, analysis of air and water; *c. Sanitary Legislation.*—Knowledge of the Acts of Parliament in force for the preservation and protection of health: *d. Vital Statistics.*—Rates of births, deaths, and marriages; the methods of calculation, classification, and tabulation of returns of sickness and mortality; data and conclusions deducible therefrom; *e. Meteorology, Climatology, and Geographical Distribution of Diseases in the United Kingdom*: *f. Sanitary Medicine*, more especially in relation to epidemic, endemic, epizootic, and communicable diseases; diseases attributable to heat, cold, or damp, insufficiency or impurity of air, food, or drink; habitation, occupation, overexertion, intemperance, heredity; preventive measures, vaccination, isolation, disinfection; the regulation of noxious and offensive manufactures and trades; the removal of nuisances; *g. Practical Hygiene*, in reference to site, materials, construction, lighting, ventilation, warmth, dryness, water-supply, and refuse-disposal of dwellings, schools, hospitals, and other buildings of public and private resort; action with respect to nuisances and outbreaks of disease; other duties of a medical officer of health.—The examination is by written papers, practical, and *viva voce*. In the practical examination, the candidate is required: 1. To report upon the condition of some actual locality; 2. To analyse liquids and gases; 3. To explain the construction and the uses of instruments employed in meteorology; 4. To make microscopic examinations. The fee is £5 5s. The next examinations will commence on September 20th, 1886, and April 25th, 1887.

B. *Certificate of Proficiency in Sanitary Science for Medical Officers of Health.*—The candidate must have obtained a registrable qualification before January 1st, 1878, must be registered, and must have acted as a medical officer of health for five years. He must not be under thirty years of age. He must pass the same examination as particularised under the heading A, and must write an essay upon some practical sanitary subject, and be examined upon the essay and upon other sanitary questions. The fee is £10 10s.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—1. Candidates must be registered under the Medical Act (1858). 2. The Examination, consisting of two parts, will be held annually, in the month of March. *Part* I will comprise: 1. Physics in their application to Health, with reference to—(*a*) Warming and Ventilation; (*b*) Water-Supply, Sewerage, and Drainage; (*c*) Sanitary Construction. 2. Meteorology in relation to Health. 3. Chemistry, with special reference to the Examination of Air and Water (exact quantitative analyses will not be required, neither will candidates be restricted to any particular chemical notation. 4. Microscopical Examinations, as applied to Air, Food, and Water (excluding work special to the duties of a Public Analyst). 5. Geology, in its relation to Drainage and Water-Supply. 6. Statistics in relation to Health. *Part* II will comprise: 1. Medicine, in relation to the growth, origin, and prevention of Disease; (*a*) Special Pathology of Preventable Diseases; (*b*) Influence of Climate, Season, and Soil; (*c*) Effects of unwholesome Air, Water, and Diet; (*d*) Diseases of Animals in relation to the Health of Man; (*e*) Influence of Occupation and Lodgment; (*f*) Isolation, Quarantine, Disinfection, Vaccination. 2. Application of Medical and other Sciences to Sanitary Work and Administration: (*a*) Health-requirements of Houses, Villages, and Towns; (*b*) The Sanitary Regulation of Households, Establishments, and Occupations; (*c*) The Prevention and Control of Epidemic Diseases. 3. Statutes and By-Laws relating to Public Health. 4. Duties of Sanitary Authorities and their Officers. 3. Candidates must be at least 23 years of age before being admitted to Part I, and 24 years of age before being admitted to Part II. 4. Candidates may enter for Parts I and II separately or at the same time; but no candidate's name will be published until he has passed in both parts of the Examination. 5. The Examination in each will be written, oral, and practical. The fee for each part is £5 5s., and must be paid three days prior to the day on which the Examination commences. 7. A candidate who fails to satisfy the Examiners in either part may present himself again at the next Examination, on payment of a fee of £3 3s. 8. The Examination on Part I will commence on the first Monday in March, and the Examination on Part II on the second Monday in March. 9. The certificate awarded is entitled "Certificate in Hygiene of the Royal College of Physicians of London." 10. A candidate intending to present himself for either part of the Examination must give fourteen days' notice in writing to the Registrar of the College.

UNIVERSITY OF EDINBURGH.—This University gives the degrees of Bachelor and Doctor of Science in Public Health.

Bachelor of Science.—1. The candidate must be a graduate in Medicine of a British University, or of such Colonial, Indian, or Foreign University as may be specially recognised by the University Court. 2. He must be matriculated for the year in which he appears for examination. 3. If the candidate have not passed an *annus medicus* in the University of Edinburgh, he must, before presenting himself for examination, have attended at the University at least two courses of instruction, scientific or professional, bearing on the subjects of the examination. 4. There are two examinations for the degree. A candidate who has passed the first examination may proceed to the second at the next or at any subsequent period fixed for this examination. 5. The candidate must produce evidence that, either during his medical studies or subsequently, he has attended a course of lectures in which instruction was given on Public Health; and that he has studied Analytical Chemistry practically for three months with a recognised teacher. 6. The examinations are written, oral, and practical, and are conducted by University examiners selected by the University Court. 7. The subjects of examination are as follows.

First Examination.—1. *Chemistry.*—Qualitative analysis; analysis of air, detection of impurities in the atmosphere; analysis of waters for domestic use, and determination of the nature and the amount of their mineral and organic constituents; detection, chemical and microscopical, of adulteration in articles of food and drink, and in drugs; detection of poisons; practical exami-

nation, including at least two analytical researches. 2. *Physics*—Elements of experimental physics; meteorology, and methods of making meteorological observations. An oral examination, and an examination in practical chemistry in the laboratory a few days after the written Examination. Candidates must give in their names and pay the fee on or before October 17th, 1886, or March 25th, 1887.

Second Examination.—1. *Medicine*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases, and the geographical distribution of disease; unhealthy trades; overcrowding; epizootics. 2. *Practical Sanitation*—Duties of a health-officer in reference to water-supply and drainage; form, dimension, and construction of sewers; quality and fitness of materials; unhealthy dwellings and public buildings; removal and disposal of sewage and other refuse and impurities; cemeteries; nuisances from manufactories, etc.; bad or insufficient supplies of food; outbreaks of zymotic diseases; quarantine; disinfectants and deodorisers; construction of permanent and temporary hospitals. 3. *Sanitary Law and Vital Statistics*—Knowledge of the leading Sanitary Acts of Parliament; knowledge of statistical methods and data in reference to population, births, marriages, and deaths. 4. *Measuration and Mechanical Drawing*—Plans and Sections of public and private buildings, mines, waterworks, and sewers. The candidate will be expected to make figured sketches from models, and to have such a knowledge of Mechanical Drawing as will enable him fully to understand engineering plans, sections, and elevations. Candidates are required to lodge with the Secretary of the Senatus proof of their being eligible, and to pay the fee on or before November 14th.

The first examinations will take place on October 14th to 19th, 1886, and March 26th to April 7th, 1887; the second on November 23rd, 24th, and 25th, 1886.

Doctor of Science.—A Bachelor of Science in the Department of Public Health may, after the lapse of one year, proceed to the degree of Doctor in the same department, on producing evidence that he has been engaged in practical sanitation since he received the degree of Bachelor of Science, and on producing a thesis on some subject embraced in the department of Public Health. Every such thesis must be certified by the candidate to have been composed by himself, and must be approved of by the Examiners. The candidate must lodge his thesis with the Dean of the Medical Faculty on or before January 30th in the year in which he proposes to graduate. No thesis will be approved which does not contain either the results of original observations on some subject embraced in the examination for B.Sc., or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted.

The fees for the degrees in Science in the Department of Public Health are: for each examination for B.Sc., £5 5s.; for the degree of D.Sc., £5 5s. Every candidate, unless a member of the General Council, must, before graduation, pay a registration fee of £1. The following are recommended as books to be studied in preparation for the examination: Balfour Stewart, *Elementary Physics*; Tait, *Properties of Matter*: Parkes, *Practical Hygiene*; Edw. Smith, *Manual for Public Officers of Health*, and *Handbook for Inspectors of Nuisances*; Michael, Corfield, and Wanklyn, *Manual of Public Health*, edited by Ernest Hart; Eassie, *Healthy Houses*; Bailey Denton, *Sanitary Engineering*; D. Galton, *Healthy Houses*: Vesey Fitzgerald, *Epitome of the Laws Affecting Health*; Binn's *Orthographic Projection*; Dittmar, *Qualitative Analysis*; Wanklyn, *Analyses of Water, Bread, Milk, and Tea*; James Bell, *Analysis of Tea, Coffee, and Sugar*; Woodhead Hare, *Practical Mycology*; R. A. Scott, *Meteorology (International Series)*; A. W. Blyth, *Poisons, their Effects and Detection*.

University of Glasgow.—A special examination is held once in every year in subjects relating to Public Health, and commences on the third Tuesday in October. All candidates must be registered medical practitioners. Candidates must produce evidence that, either during their medical studies or subsequently, they have attended a course of lectures in which special instruction was given on Public Health; and that they have attended a course of Analytical Chemistry specially bearing upon the subjects of examinations, given by recognised teachers. Candidates who have not passed an *annus medicus* in the University of Glasgow must, before presenting themselves for examination, have attended as matriculated students in this University at least two courses of instruction, scientific or professional, bearing on the subjects of the examinations. The examinations are written, oral, and practical.

The fee for this examination is £5 5s. The candidate must give notice to the Assistant-Clerk of Senate, and pay the required fee, at least one calendar month previous to the examination. If, after payment of the fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, the fee is not returned to him; but he may enter for any *one* subsequent examination without the payment of an additional fee.

The examination embraces the following subjects: Duties of Health-Officer; Air and Ventilation; Food and its Adulterations; Water and Water Supply; Sewage and Drainage; Construction of Hospitals, Public Buildings, and Dwellings; Overcrowding; Manufactories; Insalubrious Trades; Cemeteries; Nuisances; Quarantine; Disinfectants and Deodorisers; Outbreaks of Zymotic Diseases; Climate, Topographical and Seasonal, its influences in relation to Health and Disease; Geographical Distribution of Diseases; Knowledge of leading Sanitary Acts of Parliament; Vital Statistics.

The following are recommended as books for study:—E. A. Parkes, *Practical Hygiene*; George Wilson, *Handbook of Hygiene*; A. H. Hassall, *Food and its Adulterations*.

A course of lectures on Public Health is delivered in the University during the winter session.

Royal College of Physicians of Edinburgh.—The Royal College of Physicians of Edinburgh grants a certificate of Qualification in Public Health under the following Regulations.

Candidates must be already on the *Medical Register*, and possess a qualification in Medicine. They are not required to attend any special course of instruction; but their attention is directed particularly to courses of lectures on State Medicine, and to the practice of Analytical Chemistry. There are two examinations, which are written, oral, and practical. Rejected candidates are not admitted for re-examination till after the expiry of six months.

Examinations.—The first examination embraces: 1. *Physics:* especially pneumatics, hydrostatics, hydraulics, and engineering in relation to sanitary operations, including a knowledge of architectural and other plans, etc.; 2. *Chemistry:* especially analysis of air, water, food, including the biology of putrefaction and allied processes, with easy practical chemical analysis bearing on public health; 3. *Meteorology:* including climate, topographical and seasonal influences in relation to health and disease.

The second examination embraces: 1. *Epidemiology and Endemiology:* including the corresponding departments in the diseases of animals and plants—contagious diseases—diseases of periods of life, professions, trades, seasons, and climates; 2. *Practical Hygiene:* duties of a health-officer; food; water-supply; sewerage and drainage; construction of hospitals, public buildings, dwellings, manufactories; cemeteries, including the explanation and drawing of plans. 3. *Sanitary Law and Vital Statistics.*

Meetings for both examinations are held annually in April and October. The first examination is held on the second Tuesday of the month; the second examination on the immediately succeeding Wednesday. Each occupies one day. Candidates may enter for both examinations in the same week, or for one only. The examinations must be passed in their order, first and second. Candidates must appear for the second examination not later than twelve months after having passed the first. A candidate remitted at his second examination may come up again after a further period of six months.

The fees must be paid at least a week before the day of examination. The fee for each examination is £5 5s. Candidates forfeit the fee for the examination which they have been unsuccessful in passing. If a candidate who has presented himself for both examinations fail to pass the first, he is not allowed to present himself for the second, and his fee for the second is returned.

Faculty of Physicians and Surgeons of Glasgow.—Candidates may be admitted to examination before they have obtained a qualification to practice; but in no case is the certificate to be granted till the candidate is registered under the Medical Act. It is not obligatory on candidates to attend any special course of instruction; but they are strongly recommended to attend a course of lectures on public health, and a course of analytical chemistry. The examinations are written, oral, and practical. The examination is divided into two parts: (1) Chemistry, Physics, and Meteorology; (2) Medicine in its bearings on Sanitary Science, Sanitary Law, and Vital Statistics. Part I. In *Chemistry* candidates must show a fair general knowledge of the principles of the science and of the more commonly occurring elements. They will also be examined on air, water, and their constituent gases; combustion, and its products. They must be able to interpret correctly analytical reports on air, water, and milk. The practical examination will comprise—1, the usual modes of testing (qualitatively) for the commonly occurring impurities in water, in-

cluding poisonous metals; 2, the quantitative analysis of air in respect of the amount of carbon dioxide which it contains; 3, milk analysis. In *Physics* the examination will be on the laws of heat, the principles of pneumatics, hydrostatics, and hydraulics, in their application to ventilation, water-supply, and drainage. In *Meteorology*, candidates will be examined on the elements of the science, and on the use of meteorological instruments; also on climatology.—PART II will comprise—(*a*). Laws relating to public health, including by-laws which may be enacted; effects of overcrowding, vitiated air, impure water, and bad or insufficient food, water-supply, sewerage, drainage, and the house in reference to health; nuisances injurious to health; vital statistics. (*b*). Origin, propagation, pathology, prevention and control of infectious diseases; unhealthy occupations, the diseases to which they give rise, and the means of removing or mitigating their unhealthy conditions; geographical and topographical distribution of disease, and effects of soil, season, and climate. The following books may be consulted: Parkes' *Manual of Practical Hygiene;* Galton's *Healthy Dwellings;* Eassie's *Sanitary Arrangements for Dwellings;* Husband's *Sanitary Law, a Digest of the Sanitary Acts of England and Scotland*; Fox's *Sanitary Examinations of Water, Air, and Food;* Scott's *Elementary Meteorology;* Farr's *Vital Statistics.* The fee is eight guineas, of which three guineas are payable on entering for the First Part, three guineas on entering for the Second Part, and two guineas on obtaining the certificate. The first examination will be held on April 14th and July 21st, 1887, the second examinations two days later.

UNIVERSITY OF DUBLIN.—Doctors of Medicine or Graduates in Medicine and Surgery who wish to obtain from the University a certificate of qualification in State Medicine, can do so on passing an examination in a limited course of the following subjects: 1. Law; 2. Engineering; 3. Morbid Anatomy; 4. Vital and Sanitary Statistics; 5. Chemistry; 6. Meteorology; 7. Medical Jurisprudence; 8. Hygiene.

Candidates are required to send in their names to the Medical Registrar at least a week before the first day of examination.

ROYAL UNIVERSITY IN IRELAND.—This University grants a Diploma in Sanitary Science. It is conferred only on Graduates of Medicine of the University. Candidates must give notice in writing to the Secretaries of their intention to present themselves, and must pay the fee, £2, at least one month previous to the examination.

The examination embraces the following subjects: *Climate*—A general knowledge of meteorological conditions; the reading and correction of Instruments, and tabulating the results of meteorological observations. *Physics*—Laws of heat; mechanics, pneumatics, hydrostatics, and hydraulics. *Chemistry*—Constitution of the atmosphere; pure and impure waters; food. *Geology*—The character and construction of rocks, with reference to water-supply and drainage. *Sanitary Engineering*—The construction of dwellings, barracks, hospitals, schools, factories, etc. *Vital Statistics, Hygiene*, including the causation and prevention of disease. *Sanitary Law.* The examination in Chemistry includes a practical part on the chemical and microscopical examination of air, water, food, poisonous substances used in manufactures, etc. The examination in Physics embraces the reading of plans, sections, scales, etc., in connection with buildings, sanitary constructions, etc.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—Stated examinations for Certificates in Sanitary Science are held on the Thursday and Friday following the first Friday of January, April, July, and October. Special examinations may be held at such other times as the President shall appoint. Every Candidate for the Certificate must be a Licentiate in Medicine of the College, or a Registered Medical Practitioner of the United Kingdom. He must return his name to the Registrar of the College a week before the Examination, and lodge with him a testimonial of character from a Fellow or Member of the College, or from a Fellow of the Royal Colleges of Physicians or Surgeons of London, Edinburgh, or Dublin. The fee for the Examination is £5 5s., for Licentiates of the College; for others, £10 10s. The Examination comprises the following subjects. 1. *Etiology and Prevention of Disease:* Epidemiology, Infection, Hereditary Influence, Accommodation and Conveyance of the Sick, Hospitals and their Management. 2. *Engineering:* Including Hospital and House-Construction, Sewerage, Drainage, Ventilation, Water-Supply. 3. *Law:* The Acts relating to Public Health, Duties of Health-Officers. 4. *Chemistry:* with special reference to Air, Water, and Food. 5. *(a) Meteorology and Climatology; (b) Vital Statistics.* The following books are recommended, viz., Parkes, *Manual of Practical Hygiene;* Grimshaw, Furlong, Emerson Reynolds, and J. W. Moore, *Manual of Public Health for Ireland;* Wilson, *Manual of Hygiene and Sanitary Science.* In addition to the foregoing, the following works may with advantage be consulted. 1. *Engineering:* Corfield, *Dwelling Houses, Their Sanitary Construction and Arrangements*, and *Treatment and Utilisation of Sewage*; Galton, *On the Construction of Hospitals; Report of the Local Government Board on Treatment of Town-Sewage;* Hellyer, *The Plumber and Sanitary Houses*, 3rd edition; Parry, *Water.* 2. *Law:* The Public Health Acts for England and Ireland; The Artisans' Dwellings Acts: The Artisans' and Labourers' Dwellings Improvement Acts; The Vaccination Acts. 3. *Chemistry:* Emerson Reynolds, *Elements of Experimental Chemistry;* Roscoe, *Lessons in Elementary Chemistry.* 4. *Meteorology:* R. H. Scott, *Elementary Meteorology.* 5. *Vital Statistics;* Article on "Medical Statistics" in the *Cyclopædia of Anatomy and Physiology.* The examinations are conducted by a printed paper on each of the five subjects. One hour is allotted for the answering of each paper, which contains five questions. The Candidates are also examined on a second day in the reading of the Engineering Plans, Sections, and Scales, and in Analytical Chemistry, with special reference to Air, Water, and Food. The fee paid by a Licentiate in Medicine is not returned in case of rejection; half the fee paid by other registered medical practitioners is returned in such case.

DENTAL SURGERY.

REGULATIONS OF THE MEDICAL COUNCIL.—The following are the regulations of the Medical Council regarding the registration and education of Dental Students. 1. The registration of Dental Students shall be carried on at the Medical Council Office, London, in the same manner as the registration of Medical Students, and subject to the same regulations as regards Preliminary Examinations. 2. Students who commenced their professional education by apprenticeship to Dentists entitled to be registered, or by attendance upon professional lectures, before July 22nd, 1878 (when dental education became compulsory), shall not be required to produce evidence of having passed a Preliminary Examination. 3. Pupils who have been articled to their fathers, or to brothers, with whom money transactions would be nominal, shall, in all other respects, be considered to be in the same position, in regard to registration, as those pupils provided for in the first part of Section 37 of the Dentists' Act, who have paid premiums for instruction. 4. Candidates for a Diploma in Dental Surgery shall produce certificates of having been engaged during four years in Professional Studies, and of having received three years' instruction in Mechanical Dentistry from a registered practitioner. 5. One year's *bonâ fide* apprenticeship with a registered Dental Practitioner, after being registered as a Dental Student, may be counted as one of the four years of Professional Study. 6. The three years of instruction in Mechanical Dentistry, or any part of them, may be taken by the Dental Student either before or after his registration as a student; but no year of such mechanical instruction shall be counted as one of the four years of Professional Study unless taken after registration. 7. The privilege provided by the first clause of Section 37 of the Dentists' Act, for persons whose articles of apprenticeship expired before January 1st, 1880, shall be extended to all persons whose articles had begun two years before that period.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND grants a Diploma in Dental Surgery under the following regulations.

Candidates must produce certificates: 1. Of being 21 years of age. 2. Of having been engaged, during four years, in the acquirement of professional knowledge. 3. Of having attended not less than one of each of the following Courses of Lectures: Anatomy, Physiology, Surgery, Medicine, Chemistry, and Materia Medica. 4. Of having attended a Second Winter Course of Lectures on Anatomy, or a course of not less than twenty Lectures on the Anatomy of the Head and Neck. 5. Of having performed Dissection during not less than nine months. 6. Of having completed a Course of Chemical Manipulation. 7. Of having attended, at a Hospital or Hospitals in the United Kingdom, Surgery and Clinical Lectures on Surgery, during two Winter Sessions. 8. Of having attended two Courses of Lectures upon each of the following subjects: Dental Anatomy and Physiology (Human and Comparative), Dental Surgery, Dental Mechanics, and one course on Metallurgy. 9. Of having been engaged, during not less than three years, in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent practitioner. 10. Of having attended at a Dental Hospital, or in the dental department of a General Hospital, the Practice of Dental Surgery during two years. The courses of instruction and

hospital practice must be by lectures or in institutions recognised by the College.

All candidates who commence their Professional Education on or after July 22nd, 1878, must, in addition to the certificates enumerated above, produce a certificate of having, prior to such commencement, been registered as a Dental Student by the General Medical Council.

Candidates who were in practice as Dentists, or who had commenced their Education as Dentists, prior to September, 1859, and who are unable to produce the certificates required by the foregoing regulations, must furnish the Board of Examiners with a Certificate of Moral and Professional character, signed by two members of the College, together with answers to certain inquiries. In the case of candidates practising in, or educated in, Scotland or Ireland, the certificate of moral or professional character may be signed by two licentiates of the Royal College of Surgeons of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow, or of the Royal College of Surgeons in Ireland.

The examination is partly written and partly oral. The written examination comprises General Anatomy and Physiology, and General Pathology and Surgery, with especial reference to Dental Practice. The oral practical examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc. Members of the College, in the written examination, have to answer only those questions set by the Section of the Board consisting of persons skilled in Dental Surgery; and in the oral examination are examined only by that Section. A rejected candidate is not admitted to re-examination within six months, unless the Board otherwise determine. Examinations are held in February, June, and October. The fee for the Diploma is £10 10s., over and above any stamp-duty.

Royal College of Surgeons of Edinburgh.—The Examinations are written and oral, and consist of two separate sittings. Candidates must apply to the Secretary of the College on or before the Saturday preceding the ordinary examination, and must produce all the required certificates.

Candidates who commenced their professional education on or after August 1st, 1878, must produce evidence of having attained the age of 21 years, and of having passed the Preliminary Examination in General Education required for the ordinary Licence in Surgery, or an equivalent examination. They must also produce certificates of having been engaged, during four years, in the acquirement of professional knowledge, and of having been, during that period, or at some time previous to their examination, engaged for not less than three years in the acquirement of a practical knowledge of Mechanical Dentistry with a registered dental practitioner.

The following Lectures and other courses of instruction must have been attended at a recognised medical school or schools: Anatomy, one winter course; Dissection and Demonstration, nine months; or Dissection, nine months, and Anatomy of Head and Neck, one course of twenty lectures; Physiology, one course of not less than fifty lectures; Chemistry, Surgery, Medicine, each one winter course; Materia Medica, and Practical Chemistry and Metallurgy, each one course of three months; Clinical Instruction in Surgery at a recognised Hospital, one course of six months, or two courses of three months; also the following special courses, in a recognised Dental Hospital or School, or by recognised teachers: Dental Anatomy and Physiology, Dental Surgery and Pathology, Dental Mechanics, one course of each; two years' attendance at a Dental Hospital, or the dental department of a General Hospital.

Licentiates of the College, or registered medical practitioners, must produce certificates of attendance on the special subjects only, and are examined in these only.

Anatomy, Chemistry (with Metallurgy), and Physiology, will form the subjects of the first Examination; Surgery, Medicine, Materia Medica, and Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics, those of the second.

The fee is £10 10s. Each candidate for the first Examination must pay to the Secretary of the College £4 4s. not later than 9 A.M. of the Saturday preceding the Examinations; and if the candidate be unsuccessful, £2 2s. are returned to him. Each candidate for the second Examination must pay £6 6s. not later than 9 A.M. of the Tuesday preceding the examination; and if he be unsuccessful, £3 3s. will be returned to him. No unsuccessful candidate will be remitted for less than three months.

Examination sine Curriculo.—Candidates who were in practice before the first day of August, 1878, or those not in practice, but who had commenced their apprenticeship as Dentists before the first day of August, 1875, and who are unable to furnish the Board of Examiners with the certificates of lectures and hospital-attendance required by the foregoing regulations, must produce: 1. A certificate of moral and professional character, signed by two registered medical practitioners, together with the full name, age, and address of the candidate. 2. The date of commencing practice or apprenticeship as a Dentist, and whether, if in practice, such practice has been carried on in conjunction with any other business, and, if so, with what business. 3. Whether he has any degree or diploma in Medicine or Surgery, and, if so, from what College or University, or other body, and at what time it was obtained. 4. The particulars of professional education. The President's Council shall determine whether the candidate is entitled to be admitted to Examination; and such examination shall, with the exception of the Preliminary Examination, and the exemption in favour of registered medical practitioners, as before explained, be passed on the same subjects and in the same manner as is required for other candidates, and will confer the same privileges.

Every candidate, before being admitted as a Licentiate, must subscribe a declaration engaging not to advertise or pursue any other unbecoming mode of attracting business.

Faculty of Physicians and Surgeons of Glasgow.—The regulations as to certificates, curriculum, number of examinations, fees, and examinations *sine curriculo*, are in effect similar to those of the Royal College of Surgeons of Edinburgh. A special course of Metallurgy is required, unless included in Practical Chemistry.

Royal College of Surgeons in Ireland.—Every candidate for the Licence in Dentistry of the College must pass a Preliminary Examination and three Professional Examinations. The regulations of the College which refer to the Preliminary Examination of the candidate for the Letters Testimonial apply to the candidate for the Dental Licence.

Professional Examinations.—The First and Second Professional Examinations will be held in July and October of each year. Should the student fail to pass in July, he may present himself in October. These examinations are identical with the second and third professional examinations for the Letters Testimonial, are conducted at the same time, and are subject to the same regulations.

The Third Professional Examination will be held in April, July, and October. The candidate must, before admission to the Final Examination, produce evidence—*a.* Of having passed the Second Professional Examination; or of having obtained a diploma in Surgery recognised by the College. *b.* Of having attended, subsequently to registration by the General Medical Council, the following courses of Lectures recognised by the College: Dental Surgery and Pathology, Dental Mechanics, of each two courses; Dental Anatomy and Physiology, Dental Metallurgy, of each one course. *c.* Of having attended for two years the practice of a Dental Hospital recognised by the College. *d.* Of having been engaged in acquiring a practical knowledge of Mechanical Dentistry, for at least two years, in a public Laboratory recognised by the College; or for at least three years under the instruction of a Registered Dentist. The candidate must also submit a piece of mechanical work certified to be of his own making.

A candidate holding a diploma in Surgery recognised by the College must produce certificates of one course of each of the above special dental subjects, and of half the Hospital attendance and half the Laboratory work required from other dental students. In this case, the special Dental courses, Hospital attendances, and Laboratory work, must all be taken out after the date of the diploma in Surgery.

The fee for the Final Examination is, in the case of Licentiates in Surgery of the College, and for Dental students, £7 7s.; for re-examination, if rejected, £4 4s. For candidates holding a Surgical diploma other than that of the Royal College of Surgeons in Ireland, £12 12s.; for re-examination, if rejected, £6 6s.

Candidates will be examined in—1, Dental Surgery—Theoretical, Clinical, and Operative; 2, Dental Mechanics—Theoretical and Operative; 3, Dental Anatomy and Physiology; 4, Metallurgy and Physics. The Examination, which will last four days, will be by printed questions and oral; and the candidates' knowledge of Operative Dental Surgery and Mechanical Dentistry will be tested in a Hospital, and in the Dental Laboratory.

Examinations sine Curriculo.—Candidates who were in practice before 1878, whose names are on the *Dental Register*, and who are unable to furnish the certificates required by the foregoing regulations, may be admitted to examination if they shall fill in the schedule of application as follows. 1. The name, age, and address. 2. A certificate of moral and professional character, signed by two Registered Medical Practitioners and by two Registered Dentists. 3. The date of commencing practice, and whether such practice has been carried on in conjunction with any other business, and, if so, with what business. 4. Any certificate of general education, or degree in Arts and Medicine. 5. The particulars of professional education. The schedule

of application, containing these particulars, must be sent to the Registrar of the College, at least three weeks before the date of the examination; and the Council of the College will then determine whether or not the candidate shall be admitted to examination for the Dental Diploma. Such examination shall comprise the same subjects, and be conducted in the same manner, as the Second and the Final Professional Examinations.

The fee for this examination is £21; re-examination, if rejected, £10 10s.

An enrolment fee of £1 1s. is payable to the Registrar of the College on the issue of the diploma.

The following provision is made for instruction in Dental Surgery.

National Dental Hospital and College.—*Consulting Physicians*, Dr. B. W. Richardson and Dr. W. H. Broadbent. *Consulting Surgeons*, Sir Spencer Wells, Mr. Erichsen, and Mr. Christopher Heath. *Consulting Dental Surgeon*, Mr. J. Merryweather. *Dental Surgeons*, Mr. F. H. Weiss, Mr. A. Smith, Mr. G. A. Williams, Mr. A. F. Canton, Mr. T. Gaddes, Mr. H. Rose. *Assistant Dental Surgeons*, Mr. W. Weiss, Mr. R. G. Bradshaw, Mr. M. Davis, Mr. H. G. Read, Mr. W. R. Humby. *Lecturers*, Dental Anatomy and Physiology: Mr. Gaddes, Tuesdays and Thursdays, 7 P.M., in October, November, and December. Operative Dental Surgery and Therapeutics: Dr. St. George Elliott, Wednesdays, 7.30 P.M., in November and December. Dental Materia Medica and Therapeutics: Mr. C. W. Glassington, Mondays, 7 P.M., in October, November, and December. Dental Metallurgy, in January, February, and March. Dental Mechanics: Mr. H. Rose, Mondays, 7 P.M., in January, February, and March. Demonstrations in Dental Mechanics: Mr. Humby, Wednesdays, 7 P.M., in January, February, and March (in 1886 and alternate years). Dental Metallurgy: Mr. A. Tribe, Tuesdays, 9 A.M., in January, February, and March. Dental Surgery and Pathology: Mr. W. Weiss, Mondays and Thursdays, 6 P.M., in May, June, and July. Elements of Histology: Mr. Gaddes, Wednesdays and Fridays, 7 P.M., May and June.

Clinical Lectures and Demonstrations are given from time to time.

Dresserships in the Extraction-room are held for three months by six senior and six junior students of the hospital.

Prizes.—Five Prizes in Medals are open for competition at the end of each course of lectures required. Certificates of Honour are given in each class. A Prize will also be given for Dental Materia Medica. The Rymer Medal for General Proficiency, value £5, with books or instruments, is awarded annually to the most meritorious student.

Fees.—General Fee for Special Lectures required by the Curriculum of the Royal College of Surgeons of England, £12 12s. For the Two Years' Hospital Practice required, £12 12s. Total Fee for the Special Lectures and Hospital Practice required, £25 4s. Perpetual Fee to all Lectures, or to Hospital Practice, £15 15s. Single Courses: Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics, each, one course, £2 12s. 6d., two courses, £4 4s.; Dental Metallurgy, one course, £3 3s.; two courses, £5 5s.; Operative Dental Surgery, Dental Materia Medica, each, £2 2s.; Demonstration of Dental Mechanics, Elements of Histology, each, £1 1s. Hospital Practice, to Registered Practitioners, six months, £7 7s.; twelve months, £9 9s.

Information respecting the Hospital Practice and the College may be obtained from the Dean, Mr. Gaddes, at the Hospital, Great Portland Street.

Dental Hospital of London and London School of Dental Surgery.—*Consulting Physician*, Sir J. Risdon Bennett, M.D. *Consulting Surgeon*, Mr. Christopher Heath. *Consulting Dental Surgeons*, Mr. S. Cartwright, Sir John Tomes. *Dental Surgeons*, Mr. Hepburn, Mr. R. Woodhouse, Mr. Gregson, Mr. Storer Bennett, Mr. A. S. Underwood, Mr. F. Canton. *Assistant Dental Surgeons*, Mr. L. Matheson, Mr. W. Hern, Mr. C. E. Truman, Mr. G. Parkinson, Mr. C. Rogers, Mr. L. Reed. *Anæsthetists*, Mr. Braine, Mr. Bailey, Mr. Bird, Mr. Mills. *Assistant Anæsthetists*, Dr. D. W. Buxton, Dr. F. Hewitt.

Lectures are given at this School on Mechanical Dentistry, by Dr. Walker, at 5 P.M., on Wednesdays, in October, November, and December); on Dental Surgery and Pathology, by Mr. Hutchinson, at 8 A.M., on Tuesdays and Thursdays, in May and June; on Dental Anatomy and Physiology (Human and Comparative), by Mr. A. Underwood, at 8 A.M., on Wednesdays and Saturdays, in May and June; on Metallurgy in its application to Dental Surgery, by Mr. A. K. Huntington, at 5 P.M., on Tuesdays, in October, November, and December.

Six senior dressers for extraction, and eighteen junior dressers, are appointed annually.

The Saunders Scholarship of £20 is awarded to the student who has obtained the largest number of first-class prizes in the winter and summer session. A prize, value £5 5s., is given for the best essay on some Surgical subject connected with Dental Surgery. First and second prizes are given in each class.

Fee for two years' hospital practice or lectures, each £15 15s.; for hospital practice, perpetual, £21. Single courses: Dental Anatomy and Physiology, Dental Surgery, Dental Mechanics, and Metallurgy, each one course, £3 3s.; two courses, £5 5s.

Further particulars may be obtained on application to the Dean, Mr. Morton Smale, at the Hospital.

Queen's College, Birmingham.—The teaching of Dentistry is undertaken by the Queen's College, acting in association with the Birmingham Dental Hospital and the Birmingham Clinical Board, so that students may fully qualify themselves for the dental diploma of the Royal College of Surgeons. The Dental Hospital is situated near the College, and is opened daily (Sundays excepted).

Lectures on the special subjects are delivered as follows: Winter session: Anatomy and Physiology, by Mr. F. R. Batchelor, Thursday, 5 P.M.; Dental Surgery and Pathology, Mr. T. Hawkins, Friday, 5 P.M.; Dental Metallurgy, Dr. Tilden, at the Mason College. Summer session: Dental Mechanics, Mr. C. Sims, Wednesday, 5 P.M.

The Birmingham Dental Hospital is open daily at 9 A.M. The staff is constituted as follows: *Consulting Physician*, Dr. James Sawyer. *Consulting Surgeon*, Mr. Furneaux Jordan. *Consulting Dentists*, Mr. T. R. English and Mr. Adams Parker. *Dental Surgeons*, Mr. C. Sims, Mr. H. B. Neale, Mr. F. R. Batchelor, and Mr. F. E. Huxley.

Clinical Demonstrations are given from time to time by the staff upon cases of particular interest; also upon the preparing and filling of cavities, and other operations upon the teeth and contiguous structures.

Dresserships in the Extraction-room are held for three months by senior and junior students at the hospital.

The *fee* for each of the special courses in Queen's College is £4 4s.; for Dental Hospital Practice, two years, £14 14s.; one year, £8 8s.; six months, £5 5s.

Bristol General Hospital.—Mr. Parsons gives practical instruction in Dental Surgery, at 9 A.M., on Mondays and Thursdays.

Owens College, Manchester.—Arrangements have been made for Dental Students to attend the hospital-practice at the Manchester Royal Infirmary, and the practice at the Victoria Dental Hospital. Lectures on the special subjects will be given in the College as follows. Winter Session: Dental Mechanics, Mr. Tanner; Thursday, 5 P.M. Summer Session: Dental Anatomy and Physiology, Dr. Paterson; Tuesday, 11 A.M.; Friday, 12. Dental Surgery, Mr. Matheson; Monday and Friday, 4.30 P.M. Dental Metallurgy, Dr. Burghardt; Thursdays, 2.30 P.M.

Fees.—For course of Metallurgy, £3 3s.; other lectures, one course, £3 3s.; two courses, £4 4s. Dental Practice for two years at the Manchester Royal Infirmary, £10 10s.; at the Victoria Dental Hospital of Manchester, £12 12s., paid in advance.

At the Victoria Dental Hospital, patients attend at 8.30 in the morning daily, and at 7 P.M. on Monday, Wednesday, and Friday. The staff of the hospital is as follows: *Consulting Physicians*, Sir W. Roberts, F.R.S., Dr. H. Simpson, Dr. J. E. Morgan, Dr. D. J. Leech, Dr. Lloyd Roberts. *Consulting Surgeons*, Mr. E. Lund, Mr. F. A. Heath, Mr. W. Whitehead, Mr. T. Jones, and Mr. J. Hardie. *Consulting Dental Surgeons*, Mr. H. Campion, Mr. S. A. Rogers, Mr. Parsons Shaw, Mr. G. W. Smith. *Dental Surgeons*, Mr. G. G. Campion, Mr. E. R. Collett, Mr. W. Dougan, Mr. L. Dreschfeld, Mr. J. W. Dunkerley, Mr. W. Dykes, Mr. W. Headridge, Mr. H. Mann, Mr. J. H. Molloy, Mr. H. Planck, Mr. I. Renshaw, Mr. W. Simms, Mr. G. N. Skipp, Mr. W. Smithard, Mr. T. Tanner, Mr. H. Ward. *Administrator of Anæsthetics*, Dr. J. J. K. Fairclough.

University College, Liverpool.—The lecturers in the Schools of Dental Surgery in connection with this institution are as follows: Dental Surgery, Mr. E. J. M. Phillips; Dental Mechanics, Mr. E. A. Councell; Dental Anatomy and Physiology, Mr. F. T. Paull; and Dental Metallurgy, Mr. J. Royston. Lectures are given once or twice weekly, by arrangement. The fee for each course is £3 3s.; for a second course, £2 2s.

The curriculum in Dental Surgery includes Lectures and Demonstrations on all the subjects required for the Licences in Dental Surgery of the Royal Colleges of Surgeons of London, Edinburgh, and Dublin, and of the Faculty of Physicians and Surgeons of Glasgow.

Practical instruction in Dentistry is given at the Dental Hospital in Mount Pleasant. The fee is £8 8s. for the two years' course.

Edinburgh Dental Hospital School.—*Consulting Physician*, Dr. A. Peddie. *Consulting Surgeon*, Mr. Joseph Bell. *Consulting Surgeon Dentist*, Dr. John Smith. *Dental Surgeons*, Mr. C. Matthew, Mr. W.

B. Macleod, Mr. M. Finlayson, Mr. A. Wilson, Mr. M. Macgregor, Mr. G. W. Watson, Mr. E. A. Cormack. *Assistant Dental Surgeons*, Mr. J. S. Durward, Mr. J. Macintosh, Mr. J. Lindsay, Mr. W. Forrester, Mr. J. S. Amoore, Mr. J. G. Munro. *Tutorial Dental Surgeon*, Mr. F. Page. The following lectures are given in the School: Dental Anatomy and Physiology, Mr. A. Nelson, Tuesday and Friday 8 (winter); Dental Surgery and Pathology, Mr. G. W. Watson, Tuesday and Friday, 8 (summer); Mechanical Dentistry, Mr. W. B. Macleod, twelve lectures, on Wednesdays; Practical Mechanics, Mr. J. S. Durward. The fee to Hospital Practice, including one course of Demonstrations in Gold-fitting, is £15 15s.; one course of Dental Anatomy, Dental Surgery, and Mechanical Dentistry, £9 15s.; one course of each subject separately, £3 5s.; second courses of the lectures, £2 4s. each.

Glasgow Dental Hospital.—Dental Anatomy (summer), Dr. J. C. Woodhouse, Wednesday and Saturday, 8 A.M.; Dental Surgery (summer), Mr. J. R. Brownlie, Tuesday and Friday, 8 A.M.; Mechanical Dentistry (winter), Mr. W. S. Woodburn, Friday, 7 P.M. Dental Metallurgy (winter), Mr. R. Price, Wednesday, 7 P.M. *Fees:* Each course of lectures, £3 3s.; this includes two summer sessions. Hospital Practice, two years, as required for the Licence in Dental Surgery, £12 12s. Composition fee for Hospital and lectures, £23 2s.

Glasgow Royal Infirmary School of Medicine.—Dr. J. C. Woodburn attends at the Royal Infirmary, at 3 P.M., on Mondays, Wednesdays, and Saturdays, and gives a course of Dental Surgery on these days in summer. The following course in the curriculum can be taken at this School: Anatomy, six months; Practical Anatomy, nine months; Physiology, six months; Chemistry, six months; Practical Chemistry, with Metallurgy, three months; Surgery, six months; Medicine, six months; Materia Medica, three months; Clinical Surgery, six months; Dental Surgery, six months; and attendance for two years on the Dental Department of the Hospital. The attendance on the dental clinic is free to Students of the Hospital; to Dental Students, one year, £5 5s.; perpetual, £10 10s. Lectures on Dental Surgery, £2 2s.

MEDICAL SCHOOLS AND HOSPITALS IN IRELAND.

School of Physic in Ireland.—This school is formed by an amalgamation of the medical schools of Trinity College and of the King and Queen's College of Physicians; the King's Professors of Institutes of Medicine, Practice of Medicine, Materia Medica, and Midwifery, and the Professor of Medical Jurisprudence, being appointed by the latter. The departments of Medicine and Surgery are presided over by the Regius Professor of Physic, Dr. J. T. Banks; and the Regius Professor of Surgery, Dr. W. Colles. The teaching staff is as follows. University Professor of Anatomy and Surgery, Dr. D. J. Cunningham, junior, M. W. F., 12; Senior, Tu. Th. S., 2. University Professor of Chemistry, Dr. J. E. Reynolds, Tu., Th., 2; S., 11. University Professor of Botany, Dr. E. P. Wright. Professor of Surgery in Trinity College, Dr. E. H. Bennett, M. W. F., 1. University Anatomist, Dr. T. E. Little, Practical Anatomy, Tu. Th. S., 12. Professor of Comparative Anatomy, Mr. Mackintosh, M. Tu. Th. F., 11. King's Professor of Institutes of Medicine, Dr. J. M. Purser, M. W. F., 12. King's Professor of Practice of Medicine, Dr. J. M. Finny, Tu. Th. S., 1. King's Professor of Materia Medica and Pharmacy, Dr. W. G. Smith, W. Th. F. S., 12. King's Professor of Midwifery, Dr. J. R. Kirkpatrick, M, W. F., 4. Professor of Medical Jurisprudence, Dr. R. Travers, M. W. Th. F., 3. Erasmus Smith's Professor of Natural Philosophy, Mr. G. F. FitzGerald, M. W. F., 2.

The Winter Session commences on October 1st by the opening of the Dissecting Room. Lectures commence on November 1st. The Winter Courses consist of fifty-six Lectures each. Attendance on at least forty-two Lectures in each course is required. The Summer Session commences April 1st. The Courses in the Summer (except those of Materia Medica and Medical Jurisprudence) consist of Laboratory Instruction and Practical Demonstrations.

The Dissecting-room is open from 11 A.M. to 5.30 P.M. in the winter, and from 8 A.M. to 5 P.M. in the summer. Instruction is given daily by Professor Cunningham, Dr. Little, and three Demonstrators. A Course of Laboratory Instruction in Histology will be given in the Physiological Laboratory. On Mondays, at 3 o'clock, a Lecture will be given in the Theatre; after which, illustrative preparations will be shown in the Laboratory. For practical work, the Class will be divided. One division will work from 3 to 5 o'clock, on Wednesdays and Fridays; the other from 3 to 5 o'clock, on Tuesdays and Thursdays. Each Student will have his own place in the Laboratory, a Microscope, and a full set of Apparatus and Reagents. The Laboratory will be open to members of the Class from 11 to 5 o'clock daily, except Mondays. The Chemical Laboratories are open daily, under the supervision of Professor Reynolds. Professor Bennett gives a complete course of Demonstrations in Operative Surgery during April and May, at 8 A.M. on Mondays, Wednesdays, and Fridays, and 11 A.M. on Tuesdays, Thursdays, and Saturdays. Professor Fitzpatrick gives Demonstrations in Obstetric Medicine and Surgery on Thursdays and Fridays at 4 P.M. Practical Botany is taught in the Botanic Garden and the Herbarium by Professor Wright.

The Museums of Anatomy and Zoology, of Pathology, of Materia Medica, and of Midwifery, and of Botany, are open to the students of the School of Physic.

Scholarships, Prizes, etc.—Two Medical Scholarships, value of each £20 *per annum*, tenable for two years, are awarded annually; one for Anatomy and Institutes of Medicine; the other for Chemistry, Physics, Botany, and Comparative Anatomy. A Medical Travelling Prize and a Surgical Travelling Prize, value of each £100, are also awarded in alternate years. The Professors of Chemistry, Botany, Materia Medica, and Midwifery each give Prizes amounting to £5.

Fees.—For Anatomy, Medicine, Materia Medica, Midwifery, Medical Jurisprudence, Institutes of Medicine, Practical Chemistry, Obstetric Medicine and Surgery (at Sir P. Dun's Hospital), Ophthalmic Surgery (at St. Mark's Hospital), each £3 3s.; Demonstrations and Dissections, each year, £8 8s.; Surgery and Chemistry, each £2 2s.; Botany, £1 11s. 6d. Students dissecting during the fourth year pay £2 2s.

School of Surgery: Royal College of Surgeons in Ireland.—Lectures will be given as follows. *Winter Session:* Physiology, Dr. Mapother, M. W. F., 3; Systematic Anatomy, Mr. Stoker and Mr. A. Fraser, M. W. F., 12; Practical Anatomy, Mr. Stoker and Mr. Fraser, Tu. Th. S., 12; Surgery, Sir W. Stokes and Mr. E. Hamilton, Tu. Th. S., 1; Medicine, Dr. A. W. Foot, M. W. F., 1; Chemistry, Sir C. Cameron, M. W. F., 2; Midwifery and Gynæcology, Dr. Roe, Tu. Th. S., 2. *Summer Session*, commencing April 1st, 1886: Materia Medica, Dr. R. Macnamara, daily, except S., 1; Medical Jurisprudence, Dr. Davy, Tu. Th. S., 1; Botany and Zoology, Mr. Minchin, M. W. F., 2; Practical Chemistry, Sir C. Cameron, M. W. F., 11; Ophthalmic and Aural Surgery, Dr. Jacob, Tu. Th., 3; Practical Physiology, Dr. Mapother and Mr. Fraser, Tu. Th. S., 11; Operative Surgery, Sir W. Stokes and Mr. Hamilton, daily, 11; Hygiene, Sir C. Cameron, M. W. F., 3. There is a Laboratory for the Study of Practical Physiology. The Dissecting-rooms open from October 1st, and are available from 8 A.M. to 10 P.M. during the session; also from 8 A.M. to 5 P.M. in the summer. The dissections are under the direction of the Professors of Anatomy, assisted by seven Demonstrators.

Fees.—Each course of lectures, excluding the practical courses, is £3 3s.; Dissections with Demonstrations, Practical Physiology, Operative Surgery, and Practical Chemistry, £5 5s. each. Students requiring an extra course of Dissections without a Certificate, and who have taken their previous Anatomical Courses in the School, are charged £2 2s.; other Students, £3 3s. Additional Courses of Practical Histology, when a Certificate is not required, £2 2s. each. The fees for all lectures and dissections for the Diploma in Surgery amount to £63; hospital attendance, £37 16s. At the termination of each Session, medals are awarded in the various classes. The dissecting-rooms will open on October 1st; and the lectures will commence on October 25th, when an introductory address will be given by Mr. Fraser, at 1 P.M.

Adelaide Medical and Surgical Hospitals.—*Consulting Physician*, Dr. J. F. Duncan. *Consulting Obstetric Surgeon*, Dr. Lombe Atthill. *Physicians*, Dr. Henry H. Head, Dr. James Little. *Assistant-Physician*, Dr. Wallace Beatty. *Surgeons*, Dr. John K. Barton, Dr. Kendal Franks, Mr. F. W. Warren. *Assistant-Surgeon*, Mr. J. H. Scott. *Obstetric Surgeon*, Dr. R. D. Purefoy. *Ophthalmic and Aural Surgeon*, Mr. H. R. Swanzy. *Dental Surgeon*, Dr. R. T. Stack.

The hospital contains 140 beds. There are wards for infants and children, and there is a large detached fever-hospital. Special hours are devoted to Clinical Instruction for the Diseases peculiar to Women, and in the Diseases of the Eye, Ear, Throat, and Skin; and students are individually instructed in the uses of the Stethoscope, Ophthalmoscope, and Microscope, in their application to Clinical Medicine Three resident pupils are selected half-yearly. At the termination of the session, prizes in Clinical Medicine and Surgery, in Obstetric Medicine, and Ophthalmic Surgery, will be awarded. In addition, the Hudson Scholarship (£30 and a gold medal), and a prize of £10

with a silver medal, will be awarded for proficiency in the subjects of clinical instruction.

Fee for nine months' hospital attendance, £12 12s.; six months', £8 8s.; summer three months, £5 5s.

Further particulars may be obtained from any of the members of the medical staff.

CARMICHAEL COLLEGE OF MEDICINE.—The Dissecting-Rooms will be opened on October 1st. Lectures will commence on November 3rd. The following are the Courses. *Winter Session:* Medicine, Dr. J. W. Moore, M. W. and F., 12; Surgery, Dr. H. Corley, Tu. Th. and S., 12; Systematic Anatomy, Dr. McVittie, M. W. and F., 12; Anatomy, Dr. F. Heuston, M. Tu. W. Th. F., 1; Physiology, Dr. J. A. Scott, M. W. F., 2; Midwifery, Dr. W. B. Jennings and Dr. A. V. Macan, M. W. and F., 3; Chemistry, Dr. C. R. C. Tichborne, Tu. Th., 3; S., 11; Ophthalmic Surgery, Dr. C. E. Fitzgerald, W., 1.—*Summer Session*, 1886: Botany and Zoology, Dr. Cosgrave, daily, except S., 11; Pathology, Dr. Wallace Beatty; Materia Medica, Dr. G. F. Duffey, M. W. Th. F., 12; Practical Chemistry, Drs. Tichborne and Falkiner, Tu. Th., 1.30; S., 11.30; Medical Jurisprudence, Mr. Auchinleck, M. W. and F., 1; Practical Physiology, Dr. J. A. Scott, daily, 3; Practical Surgery, Dr. Corley, daily, 8. There are nine Anatomical Demonstrators, who superintend the dissections. The Physiological Department comprises a Histology Room, a room for Physiological Chemistry, and one for Physiological Apparatus. The Museum comprises a valuable collection of Anatomical and Pathological Preparations. There is also an extensive Museum of Materia Medica. A Students' Reading Room has been added. *Fees*, for each course of lectures, £3 3s.; for each course of Practical Instruction, £5 5s. A second practical course can be attended for £3 3s., if no certificate be required. Systemic Anatomy and Ophthalmic Surgery are free, if no certificate be required. The Carmichael and Mayne Scholarships, each £15 in value, and Prizes, are awarded annually. For information, apply to Dr. Heuston, at the College, Aungier Street; or to any of the lecturers.

CATHOLIC UNIVERSITY MEDICAL COLLEGE.—*Winter Session:* The dissecting-rooms will be opened on October 1st. The lectures will commence on November 3rd. Anatomy and Physiology, and Anatomical Demonstrations, Dr. Nixon, daily, except S., 12; Dr. Coppinger, M. W. F., 1; Chemistry, Dr. J. Campbell, M. W. and F., 11; Surgery, Mr. P. J. Hayes, M. W. and F., 3; Medicine and Pathology, Dr. R. D. Lyons, Tu. Th., 11, and S., 12; Ophthalmology, Mr. D. D. Redmond, S., 2; Midwifery, Dr. J. A. Byrne, Tu. Th., 2, and S., 1; Demonstrations in Dissecting-rooms, Mr. McCullagh, Mr. McArdle, Mr. Chance, Mr. J. F. O'Carroll, Mr. P. R. Dillon, and Mr. A. J. Bermingham. *Summer Session*, 1887: Practical Chemistry, Dr. John Campbell, M. W. and F., 11 A.M. to 1 P.M.; Practical Histology, Dr. Coppinger, Tu. Th. S., 11; Materia Medica and Therapeutics, Dr. F. J. B. Quinlan, M. Tu. W. and Th., 1; Medical Jurisprudence, Dr. S. M. MacSwiney, M. Tu. W. and Th., 12; Botany, Dr. G. Sigerson, M. Tu. Th. and S., 2; Zoology, Dr. Sigerson; Operative Surgery, Mr. P. J. Hayes; Natural Philosophy, the Very Rev. Gerald Molloy, D.D., Tu. Th. S., 11 (both sessions).

The school is within a few minutes' walk of the principal hospitals of the city. It includes a complete chemical laboratory, and a well supplied students' library.

The *Fees* are for Anatomy, Physiology, Surgery, Medicine, Midwifery, Materia Medica, and Medical Jurisprudence, each £3 3s.; Operative Surgery, Practical Anatomy, Practical Chemistry, Practical Histology, each £5 5s.

Prizes.—At the termination of the winter and the summer sessions respectively, public examinations are held in each class, and prizes are offered for competition.

CITY OF DUBLIN HOSPITAL.—*Consulting Physicians*, Dr. Apjohn, Dr. Banks. *Consulting Surgeon*, Mr. Jolliffe Tufnell. *Physicians*, Dr. Hawtrey Benson, Dr. Duffey. *Surgeons*, Mr. H. G. Croly, Dr. W. I. Wheeler, Dr. H. Fitzgibbon. *Ophthalmic and Aural Surgeon*, Mr. A. H. Benson. *Gynæcologist*, Dr. W. J. Smyly. The Hospital is visited at 9 A.M.; after the visit, Clinical Lectures are delivered, and Pathological Specimens exhibited. There are special wards for Fever and other Contagious Diseases, Ophthalmic and Aural Diseases, and Diseases of Women and Children; also a Daily Dispensary, and Special Dispensaries for Diseases of the Skin, Throat, Eye, and Ear, and for Diseases peculiar to Women.

Clinical Assistants to the Physicians, and Dressers to the Surgeons, are appointed from the most deserving of the class, and certificates awarded for the faithful performance of their duties. Medical and Surgical Resident Pupils are appointed by examination, and Special Certificates awarded if merited. A House-Surgeon is appointed annually.

The Winter Session commences in October and terminates in April; the Summer Session commences in April and terminates in July. *Fees:* Nine Months' Hospital attendance, £12 12s.; Six Months', £8 8s.; Three Months', £5 5s. For further particulars, apply to Mr. Wheller, 27, Lower Fitzwilliam Street, or at the Hospital, or to Mr. Pratt, 27, Lower Fitzwilliam Street.

COOMBE LYING-IN HOSPITAL.—*Consulting Obstetric Surgeon*, Dr. G. H. Kidd. *Master*, Dr. S. R. Mason. *Assistant-Masters*, Mr. F. W. Kidd, Mr. J. C. Hoey. *Pathologist*, Dr. J. M. Redmond. The hospital contains sixty-five beds, in two divisions, one devoted to Midwifery, and the other to Diseases of Women. Students can enter for six months at any period of the year. Clinical Instruction is given daily, and Lectures are delivered on the more important cases. Two Paid Pupil Midwifery Assistants and one Clinical Clerk are selected half-yearly from among the pupils. Certificates of attendances are accepted by the Examining Boards; and the diploma of the Hospital is recognised by the Irish Local Government Board and the Army and Navy Boards as a qualification in Midwifery. *Fees:* For six months' courses, extern pupils, £8 8s.; intern pupils, £18 18s. Particulars may be learned on application to the Master at the Hospital.

JERVIS STREET HOSPITAL, DUBLIN.—*Physicians*, Dr. S. M. MacSwiney, Dr. W. Martin. *Surgeons*, Mr. A. Meldon, Dr. W. Stoker, Dr. J. J. Cranny, Dr. R. McDonnell, Dr. C. Gunn, Mr. T. Myles, Dr. F. C. Dwyer.

Clinical Instruction is given by the Physician and Surgeon on duty on alternate mornings, between 9 and 11. Two Clinical Lectures are delivered each week, and Pathological Specimens are exhibited. Surgical Instruments and Appliances of all kinds are made the subject of Special Instruction.

Surgical Operations are performed on Tuesdays at 10 A.M., except in cases of emergency.

Resident Pupils, Clinical Clerks, and Dressers, are appointed every six months, without additional fee, and are awarded special certificates if their duties have been satisfactorily performed. Two interns are appointed each half-year, and are provided with apartments, etc., free of expense.

Examinations in Surgery, Medicine, and Case-taking, will be held at the end of the Session. A gold and two silver medals will be awarded if sufficient merit be shown.

LEDWICH SCHOOL OF MEDICINE.—The following courses of lectures will be delivered. Anatomy, Dr. Thomas P. Mason, Mr. E. Ledwich; Surgery, Mr. F. Alcock Nixon, Mr. William Stoker; Physiology, Dr. M. A. Ward, Mr. Thomas Mason; Ophthalmic Surgery, Mr. J. B. Story; Medicine, Dr. C. F. Knight, Dr. J. M. Redmond; Midwifery, Dr. Samuel R. Mason; Materia Medica, Dr. R. D. Purefoy; Chemistry, Mr. Edwin Lapper; Zoology and Botany, Dr. E. M. Ward, Mr. C. H. Robinson.

Certificates of attendance on these lectures are accepted by all licensing bodies.

Dissections commence on October 1st. Demonstrations are given from 7.30 A.M. to 10 P.M., by the Lecturers in Anatomy, assisted by seven Demonstrators. Special Demonstrations in Medical and Surgical Anatomy will be given by the Lecturers in Medicine and Surgery respectively.

The School contains a Dissecting Hall, a new Physiological Laboratory, a fully fitted Chemical Laboratory, a Room fitted for Operative Surgery and Surgical Appliances, a Pathological Museum, and a Bone-room.

Information may be obtained from, and entries will be received by, Dr. T. P. Mason, 74, Harcourt Street; Dr. M. A. Ward, 9, Rathmines Road; Mr. F. A. Nixon, 33, Harcourt Street; and Mr. W. Stoker, 32, York Street.

MATER MISERICORDIÆ HOSPITAL.—*Consulting Physician*, Dr. F. E. Cruise. *Physicians*, Dr. C. J. Nixon, Dr. J. M. Redmond, Dr. M. A. Boyd, Dr. John Murphy. *Surgeons*, Mr. P. J. Hayes, Mr. C. Coppinger, Mr. J. Lentaigne, Mr. A. Chance. *Assistant Surgeon*, Mr. H. Kennedy. *Obstetric Physician*, Dr. T. More Madden. *Dental Surgeon*, Mr. D. Corbett.

This Hospital contains 230 beds, including 50 beds for Fever and other Contagious Diseases. There is a ward for Ophthalmic Diseases.

Two Clinical Lectures are given every week, in addition to bedside instruction. A special Course of Lectures and Instruction on Fever

will be given. Special courses of lectures on Medical and Surgical Diseases, and on Clinical Gynæcology, will also be given. Surgical Operations are performed at 10 A.M. on Thursdays.

Six resident pupils are elected without fee for the winter, and six for the summer session. Dressers are also appointed in the out-patient department.

Four Clinical Prizes (the "Leonard Prizes"), two of £10 and two of £5, will be given at the end of the winter session, for reports of medical and surgical cases.

Fee for nine months, £12 12s.; six winter months, £8 8s.; three summer months, £5 5s.

Further particulars may be learned on application to Mr. Hayes, 18, Merrion Square North, or to any of the other medical officers.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.—*Physicians*, Dr. A. W. Foot, Dr. J. W. Moore. *Surgeons*, Sir G. H. Porter, Mr. J. H. Wharton, Dr. P. C. Smyly, Mr. R. Macnamara, Dr. L. H. Ormsby, Mr. W. J. Hepburn.

The Hospital contains 120 beds for the reception of medical and surgical cases. An extensive dispensary, lending library, and physical laboratory, are attached. An additional ward has been erected for the reception of children.

Four Clinical Lectures will be delivered weekly, and instruction in Medicine and Surgery will be given on alternate days. The Physicians and Surgeons on duty visit the Hospital at 9 A.M.

Prizes will be given at the termination of the winter course to the best answers in their respective classes. The office of Resident Pupil is open to pupils as well as apprentices.

Further information may be obtained on application to Mr. V. J. Hepburn, 53, York Street, Dublin, or at the Hospital.

MERCER'S HOSPITAL.—*Physicians*, Dr. T. P. Mason, Dr. C. F. Knight. *Surgeons*, Mr. E. S. O'Grady, Mr. F. A. Nixon, and Mr. M. A. Ward.

Special instruction is given in Cutaneous, Gynæcological, Infantile, and Ophthalmic Diseases. Lectures upon Clinical Medicine and Clinical Surgery are delivered weekly.

Resident Pupils and Clinical Clerks are appointed half-yearly, and Dressers are selected each quarter. Prizes in Clinical Medicine and Clinical Surgery are awarded at the termination of the winter session.

Fees for the winter and summer session (nine months), £12 12s.; for the six winter months, £8 8s.; for the three summer months, £5 5s.

Further information can be obtained from any of the medical officers of the Hospital; of from Mr. James Shaw, Secretary to the Medical Staff.

QUEEN'S COLLEGE, BELFAST.—The following courses are delivered. Anatomy and Physiology, Dr. Redfern, M. Tu. W. Th. F., 2; each alternate Friday, 4 P.M., Practical Anatomy, daily, except Sat., 12; Practical Physiology and Histology, Saturdays and alternate Fridays (winter); Medicine, Dr. James Cuming, M. Tu. W. Th., 4; Surgery (vacant), M. Tu. W. Th., 1; Materia Medica and Therapeutics, Dr. J. Seaton Reid, M. Tu. W. Th., 4; Midwifery, Dr. R. F. Dill, M. Tu. W. Th., 3; Chemistry, Dr. Letts, M. Tu. W. Th. F., 3; Medical Jurisprudence, Dr. J. F. Hodges, M. Tu. W. Th., 2 (summer); Practical Chemistry (winter), M. W. F., 10; (summer), M. Tu. W. Th. F., 12; Natural Philosophy, Dr. J. D. Everett, first year, Tu. Th.; second year, M. W. F., 11; Zoology, Dr. R. O. Cunningham, M. Tu. W. F., 1; Botany, Dr. Cunningham, M. Tu. W. Th. F., 11 (summer).

Clinical instruction is given at the Belfast Royal Hospital. The Ulster Hospital for Diseases of Women and Children, and the Lying-in Hospital in Belfast, are open to students. Instruction is also given at the Belfast District Lunatic Asylum.

Fees.—Anatomy and Physiology, first course, £3; each subsequent course, £2. Demonstrations and Practical Anatomy, and Practical Chemistry, each course, £3. Practical Physiology and Histology, each course £3 3s. Other Medical Lectures, first course, £2; each subsequent course, £1. Belfast Royal Hospital, Clinical Fees, winter session, £5 5s.; summer session, £2 2s.; Perpetual Fee, payable in two instalments, £10 10s.; Hospital Fee, half a guinea for each winter or summer session. Ulster Hospital for Diseases of Women and Children, and Midwifery Dispensary, six months, £3 3s. Lying-in Hospital, six months, £2 2s. Belfast District Lunatic Asylum, summer session, £3 3s. Belfast Hospital for Sick Children, and Belfast Ophthalmic Hospital, session, each £1 1s. Students can also attend the Ulster Eye, Ear, and Throat Hospital on visiting days. Eight Junior Scholarships, of the value of £25 each, are awarded annually, after examination, to students of the Faculty of Medicine; two being awarded for each of the four years of study.

QUEEN'S COLLEGE, CORK.—The following courses of lectures are given. Anatomy and Physiology, Dr. J. J. Charles, daily, except S., 1; Histology and Practical Physiology, Tu. S., 2; Anatomical Demonstrations, five days weekly, 12; Medicine, Dr. D. C. O'Connor, M. W. S., 12; Surgery, Dr. S. O'Sullivan, M. W. F., 4; Operative Surgery, Dr. S. O'Sullivan, Tu. Th., 12; S., 1, in March, April, and May; Materia Medica, Dr. C. Y. Pearson, Tu. Th., 3; S., 12; Midwifery, Dr. H. Corby, Tu. Th. S., 4; Medical Jurisprudence and Public Health, Dr. Pearson, M. F., 3; Natural Philosophy, Mr. J. England; Chemistry and Practical Chemistry, Dr. M. Simpson, M. W. F.; Zoology and Botany, Dr. M. M. Hartog, M. W. S.; Modern Languages, Dr. O. O'Ryan.

The building in which the Medical School is located is provided with a large, well lighted, well ventilated dissecting-room, with Physiological and Toxicological Laboratories, Materia Medica, Anatomical and Pathological Museums, as well as a room for surgical and obstetrical instruments and appliances. There are well appointed Physical and Chemical Laboratories, and a large Natural History Museum in the adjoining building; and there is also a Botanic Garden. The College Library is open daily to students of the school.

Fees.—For Practical Anatomy and Practical Chemistry, £3 each course; for Anatomy and Physiology, £3 for first course, and £2 for subsequent courses. Other Medical Classes, £2 for first course, and £1 for second course. Eight scholarships (value £25 each), as well as several exhibitions and class prizes, are awarded every year to the most deserving students.

Clinical Instruction is given at the North and South Infirmaries (each 100 beds). Students can also attend the Mercy Hospital (60 beds), the County and City of Cork Lying-in Hospital, the Maternity, the Hospital for Diseases of Women and Children, the Fever Hospital, the Ophthalmic and Aural Hospital. Fee for Clinical Lectures and attendance at either the North or South Infirmary, for twelve or nine months, £8 8s.; six months, £5 5s.; three months, £3 3s.; at the Lying-in Hospital and the Maternity, for six months, each £3 3s.

QUEEN'S COLLEGE, GALWAY.—*Professors:* Anatomy and Physiology, Dr. J. P. Pye, M. Tu. W. Th. F., 3; Anatomy, Dr. Pye, same days, 1; Medicine, Dr. J. I. Lynham, Tu. Th. S., 2; Surgery, Dr. J. V. Browne, M. W. F., 11; Materia Medica, Dr. N. W. Colahan, Tu. Th. S., 3; Medical Jurisprudence, Dr. R. J. Kinkead and Dr. Rowney, M. W. F., 12; Midwifery, Dr. R. J. Kinkead, M. W. F., 2; Chemistry, Dr. T. H. Rowney, M. W. F. S., 12; Practical Chemistry, Dr. T. H. Rowney, M. W. F., 2; Botany and Zoology, Dr. R. J. Anderson, Tu. Th. S., 11; Experimental Physics, Dr. Larmor, Tu. Th., 12; Modern Languages, Dr. C. Geisler. The College Library is open daily to students; also the Museums of Human and Comparative Anatomy, of Physiological Instruments, of Pathology, of Materia Medica, of Natural History, of Chemistry, and of Natural Philosophy; and the Montgomery Obstetric Collection.

Prizes.—Attached are eight scholarships of the value of £25 each; four exhibitions of the value of £12 each; two exhibitions of the value of £16 each; and sessional prizes in each of the subjects of the curriculum are awarded annually. All scholarships and exhibitions of the second, third, and fourth years may be competed for by students who have attained the requisite standing in any Medical School recognised by the College Council, and have passed the Matriculation Examination in the College.

Clinical Lectures are delivered on Tuesdays and Fridays, and practical teaching at the bedside on other days of the week, at the Galway County Infirmary and the Galway Town Hospital.

Fees.—College fee, first year, 10s.; each subsequent year, 5s.; Anatomy and Physiology, first course, £3; each subsequent course, £2; Practical Anatomy and Practical Chemistry, each course, £3; pass courses, one term, £1; each course, £2; honours courses, £3; re-attendance, £1. Clinical Instruction, six months, £4 4s. Resident Clerkship, six months, £15 15s.

RICHMOND, WHITWORTH, and HARDWICKE HOSPITALS.—*Physicians*, Dr. J. T. Banks, Dr. S. Gordon, Dr. R. D. Lyons, Dr. G. P. L. Nugent. *Assistant-Physician*, Dr. J. O'Carroll. *Consulting Obstetric Surgeon*, Dr. G. H. Kidd. *Surgeons*, Sir William Stokes, Dr. William Thomson, Dr. W. Thornley Stoker, Dr. Anthony H. Corley. *Ophthalmic Surgeon*, Dr. A. H. Jacob. *Assistant Surgeon*, Mr. Burgess.

These hospitals contain 312 beds: 110 for surgical cases, 82 for medical cases, and 120 for fever and other epidemic diseases.

There will be a distinct Course of Lectures and Clinical Instruction in Fevers. Operations are performed on Monday and Wednesday mornings, except in cases of emergency. A course of Practical Instruction in Ophthalmic Surgery will be given; fee, £3 3s. Practical Pharmacy is taught under the superintendence of the Apothecary of the hospitals. A Resident Surgeon is appointed every alternate year, receives a salary, and holds office for two years. Eight Resident Clinical Clerks are appointed each half-year, and provided with furnished apartments, fuel, etc. These appointments are open not only to advanced students, but also to those who are qualified in Medicine and Surgery. The dressers are selected from among the best qualified of the pupils, without the payment of any additional fee.

The Richmond Lunatic Asylum, containing over 1,000 patients, adjoins these hospitals, affording facility for the study of mental diseases. The hospitals are visited at nine o'clock by the physicians and surgeons on alternate days. Two Clinical Lectures are delivered in each week, in addition to the usual daily bedside instruction.

Fees.—For the winter and summer session, £12 12s.; for the six winter months, £8 8s.; for the three summer months, £5 5s. Resident Clinical Clerks, winter, nine months' certificate. £12 12s.; summer, three months' certificate, £5 5s.; winter or summer, six months' residence, £8 8s.

ROTUNDA HOSPITALS.—*Master*, Dr. A. V. Macan. *Consulting-Physician*, Dr. J. Little. *Consulting-Surgeon*, Dr. W. Colles. *Assistant-Physicians*, Dr. R. H. Fleming and Dr. A. J. Smith.

This institution consists of two distinct hospitals—namely, the Lying-in Hospital for labour-cases, and the Auxiliary Hospital for patients suffering from uterine and ovarian disease. There are also a large extern maternity in connection with the hospitals, and a Dispensary for Diseases of Women.

Clinical Instruction in Midwifery and the Diseases of Women is given daily; and the Lectures are delivered regularly during the session.

The Diploma from this institution is granted to pupils after a six months' attendance, and on their passing an examination. Female pupils are trained as nurse-tenders and midwives on the following terms: for six months, £10; including board and lodging, £20.

Accommodation is provided for a limited number of Intern Pupils. Pupils can enter at any time.

Fees.—Intern Pupils: six months, £21; three months, £12 12s.; two months, £9 9s.; one month, £6 6s.; Extern Pupils: six months, £10 10s.; three months, £6 6s.

SIR PATRICK DUN'S HOSPITAL.—*Consulting Physician*, Dr. J. T. Banks. *Consulting Surgeon*, Dr. W. Colles. *Physicians*, Dr. J. M. Purser, Dr. J. M. Finny, Dr. W. G. Smith, Dr. J. R. Kirkpatrick. *Surgeons*, Dr. E. H. Bennett, Dr. T. E. Little, Dr. C. B. Ball.

The physician on duty visits the wards, with his class, at 9 A.M. on Mondays, Wednesdays, and Fridays; and the surgeon on duty, with his class, at 9 A.M. on Tuesdays, Thursdays, and Saturdays. There are separate wards for Infectious Diseases, and for Diseases of Women and Children. The Hospital Dispensary is open from 9 to 11 daily.

Two resident pupils are appointed annually.

Fees.—Silver Clinical medals in Medicine and in Surgery are awarded to the students who pass the best examinations on the Medical and Surgical cases treated in the hospital during the year, The payment of £12 12s. to the hospital entitles the student to hospital attendance and clinical teaching during the winter and summer sessions. For the winter session alone, the fee is £8 8s.; for the summer alone, £5 5s. For twelve months' instruction in Practical Midwifery, students of Trinity College, £3 3s.; other students, £6 6s.

DR. STEEVENS'S HOSPITAL.—*Consulting Physicians*, Dr. H. Freke and Dr. T. W. Grimshaw. *Consulting Surgeons*, Mr. S. G. Wilmot and Sir G. H. Porter. *Physicians*, Dr. H. C. Tweedy, Dr. R. A. Hayes. *Surgeons*, Mr. W. Colles, Dr. E. Hamilton, Dr. R. McDonnell. *Ophthalmic and Aural Surgeon*, Mr. R. W. Maxwell.

The Hospital contains 250 beds. There is a ward entirely devoted to Syphilitic Disease, and also a detached building for Fever-cases; also an extensive Out-patient Department, with separate Clinics for Diseases of the Skin, Throat, Teeth, and those peculiar to women.

Arrangements have been made that each pupil shall be assigned one or more beds, for the care of which he will be responsible; and he will be expected to keep accurate notes of the cases. At the end of each hospital-year, Gold Medals will be awarded for general attention and proficiency in Clinical work and Case-taking.

The Hospital is visited by the physicians and surgeons at 9 A.M. Clinical Lectures are given by the physicians and surgeons. Surgical Operations are performed on Saturdays, at 10 A.M., except in cases of emergency.

The Museum is open daily to the Pupils of the Hospital. There is also a Lending Library.

Fees.—Hospital Practice: Nine months, £12 12s.; six months, £8 8s.; three months, £5 5s. Dressership: Winter, six months, £21; summer, £15 15s.

ST. VINCENT'S HOSPITAL.—*Physician*, Dr. F. J. B. Quinlan and Dr. M. F. Cox; *Assistant-Physician*, Dr. M. McHugh; *Consulting-Surgeon*, Dr. E. D. Mapother; *Surgeons*, Dr. J. S. McArdle, Mr. R. F. Tobin; *Assistant-Surgeon*, Mr. C. B. Gaffney; *Gynæcologist*, Dr. J. A. Byrne; *Ophthalmic and Aural Surgeon*, Mr. D. Redmond; *Surgeon-Dentist*, Mr. E. J. Corbet.

The Hospital contains 160 beds. Attached to the Hospital is a General Dispensary, also a Convalescent Home at Linden, Blackrock. There are special wards and dispensaries for Ophthalmic, Aural, and Gynæcological cases.

Medical and Surgical Clinical Lectures are delivered twice a week during the Session, and clinical instruction is given daily. Operations admitting of delay are performed on Fridays.

Arrangements have been made for giving Special Clinical Instructions in infective fevers. Practical Instructions in Medical Chemistry, Spectrum-Analysis, and in the use of the Microscope, and of the other Scientific Instruments applicable to Clinical Investigations, are given in the Medical Laboratory of the Hospital.

At the commencement of every winter and summer session, Resident Pupils are selected from the previous classes. A House-Surgeon is appointed yearly, and receives £100, with board and apartments.

Fees.—Winter and Summer, nine months, £12 12s.; Winter, six months, £8 8s.; Summer, three months, £5 5s.

Certificates of attendance on the practice of this Hospital are recognised by all the Licensing Bodies. For further particulars, apply to the Secretary to the Medical Board, Mr. McArdle, 7, Upper Merrion Street, Dublin; and at the Hospital.

INSTRUCTIONS IN HOSPITALS, ETC.

IN addition to the hospitals mentioned in the JOURNAL of September 11th, instruction is given in the following general and special hospitals, etc., in London and other parts of the Kingdom.

BETHLEM ROYAL HOSPITAL.—*Medical Superintendent*, Dr. G. H. Savage. Two Resident Clinical Assistants are appointed twice a year for six months from recently qualified medical students. Students can attend the hospital practice for three months for £3 3s. Students of Guy's Hospital and St. Thomas's Hospital during the summer can attend special afternoon ward-instruction.

CENTRAL LONDON THROAT AND EAR HOSPITAL.—*Consulting Surgeon*, Mr. Sidney Jones. *Surgeons*, Mr. Lennox Browne, Dr. A. W. Orwin, and Dr. Dundas Grant. *Assistant-Surgeons*, Mr. P. S. Jakins and Mr. Carmalt Jones. *Dental Surgeon*, Mr. G. Wallis. The hospital contains accommodation for eighteen in-patients, and has an extensive Out-patient Department, which is open to all medical practitioners and students for the purpose of Clinical Demonstration and Instruction. Fee for three months' attendance, £2 2s.; for six months, £3 3s.

CHELSEA HOSPITAL FOR WOMEN.—*Consulting Physicians*, Sir A. Clark, Bart., Dr. R. Barnes. *Consulting Surgeons*, Sir T. Spencer Wells, Bart., Mr. J. Hutchinson, F.R.S. *Physicians*, Dr J. H. Aveling, Dr. A. W. Edis, Dr. Fancourt Barnes. *Assistant-Physicians*, Dr. J. Phillips, Dr. W. Travers, Dr. T. V. Dickinson, Dr. J. Mackern, Dr. G. Harper, Dr. W. H. Fenton Jones, Dr. H. T. Rutherford, Dr. J. I. Parsons. *Pathologist*, Dr. R. W. Burnet. *Anæsthetist*, Dr. J. Harper. Qualified medical men are admitted to the practice of the hospital, which has 63 beds, and to the consultations and operations, which take place at 2.30 P.M. on Mondays, and 2 P.M. on Thursdays. A course of post-graduate lectures on Diseases of Women, free to qualified medical men, is delivered yearly in February and March by the physicians of the hospital.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.—*Consulting Physicians*: Dr. C. J. B. Williams, Dr. W H. Walshe, Dr. Richard Quain, Dr. James E. Pollock. *Consulting*

Surgeon, Mr. John Marshall. *Physicians*, Dr. E. Symes Thompson, Dr. C. Theodore Williams, Dr. R. Douglas Powell, Dr. John Tatham, Dr. Reginald E. Thompson, Dr. Frederick Roberts. *Assistant-Physicians*, Dr. T. Henry Green, Dr. J. Mitchell Bruce, Dr. J. Kingston Fowler, Dr. Percy Kidd, Dr. Cecil Y. Biss, Dr. T. Dyke Acland. *Dental Surgeon*, Mr. Charles J. Noble. There are 331 beds in the two buildings constituting the hospital. Lectures and Demonstrations are given by members of the medical staff, at times of which notice is given. Members of the medical profession are admitted on presentation of their cards. Pupils are admitted to the Hospital; *Fee*, including Clinical courses, three months, £3 3s.; six months, £5 5s.; perpetual, £10 10s. Certificates of attendance on the Medical Practice of this Hospital are recognised by the University of London, the Apothecaries' Society, and the Army and Navy and Indian Boards.

Hospital for Women, Soho Square.—*Consulting Physician*, Dr. Protheroe Smith. *Physicians*, Dr. Carter, Dr. R. T. Smith, Dr. Holland, Dr. Mansell-Moullin. *Assistant-Physicians*, Dr. Bedford Fenwick, and Dr. James Oliver. *Surgeon*, Mr. Reeves. *Assistant-Surgeon*, Mr. S. Osborn. In connection with this Institution there is now an organised School of Gynæcology open to qualified medical men and students after their third year. A limited number of Clinical Assistants to the Physicians and Surgeons in the In-patient and Out-patient Departments are appointed every three months. A course of Lectures on the Anatomy and Physiology of the Female Pelvic Organs is given during each quarter. Clinical Lectures are given on alternate Thursday afternoons at 3.30 P.M. throughout the Winter Session. Prizes are given annually after examination, open to past and present Clinical Assistants. *Fee* for the three months' course, £5 5s. Further information can be obtained by letter, addressed to the Dean at the Hospital.

Hospital for Sick Children, Great Ormond Street.—*Physicians*, Dr. W. B. Cheadle, Dr. O. Sturges, Dr. T. Barlow. *Assistant-Physicians*, Dr. R. J. Lee, Dr. D. B. Lees, Dr. Montague Lubbock, Dr. J. Abercrombie, Dr. A. Money. *Surgeons*, Mr. Howard Marsh, Mr. Edward Owen, Mr. J. H. Morgan, Mr. B. Pitts, and Mr. W. A. Lane. *Ophthalmic Surgeon*, Mr. R. Marcus Gunn. *Surgeon-Dentist*, Mr. A. Cartwright. There are 121 beds in the hospital at Great Ormond Street, and 52 at Highgate. The physicians and surgeons of the hospital will give clinical instruction in the wards, and deliver lectures during the ensuing winter session in rotation. The medical visits are at 2.15 P.M., on Tuesday and Friday; the surgical visits at 9 A.M. on Wednesday and Saturday. The practice of the out-patient department is to be seen daily at 9 o'clock: for medical patients, on Monday, Tuesday, Thursday, and Friday; and on Wednesday and Saturday, at the same hour, for surgical patients. The practice of the hospital is open free to practitioners, and to students after their first year, on presenting their cards.

Normal School of Science.—Arrangements have been made by the Medical Schools of Charing Cross, Middlesex, St. George's, and Westminster Hospitals, for students desirous of undergoing a course of instruction in Science, such as that required for the Preliminary Scientific M.B. Examination of the University of London, to attend the Lectures and Practical Instruction in Biology, and a portion of the ordinary courses in Physics and Chemistry at the Normal School of Science, South Kensington. The fee for the whole course, which extends from October to June, is £35, of which £20 will be deducted by these four Schools from the fees for the Medical Curriculum, either in one sum or in equal instalments, according as the fees are paid. A separate syllabus will be forwarded to those desiring further particulars.

Queen Charlotte's Lying-in Hospital and Midwifery Training School.—*Consulting Physicians*, Dr. G. O. Rees, Dr. Gream, Dr. Brodie. *Consulting Surgeons*, Mr. H. Lee, Sir William Mac Cormac. *Physicians to In-Patients*, Dr. Hope, and Dr. W. C. Grigg. This Hospital, which has been recently enlarged, receives nearly 1,000 patients annually, besides having a large out-patient department. Medical Pupils are received at all times of the year. Pupils have unusual opportunities of seeing Obstetric Complications and Operative Midwifery, on account of the very large number of primiparous cases—upwards of three-fourths of the total admissions. Clinical Instruction is given on the more important cases that present themselves. Certificates of attendance at this hospital are recognised by all Universities, Colleges, and Licensing Bodies. Monthly Nurses and Midwives are received for training. *Fees.*—Medical Pupils, from £3 3s. for one week, to £26 5s. for three months, exclusive of board and lodging: Pupil Midwives, £26 5s. for three months; and Pupil Nurses, £10 10s. for two months, both inclusive of board and lodging. For further particulars, application should be made to the Secretary, at the hospital.

Royal Orthopædic Hospital.—*Surgeons*, Mr. B. E. Brodhurst, Mr. H. A. Reeves, Mr. C. Read, Mr. W. H. Balkwill. *Assistant-Surgeon*, Mr. H. F. Baker. Operations are performed at 2 P.M. on Mondays. The hospital is open to all legally qualified practitioners, and students are admitted on payment of the following fees: six months, £3 3s.; twelve months, £5 5s.; perpetual, £10 10s.

Royal London Ophthalmic Hospital.—*Physician*, Dr. Stephen Mackenzie. *Consulting Surgeons*, Mr. J. Dixon, Sir W. Bowman, Mr. J. Hutchinson. *Surgeons*, Mr. Hulke, Mr. Lawson, Mr. Couper, Mr. Waren Tay, Mr. Tweedy. *Assistant-Surgeons*, Mr. Nettleship, Mr. Gunn, Mr. Lang, Mr. A. Silcock. There are 100 beds for in-patients. Operations are performed daily, from 10.30 until 1 P.M. Gentlemen are admitted to the Practice, and to Lectures and Demonstrations in the winter months. Fees for six months, £3 3s.; perpetual, £5 5s. Students of the Hospital are eligible for the office of House-Surgeon, and may be appointed Clinical Assistants.

Royal Westminster Ophthalmic Hospital.—*Surgeons*, Mr. Power, Mr. Rouse, Mr. Macnamara, Mr. Cowell. *Assistant-Surgeons*, Mr. Juler, Mr. Frost, and Mr. Hartridge. The hospital contains 50 beds. The practice is open to practitioners and students from 1 to 4 P.M. daily. Special instruction is given in the Diagnosis, Pathology, and Treatment of all Eye Affections, including the Operations on the Eye, the Treatment of Errors of Refraction, and the Use of the Ophthalmoscope. Operations daily at 2 P.M. *Fees:* Six months, £3 3s.; perpetual, £5 5s. For particulars, apply to Mr. Juler, 77, Wimpole Street.

Seamen's Hospital, Greenwich.—*Consulting Physicians*, Dr. Robert Barnes, Dr. Richard Quain. *Visiting Physicians*, Dr. John Curnow, Dr. H. T. Griffiths. *Visiting Surgeon*, Mr. G. R. Turner. *Medical Officers*, Mr. W. Johnson Smith, and Dr. C. E. H. Cotes. The hospital contains 300 beds. Apartments are provided in the house of the surgeon for students and others who may be desirous of studying diseases incidental to tropical climates before entering the services or going abroad. There are a resident House-Physician and a House-Surgeon.

St. John's Hospital for Diseases of the Skin.—*Physicians*, Dr. T. Robinson and Dr. H. B. Dow. *Assistant-Physicians*, Dr. A. J. Harries, Dr. C. M. Campbell. *Surgeons*, Mr. J. L. Milton, Mr. James Startin. *Assistant-Surgeon and Chloroformist*, Dr. N. W. Bourns. The medical officers attend at Leicester Square every week-day (except Saturday) at 2; and on Monday, Wednesday, and Friday, at 7 P.M.; at Markham Square, Chelsea, on Monday and Thursday mornings, at 10 A.M.; and on Thursdays at 7 P.M. The large number of cases of skin-disease which pass through this hospital during the year, together with the attendance upon the practice by many students and medical men, have suggested to the Board of Management and the Medical Staff the establishment of a School for the Systematic Teaching of Dermatology. The first session will commence on Thursday, September 30th, when the Introductory Lecture will be given by Mr. J. L. Milton. Lectures will be delivered as follows. Anatomy, Physiology, Histology, and Pathology of the Skin, by Dr. C. M. Campbell. Materia Medica and Therapeutics of agents employed in the treatment of Skin-Diseases, by Dr. H. B. Dow. Principles and Practice of Dermatology, by Dr. Tom Robinson and Dr. A. Harries. Clinical Instruction in the Out-patient Department will be given every week-day afternoon at 2 o'clock.

School of Pharmacy of the Pharmaceutical Society.—The school opens on Friday, October 1st. Lectures on Chemistry and Pharmacy by Professor W. R. Dunstan, M. Tu. W., 9; Botany and Materia Medica, by Professor Bentley, Th. F. S., 9. The Laboratories for Practical Chemistry are open from 10 A.M. to 5 P.M.; on Saturdays from 10 to 2. *Director*, Professor Attfield. *Demonstrator*, Mr. F. W. Short. *Assistant-Demonstrator*, Mr. E. J. Eastes. They are fitted up with every convenience for the study of Chemistry by personal experiment. Application for admission to the school, or for further information, may be made to the professors or their assistants in the lecture-theatre or laboratories, at 17, Bloomsbury Square. Medical students, or pupils intending to enter the medical profession, are admitted to the lectures and to a course of practical chemistry of any length in the laboratories. Sir Henry W. Acland, K.C.B., M.D., F.R.S., will deliver an Introductory Address on Wednesday, October 6th, at 8 P.M.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.—*Consulting Physician*, Sir G. E. Paget. *Consulting Surgeon*, Mr. Lestourgeon. *Physicians*, Dr. P. W. Latham, Dr. J. B. Bradbury, and Dr. D. MacAlister. *Assistant-Physician*, Mr. Laurence Humphry. *Surgeons*, Dr. G. M. Humphry, Mr. E. Carver, Mr. G. Wallis, and Mr. G. E. Wherry. The hospital contains 120 beds. Clinical lectures are delivered twice weekly during the academical year; and practical instruction is given daily throughout the year. Clinical clerks and dressers are appointed without payment.

BRADFORD INFIRMARY AND DISPENSARY.—*Physicians*, Dr. R. G. Alexander, Dr. H. C. Major. *Surgeons*, Dr. A. Rabagliati, Mr. J. Appleyard, Dr. T. C. Denby, Mr. W. Lake Roberts. *Medical Officers*, Dr. J. H. Bell, Dr. D. Goyder. The hospital contains 210 beds. Non-resident pupils are received, and have every opportunity of acquiring a practical knowledge of their profession under the superintendence of the House-Surgeon. One year's attendance is recognised by the Examining Boards. *Fee:* Perpetual, £10 10s.

CUMBERLAND INFIRMARY.—*Consulting Surgeons*, Mr. Herbert W. Page, Dr. J. A. Macdougall. *Physicians*, Dr. Lockie, Dr. Barnes. *Surgeons*, Dr. Maclaren, Dr. Lediard. *Dental Surgeon*, Mr. Warwick Hele. The infirmary contains 100 beds. Pupils are admitted on such terms of payment as the committee may fix. In-door pupils reside at the infirmary; out-door pupils visit the infirmary at such hours as the medical officers shall approve. The pupils are entirely under the control of the medical officers.

DERBYSHIRE GENERAL INFIRMARY.—*Consulting Physician*, Dr. G. Taylor. *Physicians*, Dr. W. Ogle, Dr. C. A. Greaves, Dr. W. Benthall. *Consulting Surgeons*, Mr. Gisborne, and Mr. J. W. Baker. *Surgeons*, Mr. A. H. Dolman, Dr. W. G. Curgenven, and Mr. C. H. Hough. There are 175 beds. Pupils are admitted to the practice of the infirmary at £5 5s. a year.

DEVON AND EXETER HOSPITAL, EXETER.—*Consulting Physician*, Dr. Drake. *Physicians*, Dr. Lewis Shapter, Dr. H. Davy. *Consulting Surgeons*, Mr. A. Cumming, Mr. T. W. Caird. *Surgeons*, Mr. Bankart, Mr. Harris, Mr. Domville, Mr. Bell. The hospital contains 214 beds, including a special children's ward. There are a good Library, Museum, Dissecting and *Post Mortem* Rooms. Attendance on the practice at this hospital qualifies for all the examining boards. Arrangements may be made by which students can attend Midwifery. For further particulars as to fees, etc., apply to the House-Surgeon.

GENERAL HOSPITAL, NOTTINGHAM.—*Consulting-Physicians*, Dr. W. T. Robertson and Dr. Storer. *Physicians*, Dr. W. H. Ransom, Dr. J. O. Brookhouse, Dr. H. Handford. *Consulting-Surgeon*, Mr. J. White. *Surgeons*, Mr. T. Wright, Mr. J. Littlewood, Mr. J. Beddard, and Mr. A. C. Taylor. The hospital contains 180 beds. The Honorary Staff introduce pupils to witness the practice of the hospital, on payment of £10 10s. annually. The pupils receive instruction from the Resident Surgeon.

GENERAL HOSPITAL FOR SICK CHILDREN, PENDLEBURY, MANCHESTER.—*Physicians*, Dr. H. Ashby, Dr. Hutton. *Surgeon*, Mr. G. A. Wright. The hospital at Pendlebury contains 140 beds, including 21 for fever. The medical staff see out-patients daily at the Dispensary, Gartside Street, at 9 A.M., and visit the hospital at 10 A.M. The practice of the Hospital and Dispensary is free to students accompanying the medical staff.

GLASGOW HOSPITAL FOR SICK CHILDREN.—This hospital, containing 60 beds for the Non-Infectious Diseases of Children, is open for Clinical Instruction. *Physicians*, Dr. James Finlayson, Dr. Samson Gemmell. *Extra Physician*, Dr. G. S. Middleton. *Surgeons*, Dr. Hector C. Cameron, Dr. William Macewen. *Extra Surgeon*, Dr. W. J. Fleming. *Oculist*, Dr. Thomas Reid. *Aural Surgeon*, Dr. T. Barr. *Pathologist*, Dr. Joseph Coats. *Dentist*, Mr. Rees Price. Students, by paying the fee of one guinea, are entitled to the practice of the hospital for twelve months from the term of entry, which may be at the beginning of February, May, or November. Further particulars may be had by applying to the Resident Medical Officer.

GLOUCESTERSHIRE GENERAL INFIRMARY.—*Consulting Surgeons*, Mr. Wilton, Mr. T. S. Ellis. *Physicians*, Dr. R. W. Batten, Dr. Oscar W. Clark. *Assistant-Physician*, Dr. H. Peacock. *Surgeons*, Mr. H. E. Waddy, Mr. R. M. Cole, Mr. A. M. Sydney-Turner. *Ophthalmic Surgeon*, Mr. E. D. Bower. *Assistant-Surgeon*, Dr. J. J. S. Johnstone. The Hospital contains 156 beds. Resident and non-resident pupils may be admitted by the General Committee on the recommendation of a member of the Medical Board. Each pupil pays in advance £10 for the first half year, and £5 for every subsequent quarter, or portion of a quarter, of a year. Each resident pupil has board and lodging in the house, for which he pays in advance 26 guineas for the first half year, and 13 guineas for every subsequent quarter, or portion of a quarter, of a year. Each pupil pays in advance to the House-Surgeon a fee of £5 5s. for instruction, and a further fee of £3 3s. for every subsequent year or portion of a year. One year passed at this Hospital, after passing a Preliminary Examination, is recognised by the Royal College of Surgeons.

JESSOP HOSPITAL FOR DISEASES OF WOMEN, SHEFFIELD.—*Consulting Medical Officers*, Dr. Aveling, Dr. E. Jackson, and Dr. Hime. *Medical Officers*, Dr. Keeling, Mr. Woolhouse, Mr. R. Favell, Mr. Laver. The number of beds is 45: in the department of Women, 36; in the Maternity Department, 9. An obstetric dressership is attached to the hospital. Students can attend the practice of the hospital, and be supplied with cases of midwifery.

KENT AND CANTERBURY HOSPITAL.—The hospital contains 102 beds. *Consulting Physician*, Dr. Lochée. *Physician*, Dr. Gogarty. *Consulting Surgeon*, Mr. J. Reid. *Surgeons*, Mr. Holttum, Mr. Wacher, Mr. T. W. Reid, and Mr. Greasley. *Dental Surgeon*, Mr. M. L. Bell. *Fees* for hospital attendance, £7 7s. Lectures are delivered weekly to the students of St. Augustine's Missionary College on Practical Medicine, by Dr. Gogarty, and on Surgery by Mr. T. W. Reid. Courses of lectures are also delivered by the medical staff for the instruction and training of the nurses and probationers of the Hospital, and of the nurses and probationers of the Kent and Canterbury Nursing Institute.

LINCOLN COUNTY HOSPITAL.—*Physicians*, Dr. G. Mitchinson, Dr. C. Harrison. *Surgeons*, Mr. T. Sympson, Mr. S. Lowe, Mr. C. Brook, and Mr. T. M. Wilkinson. The hospital contains 100 beds. The house-surgeon is allowed to take two pupils, on terms arranged by the weekly board, himself, and the pupils. A fee of not less than £10 10s. is paid by every pupil to the hospital. The house-surgeon is responsible for the conduct of his pupils. The pupils remain in the hospital only when occupied in performing or observing the actual work of the hospital.

LIVERPOOL NORTHERN HOSPITAL.—*Physicians*, Dr. Dickinson, Dr. Caton. *Consulting Surgeons*, Mr. Manifold, Mr. H. Lowndes, and Dr. W. M. Campbell. *Surgeons*, Mr. C. Puzey, Mr. D. Harrisson, and Mr. G. G. Hamilton. *Dental Surgeon*, Mr. Lloyd. The hospital contains 160 beds. There is a special ward for the treatment of children. Clinical lectures are delivered by the physicians and surgeons during the summer and winter sessions. Clinical clerkships and dresserships are open to all students without additional fee. *Fees:* Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. Students can enter to the medical or surgical practice separately on payment of half the above fees. Practical Pharmacy, three months' fee, £2 2s.

LIVERPOOL EYE AND EAR INFIRMARY.—*Consulting Surgeons*, Dr. R. H. Taylor, Dr. Nevins. *Surgeons*, Mr. E. A. Browne, Mr. R. Williams, and Mr. C. G. Lee. *Assistant-Surgeons*, Mr. C. H. B. Sheard and Mr. J. Rose. The Infirmary contains 43 beds. Evening courses of lectures on Refraction and Medical Ophthalmoscopy are delivered at this Infirmary during the winter months by Mr. Edgar Browne. Students of Medicine of University College, Liverpool, have free access to the practice of the Infirmary.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—*Physicians*, Dr. Cameron, Dr. Carter, Dr. W. Williams. *Consulting Surgeon*, Mr. Nottingham. *Surgeons*, Mr. Hamilton, Mr. Little, Mr. Paul. *Dental Surgeon*, Mr. R. E. Stewart. The hospital contains 200 beds. Clinical lectures are given by the physicians and surgeons during the winter and summer sessions. Clinical clerkships and dresserships are open to all students. There are special wards for accidents and diseases of children; also rooms for a limited number of resident students. *Fees* for hospital practice and clinical lectures: Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. The practice of the hospital is recognised by all examining bodies.

NORFOLK AND NORWICH HOSPITAL.—*Physicians*, Sir Peter Eade, Dr. Bateman, Dr. Taylor. *Surgeons*, Mr. Cadge, Mr. Crosse, Mr. C. Williams. *Assistant-Surgeons*, Dr. Beverley, Mr. Robinson. The hospital contains 150 beds. One year's attendance is recognised by the Examining Boards. Clinical lectures are given by the physicians and surgeons. *Fees:* Physicians' practice, six months, £5 5s.; perpetual, £10 10s.; surgeons' practice, including dresserships, three months, £10; six months, £15; one year, £20; two years, £30; perpetual, £40. Pupils, resident and non-resident, are admitted.

NORTHAMPTON GENERAL INFIRMARY.—*Physicians*, Dr. Buzzard, Dr. Jones. *Surgeons*, Mr. G. H. Percival and Mr. R. A. Milligan. There are 144 beds and a large out-patient Department. Out-pupils are received, and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given by the House Surgeon in Anatomy, Materia Medica, and Pharmacy. *Fees:* 25 guineas a year; perpetual £50. Arrangements for board and residence, etc., can be made.

NORTH STAFFORDSHIRE INFIRMARY.—*Physicians and Medical Officers*, Dr. J. T. Arlidge, Dr. C. Orton, Mr. Ashwell, Mr. J. G. West. *Surgeons*, Mr. W. H. Folker, Mr. J. Alcock, Mr. W. D. Spanton. The Infirmary has accommodation for nearly 220 patients, including children's wards, and special ovarian wards. The attendance of pupils at this Infirmary is recognised by all the Examining Boards. Particulars as to fees, etc., may be obtained from the secretary, Mr. R. Hordley, Hartshill, Stoke-on-Trent.

ROYAL ALBERT HOSPITAL, DEVONPORT.—*Consulting Surgeons*, Mr. May, Mr. Laity. *Surgeons*, Mr. C. Bulteel, Mr. J. May, jun., Mr. Leah. *Provident Dispensary Surgeons*, Mr. W. J. Gard, Mr. M. H. Bulteel, Mr. J. R. Rolston, Mr. F. E. Row, Mr. J. Harrison. The hospital contains 218 beds. The pupils of the medical staff are allowed to attend the hospital-practice and to learn Pharmacy, on payment of a fee of £2 2s. to the dispenser.

ROYAL EYE HOSPITAL, MANCHESTER. — *Medical Officers*, Dr. Little, Dr. Glascott, Dr. Mules, Dr. Emrys-Jones, Dr. Hill Griffiths. The hospital contains 100 beds. The medical staff attend daily from 9.30 to 1. Clinical instruction is given (in connection with Owens College) on Mondays, Tuesdays, Thursdays, and Fridays, at 9.30 A.M., by Dr. Little and Dr. Glascott, free to advanced students. Dr. Mules and Dr. Emrys-Jones visit the hospital at 9.30 A.M. on Wednesdays and Saturdays. Dr. Little gives demonstrations on the Use of the Ophthalmoscope every alternate Thursday in the winter session, at 10 A.M.; Dr. Glascott gives a special course of Ophthalmoscopic Demonstrations on Tuesdays, at 5, during the summer session.

ROYAL HANTS COUNTY HOSPITAL, WINCHESTER.—*Physician Extraordinary*, Dr. T. Hitchcock. *Physicians*, Dr. W. A. Richards, Dr. B. N. Earle. *Surgeons*, Mr. T. C. Langdon, Dr. W. England. The hospital contains 108 beds. Apprentices are received by the Committee on payment of £100 per annum, and are bound to the House-Surgeon for five years. During the first two years they are chiefly employed in dispensing; afterwards, they may witness the practice, and attend clinical lectures and operations, and *post mortem* examinations. The Physicians and Surgeons are allowed to introduce a certain number of pupils; the House-Surgeon may also receive a pupil, on payment of £100 per annum. Pupils of qualified medical practitioners not belonging to the staff of the Hospital may, with the consent of the Committee, become out-pupils, and see the practice of the Hospital under the direction of the House-Surgeon, on the payment of £10 10s. for one year, or £21 for unlimited attendance. Out-pupils are permitted daily (Sundays excepted) to read in the Library on payment of £1 1s.

ROYAL SOUTH HANTS INFIRMARY, SOUTHAMPTON.—*Physicians*, Dr. G. Scott, Dr. Thomas. *Assistant-Physician*, Dr. Griffin. *Surgeon-Extraordinary*, Dr. J. K. Sampson. *Surgeons*, Dr. G. A. K. Lake, Dr. G. King, Dr. W. Sims. *Assistant-Surgeon*, Dr. Wade. *Dentist*, Mr. C. H. Bromley. The hospital contains 100 beds. Pupils, duly qualified by examination and registration, are received, and pay a fee of £10 10s. for a perpetual ticket, and £5 5s. for six months. These are under the care of the house-surgeon. After three months in the dispensary, they see all the practice, operations, etc., and may act as clinical clerks and dressers. There being a good many surgical cases in this place, they gain a good all round knowledge before proceeding to a regular Medical School. There is a good supply of modern books, and a collection relating to Osteology, and specimens of Materia Medica.

ROYAL UNITED HOSPITAL, BATH.—*Consulting-Physician*, Dr. Coates. *Physicians*, Dr. Goodridge, Dr. Cole, and Dr. A. E. W. Fox. *Surgeons*, Mr. Stockwell, Mr. Fowler, Mr. Freeman. *Assistant-Surgeons*, Mr. Green, Mr. Scott, Mr. Ransford. *Medical Officers for Out-Patients*, Dr. Field, Mr. Cowan, Mr. Craddock. *Dental Surgeon*, Mr. Gaine. *Pathological Registrar and Curator*, Mr. H. Culliford Hopkins. The hospital, which contains 120 beds, is recognised by the Royal Colleges of Physicians and Surgeons, etc., and is licensed for Dissection. It has a good Library and an excellent Museum, containing a large number of interesting specimens, both in Pathology and in Comparative Anatomy. *Fees* for attending the hospital practice: six months, £5 5s.; twelve months, £10 10s. Instruction in Practical Pharmacy, £5 5s. Pupils entering in October can, if desired, be instructed in the subjects required for the First Professional Examination of the Royal College of Physicians, which can be passed during the year spent at the hospital. The subjects are Chemistry and Chemical Physics, Materia Medica and Pharmacy, Medical Botany and Osteology. For further particulars, apply to the Registrar and Curator.

ST. MARY'S HOSPITAL, MANCHESTER. — *Physicians*, Dr. Lloyd Roberts, Dr. C. J. Cullingworth. *Consulting Surgeons*, Mr. Henry Winterbottom, Dr. S. Nesfield, Mr. G. W. Pettinger, Mr. Robert Heslop. *Surgeon*, Dr. William Walter. The accommodation for in-patients comprises 50 beds, of which 35 are set apart for the treatment of women, 12 for children, and three for the reception of exceptional lying-in cases, attended with special difficulty or danger. Out-patients are attended every day at 9 A.M. by the honorary staff, assisted by the resident medical officers. In the out-patient department, students are taught the various methods of examination and diagnosis, and the use of gynæcological apparatus; while, in the wards, they have an opportunity of becoming familiar with the diagnosis and treatment of graver cases, and of witnessing the more important gynæcological operations, which take place on Wednesdays at half-past ten. The large number of maternity cases attended annually in connection with this hospital affords ample opportunity to students for receiving instruction in practical midwifery. Every student, on registering himself as a midwifery-pupil, is supplied with a card, on which must be filled in the particulars of every labour at which he is present, each entry being attested by the initials of the medical officer or certified midwife in charge of the case. The hospital possesses a library, presented by the late Dr. Radford, consisting of nearly 4,000 volumes, chiefly on subjects connected with obstetrics and gynæcology. There is also a museum, containing a large number of pathological specimens, and a valuable collection of deformed pelves, casts, obstetric instruments, and anatomical models. The gynæcological practice of the hospital is free to third and fourth years' students. The fee for the midwifery-practice, which includes attendance upon twenty cases of labour, as required by the examining bodies is £2 2s. Application must be made to the House-Surgeon at the hospital.

STAFFORDSHIRE GENERAL INFIRMARY.—*Physicians*, Dr. Crawford Dr. Reid. *Surgeons*, Mr. Weston, Mr. Greaves. There are 120 beds. The pupils of medical practitioners resident in the county of Stafford are allowed to witness the Medical and Surgical Practice of the Infirmary, and to be present at Operations. The pupils of the Officers of the Institution are admitted to these privileges gratuitously, those of other practitioners on the payment of £10 10s. with each pupil. The assistants of a medical practitioner, having gone through a complete curriculum, are admitted on the annual payment of £5 5s.

SWANSEA HOSPITAL.—*Consulting Physicians*, Dr. G. Padley and Dr. J. Paddon. *Physicians*, Dr. J. Rawlings, Dr. D. A. Davies. *Consulting Surgeon*, Mr. J. G. Hall. *Surgeons*, Mr. J. Thomas, Mr. H. A. Latimer. *Ophthalmic Surgeon*, Dr. W. T. F. Davies. *Medical Officers for Out-Door Patients*, Mr. J. F. Fry, Dr. A. D. Davidson. *Surgeon Dentists*, Mr. F. C. Scott and Mr. W. C. Humphreys. The House-Surgeon is permitted to take two articled pupils, whom he binds himself to transfer to his successors in the event of his leaving the hospital during the term of their apprenticeship. The premium or fee on the introduction of pupils is such a sum as the Committee may consider reasonable. It is apportioned between the House-Surgeon and the Institution, as the Committee for the time being may determine.

SUSSEX COUNTY HOSPITAL, BRIGHTON.—*Consulting Physician*, Dr. Kebbell. *Physicians*, Dr. Withers Moore, Dr. J. Rutter, Dr. W. A. Hollis. *Assistant-Physicians*, Dr. H. S. Branfoot, Dr. E. Mackey, Dr. A. Shadwell. *Consulting Surgeon*, Mr. E. J. Furner. *Surgeons*, Mr. F. W. Jowers, Mr. F. A. Humphry, Mr. N. P. Blaker. *Assistant-Surgeons*, Mr. W. Furner, Dr. J. C. Uhthoff, Mr. T. J. Verrall. The hospital contains at present 173 beds, with separate wards for Children and for Fever-cases; and the Out-patient Department is attended by 600 to 700 patients weekly. It is recognised by the College of Surgeons and by the Conjoint Board as a hospital where part of a Medical Course may be spent; and special Classes are held by Members of the Honorary Staff and by the House-Surgeon, in Osteology, Anatomy, Physiology, Materia Medica, Pharmacy, and Elementary Clinical Medicine and Surgery. In-pupils are received in adjacent houses under supervision of the Assistant House-Surgeon, and have rooms in hospital in rotation as "Resident Pupils;" inclusive fee, £84 for the first year, and £73 10s. the second and subsequent years. Out-pupils are admitted

to the Clinical Teaching and the Classes at a fee of £21 for two years. The Ormerod Exhibition, of the average value of £30, is awarded annually, after examination, to the best Student of those leaving to pursue their studies at a Medical School. A Prize of £25 will be awarded in the first week in October to the Student who shall pass the best Examination in Classics, Mathematics, and French or German, on his entrance at the Hospital. Further information may be obtained from the House-Surgeon or the Staff.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—*Consulting Physicians*, Dr. Topham, Dr. Millington, *Consulting Surgeon*, Mr. Newnham. *Physicians*, Dr. Totherick, Dr. Malet. *Surgeons*, Mr. Vincent Jackson, Mr. Kough, Mr. F. E. Manby. The hospital contains 224 beds, and is a preparatory School of Medicine and Surgery. The pupils see the whole of the practice of the physicians and surgeons, and are trained in clinical work by the medical and surgical staff. Attendance at this hospital is recognised by all the Examining Boards. *Fees:* six months, £6 6s.; twelve months, £12 12s.; perpetual £21.

WEST OF ENGLAND EYE INFIRMARY, EXETER.—*Surgeons*, Mr. Bankart, Mr. Tosswill. The infirmary contains 50 beds. Arrangements can be made for students of the Exeter Hospital to attend the practice of the Eye Infirmary.

TEMPERANCE LEGISLATION.—The arrangements for the forthcoming conference on temperance legislation, to be held under the auspices of the Social Science Association, are now complete. The conference will be held at Prince's Hall, Piccadilly, on February 25th and 26th, under the presidency of Sir Richard Temple, M.P., President of the Council of the Association. The association is not at present pledged to the support of any scheme which may be brought forward in Parliament, but its main object in convening the conference is to afford an opportunity for a full and frank discussion of proposals which are already before the public. The proceedings will begin on the first day at eleven o'clock, when the president will deliver an address. Papers will then be read on the question, "What reform, if any, is desirable in the licensing laws?" The readers will be the Rev. J. W. Horsley, M.A., on behalf of the Church of England Temperance Society, and Mr. Albert J. Mott, F.G.S., on behalf of the Brewers' and Licensed Victuallers' Societies. On the second day Mr. Ernest W. Norfolk, on behalf of the Licensed Victuallers, Mr. Stephen Bourne, on behalf of the Church of England Temperance Society, and Mr. Joseph Malins, on behalf of the Independent Order of Good Templars Grand Lodge of England, will read papers on the question—"Should compensation be given on the compulsory extinction of licences, and if so from what source?" After the discussion of this subject, the question of prohibitory legislation will be considered. Mr. Samuel Pope, Q.C., on behalf of the United Kingdom Alliance, Mr. Peter McLagan, M.P., on behalf of the Scottish Permissive Bill and Temperance Association, and Mr. J. Danvers Power, on behalf of the Country Brewers, will contribute papers on the question as set down on the programme—"Is prohibitory legislation desirable, and if so in what form?" The discussion on this question will close the proceedings. Admission to the conference will be by tickets, for which application should be made to the secretary, Mr. J. L. Clifford-Smith, at the office of the Association, 1, Adam Street, Adelphi, W.C.

BEQUESTS AND DONATIONS.—Mrs. Mary Anne Curwen, of 42, Grosvenor Place, has bequeathed the residue of her personal estate upon trust for her daughter, Mrs. Goodlake, and then for her children or issue, and in default of any such children or issue, she further bequeathed £40,000 to St. George's Hospital, on condition that one of the wards be named "The Ewing Ward," and that the money be kept as a separate fund; £5,000 each to the Great Northern Hospital, St. Mary's Hospital, and All Saints' Seaside Convalescent Hospital, Eastbourne; £2,500 each to Westminster Hospital, Charing Cross Hospital, the London Fever Hospital, the Royal Free Hospital, the London Hospital, the Cancer Hospital, the Middlesex Hospital, Queen Charlotte's Lying-in Hospital, the General Lying-in Hospital, the City of London Lying-in Hospital, the National Hospital for the Paralysed and Epileptic, the Royal Hospital for Incurables, the Convalescent Hospital at Walton, the Royal Westminster Ophthalmic Hospital, the Hospital for Sick Children, and the North-Eastern Hospital for Children; £500 each to the Victoria Hospital for Sick Children, and the Belgrave Hospital for Children. If her estate should be insufficient to pay all the charitable legacies in full, then the legacy to St. George's Hospital is to be first paid, and the other legacies are to abate in proportion; but if there be any residue after paying all the said legacies, then it is to be divided between all the charities, except St. George's Hospital, in the same proportion as the amount of their respective legacies.

BRITISH MEDICAL ASSOCIATION SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 18th, 1886.

OUR COLONIAL SANATORIA.

THE colonies are becoming increasingly popular with the profession as sanatoria. The progress of science has so largely annihilated distance and robbed travel of its terrors, that a journey to Australia or New Zealand is now as readily recommended and as willingly undertaken as were, in a former era, the less formidable trips to Pau, Cairo, or Madeira. The new fashion is being daily justified by its results; but, like all new fashions in medicine, it is apt to be often ignorantly applied, and to suffer in consequence from unmerited obloquy. We propose to consider briefly the peculiar features of the Australian colonies as health-resorts, and to lay down a few general principles regarding the classes of patients that may be sent thither with a reasonable prospect of benefit.

Australia presents at least three distinct types of climate; namely, the climate of the littoral region, that of the mountainous districts, and that of the vast plains of the interior. The first, or coast-climate, is characterised by a high range of summer-heat, absence of snow or winter-cold, considerable rainfall—ranging from 21 inches *per annum* at Adelaide and 32 at Melbourne, to 50 at Sydney and 60 at Port Macquarrie—combined with much dryness of the atmosphere, much sunshine, and somewhat sudden changes of temperature and humidity, owing to the alternate prevalence of hot winds from the interior and cold blasts from the Antarctic seas. The second, a mountainous climate, presents a great variety of type, according to latitude and elevation. In the New England and the Blue Mountain regions of New South Wales, we find a highly agreeable and salubrious climate, while there are other mountainous districts in Australia characterised by intense cold or excessive rainfall. The third type of climate—that of the inland plains—is the most typical of the Australian continent. Its chief characters are intense summer-heat, the thermometer often ranging for many weeks from 110° to 120° Fahr., very low rainfall in many places, not exceeding 10 or 12 inches *per annum*, intense dryness of the atmosphere, brilliant sunshine, and frequent dust-storms. The summer climate of these plains is rendered trying by the heat, dust, and drought, but the other seasons are highly agreeable, and the winter is often perfection. The best known of these inland districts are the Riverina of New South Wales and the Darling Downs of Queensland.

While presenting these diverse types, the climate of Australia, speaking broadly, may be said to possess some constant features. It is, in the main, hot and dry, and the winter is usually mild and open, snow being almost unknown, except among the mountains. Its

equability has been overrated; for, while there is not a very striking contrast of seasons, sudden and extreme changes of temperature are not uncommon. Its general physiological action is tonic and stimulant, the activity of both the nervous and the nutritive systems being increased.

The Australian climate is undoubtedly entitled to rank high in point of salubrity. The colonial death-rate is only about two-thirds of the British average; and after making all reasonable deductions on the score of the larger relative proportion of adults in the prime of life to be found in the colonies, this must be accounted a very favourable percentage. Epidemic disease and respiratory disorders are much below the British rate; while, on the other hand, affections of the nervous and alimentary systems are relatively somewhat common. Parasitic disease, especially hydatids, prevails extensively in the colonies. Typhoid fever and diphtheria are somewhat prevalent, while typhus and small-pox are practically unknown. There is a great conflict of medical opinion regarding the incidence of phthisis in the colonies. In the early days of colonisation, the disease was undoubtedly very rare, but it has gradually become more frequent, until the returns from the large towns are beginning to approximate to the British average. Some colonial authorities explain this fact as the result of the large and increasing immigration of phthisical sufferers from the home country; but others admit that, excluding imported cases, there is a decided spontaneous increase of the disease in the larger colonial cities. It is, at least, beyond question that phthisis is now very common in Melbourne and Sydney, and the consumptive invalid who resorts thither must not rely too confidently on the power of the climate to arrest his malady. On the other hand, phthisis is extremely rare upon the great plains of the interior, and the phthisical sufferer may resort thither with the assurance that he cannot have a more favourable environment in which to resist the insidious progress of disease. The intense dryness of the atmosphere, the large amount of sunshine, the open-air life of wholesome activity usually followed in the country districts, all combine to exercise a favourable influence upon consumptive cases, and to promote that increased vigour of nutrition, which lies at the root of all successful treatment of phthisis. But the consumptive who lingers in the large towns usually makes little progress, and either succumbs prematurely, or, becoming disheartened, embarks for home with a very low opinion of the curative effect of the colonial climate. The mountain regions of the colonies are still undeveloped as sanatoria; but, in view of our experience at Davos and St. Moritz, it is not rash to predict that they have a future in store for them.

While the colonial climate has won its chief repute in phthisis, it possesses a high value in other morbid conditions. In struma and other cases of impaired development, its tonic and stimulant properties find a ready applicability. It has a remarkable influence in restoring vigour to persons of middle life who are beginning to feel the approach of senility; and it may be expected to prove valuable in renal and rheumatic affections. On the other hand, the colonial climate is too irritating to suit neurotic affections; and the high range of summer heat renders it unsuitable in dysentery and allied disorders.

It is highly regrettable that invalids who resort to the colonies are usually content with a very brief stay, and have no sooner exhausted the excitements and novelties of a new country, than they begin to bethink themselves of securing their return passage. In cases of serious organic mischief, a residence of two or three months in the colonies can be of little avail, especially if the time be devoted—as often happens—to a round of sight-seeing and gaiety. Too frequently the invalid speedily loses, in Melbourne or Sydney, all the benefit which has accrued from the sea-voyage; and he owes this loss, in a large number of cases, to his mistaken idea that the salubrity of the climate warrants the neglect of his customary precautions for the preservation of health. In phthisis, especially, a prolonged residence in the colonies should be the rule, and it is only on such conditions that great benefit can be confidently anticipated.

MISTAKES IN DISPENSING.

DURING the last few months there have been a considerable number of fatal mistakes in the compounding of medicines. Some of them —we are even afraid most of them—have been due to the careless management of the dispensers of medical men; but a tangible proportion, nevertheless, have to be debited to dispensing druggists and their assistants. The substitution of a solution of strychnine for chloroform water, or of carbolic acid for dill water, are examples o the class of errors which have cost the lives of several people during the current year; and, as "culpable negligence" is almost impossible to prove, the perpetrators escape with a recommendation not to do so again.

Without desiring to appear unduly harsh on persons who have been unfortunate enough to commit errors of this description, we cannot help thinking that the matter is really far too serious to be allowed to terminate in such an inadequate result; and the more so, because these accidents might almost invariably be avoided by the employment of ordinary caution. The fact is, that ignorance on the one hand and overwork on the other have much to do with the frequency of these accidents, and this may account for the comparatively small number of accidents which occur in the dispensing of prescriptions in druggists' shops, and in the "surgeries" of better class practitioners. In the former, some guarantee of knowledge is required by law before the assistant is allowed free access to powerful and deadly drugs; and, moreover, the chemist is probably not subjected to the extreme pressure brought to bear upon the unhappy dispensary hack, who, for a miserable pittance, has, at certain specified hours, to contrive to fill, with more or less complicated mixtures, a well nigh incredible number of bottles and pill-boxes, and this without any other evidence of technical ability than a certificate from his last employer. We may go a step further, and maintain that, in a great many instances, the surgery dispenser is either devoid of the necessary instruction; or, if perchance he have gone through all or part of his curriculum, he has probably got no further on account of his want of intelligence or of sobriety.

To this rule there are, we hasten to say, numerous exceptions; and probably there are few more reliable men than those who, for financial reasons, are obliged to devote a portion of their time to dispensing, in order to be enabled to carry on their studies. Such men, however, are rarely to be found in the "dispensaries;" there, the compounder of medicines is a genus by himself, who, having somehow or other acquired a smattering of the names of drugs and the signs indicative of quantities, drags along a miserable existence as a "dispenser and book-keeper, able to visit and attend midwifery."

Accidents in any sense of the word preventable, whether caused by erroneous labels or by simple want of discrimination, ought assuredly to

be punished in some way, as this alone will conduce to a fit and proper sense of responsibility. If the dispenser be a licensed person, his incompetency should lead to a more or less prolonged suspension of his licence, if to nothing more; while, if no proof of competency be alleged, its absence should be, *per se*, a sufficient reason for fine and imprisonment. The day is possibly not far distant when the employment of dispensers not possessed of proper dispensing qualifications will be forbidden; and, even under the present condition of things, their employment would probably create a civil liability which might, if properly appreciated, do much to call the attention of medical men to the risks they are running in the interests of a false economy. Fortunately, accidents are not necessarily fatal; but the number of serious cases affords some idea of the recklessness with which potent agents are handled, with far too few precautions to avoid mistakes.

Sir Andrew Clark has retired from the office of Senior Physician to the London Hospital.

The Local Government Board have, by order, extended for another month from September 1st the prohibition of the importation into this country of rags from Spain.

We regret to hear of the death from typhoid fever, on Wednesday last, of Dr. Samuel Woodman, of Ramsgate. He was Consulting Surgeon to the Ramsgate and St. Lawrence Royal Dispensary, and Surgeon to the Board of Trade for Ramsgate Harbour.

THE SANITARY INSTITUTE.

The Sanitary Committee of the Bolton Corporation have decided to invite the members of the Sanitary Institute to hold their annual congress next year in that town.

GUY'S HOSPITAL.

Dr. F. Taylor has been appointed Joint Lecturer on Medicine with Dr. Pye-Smith, in place of the late Dr. Moxon. Mr. Beddard will lecture on Biology; the term including Zoology and Botany. The Physical Society will meet at 7.30 P.M. on Monday, October 4th, Dr. Wilks in the chair, when Dr. Ryle will read a paper on the History of Medicine. In last week's Journal it was stated, by an accidental error, that students entering on their third year pay £30 for the second year; it should have been £20.

THE POISONING OF A WEDDING PARTY AT CARLISLE.

We learn from Dr. H. Barnes that the investigation into the cause of the poisoning of a wedding party in Carlisle, so far as it has gone, points strongly to a ham which was used on the occasion as the source of the catastrophe, a bacillus having been found in that meat. An inspector from the Local Government Board has been sent to inquire into the matter, and it is expected that the result of the inquiry will be known at the end of this week.

CIVIL LIST PENSIONS.

The list of pensions granted during the year ending June 30th, 1886, and charged upon the Civil List, includes the following names: Mrs. Ann Martha Radcliffe, in recognition of the valuable services rendered to sanitary science by her husband, the late Dr. John Netten Radcliffe, £100; Thomas Henry Huxley, LL.D., F.R.S., in recognition of his eminent services to science and education, £300.

THE TRAFFIC IN RAGS IN HOLLAND AND SWITZERLAND.

The Netherlands Government have issued a ministerial notification prohibiting, from August 27th, 1886, the importation and the transit of rags, worn clothing, and unwashed underclothing and bedding, coming from Italy and Austria-Hungary. Worn clothing brought by travellers as part of their baggage does not come within the prohibition. The Swiss Federal Council have also prohibited, by an order of August 20th, and until the issue of a further order, the importation and transit of rags, old clothes, unwashed linen, etc., coming from Italy, except such as may be included in travellers' baggage.

REDUCED CONSUMPTION OR INCREASED SMUGGLING.

The French Society, formed a few years ago to check the abuse of tobacco, has met with a severe disappointment. The manufacture and sale of tobacco in France is a State monopoly, and the budget every year contains a considerable sum accredited to this source. The last budget showed a remarkable diminution in the revenue from tobacco, and the Société contre l'Abus du Tabac congratulated itself on the rapidity with which Frenchmen had appreciated the sweet reasonableness of its arguments. Unhappily, this joyful state of mind was not to last long. Incredulous officials noticed that the supposed diminution in the consumption of tobacco was especially marked in Paris, and doubted whether the luxurious city could in reality be setting an example of self-denial to the rest of France. Increased vigilance on the part of the customs has revealed the fact that contraband tobacco is introduced into France in enormous, and, it is presumed, increasing quantities. Fifty-seven thousand cigars were seized in one swoop a short time ago; the cigars, which are stated to have been of very superior quality, were artfully concealed in innocent-looking agricultural implements. French grown tobacco in any and every form is atrociously bad, rank, and of poor flavour, and the Society may congratulate itself that if the quantity consumed has not diminished as was hoped, a taste for a better and more innocent variety is springing up.

DEATH FROM FUMES OF NITRIC ACID.

Three seamen recently lost their lives upon the American ship *Manopouri*, from an unusual cause. Upon opening one of the hatches, dense clouds ascended, and water was poured into the hold to extinguish the supposed fire. The men who subsequently went below, found that the hold was full, not of smoke, but of far more irritating fumes; and it was ascertained that a bottle of nitric acid, which had been shipped in a case as something else in order to save the extra cost, had been broken. The length of time during which the men were exposed to the fumes is not stated by Dr. J. W. Stickler, who reports the circumstances in the *New York Medical Record*, but no great suffering appears to have been immediately produced; within a few hours, however, the men began to complain of serious illness, and in a very short time died.

VENTILATION OF GYMNASIA.

In this great overgrown city of London, and to a less degree in other great cities of the country, as the opportunities for healthy exercise grow fewer, the custom of resorting to gymnasia will grow even more common than it has already become. The advertisements of "Professors of the gymnastic art," multiply with rapidity, a sure sign that the fashion is spreading. While willingly admitting that gymnastic training has its uses for both sexes, and is, indeed, especially during the winter months, the only substitute for out-door exercise available to those large classes of the community who follow ill-remunerative sedentary occupations, it is advisable to sound a note of warning with regard to the ventilation of the room in which the exercises are performed. The training received from a gymnastic master necessitates inspirations which, when not rapid, are deep; the pupil, therefore, charges his or her lungs very fully with the air of the often crowded room in which the apparatus is erected; if ventilation be not free, the air quickly becomes charged, not only with dust, but with emanations from the lungs and perspiring bodies of the executants. If ventilation be carelessly managed, draughts most dangerous to heated bodies are generated; of the two evils, it is to be feared that draughts are looked upon as the chief and the only one to be seri-

ously combated by the managers of gymnasia. To delicate persons, the danger, however, of breathing air contaminated as above described must be very real; and it is worth while remembering that, of a family of four famous acrobats who, not many years ago, delighted the frequenters of London theatres and music halls, all have met early deaths from disease; in two cases, death was due to pulmonary consumption. Who shall say that this dire disease was not contracted in the fetid atmosphere in which their marvellous feats of agility and strength were commonly performed?

QUARANTINE IN TURKEY.

THE following Frontier Quarantine Regulations, it is officially announced, have been adopted by Turkey. A Commission is about to be established, composed of a director, two medical men, and an experienced assistant. The Commission will be established at Moustafa Pacha, a station near the Roumelian frontier. Passenger-trains from the interior will stop there, and the travellers will undergo a medical inspection, and asked whence they come. Those arriving from a country or town where cholera exists, such as Italy, Fiume, Trieste, Ragusa, and all Dalmatia, will be separated from other travellers, and subjected to five days' observation in a lazaretto established for that purpose. Travellers arriving from European places other than those specified will, after the visit, proceed in another train to Adrianople. If sick persons with choleraic symptoms should be discovered among the travellers, they will be detained at the quarantine-station, and a special meeting of the Board of Health will be convened to consider the matter.

CHARGE AGAINST A MEDICAL MAN.

IN the Central Criminal Court, on Tuesday, Mr. Poland applied to the Court to allow the recognisances of the witnesses in the charge against a medical gentleman named Oldfield, who had been committed upon a charge of indecent assault upon a young girl in his surgery, at Walworth, to be enlarged, and no bill to be preferred until next sessions. He said that, by the request of Mr. Chance, the magistrate who investigated the case, the matter had been taken up by the Public Prosecutor, and it was absolutely necessary that some further inquiries should be made before any bill was preferred.—Mr. Horace Avory, who appeared for the defence, said that Mr. Oldfield was most anxious to have the case disposed of as speedily as possible, in order that his character might be cleared, but, as the result of the inquiries suggested might be that the charge would be abandoned, on this ground he should not offer any opposition to the adjournment.—The Recorder directed that the case should stand over to the next sessions.

POST-GRADUATES COURSES IN MANCHESTER.

DURING the summer months, several practical courses for medical men have been held, and with highly satisfactory results. Dr. Griffith gave a course of instruction on ophthalmoscopy and clinical ophthalmology, which was attended by thirty-three medical practitioners. Dr. Sinclair gave a clinical course with demonstrations in gynæcology, at the Southern Hospital, to about twenty practitioners; while Dr. Harris, Assistant Lecturer on Pathology at the Owens College, had a well-attended class on practical morbid histology. Dr. Griffith has begun a second course, and considering the rich material of the eye hospitals, the appliances for clinical examination of the eye, and the highly practical way in which this class was conducted, there is every reason to believe that the experiment to give these courses in the winter months is likely to prove successful.

A GRIEVANCE OF LANGUAGE.

ATTENTION was drawn at the last meeting of the Merthyr Board of Guardians, to the fact that, although the majority of the 800 patients at the county Asylum at Bridgend were Welsh, and a number of these were unable to understand English, none of the medical officers understood Welsh. The following resolution was unanimously passed, in view of the erection of a new asylum building, at a cost of £100,000:—"That the Merthyr Board of Guardians begs to call the attention of the Bridgend County Asylum Committee to the following facts and recommendations: (*a*) That there are many patients at the asylum who could not speak English well when in good health; (*b*) that there are others who do not understand any other language than Welsh; (*c*) that there are no medical officers, and a very few of the members of the staff, who come into daily contact with the patients, that are well able to speak to them in their mother tongue; (*d*) that it is most desirable to engage persons conversant with the Welsh language for similar positions at the new building, and to fill in any vacancy that may occur with a due regard to the bilingual condition of the county of Glamorgan; that a copy of the foregoing resolution be sent to the chairman of the quarter sessions, and the chairman and clerk of every board of guardians in the County of Glamorgan."

THE SANITARY INSTITUTE.

AS we announced in the JOURNAL for July 10th, the annual Congress of the Sanitary Institute of Great Britain will be held in York from September 21st to 25th inclusive. The President of the Congress will be Sir Spencer Wells, Bart., who will deliver the opening address at 8 P.M. on Tuesday, September 21st. There will be three Sections: 1. Sanitary Science and Preventive Medicine; 2. Engineering and Architecture; 3. Chemistry, Meteorology, and Geology. In the Section of Sanitary Science, Dr. de Chaumont and Dr. Clifford Allbutt will be Presidents; and Mr. H. E. Armstrong, Dr. T. Anderson, Rev. W. H. Dallinger, Dr. W. T. Gairdner, Mr. W. H. Jalland, Dr. W. Matterson, Dr. J. Ramsay, Mr. F. Shann, and Mr. T. Pridgin Teale, Vice-Presidents. The Section will be opened on September 22nd at 10.30 A.M., with an address by Dr. de Chaumont. Papers and discussions will follow; and from 2 to 5 in the afternoon of the same day, there will be a conference of medical officers of health, at which the following subjects will be brought forward for discussion: 1. Hospitals for the treatment of infectious diseases; ought they to be free to all ratepayers, or a charge made for maintenance? Papers on this subject will be read by Dr. J. B. Rupell, of Glasgow, and Mr. Vacher, of Birkenhead. 2. Dr. E. Seaton will introduce a discussion on the notification of infectious diseases. 3. A discussion on the appointment and tenure of medical officers of health will be introduced by Dr. R. Bruce Low, of Helmsley. At 8 P.M. on Saturday, September 25th, there will be three addresses to the working classes, one being by Dr. G. V. Poore. The Health Exhibition in connection with the Congress will be open from September 21st to October 16th.

THE PARKES MUSEUM.

IT is announced that a course of lectures and demonstrations, for the instruction of sanitary inspectors, will be given in October on Mondays, Wednesdays, and Fridays at 8 P.M. On Monday, October 4th, Dr. G. V. Poore will deliver an introductory lecture on the General History, Principles, and Methods of Hygiene. The subsequent lectures will be as follows: October 6th, Water Supply, Drinking Water, Pollution of Water; Professor W. H. Dorfield, M.A., M.D. October 8th, Drainage Construction; Professor H. Robinson. October 11th, Sanitary Appliances; Mr. P. Gordon Smith. October 13th, Ventilation, Measurement of Cubic Space, etc.; Professor F. de Chaumont, M.D., F.R.S. October 15th, Scavenging and Disposal of Refuse; Mr. H. P. Boulnois, M.Inst.C.E. October 18th, Food, Good and Bad; Milk, Sale of Food and Drugs Act; Mr. C. E. Cassal. October 20th, Infectious Diseases and Methods of Disinfection; Dr. R. Thorne Thorne. October 22nd, General Powers and Duties of Inspectors of Nuisances, Method of Inspection; Mr. J. F. J. Sykes, B.Sc., M.R.C.S. October 25th, Nature of Nuisances, including Nuisances the abatement of which is difficult; Mr. J. F. J. Sykes. October 27th, Sanitary Law; General Enactments; Public Health Act, 1875, Model By-Laws; Dr. Charles Kelly. October 29th, Metropolitan

Acts, By-Laws of Metropolitan Board of Works; Mr. A. Wynter Blyth, M.R.C.S., L.S.A. A nominal fee only of five shillings for the course will be charged, and students attending the course will be granted free admission to the museum and library from October 1st to November 13th.

RECKLESS PUBLIC SPIRIT.

A CURIOUS libel case will shortly be tried in Paris. Last May, a young man, the son of one of the deputies for Cantal, drew a lot to serve as a conscript in the army; at the medical examination, however, he was rejected as unfit for service on account of heart-disease. Dr. Amagat, another deputy for Cantal, thereupon wrote a letter to the Minister for War affirming, as a medical man, that the young man was not suffering from any disease, and denouncing what he described as a scandal. An inquiry was ordered, and a medical commission, headed by Professor Germain Sée, examined the young man, and came to the conclusion that he was suffering from disease of the mitral valve with hypertrophy. Hereupon, Dr. Brousse, the army surgeon upon whose advice the conscript was rejected, obtained leave to bring an action for calumny against Dr. Amagat. After a preliminary application, the law-courts have held that the action will lie, and Dr. Amagat is likely to learn the folly, as well as the bad taste, of bringing reckless charges against the honour of a professional brother.

VACCINATION AND SMALL-POX.

IT is stated that if the health-officer of Philadelphia receives, in his morning mail, news of a suspected case of small-pox, he at once sends instructions to the vaccine-physician of the district to visit the suspected house and neighbourhood, and vaccinate all who are not evidently well protected by this operation against the disease. The agents of the Board are at once despatched to thoroughly disinfect the suspected premises, and to insist upon their being placed in proper sanitary condition. Later in the day, the proper officer is sent to investigate the nature of the case reported. The result is that, whether the case be small-pox or not, vaccination and disinfection are secured. "This great city," says the Philadelphia *Annals of Hygiene*, "has passed a whole year without a case of small-pox. This can be said of very few large cities, if of any, in the world. There never has been a time in the history of the city when the preparations to battle with this disease were so good, and it is seen that there has been accomplished that which sanitarians always say can be accomplished. They have dirty water, at least; they have badly paved streets; they want sewers; but they have not had small-pox. We emphasise this fact, because it is encouraging to those who labour for the public good, and it is the presentation of such facts that will enable us to convince the people of the beneficence of sanitation."

DISCOVERY OF PRIMITIVE SKULLS.

IT is announced that MM. Marcel de Puydt and Maximilian Lohest, of Liege, have found in the sandstone in a cave at Spy, a few miles from Namur, known as the Biche aux Roches, two human skulls of extraordinary thickness, resembling the celebrated skull found in the Neanderthal, near Elberfeld. They suggest that these are types of the skulls of the primitive race who dwelt on the Sambre. Other things were discovered in the cave, among them some thousands of flints very carefully dressed on one side; also some specimens of jasper and agate, minerals not found anywhere in the neighbourhood, ivory breast-pins, several red ear-pendents, and some necklets of pearls of curious designs. All were found in the sandstone, three layers of which were plainly discernible. The remains of flints, etc., deposited in each layer, indicated different stages of skill in workmanship. The lowest stratum was by far the poorest in the number of the objects found and in the quality of their workmanship. But it was here that the skulls were found.

NOMINATION OF CANDIDATES FOR THE GENERAL MEDICAL COUNCIL.

ON Tuesday afternoon, a meeting of the Committee formed during the annual meeting of the Association in Brighton, to select candidates to be recommended for election by the votes of the profession into the General Medical Council, was held in Birmingham. An account of the proceedings is given in another column. Eleven gentlemen were proposed; namely (in alphabetical order), Mr. Balding (Royston); Dr. Bridgwater (Harrow); Sir Andrew Clark, Bart.; Dr. T. M. Dolan (Halifax); Sir B. Walter Foster (Birmingham); Dr. J. G. Glover; Mr. Ernest Hart; Dr. C. Holman (Reigate); Dr. Morris (Spalding); Dr. B. W. Richardson; and Mr. C. G. Wheelhouse (Leeds). A selection of three names from this list is to be made by the members of the Committee. Besides the names above mentioned, Dr. Taaffe, of Brighton (as may be seen from our advertising columns), offers himself as a candidate. In Scotland, Dr. Robert Sinclair, of Dundee, is supported by a large committee; and Dr. William Bruce, of Dingwall, has also come forward in compliance with a requisition. In Ireland, we hear of the names of Dr. G. H. Kidd, of Dublin, and Mr. Laffan, of Cashel, as candidates.

THE ELECTION OF THE DIRECT REPRESENTATIVES.

THE regulations for the conduct of the election of the direct representatives on the General Medical Council certainly do not err in being too complex. A notice that the election is to be held, and specifying the date and place for receiving nomination papers, will be published in two or more newspapers; then the Branch Council will receive a "precept" to proceed to the election, and if a sufficient number of persons are nominated to entail a contest, the Branch Council will send a voting paper to every registered practitioner resident within its boundaries. The voting paper will be very simple, and the voter will only be required to put his initials opposite the name of the candidate or candidates for whom he votes, and then sign the paper; no verification by a magistrate, as in Parliamentary elections at Universities, is required. This omission will be regretted by some, who will see therein an opportunity which might conceivably lead to dishonest practices. Considering the nature of the electorate, the danger must, however, be very small, and the advantage in increased simplicity and facility is obvious. All depends upon the post: each voter is "entitled to receive one voting paper;" and, as the papers are to be sent out in ordinary covers, and not registered, some complaints will perhaps arise on this score. The Council, however, have taken every precaution to obtain the correct address of every person on the *Register*, and the post may probably be trusted not to make any mistake. It may be noted that plumping is not forbidden, and that the Branch Councils are required to ascertain the validity of the votes.

SCOTLAND.

AMBULANCE-WAGON FOR WISHAW.

THE ambulance-wagon for the Wishaw District Ambulance Association has just been handed over to the committee entrusted with its purchase. The wagon cost £85. The workmen and employers of labour in the district subscribed £65, the other £20 being part of a surplus fund handed over by the Coombe Trust Health Lectures Committee. The wagon is a large-sized one, and is provided with four stretcher-beds, attendants' seats, and all the other requirements.

ROYAL HOSPITAL FOR SICK CHILDREN, EDINBURGH.

THE monthly report of the Sick Children's Hospital, Edinburgh, for August, shows that during the month 101 patients were treated in the hospital. Of these, 54 were in the hospital on July 31st, and 47 were admitted during the month. Nineteen were discharged from the hospital cured, and 11 were relieved. The average daily sick in the hospital during the month was 55. At the dispensary, 625

patients were treated, and 22 were vaccinated, making in all 647. Of 368 new cases during the month, 307 were from the city, 37 from Leith, and 24 from the country. The total number of patients treated at the hospital during the month was 748.

THE DESTRUCTION OF DOGS.

THE crusade in favour of public safety against ownerless dogs in Edinburgh has now been engaged in for nearly a fortnight, and there is a very perceptible diminution of what was always a nuisance, and, in many cases, a danger. As usual in such cases, the Press was flooded with letters on the subject, and attention was specially directed to the method by which unclaimed and worthless dogs were killed. This was done by the authorities by placing several dogs in a sack, then submerging the sack with its contents in a barrel of water. It was contended that this was a cruel method of depriving the dogs of life, and the authorities of the Home for Dogs offered their lethal chamber for the purpose. In order that the better method might be used, a Committee of Practical Inquiry, consisting of the Principal of the Dick Veterinary College, the Chief Constable, and the Inspector of the Society for the Prevention of Cruelty to Animals, investigated the two methods. The results obtained were perfectly conclusive; in the submersion process, life was extinct completely in less than forty seconds; while, in the lethal chamber, a death-struggle began ten minutes after the beginning of the suffocation atmosphere, and lasted for about four minutes. There was, therefore, no doubt as to the propriety of continuing the immersion process, at least of doing so until a less tedious lethal chamber or method could be devised.

QUESTION AS TO THE LEGALITY OF ENTERTAINMENTS TO PAUPER LUNATICS.

ONE of the members of the parochial board of Dundee has raised the question of the legality of providing from the rates entertainments for the pauper lunatics. The board, at a meeting held recently, resolved, as in former years, that pauper lunatics in both poor-houses should have a monthly entertainment, but this was opposed by the above-mentioned member on the ground that any expenditure for such a purpose is illegal. He has appealed to the Board of Supervision for a decision on the question; and, in the meantime, the board have discontinued the entertainments until a decisive reply has been received from the Board of Supervision.

REOPENING OF SCHOOLS AND FEVER.

AN important point in relation to the spread of fevers by means of scholars at schools, especially so at present, when schools are being reopened, was brought up on Tuesday at the monthly meeting of the Perth Police Commission by Dr. Simpson, the medical officer of health, who stated that several sporadic cases of scarlatina had been reported to him, and suggested that, in cases of illness from that cause, the schoolmaster should require a medical man's certificate of the child's freedom from infection before allowing it to return to school. It may be mentioned that for several months scarlet fever has been prevalent in Dundee, and that recently it has spread somewhat rapidly.

HEALTH OF GLASGOW.

DR. RUSSELL'S report for the fortnight ending August 30th showed an increase of fever cases registered, 23 being cases of enteric fever, 5 of typhus, and 117 of scarlet fever; 62 of whooping-cough, 17 of measles, and 10 of diphtheria. A sudden spurt of scarlet fever had occurred in the Springburn district. The features of this sudden increase were such as to suggest at once an inquiry into the milk-supply. Within eleven days, 20 cases arose in a small area within the municipality, of which 14 were supplied with milk from one dairy, while beyond the municipality 25 cases had been similarly supplied. Three boys were employed to distribute the milk to customers; the sister of one, and the other two, were attacked. There was no evidence of previous sickness in any of the families. The milk was supplied from three farms, only one of which could be said to be in decent sanitary condition, but no sickness could be found either among the people or the cattle. In view of the recent pamphlet, issued by the Local Government Board, on milk-scarlatina, Dr. Russell thinks that investigations can no longer be exhausted by the application of special knowledge of scarlet fever in the human subject, but require also knowledge of the minor ailments of the cow, which may perhaps only now be raised into significance and discrimination by their grave associations with disease in the human milk-consumer. Dr. Russell therefore suggests to the Town Council that he should be empowered to ask the assistance of Principal McCall, Veterinary Inspector to the Privy Council, in the investigation of such outbreaks of infectious disease. It was also reported that it would be necessary to get an extra medical assistant for the Fever Hospital, the total number of scarlet fever cases having increased in four weeks from 185 to 256. The death-rate of the city for the past week was 21, against 19, 21, 19, and 21, for the last four weeks, and 23, 24, and 24 for the corresponding week in the three previous years.

IRELAND.

THE Belfast Main Drainage Bill has been temporarily withdrawn, owing to the persistent opposition, which rendered it impossible to make any progress this session.

HEALTH OF BELFAST.

DURING the four weeks ending August 21st, the births registered in Belfast amounted to 588, and the deaths to 335. Of the latter, 65 occurred from phthisis, and 50 from other diseases of the respiratory organs, or a total of 115 from lung affections, a number somewhat below the average. The average death-rate was, from all causes, 19.6; from diseases of the lungs, 6.7, and from zymotic diseases, 2.4 per 1,000.

BELFAST ROYAL HOSPITAL.

IN consequence of the recent rioting in Belfast, a considerable expenditure has been incurred by the authorities of this hospital in treating the various injuries received by the combatants. These comprised 369 patients, suffering from gunshot and other wounds, at an expense to the hospital of £800. The governors last month memorialised the Lord-Lieutenant, drawing attention to the circumstances, and requesting a grant from the authorities; and it is believed that a special grant of £500 will be allocated to the hospital.

TYPHUS FEVER AT BALLYMENA.

AT a recent meeting of the Ballymena Town Commissioners, Dr. Ross, the sanitary officer of the Board, reported that, in Sydney Lane, there had been many cases of typhus fever during the past month. Owing to the existing defective sanitary arrangements in this place, Dr. Ross recommended that it should be closed up. The owners of the property were ordered to be notified to have proper sanitary accommodation provided for their tenants; and were informed that, if they failed to do this within fourteen days, the place would be shut up.

CORK DISTRICT LUNATIC ASYLUM.

BETWEEN the death of Dr. Eames and the appointment of his successor, Dr. Dwyer, an interval of two months occurred; and, during this period, the duties of resident medical superintendent of this asylum were performed by Dr. Oakshott, Assistant-Physician. The Governors, at a recent meeting, passed a resolution testifying their entire satisfaction with the zeal and attention with which Dr. Oakshott attended to the duties of medical superintendent, and it is expected that a sum of £25 will be presented to him in recognition of his services.

DISCIPLINE OF MEDICAL STUDENTS IN LONDON.

In the JOURNAL of August 7th, reference was made to a letter by Surgeon-Major Evatt, which appeared in the public papers, calling attention to certain defects which, in his opinion, exist with regard to: 1, provision of collegiate residences for medical students in London; 2, systematic reports to parents and guardians of the progress of the students; 3, the perpetual pupil system. Through the courtesy of the Deans of the Medical Schools, with whom we have communicated, we have received much valuable information on the subjects commented on by Dr. Evatt; and from this information, and from the yearly announcements of the medical schools, the following summary is compiled.

I.—Residences for Medical Students.

At *St. Bartholomew's Hospital* there has been, since 1843, a College, to residence in which students of the hospital are admitted on the recommendation of a medical officer of the hospital. New pupils can obtain such recommendation on producing satisfactory evidence of good moral character. An entrance fee of £2 2s. is paid, and also a deposit of £3 3s., which is returned to the student on his leaving the College, unless the furniture of his rooms have been wilfully damaged, in which case the whole or a part of the deposit is retained. Resident students are expected to dine in the Hall every day; non-resident students may also do so on giving notice. The names of all students absent after 10 P.M. are reported to the Warden. Students are not allowed to be absent after 12 at night without giving notice to the Warden; and visitors must leave the College by 12 at night. No student may be absent for a night without permission of the Warden. The Warden, Dr. Norman Moore, will give information as to the terms of board and residence, and also as to residences for students outside the hospital. The Wardens of the College, from the time of its establishment, have been Mr. (now Sir James) Paget (1843); Dr. Patrick Black (1851); Dr. Robert Martin (1856); Dr. James Andrew (1861); Mr. Alfred Willett (1865); Mr. W. Morrant Baker (1867); and Dr. Norman Moore (1874), the present Warden.

At the *Charing Cross Hospital* there is no collegiate residence; but arrangements have been made with several members of the hospital staff to receive resident pupils. Parents or guardians are, in all cases, advised to communicate with the Dean, before determining on the residence of their sons or wards. The Librarian and Secretary is frequently able to recommend respectable and comfortable lodgings to a certain number of students.

At *St. George's Hospital* it is announced that Dr. Delépine, one of the lecturers, receives pupils to reside with him at 6, Chapel Place, Cavendish Square; and that the Dean has a list of medical gentlemen living in the neighbourhood of the school who receive pupils to reside in their families. There is no residential college attached to the school. On this subject, Dr. Wadham, the Dean, writes, in answer to our inquiries: "At this school, the subject of a Medical College has been under discussion at intervals during the last thirty years; but at no time have the staff been able to convince themselves that it would be either to them, or to the students, of sufficient advantage to justify the large expenditure required to establish it, or that, if established, it would prove successful. This may have been greatly due to the favourable locality of the school, and to the fact that the majority of our students either reside with their parents or friends in the neighbourhood, or are older men who have passed through an university career, which would make them intolerant of anything approaching tutorial control."

At *Guy's Hospital*, we are informed by the Dean, Dr. F. Taylor, a scheme for Collegiate residences has been under consideration; although, for various reasons, it has not yet taken shape. As at other hospitals, the junior lecturers and teachers take students to live with them. Dr. Taylor remarks "that it is much better for many students that they should live a little way out of town, with the chance of fresh air morning and evening, than in the immediate vicinity of a hospital;" and he suggests that "the gathering together of many students in a building does not necessarily promote diligent study."

At *King's College*, rooms are provided within the walls of the College, for the residence of a limited number of matriculated students. The Censor of the College lives within its walls, and to him is committed by the Council the superintendence of all resident students, who are subject to the same general rules as undergraduates at the universities. From the yearly programme, it appears that there are in all twenty-eight apartments, some consisting of a separate sitting-room and bed-room, others of a sitting-room and bed-room in one. The charges vary from £50 to £60 yearly, or £18 to £22 for each of three terms. These amounts include the whole expenses of rent for furnished rooms, of attendance during the academical year, and of dinner (beer excepted) in the College Hall during the time that lectures continue. Mr. A. S. Kenny, of 41, Guildford Street, is allowed by the Council of the College to receive medical students into his house as boarders.

At the *London Hospital*, the prospectus for the coming year announces that students wishing to reside with a member of the medical profession living within easy access to the hospital, can obtain information as to vacancies and terms by application to the Warden, either personally or by letter. Lodgings can be obtained in healthy localities in the immediate vicinity of the Hospital, at very reasonable charges. A list of approved lodgings is kept by the Warden. Several members of the hospital staff receive resident pupils. In reply to our inquiries regarding the subjects alluded to by Surgeon-Major Evatt, the Warden, Mr. Munro Scott, writes as follows: "The importance of providing a residential college for the students attending this hospital and college has, for many years, occupied the very serious attention of the medical and surgical staff, and others interested in the welfare of the students. Two years ago, it was proposed to build a resident college to accommodate between sixty and seventy students, with large dining-rooms, library, smoking rooms, etc., and all the necessary steps preliminary to the actual building were taken; but it was felt strongly by some members of the staff that, before building a resident college, the educational buildings should be reconstructed, and put in such a condition as befitted the medical college attached to the largest hospital in the kingdom; and it was feared that an attempt to carry out both schemes at once might result in failure, on account of the difficulty always experienced in obtaining funds for such purposes. It was therefore decided first to remodel and reconstruct the college buildings, and this has been done at a very large cost, so that, by October 1st, the College (almost entirely rebuilt, and offering more than double the accommodation previously provided) will be complete, and ready for occupation. In the new building a dining-room and a sitting-room have been provided, so that, during the working hours of the day, no student need quit the precincts of the hospital and college. The entire cost of this extensive work will fall upon the medical and surgical staff, and I need scarcely say that the work of providing a residential college is not one that can be ordered straight off without much consideration as to ways and means. Another reason for waiting before erecting the resident college here, was the opening of the Metropolitan and Metropolitan District Railway extension, which has placed the hospital and college in direct communication with all parts of London. A glance at the District Railway Map will show that the College is in the midst of railways, with stations close to its doors, so that the student may reside with friends, and yet have no difficulty in attending lectures punctually and regularly. Personally, I prefer first year's students living with friends, or in a carefully selected home at some distance from the hospital, as the change of air and scene cannot fail to be beneficial to them during that early portion of their career."

At *St. Mary's Hospital* there is a College, in which students may reside under the supervision of the Warden, Dr. Robert Maguire. The terms are 90 guineas for the academical year, including the assistance of the demonstrators of the school, on three evenings of the week. Prospectus and rules may be obtained from the Warden. We learn, from the Dean's report, published with the prospectus of the school for the ensuing year, that the residential College, which was first established in 1885, has been so successful as to require the addition of another house.

At the *Middlesex Hospital*, as we lately noted, the governors and medical staff have promoted a company for the purpose of erecting a residential college for the accommodation of about thirty students; and it is hoped, with the support which has already been promised, and with that which may be reasonably expected from those interested in the well-being of medical students, that by October in 1887 a comfortable college, overlooking the hospital gardens, will be opened, where students will be received as boarders, and live under the supervision of a resident warden. No hospital funds can be applied for this purpose, and the requisite sum for building the chambers must be subscribed by the public. Information may be obtained from the Secretary to the Company, Mr. F. Clare Melhado, at the Hospital.

At *St. Thomas's Hospital* there is no residential College. Several medical practitioners and private families in the neighbourhood receive students for residence and supervision; and a register of approved lodgings is kept in the Secretary's office.

In connection with *University College*, the University Hall, in Gordon Square, of which Professor Henry Morley is principal, receives students of the College as residents. Furnished rooms, single or double, may be had, at rents varying from £7 to £13 for each term of eleven weeks. There is a board fee of £1 1s. per week, with a term fee of £3 3s. The board fee entitles a resident to breakfast, lunch, dinner, and tea, and, with half of the term fee, it includes payment for coals, gas, and laundress. Beer is supplied, at cost price, as an extra. There is also a library fee of 10s. 6d. in each term. The cost of thirty-three weeks' residence varies from £66 13s. 6d. to £84 13s. 6d. ; for residence throughout the year, the sum of £22 16s. (board fee, £19 19s. : term fee, £2 17s.) must be paid in addition. These estimates are for students in the Faculties of Arts and Science. In the Faculty of Medicine, the sessions extend over 36 weeks, and hence £3 3s. has to be added. Term rents are payable in advance. The Hall is always open. To students who have been resident in the Hall during three consecutive terms, there is no charge for vacation rent. They pay the usual board fee for the time of actual vacation residence, and 3s. a week in place of term fee. To other students, there is a charge of 35s. a week for board and residence in Hall during the long vacation. When the Hall is full, outside bedrooms are provided in the immediate neighbourhood, in Tavistock Square, and in Torrington Square, for not more than eight students, with board in the Hall, and all privileges of resident members during the day. Only students of University College who are waiting for rooms within the Hall can be so admitted ; and these students, in the order of their entry, have prior right of admission to full residence as vacancies arise. While they are without private studies in the Hall, a place for common study during the day, apart from the students' common room, which is for friendly intercourse and conversation, is provided for these members of the Hall. Fee, for board and lodging, 35s. a week. Four students of University College can also be received at the house of Professor A. H. Keane, 3, Camden Street, Oakley Square. These students may have, after the day residents, the next right of exchange into residence at the Hall, if they should wish for it. While resident in Professor Keane's house, students of University College will be associate members of the Hall, with right to use its library and common room, and to take part in the general life of the place. Fee, for board and lodging, £2 2s. a week. The following are some of the regulations. Prayers are read by the Principal at 8 A.M. ; attendance is voluntary. The Principal and students breakfast together in the Dining Hall at ten minutes past 8 ; late breakfasts can be obtained in the College Refreshment Room, at a fixed scale of charges ; in the Hall they are supplied only to invalids. Lunch can be had in the Dining Hall at any time from half-past 12 till half-past 2. There is a Common Room for the use of students ; there is also a Hall Library. The Principal and students dine together at a quarter-past 5 ; a student who has chambers in the Hall may occasionally bring a relative or a student friend to be his guest at dinner, with the leave of the Principal, and on payment of two shillings for a dinner ticket. Tea is supplied to students in their rooms or in the Students' Common Room. On Sundays, the breakfast hour is half-past 8 ; the dinner hour is half-past 1 ; and there is supper instead of lunch. The Hall is closed every evening at 11, by which hour all students should have returned to their rooms, and any friends who have been visiting them should have left; extension of the time can be obtained by showing sufficient reason to the Principal.

Several professors and other gentlemen connected with the College also receive students to reside with them ; and in the office of the College there is kept a register of persons unconnected with the College who receive boarders into their families ; among these are several medical gentlemen.

At the *Westminster Hospital* there is no provision for the residence of students. On this subject, Dr. de Havilland Hall writes, in answer to our inquiries : "I would point out that, at the most, only a very small number of students can be accommodated in the residences at present in existence ; but, supposing accommodation were provided for the bulk of the students, I believe that the question of maintaining discipline would become a very serious one. Given an able Warden, the collegiate establishment will work well ; but the difficulty is to find the man who possesses the qualities needful to command the respect and esteem of high-spirited youths who have just shaken off the trammels of school-life. Thus, though I believe that it is desirable to have residential establishments attached to the various schools, I am not so sure that their influence will be all for good. I am of opinion that the best possible thing for the majority of students is, that they should be placed in families, preferably doctors', living in the suburbs. A little journey backwards and forwards night and morning is very desirable."

II.—Reports to Parents and Guardians.

With regard to the registration of attendance and conduct, and the making of reports to parents and guardians, the practice varies in the different schools.

At *St. Bartholomew's Hospital* the attendance of students, Mr. Bruce Clarke states, is carefully registered, and inquiries are made into the cause of absence ; and the parents are at once communicated with in case of any serious neglect of work.

At the *Charing Cross Hospital* no student is entitled to a certificate of attendance on any course of lectures unless he have attended two-thirds of the lectures comprising the course. Only those students who have regularly attended the meetings for examination, as well as the lectures, will be admitted to compete for scholarships, medals, and certificates of honour, or have their schedules signed for the examinations of the licensing bodies. Students who attend very irregularly will be reported by the Dean to their parents or guardians.

At *St. George's Hospital* it is stated in the prospectus that certificates of attendance on lectures will not be signed for any pupil who does not attend regularly and conduct himself with propriety. With regard to furnishing reports to parents, Dr. Wadham, the Dean of the School, expresses the belief that to make such reports "would be to treat them" (the students) "as children, instead of encouraging them in habits of self-control and reliance, and would be most offensive to the best class of students. At this school, the attendance upon lectures is regularly marked ; and every parent wishing for it can be immediately, without extra fee, supplied with information on this point, and generally as to the conduct and progress of a student."

At *Guy's Hospital* it is stated that gentlemen desirous of becoming students must produce satisfactory testimony as to their education and conduct. The privileges of students are liable to be withdrawn in case of persistent idleness, aggravated breaches of discipline, or misconduct. Schedules will not be signed unless the student has satisfactorily attended, not only lectures and demonstrations, but also the practical work in the dissecting-room and the wards. Periodical reports are supplied to parents, if desired.

At *King's College* Dr. Curnow, Dean of the Medical Faculty, states, reports of conduct are sent three times a year to the parents and guardians of the pupils. This has always been the custom in the College.

At the *London Hospital* students are required to conform to the rules and regulations of the College Board for the management of the school. A register is kept by the Warden, in which is recorded the attendance of students at lectures, demonstrations, and hospital practice, and their general conduct. The College Board take into very especial consideration these records when making nominations for house-appointments. Certificates are not given for lectures or demonstrations, or for medical or surgical practice, unless the attendance has been to the satisfaction of the teachers, and evidence has been given of satisfactory progress. On the subject of periodical reports to parents and guardians, Mr. Munro Scott, the Warden, writes: "I doubt very much the wisdom of making such periodic reports. Medical students are not all boys, and their ages vary from 17 to 44. Of course, the latter age is exceptional ; but students varying from 26 to 30 are by no means uncommon ; and they would, I think, naturally resent such reports. For my own part, I always tell parents, when I have an opportunity of seeing them, that I make it a rule never to complain of a student to his friends if I can possibly help doing so ; but at the same time I add that, in the event of a parent taking the trouble to write and make inquiries about his son, I will with pleasure reply fully and candidly."

At the *Middlesex Hospital* we are informed by Mr. Andrew Clark, Dean of the Medical School, reports of the attendance of students are sent to parents and guardians at the end of each summer and winter session. The attendance at each lecture is regularly registered, and whenever students are absent without known cause, their friends are informed of the fact.

Regarding *University College* we have received the following information from the Dean, Dr. G. V. Poore. "We have a salaried officer, the Sub-Dean, whose duty it is to keep himself informed as to the diligence and general conduct of the medical students. He keeps a register of students, with their private addresses, and the addresses of their parents or guardians ; and, in the case of a student being absent from the College without leave, it is his duty to ascertain the cause of the student's absence, and, if necessary, communicate with his friends. The present Sub-Dean is Professor Thane, who, as Professor of Anatomy, has the first and second years' students (who most need advice and supervision) constantly under his eye, and it is impossible for a man to neglect his work without the fact being known. No

student is allowed to serve the office of clerk or dresser in the hospital until he has passed his anatomical and physiological examinations, and this regulation has proved a valuable incentive to work. ..... Our supervision of students, up to the time of the completion of their obligatory clinical work, is most thorough. If any parent were to ask me to furnish a periodic report of his son's progress I would do so, although, personally, I am a strong believer in the advisability of trusting to a student's sense of honour, and in trying to make him think and act like a man."

At the *Westminster Hospital* a system of marking attendance at lectures is regularly carried out, and, we are informed by the Dean, Dr. de Havilland Hall, has yielded excellent results. At the end of every term, reports on a printed form are sent to the parent or guardian of each student, who can see at a glance the number of lectures attended and the number missed. At the commencement of every term, a list of students in arrears as regards lectures is posted up, so that when the time for signing schedules comes, no excuse can be made by the students that they were ignorant of their position.

III.—Perpetual Pupils.

Regarding the extent of the privileges attending the payment of composition fees, the following are the rules and customs of the London Medical Schools.

At *St. Bartholomew's Hospital* the holding of a perpetual student's ticket is conditional on the student's work and conduct being satisfactory to the hospital authorities and to the medical officers. We are informed that this rule is rigidly enforced.

At the *Charing Cross Hospital* the composition fee is stated to cover the period of study required by the examining boards.

At *St. George's Hospital* the Medical School Committee reserve to themselves the power of withdrawing from any student, whose conduct is not satisfactory, the privileges of a perpetual pupil. For many years, Dr. Wadham informs us, the school authorities have refused to take a perpetual student until he has been at the school two years, and has passed that which, under the conjoint scheme, is termed the second examination; and then only if his previous conduct have been satisfactory. "To make him then a perpetual pupil, is to make a pecuniary concession to his parents, and to show confidence in him."

At *Guy's Hospital* there is a perpetual fee, which may be paid in three instalments. The authorities of the medical school reserve the right of dismissing a student who is persistently idle.

At *King's College* Dr. Curnow states, perpetual tickets do not empower students to hang on year after year in idleness, for the students are always subservient to the College discipline, and can be rusticated or dismissed for any offence at any period of their career.

At the *London Hospital* students are permitted to remain as long as may be necessary. Some, of course, remain much longer than others; in particular, students proceeding to the degrees of the University of London, the Fellowship of the Royal College of Surgeons, etc. Idle or vicious students, Mr. Munro Scott informs us, are promptly dealt with by the College Board.

At the *Middlesex Hospital* the Dean, Mr. Andrew Clark, writes that it is the custom to limit the privilege of perpetual attendance to working students, and not to allow idlers to hang about indefinitely.

At *St. Thomas's Hospital* the perpetual tickets admit to hospital practice and lectures for an unlimited period.

At *University College* perpetual tickets are good for five years only, and no renewal beyond that time is allowed, except on the written recommendation of the Dean. In the case of hopelessly idle or worthless students, such renewal is refused.

At the *Westminster Hospital* the system of perpetual pupils has been abolished. If the student, on entry, elect to pay a composition fee, he receives a ticket which entitles him, during good behaviour, to attend lectures and hospital practice for four years. At the end of that time, in cases where the conduct has been unsatisfactory, and further hospital practice is required, additional fees are demanded; or, in extreme cases, permission for further attendance refused. Students who have conducted themselves well are never called upon for further fees at the end of the four years.

Medical Magistrate.—Dr. Joseph Dillon Kelly has been placed on the Commission of the Peace for the County Westmeath.

Cremation. — The seventh cremation which has taken place at the Crematory of the Cremation Society of England, at St. John's, Woking, was satisfactorily conducted on September 9th. The body was that of Mr. H. Ohlick, an engineer in London, who died from typhoid fever at the age of 32. The cremation lasted the usual time, and was witnessed by a representative of the family.

DIRECT REPRESENTATION OF THE PROFESSION ON THE MEDICAL COUNCIL.

A meeting of the representative committee of the general practitioners of England and Wales was held on Tuesday evening, in Birmingham, to discuss the matter of adopting candidates for the election to the General Medical Council under the new Medical Act. Dr. Strange (Worcester) was elected to the chair. There were also present, in addition to the honorary secretaries (Drs. Ker and W. Carter):

Mr. W. Armstrong, Manchester
Dr. Barron, Southport
Mr. Bates, Nottingham
Mr. Beasley, Rowley Regis
Mr. W. Berry, Wigan
Dr. P. Chapman, Hereford
Dr. Crowe, Worcester
Mr. De Denne, Brierley Hill
Mr. Donovan, Erdington
Dr. Eyton-Jones, Wrexham
Dr. J. Farrar, Morecambe
Mr. Grainger, Chester
Mr. S. Haynes, Birmingham
Mr. Vincent Jackson, Wolverhampton
Mr. Jordan Lloyd, Birmingham
Mr. Lowe, Burton-on-Trent
Dr. Lyle, Rectory Hill, Bromsgrove
Mr. Bennett May, Birmingham
Mr. Nicholson, Hove
Dr. Pike, Malvern
Dr. Roden, Droitwich
Dr. Saundby, Birmingham
Dr. Strange, Shrewsbury
Dr. Lee Strathy, Harborne
Dr. Suckling, Birmingham
Mr. Lawson Tait, Birmingham
Mr. Taylor, Chester
Dr. Danford Thomas, London
Mr. D. Vinrace, Hockley Hill
Dr. Walker, Birkenhead
Dr. Waters, Chester
Mr. Wheelhouse, Leeds.

In answer to a question, the Chairman explained at the outset that this was a meeting of gentlemen who had signified their willingness to act on the Committee.

Dr. Carter said he had received a letter from Mr. G. T. Keele, of St. Paul's Road, Highbury, asking whether he was to understand the meaning of the advertisement which had appeared in the British Medical Journal to be that any registered practitioner might attend and be a member of the Committee, for he was not a member of the British Medical Association. He (the Honorary Secretary) had replied that membership of the Committee was not limited to the Association, but all gentlemen who came must have already indicated that they were willing to act on the Committee.

The Chairman said that, after a very long struggle—many years of persevering efforts on the part, principally, of the Reform Committee of the British Medical Association, and its chairman, Dr. Edward Waters—they had obtained an amended Medical Act. That Act might not be everything they could have desired; but, at all events, it conferred considerable privileges upon the profession, which hitherto had been denied. They knew also that, in the original draft of the Bill, two representatives on the Medical Council were to be conceded to England, one to Scotland, and one to Ireland. By the efforts of Sir Walter Foster and others in Parliament, and he believed also of Dr. Waters, the two was converted into three. The passing of this Act, and the obtaining of three direct representatives on the Medical Council, was really an epoch in the history of British medical men. The Universities and the Royal Colleges had had their representatives in former times; and those gentlemen, eminent and trusted as they were, had represented, no doubt, those great bodies exceedingly well; but the practitioners of the country did not think those gentlemen represented what might be called the individualisation of the profession. They did not represent sufficiently even the individual members of the institutions by whom they were appointed, and therefore it was a great boon that the general practitioners should receive the power of sending to the Council representatives directly elected by themselves, and men who, they hoped, would really represent the feelings, opinions, and interests of the great body of practitioners through the country. In a vast body of men like the medical profession, consisting of some 20,000 members in England and Wales alone, it must be extremely difficult to manage anything like an election under any circumstances; still more so when there was no organisation, and no plan settled by which they could decide upon the merits of candidates, and by which, after doing so, they could carry out the proper steps for their election. It was highly desirable that they should fix upon not any one individual who might happen to have put himself forward, or who might have a large following or a large committee, but upon those individuals who, from their position in the profession, from the work they had done, and from the leisure they might have and the industry they exhibited, seemed fitted to represent them in an adequate and proper manner. He need say nothing about the origin of the meeting. There might have been some strictures passed upon

what took place at Brighton, but that was of no consequence at all, because now, at any rate, they had done what was originally intended to be done—they had applied to the whole profession. Eleven hundred circulars had been sent out, and members had been invited from over 161 towns, more than 300 of whom had replied. It was rather a difficult thing to make a clique of 300 members. They could not be the personal friends of any man. That meeting, therefore, was perfectly open and free to the whole profession.

Dr. EYTON-JONES (Wrexham) moved the following resolution: "That this meeting, fully impressed with the extreme importance of the present crisis in the history of English medical practitioners occasioned by the right acquired under the recent Medical Act of electing three representatives of their body on the General Council, deems it expedient to proceed at once to deliberate on the merits of the various candidates for such representation, and to solicit by requisition three fit and proper persons to undertake the office." He said that whilst the bias of their inclinations was to support men who had laboured for these three vacancies, they still held themselves open to vote for those whom they considered the best men; and he thought that, as the Association was originally provincial, and as the Council had been represented by men mainly taken from the three centres of learning—London, Edinburgh, and Dublin—it now became necessary that the medical practitioners throughout the country should be specially represented by men in the General Council as a balance, though a small one, against those who had hitherto been selected by universities and corporations, or nominated by the Government.

Mr. LAWSON TAIT seconded the resolution. He said he had asked the question about the number of circulars because the meeting was only small; and he could not help feeling that the attendance was a scant reward for the trouble the honorary secretaries had taken. He for one had no great enthusiasm in the matter of the Medical Council, because he thought their efforts might have been much more satisfactorily directed to the reconstruction of the Medical Council altogether. It seemed to him a tremendous waste of money, and very little more than a harbour of refuge for those who had very little interest in the profession; a body organised for spending money and indulging in long speeches with little aim and very little result. He hoped that they would not send three gentlemen to the Board merely by reason of their seniority, men who were in the clouds of the profession, and who had little association with the feelings and aspirations of the bulk of practitioners. There would be some kind of claim and hope that the three men whom they sent would reform a great many of the abuses that existed at the present time in the Council.

The resolution was carried unanimously.

Dr. CARTER read some of the more important correspondence which was in the hands of the secretaries. He said that some writers had suggested that the names should be those of general practitioners. One gentleman suggested that that meeting should be preliminary to another, which should make a final selection. Others were almost wholly in approval of the principle of the committee, or nominated certain special names. Dr. Taaffe, of Brighton, requested that his name might be laid before the committee, and was recommended in a letter from Mr. Vacher, of Birkenhead. Another gentleman recommended Dr. Glover, who seemed to be somewhat largely in favour; and a letter had also been forwarded from his committee, with a request that it might be read. The letter said: "Some weeks ago, at the request of a large and representative meeting, Dr. Glover consented to stand, and accordingly issued an address to the profession announcing the fact. His appeal has met with a remarkable response, most encouraging, not only on account of the numbers who have promised him support, but also because of the kind and flattering terms in which so many eminent men, in all parts of the country as well as in London, have thought fit to express their satisfaction at his candidature. It is well known to Dr. Glover's friends that he has had for some years special opportunities of making himself familiar with the proceedings of the Medical Council; and, being a general practitioner himself, he would fully represent the great body of the profession now for the first time to have a voice at the Council Board." Several well known medical men had written to support Dr. Glover's candidature, all of them very warmly. Others had written, expressing a strong desire that Sir B. W. Foster's name should be put before the meeting. A meeting held at Cambridge, attended by ten gentlemen, proposed to recommend Mr. D. B. Balding, of Royston, as a candidate. Dr. Rabagliati, of Bradford, wrote recommending the candidature of Dr. Dolan, of Halifax; and Dr. Berry, of Wigan, wrote, hoping that Dr. Dolan's name would be well before the committee. Dr. Square, of Plymouth, and Dr. Rawlings, of Swansea, wrote recommending Dr. B. W. Richardson to the committee. Dr. Glascott, of Manchester, had sent a telegram, offering "earnest support for Wheelhouse, Hart, Clark, or Holman." Dr. Humphry recommended Dr. Waters, of Chester, and Mr. Wheelhouse, of Leeds.

Dr. WATERS asked that his name might be omitted.

The SECRETARY, proceeding, said that Dr. Rabagliati mentioned also the name of Dr. Sinclair, both in a letter and in a telegram, but Dr. Sinclair resided in Scotland.

After some discussion as to the form of doing business,

Mr. NICHOLSON (Hull), as a Yorkshireman, said that he had a very strong interest in the election of a Yorkshireman, and he need not say that the man was his friend, Mr. Wheelhouse. [*Applause.*]

Dr. BARRON suggested that the whole of England should be portioned into three districts. He did not see the propriety of electing Clark, Glover, and Richardson to represent the extreme northern parts of the country. Let them have a good representative man for the north (none better than Mr. Wheelhouse), and a good representative man for the south. He, personally, could not accept Dr. Richardson, nor did he think Sir Andrew Clark a good representative of the general practitioners.

Mr. VINCENT JACKSON (Wolverhampton) thanked Dr. Barron for the suggestion as to a subdivision of the country.—Dr. WATERS had no doubt there was a feeling on the part of the profession that there should be a representative for each of the three parts of the kingdom; but they could not parcel out England into distinct electorates, because, under the Act, the whole country would vote for each candidate.—Mr. TAIT could not imagine anything more absurd, or more likely to defeat the object which he, for one, had, than to divide England into three districts. Let there be selected three of the most active, young, and discontented men that could be found in the profession.

After some further discussion, the Chairman proceeded to take nominations.

Dr. EYTON-JONES proposed the name of Mr. Wheelhouse; Dr. KER proposed Dr. Glover, of London.—Mr. TAIT said that Dr. Glover succeeded to the editorial chair of the *Lancet*, and that was sufficient to secure the support of those who ranked themselves on the discontented side of the question.—Mr. NICHOLSON nominated Sir Walter Foster, and the nomination was supported by Dr. Barron, as a matter of gratitude to the candidate for his parliamentary services. [*Hear, hear.*].—Mr. ARMSTRONG proposed Dr. Dolan, of Halifax, speaking of the scientific work that gentleman has done, and of the fact that he was in touch with the general body of northern practitioners. In his view, it would be a great mistake to nominate consultants.—Mr. TAIT recommended Dr. Dolan for the same reason that he had recommended Dr. Glover.—Mr. DONOVAN, though he yielded to no man in respect for Mr. Wheelhouse, thought they needed a different type of man.

Dr. WATERS, speaking as the mouthpiece of a meeting held in Chester the previous night, chiefly composed of general practitioners, nominated Mr. Ernest Hart. That gentleman's ability, he said, was well known. At school he was leader of the school; at his medical college he carried off many of the prizes; when on the staff of the *Lancet*, he was a very able contributor to that journal, and they all knew how, for the last twenty years, he had conducted the JOURNAL of the British Medical Association, and made it second to none in the world. At Brighton they had a number of representatives of the profession from America, who one and all seemed to think that the BRITISH MEDICAL JOURNAL was the medical journal of the day. Mr. Ernest Hart had taken, moreover, a deep interest in the welfare of the profession, and especially of the general practitioners. Before the select committee of the House of Commons, he was the only man who arraigned the General Medical Council for its shortcomings, and the only man who stood up for forcing the Council to institute a greater number of prosecutions under the Act of 1858. Such was his influence with the Committee, that his proposal to divide the medical charities in each division of the kingdom was the plan adopted by the Royal Commission. It was the only plan by which it was possible to diminish the representation of the corporations and the universities, and it only failed in consequence of the power of the corporations. It would be the crowning honour of Mr. Ernest Hart's life if this election were made.

Dr. DANFORD THOMAS nominated Dr. B. W. Richardson as a man who had done much for medicine and science, and who was really conversant with the work and wants of the general practitioner.—Dr. Bridgwater, Dr. Holman (Reigate), Sir Andrew Clark, Dr. Morris (Spalding), and Mr. Balding (Royston) were also nominated.

On the motion of Mr. NICHOLSON, seconded by Dr. WATERS, it was resolved that the names be sent to the members of the committee, that a vote by postcard be taken, and that the three who received the highest number of votes be the adopted candidates of the Committee.

The resolution was carried by eleven votes to three, and the chairman and secretaries were empowered to count the votes and declare the result.

A feeling was expressed, at the close of the meeting, that the expenses of representatives should be deferred by subscription.

ELECTION OF DIRECT REPRESENTATIVES OF THE PROFESSION IN THE GENERAL MEDICAL COUNCIL.

THE following Regulations for the Conduct of Elections under Section 8 of the Medical Act, 1886, have been issued by the Privy Council.

1. The returning officer shall fix the last day on which nomination-papers are to be sent in; and, at least fourteen days before the day so fixed, shall cause a notice of the election to be published, specifying the number of persons to be elected, the place where the nomination-papers are to be sent in, and the last day on which they are to be sent in. The notice shall be published in two or more newspapers circulating in the part of the United Kingdom in which the election is to be held, and shall be, as nearly as may be, in the form marked A in the appendix to these regulations, or to the like effect.

2. Before the last day fixed for the sending in of nomination-papers, the returning officer shall issue his precept to the Branch Council for that part of the United Kingdom in which the election is to be held, requiring the said Branch Council to cause a representative or representatives to be elected by the registered medical practitioners resident in that part of the United Kingdom within twenty-one days after the receipt of the said precept. The said precept shall be as nearly as may be in the form marked B in the appendix to these regulations, or to the like effect, and shall be sent, by post or otherwise, to the registrar of the said Branch Council.

3. Each candidate for election shall be nominated by a separate nomination-paper signed by not fewer than twelve registered medical practitioners resident in that part of the United Kingdom in which the election is to be held.

4. Every nomination-paper shall state the name, address, and registered qualification or qualifications of the person nominated, and also the addresses and registered qualifications of the persons signing such paper, and shall be, as nearly as may be, in the form marked C in the appendix to these regulations, or to the like effect.

5. Any person entitled to vote at the election may sign the nomination-paper of a candidate, or of any number of candidates not exceeding the number to be elected.

6. Every nomination-paper shall, on or before the last day fixed for the sending in of nomination-papers, be delivered by post or otherwise at the appointed place, and shall be accompanied by a declaration in writing, signed by the person nominated, acknowledging that such person consents to be nominated.

7. If the number of persons so nominated as aforesaid does not exceed the number to be elected, such persons (if duly qualified) shall be deemed to be elected, and shall be so certified in writing by the Branch Council to the returning officer.

8. If the number so nominated exceeds the number to be elected, the Branch Council of the part of the United Kingdom in which the election is to be held shall cause voting papers to be prepared, containing the names, addresses, and registered qualifications of all the persons nominated, and stating the last day on which voting-papers may be returned, and the place to which they are to be returned. Voting-papers shall be as nearly as may be in the form marked D in the appendix to these regulations, or to the like effect.

9. The Branch Council shall, seven days at least before the last day fixed for the return of voting-papers, cause a voting-paper to be forwarded by post to each registered medical practitioner resident in the part of the United Kingdom in which the election is held, at his registered address. Each voter shall be entitled to receive one voting-paper and no more; and votes shall not be given except upon the voting-papers provided by the Branch Council.

10. Each voter shall write his initials in the voting-paper delivered to him against the name or names of the person or persons (not exceeding the number of persons to be elected) for whom he intends to vote, and shall sign such voting-paper, and shall append to his signature his address and registered qualification or qualifications; and such voting-paper shall be returned, by post or otherwise, to the appointed place, on or before the last day fixed for the return of voting-papers. Every voting-paper in respect of which any requirement of this regulation has not been complied with, or which is not received at the appointed place on or before the last day fixed for the return of voting-papers, shall be invalid.

11. The Branch Council, immediately after the last day fixed for the return of voting-papers, shall cause the validity of the votes to be ascertained by an examination of the *Medical Register* and by such other evidence (if any) as they may think necessary, and shall cause such of the votes as are found to be valid, and to have been duly returned, to be counted, and the number of such votes given for each candidate to be ascertained.

12. The candidate, or the candidates to the number to be elected, who being duly qualified has or have received the greatest number of votes, shall be deemed to be elected, and shall be so certified in writing by the Branch Council to the returning officer.

13. The returning officer shall forthwith give to every person certified by the Branch Council to be elected notice of his election.

APPENDIX.

FORM A. (*Notice of Election.*)—Notice is hereby given that, pursuant to the Medical Act, 1886, an election of [1] member of the General Council of Medical Education and Registration of the United Kingdom, to represent the registered medical practitioners resident in [2] is about to be held. Every registered medical practitioner is qualified to be nominated as a candidate. Each candidate must be nominated by a separate nomination-paper. Every registered medical practitioner resident in [2] is entitled to take part in nominating [1] candidate. Every nomination-paper must state the name, address, and registered qualification or qualifications of the candidate nominated; it must be signed by not fewer than twelve registered medical practitioners, resident in [2], as nominating such candidate; and the address and registered qualification or qualifications of each one so signing must be appended to his signature. Every nomination-paper, accompanied by a declaration in writing signed by the person nominated, acknowledging that he consents to be nominated, must be delivered by post or otherwise, on or before the day of , addressed to at [3], where forms of nomination-papers may, on application by post or otherwise, be obtained.

(Signed) , Returning Officer.

[1] Here insert number of representatives to be elected.
[2] Here insert England, Scotland, or Ireland, as the case may be.
[3] Here insert name and address of Branch Registrar.

FORM B (*Precept of Returning Officer*).—To the Branch Council for [1]. In pursuance of the above-mentioned Act you are hereby required, within twenty-one days after the receipt of this precept, to cause [2] representative to be elected to the General Council of Medical Education and Registration of the United Kingdom by the registered medical practitioners resident in [1]. Herewith are transmitted to you copies of the Regulations made by the Privy Council in pursuance of the above-mentioned Act for the conduct of elections held thereunder. The election required by this precept to be held must be conducted in accordance with such Regulations. (Signed)

Date Returning Officer.

[1] Here insert England, Scotland, or Ireland, as the case may be.
[2] Here insert number of representatives to be elected.

FORM C. (*Form of Nomination Paper*).—We, the undersigned, being registered medical practitioners in [1] hereby nominate [2] of [3] a registered medical practitioner, as a proper person to be elected to the General Council of Medical Education and Registration of the United Kingdom by the registered medical practitioners resident in [1]. (Signed) [4]

Date

[1] Here insert England, Scotland, or Ireland, as the case may be.
[2] Here insert name of person nominated in full.
[3] Here insert address and registered qualification or qualifications of person nominated.
[4] To be signed by not fewer than twelve registered medical practitioners, to the signature of each one of whom his address and registered qualification or qualifications must be appended.

FORM D. (*Form of Voting Paper*).—Election to the General Council of Medical Education and Registration of the United Kingdom by Registered Medical Practitioners resident in [1].

Voting Paper.

No. of Voting Paper. Name and Address of Voter.

Initials of Voter against Name[s] of Person[s] for whom he intends to Vote.	Names of Persons Nominated.	Residence of Persons Nominated.	Registered Qualifications of Persons Nominated.
	A. B.		
	C. D.		
	E. F.		
	G. H.		

I vote for the person[s] in the above list against whose name[s] my initials are placed.

(Signed)

Of

(Registered Qualification or Qualifications)

Directions to the Voter.—The voter is entitled to vote for[2] candidate , and no more. The voter must write his initials against the name of every[3] person for whom he votes, and must subscribe in full his name, address, and registered qualification or qualifications. If the voter writes his initials against the names of more than[2] candidate[s], or otherwise fails to comply with any of these directions, the voting paper will be cancelled. This paper must be returned, by post or otherwise, under cover addressed[4] and must be received there on or before the day of

[1] Here insert England, Scotland, or Ireland, as the case may be.
[2] Here insert number of representatives to be elected.
[3] If only one representative is to be elected substitute "the" for "every."
[4] Here insert name of Branch Registrar and address to which voting papers are to be sent.

THE CHOLERA.

CHOLERA IN ITALY.

THE reported cholera returns, from September 10th to September 13th, are as follows: Torre del Annunziata, 53 cases, 22 deaths; Castellamare, 5 cases, 2 deaths; San Marco in Lamis, 40 cases, 21 deaths; Putignano, 65 cases, 31 deaths; Venice, 11 cases, 4 deaths; Ferrara, 46 cases, 23 deaths; Ravenna, 56 cases, 27 deaths; San Benedetto Tronto, 18 cases; Vicenza, 5 cases, 2 deaths; Padua, 23 cases, 8 deaths; Taranto, 10 cases, 2 deaths; Naples, 3 cases; San Giovanni Rotondi, 3 cases, 1 death; Carrara, 4 cases, 2 deaths.

CHOLERA IN AUSTRIA-HUNGARY.

EIGHT fresh cases of cholera-nostras are reported to have occurred at Budapest on Tuesday. A labourer, who was taken ill on Monday, died half an hour after the first symptoms appeared. The Cholera Commission met on Tuesday morning.

In a village in Croatia, which is chiefly inhabited by immigrants from Herzegovina, cholera is said to have been present for some time, but its existence was kept secret by the inhabitants. In this place, and in several villages of Istria, says a correspondent, telegraphing from Vienna, stones were thrown at the physician, and it was with difficulty that the populace could be pacified, and persuaded that he was not a poisoner.

The cholera having broken out at Pesth, arrivals from all the Danubian ports have been declared liable to quarantine. Odessa is still regarded as free from infection.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1886.

ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation: (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above District will be held at the National Art Treasures Exhibition, Folkestone, on Thursday, September 23rd, at 3 P.M. Dr. Thomas Eastes in the chair. *Agenda*: Dr. Fitzgerald: Some Practical Points on the Treatment of Ulceration of the Os Uteri. Dr. Gogarty: A Case of Ascites. The Chairman: Three Cases of Visceral Abscess. Members intending to exhibit specimens or make any communication to the meeting are requested to inform the Secretary at once. N.B.—Readers of papers are requested to send very brief summaries to the Honorary Secretary for insertion in the minutes and journal. The dinner will take place at 5 P.M., at the Exhibition. All members of the South-Eastern Branch are entitled to attend these meetings, and to introduce professional friends. The chairman will be glad to see all members and their friends to luncheon, at the Exhibition, between 1 and 2. Members will be admitted free to the Exhibition on the presentation of their visiting cards. N.B. All gentlemen purposing to dine are particularly requested to inform the Secretary by Tuesday, the 21st, that proper arrangements may be made.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of the above District will take place at the West Kent Hospital, Maidstone, on October 29th. Gentlemen who wish to read papers, exhibit specimens, &c., are requested to inform the Honorary District Secretary, A. W. Nankivell, F.R.C.S., St. Bartholomew's Hospital, Chatham, not later than October 9th. Further particulars will be duly announced.—A. W. NANKIVELL, St. Bartholomew's Hospital, Chatham, September 11th, 1886.

NORTH OF ENGLAND BRANCH.—The next meeting will be held at the Newcastle-on-Tyne Infirmary on Tuesday, September 28th, at 2.30 P.M. Business, Introduction of Patients. By Dr. Philipson: A Case of Empyema successfully treated by Incision, Removal of a Portion of Two Ribs, Drainage, and Antiseptic Dressing. Demonstration, by Dr. Mantle, of the Methods employed in the Investigation of Disease by Bacteria, together with the Bacteria found in Rheumatism. Papers: Dr. Drummond: On the Symptoms and Diagnosis of Floating Kidney. Dr. Morison: Three Cases of Intestinal Obstruction. Dr. Munro: A Case of Intestinal Obstruction. Mr. Williamson: Successful Operation in a Case of Acute Intestinal Obstruction. Dr. Murphy: A Case in Medical Jurisprudence. Dr. Oliver: On some points in the Clinical Examination of the Urine. The dinner

after the meeting will take place at the Douglas Hotel, at five o'clock. Tickets, 6s. 6d. each, exclusive of wine.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 22, Eldon Square, Newcastle-on-Tyne.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Painful Cystitis.—Recurring Typhoid Fever.—Inhalations of Hydrofluoric Acid in Pulmonary Phthisis.—Renal Affections Treated by Naphthaline.—Gaseous Tumours of the Neck.—Lanolin.

THE following suggestion for painful chronic cystitis has been found to be very efficacious: Crystalised nitrate of silver, 1 gramme; distilled water, 50 grammes. This is injected in cases of painful chronic cystitis. After the patient has passed urine, an explorator, with a perforated bougie, No. 12 to 14, is introduced until the urethral sphincter is reached, and from 20 to 40 drops of the solution are injected. The necessary number of injections, and the time which should elapse between administering them, varies. If the patient have only suffered three or four hours after the first injection, it is repeated every other day; but, if the pain continue for one or two days, it is better only to administer an instillation once or twice a week, and to decrease the number of drops. This remedy succeeds very well in cystitis of a gonorrhœal origin, but should not be used in cases of cancer, or tuberculosis of the bladder.

At the recent French Congress for the Advancement of Science, M. Deshayes stated that he has recently met with two cases of recurring typhoid fever, quite distinct from relapse, as the fever reappeared three years after the first attack. M. Deshayes thinks that typhoid has a tendency to change in character. He cites, as a proof of this, the fact that most of the typhoid patients have aphthæ. M. Bouchard has observed recurring cases of typhoid fever, at the rate of 20 per cent. The recurring attacks are always milder than the original illness.

At the same meeting, M. Sellar described his manner of treating pulmonary tuberculosis with inhalations of hydrofluoric acid. The patients are submitted to daily inhalations which last about an hour each time, and are repeated about twenty or thirty times. Air is passed into a mixture composed of 150 grammes of water, 50 of hydrofluoric acid. The air thus impregnated is propelled into a room in which the patients under treatment remain during the necessary time. M. Sellar states that these inhalations are perfectly harmless, and produce great improvements in patients suffering from pulmonary tuberculosis.

M. de Pezzer treats certain renal affections with naphthaline, especially those that are accompanied with difficult micturition; and, when fetid urine is passed, the results are generally good. In pyelonephritis, M. de Pezzer gives a gramme and a half, also in cystitis and prostatitis, with retention of urine, likewise for stricture complicated by fistula. The digestive functions are not disturbed by this treatment, and it has a sedative effect on the bladder. Its action is analagous to that of turpentine. M. Bouchard observed that stronger doses of naphthaline are necessary (five grammes a day) in order that urine may ferment less rapidly. Naphthaline is not eliminated in the form of naphthaline, but as naphthyl sulphate of soda, an antiseptic combination, which explains why it is that fermentation is lessened. M. Bergeron read a paper on rectal injections of a current of carbonic acid gas, impregnated with hydrosulphurous acid. These injections, given twice in the course of twenty-four hours to patients suffering from pulmonary tuberculosis, are followed by marked improvement—the cough becomes greatly calmed, the breathing is easier, and the general condition is greatly improved.

Dr. Paul Fabre, of Commentry, publishes in the *Gazette Médicale de Paris* the following cases of gaseous tumours in the front of the neck. The first case mentioned presented symptoms of a gaseous goître, with spontaneous emphysema of the right side of the neck occurring during an attack of bronchitis. The patient was a child, not three months old, who was attacked with bronchitis on March 13th. On the 16th, a swelling was noticed above and below the right clavicle, which, when touched, produced crepitation. It was subcutaneous emphysema, but no trace of injury was visible. The child coughed incessantly, and, with each fit of coughing, the swelling increased. Auscultation under these circumstances was extremely difficult, but hissing *râles* in the left lung were distinctly heard, and, evidently, coughing had produced a rupture of the air-passage, followed by emphysema. The pulse-beats were 116 a minute. Linseed-meal poultices, sprinkled with *eau blanche*, were applied to the swelling. A teaspoonful of Desessartz's syrup was administered every hour. The following day the cough had somewhat subsided; tumefaction above the collar-bone was less prominent, and below it emphysema had almost disappeared. On the 18th, the tumefaction was limited to the neck, and the cough was nearly gone. On the 19th, the swelling had diminished, and crepitation no longer existed. A teaspoonful of equal parts of syrup of tolu and ether was given every two hours. On the 21st, the fever had entirely left. Pressure appears to have caused the swelling to decrease. On the 23rd, there was no more fever or cough, and the neck was not more swollen on the right than on the left side. From that time (a year ago), the child has been very well, and not the slightest swelling has reappeared. Another case was that of a child a month old, who had a gaseous tumour in the front of its neck, which entirely subsided with each inspiration of the breath. There was in this case a total absence of the first piece of the sternum. None of the rings of the trachea could be felt, and there were no solid tissues between the cricoid cartilage and the anterior extremity of the fourth rib. The size of the swelling, when distended by regular breathing, was the size of a goose's egg. On touching it, the articular surface of the inner extremity of the clavicle could be distinctly felt. With the child's cries, the tumour became swollen, but decreased with each inspiration. Nine months later, an apparatus was worn, the object of which was to prevent increased swelling of the goître, which might in time break. Nothing since has been done in the case; and the child, who is now fourteen months old, is comparatively in good health.

M. Doyon, in an article in the *Annales de Dermatologie*, states that lanolin is rapidly absorbed by the skin. After rubbing with lanolin, the skin appears firmer, more turgescent, and at the same time the surface is almost dry; whilst, with vaseline, it preserves a shiny appearance even after energetic friction. This rapid absorption may be shown to be due to the intimate connection existing between lanolin and the fat of the epithelium. Lanolin has been shown experimentally to have no action upon healthy or unhealthy skin, but acts favourably on morbid phenomena occurring in deep layers of the skin. Lassar has used ointments prepared with lanolin, instead of vaseline or glycerine, in four hundred cases of persons affected with cutaneous lesions, and has not discovered harmful effects in any one of them, not even in those cases where there was great irritability of the skin. In the case of a child suffering from impetiginous eczema of the skin of the head and face, the sole use of lanolin containing salicylic acid at 2 per cent. produced cure. In cases of ulcerated impetigo, or of inflamed eczema, a salutary and prompt action has been obtained with the following ointment. Salicylic acid, 2 grammes; lanolin, 50 grammes; zinc oxide, 24 grammes; starch, 24 grammes. In the case of a patient who had suffered for several years from a severe and rare form of pityriasis versicolor, three frictions of the following ointment sufficed to destroy the parasite: Salicylic acid, 2 grammes; precipitated sulphur, 10 grammes; lanolin, 100 grammes. When greater softness of the skin is desired, it is necessary to add 20 parts of lanolin to 100 of vaseline. In seborrhea of the scalp, carbolic lanolin and sulphur suffice to remove furfuraceous desquamation. Lassar advises a mixture of vaseline and lanolin in equal parts, with the addition of tincture of benzoin if the skin be rough.

CORRESPONDENCE.

DIRECT REPRESENTATION.

SIR,—In anticipation of the meeting at Birmingham on Tuesday, September 14th, to nominate candidates for the direct representation of the profession in the Medical Council, a meeting of the profession was held in Chester on the preceding Monday in order to ascertain whom it might be deemed most advisable to nominate. Fourteen members of the profession attended, including those who were not members of the British Medical Association. The choice fell on the following gentlemen, who were unanimously selected.

1. Sir Andrew Clark, Bart., on account of the exceptional interest he evinced in the subject of medical education when President of the Metropolitan Counties Branch, and also on account of his strenuous advocacy of direct representation when chairman of the conference of medical reformers in 1880.

2. Mr. Wheelhouse, of Leeds, as specially familiar with the training of medical students, and as well known in connection with general practice in the north of England.

3. Mr. Ernest Hart, on account of his general ability, and his able championship of the general practitioners when giving evidence before the Select Committee of the House of Commons; on account of

his intimate acquaintance with the views of the profession through being in close communication with the 12,000 subscribers to the BRITISH MEDICAL JOURNAL. He arraigned the Medical Council (query 3726) for not enforcing the provisions of the Act of 1858 against unqualified persons who pretended to be qualified. In his reply to query 3893, he proposed the formation of divisional councils or boards by the medical authorities in each division of the kingdom, which boards were to elect representatives to the Medical Council. This suggestion was acted on in the report of the Royal Commission as a means of diminishing the number of the representatives of the corporations and universities in the Medical Council.

The name of Dr. Holman, of Reigate, was also mentioned, but not with unanimity.—I am, sir, your obedient servant,

EDWARD WATERS.

M. PASTEUR'S PROPHYLACTIC.

SIR,—In common gratitude to M. Pasteur for the extreme kindness and scientific frankness with which he afforded me every opportunity of examining his method of treating rabies, I venture to ask for the insertion of the following answer to Dr. Dolan's letter of September 4th, 1886.

Before detailing the real facts of our present knowledge of the subject, I wish simply to say that M. Pasteur's system is on its trial, and that all I demand is that it shall have a fair field and no favour.

DR. DOLAN.	THE FACT.
"*Objection*" *1.*—"Control experiments were neglected. The same kind of affection" (that is, rabies) "can be produced by injecting almost any kind of diseased material into the same region favoured by M. Pasteur."	*Answer.*—M. Pasteur performed control-experiments. I have repeated the same six times, always with a negative result. It is absolutely untrue that the disease termed rabies by M. Pasteur, proved to be so by him, and which fact I have had the opportunity of confirming, can be produced as Dr. Dolan asserts.
"*Objection*" *2.*—"No ill results" (that is, from M. Pasteur's inoculations) "have followed, not even an abscess, only a slight erythematous redness at the end of the inoculations. This is not only strange, but it even reduces the value of his virus to an absurdity. M. Pasteur has been injecting all this time a sterilised *bouillon*, hence the safety of his patients ..... I shall be answered that he tested the virus on rabbits. I answer yes, but not by simple inoculation into the skin."	*Answer.*—Dr. Dolan appears to be unaware of the fact that the first few inoculations contain very little virus, and that these, practically never, as he says, produce any local effect (an exemption, by the way, which he seems to consider is a drawback). Further, although he states that redness and swelling follow the last inoculation or two, he does not seem to recollect that those are the most virulent. Dr. Dolan forgets that the point of inoculation of many acute specific diseases are seldom the seat of violent inflammation. The fatal bite or scratch of a rabid dog, for instance, frequently causes no inconvenience, neither do M. Pasteur's inoculations. The force of Dr. Dolan's "objection" lies in his boldness; for, as M. Pasteur stated (and this I have also confirmed), a very large proportion of rabbits inoculated simply "into the skin" with M. Pasteur's "sterilised *bouillon*" (which, by the way, also contains some rabic virus) die from rabies.
"*Objection*" *3.*—"M. Pasteur has had numerous deaths.....He has had better results than any other hydrophobia curer. I have not posed as a hydrophobia curer. .....Not a single patient of mine has died from hydrophobia..... My success has been due to the fact that the large number I have treated have been bitten by non-rabid dogs.....The success of Pasteur has depended on the 'same' fact."	*Answer.*—This objection will be more easily understood when Dr. Dolan can prove that the large majority (1,986, August, 1886) of M. Pasteur's cases who have not died from hydrophobia, were all bitten by healthy animals, and that the minority (22, Aug., 1886) were the only victims of rabid dogs out of the total of over 2,000 persons bitten.
"*Objection*" *4.*—[1]	
"*Objection*" *5.*—"We know now that Villemin was not correct in his deductions."	*Answer.* — Villemin deduced from his experiments that tubercle was transmissible from one animal to another. His deduction was therefore correct.

"*Objection*" 6.—This appears to me not to be an objection to M. Pasteur's method, but to be, in fact, an appeal for greater stringency in our Dog Act. If my reading is correct, I am glad to find that the splendid results achieved by legislation in this direction are beginning to attract attention.

In conclusion, sir, I feel sure that if Dr. Dolan will closely study this question, make himself thoroughly acquainted with the subject, and, above all, visit M. Pasteur's laboratory, and there investigate his methods, he will not adopt the un-English method of fighting which I think is exhibited in his letter.—Believe me, yours sincerely,

80, Park Street, Grosvenor Square. VICTOR HORSLEY.

MEDICO-LEGAL AND MEDICO-ETHICAL.

CLUB-PATIENTS AND MEDICAL ETHICS.

SIR,—One of the medical men of this town holds the opinion, and acts upon it, that he is at liberty to visit a club-patient, in the absence of the patient's usual medical attendant, give an opinion on his illness, and allow the said ordinary medical attendant to go on treating the case.

He does this, he says, because he holds that friendly society patients, and what he calls private patients, are on a different platform, and because he objects to medical men undertaking to attend friendly society patients at a given sum per head *per annum*, as is the custom with Oddfellows, Foresters, Shepherds, etc. (He, however, is the medical attendant to the post-office employees here, and is paid by Government a yearly sum for this.)

On his treating me in this manner, and justifying himself for doing so, I informed him that he was acting unprofessionally, ungentlemanly, and in an unfriendly manner to me, as the medical attendant to a friendly society, and perfectly willing to meet him in consultation when the patient desires his opinion. He denies that he is acting unprofessionally under the circumstances, and says that he will continue to act in the future as in the past.

Will you kindly let me know if I am right or wrong in my opinion of his professional conduct?—Yours truly, A MEMBER.

*** In visiting the club-patient in the absence and without previously obtaining the sanction of the medical officer—the ordinary medical attendant—the practitioner alluded to by our correspondent not only took a wrong view of his assumed professional right, but acted in direct contravention of the well-known prescriptive rule relating to other than a practitioner's own immediate patients, a rule alike applicable to all, whether they be members of a "friendly society," pauper patients, or the inmates of a palace. Clearly defined rules bearing on the question may be found in the *Code of Medical Ethics*.

RESPONSIBILITY OF RELATIVES OF A DECEASED PATIENT.

SIR,—During last December I was sent for to visit an old gentleman at the house of a brother, with whom, I was told, he had lived for many years. His illness was a serious one, and I saw him frequently up to the time of his death, which happened in about a month after my first visit. As it was the brother's servant who came for me (I do not know who sent her), and as he usually met me and welcomed me when I called, and paid the consultant's fee when I thought a second opinion necessary, it did not occur to me that there would be any difficulty about my bill. I did not, therefore, send it in till the end of the quarter. No notice whatever was taken of it, nor of those which have followed regularly upon each successive quarter-day.

Would you recommend me to threaten the "brother" with legal proceedings? and what success do you think would be likely to attend such?—I am, sir, yours respectfully, A MEMBER.

*** The question submitted by our correspondent is a strictly legal one, and, if the following suggested expedient should fail to elicit a satisfactory reply, it may be well to consult his solicitor.

In the absence of a direct request from the brother (such as would entail personal responsibility) for professional attendance on the subsequently deceased gentleman, we would recommend that a written statement of the professional charges be addressed to the executor or administrator of "A Member's" late patient, under cover to the surviving brother, with a courteous note of request that it may be handed to such executor, etc. No active legal proceedings, however, should, in our opinion, be taken until twelve months after the demise of the party in question. A quarterly statement of account is not, we think, it well to remark, in accordance with the usual practice of the profession.

ETHICS OF SALE OF PRACTICE.

A. has a small country practice (with poor-law appointment), which he has held for over twenty-one years. A. feels increasing years, and wishes to dispose of his practice, in order to take another, more easily worked. B. applies to A. about the practice; a price is agreed upon, and an agreement is talked of. A. informs B. next day that he cannot sign an agreement until he has arranged to go into a practice elsewhere. B. meanwhile writes occasionally to A., urging him to complete his arrangements so as to get an agreement signed. A. is doing all he can for that purpose in part of May and in June, and tells B. so; and that, if he do not like to wait until A. succeeds, he is quite at liberty to

[1] Comment on this "objection," in which M. Pasteur's treatment is compared to quackery, is superfluous.

look elsewhere. To this, no reference is made in subsequent letters. A. is attacked with scarlet on the last day in June, is laid up nearly a month, gets about for a week, and has a severe return of the complaint; whereupon he writes to B. saying that he must, at present, give up disposing of his practice, as he is unable to prepare for removal. B. writes in reply that he is surprised, and that he thinks he shall be fully justified in setting up in A.'s village.

B.'s version is as follows. B. has been residing in a town eight miles distant from A. for three years, acting as an assistant to a relative, and has been connected with his relative's practice for ten years, as pupil, assistant, etc. B. marries two years ago, his wife coming from the village where A. practises. B. hears that A. would dispose of his practice if a suitable offer were made; and A., when asked by B., replies that he has said he would sell. In the spring of this year, B. writes to A., and asks whether A. would still be willing to sell. A. replies, and asks B. to meet him at the hospital where they are both honorary surgeons. B. meets A. as arranged, and A. agrees to sell, and to get out the necessary particulars. After a few weeks, A. calls upon B., and a price is arranged, and A. promises to go in a day or two to a firm of solicitors, and get an agreement drawn up. The next morning or so, a note comes from A., saying he has consulted his brother, who thinks it would be unwise to sell until he had obtained something else. B., in consequence of A.'s promise to sell, has resigned his assistancy, which was a very good one, and writes to A., urging him to obtain something at once. This A. promises to do; but, as time goes on, and as A. does not appear to be making any very vigorous efforts to obtain another practice, B. writes again. A few weeks ago, A. is taken ill, and after a time writes to B., informing him that he is better, and soon hopes to obtain something. B. writes encouraging this; when, a few days later on, he receives a note from A. saying he has decided not to sell. B., whose assistancy expires in a month from the writing of the last letter, feels much annoyed at this, because he has been relying solely upon A., and writes to A., saying he is much surprised, and shall feel quite justified in commencing practice in the same village. B. is well known in A.'s village, and also in the surrounding neighbourhood; in fact, he has patients there. B.'s only object in offering to purchase A.'s practice was in order not to appear to be behaving in an ungentlemanly manner towards A., an introduction into the neighbourhood being unnecessary. B. would be glad to know whether he is not justified in commencing practice whenever he likes.

*** After a careful unbiassed consideration of "A.'s" and "B.'s" respective statements, and withal strongly disapproving of the latter's expressed intention to commence practice in the village alluded to, even under the irritating circumstances specified in his version of the matter, we are of opinion that he (B.) is justified in calling upon A. to fulfil the compact entered into for the sale of his practice at the price originally agreed upon; and further, that the latter (A.) will act wisely and justly in assenting thereto; for it cannot, we think, be regarded as otherwise than unreasonable to expect, after entering into a mutual, though unwritten, agreement, and B.'s consequent resignation of a valuable assistantship, that A. should, month after month, delay the completion of the contract to suit his own purpose and convenience, and then finally seek to withdraw therefrom, on the pleas set forth in the correspondence. An amicable arrangement is much to be desired.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

THE following appointments have been made at the Admiralty during the past week: C. L. VASEY, Staff-Surgeon, to the *Britannia*, additional for temporary service; H. P. SHUTTLEWORTH, Surgeon, to the *Hearty*; JAMES B. CLIBBORN, Surgeon, to the *Isdes*; CHARLES JAMES, Surgeon, to the Plymouth Division of the Royal Marines; WILLIAM S. LIGHTFOOT, Surgeon, to the *Temeraire*; BOWEN S. MARKS, Surgeon, to Haslar Hospital; HORATIO S. R. SPARROW, Surgeon, to the *Port Emerald*; GEORGE F. DEAN, Surgeon, to the *Polyphemus*; WILLIAM W. PEYN, Surgeon, to the *Hotspur*.

MEDICAL STAFF.

SURGEON E. H. LOCKER has resigned his commission, which he obtained so lately as January 26th last.

Surgeon-Major C. C. HICKSON, who is serving in the Bengal Command, is granted leave to England for six months on urgent private affairs.

Deputy Surgeon-General W. COLLIS has been brought on to the Administrative Medical Staff of the Bengal Army, *vice* Deputy Surgeon-General W. H. Corbett, dead.

Under instructions from the Horse Guards, Deputy Surgeon-General A. F. BRALSHAW has been directed to proceed immediately from Bombay to Egypt, to assume administrative medical charge, *vice* Deputy Surgeon-General T. W. Fox, M.B.

Surgeon-Major G. ANDREW, M.B., is transferred from the Bengal Presidency to do general duty with the Hyderabad Subsidiary Force.

Surgeon W. G. MACPHERSON has passed the examination for the lower standard in Persian.

THE INDIAN MEDICAL SERVICE.

Surgeon S. J. THOMSON, Bengal Establishment, Deputy Sanitary Commissioner of the Division, North-West Provinces and Oudh, has been appointed to the civil medical charge of Almora.

Surgeon F. H. PORT, M.B., Madras Establishment, is directed to act as Professor of Hygiene, Medical College, during the employment of Surgeon-Major Allison on other duty.

Brigade-Surgeon W. R. ROSE, M.D., Bengal Establishment, is ordered to officiate as Inspector-General of Civil Hospitals, North-West Provinces and Oude, during the absence of Deputy Surgeon-General Wilkie on privilege leave.

Surgeon S. C. NANDI, M.D., Bengal Establishment, has been declared by the Board of Examiners at Calcutta to have passed with high proficiency in Sanskrit.

Surgeon R. J. PARKER, M.B., is appointed to act as Resident Surgeon of the Medical College Hospital, in addition to his own duties as Resident Surgeon Eden Hospital, Calcutta.

The undermentioned Surgeons of the Bengal Establishment are appointed to the officiating medical charge of the regiments stated: R. SHORE, M.D., to the 9th Bengal Lancers, *vice* Surgeon G. A. Emerson; H. R. WOOLBERT, to the 13th Native Infantry, *vice* Surgeon-Major W. Finden: J. R. ADIS, to the 45th Sikhs, *vice* Surgeon-Major H. Boyd.

The undermentioned gentlemen have obtained leave of absence for the periods specified: Surgeon-Major W. FINDEN, Bengal Establishment, medical officer 13th Native Infantry, for 183 days on medical certificate; Surgeon-Major J. H. NEWMAN, Bengal Establishment, in medical charge of the Mhairwara Battalion, for one year on medical certificate; Surgeon-Major J. J. L. RATTON, M.D., Madras Establishment, Surgeon General Hospital, and Professor of Surgery, etc., Medical College, for one year on medical certificate, with ten days' subsidiary leave; Surgeon-Major R. V. POWER, M.D., and Surgeon R. H. CAMA, both of the Madras Establishment, for one year on medical certificate; Surgeon-Major H. J. BLANC, M.D., Bombay Establishment, for one year on medical certificate; Surgeon D. MULLEN, M.D., Bengal Establishment, officiating Residency Surgeon Hyderabad, to Europe for one year on medical certificate; Surgeon-Major W. E. GRIFFITHS, Bengal Establishment, in medical charge 17th Native Cavalry, to Cashmere on medical certificate till October 15th.

Surgeon-Major C. SIBTHORPE, Madras Establishment, Professor of Anatomy, is appointed to act as Professor of Surgery and Clinical Surgery at the Medical College during the absence of Surgeon-Major J. J. L. Ratton, M.D., on leave.

Surgeon-Major H. ALLISON, M.D., Madras Establishment, Professor of Hygiene, is ordered to act as Professor of Anatomy at the Medical College, during the employment of Surgeon-Major C. Sibthorpe on other duty.

Mr. R. U. TAIT has been appointed Surgeon to the 1st Newcastle and Durham Engineer Volunteers; and Mr. H. G. THOMPSON, M.D., is made Acting-Surgeon to the 1st Volunteer Battalion of the Royal Fusiliers (late the 10th Middlesex Volunteers).

Mr. T. B. GRIMSDALE, M.B., has been appointed Acting-Surgeon to the 4th Lancashire Artillery Volunteers.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, September 10th.

Vaccination.—On the Vote of £175,956 to complete the sum for salaries and expenses of the Local Government Board, under various statutes, including grants in aid of local taxation, Mr. A. O'CONNOR moved to reduce the Vote by the sum of £16,500, the item appropriated for public vaccinators. The hon. member justified the amendment on the ground that this sum was the mainspring, or one of the chief springs, in a system which he condemned as immoral, stupid, and cruel.—After a discussion, in which Mr. RITCHIE, Mr. BRADLAUGH, Mr. LABOUCHERE, Mr. H. S. WRIGHT, Dr. TANNER, and other members took part, the contest for the reduction of the vote was negatived without a division.

The Lunacy Commissioners.—On the vote for £6,239 to meet the expenses and salaries of the officers and Commissioners in Lunacy in England, Mr. MOLLOY moved the reduction of the vote by £6,000, the sum paid to the Lunacy Commissioners in England. The Commissioners in Lunacy were six in number, three lay and three professional, and they were bound to go to the county asylums in couples. Their duty was not only to visit the asylums, but to examine the patients, to ascertain their condition, and to prevent any misuse of the law. There were 80,000 lunatics in the country at the present time, and it was absurd to expect three sets of men to look after 80,000 lunatics. Each succeeding Government, year after year, had promised that the law should be remedied. He believed that many poor people were incarcerated in private asylums who were no more lunatics than any member of that House. There was a fundamental distinction between public and private asylums, because, with the former, it was not a question of gain, whereas the latter were purely business undertakings, whose proprietors desired to make a profit out of them.—Mr. CORBET supported the amendment.—Dr. TANNER remarked that many of the alleged injustices connected with private lunatic asylums were still true.—Mr. STUART-WORTLEY replied that a Bill had been introduced into the House of Lords last session dealing with this question, and had for its object the gradual extinction of private lunatic asylums. It would be a great hardship if commissioners were to have their salaries reduced because Parliament had been unable to carry their legislation on the subject. Between this and the next session the question should have the earnest attention of the Government, and no time would be lost in seeking the assent of Parliament to legislation.—After some further discussion, the Committee divided.

For the reduction	67
Against.....	123
Majority against	—56

The vote was agreed to.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE SANITARY CONDITION OF WINDSOR.

On Tuesday last, Mr. Ritchie, President of the Local Government Board, received a deputation from New Windsor to protest against the charges made by the *Lancet* as to the unsanitary condition of Windsor, and to ask the Local Government Board to appoint an inspector to investigate the subject. The deputation consisted of Mr. Richardson-Gardner, M.P., Mr. T. D. Bolton, M.P., the Mayor of Windsor (Mr. Lundy), and others.—Mr. Richardson-Gardner, M.P., said that for the last two or three years letters had been written to the public press by a gentleman resident in Windsor, and the sanitary authorities treated these statements with the contempt that they deserved. In time, however, the effect upon the town became so serious that, at a public meeting of the inhabitants, these statements were denounced, and the authorities were called upon to take the necessary steps to bring the matter to a crucial trial. This deputation desired the Local Government Board to appoint an inspector to investigate these charges. He might mention that great improvement had been made at Windsor within the last thirty years, and over six hundred model cottages had been built from designs of the late Prince Consort.—Mr. Bolton, M.P., said the charges were unfortunate, and it was impossible to deal with them in the ordinary way; and therefore they asked for a Local Government Board inspector to put his seal, as it were, on the Royal borough, whether good or bad.—Mr. Ritchie, in reply, said the matter was one of very great and serious importance to Windsor. It would be very inconvenient if the Local Government Board should be called upon, on every occasion when there might be some dispute of the kind, to send down an inspector. They would have very largely to increase the number of inspectors. But, looking to the exceptional character of Windsor, he should feel inclined to grant their request, and to send down an inspector or inspectors. He assumed that the sanitary authority would remedy any defects that might be pointed out. It was important that the matter should be attended to quickly, and the inquiry would be instituted in the course of a few days.—The deputation then retired.

THE HEALTH OF THE CITY OF LONDON.

On Tuesday last, at a meeting of the City Commissioners of Sewers, Dr. Sedgwick Saunders reported that, during the vacation, the health of the City had been remarkably good, and the duties of the sanitary department unusually light. Excluding a few deaths from infantile diarrhœa, inevitable during the hot weather, only three deaths had arisen from preventable disease. Not a single fatal case of small-pox, measles, whooping-cough, or simple cholera had been recorded, and only one case of fever of the 108 deaths registered. The precautionary measures suggested by him had been faithfully carried out, and the constant use of disinfectants had had something to do with so gratifying a result. In the recess, 1,695 houses had been inspected, of which eight required sanitary improvement.

MEDICAL NEWS.

Society of Apothecaries of London.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, September 9th, 1886.

Brooks, Richard Philip, 14, Tollington Park, N.
Griffiths, William, 37, St. John's Wood Terrace, N.W.
Marks, Robert John, 23, Canyage Square, Clifton, Bristol.
Melland, Brian, Victoria Park, Manchester.
Rusher, John Golby, Pershore, Worcestershire.
Wright, Charles Franklin, 5, Trafalgar Road, Great Yarmouth.

The following gentlemen also on the same day passed their Primary Professional Examination on September 2nd.

Goodwin, William Henry Frederic, Westminster Hospital.
Lewington, John Joseph, London Hospital.
McGeagh, William Stewart, St. Thomas's Hospital.

MEDICAL VACANCIES.

The following vacancies are announced.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House-Surgeon. Salary, £60, with board and residence. Applications by September 20th to the Chairman of the Weekly Board.

BOURNEMOUTH COTTAGE HOSPITAL AND DISPENSARY.—Resident Medical Officer and Secretary. Salary, £120 per annum, with rooms, etc. Applications by September 27th to the Secretary.

CANCER HOSPITAL, BROMPTON. Assistant House-Surgeon for six months. Honorarium at the rate of £35 per annum, with board and residence. Applications by September 22nd to the Chairman of the Weekly Board.

EAST LONDON HOSPITAL FOR CHILDREN.—Resident Clinical Assistant. Board and lodging. Applications by September 23rd to A. Warner, Esq.

EASTERN DISPENSARY, Bath.—Resident Medical Officer. Salary, £100 per annum, rising to £120, lodging, etc. Applications by September 20th to T. H. Plowman, M.A., 1, Russell Street, Bath.

HOSPITAL FOR WOMEN, Soho.—House-Physician. Salary £75 per annum, with board, etc. Applications by September 18th to D. Cannon, Esq.

KENT COUNTY OPHTHALMIC HOSPITAL.—House-Surgeon. Salary, £100 per annum, with apartments. Applications by October 1st to M. A. Adams, Esq., 1, Ashford Road, Maidstone.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT.—Resident Medical Officer. Salary, £60 per annum, with board and lodging. Applications by September 27th to G. Keating, Esq.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer. Salary, £150 per annum, with board and residence. Applications by September 18th to the Chairman of the Board.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer. Salary, £150 per annum, with board and residence. Applications by September 18th to the Chairman of the Board.

MIDDLESEX COUNTY LUNATIC ASYLUM, Colney Hatch.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications by September 23rd to R. A. Burrows, Esq.

NORWICH FRIENDLY SOCIETIES MEDICAL INSTITUTE.—Medical Officer. Salary, £250 per annum. Applications by September 30th to the Secretary, Ivy House, Lady Lane, Norwich.

ROYAL SURREY COUNTY ASYLUM, Guildford.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by October 4th to Thomas Taunton.

ROYAL UNIVERSITY OF IRELAND.—Medical Fellow. Salary not to exceed £100 per annum, and appointment to last for seven years. Applications to Secretaries of University on or before October 1st.

ST. PETER'S HOSPITAL FOR STONE.—House-Surgeon. Honorarium 25 guineas, with board, lodging, and washing. Applications by September 25th to W. E. Scott, Esq.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY.—Honorary Physician. Applications by October 4th to T. Robinson, Esq.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea.—House-Surgeon. Honorarium, £50 per annum, with board and lodging. Applications by October 4th to Commander Blount, R.N., Secretary.

WEST BROMWICH DISPENSARY HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, etc. Applications by October 2nd to W. Bache, Esq., Churchill House, West Bromwich.

WESTMINSTER HOSPITAL.—Assistant Surgeon. Applications by September 21st to S. M. Quennell, Esq.

WESTMINSTER HOSPITAL.—Aural Surgeon. Applications by September 21st to S. M. Quennell, Esq.

MEDICAL APPOINTMENTS.

Barclay, W. M., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Bristol General Hospital, *vice* A. N. Little, resigned.

Brockatt, A. O., L.R.C.P., M.R.C.S., reappointed Resident House-Physician to St. Thomas's Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

BIRTHS.

Oliver.—At Consett Hall, Co. Durham, on September 8th, the wife of Thomas Oliver, M.D., Eldon Square, Newcastle-upon-Tyne, of a son.

Owen.—On September 11th, at Waltham's Dene, Twyford, Berks, the wife of Owen Owen (Brigade-Surgeon R.P.), of a daughter.

Ryan.—At 153, Castlemere Terrace, Drake Street, Rochdale, Lancashire, on September 10th, the wife of M. J. Ryan, L.R.C.S.I., L.&L.M.K.&Q.C.P.I., of a son.

Wright.—On September 8th, at 198, Regent Road, Manchester, the wife of Gaskoin Wright, L.R.C.P.Lond., M.R.C.S.Eng., of a son.

MARRIAGE.

Campbell—Hirst.—On September 9th, at St. Chad's, Saddleworth, by the Rev. H. Doig, M.A., Vicar, assisted by the Rev. A. J. Sacré, Curate, Colin George Campbell, M.R.C.S., etc., of Uppermill, Saddleworth, to Annie Ethel, only daughter of Ben Hirst, Tamewater House, Saddleworth, Yorkshire.

DEATHS.

Jelly.—Suddenly, on September 14th, at Buxton, Fred. A. Jelly, M.B., C.M., aged 29 years, the beloved son of William Jelly, M.D., F.R.C.P.Lond., late of Valencia, Spain.

Montgomery.—At Wordsworth House, Penrith, Cumberland, on September 8th, Elizabeth Ann Montgomery, wife of Tristrem Lowther Montgomery, F.R.C.S.E., aged 43 years.

Ninnis.—On September 12th, at Pembroke House, Streatham, from pneumonia, Walter Melville, son of Belgrave and Ada J. Ninnis, aged 17 months.

Stephen.—At Carlsbad, on Saturday, September 11th, of cholerine, William H. G. Stephen, M.B., C.M.Edin., L.R.C.P.Lond., youngest son of the late William Stephen, Inchbroom, Morayshire, aged 24 years.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

SENILE DISEASES.

JUNIOR asks for the names of any book or books on senile diseases, especially those bearing on the respiratory system.

EPSOM COLLEGE.

COUNTRY PRACTIONER writes: Will any gentleman that has experience of the above College give his opinion as to its fitness for a highly nervous boy?

ANSWERS.

SOIL OF SUBURBS OF LONDON.

J. D. writes: I. W. will find every information as to soil and altitudes in the suburbs of London in Mayne's *Geological and Topographical Map of London and its Environs*, published by Stanford. I fear that I. W. will find a residence on gravel no safeguard against rheumatic fever. The severest case I ever saw occurred a few yards from Park Lane, at an altitude of seventy feet above the Thames, where the soil is wholly gravel.

MEDICAL TITLES.

INQUIRENS writes: Many medical practitioners assumed, prior to the passing of the Medical Act (1886), the title "Doctor," without being possessed of an university degree. Does that Act in any way interfere with that assumption, either positively or negatively?

*** The Act does not affect the question in any way.

SEA-VOYAGES.

IN reply to G. F. R.'s inquiry, Dr. J. C. Thorowgood recommends, in addition to the works already mentioned, Dr. W. S. Wilson's *Ocean as a Health-Resort*, published by Churchill. Every patient who is contemplating a sea-voyage, he says, should get this very useful little book, and take it with him. Of the great value of a voyage in a sailing vessel to Australia and back as a cure for commencing phthisis, there appears increasing evidence, but the invalid requires to be advised on many points before he starts.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. W. T. Jackman, Coggeshall; Dr. H. F. A. Goodridge, Bath; Constant Reader; Mr. T. Collier, Ripon; Dr. M. W. Taylor, London; Dr. W. G. Walford, London; Dr. W. Hale White, London; Mr. C. G. Campbell, Saddleworth; X; Mr. Mayo Robson, Leeds; Junior; Mr. J. Grover, Carisbrooke; Mr. H. B. Warner, Sheffield; Mr. H. Greenway, Plymouth; Mr. R. G. Salmond, London; Dr. C. M. Chadwick, Tunbridge Wells; A Member; M.B., M.A.; Dr. Henry H. Smith, Philadelphia; Mr. E. Kite, West Bromwich; Mr. Gardiner Trouton, Carlisle; An Old West Indian Doctor; Mr. C. E. Paget, Kendal; Mr. J. Stuart Nairne, Glasgow; Dr. Maxwell, Woolwich; Dr. Van Idelson, Berne; Mr. P. J. Jackson, London; Mr. H. B. Roberts, Baden, Germany; Mr. W. Eassie, London; Mr. J. Davison, Bellaghy; Mr. W. M. Bristow, Wavertree; Mr. J. Dixon, Dorking; Mr. J. Burns, Salisbury; Mr. H. Davis, Tuam, County Galway; Dr. H. Barnes, Carlisle; Mr. H. Myddelton-Gavey, London; Dr. Teevan, Melbourne; Mr. O. Scattergood, M.B., Leeds; Mr. H. B. Hewetson, Leeds; Mr. W. A. Satchell, St. Servan; Mr. G. P. Atkinson, Pontefract; Mr. M. Thomson, Boxmoor; Mr. A. Jackson, Sheffield; Dr. W. Carter, Liverpool; Dr. J. Tatham, Salford; Dr. J. Alexander, Glasgow; Mr. W. H. Laban, West Bromwich; Messrs. Bush and Co., London; County Practitioner; Mr. W. G. Bacot, Blandford; Mr. C. H. Cuming, Plymouth; Dr. R. H. Fox, London; Mr. L. FitzPatrick, Queanbeyan, New South Wales; Mr. H. Ker, Birmingham; Cratægus; Dr. H. McAlister, Carrickfergus; Mr. E. White Wallis, London; The President of St. Thomas's Hospital, London; A Member; Mr. C. W. Evans, M.B., Bakewell; Mr. A. W. Nankivell, Chatham; Mr. R. Fletcher, Manchester; Mr. W. Adams Frost, London; Mr. C. G. Wheelhouse, Leeds; etc.

BOOKS, ETC., RECEIVED.

Social Arrows. By Lord Brabazon. London: Longmans, Green and Co. 1886.

Manual of Urine Testing. By K. M. Heanley. London: H. K. Lewis. 1886.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE "BRITISH MEDICAL JOURNAL."

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BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

ON AN OUTBREAK OF CHOLERA AMONGST BRITISH EMIGRANTS PROCEEDING FROM LONDON TO QUEENSLAND IN THE S.S. "DORUNDA," IN DECEMBER, 1885.

Read at the Section of Public Medicine at the Annual Meeting of the British Medical Association in Brighton.

By SURGEON-GENERAL W. R. CORNISH, F.R.C.S., C.I.E., Q.H.P.,

Fellow, and late President of the Medical Faculty, of the Madras University.

In December last, the readers of the daily journals were startled by the telegraphic announcement that epidemic cholera had broken out in an emigrant ship, proceeding from London to Queensland.

As the Australian colonies have hitherto had the good fortune of remaining absolutely free of this terrible scourge, it became a matter of scientific interest, as well as of deep practical importance, to ascertain with exactitude the actual circumstances under which this manifestation of cholera appeared.

Having been accustomed to such investigations during my Indian service, I intimated to the Colonial Office a desire to be furnished with any documents bearing upon the subject, and was referred by the Colonial Secretary to the agent of the Queensland Government.

I wish here to acknowledge the kindness and courtesy of C. S. Dicken, Esq., Secretary to the Queensland Government Agency, in furnishing me with a copy of "The *Dorunda* Inquiry," an official paper presented to both Houses of Parliament by command; also to Messrs. Gray, Dawes, and Co. the agents of the British India Steam Navigation Company, for allowing a reference to the original log of the *Dorunda*, and to Dr. Thomas Hickling, the Surgeon-Superintendent of emigrants during that particular voyage of the vessel, for valuable information given at a personal interview, as well as for the loan of papers referring to the subject, my cordial thanks are due.

The circumstances of the *Dorunda* cholera-outbreak were recorded with great fulness, by a special medical board appointed by the Queensland Government, of which board Dr. J. Bancroft, of Brisbane, was president. This board examined fourteen witnesses on oath, and, after obtaining all the information in their power, made a report on April 2nd, 1886.

From this report and appendices, and from the medical officers' "diary" or "log," an official document kept in accordance with the regulations of the Emigration Department, I have condensed the following narrative.

The British India steamer, *Dorunda*, left Blackwall at noon on October 20th, 1885, carrying a crew of 105 officers and men (the crew mostly Indian Lascars), and 367 passengers (men, women and children), chiefly of the class of assisted emigrants, of British and other nationalities, bound for Brisbane. The emigrants and ship's-crew were under the medical charge of Dr. Thomas Hickling, an old officer of the Queensland Government, who had been thirteen years engaged in similar duties. All the evidence goes to show that the steamer was well adapted for the conveyance of emigrants, that there was no overcrowding, that the sanitary arrangements, food, water, etc., were unexceptionable.

The *Dorunda* touched at Malta on October 29th, reached Port Said on November 2nd, and Aden on November 9th. At Aden, the *Dorunda* remained for two days, and, at this port, her crew of Indian Lascars was exchanged for a new set of men coming from Bombay. The new crew was medically inspected by the surgeon, before the men came on board.

On November 11th the steamer proceeded on her voyage, touching at no other port until November 27th, when she was brought alongside of the inner harbour, or canal mouth, at the coaling station of Priok, which is the landing port of Batavia in Java.

From the time of leaving England, to arrival at Priok, the health of passengers and crew had been quite satisfactory. There had been the usual inconveniences from sea-sickness, and minor ailments amongst women and children, but no case of severe illness. One child, aged 7 months, had died of dentition the day after embarkation at Blackwall, but with this exception, no severe or fatal sickness occurred, until after leaving the Batavian port.

The *Dorunda* arrived in the Batavian harbour, Priok, at noon on November 27th. The object was to take in a supply of coal for the remainder of the voyage, and about 560 tons were put on board during the afternoon and night of that day. It seems, from the evidence collected at Brisbane, that some steamers coal in the outer harbour or roadstead, the coals being brought alongside in lighters, while others run in and lie alongside a bamboo jetty, over which coals are brought by coolies, in baskets, from the depôt on the adjoining shore. The *Dorunda* lay alongside the jetty and close to the land, for a period of twenty-four hours, and during this period about 100 Javanese coolies had access to the deck of the steamer, in coaling and removing cargo.

This Priok harbour has a bad reputation for salubrity. It is situated in marsh and jungle, and is connected with Batavia by a line of railway and canals. The coolies who work there in the day-time do not, if they can avoid it, pass the night there. The immediate neighbourhood has no native houses, and the coal landed here for the use of steamers is kept in heaps in open spaces, close by the jetty. These coal depôts, it is shown in evidence, are resorted to by the native workmen as latrines, and the surface of the coal enclosures is polluted by their filth.

On the arrival of the *Dorunda*, most of the saloon passengers, about twenty in number, landed and proceeded to the town of Batavia by rail, and remained there while the steamer was in harbour. The emigrants were not allowed to land, and although some of the men seem to have attempted to reach the shore, there is no evidence to show that any of them, except one or two constables placed at the bottom of the gangway to stop others, ever succeeding in putting foot on the land.

The constables were directed also to prevent native fruits being brought on board; but, as a matter of fact, the evidence collected at Brisbane shows that one bum boat did approach the ship, and that a few of the passengers (curiously enough, four are mentioned who ultimately took cholera), did buy or use cocoa nuts, bananas, and pine apples, before the dealers could be driven off.

The evidence laid before the Brisbane Board of Enquiry shows that no cargo was taken on board at Priok, but that fresh vegetables, fruit and potatoes were brought on board for the use of the saloon table. It is important to note that the commander and agent of the steamer declared emphatically that no water was shipped at Priok; and, indeed, the evidence in regard to water is that distilled water from the ship's condensers was in use throughout the voyage.

The evidence in regard to the sanitary condition of the island of Java, while the *Dorunda* was at Priok, is not so clear as could be desired. I am not aware that the Dutch publish any statistics of births and deaths of the native populations under their rule. It is quite certain that no official intimation was made to the captain or medical officer of the *Dorunda*, of the existence of cholera in the port on November 27th, 1885, and it becomes necessary to sift carefully the evidence on this point.

The British Consul at Batavia, writing officially on January 20th, 1886, declares Batavia, at that time, to be absolutely free of cholera. The last general epidemic, he states, occurred in 1881. But this negative evidence is rather upset by his admission that, during the dry season, from May to November, "sporadic cases from time to time appear, as they do I believe in almost all eastern ports." It is quite plain, from what we know of the history of cholera, that it may have epidemic prevalence in a place in one month, and be absolutely extinct two months later. The consul's statement, therefore, is to be taken for what it is worth, namely, that there was no cholera in Batavia on January 20th, 1886.

On the other side, there is very positive testimony that cholera was prevailing in Batavia and its neighbourhood in the month of November, 1885. Dr. Hickling, in his evidence, states that he always makes a point of inquiring of the coolie overseers as to the health of the people of the port. I said to one of them he says this last time, "You have cholera here." "Well," he said, "it is here; but it is not known officially." This is corroborated by the captain, who says that Dr. Hickling mentioned to him the statement of the overseer.

But more precise details are mentioned by an independent witness. The Rev. Mr. Spicer, British chaplain at Batavia, hearing that the cholera outbreak in the *Dorunda* was attributed to communication with Batavia, wrote a letter to the *Brisbane Courier*, under date of

January 17th, 1886, with the object of showing that Batavia had been unjustly blamed. In this letter, he states positively, of his own knowledge, that three cases of cholera (two fatal) had occurred amongst European residents within one week—"about two months ago"—that is, about the middle of November—Mr. Spicer further admits that "at the time the *Dorunda* was here, cases of cholera were reported from Sourabaya and other towns along the Java coast." He further corroborates the consul's statement that cholera usually shows itself in Java in May (beginning of the fruit-season) and November (beginning of the monsoon rains). Mr. Spicer speaks in laudatory terms of the suitableness of the Batavian climate to Europeans who take ordinary care of themselves; and his evidence in regard to the prevalence of cholera on or about the date the *Dorunda* was in harbour is all the more valuable, inasmuch as the purport of his letter is to show that cholera was not a constant or overwhelmingly prevalent epidemic in the island.

I am of opinion, therefore (in the absence of official disproof in the shape of registration of the causes of death) that the evidence as to the existence of cholera in Batavia during November, 1885, is quite positive and unassailable.[1]

The harbour or coaling-station of Priok, as has been already stated, bears an evil repute for salubrity. It lies in a mangrove swamp, and exposure to the night-air is avoided by all who can get away from it. The evidence of other ship-surgeons shows that agues, remittent fevers, and dysentery are often contracted at the place. Dr. Hickling, the surgeon of the *Dorunda*, was some years before in charge of the steamship *Durham*, which touched here and took in water on her homeward voyage. Cholera broke out four days after leaving the port, and occasioned twelve cases and four deaths amongst the crew; and the steamer was quarantined at Aden and Egypt. This occurred in December, 1881.

To resume the story of the voyage, the *Dorunda* took on board a pilot, and left Priok at noon on November 28th. The course lay through Torres Straits to Thursday Island, on the north-east coast of Queensland, the air and climate being specially tropical and sultry during this part of the voyage. The first case of anything in the nature of cholera was noticed on December 2nd, or on the fourth day after leaving Priok.

The patient was an elderly man, who had been ill in England, and ailing throughout the voyage. On reference to the surgeon's log, I find that he had been to hospital on various occasions during the voyage, for constipation, fever, catarrh, etc. The notes written in the log regarding the case are important, because the surgeon who treated the patient was not willing to admit before the committee in Brisbane that it was a genuine case of cholera; and I have gathered, from a conversation with Dr. Hickling, that, even viewed in the light of after events, he is not satisfied that the disease was of choleraic character.

The following are *verbatim* extracts from Dr. Hickling's log.

"B. L., aged 62; diarrhœa. December 2nd, 8 P.M. Has been suffering all day, since 7 A.M., from diarrhœa; voice husky; pulse 98, weak; much thirst; vomited once.

"3rd, A.M. Vomited milk and chicken-broth; cramps in calves of legs and feet; pulse 110, weak and small; temperature 98.6° Fahr. P.M. Has retained everything since morning; three motions, watery, but with colour.

"4th, A.M. Pulse 94, stronger; temperature 99.6°; perspiring freely, no pain. P.M. Pulse 85; temperature 99.4°.

"5th. Pulse 88, weaker, but fair; temperature 98°. Has had fewer motions, and passed a fair quantity of urine (no albumen).

"6th. Complains of excessive weakness; eructates a little greenish (fluid?); makes water more freely. A.M., Pulse 80, temperature 98.5°; P.M., pulse 98, temperature 98.5°.

"7. Bilious vomiting, bowels frequently moved. Pulse 85, temperature normal.

"8. Bowels moved three times in night, chiefly flatus. Pulse 78, temperature normal; takes plenty of nourishment."

From this date recovery was slow, but progressive. The Medical Board at Brisbane came to the conclusion that this was the first case of cholera on board the *Dorunda*, and, after a careful review of all the evidence, I am quite in accord with the Board in this opinion, but it is only fair to state that Dr. Hickling, who saw and treated the case from day to day, is still doubtful on the point. He argues that the urine was not suppressed, that the patient was never collapsed, and, therefore, that it could not be a genuine case of Asiatic cholera.

So far as the recorded notes of the case go, it is clear that the patient did not at any time sink into actual collapse. He had white watery stools, cramps, thirst, vomiting, and husky voice, and continued in a low state for many days, and it is in evidence that some old soldiers who had been in India, and were practically acquainted with cholera, "thought" him to be suffering from cholera. Practically, whatever theory the surgeon had formed of the case, the man was treated as though he suffered from a contagious malady. He was isolated from the family quarters, special nurses told off to wait upon him, and his excretions were carefully disinfected. Thanks to skilful treatment and nursing, the man recovered; but I have myself no doubt whatever as to the real nature of the disease. This, according to the evidence, was one of the persons who got some fruit at Priok. The surgeon states also that he was one of those restrained by himself from going ashore. He had been assisting the surgeon before his illness.

I wish to state distinctly my opinion that the non-recognition of this case as one of epidemic cholera was very excusable. The symptoms and course of the disease were not absolutely clear, and persons having an every day familiarity with cholera might have come to the conclusion that Dr. Hickling did. In his evidence, Dr. Hickling states that the case seemed to him like a bad attack of English cholera; but, as the severity of the symptoms subsided, "the idea of cholera went out of my head."

The next suspicious case which is noted in the surgeon's log is under date December 6th. Here there is no reference to cholera, and the special features of the case seem to have attracted no notice from the Medical Board in Queensland. The entry relates to the death of an infant, eighteen months of age, the child of German parents. I quote it in full.

"M. S., aged 18 months; convulsions from diarrhœa.

"December 6th. Called to this child at 7.30 A.M. It had eaten meat last night for supper, and had been suffering from diarrhœa all night; when seen it was in a state of collapse, pulseless at the wrist; it died at 9 A.M."

The heading of the case would seem to indicate that convulsions had followed upon the attack of diarrhœa, but no reference is made to these symptoms in the brief record of the surgeon. I may remark that convulsions are not at all uncommon in children attacked by cholera in India, due probably to uræmic blood circulating in a sensitive brain. The "collapsed" and "pulseless" condition of the child after a night of active diarrhœa does not seem to have suggested to the medical officer any connection with the previous case of diarrhœa. Yet, in glancing over the record of occurrences noted in the surgeon's diary, it seems to me that the case of this child occupies a significant place. The medical officer only saw the child when it was in a dying condition, but the history he gives of dietetic error, profuse diarrhœa, collapse, and want of pulse, all occupying only a few hours, seems to me to indicate that the case might have been properly classed with those of epidemic origin.

In support of my view of this case, I have to note that two persons of the same name, and presumably of the same family, were treated for "diarrhœa" on December 3rd, the fatal attack of the child occurring on the 5th. In the subsequent outbreak of recognised cholera, two members of this family died.

On December 5th, the surgeon's log shows two entries of German emigrants for "diarrhœa."

On the morning of the 6th, the infant (M. S.), whose case has already been given, died, and two fresh cases of diarrhœa were treated. One of these had also "vomiting and stomach-ache." Of the other (W. S.), it is recorded: "Had diarrhœa since yesterday morning, but thought it would go away. Tongue silvery white. Motions thin and dark, with lumps of undigested food."

On December 7th, the *Dorunda* reached Thursday Island. The health-officer boarded the ship at 6.15 A.M., and appears to have satisfied himself that there was no need to interfere with her proceeding on the voyage. On this day, two fresh cases of diarrhœa were entered in the medical log.

On December 8th, the number of new diarrhœa cases coming under the doctor's notice had increased to seven.

On the morning of December 9th, the *Dorunda* arrived off the port of "Cookstown," where she appears to have been boarded by the health-officer, and to have been passed by him.

While the immigration agent was on board transacting business with the Surgeon-Superintendent as to the disposal of some of the single women emigrants, the first unmistakeable seizure with cholera occurred. The particulars of the case are gathered from the surgeon's

[1] Since this paper was written, I see, in a Queensland paper, that the British Consul in Batavia had forwarded to the Chief Secretary the report of the municipal health-officer, Batavia, on the sanitary condition of Tanjon Priok. The report shows that thirteen cholera-patients were taken to the Batavia Convict Hospital from October 1st to December 31st, 1885, of whom eight died.

log, and evidence given before the Brisbane Medical Board. The wife says that her husband (T. D., aged 33) got up well and hearty at 5 A.M., and had his bath. At 7.30, he complained of diarrhœa. At 9 A.M., he was getting worse, when she advised him to see the surgeon. There appears to have been some little delay in getting medical help, as the surgeon was engaged with the immigration agent, but at 11 A.M. he got medicine, which, however, did not check the diarrhœa or vomiting. At 1 P.M., cramps set in. At 5 P.M., he had passed into a state of collapse; and at 7 P.M. he died. This case was reported by the surgeon to the captain as one of undoubted Asiatic cholera. Meanwhile, the steamer was on her way to the next port of call, at Townsville. Two out of three children of this man (T. D.) were seized with diarrhœa and vomiting on the same evening. Both died on the next day (10th). This man and his children ate fruit bought at Priok, according to the wife's evidence.

A man (L. H. F.), who acted as one of the constables on board, and who had served in India as a soldier, complained on December 7th of being very unwell. He had helped to nurse the first suspicious case (of B. L.). His disease is entered in the log as "malaria;" but he had severe diarrhœa, with a foul tongue. This man appeared as a witness before the Medical Board; and, in his evidence, states that, while employed in nursing B. L., who had been isolated on the upper deck, he was attacked by diarrhœa, and was under the doctor's treatment. He was ill at Thursday Island (7th), and had more or less continuous diarrhœa until reaching Townsville on the morning of December 10th, when he was seized with cramps, and afterwards lost consciousness. He passed through a severe attack of cholera, and recovered.

On the morning of December 10th, the *Dorunda* arrived off Townsville. The health-officer was informed that a contagious malady prevailed, whereupon he proceeded on board to see for himself, and was satisfied that the disease was epidemic cholera. His action in boarding an infected ship was not appreciated by his fellow-townsmen, who proceeded to put him and his household in quarantine. Some delay occurred in arriving at a decision as to what should be done with the ship. Ultimately, it was decided that the steamer should proceed in quarantine to Peel Island, opposite Brisbane, as the quarantine arrangements there were more advanced than in any of the Northern Queensland ports, and the weather, moreover, was more settled in the South. After securing additional medical aid, Dr. Hickling being worn out with anxiety and incessant work (it is on record that he had not time to take his clothes off for three consecutive days and nights), the steamer left Townsville on the afternoon of the 11th, arrived in Moreton Bay on the 14th, and landed the emigrants at the quarantine station on Peel Island on the morning of December 15th.

About December 10th, the epidemic attained its maximum of intensity. Diarrhœa was very prevalent, and something like panic prevailed amongst the emigrants. One witness, who was seized with cramps on the evening of the 10th, says: "I called for help, but no one would come to me. This was the night there was such a panic on board. Although there were seventy men around me, not one would come near me. Then Mr. Radcliffe, one of the saloon passengers, came to me with two men, and brought some brandy. No one would come near me until he came, and put me back into bed, and had me rubbed with hot water and turpentine."

The daily admissions and deaths from choleraic diarrhœa, and cholera, are extracted from the log in the following tabular form. It is possible, of course, that many of the diarrhœa cases were due to nervous excitement; but, on the other hand, it is probable that many cases of temporary looseness of the bowels were not reported at all.

Date.	Admitted Cases.	Deaths.
December 10th	24	2
,, 11th	5	2
,, 12th	6	2
,, 13th	8	2
,, 14th	9	2
,, 15th	3	1[1]
,, 16th	5	1
,, 17th	10	1
,, 18th	3	0
,, 19th	0	1
,, 20th	15[2]	1
,, 21st	1	0
,, 22nd	0	1
,, 23rd	0	0

From December 21st, the epidemic may be said to have been practically over. The emigrants were detained on the quarantine station until January 7th, when they were permitted to proceed to their respective destinations.

In all, seventeen persons died of cholera, not including the doubtful case of the child on December 6th. The number of diarrhœa cases of a choleraic character treated before the emigrants were landed in quarantine, was about 75. It should be noted here that none of the crew or ship's officers were affected, nor did the saloon passengers (about 20) who landed at Priok, and passed the night in the town of Batavia suffer. One lady of the latter class had diarrhœa, which the surgeon thought to be due to nervousness.

It has been already shown that the maximum intensity of the epidemic was reached on December 10th, and that it had begun to decline, as regards new cases, from that date. It should be noted that only two new cases of cholera showed themselves after the evacuation of the steamer on the 15th; namely, one on the 16th and the other on the 17th, and these had undoubtedly taken the germs of the disease into their systems before leaving the ship. There was an accession of simple diarrhœa, chiefly amongst the single women, on the 20th, when they had been five days ashore, but this was of a mild character, thought to be due to atmospheric changes.

The enquiry held at Brisbane shows that the *Dorunda* was well fitted and arranged for emigration service, that she was sanitarily in a sound condition, and that there were no local circumstances connected with the vessel to induce or foster the development of cholera. The excellent health of the passengers for the first six weeks of the voyage may be adduced in evidence of the careful provision made for the passengers' health and comfort, but a curious fact was brought out in the course of the enquiry, which I will here notice. It is the practice, in all ships at sea, to use white sand for holystoning the decks. It seems that the *Dorunda* had run out of white sand, and took in a new supply at Priok. This was brought on board in bags, and when the emigrants came to use it for cleaning the decks, around the berths of the single and married men, they found it was black and filthy, and that it stained the boards of a dark colour, instead of cleaning them. The evidence goes to show that this foul sand was used on two occasions only, after leaving Priok, for cleaning the decks of the married and single men's quarters; and that, on reports being made of the bad quantity of the sand, it was ordered to be discontinued, the remaining stock being thrown overboard.

This sand, according to the witness, Ferris, was nearly black. He says, "I got a tin and washed some of it, and there was a quantity of dirty water came from it. I believe the purveyor of the vessel, Mr. Sinclair, reported the matter to the doctor, after we had tried to use the sand for a day or two. It was tried round the berths for two days, and it made the place more dirty than it was before. Eventually it was thrown overboard. The purser said, 'Throw it away; that is no good.' It turned the boards black instead of white. The water I washed it in had an offensive smell."

This evidence is corroborated by two other emigrant constables, so that the fact of using a polluted and possibly cholera-contaminated sand for two days in cleaning the decks is well established.

I need not add that, on the supposition that the sand had been carelessly collected from a spot recently contaminated by cholera-excretions, we should want no other evidence to explain how cholera had been brought on board. That the sand contained organic impurity is certain from its colour, and the offensive smell of the water in which it was washed, and we have every reason to suppose that cholera was prevailing in the native population during the period the *Dorunda* was in harbour. Is it not possible that a cholera-soil was brought on board in this polluted sand?

In this case, it is quite evident that we must set aside the question of water contamination. There is no evidence to show that any emigrant drank water at Priok, other than that habitually used from the steam-condensers during the voyage.

The history of the cholera-outbreak on board the *Dorunda* possesses some interest both in a scientific and practical point of view. In regard to the mode of infection, the ascertained facts show that only after communication with the port of Priok in Java, where cholera was admittedly prevalent in November 1885, did the disease manifest itself amongst the passengers in the *Dorunda*. Those who hold that cholera is incapable of transmission by ordinary channels of human intercourse, will find it hard to explain why this particular outbreak should have occurred only after communication with an infected locality. I have ventured to bring the circumstances to the notice of the Public Health Section of this Association, because the tendency, of recent years, has been to make light of, or to ignore, the experience of the past, in respect to the methods by which cholera spreads. What has happened in the case of the *Dorunda* may occur again, and our vast colonial possessions in southern seas may at any time receive an importation of cholera by means of the emigration service in connection with the ports of Queensland.

The voyage from Priok to Thursday Island occupies from eight to

[1] Landed at Peel Island.
[2] Simple diarrhœa, chiefly amongst the single women.

nine days only; and, as in the case of the *Dorunda*, cholera may not unmistakably declare itself until some of the most northern ports of Queensland have been passed. The Queensland Government is apparently fully alive to the danger; and it possesses an efficient quarantine law, and has established isolated quarantine stations at the various northern ports of call. The quarantine station at Townsville, however, does not appear to have been in readiness for the accommodation of a large number of emigrants in stormy and unsettled weather; and hence the decision of the authorities to send the ship onward to Peel Island, which involved a delay of three days in landing, and in the segregation of the sick from the healthy. If Batavia is to be used in future as a coaling-station, it would seem to be desirable, in the interests of the colonies, to maintain ample quarantine accommodation at Thursday Island and Cook's Town always in a state of preparedness.

The quarantine arrangements at Peel Island involved the landing of all passengers, sick and healthy, and their isolation for a period of nearly three weeks from the date of the last case of cholera. So far as is known, cholera was not communicated to any of the inhabitants of the country, and the means adopted appear to have been successful in stamping out the disease. If an emigrant ship in similar circumstances had appeared in a British port, the sick would have been separated from the healthy, and the latter, after a brief period of observation, allowed to mix with the resident population.

I am inclined to think that the Queensland quarantine regulations are best suited to the circumstances of the colonies, and that the authorities wisely exercise an excess of caution in their efforts to preserve the inhabitants from a pestilence of the nature of cholera. There may be some inconvenience to shipowners and passengers under the Queensland rules, but the public safety is undoubtedly better assured by the temporary isolation of all persons who have been exposed to cholera-infection. It is quite possible that the liability to cholera-importation may be diminished by the abandonment of Priok as a coaling station on the outward voyage. This port, when cholera is present, is unpleasantly near to the northern ports of Queensland; and, if circumstances necessitate its use for coaling purposes, it would be safer to direct that emigrant vessels should not use the inner harbour, which is, according to the evidence recorded, a most unhealthy locality. The duration of the sea-voyage in regard to New South Wales, Victoria, Adelaide, and Western Australia, has hitherto been their most efficient protection from Asiatic cholera; and even, at present, these colonies are only reached after from eighteen to twenty-five days of isolation from Asiatic ports. But the new route to Queensland exposes the passengers to a long voyage through tropical seas, and to the dangers of touching at Asiatic ports, where cholera is more or less an indigenous disease. On the efficiency of the Public Health Service, and due preparation in Northern Queensland for similar outbreaks to that of the *Dorunda*, we must trust to the protection of Australia in the future.

In conclusion, let me remark that, since the lamented death of Dr. J. Netten Radcliffe, it would seem to be nobody's business to collect and survey, from time to time, the progress of epidemic cholera in various parts of the world. Local outbreaks of the disease in India are duly recorded by the sanitary department; and, if they should occur in this country, the facts would be clearly ascertained and recorded by our public health officers. But there are many parts of the world of which we have but an imperfect cholera-history; and I may specially mention China, Japan, and the islands of the Eastern Archipelago as localities regarding which our knowledge is very imperfect. I think it would be most useful to students of epidemiology if the facts regarding cholera could be collected in an annual report by some of the able public officials connected with the Public Health Service, and published for general information.

DONATIONS AND BEQUESTS.—Mr. Philip Horsman (in addition to previous munificent gifts to the town) has offered to defray the whole expense of providing and furnishing the in-patients' department of the new Eye Infirmary, to be erected in the Merridale Road, Wolverhampton, which is estimated at £4,000.—Mrs. M. Gatley Litler, of Wallerscote, near Leamington, bequeathed £1,000 to the National Hospital for the Paralysed and Epileptic, £1,000 to the Royal Hospital for Incurables, £500 to the Warneford and South Warwickshire Hospital, Leamington, £500 to the British Home for Incurables, and £200 to the Kenilworth Convalescent Home.—The Devonshire Hospital, Buxton, has received £1,000 under the will of Miss M. J. A. Nightingale.—Mrs. Henry Dewhurst, of Tartown, has given £500 towards the fund for providing a new ward for children at the Halifax Infirmary.—The Northampton General Infirmary has received £200 under the will of Mr. Henry M. Vane.

SECTION OF PSYCHOLOGY.

WEDNESDAY, THURSDAY, AND FRIDAY, AUGUST 11TH, 12TH, AND 13TH.

THOMAS S. CLOUSTON, M.D., President, in the Chair.

Experimental Dietetics in Lunacy Practice: A Record of Investigation and Results. By A. CAMPBELL CLARK, M.D.Edin., Medical Superintendent, Glasgow District Asylum, Bothwell.—The object of this paper was to place on record the lines of investigation adopted, the motive of the inquiry, and the tabulated results. It had occupied so long a time as to preclude the addition of the deductions necessary for a natural termination of the inquiry. Five female patients, as alike as possible in mental and dynamic conditions, were clinically examined, and standardised beforehand. Their digestive functions were approximately studied, by a variety of methods, at the commencement, and at several stages of the inquiry; and a series of dietetic experiments, sixteen in all, were entered on; beginning with ordinary diet, and gradually introducing eggs and milk to the exclusion of all else, a maximum was soon reached of twelve eggs and four pints of milk daily, with decided loss of weight. This was recovered from by the administration of small doses of calomel; but when the action of the latter was intensified by the further administration of an acid and nux vomica, mercurialisation supervened, and the weight fell. Various other combinations were tried; but the maximum and best results were apparently obtained by increasing the relative quantity of milk. A series of tabulated results brought into relief: (1) The rate of salivary digestion; (2) the rate and degree of gastric digestion; (3) approximate evidence of the extent of biliary, pancreatic, and intestinal digestion; (4) a general description of the prepared foods, and their calculations, the amount of exercise, and the gain or loss of weight; (5) an analysis of the various diets, and comparison with standard diets; (6) the total ingesta, actual of solid food and water, approximate by lungs, and the percentage excreta by bowels and kidneys; (7) the average daily quantities and specific gravities of day and night urines; (8) the excretion estimates of phosphoric acid, chloride of sodium, and urea. The paper was not yet complete, and only a tentative opinion could meanwhile be held with reference to several of its points of interest.—The PRESIDENT said that Dr. Clark had done, with enormous labour and extraordinary care, what so many physicians to asylums had wished to do. He had made a beginning of a really scientific investigation into the effects of diet on mental disease. The amount of labour involved must have been enormous. Such work would be a real and great gain in the treatment and cure of insanity. Dr. Campbell Clark deserved the highest credit for his work.—Dr. CAMPBELL (Carlisle) expressed his high opinion of Dr. Clark's paper; but, while thanking him, and hoping that he would continue his experiments, he would suggest that he should first lay down certain rules for his mode of action; that he should institute an examination into an ordinary asylum diet-scale; and that he should give the items that formed any compound foods. It would be a great boon, from an economic point of view, if the cost in money of each diet were given with the results.—Dr. SAVAGE (London) said that, in his experience, constipation was not constant with fluid food. Diarrhœa had often followed at the end of a few weeks. He gave varying fluid diet. He believed that the addition of stimulants to diet was of great service, and that the same amount of food, with a little stimulant each time, would be good.—Dr. NEEDHAM (Gloucester) suggested that, in future experiments, the influence of maltine added to the food should be considered. He had found that this combination had exercised the largest influence in increasing the weight of the patient, and its omission had been followed by a corresponding diminution of weight. His custom was to use a combination of milk, eggs, entire wheat-flour, and maltine.—Dr. DEAS (Exeter) thought that the value of Dr. Clark's results would have been enhanced if the various experimental dietaries had been tested on one or more sane individuals. He also pointed out that the frequent changes, at very short intervals, was calculated to vitiate the results, by tending to impair the digestive functions. He also thought that the number of eggs given was too large, and that the latter experiments tended to show that a diet with a larger quantity of milk was more easily assimilated, and gave better results in regard to increase of weight.—Dr. CHAPMAN (Hereford) said that such a laborious mass of research as was embodied in Dr. Clark's paper deserved the highest praise. He thought it might be useful to call attention to a practical point, which occurred to him in looking over Dr. Clark's tables, and which was emphasised by the remarks of Dr. Savage and Dr. Needham. In giving custards, too little of carbohydrates was given, which Dr. Needham supplied in maltine, and Dr. Savage in alcohol. Sugar, or starch, would probably have served the

same purpose. Common salt was also apt to be omitted in making custards.—Dr. CAMPBELL CLARK said, in reply, that Dr. Campbell misunderstood the first table, which was a mere expression, in general terms and in popular calculations, of the nature of the inquiry. Dr. Deas had suggested to combine sane with insane subjects for experiment; but this form of inquiry he definitely abstained from pursuing, for the purpose was to understand the digestive peculiarities of the insane, and to establish a standard for them, not a standard regulated by dietaries for the sane. The loss of weight, which he attributed to excess of eggs, and the gain to excess of milk, were not thus properly accounted for. Loss, as he understood it, was due to defective emulsification, and increase to the converse. Drs. Needham and Chapman had referred to maltine and stimulants as valuable adjuncts, especially as carbo-hydrates; but, in this latter respect, they were totally inadequate.

The Relation of Marriages of Consanguinity to Mental Unsoundness. By G. E. SHUTTLEWORTH, B.A., M.D., Medical Superintendent, Royal Albert Asylum, Lancaster.—In this paper, the author discussed the diverse views held popularly, and by various medical authorities, upon the question of mental degeneracy of offspring arising from the intermarriage of near kin. Quoting and illustrating the remark of Jeremy Taylor that "the elder the times, the more liberty there was of marrying kindred," he went on to show that restrictions on such marriages were imposed in the fourth century from ecclesiastical rather than from physiological considerations. Referring to experience as to inbreeding of stock, he pointed out that great care was needful in selecting as parents animals free from any morbid tendency, to prevent deterioration of offspring; a care which, unhappily, was usually not exercised in arranging human marriages. Statistics were not available to determine exactly the proportion of consanguineous marriages to all marriages in the general population; a matter which, indeed, was, to a great extent, one of surmise. If, however, Mr. G. H. Darwin's conclusions might be accepted, it would appear, from the statistics derived from the experience of idiot institutions, that the marriage of first cousins must be regarded as a factor in the production of imbecile children. It was, however, seldom the sole factor; and the danger of such marriages would appear to lie in the intensification of morbid hereditary tendencies in the offspring, though such tendencies might not be actually developed in the parents. The experience on this subject, of British authorities, seemed to be confirmed by the statistics of American imbecile institutions.—Professor BALL (Paris) expressed the opinion that consanguinity in parents, while it certainly multiplies pre-existing morbid predispositions, has no evil influence when the parents are both of fairly sound health. He mentioned as instances the following facts. In several of the mountain valleys of Europe, the whole population seems descended from the same stock, and yet exhibits no signs of degeneracy. He quoted the Vallé des Ormonts, in the Canton de Vaud, in Switzerland, and some other cases. He observed that the Incas of Peru were under a religious obligation to marry their eldest sisters, and that these consanguine unions gave birth to a line of twelve princes, all equally remarkable for prowess, vigour, and ability; but, in practice, since in our civilised communities all men have some morbid taint in their ancestry, it is much better for the physician to oppose, instead of favouring, such marriages.—Dr. LANGDON DOWN said that he once commenced a paper to prove that marriages of consanguinity were exceptionally productive of idiocy and imbecility, but the facts he met with in his investigation converted him to the opposite view.—Dr. FLETCHER BEACH (Darenth) said that there was no doubt that the truth with respect to consanguineous marriages was that, provided the parents were mentally sound, the offspring would probably be so too; but that, if there were any defect in the parents, it would be intensified in the children. Of 836 cases in the Darenth Asylum, where information could be obtained, 14 were found to be the children of first cousins, a percentage of 1.67 per cent., agreeing thus with Mr. Darwin's percentages of marriages of first cousins in London. Of these 14 cases, the parents in nearly all were mentally unsound, the most notable case being one where the father was intemperate, the grandfather intemperate and insane, the uncle intemperate and imbecile, and the mother's father was paralysed. With such an ancestry, it was not surprising to find that the child was an imbecile. Two children were the offspring of second cousins; in two cases, the patients' parents were first cousins, and, in one, the father had married his niece.—Dr. HACK TUKE (Hanwell) expressed his agreement in the conclusion of the paper. He thought, however, that, on the side of evil effects of consanguineous marriages, we ought to comprise the cases of deafness and blindness which are alleged to be associated with the marriage of near relations. On the other side of the question, the Cagots might be mentioned, who do not marry with neighbouring populations, but there is no more insanity or idiocy among the former than the latter. While, however, disposed to hold that no bad effects necessarily result from the mere marriage of relatives, the alienist must continue to discourage these marriages, because of the difficulty of securing the perfect health of those who marry.

Alternation of Neuroses. By GEO. H. SAVAGE, M.D., F.R.C.P., Medical Superintendent of Bethlem Hospital.—The author began by explaining what was meant by alternation of neuroses, and described the nervous tree with its branches. He then noticed neuroses as seen in succeeding generations; neuroses as they might occur in the same individual. Alternation was most commonly seen with functional disorders rather than with brain-diseases. Remarks were made on the following alternations: Between nerve-storm-headache and insanity; between hysterical affections and insanity; between asthma and insanity; and between asthma and some bodily diseases; between epilepsy and insanity; between some bodily diseases, such as diabetes, rheumatic fever, and gout, and insanity; between some general and local affections, such as those affecting the skin, and insanity.—Dr. BALL (Paris) cited some cases in illustration of the subject.

Staining of Nerve-Tissue.—Dr. BEEVOR (London) drew attention to the Hæmatoxylin method of staining nervous tissue, and showed a number of preparations. Weigert's method was explained, the central nervous tissue being hardened in bichromate of potash, followed by alcohol, then embedded in collodion, and sections cut; the sections immersed in acetate of copper solution, half-saturated for twenty-four hours, then in alcohol for a few minutes; after this into solution of hæmatoxylin for twenty-four hours, and washed in water for a few minutes; and into a solution of ferrocyanide of potash till all colour was washed out, except from the medullated fibres. Sections of the brain of the marmoset monkey and kangaroo were shown, and also sections of the cord of tabes dorsalis.—Dr. SAVAGE (London) asked if the acetate of copper was used as a hardening method. First of all, he tried acetate as a hardening agent, and not only failed to harden well, but he also spoilt the specimens, in consequence of the deposit of copper salts along the vessels.—Dr. BEEVOR replied that the acetate of copper solution was not used as a hardening reagent, the tissue on the sections being put into this solution for twenty-four hours only, after hardening by bichromate of potash, followed by alcohol.—Dr. HUGHLINGS JACKSON (London) regretted that he had not yet had the opportunity of carefully studying the specimens Dr. Beevor had brought forward. He thought the kind of work Dr. Beevor was doing would be of very great value, and, ultimately, very fruitful for practical purposes, mentioning in particular the elaborate sections of the whole brain of the marmoset.

How the Medical Spirit can best be kept up in Asylums for the Insane.—The PRESIDENT (Dr. CLOUSTON), in opening a discussion on this question, first defined the "medical spirit" as being the "study and cure of a diseased state of mind." Applied in asylums for the insane, this means the conscious interpretation of every asylum general rule and arrangement as to its meaning and its effect on each patient; the buildings, the food, the rules, the nursing, the supervision, the work, the decorations, the amusements, all had such a meaning, and all should have a curative or an ameliorating effect. Why was work medically good for the insane? and to what degree? It did various things that were good. It withdrew the attention from what was morbid to the healthy objective, instead of the unhealthy subjective. It promoted appetite, circulation, and muscular development. It caused healthy functional hyperæmia in the cortex, instead of morbid hyperæmia or anæmia. It inhibited morbid movements. Ward-decoration and cheerful surroundings produced healthy acts of attention, revived pleasant associations of old registered images in the cortex, excited the feeling of gratitude and the protective instincts towards what was good, costly, and gives pleasure. Amusements revived the social instincts, which are so commonly dormant and perverted; they inhibited antisocial practices of all kinds, they excited the highest regions of the cortex to healthy action; and so on, with every other arrangement of a good modern asylum. The medical spirit at every turn would cause us to ask the reason of the rules, as well as that of the unreason of the patients. No doubt the next most important thing to keep up the medical spirit in asylums was to individualise the patients; without this, there could be no medical spirit in an asylum. Each patient must be known bodily and mentally, seen frequently, studied with as much care as possible. To help to do this in a large asylum, it should have a special "admission-ward," and a special "hospital-ward," where all the cases of medical interest should be concentrated, where the medical visits should be first and oftenest made, where the medical records should be most carefully kept, and where the nursing

should be best and in greatest amount. In the Royal Edinburgh Asylum, the new nurses and attendants were placed for training in the hospital-wards, then into the admission-wards. The admission-ward should have two or three sections, one for those needing the immediate and individual supervision of each patient by a nurse responsible for her, able to report as to her minutest symptoms; and another section where employment was the key-note. Another mode of keeping up this medical spirit, was for asylum physicians to mingle with the general profession, to have outside medical men to go through their wards frequently, and to go themselves to general hospitals. Asylum physicians should try and see cases of mild insanity out of asylums, and also cases of acute insanity in their early stages. The stringent rules of the English Commissioners in Lunacy against the physicians to county asylums consulting with their brethren were most anti-medical in their spirit, and, in his opinion, had done great harm to the medical spirit in English asylums. Such rules were unknown in any other country; they have done harm to the asylums and to the public. He had purposely not gone into the self-evident aids to this medical spirit, of clinical recording, and publication, and of pathological investigation. Every asylum physician should look on his department as the highest in medicine, and the most difficult, and therefore as needing all that the best minds could do to advance. Pride in one's work was essential to a proper enthusiasm in doing it. Last of all, a right preliminary training, scientific and medical, before entering one department, would do much to increase the medical spirit. All the profession should be taught something about mental disease. The development of the keenest medical spirit was, he believed, perfectly compatible with the highest administrative efficiency; nay, was likely to be coincident with it.—Dr. SAVAGE (London) said that the "medical spirit" required defining. He did not understand at first that this spirit included every stimulant to the senses and to the viscera; so that every healthy stimulus, from the pleasant landscape to the good dinner, might be useful in the healthy functioning of the sane and the insane. He feared the want of progress was often due to jealousy of superintendents. They should get the best assistants they could, and encourage them to publish all they could. He did not think a superintendent should mind his assistant having better and later medical knowledge than he. He should use his assistants as right hands. As superintendent, he had too much administration to do original work. To encourage the medical spirit, the best physicians obtainable should be selected, as in time to succeed to the highest posts. Thus progress, not degeneration, would follow.—Dr. CAMPBELL (Carlisle) said that he was not astonished at the want of medical spirit in asylum men, as they were often, by the position of the asylum, isolated, not only from their medical brethren, but also from fellow-men; and they were often overworked. The management seemed, in many places, to be rewarded more highly than medical work. Appointments which often were given to outsiders, should be confined to asylum physicians. The asylums in India were superintended by army medical men; surely the treatment of insanity should be considered in the army examination. It was very adverse to the medical spirit, and its production and existence, that lack of promotion among assistants should exist as it did. No better training existed than that received by an asylum assistant-physician for such posts as inspectors of workhouses in England and Scotland; yet the medical profession was practically left out of such appointments. Public asylum men should certainly be allowed to see cases in consultation; and it would be well if the President of this Section could bring an expression on this point before the English Commission, as they had issued a circular advising certain changes in the rules concerning medical superintendents, yet omitting this point. Dr. Campbell also strongly deprecated any interference by Commissioners in Lunacy on asylum appointment. He stated that the English Commissioners refrained from this; but that he believed, on good grounds, that one of the Scotch Commissioners, at times, interfered in this way, and this, he held, had a bad effect on the medical spirit which ought to exist in asylums from numerous aspects upon which he could not enter at length.—Professor BALL (Paris) insisted upon the necessity of developing clinical teaching in morbid psychology, as the best means of counteracting the sleepy tendency which so often creeps upon us at certain times, and also of promoting that intercourse with the medical profession, and the public at large, which alone can dispel the jealousy with which mental physicians are too frequently looked upon by outsiders in general, and by legislators in particular.—Dr. HUGHLINGS JACKSON expressed his great interest in the subject, and congratulated the members present on their efforts in connection with it.—Dr. HACK TUKE (London) expressed his concurrence in the views so well enunciated by Dr. Clouston, and also in the opinion Dr. Campbell had expressed in favour of assistant medical officers being married. He had found in the asylums of the United States that this was encouraged, and the superintendents had told him they considered it a great advantage.—Dr. URQUHART (Perth) said that the medical spirit was to be fostered by early training; and it was, therefore, highly important that the newcomer into the specialty should look about for an asylum where original research was encouraged, and there was every liberty to publish results. Dr. Campbell (Carlisle) touched on the practical points of such a question as this very acutely, but he could afford to select the difficulties rather than to indicate how these could be removed, seeing that the medical work that had been evolved at Carlisle had won the prizes for assistant medical officers, given by the Medico-Psychological Association, for two consecutive years. But it could not be believed, with Dr. Campbell, that this was a matter of money, but that the rewards which followed good work were of far higher nature.—Dr. F. OUTTERSON WOOD (London) said that the importance of prohibiting medical superintendents from acting as consultants could not be overestimated, as it prevented the country from having the benefit of their large experience in the class of cases which fell under their observation, and also prevented their medical brethren from applying to them for advice and assistance in dealing with cases of lunacy. He could not but think that, if proper representation were made to the Commissioners, they would modify their views. Dr. Campbell had referred to the Scotch Commissioners obstructing medical work in asylums, and it was to be hoped he had judged them somewhat severely.—Dr. NEEDHAM (Gloucester) agreed with Dr. Clouston that superintendents of asylums should be allowed to take consultations, as bringing them in contact with outside medical influences, which could not fail to stimulate medical research and effort on their part. He thought that assistant medical officers should be accompanied, in one visit a day to the patients, by their superintendents, whose experience should be of use in aiding the special education of the assistants, many of whom commenced their work without practical knowledge of the treatment of insanity. He also considered that the want of finality in the pathology and treatment of insanity should be regarded as an incentive to further effort, and not as a discouragement by reason of the comparative barrenness of results.—Dr. CAMPBELL CLARK (Bothwell) said that one very important question seemed to have been left out of the discussion, and that was the important part which attendants play in the medical work of asylums. A mass of clinical records was but the transcribed notes of attendants' verbal information. The question then arose, How much could these untutored reports be improved by training attendants? His experience of assistants was, that they were pumped out when they came from college, and they did not see well what to put their hands to in asylum work. The important duty might be given them to instruct attendants, and thus keep fresh their own knowledge, stimulate reading and research, and improve the clinical records. Lastly, collective investigation was wanted, to develop and intensify the medical spirit. This was a matter well worthy of consideration.—Dr. LYLE (Birmingham) said that clinical teaching was much neglected in county and borough asylums. At present, there were only four or five asylums where clinical teaching was in practice. He would recommend that all county and borough asylums should be open for clinical assistants. In this way, the medical spirit would be encouraged and better kept up.—Dr. WHITCOMBE (Birmingham) said he looked rather at the obstructions which were to be met with in carrying out the pure medical spirit in asylums. Medical superintendents must not avoid the responsibility; it was not a matter for assistants, or attendants, but of superintendents themselves. The psychologist was not recognised in a proper manner by the profession generally. He believed no psychologist had ever presided over the Association, of which this was a Section only. Psychology should take its place in medicine as one of its most important parts. The Lunacy Acts appeared to be an obstacle in the treatment of the insane. The misnomer, lunatic, ought to be given up; the lunatic asylums should rather be called hospitals for brain-diseases, or mental diseases, and hospitals they should be.—Dr. ALDRIDGE (Plympton) said that the remarks made had mainly proceeded from physicians of large asylums. Having had experience in both large and small asylums, he had felt the difficulty of maintaining the medical spirit in his own case. Coming from a large asylum (West Riding) to a very small one, from the admission and medical examination of 250 patients to the admission of from 12 to 20 *per annum*, he felt the contrast keenly, and cast about for opportunity for a wider field for observation, which at last came to him in the shape of the appointment of physician to the public dispensary in the nearest town. He had thus seen many cases of mental diseases in a much earlier stage than would permit of their coming under the notice of an asylum physician. Generally, he had felt that such an

appointment, where it could be obtained by an asylum medical officer, must be of great value in keeping alive the medical spirit in asylums. —Dr. DEAS (Exeter) said that when he saw the question put down for discussion, "How the medical spirit can best be kept up in asylums for the insane," it occurred to him that the negative aspect of the question was really the most important, namely, "What are the obstacles that tend to prevent the medical spirit being kept up?" In his opinion, the greatest obstacle of all was the large size of public asylums, and the ever growing tendency for them to become larger. One result of this was that the individual treatment of recent and curable cases was greatly impeded by their being lost among a mass of chronic cases, and that the time and energies of the medical superintendent were so much occupied and dissipated by administrative work, that no man, unless of most exceptional powers, could either give sufficient attention to keeping up the medical spirit in himself, or to cultivating it in his assistants. With reference to Dr. Clouston's advocacy of a separate reception-ward for all new cases, he thought that, desirable as this might be in a great many cases, it was not so for all, and that it was possible, in that and in other ways, sometimes to cultivate the "medical spirit" at the expense of the individual patient. He quite agreed with Dr. Clouston in his remarks as to the needless restrictions placed in the way of medical superintendents of public asylums consulting with their professional brethren in cases of mental disease, but thought that the remedy for this was very much in the hands of medical superintendents themselves if they placed the point fairly and frankly before their committees.—A paper on the subject by Dr. S. A. K. STRAHAN (Northampton) was read in his absence by the Secretary. It is published in abstract at page 585.

On the Separate Care and Medical Treatment of Recent Cases of Insanity, either in Existing Asylums, or in Lunatic Hospitals to be Established for that Special Purpose. By D. G. THOMSON, Surrey County Asylum, Canehill.—The author said that the present method of dealing with the insane (pauper) not being satisfactory, three alternative methods were presented; first, the establishment of a lunatic department in the general hospitals, where every occurring case of insanity could be sent, the incurables sent to some chronic establishment in the country, and the curable cases treated to recovery in the hospital; secondly, the establishment of special urban lunatic hospitals, separate from the general hospitals, with a permanent resident staff, where all occurring cases could be sent, the incurables sent to some establishment for chronic cases in the country, and the curable cases treated to recovery; and, thirdly, the establishment of a special lunatic hospital in the grounds of every existing asylum, to which all cases on admission could first be taken, the manifestly incurable discharged to the main building, and those cases in which there was any possibility of cure detained for treatment. This last plan was the only feasible one, as it would not necessitate any new legislation, the cost would not be prohibitive, transfer and retransfer from the main building would not be difficult, the many advantages arising from the resources of the neighbouring main asylum would be invaluable, grounds and means of outdoor employment would be at hand, not to mention change of air and scene, and other advantages too numerous to mention. He suggested that, in existing asylums, especially those built on the pavilion system, a block be altered and fitted up as a special hospital, and that, in all future asylums, such a hospital be erected "in the asylum, but not of it;" autonomous in nearly every respect, replete with every structural arrangement and medical appliance that skill and experience could suggest, to the end that the more earnest medical study of insanity might be promoted, and that the medical officers being disencumbered of the administrative work necessary for the well-being of hundreds of incurable cases might have the time and means for exerting, to the utmost, their almost forgotten function as physician. The means of applying and carrying out this suggestion would, of course, vary greatly in different existing asylums; but so long as the main principles were kept in view, carrying them out was only a matter of arrangement; these principles were the separation of the curable from the incurable, together with the opportunities for the study and treatment of individual curable cases. It might reasonably be inferred that this would raise the recovery-rate from its present stagnant level, in which case the primary additional cost necessary would be in the end a gain; on the other hand, if the recovery-rate did not increase, we would have the satisfaction of having done everything possible in the present state of our knowledge, which was not being done at present.—Dr. COBBOLD (Earlswood) said that, while agreeing with Dr. Thomson in most points, he would prefer that the hospital department of an asylum should be a part of the asylum itself, and not in a detached building. A lunatic ward in a general hospital was undesirable, except in the case of an university or medical school, where it was useful for teaching purposes. The speaker repudiated the pessimist spirit of the discussion that afternoon; he contended that the medical spirit already exists very largely in many of our asylums; the inmates of our asylums are regarded by the physicians as patients to be treated, and not as prisoners to be confined; classification is very thoroughly carried out in many asylums. The curable insane do actually receive the hospital treatment they require, and attendants are trained in their duties to a greater extent than is generally known. All these matters receive attention in asylums at the present day, but they require further development. It was urged that efficient assistant medical officers should be encouraged to make a career of the purely medical work in asylums by appointing them resident physicians, with appropriate salaries, and residences suitable for married life. The patients would thus benefit by retaining the medical services of experienced men. Attention was directed to the advantageous practice of placing all new attendants in the infirmary-wards for a time as probationers; they there learned to feel that the insane were patients under hospital-treatment, and they afterwards carried this idea with them into the general wards.

The Alleged Increase of Insanity. By D. HACK TUKE, M.D.—Dr. Tuke laid it down as a fundamental principle in the study of the question that the number of occurring cases of mental disorder in proportion to the population, during any given periods of time, was the only sound test to apply. If this were disregarded, and only the total number of lunatics and idiots in detention in 1859 (the earliest date of reliable statistics) were taken and compared with the number in 1885, it would be found that there had been an increase of 118 per cent.; in other words, for 100 lunatics and idiots in the former year, there were 218 in the latter; but this increase was not more than apparent, being the result of accumulation and reduction of the mortality-rate. Figures were brought forward showing the enormous effect of this lower mortality in asylums. Dr. Tuke stated that, allowing for increase of population, there was an increase of 54 per cent., instead of 118 per cent., between 1885 and 1859; and that if the fairer method of comparing the five years 1871-75 and 1881-85 were adopted, the increase was not more than 37 per cent. When only admissions of certified lunatics and idiots were taken, the rise was still less formidable, being reduced for corresponding terms of years to 28 per cent. (from 37 per cent.). Admissions, however, were not the same as occurring cases; and when these latter were taken, in other words, first attacks of insanity, which, unfortunately, could only be done since 1878, there was shown to be very little variation indeed in the occurrence of mental disorders, so far as they came to be certified; in fact, there was a slight tendency to diminution. Dr. Tuke, however, gave a caution against concluding that there was no increase in any form of insanity, as general paralysis of the insane. This might well be, and yet a diminution in others might occur; and, moreover, there might be an increase in brain-instability and in slighter forms of mental disorder which did not pass through the portals of an asylum.—Dr. CLOUSTON thought there were two things in Dr. Tuke's paper of great importance: the one was the effect of the recent lessened death-rate among the insane, in increasing the numbers of the existing insane; the second, and by far the most important thing, was the light thrown on the question by Dr. Tuke's last table, showing the number of the cases of first attacks of insanity occurring year by year. This came nearer the kernel of the question than any facts yet adduced for its elucidation. If, as Dr. Tuke's tables seemed to show, the number of first attacks of insanity were diminishing in proportion to the numbers of the population, then the public might set its mind at rest as to any risk of an increase of insanity. His own impression, and his limited figures in Cumberland and Edinburgh, were in accordance with the results of Dr. Tuke's larger figures. He had found that, during the past five years of commercial depression, the number of our general paralytics in the Royal Edinburgh Asylums had fallen over 50 per cent. as compared with previous numbers.—Dr. COBBOLD (Earlswood) considered that Dr. Tuke's figures confirmed the view taken by the Commissioners, that the increased number of the insane was due to accumulation, and not to a larger proportion of new cases to population. The decrease of insanity following fever was put forward as due to improved sanitary conditions. The increase of general paralysis, and of insanity due to high-pressure occupation, were noticed. A decrease in freshly certified patients was ascribed to the unwillingness of medical men to certify in the present day, and to the private treatment of patients who would formerly have been placed under certificates.—Dr. T. OUTTERSON WOOD (London) said that, with regard to the increase of insanity, it was necessary to take into consideration, as Dr. Cobbold had said, the unregistered cases; and he could bear out that, having seen lately several cases of undoubted insanity living in private care.—Dr. FLETCHER BEACH (Darenth) said that one point in Dr.

Tuke's paper interested him. Dr. Tuke was under the impression that, although there was no actual increase in insanity, yet there were a large number of cases on the borderland of it. On going through his case-books for the production of his paper, it struck him that there were a larger number of cases of acquired imbecility than in former years, cases of children born with unstable brains, easily upset by a slight cause, such as a blow, convulsions, or fever.—Dr. CAMPBELL (Carlisle) thanked Dr. Tuke for his interesting and elaborate paper. He, however, thought that it was difficult really to arrive at trustworthy conclusions on the subject, and that the following conditions complicated the deductions. 1. All cases of insanity did not come under official cognisance for the following reasons: that rich people were able to have relatives treated secretly; many cases were treated out of the country. 2. Commercial prosperity, or the reverse, had a great influence in the production of pauper lunacy. 3. Alterations in sources of payment might and did cause an ostensible alteration in the number of officially recognised lunatics.—Dr. TUKE, in reply, said he doubted whether the unwillingness of medical men to sign certificates had much ultimate effect in lessening the numbers certified, because, along with this, there had been much more stringency in the Lunacy Board in enforcing the practice of procuring medical certificates for single patients. Dr. Cobbold's suggestion that cases of insanity following fever were less frequent than formerly was important; and this circumstance, and similar ones, might be set against the increase of general paralysis. Dr. Tuke added that all his tables were necessarily based upon the annual reports of the Commissioners in Lunacy, or information with which they had courteously supplied him.

Suicidal Tendencies in Congenital Imbeciles. By C. S. W. COBBOLD, M.D.—Six cases, met with at Earlswood Asylum during the past four years, were related, and some others were cited. The author showed that suicidal intent occurred in congenital imbeciles under three aspects: (1) as an accompaniment of a definite attack of melancholia; (2) as a fixed purpose, without emotional depression; and (3) as a transitory impulse, arising either without any external cause, or in consequence of some absurdly slight annoyance. Special stress was laid upon this last form of suicidal intent, as being peculiar to imbeciles, and as presenting the following characteristics: 1. The absence or slightness of an exciting cause (the death of a cat, and "being called names," were instances of the latter); 2. The absence of the courage or steadfastness of purpose necessary to consummate the act of self-destruction; 3. The rapidity with which the suicidal purpose passed away, and was forgotten.—The PRESIDENT suggested whether the special suicidal tendency, referred to by the author, was not the same as that which sometimes induced children at school to attempt or commit suicide.—Dr. SHUTTLEWORTH (Lancaster), in an experience of over one thousand cases, remembered only two or three in which attempts at suicide had been made. As in Dr. Cobbold's cases, both of these were imbeciles of mature age. In one, symptoms of melancholia showed themselves; there was refusal of food, etc.; and, ultimately, he had to be removed to a lunatic asylum. In another case, a youth who had from infancy lived in a tub (like Diogenes), but, at the Royal Albert Asylum, was weaned therefrom, and much improved by training, drew a knife across his throat (it was thought from mere love of notoriety), and subsequently endeavoured to precipitate himself into a gravel-pit; and, in consequence, had to be sent to the County Asylum. Another young man, employed as a tailor, in view of a visit from the policeman in consequence of some peccadillo, stuck his needle deep into his neck, with a view, as he told me afterwards, of doing for himself. It was, of course, to be expected that insanity would, in a certain number of cases, supervene on congenital imbecility; but suicidal tendencies were, in his experience, very rare.—Dr. FLETCHER BEACH (Darenth) said that Dr. Cobbold's paper was very interesting, as showing the slight cause which had produced the attempt at suicide. Of the fifteen hundred cases which had been under his care, only one attempted suicide. He tied a scarf tightly round his neck, and was blue in the face when discovered. His reason for the attempt was that he had been removed from home, and he objected to it. Many of Dr. Beach's patients, however, had made homicidal attempts; one especially, when put out by another boy, tried to stab him.—Dr. COBBOLD suggested that the children at school who attempted suicide were really imbecile morally, if not mentally. Cases of homicidal attempts by imbeciles having been referred to in the discussion, Dr. Cobbold drew attention to the fact that the suicidal attempts were made almost entirely by adults, whereas the homicidal attempts were often made by children.

Pathological Changes in the Brain in General Paralysis.—Dr. PALMER (Lincoln) drew attention to certain pathological changes in the brain of general paralytics, and exhibited drawings and microscopical preparations.—The PRESIDENT pointed out the exceeding beauty of Dr. Palmer's preparations, and hoped he would take another opportunity of exhibiting them to his medical brethren.

The Influence of Hereditary Predisposition in the Production of Imbecility. By FLETCHER BEACH, M.B., Medical Superintendent of the Asylum for Idiots, Darenth.—The author commenced by giving Ribot's definition of heredity, and remarked that the biological law applied not only to the physical, but also to the mental, life. Examples of heredity of structure and internal conformation of the body had been noted from ancient times; and the heredity of disease had also been observed from the foundation of the art of medicine. Examples of the heredity of intellect were given, and the study of mental diseases was said to contribute many facts in favour of heredity. The metamorphosis, or transformation of heredity, must also be taken into account. It did not follow that a family, whose head has become insane or epileptic, should of necessity consist of lunatics or epileptics; but the children might be idiots, paralytic, or scrofulous. What the father transmitted was a vicious constitution, which would manifest itself under various forms. The passion for drink was not always transmitted in that identical form, and deaf-muteness in the parents might give rise to obtuseness of the mental faculties, or even idiocy. The author found that, of 836 cases where he had been able to obtain information, a history of hereditary predisposition was present in 637, or 76 per cent. The following causes of imbecility were given: intemperance, insanity, imbecility, epilepsy, phthisis, chronic neuralgia, paralysis, disease of the brain, excitability, extreme nervousness, cancer, deaf-dumbness, suicide, a masturbating father, and a mother a prostitute. The reasons for regarding some of these as causes were defended, and it was noted that in several cases many causes act together to produce the result. It was discovered that in some cases three or four members of the parents' family suffered from one of the predisposing causes, such as epilepsy or insanity, and that the grandfather on the paternal or maternal side often transmitted the hereditary predisposition through the father or mother to the patient, constituting atavism. Cases illustrating the influence of hereditary predisposition in the production of imbecility were then given.—Dr. HACK TUKE did not think it fair to judge Dr. Beach's paper without careful study, but confessed he was rather sceptical as to some of the conditions (for example, cancer) in the parents of idiots, being regarded, as Dr. Beach had done, as causes of idiocy in the children.—Dr. SHUTTLEWORTH (Lancaster) agreed with Dr. Beach as to the marked peculiarities of many of the parents of imbeciles. Two things struck him with regard to Dr. Beach's statistics; one, that the percentage he attributed to parental intemperance as a factor, was about double of what he had found in the class of patients in the Royal Albert Asylum; the other, that the history of phthisis was more common in his experience than in Dr. Beach's. Probably, in the pauper class, from which Dr. Beach's patients were drawn, intemperance was more common than in the artisan and middle classes, which mainly contributed cases to institutions like Earlswood and the Royal Albert Asylum.—Dr. BEACH, in reply, said that the remark of Dr. Clouston was important. We were too apt, perhaps, to place too much stress on causes which produced imbecility, judging only from the histories obtained in asylums; and it would be interesting, and, indeed, important, to obtain histories from the parents or friends of children in ordinary schools, where the causes mentioned in his paper had not produced bad results. With respect to Dr. Shuttleworth's remark on intemperance as the cause of imbecility, there was no doubt that it was a greater cause in the class from which his (Dr. Beach's) patients came, than in those resident in Earlswood and Lancaster Asylum.

The Idiots' Act.—Dr. COBBOLD directed attention to the "Idiots' Act, 1886," which had recently become law. He explained the unsuitability of the provisions of the lunacy laws, when applied to asylums for idiots and imbecile children, the latter partaking largely of the character of educational establishments for children unable to be taught in ordinary schools and workshops. On and after January 1st, 1887, a new and much simpler form of medical certificate would come into use, and would be sufficient for admission of patients into institutions registered under this Act. In this form, the word "imbecile" might be used, and was thus for the first time legally recognised. Altogether, the Act was welcomed by all interested, as affording most desirable facilities for the care, education, and training of idiots and imbeciles, also as abolishing a number of useless formalities which had to be complied with so long as idiot asylums were carried on under the lunacy laws.

The Use and Abuse of Seclusion. By J. A. CAMPBELL, M.D. (Carlisle).—Dr. Campbell read a short paper on this subject. He laid down some reasons which occurred to him as indicating in a clear

manner the use of seclusion in certain cases of insanity, stating distinctly that, where seclusion was used for the best interests of a patient, it was proper treatment; where merely as a means of saving trouble, it was improper treatment. Like all other remedial agents, it should only be used by medical order. Dr. Campbell considered that, in the following class of cases, seclusion was correct and proper treatment at times; and he regretted to state that, in some asylum reports, he had seen it mentioned in rather a boastful way that seclusion had never been used during the year. This, he thought, showed an absence of true medical spirit; for, if this agent were only used as it ought to be, its use ought not to be a matter to be ashamed of. 1. In cases of excitement in general paralytics, where the excitement is of an utterly unreasoning, uncontrollable nature, and in which, at certain stages, a great amount of physical exercise is out of the question. 2. In cases of epilepsy, both before and after a fit, where, often, sounds, motions, even sights, act as strong irritants and excitements of violent emotions and actions, and where quiet, solitude, and even darkness, really have the necessary soothing effect, and may, perhaps, ward off an attack of excitement—certainly tend to shorten it, and in most cases tide it over, without the patients receiving or inflicting injuries. 3. In those recent acute cases where violence and excitement are present to a great extent, and where the strength of the patient will not allow his being kept in the open air during the whole day. 4. In certain happily rare cases, where the patient is at intervals extremely violent and dangerous, where insanity seems so mixed up with evil-mindedness that one is quite astonished at the activity and continuity of purpose shown by the inventive power of a diseased mind in formulating and carrying out purposes of violence, destruction, and apparently wanton mischief. Dr. Campbell stated that numerous casual circumstances might cause an asylum-physician to use seclusion to a greater extent at one period than at another, and he instanced a proof of this in his own experience. In 1874, Carlisle Asylum was very full; trade in the district prospered; high wages were the rule, and rendered it difficult to obtain and retain good attendants. The admission of acute cases was high; and most of the recent cases were Irish, who had been attracted to the Cumberland pit-districts by high wages, and who had fallen victims to excesses formerly out of their reach, and who, in the asylum, were elements of noise and extreme danger, owing to their original semi-savage propensities being immensely exaggerated by their disease, their turbulence, noise, and bellicose propensities, rendering them a terror and danger to their fellow-patients. In conclusion, a table, giving the seclusion at the Carlisle Asylum for the last five years, was submitted, giving the length of time in each case, and separating the general paralytics and epileptic cases from other forms of insanity.—Dr. CLOUSTON (PRESIDENT) said they all agreed with Dr. Campbell that though, like many other modes of treatment of insane patients that were liable to abuse, seclusion should be used with care, yet that, it being a purely medical question if a responsible physician used it for his patients, no one who does not see the case had any moral right to question its applicability to his patients. At the Royal Edinburgh Asylum, he had the opportunity of seeing the amount of seclusion used in the higher class of patients, with a staff of attendants of one to 2½ patients, as compared with the pauper department, where there is a staff of one attendant to 10 patients. He found that though we have less seclusions among the former, yet that in certain very bad cases there was more risk of such lesser surgical injuries as fractures of the radius among the former.—Dr. OUTTERSON WOOD (London) thought it would be most important to know if, in any asylum, the power to seclude a patient is left in the hands of any official other than a medical officer. He had taken the returns of fifty asylums in which the instances of seclusion were given in the last report of the Commissioners in Lunacy, and he found that they contained an average resident number of 34,938 patients; that the percentage of recoveries was 41.8; that there were 3,032 instances of seclusion, with an average duration of 5.4 hours, or one instance to every 11.19 patients. He had also taken the two extremes: those which had secluded least, and those which had secluded most frequently; and he found that in seven asylums, containing 4,646 patients, there was no seclusion whatever. In these asylums, the percentage of recoveries was 42.15. In seven other asylums, with 5,024 patients, there were 1,724 instances of seclusion, and the percentage of recoveries was 40.4. Thinking that it would be better to take an average of longer duration, he had worked out the seclusions in the same asylums for three years; and it did not seem to be so much the exceptional nature of the cases under treatment which accounted for the high or low rate of seclusion, as it was the practice the medical staff; for, on the one hand, in seven asylums, with an average of 4,660 patients, only one instance of seclusion was recorded, and that was as an experiment, which, the medical superintendent said, was only continued for thirty minutes, and was not successful. The percentage of recoveries in these asylums for the three years was 40.6. On the other hand, there were seven asylums, with an average of 5,081 patients, in which there were recorded 5,542 instances of seclusion; in these, the recoveries were 38.1 per cent. It might not be the high rate of seclusion which depressed the percentage of recoveries; but the fact remained, that it was depressed.—Mr. WHITCOMBE (Birmingham) had not found it necessary to use seclusion in a single instance for the last eight years; during that time, in three instances, restraint had been used. Previously, Mr. Whitcombe had seen much seclusion, and, he believed, great abuse of it.

HOW CAN THE MEDICAL SPIRIT BEST BE KEPT UP IN ASYLUMS FOR THE INSANE?

Abstract of a Paper read in the Section of Psychology at the Annual Meeting of the British Medical Association in Brighton.

BY S. A. K. STRAHAN, M.D.,

Late Medical Officer, and Assistant Medical Officer County Asylum, Northampton.

THE supposition is that an asylum is a place where persons mentally ill are treated by men who have specially studied nervous diseases, and where every opportunity is seized upon to advance our knowledge of insanity; in fact, that an asylum is a school of psychological medicine. From this point of view, it is certainly alarming to hear that the medical spirit is in danger of extinction in these places.

It has long been hinted that the medical spirit in asylums is not very strong; but asylum medical officers have never admitted the fact until now, when they boldly put down for debate the question, How best can this declining spirit be galvanised into new life? But when an error has been admitted, it is in a fair way to be remedied; and now that asylum medical officers have admitted the necessity for reform, it is to be hoped that soon a better state of things will be arrived at, and that psychological medicine will begin a steady onward march.

Let us now consider briefly, under four heads, what tends most to extinguish the medical spirit in asylums, and how best that can be overcome.

1. Classification, that is, separation of curable cases from the incurable asylum population. 2. Necessity for hospital treatment for the curable. 3. Necessity for training the attendants. 4. Necessity for more medical officers to asylums, and a rearrangement of their duties.

1. *Classification.*—All will agree that the present system of classification is far from satisfactory, if not bad. It is impossible to obtain the quiet so often absolutely necessary in the treatment of nervous disorders in the wards of our asylums as at present arranged. If we cannot have a hospital for the curable cases, then let us at least have a ward where they shall be cut off from the unfavourable influence of the chronically diseased. If we can do nothing to help nature on her healthward course, let us not impede her by unfavourable surroundings—surroundings which many healthy minds could not long withstand. The feeling of utter helplessness and hopelessness which this want of classification inspires in the minds of medical officers of asylums is one of the most effectual extinguishers of the medical spirit.

2. *Hospital Treatment for the Curable.*—There has been a very general and reasonable clamour for hospital treatment for the curable insane. Why should the brain be the only organ in the economy to which the expectant mode of treatment should always be applicable. Our knowledge of the brain is no doubt limited, yet, with that knowledge, very recent events have shown us what might be done by surgery for many who exist only to people our asylums. Not long ago, an intraperitoneal operation was looked upon much as an intracranial one is to-day, that is, almost necessarily fatal; but now surgeons daily perform such operations, and are disappointed should they be unable to record a consecutive hundred or more of such cases without a death. Why should not the cranial cavity, the last secret chamber of disease, be attacked? We daily open every other cavity of the body, and perform the most delicate of operations successfully, while the brain has already shown itself most tolerant of injury. There must be a great future for brain surgery. But in nervous disorders there is a still greater field for conquest for the physician, and for him hospital treatment is equally necessary.

If the medical spirit is to be kept up in asylums, we must recognise and make our attendants, and also the public, recognise, that the

man with a diseased or disordered brain, is equally sick with the possessor of a diseased heart or disordered stomach. It is not enough that we take care of the insane; as we are able to treat the disorders of the other organs, so we must learn to treat those of the brain. Let us call in to our help all the aids which modern science has placed in our hands, and let us work diligently at the bedside, in the operating-room, and, when opportunity offers, in the mortuary, and soon we must find the end of the tangled skein.

3. *Training of Attendants.*—This subject, like the foregoing, is not new. It has been before us for some time, and has received more attention than is generally given to proposed reforms in asylum management. The Medico-Psychological Association has given us a text-book; but, so far, little progress has been made. There is no occupation for which a man or woman is not the better fitted by training, and it is a proof of the want of medical spirit in asylums to find this important matter noticed by a very few superintendents in the annual reports. We can never expect the medical spirit to flourish where the physician's orders are left to be carried out, and where his efforts to treat disease are to be seconded, by persons without the most elementary knowledge of nursing.

4. *Necessity for more Medical Officers.*—The whole matter turns upon this one point. With asylum medical staffs at their present strength, little more can be done than we are doing for the insane. Our asylums are splendid places for the care of the incurable insane; and, so long as they are looked upon as mere retreats, the present staffs will suffice; but the moment we attempt to change them into hospitals, where every case is to be studied, we must augment these staffs, and so make the change a possibility. At present, an asylum with 700 inmates has generally but two medical officers. The superintendent must give the greater part of his time and thought to fiscal duties.

An American writer has said, "the mainspring of every asylum is how much per week." Certainly the "rate per week," is of much more importance to the superintendent than the "recovery-rate," or any other rate. A decrease in one can be explained, but an increase in the other is more troublesome. Some of our superintendents have tried to serve the two masters, business and science; but the greater number, believing in the soundness of the apostolic maxim, confine their attention to one.

There is a fast increasing custom of abolishing the office of steward in asylums; this makes the superintendent the universal provider, and adds to his fiscal duties, and it must directly tend to the extinction of the medical spirit.

Therefore, to keep up the medical spirit in asylums, we must separate the curable from the chronic; go in for brain surgery and the treatment of mental disorder; have a trained nursing staff, and sufficient medical officers to give each case the care and attention received by an ordinary hospital patient.

OBSTETRIC MEMORANDA.

INDUCTION OF PREMATURE LABOUR: TWINS.

Mrs. J., 28, consulted me when about six months gone in her third pregnancy. Both her previous pregnancies had resulted in craniotomy. I assisted at the second, and the operation was one of considerable difficulty. So far as I could make out at that time, I thought the outlet of normal size; but the inlet, although not distorted, abnormally contracted. I advised induction of premature labour. She consented, and shortly after the seventh month, I passed a No. 12 bougie, so as to avoid injuring the membranes. Next day the bougie came out during straining at stool. There was no dilatation of the os, but there was slight discharge and pain. The pain soon ceased; and three days later I again passed a No. 12 bougie, this time with success, as pains began twenty hours after the passage of the bougie. I was called to her four hours after the first pain; I found the os dilated, admitting the ends of three fingers, and soft; the head presented high up, in the first position. The pains became very severe, without bringing the head down at all; I therefore decided to apply forceps. Considerable difficulty was experienced in so doing; when they were locked, however, very little traction sufficed to deliver the child.

On making an abdominal examination, preparatory to extracting the placenta, I found the body very large, and felt what I took to be another child. I examined, and found another head presenting at the brim, with bag of waters intact. I turned, without much difficulty, and then brought the placentæ away together. The mother and children did well. Was I right in performing craniotomy?

J. R. Purdy, M.B., C.M.

SURGICAL MEMORANDA.

THE REMOVAL OF HÆMORRHOIDS RENDERED PAINLESS BY THE INJECTION OF CUCAINE.

The two following cases may prove interesting, as showing the usefulness of cucaine as a local anæsthetic in operating on hæmorrhoids.

Case I.—A gentleman consulted me on June 12th, 1886, for a painful swelling, saying he thought that his "seat had come down." On examination, I found a large venous pile, tense and shining, and tending to ulceration, the base of which sprang from just within the margin of the sphincter ani. With difficulty and pain, it was reduced; but, as it descended on the following day, it was decided that it would be best to tie it. The patient was a very sensitive man, and asked that chloroform might be given to him; but, thinking it was a suitable case, I decided to try the effects of cucaine. Five drops of a ten per cent. solution of hydrochlorate of cucaine were injected, by means of a hypodermic syringe, into each side of the base of the hæmorrhoid; and, after waiting five minutes, the tumour was seized with a vulsellum, transfixed with a double-threaded needle, and tied in the usual manner. A morphine suppository was placed in the rectum, and, from the commencement of the operation up to complete recovery, a period of eight days, the patient did not experience the slightest pain.

Case II.—On June 17th, a young pregnant woman consulted me for a large venous pile, commencing to ulcerate, and occupying the same position as in the preceding case. The same number of drops were injected, and the hæmorrhoid was tied. She experienced no pain during the operation, which was attended by no evil consequences.

In both the above cases, no toxic effects were produced from the use of cucaine. The solution used had been kept for three months, and contained one grain of hydrochlorate of cucaine in a drachm.

Remarks.—By means of cucaine, operations for the relief of hæmorrhoids can be rendered painless, but the effect of the drug soon passes off; and, to ensure absolute freedom from pain, it is necessary to follow it up with morphine, administered in one of its many forms. By using cucaine as above described, the operation is rendered much easier, and can be accomplished by the surgeon single-handed without the help of an assistant, who is indispensable when a general anæsthetic is employed.

J. Prince Stallard, M.B., Manchester.

REPORTS OF SOCIETIES.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

Thursday, September 2nd, 1886.

E. Noble Edwards, M.R.C.S., President, in the Chair.

Papular Rash.—Dr. Harris Ross showed a girl suffering from an irritable papular rash spreading in circles. It had commenced about the hair at the back of the head, and had spread over both shoulders and on to the chest and back. There were one or two circular isolated patches on the arms and legs. On the neck and shoulders, the rash formed a very pretty intertwining circinate pattern. It had lasted six months, and was shown to be infectious by the appearance of a somewhat similar eruption, less well developed, in the mother and a sister. The case was looked upon as one of tinea circinata.

Contracted Fingers.—Dr. Uthoff showed a woman suffering from contracted fingers of the right hand, resulting, apparently, from paralysis of the interossei and spasm of the opposing muscles. The proximal phalanges were extended, and the distal spasmodically flexed. She had fallen and injured the arm eighteen months before, and it was supposed that the ulnar nerve was damaged either by the accident or by the violent attempt made to reduce a supposed dislocation of the shoulder. The hand was at first powerless; the contractions had only occurred during the last few months.

Myeloid Sarcoma of Humerus.—Dr. Uthoff showed a myeloid sarcoma of the upper end of the humerus, removed by amputation at the shoulder-joint from a girl aged 14. There was a history of only six months, and no record of injury. The growth recurred in the flaps before the wound was quite healed, and the patient died about two months after the operation. No secondary deposit was discovered at the *post mortem* examination.

Treatment of Stricture of Urethra.—Mr. Willoughby Furner read a paper on some points in the treatment of stricture of the urethra, referring only to those cases of stricture low down in the canal, which were curable by dilatation with instruments, without urethrotomy. He advised that no instrument should be passed for the first

time down the urethra of a patient who came to the surgeon's house, and advocated, in difficult cases, the use of catgut bougies. The treatment of rigors following catheterism was considered. Chloroform was found to be not so sure a preventive against this complication as quinine and opium. The advantage of rest in bed, with ordinary dietetic accessions, was also commented upon.—The PRESIDENT agreed with the use of bulbous catheters, unless there were a double stricture, or instruments had been much used, when he advocated silver catheters.—Dr. CORFE called attention to the importance of the plexus of veins at the base of the bladder, and to the relief experienced by gouty subjects after the occurrence of hæmorrhage from them.—Mr. SANDERSON believed that rigors after catheterism were in all cases from septic absorption, however rapidly they might come on.—Mr. BABER and Dr. UHTHOFF spoke of the treatment of retention and the value of tapping or aspiration above the pubes.—Brigade-Surgeon HENSMAN preferred metallic instruments. He referred to the value of low diet in the treatment of stricture, and asked how catheters could be best made aseptic.

REVIEWS AND NOTICES.

GUY'S HOSPITAL REPORTS, vol. xliii. London: J. and A. Churchill. 1886.

THIS volume of *Guy's Hospital Reports*, recently issued, equals in interest most of the volumes that have appeared in former years. It opens with an "In Memoriam" notice of Dr. F. H. A. Mahomed, who died in November, 1884, which is contributed by Dr. Goodhart and Mr. Jacobson, and which appears to analyse clearly the complex characteristics of his enthusiastic nature. Dr. Hale White contributes two articles: the first records the condition of the bones of the skull and the dura mater in cases of tumour of the brain, as noticed in the *post mortem* room; the second narrates particulars of 100 cases of cerebral tumour with reference to operative treatment, cause, mode of death, and general symptoms; from which it would appear that only fourteen of the 100 cases were likely to be benefited by operation. Both these articles will well bear perusal by gentlemen interested in the now prominent question of surgery of the brain. Mr. Clement Lucas contributes two short papers: one detailing two cases of strangulated hernia in infants; the other describing a needlewoman's bursa of the second finger of the left hand. This latter paper is not indexed in the table of contents. Mr. W. Arbuthnot Lane furnishes three papers: one is entitled "The Pathology of Extravasation of Urine, and of Sacculation of the Urethra and Bladder," in which the writer endeavours to controvert the opinion of Sir H. Thompson that ulceration of the mucous membrane behind the stricture leads to a breach of the urethral walls. A second paper by Mr. Lane deals with flexions of the fingers, Dupuytren's, etc., and with some senile changes in joints; and contains the remark that the treatment of Dupuytren's finger depends very much on what structure is contracted, and that one cannot lay down any hard and fast rule for every case, but that treatment must be suited to the peculiarities of each.

A third article by the same writer is devoted to the pathology of changes produced by pressure in the skeleton of the bony trunk. Mr. Lane states that, in labourers, one can detect their previous career of labour from an examination of the bony skeleton; and that these facts are of value from a medico-legal and also from an archæological aspect. He has been able to find instances of these definite changes in very old bones, and even in the mummy. This is a long article, illustrated by about twenty-three woodcuts, and full of interest.

The demonstrators of anatomy describe the abnormalities observed in the dissecting-room of the hospital during 1883 and 1884; and the curator of the museum (Dr. Goodhart) gives a list of specimens added to the pathological museum during 1884-85. Dr. P. Horrocks contributes a valuable article on Uterine Dilatation, with illustrative cases; and Mr. Higgens describes fully a case of pulsating sarcoma involving the left nasal fossæ, antrum, and orbit. Dr. Goodhart furnishes a report on the Changes in the Vascular System in Bright's Disease, as deduced from an analysis of the *post mortem* records of the hospital for ten years. Mr. Bryant's article on Cystic Tumours of the Breast concludes the volume, and contains an excellent account of these tumours, with notes of forty-four cases, and of the treatment adopted. But the *pièce de resistance* of the whole volume is an elaborate contribution by Mr. W. H. A. Jacobson on Middle-Meningeal Hæmorrhage, which deals exhaustively with this subject, and which quotes the opinions of apparently almost every surgeon, British or foreign, who at any time has written about it. This one article alone would redeem any volume from the charge of being uninteresting. But, whilst we may speak in commendatory terms of the contents of this number of the *Reports*, we regret that not one of the senior members of the staff, with the exception of Mr. Bryant, has contributed to the volume. With the unrivalled field for observation of disease of all kinds which these gentlemen possess, it is much to be desired that some of them should select some portion of it for notice and exposition in their hospital's world-famed *Reports*. Their professional brethren generally could scarcely fail to be gainers therefrom.

NOTES ON BOOKS.

A Handy Guide to Brighton. By D. B. FRIEND. (Brighton: D. Burchell Friend, 77, Western Road.) 192 Pages.—Amongst the many kindly offices achieved by the Executive Committee of the recent annual meeting at Brighton for the convenience and pleasure of the members of the Association who attended the gathering, none, probably, gave, in a quiet unobtrusive way, more gratification than this little handy guide to Brighton, by Mr. Friend, with a copy of which each member, on inscribing his name, was presented. It was useful to those who attended the meeting; and parts of it will well bear perusal at odd subsequent moments if it has not been already read. Brighton is a place with a history; and though the events connected with the rise of the town and its present prosperity have been affairs of the last hundred years, yet have they engaged the attention of such notorious personages, that much in the past has been written respecting these worthies, and the place with which they had to do. Excerpts from such writings have been largely introduced into this little volume, particularly in the chapter dealing with Brighton when George the Fourth was king; and such extracts add much to the interest of the book. Brighton in the present day, Hove, the residents and visitors, hotels, shops, bathing and baths are all fully noticed. Most of the "lions" of Brighton are adequately described; whilst the Pavilion and Dome come in for extended notice. The churches and chapels have a chapter to themselves. Information in regard to the amusements of Brighton, its aquarium, theatre, piers, roundabout rambles and excursions to neighbouring interesting places by road and rail, Brighton as a "health-resort," postal accommodation and omnibus and railway fares, is detailed as fully as one may expect to find it in a guide of the kind; a map of the town is also introduced, and several illustrations are interspersed through the text. Visitors to "London-by-the-Sea" may, in fact, find in these pages much wherewith to amuse and instruct themselves, as well as much which will be of daily use to them during their sojourn on the Sussex shore. The information is brought well up to date; thus the appointment of Mr. W. T. Marriott, M.P. for the Borough, to the post of Judge Advocate-General in July last, is duly chronicled.

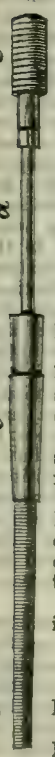
Notes on Analytical Chemistry for Students in Medicine. By ALBERT J. BERNAYS, Ph.D., F.C.S., F.I.C., Professor of Chemistry at St. Thomas's Hospital. Second Edition. (London: J. and A. Churchill. 1886.) This is an enlarged and improved edition of the work published by Dr. Bernays in May, 1879. All the subjects included under the title Practical Chemistry, concerning which a practical knowledge is required from candidates for the medical degrees of the University of London, are systematically dealt with in this little volume. As the requirements of the London University are known to be comparatively exacting, it follows that the information contained in the book will be found sufficient for most examinations of our time; but we can confidently recommend Dr. Bernays' work to students for a higher purpose than that of passing examination—we mean as a means of acquiring knowledge. Arranged as it is in a thoroughly scientific manner, and obviously the work of a careful and experienced teacher, no one need hesitate to place Dr. Bernays' *Notes* in the hands of any student, whether his aim be to pass an examination or not. The subjects discussed are the qualitative analysis of simple salts, examination of substances given at the first M.B. examination at the University of London; certain examples of volumetric analysis; the practical chemistry of bile, urine, and blood; the examination of potable waters; ultimate organic analysis; the chemical portion of the practical examination in forensic medicine at the University of London; the detection of insoluble substances, the analysis of mixtures, etc. There is a good index, and the book contains many useful and excellent tables.

The Students' Manual of Venereal Diseases, being a Concise Description of those Affections and of their Treatment. By BERKELEY HILL and ARTHUR COOPER. Fourth Edition. (London: H. K. Lewis.)—This popular work has reached a fourth edition. The

authors have added much new matter without greatly increasing its bulk, and the formulæ have been revised and enlarged. The value of the *Manual* has long been recognised. By its aid, the student can gain a sound elementary knowledge of venereal diseases as he observes the various forms of gonorrhœa, syphilis, and chancre in his hospital. A larger and more complete publication would not be so palatable to his mind. A large proportion of general practitioners are not in a position to acquire or maintain much practical experience in diseases of this class, yet, at the same time, are constantly called upon to treat disorders which may be their sequelæ. For these members of the profession, the *Manual* is peculiarly valuable.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A NEW BULLET-PROBE.



Some months ago I designed a new bullet-probe, and I only delayed laying it before those interested in such matters till I had satisfied myself that I was not reproducing some discarded or forgotten instrument. I have not found anything like it, and I believe it is original in every way.

The probe, a drawing of which I give, is very simple. The point (A) is the usual porcelain tip; but it is perforated for washing purposes. The shaft or body (B) is a coil of steel wire (nickel-plated), and it is slightly tapering towards the point; (C) is a portion of handle, and it is attached to the shaft (B). The stilette (D) is partially withdrawn with its handle (E). When the stilette is pushed home, its end passes through the porcelain tip (A), and is flush with it. The instrument is then rigid, and can be used as an ordinary Nélaton's probe.

Remove the stilette, or partially remove it, and the probe becomes either entirely or partially flexible. It bends easily, and any twist that is given to the handle is at once communicated to the point.

Messrs. Evans and Wormull have made the instrument, and their well-known workmanship has done full justice to my design.

I have examined many flexible probes at present in use, and I believe the one I now introduce has fewer faults than any one of them. It is simple in construction; is easily cleaned; can be used as a straight rigid probe, or flexible; and, as there is no joint or break, you never lose touch of the point.

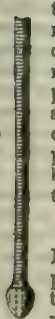
The instrument is drawn full size, and its length is ten inches.

W. D. Wilson, Surgeon-Major M.S., Royal Arsenal, Woolwich.

BISHOP'S GRANULAR EFFERVESCENT HYDROBROMATE OF CAFFEINE.

Mr. Alfred Bishop, whose effervescing granular preparations are so well known, has just issued for medicinal use a granular effervescent hydrobromate of caffeine. This salt is now largely employed, and, on the Continent, is usually preferred to the citrate. It is a powerful diuretic, and is frequently administered with success in cases of dropsy, either alone or in combination with digitalis. It is one of the best remedies for many kinds of megrim, headache, and neuralgia. It is supposed to have the power of lessening tissue change and waste, and is recommended for the mental depression caused by overwork and other causes. The dose of Mr. Bishop's preparation is one teaspoonful in half a tumbler of water, to be repeated every forty minutes, until four doses have been taken or relief is obtained.

PURE SANDAL-WOOD OIL.



Messrs. W J. Busch and Co. have sent us specimens of their pure sandal-wood oil. We have tested them and examined them, and find that they are admirably adapted for medical purposes, being unusually free from disagreeable smell and taste.

Bequest.—Mr. Henry Whiting has given £50 to the Dental Hospital of London.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

Subscriptions to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 25th, 1886.

SIR SPENCER WELLS ON PUBLIC HEALTH.

In these degenerate days, when something novel must perpetually be sought to arrest the vagrant attention of the public, it is difficult enough to find anything fresh to say on any question, and most of all, perhaps, on a subject so worn and hackneyed as the public health of the nation. Our sanitary preachers have spoken so often to deaf ears, that the thought of having to address a general audience on the problems of hygiene in such a way as to interest them and make them ponder, might well daunt the boldest heart. All those who know and appreciate his open mind and wide philanthropy will have welcomed with expectancy the announcement that Sir Spencer Wells had accepted the presidential chair at this year's congress of the Sanitary Institute, and will have given themselves up to the pleasures of anticipation with regard to his address to the Congress. They will certainly not be disappointed when they read the words of ripe wisdom and sound counsel which fell from his lips on the 21st instant.

What is the object of these annual congresses of sanitarians? The President answers the question by anticipation. "To draw general attention to questions of vital importance to the public health, to diffuse information, to get the people to take an intelligent interest in sanitary matters, and to bring the governing powers into a disposition to give more effectual help in carrying out such reforms as are proved to be necessary by scientific investigators." To Sir Spencer Wells, the improvement of the public health is not an affair of so many miles more of drain-pipes, or the isolation and extermination of some germ or microbe, or the reduction by a decimal fraction of a death-rate. He wants to help his fellow men and women to healthier, happier, and brighter lives, and he applauds everything that will assist in that great aim. In forest regulation, public gardening, ventilation of public places, convalescent institutions, and cremation, he sees, for example, sanitary aids of the first rank, and he bids us to be properly solicitous about them.

Concerning "overpressure," he properly and usefully reminds us that it may in part be traced to our sanitary successes. We have reduced the mortality of early infancy. Many children who would formerly have died off-hand are now saved, and find their way into the schools. They live, but are not strong; not so strong as the average. They have to submit to the same routine, and to be forced up if possible to the same standard as the rest. The effort is too much for them. But the evil will, he thinks, remedy itself in time by the growing up of a larger proportion of strong children, and the

present difficulty may be got over by a little patience and moderation —a little more regard to sanitary logic. "The children must have training before education, and must be put upon something even less than a half-time system."

About a matter which came into prominence at the recent annual meeting of our Association at Brighton, Sir Spencer Wells speaks with no uncertain voice. He sees no great cause for alarm in giving women the option of other occupations than those of domestic life. "As for the outcry about the dangers from women taking up men's work, it is," says he, "breath wasted." For his part, he thinks women capable of a great deal more than they have been accustomed to do in times past. "'To suckle fools and to chronicle small beer,' surely cannot be the chief end of woman. If overwork sometimes tends to disease, it is more morally wholesome to work into it than to lounge into it." We expressed our views on the subject in discussing Dr. Withers Moore's address last month, and need not now reopen a controversy which has raged with more or less virulence for a number of years, and upon which the disputants are as much at variance as ever.

The President reminded the Congress that "any great sanitary improvement of the community must be the result of elaborate co-operation. We must have the combined action of the three great classes of investigators, legislators, and administrators before we can effect any good result." A great deal of the work of investigation has, he thinks, been done; but the work of legislation is lamentably deficient, and the work of administration cannot advance beyond the limits of legislation. Sir Spencer Wells is infinitely patient with our legislators. Sanitarians, he says, find themselves in the same plight as the rest of the world, loaded with good intentions. By-and-by, apparently in the dim and distant future, "the turn will come for practical measures." The orator is calm and confident in the justice of the cause he is pleading. "Our demands will appear so reasonable, our work so useful, and our plans so feasible, that no committee will have the heart to suppress them, no Parliament the churlishness to refuse them." We trust not; but much study of legislative methods has taught us that committees have no hearts, or only hearts of stone, and that Parliament takes rather an unkind delight in rejecting just demands, unless its fears be worked upon. However, Sir Spencer Wells' advice is wise and appropriate whatever happens. "Let us be prepared for the occasion, have our subjects chosen, our evidence forthcoming, our arguments marshalled, and our advocates ready. We shall have ourselves to blame if we do not make sanitary legislation the popular legislation of some sessions near at hand."

But, as Captain Galton pointed out last year at Leicester, if legislation is not to be ridiculous, it must be accompanied by increased knowledge in sanitary matters on the part both of the persons charged with administering the sanitary Acts, and the public themselves. Sir Spencer Wells asks how, when we have instructed the public and embodied our contingent of qualified agency, we are to make sure that the agents shall act efficiently upon the public. "It can never be done without elaborate organisation; and no organised body can act without full legislative authority, and then only under a responsible chief." He emphasises once more the need and importance of a Ministry of Health. But for this the millenium must apparently be awaited; and he therefore very pertinently asks what, in the meantime, WE are to do.

"The last generation has done so much with means less efficient than we have at command, that we ought to do more than emulate the past." Sir Spencer Wells thinks the Institute is bound to induce all the other societies that are now working for the improvement of the public health to make, not only common cause, but joint action, and he speaks of the "folly and waste of division." He urges that the great effort at present ought to be "the concentration of working power, and its economical direction." He draws a picture of what an institute could accomplish which had focussed all the now scattered rays of effort, and the funds now sadly squandered on needless separate organisations. It could "form its commissions, send out its health challengers, have its own laboratories, museums, deliberative councils, exponents and consultants—and all this not interfering with, but rather in aid of, recognised privileges or established authorities." Quite so. A consolidated hygienic institute is a great and pressing want, and we trust that the various societies and institutions that now exist for the furtherance of the public health, may be able to sink their differences, and recognise that union is strength. In the eloquent words of Sir Spencer Wells, "it is to be hoped that before long we shall have, for the sake of life and health, an organisation as powerful as that which protects our properties and our liberties. The Colleges of Physicians and Surgeons have done, and are doing, much useful work; but the work is done more for the individual than the collective good. Without interfering with them, rather aiding them, why should we not have a College of Health—a college which would show our appreciation of the gift of life, and our reverence for the Giver?"

RESIDENT COLLEGES AT MEDICAL SCHOOLS.

In the editorial columns of the JOURNAL last week, there appeared a report of valuable evidence collected from hospital deans (or from officers holding appointments equivalent to deanships) concerning collegiate residences.

In the JOURNAL of August 7th, we commented upon Surgeon-Major Evatt's observations in the public press. It happened that in March, 1883, when the London Hospital authorities were discussing the propriety of establishing a residential college, we discussed at some length the question of such colleges (JOURNAL, March 17th, 1883, p. 521). We showed all the disadvantages which they may involve, for the demerits as well as the merits of important questions must never be overlooked. It was observed that the first-year student is thrown together, in a college, with all kinds of young men, of very varied age and character. In lodgings he may not be brought into contact with any other student at all. In lodgings, again, he is forced, through too well-known circumstances, to gain some useful practical experience in respect to house keeping and weekly bills; such experience is less easily acquired where more is done for him. One great difficulty in collegiate institutions is, as we pointed out, the principle on which the selection of a warden should be based. When a younger member of the hospital staff, or an aspirant to the staff, is chosen, he will be, sentimentally speaking, in accord with the young men under his charge. Students always respect, always take interest in the local professional dignitaries of a hospital. Unfortunately, the medical warden has his future ambitious plans to consider; he is, moreover, often over-worked through other duties. Besides, the laws of human nature must be considered, that is to say, it must be remembered that a warden of this kind may be slow to exercise necessary severity towards refractory students who may some day hold towards him some professional relationship.

The alternative to the medical warden is a non-medical warden—we will not say lay-warden, since an officer of this kind might probably be a clergyman. An able, well salaried, and kindly warden of this kind may prove highly satisfactory. The chief objection to non-medical wardens is the disinclination of students to believe in non-medical officers of a hospital; besides, it is not always easy to find an able man for the purpose.

In 1883, however, we expressed ourselves strongly in favour of collegiate institutions. They should exist, however, we said, mainly for the benefit of senior students, that is, dressers, clinical clerks, and obstetric assistants. For such students, "the advantages of residence in college are so great as to justify, according to our belief, the establishment of hospital colleges in connection with all the metropolitan schools that as yet do not possess them." Thus we wrote in 1883, and the case remains the same. With regard to freshmen, it may be gleaned from the above remarks that the hospital college can only be made a beneficial institution after all the possible disadvantages have been taken into account and neutralised by judicious management. This is no chimerical scheme. Hospital authorities know well the sources of evil to which we have referred. A successfully managed college would allow to its inmates that which, as we observed (JOURNAL, August 7th, 1886), they urgently need, "a friendly and sympathetic eye, and all the influences for wholesome public spirit and incorporate self-respect which collegiate life can give." A successful college system universal in the London schools would give to the medical student a social prestige which, much as he already deserves it, he does not at present possess.

By the report in last week's JOURNAL, we learn that there are four colleges in existence, in association with metropolitan hospitals, namely, at St. Bartholomew's, King's College, St. Mary's, and University College. Of these, only the first is physically a part of the hospital-buildings. The second and last are part of the well known educational institutions to which they are attached. St. Mary's College lies in Westbourne Terrace. We believe that, for first-year students, there are many advantages in an extramural college. The building is isolated, and thus every person who enters can be recognised or properly challenged, if unknown, and in this way objectionable individuals cannot gain admission under excuse of relationship to patients. The Dean or Warden has his young charges completely under his control. However, such colleges are not so advantageous for senior students, who should never be further from the wards than possible. The college at St. Bartholomew's Hospital is very convenient in this respect. Under its present intelligent management, first-year students are well looked after, but it would most assuredly decline in every respect if it came under the management of a warden inefficient through lacking certain qualities not often found together, but indispensable in a manager of such an establishment. In any case, however, it is probable that this College is the best type of its kind, subject to regulations which would help to ensure order and discipline independently of the sole efforts of the Warden. University Hall has not any direct organic connection with the medical schools of University College, and holds an almost independent position to the College itself. Both here and at King's College medical students form a varying, and it may be but a small, portion of the residents. St. Mary's can claim success in having a residential college for medical students only.

At the London and Middlesex Hospitals colleges have been proposed and also projected, but it is only at the latter institution that the new departure is reported as meeting with no objections from members of the staff. Such objections have been made or implied in the case of all the other hospitals in London. The opposition is based upon grounds which we have already discussed. Dr. de Havilland Hall, for example, shows that, as we hinted in a particular case, a college depends very much on the precarious tenure of a good warden. With very fair reason, the residence of students in the private houses of members of the hospital staff is widely recommended by disinterested parties. The arrangement works well, but cannot be carried out to any wide extent at a large school. The great desideratum is a college at each hospital where the numerous disadvantages already noted can be neutralised, where the junior student can work, protected from bad example by judicious superintendence, whilst his senior colleague can also work without vexatious restrictions interfering with that amount of liberty which his duties demand. Such colleges would soon attract the majority of students attached to the metropolitan hospitals, and, as we have said, would raise the reputation of medical students as a class by associating them essentially with a local habitation representing discipline and order, independently of the buildings where they play a noble but subordinate part in the study of the human frame, and the relief of human suffering.

THE RELATIONS OF SIZE BETWEEN THE LUNGS AND BRONCHI.

DRS. W. BRAUNE and H. STAHEL have published in the *Archiv für Anatomie und Physiologie* the results of researches made by them on the relation between the lungs as ventilating air-spaces, and the bronchi as air-conducting tubes. The facts that the right bronchus is wider than the left, and that the volume and weight of the right lung are greater than those of the left, led them to consider the question whether the greater width of the bronchus is dependent on the greater size and weight of the lung, or on other causes.

In order to answer this question, they first made measurements on eleven frozen bodies, and found that, in all, the lungs being normal, the diameter of the right bronchus was greater than that of the left, in the proportion of 100 to 77.9. The proportions are shown in a table; and in another table, founded on measurements of ten cases, it is shown that, in eight, the transverse section of the trachea, three centimètres above the bifurcation, was less than the sum of the transverse sections of the bronchi, and, in two, greater. Successive measurements showed that the diameter of the trachea is least immediately below the larynx. From this point the diameter increases gradually to below the middle; here it attains its maximum, and then it diminishes as far as three centimètres above the bifurcation. From this point it again undergoes dilatation; hence the transverse sections of the trachea from the cricoid cartilage to the bifurcation are smaller than the sum of the transverse sections of the two bronchi. The authors therefore regard as erroneous the statement of Aeby, that the human trachea is a funnel-shaped tube, with its base turned downwards, and also that of Sée and Krause, that it is a cylindrical tube.

The transverse section of the right bronchus, measured at the bifurcation, is, like that of the left, greater than the sum of the transverse sections of its branches; but in one out of six cases, the reverse was the case.

The trachea and bronchi constitute a system of tubes with alternate

dilatations and contractions. The same is the case in the dog, cat, and sheep. From the repeated occurrence of the conditions described, the authors conclude that the form of the air-tube not only depends on morphological laws, but has also a relation to physical conditions.

In pulmonary diseases, the relation of the transverse section of the bronchi, which in healthy lungs varies within narrow limits, undergoes essential changes. With emphysematous lungs, the left bronchus becomes wider from the point of bifurcation than in the normal state. When the capacity of a lung is reduced beyond that which is normal, the transverse section of the bronchus leading to it is smaller than that of the bronchus of the sound lung. In general, it may be said that the size of the transverse section of a bronchus depends on the size of the volume of air which passes through it. If the volume of air increase, the size of the transverse section of the bronchus also increases; and *vice versâ*. Pulmonary emphysema produces enlargement, pleural adhesions narrowing, of the bronchus. If these two pathological conditions co-exist, they may completely neutralise each others action.

In each of six subjects that were examined, the weight of the right lung was greater than that of the left. In three of the cases, the weights of the right and left lungs were in nearly the same proportions as the transverse sections of the corresponding bronchi. In order to ascertain in what relation the weight of lungs emptied of blood bore to the transverse sections of the corresponding bronchi, Braune and Stahel caused a number of dogs to be bled to death, or washed out their lungs with water. The weight of the right lung was to that of the left as 100 to 74.9; the transverse section of the right bronchus to that of the left as 100 to 75.5. Hence the weights of the lungs bear the same relation to each other as the transverse sections of the corresponding bronchi. The same is the case with regard to the absolute volumes of the lungs, and the volumes of the air which enters them during inspiration. Thus there is a fixed relation between the lungs as air-spaces and the bronchi as air-conducting tubes. The bronchus leading to each lung has a transverse area of such a size, as to render possible the mechanical conditions requisite for the entrance of air to the lung.

Dr. G. Sims Woodhead, of Edinburgh, has been awarded one of the research scholarships of the Grocers' Company.

The King's College Hospital old students' dinner will take place at Limmer's Hotel, Conduit Street, on October 1st, at 7 P.M. Dr. George Johnson, F.R.S., will take the chair.

No clue, as yet, appears to have been obtained to account for the death of Mr. Everard Woods, L.K.Q.C.P.I., whose body was found in the Thames, near Lambeth, on Saturday last, under suspicious circumstances.

The Pharmaceutical Society of Great Britain announce that the distribution of prizes by the President, and the delivery of the inaugural sessional address by Sir Henry W. Acland, K.C.B., M.D., F.R.S., will take place on Wednesday, October 6th, at 8 p.m.

Dr. Symes Thompson will deliver a series of four lectures, on the Infectious Diseases of Childhood, at Gresham College, on October 5th, 6th, 7th, and 8th. The first lecture will be on Infection and Contagion, the second on Scarlet Fever, the third on Diphtheria and Whooping Cough, and the fourth on the Treatment of the Epidemic Diseases of Infancy and Childhood. The lectures, which are free to the public, commence each day at 6 P.M.

The Indian Government is fitting out the steamship *Canning* as a hospital ship for 200 beds, at Calcutta. She will proceed to Burmah, pick up invalids and wounded men, and then take them for cruises in the Bay of Bengal, and will drop the sick at Madras and Calcutta. Brigade-Surgeon J. B. Hamilton has been nominated to superintend the fitting out of the *Canning*, and Surgeon-Major Gubbins and a staff of medical officers, apothecaries, and men of the Army Hospital Corps will assist on board.

MEDICAL DEFENCE COMMITTEE.

A meeting of the Provisional Committee in connection with this subject was held at Birmingham on September 14th. The draft of a statement to be laid before the Council of the British Medical Association was approved; the Secretary was instructed to have it printed, and to send a copy to each member of the Committee.

IMPROVED SANITARY CONDITION OF ITALY.

The death-rate in Italy appears to be declining. The average annual mortality during the period 1862 to 1885 was 30.3 per thousand; during the last five years of that period the rate was considerably below the average, for it only reached 27.0 per thousand. This, though a very high rate, judged by the standard which we have reached in this country, apparently shows a distinct improvement. This improvement is the more encouraging, as it is said to be largely due to a decrease in the number of deaths attributed to typhoid and malarial fevers.

CHOLERA PRECAUTIONS AT MALTA.

The Secretary of State for the Colonial Department wishes it to be known that, in consequence of the measures adopted by the Government of Malta to prevent the introduction of cholera into that island, persons who are about to leave this country and to travel overland to Malta, should provide themselves with a certificate to be produced before the Consul at the Mediterranean port at which they embark for Malta. The certificate must prove that the traveller has resided in this country for twenty-one days immediately preceding his departure from the United Kingdom.

RABIES.

An order in Council has been issued, which is to take effect on September 30th, relating to the existence of rabies in dogs and other animals. It requires notice of such a disease to be given to the officer of the local authority, whose powers are prescribed in detail. The local authority are empowered to make special regulations in regard to dogs, and to cleansing and disinfection, to slaughter animals affected with rabies, and to dispose of the carcases in a prescribed manner. Weekly returns of the disease are to be made. Any contravention of this order is to be regarded as an offence against the Act of 1878.

THE POISONING OF A WEDDING-PARTY AT CARLISLE.

We stated last week that an inspector had been sent down by the Local Government Board to inquire into the circumstances attending the poisoning recently of a wedding-party at Carlisle. Dr. Page, the inspector in question, visited fourteen of the persons who had eaten of the wedding-breakfast, ten of whom had been very ill, and ascertained what their symptoms had been. Paying particular attention to the sequence of the symptoms, he arrived at the conclusion that they were not the symptoms of any known mineral or vegetable irritant poison, and, after investigating all the circumstances, satisfied himself that a *primâ facie* case had been made out against the ham, a portion of which he took away with other articles for microscopic examination by the experts of the department. He called upon the

vendor of the ham, who informed him that it was one of a consignment of forty-six American hams which he had received from Liverpool in August, and the whole of which had been sold, mostly in small quantities for immediate consumption; and no complaint had been made about any of the lot, nor about one hundred more of the same brand since disposed of. Dr. Page's report on the case, together with that of the experts, will no doubt be issued in due course; and in the meantime the inspector has advised with Dr. Barnes, of Carlisle, as to his continuing the investigation. The case at present seems to rank with those of meat-poisoning which occurred at Welbeck and Nottingham a few years ago, and which were carefully investigated at the time by Dr. Ballard.

SMALL-POX IN PANAMA.

SMALL-POX appeared some months ago at Colon, on the isthmus of Panama, and has since become epidemic. The sanitary arrangements of this little port are reported to be very unsatisfactory. The disease has also made its appearance in the town of Panama.

SMALL-POX IN JAMAICA.

SINCE early in March last, a considerable epidemic of small-pox has prevailed in Jamaica; but, judging from the proportion of deaths to cases, the disease does not seem to have been of a very virulent character. On August 15th, there were about 170 cases in Kingston, whilst numerous cases were reported from the outlying parishes.

FEVER AT SWANAGE.

A SHARP outbreak of fever has recently occurred at the little town of Swanage in Dorset, and the Local Government Board have commissioned Mr. W. Harvey to investigate the circumstances on their behalf. Mr. Harvey has done, and is still doing, good service as medical officer of health for the Newton Abbot, Dawlish, and Wolborough combination of sanitary authorities.

THE POLICE AND AMBULANCE WORK.

ARRANGEMENTS have been made for the instruction of the Singapore Police Force by the local Centre of the St. John Ambulance Association, the Government undertaking to defray two-thirds of the cost, and the Centre the remaining third. Many Chinese are life and annual subscribers to this Centre.

CHEMISTS AND EARLY CLOSING.

UNDER the Shop Hours Regulation Bill, of which Sir John Lubbock is the chief promoter, a chemist and druggist will not be liable to fine for supplying medicines after the hour appointed by the Act, namely, 10 o'clock on Saturdays, or on such other day in each week as may be appointed from time to time in the case of any district by the local authority in lieu of Saturday, and the day preceding a public or bank holiday, and at 8 o'clock on other days. Though he will not be liable to fine for supplying medicines, he will not be authorised to keep open shop after the said hours. According to the terms of the Bill, a person infringing the Act will render himself liable to a fine not exceeding £5.

MEDICAL REFORM IN BRITISH GUIANA.

WE hear from British Guiana that there has been, after a good deal of difficulty, an important measure of medical reform carried out in that colony. An ordinance has been passed, and new regulations have been made as to pay, etc., the nature and extent of which we shall notice at a later date. There appears to be an evident desire on the part of the Government to render them effective, and to advance the interests of the profession. The correspondent to whom we are indebted for the above information states his belief that, to a young man who has a taste for travel, and who is willing to undergo the difficulties inseparable from tropical work, there will be no better field than in the British Guiana service, provided always that he fully understands that there is work to be done. The medical institutions are large, and liberally provided for. We note with satisfaction that, in connection with the reorganisation of the medical service, the resuscitation of the British Medical Association has been accomplished, officers have been elected, and the first meeting has already been held, when the President delivered an opening address. In commemoration of the establishment of the new Government service, and of the resuscitation of the British Guiana Branch of the British Medical Association, a dinner was given early this month by the members of the medical profession in the colony. The chair was taken by Dr. Robert Grieve, Surgeon-General, the President of this Branch of the British Medical Association. His Excellency Sir Henry Turner, K.C.M.G., the Attorney-General, and other official persons were present. It is to be hoped that this Branch of the British Medical Association, which has been resuscitated under such favourable auspices, will have a long and successful career.

FASTING AS A TRADE.

SIGNOR SUCCI has succeeded in living through his month's fast, and in proving that he is a person of singular moral courage in mortifying the flesh. His fast was not absolute, since he daily partook of a small quantity of some "red fluid" of secret composition, but there seems to be no doubt that he has abstained from every other form of nutriment, if nutriment it was. French newspaper writers in search of a sensation have been prophesying ruin to the butchers, bakers, and public caterers; and, as Succi is to go to Paris, to fast in public, he and his bottle of red fluid will doubtless deeply impress the public; still it is not likely that the shares of the Café Anglais will decline for this season, though Succi may make a fortune by demonstrating the uselessness of food for a month. For obvious reasons, the fast of Signor Succi ranks rather as a newspaper sensation than as a physiological experiment of any true value.

MEDICAL ATTENDANCE AT THE GENERAL POST OFFICE.

MR. PICKERSGILL, M.P., in putting a question with regard to the medical department of the Post Office, was, doubtless, animated by excellent motives, and it was, perhaps, as well for all the parties concerned that the latent dissatisfaction which, it is stated, exists among the numerous officials, should be purged by full inquiry and discussion. The circumstances were briefly these. A member of the staff, who had been away for some time on sick leave, was suffering from undefined symptoms, the most pronounced of which were general *malaise* and headache. He was summoned to return to duty, or, at any rate, to appear before the medical officers of the Post Office. This he did, but was, apparently, unable to satisfy them of the existence of any really serious complaint. After a vain endeavour to resume his duties, he again absented himself, and, while his own medical attendant was exchanging letters with the department as to the nature of the illness, he died, death being due to typhoid fever. Typhoid fever is notoriously a treacherous affection, the characteristic symptoms of which may be conspicuous by their absence, and nothing is easier than to overlook its presence in certain cases, which have been termed the "ambulatory" form of the disease. In the other case referred to in the House of Commons, where a man had already remained at home five weeks on account of a boil, one can quite understand that the responsible officer was disposed to consider that a prolongation was unnecessary. The fact is, each case requires to be judged according to its merits, and this is very difficult to carry out satisfactorily in an administration like the Post Office. If a man has scarlet fever or small-pox, he will be treated with all the consideration he deserves; but in other cases, such as the case in question, where it is impossible to arrive at a definite diagnosis, and in obscure cases of commencing affections of the nervous system or kidneys, the sufferers may not be given the benefit of the doubt, and may even run great risk of being classed as a malingerer. Although strenuous efforts were made on several sides to secure a vote of censure on the conduct of the medical officers, and the system under

which they work, the firmness of the Minister was successful in averting it. No one who has not been engaged in similar work can adequately appreciate the difficulties with which these officers have to contend, and, probably, in spite of the utmost care and skill, instances will now and then occur which, if suitably stated, will serve to create an unfavourable impression. The greatest safeguard against abuse is the excellent, if disagreeable, publicity afforded by a parliamentary discussion.

PHTHISIS IN DENMARK.

DR. LEHMANN has contributed this year some important statistics on the subject of Phthisis in Denmark. He examined the death-rates in the Danish towns from 1876 to 1883. He divides the deaths from phthisis into three classes: first, those during the development age to 20; second, those during the vigorous years, from 20 to 55; third, those during the later years, from 55 to old age. He shows that the mortality from phthisis is, in the smaller towns, one-fifth less than in Copenhagen, which contains a population of 300,000; in the capital, too, mortality amongst men is greater than that amongst women; whilst, in the smaller towns, the mortality of the sexes is almost equal. Phthisis has a slower course also in small towns than in Copenhagen. Up to the age of 20, more women than men die of it; after that, more men than women. With regard to the geographical distribution of phthisis, the mortality in Jutland is 2.6 per 1,000 living. It is about the same in Seeland, but only 1.55 in the Southern Islands. The greater immunity of these islands was demonstrated by the recruiting returns of 1875-1884, during which period 9.4, out of every thousand men taken from Jutland, were rejected on account of phthisis; whilst only 3.74 of those from the Southern Islands were declared unfit. The mortality from phthisis is greatest in those towns of Jutland which lie in the inland or coldest parts of the country, and rarest on the coast, which is warmer, and in towns situated in the neighbourhood. With regard to the country districts, Dr. Lehmann has had to place his dependence on the accounts of private medical men, hence the materials are not equal to those furnished by the hospitals. All accounts agree, however, in stating that phthisis is on the increase, as well as chlorosis, cardialgia, and scrophulosis. It appears also that tuberculosis of cattle is on the increase.

THE PROPOSED INDIAN AND COLONIAL INSTITUTE.

THE Prince of Wales's proposal to commemorate the jubilee year of the Queen's reign by the creation of a Colonial and Indian Institute, which shall be "at once a museum, an exhibition, and the proper locality for the discussion of Colonial and Indian subjects," has been received with such general approbation that its success seems to be ensured from its inception. While adding our congratulation to those which have already been expressed in other quarters that the jubilee memorial should take so practical a shape, it may not be inappropriate to express a hope that, in the constitution of the museum, and in the selection of subjects to be illustrated and discussed, a foremost place may be given to questions involving the preservation of health. Intending emigrants at the present time find the greatest difficulty in obtaining reliable information as to the climatological conditions under which they will have to work, and are apt to fall into the most egregious mistakes in selecting their outfit. It ought not to be difficult to show by specimens the kind of clothes best adapted for the climates, the sort of houses that are inhabited, as well as the prevalent varieties of disease, and the modes of combating these diseases. In quite another way, also, such an institute might be of direct service to medicine; it might be part of the duties of the Commissioners to form and maintain a collection of the plants known or suspected to possess medicinal qualities. At the present time, it is exceedingly difficult to obtain sufficient quantities of Indian and Colonial drugs believed to contain active principles. Such specimens as reach the hands of pharmacists and physicians in this country are often only large enough to be tantalising. The chemist is able to determine the presence of an active principle, but it may be years before the herb can be obtained in sufficient quantity to permit its therapeutic value, if any, to be determined. Those who are familiar with the history of pharmacology during the last decade can supply for themselves examples of the truth of this statement. We have indicated but two ways in which such an institute might render service, direct or indirect, to medicine; and there can be little doubt but that it would be equally easy to prophesy gain from its creation in other fields of work.

THE TREATMENT OF EXCESSIVE SALIVATION DURING PREGNANCY.

OWING to the ordinary insignificance of this ailment, few medical works contain a lengthened account of it. Dr. Y. Schramm, however, had the opportunity, in the autumn of 1885, of observing a very severe case, and he has published some notes of it in a Scandinavian journal. Numerous remedies were employed with very little effect, for at first he imagined the salivation to be due to chronic mercuralisation; but, later, he discovered that the patient was pregnant, and that pregnancy was the cause of the condition. Neither the iodide of potassium recommended by Le Maestre nor Von Ebstein's atropine treatment had any effect. Galvanising the sympathetic also exercised only a very slight effect. Galvanising the cervical sympathetic was resorted to with no perceptible result. Dr. Schramm then tried subcutaneous injections of pilocarpin (as recommended by Von Labbe and Daveyeux). After seven injections of pilocarpine chloride, 0.01 gramme per dose, there was a diminution of the daily quantity of saliva, as well as improvement in the general health of the patient. The excessive secretion, however, could not be entirely stopped. Bromide of potassium was tried, which acted quickly in the reduction of the flow; and Dr. Schramm prefers bromide of potassium to all other drugs, as it is harmless during pregnancy, and yet exercises a distinct effect on the salivary nerves, and on the origin of the facial nerve in the medulla oblongata, and also on the secretory filaments of the sympathetic. Professor Fleck made a chemical examination of the saliva, and found that pytalin was absent.

TOO MUCH ZEAL.

THE conduct of a certain medical man in Paris, in reference to a patient whom he was called upon to attend, has given rise to some very strong expressions of opinion on the part of various colleagues. The patient in the present instance contracted marriage with a lady without completely disentangling himself from the meshes of another woman. As frequently occurs in France, the deserted one, without any unnecessary delay, proceeded to inflict several rather serious wounds on her lover by means of a revolver. Anxious at any price to preserve silence on a matter so prejudicial to his domestic relations, and menacing to the perpetrator of the outrage, the victim contrived to reach home, where he allayed possible suspicions by a story of having been "nocturnally assaulted." The explanation was believed until a medical man was called in, who, not satisfied with acting in a purely professional capacity, subjected his patient to a searching cross-examination, with the result of eliciting the real facts of the case. He then felt himself obliged to take the district *commissaire de police* into his confidence, with the most disastrous effect so far as the happiness and peace of mind of his patient was concerned. The arrest of the woman, and her confrontation with the victim, followed as a matter of course, entailing the publicity which the injured man had so sedulously endeavoured to avoid. The question raised is, naturally, whether medical men are obliged, morally or legally, to communicate to the police suspicious facts which may have come to their knowledge in the exercise of their profession. If murder has been committed, nothing can be clearer than the duty of the medical man in informing the police of the facts of which he has become cognisant; but, although the line of demarcation may not be easy to draw, he is not called upon to do this if it be merely a question of wounds, and

certainly only under very exceptional circumstances would he be justified in cross-examining the patient with the view of ascertaining the exact features of the case. The responsibility for the false statement, if any, rests with the person who made it, and would not be shared by his medical attendant. Such cases are of frequent occurrence in the hospitals of large towns; but it probably does not enter into the minds of either the house-surgeon or his senior to inquire into the matter, except in so far as it may be necessary for purposes of diagnosis.

DEATH FROM "SHOCK."

THE result of the inquest on the body of a young woman, Clara Maria Bowers, aged 23, who died in the house of a Mrs. M'Kenzie, to whom she had resorted on account of her condition, cannot be considered satisfactory. Dr. Dupré stated that the stomach and intestines did not contain any poison. The coroner is reported to have said, in his summing-up, that it was a suspicious case, and that the Treasury would probably take the matter in hand. He added that it was clear that the deceased went to the house for a specific purpose, and died, whether from mechanical interference, or natural causes, they were unable to tell. The jury returned a verdict that the deceased died from shock, but whether caused by mental emotion, or physical injury at the hands of Anne M'Kenzie, they were unable to say.

THE DEATH OF THE EARL OF DALKEITH.

IT would appear that the terrible accident which befell the young Earl of Dalkeith was, under the peculiar conditions, necessarily fatal. He had fired at, and wounded a stag, which, however, retained sufficient strength to make off; Lord Dalkeith ran down a steep hill, in the direction taken by the animal, slipped, and slid down the hill, until he came in contact with a bare flat rock, where his rifle was discharged, inflicting a severe wound in the shoulder. Hæmorrhage was at once copious, and the keeper endeavoured to check it by grasping the arm with both hands, but without much success. Lord Dalkeith appeared to recognise his position, as he said, "I am bleeding and dying fast." The scene of the accident was so remote, and so difficult to get at, that before the message reached Dr. Duncan Macintyre's house, the unfortunate nobleman was dead more than two hours; he lived precisely eighty minutes after the accident. Early next morning, when Dr. Macintyre saw the body, it presented all the appearances indicative of robust health up to the moment when the fatal wound took place. We are informed that the bullet entered the left pectoralis major muscle close to its insertion into the humerus, lacerating into shreds the coraco-brachialis and the clavicular and acromion portions of the deltoid. The humerus was split longitudinally from the insertion of the teres major to the surgical neck, which was completely detached from the shaft. The wound contained numerous spiculæ of fractured bone. The bleeding had evidently been mainly from the axillary artery and vein, and from its anterior and posterior circumflex branches. Looking at the parts *post mortem*, there seemed no insuperable difficulty in arresting the hæmorrhage had skilful treatment been available immediately after the accident. What the loss of blood amounted to can never be determined. There was no very striking pallor of the surface; on the contrary, the hypostatic congestion on the posterior aspect of the body was very noticeable. The mangled condition of the soft parts and splintered state of the humerus would doubtless have necessitated amputation at the shoulder-joint, if the unfortunate nobleman had survived the immediate effects of his accident. This sad case illustrates the amount of injury which an explosive rifle-bullet, such as is now generally used in deer-stalking, can inflict when it hits with undiminished velocity. It also affords a striking example of the comparatively long time which may elapse before even severe traumatic hæmorrhage will completely exhaust the strength of a young man in first-rate physical condition.

SCOTLAND.

SCARLET FEVER IN DUNDEE.

SINCE the beginning of September, the outbreak of scarlet fever in Dundee (noticed in a previous number of the JOURNAL) has not shown any signs of abatement. Since September 1st, nearly one hundred new cases have come to the knowledge of the sanitary authorities. The authorities are vigorously endeavouring to bring the outbreak to an end; and, when outbreaks occur in the more densely populated districts, the patients are removed to the Infirmary, while the Fever Hospital at King's Cross has been opened, and will be used meanwhile principally as a convalescent home.

THE HEALTHIEST CITY IN THE KINGDOM.

AT a meeting of Edinburgh Town Council, held on Tuesday, a remarkable statement was made by the Dean of Guild, Sir James Gowans, who (in the absence of Bailie Russell, Convener of the Public Health Committee) called attention to the report by the Medical Officer of Health for the month of August. Sir James stated that they were able to compliment themselves upon having the healthiest city in the kingdom; going back as the report did for five years, it showed that they had a continuous bill of good health in the city, the death-rate averaging 16 per 1,000. He also directed attention to a fact of some significance, that, while there were no fatal cases of measles in the Southern suburbs, and only one or two in the New Town, there was a considerable mortality from the same disease in the Old Town; and he thought it should make them exert themselves further in connection with the better housing and sanitary condition of the population in the older parts of the town.

POST-GRADUATE COURSE OF INSTRUCTION IN LARYNGOLOGY.

IT has been announced that Dr. Hunter Mackenzie is giving a course of instruction in the Ear, Eye, and Throat Hospital, Edinburgh, in Laryngology, Rhinology, and allied departments of Medicine. Attendance is confined to a limited number of duly-qualified practitioners of medicine. The meetings commenced on Tuesday, September 21st, at 4 P.M., and will be continued thereafter three times weekly, on Tuesdays, Thursdays, and Fridays, at the same hour. Tuesdays and Fridays will be devoted to Demonstrations and Practical Work, and opportunities will, on those occasions, be afforded to members for becoming conversant with the details of laryngoscopic and rhinoscopic practice, and with the methods of preparing and staining the sputum for microscopical examination. On the Thursday of each week, lectures, illustrated by cases, specimens, etc., will be delivered. The following synopsis of lectures has been published. September 23rd: Lecture I. Introductory; Anatomy and Physiology of the Regions; Objects and Methods of Laryngoscopy and Rhinoscopy. September 30th: Lecture II. The more common affections of the Nose, Naso-pharynx, and Pharynx, and their sequelæ. October 7th: Lecture III. The more common affections of the Larynx, and their sequelæ. October 14th: Lecture IV. Tubercle, Syphilis, and Cancer. October 21st: Lecture V. Respiratory Therapeutics: Medical, Surgical, Climatic. October 28th: Lecture VI. The sputum in the diagnosis of Respiratory Diseases.

IRELAND.

QUEEN'S COLLEGE, BELFAST.

THE report of the President for the Session, 1885-86, has now been issued, and from it we learn that the total number of students enrolled during the session was 460; of these, 244 attended the classes in the faculty of medicine. The professors of chemistry, physics, natural history, and anatomy and physiology, still complain of the want of sufficient accommodation, especially in their laboratories.

Practical work has of late become essential to the proper training of young men in these departments; and in this respect the laboratories of the College are very deficient. Last year a small addition was made to the chemical laboratory; but even now there is not room for one-half the students in attendance: great additional labour is thereby imposed upon the professor, who is obliged to divide his class, and to repeat his lectures and demonstrations, not unfrequently two or three times in the day. The progress of the students is also seriously interfered with, for the laboratory should be open to them for practical work at all hours. In the departments of practical physiology and histology, now forming so important a part of medical study, the laboratories are much too small. Recently Professor Redfern forwarded an urgent application to the Board of Works for some alterations which would secure additional space, and although nothing yet has been done, it is hoped that his appeal may ultimately be successful. The increase of students has far overgrown the capacity of the College; and, beside the rapid advance made during the past few years in scientific and practical education, demands accommodation and appliances which were not thought of thirty-six years ago, when the College was founded. The success of the College is the main source of the difficulty, and it seems alike impolitic and unfair to cramp the energies of professors, and retard their work by insufficient and unsuitable laboratories; and it is especially so, not to provide earnest and laborious students with the materials necessary to prepare themselves for promoting and improving the great staple industries of the town and province. At the opening of the summer session a Volunteer Ambulance Corps was organised by the medical students, and the Council voted a sum of £50 towards the purchase of ambulance, tent, and stretcher. The progress made in drill and other details of ambulance work has been very satisfactory.

THE BALDORAN ASYLUM FOR IMBECILE CHILDREN.

THE annual report of the Baldoran Asylum for Imbecile Children for 1885 shows that the institution maintains its high character for efficiency in the accomplishment of the difficult work it has to perform. Dr. Sibbald, in his report on the education, testifies to its highly satisfactory results, and says: "The children appear to receive not only everything which is necessary for their kindly care, but also such education as their various capacities admit of their receiving. The excellent results which have been shown in the condition of a large number of children who have passed through the training which is given here, are most satisfactory evidence of the efficiency of its character." Industrial occupations, which bring in a substantial revenue to the institution, form no inconsiderable mode of training to the inmates, whose happy and contented condition it is most pleasing to behold. The asylum is licensed for seventy patients, but only forty-eight are under treatment in the establishment. There is a deficiency in the income for the year, the receipts amounting to £1,214 4s. 1d., and the expenditure to £1,241 11s. 7d., leaving a deficiency of over £27.

MONAGHAN DISTRICT ASYLUM.

A PLEASING ceremony took place at this institution on September 4th. The staff of officers and servants, together with a large company of ladies and gentlemen from the neighbourhood, assembled at the asylum for the purpose of reading an address to the medical superintendent, Mr. Conolly Norman, on the occasion of his promotion to the Richmond Asylum, Dublin, and of making a presentation to Mrs. Conolly Norman. The address was beautifully illuminated by Messrs. Strain, of Belfast. The presentation consisted of two very handsome and massive pieces of silver plate, a bowl to serve as centre-piece, and a claret jug. The bowl, which is a magnificent specimen of *répoussé* work in the modern French style, was executed by Messrs. Chapple and Mantell, of the Strand. It bears on one side the double monogram of Mr. and Mrs. Norman, on the other, this inscription: "Presented to Mrs. Conolly Norman as a token of respect and an earnest of good wishes by her friends in Monaghan, and by the Officers and Staff of the District Asylum on the appointment of Dr. Norman to Richmond Asylum, Dublin." The jug, which is also a fine example of the same work, was executed by West, of Dublin. It bears the double monogram. Several of the governors of the asylum were present, one of whom, W. Henderson, Esq., J.P., took the chair, while another, R. J. Blakely, Esq., J.P., read the address. Some very kindly speeches having been made by the presenters, Mr. Norman replied, thanking the company for their kindness, and expressing his regret that his long connection with the asylum was now being severed.

THE SANITARY INSTITUTE CONGRESS.

THE proceedings of the ninth annual congress of the Sanitary Institute of Great Britain, commenced at York, on Tuesday, September 23rd, when Sir T. SPENCER WELLS, Bart., President, delivered his inaugural address. Having expressed the hesitancy with which he accepted the position of President of congress, since he could not presume to appear before a body of sanitary experts as an instructor, he asked them to accept him as a worker in a collateral science and art, and as engaged with them in a joint effort to draw general attention to the questions of vital importance to the public health, to diffuse information, to induce people to take an intelligent interest in sanitary matters, and to bring governing bodies into a disposition to give more effectual aid than heretofore to carry out necessary reforms. After reviewing the earlier presidential addresses of Richardson, Chadwick, Lord Fortescue, Galton, Humphry, Rawlinson, and De Chaumont, he said that any great sanitary improvement must be the result of elaborate co-operation. Combined action of investigators, legislators, and administrators, was necessary; the work of investigation had hitherto, for the most part, been personal, and the waste of labour had been enormous. The Colleges of Physicians and Surgeons had done much. "Why," he asked, "should we not have a college of health, which should show our appreciation of the gift of life, and our reverence for the Giver." He reviewed the work which those whom he called the "advanced guard of sanitary science" had accomplished, in lessening the death-rates of our population, and in benefiting the public health by prolonging life.

Much of this he attributed to the coincident progress made in the science and art of medicine and surgery. He claimed for the medical profession a considerable share in the gain to the State of increasing numbers of more healthy subjects. It would not be far wrong to put the average duration of human life in Great Britain, half a century ago, at about 30 years; now, according to the life-table, it was 49 years. Formerly, it was calculated that a twenty-third part of the population was constantly sick, and the products of all that labour for the time necessarily withdrawn. A great deal of this sickness had been altogether prevented, and the duration of that which comes in spite of sanitation was lessened. The necessary arrangements for bringing about an amalgamation of the Parkes Museum with the Sanitary Institute of Great Britain being in course of completion, might not the Society of Medical Officers of Health, which was co-operating by holding a meeting, the National Health Society, the Ladies' Sanitary Association, the Smoke Abatement Association, and others of a like character follow this example, and, by working in combination, achieve greater results at less expenditure of time and labour. Since the formation of the Sanitary Institute, progress, if not as rapid as could be desired, had been more readily measured. The moral and physical condition of the people had improved, infant mortality was lower, education was more satisfactory, and the principles on which it should be conducted were better understood, workers were better paid, they got more wholesome food, and their dwellings were more fit for human habitation. With all this encouragement, it was possible to look hopefully to the future. The field was vast, but not impenetrable. The Institute possessed working power, and was effective as an investigating, deliberative, consulting, and examining body, but it was a nucleus rather than a complete organisation. For carrying out its measures it should, while waiting for a ministry of health, set up an interim organisation of deliberation and administration. The subjects to which the Institute had given attention were those which related to the training and health of the population, their social comfort and well-being, the prevention of disease, the care of the sick, and the disposal of human refuse and remains. Waste of time and energy in Parliament in party struggles had banished all possible home legislation for the present, but when this crisis of angry discussion had passed, then sanitary legislation would come up, and then their demands, if they had properly prepared for the occasion, would

be so reasonable, their work so useful, their plans so feasible, that no Committee could have the heart to suppress them, no Parliament the churlishness to refuse them.

The sectional work of the Congress opened on Wednesday morning. Professor F. DE CHAUMONT, the Chairman of the Section of Sanitary Science and Preventive Medicine, delivered an address, in which he treated of the germ-theory of disease, and said there seemed every probability that processes which were formerly looked upon as purely chemical, such as nitrification, were brought about by bacterial agency; even in the case of our own bodies, it was probable that all the changes, physiological as well as pathological, were dependent upon those minute workers. The bacterial or microbial under-world must be regarded not as an utter enemy, but as a mighty agency for good or evil, as the case might be. Their cue would be to help the friendly microbes, and to fight those which were their foes; but the first thing to do would be to learn to recognise friends from foes, and they were not yet sure that the recognised individual species were really completely differentiated. With respect to the doctrine of evolution as applied to disease, he said he did not wish to suggest that one form of disease might breed another form, yet it had become pretty clear that there was no such thing as spontaneous generation of disease. There remained for preventive medicine the steady path that was being trod in the direction of providing for the purity of all articles of food and drink, of dwellings, of clothing, the supply of fresh air, and the immediate and complete removal of all refuse and effete matter. If to that they added a proper mode of life, both physically and morally, they might practically snap their fingers at both bacterium and bacillus.

Mr. W. EASSIE read a paper on "The Economy of Cremation." Comparing the Gorini and Siemens systems, he said the Gorini system was cheaper by three-fourths, and was more suited to country places. He dwelt upon the cost involved in the acreage required for burial purposes, and to the fact that the land when used was for ever alienated from agricultural and mining purposes. Taking an estimate, the cost of cemeteries in the metropolis would be nearly £272,000. Were cremation practised by 50 per cent. of the population of the metropolis, a piece of ground of about 500 acres would be sufficient; and, at the same average rate of purchase, there would have been a saving of £75,000, and 605 acres would have been saved for population. This 500 acres would serve a population of two and a half millions for 1,000 years. The expenses of funerals in England and Wales in 1874 were £4,871,000. By cremation, he calculated that, in 310 working days, the cost of 3,100 dead would be only 10s. 6d. each.—Mr. W. ROBINSON followed with a paper on "Beauty and Health *v.* Horror and Decay, in our Cemeteries."—Sir T. SPENCER WELLS opened the discussion, and expressed his approval of cremation.—Mr. W. LYON exhibited a mouse which he cremated twelve months ago by fire. The mouse, even to its whiskers, was preserved, and there was no smell arising from it. He therefore thought human bodies might be cremated by getting rid of the noxious gases, and then they could be buried in a coffin, according to the custom which commended itself to the sentiments of the people.—After further discussion, Mr. EASSIE replied.

In the afternoon, a Conference of Medical Officers of Health was held.

Mr. R. BRUCE LOW (Helmsley) read a paper on "The Tenure of Office and Appointment of Medical Officers of Health." He said opinions were divided as to whether medical officers of health should be debarred from practice; but the majority were in favour of separating public duties from private practice. If the health-officer be debarred from private practice, and furnished with a reasonable salary, it was absolutely necessary that he should obtain a special licence or diploma in sanitary science.

Dr. EDWARD SEATON read a paper on "The Notification of Infectious Diseases." The medical profession, he said, declined to do more than to sanction the abstract proposition that notification was desirable; but the questions arose: Who is to notify, to whom is the notification to be made, and what is to happen when notification is made? He held that notification, combined with a good sanitary service, had limited the centres of infection; and pointed out that, in London, with its forty parishes or districts, each of which had its separate authority, the sanitary service was not so efficient as in Glasgow, Liverpool, Manchester, or Birmingham. He quoted the experience of Leicester with regard to small-pox, and said that, if the same practice of notification could be carried out in London, much of the mortality from small-pox would be greatly reduced.

Mr. F. J. SYKES read a paper on "Organisation and Administration for the Control of Infectious Diseases;" and Mr. FRANCIS VACHER followed with a paper on "Hospitals for Infectious Cases—should they be free, or a charge made for maintenance?" Mr. Vacher held that, whenever isolation was impracticable at home, the patient suffering from an infectious disease should be removed as soon as reported, no matter who paid the cost of his maintenance. After a brief discussion, the Congress adjourned.

DIRECT REPRESENTATION OF THE PROFESSION IN THE GENERAL MEDICAL COUNCIL.

A CLEAR proof of the interest which the profession takes in its direct representation in the Medical Council, will be afforded to our readers by the list which we publish below, of the members of the Committee formed during the annual meeting at Brighton, for the purpose of promoting efficiency in that representation by the selection, after free discussion, of suitable candidates. The honorary secretaries inform us that, in addition to the letters from the members of the profession, who have expressed their desire to join the committee, they have received correspondence from all parts, wherein the writers declare their full sympathy with its objects, but, for various reasons, decline to have their names added to the list. Probably there is a still larger proportion of the profession which consists of those who, like the class just mentioned, have equal sympathy with the aim of the Committee, but who abstain from even replying to secretarial communications, for reasons entirely unconnected with any opposition to the composition, the principles, or the practice of the committee. They largely consist of hard worked practitioners, who may hardly have time to study and consider the question to that extent which alone would make them feel justified in joining the committee. Indeed, it is, to some extent, for the benefit of their class, that the committee will act. It will fight for the cause of those who have little or no time to consider, promote and protect their public interests. Taking the above matters into consideration, it is evident that the list which we publish proves, as we above observed, that the bulk of the profession takes the greatest interest in the work of the committee, and that the majority of abstainers from its ranks are not its enemies, nor even opponents; nevertheless, it cannot be denied that, as might be expected, there are some who object to the principles of the committee. We publish a letter, this week, from a candidate of known reputation, for election as a representative of the profession on the Medical Council, where sundry objections are made to the committee. We explained, however, in the JOURNAL of September 4th, that the committee was formed under conditions involving the greatest publicity, for it was projected at an annual meeting of the Association, which was of the most public character, and where every kind of general or personal objections to the principles, or very existence of the committee, could be freely debated. It has, however, been explained, and the fact must be self-evident to our readers, that it is impossible that candidates can be selected in a satisfactory manner, without some kind of organisation, such as can alone be arranged by committees. Then, the circumstances of the establishment of the committee necessitated that it should be connected intimately with the name of the British Medical Association, but its members need not necessarily be members of that Association. The committee earnestly endeavours, as it has already announced, to embrace representatives of every section, and every interest of the profession, and their efforts in this direction are being rewarded by success. The committee has not the will, even if it had the power, to oppose candidates who may desire to act independently of its support and counsels. It is simply an organisation to ensure facility in selecting suitable candidates after publicly discussing their merits in a legitimate and unprejudiced manner. With regard to Sir Andrew Clark's letter, it is satisfactory to find that that distinguished physician so thoroughly upholds the principle that the representatives should be chosen exclusively from the body of general practitioners. Still, many will regret that, as he is strongly in favour of allowing an exception to be made in the case of Mr. Ernest Hart, he declines to permit it to be extended to his own benefit, for, like Mr. Hart, he has laboured well for the cause of the profession.

The result of the ballot, held in accordance with the resolution of the Birmingham meeting, shows Mr. Wheelhouse (Leeds), Sir B. W. Foster (Birmingham), and Mr. Ernest Hart (London), to be the choice of a considerable majority.

COMMITTEE FOR ASCERTAINING THE WISHES OF THE MEDICAL PROFESSION AS TO THE MOST SUITABLE REPRESENTATIVES TO RETURN TO THE GENERAL MEDICAL COUNCIL.

Chairman.
Strange, W., M.D., Worcester.
Treasurer.
Saundby, R., M.D., 88A, Edmund Street, Birmingham.
Honorary Secretaries.
Carter, W., M.D., Liverpool.
Ker, H. R., F.R.C.S.E., Halesowen, Worcestershire.

Baker, S. I., M.R.C.S., Abingdon
Steele, E. Y., L.R.C.P., Abergavenny
Clayton, R., L.R.C.P., Accrington
Cooke, W. H., M.D., Aldridge, Staff.
Parkinson, J. R., M.R.C.S., Ashton-on-Ribble
Duncan, Jas., M.B., Ashton-under-Lyme
Marshall, B., L.R.C.P., Atherton, Manchester
Evans, C., F.R.C.S., Bakewell
Wise, R. S., M.D., Banbury
Bartrum, J. S., F.R.C.S., Bath
Mason, F., L.R.C.P., ,,
Spender, J. K., M.D., ,,
Booth, P. L., M.R.C.S., Barrow-in-Furness
Anderson, J. W., M.B., ,,
Barnardo, F. A. E., M.K.Q.C.P., Birkdale, Southport
Bowen, E., M.D., Birkenhead
Butcher, A. H., L.R.C.S., ,,
Vacher, F., M.R.C.P., ,,
Walker, G., M.D., ,,
Baker, A., F.R.C.S., Birmingham
Bartleet, T. H., F.R.C.S., ,,
Donovan, W., M.R.C.S., Erdington, Birmingham
Fairley, S. B., L.F.P.S., ,,
Foxwell, A., M.B., ,,
Garner, J., M.R.C.S., ,,
Haines, R. W., M.R.C.S., ,,
Hill, A. B., M.D., ,,
Holloway, G., L.R.C.P., ,,
Lloyd, G. J., F.R.C.S., ,,
Lloyd, J., M.B., ,,
May, Bennett, F.R.C.S.E., ,,
May, H., L.R.C.P., ,,
Malins, E., M.D., ,,
Moyles, T., M.D., ,,
Pemberton, O., F.R.C.S., ,,
Richards, T., M.D., ,,
Savage, T., M.D., ,,
Suckling, C. W., M.D., ,,
Tait, Lawson, F.R.C.S.E., ,,
Thomas, W., F.R.C.S.E., ,,
Vince, J. F., M.R.C.S., ,,
Ward, J., M.D., ,,
Warden, C., M.D., ,,
Wilders, J. St. S., M.R.C.S., ,,
Sissons, W. H., M.R.C.S., Barton-on-Humber
Anderson, A. J., M.R.C.S., Blackpool
McNaughton, T., M.D., ,,
Ruxton, J., M.D., ,,
Sharp, H., M.R.C.S., ,,
Wartenberg, V. A., L.R.C.P., ,,
Welch, H., M.B., ,,
Kingsbury, G. C., M.D., ,,
Richardson, W. B., M.R.C.S., ,,
Hudsmith, P., L.K.Q.C.P.I., ,,
Heslop, F. A., L.R.C.P., ,,
Clay, J., L.F.P.S.G., ,,
Hunt, D. de V., L.R.C.P., Bolton
McTriesh, N., M.B., ,,
Johnston, J., M.D., ,,
Sprakeling, R. J., M.R.C.S., Bootle
Young, T. F., L.K.Q.C.P., ,,
Boustead, Surgeon-Major, Brighton
Lyle, T., M.D., Bromsgrove
Smith, S., M.R.C.S., Bristol
Jones, J. T., M.B., Brecon
Adam, A. M., M.D., Boston
Greenhalgh, H., M.R.C.S., Bury
Camplim, M.R.C.S., ,,
Dunbar, R. P., M.D., Blackburn
Cardew, G. A., M.R.C.S., Cheltenham
Gooding, J. C., M.D., ,,
Wilson, E. T., M.B., ,,
Godson, A., M.B., Cheadle
Grainger, F. M., L.R.C.P., Chester
Stolterfoth, H., M.D., ,,
Taylor, J., L.R.C.P., ,,
Waters, E., M.D., ,,
Nankivell, A. W., F.R.C.S., Chatham
Hough, J. H., L.R.C.P., Cambridge
Bridger, J., M.R.C.S., Cottenham, Cambs.
Skerritt, E. M., M.D., Clifton, Bristol
Spencer, W. H., M.D., ,,
Jackman, W. T., M.R.C.S., Coggleshall, Essex
Joyce, T., M.D., Cranbrook
De Denne, T. V., L.R.C.P., Cradley Heath
Paget, W. S., M.D., Great Crosby, Lane
Deardon, M.D., Crumpsall
Vaughan, W. E. W., M.R.C.S., Crewe
Eady, G. J., M.D., Caterham
Idison, J. J., L.S.A., Colne
Baker, J. W., M.R.C.S., Derby
Chaldecott, C. W., M.R.C.S., Dorking
Williams, C., M.R.C.S., Dyffryn, Merioneth
Roberts, G. W., M.D., Denbigh
Messiter, M. A., M.R.C.S., Dudley
Middlemiss, G., L.R.C.P., Darlington
Parsons, C., M.D., Dover
Allkin, W. J., L.R.C.P., Denton-le-fylde Lanc.
Darwin, G. H., M.R.C.P., Didsbury Lane.
Hindle, G., L.R.C.P., Over Darwen
Wraith, O. S., L.R.C.P., ,,
Roden, S. S., M.D., Droitwich
Robinson, E., M.R.C.S., Dukinfield
Price, E., L.R.C.P., Dudley Port, Staffs
Roberts, B., M.D., Eastbourne
Deas, P. M., M.B., Exeter
Patteison, J. N., L.S.A., Earlestowne, Newton-le-Willows
Pope, H. B., M.B., Eardisley
Falls, W. S., M.D., Falmouth
Bowles, R. L., M.D., Folkestone
Eastes, F., M.B., ,,
Tyson, W. J., M.D., ,,
Weaver, F. P., M.D., Frodsham
Bond, F. T., M.D., Gloucester
Bower, E. D., M.R.C.S., ,,
Needham, F., M.D., ,,
Waddy, H. E., L.R.C.P., ,,
Kealy, J. R., M.D., Gosport
Lowther, R., M.D., Grange-over-Sands
Forsyth, A., M.D., Greenwich
Folker, W. H., F.R.C.S., Hanley
Ker, H. R. (Hon. Sec.), Halesowen
McLanchlary, T. G., M.B., ,,
Strathy, F. R. L., M.D., Harborne, Birmingham
Evans, A. L., L.R.C.P., Hawarden
Chadwick, A., M.D., Heywood, Manchester
Chapman, T. A., M.D., Hereford
Stainthorpe, T., M.D., Hexham
Whittaker, J., M.B., Harwich
Peirce, W., M.D., Hoylake, Birkenhead
Sheen, A., M.D., Cardiff
Gaskell, R. A., M.R.C.S., Huyton
Howlett, E. H., F.R.C.S., Hull
Nicholson, R. H. B., M.R.C.S., ,,
Boulton, G. S., L.R.C.P., Ingham, Lincs.
Black, G., M.B., Keswick
Preston, —, M.R.C.P., Kidderminster
Johnson, C., F.R.C.S., Lancaster
Shuttleworth, G. E., M.D., ,,
Crickmay, E., M.R.C.S., Laxfield, Suffolk
Bates, W. R., L.K.Q.C.P., Addingham, Leeds
Jessop, L. R., F.R.C.S., Leeds
Wheelhouse, C. G., F.R.C.S., ,,
Wright, C. J., M.R.C.S., ,,
Boyer, J. J. W. R., M.D., Leamington
Eardley-Wilmot, R., M.B., ,,
Thorne, F., M.R.C.S., ,,
Thursfield, T. W., M.D., ,,
Tomkins, A. W., M.D. ,,
Adam, E., M.K.Q.C.P., Liverpool
Alexander, W., M.D., ,,
Archer, R. S., M.B., ,,
Armstrong, J., M.B., ,,
Bailey, F. J., L.R.C.P., ,,
Bennett, J. M., M.D., ,,
Bernard, A., M.B., ,,
Briggs, H., M.B., ,,
Burton, J. E., L.R.C.P., ,,
Cameron, A. H. F., L.R.C.P., ,,
Campbell, W. M., M.D., ,,
Carter, W. (Hon. Sec.), M.D., ,,
Chain, A., L.R.C.P., ,,
Davidson, A., M.D., ,,
Davies, E. T., M.D., ,,
Edis, J. B., L.R.C.P., ,,
Edwards, J., L.R.C.P., ,,
Evans, T. C., L.F.P.S.G., ,,
Fitzpatrick, W. H., M.D., Stonycroft, Liverpool
Glazebrook, N. S., M.R.C.S., West Derby, Liverpool
Hicks, J. S., L.R.C.P., Liverpool
Hopper, A. R., L.R.C.P., ,,
Howard, J. A., L.R.C.P., ,,
Howie, J. M., M.B., ,,
Judson, T. R., L.R.C.P., West Derby, Liverpool
Kelly, W., M.R.C.S., Liverpool
McGeagh, W., M.D., Waterloo, Liverpool
Matthews, J., L.R.C.P., Liverpool
Nevins, J. B., M.B., Stonycroft, Liverpool
Parker, R., L.R.C.P., Liverpool
Rowe, W. P., L.R.C.P., ,,
Shaw, S. H., M.D., ,,
Shearer, G., M.D., ,,
Sheldon, E. M., M.R.C.S., ,,
Steele, C. E., M.R.C.S., ,,
Steeves, G. W., L.R.C.P., ,,
Taylor, G. G. S., L.K.Q.C.P., ,,
Taylor, R. H., M.D., ,,
Thomas, H. O., M.R.C.S., ,,
Warburton, J. W., M.R.C.S., ,,
Waters, A. T. H., F.R.C.P., ,,
Westby, G., M.K.Q.C.P., ,,
Whitford, W., M.D., ,,
Wilson, J. H., M.K.Q.C.P., ,,
Wollaston, T. G., M.D., ,,
Carline, W. A., M.D., Lincoln
Inglis, T., F.R.C.P., ,,
Sympson, T., F.R.C.S., ,,
Morgan, M., L.R.C.P., Lichfield
Owen, O. E., L.R.C.P., Llangefni, Anglesey
Davies, W. B., L.R.C.P., Llandrindod
Barnes, H. F., L.K.Q.C.P., London
Barnes, J. W., F.R.C.S., ,,
Cholmley, Wm., M.D., ,,
Davidson, —, M.D., ,,
Galton, J. C., M.R.C.S., ,,
Grigg, W. C., M.D., ,,
Macnamara, C. N., F.R.C.S., ,,
Orwin, A. W., M.D., ,,
Sibley, S. W., F.R.C.S., ,,
Stowers, J. S., M.D., ,,
Thomas, Danford, M.D., ,,
Eddowes, J. H., M.D., Loughborough
Gallimore, T. A., L.R.C.P., Lynn
Armstrong, W., M.R.C.S., Manchester
Davidson, —, M.D., ,,
Dreschfeld, J., M.D., ,,
Glascott, C. E., M.D., ,,
Hamill, J. W., M.D., ,,
Haslam, G. J., M.D., ,,
Helme, J. M., M.D., ,,
Jones, Leslie, M.D., ,,
Leech, D. J., M.D., ,,
Rowe, T. S., M.D., Margate
Pike, T., M.D., Great Malvern
Hallowes, J. H. B., M.R.C.S., Maidstone
Monckton, D. H., M.D., ,,
Bailey, J. J., M.D., Marple
Lloyd, T. L., L.R.C.P., Market Drayton
Cresswell, P. R., F.R.C.S.E., Merthyr Tydvil
Ollerhead, T. G., L.R.C.P., Minehead
Farrar, J., M.D., Morecambe, Brynley
Roberts, John, M.D., Menai Bridge
Drummond, D., M.D., Newcastle-on-Tyne
Evans, —, M.D., ,,
Oliver, T., M.D., ,,
Philipson, G. H., M.D., ,,
McNaught, J., M.D., Newchurch
Appleby, F. H., M.R.C.S., Newark
Beaman, E. H., M.R.C.S., Newton-le-Willows
Watkin, J. W., M.D., ,,
Terry, H., M.R.C.S., Northampton
Handford, H., M.D., Nottingham
Hatherley, H. R., L.R.C.P., ,,
Marshall, L. W., M.D., ,,
Fawsitt, T., L.R.C.P., Oldham
Gledhill, M.R.C.S., ,,
McGowan, S. A., M.D., ,,
Thomson, G., M.D., ,,
Barron, W., M.B., Old Elvet, Durham
Square, W., F.R.C.S., Plymouth
Ward Cousins, J., F.R.C.S., Portsmouth
Morris, W. J., L.R.C.P., Portmadoc
Anderson, J., M.D., Poulton-le-fylde
Christison, J., M.D., Preston
Philips, H. H., M.D., Reading
Walford, T. L., M.R.C.S., ,,
Harris, H., M.D., Redruth
Hodgson, W. J., M.D., Rochdale
March, H. C., M.D., ,,
Pooley, W., L.R.C.P., ,,
Beasley, J. G., M.R.C.S., Rowley Regis
Anderson, J., M.D., Royton
Dukes, C., M.D., Rugby
Campbell, C. G., L.K.Q.C.P., Saddleworth, Yorks
Green, J. L., M.R.C.S., Salisbury
Jamieson, A. A., M.D., St. Helen's
Reid, J., M.B., ,,
Ricketts, J., L.R.C.P., ,,
Neal, J., M.D., Sandown
Jackson, A., M.R.C.S., Sheffield
Cureton, E., M.R.C.P., Shrewsbury
Eddowes, W., M.R.C.S., ,,
Humphreys, J. R., F.R.C.S., ,,
Saukey, W. H. O., M.D., ,,
Strange, Q., M.D., ,,
Baildon, F. J., M.B., Southport
Barron, G. B., M.D., ,,
Brideoake, J., M.R.C.S., ,,
Charlick, A. J., L.K.Q.C.P., ,,
Longton, E. J., M.D., ,,
McNicholl, L. D., F.R.C.S., Southport
Pinkerton, C., M.D., ,,
Walker, G. C., M.D., ,,
Axford, W. H., M.B., Southsea
Norman, H. B., F.R.C.S., ,,
Crease, J. R., F.R.C.S.E., South Shields
Gowan, W. F., F.R.C.S.E., ,,
Fletcher, J., M.R.C.S., Stockport
Tylecote, M.D., Stafford
McAldowdie, A. M., M.D., Stoke-on-Trent
Smith, H. H., M.R.C.S., Stonebridge
Partridge, T., M.K.Q.C.P., Stroud
Leach, J. C., M.D., Sturminster
Whitehouse, J., F.R.C.S., Sunderland
Atkinson, F. P., M.D., Surbiton
Fry, J. F., L.R.C.P., Swansea
Hall, J. G., M.R.C.S., ,,
Rawlings, J. A., M.R.C.P., ,,
Pricé, J. L., M.R.C.S., Standish
Bagshawe, F., M.D., St. Leonards
Moreton, J. E., F.R.C.S., Tarvin
Sharp, E., M.R.C.S., Truro
Adeney, E. L., M.R.C.S., Tunbridge Wells
Lister, E., L.R.C.P., Ulverston
Thompson, A., M.D., ,,
Taylor, J. J. B., M.B., ,,
Gettings, J. S., L.R.C.S., Walsall
Fox, E. A., L.R.C.P., Warrington
Smith, Thomas Starkey, M.B., ,,
Tibbits, J., M.D., Warwick
Harvey, H., M.B., Wavertree, Liverpool
Matthews, J., L.R.C.P., Waterloo, Liverpool
Sutcliffe, H., M.R.C.S., West Bromwich
Childs, C., M.B., Weymouth
Cooper, W., M.R.C.S., Widnes
McLennan, D. U., M.D., ,,
Barnish, W. C., M.R.C.S., Wigan
Berry, W., L.R.C.P., ,,
Brady, C. M., L.R.C.S.I., ,,
Hall, R. S., M.R.C.S., Ince, ,,
O'Donnell, W., L.K.Q.C.P., ,,
Stuart, J. B., M.R.C.S., ,,
White, James, M.R.C.S., ,,
Harthill, J. T., L.R.C.P., Willenhall
Batterbury, G. H., M.D., Wimborne
Parkinson, C. H. W., M.R.C.S., ,,
Jackson, T. V., F.R.C.S., Wolverhampton
Lysett, J. A., M.D., ,,
Newnham, C. A., M.R.C.S., ,,
Totherick, J. Y., M.D., ,,
Eyton-Jones, T., M.D., Wrexham
Crowe, G. W., M.D., Worcester
Strange, W., M.D. (Chairman), ,,
Chapman, G., M.R.C.S., Yoxall
Cook, W. H., M.D., Aldridge, near Walsall
Robinson, J., M.D., Dunscar, Bolton-le-Moors
Ginling, M., M.R.C.S., Birmingham
Turner, E., M.R.C.S., Wordsley, Staffs
Goulder, F. S., L.R.C.P., Dudley
Paine, W. H., M.D., Stroud
Saul, W. Wingate, M.D., Lancaster
Edmunds, James, M.D., 8 Grafton Street, Piccadilly
Keeling, James H., M.D., Sheffield
Spurgin, H. B., M.R.C.S., Northampton
Rickards, E., M.D., Birmingham
Weston, E. F., M.R.C.S., Stafford
Ewbank, F., M.R.C.S., London
Brookes, R. C., M.R.C.S., London
Holmes, J., M.D., Ouselhurst, Lancashire
Shuttle, R. C., M.D., Reading
Barker, John, M.D., Lancaster
Howard, J. F., M.D., Sandycroft, Oldham

ON THE MARINE HOSPITAL SERVICE FOR SICK AND HURT MERCHANT SEAMEN OF THE UNITED STATES.

Two years ago, we published a paper on the above subject, to which we revert, having been favoured with an official copy of the annual report for the last fiscal year.

The United States Bureau holds medical charge of the men of the revenue, quarantine, life-saving, and lighthouse services, as well as of the marine hospitals; and its importance is displayed in its receipts and expenditure, which have amounted, during the fiscal year, to over £100,000. Relief was afforded to 41,724 men, of whom 12,132 were treated in hospitals, a gross period of 318,408 days, or 26¼ days for each man, together with 28,921 who were furnished with relief at the dispensaries as out-patients; 482 surgical operations were performed. The system was reorganised in 1871, since which the stations for relief have increased from 72 to 210, and the relief afforded has grown in the last fourteen years from 14,256 to 44,761. There are 17 marine hospitals belonging to the service.

The new model hospital at Baltimore has been completed, and others are in progress. Its wards are each computed to hold 20 patients in a cubic space of 70,300 feet, which give 3,500 to each bed; but they may well receive 50 per cent. more, if necessary. It is suggested by the supervising Surgeon-General, Dr. J. H. Hamilton, that, "if the country should at any time be engaged in a war, it will be found that these hospitals constitute a chain of general hospitals supplementary to, and of the greatest utility to, those of the army as well as navy. These could in no way be improved to meet the sudden exigencies of war; and experience has shown that, at such times, the thoughts of those in authority are generally directed towards other objects."

The functions of the office have been active on the Atlantic shore, in view of the possibility of introducing cholera from the southern shores of Europe, or from the shores of the Gulf for the same reason, regarding Cuba as the intermedium of Spain. Yellow fever has been malignant on the Pacific shore of Mexico, and, to guard against its introduction on the south-west frontier, the inspection of all arriving trains was carried out. The most energetic display of preventive measures was, however, in Michigan, at the river channel, connecting lakes Huron and Erie—the points of main-line traffic between Canada and the south-west states of the Union.

It had happened early in June that small-pox made its appearance in Montreal, becoming strongly epidemic there and around it, arousing alarm in the United States frontier towns, so that in the middle of August the inspection of all trains from Canada was enforced at their railway stations of inter-communication, under medical officers of the Marine Hospital Service. When this was done by the authorities of the United States, a meeting was held in the office of the United States Consul-General, at Montreal, attended by the Board of Health officials of Vermont and New Hampshire, on the road from Montreal to Boston, "to urge the Canadian authorities to adopt measures towards the stamping out of the disease in Montreal and adjoining municipalities, and precautionary of its spread." By this combination good results were achieved, with, however, some unavoidable delay of the traffic at Detroit and Port Huron. There, between August 24th and September 19th, the following amount of precautionary work was effected: 181 trains and 10,753 passengers were inspected, 400 pieces of baggage were detained, and disinfected by sulphur-fumigation, and 75 persons were vaccinated voluntarily, showing averages of 7 trains with 413 passengers daily. The chief importance was attached to the fumigation of the baggage, on which great stress was laid. All persons arriving without proper medical certificates were detained, but no cases of small-pox were detected by the inspectors.

The last sixty-one pages are filled up by 130 cases of injury and diseases, with the names and positions of the reporters. They are succinct, and being chiefly fatal, and many of them climatic, or special to seamen, much is found in them of interest. Fifty of these are grouped as "cases of peculiar forms of fever," by Past Assistant-Surgeon Guitéras, to elucidate a theory as to the nature and the characters of anomalous continued fevers that crop up on the neutral ground betwixt malarial fevers and typhoid, particularly seen in hot climates, where difficulties of diagnosis are more frequently met with than elsewhere. Out of these he selects cases in support of a hypothesis of "a fever that is probably produced by an exhaustion of the heat-controlling centres, which is brought about by their prolonged over-exertion under the influence of continued atmospheric heat, an essential of nervous origin, and one which awakes a twofold interest—first, because it is a disease which we are called upon to treat, and second, because it is the background upon which the many febrile affections are painted."

Mr. Guitéras would seem to have struck a cord that will awaken the minds of our sea-going brethren, as well as of those who practice in tropical and semi-tropical climates, to whom we would commend the careful study of this concise paper. In elucidation of his descriptions, he has appended a sheet containing fifty comparative diagrams of the curves of temperatures, pulse, and respirations observed in several of the fevers within his province. These are diagrammatic of essential points in pyretology, and may well serve to aid in diagnosis of fevers which are little known in European climates, and thus it becomes a valuable contribution to medical literature. He proposes to give to this group of fevers the title of "Thermic Fevers," which would embrace the febrile attacks of varying type after sunstroke, from the ephemeral to the low adynamic type of continued fever, which in hot climates are not amenable to treatment by quinine, as all these of malarial characters are.

Reverting to the economic view of this question, which is that of the admirable measures taken on the other side of the Atlantic to provide for the necessities of the sick of the mercantile marine, not by public or private charity, but by a tax on tonnage, free from any mulct on the wages of the sufferers, with supplementary votes by Congress to assist in maintaining an efficient system, it may be said that neglect of State supervision appertaining to the welfare of our merchant seamen—the greatest in the world—underlies much of the discontent of this important class. Its present condition is a degraded one, because its rights are unrecognised, and its claims lie altogether at the mercy and under the judgment of the employers, many of whom are unquestionably honourable and kind-hearted gentlemen. Our Royal Navy presents a grand example of how much can be effected by raising the self-respect of its seamen; but it is now a covenanted service, in which it is known and felt that rights are respected, and claims attentively listened to. But, in the event of war, Great Britain can man her fleets only from her mercantile marine, and therefore our Government should take a warm interest in it. The action of the United States Government shows its watchfulness, not only over the welfare of its Navy, but over the merchant service. This "Bureau" has under it a far-reaching organisation to care for them when sick and disabled. Why, it may be asked, should not we organise a system to the same end? The time has come for such to be done. Our seamen who go to Australia are fully aware that there their brethren have founded a "trade union," which is said to be one of the most influential in that new continent; and possibly it may have its emissaries in our home-ports, to disseminate their ideas and principles of self-help. The Royal Commission now investigating the causes of the unprecedented losses of life at sea might be usefully empowered to inquire into the closely affiliated question of the position of the ordinary means and appliances the mercantile seamen have allotted to them when sick or disabled at sea or on land.

CHOLERA.

CHOLERA IN HUNGARY.

THE number of those attacked by cholera at Buda-Pesth is again on the increase, says a telegram from Vienna of the 19th instant, whereas the fatal cases are not so numerous. From the 12th to the 18th of September, 61 cases of sickness and 19 deaths occurred. The Cholera Commission has discovered practices dangerous to health. In each of two houses belonging to a nobleman there were discovered from 150 to 200 persons lying together on the bare ground in the courtyard. In a cellar, 40 persons of both sexes were found sleeping together on the ground. A number of such dwellings have been visited. In Vienna and Lower Austria, strenuous preventive measures are being adopted, although there has not as yet been reported a single case of cholera. The Servian Government has decreed a seven days' quarantine for travellers and goods coming from Hungary. At Odessa, a fourteen days' quarantine has been decreed for goods arriving from the Danubian ports. The five days' quarantine imposed at Constantinople consists, it is stated, in remaining five days on board of a steamer at the entrance of the Bosphorus. Fumigation is not regularly applied. There is, it is said, no chance of an early suppression of this quarantine.

CHOLERA IN ITALY.

THE following are the cholera-returns from September 18th to September 22nd. Torre dell' Annunziata, 16 cases, 11 deaths; Castellamare, 3 cases, 2 deaths; Putignano, 15 cases, 6 deaths; San Marco;

in Lamis, 9 cases, 8 deaths; San Giovanni Rotondo, 11 cases, 4 deaths; Ferrara, 26 cases, 14 deaths; Carignola, 8 cases, 2 deaths; Bergamo, 11 cases, 2 deaths; Ravenna, 9 cases, 4 deaths; Ravarino, 11 cases, 11 deaths; Venice, 3 cases, 1 death; Vicenza, 4 cases, 1 death; Taranto, 14 cases, 2 deaths; Rovigo, 6 cases, 5 deaths. In the 24 hours ending September 22nd, there are reported to have been 3 fresh cases of cholera, and 1 death at Trieste; and 1 fresh case at Fiume; 32 cases of cholera, and 5 deaths at Pesth.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETING FOR 1886.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of the above District will take place at the West Kent Hospital, Maidstone, on October 29th. Gentlemen who wish to read papers, exhibit specimens, etc., are requested to inform the Honorary District Secretary, A. W. Nankivell, F.R.C.S., St. Bartholomew's Hospital, Chatham, not later than October 9th. Further particulars will be duly announced.—A. W. NANKIVELL, St. Bartholomew's Hospital, Chatham, September 11th, 1886.

NORTH OF ENGLAND BRANCH.—The next meeting will be held at the Newcastle-on-Tyne Infirmary on Tuesday, September 28th, at 2.30 P.M. Business, Introduction of Patients. By Dr. Philipson: A Case of Empyema successfully treated by Incision, Removal of a Portion of Two Ribs, Drainage, and Antiseptic Dressing. Demonstration, by Dr. Mantle, of the Methods employed in the Investigation of Disease for Bacteria, together with the Bacteria found in Rheumatism. Papers: Dr. Drummond: On the Symptoms and Diagnosis of Floating Kidney. Dr. Morison: Three Cases of Intestinal Obstruction. Dr. Munro: A Case of Intestinal Obstruction. Mr. Williamson: Successful Operation in a Case of Acute Intestinal Obstruction. Dr. Murphy: A Case in Medical Jurisprudence. Dr. Oliver: On some points in the Clinical Examination of the Urine. The dinner after the meeting will take place at the Douglas Hotel, at five o'clock. Tickets, 6s. 6d. each, exclusive of wine.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 22, Eldon Square, Newcastle-on-Tyne.

MIDLAND BRANCH.—There will be a meeting of this Branch on Thursday, October 21st, at 2 P.M., at the Infirmary, Stamford, when it is hoped there will be a discussion on the Duration of Infectiousness in Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. Members desirous of reading papers or exhibiting cases are requested to communicate with me before the 4th October next.—W. A. CARLINE, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The autumnal meeting of this Branch will be held at Kimbolton, on Thursday, October 14th. The President, J. Hughes Hemming, Esq., invites the members to luncheon from 1 to 2 o'clock P.M., and will be glad of a reply. By the kind permission of His Grace the Duke of Manchester, the visitors will have the opportunity of seeing over Kimbolton Castle. Gentlemen wishing to bring forward communications, etc., at the meeting, are requested to send the titles of the same, as soon as possible, to the undersigned.—CHARLES J. EVANS, Honorary Secretary.

WEST SOMERSET BRANCH.—The annual meeting of this Branch, which was appointed to be held at Minehead on July 30th, was put off in consequence of its being ascertained that probably only three or four members could have attended on that day. The Council have now fixed that the postponed meeting shall be held at the Railway Hotel, Taunton, on Thursday, October 14th, at 4 P.M. The business will be the same as that stated in the circular of July 6th, and the dinner will be at 5.30 P.M.—W. M. KELLY, M.D., Honorary Secretary.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.

A MEETING of the above District was held at the George Hotel, Halstead, on Saturday, September 11th. Nineteen members were present. In the absence of the President, Dr. Elliston, the chair was taken by Mr. KELLETT, of Halstead.

Next Meeting.—It was decided to hold the next meeting at Chelmsford, in January, and Dr. Wheeler, of that town, was nominated to act as president, in the event of the President of the Branch being absent.

Papers, etc.—The following communications were read.

1. Mr. Kellett (Halstead) opened a discussion upon Convulsions occuring after Parturition, reading notes of a case in which Phlebotomy proved of marked assistance in restoring the patient. Dr. Wheeler (Chelmsford), Dr. Bodkin (Chelmsford), Mr. J. Taylor (Earle's Colne), Dr. J. Sinclair Holden (Sudbury), Mr. Edwards (Ipswich), and Mr. Crickmay (Laxfield) took part in the debate.

2. Mr. Kellett afterwards read notes of a case of Gestation which was prolonged to three weeks over the ordinary time.

3. Dr. Sinclair Holden (Sudbury) read a paper, illustrated by drawings, upon "the Treatment of Cancer by applying Arsenic." He advocated this mode of treatment for small cancers of the epithelial type, and stated that, although the cure was probably more delayed than if the knife were used, the patients would often yield to this method of treatment when they would object to surgical interference. The application of a 4 per cent. solution of cucaine greatly lessened the pain if painted over the growth before the arsenical paste. Dr. Bodkin (Chelmsford) raised objections to this manner of treating cancers, but the feeling of the meeting seemed to be in support of Dr. Holden's contention.—Mr. J. Taylor and Mr. Kellett also took part in the discussion.

4. Mr. John Taylor (Earl's Colne) showed a large Biliary Calculus, which had been passed through the abdominal walls; Mr. Taylor also showed an interesting specimen of a Fractured Femur, and a drawing of a case of Ichthyosis.

5. The following cases were also shown: A case of recovery after an operation for Strangulated Hernia, in which the gut had sloughed through and afterwards healed, together with the external wound, the man being now in perfect health, by Mr. J. Taylor; a case of Graves's Disease, by Mr. Kellett; a well marked case of Morphœa, with a photograph of the same, taken three months previously, by Mr. W. T. Jackman (Coggeshall).

6. Mr. W. T. Jackman demonstrated several of Mr. Priestley Smith's ingenious Ophthalmic Models, and the practical utility of his Demonstrating Ophthalmoscope was proved by the members in the examination of a well marked case of Optic Neuritis.

At the conclusion of the meeting, the members were most hospitably entertained at dinner by Dr. Kellett, and a most enjoyable evening brought to a close a very successful meeting.

READING BRANCH.

THE annual meeting of the Reading Branch of the British Medical Association was held on Wednesday, September 15th.

The President, Mr. W. G. ARMSTRONG, delivered an excellent address, taking for his subject the most prominent topics of professional interest at the present day; touching upon the assumption of the title of "Doctor" by the members of the profession generally. Mr. Armstrong suggested some afternoon meetings of the Branch for the consideration of subjects of interest.

The attendance of members was good, and the meeting terminated by the members dining together as usual.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Triple Contagion of Tuberculosis—from Man to Man, from Man to Fowls, and from Fowls to Man.—Paralysis after an Attack of Tonsillitis.—Piliganine.—Local Treatment of Membranous Dysmenorrhœa.—Diseases of the Uterus treated by Fluids.—Cure of Mental Diseases by Hypnotism.

Dr. de Lamailerée publishes, in the *Gazette Médicale de Paris*, the following interesting facts. The little village of C. is a most healthy spot, being about 2,000 feet above the level of the sea. Epidemics are there unknown, and the inhabitants of this village generally die of old age or pneumonia. In 1872, a young man who had contracted bronchitis, whilst a prisoner in Germany during the war, settled down in this village. He married a strong healthy girl; soon afterwards, he began to spit blood, and died of consumption two months after the birth of a son, and within a year of his marriage. Soon after his death, his wife, who had nursed him, had bronchitis, which became chronic, and in a little while tuberculosis of the lungs was manifested. The child had successive attacks of bronchitis, and rapidly developed consumption. Cavities formed in the woman's lungs, and she expectorated abundantly. A short time ago, the physician attending her was called to a young woman in the same village who showed evident signs of pulmonary phthisis. The house was at some distance from that of the first female patient. The second patient was a woman, aged 29, and of a robust constitution. A careful examination revealed that she rarely went to the house of her neighbour who had contracted consumption, and never ate or slept there, but that she had eaten the flesh of eleven fowls which had died at her invalid neighbour's during the space of four months. She had eaten them very underdone, believing that they were most nourishing when but slightly cooked. It was discovered that these fowls had swallowed some of the sputa expectorated by the first patient. The birds had been seen to collect round her whenever she coughed. On making a necropsy of one of the fowls which had just died, it was found that the intestines and liver were filled with tubercles. The fowl had become very emaciated, and could hardly move; the purulent liquid found in the tubercules contained in the liver was filled with bacilli tuberculosis. It was probable that the other birds had perished from the same cause. These fowls must, therefore, have been the means of conveying contagion to the second woman who had eaten them. In this case there is the triple contagion of tuberculosis. 1, from man to man; 2, from men to animals; 3, from animals to men. Contagion from man to man is already a scientific fact. Contagion from men to animals had been admitted by many writers, but others have stated that certain animals, amongst which are fowls, could not be inoculated. This case shows clearly that fowls are as liable to contract tuberculosis as other animals, such as cats and dogs. Contagion from animals to men is clearly demonstrated in this case. Up to this time, the only known vehicle of contagion was cow's milk; now it is shown that the bacillus can also be carried through fowls. It is important, then, to pay great attention to the health of fowls destined for food, and it would be worth while to find out how soon after the fowl has begun to suffer from tuberculosis it can infect those eating it, and also how much cooking will destroy the bacilli.

Dr. Prévost mentions in the *Archives Médicales Belges*, an exceptional case of paralysis of the arm following tonsillitis. An officer had a sharp attack of tonsillitis, so that scarification was necessary, but there was no exudation which might suggest diphtheria. The affection had been cured for some time, and no trace of it remained, when the patient complained of weakness in the right arm, which increased by degrees, and resulted in paralysis. After trying various remedies, the patient was cured, and no trace remained of the paralysis.

Piliganine is an alkaloid which is present in lycopodium saururus, commonly known as piligan or piliganine. Dr. Bardet, chief of the therapeutical laboratory of the Cochin Hospital, tested the effect of an infusion of piligan, and observed that it acted as a powerful emetic, and produced general symptoms which indicated that it was not a suitable therapeutic agent. A chemical examination proved that this plant contained a special kind of resin and an alkaloid which M. Bardet calls piliganine. This alkaloid was isolated by M. Adrian, who gave M. Bardet two grammes of hydrochlorate of piliganine. This investigator made experiments with it on a dog, rabbit, and frog, and concluded from the resulting phenomena that piliganine acted as a poison, and that its influence was principally exercised on the nerve-centres, the medulla oblongata, and pneumogastric nerves.

A paper was recently read at the Medical Congress held at Nancy, by M. Paul Landowski, concerning the application of the electro-cautery to the endometrium in cases of membranous dysmenorrhœa. The author stated that it was essential that this operation should not be performed before previously dilating the uterine orifices, and if they were sufficiently large and easily dilatable, a single application only of a prepared sponge was necessary; if, on the contrary, there should be rigidity of the orifices, the sponge must be applied twice, once in the evening, and again the following morning. It was on removing the sponge that the electro-cautery should be introduced. It was heated rapidly as it passed lightly over the surface of the endometrium. After applying the electro-cautery, the patient should remain in bed for a week. The application should be made five or six days following the menstrual period. In the case of two patients, of whom M. Ladowski spoke, one proved a complete success; in the other, the patient passed pieces of membrane the size of a penny during her periods, but she was relieved of pain. It would be interesting to know if the exfoliative processes were only limited to that part where the application had been insufficient.

At the Medical Congress at Nancy, M. Gairal, senior, presented an apparatus which he called a uterine basin, the object of which was to check uncontrollable vomiting in pregnant women, and to support the womb, which had become too heavy, by bringing it in permanent contact with a liquid which would cause local anæsthesia. M. Gairal referred to the question of leucorrhœa, on which gynæcologists were not agreed. He adopted a local treatment by a special method based upon the disposition of the vaginal mucous membrane, and the use of a vegetable charcoal powder introduced by means of a small insufflator.

M. Voisin, of Paris, read the following communication at the Congress at Nancy, on the possibility of curing mental diseases by the aid of hypnotic sleep. He quoted two cases which lately came under his notice. With the first patient, sleep had not been obtained by adopting the ordinary means of looking fixedly at the experimenter. The patient's eyes were then kept open by means of two palpebral separators, and the rays of the magnetic lamp being directed towards them for ten minutes, produced sleep. In two days, the patient, who at first manifested great excitability, was completely cured. The second patient, a lypemaniac, who had refused food for a fortnight, and had made several attempts to commit suicide, was put to sleep for ten minutes, the first time by hypnotism. On awakening, she acquiesced in suggestions made during sleep, and consented to take milk. The same treatment was repeated every other day, and at the end of a month she was quite cured, and able to return to work.

SWITZERLAND.

[FROM OUR OWN CORRESPONDENT.]

Swiss Dental Association.—Gratuitous State Medical Help.—Swiss Asylum for Epileptics.—Antipyrin.—Cascara Sagrada.—Cocaine in Tooth-Extraction.—Nævus Treated by Electrolysis.—Addison's Disease.—Transfusion of Saline Fluids.—Toxic Nephritis.—Tuberculosis of the Tongue.—Carbolic Injection in Anthrax.—Schaffer's Apparatus for Testing the Air.—Sudden Death of a Practitioner.

A Swiss Dental Association (*Verein Schweizerischer Zahnaerzte*) has been lately constituted, and for this purpose a meeting was held at Zurich. The initiative in the matter was taken by M. Wellaner, of Trauenfeld. His appeal was responded to by sixty dentists.

The Glarus sections of the Gruetliverein (a radical political union) consisting mainly of working people, have introduced into their programme a demand for gratuitous State help in sickness and burial. They hope to see their demand satisfied in the forthcoming revision of the cantonal constitution (*Stadtblatt für die Stadt Bern*, September 3rd, 1886). The idea of gratuitous medical aid from the State markedly gains ground amongst the Swiss working people from year to year.

According to the *Schweizer Handelscourier*, September 3rd, 1886, on August 31st a Swiss Asylum for Epileptics was opened in Rueti, near Ries-Zurich. It is the first institution of its kind in Switzerland. The number of beds is 50. It is almost superfluous to add that all the beds were filled on the very first day. The institution is directed by Dr. Koelle, formerly of Stetten, Wurtemberg.

In the *Revue Médicale de la Suisse Romande*, May 15th, 1886,

p. 281, Dr. Blanchard stated that, in acute articular rheumatism, antipyrin, in daily doses of from four to five grammes, acts as effectively as salicylate of soda, but more rapidly. The only drawback is, that the drug sometimes produces erythema. In pneumonia of children, its medical action is very marked, while in adult cases the drug remains almost inactive. In all (except suppurative and diphtheritic) anginas, the drug in a few hours removes fever, headache, anorexia, and pain, though the morbid process itself runs its usual course. A dose of one or two grammes rapidly causes the disappearance of malaise in cases of ephemeral fever, or febrile gastric disturbances. But in enteric fever antipyrin is by far less successful than baths.

Dr. Paris, of Peseux, has treated forty cases of habitual constipation (of hepatic origin, in chlorotic girls, etc.) by cascara sagrada, given after the formula of Dr. Bundy, which is as follows: R Fluid extract of cascara sagrada, 1 scruple; syrup, water, of each 30 grammes. Three or four teaspoonfuls a day. The results were most satisfactory in all cases but one, a case of hepatic cirrhosis, where the administration was discontinued on account of violent colic.

Professor Redard and his assistant, Dr. G. Andina, of the Geneva Dental School, have employed hydrochlorate of cucaine as a local anæsthetic in forty cases of tooth-extraction. They used a 15 per cent. solution, injecting into the gum in average 50 or 75 centigrammes of the alkaloid by means of an ordinary Pravaz's syringe. In all the cases, extraction, which was performed usually in ten minutes after the injection, was absolutely painless. No unpleasant accessory effects, except some nausea and heaviness of the head in young girls and children, were observed. The author's results, therefore, coincide with those published by Mrs. Helene Vongl-Sviderskara, of St. Petersburg (see the *London Medical Record*, July, 1886, p. 304), who, however, used far larger doses.

Dr. A. Mayor, of Geneva, published an interesting case of an erectile tumour (a nævus of the cutaneo-subcutaneous variety) on the back in a girl, aged 10 months, where he successfully tried electrolysis. The number of sittings was two; the duration of each about two minutes. The dose of the current was only two milliampères (from four cells of Leclanché's battery). On examination of the patient about four years later, not a trace of the nævus (which originally was of the size of a nut) was detected.

In the *Correspondenz-blatt für Schweizer Aerzte*, Nos. 15 and 16, 1886, Dr. Ernst Kummer, assistant to Professor Kocher, of Berne, ably details two cases of Addison's disease, in one of which intense urobilinuria was present. Professor Nencki was able to isolate (by evaporating an amyl-alcoholic solution) about 0.4 gramme of urobiline from the patient's urine, collecting during twenty-four hours. Indican was nearly absent. The author dwelt on the question of the origin of the pigment which caused a "bronze" discoloration of the integuments in Addison's disease. As is known, Professor Nencki and Dr. Berdez have succeeded in isolating the colouring matter of human melanotic sarcoma, the so-called phymatorhusin, which has no relation whatever to hæmoglobin, since it contains more than 11 per cent. of sulphur (*Archiv für Experim. Pathol. u. Pharmac.*, vol. xx, p. 346), but is closely related to hair-pigment, as Dr. Nadjeda Sieber's researches have shown (*ib.*, p. 362). It would be possible to admit that the pigment of Addison's disease is either phymatorhusin or hair-pigment; but then the urine should contain an increased amount of non-oxidised sulphur. Since nothing of the kind is observed in the disease in question (Lichtheim), the author comes to the conclusion that the "bronze" pigment is a product of hæmoglobin. He supports his view by pointing to an universal diminution of red blood-corpuscles, and an absolute reduction of hæmoglobin in Addison's disease.

At a meeting of the Zurich Medical Society, Professor Gaule made an interesting communication on transfusion of a solution containing 3.5 per cent. of cane-sugar, 0.6 per cent. of chloride of sodium, and 0.005 per cent. of hydrate of soda. As his and Landerer's experiments show, the addition of sugar leads to a rapid regeneration of red blood-corpuscles. Thus, a dog with a maximal loss of blood (5.5 per cent. of the body's weight) showed a normal number of blood-corpuscles in eight days after the transfusion. According to the author, transfusion is indicated—(*a*) when the filling of blood-vessels is altered; (*b*) when the nutrition of tissues is changed; and (*c*) when the function of hæmoglobin is disturbed (poisoning). The transfusion of saline fluids may be effective only in the first case; in the two latter cases, transfusion of blood should be performed.

According to Dr. Muerset, of Twann (*Berne Inaugural Dissertation*, 1886), aloïn, oxalic acid, and chromium, on being injected (in a few large, or in frequent small doses) under the skin, in rabbits, produce nephritis, with the principal lesions in the convoluted urinary tubes; while cantharidin and bismuth cause nephritis with the principal changes in the glomeruli.

Dr. G. Feurer, of St. Gall, publishes three rare cases of tuberculosis of the tongue. In two of the patients, in men aged 72 and 34, the disease was primary, no symptoms of tuberculosis being found in any other organs. A third man, aged 50, suffered from advanced pulmonary phthitis. In the latter, a cuneiform excision with suturing was performed; the wound healed by the first intention. No return of the disease has followed (two years have passed already). In another, the affected anterior part of the organ was removed by the galvano-cautery. The patient remains well. In the third, the anterior half of the tongue was excised by Kocher's method. The patient died four months later, from meningitis; no necropsy was made.

At a meeting of the Berne Medico-Pharmaceutical Society, Dr. Niehans related a case of facial anthrax in a man, aged 50, where he most successfully tried subcutaneous injection of a 5 per cent. solution of carbolic acid, four syringefuls (Pravaz) at a time, around the pustule.

Dr. A. E. Burckhardt, of Basle, warmly recommends a simple and small apparatus for determining the amount of carbonic acid in the air of schools, hospitals, etc., invented by Dr. Schaffer, of Berne. The apparatus is based on the fact that diluted lime-water gives a violet-red stain on phenolphtalein paper, which stain disappears in the air containing carbonic acid, and does so the more rapidly the larger the amount of the acid present in the air. It is only necessary to mark the time which has been required for the disappearance of the stain, and to consult an appended table which shows the amount of the acid corresponding to the time.

The *Berner Zeitung* announces that a practitioner, Dr. Ed. Salchli, of Ruchwyl, suddenly fell dead from an apoplectic seizure when at the bedside of a patient.

CORRESPONDENCE.

DIRECT REPRESENTATION OF THE PROFESSION ON THE GENERAL MEDICAL COUNCIL.

SIR,—Being from home, and out of the way of the public papers, I have only now discovered that I have been nominated by the Birmingham Committee as one of several persons qualified to represent the profession in the General Medical Council.

Although I should regard the position of a representative of the profession in the General Medical Council as a right object of ambition, as worthy of any personal sacrifice, and as one of the highest honours to which anyone amongst us could attain; and although I am deeply and gratefully sensible of the generous manner in which the Committee has adverted to my small services in the cause of medical education and of professional polity, I am nevertheless not free to accept the nomination by which I am so much honoured.

For as I venture to read the history of our struggle, the just demand of the profession for direct representation in the General Medical Council was fought for upon the grounds that it would remedy a rankling injustice; that it would give, under conditions of the highest responsibility, a free if not full voice to the needs and aspirations of the general practitioners; that it would, in some measure at least, neutralise whatever might be partial in the influence exercised upon the Council by teachers, corporations, and universities; that it would create, foster, and maintain an active spirit of corporate life; and that it would knit together in closer union and wider co-operation the various sections of a profession whose duties and rights, whose responsibilities and privileges, whose ends and interests are, of a surety, one and indivisible.

And now that the interests of "consultants" and of teachers, of corporations and of universities, of the Crown and of the people, are already more than adequately represented in the General Medical Council; now that the right of direct representation therein has been conceded to the repeatedly renewed claims of the general practitioners, it seems both natural and proper that they should themselves exercise the suffrage in their own behalf; that they should elect as their representatives genuine working members of their own body, men who, commanding the confidence of their brethren, are familiar with the

history of our struggles for medical reform, who understand, in education and polity, the points which have yet to be won, who are zealous in adding to the value of the services which we render to society and the State, and who, in spite of every kind of opposition, will remain loyal to the highest interests of the profession. If this principle o lection is disregarded, and if all the representatives are chosen fromf outside the body of general practitioners, it will seem, at least to me, that the fight has been fought, and the battle won, in vain.

If, however, the profession is resolved, as I am told it is, to make one exception to this principle of election, I think that the exception might well be made in the person of Mr. Ernest Hart, whose labours in the cause of the profession, in the cause of public health, and in the cause of the sick, the poor, and the unprotected, are worthy of the highest acknowledgment.—I am, sir, your faithful servant,

ANDREW CLARK, M.D.

SIR,—I have no doubt the great majority of our profession will be of opinion that 343 responses cannot represent 17,000 practitioners, and that the meeting at Birmingham was a failure. Let me call attention to what took place at Birmingham. A meeting was called of a committee self-constituted, and not in the least representative. Of the 343 members of that committee, only 32 attended, and towards the end of the meeting only a few remained. It was then agreed to send the names of a number of the candidates to the whole committee, for each one to select three names, the three having the largest number of recommendations to be adopted by the committee.

Now, sir, in what way is that plan to recommend itself to the whole profession, each member of which is just as capable of forming a correct judgment of the merits of each candidate as is any one of the 343, who are not the elected representatives of the profession, with power to select candidates? Looking at the matter from every point of view, is it not substituting a body of 343, self-constituted as a committee, for the whole 17,000 members of the profession? For my own part, I think the system of committees a wrong one. The profession now for the first time is given a direct representation on the Medical Council, and the Council will send out the names of all the candidates to the 17,000 electors, for them to return three of those candidates to represent them. The members of the medical profession for the first time form an electoral body, unequalled in education and intelligence by any other in the kingdom; and recourse to anything like the ordinary electioneering tactics will be simply an insult to the understanding of those composing that electorate. I ask, is it seriously thought to be necessary for any committee to inform the 17,000 electors of the merits of the majority, if not the whole, of the candidates? Are they not thoroughly competent to decide each one for himself? The representation is intended to be direct. I ask, will it be direct if any committee, however influential or well-intentioned, should interfere between the candidates and the electorate?

Trusting that you will kindly insert these few remarks, I am, etc.,

Brighton. R. P. B. TAAFFE.

SIR,—Will you kindly correct a mistake which occurrs in your account of the meeting for the direct representation of the profession on the Medical Council. According to your report, I said that Dr. Glover had succeeded to the editorial chair of the *Lancet*. I believe I said that I had been told so, at least I made the statement on what I believed at the time to be good authority. I find I am mistaken, and I am requested by Dr. Glover to correct the statement.—I am, etc., LAWSON TAIT.

Birmingham.

THE DIRECT REPRESENTATION OF IRELAND.

SIR,—In the editorial note which appeared in the JOURNAL of September 18th, in which you recapitulate the names of the candidates for the office of direct representative, you omit my name, and that of Dr. Mac Mordie, of Belfast, while mentioning two other competitors for the Irish seat. I am sure this omission must have been inadvertent, inasmuch as my address—of which I inclose a copy—has been before the electors for two months, and I think my candidature is known to every practitioner in Ireland. Having for the last twenty years been intimately associated with medico-educational reform, both in and out of Parliament, and having had a hand in every amendment of system which during that period has been devised for the benefit of the Irish poor-law medical officers, I certainly intend to go to the poll, hoping for their warm support. I should, therefore, be sorry that the omission of my name by the JOURNAL should lead electors to suppose that I was not in earnest in my candidature.—Yours truly, ARCHIBALD H. JACOB, M.D. Dub. Univ., F.R.C.S.I.,

Ex-President of the Irish Medical Association.

23, Ely Place, Dublin.

*** We regret that, by an oversight, the names of Dr. Jacob and Dr. Mac Mordie were omitted from the list published on September 18th. Dr. Jacob's name was mentioned in this JOURNAL last July as an intending candidate.

ABDOMINAL PALPATION AS A MEANS OF DIAGNOSIS.

SIR,—My attention has been directed to a letter which appeared in the JOURNAL of August 7th, pointing to the value of abdominal palpation as a means of diagnosis.

This letter was so far instructive to myself, as I was not aware that this particular method had been elevated to the rank of a special course.

With a view of illustrating the benefits which he himself had obtained from such a course, Dr. Brand refers to an instance where "quite recently he was called in consultation;" and, as I happen to be the surgeon whom he alleges to have been in some doubt whether his patient was pregnant or not, perhaps I may be allowed to make the following statement, which I hope may not be altogether devoid of interest.

The patient was under my care from the beginning of December to the end of February, when she was removed to our Cottage Hospital. Throughout the whole of that period the abdomen was greatly enlarged; there was also much pain and tenderness, and distinct fluctuation was readily perceptible. The girl herself affirmed that she had been previously examined by two medical men, who had pronounced her case to be one of pregnancy. This condition was firmly denied by herself; it was also strongly negatived by the absence of all the usual signs and indications.

Her case being one of some interest, I thought it desirable, in compliance with an occasional custom at our hospital, to invite my colleagues to examine the patient, one of whom, as I well recollect, expressed his firm belief in the previous existence of peritonitis.

Dr. Brand records his own diagnosis in the following terms: "I could make my hands meet deep in the pelvis, and diagnosed ovarian disease springing from the left ovary, as was afterwards verified on operation."

Owing to the occurrence of scarlatina in our hospital, it was deemed advisable to remove the patient to the Hull Infirmary, where she subsequently died on July 26th; and, on *post mortem* examination, it was found the omentum and intestines were all matted together; that there was purulent fluid in the peritoneal cavity, and that the ovaries contained cheesy matter, but were not connected with any cyst. The only operation performed in the infirmary was the removal of about a pint of clear fluid by the aspirator, soon after her admission.

I shall only remark that there is at least one useful lesson to be learnt from this case, and that is, the need of exercising a judicious caution with reference to our diagnosis of those abdominal tumours.—I am, sir, your obedient servant, R. WOOD.

Driffield.

M. PASTEUR'S PROPHYLACTIC.

SIR,—I have read, I believe, nearly all the papers bearing on Pasteur's work published in England, America, France, Germany, Austria, Italy—papers written for and against. I have more particularly gone through M. Pasteur's own utterances in the hope of arriving at some conclusions on the value of the method of Pasteur. My views I have ventured to put before your readers, hoping that they would be criticised.

Before replying to my first critic, I should like to brush away a cobweb. Mr. Horsley speaks of my "un-English method of fighting." This phrase may serve for controversial purposes, and may help to direct attention from the main points at issue, but it has no bearing on the question; I am not fighting anyone. I think I am fully within my rights in pointing out what seem to me objections against a new method of treating a disease, about which I certainly know as much as Mr. Horsley. If my objections have no force, they can be easily disposed of. Mr. Horsley assumes to write from a higher level, as "he feels sure that, if Dr. Dolan will closely study the question, etc." I might reply to this very effectually, but it would still further lead us away; so, with your permission, I shall go over the "facts" which Mr. Horsley presents to your readers to controvert my objections.

1. "Control experiments were neglected." I am not alone in urging this point. Frisch, as far back as April 29th, 1886, suggested control experiments, which never were, as far as I can ascertain, performed by Pasteur, but have since been carried out by Frisch himself (see *Deutsche Med. Wochen.*, April 29th, 1886; and *Wiener Med. Presse*, August 1st and 8th, 1886). Frisch was favourable to Pasteur, and went to Paris to study the system, and suggested to Pasteur the experiments he has lately performed, and which have turned out adverse to the method. As regards another control experiment, Spitzbia, New York, inoculated rabbits with mere matter, and set up symptoms resembling those of the rabbits rendered rabid by Pasteur. Spitzbia has since set up pseudo-dumb rabies in dogs artificially. Mr. Horsley has had six negative results, a very small number indeed to place any reliance upon. There are other control experiments which, to my mind, should have been performed before M. Pasteur ventured to treat human beings, or to claim for his method the surety conveyed in the following quotation. Reporting the result of his treatment of 950 persons, *Le Progres Médical*, May 8th, attributes to M. Pasteur the following words, "Cette statistique prépare une deception aux personnes hostiles et répond victorieusement aux objections que des malveillants ou des fanatiques d'ideés hypothétiques n'ont cessé d'apporter depuis la découverte de celle méthode dont les resultats sont aujourd'hui trop assurés pour être sérieusement combattus." Mr. Horsley assures us Pasteur's method is now "on its trial." M. Pasteur did not think so last May. What has changed the aspect? The deaths.

2. I am aware that the first few inoculations contain very little virus, and I am also aware of a fact which Mr. Horsley omits to state, that some of the injections must be absolutely inert. In the case of the boy Meister, five of the ten injections were proved to contain no virus, and herein lies not only a danger, but a source of fallacy as to the value of the ten injections. Meister must have been protected by only five inoculations? I use the term sterilised *bouillon*, and I may be allowed to theorise as well as M. Pasteur. I adopt a sterilised *bouillon* theory, which I am willing to discard for a better one, in order to account for the extraordinary results. Mr. Horsley objects to my statements, but he does not answer the real question contained in objection 2. Pasteur's prophylactic has been applied (1) to persons not bitten by a dog at all; (2) to persons licked by dogs; (3) to persons bitten by healthy dogs; (4) to persons bitten by dogs presumed to be rabid. It acts equally well on them all, that is to say, it has no effect as far as we can see. If given to counteract a virus already in the system, the theory fails. Mr. Horsley does not offer us any explanation. Can it be possible that if this *bouillon* contained a virus more virulent than that of the rabid wandering street dog, that all would have escaped, especially in view of the danger of the irregularity of the injections seen in the instance of Meister. There is no boldness in my stating this objection. In none of M. Pasteur's published notes can I find a reference to "skin injections" as practised on his patients.

3. Mr. Horsley throws the *onus probandi* on me. We have strong evidence that a number were not bitten by rabid dogs, and this presumptive evidence weakens the case. Does Mr. Horsley pretend that the two thousand were bitten by rabid dogs, and that they went away from Pasteur's laboratory "completely cured" of hydrophobia? Mr. Horsley makes no allusion to the deaths when the Hydrophobia Commission returned from Paris. Shortly afterwards they could have presented statistically a favourable report; fortunately, they were saved from doing so by certain circumstances familiar to them, and they may congratulate themselves that time has come to their aid in estimating the value of M. Pasteur's work. How does Mr. Horsley explain the deaths? For some of them the old argument cannot be used "that they came too late."

4. As regards Villemin's experiment, I repeat my statement: Villemin was not correct in his deductions, for it has been since proved that the inoculation of other forms of growth, or of decomposing healthy tissue, or of the products of local inflammations, excited by mere mechanical irritants, were quite as efficient in generating general tuberculosis as was the inoculation of tubercular matter itself. This view of pathology may not be accepted by Mr. Horsley, but one is not altogether to sit at Mr. Horsley's feet to learn pathology; and Mr. Horsley's "facts" may be questioned as much as my own. In conclusion, I may say that I very much regret I cannot share in the enthusiasm manifested by some.

5. Mr. Horsley evades the point of this objection. We know that stringent Dog Acts check hydrophobia. That is not the point. "If Pasteur can render dogs insusceptible to rabies," why does not Mr. Horsley, who has had all the advantages of being in Paris a few days, and who knows the whole *technique* of Pasteur-injection, take up this part of the work, and do the same in London? This is the keynote: Abolish rabies in the dog, hydrophobia will be then unknown. I asked Why was not this done? Objections there cannot be on the ground of expense; nay, there is a fortune in it. I ask the question again. In conclusion, I may say I very much regret I cannot share in the enthusiasm manifested by some.

M. Pasteur's prophylactic is not proven to my satisfaction. I regret this all the more as I ventured to prophesy in my work on hydrophobia, 1877, "that rabies would be brought under control," and prophets like to have their prophecies fulfilled.

As a student of hydrophobia, and well acquainted with the literature of the subject, historically I am surprised at some of the physiological and pathological views put forward at the present day. Without a shadow of proof, we accept the fashionable microbic pathology to account for the phenomena. In the experiments, the saliva which is the initial point in the lesion, is absolutely neglected, and it is said "not to be patent enough for experimentation."

Not patent enough when it starts the whole disease! not patent enough when, in the recorded cases of hydrophobia, some of the slightest bites have been attended by as fatal consequences as the most severe! The initial lesion—the bite; the secondary lesions during the period of incubation; and the tertiary lesion—the medullary affection; are the three great land-marks in the life-history of the disease; of the first two stages we are in absolute ignorance. Of the last we have positive knowledge, glimmerings of the truth of which have been known to some writers on hydrophobia, but the truth of which has been demonstrated by Pasteur. It appears to me that we shall have to go back, as I pointed out in 1879, to the saliva, and find out by bio-chemical research the nature of the poison which, from analogy, I then fixed as belonging to the same class of poison (the proteid) as the poison of the snake. Viperine has been isolated, and I think in the same way we should conduct a series of experiments, not alone biological, but chemical, to isolate and find out the nature of the death-bearing ptysma, which sets up the whole disease. Dealing with a poison which acts no one knows how, with a prepared virus which acts no one knows how, we have only to depend on empirical results, and on empirical methods. The ten inoculations being arbitrarily fixed (as we have seen in the case of the boy Meister, five were sufficient) and being used on all comers, without relation to number of bites, or to whether bitten by genuine rabid dogs or not. In certain cases, Pasteur has increased the number, also an arbitrary arrangement, because severity of bites does not involve subsequent hydrophobia.

It is to be hoped that the Hydrophobia Commission will not be guided purely by "gratitude" to M. Pasteur, or the pure appreciation of his great and valuable services generally to science; but that they will, apart altogether from M. Pasteur's personality, give us a well-reasoned *critique*, detailing the various experiments that have been made, not only for, but against the method. All I ask for is "fair play," not alone in the interests of M. Pasteur, but in those of the thousands of scared creatures in different countries who are now frightened of dog bites as they never were before, and also one in the interests of medicine and science.—I remain, yours faithfully,

Horton House, Halifax. THOMAS M. DOLAN, M.D.

MEDICO-LEGAL AND MEDICO-ETHICAL.

PROFESSIONAL CONDUCT.

SIR,—A. is a surgeon to several collieries; B. is a medical practitioner in a neighbouring district, opposed by an unqualified man, C. A. assists C. in operations, and consults with him in difficult cases. Through certain disputes, A.'s services are dispensed with by three collieries; B. takes up the appointments, and engages A.'s unqualified assistant C., whom A. has discharged for alleged negligence and drunkenness, after having got him to sign a sham agreement not to practise in the district on leaving his service, within twenty-four hours of his discharge. B. finds that C. is in great confidence of the people, by whom he is immensely liked; and, for the two months he has been with B., he has discharged his duties entirely to the satisfaction of B. and the patients. A. complains of B.'s unprofessional conduct, breach of medical etiquette, and covering an unqualified practice to two medical societies; further stating that C. is an habitual drunkard, subject to delirium tremens, and had repeatedly grossly neglected his duties when in the service of A. During eight years that C. was in the service of A., he was in sole charge of his branch practice connected with the three collieries, and only supervised by A. On inquiry, B. finds that A.'s charges against C. cannot be substantiated. One of the medical societies refers A.'s statements to B., to which B. replies as far as facts go. The secretary of the other society, who is appealed to under pressure, levels charges against B., threatening him to complain of his conduct to the Royal College of Physicians, but does not refer to B. the statements made by A. B., resenting this unwarrantable threat, gives ample proofs to the secretary refuting the charges. The secretary again takes upon himself the duty of pronouncing his judgment, in an intemperate tone, that B. has forfeited all protection of the medical societies, and his conduct condemned. B.'s reply is that he does not care for the secre-

tary's individual opinion, who is personally interested in the matter, and is acting blindfolded, but hopes that the course of events within the next few months would open his eyes, and bring him repentance, and lead him to repair an injury. A. is now opposing B. in regaining the appointments, by calling at workmen's houses that pay to B., and going to B.'s patients requesting them to be permitted to attend on them. He is also distributing beer by gallons to pursuade men to give up B.

1. Is A.'s conduct towards B. professional? and is he entitled to the protection of the medical societies against B.?

2. Is B. covering an unqualified practice? and is it reasonable for A. to expect courtesy from B., especially when he was helping C. against his past practice?

3. Has C. grounds of action against A.? If C. was good enough assistant to A. for eight years in charge of the branch practice, is he not now elegible to be the assistant of B. under strict supervision?

4. Is not the conduct of the secretary of the society arbitrary, injudicious, and personal?

Your views on the above questions will oblige, A SURGEON.

**** Although we have given insertion to our correspondent's letter—the general allegations in which, it may be well to remark, are maintained in the "brief history of the case" published by "The Workmen's Committee of the ——— and ——— Collieries,"—we are not in a position, in the absence of the all-important and essential details applied for, to answer the several questions submitted for our opinion. In view, moreover, of the whole matter having, as we are informed, been laid before the council of the Medical Defence Union for consideration, it is incumbent upon us to abstain from further comment thereon.

OBITUARY.

JOSEPH SAMPSON GAMGEE, M.R.C.S., F.R.S.E.

WE deeply regret to have to announce the death of Mr. Gamgee, of Birmingham, who died somewhat suddenly at his residence in Birmingham last Saturday.

Mr. Gamgee, a few weeks ago, went into Devonshire for a few weeks' holiday. Whilst walking along one of the streets of Dartmouth with his sons, he slipped and fell, seriously injuring his thigh, and was conveyed home to Birmingham with all speed. He thought little of his injury at first, and did not believe that there was any fracture.

On the Monday preceding his death, ether was administered by Dr. Suckling, and a careful examination was made by Mr. Bartleet and Mr. Jordan Lloyd, a fracture of the neck of the femur being discovered. The limb was carefully put up, and he went on comfortably till the following Friday, on which day hæmatemesis occurred, and Sir James Sawyer was called in.

The hæmorrhage recurred constantly until his death. Five or six years ago, Mr. Gamgee suffered from severe hæmaturia, and undoubtedly was the subject of chronic Bright's disease. Mr. Gamgee was in his 59th year, having been borne at Florence in 1828.

During his collegiate life, which was spent at University College, London, he carried off several high honours, and early gave promise of a future useful and brilliant career. He subsequently proceeded to Paris, Pavia, and Florence, and from his life on the Continent he acquired a remarkable fluency in various continental languages and dialects. Throughout his professional career, he was a valued contributor to medical periodical literature.

He was admitted a Member of the Royal College of Surgeons of England in 1854, and later became a Fellow of the Royal Society of Edinburgh.

For one of his papers on amputation at the hip-joint he was made foreign corresponding member of the Society of Surgeons of Paris. He was also an honorary member of the Massachusetts Medical Society of the United States of America, foreign corresponding member of the Royal Medical Academy of Rome, and a member of the Medical Society of Christiania and St. Petersburgh.

His first professional appointment was as a Staff Surgeon to the British Navy.

In 1857, he was elected to the post of Honorary Surgeon to the Queen's Hospital, Birmingham, previously having held a similar position at the Royal Free Hospital, London.

Among his fellow-students were men who subsequently attained great distinction in the medical profession, among them being Sir Henry Thompson, Sir Joseph Lister, and Mr. Christopher Heath.

Mr. Gamgee was a most eloquent and instructive teacher, and did much towards giving the Queen's Hospital the high reputation it now enjoys. He was an active member of the hospital committees, and rendered valuable aid in the management of the charity. He resigned his office of Honorary Surgeon in 1851, after his serious illness above-mentioned, and was elected to the high position of Consulting Surgeon to the hospital, which he retained till his death. He was also Professor of Clinical Surgery at the Queen's College, and when he resigned his appointment as honorary surgeon he was presented with an address by the students of the Queen's College, in which grateful recognition was expressed of the high value of his teaching, and of the great interest he had always taken in their advancement.

Mr. Gamgee's private practice was very extensive, and, in addition, he held at various periods every honorary office of medical distinction in the town.

He was President of the Birmingham and Midland Counties Branch of the British Medical Association, and President of the Midland Medical Society. He was also connected with the Birmingham Medical Institute on its formation twelve years ago, and last year he became its president. He was one of the most energetic presidents the institute has had; during his year of office he added several hundred books to the library, in which he took the greatest interest. Mr. Gamgee also rendered very valuable services to his town. His name will always be remembered in connection with the Hospital Saturday collection movement, which he mainly instituted, and which now brings in between £4,000 and £5,000 annually for the benefit of the various Birmingham medical charities.

In the autumn of last year, he championed the cause of the members of the Royal College of Surgeons, and claimed for them direct representation on the Council. Mr. Gamgee was the inventor of several valuable surgical appliances; for example, artificial sponges, and the "Gamgee tissue," both of which have been adopted by the Army Medical Department.

Amongst his publications are, *An Essay on the Starched Apparatus*, which gained the Lister prize in 1853; *Intra and Extra-Peritoneal Surgery, Researches in Pathological and Clinical Surgery, A Successful Case of Amputation at the Hip-Joint, The Treatment of Wounds, The Treatment of Fractures of the Limbs, Vivisection and Human Surgery, Hospital Saturday, its Origin and Future; The Treatment of Wounds and Fractures*, and many historical essays, a most important one being *Harvey and Cæsalpinus*. He was a great believer in the system of the dry and unfrequent dressing of wounds.

In 1860, Mr. Gamgee married Miss Parker, of Edgbaston, the sister of Councillor Lawley Parker, and had a family of seven children, four of whom, two sons and two daughters, are living. His two sons have recently commenced their curriculum at the Queen's College as medical students. One of his brothers is Dr. Arthur Gamgee, F.R.S., late Professor of Physiology at Owens College, Manchester.

Mr. Gamgee was a brilliant operator, a fluent speaker, and a ready writer. He was especially kind and generous to his juniors, sparing himself no trouble in helping and advising them. We express our deep regret at the loss of so valuable a life, and to his widow and children we tender our sincere sympathy.

A friend who knew him well, has sent us the following estimate of his character.

Let others, who are qualified to do so, speak of his professional career and attainments. I, who knew him rather intimately, ask a small space in your paper to speak of him as I knew him, at home and as a friend.

He was, in every sense of the word, a model and most devoted husband and father; but here the child was but the father of the man, as our departed friend was a most devoted son to his parents. When he made friendships they were deep and sincere attachments; and his repeated kind actions, not only in great, but in little, matters, will ever be held in grateful memory by those who enjoyed the rare privilege of his intimate acquaintance.

No trouble was too great for him when he wanted to do a kind action. His wonderful gifts of language, feminine delicacy of touch, and perfect tact, were such as fall to the lot of few men to possess. He was a man of deep and true religious feeling, which was intensified during and since the serious illness under which he suffered some five years ago. Among his favourite pieces of sacred poetry may be especially mentioned Psalm xxiii and,

"Lead, kindly Light, amid the encircling gloom."

His genuine religion found expression in such acts of kindness and self-denial as could have no other source. His premature decease, in the ripe autumn time of his splendid talents and matured experience, leaves a void in his circle of relations and friends which will be bitterly felt and never again filled. It is more than probable that his decease may have been hastened considerably by the immense amount of brain and body work which he crowded into his useful life. He was always an enthusiastic student of his profession, and could not do either his lay or professional work by halves, on account of his innate earnestness of purpose.

In conclusion, a very correct summing-up of his nature may be found in the words of one of his favourite authors, "Take him for all in all, we ne'er shall look upon his like again."

SAMUEL WOODMAN, M.D., F.R.C.S., J.P., Ramsgate.

THE subject of this notice was born in Exeter, forty-five years ago, his father, the late William Woodman, being a medical practitioner in that city. He was educated at the Exeter Grammar School, and commenced the study of medicine at St. Mary's Hospital, London, in 1861; having, in due course, held the house-surgeoncy of that hospital for a year, he entered into partnership with the late Dr. Webster, of Ramsgate, about twenty years since.

The cause of Dr. Woodman's death was enteric fever. He returned from his holiday on the Continent on August 30th last, apparently in good health; but at Nuremberg, where he had found great fault with the smells, he had suffered from a sharp attack of diarrhœa. On September 3rd, he complained of headache, dizziness, aching in the limbs and weakness, and placed himself under the charge of his brother-in-law, Mr. Raven, of Broadstairs, who, together with Dr. Wheatley, of Kensington, attended him throughout his fatal illness with unwearying care. Though the course of the disease was otherwise favourable at first, Mr. Raven's anxiety was great on account of an early appearance of albuminuria. Later on, the temperature became irregular, and, on the morning of September 12th, there was an ominous fall in the reading of the chart, and evidences of intestinal hæmorrhage appeared, increasing to a marked extent. Two days later, the patient's old friend, Dr. Broadbent, was summoned from town, but could only confirm the worst fears of the anxious watchers around the patient. Death occurred just before midnight of the 15th, the mind remaining clear, and the courage unshaken to the last. The funeral took place on the following Saturday amidst public and private expressions of respect for the deceased.

Samuel Woodman was a friend of progress, of great activity of mind and body, and of refined tastes, straightforward and outspoken. His social qualities were of a high order; and, whether in the sick room, or in public or private intercourse, his manner was peculiarly bright and cheery. He was intensely averse to all professional intrigue and advertisement; and, during the recent illnesses of his illustrious friend and patient, Sir Moses Montefiore, it was his constant endeavour to have his name suppressed in the telegrams and reports which were so widely sought for.

Professionally, his bent was towards surgery, and when in the full swing of a large general practice, he began to work for, and shortly obtained, the Fellowship of the College of Surgeons. He was a skilful operator, and had enjoyed an unusually large experience in lithotrity. A few years since, at the constant entreaty—one might almost say, at the friendly command—of Sir Moses, he prepared himself for and secured the M.D. degree of the University of Durham.

For some years a member of the local board of Ramsgate, he worked hand in hand with his friend, the Rev. E. G. Banks, and often against keen opposition, he successfully struggled in the cause of municipal progress and reform. He was a Justice of the Peace for the Cinque Ports division of Kent, and recently he had added one more to his many self-imposed tasks by the active promotion of the High School for Girls, by the directors of which association he was elected chairman. As a politician, he was a strong Constitutionalist, and was recently induced to undertake the work of Ruling Councillor of the King-Harman Habitation of the Primrose League.

Dr. Woodman has left a widow, and four children, the eldest of whom is a boy at Winchester School.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, September 17th.

Army Surgeons in India.—In reply to Dr. TANNER, Sir J. GORST said that the uniform for the Army Medical Department was not prescribed by Indian regulations. Surgeons ranked with captains in India, as elsewhere. They drew in India a higher rate of pay and allowances than lieutenants. After six years, a surgeon's pay was increased by 116 rupees a month, and was more than a captain's. The Secretary of State did not consider that there was any necessity for changing the present rates of Indian pay of the Army Medical Department.

Saturday, September 18th.

Post Office Medical Officers.—Mr. PICKERSGILL called attention to the medical staff of the Post Office, and maintained that the working of the present system was oppressive and injurious to Post Office servants. He referred in some detail to the death of Mr. Billinghurst, a telegraphist. Mr. Billinghurst, who had been ailing for some time, and who had obtained a medical certificate justifying his absence from the Post Office on the ground of illness, was, on August 5th, summoned to attend at the office with the sanction of the medical officer of the department. This summons was injudicious, harrassing, and, on the part of the medical officer, unprofessional. On August 6th, Mr. Billinghurst was in a dying state; yet, three days afterwards, the medical officer to the Post Office wrote asking him to send a certificate stating the nature of the fever from which he was suffering. The reply sent was that the patient was dead. The present system of medical supervision at the Post Office was harrassing to the staff and injurious to the public interest, for clerks who were inpisposed were ordered to resume their duties when still unwell, with the result that they became worse, and that fresh and longer leave of absence had to be given them. He objected to the employment of a substitute at a low salary by the medical officer. During the tenure of office of the predecessor of the present Postmaster-General, a substitute was employed by the medical officer for five weeks, and paid at the rate of three guineas a week. This gentleman on one occasion ordered a clerk to resume duty in spite of his strenuous protests. Was it right that such a power should be placed in the hands of a man who was only casually employed? The salary of the chief medical officer at the Post Office was £938 *per annum*. If an efficient substitute could be found to do the work for three guineas a week, why give this medical officer so much more? He objected altogether to this system of substitution; and, if he could do so, he would move to reduce the vote by the sum of £100, that being the amount set down in the Estimates in respect of it. To him this demand for £100 savoured of jobbery.—Mr. ISAACSON, who endorsed the statements of the hon. member, said that, among the servants of the Post Office in the East End, great dissatisfaction existed as to the way in which the medical department was conducted. He hoped that a searching inquiry would be made with a view to the establishment of an improved system.—Mr. RAIKES thought that the hon. member for Bethnal Green, who had every right to speak on this question, had been a little swayed by his sympathy with the officials of the department. He had already given the hon. member all the information he possessed as to the case of Mr. Billinghurst. When that gentleman, who was a very meritorious officer, was summoned to the Post Office on August 5th, the heads of the medical department had no reason to believe that he was suffering from typhoid fever. He agreed that weight should be given to the certificates of independent medical men, but it would be impossible to conduct the service satisfactorily if such certificates were in every case to be accepted as final. He had, however, made arrangements to make it clear to officers who were reported ill, that they would not be compelled to attend at the Post Office if their state of health rendered it undesirable that they should do so. He held that it was quite possible for a medical man, however experienced, to make occasional mistakes when the medical supervision of such a large number of men as were employed in the Post Office was intrusted to him. The comparatively insignificant number of such mistakes occurring in the department proved that special care was exercised by its medical officers. The hon. member for Bethnal Green had alluded indirectly to another cause of complaint against the medical department. This was the case of an officer who suffered from boils, and who was absent on sick leave from June 8th until August 30th. Having obtained such long leave, surely it did not become him to complain that he had not been treated with sufficient consideration? As to the salary of the medical officer, which was one of the highest obtainable in the Post Office, he would observe that it could only be gained after a prolonged period of service. The hon. member thought that the payment of three guineas a week for a substitute was too small; but if the efficient performance of the work of a substitute could be insured for that sum, the department would hardly be justified in raising the amount. To be logical, the hon. member ought not to strive to abolish the modest sum of £100 set apart for the payment of substitutes, but ought rather to propose to increase it. He could not undertake to do without this sum in future; but he promised to investigate carefully the present position of the medical department with a view to the introduction of any desirable and practicable reform.

QUARANTINE.—All arrivals from Spalato are to be subjected to seven days' observation; in all other ports of Dalmatia, and in the other ports of the Austro-Illyrian coast, arrivals will be subject to the regulations of the decree issued by the Minister of Commerce on October 6th, 1865.

NAVAL AND MILITARY MEDICAL SERVICES.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month :—

	From	To
Dep. Surgeon-General T. N. Hoysted ..	— ..	.. Dublin.
Brigade-Surgeon T. Rudd, M.D. ..	Woolwich ..	.. Malta.
,, W. Tanner	Dover ..	.. Mauritius.
Surgeon-Major T. M. O'Brien	Bengal ..	.. Bombay.
,, J. F. Beattie, M.D. ..	London ..	.. Netley.
,, A. Minto, M.B.	Bengal ..	.. Madras.
,, G. Andrew, M.B. ..	Bengal ..	.. Madras.
,, G. J. H. Evatt, M.D. ..	Woolwich ..	.. Bengal.
,, R. Keith, M.D.	Piershill ..	.. Bengal.
,, G. Corry	Suakin ..	.. Egypt.
,, W. H. Garde	Egypt ..	.. Clonmel.
,, J. W. O'M. Martin, M.B.	Egypt ..	.. Dublin.
,, H. J. W. Barrow ..	Devonport	.. Newport.
,, R. H. Quill	Devonport	.. Woolwich.
,, O. G. Wood, M.D. ..	Edinburgh	.. Egypt.
,, J. A. Smith	— ..	.. York.
Surgeon H. G. Gardner, M.B.	— ..	.. Bengal.
,, A. E. Hayes	Shorncliffe	.. Egyptian Army.
,, P. H. Johnston, M.D.	— ..	.. Bengal.
,, W. T. Johnston, M.D.	Sheffield ..	.. Birmingham.
,, R. D. Hodson	— ..	.. Bombay.
,, P. M. Ellis	— ..	.. Bombay.
,, P. J. O'Sullivan, M.D.	— ..	.. Bengal.
,, R. T. Beamish, M.D.	— ..	.. Bengal.
,, J. Pedlow, M.D.	— ..	.. Bengal.
,, P. J. Dempsey, M.D.	— ..	.. Bengal.
,, A. Harding	— ..	.. Bombay.
,, H. Martin, M.B.	Sunderland	.. Carlisle.
,, E. F. Smith	Devonport ..	.. Worcester.
,, G. W. Robinson	York ..	.. Coventry.
,, W. O. Wolseley	— ..	.. Bombay.
,, F. B. Maclean	Trowbridge	.. Pembroke Dock.
,, P. H. Fox	— ..	.. Dublin.
,, M. F. Macnamara, M.D. ..	Dublin ..	.. Tipperary.
,, J. O. G. Sandiford, M.D. ..	Queenstown	.. Clonmel.
,, E. L. Mannsell	Devonport	.. Sandhurst.
,, M. O. Drury	— ..	.. Bombay.
,, R. W. Ford	Bengal ..	.. Bombay.
,, J. Osburne	Bengal ..	.. Madras.
,, R. C. Johnston, M.B.	Curragh ..	.. Belfast.
,, H. H. Johnston, M.B.	Egypt ..	.. Edinburgh.
,, G. W. Brazier-Creagh	Bengal ..	.. Bombay.
,, A. F. Russell, M.B.	Bengal ..	.. Bombay.
,, A. E. Tate	Bengal ..	.. Madras.
,, J. R. Barefoot	Egypt ..	.. York.
,, M. W. Russell	Egypt ..	.. Devonport.
,, E. A. C. Smith	Egypt ..	.. Shorncliffe
,, W. E. Berryman	Egypt ..	.. York.
,, H. W. James	— ..	.. Bengal.
,, F. W. C. Jones, M.B.	Bengal ..	.. Bombay.
,, W. B. Day, M.B.	Bengal ..	.. Madras.
,, W. H. Bennett, M.B.	Bengal ..	.. Madras.
,, S. C. Philson	Bengal ..	.. Madras.
,, H. Cocks, M.B.	York ..	.. Leeds.
,, J. Rose	Kinsale ..	.. Madras.
,, A. H. Morgan	Clonmel ..	.. Sierra Leone.
Quartermaster C. Johnson	Shorncliffe ..	E. District.
,, J. M'Swiney	Aldershot ..	.. Egypt.
Captain of Orderlies H. J. Sylvester ..	Egypt ..	.. Shorncliffe.

THE NAVY.

THE following appointments have recently been made at the Admiralty : JAMES DUNLOP, M.D., Staff-Surgeon, to the *Valorous*, additional for temporary service ; WILLIAM H. COLAHAN, M.D., Staff-Surgeon, to the *Canada*, when recommissioned; JOSEPH WOOD, M.D., Staff-surgeon, to the *Assistance;* ANTHONY GORHAM, M.D., Staff-Surgeon, to the *Shannon;* and PATRICK B. HANDYSIDE, Surgeon, to the *Canada*, when re-commissioned.

MEDICAL STAFF.

SURGEON R. F. O'BRIEN, serving in Bengal, is appointed to have medical charge of the Lock Hospital and Civil Station at Dum Dum, *vice* Surgeon Osborne.

Sir THOMAS CRAWFORD visited the camp at Aldershot on the 13th instant, for the purpose of inspecting the Depot Medical Staff Corps, and presenting to a class of seventy young surgeons their certificates of proficiency on the conclusion of their course of instruction. The Director-General, after inspecting the depôt and presenting the certificates, witnessed some ambulance and stretcher drill carried out by the surgeons. Sir T. Crawford expressed himself highly pleased with the way in which they had worked, and also with the depôt, which, he said, was in perfect working order, and reflected great credit on those in command.

Surgeon-Major T. M. O'BRIEN, Surgeon R. W. FORD, Surgeon G. W. B. CREAGH, Surgeon A. F. RUSSELL, M.B., Surgeon F. W. C. JONES, M.B., who have been transferred from the Bengal Medical Staff, are brought on the strength of the British troops in the Bombay command.

THE INDIAN MEDICAL SERVICE.

SURGEON E. R. W. C. CARROLL, Bengal Establishment, is appointed to the officiating medical charge of the 33rd Native Infantry, *vice* Surgeon-Major F. W. Wright, who has proceeded to Burmah.

Surgeon T. GRAINGER, M.D., Bengal Establishment, is appointed to the medica charge of the 40th Native Infantry, *vice* Surgeon S. C. Nandi, M.B.

Surgeon T. H. POPE, M.B., Civil Surgeon of Negapatam, and Acting Civil Surgeon and Superintendent of the Gaol at Bellary, is directed to act as Assistant-Physician at the General Hospital during the employment of Dr. Allison on other duty.

Surgeon-Major T. MAYNE, Madras Establishment, has passed the examination for the higher standard in Hindustani.

The services of Brigade-Surgeon J. H. THORNTON, M.B., C.B., Bengal Establishment, have been placed at the disposal of the Home Department.

The services of Surgeon-Major D. D. CUNNINGHAM, M.B., Bengal Establishment, are replaced at the disposal of the Government of Bengal from the date of quitting the Thibet Mission.

The services of Brigade-Surgeon W. R. RICE, M.D., Bengal Establishment, have been placed at the disposal of the Government of India in the Home Department.

Surgeon-Major S. H. BROWNE, M.D., Bengal Establishment, Civil Surgeon, Nimar, is appointed to officiate as Civil Surgeon, Jubbulpore, during the absence of Surgeon-Major W. R. Rice.

Surgeon-Major B. EVERS, M.D., Bengal Establishment, Civil Surgeon, Chanda, is appointed to officiate as Civil Surgeon and Superintendent of the Gaol, Nimar, *vice* Surgeon-Major S. H. Browne.

Surgeon G. M. GOVAN, M.D., Bengal Establishment, second-class civil surgeon, has been temporarily transferred from Budaun to Abmorah.

Brigade-Surgeon J. C. MORICE, Bengal Establishment, has been appointed to the administrative medical charge of the Quetta District, *vice* Brigade-Surgeon A. F. Bradshaw, ordered to Egypt.

Brigade-Surgeon JAMES BROWNE, Bengal Establishment, has retired from the service, which he entered February 20th, 1856, attaining the rank of Brigade-Surgeon, August 3rd, 1882. He does not appear to have had war-experience.

Surgeon-Major C. R. G. PARKER, Madras Establishment, has also retired, with the honorary rank of Brigade-Surgeon. He entered as Assistant-Surgeon, January 20th, 1860 ; and became Surgeon-Major twelve years therefrom. He is not credited in the *Army Lists* with any war-service.

Surgeon-Major T. B. W. P. JOHNSTON, Bombay Establishment, whose retirement was recently announced, is now granted the honorary rank of Brigade-Surgeon.

Surgeon-Major C. P. COSTELLO, Bengal Establishment, medical storekeeper at Meean Meer, is promoted to be Brigade-Surgeon, *vice* J. H. Thornton, M.B., C.B., made Deputy Surgeon-General. M. Costello entered the service as Assistant-Surgeon, February 10th, 1859, and served with the 6th Punjab Infantry in the Umbeyla campaign in 1863-64 (medal with clasp) ; in the Jowaki Expedition of 1877-78 (clasp); and in the Afghan war of 1878-80, first in charge of the Native Base Hospital of the Koorum Field Force, and afterwards with the 1st Goorkhas in the Khyber Line Force (thanked by the Governor-General and by the Commander-in-Chief in India in General Orders (medal).

Deputy Surgeon-General J. H. THORNTON, M.B., C.B., is posted to the administrative medical charge of the Punjab Frontier Force, *vice* Deputy Surgeon-General A. J. Dale, M.B., whose tour of service has expired.

Owing to the transfer of Surgeon-Major T. M. O'Brien, Medical Staff, to the Bombay Presidency, Mhow, Surgeon-Major A. S. REID, Medical Officer of the 2nd Bengal Cavalry, will assume charge of the Lock Hospital at Saugor.

Surgeon J. ANDERSON, Bengal Establishment, Second Class Civil Surgeon, will, on return from leave, officiate as First Class Civil Surgeon at Allahabad, during the absence on leave of Surgeon-Major A. Cameron, M.D.

Surgeon C. ADAMS, M.D., Madras Establishment, has leave of absence for one year, on medical certificate.

The services of Surgeon-Major H. WHITWELL, Bengal Establishment, are permanently placed at the disposal of the Government of Bengal.

The services of Brigade-Surgeon H. CAYLEY, Bengal Establishment, Ophthalmic Surgeon and Professor of Ophthalmic Surgery, Medical College, Calcutta, are, at his own request, replaced at the disposal of the Military Department.

Surgeon-Major R. C. SANDERS, M.D., Bengal Establishment, who was appointed *pro tempore* Ophthalmic Surgeon and Professor of Ophthalmic Surgery, Medical College, Calcutta, is confirmed in that appointment.

Surgeon-Major J. RICHARDSON, M.B., Bengal Establishment, Deputy Sanitary Commissioner, Second Circle, North-West Provinces and Oudh, is directed to officiate as sanitary commissioner for those provinces, *vice* Deputy Surgeon-General C. Planck.

The undermentioned gentlemen have obtained leave of absence for the periods specified : Surgeons-Major J. O'BRIEN, M.D., and J. DUNCAN, M.D., both of the Bengal Establishment, for one year on medical certificate ; Surgeon-Major C. W. CALTHROP, M.D., Bengal Establishment, in medical charge of the 4th Cavalry.

SURGEON W. S. BATTEN, whose resignation was announced in July last, is granted the honorary rank of Surgeon-Major, and may continue to wear his uniform.

Surgeon and Honorary Surgeon-Major JOSEPH WICKHAM, M.D., of the Westmoreland Yeomanry, whose resignation was recently announced, is permitted to retain his rank and uniform.

Mr. O. R. TRAVERS is appointed Acting-Surgeon to the 1st Cinque Ports Artillery Volunteers.

Acting Surgeon C. G. M. LEWIS, of the 1st Volunteer Battalion of The Buffs (late the 2nd Kent Volunteers), is made Surgeon to the same corps.

ARMY SURGEONS AND PRIVATE PRACTICE.

SIR,—My attention has been called to a leading article in the BRITISH MEDICAL JOURNAL of July 3rd last, headed, "Ought Army Surgeons to engage in Private Practice?"—referring to the case of an army surgeon practising in a distant colony, against whom grave charges have been made by one of the civil practitioners resident therein.

It is not difficult, although no names are mentioned, to recognise the colony referred to as British Honduras, and the town where both your correspondent and the army surgeon referred to reside, as Belize. Being one of the four medical practitioners referred to as possessing British qualifications, being on intimate terms with the army surgeon, against whom the charges have been brought, and being perfectly acquainted with all the circumstances of the case, I beg to be permitted to state its other side.

To begin, I have no hesitation in saying that the serious charges made against the army surgeon are substantially unfounded, and I shall proceed to deal with them *seriatim*. 1. The bold statement made against the army surgeon, that he has an office in town, is so far true, that he has a room for the accommodation

of patients, where he receives them, his quarters at the barracks being a mile out of town. But he keeps no dispensary, his prescriptions being made up by a chemist, to whom they are taken by his patients. 2. That his scale of fees is below the established rate agreed upon, is not correct, for there is no established rate; and, so far as my observation goes, the army surgeon's charges are not below the average of the fees charged by other practitioners here, and I think they are higher than those charged by the two American practitioners referred to. 3. That he has made disparaging remarks regarding the abilities of the civil practitioners. I do not think this is true, for, though I am on very intimate terms with him, I have never heard the army surgeon say anything disparaging of any civil practitioners' abilities—not even of your correspondent, who is his enemy. All I ever heard him say was that, keeping a shop at which, besides medicines, perfumery, hair-oil, tooth and hair brushes were sold, was beneath the dignity of the medical profession.—I remain, sir, your obedient servant,

FRED. GARNE.

Belize.

THE VOLUNTEER MEDICAL SERVICE.

SIR,—The more complete organisation of the medical department of the volunteer force has lately occupied a fair share of attention, and a general sketch of the objects in view will be of service, not only in putting before the public what is wanted for the volunteers, but as indicating what will probably become the system in the regular army. It is said, "Why create a medical organisation for the volunteers? They will never be used for any but garrison-duty, and the civil medical men of the towns where they are quartered will look after them if there should be any necessity for supplementing the regimental surgeons." That may be so; but it is surely better to have a ready organised system, though it may never be required, than to find ourselves without an organisation if ever one should be wanted. Again, the volunteer army has a distinct value apart from ever being called upon for active service against an enemy. It serves as a model on which new ideas can be tried, before being adopted in the regular service; and it has created and keeps up in the civil population a knowledge of, and an interest in, the army, which is of great advantage to the country. It must, then, be a good and useful thing to have a medical branch of the volunteers, where civil surgeons may learn to understand the means necessary for rendering efficient medical aid to large bodies of troops, and by means of which the army medical officers may possibly get some hints from their brethren in civil practice. A closer relationship between the army-surgeons and their civil brethren cannot fail to result in mutual advantage.

Let us, then, grant that a complete medical organisation for the volunteers may be of great advantage, or, at the least, that it cannot do harm. "But," it is objected, "it will do harm if it interfere with existing arrangements. Each regiment has its medical officers and its trained stretcher-bearers. If you bring a bearer-company into the field, these are not required, and the men will soon cease to learn duties which they will never be expected to perform." Such is the cry of the regimental aid; and it is in itself a powerful argument in favour of more complete organisation. For ignorance of the various details and lines of medical assistance which are required in an army, could alone have prompted such an objection. We are too prone to look upon each volunteer regiment as a complete body, instead of as merely an unit of an army; and if a corps have everything it requires to move itself, by itself, from its head-quarters fifteen or twenty miles, and back after a two days' stay, and this with, perhaps, a month to make arrangements, we call this a commendable state of efficiency. But how different this is from the movement of twenty regiments, of all arms, for two months, the destination each day possibly being determined by the events of the preceding day. Yet, if we consider only the march of a corps from Saturday to Tuesday, we can easily see how a departmental medical service might be useful. Suppose a man in the ranks is reported sick, and it is found necessary to leave him behind when the regiment returns to head-quarters. Having been taken ill while on duty, the man expects to be attended by the regimental surgeon until he can be taken home; the colonel, also, is anxious to have a report from time to time as to the man's condition. It has happened, in such a case, that a regimental surgeon has had to make a journey every second day—leaving a large practice—in order to see a man injured at a distance from home while on military duty. Would it not be far better if the man could be handed over to the care of any officer of the volunteer medical staff in the neighbourhood, who would attend him and report to the colonel, not as a favour to anyone, but as a necessary part of his military duty?

In the following sketch of the medical organisation for the volunteer force, it will be seen that, instead of it aiming at doing away with the regimental surgeons and the regimental stretcher-bearers, these have their place in the scheme, and form a necessary part of the system. With regard, also, to the dress of the regimental surgeons, there would seem to be a fear that they would be obliged to change their regimental uniforms for that of the medical staff. This fear is groundless; for, just as the surgeons of the Guards wear the uniform of their regiments, so regimental surgeons of the volunteers would continue to wear the uniforms of their corps.

The outline of the Volunteer Medical Organisation is, then, as follows.

A. *Regimental.*—Each regiment should have two surgeons (if over four companies), regimental stretcher-bearers, in the proportion of two per company, an ambulance staff-sergeant, and a medical officer's orderly. Equipment (stretchers and field-havresacs) should be supplied by the regiment. Further equipment, when required, to be obtained by requisition from the Medical Staff Corps depôt of the district. On all occasions when the regiment is acting by itself, the regimental surgeons and stretcher-bearers would be all that was required. When brigaded, the regimental aid would first attend to any cases, and only hand them over to the bearer-company if the nature of the case made it necessary to leave the men behind as the regiment advanced.

B. *Departmental.* 1. *Volunteer Medical Staff Corps.*—Companies should be raised in each county or regimental district, the number of men enrolled in each county being proportionate to the number of combatant volunteers.

Each company (about sixty men) requires a surgeon-major in command, two surgeons, and a quartermaster.

These companies are independent units, but are all under the principal medical officer of the district. In large towns, two or more companies might be banded together for administrative purposes, as in the London Corps. The nearest approach to this idea of separate isolated companies in different parts of the kingdom, all belonging to one corps, is to be found in the various brigades of the Royal Naval Artillery Volunteers.

These bearer-companies would be trained in hospital-work, as well as in stretcher-drill and bandaging. They would work behind the fighting line, taking over the sick and wounded from the regimental bearers, and helping them to the dressing station or field-hospital. In this duty, they in no way clash with the regimental bearers. It may happen, from the nature of the ground, or from the fact that the force is in retreat, that the dressing station may be over a mile from the fighting line. If there be no regimental aid, the Medical Staff Corps bearers have to carry men the whole of this distance, with much consequent fatigue; but if each regiment be properly supplied with bearers, these can bring the sick to the collecting station, and there hand them over to the Medical Staff Corps for transport to the rear. To make the Medical Corps more interesting, a course of manual and firing exercise, and of target practice, should form part of the training. Men in the Volunteer Medical Staff Corps might then take part in rifle-competitions with the other branches of the service.

Cadet-companies might be formed at the various medical schools, so that medical students could be instructed in bearer-company work, hospital administration, etc. They would then make efficient medical officers, either with regiments or with the Staff Corps.

The effective companies should not be composed of medical students. In choosing recruits, preference might be given to men who had gone through the first-aid course of the St. John Ambulance Association, and a certificate in this course, or a similar one, should be necessary before promotion to sergeant.

2. *Volunteer Medical Staff.*—All medical officers in the Volunteer Service would have their names placed together in the Army List according to seniority and date of commission, under the heading Volunteer Medical Staff. Those acting with regiments would have their names in italics, with the name of the corps to which they belong printed after the name. Their names would also appear with their regiments, as at present. There might be regimental promotion, as in the Guards. Acting rank should be abolished, all surgeons ranking as captain on appointment. Regimental surgeons should wear the uniforms of their corps, with medical staff belts.

3. *Administrative.*—A "staff officer of the Volunteer Medical Staff," having a room at the Director-General's office, should be the administrative head of the Volunteer Medical Service. He should be a retired surgeon-general of the army, and might have the title of assistant director-general (for volunteers).

A staff-officer—a surgeon-major Army Medical Service on full pay—for each district, should act as adjutant to the various companies in his district, and be in direct communication with the staff-officer at Whitehall. All communications between the various companies and the central office would go through him.

It will be seen that this scheme is practically the same as is followed in an army in the field; although, in time of peace, there are now no regimental surgeons. As soon as a regiment is on active service, a medical officer is detailed to it, and it has, also, the regimental bearer. Then come the first line of medical assistance or bearer-companies; the second line of medical assistance or field-hospitals; and, behind these, the stationary hospitals on the lines of communication, and the base-hospitals, etc. All these are worked by the Medical Staff Corps.

In the volunteer service, regiments work so much by themselves, that regimental surgeons are a necessity; and it is possible that a combination of a regimental *plus* a departmental system may eventually be found most advantageous in the regular army during peace as well as in the field.

The medical department of the army is one of the most expensive branches of the service, and to keep it always on a war-footing would be unadvisable. If we were to be engaged in a large war, there is no doubt the medical staff would require greatly augmenting; even the last campaign in the Soudan made it necessary to put some of our garrisons in charge of civil practitioners; and a large war, especially if prolonged, would make it necessary to send further medical aid to the army in the field. A well trained volunteer medical staff would give the country a reserve of skilled surgeons ready to fall at once into the routine of military hospitals. To make this medical reserve more real, medical commissions in the Army Reserve should be granted to volunteer-surgeons who might be willing to serve abroad on emergencies. When civil practitioners are required to take charge of garrisons or detached troops, preference should be given to volunteer medical officers, who would then take their rank when on military duty.

It cannot be too much insisted on that the proposed organisation does away with nothing that now exists, and does not touch existing regimental aid, but aims at supplementing and augmenting the present arrangements.—I am, etc.,

AN OFFICER OF THE VOLUNTEER MEDICAL STAFF CORPS.

HOSPITAL AND DISPENSARY MANAGEMENT.

DERBYSHIRE COUNTY ASYLUM.

HERE, as at the Wilts Asylum, there was a large decrease in the number of admissions in 1885, as compared with the preceding year; the admissions in 1884 amounted to 133, those in 1885 to only 112. At the close of the year there were 422 patients remaining in the Asylum, of whom not more than 33 were deemed curable; there were 24 vacant beds in the male division, and 22 in the female. Dr. Murray Lindsay attributes the diminished number of admissions to a variety of causes, such as "the changing opinions of public boards, the suspense and uncertainty in which lunacy legislation has of late years been kept, and the increasing objection on the part of parochial authorities and relatives of the insane to look upon the Asylum as a curative hospital, combined with the increasing disposition to regard the Asylum more as a last resort for the hopelessly incurable, or a prospective cemetery for the dying."

The Visiting Committee and the Medical Superintendent draw special attention to the satisfactory recovery rate, which is stated to have been 46.87 per cent. of the admissions (excluding transfers from other asylums).

It may, however, be as well to point out that there is "an error in the bill;" the total number of cases admitted (excluding transfers)

having been 108, while the recoveries amounted to 45; whence it follows that the recovery-rate was 41.7 per cent. The rates for males and females respectively are similarly miscalculated. The result remains creditable to the able Superintendent, Dr. Murray Lindsay.

The number of deaths during 1885 was 62, being at the rate of 14.93 per cent. of the daily average population. This high mortality is attributable partly to the very unfavourable character of the cases admitted, 18 dying within twelve months of admission; partly to the large number of deaths from pulmonary diseases, phthisis proving fatal in 15 cases, and pleurisy, bronchitis, and pneumonia in 12 more. Dr. Murray Lindsay is to be congratulated on having been able to make *post mortem* examinations in 61 out of the 62 deaths. The average annual death-rate since the opening of the asylum has been 12.5 per cent., which is much above the average of asylums generally, and can only arise from exceptional causes in so well-managed an institution.

Several improvements were effected in 1885, such as the purchase of new boilers, additions to the laundry, new conservatory, new organ, etc. The Commissioners in Lunacy have repeatedly and urgently pressed for the erection of a detached infectious hospital at this asylum. Application was made to Quarter Sessions at Midsummer, 1885, for a grant of £2,600 for this purpose; but the application was rejected. At the October Sessions, £300 was granted to provide a disinfecting-room and apparatus, in the hope that "this would obviate for the present the necessity for the erection of a detached infectious diseases hospital." We are glad to see that Dr. Murray Lindsay does not hesitate to express a very decided opinion as to the inadequacy of this provision, and the risk incurred by neglecting to erect a detached hospital.

We hope the report for 1866 will include Table II A. There are also a few *lacunæ* in Table III which should be filled up.

IPSWICH BOROUGH LUNATIC ASYLUM.

ALTHOUGH we do not find much of importance to note in the report of this institution for 1885, it may be said that the condition of the asylum is apparently satisfactory, and that the accommodation is sufficient not only for the borough patients, but also for a large number of out-borough and private patients. The recovery-rate during the year was remarkable good, being nearly 82 per cent. of the admissions, exclusive of transfers to the asylum. The proportion of deaths to the average number resident was 8.4 per cent; the average death-rate for the entire period during which the asylum has been open is 11 per cent. *Post mortem* examinations were made in only eleven out of the twenty-one deaths. More or less severe accidents seem to have been rather frequent. One patient died of rupture of the bladder; "a female patient broke her thigh from slipping up in the scullery, without the intervention of another person; and another had her shoulder dislocated in a struggle whilst being undressed. Besides these, a woman was admitted with a broken arm, having jumped from a first-floor window into the street below." The Commissioners in Lunacy report that few patients were engaged in any trade. At the time of their visit, one man was at work with the tailor, and one with the shoemaker; but neither the carpenter, painter, bricklayer, nor upholsterer was assisted by any patient. The Commissioners, being told that these artisans objected to having patients to work with them, not unnaturally observe: "We should think that the solution of the difficulty was exceedingly easy, when it is remembered that the asylum is intended for the curative treatment of patients (amongst which (*sic*) work proves in many instances a powerful agent), and not to give employment to artisans."

Although the reports of the Commissioners are not always remarkable for their lucidity and accuracy of diction, the superintendent appears to be responsible for the singular mistakes in the following sentence. It is rather hard on the former to make them seem to write in a more slipshod manner than usual. "We do not consider the staff of attendants at all too strong; and, looking in the 'medical journal,' we are struck by the number of black eyes, bruises, etc., which point to an inadequate, if not an insufficient (inefficient) staff; and we do not think that we have any sufficient ground for considering the staff to be insufficient (inefficient)."

We are glad to learn that "the alterations suggested by our colleagues at the last visit with regard to the tell-tale clocks, and more frequent record thereat, has (*sic*) been carried into effect."

The statistical tables are very well prepared. We would only draw Dr. Chevallier's attention to the fact that the average numbers resident are stated differently in Tables II and III.

MEDICAL MAGISTRATE.—Dr. J. Dillon Kelly, of Mullingar, has been appointed by the Lord Chancellor to the Commission of the Peace for the county of Westmeath.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

FEES FOR INSPECTING LABOURERS' COTTAGES IN IRELAND.

WE learn from the *Waterford News and General Advertiser* of August 20th that Mr. Cadogan's notice of motion to give the dispensary medical officers 10s. 6d. instead of 5s. for each certificate given by them in future under the provisions of the Labourers' Act, adjourned from August 13th, came on for consideration at the meeting of the Waterford Board of Guardians on the preceding Wednesday. In proposing it, Mr. Cadogan said "that his task was an easy one; all he wanted to do was justice to these gentlemen, who had done their duty like good men." In seconding the resolution, Alderman Redmond said that 5s. was far too small a sum for the doctors' visits to these cottages, which are widely scattered all over the country. He knew that the doctors' salaries did not sufficiently pay them for their laborious work; and therefore he thought that any little extra duties which they might have to perform should be fairly remunerated." Alderman Clampett supported the resolution, which was opposed by the Chairman of the Board, who stated that the Local Government Board had informed them that the doctors were bound to give their certificates without extra pay. In reply, Mr. Cadogan traversed successfully the remarks of the Chairman; so that, when the resolution was put to the vote, it was adopted unanimously.

We congratulate the dispensary medical officers of the Waterford Union on this act of justice by the Board; and we also commend Dr. J. B. N. Cane for the success which has attended his spirited appeal to the guardians for higher consideration for their services under this Act.

THE POLLUTION OF THE THAMES.

AT the last meeting of the Court of Common Council, in reply to a question as to what steps had been taken by the Metropolitan Board of Works to carry out the recommendations of the Royal Commission in respect to the pollution of the Thames by sewage, Mr. Deputy Saunders said that the Board had, during the last three months, adopted temporary measures. There were two plans before the Board. By the one it was suggested to carry a main trunk sewer thirty-four miles from the present outfall to Thames Haven, Canvey Island, or Mapplin Sands. The cost of carrying the outfall to any one of these places would be at least three and three-quarter millions. The other plan was the precipitation of the solid matter from the sewage, and its purification at the present outfall. The Court would bear in mind that something like 160 million gallons of sewage had to be dealt with daily, and it was calculated that after the process of precipitation 850 tons of solid matter *per diem* would remain. The Board had offered premiums for the best design of a boat or vessel for carrying away that large quantity of solid sewage, and a design had been approved, and a vessel was in course of construction. The vessel would be so built as to convey the sludge to the lowland districts on the banks of the Thames, where it could be placed at a minimum cost for labour. The precipitation scheme would cost about £750,000 to complete, and £118,000 annually when in operation, while the alternative plan would cost £215,000 a year to keep up.

HEALTH OF ENGLISH TOWNS.

IN the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,454 births and 3,631 deaths were registered during the week ending Saturday, September 4th. The annual rate of mortality, which had increased in the three preceding weeks from 18.9 to 20.1 per 1,000, further rose during the week under notice to 20.8. The rates in the several towns, ranged in order from the lowest, were as follow:—Bristol, 14.2; Hull, 16.6; London, 16.7; Oldham, 17.6; Nottingham, 18.9; Wolverhampton, 18.9; Huddersfield, 19.4; Bradford, 20.5; Newcastle-upon-Tyne, 20.5; Sunderland, 20.5; Brighton, 20.6; Halifax, 21.3; Leeds, 23.1; Cardiff, 23.3; Birmingham, 23.6; Blackburn, 23.7; Bolton, 23.9; Leicester, 25.0; Derby, 25.6; Birkenhead, 25.7; Liverpool, 26.4; Sheffield, 28.2; Plymouth, 28.6; Manchester, 28.8; Norwich, 29.5; Salford, 34.1; Portsmouth, 35.6; and the highest rate during the week, 38.1 in Preston. In the twenty-seven provincial towns the death-rate averaged 24.8 per 1,000, and exceeded by as much as 7.6 the rate recorded in London, which, as before stated, was only 16.7 per 1,000. The 3,631 deaths registered in the twenty-eight towns during the week under notice included 710 which were referred to diarrhœa, 58 to "fever" (principally enteric), 53 to scarlet fever, 46 to measles, 45 to whooping-cough, 19 to diphtheria, and not one to small-pox; in all, 931 deaths resulted from the principal zymotic diseases, against 806 and 778 in the two preceding weeks. The zymotic death-rate was equal to 5.3 per 1,000. In London, the zymotic death-rate did not exceed 3.2 (of which 2.2 was due to diarrhœa), whereas it averaged 7.1 per 1,000 in the twenty-seven provincial towns (including 5.6 from diarrhœa), and ranged from 1.7 and 3.1 in Bristol and Brighton,

to 10.8 in Norwich, 11.5 in Preston, 12.8 in Salford, and 14.2 in Portsmouth. The fatal cases of diarrhœa, which had been 67 and 82 in the two preceding weeks, rose again to 94 in the week under notice, and caused the highest death-rates in Norwich, Preston, Birmingham, Portsmouth, and Salford. The deaths referred to different forms of "fever," which had declined from 41 to 35 in the three previous weeks, rose again during the week under notice to 58; this disease was proportionally most fatal in Huddersfield, Plymouth, and Portsmouth. The 16 fatal cases of measles showed a decline of 11 from the number recorded in the preceding week, and caused the highest death-rates in Halifax and Preston. The deaths referred to scarlet fever, which had increased from 30 to 49 in the three preceding weeks, further rose during the week under notice to 53, and showed the largest proportional fatality in Sheffield and Salford. The 19 fatal cases of diphtheria showed a decline of 9 from the number in the previous week, and included 11 in London. No death from small-pox was registered during the week under notice, either in London or in any of the twenty-seven provincial towns. No small-pox patients were under treatment in the Metropolitan Asylum Hospitals during the week under notice. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 1.5 per 1,000, and was considerably below the average. The causes of 94, or 2.6 per cent. of the 3,631 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

During the week ending Saturday, September 11th, 5,784 births and 3,939 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had steadily increased from 18.9 to 20.8 per 1,000 in the four preceding weeks, further rose during the week under notice to 22.6. The rates in the several towns, ranged in order from the lowest, were as follow: Bristol, 13.9; London, 16.5; Plymouth, 19.1; Huddersfield, 20.0; Derby, 21.0; Brighton, 21.5; Bradford, 23.1; Blackburn, 24.6; Birkenhead, 24.6; Birmingham, 25.9; Leeds, 26.2; Sunderland, 27.0; Halifax, 27.3; Hull, 27.5; Newcastle-upon-Tyne, 27.9; Oldham, 28.0; Salford, 28.9; Portsmouth, 29.1; Wolverhampton, 29.4; Liverpool, 30.4; Cardiff, 30.6; Manchester, 31.0; Sheffield, 31.0; Nottingham, 31.9; Bolton, 31.9; Leicester, 34.8; Norwich, 35.1; and the highest rate during the week, 38.1, in Preston. The death-rate in the twenty-seven provincial towns averaged 27.7 per 1,000, and exceeded by as much as 11.2 the rate recorded in London, which, as before stated, did not exceed 16.5 per 1,000, and was lower than in any week since the end of June last. The 3,939 deaths registered in the twenty-eight towns during the week under notice included 1,199 which were referred to the principal zymotic diseases, against 778 and 931 in the two preceding weeks; of these, 995 resulted from diarrhœal diseases, 70 from whooping-cough, 49 from "fever" (principally enteric), 46 from scarlet fever, 36 from measles, 20 from diphtheria, and one from small-pox. These 1,199 deaths were equal to an annual rate of 6.9 per 1,000. The zymotic rate in London during the week under notice did not exceed 3.4 per 1,000, whereas it averaged 9.8 in the twenty-seven provincial towns, among which it ranged from 2.1 and 3.4 in Bristol and Plymouth, to 13.4 in Preston, 14.2 in Hull, and 17.6 in Norwich. The deaths referred to diarrhœal diseases, which had been 582 and 710 in the two preceding weeks, further rose to 995, and showed the largest proportional fatality in Leicester, Preston, Hull, and Norwich. The 50 fatal cases of whooping-cough showed an increase of 5 upon the number in the previous week, and caused the highest rates in Preston. The deaths from "fever," which had been 35 and 58 in the two preceding weeks, declined again during the week under notice to 49, and showed the highest proportional fatality in Norwich and Portsmouth. The fatal cases of scarlet fever, which had increased from 30 to 53 in the four previous weeks, declined to 46; this disease caused the highest death-rate in Salford and Huddersfield. The 38 deaths referred to measles showed a further decline from recent weekly numbers, and caused the highest proportional mortality in Nottingham. The 20 fatal cases of diphtheria showed a slight increase, and included 9 in London, 2 in Liverpool, 2 in Portsmouth, and 2 in Salford. The death referred to small-pox during the week under notice occurred in London; no fatal case of this disease was recorded in any of the twenty-seven provincial towns. No small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals during the week. The death-rate from diseases of the respiratory organs in London during the week under notice was only 1.4 per 1,000, and considerably below that recorded in any preceding week of this year. The causes of 79, or 2.5 per cent., of the 3,939 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, September 4th, 801 births and 479 deaths were registered in the eight principal Scotch towns having an estimated population of 1,283,977 persons. The annual rate of mortality, which had been 17.9 and 17.7 per 1,000 in the two preceding weeks, rose again to 19.4 during the week under notice, but was 1.4 per 1,000 below the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 11.5 in Perth, 14.4 in Dundee, 17.0 in Leith, 18.2 in Paisley, 19.9 in Aberdeen, 20.0 in Edinburgh, 20.8 in Glasgow, and 23.6 in Greenock. The 479 deaths registered during the week under notice in these towns included 86 which were referred to the principal zymotic diseases, against 63, 72, and 83 in the three preceding weeks; of these, 53 resulted from diarrhœa, 11 from scarlet fever, 10 from whooping-cough, 7 from "fever," 4 from diphtheria, 1 from measles, and not one from small-pox. These 86 deaths were equal to an annual rate of 3.5 per 1,000, which was as much as 1.8 below the average zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic death-rates in the Scotch towns during the week under notice were recorded in Greenock, Leith, and Glasgow. The fatal cases of diarrhœa, which had increased in the three preceding weeks from 18 to 36, further rose during the week to 53, of which 24 occurred in Glasgow, 7 in Edinburgh, and 7 in Dundee. The 11 deaths referred to scarlet fever, showed a decline of 5 from the number in the previous week, and included 9 in Glasgow, and 2 in Aberdeen. The fatal cases of whooping-cough, which had been 22 and 19 in the two preceding weeks, further declined during the week under notice to 10, of which 8 occurred in Glasgow, and 2 in Edinburgh. The 7 deaths from fever showed a slight further increase upon recent weekly numbers, and included 5 in Glasgow, and 2 in Edinburgh. The 4 fatal cases of diphtheria were all returned in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 2.6 per 1,000, against 1.5 in London. The causes of 69, or more than 14 per cent., of the 479 deaths registered during the week in these Scotch towns were uncertified.

In the eight principal Scotch towns, having an estimated population of 1,283,977 persons, 777 births and 508 deaths were registered during the week ending Saturday, September 11th. The annual rate of mortality, which had been 17.7 and 19.4 per 1,000 in the two preceding weeks, further rose during the week under notice to 20.6, but was 2.0 per 1,000 below the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 13.1 in Perth, 15.7 in Dundee, 16.3 in Edinburgh, 19.5 in Greenock, 20.7 in Leith, 22.6 in Glasgow, 24.3 in Paisley, and 28.0 in Aberdeen. The 508 deaths registered during the week in these Scotch towns included 57 which were referred to diarrhœa, 20 to whooping-cough, 7 to scarlet fever, 4 to diphtheria, 4 to "fever," 1 to measles, and not one to small-pox; in all, 93 deaths resulted from these principal zymotic diseases, against 83 and 86 in the two preceding weeks. These 93 deaths were equal to an annual rate of 3.8 per 1,000, which was 3.1 below the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Paisley, Aberdeen, and Glasgow. The deaths referred to diarrhœa, which had steadily increased from 18 to 53 in the four preceding weeks, further rose to 57, and were nearly twice the number recorded in the corresponding week of last year; 20 occurred in Glasgow, 9 in Dundee, and 7 in Aberdeen. The fatal cases of whooping-cough, which had been 22, 21, and 10 in the three previous weeks, rose again last week to 20, and included 15 in Glasgow. The 7 deaths referred to scarlet fever showed a further decline from recent weekly numbers, and were all returned in Glasgow. The 4 fatal cases of diphtheria corresponded with the number in the preceding week, and included 2 in Glasgow. The 4 deaths from "fever" were fewer than those recorded in any recent week, and included 2 in Glasgow. The fatal case of measles occurred in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns, was equal to 3.1 per 1,000, against 1.4 in London. As many as 72, or 14 per cent., of the 508 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

In the week ending August 14th, 303 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 18.2 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000:—Armagh, 10.3; Belfast, 16.9; Cork, 13.0; Drogheda, 33.8; Dublin, 20.5; Dundalk, 34.9; Galway, 20.2; Kilkenny, 29.6; Limerick, 17.5; Lisburn, 4.8; Londonderry, 14.3; Lurgan, 15.4; Newry, 14.0; Sligo, 4.8; Waterford, 18.5; Wexford, 12.8. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1.5 per 1,000, the rates varying from 0.0 in nine of the districts to 4.4 in Dundalk; the 8 deaths from all causes registered in that district comprising 1 from diarrhœa. The 72 deaths from all causes registered in Belfast comprised 1 from diphtheria, 1 from ill-defined fever, 1 from enteric fever, and 7 from diarrhœa; and the 20 deaths in Cork comprised 1 each from scarlatina, typhus, and diarrhœa. In the Dublin Registration District, the deaths registered during the week amounted to 141. Ten deaths from zymotic diseases were registered in Dublin; they comprised 1 from measles, 1 from scarlet fever, 1 from cerebro-spinal fever, 1 from typhus, 1 from enteric fever, 4 from diarrhœa, etc. Twenty-six deaths from diseases of the respiratory system were registered; they comprised 16 from bronchitis, 7 from pneumonia, and 2 from croup. The deaths of 14 infants under 1 year old (including 7 under 1 month) were ascribed to convulsions. Three deaths were caused by apoplexy, 7 by other diseases of the brain and nervous system (exclusive of convulsions), and 13 by diseases of the circulatory system. Phthisis caused 21 deaths, mesenteric disease 6, and cancer 3. Five accidental deaths were registered. In 19 instances, the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending August 28th, 301 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 18.1 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 15.5; Belfast, 21.9; Cork, 11.7; Drogheda, 21.1; Dublin, 17.7; Dundalk, 26.2; Galway, 20.2; Kilkenny, 25.4; Limerick, 9.4; Lisburn, 0.0; Londonderry, 26.7; Lurgan, 15.4; Newry, 10.5; Sligo, 9.6; Waterford, 27.8; Wexford, 8.6. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2.2 per 1,000, the rates varying from 0.0 in eight of the districts to 4.6 in Waterford; the 12 deaths registered from all causes in that district comprising 2 from diarrhœa. The 93 deaths from all causes in Belfast comprised 1 from scarlatina, 1 from whooping-cough, 1 from ill-defined fever, 2 from enteric fever and 4 from diarrhœa; among the 18 deaths in Cork were 1 from scarlatina, 1 from enteric fever, and 1 from diarrhœa; and the 15 deaths in Londonderry comprised 1 from whooping-cough and 1 from diphtheria. In the Dublin Registration District, the deaths registered during the week amounted to 123. Nineteen deaths from zymotic diseases were registered during the week; they comprised 3 from scarlet fever, 1 from whooping-cough, 3 from simple continued and ill-defined fever, 2 from enteric fever, 9 from diarrhœa, etc. Fourteen deaths from diseases of the respiratory system were registered; they comprised 10 from bronchitis. The deaths of 13 children under 5 years of age (including 12 infants under 1 year old) were ascribed to convulsions. Two deaths were caused by apoplexy, 7 by other diseases of the brain and nervous system (exclusive of convulsions), and 7 by diseases of the circulatory system. Phthisis caused 12 deaths, mesenteric disease 4, and cancer 5. In 18 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending September 4th, the number of deaths registered in the sixteen principal town districts of Ireland was 363. The average annual death-rate represented by the deaths registered was 21.9 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 25.8; Belfast, 18.1; Cork, 18.2; Drogheda, 8.5; Dublin, 26.1; Dundalk, 21.8; Galway, 20.2; Kilkenny, 38.1; Limerick, 17.5; Lisburn, 14.5; Londonderry, 21.4; Lurgan, 30.8; Newry, 21.1; Sligo, 19.2; Waterford, 23.2; Wexford, 0.0. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2.6 per 1,000, the rates varying from 0.0 in eight of the districts to 4.8 in Lisburn; the 9 deaths from all causes registered in the last-named district comprising 1 from diarrhœa. Among the 77 deaths from all causes in Belfast were 1 from whooping-cough, 1 from diphtheria, 4 from enteric fever, and 4 from diarrhœa; among the 28 deaths in Cork were 1 from enteric fever, and 3 from diarrhœa; and the 10 deaths in Waterford comprised 2 from diarrhœa. In the Dublin Registration District the deaths registered during the week amounted to 177. Twenty-five deaths from zymotic diseases were registered in Dublin during the week; they comprised 3 from typhus, 5 from enteric fever, 14 (including 13 of children under

5 years of age) from diarrhœa, etc. Seventeen deaths from diseases of the respiratory system were registered; they comprised 13 from bronchitis. The deaths of 23 children under five years of age (including 16 infants under one year old) were ascribed to convulsions. Two deaths were caused by apoplexy, 7 by other diseases of the brain and nervous system (exclusive of convulsions), and 9 by diseases of the circulatory system. Phthisis caused 25 deaths, mesenteric disease 9, and cancer 10. One accidental death was registered. In 28 instances the cause of death was uncertified, there having been no medical attendant during the last illness. One man was stated to have been aged 105 years.

HEALTH OF FOREIGN CITIES.

It appears from statistics published in the Registrar-General's return for the week ending September 4th, that the annual death-rate recently averaged 27.2 per 1,000 in the three principal Indian cities; it was 19.3 in Calcutta, 21.5 in Bombay, and 41.7 in Madras. Cholera caused 6 deaths in Calcutta, and the greatest mortality from "fever" occurred in Madras. According to the most recently received weekly returns, the annual death-rate averaged 26.7 per 1,000 persons estimated to be living in eighteen of the largest European cities, and exceeded by 5.9 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was equal to 25.6, and showed a further decline from the rates in previous weeks; the 456 deaths included 86 from diarrhœal diseases, 11 from scarlet fever, and 4 from small-pox. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 23.2, and ranged from 22.2 in Copenhagen to 26.2 in Christiania; diarrhœal diseases caused 24 deaths in Copenhagen, and 28 in Stockholm, and the 66 deaths in Christiania included 9 from diphtheria and croup, and 3 from scarlet fever. In Paris, the death-rate was equal to 21.7, and exceeded by 5.0 the rate that prevailed in London; the deaths included 165 from diarrhœal diseases, 29 from diphtheria and croup, and 25 from typhoid fever. The 196 deaths in Brussels, of which 47 resulted from diarrhœal diseases, and 6 from "fever," gave a rate of 23.4. The usual return from the three principal Dutch cities does not appear to have come to hand. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 30.3, and ranged from 28.3 and 23.6 in Dresden and Vienna, to 32.1 in Breslau, 35.8 in Buda-Pesth, and 72.4 in Trieste. Diarrhœal diseases showed a marked excess in Berlin, Munich, and Breslau, and cholera caused 60 deaths in Trieste; 22 deaths from small-pox occurred in Buda-Pesth, and 27 from measles in Trieste. The death-rate was equal to 25.6 in Rome, and to 31.4 in Venice; small-pox caused 6 deaths in Rome, and cholera 15 in Venice. In Alexandria the death-rate was 56.4, and in Cairo 58.0; diarrhœa caused 72 deaths in Alexandria and 155 in Cairo, typhoid fever 5 in Alexandria and 18 in Cairo, and 2 fatal cases of small-pox occurred in Alexandria. In four of the largest American cities, the mean recorded death-rate was 25.8, the rates ranging from 22.1 in Philadelphia and Baltimore to 29.8 in New York. Diarrhœal diseases and diphtheria caused considerable mortality in New York and Brooklyn; and 16 deaths from typhoid fever were recorded in Philadelphia.

It appears from statistics published in the Registrar-General's return for the week ending September 11th, that the annual death-rate recently averaged 26.3 per 1,000 in the three principal Indian cities; it was 21.1 in Calcutta, 21.6 in Bombay, and 35.6 in Madras. Cholera caused 28 deaths in Calcutta; diarrhœal diseases 37 in Bombay and 41 in Madras; and the mortality from "fever" was greatest in Madras. According to the most recently received weekly returns, the annual death-rate averaged 27.4 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded by 4.8 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 25.2, and showed a slight further decline from the rate in recent weeks; the 449 deaths included 4 from small-pox, 8 from scarlet fever, and 95 from diarrhœa. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 25.9, and ranged from 18.5 in Stockholm to 31.4 in Copenhagen; diphtheria and croup caused 9 deaths in Christiania, and diarrhœal diseases were fatally prevalent in each of these three cities. In Paris, the death-rate was equal to 25.3, and exceeded the rate that prevailed in London by as much as 8.8; the deaths included 31 from typhoid fever, 24 from measles, and 205 from diarrhœal diseases. The 199 deaths in Brussels, of which 58 resulted from diarrhœa and 4 from diphtheria, gave a rate of 26.2. The rate in Geneva did not exceed 19.4, and no fatal case of zymotic disease was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 26.5, the several rates being 25.9 in Amsterdam, 26.1 in Rotterdam, and 28.1 in the Hague; diphtheria caused 3 deaths in Amsterdam, scarlet fever 2 in Rotterdam, and measles 4 in the Hague. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 29.3, and ranged from 25.7 and 25.8 in Vienna and Berlin, to 34.8 and 36.4 in Buda-Pesth and Breslau. Small-pox caused 34 deaths in Buda-Pesth, and diphtheria 26 in Berlin, while diarrhœal diseases were fatally prevalent in most of these cities. The rate of mortality in Venice was equal to 34.7; the deaths included 15 cases of cholera, against 20 and 15 in the two preceding weeks. The 165 deaths in Turin gave a rate of 22.5, and included 8 from diphtheria and croup, 4 from typhoid fever, and 4 from scarlet fever. The death-rate in Cairo was 49.8, and in Alexandria 46.9; typhoid fever caused 21 deaths in Cairo; diarrhœal diseases 129 in Cairo and 49 in Alexandria. In four of the largest American cities, the recorded death-rate averaged 24.8, and ranging from 21.1 in Baltimore to 27.8 in New York. Diphtheria caused 23 deaths in New York and 14 in Brooklyn; 16 deaths were referred to typhoid fever in Philadelphia, and 3 in Baltimore, while diarrhœal diseases were fatally prevalent in each of these American cities.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Oldham.—Dr. R. Bryden Hill writes clearly and to the point, and his interest is evidently wrapped up in the welfare of his borough. He estimates the population at the middle of last year at 122,676, and its mean density at 25.96 per acre. The birth rate last year was 35.4, and the death-rate 24.5. The death-rate was greater by 2.6 per 1,000 than it was in 1883. This increase was, it seems, almost entirely due to an epidemic of measles and to an unusual amount of diarrhœa. There were 123 deaths from measles, and 149 from diarrhœa in 1884, as compared with 6 from measles and 76 from diarrhœa in 1883. And yet Dr. Hill says that (with the exception of measles) bronchitis, phthisis, and pneumonia were, as they have been for years past, the principal causes of death in Oldham. He adds, "We need not look for any rapid decrease in this class of disease, owing to the nature of the occupation of our working classes in hot mills, which renders them more susceptible to chill. The elevated position of Oldham, which, though favourable, as I have observed, in producing a greater movement and renewal of our atmosphere, nevertheless exposes our mill operatives to a great risk from chest diseases—the pollution of the atmosphere with irritating smoke and noxious gases, and the damp clay subsoil on which Oldham rests." The principal means to be adopted towards diminishing this mortality are, "purification of our atmosphere, ventilation of dwellings and workshops, protection of our working classes from the injurious effects of inhaling fine dust and irritating particles at their work by means of efficient ventilation, wet grinding, use of mouth coverings, etc., and the careful drainage of our houses and subsoil." In this connection Dr. Hill urges on his Authority the importance of drainage and paving all streets as early as possible. There were 440 deaths registered from one and another of the seven principal zymotic diseases, viz, 149 from diarrhœa, 22 from typhoid fever, 36 from whooping-cough, 7 from diphtheria, 33 from scarlet fever, and 193 from measles. The number of deaths from diarrhœa exceeded by 62 the average of the previous ten years. The deaths recorded from this affection during the successive quarters of the year were 10, 12, 107, and 20, and Dr. Hill traces the parallelism between these fluctuations and those of the mean temperature of the several quarters. The deaths from typhoid fever were fewer than they have been in any previous year, and they numbered less by 18 than the average of the preceding ten years, though the population has been increasing at the rate of between 3,000 and 4,000 annually. This reduction is taken as satisfactory evidence of improving sanitary condition. Dr. Hill has had, it appears, a most anxious and arduous duty to perform in regard of the long sustained and fatal prevalence of measles. The infantile mortality last year was as high as 182. Among the main factors of this mortality there were, as will already have been gathered, measles and diarrhœa; there was also "baby-farming," a picture of which, as drawn by Dr. Hill, is saddening to a degree. It is to the evil results of this unnatural system that many of the deaths among infants at Oldham is attributed. It is satisfactory to hear that of 412 infectious cases reported in the borough, as many as 165 were removed to the Westhulme Fever Hospital, and that "the repugnance to the hospital, at first entertained by many, is disappearing."

Thingoe Rural District.—Mr. C. S. Kilner gives a death-rate of 15.19 per 1,000 for this district, of which the zymotic proportion was 0.3. Small-pox was imported into two parishes, but prompt precautionary measures effectually prevented the spread of the disease. One case, that of an elderly woman, proved fatal. Scarlet fever was prevalent in a mild form throughout the year, but the district generally suffered little from preventible diseases. Mr. Kilner reports many cases of overcrowding, but the difficulty of finding suitable accommodation for large families is a serious obstacle to the abatement of this nuisance.

MEDICAL NEWS.

University of Edinburgh.—The following is the official list of candidates who have passed the First Professional Examination, which was completed on Saturday.

J. Allen, W. S. Anderson, R. Badger, T. S. Balfour, V. E. Barrow, R. M. Beattie, J. H. Beilby, W. A. Black, J. E. Brandt, J. B. Lester, W. A. Bryant, R. C. Buist (M.A.), S. B. J. Bulteel, T. L. Bunting, W. H. Bunting, T. J. Burton, F. S. Butler, E. S. R. Cadman, A. W. Campbell, A. W. Carter, A. C. Coles, J. J. Cowan, G. Craig, D. B. Crerar, J. W. Crerar (with distinction), H. G. Critchley (B.A.), G. M. Cullen, J. Currie, W. Currie (M.A.), B. E. Dalison, H. Dardenne, G. D. Darlington, A. J. Dearden, J. R. Dickson, C. C. Douglas (with distinction), D. G. Douglas, J. J. Douglas, A. G. Dow, J. W. Dowden, A. S. Duncan, W. Everett, H. C. Evison, B. G. Ewing, E. Fawcett, S. Fergusson, E. Forsyth, J. S. Fox, T. Frankish, R. C. Fryer, R. V. Fulton, W. S. Gibb, W. S. Gibson, A. B. Gilts, C. Gordon, J. Grant, J. D. Gray, H. W. Greatbatch, T. P. Greenwood, G. Grindlay, E. B. Gwynn, A. E. H. C. Hallen, J. Hardie, A. F. Hardy, J. W. Hart, C. E. Harvey, T. R. Henderson (M.A.), G. Hennan (with distinction), M. L. Hewat, O. B. Holland, A. C. Houston, H. C. Hudson, J. C. Jameson, E. C. P. Johnstone, P. Jones, P. M. Kyle, J. Lackie, H. G. Langwill (with distinction), G. E. Lanyon, T. Lawson (Huntly), T. Lawson (Dunning), W. Leask, J. W. Leitch (B.A.), T. T. Littlejohn, G. V. Lockett, F. A. L. Lockhart, W. Lundie (M.A.), S. G. M'Allum, A. H. W. Macdonald (M.A.), R. P. Mackenzie, F. J. M'Ketterick, A. J. Mackintosh, M.A. (with distinction), J. M'Laren, A. Maclean (with distinction), E. J. Maclean (with distinction), C. Macmaster, F. W. Mann, G. B. Marshall, W. O. Meek, H. G. Melville, H. N. D. Milligan, E. A. Milner, G. B. Mitchell, G. H. Monro, A. W. Mortlock, J. W. Moss, D. Murray, J. S. M. Nurse, M. Ogilvy-Ramsay (M.A.), W. Oliver, J. C. Palmer, W. Paterson, L. G. Peters, S. A. Pike, J. F. Pougnet, A. F. M. Powell, K. Prasad, E. W. Rahn, W. H. Ralphs, J. F. Richardson, M. J. Richardson, E. E. Roberts,

J. C. Robertson, J. S. Y. Rogers, I. H. Ross, H. G. F. E. le Roux, H. A. Rowland, R. D. Rudolf, A. Rutherford, R. A. St. Leger, L. S. Senhouse, W. J. Shaw, L. M. Silver, C. Simpson, E. M. Smith, J. L. Smith (M.A.), J. W. Smith, J. Spencer, W. C. W. Stain, T. E. K. Stansfield, E. G. B. Starkie, F. Stevenson, R. Sturgis-White, J. A. Taylor, G. W. Thompson (with distinction), A. Thomson, W. E. F. Thomson (M.A.), G. Thornton, G. Thyne, J. A. Thyne (with distinction), F. P. Trench, N. G. Trotter, H. Watthews, S. R. Webb, D. Westwood, A. Wheeler, P. C. White, E. M. Wilkes, G. Wilkinson (with distinction), A. W. Williams (with distinction), A. F. Wilson, G. M. Wilson, J. J. Wilson, Richard Wyse (M.A), J. Y. S. Young, T. M. Young.

The following is the official list of candidates who have passed the Second Professional Examination.

R. Abernethy, H. J. Bailey, J. Barclay, J. A. B. Bayly, L. A. W. Beck, H. A. Becker, W. J. Bell, A. Birt, W. C. Bluck, G. P. Boddie, D. J. M. Bone, H. E. Bower, N. D. Boxill, J. Brodie, G. M. Brown, F. O. Buckland, A. W. T. Buist-Sparks, A. E. Bullock, J. Cameron, P. Campbell, W. G. Campbell, W. R. Chew, A. Clarkson (with distinction), A. Coleman, J. Cowper, A. E. Cox, F. Dendle, A. H. Douglas, J. J. Drinkwater, J. Edmondson, F. Elkins, C. Fleming, S. C. Fowler, A. H. Frere, F. J. C. Fulss, G. H. Gibson, R. W. Gibson, Raillton Gill, J. G. Graham, J. Harrison, A. C. Hartley, T. E. Hill, P. W. Hislop, T. D. H. Holmes, H. R. Hunt, J. R. Hutton, T. W. Irvine, W. P. Johnstone, W. W. Jones, J. Laurie, H. T. G. van der Linde, W. Leckwood, D. C. Longden, F. J. M'Cann, D. J. Macdonald, D. MacLeod, W. G. Macpherson, C. Malcolm, J. W. Martin, K. A. Mutheson, J. G. Miller, H. M. Montgomerie, P. Murison, J. Nightingale, L. S. F. de R. Norman, A. B. Northcote, W. B. Orr, C. H. L. Palk, W. Paterson, W. B. Paterson, T. D. Poole, E. W. Rayment, C. B. Reid, R. S. Rogers, A. Rouget, A. Rowand (M.A.), C. R. Scarth, R. G. Scott, R. B. Shaw. R. B. Simmins, J. Smith, H. V. Steyn, A. R. Stoddart, W. D. Sutherland, E. E. Taylor, M. Taylor, I. Thompson, W. T. Thomson, R. Thin (M.A.), H. W. M. Tims, W. H. Tofft, E. C. Tothill, J. Townsley, J. H. Traquair, A. H. H. Watson, J. R. Watson (B.A.), J. C. Webster (B.A.), J. D. Williams (with distinction), J. H. Wilson, W. Wilson, L. G. Wynn.

Royal Colleges of Physicians and Surgeons, Edinburgh: Double Qualification.—At the special sittings of the Examiners which commenced September 16th, the following gentlemen passed the Second Professional Examination, and were admitted L.R.C.P.Ed. and L.R.C.S.Ed.

P. H. S. Mellish, Kent; W. H. Shand, Kirkcudbright; F. J. B. Bateman, Norwich; J. Smith, Coleraine; G. E. Claxton, India; S. Herriot, Cheshire; R. S. Smith, Edinburgh; C. A. Edwards, Wiveliscome; J. U. Downing, Birkenhead; R. W. Long, Cork; S. H. Craig, County Derry; T. E. Moore, County Derry; T. Godley, County Kerry; A. O'R. Blackwood, County Down; A. D. Dunn, Canterbury; W. Chalmers, Cornwall; W. McCoull, Ovington; W. H. Chamberlain, Leicester; R. J. Beacon, County Tyrone; B. O'Regan, County Mayo; W. C. Graham, County Antrim; H. J. Augustine, Bengal; F. W. Gibbon, County Durham; F. Evans, Cork.

Society of Apothecaries of London.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, September 16th, 1886.

Doyle, Henry Martin, Melbourne, Victoria, Australia.
Moxon, Alban Henry, 147, King Street, Great Yarmouth.
Walker, Frederick William, Aldbrough, Darlington, Yorkshire.
White, Creswell Fitzherbert, Chippenham, Wiltshire.

Preliminary Examination in Arts.—The following candidates passed this Examination on September 10th and 11th.

First Class.—H. E. Cooper, C. B. Dale, A. C. Gask, W. F. E. Milton.
Second Class.—J. C. Bowden, B. H. Carpenter, L. V. Cooper, C. A. Coventon, T. S. Davies, F. Deas, J. M. Duncan, H. F. Ealand, E. Flint, B. B. Ghose, S. F. St. D. Green, W. R. Grove, A. A. Hewer, W. C. Hinde, P. S. Kesteven, H. Meyrick-Jones, J. J. Mooney, F. N. O'Donel, F. R. Oram, W. C. Orme, A. W. Perry, R. W. Prentice, R. H. Reynolds, H. Sisson, L. F. E. Snead, S. L. Steggall, S. W. Sweetnam, J. G. Turner, R. S. Whitford, F. E. Withers, W. E. Wyborn.

The following gentlemen passed in Elementary Mechanics only.

C. W. Allen, L. S. Baines, W. Birkett, F. L. Charters, A. T. Collett, C. W. Claswelller, F. J. A. Dalton, C. T. W. Hirsch, H. A. Julius, F. W. Kerbey, A. King, F. C. Lewis, H. W. Lyle, D. O. Maddock, N. Marder, M. C. O'Brien, F. O'Bryan, G. E. Page, H. L. Powys, G. F. C. Prance, H. Reeks, J. J. D. Richardson, F. C. Rundle, G. J. Rutherford, F. Scorer, J. H. B. Simons, M. K. Thomas, G. M. Y. Whittingham, C. H. Willis, J. J. Winn, E. Yonge.

MEDICAL VACANCIES.

The following vacancies are announced.

BOURNEMOUTH COTTAGE HOSPITAL AND DISPENSARY. — Resident Medical Officer and Secretary. Salary, £120 per annum, with rooms, etc. Applications by September 27th to the Secretary.

CHILDREN'S HOSPITAL, Birmingham.—Resident Medical Officer. Salary, £80 per annum, with board and lodging. Applications by October 6th to the Secretary.

CHILDREN'S HOSPITAL, Birmingham.—Assistant Resident Medical Officer. Salary, £40 per annum, with board and lodging. Applications by October 6th to the Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Clinical Assistant. Applications by October 11th to the Secretary, 24, Finsbury Circus, E.C.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Clinical Assistant. Applications by October 16th to the Secretary.

KENT COUNTY OPHTHALMIC HOSPITAL.—House-Surgeon. Salary, £100 per annum, with apartments. Applications by October 1st to M. A. Adams, Esq., 1, Ashford Road, Maidstone.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT.—Resident Medical Officer. Salary, £60 per annum, with board and lodging. Applications by September 27th to G. Keating, Esq.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Senior Resident Medical Officer. Salary, £60 per annum, with board and lodging. Applications by October 8th to W. Bristow, Esq.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Salary, £30 per annum, with board and lodging. Applications by October 8th to W. Bristow, Esq.

NORWICH FRIENDLY SOCIETIES MEDICAL INSTITUTE.—Medical Officer. Salary, £250 per annum. Applications by September 30th to the Secretary, Ivy House, Lady Lane, Norwich.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner in Medicine. Applications by October 6th to the Secretary.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—Two Examiners in Midwifery. Applications by October 6th to the Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications by October 5th to the Secretary.

ROYAL SURREY COUNTY ASYLUM, Guildford.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by October 4th to Thomas Taunton.

ROYAL UNIVERSITY OF IRELAND.—Medical Fellow. Salary not to exceed £100 per annum, and appointment to last for seven years. Applications to Secretaries of University on or before October 1st.

STAFFORDSHIRE GENERAL INFIRMARY.—Unqualified Assistant. Applications by September 29th to the House-Surgeon.

ST. PETER'S HOSPITAL FOR STONE.—House-Surgeon. Honorarium 25 guineas, with board, lodging, and washing. Applications by September 25th to W. E. Scott, Esq.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY.—Honorary Physician. Applications by October 4th to T. Robinson, Esq.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea.—House-Surgeon. Honorarium, £50 per annum, with board and lodging. Applications by October 4th to Commander Blount, R.N., Secretary.

WEST BROMWICH DISPENSARY HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, etc. Applications by October 2nd to W. Bache, Esq., Churchill House, West Bromwich.

WIRRALL CHILDREN'S HOSPITAL, Birkenhead.—Resident House-Surgeon. Salary, £40 per annum, with board and lodging. Applications by October 6th to the Honorary Secretary.

MEDICAL APPOINTMENTS.

Anderson, J. Jaspar, M.A., M.B., appointed Medical Tutor to the University College, Bristol, *vice* W. C. Lysaght, M.R.C.S., resigned.

Berrill, A., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the General Hospital, Birmingham.

Bluett, George Mallack, L.R.C.P.Lond., M.R.C.S.Eng., appointed Obstetric Assistant to the University College Hospital.

Brown, J., L.K.Q.C.P., L.R.C.S.I., appointed Medical Officer to the Department General Post Office, Wandsworth Division.

Conway, John, M.D., M.R.C.S., appointed District Physician for the Eastern District in connection with the Glasgow Maternity Hospital.

Cotterell, Edward, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Stoke Lyne District of the Bicester Union.

Crowdy, F. D., M.B.Oxon., M.R.C.S., L.S.A., reappointed Resident House-Physician to St. Thomas's Hospital.

Elliott, W. S., A.B., M.B. & B.Ch., T.C.D., appointed Registrar, etc., to the County Down Infirmary, *vice* A. N. Whitestone, A.B., M.B. & B.Ch., resigned.

Evans, C. S., M.R.C.S., L.S.A., appointed Assistant House-Surgeon to St. Thomas's Hospital.

Evans, C. W., M.B.Lond., appointed Certifying Surgeon under Factories and Workshops Act for the Bakewell District.

Evans, C. W., M.B.Lond., appointed Visiting Medical Officer to the Bakewell Union Workhouse, *vice* C. Evans, F.R.C.S.Eng., deceased.

Ferrier, David, M.D., F.R.S., appointed Physician to the British Home for Incurables at Clapham.

Field, O., M.B., C.M., appointed Assistant House-Surgeon to the General Hospital, Birmingham.

Frazer, William, B.A., M.D., L.K.Q.C.P., appointed Honorary Physician to the Bournemouth Cottage Hospital and Dispensary.

Gilray, R. C., M.B., C.M., appointed House-Surgeon to Paisley Infirmary, *vice* Dr. David Moffat, resigned.

Godfrey, A. E., L.R.C.P., M.R.C.S., reappointed non-resident House-Physician to St. Thomas's Hospital.

Hutton, J. S., L.R.C.P., M.R.C.S., L.S.A., appointed Clinical Assistant in the Throat Department of St. Thomas's Hospital.

Kidd, H. Cameron, L.R.C.P., M.R.C.S., appointed Assistant House-Physician to St. Thomas's Hospital.

Lowry, J. H., L.R.C.P.Edin., L.R.C.S.Ed., Medical Officer to the Imperial Maritime Customs, Pakhoi, China, appointed Medical Officer to the Imperial Maritime Customs, Kiungchow, Hainan, China, *vice* Dr. E. A. Aldridge, transferred to Wuku.

Mahomed, George S., M.R.C.S., L.S.A., appointed Honorary Medical Officer to the Bournemouth Cottage Hospital and Dispensary.

McFarlane, T. F., M.B., C.M., appointed Assistant House-Surgeon to the General Hospital, Birmingham.

MONTAGUE, A. J. H., L.R.C.P., M.R.C.S., L.S.A., reappointed Clinical Assistant in the Skin Department of St. Thomas's Hospital.

NICHOL, F. E., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

PAGET, Charles E., M.R.C.S., L.R.C.P.Lond., reappointed Medical Officer of Health for the Westmoreland Combined Sanitary District for a second term of three years from September 29th.

PARSONS, F. G., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Ear Department of St. Thomas's Hospital.

PAYNE, W. A., B.A.Oxon., M.R.C.S.E., L.S.A., appointed House-Surgeon to the Richmond Hospital, Surrey, *vice* John Williamson, M.B., resigned.

RITCHIE, E. O., M.B.Cantab., M.R.C.S., L.S.A., appointed House-Surgeon to St. Thomas's Hospital.

SMITH, Blaikie, M.D., appointed Assistant-Physician to Aberdeen Royal Infirmary.

TEICHELMANN, E., appointed Resident Medical Assistant to the General Hospital, Birmingham.

TAYLOR, L. A., M.R.C.S., appointed Assistant House-Surgeon to the General Hospital, Birmingham.

TRASK, J. E., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Royal United Hospital, Bath, *vice* G. C. Helps, M.R.C.S.Eng., resigned.

TRONTON, Gardiner, M.B., B Ch.Univ.Dub., appointed House-Surgeon to the Cumberland Infirmary, *vice* G. Francis Smith, M.R.C.S., L.R.C.P., resigned.

WILLIAMS-FREEMAN, John P., appointed House-Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital.

YEOMAN, C., M.B., B.C.Cantab., M.R.C.S., L.S.A., appointed Resident Accoucheur to St. Thomas's Hospital.

CHARTERHOUSE SCIENCE AND ART SCHOOL AND LITERARY INSTITUTE.—The winter session of this, one of the largest science and art schools in the United Kingdom, will commence on Saturday, October 2nd, 1886, under the presidency of the Rev. Henry Swann, M.A. During the late session, about 850 students, mostly elementary teachers, availed themselves of the privileges afforded by this institution, and, of this number, upwards of 600 presented themselves for examination, and were successful in obtaining a large number of first class certificates, and also a goodly number of honorary certificates, awarded by the Science and Art Department, South Kensington. Of the thirteen National Scholarships granted by the Government, three were carried off by London candidates, all of whom were students of this institution. Instruction of a practical character is given in most of the sciences at a very nominal fee; whilst in art, at an equally low rate, students, under the direction of five competent instructors, can be advanced in their studies. Those who have leisure can, at a moderate charge, attend the day classes in art; day classes will also be held, to prepare candidates for matriculation (London) the clerical, medical (including dental), legal, and other examinations. Students who aim at becoming proficient in chemistry (organic and inorganic) have the opportunity of working in a well fitted laboratory, capable of accommodating sixty students. Aspirants for university honours can, at a small expense, be assisted in their studies. Classes for Matriculation, Latin, Greek, French, German, Music, and Shorthand, are taught by well qualified teachers. Opportunities for the study of photography and watchmaking will be continued this session. Full particulars of the classes may be obtained from Mr. C. Smith, organising secretary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

BIRTHS.

BARNES.—On August 19th, at St. George's, Bermuda, the wife of Surgeon H. J. Barnes, Army Medical Staff, of a son.

RENSHAW.—On September 13th, at Enoclew House, Market Place, Altrincham, the wife of W. Agar Renshaw, M.R.C.S., of a daughter.

MARRIAGES.

BIRD - BAYLEY.—On September 2nd, at St. James's, Handsworth, Ashley Bird, of Penarth, M.R.C.S., etc., to Jessie, daughter of the late Charles Henry Bayley, of West Bromwich.

BOSTOCK—JOHNSTON.—On September 21st, at Christ Church, Belper, by the Rev. E. A. Hillyard, Vicar, assisted by the Rev. F. A. Friend, Vicar of St. Peter's, Joseph, eldest son of John Bostock, Esq., Osgathorpe House, Leicestershire, to Ada Frances, only daughter of Thomas Johnston, Surgeon, Beech Lawn, Belper.

COLVILLE—BARLING.—On September 15th, at the Parish Church, Newnham-on-Severn, by the Rev. T. J. Weight, M.A., Vicar, Ernest George Colville, of Ashford, Kent, F.R.C.S., to Agnes Mary, younger daughter of William Barling, of Blythe Court, Newnham-on-Severn.

SOUTAR—HIRST.—On September 16th, at the Parish Church, New Mill, Yorks., by the Rev. E. J. Holmes, M.A., Vicar, Edward Fowler Seougal, M.B., C.M., Huddersfield, to Clara, younger daughter of the late Charles Hirst, of Birdsedge.

DEATH.

STEPHEN.—On Saturday, September 11th, at Carlsbad, of cholæmia, William H. G. Stephen, M.B., C.M.Edin., M.R.C.S.Lond., youngest son of the late William Stephen, Inchbroom, Morayshire, aged 24 years.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p. Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W. 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

Duration of Infectiousness in Measles, etc.

Inquirens asks whether "the date of the rash," in the following extract from the Code of Rules of the Medical Officers of Schools Association, is to be taken to mean the date of its appearance or disappearance. "A pupil may go home, or rejoin the school, after measles, in not less than three weeks from the date of the rash, if all, etc. Perhaps the honorary secretaries would kindly answer this question.

A Means of Locomotion Wanted.

Baffled writes: I have a female patient unable to walk much. She may or may not have spinal disease; on this point specialists are not of the same opinion. Is there a tricycle or any self-propelling machine made where the arms can be used instead of the legs? My patient has not lost much strength in her arms, being as strong as an average female in her upper extremity. I will be thankful to any member or others for information.

Bites of Harvest-Bugs.

Mr. J. Bellingham (Dublin) asks for information as to a good remedy for allaying the intense irritation caused by the harvest-bug.

*** Any of our readers who are acquainted with such a remedy will perhaps kindly communicate the results of their experience to Mr. Bellingham.

Food and Growth.

F. S. A. asks for information as to "what kind of food contains the largest amount of bone-forming constituents; also what course of life and diet is best suited to promote growth in a youth nineteen years of age."

Death-Certificates

Mr. T. E. Lovegrove (Nottingham) asks the following questions.

1. Supposing a person died from eating a poisonous fungus, would there be anything absolutely wrong or illegal in the medical man attending such person, giving a certificate stating plainly that the person had been "poisoned, through eating a fungus," leaving it to the registrar to transmit the certificate to the coroner? The Act says that such certificate "need not" be given. Surely that implies that it "may" be given; and if the giving were an illegal act, the imperative "must" would surely have been used by the framers of the Act.

2. If it be allowable to give a certificate in such a case, why not in all cases of accidental or violent death, always taking care that the accidental or violent cause should be fully and clearly stated, leaving the registrar to communicate with the coroner, and lay before him such certificate?

3. Should not a registrar be sufficiently well educated to be able to distinguish between certificates which it is allowable for him to register, and those in which it is not?

4. If it be held that the medical man may fairly be brought within the meaning of the words "about the deceased," mentioned in the Act, and so rendered liable should any concealment of any such death take place, would not the registrar be very much more to blame for having registered such death from a certificate not given for that purpose, but with the intention of bringing the matter under the coroner's notice, through the person most legally connected with the coroner, namely, the registrar?

5. Are not the registrar, and the relatives of the deceased person, the only persons who are legally obliged to communicate with the coroner? or is the medical attendant also included in the list of those persons legally required to inform him of such deaths?

*** 1. A certificate that a person had been "poisoned through eating a fungus," if true, would be sufficient.

2. In cases of accidental or violent death, a certificate stating the cause of death to the best of the knowledge and belief of the person giving it would, as in other cases, be sufficient.

3. Registrars should, of course, be sufficiently educated to be able to do their work properly.

4. The question is so vague, that it is impossible to give it a definite answer.

5. We know of no law obliging a medical attendant to volunteer information to the coroner. He is only bound to give a proper certificate to the relatives of the deceased, and to attend the inquest as a witness if summoned.

If any further information be wanted, the statutes and sections referred to should be specified.

Remuneration for a Private Insane Patient.

A. B. C. asks: What might be considered fair remuneration for taking a lady of unsound mind into my house as one of the family? providing for her a special attendant, giving her occasional carriage exercise, and the benefit of professional services? Her parents reside in a house of upwards of £200 a year rental. What legal steps would have to be taken? She is already in an asylum.

Climate of Scarborough.

M.B. would be greatly obliged to any reader who would give him information as regards the advisability of allowing a patient with incipient phthisis to spend the winter months in Scarborough. Is the climate suitable for these cases?

Registered Practitioners Resident Abroad and the Election of Direct Representatives.

Mr. J. Goodwin Shea (Chesterfield) writes: I would be glad to know if registered medical practitioners residing abroad will be afforded an opportunity of voting at the coming election of representatives for the General Council. If so, please give particulars as to when the necessary forms to be filled up shall be sent out.

*** The wording of the Act (British Medical Journal, July 3rd, 1886, p. 37) is: Clause 8, section 5, "A representative to be elected by the registered medical practitioners resident in that part of the United Kingdom." See also Clause 7, section 1, "Three persons elected from time to time by the registered medical practitioners resident in England; one person elected from time to time by the registered medical practitioners in Scotland; one person elected from time to time by the registered medical practitioners in Ireland."

Steel Screws for Horses.

M.B.M.A. will be obliged if anyone who has had experience in the use of steel screws, used instead of roughing horses, will kindly inform him where they may be obtained, and also give his experience of their use.

ANSWERS.

Training of Nurses.

Member, who wishes to know where he can obtain information of a full nature with regard to institutions for training ladies for nurses, may be advised to apply to the matrons of the various hospitals where nurses are trained; for example, Mrs. Wardroper, St. Thomas's Hospital, Albert Embankment, London, S.E.; Miss Manson, St. Bartholomew's Hospital, Smithfield, E.C.; Miss Luckes, The London Hospital, E.; Miss Medille, St. Mary's Hospital, Paddington, W. Young ladies may advantageously begin their training at a children's hospital, and application might be made to the Lady Superintendents of the Children's Hospital, Great Ormond Street, W.C.; of the East London Hospital for Children, Shadwell, E.; the Victoria Hospital for Children, Chelsea, S.W.; or the Hospital for Sick Children, Pendlebury, Manchester.

Practice in the United States.

L.R.C.S.I.—Attention may be called to a reply in the British Medical Journal of November 21st, 1885. As there stated, the laws affecting the practice of medicine in the United States vary considerably, each State having its own regulations. The possession of a second qualification would be undoubtedly desirable.

Hospital for a Case of Coxalgia.

Miss M. Sutman (Oakfield, Forest Hill) writes that M.R.C.S. will find there every comfort and attention, coupled with skilled nursing, for his patient suffering with coxalgia.

NOTES, LETTERS, ETC.

The Ridley Fund.

Mr. H. A. Smith (Ealing) writes: The following additional subscriptions have been received.

	£ s. d.
Lionel de Rothschild, Esq., Gunnersbury	2 0 0
Dr. Graham, Weybridge	1 1 0
Dr. H. de Tatham, Hasik, Bombay	1 1 0
E. B. Tench, Esq., London	1 1 0
Dr. Roberts, London	1 0 0
.. .. ..	0 10 0
Total amount subscribed ..	£40 17 6

It is earnestly hoped that further help will proceed ere the fund closes (on September 25th), as the widow is in a very weak state.

A Drain-Pipe Ditty.

"The ancient Company of Plumbers has established an office for the registration of all properly qualified persons belonging to the trade."—*Daily Paper.*

Scamping plumber, ere we part
I'll recall your gruesome art?
Still the memory remains
Of your dalliance with the drains.
Hear me state, with rapturous joy,
"*Licensed* plumbers I employ!"

By the typhoid you have spread
From those pipes unstopped with lead!
By your love for leaking taps,
Faulty joints and bogus "traps"!
Get you trained your trade to know.—
Pass your plumbing Little Go!

By the cistern (whence we drink),
Forming a connecting link
'Twixt the noisome parish sewer
And the humble household ewer,
Hear me thank the Plumbers' Co.
Branding you a public foe!

Scamping plumber! you have wrought
Evil much by being untaught.
'Spite of amateurish ways,
Knowledge *is* the thing that pays.
If you can't a licence show,
Scamping plumber, out you go!

(*Punch*, September 4th).

Piperine in Intermittent Fever.

An Old West Indian Doctor writes: I do not understand Dr. Taylor's communication on the above subject, and am interested, having practised for sixteen years where intermittent fever is rife. He does not state whether his cases occurred in Europe, Asia, Africa, or America. To show the direct use of piperine, he combines it with quinine, to say nothing of blue pill. In case No. II, one of collapse, piperine could be nowhere when brandy and champagne were given *ad libitum*.

A Centenarian.

Mr. C. S. Kilner (Bury St. Edmunds) writes: Joseph Gathercole died lately at the Shinghoe Union, at the advanced age of 104 years and 8 months. The accuracy of this age may be ascertained from the fact that he has been, on and off, an inmate of the Shinhoe Union House since it was built in 1836, and that at the time of his admission he was supposed to be about 55 years of age. Up to a few months of his death, he was hale and hearty, and able to get downstairs and walk about.

Consultants and General Practitioners.

A Country Member writes: I have read with interest the correspondence on the above subject. An "Assistant Hospital-Physician" describes three cases of gross ignorance or carelessness on the part of two practitioners, but how that bears on the question under discussion I fail to see. Permit me to relate a case that occurred in my practice a few months ago.

I advised the parents of a young lady suffering from lateral curvature of the spine to consult a well known London orthopædic surgeon as to what form of support was necessary. He recommended one, at the same time telling the parents that it was absolutely necessary that he should see the patient once a month. The parents said if he wrote to me giving directions, I would continue the treatment; to which he replied that it would be useless, as he never could get medical men to manage such instruments in a proper manner.

My patient now goes up to see him, though living 200 miles from town, believing that he alone understands the right application of the instrument. Now, sir, an "Assistant Hospital-Physician" may call this an illustration of the law "of the survival of the fittest;" but, in my opinion, it is an illustration of the want of an association to prevent men from surviving by such means.

Prescribing Formulæ.

Mr. W. Martindale (New Cavendish Street) writes: The resolution on "Prescribing Formulæ," passed at the meeting of the British Pharmaceutical Con-

ference, published in the BRITISH MEDICAL JOURNAL, page 471, September 4th, is intended to embrace simple preparations of new drugs, as well as the mixed combinations referred to by Mr. Greenish. The following pharmacists from various parts of the country were appointed as a committee to carry out the resolution, namely: Messrs. Abraham, Liverpool; Greenish, London; Groves, Weymouth; Mabon, Hawick; Martin, Newcastle-on-Tyne; Martindale, London; Naylor, London; Reynolds, Leeds; Syme, Liverpool; Thresh, Buxton.

THE PRINCIPLE OF TRACTION-RODS, WITH A SIMPLE SUGGESTION APPLICABLE TO ANY FORCEPS.

DR. J. L. PORTEOUS (Kirkcaldy) writes: I have read with much interest the article on the above subject by Professor Stephenson, of Aberdeen, in the JOURNAL of August 28th. About seventeen years ago, whilst in charge of emigrants crossing the Western Ocean, I had the misfortune to have to attend several confinements, in very stormy weather. One case, that of a Dutch woman, required forceps. The ship rolled very much, so much that I had to tie the patient to the bunk to keep her from rolling out. After I had applied the forceps, I was in great dread of rupturing the uterus, as the motion of the vessel and the slipperiness of the deck of the temporary hospital, caused by the salt water pouring in from the hatches, made my feet constantly slide from under me. The thought struck me that, if I could allow free action to the forceps, and still command traction-power, there would be less risk of damage to the mother. Having my blunt hook beside me, I tied the handles of the blades of the forceps firmly together with spun yarn, and passed the blunt hook between the blades, so that it caught above the lock. I then used traction by seizing the shaft of the hook with the right hand, and steadying the handles of the forceps with my left. Much to my relief, I delivered the woman of a fine twelve-pound child, without injury to either mother or infant. I have frequently used the same means since, and always with success.

LIFE-ASSURANCE COMPANIES.

A POLICY-HOLDER writes: Will you kindly allow me, through the medium of your JOURNAL, to bring under the notice of medical men who hold any appointments as medical referees to assurance companies, a question of great importance connected therewith.

The subject to which I allude is payment of extra premiums where a change of residence takes place into countries within thirty degrees north of the equatorial line. Some insurance offices make no extra charge, others a very trifling increase over the ordinary rate of insurance, whilst others charge exorbitantly. A few moments' consideration will, I think, suffice to show that, in reality, there is no additional risk to the duration of life by the change; consequently, any extra premium is unjust.

The following statistics are taken from authentic sources in America, which verify the above statement. They have been copied from Hassan's tables, published in Philadelphia, duly entered according to Act of Congress. Statistics show that, in Europe, the annual number of deaths is 1 in 42 inhabitants; but in this country (America), it is 1 in every 81. In the Gulf States, the average yearly proportion of deaths is 1 in every 63; in New England, 1 in every 68; in Southern, 1 to 70; in Atlantic and Mississippi Valley, 1 to 80; in the Western, 1 to 81; in Middle States, 1 to 80; in the Pacific, 1 to 115; North-Western, 1 to 120.

A client of mine insured his life many years ago, now about 50 years of age. He insured in several offices to a large amount. About eight or ten years since, he left England, and went to reside abroad about 28° north of the equator. Since he left, he has paid in extra premiums not less than about £1,500. The state of his health was always good; if anything, it has been better since he has resided abroad. One of the boards of directors in which he has assured have now taken off the whole of the extra premium; one of the others only part.

The above named facts are important, and ought to be made more generally known, with a view to prevent the apparently unjust demands. The tables forcibly show that there is in reality no extra risk. On the contrary, it is quite the reverse.

I have read the report of the recent meeting of the "Medical Sickness, Annuity, and Life-Assurance Society." There were no allusions made to this question by any of the speakers. It would be well if this extra charge was abandoned by all the insurance offices.

ALCOHOL FOR THE HOSPITAL STAFF.

MR. G. STURGE (Sydenham Hill Road) writes: Many of your readers may be surprised at this question, and have forgotten the remarkable declaration of the late Dr. Babington, Sir Benjamin Brodie, and 2,000 medical men, in the year 1847, which was as follows.

"We, the undersigned, are of opinion, first, that a very large portion of human misery, including poverty, disease, and crime, is induced by the use of alcoholic or fermented liquors as beverages; secondly, that the most perfect health is compatible with total abstinence from all intoxicating beverages, whether in the form of ardent spirits, or as wine, beer, ale, porter, cider, etc.; thirdly, that persons accustomed to use such drinks may with perfect safety discontinue them entirely, either at once, or gradually after a short time; fourthly, that total or universal abstinence from all alcoholic liquors, and beverages of all sorts, would greatly contribute to the health, the prosperity, and the happiness of the human race."

At this time it was discovered that the medical staff, as well as other persons, would enjoy better health without alcoholic drink. Since that time, the evidence in favour of this opinion has accumulated. Many medical men of eminence in their profession have given similar testimony. The researches connected with life-assurance have conclusively proved that the lives of those called moderate drinkers are often shortened; and thus life-assurance societies have discovered that they can assure the lives of abstainers at a lower premium than it is needful to require from the moderate drinkers.

Further, in corroboration of this opinion, certain hospitals have been established where alcohol is generally disused, even as medicine, and the medical profession has been very successful in the cure of disease, and especially so in case typhoid fever.

In the present year, 1886, we have still further testimony in favour of the view that the hospital staff, with mankind in general, would be better and stronger without alcohol. To prevent any mistake, I will quote the words of Sir Henry Thompson: "It is rare now to find anyone well acquainted with human physiology, and capable of observing and appreciating the ordinary wants and usages of life around him, who does not believe that, with few exceptions, men and women are healthier, stronger—physically, intellectually, and morally—without alcoholic beverages than with them." (See Sir Henry Thompson on *Diet*, 1886.)

From the foregoing, I think it is evident that it would be an advantage if the hospital-staff would give up the use of alcohol as a beverage. I do not wish to assume a dogmatic tone, and therefore wish that this subject should be well considered and discussed.

In addition to the benefit which the hospital-staff would derive from following the advice of Sir H. Thompson, there is another important branch of the subject in which the public are deeply concerned; that is, the very large sum which is expended on alcohol by the different hospitals. Until the hospitals render more exact accounts, and separate what is used by the patients from what is used by the hospital-staff, it will be impossible to state the exact amount. Enough is known from two hospitals who render some account, though not complete. In one hospital, it amounts to about £400, in the year 1885, although the majority of the nurses take milk instead of beer; and in the other hospital, the alcohol used by the staff cost £218 in the year 1884.

This question naturally arises: Are the managers of our hospitals justified in using charity funds given for the use of the sick and suffering to supply alcoholic drink to the hospital-staff?

With the hope that these observations will be found worthy a place in your JOURNAL.

COMMUNICATIONS, LETTERS, etc., have been received from:

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BOOKS, ETC., RECEIVED.

Therapeutics founded upon Organopathy and Antipraxy. By William Sharp, M.D., F.R.S. London: G. Bell and Sons. 1886.

Sketch Book for Ophthalmoscopical Observations of the Fundus of the Eye. By Dr. O. Haab, of Zurich. London: Trübner and Co. 1886.

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BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

ON THE SUPRAPUBIC OPERATION FOR OPENING THE BLADDER.

Introduction to a Discussion in the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

By SIR HENRY THOMPSON, F.R.C.S., M.B.,
Consulting-Surgeon to University College Hospital, etc.

HAVING only fifteen minutes allotted to me, I shall forego all prefatory remarks, and commence by requesting you to call to mind that almost the sole object of the surgeon now, when discussing the applicability of lithotomy to adult cases, is to determine what is the best method for removing a stone of considerable size. This is comparatively a new question. It was not a question at all forty years ago. At that period, most surgeons debated the relative advantages of lateral and median operations in the perinæum with the avowed intent of removing all ordinary stones by the knife, except perhaps a few small ones, which might be left to lithotrity. The latter method had been tried for large stones by our best lithotomists in London, who had found it disastrous in its results. Crushing was, as compared with its present capabilities, an imperfect proceeding; yet now it is, by almost universal consent, the best operation for nine out of ten stone-cases, at least in the adult.

About thirty years ago I learned what the process of crushing would effect in the hands of Civiale, and had the advantage of his friendly teaching; and I soon felt warranted by my own early experience in declaring a belief that it must, sooner or later, become our chief method, and that lithotomy would be required only for exceptional cases: a doctrine which was for a long time received with disfavour. Moreover, I was profoundly dissatisfied with the results of the lateral operation in the hands of the most skilful operators—to wit, Liston, Key, and Fergusson. No doubt, as a display in the theatre, it was mostly a brilliant performance. There was a free incision, visible to all, followed by one or two deep ones, the extent of which was known only to the surgeon, perhaps not always even to him; and the stone was often produced in a minute's time or less, amidst the plaudits of the gallery. But to those who had access to the wards, and followed the patient's career there, the results were very far from "brilliant." The mortality, indeed, was terribly heavy. Many years ago, I pursued that subject with great care, personally collecting the experiences of most of the leading surgeons, metropolitan and provincial; and these were published in an early work. Again, for a like purpose, I reproduced the experience of Fergusson as recorded by himself, when recently discussing the question of mortality—namely, in my lectures at the Royal College of Surgeons in 1884.

Hence it was that, in the early part of my career, I endeavoured to test at University College Hospital, as our worthy President may recollect, the merits of other modes of reaching the bladder, performing in the theatre several times the bilateral, the median, and the medio-bilateral operations, in the hope of finding a more successful method. The inquiry gave no better results than the lateral, nor, I think, worse, but the contrast between the prospects of a patient with a stone of moderate size to be crushed, and those of a patient who was to be cut for a rather large one, was very serious; and could it have been realised by patients of the latter class, few I think would have had the courage to come to the table. I show you there twenty-five specimens from my own collection of large calculi removed by the perineal route. The mean weight of these is more than two ounces and a half, and the mean age of the patients was above 60 years. We have only to look at them to be aware that not one could have come through the neck of the bladder without an amount of laceration which it is difficult to realise. What must have been the condition of the prostate, the membranous urethra, and of the surrounding tissues, when that jagged spherical mulberry-stone, lying between the widely parted blades of powerful forceps, had been dragged forth to light? One does not wonder at the mortality, but rather that a successful result was possible under such circumstances. I am quite content to record that seventeen of the twenty-five made good recoveries, and that the deaths were no more than eight, every kind of casualty following the operation being permitted to count, seeing that these were the exceptionally bad cases among about 500, the remainder being chiefly and more happily disposed of by lithotrity. But by way of showing you that several of the average cases submitted to the crushing operation were by no means small ones, I place before you several specimens, all but one removed at a single sitting, with a mean weight of more than an ounce and a half, and consisting mostly of hard uric acid and oxalates. Among them there was not one death; indeed, most of the patients are now living.

I must ask your attention to the significant fact that the lateral operation won its success in the hands of Cheselden and of his followers, through its applicability to the large majority of cases of stone occurring in children and middle-aged adults; in other words, for stones of moderate size. For such it was probably the best procedure, while that of crushing was still unknown. Indeed, at this early period, comparatively few cases besides those of children and strong adults were submitted to the knife, and the elderly man with a large stone was by comparison very rarely dealt with. And the scanty aggregate of these unfortunate patients furnished a mortality far greater than that which has been incurred in the present century. For example, Cheselden's entire experience of elderly cases extended only to fourteen patients over 50 years of age, and among these he had no fewer than six deaths.

The lateral operation, which was improved by him on that of Rau, took the place of the Marian, which hitherto had been in vogue here. The suprapubic had been introduced and practised only six or seven years previously, first by John Douglas, of the Westminster Hospital, and was then adopted by Cheselden himself; for Franco, its inventor, did but a single case—on a young child; and the operation can scarcely be said to have been repeated during the century and a half which followed it. It had never yet been established, and had achieved no position to maintain against the new lateral procedure which Cheselden had somewhat suddenly adopted, as applicable to what may be called the "general run" of cases.

But to-day the situation is altogether changed. The "general run of cases"—to repeat the phrase—is now provided for by lithotrity, which has irretrievably superseded lateral lithotomy, formerly so valuable for them. On the other hand, it must be confessed that the lateral operation has always proved to be more or less difficult and hazardous when large and hard masses of calculous matter were removed by it.

Now, it is precisely in these severe and exceptional conditions, and not for the "general run," that the suprapubic operation becomes, especially in its modern form, an available and trustworthy resource. I shall venture to maintain here that it is decidedly superior to the lateral for the removal of stones which are much above the average size; and I do so on the following grounds.

1. Because in the suprapubic operation there are no important structures lying in the line of the incision, or sufficiently near to be rendered liable to injury either by the knife or by the forceps.

2. Because the space for removing a large stone above the pubes is practically unlimited.

3. Because there is little or no danger to be apprehended from hæmorrhage; and, if it does occur, which rarely happens, it may be readily dealt with.

4. Because the incisions are certainly more easy to perform than those of lateral lithotomy; while the removal of a large stone, always the most difficult and dangerous part of any operation in the perinæum, is safe and easy by the suprapubic route.

5. Because, during the after-treatment, the urine leaves the suprapubic wound more directly, and therefore more safely, than it does by the long and lacerated opening which forms the communication between the bladder and the perineal surface after the lateral operation for a large stone.

6. Because antiseptic dressings can be employed in the former operation, and cannot be made available in the latter.

Lastly, because in the suprapubic operation it is impossible to cut the rectum, to inflict injury on the sexual organs, or to make a urethro-rectal or perineal fistula, any or all of which are liable to follow the lateral operation in a patient with a large stone. But it may be retorted by the advocates of the lateral method that the suprapubic operation is attended by certain grave risks of its own. Two such are alleged against it.

There is the danger—it is said—of opening the peritoneum in making the necessary incisions; and, besides this, there is the risk of what is called "extravasation of urine around the base of the bladder,"

as an after-result. The latter, as the least considerable, shall be briefly dealt with first.

I reply, then, that the risk of extravasation is exceedingly small, because it can only happen as the result of unnecessary and unwarrantable interference with the tissues outside the bladder. There ought to be no action in that region whatever, and how there should be any if the rules of procedure are followed, it is difficult to comprehend. There should be no employment of the finger, and no approach of an instrument to any part outside the bladder, except in the line of incision. I believe there is only one way in which the tissues can be so disturbed outside the neck of the bladder, or by which its connections can be injured; and there is little doubt that mischief has sometimes occurred in that way, by the old mode of operating on a staff. Thus, when the bladder has been reached and recognised at the bottom of the wound, and the staff has been felt there, and has been cut upon, its point would sometimes, unless care were taken, emerge at once, as the consequence of that incision. The bladder was then liable to lose its fluid contents suddenly, and to sink, closely contracting round the staff. Only one who has met with the occurrence so described, knows how difficult it may be, at the bottom of a wound deep in the pelvis of a fat subject, to raise up the collapsed bladder again, and insert into it by the side of the staff, some sort of guide into the cavity, so as to gain safe admission for the finger there. It is in these circumstances that the embarrassed and inexperienced operator vainly gropes in fruitless effort to secure an entry, and while doing so, unwittingly breaks up the external cellular connections around. This has long been my conviction as to the cause of the alleged extravasation. Whenever a staff is employed as a guide on which to cut, the coats of the bladder must be securely laid hold of by hook or forceps, so as to retain it in position before incision on the end of the staff is made. It is interesting to observe that Mr. John Douglas, to whom the establishment of Franco's operation as a practical procedure is undoubtedly due, makes almost the same remark in the following words. "Should any one object," says he, "that urine may be extravasated and corrupt the parts about the bladder, I reply that it can only happen where these parts have been improperly separated through the fault of the operator" (p. 66).

In the modern operation no staff is used for the male, and the accident, therefore, cannot happen; while for the female, for whom a staff is mostly necessary, and even for the male in a rare and exceptional case, I have devised one which secures the operator from the occurrence of the accident. It lies here, and can be examined hereafter.

The other risk averred to attend the suprapubic operation is that of wounding the peritoneum. The limits of this paper do not permit me to reiterate the arguments on this question. What is of greater value and importance than argument, is, that experience of the modern operation enables me to reply that the danger is now virtually non-existent. In the practice of this method I have neither seen nor heard of its occurrence. But even supposing that the accident should occur, our present resources in relation to an opening of the abdominal cavity, enable the surgeon to face such an occurrence with equanimity and with confidence.

There can be no doubt that Dr. Garson's experiments as to the effect of rectal distension in raising the peritoneal fold were corroborated by Petersen's practice, followed as this has been by numerous successful operations conducted on the same principle in Vienna and Paris, and more recently here in London. But the augmentation of the "suprapubic interval," an undoubted result of rectal distension, is by no means the only advantage obtained by this procedure. Its chief value consists in the fact that the bladder, with its contents, is lifted out of the depths and darkness of the pelvic region, into the accessibility and light of the abdominal one; and not only so, but the viscus is steadied in its new position, where it remains visible and, indeed, tangible, affording evident proof of its size and position, and thus ensuring confidence to the operator before he even makes an incision of the skin.

Then, after this is completed, when the linea alba has been slit up, and the muscles have been separated, he may mostly recognise the stone with his fingers, and form an estimate of its size; and, when the bladder is opened, his finger can explore the whole of it, no enlarged prostate being able to bar the way, and so can ascertain the best mode of performing extraction. Finally, supposing his object to be the removal not of a stone, but of a tumour, he is enabled to obtain some view of the structures to be excised: an impossible achievement while the bladder reposed in its normal position within the pelvis.

A few words must suffice in relation to some slight modifications of the operation which recent experience has suggested.

First, in regard of the rectal distending bag. It has hitherto been made of a spheroidal or pyriform outline, and some operators, it is said, have, in employing it, burst or seriously injured the rectum. This is, perhaps, possible with a large bag of the original form, especially if an inordinate quantity of fluid, such as twenty ounces, which I have heard suggested, be employed. I have never used or advised more than "twelve or fourteen."[1] Not long ago, I adopted a more elongated bag, one having a simple, oval contour, and have used it in preference to the old pattern. Its form may be modified, so that the transverse section is either cylindrical or slightly flattened from before backward, the last named making it somewhat broader; in either case, the bag has an ovoid, and not a spheroidal outline. It holds a maximum of fifteen ounces, which is ample under any circumstances. The diameter, when distended for the adult rectum, is about three or three and a quarter inches, the length about seven inches. I think it is inconceivable that harm should result to the bowel in any adult case from their use, and either is amply large enough for any patient. I exhibit the two bags here, besides a third, which I obtained in Paris, as the approved pattern for my first operation; and this I now regard as undesirably globular in form.

I introduce the rectal bag as soon as the patient is under the effect of ether, and having thrown in usually two six-ounce syringefuls of water, I next pass a flexible catheter into the bladder; although this may be done before the bag is distended, the latter procedure sometimes making catheterism less easy. In either case, the injecting of the bladder is the second step, and should be performed slowly and gently. A six-ounce elastic bottle attached to the catheter, and held in the operator's right hand, is carefully used to distend the bladder with a weak solution of boracic acid, while he watchfully observes and calculates the degree of resistance perceived in the act, as the fluid enters, and slight suprapubic prominence appears as the consequence. The quantity may vary between six and twelve ounces. A firm rounded tumour, dull on percussion, may now generally be defined above the pubic symphysis. Standing on the patient's left side, he incises the skin and subcutaneous tissue by transfixion, the lower end of the incision slightly overlapping the symphysis. I formerly used my finger-nail, but now I prefer to use the ivory separator here shown, as a divider of tissue as far as to the linea alba, which is to be slit on a director. I then continue to use the separator chiefly in a direction from the lower end of the wound upwards, until the transversalis fascia is reached, which may also be incised on a director. If the patient be stout, and the wound deep, additional space may be gained by cutting through a little of the attachment of either rectus muscle to the pubic ramus. The yellow fat characteristic at this point of proximity to the bladder, and looking to the inexperienced eye uncomfortably like a mesenteric protrusion, comes into view; it is explored with the separator, while the veins traversing the region are carefully drawn aside, until the fibres of the bladder may be identified, and a fluid-impulse be detected by the finger. This little ivory instrument, if used systematically in the manner advised, prevents the occurrence of hæmorrhage, always embarrassing by filling the wound, and so obscuring the procedure; and it also renders the risk of wounding the peritoneum extremely remote, even when the membrane approaches the pubic symphysis. A small hook should now be inserted into the bladder, and an opening near to it be made by a scalpel, so that the operator's finger may enter as the fluid thus set free escapes. The opening may be enlarged according to the size of the stone, which the operator ascertains by feeling it, exploring the cavity freely at the same time with the finger.

The stone may be generally removed by one finger and the scoop, or indeed by the joint action of two index-fingers, each hand clasping the other closely, to give power to the natural forceps thus formed. The qualities of pliancy and sensitiveness which the fingers possess amply compensate for the slightly increased thickness of the blades so formed, in comparing them with those of the forceps, which are inflexible, and convey sensation in an imperfect manner at second hand. I see no advantage in attempting to close the opening in the bladder at the time of the operation, desiring rather its patency as a guarantee for the safe and free outflow of urine and other discharges. A stitch, or even two, through the abdominal walls, so as to close the upper half of the wound, appear to be desirable; and these should be supported by broad plaister and a bandage. Moreover, most attempts to close the bladder by sutures have failed; while such closure undoubtedly involves some risk of forcing urine into the recently divided tissues, instead of making a safe exit by the wound, since the presence of a catheter cannot be relied on with certainty to maintain the bladder constantly empty. In the cases of children, there is little or no risk of extravasation, and the attempt to close the bladder may be more safely made; in any case, however, these little patients mostly recover easily and rapidly.

[1] *Suprapubic Operation of Opening the Bladder.* By Sir Henry Thompson. London. 1886. P. 30.

Twenty-five Cases of Large Calculus, weighing more than 2½ ounces, Removed by the Lateral, Medio-bilateral and Bilateral Operations.

No.	Initials.	Specimen Number.	Age.	Date.	Operation.	Nature of Stone.	Remarks.
1	P. P.	10	63	1864	lateral	uric acid	University College Hospital. A rapid recovery.
2	J. P.	59	71	1865	medio-bilateral	chiefly phosphate	,, ,, Rather slow recovery.
3	J. K.	69	73	1865	,,	oxalate	Private. Mr. Erichsen held the stall. Gradually sank on the twenty-third day.
4	J. P.	94	69	1866	,,	,,	,, Death on the fourteenth day.
5	J. R.	140	66	1868	lateral	uric acid	,, A good recovery. From Moriston, Swansea, under the care of Mr. J. Cook, of Glais.
6	J. T.	148	65	1868	bilateral of Dupuytren	,,	University College Hospital. Death on the fifth day. Advanced disease of kidneys, etc.
7	J. N.	159	29	1868	lateral	mixed urate and phosphate	,, ,, Died after apparently good progress, in about six weeks.
8	A. J. M.	173	55	1868	,	uric acid	Private. Severe secondary haemorrhage on the twelfth day, of which he died.
9	W. F.	196	66	1869	,,	uric acid and phosphate	,, Sir W. Fergusson held the stall. Recovery. Sent by Dr. Francis, Northampton.
10	J. W.	231	65	1870	,,	uric acid	University College Hospital. Rapid recovery.
11	J. M.	246	65	1870	,,	uric acid multiple	,, ,, An average period of recovery.
12	B. P.	261	49	1871	,,	uric acid	,, ,, Rapid recovery.
13	J. G.	340	75	1873	,,	,,	Private. A rather slow recovery.
14	J. M.	390	22	1875	,,	oxalate	,, An average period of recovery.
15	B. W.	407	68	1876	,,	uric acid	,, Healing by first intention and rapid recovery. No urine through the wound after the first day.
16	J. C. F.	414	68	1876	,,	urates	Private. An average period of recovery. Sent to me by Mr. A. R. Martin, Chatham.
17	J. A.	433	70	1876	,,	uric acid	,, A good recovery, and living now, 1886. Sent to me by Mr. Wakefield, Nottingham Place.
18	F. P.	451	59	1877	,,	,	Private. A rapid recovery, and living now, 1886. Sent to me by Dr. Heward, Stamford.
19	J. W.	478	71	1878	,,	oxalate	Private. Death from erysipelas.
20	J. S.	490	56	1878	,,	uric acid	,, Died in three weeks. Sent to me by Dr. Thomson, of Peterborough.
21	F. C.	539	33	1880	,,	phosphate	,, A good recovery. Mr. C. Heath, and Dr. Mott, of New York, present.
22	C. J.	542	52	1880	,,	uric acid	,, A somewhat slow recovery, and living now, 1886, Sent to me by Dr. Smith, Belfast.
23	F. C.	545	58	1880	,,	,,	Private. A rapid recovery, and living now. Sent to me by Mr. Curgenven, of Derby.
24	J. R.	565	68	1880	,,	,,	Private. I removed a large prostatic tumour; he had severe secondary haemorrhage. The wound healed slowly; but he died, after a few weeks, of disease of the kidneys.
25	J. P.	625	66	1882	,,	mixed uric acid and phosphate	Private. Died on the twentieth day. Mr. George Lawson was present.

Twenty-five exceptionally large calculi, occurring among about five hundred cases of stone in the adult male. Among the twenty-five were seventeen recoveries, and eight deaths.

Eleven Cases of Large Calculus and Tumour removed by the Suprapubic Operation. One Death only.

No.	Initials.	Specimen Number.	Age.	Date.	Nature of Stone.	Results.
1	C. H.	690	36	1884	Cystic oxide calculus, 2½ ounces	Seen with Dr. Roberts, of Manchester. Complete recovery.
2	W. R. P.	827	12	1885	Uric acid and oxalate, 1½ ounces	Seen with Dr. Powdrell, of Euston Road. Complete recovery.
3	W. H.	717	62	1885	Uric acid, weighing 14 ounce	Seen with Mr. Atkinson, of Bennington, Boston. Complete recovery.
4	J. G.	718	73	1885	Uric acid, weighing 2 ounces	He was under the care of Dr. W. M. Campbell, of Liverpool. Complete recovery.
5	J. B.	732	70	1885	Uric acid calculus, large	Gradually sank in about a fortnight; seen with Mr. Adams, of Aldersgate Street.
6	J. B.	735	76	1885	,, ,, 6½ ounces	Seen with Messrs. Jones and Henley, of Woodbridge, Suffolk. Complete recovery.
7	Miss P.	—	73	1885	Very large papillomatous tumour	Sent me by Dr. Edis, of Gloucester. Relieved.
8	A. S.	—	55	1885	Large growth in the bladder; sarcoma (?)	Relieved. Dr. Lloyd, of Bloomsbury, and others, were present at the operation.
9	E. H.	714 b	66	1886	Much phosphatic matter adhering to walls	Enormous prostate; drainage by suprapubic wound; much relieved, and has dispensed with catheter. Mr. R. Ord, of Clapham, was present at the operation.
10	E. G.	760	63	1886	Oxalate of lime calculus, 1½ ounces	A patient of Dr. Whitla, Belfast. Making a speedy recovery.
11	J. M.	748	50	1886	Uric acid calculus, 2½ ounces	Sent to me by Dr. Mackenzie, Sydney, New South Wales. Rapid recovery.

Seven Cases of very Large Calculus removed by Lithotrity, chiefly at one Sitting. No Death.

No.	Initials.	Specimen Number.	Age.	Date.	Nature of Stone.	Results.
1	S. J. F.	535	53	1880	Mixed uric and phosphatic, 787 grains	An excellent result. Seen with Mr. H. Smith, of King's College
2	B. C.	538	68	1880	Oxalate, 640 grains	An excellent result. Now living, and no return. Seen by Mr. Fuller, of Brighton with me.
3	R. N. W.	606	69	1882	Uric acid, 1185 grains	An excellent result. Seen with Dr. Travers, of Kensington.
4	J. H.	644	60	1882	Urate and phosphatic, 704 grains	All urine passed by catheter. Recovery slow; relief considerable.
5	L. W. S.	668	62	1883	Uric acid, 790 grains	An excellent result. Seen with me by Dr. George Johnson.
6	C. B.	685	74	1884	,, ,, 660 grains	Result good, after a rather slow recovery. Seen with Sir James Paget.
7	A. B.	731	70	1885	Phosphatic, 976 grains	A slow but good recovery. Seen with Dr. Marshall, of Barnes.

To return to the cases of adults. A large flexible tube, with one lateral opening at the inner end, should be left in the bladder for twenty-four or thirty-six hours, to aid in maintaining a free aperture; and the patient should lie on his side to facilitate the outflow. As a rule, I use no catheter in the urethra, regarding it as an unnecessary source of irritation; nevertheless, in exceptional circumstances, it may be useful.

I have operated altogether on eleven patients by the method now described, each one of these cases presenting conditions of exceptional difficulty and gravity, which alone determined me to adopt the procedure. Of these, seven were performed on elderly male patients with "calculi" weighing from one and a half to fourteen ounces. The next was a youth of 12, with a stone weighing an ounce and a half. Two others were the subjects of very large vesical tumour. The last was on a patient with enormous prostate nearly filling and occupying much of the pelvis. In this exceptional case, it was impossible to reach and explore the bladder by an opening from the perinæum. He had, for some years, passed all urine by catheter, and, for a considerable period, had been compelled to do so every hour, both night and day, with great suffering. On opening the bladder, I encountered a quantity of phosphatic matter adhering closely to its sides: this I cleared away with my finger, aided by a scoop, and introduced the drainage-tube as usual. The wound rapidly healed, but I kept the lower angle open sufficiently to permit him to wear for permanent use a short flexible tube, with silver shield like a tracheotomy-tube, by which he now passes all the urine with great relief. He has much improved in health, takes gentle exercise, and has entirely dispensed with the catheter. This proceeding resembles that which I adopted with advantage more than fifteen years ago for five cases, where no calculus was present, making only a suprapubic puncture in order to insert the permanent tube. A lecture was devoted to the proceeding in the fourth edition of the Clinical Lectures published in 1873.

I have presented the chief details of all the cases of the new operation in a tabular form, and placed the calculus removed from each on the table before you. Of these eleven cases, one only died, a patient already worn out by long standing disease. Among the rest, all but one are living at the present moment; the oldest, aged 77 at the time of operation, who made an excellent recovery, and literally resumed an active life, has recently died of disease wholly unconnected with the calculous affection.

So far as my present record enables me to judge, I cannot do otherwise than form a very favourable estimate of the proceeding, based on practical as well as on theoretical considerations. I shall never fail to regret that it was not in my power to apply it at an earlier period of my career, in removing some of the large stones before you; on the other hand, I must be content to derive some small satisfaction from having introduced it into this country as soon as data were forthcoming to warrant me in so doing, as well as from the profound conviction which I entertain that the result has more than justified my early judgment respecting it.

TWO CASES OF SUPRAPUBIC CYSTOTOMY.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

By WALTER PYE, F.R.C.S., London.

Surgeon to St. Mary's Hospital, etc.

The cases which form the subject of this short communication have seemed to me to be sufficiently interesting examples of the employment of the suprapubic method of opening the urinary bladder, to justify me in bringing them before the Association, at a time when our attention is being largely directed to this operation.

I propose, therefore, briefly to narrate the salient features of each case, in the first place, and will then confine myself to those points which may have value as helping towards a just estimate of the reasons which should lead us to prefer, in certain cases, the suprapubic method, and to the discussion of one or two questions of detail which arise in the course of the operations, or in their after-treatment. I should add that for the notes of the cases I am indebted to Mr. Kidd and Mr. Sieveking, their surgical dressers in the hospital.

Case I.—The first case is one in which the cystotomy was performed for the removal of a large encysted calculus; it presents some unusual features, more particularly in that the existence of the stone could not be determined by sounding, and was not, in fact, suspected before the operation. H. H., 48, was admitted into the Thistlethwayte Ward of St. Mary's Hospital May 6th, 1886, under the care of Mr. Owen, with the object of his obtaining some relief, by operation or otherwise, of the results of a stricture, through which scarcely any urine could pass, almost the whole quantity coming through scrotal and perineal fistulæ, running in very dense fibrocellular tissue. This condition had existed for years, but the exact dates were not easy to establish. It is probable that urinary extravasation occurred five years ago, and it is certain that, since that time, no instrument had ever been got into the bladder.

His symptoms were those commonly found in chronic cystitis; were not acute, but were stated to be gradually getting worse. What urine could be saved for examination was feebly alkaline, and fairly clear, containing a moderate amount of mucus, and some albumen. He had been in the army as a young man, and dated the commencement of urinary trouble from an attack of gonorrhœa acquired at that time. There was no complaint of such pain at the neck of the bladder, or end of the penis, as suggested the existence of calculus. He had had no hæmorrhage, and the only other noteworthy point was a long-standing difficulty in relieving the rectum. From the date of his admission until May 20th (a fortnight) many attempts were made to pass an instrument through the urethral stricture, but without success, and the usual operation for section of the urethra *in perineo* was determined on. At this time Mr. Owen was called away from the hospital, and asked me to take the case on, and to operate for him.

Accordingly, on May 20th, under ether, I divided the dense cicatricial tissues in the perinæum, which formed the walls of the stricture, and had little difficulty in passing a No. 14 catheter onwards in the direction of the bladder; urine had escaped freely through the perineal wound. The progress of the catheter was, however, stopped at a point corresponding to the neck of the bladder, by striking a calculus, which was obviously large and fixed, and when the perineal wound was enlarged to admit the finger, it was found that the onward passage of the catheter in its normal direction was barred by this stone, which appeared to be enclosed in, and firmly gripped by, the walls of a cavity, placed where the neck of the bladder, and the parts immediately behind the neck, should be. A catheter was then passed through the perineal wound, along the upper and front surface of the stone; behind the pubes it passed into a free cavity, containing a little urine. Its point could be felt above the pubes, as in the case of a catheter when passed into the bladder.

The situation of the calculus was then examined carefully through the perineal incision, with a view to its extraction beneath the pubic arch; but it was large, and was found to be so firmly grasped by the walls of the cavity in which it lay, that it seemed impossible either to get the jaws of a lithotrite upon it, or to perform any safe lateral enlargement of the wound which would enable it to be extracted whole. (Had piercing lithotrites, made on the principle of a cephalotribe, been at hand, it could probably have been crushed.)

It was determined, therefore, to operate above the symphysis, and to cut down upon the point of a staff introduced through the perinæum, and so depressed that its point could be felt just above the pubes, pushing up the upper cavity, which had contained urine; but, as this had all drained away, it was feared that the peritoneum might reach down to the pubes. Median suprapubic incision was accordingly very carefully made, and the attachments of the abdominal recti freely divided before the point of the staff was exposed.

The peritoneum was not seen; the walls of the cavity pushed up by the staff were pulled up by a silk thread passed through them, and a small opening was made. But, instead of a stone being immediately touched, the finger, when introduced, felt only smooth walls, like those of a normal bladder; and it was only with much difficulty that, at the very bottom of this, a small aperture, just admitting the little finger, was detected leading down to the stone.

The nature of the case was now clear as one of encysted calculus; and, although the dilatation of the aperture, and the freeing of the stone from its cyst, the walls of which were thickly encrusted with sabulous matter, was a tedious process, it was extracted at length, and was found to be just ¼ lb. in weight.

A clear washing through could be secured, either from the perinæum to the suprapubic wound, or *vice versâ*, and this was done with perchloride of mercury solution (1 in 1,000). A full-sized drainage-tube was put into both the wounds, and no attempt was made to close the upper one by stitches. Iodoform and salicylic wool were used as dressings.

For the next four days, the temperature was high, varying between 103° and 102°; it then fell to normal. On the fifth and sixth days, some large sloughs came away, being apparently of the mucous lining of the cavity which contained the stone. From that time the patient

did well, and there was little of interest in his convalescence. At first, urine came freely through the wounds; then through the upper one, only when any temporary blocking occurred in the perineal tube; and, finally, the upper wound healed soundly in about five weeks.

June 28th. The perineal wound still chiefly discharges the urine; but, at times, some quantity comes through the penile urethra.

August 1st. The patient has been discharged from the hospital as "well." It is quite probable, however, that some further operation upon the indurated urethral stricture will be called for.

Case II.—This case is one in which the operation was performed for the removal of villous growths in the bladder, and can be shortly told. V. P., aged 46, was admitted into Thistlethwayte Ward on September 21st, 1885. For the past two years and a half he had suffered from pain on micturition, with occasional hæmaturia, both symptoms getting steadily worse. Latterly, he had lost flesh. He passed urine most easily when lying on his back, and the flow was frequently arrested by painful spasm. He had been many times sounded, with negative results; the sounding was always followed by the presence of blood in the urine. On examination, the prostate was found to be enlarged and tender. There were both internal and external piles, and defæcation was painful. The urine was slightly acid and light coloured, but contained a little flocculent blood-clot and one-fourth albumen; specific gravity 1020.

On October 5th, the patient was carefully sounded, and it seemed that an obstruction could be felt situated on the left side near the entrance of the ureter. The urine was kept for examination, and in the *débris* were found fragments of villous growth. In consultation with my colleagues, it was held that there was sufficient warrant for an exploration of the bladder, and that it was probable that the growth was localised and removable. A perineal cystotomy was clearly unadvisable.

On October 7th, under ether, I opened the bladder above the pubes, having previously introduced a Petersen's bag into the rectum, and injected twelve ounces of water, and having also injected eight ounces of very dilute perchloride of mercury solution by the urethra. The bladder was easily exposed; but the recti abdominis were very tense, and required free division. There was a good deal of straining, and this created some embarrassment by forcing the peritoneum, with the coils of the small intestine within it, down upon the pubic symphysis. The bladder was secured by a silk thread through its walls, and opened just to admit the finger. On examination, it was found that, instead of a local growth, the whole of the floor and trigone of the bladder was covered by numerous flocculent villous masses like seaweed; and the result of handling these was to produce very serious hæmorrhage, too serious to be left to stop of itself. I then determined to do what I could in the way of removal by scraping off the growths at their bases with the finger-nail, doing this chiefly with the object of arresting the bleeding. I found that they came away readily, and that the *débris* could be well washed out of the bladder. I thus proceeded until the cavity felt clear of growths, and by this time the bleeding had ceased. The bladder was then well washed through, and one China silk stitch was put in, a drainage-tube being afterwards inserted. The wound was dressed with iodoform and salicylic wool.

The patient did fairly well from the first; but there was much trouble from cystitis, which appeared to be kept up by the almost continuous urethral catheterisation for the purpose of drainage. It was necessary to keep a catheter almost always in the bladder for the first four or five weeks, and this caused irritation. An abscess also formed, and tracked down into the scrotum. The suprapubic wound finally closed about two months after the operation. The patient was discharged soon afterwards, and is now well. He has as yet, nine months since his discharge, no return of pain or bleeding, and has gained much flesh.

The points to which I would wish to draw the attention of members in respect of these cases are not numerous. It may be noticed that the result to these patients bears out very strongly the views of Sir Henry Thompson as expressed in his recent book on *Suprapubic Cystotomy*. With regard to the first case—that of encysted calculus—the complication with stricture is interesting, and probably the stricture played an important part in the formation of the calculus; but it may be of more moment to consider whether the stone occupied a true secondary cyst, or whether it did not lie in the original bladder-cavity, the cavity which functioned as the bladder being a secondary development. This would seem to be indicated by its position in the middle line, next to the rectum, and below the other cavity; and, although the question cannot now be cleared up, an examination of museum-specimens—notably those in the Museum of the Royal College of Surgeons numbered 3,660, 3,661, 3,662, and 3,710—seem to me to show that this is a usual sequence of events. In Mr. Rivington's case, which in many respects is very like to the one we are now considering, the calculus was encysted in a lateral pouch; and of this there are also many examples (for example, No. 3,656 in the College Museum) to be found.

This case of Mr. Rivington's, which is reported in the *Proceedings of the Royal Medical and Chirurgical Society* for March 30th, 1886, is, as I have said, singularly parallel to my own. In both cases, a perineal incision was first made, and the suprapubic operation subsequently performed. In both cases, the calculus was encysted, and firmly held in a sabulous cavity. Both cases also recovered from the operation—my own, I hope, permanently; while Mr. Rivington's patient lived, I think, three months, his death being due to causes quite apart from the operation. There is, however, no comparison to be instituted between the two calculi in point of size, Mr. Rivington's being very much the larger.

The question of the advisability of making a perineal incision, in addition to the suprapubic one, has been raised before now, and has generally been decided in the negative; yet I cannot but believe that, in the first of the two cases I have related, the very free and perfect drainage thus secured by natural gravitation, from irregular urinary cavities, parts of the walls of which were sloughy and all in a state of irritation, was the important factor in my patient's recovery. I think also that in the second case—that of villous growths—the drainage by urethral catheterisation retarded the healing of the suprapubic wound, and kept up a needless amount of cystitis and painful spasm of the bladder. A simple perineal incision into the neck of the bladder should not be in itself a formidable complication. In any case, this question seems to still call for discussion, and, if possible, for settlement.

So far as two cases can go, mine bear out, I think, Sir Henry Thompson's and the general opinion that stitches inserted into the bladder are, at the least, useless. The wound in which a stitch was used was the longest to heal, although there was no bruising of the parts; while the calculus-case, where the parts were necessarily very roughly handled, being left alone, healed soundly in about the average time. This question of the manner of healing of the suprapubic wound has, of course, a very distinct bearing, again, on the question of perineal incision.

Lastly, with regard to the case where villous growths were removed, I would wish to bear testimony to the value of Petersen's bag, and to the importance of Dr. Garson's demonstration of the effect of raising the bladder, with its peritoneal fold, out of the pelvis, by dilatation of the rectum. Only by this means could the base of the bladder be brought sufficiently within view and touch of the finger to enable the very numerous growths to be recognised and removed; while the way in which the same parts sank down out of reach when the bag was emptied was very striking indeed.

Mr. Reginald Harrison: As in a discussion of this kind the object in view was best served by confining themselves to that which had been learnt from their several experiences, to this the speaker briefly addressed himself. During the past twenty-five years, he had practised almost invariably in males, where lithotrity had been contra-indicated, the lateral operation for stone on the lines laid down by Cheselden. He had operated in this manner over fifty times in children without a fatal result or accident happening, and though his cases in adults had not been so numerous by reason of his preference for crushing after Bigelow's method, his mortality had not exceeded, in these exceptional instances, 1 in 12. He mentioned these figures merely because he questioned very much whether such results would have been improved upon by the substitution of the suprapubic method; at all events, he thought they had been sufficiently satisfactory as to cause him to hesitate before changing his practice until the evidence in favour of the suprapubic method was more general and convincing than it seemed to him to be at present. In discussing the relative merits of different operations, it must not be forgotten that what determined one set of operators in their selection of what was best to be done must not be regarded as of universal application. It was impossible to study the results obtained by some operators, and the circumstances attending their proceedings, without coming to the conclusion that lateral lithotomy in their hands must have proved a difficult as well as a hazardous undertaking. Ample ground was thus furnished for carefully considering any method of operating for stone which was likely to prove more uniformly satisfactory, whilst if, at the same time, the proceeding could be simplified so as to be of more universal adoption, an important epoch in the treatment of stone would thus have been attained. In the personal experience to which he had referred, an experience which had been chiefly gained in public hospital-practice, he could not say that he ever met with any difficulty worth mentioning

in the extraction of stones up to five ounces in weight by lateral lithotomy, nor had he incurred risks which would have been obviated by the suprapubic method. Though lateral lithotomy had its own dangers, it was quite clear, from a reference to the recent literature of the subject, that the suprapubic operation was by no means free from others. In one instance only, after lateral lithotomy, did hæmorrhage happen under circumstances which induced him to connect the subsequent death of this patient with this occurrence. He mentioned this more particularly as this case led him to adopt improved measures for controlling either primary or secondary hæmorrhage, which had since proved entirely efficacious in those rare instances where it had been necessary to resort to them. If a wound, made either for lateral lithotomy or for prostatotomy, continued to bleed from vessels he could not get at to ligature, he at once introduced a gum-elastic drainage-plug, which accurately filled the opening. This was not removed until all risk of bleeding had ceased; the bladder being drained or irrigated as the case might be, by a rubber-catheter passed through the larger gum-elastic tube. He had plugs of various calibres (as might be seen from the specimens he had brought with him), so that, in this way, he could accurately fit any sized wound that might be made into the bladder from the perinæum. As a rule, however, a well executed lithotomy wound seldom occasioned hæmorrhage which could not be immediately and permanently arrested by ordinary means. To return to the discussion, he had purposely confined his remarks to uncomplicated cases of stone requiring removal by lithotomy in preference to lithotrity. He could speak perhaps still more strongly on the advantages of the lateral over the suprapubic operation in cases of stone attended with complications due to sacculation, and to some states of the enlarged prostate, as well as to other conditions, such as cystitis, where the bladder required draining from its most dependent point just as thoroughly as any chronic abscess which it might resemble. Though, as he had already said, his experience of the lateral operation had hitherto been limited to removing stones not exceeding five ounces in weight, he should, with the experience we now possessed, resort to the suprapubic method in those comparatively rare instances where these dimensions were exceeded, and where, by reason of the pubic arch, the extraction of the stone through the perinæum might be rendered either difficult or impossible. He thought, after what he had said of his own experience in these operations, it would be readily understood that he should feel considerable reluctance, at all events at present, in abandoning lateral lithotomy in favour of suprapubic, except in cases where the stone was very large.

Mr. CADGE: In commenting on the subject of suprapubic lithotomy, he should not be far wrong in recognising Sir H. Thompson as the advocate, and Mr. Harrison as the opponent, generally, of that proceeding. Although he went far with the author of the paper in his advocacy of the operation, he still thought that, as usual, the middle course was the safest. He did not yield his support of the high operation so readily and fully as Sir H. Thompson for two reasons: 1, he did not like to go back from opinions once deliberately formed, and therefore he was perhaps slow in forming them; he saw drawbacks and difficulties quicker than he did the merits and advantages of any surgical proceeding; and 2, he confessed to a reluctance to yield the place of honour, which the old operation had so long held, to its new, or, perhaps he ought to say, to its old rival. He could not forget that Cheselden, who operated successfully by the high method, yet, for good reasons, relinquished it in favour of the lateral, and, having tried both, he never for a moment thought of retracing his steps. Moreover, the results of the high operation, even since its revival, and with the advantage of rectal distension, had not been very encouraging. He would not give statistics, because, without full particulars of cases as to age of patients, weight of stone, etc., they were apt to mislead. What he did desire was a candid and full statement of the causes of death, and, when possible, of *post mortem* evidences. Another thing might be said of the high operation: there had been too ready a tendency to advocate or condemn it on too slender evidence for or against it. The amount of literature on the subject since 1880, chiefly foreign, was immense; and yet, no individual surgeon had had more than a few cases; and the total number did not greatly exceed, if it reached, 150. When lithotrity was young and on its trial, Brodie had done upwards of 100 cases before he published his well-known paper on it; and with what weight and force did his opinions come? The profession accepted them at once, and we have scarcely had to modify one of his views since. In his own small way, in 1873, he read a paper on Median Lithotomy, at the London meeting of this Association; but he did not venture to express his views and opinions until he had performed fifty to sixty operations by that method. Touching the method of the suprapubic operation, there were many points which were uncertain, and on which surgeons differed—namely, as to the closure of the vesical wound; the proper mode of drainage after the operation, whether by the wound alone, or by a catheter in the urethra, or by a tube through the perinæum; as to the difficulty sometimes experienced of distending the bladder, and the proper course to adopt in that case; as to the risk of wounding the peritoneum, and the best course to be adopted if that accident should occur; as to the size and shape of the rectal bag, and the necessity of using that appliance, and in what cases it should or should not be used. On all these points, on which surgeons of great authority differed, and whose opinions we have heard nothing of to-day, time did not permit him to speak; or, on the kind of cases which were or were not fitted for the operation; but this he might say, that we were none of us entitled to dogmatise or give very decided opinions, and his own desire was to keep an open mind on the whole subject—to test and try, by experiment on the dead, and by cautious practice on the living, the various methods, and to wait patiently for results.

Mr. JESSOP began by stating that his experience of suprapubic lithotomy was limited to one case, which he would briefly refer to, seeing that it presented one or two points of unusual interest. It occurred in a deformed hunchbacked youth, whose symptoms had for several years been of a very severe type. The stone could be felt by the hand projecting above the pubes, and, when grasped between the rectum and the abdomen, gave the impression of being large in size. A sound, introduced into the bladder, passed beneath it, and it could not be grasped by a lithotrite. The suprapubic operation was performed in the manner described by Sir H. Thompson; and without any difficulty a stone, measuring two inches by one only, and weighing ten drachms, was removed. After its removal, it was found that it had been lying imbedded in the anterior wall of the bladder, one-half of it having occupied a pouch situated beneath the arch of the pubes, and between it and the prostate. It was evident that the suprapubic operation had afforded facilities in this case which no other operation would have done. It was not so much, however, for the purpose of reciting this small experience that he rose, as from a desire to elicit from men of exceptional opportunity, like Sir H. Thompson, Mr. Cadge, and others, a definite opinion as to the kind of cases suitable for this procedure. He felt disappointed with Sir H. Thompson's paper, lucid and able as it was, in that it did not contain one single fact or argument which he had not, on more than one occasion, previously published. He had hoped to hear an authoritative opinion as to whether, under any other circumstances than those in which a very large stone in an adult bladder had to be dealt with, this revised operation might be resorted to—as, for instance, in cases of unusual enlargement or other disease of the prostate, or of the urethra; and, again, in very young children. One of the most difficult operations he had ever been called upon to perform was the removal, by lateral lithotomy, of a comparatively large stone from the bladder of an infant, 19 months' old, and he had heard of others who had experienced similar difficulty. Was the suprapubic operation justifiable here?

Mr. BARWELL felt that the excellent and lucid paper by Sir Henry Thompson must have given much pleasure to the members present, and he felt the greatest diffidence in controverting some points of that paper. He could have wished that Sir H. Thompson had laid a little more stress on the case of young children with large and hard stones. In little boys—though, as a rule, lateral lithotomy was very successful, yet large stones introduced an element of danger. In the case of little girls, with a stone too large and hard to be extracted entire, or crushed *per urethram*, the establishment of a vesico-vaginal fistula, by any vaginal or vagino-urethral operation, was too frequent to justify such procedures. With regard to distension of the rectum, it was generally desirable, when epicystotomy was performed for the removal of tumour; but it was unnecessary in suprapubic lithotomy, because a fairly distended bladder was always sufficiently fixed, and because it did not raise the anterior fold of the peritoneum. Moreover, it might be dangerous, as, by stretching, it may rupture the urethra. He did not desire to enter into the subject of after-treatment, as even now sufficient experience had not been acquired, and as all methods hitherto used had given about equal results.

Dr. WARD COUSINS: The President, in his eloquent address, fully explained the causes influencing the revival of old operations. Suprapubic lithotomy was abandoned from unsuccessful results, and imperfect details. It had been resuscitated by improved details and antiseptic precautions. The discussion had brought out an unanimous opinion as to the advantages of the operation in cases of large stone, encysted stone, and stone complicated with disease of the prostate. But would the application of the operation be within these limits? Would it completely eclipse lateral lithotomy? Both operations had their risks. With the suprapubic operation there were the special dangers of urinary infiltration, wounds of peritoneum, and difficulty of drainage. But were there not special risks in lateral lithotomy—

hæmorrhage, wound of rectum, laceration of soft parts, and seminal injury. We must remember that risks were reduced by judgment and experience, and that it was not by a comparison of the risks, but by selecting the operation according to the special peculiarities of the case, that the surgeon must be guided. Dr. Cousins did not believe suprapubic lithotomy would replace the lateral in the average size stone occurring in children. Small stones in children could be crushed with the lithotrite, and large ones removed by the high operation; but would it be more successful than the lateral operation in average cases? Both were easy, but the results of suprapubic lithotomy must be extraordinary and brilliant before they will eclipse the old method. As to safety, Dr. Cousins uses a straight director, set on a long handle, and, by using this staff and a very sharp knife, it was impossible to go wrong, with ordinary care. At all events, in average cases, he should at present continue to perform the lateral, but his condition of mind, he hoped, would be always open to conviction, and his dearest fads would be cast to the winds of heaven, and his strongest prejudices dissolved away, whenever truth and experience demanded the sacrifice.

Surgeon-Major KEEGAN exhibited the *débris* of a large collection of stones which he had removed from male children and male adults at the Indore Hospital, Central India, by litholapaxy. One stone was particularly large. It consisted of phosphates, with a small mulberry nucleus, and weighed as many as 2,804 grains, or somewhat over six ounces avoirdupois. The subject of this stone was a man, aged 30. The case was operated on March 13th, 1886, and was discharged cured on April 3rd. He also showed the *débris* of a calculus, weighing 1,470 grains, which he had removed from the bladder of a man, aged 65, by litholapaxy. This stone consisted of urate of lime, and the man left the hospital perfectly well five days after the operation. He also showed the *débris* of some other very large stones. With such results he was more disposed to draw the line at which litholapaxy should cease and suprapubic lithotomy begin at a four-ounce stone than at a two-ounce stone. He had begun litholapaxy in boys in December, 1881, and had continued this operation steadily for four and a half years. He showed a table giving details of 58 litholapaxies performed on boys, with only one death. The stones varied in weight from 5 grains to as many as 700 grains, and the ages of the boys varied from one year and nine months to fourteen years. There could, of course, be no question but that lateral lithotomy was an eminently successful operation in the case of boys. Surgeon-Major Freyr's unequalled success in cutting 143 boys for stone without a single death proved this; but he had good grounds for knowing that Surgeon-Major Freyer was disposed to give litholapaxy a trial in the treatment of stone in boys. Surgeon-Major Keegan then exhibited two small lithotrites: one a No. 6 English size, and another a No. 8 English size. The lithotrites were made by Weiss and Son, and were fully fenestrated—a matter of vital importance in performing litholapaxy in boys. He said that the No. 6 lithotrite would, in the great majority of cases, pass readily into the bladder of a boy of three years of age, and that the No. 8 would pass readily into the bladder of a boy of five or six years of age. With such lithotrites, and evacuating catheters of corresponding sizes, it was quite feasible to crush and remove a stone of considerable size from a boy's bladder in less than an hour. He advocated the extension of litholapaxy to the treatment of stone in male children in preference to lateral lithotomy for two reasons: first, on account of rapidity of cure; and, secondly, absence of any cutting operation. He found that, in his practice, the average stay in hospital of boys after litholapaxy is 7.7 days, as compared with 17 days after lateral lithotomy. He believed that the urethra of male children was much larger than was generally supposed to be the case.

Sir WILLIAM MAC CORMAC: Sir Henry Thompson, in his address, referred to suprapubic lithotomy as chiefly applicable to stones of large size, but as some other speakers had said, it was in children that perhaps its greatest future development would occur. In Germany, it had long been practised, and he well remembered, in his demonstration of the operation on the dead body, Langenbeck pointing out the method of safely and surely preventing injury to the peritoneum by pushing up the peritoneal reflection with the finger. He agreed very heartily with Mr. Jessop's remark as to the difficulty and anxiety often attending the lateral operation in very young subjects, while these were the cases best fitted perhaps for the high method. He cited as an illustration of the success of the suprapubic method in children a case of mulberry calculus in a boy of 3½ years. The operation was performed in the ordinary way, the opening in the bladder carefully sutured with catgut, the aponeurosis and external wound also separately sutured, a drainage-tube being left in it. This was removed in forty-eight hours. The wound healed by first intention, without any general or local disturbance whatever. A catheter was used on one occasion only afterwards. Otherwise he freely passed urine. Recovery was complete within a week.

Mr. JACOBSON was glad to have an opportunity of saying a few words about this operation, as he had, perhaps, in three cases in which he had performed it this year, gone further than most surgeons would approve, having used it in three adults for what would be considered small stones. Each of the three had certain drawbacks qualified to test the operation; each of the three made an excellent recovery. In the first, a young labourer, three oxalic acid calculi were present, the largest three-quarters of an ounce; and the patient passed through a severe attack of lobar pneumonia, due partly to ether and partly to the bitter weather of last February. The second, a private case, aged 40, had a huge hunchback, the result of old spinal caries, and suffered much from hæmorrhoids; the third, aged 44, had had old pelvic disease, and had such an extremely small urethra as not to admit, even after incision, of the smallest evacuating tube; in addition to this, he was a timid, tearful hypochondriac. All three had ammoniacal urine at the time of operation, yet in none was there the least difficulty with drainage, by following Sir H. Thompson's directions to keep the patient on his side, and by the use of the boro-glycerine fluid which bears his name. These cases did so well, that he would have been inclined, too, to make further trial of the operation in preference to lithotrity even in small stones, and he had been strongly confirmed in this by reading Mr. Cadge's recently delivered lectures at the College of Surgeons. In one of these, he spoke with his usual straightforward candour on recurrence of stone, and stated that recurrence after lithotrity was "lamentably frequent, amounting in his own hands to one in seven;" he calculated Sir H. Thompson's cases as giving a recurrence of one in eight. Mr. Cadge then went on to say: "I am disposed to believe that recurrence is even more frequent than this, because it is not likely that all who get relapse apply to the same surgeon again. If there be added to this list those numerous cases of phosphatic deposit or concretions so frequently noticed after lithotrity, the relapses would amount, I believe, to nearly 20 per cent. This seems a heavy indictment to bring against lithotrity, but I am afraid there is no gainsaying it; and if so, it would be wrong to pass it over, and make light of it." Mr. Cadge further remarked that, as recurrence after lithotomy was only one in fifty, the frequent relapse after lithotrity must be due to other causes than the descent of a fresh stone. Mr. Jacobson thought we all owed Mr. Cadge very sincere gratitude for outspokenness in this matter, for it was one which had rarely had justice done to it, and he thought he had seen too great a tendency for surgeons to teach and students to believe that, when a lithotrity was finished, the patient was cured. And he would ask if a man like Mr. Cadge, having had unusual opportunities for stone-operations throughout his professional life, and after the use which he was known to have made of them, came forward with his ripe experience, and spoke of relapse after lithotrity as being lamentably frequent (whether it was one in seven, or including those cases of atonic bladders and phosphatic concretions, one in five), if such was his experience, what was likely to be the case with those who, with infinitely fewer opportunities, had to face from time to time, cases of stone in the adult. He would shrink, and rightly so, from presuming to teach in a place like this, but we must remember, in discussing a question like this, we had to discuss it not only for the sake of those who, like many of us, had frequent opportunities of operative surgery, but also for the sake of those whose opportunities were few and far between. For it was beyond all doubt that cases of stone would from time to time arise in parts of England where stone was rare, cases which would not go to London or large centres, but which will have to be treated in the local cottage hospital or workhouse. Now, he would ask whether the practitioner who perhaps had no experience of lithotrity would not be wiser in adopting modern suprapubic lithotomy, with the far simpler structures to cut through, for example, linea alba, fascia transversalis, and one layer of pelvic fascia, in preference to the lateral operation with the extensive structures in the perinæum, the prostate with its venous plexus, and the neck of the bladder with its elaborate layers of fasciæ and cellular tissue. He would like to occupy the remaining minutes with some remarks on some points connected with the operation itself. The peritoneum was neither seen nor felt in any of the three cases. The injection of the bladder should in no case exceed eight or ten ounces, and that of the rectal bag, which should be of sufficient strength, twelve ounces. Certainly, if these amounts which were sufficient were exceeded, we should hear of some slight hernial pouch in the bladder giving way, or of lacerations of rectal mucous membrane. He made no attempt to make use of bladder-sutures, as the urine was ammoniacal in each case. But even if no cystitis were present, he thought in their use we ran risk with no really equivalent

return. If the bladder was sewn up, we must trust either to the catheter or to the voluntary power of expulsion. If the latter failed, there was, it seemed to him, the most serious risk that, either by blocking of the catheter if left in, or by its not being passed just when required, a little urine might escape between the stitches, deep in a closed wound, and thus cause the gravest risk. Surely it was worth while to run this in the hope of primary union after an operation like lithotomy and ten days' rest in bed. So far, his remarks had applied chiefly to adults. Would it not be well, if those who, like Mr. Cadge, had had opportunities of noting the life-histories of some at least of their patients, were to tell us whether the lateral operation in little children does really incur the risk of rendering our patients sterile? Mr. Jacobson mentioned Mr. Teevan's four cases brought before the Clinical Society, in which all four were childless husbands. If this were not a strange coincidence, it is surely a strong indication for performing this operation even in children. Finally, I would impress on all who perform this revived operation, the importance of publishing their cases.

Mr. BRUCE CLARKE proposed to draw attention only to two points: 1. The point that it is not necessary to always use the bag in the rectum. This was not the case in Mr. Smith's case, which he had just published, and in which he had the good fortune to assist him. Here there was no difficulty whatever in removing the stone, though no bag was used in the rectum. It could be easily felt beforehand with one finger in the rectum and the other above the pubes. 2. The question of the after-treatment of the wound was of great importance, as he had come across four suprapubic incisions of the bladder in which there had been a fistulous track. He was inclined to believe that this was due to leaving the drainage-tube in too long.

Dr. HINGSTON considered that, where practicable, lithotrity should always be performed in adults rather than lithotomy; but that, as in children, lateral lithotomy was so easy and simple, there did not seem to be any reason to exchange it for any other method. He thought the size of the stone of more importance than its weight in considering the question whether the lateral or the suprapubic operation should be performed. There was no hard and fast line in this matter. Stones between three and four ounces might be removed by the lateral method. For very large stones, he would do the suprapubic operation.

Mr. REGINALD HARRISON exhibited for Dr. Morison, of Hartlepool, a large uric acid calculus, and a pair of small midwifery forceps with which it had been extracted through a suprapubic opening. The following are Dr. Morison's notes of the case. "Shortly stated, the patient was a man, aged 52, who had symptoms of stone for thirty years. On several occasions, he had been examined for stone by competent surgeons without result. At the time of my seeing him, one of the small stones had been dislodged, and was impacted in the urethra; this I credit as the cause of my discovery. The symptoms were now so urgent that, notwithstanding his bad state of health, and the evident presence of kidney mischief, an operation was determined upon with the patient's and his friends' strong approval. The large stone had to be removed by suprapubic operation after the ordinary lateral operation discovered the size of the stone. It was found impossible to remove the stone until a pair of small midwifery forceps were procured. With them, applied in the ordinary obstetrical fashion, the stone was readily got out. Until the thirteenth day after operation, progress was satisfactory, the wound rapidly healing. Hiccough then commenced and steadily increased in violence. Death occurred on the fourteenth day, uræmia being assigned as the cause, though no *post mortem* examination could be obtained to verify this opinion. The stone weighed, when extracted, 1 lb. 6⅞ ozs.; it has since lost, I think, two drachms in weight. This loss in weight is attributable to the presence of fluid in a cavity in the stone, which, a week after the operation, was plainly demonstrable by succussion, and continued so for some time. The fluid sound has now disappeared. The points of interest are: 1. The size of the stone. So far as I can learn, it is the largest of pure uric acid on record. 2. The length of the incision in the soft parts. This extended about four inches upwards from the pubic bone, dividing all the soft parts in the middle line, except the structures closely overlying the peritoneum and the wall of the bladder. The wound in the bladder-wall was about two inches in length, and stretched easily, without laceration, as the stone was withdrawn. The longer section of the soft parts above allowed of no further obstruction during extraction. 3. The application of midwifery forceps to the stone, and its easy removal by them. The forceps exhibited have been sent to me on approval, at my request, by Mr. Young, surgical instrument maker, Edinburgh. They are not all that I could desire, being too thick, too heavy, and too broad in the blades, while the shafts come too close together at the lower part; making the forceps, with a stone in their grasp, less of a wedge-shape than could be obtained by a slight alteration. They serve, however, to illustrate what, with experience limited to this one case of giant calculus, will I believe be found to be the best means of getting out similar stones."

THE ALTERNATIVES TO CRANIOTOMY.

Introduction to a Discussion in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association held at Brighton.

BY ROBERT BARNES, M.D., F.R.C.P.,
Consulting Obstetric Physician to St. George's Hospital.

THE question we are met to discuss—"What are the Alternatives to Craniotomy"—may be accepted as the great test of the progress of obstetrics. Or the following proposition may be stated: the more nearly we approach to the abolition of craniotomy, the more nearly do we attain perfection in obstetric practice.

I will endeavour to place the main points of the question before you in as plain and concise a manner as possible, and without prejudging it. At various epochs, the question has been considered to be decided; and so it has been decided according to the actual state of knowledge at the time. We cannot afford time to dwell upon the history of the subject, howsoever interesting such a retrospect might be in illustration of our proposition.

We must press on to our theme. Tyler Smith brought the question before the Obstetrical Society in 1859 in these terms: "On the Abolition of Craniotomy from Obstetric Practice in all cases when the child is living and viable." To attain this consummation is the goal to which humanity points. And science in this respect, as in many others, is untiringly striding towards the fulfilment of the dictates of humanity. That science will ever achieve all that humanity longs for may be doubted; but the pursuit is a noble one, and it cannot fail to bear good fruit.

The life and progress of medicine depend upon its professors being impelled by the conviction that medicine is always and necessarily in a state of evolution and development. We cannot sanction the idea of finality in medical science.

Actuated by this spirit, let us from time to time put to the test of the knowledge of the day such questions as this. Since Tyler Smith's memoir, decided progress has been made; and there are not wanting men who believe the abolition of craniotomy is actually in our power. Amongst the more enthusiastic of these is perhaps Dr. Kinkead, who, in March, 1880, read before the Dublin Obstetrical Society a memoir on "Craniotomy and its Alternative." This gentleman has a paper on the same subject, which I hope will follow mine. So I will not anticipate his argument.

Before grappling with the actual problem as affecting the present generation, it is well to glance at the prospective aspect of it. This is the hygienic or prophylactic—the most fundamental, the most important of all. The main conditions that make craniotomy and some other obstetric operations necessary take their origin, transmitted or acquired, in infancy and childhood. It is obvious that, if all child-bearing women were healthy and well formed, the resort to craniotomy might be reduced to a minimum. In a large proportion of cases, the craniotomy-compelling cause is deformity.

It is further obvious that, if all fathers were healthy, many more obstetric difficulties would be avoided.

When Medicine and her daughter Hygeia shall have accomplished this end of securing healthy parents, Obstetric Surgery will find a very limited field for action; and already no inconsiderable progress has been made in this direction, at least in this country. I know no more interesting and cheering proof of this than the testimony the late Dr. Radford bore to the influence of the Factory Acts, which limit the age and hours at which girls can be employed in England. Since the introduction of these Acts, Dr. Radford informed me that, within his time, deformities had become much rarer in Manchester; craniotomy and the Cæsarian section were less frequently called for; and he attributed this happy change in a great measure to the operation of these Acts. It is to the better hygienic conditions of the working-classes in this country that we owe our comparatively limited experience of pelvic distortions and the outcoming obstetric operations, as contrasted with that of our continental brethren. German museums and literature are painfully rich in this field of deformity.

We cannot hope or wish to rival them. Our path is happily traced out in the production of model pelves, and so of minimising maternal and infant danger and death. This is the fundamental work in which we invite and challenge emulation. This is the best alternative to craniotomy. In stating this, I think it not out of place to advert to one lamentable counteracting influence that is incessantly at work thwarting the best efforts of hygiene. I refer to the action of those very superior persons whose irrepressible desire to show the world how much better and wiser they are than their neighbours leads them to do all in their power to remove the impediments to the propagation of syphilis.

Tyler Smith urged that "craniotomy was performed in British practice in about 1 in every 340 labours." If we accept this as an approach to the truth, we get something to start from. Tyler Smith spoke of a time which might be styled the epoch of craniotomy. In the practice of more than one eminent teacher, the perforator was more frequently used than the forceps. Sacrificial midwifery prevailed over conservative midwifery. Now the scale is turned; the forceps has largely supplanted the perforator. We live now in the epoch of the forceps. This happy reform is, I believe, partly due to the diminished frequency of deformities, but more largely still to the influence of those who advocated and improved the long forceps with the pelvic curve. The old short single-curved forceps could hardly be looked upon as an alternative for craniotomy. It can rarely grasp the head effectively before this has descended into the pelvic cavity. When the head has got so far, it can but rarely be a fit subject for perforation. In the great majority of cases, the question of craniotomy arises when the head is impacted in the brim or is arrested above it.

We might then formulate the matter thus: There are two classes of cases of arrested labour: 1. Those cases in which the head was arrested in or above the brim, and which fell to the perforator. 2. Those cases in which the head was delayed in the pelvis, and which came within the range of the forceps. The perforator and the short forceps held each its special ground; the one was not an alternative for the other. Practically, however, there is too much reason to conclude that, owing to the feeble and faulty construction of the forceps; the perforator was frequently resorted to, even when the head had descended into the pelvis. Thus, the perforator was really taken up as an alternative for the forceps.

The next alternative, after hygiene, we have to discuss is the induction of labour. Upon this we need not dwell; it stands first in the chronological order of operations. It may be applied in two orders of cases, or in two distinct epochs of gestation; first, before the child is viable; secondly, during the last three months, when the child is viable.

Assuming, from past clinical knowledge, confirmed by exploration, before and during early gestation, that the woman cannot bear a living child at term; the indication is obvious to anticipate the difficulty by provoking labour at a selected time. By what rule shall we select the time?

Take a case of maternal distortion. There are two mechanical factors, the pelvis and the fœtus, the passage and the passenger. Practically, we may assume that the fœtus is, within moderate limits, a fixed quantity. At term, the obstacle it offers is compounded of two qualities, size and solidity. In many cases undue bulk is compensated by increase of plasticity. This latter quality is often of decisive importance in delivery by forceps. The conservative forceps depends greatly for its efficacy upon its power of moulding the head. And yet there are men who protest against using the two great powers of the instrument, compression and oscillation or leverage. The dominion of the forceps, and therefore its more frequent use as an alternative for craniotomy, will be largely extended by the use of the axis-traction curve. A surgeon, armed with a forceps that will neither compress nor mould the head, is like the soldier armed with a contractor's sword that will neither cut nor thrust. The difference is that the soldier is the victim of a rascally contractor, whilst the surgeon or, unfortunately his patient, is the victim of his own folly. Such a surgeon is a survivor of the brutal epoch of craniotomy.

At term the compressibility of the head by the forceps, compatible with the safety of the child, is limited. We therefore try to bring the head under the dominion of the forceps at an earlier stage of development, when it is not only smaller, but also more plastic and ductile. And it is a point to remember that ossification of the cranium, and therefore solidification, seems to advance at an accelerated ratio during the last three or four weeks of gestation, so that it may be very possible to deliver a child by the forceps alive at 39 weeks, which would be lost at 40 weeks.

We have hitherto assumed that the other factor, the pelvis, is only moderately contracted. Now, let us assume that the pelvis is more and more contracted. We are driven to advance still further the period for the provocation of labour; and as we approach the thirty-sixth week of gestation, it becomes more and more doubtful whether we can rely upon the forceps. The space available for the ordinary instrument is becoming too small to admit of its application. Assuming, then, that the natural forces will not expel the child, we must invoke another alternative. This we find in turning. The bi-polar method here comes into most useful application. I am sure this improvement has greatly enlarged the range of this conservative operation. It is especially valuable as a means of accelerating delivery in provoked labour.

We thus find successively in the forceps and turning, alternatives for craniotomy in those minor degrees of disproportion which are compatible with the birth of a living child, dating back from labour at term to labour induced at thirty-three, thirty-two, or possibly thirty-one weeks of gestation.

At this point, the limit of viability of the child, other questions arise, other alternatives must be weighed. The fœtus is doomed; the mother alone remains to be considered; but, nevertheless, the question is not simple. We assume that the question is limited to cases in which the fœtus is living and viable. When the fœtus is known to be dead, the chief motive in seeking an alternative to craniotomy is wanting. I do not know if we are sufficiently advanced to advocate or to practise the Cæsarian section as an alternative for the induction of labour before the period of viability of the child. Is any one prepared to contend that a woman whose pelvis is so contracted that she cannot bear a living child *per vias naturales*, ought to be permitted to carry her child to term in order that its life may be saved by the Cæsarian section at the peril of her own?

Now, whether by design or otherwise, we have arrived at this point—there is a viable child; it cannot be brought living through the pelvis; a momentous problem confronts us. Shall we deliberately sacrifice it, by perforation or equivalent operations, so as to save the mother from the perils attendant upon attempts to deliver *per vias naturales*, or by the Cæsarian section at a time selected when the child is viable? In such a case, the Cæsarian section takes rank as an elective operation, as a real alternative of craniotomy. If the opportunity of election between the induction of labour to be completed by craniotomy, or to be evaded by Cæsarian section, has gone by, and we are brought face to face with a labour at term, the pelvis deformed beyond the reasonable probability of extracting the fœtus by embryotomy with safety to the mother, the Cæsarian section has become an operation of necessity. It is not an alternative; it is the only operation.

But does its application end here? And, if not, how far are we to extend its application? This is really the question of the day. It is to this point that our most earnest attention must be directed. I have often insisted upon a fact, sufficiently obvious when simply stated, namely, that the choice between two or more alternative operations is very much determined by the relative skill possessed by the operator, and by the perfection of the means at his command. For example, if a man has a good forceps, and is skilled in its use, he will resort to it whenever he reasonably can; whilst a man who has only a bad forceps, is apt to prefer craniotomy or turning.

Now to apply this proposition to the choice between craniotomy and Cæsarian section in cases of extreme deformity. If we go back twenty years or less, that is, before the epochal modification of the Cæsarian section by our illustrious colleague, Professor Porro, and the remarkable advances in abdominal surgery so largely due to Lawson Tait, it might be contended that the embryotomy instruments, and skill in their use, would turn the scale in favour of embryotomy, and, practically, this preference largely prevailed.

But now we are called upon to consider the question afresh, and we must remember that both the embryotomy instruments and the Cæsarian section have since improved, if not *pari passu*, at any rate together. This simultaneous improvement increases the difficulty of solving the question of choice. If it be proved that Porro's operation is greatly safer than the old Cæsarian, it would still remain to be proved that the increased safety to mother and child is such as to outweigh the increased safety to the mother obtained by the improvements in embryotomy. The improved basiotribes of Tarnier, of A. R. Simpson and others; the adaptation of the axis-traction curve to the cephalotribe; the methods of lamination, by the wire *écraseur* and the forceps—saws of Van Huevel and Tarnier; the removal of the cranial vault by the cranioclast, so as to admit of the base of the skull being whole or broken up, drawn through, like a disc or plate; all these have greatly extended the range of delivery by embryotomy, reducing the range of the Cæsarian section as an operation of necessity. Still it may be, and will be, contended that even this is

debateable ground, and that Porro's Cæsarian section may claim preference as an elective alternative of embryotomy.

For the Cæsarian section, two very powerful arguments may be advanced: 1, that the child is not sacrificed, and that it has a reasonable prospect of being saved; 2, that the mother has a reasonable prospect of being saved. The argument in favour of the Cæsarian section is greatly enforced if we adopt Porro's operation. In the case of the old operation, if the patient survived, she might have, again and again, to encounter the perils of parturition, whereas Porro's operation offers absolute immunity in the future. We must not, however, forget that equal immunity may be obtained by the ordinary Cæsarian section *plus* the removal of the ovaries.

The difficulty still meets us: "Where to draw the line." Uncompromising advocates of the Cæsarian section—if such there be—might contend that it is equal to every case that lies beyond the range of the forceps and of turning; whereas embryotomy is excluded when a degree of distortion which cannot be determined with precision is reached. And it is a grievous thing, after failing by embryotomy, to be forced to attempt to save the mother by Cæsarian section. The child is certainly lost; the mother's prospect is seriously damaged.

Here, again, the statistical test has to be disposed of. The case has been stated somewhat in this fashion: The mortality attending the Cæsarian section is put at, say, 50 per cent., and the mortality attending embryotomy at, say, 30 per cent. Therefore, the decision must be in favour of embryotomy, if we consider the mother only. It is needless now to point out the fallacies which vitiate deductions of this kind. No allowance is made for differences in the conditions under which the operations were performed, or in the skill of the operators. What we want are clinical facts, rigorously conducted, scientifically analysed, and fairly compared. For example, let us postulate a case of dystocia from pelvic contraction, say to 2 inches conjugate diameter, all other things being fairly equal, which operation, embryotomy or the Cæsarian, will give the greater security to the mother? Of course, it must be understood that, in either case, the surgeon selects the best time for action. What facts have we, answering to these conditions, to aid us in determining that either operation is safer than the other?

Here, being on doubtful ground, we may—throwing the fate of the child and the future immunity of the mother into the scale—decide for the Cæsarian section.

But, let us postulate another case: one of pelvic contraction to 3 inches. Here, I do not hesitate to say that embryotomy, performed at a proper time, and with proper skill, ought to give a mortality hardly exceeding that of ordinary labour.

And here the question of the Cæsarian section, as an alternative for craniotomy, assumes a different aspect, is invested with more complications, and becomes more difficult to solve. The ethical question comes prominently, imperiously, before us. We have it in our power to save the mother by sacrificing her child. The alternative is to perform an operation which will probably save the child, and, at the same time, give a doubtful chance of rescue to the mother. Are we justified in weighing the two combined probabilities in favour of mother and child, against the moral certainty of saving the mother?

It is clear that the two cases differ widely. Assent to the first case does not carry assent to the second. Therefore, if it be still contended that the Cæsarian section should in all cases be preferred to embryotomy, it must be justified on other grounds. Two points must be granted, or either of them: 1. Must we abandon the old moral law, which declares that it is the mother's right to save her life, even at the sacrifice of her child's? Are we prepared for this? It is not simply a question for medicine to decide. Religion and the civil law claim a voice—a preponderating voice. In the whole range of the practice of medicine, there arises no situation of equal responsibility, of equal solemnity. Can we in any way escape from it?

This brings us to our second point. Is the Cæsarian section, with its recent improvements, adequate to the reconciliation of the interests of both mother and child; that is, can it, whilst respecting the child, give equal or nearly equal security to the mother with embryotomy? When the Cæsarian section can do this, the difficulty is solved; and we are no longer perplexed with the moral question of the duty to sacrifice the child to save the mother.

This is the ideal towards which medicine aspires. Undoubtedly partial success will be achieved; but it would be yielding too much to the pressure of enthusiasm to admit that we have as yet attained its realisation.

Let us consider some of the difficulties that stand in the way. Some of us are apt, looking back upon the history of ovariotomy and of abdominal surgery generally, to think that the Cæsarian section may soon become equally successful. Far be it from me to discourage this hope. But are the cases analogous? Is there no difference in dividing the stump of an ovarian tumour, and in strangling and dividing the neck of the uterus? I know, at least, that the shock attending the two operations is not comparable. And shock sometimes kills. It is a danger that as yet it is hard to calculate. Can we share the confidence and accept the argument of Lawson Tait when he says: "If I had 100 Porro's operations to do, before craniotomy or any other turbulent proceedings upon the child had been attempted, I would not have a mortality of more than 4 or 5 per cent."

Not to urge that this is begging the question, several serious considerations stand in the way. Even Tait demands 100 cases to give him the necessary skill. Some victims must fall by the way. And what shall we say of the prospect of the mass of obstetric surgeons acquiring a degree of skill that even Tait cannot command? And yet the emergency is often one that cannot possibly be transferred to a trained specialist; it must be encountered by the average surgeon. And where shall the average surgeon acquire the necessary skill?

Again, the justifiable opportunities of practising the Cæsarian section are very limited. Only a few men, practising under exceptional circumstances, as in Germany and Italy, can ever enjoy considerable experience in performing it. In this country, in ordinary practice, craniotomy is not frequently resorted to; and if we subtract those cases where the alternative of forceps, turning, or premature labour would have been applicable, we come to a residuum that might properly fall to Cæsarian section, very small indeed.

As an illustration, let us take the experience of Francis Ramsbotham, an admirable practitioner. Tabulating 68,435 deliveries in the practice of the Royal Maternity Charity from 1828 to 1850, he had 35 craniotomies to 112 forceps cases. Six of the women whose children had been perforated died, and 3 of the forceps cases. But, he says, "of the craniotomies, many of the children were unequivocally dead before any attempt was made to deliver; and that in such cases the head was opened to save the patient from additional pain and danger, when perhaps she might have been delivered by the forceps."

Now, can it be supposed that the Cæsarian section would have given better results? or, if craniotomy was only called for eighty-five times, from this number a considerable deduction being made for cases in which the child was dead, how small is the residuum in which the Cæsarian section could come into competition with craniotomy; and what amount of experience could the most enterprising surgeon fairly get out of even this enormous field of nearly 70,000 labours?

Still, Mr. Tait feels certain that "the decision of the profession will be, before long, to give up the performance of those operations destructive to the child in favour of an operation which saves it, and subjects the mother to little more risk." I am afraid the risk is more than little, and that little involves the sacrifice of mothers who might plead their right to be spared. They might object to be sacrificed even to establish a scientific truth, that might save their sisters.

That embryotomy in the moderate degrees of deformity will save more mothers than the Cæsarian section can hardly be disputed. And I think it can be shown that it can be the means of saving more children too. This may seem at first sight paradoxical. But this is what happens: A woman in labour at term, or near term, is delivered by craniotomy; that child, of course, perishes. But the mother survives; and, in future pregnancies, labour being induced at seven or eight months, she may bring forth not one, but many live children. Add these infants saved to the mothers saved, and I believe that the aggregate saving of life, infant and maternal, will surpass anything that is likely to be obtained by the Cæsarian section.

Having dwelt sufficiently, or at least as long as the time at our disposal will permit, upon the most important point—the alternatives of craniotomy in cases of distortion—we must briefly consider other particular cases.

Labour Obstructed by Ovarian or Pelvic Tumours.—If an ovarian tumour be found to complicate pregnancy, the rule is now settled that it is proper to remove it by abdominal section, and to leave the uterus to take care of its burden. In such a case, laparotomy may be an alternative for craniotomy or for the Cæsarian section. If labour at term, obstructed by an ovarian tumour, presents itself, the same rule applies. Remove the tumour, and it may then be possible for the labour to terminate spontaneously, or by forceps or turning.

But there are cases where the pelvis is blocked by irremovable tumours. For the most part, these are fleshy or bony tumours, growing from the pelvic walls. When such tumours exist, even of such moderate size as to forbid extraction of the child by forceps or after craniotomy, without the risk of crushing or seriously bruising the

tumour, Porro's operation is the proper alternative. It is better in the double interest of mother and child.

In cases of rupture of the uterus, Porro's operation is the most rational proceeding. Whether the child be alive or dead, this is the proper alternative for craniotomy or turning, or even the forceps.

In cases of obstructed labour from malignant disease of the cervix uteri, or from fibroid tumours, it will, I think, be generally better to resort to the Cæsarian section. And this is especially a case for Porro's operation, if the whole uterus, including the diseased portion, can be removed.

When obstruction is due to atresia, or closure of the os externum uteri, we must not hastily assume that the Cæsarian section is called for. Moderate incisions, radiating from the point judged to be the seat of the os uteri, followed by dilatation by the water-bags, has been so strikingly successful, in cases under my care, that this proceeding may generally be looked upon as the proper alternative for craniotomy and the Cæsarian section.

A case more difficult to determine is that of atresia, or occlusion of the cervix and vagina, from cicatricial contractions. In moderate cases, radiating nicks or incisions, and the use of the water-bags, may enable us to avert craniotomy by the forceps. In extreme cases, where the opportunity of inducing labour or abortion has not been given, the course is more doubtful. In such cases, we can rarely tell to what extent safe dilatation can be carried. But it is right, in the first place, to proceed tentatively by incisions and dilatation; and, when we find that this course cannot prudently be carried further without danger of laceration, the difficulty should be met by bringing down the bulk of the child to the capacity of the passages by embryotomy. In one such case I pursued this course, the mother making a good recovery. By incisions, dilatations, and wearing pessaries, continued for some time when not pregnant, the capacity of the passages was so well restored, that she bore two live children, one prematurely, the second at term. Now, if the Cæsarian section had been resorted to, it is highly probable that, although the first child might have been rescued, the mother would have been lost; and it is certain that two live children would not have been born.

Convulsions.—Not many years ago, it was widely believed that, in the uræmic convulsions of pregnancy, the urgency to deliver was so imperative that it was held necessary to effect delivery by the quickest method—that is, by craniotomy. Now that we can control the convulsions by chloroform, or nitrite of amyl, and can dilate the passages by the water-bags, the plea for craniotomy is gone. Chloroform, nitrite of amyl, elastic dilatation, turning, or forceps, constitute the proper alternatives.

Hæmorrhage.—Until within recent years, no emergency in obstetrics was held to render instant delivery more imperative than the so-called accidental and unavoidable hæmorrhage; and the *accouchement forcé* was too apt to imply craniotomy. In some cases of accidental hæmorrhage, it may still be justifiable to perforate—the more so as the child is likely to have perished. But in placenta prævia, in which my experience has been large and successful, I have no hesitation in saying that craniotomy can rarely or ever be justified. Since the demonstration of the true theory of placenta prævia, and the clinical proof that the hæmorrhage may almost always be arrested by puncture of the membranes, by detachment of the placenta from the lower zone of the uterus, by dilating the cervix by the water-bags, and extracting the child, if necessary, by forceps, or turning by the bi-polar method, there can be no excuse for craniotomy or other method of violent delivery.

When there is obstruction to the labour, the child being dead, there is no object in seeking an alternative to craniotomy.

Embryotomy, as by decollation, is especially indicated in cases of impaction of the child's body in shoulder-presentations, the child being dead, or turning hazardous.

A case in which there is no proper alternative for craniotomy is that where obstruction is due to excessive size of the child's head from hydrocephalus or other deformity. Embryotomy is in like manner indicated where the child's abdomen is of excessive size from dropsy, or enlarged liver or kidney.

In conclusion, let me submit the following summary of the arguments set forth.

1. The legitimate aspiration and tendency of science is to eliminate craniotomy on the living and viable child from obstetric practice.

2. The advance of hygienic rule, the improvements in the forceps, in turning, in the induction of labour, and in obstetrics generally, have materially curtailed the field within which craniotomy can be justifiable.

3. In the most extreme degrees of pelvic distortion, where delivery *per vias naturales* can only be effected with doubtful success to the mother, Porro's operation is the legitimate alternative for craniotomy, it being understood that the opportunity of inducing abortion has gone by.

4. In less advanced degrees of pelvic contraction, but still incompatible with the delivery of a living child *per vias naturales*, the opportunity of inducing abortion having gone by, but in which craniotomy would effect delivery with strong presumption of safety to the mother, the Cæsarian section may be a proper alternative for craniotomy. This is the most debateable point.

5. In the minor degrees of contraction, say from three inches to three and a half or three and three-quarters inches, the opportunity of inducing labour having gone by, the far greater safety to the mother obtained by craniotomy, and the prospect of living children in future pregnancies by inducing labour, make craniotomy the proper course to adopt.

6. In other emergencies than deformity, as in obstructed labour from ovarian tumours, the alternative to craniotomy is to remove the tumour.

7. In cases of immovable tumours, Porro's operation is the proper alternative.

8. In rupture of the uterus, the child being delivered or not, Porro's operation is the proper alternative. There the interests of mother and child coincide.

9. In cases of disease or tumours of the uterus obstructing delivery, Porro's operation is the proper alternative.

10. In atresia of the cervix or vagina, Cæsarian section or craniotomy may be necessary; but incisions and gradual dilatation will more frequently be the proper alternatives.

11. When obstruction is due to hydrocephalus or dropsy in the child, embryotomy or tapping is indicated. When the child is dead, embryotomy is indicated, and decollation when the child is impacted, and turning is hazardous.

12. In convulsions and hæmorrhages, the proper alternatives for craniotomy are found in the more scientific methods of conducting labour under these complications.

Lastly, but the dream of Tyler Smith, the abolition of craniotomy, will be fully realised only when hygiene shall have triumphed over disease and deformity.

CRANIOTOMY AND CÆSARIAN SECTION.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association, in Brighton.

By R. J. KINKEAD, M.D. Dubl.,

President of the Irish Medical Association; Professor of Obstetrics in Queen's College, Galway; late Examiner in Obstetrics in the Queen's University in Ireland.

In dealing with any or all the alternatives to craniotomy, the principal question that attracts attention is this: Is it probable that the maternal mortality can be reduced to the level of that following craniotomy?

To ascertain the mortality after craniotomy is not easy; statistics on this point are singularly defective.

Within a certain limit of pelvic curvature, craniotomy is the easiest obstetric operation. Performed with ordinary skill and caution, it does not add to the puerperal risk. When, however, we have to deal with a greater degree of deformity the case is different; and high authority has not hesitated to declare that, with a conjugate of two to two and a half, the Cæsarian section is preferable, in the interests of the mother.

Parry has proved from collected cases that, with a conjugate diameter of two inches and a half, craniotomy is not more successful than Cæsarian section. That the maternal mortality after the Cæsarian section has been exceedingly great cannot be controverted. That there is anything in the operation itself which should necessarily make it so fatal, I deny. In a great measure, its fatality has been due to delay in, and defective methods of, operating; and these have been the consequence of the dogmatic teaching, that the operation is almost necessarily fatal.

At present, there appears to be a turn in the tide, a disposition to doubt the essentially sacrificial nature of this alternative to craniotomy. Mr. Lawson Tait has written in favour of Porro's operation; and even Dr. Barnes, who, in his *Obstetric Operations*, emphatically condemned the Cæsarian section, in his *Obstetric Medicine and Surgery* admits that it is not necessarily fatal to either mother or child; that, if it could be done at a chosen moment, and improved so as greatly to increase the probability of saving the mother, then the already high

probability of saving the child might turn the scale in favour of the operation. This admission from so eminent an authority—one so emphatic in condemnation so lately as 1876—would of itself be a powerful reason for a reconsideration of the doctrines generally received, as to the relative positions of craniotomy and the Cæsarian section.

Statistics are deficient; though not absolutely reliable, yet we can obtain some illumination from them as to relative mortalities in the past.

The following table, taken from a paper read by me before the Obstetrical Society of Dublin in March, 1880, gives the percentage of maternal mortality in craniotomy, and the nature of obstruction causing operation.

Cause of Operation.	Percentage of Maternal Mortality.
Contracted pelvis, 2½ inches and under. Parry	37.5
Pelvic tumours. Stadfelt	40.
Ovarian tumours.[1] Playfair	46.6
Ovarian tumours, no other treatment. Playfair	60.
Carcinoma of uterus. Hermann	75.

[1] Includes cases in which tumour was punctured or pushed above the brain.

Now, comparing this mortality with that given for Cæsarian section, and bearing in mind that in the Cæsarian cases are included those in which patients were moribund at the time of operation, those in which labour had been protracted for hours, those in which attempts to delivery by forceps, or turning, or craniotomy, had been made, there does not appear that remarkable saving of the maternal life which can justify the necessary destruction of the fœtus. Thus the results of Cæsarian sections have been:

Number.	Percentage of Mortality.
1,605, quoted by Barnes	46.0.
130 ,, Harris	56.
32 ,, Kinkead	62.5.

If, however, we take timely operations alone—that is, those operated on within twenty-four hours from the commencement of labour, and in which attempts to deliver *per vias naturales* had not been made—the result is very different. Harris's researches show in these cases a maternal mortality of 25 per cent., a result which the few cases I have been able to collect confirm. This percentage is far too high; and, when we consider the causes of death, I think it must be admitted that there is no necessity why it should be.

The causes of death after Cæsarian section are, shock and exhaustion, hæmorrhage, peritonitis, septicæmia, and incarceration of intestines. The liability to all and each, save perhaps the last, is enormously increased by delay. Every hour spent in unavailing labour adds to the danger; yet it is impossible, with the dogmas drilled into their heads, (1) that the operation is sacrificial, (2) that craniotomy ought to be performed even with an inch and a half or one inch conjugate, but that men should hope against hope to effect delivery *per vias naturales*, and should put off to the last the evil hour.

Then, when the patient is exhausted by pain and fruitless expulsive efforts; when structural change, produced by protracted uterine contractions, has taken place; when her nerve-force is expended, her vital powers failing; when she sinks from the shock, or falls a victim to the sequelæ almost necessarily resulting,—the case is quoted as an additional item in the sum total testifying to the essentially fatal nature of the Cæsarian section.

The shock of the operation is not greater than that following ovariotomy. It has been successfully combated in the latter; it follows that it can be as successfully dealt with in the former.

Hæmorrhage is a more formidable antagonist both during and after operation. I doubt if it is more liable to occur from the placental site (if unwounded) than after ordinary delivery; and the prophylactics against it are early operation, ergot, and styptics.

The real risks result from the uterine incision, and no one can read the histories of Cæsarian cases without being struck by the very eminent peril from this source. But are we powerless to deal with this danger? Are we unable to reduce it to a minimum? The plan of constricting the cervix uteri by a wire or elastic ligature, prior to making the incision for extracting the child, was, I believe, first suggested by Litzmann, of Kiel, and was probably taken from Porro's method. A decided improvement on this plan was carried into effect by Dr. Anna Broomall. The case is reported in the *Medical Times and Gazette* of November 3rd, 1883. It consisted in turning the uterus out of the abdomen, and grasping the cervix with the hand. Although the placental site was cut through, not a drachm of blood was lost from the uterine incision. Therefore, by means of compression of the cervix with either a wire, an Esmarch's tube, an elastic band, or the hand, we can perfectly control the circulation, and prevent hæmorrhage during the operation. After it, if a permanent condition of contraction obtain, there will be no hæmorrhage. But we cannot with certainty calculate on such a contractile condition. Trusting to contraction absolutely or effectively to control hæmorrhage, is placing reliance on a chance. Security can only be obtained by satisfactorily suturing the uterine incision.

Keeping the edges of the uterine incision in apposition, and so promoting their rapid union, not only prevents bleeding, but guards against the other dangers of septicæmia, peritonitis, and incarceration of intestine.

The mistake hitherto made has been that of using the interrupted suture in a mobile constantly contracting body like the uterus; consequently, the wound has gaped between the sutures; or they have been torn out; or when gut has been used, the knots bathed in and softened by moisture, have untied, and either bleeding has occurred, or discharges have been poured into the peritoneum.

Sanger suggests a method, which, to a certain extent, is approved of by Leopold, for example, dissection of peritoneal flaps and resection of uterine tissue, so as to bring the peritoneal surfaces together; but if the continuous suture be used, this process is altogether needless. Antiseptic catgut, as soft and pliable as silk, can be left with safety in the uterine wound and within the abdominal cavity. With a continuous suture of this material, the edges of the uterine-wound can be brought into, and kept in, accurate apposition. There are no knots to untie. Uterine contraction cannot separate the edges of the wound, neither can hæmorrhage take place, nor lochial discharge escape into the peritoneal cavity, nor can the intestine become incarcerated.

It is curious in how few cases sutures have been used at all, and in only two have I been able to find a report of the use of the continuous suture. Both of these were operated on by Sir Spencer Wells. One recovered, and the other died; in the latter, it was discovered at the *post mortem* examination that the suture had worked its way out of the upper half of the uterine wound.

This appears to have resulted from one end of the suture being left free in the abdomen, and the other brought out of the vagina, in order that by pulling on the vaginal end, the entire suture might be removed.

The use of antiseptic catgut obviates entirely the necessity of removing the suture; there is, therefore, no reason why the ends should be left free. But as experience has shown that knots on catgut used to suture the uterus untie, both ends of the suture should be brought out through the vagina, or through the lower angle of the abdominal wound.

A striking fact observable in reports of Cæsarian cases is the rapidity with which the abdominal wound is closed, as if the object was to get the whole thing done with and put out of sight as rapidly as possible. Granting the importance of rapidity, yet the cleansing of the abdominal cavity, and the closure of the uterine wound are more important.

If, as I believe it can be, the mortality after the Cæsarian section is to be reduced to the level of that of ovariotomy, the same care must be taken in every step of the one that experience has shown to be needful in the other.

If the operation is performed before the vital powers are weakened and the uterine tissues injured by protracted parturition; if it is done with the means at our disposal for controlling hæmorrhage, with the continuous suture, with thorough cleansing of the abdominal cavity, with scrupulous cleanliness and care in every stage, I have no doubt but that it would be as safe for the mother as craniotomy, and that, considering the very high probability of saving the child, it ought to have a prior place to the only operation sanctioned by surgery, which is undertaken with the avowed object of destroying life.

Finally, I would point out that, to reduce the bulk of the child, or to extract its mutilated remains, though a pelvis of 2½ or less conjugate, is an operation of extreme difficulty; one occupying a very considerable period of time, and needing for its successful accomplishment, as far as the mother is concerned, very great experience, and an amount of manual dexterity hardly to be acquired outside of large cities; while, on the other hand, the Cæsarian section is an easy operation, capable of successful performance by any surgeon of ordinary skill.

Dr. LUSK (New York) believed that, under 2¾ inches, namely, below the limit where premature labour and version were available, modern methods of Cæsarian section were preferable to craniotomy. Cæsarian section always held out promise when performed under

favourable circumstances. The weak side was always the gaping of the uterine wound. Porro's great merit consisted in doing away with this danger by the removal of the organ. But a still greater work was the reawakening of the professional interest in the Cæsarian operation. The result was the wonderful success of Leopold and other Germans with the uterine suture of Sänger. This method, according to the latest reports, showed, in twenty-six cases, nineteen recoveries, and seven deaths. In all the latter, the operation was performed under circumstances well nigh hopeless. Cæsarian section, modified by Sänger, Porro's operation, and that of Dr. Thomas, were not rival, but supplementary operations. Sänger's operation was done after partial dilatation of the cervix, in early cases, and when the patient was in good condition; Porro's operation, where prolonged labour had ended in impaired integrity of the uterine tissue; Thomas's operation after dilatation of the cervix when the head was arrested at the brim, and there was ulceration of the uterus above the largest circumference of the child's head.

Dr. WILSON (Baltimore) said that, in a large obstetric practice of thirty-six years, he had not performed one craniotomy in the last thirty years; and he believed the day was not far distant when craniotomy would be a very rare operation in obstetric surgery. With the advancements made within the last few years in abdominal surgery, and the successes obtained in the same, he was satisfied that the Cæsarian section, or Porro's operation, would very soon take the place of craniotomy in obstetric practice.

Dr. SWAYNE (Bristol) stated that, however one might sympathise with Dr. Tyler Smith and others in their attempt for the total abolition of craniotomy, yet there were many cases, where the conjugate diameter was between three and four inches, in which craniotomy became necessary as a last resource. For instance, turning or the forceps were tried and failed, and then craniotomy had to be performed. The child, for instance, was turned, and the head was arrested in the pelvic brim. The child died from pressure on the cord, and craniotomy was necessary. Also where a child was undoubtedly dead, craniotomy was not only justifiable, but proper.

Mr. LAWSON TAIT (Birmingham) said that he could add but little from the obstetric side of the question; but, from the surgical aspect, he felt certain that the argument, that such operations as that of Porro would fall largely, of necessity, into the hands of men inexperienced in abdominal surgery, was not of much value; for exactly the same thing was true of bad cases of craniotomy; and he felt certain, of the two classes, under similar circumstances, the resulting advantages would be largely on the side of amputation of the uterus.

Dr. MORE MADDEN (Dublin) congratulated the Association on having obtained the interesting and able statements which Dr. Lusk had made. In a long obstetric experience in hospital and private practice, and as an obstetric teacher, he had not himself been able to recognise the necessity of craniotomy, and he had never resorted to or countenanced it. He was aware that, in Dublin, cases of labour complicated by great pelvic deformity, were much more exceptional than in other places where rickets were prevalent. In cases of difficult or complex labour, in which craniotomy, which he regarded as a murderous and horrible operation, had been recommended, he had been fortunate enough to save life by one—or attend the various improved methods of artificial delivery now available—namely, either by the induction of premature labour; by the different modifications of Porro's operation; or by the Cæsarian section; or by the timely and judicious employment of the long forceps, or version—whichever method might be adopted, it should, he said, be borne in mind that the primary object of the obstetric art was to deliver living children from living mothers, with safety to both.

Dr. NEVILLE (Dublin) said he could not understand Dr. More Madden's statement that during a long experience he had never found craniotomy necessary, though he had only once performed any form of delivery through the abdominal walls; namely, one Cæsarian section. Dr. Lusk had rightly appreciated and stated the merits of the question, and he (Dr. Neville) agreed with him in preferring Sänger's operation in favourable cases requiring craniotomy, or one of its operations; reserving Porro's operation for the less favourable cases in which labour had been very protracted at the time of operation. The results of Sänger's operation were even better than Dr. Lusk had stated, 21 having recovered out of 27 operations, up to the middle of June. It was much to be regretted that English textbooks contained no proper description of Sänger's operation, the essentials of which consisted in employing 8 or 9 deep muscular silver sutures, just avoiding the decidual line, and 18 to 25 superficial "symperitoneal" catgut sutures. Out of 19 cases of this operation performed in three German Hospitals, 18 women recovered, and all the children were saved.

Dr. ALDERSON (London) referred to the danger of considering that Porro's operation required no more surgical skill than craniotomy. It might be so in the hands of Mr. Lawson Tait, but he did not think so with the average surgeon. Dr. Alderson had operated by craniotomy seven times, and nearly always successfully; on one patient three times. She refused to have labour induced, and he refused to alter it. He had since heard that she died in labour in craniotomy. He did not forget one lady unfortunately died, but she had been several hours in labour. Two surgeons had endeavoured to deliver previously. He also failed to apply forceps, and also to deliver by craniotomy.

Dr. M. CAMERON (Glasgow) agreed with Dr. Lusk that all these operations need not be at all antagonistic. His opinion was, that the question was obstetrics *versus* surgery, and would not trust the opinion of any surgeon he knew as to whether a case was one requiring any instrumental aid whatever. Surgeons boasted that they had never attended a midwifery case unless, perhaps, their own birth. Under such circumstances, they were not the persons to decide when the case was one for forceps, craniotomy, or Porro's operation. In fact, he had known cases where the patients fared better when left to a midwife than in the hands of a physician. When attended by the physician, the cases were for craniotomy; but when attended by a midwife, living children were born. Therefore he would urge a closer study of obstruction at the brim, as might be found in Lusk's or Charpentier's works, and a very careful examination of every case met with. His own experience was that craniotomy need not be so fatal, if proper care were shown in the removal of sharp bones. Again, with regard to ovariotomy, he knew many skilled surgeons who refused to operate if the patient were menstruating. Such being the case, it could well be understood how pregnancy would largely increase the danger in an abdominal operation.

Dr. THOMPSON (Rome) was surprised to hear gentlemen state that, during twenty years of extensive practice, they had met but one case demanding craniotomy or abdominal section. His experience must have been very unfortunate, as, during thirty years of a rather large obstetric practice, he (Dr. Thompson) had repeatedly seen cases demanding either the operation of craniotomy or Cæsarian operation. With the advance in abdominal surgery of the last ten years, he believed the chances for the mother and child were far better by abdominal section than by craniotomy. The latter operation he considered unjustifiable, as it caused certain death to the child and great risk to the mother. With the abdominal section there were prospects for both.

Mr. HOUGH (Cambridge) said that, after a large practice of midwifery of over forty years, he had only met with one case in which it was necessary to perform craniotomy, and that was about forty-two years ago, under the advice of the late Dr. F. Ramsbotham. He had lately made more frequent use of the forceps than he had been formerly in the habit of doing.

Dr. EDIS (London) thought there was one aspect of the question which had not met with the consideration it deserved, and that was the preventive aspect. No practitioner should undertake to attend a patient in labour without insisting firmly but kindly upon the necessity of ascertaining the conjugate diameter of the pelvis in the case of a primipara, or of acquainting himself with the history of previous labours in cases of multiparæ. If the diameter of the pelvis were such that labour at full time of an average-sized child seemed improbable, it was clearly a duty to induce premature labour, if such a measure seemed judicious, as offering a better chance to both mother and child than if pregnancy were allowed to go on to full time. Dr. Edis had succeeded in delivering living children in cases of contracted pelvis, where craniotomy had been resorted to on many previous occasions. Where the precaution of ascertaining the capacity of the pelvis was neglected, cases would continue to occur where craniotomy apparently offered the simplest way out of the difficulty, more especially in those cases of protracted labour where the life of the fœtus was presumably already sacrificed, and the fœtal head was impacted in the pelvis. But, if every practitioner would make a point of exploring carefully the capacity of the pelvis when first called to attend a patient in labour, supposing that he had not previously done so, as suggested, there would still be time for considering what method of operation would be likely to prove most satisfactory to both mother and child, in place of hastily resorting to craniotomy. Although the life of the child was potential, the mother's being actual, still that was no reason why due consideration should not be given to its interests. With the improved methods of abdominal surgery, there was little doubt but that Porro's operation, as now modified, should largely replace the repulsive operation of craniotomy. Laparo-elytrotomy, in skilled hands, might prove useful in some cases, but

would never come into very general use, on account of the difficulties attending it and the danger of injuring the base of the bladder.

Mr. C. J. WRIGHT (Leeds) named three cases of Cæsarean section in which he assisted. The mothers died, but all three children were saved. In this country, this operation was performed after prolonged labour, when the mother was exhausted. For Porro's operation, however, a suitable time might be selected, and due preparation made before the powers were weakened. The serious point to decide was how far a surgeon was justified in recommending Porro's operation for those cases where, with a contracted pelvis, induction of premature labour had failed to produce a living child, or where craniotomy had been repeatedly required.

Dr. BARNES briefly replied to the discussion.

HYDROPHOBIA AND ITS PREVENTION.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Brighton.

BY NORMAN KERR, M.D., F.L.S., LONDON.

THOUGH it has been contended by some learned and skilful practitioners of our art that there is no such disease as a true hydrophobia, our recent British experience must have opened the eyes of even the most sceptical to the reality of this terrible affection in man. I confess that, at one time, I shared in this scepticism, which unbelief arose mainly from personal immunity after repeated and troublesome bites from dogs, and from having had under my care patients who had been bitten by rabid animals, who, after intervals of years, had experienced no ill effects beyond nervous disturbance, and symptoms dependent on the irritation of the wounds. I had also to deal with cases in which an unmistakable attack of true hydrophobia seemed to be imminent, but where stimulating (that is, medicinally stimulating) treatment, combined with encouragement of the patient, change of scene, etc., gradually subdued the nervous terror, with the happy issue of complete recovery. The serious outbreak amongst us during the past two years has, however, compelled me to believe in the existence of a true hydrophobia. By this term, I mean a specific disease occurring in man, arising from the action of a virus communicated from an animal labouring under an attack of rabies, characterised by a group of symptoms, the most characteristic of which is what may be called spasmodic dysphagia, agonising uncontrollable contractions of the muscles of the throat and neighbouring regions, excited by liquids or attempts to swallow, or by various external influences, such as a current of air or the falling of water, or even occurring apparently spontaneously. In spurious hydrophobia, I have known death occur from the bite of a dog through nerve-shock and extreme dread, in which some of the usual symptoms of true hydrophobia have been present, though the dog lived long afterwards, and showed no symptom of madness. I need not discuss the question of spontaneous rabies, or of a spontaneous hydrophobia or allied affection. To-day, I deal only with both where they have been communicated through injuries inflicted by other individuals.

The disease is not a new one. It was known to Aristotle. In modern times, during the latter half of the eighteenth century, it appeared in the French West Indies, and, in a few years afterwards, in Jamaica. In the beginning of the present century, it broke out in South America. In England and Wales, during the three quinquennials from 1870 onwards, the annual average number of deaths from hydrophobia was forty-two. The numbers fluctuated considerably, there having been in one year only twenty-eight, and in another as many as eighty-two deaths.

The proportion of those bitten, who have been attacked with hydrophobia, has been variously estimated. In John Hunter's experience, it was 1 in 21. In the Stockholm Royal Hospital experience in 1824, it was 1 in 106. In one case of rabies in a dog, with the history of which I am acquainted, three persons out of the five who were bitten died from hydrophobia within fifteen months. Probably the estimate of 25 per cent., which I have published elsewhere, is tolerably near the truth.

A dog afflicted with rabies generally dies within a fortnight; so that, if the after-history of the dog be known, and if it have lived beyond that period, the person who has been bitten need have no fear of hydrophobia setting in.

Though many inquirers have wrought assiduously at the subject, Pasteur especially having, by the marvellous extent and accuracy of his experiments, laid science under deep obligations, it must be admitted that we know as yet little of the *rationale* of the disease. The general tendency of the observations of Pasteur and others points to the existence of a specific germ or microbe, but, though there have been many false finds, such a body has not hitherto been discovered. Dumb rabies and furious rabies seem to arise from the same virus; but there is little doubt that, in different individuals bitten by the same rabid animal, the period of incubation and the severity of the attack may be varied by the idiosyncrasies of each. Clifford Allbutt discerned microscopic changes in the brain and spinal cord, and Gowers in the medulla oblongata. From these and other observations, fully confirmed by the researches of Pasteur, it appears now pretty well made out that the parts affected by the virus are the medulla oblongata, the spinal cord, and the nervous centres.

Hydrophobia may be communicated from various animals. A popular nobleman died in the early part of the present century from hydrophobia following a bite from a rabid tame fox. Many fatal cases have resulted from injuries by rabid wolves, while rabid jackals, horses, and badgers have also originated the disease. Probably, the fact that many domestic animals are not in the habit of biting human beings may account for no record of cases, for example, from the cow; but it must be borne in mind that rabies is a very rare occurrence among these. Pigs and goats are among the animals known to have become rabid.

My own impression is, that the splendour of the recent researches and results has diverted attention from the need for close watchfulness of the rise and progress of hydrophobia in the living human subject. In a remote district in an eastern country, about eighteen months ago, a medical friend of mine was bitten by a rabid dog in two places, one on each hand. He asked a colleague to excise, and apply nitric acid. The latter declined, looking upon the simple application of nitrate of silver as efficacious as the more heroic measure. My friend thereupon excised the bitten part on the left hand with a razor, cutting right down to the bone, and applied the acid. He was unable to excise the injured part on the right hand, therefore had to content himself with the application of the acid. The wounds on both hands healed up without any difficulty. He experienced no further trouble with the left hand, which had been operated on heroically; but, in about five weeks, a curious feeling of numbness set in at the seat of injury on the right, accompanied by heat, pain, and slight swelling. He laid open the hand, when he detected two little inflamed cellular bodies, which were at once destroyed with nitric acid by his wife, who cauterised the whole wound thoroughly, in the absence of professional assistance. The pain, heat, and swelling rapidly subsided, and the numbness followed suit, the wound soon healing without complications. Every other person, save one, who had been bitten on the same day by the same dog, had meanwhile died from hydrophobia. This recrudescence of pain and discomfort before a pronounced attack of the disease sets in, has been observed by others. It appears to me most probable that the virus is enclosed in a cell or cells, or is in some as yet unknown way confined in the wounded tissues, and, after a longer or shorter period of inactivity, may be roused from its quiescent and latent state, either by an inherent power of its own, or by some condition of the system, and developed into activity with the issue of true hydrophobia. May it not also be that, in some cases of perfect functional and organic health, with no disturbing environment, the poison, incarcerated within the cell or tissues, may be absorbed without any injurious effect?

The period of incubation may, I believe, terminate in eight days, and may be prolonged even to eighteen months; though I have little doubt that, in the great majority of instances, this stage is passed within sixty days.

I cannot hold that all Pasteur's cases have been clearly shown to have been the subjects of bites of rabid animals, though he has done all in his power to verify the fact. Yet it cannot be denied that he seems to have (so far as the evidence before us goes, and without prejudice to the forthcoming report of the Pasteur Commission) fair ground to allege that he has had only 4 deaths in 1,049 cases of bites from rabid dogs. 113 of these cases were classed as hydrophobic from the successful inoculation of other animals by a part of the spinal cord and brain, or from some animal bitten by them having been attacked by the disease. The remainder were certified by the local veterinary surgeon. The existence of the disease was thus apparently made out, and yet there was but one fatal case in this group. In the remaining 936 cases of the clinical category, in which the presence of the disease had been certified by the communal veterinary surgeon, three died from hydrophobia. No such results, of which the records are incontestable, have ever before been approached. Up till July 1st last, Pasteur had treated in all 1,426 cases of dog-bites, with 4 deaths, and 48 cases of wolf-bites with 7 deaths.

Whatever the truth as to the successful discovery of a remedy by Pasteur, something more is needed. Preventive measures are called for, and, in the interests of public medicine, it is imperative that we endeavour, by every possible means, to prevent the development of rabies in the dog and other animals. Is this practicable? In view of the wonderful success, in spite of great difficulties arising from prejudice against the practice engendered by misconception and misrepresentation of the facts, which has followed vaccination against small-pox in man, we may fairly anticipate a similar result from the inoculation of dogs against rabies. The cases, however, are so rare that, for the present at least, popular opinion will probably not support a Government in enforcing inoculation against the interested and short-sighted opposition of the owners of animals.

What resource then remains? The adoption of two plans, the one the complement of the other, which, if rigorously executed, would effectually stamp out the disease. The one is the muzzling of all dogs, as is carried out in Prussia, where, in consequence, there has been no case of canine madness for a long time. The muzzle ought to be of a pattern approved by the authorities, and should be constructed to prove as little irksome to the wearer as possible, while absolutely hindering the dog from biting.

The muzzling of dogs in London rapidly reduced the number of cases of rabies and hydrophobia. In November, 1885, there were 58 cases of the former, and 5 deaths from the latter. In the early part of December, the order for muzzling dogs was enforced, and, in that month, the number decreased by 12 cases and 4 deaths. So effective was the muzzling, that the numbers fell in January, 1886, to 27 cases of rabies, and 1 death from hydrophobia; and, in February, to 14 cases and no death. Had this measure been in force throughout the kingdom, the results outside the metropolitan area would probably have been as satisfactory.

The other proposed regulation is that all dogs, muzzled or unmuzzled, wandering about, and not under control, should be arrested and taken to a hospital or house of rest, where they could be claimed by their owners within a certain limited term of days. All dogs with suspicious symptoms, or unclaimed, or not otherwise properly disposed of, should be destroyed by Richardson's painless process.

By these measures, effectively enforced in the provinces as well as in the metropolis, the fearful malady of hydrophobia would very soon be all but unknown in our midst.

THERAPEUTIC MEMORANDA.

DEPRESSING EFFECTS OF ANTIPYRIN.

THIS drug has recently been administered in several cases of high temperature occurring in the station-hospital at Peshawur. Some of these cases were suffering from enteric fever, others from remittent fever. The temperatures ranged as high as 105°. The administration of the antipyrin usually, not invariably, was followed by a steady decline in temperature to the normal point; but the intermission rarely lasted more than from twelve to twenty-four hours. The drug had no permanent influence in reducing temperature, or modifying the *materies morbi*. But in one case more serious results occurred. A dose of 30 grains of antipyrin was administered to a case of enteric fever, thirty-three days in hospital, and slowly recovering. All acute symptoms had subsided, but the evening temperature remained high —104°.

In about four hours after the medicine was taken, the temperature fell at once to 95°, and this was accompanied by the most alarming collapse, sighing respiration, cold extremities, clammy surface, and feeble pulse. In a few hours, under stimulants these depressing symptoms disappeared; and at 6 A.M. the temperature was again at 104°. The drug was not tried again in this case; and my recent experience has led me to look with a little suspicion on so uncertain a remedy.

EDWIN FAIRLAND, Surgeon-Major Medical Service, Peshawur.

ANTIPYRIN AND TEMPERATURE.

A GIRL, aged 12, who was suffering from the symptoms of large white kidney, with highly albuminous urine, came under my care at the Samaritan Hospital, in May, 1886. On the first occasion, when antipyrin was prescribed, the temperature was 103.0; a fall of three degrees took place in twelve hours after taking five grains of the drug, with much relief to the head. On the 25th, when the temperature again rose to 103.0, five grains of antipyrin brought it down to 100.0 in four hours, reduced the frequency of the pulse, and calmed excitement. On the 30th, when the temperature was 104.0 at 9 P.M., a fall of three degrees took place in three hours after the administration of five grains of the drug. On June 9th when the temperature was 104.0, seven grains of antipyrin given at 4 P.M. caused the mercury to fall to 99.4 at 8 P.M.

Whenever the temperature is disposed to run high in the febrile affections of children, as in pneumonia, typhoid fever, and exanthemata, antipyrin appears to be a remedy of decided value. In these diseases, antipyrin almost invariably reduces the temperature very quickly, sometimes as much as three or four degrees in a few hours, but it soon rises again. Sweating is not invariably produced; when it is, the fall is more rapid and decided. No purging or ill consequences followed the administration of the drug in the cases that have come under my notice. My friend, Dr. Moncorvo, of Rio de Janeiro, speaks very highly of it in a recent treatise of high merit, entitled *De l'Antipyrine dans la Thérapeutique Infantile.*

WILLIAM H. DAY, M.D., 10, Manchester Square, W.

CLINICAL MEMORANDA.

BLACK TONGUE.

CASES of black tongue being of rare occurrence, it may be as well to record them, and I therefore forward a short account of one that has lately fallen under my notice, which closely agrees with the very able and accurate description given by Mr. Butlin, in his work on *Diseases of the Tongue.*

It occurred in the person of a friend, who is a nautical officer, aged 47, a widower with one child. His general health was good, but when first he noticed the condition, he had been suffering for some two or three weeks from a "lawn-tennis" strain (and bruise) of the calf of the leg. On June 16th or 17th last, he accidentally discovered on the dorsum of the tongue, and centrally situated, a large, dark patch, the size of half-a-crown; his attention being probably attracted thereto by abnormal sensation (metallic taste). The size of the patch gradually increased. He showed it to several medical men, only one of whom, he says, a ship-surgeon, seemed to take any practical interest in it; and he suggested the use of sulphurous acid as a wash. His own medical attendant, whom he saw incidentally the same evening, recommended him to use boracic acid. He tried first one and then the other, and says the latter appeared to be the most effectual, though he is somewhat doubtful as to the efficacy of either; he also used a whalebone scraper of a morning, and found that by this means, and by sponging it with the boracic acid, he could separate small shreds.

The colour toned down from black to brown, from the centre to the sides, and about the first week in August (that is, in about two months) it gradually disappeared. The expression used by Raynaud (op. cit.) of its resemblance to "a field of corn laid down by wind and rain," quite took his fancy. The tongue is still coated (September 16th), but the colour is gone.

Since the loss of his wife, about a year ago, this gentleman has been much dispirited, and has lately had recourse to chloroform to obtain sleep.

J. R. STOCKER, M.B., M.R.C.P.

SURGICAL MEMORANDA.

CASE OF STRANGULATED HERNIA TREATED BY PUNCTURE.

S. M., aged 63, a thin, flabby, white-faced, average-sized man, had always enjoyed tolerably good health, with the exception of a hernia, which had troubled him for several years. Latterly it had been coming down more frequently, increasing in size, and becoming more difficult to reduce.

On August 7th, he was seized with a sharp attack of diarrhœa. Next morning, about 8 o'clock, while straining at stool, the hernia suddenly appeared in the left scrotum. All the means of reduction, which formerly had been successful, were tried, but failed. I saw him about 11 o'clock. The tumour was red and glistening, and reached halfway down to the knee. Symptoms of strangulation were well marked. The ordinary manipulation was used, but to no purpose; indeed, it was not long continued, as it gave rise to intense pain. Morphine was injected below the skin, fœtid enemata were given, and bags of ice applied. After two hours, the symptoms continuing unabated, taxis, under chloroform, was again tried, but with no better result. As a large part of the tumour was tympanitic, evidently consisting of intestine distended with flatus, it occurred to me that, were this removed, reduction would be facilitated. I accordingly introduced a small trocar and cannula, and freed a large quantity of flatus. The hernia was reduced to a third of its original size, and

its contents were without the slightest difficulty returned into the abdominal cavity. The patient shortly fell asleep, and slept for several hours. Next day, he was comparatively well, was kept still, and fed on milk-diet. The bowels opened naturally that night; and on the third day he was out of bed, and going about the house. His recovery has been uninterrupted.

Whether this method of treatment has been used before or not, I do not know; but, at any rate, in this case it was eminently successful. JAMES BRYDON, M.D., Hawick.

REPORTS

OF

HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

EDINBURGH ROYAL INFIRMARY.

SEVERE INJURY FROM DYNAMITE: AMPUTATION OF FOREARM: LIGATURE OF FEMORAL ARTERY: GANGRENE OF LEG: AMPUTATION OF THIGH: PYÆMIA: SEVERE REACTIONARY HÆMORRHAGE: TRANSFUSION OF BLOOD FOUR TIMES: RECOVERY.

(Under the care of Mr. ANNANDALE and Mr. J. M. COTTERILL, Assistant-Surgeon.)

[Reported by Mr. COTTERILL.]

Two major amputations and the ligation of the femoral artery in its continuity, complicated by traumatic gangrene, pyæmia, and profuse secondary hæmorrhage, constitute a state of matters from which perfect recovery could scarcely be anticipated in most instances. The interest of the case, shortly noted below, centres chiefly in the question as to how far the successful issue was brought about by the repeated transfusions of blood.

J. P., aged 23, a quarryman, was admitted on January 8th, 1886, suffering from the results of the explosion of some dynamite cartridges.

The proper apparatus for the purpose being out of order, the patient had been warming some of the explosive in an ordinary iron kettle at a "chaffer," when the dynamite exploded. The left hand was completely shattered, and the forearm badly lacerated by the pieces of metal. The posterior aspect of the left thigh was deeply gashed in all directions, the fragments of metal splintering the lower end of the femur, and lying in great quantity among the deep structures of the thigh. The right hand and leg were also severely cut, but to a less extent than the left.

About five hours after the accident, which happened in the country, Mr. Cotterill removed the shattered hand by a modified circular amputation above the wrist, and extracted large pieces of the kettle from the tissues of the forearm and thigh. He was only prevented from amputating high up in the thigh by the extreme weakness of the patient; the wounded parts were, however, thoroughly opened up, so as to remove the fragments of metal, and to ensure free escape of discharge.

He had lost a large quantity of blood before his admission, and the shock was severe. After the operation, chloroform sickness was very troublesome; after failure with most of the usual remedies, it was controlled by a few fifteen-drop doses of a 20 per cent. solution of cucaine.

On January 10th, the wounded tissues of the thigh were sloughing severely. Mr. Annandale consequently tied the femoral artery at the apex of Scarpa's triangle, so as to lessen the risk of secondary hæmorrhage.

On January 13th, unmistakable signs of gangrene showed themselves in the calf of the left leg. The temperature ran up to 107° Fahr. in the evening, and the patient became delirious.

On January 14th, the gangrene had spread up to the knee, and amputation through the upper third of the thigh was performed at mid-day. The temperature at once fell from 103° to 98°.

On January 15th, at 1 A.M., a very profuse reactionary hæmorrhage, from a branch of the profunda artery, having taken place, the patient was transfused by the house-surgeon, Dr. Darling (blood being given for the purpose by Dr. Thomson, another of the house-surgeons). At the time of the transfusion, no radial pulse could be felt, respiration was very slow (about 5 per minute), and the patient appeared to be moribund. The injection of 4 ounces of blood, with 2 ounces of solution of phosphate of soda, according to a method described below, was followed by immediate improvement in the grave symptoms.

The patient being still very weak, and at times delirious, Mr. Annandale performed tranfusion again at midday, injecting 6 ounces of blood with 2 ounces of saline solution (one of the dressers, Mr. Paton, gave the blood). The operation was again followed by marked improvement of the general symptoms. On January 16th, symptoms of septic absorption were well marked, and the patient was profoundly weak. Transfusion to the extent of 6 ounces of blood and 2 of the saline solution was again performed, the patient's brother giving the blood. The result of this operation was a marked improvement, which was maintained for about thirty-six hours, the patient being decidedly better on January 17th; but on January 18th there was a falling off, the patient looked weaker and more bloodless, and, as the corpuscles had fallen considerably in number, transfusion was resorted to for the fourth time. Seven ounces of blood (given by Mr. Smith, student) and 2 of the saline solution were injected. About half an hour after the operation the patient had a rigor, and the temperature ran up to 106°, but it rapidly dropped again to 99·2°, and the corpuscles were found in the evening to have increased by 250,000 per cubic millimètre since the morning. From this point onwards to the end, the patient made slow, but steady improvement. Several large pyæmic abscesses formed, and were opened in various parts of the body. The perspirations, at first profuse, gradually lessened, and by the end of February the patient was free from all symptoms of septic absorption. He left the hospital on April 9th in very good health.

The following abbreviated record of the enumeration of the corpuscles during the course of the case is instructive.

January 15th. 1 A.M. Severe hæmorrhage. First transfusion of blood to ʒiv. (corpuscles not counted). 12 midday. Second transfusion of blood to ʒvi.; after operation, blood-corpuscles were 1,600,000 cubic millimètre.

January 16th. Third transfusion of blood to ʒvi.

January 17th. The corpuscles were 2,060,000 per cubic millimètre.

January 18th. The corpuscles were 1,480,000 per cubic millimètre.

January 18th. 1 P.M. Fourth transfusion of blood to ʒvii. 2 P.M. corpuscles were 1,730,000 per cubic millimètre.

January 20th. The corpuscles were 1,750,000 per cubic millimètre.

January 22nd. The corpuscles were 2,040,000 per cubic millimètre.

January 24th. The corpuscles were 1,930,000 per cubic millimètre.

January 26th. The corpuscles were 1,790,000 per cubic millimètre.

January 30th. The corpuscles were 2,170,000 per cubic millimètre.

February 3rd. The corpuscles were 2,200,000 per cubic millimètre.

February 9th. The corpuscles were 2,620,000 per cubic millimètre.

February 20th. The corpuscles were 3,490,000 per cubic millimètre.

April 7th. The corpuscles were 4,665,000 per cubic millimètre. The hæmoglobin was 66 per cent. on the same day.

(The normal standard was taken at 5,000,000 corpuscles per millimètre.)

REMARKS BY MR. COTTERILL.—Though no enumeration of the corpuscles was made before the first two transfusions, and consequently their exact effect on the patient could not be judged as in the case of the two latter operations, still there can be no doubt whatever that the symptoms of intense weakness, fluttering pulse and delirium, were markedly influenced for good in each case.

The rapid falling off noted on January 18th, which called for the fourth transfusion, and the marked and continued improvement in general symptoms, with coincident increase of blood corpuscles, was most interesting.

There can be little doubt that the operation of transfusion is one which in the future is destined, in our Edinburgh school at least, to hold a far more prominent position than it has hitherto done. This is due to the fact that the method of operation has been simplified and perfected: the applicability of the operation to various classes of cases increasing in the same proportion as the recognition of the ease and safety with which it can be performed.

The suggestion that use should be made of saline solutions to prevent the coagulation of the blood which is to be injected, is no new one. Amongst others, Dr. Braxton Hicks, in 1868, recommended the use of a solution of phosphate of soda for this purpose. It is somewhat remarkable that this method has not come into more general use, as it certainly deprives the operation, as usually performed, of most of its difficulties and dangers.

I am not aware that this method had ever been used in Edinburgh till about two years ago, when, being thoroughly mistrustful of the various forms of transfusion-instruments, each one more ingenious and dangerously complicated than the other, I used the phosphate of soda method in a case of severe hæmorrhage from gastric ulcer. I was so struck with the ease and safety of the method, that I determined to give it a further trial. Some months since, Mr. John Duncan, on

my strong recommendation, used the same method of operating, and repeated it frequently on the same patient, with brilliant success.

The details of the operation, as I performed it two years ago, are in the main identical with those used by Mr. Duncan, and published a short time ago by him in connection with his case of pernicious anæmia. The steps of the operation are also to be found in the BRITISH MEDICAL JOURNAL of April 10th of this year, page 697. I need not, therefore, repeat them here, but would only wish to modify the account there given by saying that the blood ought not to take more than five or six minutes to inject (though it does not coagulate in most instances for at least twenty minutes); and that this operation, like all others, should be done with such antiseptic precautions as commend themselves to the common sense of the operator.

The advantages which I claim for this method of transfusion are these.

1. No special nor expensive apparatus is necessary, the simple instruments required being always at hand.

2. The operation is rendered very easy, and may be done leisurely.

3. Instead of working in the dark, as with most of the instruments devised for the purpose, one can see exactly what is going on, and the introduction of air can be prevented by the most ordinary care; while clots do not form. The operation is thus rendered safe.

In conclusion, I wish to thank Mr. Annandale, in whose wards the patient was, for his permission to publish the case; and my thanks are also due to Drs. Darling and Carmichael for the use of their notes of the patient's progress.

REVIEWS AND NOTICES.

ARMY MEDICAL DEPARTMENT REPORT FOR THE YEAR 1884. Vol. xxvi. Pp. 407. London: 1886.

THE Report of the Army Medical Department, recently issued, refers to the health of the army during the year 1884, and shows that, at that date, the white troops, serving in Great Britain and in foreign stations, averaged 167,686 in number. This number does not include the commissioned officers of the army, nor 2,878 men detached from their respective corps; and all non-commissioned officers and men who were enlisted abroad, such as those belonging to the Royal Malta Fencible Artillery and other corps, are excluded from it. The force above named of 167,686 troops led to 183,127 admissions into hospital for sickness, a proportion of 1,092 per 1,000; and 1,436 soldiers in, with a few out of, hospital died. The number of deaths was in the ratio of 8.42 per 1,000, when the strength of the men away from their corps, among whom 29 of the deaths occurred, is added to the average effective strength of troops above mentioned. Out of the number of troops serving abroad, 2,648 men were sent home to England as invalids, a ratio of 32.35 per 1,000; and, out of this number, 1,222 men were discharged from the army as permanently unfit for military service. There were also 1,797 of the men doing duty in the United Kingdom discharged as invalids, the total number invalided and discharged thus being 3,019, or a proportion of nearly 18 per 1,000 of the total number of troops serving at home and abroad. Of the total force of 167,686 non-commissioned officers and men, 9,303 were constantly non-effective through illness, or 56.38 per 1,000. These figures show an increase of 69 per 1,000 in the proportion of hospital admissions as compared with the number of admissions in 1883, and a slight increase in the proportions of men constantly sick, and of men discharged unfit for further service; but a decrease in the number of men invalided for sickness from foreign stations, and also, what is most important, in the ratio of mortality. In 1883, the number of deaths was in the ratio of 9.57 per 1,000 of the total number of troops; in 1884, the ratio was 8.42, thus showing a decrease of 1.15 per 1,000. The improvement in the proportionate number of deaths becomes the more noticeable when the ratio of mortality in 1884 is compared with the average rate of the ten preceding years, during which the deaths were in the proportion of 12.06 per 1,000 of the total strength of the troops serving at home and abroad.

The average strength of the warrant officers, non-commissioned officers, and men, serving in the United Kingdom in 1884, was 83,135. Of this number, 72,344 were admitted for hospital treatment, giving an annual ratio of 870.2 per 1,000; the deaths amounted to 459, including 29 among men who were absent from their regiments, being at the rate of 5.33 per 1,000; while 1,797 were discharged from the service as invalids, or nearly 21 per 1,000. The average number of men, out of the 83,135 troops, who were daily incapacitated for duty on account of sickness, amounted to 4,059, or nearly 49 per 1,000, and the average duration of each case of sickness was 17.87 days.

The usual information is furnished on the subject of venereal diseases among the men serving in the United Kingdom. As happened last year, so, also, in this report for 1884, the returns show a considerable increase in the prevalence of these diseases as compared with previous years. Primary syphilis caused 10,410 admissions into hospital, and secondary syphilis 2,508 admissions. The admission-rate of all forms of venereal diseases, including gonorrhœa and its sequelæ, was 270.7 per 1,000, being an increase of 10.7 per 1,000 over that for the previous year 1883, and of 35 per 1,000 on the mean rate for the preceding five years. The average number of men constantly disabled for duty owing to these disorders in 1884 was 1,674, or at the rate of 20.14 per 1,000, which was higher than the corresponding number in 1883 by 1.60, and than that of the average of the previous five years, before the modification of the Contagious Diseases Acts had taken place, by 4.17 per 1,000. The report furnishes a series of tables showing the proportionate numbers of hospital admissions for primary venereal sores in 28 of the principal military stations during each year from 1867 to 1884, and supplies much other information in detail on the subject.

The portion of the report which deals with the "Recruiting of the Army" embraces many topics of social as well as of medical interest. The number of men who sought enlistment in the army, and were medically inspected in 1884, exceeded the number inspected in 1883 by 7,446; the number in 1884 being 66,882, while in 1883 it was 59,436. Of the 66,882 men examined in 1884, 27,888 were rejected as physically unfit for service, while 38,994 were considered fit, and accepted, being in the ratios of 416.97 and 583.03 per 1,000 respectively. The rejections were 20 per 1,000 greater in 1884 than they were in 1883.

England and Wales together furnished 50,386 out of the 66,882 men examined for recruits; Ireland, 9,308; Scotland, 6,458; and 730 were men belonging to British colonies or foreign countries. The proportion of men rejected was highest among the Scotch recruits, namely, 439.77 per 1,000; and, so far as the United Kingdom was concerned, was lowest among the Irish recruits, being among them 372.15 per 1,000.

The usual information is given in the report respecting the occupations of the 66,882 men who sought enlistment in the army, and the apparent influence of these occupations on health so far as the proportionate numbers of rejections on account of physical unfitness for service in the army, may serve to indicate it. As usual, the largest number of recruits came from the class of labourers and husbandmen, namely, 42,346, and of these, 18,048 were rejected as unfit, or 426.20 per 1,000; 9,697 belonged to the class of mechanics, such as smiths, carpenters, masons, etc., and among them, 4,008 were rejected, or 413.32 per 1,000; 8,408 were manufacturing artisans, as weavers, cloth-workers, etc., and of them, 3,805 were rejected, or 452.55 per 1,000; 4,229 were shopmen and clerks, of whom 1,633 were rejected, or 386.14 per 1,000; 634 were students or professional men, of whom 173 were found unfit, or 272.87 per 1,000; and of the remaining number, 1,564 were boys under 17 years of age, of whom 216, or 138.11 per 1,000, were rejected; while in the cases of 5 rejections, the occupations of the men were omitted to be recorded.

The causes of rejection of the 27,888 men who were found to be unfit for military service are shown under the same forty-two headings as in previous years. Among the various classes of diseased conditions and physical defects, the largest number of rejections is shown under "Defective Vision," namely, 2,530, nearly one-tenth of the total number rejected, and in a ratio of 37.83 per 1,000 of the total number inspected. When the lowness of the standard of visual power which is required for admission into the army is regarded, it seems remarkable that so large a proportion of men should be found unfit for service on account of imperfect sight. The causes of rejection next in frequency are "Varix," 1,183; "Varicocele," 1,060; "Cardiac Disease," 1,161; "Impaired Constitution," 738; and "Syphilis," 707. Defects of the upper extremities, resulting from fracture, luxation, contraction, etc., led to the rejection of 431 recruits; and of the lower extremities, to the rejection of 791 recruits. A very large number of the men who sought enlistment in the army, namely, 13,008, were reported unfit for service and rejected, from not being up to the standard of military requirements in respect to height, weight, and chest-measurement. A very noticeable difference is exhibited between the proportionate numbers of men who were regarded as unfit for the army on account of these particulars by the army surgeons, and by the civil medical practitioners. Of the total number of men examined, namely, 66,882, the army medical officers examined 55,732, and civil medical practitioners the remaining 11,150; and of the 13,098 men rejected for being under height, weight, or chest-measurement, 12,640 were rejected by the army medical officers,

or 226.71 per 1,000; while only 458, or 41.16 per 1,000, were rejected for these causes among the men whom the civil practitioners examined. There are no means of tracing these differences to their precise causes, for the same rules are laid down for all examiners alike; but the greater strictness of the military practitioners in the examination of recruits is exhibited throughout the table on the subject. Thus, for "defective vision," the number rejected at the primary inspection of the men by the army medical officers was in the ratio of 38.56 per 1,000; while among those rejected by the civil practitioners, the ratio was under 17 per 1,000, and so under various other headings. The same marked exception, however, to this general rule that was observed in the report for 1883 is again shown in the report for 1884 now under review; for, as regards "varicocele," the proportion rejected by the civil practitioners exceeded the proportion rejected by the military practitioners, the respective numbers being 20.81, and 13.26 per 1,000.

When the lads under 17 years of age, 1,584 in number, are abstracted, the average age of the men who came forward as recruits during 1884 was 19.68 years, which is fractionally less than the average age of the men who sought enlistment during the previous year. The greatest number of the men inspected, namely, 21,317, were between the ages of 18 and 19 years; while 17,612 were between 19 and 20 years of age, and 7,001 between 20 and 21 years of age.

The state of education is recorded as regards 64,908 of the recruits inspected, and a certain amount of satisfactory progress is shown in this direction. Among the number of recruits mentioned, 6,472 were reported to be "well educated," or 100 per 1,000; 46,496, or 716 per 1,000 were able to read and write; 4,590, or 71 per 1,000, could read but not write; and 7,350, or 113 per 1,000, could neither read nor write. These numbers show an increase of 21 per 1,000 in the population of well educated recruits, as compared with the number in 1883, with a decrease of 11 per 1,000 in the proportion unable to read or write, of 7 per 1,000 in the proportion of those able to read only, and of 3 per 1,000 of those able to read and write, but otherwise not well educated.

There was a slight increase in the proportionate number of recruits who had not been vaccinated nor had small-pox, namely, 2.3 per 1,000, as compared with the number in the previous year. The condition as to marks of vaccination or small-pox was recorded in 38,910 of the recruits who were found fit, and passed into the army. Of this number, 35,767, or 917.2 per 1,000, had marks of vaccination; 1,085, or 27.8 per 1,000, bore marks of small-pox; and 2,058, or 52.8 per 1,000, had neither marks of small-pox nor of vaccination. During the year, 33,330 recruits were vaccinated; in 32,416 of the number, revaccination being performed, and primary vaccination in 914. Of the revaccinations, 13,863, or 427.7 per 1,000, were followed by a perfect vaccine pustule; 10,555, or 325.6 per 1,000, by a modified vaccine pustule; and in 7,998 instances, or 246.7 per 1,000, failure resulted. Of the primary vaccinations, 463, or 506.6 per 1,000, were followed by a perfect vaccine pustule; 272, or 297.6 per 1,000, by a modified vaccine pustule; and 179, or 195.8 per 1,000, ended in failure. During the year, revaccination was performed in 242 women of the army in the United Kingdom, and primary vaccination in 2,968 children. Among the women, the revaccination was followed by perfect results in 131 instances, by modified vaccine pustules in 62, and by failure in the remainder. Among the 2,968 children vaccinated, there were 2,643 successful results, and 325 failures. Ten cases of small-pox occurred among the 33,135 men of the army in the United Kingdom, without any death; no case of the disease occurred among the women of the army; among the children there were 7 cases, and no death. During the year 1883, there were only 6 cases of small-pox among the 81,677 men serving in the United Kingdom, and, as regards soldiers' families, only one case occurred among the women, and not one among the children. No death ensued, either in 1883 or 1884, among the soldiers or their families in the United Kingdom from small-pox.

It is not practicable, in this notice, to remark on the particular diseases which caused the 72,344 admissions into hospital among the troops in the United Kingdom during the year. The highest ratio of admissions occurred in the Foot Guards, 1010.7 per 1,000, and the lowest, 642.5 per 1,000 in the Royal Engineers. But the ratio of mortality among the men admitted into hospital was highest in the Engineers, namely, 8.69 per 1,000. The greatest ratio of men constantly non-effective owing to sickness occurred in the Foot Guards, 57.53 per 1,000, and the least in the Royal Engineers, 35.38 per 1,000. The report states that, in the previous year, as well as in the average of the preceding ten years, the Foot Guards show the highest ratio of hospital admissions, and of constant inefficiency through sickness. This statement seems to indicate the need of a special investigation of the subject, with a view to discover the cause of so marked a difference between the state of health of the Foot Guards and that of the other corps.

We regret to see 15 cases of suicide reported among the troops serving at home during the year. The modes of suicide were by gunshot in 9 cases; cut-throat, 2; poison, 2; fracture of skull by a man throwing himself out of window, 1; and, in 1 instance, the mode of death is not stated. The average age of the suicides was 31 years, and their average length of service in the army 11 years. Some statistical notes are appended to the report on suicide in the army generally during the year 1884. From these it appears that, in addition to the 15 cases of suicide at home, 31 cases occurred on foreign stations. Taking the suicides at home and those among the troops on foreign stations separately, the ratios were 1.73 and 3.46 per 10,000 respectively; so that the proportion of suicides occurring abroad to those occurring in the United Kingdom, was about two to one. A comparison is given between the ratios of suicide in the whole army during 1884 per 10,000 soldiers at certain periods of life, and the ratios among the civil male population of England at corresponding ages, and from this it appears that the number of suicides among soldiers between 20 and 24 years of age inclusive, was about 2½ times as great as the number among the civil male population at the same period of life; between 25 and 34 years of age, it was about 4 times as great; and between 35 and 45 years of age, the rate in the army was about 3 times as great as in the civil population. There is a very marked difference in the modes of suicide among soldiers and among civilians. As might be expected from the constant possession of fire-arms by soldiers, suicidal deaths by gunshot are far more frequent among them than among civilians; 69.6 per cent. of the suicides among soldiers being by gunshot, while only 7.8 per cent. occur from gunshot in civil life. On the other hand, suicide by hanging occurs 19 times more frequently among civilians, by drowning 9 times, and by cut-throat or poison twice more frequently than among soldiers. Of the total number of suicides in the army during the year 1884, 4 per cent. occurred in the cavalry, 20 per cent. in the artillery, and 76 per cent. in the infantry. In one battalion, 3 suicides occurred during the year, and in four battalions there were 2 suicides in each respectively. In one battery of artillery also there were 2 cases. The remaining cases were all single instances in different corps.

We reserve our observations on the state of health of the troops serving in special stations abroad in 1884 for another occasion.

A Text-Book of Human Physiology, including Histology and Microscopical Anatomy; with Special Reference to the Requirements of Practical Medicine. By Dr. L. Landois, Professor of Physiology, University of Greifswald. Translated from the Fifth German Edition, with additions, by W. Stirling, M.D., Brackenbury Professor of Physiology and Histology, Owens College, Manchester. Second Edition. London: C. Griffin and Co. 1886.

The well-merited success which has attended Professor Stirling's translation of Landois' *Physiologie*, has necessitated the issue of a second edition, in a little more than six months after the first publication.

Landois and Stirling's *Physiology* is much more than a mere translation from the German, as the numerous additional matter in the English work clearly shows. It fills a distinct gap in English medical science; one of its main objects being to indicate and illustrate the relationship of physiology to practical medicine, by giving a short account of the facts of pathology and pharmacology. The importance of such an object is evident, when we consider the ever increasing additions to pathological and pharmacological knowledge contained in original papers which can only, from their number, be consulted by specialists in these subjects.

The satisfactory manner in which this object is carried out in Landois and Stirling's *Physiology* must be evident to all who have consulted the first edition. In the second edition, there are many improvements which have greatly enhanced the value of the work. The arrangement of the book is practically the same, but the typography has been greatly improved, subsidiary matter being relegated to small print, and the important points of a paragraph brought out by thick type. This arrangement greatly facilitates reference, while it shows the student the chief headings which must be impressed on his mind; thus tending to check diffusiveness of knowledge.

The numerous additions which Professor Stirling has made to the

second edition, includes the latest researches in physiology, experimental pathology, and pharmacology. The greatest change has been made in the section on the nervous system, which has been re-arranged and partly re-written, so that the whole subject, with the latest ideas and experiments in this, the most difficult, department of physiology is clearly brought before the reader.

The sections on pathology at the end of each chapter have been made more complete; and a new feature of this edition are the sections on the action of drugs. Both these sections deal with subjects which are of great importance to practical medicine, and will serve to give to busy practitioners, who have not the leisure to keep pace with the advances of medical science, a clear idea of the progress of pathology and pharmacology in their scientific and practical aspects.

In dealing with these subjects, Professor Stirling has made a very judicious selection from the numerous facts at his disposal, so that the sections are not too elaborate, and are clear and suggestive. In all cases, the subjects have been brought up to the present date.

A special feature of this edition is a bibliography, which, while not professing to be complete, includes the most important papers published on each subject, and is arranged and printed in a manner easy of reference.

Landois and Stirling's *Physiology* will continue to hold its place in the first rank of English text-books of physiology, while it has a position peculiar to itself in treating also of the relationship of physiology to the subjects of practical medicine. Professor Stirling is to be congratulated on the great success of the work, which bears evidence of no ordinary amount of labour.

An Introduction to General Pathology: Founded on Three Lectures delivered at the Royal College of Surgeons, London, 1886. By John Bland Sutton, F.R.C.S., Sir Erasmus Wilson Lecturer on Pathology, Royal College of Surgeons; Assistant-Surgeon to the Middlesex Hospital, etc. London: J. and A. Churchill. 1886.

It is satisfactory to find in this work a complete collection of Mr. Sutton's pathological researches. We have repeatedly had occasion to notice the author's contributions to the archives of societies, and an epitome of the Erasmus Wilson Lectures, 1886, has already appeared in the Journal, so that there is no need for further details respecting the result of Mr. Sutton's labours in the field of pathology beyond the limits of the human species. He still remains a pioneer in comparative pathology; and yet more work in that direction may be expected from him. In any case, he will not fail to find followers, and for them this *Introduction to General Pathology* will be indispensable. Even if a worker possess the periodicals and publications of learned societies which contain Mr. Sutton's scattered contributions, he will find in this book important additions and modifications of opinion which must be taken into account. The work is published in a very convenient form, and the type and woodcuts alike deserve especial commendation.

Practical Human Anatomy: A Working Guide for Students of Medicine, and a Ready Reference for Surgeons and Physicians. By Faneuil D. Weisse, M.D., Professor of Practical and Surgical Anatomy, Medical Department of the University of the city of New York, etc. Illustrated by 222 lettered plates, containing 321 figures. New York: William Wood and Co.

This is decidedly a sumptuous publication, and Dr. Weisse has done his best to avoid the chief defects inherent to all works, wherein anatomy is taught chiefly by illustrations. The book is not a folio, nor even a quarto, so that inconvenient size has been avoided. The plates are, in consequence, small, but, at the same time, they are decidedly clear, and neither too diagramatic, as in many English works, nor too highly finished, as in some French productions. A large proportion of the plates are original. The text deserves favourable notice, for the headings are of a kind to facilitate reference; the type is large, and the descriptions brief and clear. In the plates, the names are, as a rule, printed upon the parts, as in Gray's work.

A review of *Practical Human Anatomy*, in detail, is impossible, since it would involve a review of the subject whence this work takes its name. All structures receive fair systematic treatment, and the author wisely avoids departing from the paths of what neurologists term "coarse" anatomy. Hence the work—unavoidably large, though, as we have just observed, not physically clumsy—is not lumbered with second-hand histology. There are some preliminary observations on the art of dissection, illustrated by diagrams.

The second part of the title of this work explains for whom it is designed by the author. We consider that it is far too advanced for the first or second year's student. For the prosector it is likely to prove of high value; indeed, the author has himself been a prosector to the late Dr. Valentine Mott. An appointment of this kind is the best training for an anatomist, since the ordinary student is obliged to dissect exclusively after a well known routine, whilst the prosector is in a position to learn systematic anatomy, and the separate characters of individual structures, in a more satisfactory manner. Hence a prosectorship is even more essential, in many respects, than a demonstratorship, to the student who is destined to be a professional anatomist, and, on this principle, the author should be a reliable authority. For demonstrators, Dr. Weisse's work will be very valuable, and it will also prove serviceable to anatomical teachers and lecturers. As a work of reference for any anatomist, surgeon, or physician, it deserves to be placed in every library attached to medical or biological institutions.

Rules regarding Defects of Vision, which Disqualify Candidates for Admission into the various Departments of the Indian Government Service. By Sir J. Fayrer, K.C.S.I., LL.D., M.D., F.R.S., with Appendix, containing the Regulations as to Range of Vision necessary to qualify a Candidate for admission into the Royal Navy, British Army, and Civil Service. London: J. and A. Churchill.

Medical men are frequently referred to by parents as to whether their sons, suffering, perhaps, from slight defects of vision, could be admitted into the British or Indian Government services. It has hitherto been impossible to give a definite answer to these inquiries, because there was no fixed standard as to the degree of ametropia which disqualified candidates for the various branches of the public services. The difficulty of selecting a career for a boy is thus often materially increased by doubts concerning his state of vision; and every ophthalmic consultant knows perfectly well that the rejections of candidates have been irregular, for the simple reason that examining officers have held very different ideas as to the amount of ametropia which should bar a candidate's entrance into the Government service. Efforts have more than once been made to rectify this state of things, unsatisfactory in the extreme to the public, and detrimental to the various branches of public services, but the official mind would not suffer the idea that "Doctors" should have it in their power to determine if a candidate's eyesight was sufficient to permit of his being an efficient civilian, soldier, or sailor. In these circumstances, Sir Joseph Fayrer, taking advantage of his position as Physician to the Secretary of State for India in Council, has been able to urge the matter on various influential members of Council, and so to obtain the sanction of Government to a set of rules, drawn up by Messrs. C. Macnamara and John Couper, which in future will regulate the admission of candidates suffering from various defects of sight, into the Indian Government service. These rules guard equally the interests of the Government and of candidates, and, thanks to the successful efforts of Sir Joseph Fayrer, there can, in future, be no misconception on the part of aspirants for the Indian, Medical or other services as to the degree of ametropia which will disqualify them from gaining access to the department they may wish to enter.

This pamphlet not only contains the rules which apply to candidates desirous of gaining access into the Indian services, but also contains directions as to the methods of ascertaining various defects of vision; and, lastly, a complete set of test-types and dots referred to in the rules. Medical examiners will, of course, adopt their own methods of testing the amount of ametropia in each case. The object of those who are responsible for this work is to indicate the simplest, and at the same time an efficient mode of testing the accuracy of vision, which any medical man can employ in the case of those who seek his advice on the subject.

The late Mr. George Pizey.—A monumental cross of white marble has been erected by public subscription over the grave of the late Mr. Pizey, in All Saints' churchyard, Clevedon. It bears the following inscription: "'And when even was come, Jesus said unto them, Let us pass over unto the other side.' In loving memory of George Pizey, M.R.C.S., who died February 10th, 1886, aged 65 years. This memorial is erected by friends and neighbours of all classes in acknowledgment of his skill and unwearied kindness, especially to the poor."

The Marquis of Hertford has been appointed a Vice-President of the Stratford-upon-Avon Infirmary.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 2nd, 1886.

UNHEALTHY HEALTH-RESORTS.

ONE of the dangers to which visitors to "quiet" seaside and recreation places expose themselves is well shown in a letter from Professor Nettleship, of Oxford, which appeared in Wednesday's *Times*. Mr. Nettleship, like a good many fathers of families, bethought him that the advantages of sea and country air might be conjoined by taking a farmhouse on the outskirts of a "health-resort." He selected for this experiment New Quay, which has always possessed, amongst *cognoscenti*, an evil reputation for unwholesomeness and epidemics of infectious disease. Dr. Ballard, of the Local Government Board, spent some weeks there in 1879 trying to trace out the causes of a very serious outbreak of enteric fever in the place, which attracted general attention at the time. Recent information as to the sanitary history of the village is not obtainable; but from Professor Nettleship's description, it would seem that it has not in the least mended its old bad ways.

It need not be supposed, from the fact that the *Times* has honoured New Quay with a leading article, that Professor Nettleship's experiences are so very unusual as might at first sight appear. We make no doubt that if the leading journal opened its columns freely to the narration of other tales of woe of the same description, multitudes of others would be forthcoming. However, *ex uno disce omnes*. If Professor Nettleship's experiences should by good fortune draw the attention of our administrators and legislators to the necessity of an amendment of the Public Health Act, they will not have been suffered in vain.

The law, as embodied in Section 129 of the Public Health Act of 1875, lays down that

"Any person letting for hire or showing, for the purpose of letting, for hire any house or part of a house who, on being questioned by any person negotiating for the hire of such house, or part of a house, as to the fact of there being, or within six weeks previously having been therein, any person suffering from any dangerous infectious disorder, knowingly makes a false answer to such question, shall be liable, at the discretion of the court, to a penalty not exceeding twenty pounds, or to imprisonment, with or without hard labour, for a period not exceeding one month."

It is not clear, from Mr. Nettleship's letter, whether he took the salutary precaution of catechising his landlord as to the recent existence of infectious disease in the house—a precaution which should invariably be taken by all hirers of seaside lodgings. Apparently, he did not do so; he was satisfied with the recommendation of "two respectable lodging-house keepers of long standing in New Quay who, as I afterwards found, were perfectly aware of the state of things. Not only, however, did they never mention the fact, but strongly advised me to take the lodgings."

This is not the place to split hairs as to the language of the law; but if either of those respectable lodging-house keepers of long standing took Professor Nettleship over the house they so strongly recommended, it would be very desirable to find out through the medium of a prosecution whether they were not liable to the fine of £20 or the month's imprisonment, as having "shown the house for purposes of hire." They could, of course, only be brought within the meshes of the law if they gave false answers to any questions Professor Nettleship may have asked on the subject; and the case teaches, therefore, the further useful moral that definite and distinct inquiries as to the recent existence of infectious disease in the house should be made by an intending hirer, of all persons with whom he is brought into communication concerning the matter.

But, if the Professor be sincerely desirous to make New Quay an example *pour encourager les autres*, he has another weapon in hand. Section 128 of the Public Health Act provides that

"Any person who knowingly lets for hire any house, room, or part of a house in which any person has been suffering from any dangerous infectious disorder, without having such house, room, or part of a house, and all articles therein liable to retain infection, disinfected to the satisfaction of a legally qualified medical practitioner, as attested by a certificate signed by him, shall be liable to a penalty not exceeding twenty pounds."

There is enough even in Professor Nettleship's brief communication, obviously not intended to exhaust the legal points of the case but only to point a general and obvious moral, to show that ample grounds exist for a prosecution of the keeper of the farmhouse under this Section. We are told that no disinfection, or next to none, was practised in the village; and certainly the attitude of the local medical man would seem to forbid any expectation that the landlord was in possession of a medical certificate as to the efficacy of any disinfection that may have been attempted at the particular farmhouse. The medical man called in to see Professor Nettleship's little boy, who was taken ill with scarlet fever soon after the family had settled in the lodgings, "was not surprised, as the landlord's child had been attacked some three weeks before by the same disorder, and was, therefore, now passing through the most infectious period, that of desquamation." This child had been, as she was then, not only going about the house, but assisting in the household work; from which it would appear that Professor Nettleship and his family were actually under the same roof as this firebrand of infection. The medical man, who is also the medical officer of health for the district, had ordered the landlord not to receive any more visitors this summer; for there had been a tenant of the lodgings before the Professor who, on ascertaining the existence of the scarlet fever in the house, had packed up and returned to London.

We need not waste words as to the culpability of the landlord and all others concerned in allowing a tenant to enter upon the possession of lodgings whilst their environment was so dangerous. But worse remains behind. Not only were the lodgings themselves steeped in the poison of scarlet fever, but also the laundry which the family patronised, the children in the adjoining cottages, in one of which the laundress lived, having quite recently suffered from scarlet fever. Professor Nettleship endeavours, indeed, to discover a third source of infection, namely, infected milk from his landlord's own cows. There does not seem much direct evidence of this in his own case, but there were undoubtedly other instances of scarlet fever in the village amongst those to whom the milk and cream from the farmhouse were sold; and another milkman, with considerable custom in the place,

sold milk as usual whilst his child was suffering severely from the disease. In fact, there seems to have been a general neglect of precautionary measures throughout the place. The children of the local shoemaker were found, ten days after they had been attacked with scarlet fever, sitting on the doorstep of the shop while customers were coming in and out; and the medical officer of health complained that there had been several cases in other houses which had been carefully concealed from him, lest he should interfere with the profits of the lodging-house keepers. But there is such a thing as a prosecution for wilful exposure of infected persons; and we should be glad to see proceedings of some kind instituted against those who are responsible for this conspiracy of silence.

It may be hoped that the people of New Quay will be visited with rightous retribution for their misdeeds. By a systematic shunning of their interesting but dirty vicinity by the health-seekers of future seasons, the lesson may be taught to so-called health resorts that they cannot play fast and loose with their visitors in the way that they have been allowed to do in the past. It is an invidious task to hold places up to public reprobation, when such a proceeding involves financial distress, and even bankruptcy, to the communities concerned. But New Quay had its warning years ago. It chose to neglect it, and if it now gets severely left alone by holiday seekers, it has only itself to thank for its misfortune.

DENTISTRY AND THE STATE.

THE art of dentistry is as old as civilisation; it was cultivated by the ancient Egyptians, and the Greeks and Romans, with whom the attainment of perfect bodily health was elevated almost into a religion, must have possessed operators of no mean skill. In our modern western civilisation the art has reached an extraordinary state of perfection, and those members of the upper and middle classes who have not benefited from conservative dentistry must form a small minority. However blind and deaf he may be to the seductions of the fine arts, *l'homme moyen sensuel* is fully alive to the advantages to be derived from the art of dentistry. The conviction is, however, generally borne in upon him during early adult life, when much mischief is already wrought; while the working classes, as a body, do not seem to be as yet penetrated with any just appreciation of the value of sound teeth. If it is rare to find adults belonging to the upper and middle classes who have not been compelled on one or more occasions to call in the assistance of the conservative dentist, it is, perhaps, still more uncommon in the working classes, and in the poorer strata of society, to find adults who have not lost teeth, or stand in need of the services of a dentist. The fact seems to be that these classes, as a rule, entirely neglect their teeth, and never resort to a dentist except for some palliative treatment for an aching molar, which, after a little temporising with sedatives or escharotics, is finally extracted. To the great mass of working men and women, conservative dentistry is unknown, and, for them, a dentist is a man who pulls out teeth. True, there are hospitals here and there which will stop teeth, but their means are so small that they make no appreciable impression on the general mass; true, also, that there are dentists who charge humble fees, but it is to be feared that the cases which reach them are too often desperate, and the modes of treatment adopted commonly of a temporary character.

In a paper read before the British Dental Association, at its meeting in London, in August last, Dr. George Cunningham, of Cambridge, gave the result of his examination of a hundred recruits who presented themselves in London for service in the army; he fully confirmed the general impression gathered from hospital practice, for he found that only four out of this number had a truly perfect denture, that 70 per cent. were suffering from inflamed and ulcerated gums, and 27 per cent. from chronic abscess. On an average, each man had either lost, or would have been the better for losing, more than three teeth, and had four others which needed stopping. A certain small proportion of recruits are even rejected for this cause; the number thus rejected at this station in the eleven years ending in 1885 was 480, or over seven per mille; this would appear to be a fair average, for the total number rejected in 1884, at all stations, was nearly eight per mille.

It will, therefore, be safe to assume that, among young men of the classes from which recruits are drawn, fully 90 per cent. would be the better for treatment by a dentist. Leaving aside, for a moment, the question as it affects the general population, it is worth while to inquire whether in the public services anything is done to check the ravages of dental disease, which it has been shown are even at this early stage of adult life so serious and widespread. It is to be feared that the answer must be an unqualified negative; as long ago as 1857, Dr. A. Smith, then Director-General of the Army Medical Department, drew attention to the question in a circular addressed to the officers of the department, and expressed the opinion "that a considerable gain to the Service, besides comfort to individuals, would accrue from a more improved practice in dental surgery, than that which has hitherto obtained in military life." The department, moreover, has given evidence of the importance which it, theoretically, attaches to the conservative treatment of the soldier's teeth, by providing a case of tooth-stopping and scaling instruments; unfortunately, the contents of this case are, in the opinion of practical dentists, so badly selected as to be useless; moreover, even if the instruments were well chosen, the number of cases is absurdly small; there are nine such cases for England and Wales, one for Scotland, one for the Channel Islands, and three for Ireland. If a medical officer wanted to use the case, he would have to send a requisition to the headquarters of his district, and he would then obtain it on loan; as, however, the medical officers have no training in dentistry, and as the instruments and materials are so badly adapted for their purpose that even a trained and skilful dentist would be unable to do good work with them, the cases are not often in requisition, and it is a notorious fact that the only treatment the soldier can hope for is the extraction of an aching tooth; if there are exceptions, they are few in number, and, so to say, accidental; they do not affect the general truth of the statement. In the Navy, the state of matters is much the same; conservative dentistry is practically unknown, and extraction is the only treatment. There is this important difference, however, that in the medical examination for admission particular attention is directed to the condition of the teeth, and the requirements are much more stringent than for the Army. As a set-off to this, however, it must be added that the age for admission to the Navy is from 15 to 16½ years, and that dental caries occur with greatest frequency between 20 and 30.

It cannot but be that the State loses by this neglect of remedial treatment; the direct effect of carious teeth, the pain and the consequent loss of sleep and appetite must often incapacitate men from the efficient discharge of their duties, while the remoter effects, the

impaired digestion and consequent general failure of nutrition, must leave them more open to the assaults of disease, especially of the digestive organs. Though this loss to the State, through the ill-health of its servants, may often appear small or inappreciable in the individual, in the aggregate it must be very considerable; the existence of such a source of detriment is, indeed, clearly admitted by the precautions, inadequate as they are, which are directed to prevent the admission of young men into the Army or Navy, whose teeth are in a very bad state. Although no doubt can exist that the State does thus suffer loss, yet the degree is exceedingly difficult to prove by statistics. Dr. Cunningham, in the paper above referred to, endeavoured to establish the point by comparing the statistics of diseases of the digestive system in the Army and Navy. There is a considerable difference in the admission into hospital, in invaliding, and in deaths from these diseases, and it is markedly in favour of the Navy, where the examination of the teeth on recruitment is, as above mentioned, much more stringent than in the Army. So far as it goes, therefore, this comparison of the two services is in favour of the contention that the neglect of dentistry is the ultimate cause of a considerable amount of incapacitating disease, but where so many contributory circumstances exist, it would be unsafe to attach much importance to the statistics.

The question, therefore, arises, and sooner or later will have to be discussed upon its merits without prejudice, whether it would not be worth while, upon purely utilitarian grounds, for the State to take more trouble to preserve the teeth of our soldiers and sailors. No practical person would dream of suggesting that every medical officer of the Army and Navy should be required to become a skilful dentist; but there is a mean between absolute ignorance and the skill of a specialist; practical dentists believe that any qualified surgeon might, with a very moderate expenditure of time, learn enough about dentistry to be able to decide what teeth were worth stopping, and how to introduce a temporary filling, to keep the tooth from further deterioration for some time. Dr. Cunningham further has the temerity to suggest that in each military district a member of the Army Medical staff should be appointed to act as dentist, and provided with the necessary equipment; such an officer would of course hold, in addition to the ordinary medical and surgical qualifications, a licence to practice dentistry, and difficult cases requiring careful treatment could be referred to him. It seems hardly less Utopian to suggest that on first entering the Army, the teeth of recruits should be put into a good state of repair; their time is not then very valuable, and they cannot be always practising the goose-step, or learning to pipe-clay their belts; a few hours spent with the dentist during the period of probation might save much future pain and illness, and contribute to future usefulness as trained soldiers.

DISCIPLINE OF MEDICAL STUDENTS IN LONDON.

A FORTNIGHT ago an editorial report, bearing the above heading, appeared in the JOURNAL. That report contained evidence on questions affecting discipline at medical schools in London, which we had collected in relation to Surgeon-Major Evatt's letter, which appeared two months ago in the public papers. Last week some comment was made on the resident college question, as elucidated by evidence in our report. As this period of the year is especially associated with the student, his education and his welfare, some observations will now be made in relation to the other two questions upon which the report was founded.

The first question related to systematic reports to parents and guardians of the progress of the students at each school. A large proportion of students enter the hospital as very young men, hence their friends, through that fact alone, must ever feel one source of anxiety. A parent may endeavour to watch over his son by occasionally visiting the medical school where he studies. In the case of the parent being a medical man, such a visit will be in every respect advisable. A parent, who is not in the profession, will seldom be able to form any fair opinion of his son's progress, or any just estimate of the influences which surround him; for, once within the walls of a hospital, that parent will be quite at a loss to comprehend the manner in which his son pursues, or does not pursue, his duties. He cannot tell whether his son is working at a "subject" or merely idling in the dissecting room, waiting for a lecture about to commence, or simply lounging outside the doors of the lecture room. He cannot be expected to interview members of the staff on the subject of his son's conduct unless he be personally acquainted with one of their number. Hence the desired information must be obtained second-hand from the Dean. As for the direct testimony of a student, even when a parent can trust to his honour, he cannot always trust to his judgment.

The Dean, or any similar officer, must therefore be the sole source of information of any value concerning the progress of a student. Our report shows that Deans are much divided in opinion as to the manner in which their duties to parents and guardians should be discharged. Only at a minority of the schools is it the custom to send reports of conduct regularly to parents and guardians. At King's College, such reports are sent three times a year; and this, Dr. Curnow informs us, "has always been the custom in the College." At the Middlesex Hospital, reports on attendance are sent at the end of each session; at the Westminster Hospital, they are sent at the end of each term. It may be observed that reports on attendance are by no means identical with reports on conduct, and especially in the case of senior students may entirely mislead parents, for reasons evident to all who understand about dresserships, midwifery, and other genuine duties which may keep the student away from the lecture-rooms. From most of the other hospitals it is announced that reports are sent to parents and guardians only if required. In many respects this is the best plan, for general systematic reports are apt to be defective in important details affecting the individual student; and it is just such details which the parent may desire to know, and which he can learn most readily by private and informal communication with a Dean or Warden. Some of the Deans appear decidedly adverse to the reporting system. They speak of trusting to the student's honour, and of encouraging habits of self-control and reliance. Behind such assertions, worthy in themselves of respectful consideration, there probably lies a feeling that a true and fair report of an unreliable student's conduct is very hard to prepare. Unscrupulous young men can evade attendance at lectures by various stratagems, and yet manage to get signed up. As for idleness, it is not always easy to make sure that a student is really lazy. There are worse faults, which some young men have the power of concealing, whilst others, really less unprincipled, cannot do so. Lastly, there is one more difficulty in respect to reports. Students over 25 years of age are not rare, and discipline of this kind will, in their case, be difficult to enforce.

Altogether, it may be said that a Dean should, at least, be always ready to furnish reports to parents and guardians, who, as we observed in the article to which we have already referred, have a right to expect such information. Some latitude must be allowed for individual cases. Very young students should most decidedly be submitted to this kind of discipline, however much they may resent it.

The perpetual pupil question really bears upon the evil of "chronic students." For the student of average or superior character, a composition fee allowing indefinite privileges in relation to hospital practice is only fair. The lecture-room is not overcrowded by this system, for few senior students and qualified or ex-students care to sit out a lecture. There is one exception to this rule, that is, the clinical lecture; old students really make up the best part of the audience in this case, and are precisely those who are most likely to benefit from the lecture. Permanent right of admission to the wards, the operating-theatre, and the dissecting-room is only just, and is not likely to be abused by good men, for old students do not crowd into those places and oust their juniors who are going through the curriculum. The composition-fee, however, favours "chronic students." This unfortunate class may be divided into two sub-classes—students who are slow to pass, through natural mental or constitutional deficiencies, and those who are wilfully idle. The former deserve full consideration; they may even grow wise and strong. The latter require local legislation; they are the pests of student-life. Hence it is satisfactory to find that most of the schools grant perpetual fees under reserve respecting the student's conduct. At St. George's Hospital, there is a good regulation, by which a student cannot be made "perpetual" until he has been two years at the medical school, when the authorities know something of his character. This practice appears to us to be most commendable. As we already observed in August, the objections to perpetual pupilship are relatively trifling and unimportant, whilst the system has many advantages, and is founded upon real necessities of student-life.

THE APPROACHING ELECTION OF DIRECT REPRESENTATIVES IN ENGLAND.

THE date of the election of Direct Representatives is now sufficiently near at hand to make it probable that no further additions to the list of candidates in the field for the English seats will be made. The qualifications of the various candidates are of such a character that the only difficulty which will be experienced in choosing representatives on the General Medical Council who will not only thoroughly represent the profession at large, but materially strengthen that body, will be due to the very number and excellence of the candidates.

It is not now necessary to inquire how the several candidatures originated, or whether it be better for candidates to be selected by a committee, or to come forward on their own initiative; the ultimate appeal is to the profession as a body, and to it alone.

All the committees which have come into existence are, in their constitution, entirely outside and independent of the British Medical Association, and it will be the duty and privilege of every member of the Association, as of every other registered practitioner, in the full and free exercise of his right of private judgment, to give his vote to the candidate or candidates who may appear to him most eligible. The importance of this first election is very great, and, in times of emergency and trial, it is but natural that men should turn towards those who have already served them well. We cannot, therefore, share the surprise expressed by some of our correspondents, that the choice of a Committee which has been constituted with the avowed object of ascertaining the wishes of the medical profession as to the most suitable representatives should have fallen, in the first place, upon three gentlemen whose abilities as administrators have become widely known, owing to the valuable work they have done for this Association. Sir Walter Foster is not merely the President of the Council of the British Medical Association, but he was an exceedingly active member of Parliament; and as he states in his address, published in our advertising columns, succeeded in obtaining from the Government, on the second reading of the Medical Bill, various important concessions, not the least of which was the third seat assigned to England. Mr. Wheelhouse, who preceded Sir Walter Foster as President of the Council, has also many claims to represent the profession, not the least of which is that he has been for thirty-seven years actively engaged in general practice, while for twenty-five years of this period he held office as teacher in one of the largest provincial medical schools. Dr. Glover, who, since Mr. Ernest Hart has declined to stand, has been adopted by this Committee as their third candidate, was already in the field before its constitution. He is not only well known as a general practitioner in the north of London, but has had exceptional opportunities for making himself acquainted with the duties, as well as the inherent weaknesses, of the General Medical Council. The Committee has therefore fulfilled its purpose so far as to have placed before the profession the names of three gentlemen whose claims are well worthy of careful consideration; it will remain for the profession at large to show how far the machinery which has been employed has succeeded in truly reflecting the general opinion. The choice is difficult, for there yet remains for consideration the numerous independent candidates, among whom are several who have special claims. Dr. Dolan is a typical general practitioner, who has shown a liberal interest in many questions nearly touching the welfare of the general body of the profession. Dr. Benjamin Ward Richardson, whose eloquent pen has made him widely known beyond the limits of the profession, has had experience of many varieties of work, and has achieved eminence not only as a physiologist and physician, but also as a writer on sanitary subjects. Dr. Morris, of Spalding, is another typical general practitioner who for forty-five years has been in active general practice, and is therefore peculiarly well qualified to speak in the name of the general practitioners. Another candidate, whose address appears in our advertisement columns this week, is Dr. Taaffe, who is not only a general practitioner of long standing, but also holds the important position of medical officer of health for Brighton, and was President of the Section of Public Medicine of the British Medical Association at this year's annual meeting; as will be seen, he gives special prominence in his address to a much further extension of the principle of direct representation. The names of Dr. Bridgwater, of Harrow, Dr. Holman, of Reigate, and Mr. Balding, of Royston, complete the number of general practitioners who offer their services to the profession on this occasion; but, as we have not yet seen the addresses of these gentlemen, it is unnecessary to do more than refer to their candidature. Each one is a general practitioner of high standing and exceptional qualities, and it would be an honour to the profession to be represented by such men. That such names have been put forward increases the regret that the number of representatives allowed has not been larger, so that the necessity for

making so difficult a choice might have been avoided. Dr. Prosser James, who is pledged to agitate for a special scheme of medical reform, has also issued an address, as has Dr. Bernard O'Connor.

These names are, we believe, all those which are at present before the profession in England; and from this long list of candidates it may be confidently anticipated that three truly representative men will be chosen.

END OF THE EASTERN HOSPITALS SCANDAL.

A HOPE, hardly sanguine under the circumstances, may fairly be entertained that we have now heard the last of the so-called Eastern Hospitals scandal; at any rate, so far as regards Dr. Collie, it would seem difficult for the most persecuting ingenuity to find opportunity for casting further suspicion on his integrity or ability. As long ago as last December, it was established that he was not responsible for the irregularities which had occurred, and that, in fact, the charges made entirely passed him by. This was so clearly proved that Dr. Collie was reinstated in his office, with, however, the curious and, under the circumstances, illogical proviso, that, at the end of six months, the managers should report to the Local Government Board on the manner in which he had discharged his duties. Upon the tenour of this report, his maintenance in office depended. When the six months had expired, no report was made, and, even at the end of nine months, the "Eastern Hospital Committee" were equally divided: hree members being in favour of reporting that Dr. Collie had discharged his duties well, and three declining to agree to any report. Unhappily, the Chairman, Sir John Tilly, who, during the course of the original investigation, had been converted from an opponent to a strong friend of Dr. Collie, was absent; and, therefore, the Metropolitan Asylums Board, when it assembled on September 25th, decided to discuss the matter in full conclave. The result could not be doubted; no charge was made against Dr. Collie; indeed, the opposing party appear to have remained most obstinately silent, and the only reason assigned for refusing to report was that the managers had been unable to arrive at an opinion, as they were only allowed to enter the hospitals collectively as a Committee. The reason was, of course, unsound, as the Board, when it referred the matter to the Committee, was aware of this condition; indeed, it is a curious commentary on the present action of certain members of the Board that the regulation was imposed, because it was considered to have been proved that the right of individual managers to visit the hospitals separately conduced to the production of grave scandals and abuses. There can be no doubt that an attempt was originally made to make a scapegoat of Dr. Collie; and it is probably very aggravating to some members of the Asylums Board to find themselves subjected to strict regulations, while Dr. Collie is reinstated. The discussion on September 25th could have only one result: it was decided by more than two to one to report to the Local Government Board that Dr. Collie had satisfactorily discharged his duties during the last nine months. Though it would have been more seemly if the Committee had reported in the ordinary course, yet the additional prominence given to Dr. Collie's reinstatement is not a matter for regret; those who appeared inclined to oppose that act of justice only succeeded in disclosing the utter hollowness of their case, while the speeches of those who held the opposite view form a splendid testimonial to the integrity and the abil ty with which the Board has been served by its medical officer.

THE Harveian Oration at the Royal College of Physicians will be delivered by Dr. Pavy on Monday, October 18th, at 4 P.M.

SIR WALTER FOSTER, President of the Council of the British Medical Association, has been appointed Vice-President of the International Medical Congress, to be held at Washington next year.

THE prizes of the medical department of King's College, London, particulars of which we shall hereafter publish, were distributed by Professor George Johnson, M.D., F.R.S., on Friday, October 1st.

WE regret to announce that Dr. Alexander Henry, Senior Sub-editor of the JOURNAL, has been seriously indisposed during the past fortnight, and remains in a very precarious condition.

THE Public Prosecutor has decided not to take any proceedings against the woman M'Kenzie, who was charged on a remand, and afterwards acquitted, of causing the death of the young woman named Bowers, to whose case we referred last week.

A CASE of hydrophobia has been treated at the Pasteur Institute, Milan. This is the second case of hydrophobia successfully treated according to the Pasteur system at an institution other than that of the Rue d'Ulm.

ANOTHER society, having for its object an extension of the present regulations relating to the muzzling of dogs throughout the United Kingdom, and to make them more stringent as action requires, has been formed, with the title of "The Society for the Prevention of Hydrophobia and the Reform of the Dog Laws."

A CONVERSAZIONE will be given at the Brompton Hospital for Consumption and Diseases of the Chest to the old clinical assistants and former pupils on Thursday, October 7th, at 9 o'clock. We are asked to state that any such who have not received cards of invitation may obtain them on application to Dr. Waugh, resident medical officer.

MEDICAL PRAYER UNION.

THE inaugural address of the Medical Prayer Union will be given this year by the Hon. and Rev. W. Talbot Rice, M.A., in the church of St. Martin's-in-the-Fields, Trafalgar Square, on Friday, October 8th, 1886, at 8 P.M. Medical students are invited to attend.

HOSPITAL SATURDAY FUND.

AT the last monthly meeting of the Hospital Saturday Fund, it was announced that the amount which had been received from the workshops' collection was £1,500 in excess of the amount received to the same date last year, thus more than compensating for the falling off in the streets' collection.

DEATH FROM HYDROPHOBIA.

A CHILD who was badly bitten by a stray retriever dog on August 6th last, has died from hydrophobia in the Sheffield Hospital. It appears that the symptoms of rabies did not manifest themselves until a few days before death. Two other children, who were bitten by the same animal, have been sent to Paris to be treated by M. Pasteur.

DANGEROUS DOGS.

IN a return just issued by the Chief Commissioner of Police, it is stated that, since the last report, fifty-two dogs have been killed in the streets within the metropolitan area, as being rabid or savage. The publication of this return renders it the more remarkable that the Commission on Hydrophobia should have been so long held back from concluding its investigations by its inability to obtain a dog suffering from rabies acquired in the ordinary way, from "street-rabies" (*rage des rues*), as M. Pasteur oddly calls it. We understand that a certain number of dogs have been subjected to the prophylactic treatment, but that delay had occurred owing to the Commission having as yet had no opportunity of testing the validity of the protection.

THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

THE arrangements for giving clinical instruction in diseases of children are now in full working order at the Hospital for Sick Children in Great Ormond Street. An advertisement referring to the courses of instruction, and stating that no fees are charged, is published elsewhere, and students or practitioners requiring further particulars should apply at the hospital, where Mr. Timothy Holmes will give an introductory address on Wednesday, October 6th, at 3.30 P.M.

SENTIMENTAL OBJECTIONS TO MORTUARIES.

IN view of the disgraceful scenes which occasionally occur in connection with bodies awaiting coroners' inquests, it is indeed high time that some rule were enforced for the removal of bodies to public mortuaries when circumstances, such as the following, demand it. At an inquest held on Friday, September 24th, several of the jury, on their return from viewing the dead body, which had been allowed to remain in a small house where there were three other families, complained of feeling ill in consequence of the stench which emanated from the corpse. The coroner's officer informed the jury that the friends of deceased persons often declined to have the bodies removed to the mortuary. Private feeling, however, even in times of domestic bereavement, cannot be allowed to override considerations of public health.

ALLEGED IMPROPER TREATMENT AT AN INFIRMARY.

AT an inquest held at the St. Pancras Coroner's Court, on Wednesday last, September 29th, on the body of a man named Alfred Cross, aged 46, an ostler, who died at the West London Hospital, a charge was made by the mother and sister that the deceased had been improperly treated whilst at the Highgate Infirmary, to which he was sent by the parish medical man. The mother stated that the deceased, while at the infirmary, had been treated only for rheumatism, being kept in bed for four months. "He had," she said, "an extension on the left foot." He came out of the infirmary after eight months' treatment, and walked with the aid of a stick. Two weeks ago he went to the North-West London Hospital, Kentish Town, where an operation was performed, after which he died. Mr. Harper, resident medical officer of the latter hospital, said that deceased, when received, was found to have an ununited fracture of the left thigh-bone. From what he had heard of the mode of treatment at the infirmary, he concluded that the deceased had been properly treated. An attempt was made to unite the limb, but the man succumbed a few days afterwards. At the conclusion of the evidence, the jury recorded a verdict of accidental death, and expressed the opinion that no blame or neglect was attributable to the infirmary authorities.

THE MYSTERIOUS DEATH OF A SURGEON.

THE mystery surrounding the death of Mr. Everard Woods, L.K.Q.C.P.I., who, on September 15th, was found drowned in the river Thames, has not been cleared up. The deceased was in no way suffering from pecuniary difficulties, and was, moreover, as it was stated, particularly cheerful on the day of the occurrence, and nothing has transpired to support the idea that he had committed suicide; but, on the contrary, the statement made by Boorer, the waterman, tends to make it probable that there has been foul play. He states that the body, when found, was lying with the head towards the river, with the feet resting against the Embankment, "as if he had been dropt in over the Embankment wall." If he had jumped in, he would, Boorer contends, have been found five or six feet from the wall. The two men, dressed like labourers, who are said to have accosted Boorer with the remark, "Have you got a boat? there is a man who has just gone over the Embankment," and then hurried away, have not, we believe, been found; and we are sorry to see a disposition on the part of the police to leave the matter in its present unsolved condition. No medical evidence was adduced at the trial, and the verdict of the jury was, to say the least, most unsatisfactory.

WATER-CLOSETS IN TENEMENT-HOUSES.

AN owner of house-property in Southwark who was summoned, on September 28th, for having neglected to provide water for closets in two of his houses, endeavoured to defend his neglect by stating that water was laid on in the yards, and by the impotent excuse that, as other people neglected to obey other orders of the Vestry, he was justified in his disobedience. It is satisfactory to read that Mr. Slade, the sitting magistrate, inflicted penalties amounting to £12, with costs in addition, a judgment which may, perhaps, convince owners of poor house-property that it is cheaper to obey the law. The provision and care of water-closets in poor tenement-houses is a very necessary, though undoubtedly onerous, part of the house-owner's duties; it is onerous not only because the tenants are often incredibly careless, but because strangers will find entrance, if possible, and not only foul the seats and floors, but steal every scrap of metal that can be wrenched away. Wherever it is possible, the best plan is to have, for each group of houses, a small separate building containing a latrine, with an automatic flushing arrangement, such as in use in many factories, and for the urinals in many stations and other public buildings.

IS COCK-CROWING A LEGAL NUISANCE?

PEOPLE vary very much in their susceptibility to noise, but to most persons of a nervous temperament, an intermittent noise during the night-watches is distressing in the extreme. It is all very well to read how chanticleer proclaims the morn in the country, but it is quite another thing when he lives in a shed at the bottom of the next garden in London. As Carlyle said, it is not merely the distressing noise of his crow, but the agonising suspense while the sleepless watcher waits for him to crow again. A householder bolder than his fellows has brought an action against the owner of a loud-crowing cock, and the Grand Jury has found a true bill, so that the case will shortly be tried at the Middlesex sessions. The proverbial uncertainty of the law forbids any confident anticipation that the decision will lead to any considerable transference of crowing cocks from central London to their proper home in the country; so much will depend on the disposition of the jurymen. A well-known physician in a provincial town, terribly disturbed by the crowing of cocks in a neighbouring mews, visited his neighbours on either hand, in the confident anticipation that he would receive their support in the crusade he proposed to lead against this nuisance; he returned disappointed, for the one neighbour slept so soundly that he never heard the crowing, and the other "rather liked it because it sounded rural."

SMALL-POX HOSPITALS AND MEDICAL RELIEF.

AFTER the cynical use made by both political parties, last year, of the question of disqualification by medical relief, as a vehicle for purely party tactics, it would be lamentable if it were shown that the ghost of the grievance had not been effectually laid by the Medical Relief Disqualification Removal Act of 1885. That Act provided that the receipt of any medical or surgical assistance out of the poor-rate should not disqualify anyone from voting at any election except that for poor-law guardians. Surely this was comprehensive enough; but it would appear, from the newspaper reports of the registration courts, that confusion is still felt on the subject by revising barristers and other legal gentlemen concerned. An exceedingly unprofitable discussion arose the other day at Marylebone as to the vote of a man who had been an inmate of one of the Asylum Board's small-pox hospitals. The revising barrister put the query whether, if a man was admitted to a parochial infirmary, it would not disqualify him as a pauper, and one of the agents gravely contended that if a man went into a hospital—small-pox or otherwise—it must be at the expense of the parish, and, consequently, it was parochial relief. As it is possible that other cases of the kind may arise, it cannot be too generally known that admission to a hospital for infectious disease (except to a workhouse hospital under poor-law administration) does not involve any electoral disqualification whatever. The hospitals of the Metro-

politan Asylums Board are, indeed, the subject of express separate legislation on this point. Section 7 of the Diseases Prevention (Metropolis) Act of 1883 distinctly provides that "the admission of a person suffering from infectious disease into any hospital or hospital-ship provided by the managers of the Metropolitan Asylum District, or the maintenance of any such person therein, shall not be considered to be parochial relief, alms, or charitable allowance to any person, or to the parent of any person; and no such person, or his parent, shall, by reason thereof, be deprived of any right or privilege, or be subject to any disability or disqualification." This Act ought certainly to be familiar to revising barristers, and, if not, should be brought to their knowledge by the department responsible for their appointment.

URETHAN IN MENTAL AND NERVOUS DISEASES.

DRS. OTTO and KŒNIG have studied the action of urethan in a large number of insane patients of different sorts. In some forms of paralysis, four to eight grammes were given, but in a condition of strong excitement, the action was doubtful. They found it useful in doses of from two to four grammes for epileptic patients where there was a condition of no great depression; larger doses were not found advisable on account of the unpleasant effects on the stomach. Urethan did good service in excited conditions of idiotic children; in the paralysis of men, with slight excitement, small doses from three to four grammes were found to be useful; in severer cases, it was very untrustworthy even in doses of ten to twelve grammes. Kraepelin has given urethan as a hypnotic especially in mental diseases, and only in doses of one to three grammes (fifteen to forty-five grains). He never observed any unpleasant effects. Sleep occurred ten to fifteen minutes after swallowing the drug, and continued for several hours. He did not use it in cases of strong excitement. Kraepelin found that, in 60 per cent. of paralytic cases, urethan acted favourably. It was also serviceable in melancholia, and in cases of great mental anxiety; as much as 77 per cent. of these cases were benefited by it. Rothenbiller found that urethan in doses of two to four grammes gave several hours' sleep to patients with slight excitement. He also used subcutaneous injections of a quarter of a gramme (nearly four grains). One to three injections insured six to eight hours' sleep. (*Centralblatt für Nerven Heilkunde*).

THE SITE OF THE HOUSES OF PARLIAMENT.

IT can hardly be said that in the multitude of counsellors there was—at any rate, until lately—wisdom in the treatment of the sewerage of the Houses of Parliament. However, a Select Committee has pried about, and reported, and the Office of Works has been spurred on to make a start with the necessary improvements, choosing, of course, for its operations the particular time when our legislators had returned wearily to Westminster to pass the Estimates. All was going on satisfactorily when the engineer in charge of the works makes a very dismal geological discovery. Excavating for the new ejector-chamber through the sand and gravel, down to the clay, he finds the following state of affairs. The water in the bed of sand and gravel down to mean low-level at the excavation, which is 40 feet long, 20 feet wide, and 32 feet deep, was found to be nearly clean and free from smell. There can, the engineer thinks, be no doubt that the favourable condition of this water was due to its motion through the sand and gravel by the rise and fall of the tides. "But the water in the gravel from mean low-water level down to the blue clay—a depth of 10 feet—was of a greenish-black colour, like ink; and it emitted, as it was exposed to the air by the removal of the gravel, an intensely noxious smell. This body of water, which was apparently stagnant from being unaffected by tidal influence, was highly charged with decomposed sewage deposit." The engineer has no doubt about this also; that the filthy condition of the water was caused by sewage gravitating into it partly from the old outlet sewers of Westminster discharging over the foreshore of the river, and partly, if not chiefly, from the permeable cesspools, drains, and sewers, which formerly honeycombed the city of Westminster. "This downward percolation of sewage through the gravel into the water resting upon the blue clay began, doubtless, from the time Westminster was first inhabited—probably, 2,000 years ago. There is strong reason to believe that this stagnant reservoir of sewage-infected water under the Speaker's Green extends under the Abbey precincts, Whitehall, and the whole of the city of Westminster. As, however, it is hermetically sealed down by the overlying bed of gravel and water therein, and cannot flow away, it is comparatively harmless where it is. But, notwithstanding this, the unpleasant fact remains that, from about 26 feet to 36 feet below the present surface of Westminster, this objectionable stratum of sewage-water exists." These are strange geological views. They may, of course, be correct; but we should like the head of the Geological Survey to look into this excavation before it is filled up, and see how far he endorses the resident engineer's opinions. The notion that we have a deposit of sewage immediately beneath our feet that has been accumulating for 2,000 years is rather staggering on first acquaintance.

THE SANITARY CONDITION OF NEWCASTLE-UNDER-LYME.

DR. FREDERICK W. BARRY, one of the medical inspectors of the Local Government Board, has been making an inspection of the sanitary condition of Newcastle-under-Lyme, in Staffordshire; and anything more disgraceful than the neglect of scavenging which he described to a recent meeting of the Town Council it has seldom been our lot to read. Such work as the Town Council has done, appears to have been in the wrong direction, and the amount of work that it has left undone is amazing. The water-supply of the poorer parts of the town is from surface-wells, Newcastle being an old town whose soil must be more or less loaded with animal matter. The sewerage is of the sealed-up pattern of a quarter of a century ago, and, short of bringing it to the surface, cannot be inspected. The common lodging-houses are, without exception, the worst Dr. Barry had ever seen. The by-laws generally are very antiquated and inefficient. But Dr. Barry's most serious complaint was about the removal of refuse. "The method of disposing of contents of closets in the district generally is about the worst that exists anywhere." The cesspits are emptied, on an average, once every six months. In many instances, pits were placed absolutely abutting on houses, and the filth actually soaks into the houses. In nearly all cases, the floors of the ashpits are below the ground-level, which admits ground-water, and causes fermentation. Dr. Barry humorously suggested that the next meeting of the Sanitary Committee should be held in an enormous ashpit which he had seen in one part of the town, and in which there were something like eight or nine loads of refuse. In none of the towns in the neighbourhood had Dr. Barry seen so many overflowing or almost full ashpits, so much refuse about the yards, and so many closets approaching fulness. It was, he said, evident that the night-soil staff was insufficient, and that it ought to be increased, so as to admit of the refuse in crowded localities being removed once a week. Here is a very obvious and indispensable reform, and we trust the Town Council will see the necessity of setting about it at once.

THE DANGERS OF PARAFFIN-LAMPS.

THE alarming frequency of accidents occasioned by the upsetting or explosion of lamps will, it is to be hoped, draw the attention of the public to the necessity of adopting those precautions, as elements of safety, insisted upon by Sir Frederick Abel in an address delivered last year before the Royal Institution, as the result of careful and elaborate investigations, made by himself and Mr. Redwood, into the circumstances attending accidents of this kind. No fewer than seven accidents occasioned by the upsetting or explosion of lamps were contained in a recent report issued by Captain Shaw; in five instances, fires were attributed to lamps exploding, and in two others to the upsetting of lamps. In two cases, the results were fatal, one being that of a child, aged 9 months, and the other that of a woman, aged 42. That accidents of this nature may, in many instances, be traced

to a want of due care, either in the carrying of a lamp or in extinguishing it, there can be little doubt. The frequency with which they occur has brought forth a voluminous correspondence in more than one of the daily papers, but much that has been stated is but a repetition of the suggestions of Sir Frederick Abel, to which we have so often alluded. One of the commonest causes of lamp-explosion is probably the too common habit of blowing down the chimney to extinguish the flame; accidents in such cases would be averted were Sir Frederick Abel's precaution adopted, to send a puff of air across the top of the chimney, instead of down it. There is undoubtedly great room for improvements in the construction of many of the cheap lamps which are so much used by the working and poorer classes. There is a disposition among the manufacturers of lamps, as among others, to put the more substantial and attractive work on the outside, while the burner and the arrangement for lowering and raising the wick are generally of a flimsy material, and very readily put out of order.

EXCISION OF A CEREBRAL TUMOUR.

We have the pleasure of recording that another case of excision of a cerebral tumour has terminated successfully. The patient was a man who had been absolutely hemiplegic for a month, and had passed into a semi-comatose condition; before these symptoms developed, he had endured terrible pain in the head, and had suffered from fits. On Thursday, September 23rd, Mr. Victor Horsley trephined over the motor region of the right hemisphere, and, after enlarging the aperture made by the trephine, succeeded in removing a large tumour from the brain; the tumour weighed four and a half ounces, was three inches long, two and a half inches broad, and two inches deep. On the day after the operation the patient was perfectly rational, and even amusing in his conversation, and said that he was quite free from pain. On September 27th, the wound was entirely healed, and the man had recovered some power in his leg. This is the fourth case in which Mr. Horsley has operated successfully on the motor area of the cortex of the brain; the three earlier cases were carefully described to the Section of Surgery at the meeting of the Association at Brighton, and the full text of his paper will be shortly published. His results constitute a real triumph for scientific surgery. Not only have the facts upon which the diagnosis of the seat of the lesion in these cases rests been discovered by experiments on lower animals, but the details of treatment have also been worked out in the course of these experiments. The complete success of the surgical method followed is demonstrated by the fact that, in two of the cases, the wound healed in four days; that, in a third, it had healed in a week; and that, in the case which was in this respect the least successful, the whole of the wound, with the exception of one-sixth, healed by first intention. A more complete proof of the validity of well directed experiments on animals it would be difficult to imagine; and it is no wonder that the professional agitators, who are beginning to find their supposed grounds of objection one by one swept away, pursue Mr. Horsley with a bitterness which increases as it becomes less reasonable.

THE OVER-PRESSURE QUESTION IN FRANCE.

At the Académie de Médicine, Paris, on September 14th, M. Dujardin-Beaumetz made a statement concerning the consequences of intellectual over-pressure in schools. Having been physician for twenty years to l'École Normale d'Élèves Institutrices de la Seine, he admitted that the secondary teaching presented evident advantages over the system of the course of studies at present in fashion. In the colleges, the day scholars enjoyed a good distribution of the hours of work and the hours of recreation; they were obliged, besides, to take active exercise, and they were taught gymnastics. But M. Dujardin-Beaumetz wished to speak of what took place in l'École Normale de la Seine. They received there, every year, twenty-five young girls appointed at the competition from amongst 500 candidates. The numbers were enough to give an idea of the difficulties of the struggle; The young girls prepared themselves for it by the most arduous study in the elementary schools, and, above all, in l'École de la Rue de Jouy. They were nominated for three years. At the end of the first year they were expected to obtain the elementary certificate; after the second year came fresh examinations, and a fresh certificate. On leaving the school, they were granted the *brevet-supérieur*, a full certificate, and the diploma of *Maîtresse de Gymnastique*, if they deserved the privilege. Thus, during these three years, these young girls were submitted to excessive and continuous hard work; they scarcely spent even an hour and a half in recreation during the day, and often, when the examinations approached, they were allowed to sit up very late at night. Thus, all these young people became anæmic, nervous, and chlorotic, and this, above all, during the first year of residence at school, for the over-pressure took place chiefly at the time of the competitions. Nearly all these young girls, besides having a general pitiable aspect, had local lesions, such as the scholarly deformity of the collar-bone, high shoulders, and ametropia. This was a state of things that certainly ought to be remedied. M. Gustave Lagneau added that M. Alphonse de Candolle, M. le Comte de Schatterburg, and, quite recently, Dr. Withers Moore, President of the British Medical Congress of Brighton, had insisted that intellectual over-pressure for young girls, particularly for governesses, was more serious than in the case of young men, hence the proportion of governesses who became insane was greater by far than that of any other class of society. M. Rochard shared the opinion of MM. Dujardin-Beaumetz and Lagneau. He suggested that we should do for the children what was done for animals. Why require from them under age what they could not give? Sedentary studies and cramming could not make men. M. Rochard recalled a visit which he made to l'École des Mousses (ship-boys) with a Minister of Public Instruction. The lads were of marvellous activity, vigour, and intelligence. Why, said M. Rochard, did we not do for all our children what we did for cabin boys? "You do not understand the difficulty," replied the Minister. "We must reform 40,000 schoolmasters and the routine." M. Rochard asked for more liberty for the children. He desired even this liberty for their recreations. He did not wish for daily irksome drill; the child ought to play, and to feel itself at liberty. It is only thus that it could develop in a complete fashion; its physical forces would be maintained, and its intellectual powers would gain by this kind of training.

FAILURE OF THE "BACTERIAL TREATMENT" OF CONSUMPTION.

At a recent meeting of the Odessa Medical Society (*Proceedings of the Odessa Medical Society*, 1886, No. 6, pp. 1—12), Dr. Filipovitch, of the Odessa Town Hospital, made a very instructive communication on six cases of advanced pulmonary phthisis, which had been treated by him after the bacterio-therapeutic method, recommended by Professor Arnaldo Cantani (see the British Medical Journal, 1885, August 29th and November 28th; and 1886, March 6th and 13th). Having obtained, by fractional cultivation, pure cultures of the bacterium termo in meat broth, the author took 5 cubic centimètres of the bacterial fluid, diluted them with 10 cubic centimètres of boiled water (37° C.), aromatised the mixture with one or two drops of tincture of peppermint (to disguise an offensive odour), and made the patient inhale the whole by means of Richardson's spray-producer. The inhalations were repeated twice daily. In one of the patients, the experiment was given up at the end of a week, since the man's state commenced to grow worse from the very beginning, and fever, steadily increasing bronchitis, and hæmoptysis, had developed. Three other patients died under the treatment, one after fifteen days' inhalations, another after seventeen days, and the third after twenty-five days. The remaining two patients left the hospital after treatment for seventeen and fifty-two days respectively. In none of them was anything like a diminution of the expectoration observed. In one of the fatal cases, shortly before death, the sputum became more profuse, more liquid, and assumed a characteristic bad odour, resembling that of a pure culture of the bacterium termo. At the necropsy, numerous excavations,

"represented as it were a culture of the bacterium;" the spleen was enlarged, flabby, partly of a dark-red, partly of a pale-red, colour; the liver was also enlarged and anæmic. In the non-fatal cases, nothing like a diminution or disappearance of the tubercle-bacilli from the sputum, was detected. In the patient who was treated by the inhalation for more than seven successive weeks, the number of bacilli was distinctly increased during the seventh week. In none of the cases was any influence exerted by this treatment on the temperature, or perspiration, or the body-weight discovered. Finally, Dr. Filipovitch came to the general conclusion that "no good whatever may be expected from the treatment of tuberculosis by the inoculation of the bacterium termo;" while some of his cases seemed to point out that the infection of the human system with the putrefactive-bacteria might prove not nearly as harmless as had been alleged.

THE TEUTONIC COMPLEXION.

Professor Virchow has recently turned his attention to the colour of the hair, eyes, and skin among the school children in Germany, and has prepared some interesting tables relating to the subject. The territorial division of the principal types corresponds accurately to the geographical boundaries of north, south, and middle Germany—over 43 per cent. of the pure blondes being found in the northern districts, over 32 per cent. in the middle, and over 24 per cent. in the southern ones. The River Main thus becomes an anthropological line of significance. In general, the further south one goes, the more brunettes one meets, South Bavaria mustering but 14 per cent. blondes. Among the 75,376 Hebrew children, the mixed type also predominates; the pure brunettes outnumbering the pure blondes, however, three-fold. Whereas the relation of the blondes to the brunettes among the Christians is 31.8 to 14, that among the Jewish children is as 11.29 to 42. The grey-eyed and dark-haired predominate in the mixed type. The racial significance of complexion is a matter of high interest to all who love science; but there remain questions in relation to the colour of the hair and skin which may prove to be of physiological or even pathological import. The tow-like hair, with its peculiar tawny yellow tint, often seen in the inhabitants of the northern Scottish islands, and in other parts of the United Kingdom where peasants walk bareheaded, is well known to tourists, and is clearly the result of the action of air, sun, and damp. Amidst the sickly offspring of the inhabitants of large towns, extreme darkness of the hair and iris, with a clear rosy complexion, is frequently observed. It probably represents a pigmentation, due to some special form of anæmia.

SCOTLAND.

At a special meeting of the Glasgow Southern Medical Society, held on September 23rd, it was unanimously agreed to give a hearty support to Dr. James Morton's candidature, as representative of the profession for Scotland in the General Medical Council.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

At the examinations, recently held, twenty-four candidates were successful in obtaining the double qualification of the Royal Colleges of Physicians and Surgeons, Edinburgh. Their names will be found elsewhere.

THE DISASTER AT THE LOCH FYNE QUARRIES.

On Saturday last, a monster blast was fired at the Crarae Quarry, on the western shore of Loch Fyne, the mine driven into the rock containing altogether 14,000 pounds of gunpowder. Arrangements had been made to explode the mine on the arrival of the saloon steamer *Lord of the Isles*, opposite to the quarry, and a large number of persons took advantage of the opportunity to see the explosion. After the mine had been successfully fired, two or three hundred passengers landed to inspect more closely the effects of the shock. The quarry faces the loch, and between it and the water is a barrier of rock twenty to thirty feet in height, in the centre of which, by a narrow archway, was the entrance to the quarry. The excursionists had poured in by this narrow entrance, and had been standing for a few minutes noting the effects of the explosion, when suddenly one after another began to drop to the ground, "as if shot," and within a few minutes, more than fifty people were lying unconscious on the ground. As soon as the manager of the quarry saw what was happening, he apprehended the cause, and shouted to the people to run; but even after they had passed out of the quarry on to the high road, the noxious gases escaping from the exploded mine overcame many. With great promptitude, those who had been overpowered within the quarry were dragged out to the pure air. A number of medical men happened to be in the company, and, though some of them also suffered, they succeeded in rendering good service to others. Six persons were taken out of the quarry dead, and of the others, five were in so critical a condition that they had to be conveyed to Greenock Infirmary, where, with one exception, they have recovered. Two of the dead were members of the Glasgow Town Council. The causes of the disaster are pretty plain. The gases evolved by the combustion of gunpowder are mainly carbonic acid gas and nitrogen, which between them form over 90 per cent of the total liberated gases. A small quantity of carbonic oxide and marsh gas are also liberated. Nitrogen is an indifferent gas, but when inhaled alone causes asphyxia. Carbonic acid gas is poisonous, and acts as a narcotic, while carbonic oxide acts by expelling oxygen from the blood, and is thus poisonous also. The action of nitrogen practically alone is well shown by an accident which happened at the Forth Bridge works early in 1882, in one of the iron cylinders sunk in the river. The cylinder was sixty feet deep, and was made up of sections, placed one on the top of the other, the lines of junction being filled up with rusting composition, consisting of iron-turnings, sulphur, and sal ammoniac. One day, when the atmosphere was still and hazy, the man working in this cylinder at the "rusting" process, was seen to be overpowered as if by some mysterious influence. A companion descended, and was also overcome, but not before he had placed his insensible companion in a bucket, by which he was raised to the fresh air and revived. One of the contractors, who next descended, was also overcome, and was saved by means of the rope he had taken the precaution to fasten round his body. Dr. Wallace, of Glasgow, investigated the matter, and found the rusting composition had used up the oxygen from the air, and the still atmosphere had hindered diffusion, and caused the accumulation of nitrogen in the bottom of the cylinder. At the time of the explosion at Loch Fyneside, the atmosphere was still and heavy, no breeze blowing to aid the dispersion of the gases evolved from the burnt powder. The excursionists reached the quarry twenty to twenty-five minutes after the explosion, just when the enormous volumes of gas would be pouring along the ground, and slowly rising upwards to overflow the rocky barrier which hemmed them in, in the absence of wind to raise and mix them. The currents of carbonic acid and nitrogen would doubtless be seeking to escape by the narrow passage through which the people were crowding. The gases evidently flowed in currents, for some of the people who were well within the quarry experienced hardly any sensation to indicate the presence of foul gas, while many were smitten down without a word, having received the full influence of the current. We have no details as to the means employed to restore animation; doubtless, with so many representatives of our science present, all that medical aid could do would be effected. Of course, the main treatment under such circumstances is the employment of artificial respiration, pursued unremittingly for a time sufficiently prolonged to make it certain that further continuance is useless. Public opinion in this country is so set against the exhibition of even painless experiments for teaching purposes, that we doubt whether many of our medical students have seen the experiment of lowering a guinea-pig into a jar of carbonic acid gas, and then, when it was apparently lifeless, practising artificial respiration. But we imagine any student who had seen the animal, so seemingly

lifeless, revive after a brief period of such treatment, and run off quite uninjured, would be a most valuable man in the midst of such a disaster as that of Lochfyne. An investigation is about to be made into the circumstances of the catastrophe. The investigation will doubtless raise some fine questions of responsibility, for the people seem not to have been warned of any risk in entering the quarry, and no steps were taken to ensure that an entrance was unattended by risk. But it is beyond question that, considering especially the enormous quantity of gunpowder employed (seven tons in all), no visitors should have been permitted near the works till sufficient investigation had been made of their freedom from dangerous accumulations of gas.

Another correspondent writes: Our readers will, from the public prints, be familiar with the details of the terrible disaster that occurred in the Crarae Quarries, Loch Fyne, last Saturday. A member of the profession, Councillor H. B. Wilson, M.D., nearly fell a victim to the fatal gases; he, after experiencing the overpowering sensations produced by them, and while endeavouring to escape from them, fell insensible, and was rescued with some difficulty. He recovered shortly afterwards, and was assiduous in his attention to other sufferers. He was afterwards joined by several medical men from the district, and from the steamer, who had gone on in her and not landed. The services rendered by the members of the profession have been amply acknowledged by the press.

PERTH INFIRMARY.

We are glad to observe the success which has attended the efforts of those well-wishers to Perth City and County Infirmary, who showed their zeal for its welfare in the very successful bazaar held last Thursday and Friday, the total drawings at which amounted to the substantial sum of £1,600, which, after expenses have been deducted, will afford a handsome contribution to Perth Infirmary.

THE OPULENT LUNATIC ASYLUM.

The large sum to the credit of the Fife and Kinross Lunatic Asylum which has for some time embarrassed the Board of Directors of that institution, and which has previously been noticed in the JOURNAL, was again the subject of discussion at a meeting of the Board held on Tuesday. It was stated that the sum now amounted to £5,950 2s. 5d., that it is not diminishing so rapidly as desired, and that a statement as to its accumulation has been presented to the sheriff of the county, and his professional opinion requested as to a legitimate and expeditious method of reducing the amount. At the same meeting, the twentieth annual report was submitted by the Medical Superintendent, from which it appears that, at the close of the year, July 31st, there were 168 male and 197 female patients on the register. The increase of admissions of pauper patients was 12.2 per cent. above the average of the previous five years, while the proportion of suicidally disposed patients, requiring special care and attention, was markedly larger than usual, and this had necessitated an additional night-attendant in the male section. The recoveries were at the rate of 29.6 of the admissions, and numbered 29; this rate was much below the usual ratio, and was 7.4 less than the average recovery rate (37 per cent.) for 1885 in the Royal and District Asylums of Scotland. The number of deaths was 30, and was larger than in any year since the opening of the asylum twenty years ago. The Board thanked Dr. Turnbull for his report.

IRELAND.

ROYAL UNIVERSITY OF IRELAND.

We understand that Her Majesty the Queen has appointed His Excellency the Earl of Dufferin, K.P., Governor-General of India, Chancellor of the Royal University of Ireland, in succession to His Grace the late Duke of Abercorn.

WATERFORD UNION.

A COMMITTEE appointed by the guardians recently sent in a report in reference to the fever-hospital lodge, which it was proposed to convert into an extern-infirmary ward. Mr. Bourke, Local Government Board Inspector, is of opinion that, as the lodge is 200 yards distant from the workhouse, there would be a great deal of difficulty in making the necessary arrangements for cooking, nursing, etc.; and, moreover, the inmates of this proposed ward would be in dangerous proximity to the fever-patients. The matter has been referred back to the guardians for reconsideration.

KELLS UNION.

THE medical officer of Nobber Dispensary recently brought under the notice of the Dispensary Committee a matter of some importance to himself, namely, that visiting tickets were issued to farmers' wives who were able to pay for medical treatment. As the cases were flagrant examples of abuse of medical relief, two visiting tickets were immediately cancelled, but this procedure of the committee is not of much service to the dispensary medical man, as immediately afterwards there is nothing to prevent fresh tickets being issued for these parties. If the medical officer wishes to put a stop to this practice, all he has to do is merely to attend on the ticket, and then sue the guardian who issued this ticket. This method has been tried in other unions, and found to work most successfully. Dr. McEvoy, of this union, has reported that an outbreak of scarlet fever has occurred in the Meath Hill Schools, due to defective drainage.

THE ANNUAL MEETING IN 1887.

A SPECIAL general meeting of the Dublin Branch was held at the King and Queen's College of Physicians on Friday, September 24th, to consider a recommendation from the Council of the Branch that the British Medical Association should be invited to hold its next annual meeting in Dublin. Dr. E. H. Bennett, Professor of Surgery in the University of Dublin, President of the Branch, occupied the chair; and there was a large attendance of members, including the President of the Royal College of Surgeons in Ireland (Sir William Stokes), the President of the Academy of Medicine (Dr. Robert McDonnell, F.R.S), the Vice-President of the King and Queen's College of Physicians (Dr. Finny), the Vice-President of the Royal College of Surgeons in Ireland (Dr. Corley), the Governor of the Apothecaries Hall (Dr. Collins), the Registrar-General for Ireland (Dr. Grimshaw); Sir George H. Porter, Surgeon in Ordinary to the Queen in Ireland; Rev. Dr. Haughton, F.R.S., Senior Lecturer, Trinity College, Dublin; Drs. Atthill, Gordon, Kidd, and T. W. Moore, Registrar, King and Queen's College of Physicians in Ireland; Professors Walter S. Smith, Mapother, Thornley Stoker, Kirkpatrick, and Cunningham; Drs. R. Hayes, Cox, Moloney, Chance, Gunn, Pollock, A. H. Jacob, C. B. Ball, Knight, Tweedy, A. H. Benson, John Barton, Lyon, Manley, and others. In the absence of Dr. Neville, Dr. George F. Duffey, representative of the Branch on the Council of the Association, acted as honorary secretary. He informed the meeting of the reasons which had induced the Council to recommend that the Association should be invited to Dublin, and also explained many points that had to be considered before sending an invitation. After some discussion, Dr. Haughton proposed, and Sir William Stokes seconded, a resolution authorising the President and Council, on behalf of the Branch, to tender a cordial invitation to the Council of the British Medical Association to hold the annual meeting of the Association for 1887 in Dublin; and to request that the Universities and Colleges, the Apothecaries' Hall, the Academy of Medicine, as well as all the members of the profession residing in the district embraced by the Branch (Leinster), but who were not at present members of it, should join in the invitation. Dr. Haughton, in moving the resolution, remarked that he thought that the University of Dublin would probably give its assistance, as it had done twenty years ago, when the Association held its first memorable meeting in Dublin, and in Ireland, under the presidency of its late dis-

tinguished Regius Professor of Physic, Dr. Stokes. After some remarks from Drs. Kidd, Gunn, and Robert McDonnell, the resolution was put from the chair, and adopted *nem. con.* Dr. Robert McDonnell then moved, Dr. Finney seconded, and it was carried by acclamation: "That, in the event of the invitation to meet next year in Dublin being accepted, Dr. J. T. Banks, Physician in Ordinary to the Queen in Ireland, Regius Professor of Physic in the University of Dublin, etc., be nominated President-elect of the Association." After some further business had been transacted, the meeting adjourned.

LUNATICS IN IRISH WORKHOUSES.

THE aggregate number of persons mentally affected in the 153 poorhouses in Ireland, on December 31st last, amounted to 3,733, being 42 less than at a like date in the previous year. It was composed of lunatics aged, utterly demented, and tranquil; and of idiots and epileptic imbeciles. Unfit to associate with ordinary paupers, they are separately provided for in each workhouse. Latterly, at some union boards, a strong feeling has been expressed that the insane of all denominations should be transferred to district asylums, a scheme which, if carried out, would entail a large outlay on new buildings, or on extensive additions, independent of an increased local taxation, and a fresh call on the Government rate in aid. The inspectors of lunatic asylums are of opinion that it is quite inexpedient to erect costly institutions, as abodes for a class of our fellow-creatures whose well-being and comfort should none the less be sedulously consulted, however incapable the great majority of them might be to appreciate the increased advantages afforded by this expenditure, or, in a curative point of view, however unlikely to benefit therefrom. Experience from year to year has convinced them that economy and practical utility can be best combined by the conversion of an unrequired poorhouse, if one existed, with some acres of land attached to it, in each district, for the reception of the exceptional classes under immediate consideration, namely, idiots, epileptics, and demented lunatics. It is further evident that such poorhouse should be well adapted to its new object, both by additions and alterations, and be supported altogether out of a union taxation, as at present maintained. What has been so satisfactorily adopted at Belfast may well serve as an example. The guardians there met the difficulty in a business-like way. The poorhouse at large was much overcrowded with idiots, imbeciles, epileptics, and the like, not a few of them living in common with the pauper population. The attention of the Local Board was specially directed by the inspectors to this unsatisfactory state of things, the result being the erection of a suitable, commodious, and well-furnished structure for 360 inmates, on an open and elevated site close to the main buildings, at a cost of £8,600.

THE CHOLERA.

CHOLERA IN ITALY.

THE following is a list of the cholera returns from September 25th to September 29th:—Torre dell' Annunziata, 17 cases, 9 deaths; San Giovanni a Teduccio, 6 cases, 2 deaths; San Marco in Lamis, 2 cases, 2 deaths; San Giovanni Rotondo, 3 cases, 2 deaths; Ferrara, 8 cases, 4 deaths; Padua, 8 cases, 3 deaths; Cagliari, 37 cases, 11 deaths; Trieste, 18 cases, 6 deaths; Pesth, 119 cases, 46 deaths; Fiume, 1 case; Raab, 2 cases, 1 death; Taranto, 18 cases, 8 deaths; Vicenza, 8 cases, 3 deaths; Venice, 5 cases, 3 deaths; Istria, 4 cases; Putignano, 5 cases, 2 deaths.

THE DANGERS TO LIFE FROM FIRE.—From the annual report of the Metropolitan Board of Works, we gather that the number of occasions on which life has been seriously endangered by fire during the year 1885, has been 138, and the number of occasions on which life has been lost has been 36. The number of persons seriously endangered by fire has been 201, of whom 154 were saved, and 47 lost their lives. Of the 47 lost, 24 were taken out alive, but died afterwards in hospitals or elsewhere, and 23 were suffocated or burnt to death.

THE METROPOLITAN ASYLUMS BOARD AND DR. COLLIE.

ON Saturday last, a meeting of this Board was held at Spring Gardens, and, amongst other matters considered, the Eastern Hospital scandal was revived in a debate respecting Dr. Collie's present and future position. Mr. E. H. GALSWORTHY, J.P., presided; and some of the newly elected members, who give increased representation, by reason of the increase in rateable value, to several localities, were introduced, and took their seats. The numbers of elected members (the guardian boards being the electors) are now fifty-four, in place of forty-five, and the Local Government Board will elect eighteen, in place of the fifteen formerly placed on the board by the central authority.

The Eastern Hospital question was raised by Sir JOHN TILLY, the chairman of the Eastern Hospital Committee. He brought forward a report, recommending that the matron, who had been on probation, should, subject to the approval of the Local Government Board, be confirmed in her appointment; but, Sir John stated, the committee had been unable to agree upon a report regarding the probationary appointment of Dr. Collie, who, after the Eastern Hospital inquiry, had been appointed to resume his position, subject to a report by the managers as to the manner in which he discharged his duties as medical superintendent. Sir John explained that he was himself absent from the committee when the question came before that body, and, of the six then present, three were in favour of reporting that Dr. Collie had discharged his duty satisfactorily, while three "could not make up their minds," and would not assent to any report.

The CHAIRMAN said the managers were now in a curious position by this negative action of the committee for the Eastern Hospital. The Local Government Board had asked the managers to report as to the manner in which Dr. Collie had discharged his duties as medical superintendent in the six months from December 18th last. At the end of the six months, the committee did not report; and now, when another three months was about to elapse, the committee refused to give the managers the power to reply to the Local Government Board. It was now for the managers, as a body, to say whether the subject should not be considered by the whole body as a matter of emergency, so that a reply should be sent to the Local Government Board. He would ask the managers to decide whether this was or was not a matter of emergency.

A vote was taken upon the question, whether Dr. Collie's appointment should be at once considered, and it was carried in the affirmative by 25 to 15.

Sir JOHN TILLY then moved, that the managers should report to the Local Government Board that Dr. Collie had satisfactorily discharged his duties during the time he had been under probation since December 18th last, and that Dr. Collie should be confirmed in his appointment. Sir John said that the three members of the committee had created an unfortunate state of things, both as regarded Dr. Collie, who was placed in a position of incertitude as to his future position, but also as regarded the management of the hospital; for Dr. Collie did not discharge his duties as one having a settled position could do. Sir John said that, in the late inquiry, he took views adverse to Dr. Collie; but investigation of all the circumstances, and of the evidence, had proved to him that throughout there was nothing which touched Dr. Collie's honour.

The CHAIRMAN called to Sir John Tilly's notice that the managers were not called upon to discuss the Eastern Hospital inquiry now, and that the only question before the managers was the manner in which Dr. Collie had discharged his duty during the period of his probation, a period which had now extended to nine months. If the other matters were entered upon, there was no telling when the discussion would end.

Sir JOHN TILLY accepted the view of the chairman, and proceeded to say that, during the period of probation, Dr. Collie had discharged his duties most satisfactorily. Dr. Bridges, the medical adviser of the Local Government Board, was at Homerton a little time ago, and reported that everything in the hospital was satisfactory, and there was no doubt that Dr. Collie had merited this report in his favour.

Mr. MARTINEAU seconded the motion, and said that, as he presided at the last committee, in Sir John Tilly's absence, he could state that the only question with the three members who "could not make up their minds" was, whether they had had sufficient opportunity of forming a judgment upon the question.

Mr. ANDREW said he would move an amendment, and this was to the effect that as, after an extra three months, the Committee could not make up their minds as to the fitness of Dr. Collie to occupy the post of medical superintendent, it was to be accepted that he was

not in their confidence; that, therefore, the managers should declare the position vacant.

The CHAIRMAN said he must refuse to accept the proposed amendment, for it went beyond the powers of the managers. Mr. Andrew should know that the managers had no power to declare a medical officer's position vacant. The Local Government Board only had that power, and the managers would have to give specific reasons if they desired a position to be declared vacant.

Mr. ANDREW asked the Chairman in what way he could frame an amendment?

The CHAIRMAN declined to frame any amendment for Mr. Andrew, and pointed out that the question was, whether Dr. Collie had discharged his duties satisfactorily during the time he had been under probation, a period which had been extended three months beyond the time appointed by the Local Government Board. Had any of the members of the Committee (those members especially "who could not make up their minds") anything to say regarding the manner in which Dr. Collie had discharged his duties in the nine months?

No one of the three members alluded to (two medical men being among the three) rising, Mr. STRONG asked whether it would not be well to ask the Committee again to report one way or the other; but the CHAIRMAN reminded Mr. Strong that the managers had already decided that the matter was one of emergency, and no amendment could be accepted, as Mr. Strong suggested should be the case, to suspend the question over another period in face of the request of the Local Government Board for an answer to the question as to the manner in which Dr. Collie had discharged his duties during the time of his probation.

Mr. FURLONG (new member) proposed as an amendment that as the Committee had not reported upon the manner in which Dr. Collie had discharged his duty during the nine months, the managers should decide that he had discharged them unsatisfactorily.

This was not seconded.

Dr. FELCE pressed that there should be delay; and, after some more appeals to those members of the Committee who had "not made up their minds" to speak, Dr. MILLAR, one of these members, said he had not been allowed opportunities of going into the hospital other than at the times when the Committee met. The Local Government Board had decided that individual members of the Committee should not be allowed to visit the hospital (such visits having been proved by the inquiry to have led to great evils), except as members of the Committee when the other members visited the hospital; and, under these circumstances, he felt unable to form a judgment upon the question of the Local Government Board as to the manner in which Dr. Collie had discharged his duty.

Mr. ROBINS pointed out that if the question were remitted back to the Committee, it was apparent, from the statement made by Dr. Millar, that the Committee would no more be able to agree than before, unless the Local Government Board altered its rules and regulations so as to permit Dr. Millar to visit the hospital whenever he desired. The other members of the Committee, he supposed, did not have the desire to visit the fever-wards. It was apparent that as the Committee had allowed Dr. Collie to carry on the duties of medical superintendent of the hospital for nine months, that they had had no fault to find with him, and could find no fault with him, therefore, they had no more moral right to displace him than they had the legal power so to do.

Miss BAKER stated that she had attended the meetings of the Committee regularly, and could say that there had not been one complaint respecting the manner in which Dr. Collie had discharged his duty. The one answer of those who voted against making any report was that they had not had the opportunity of visiting the hospital at other than Committee times, but they did not visit it then when they had the opportunity.

Sir EDMUND H. CURRIE asked the managers if it was necessary for the managers to pursue the subject further after hearing what Miss Baker had said. Dr. Collie had been placed under a cloud, and the managers had now to consider how he had treated his patients and conducted the hospital during the time of his probation. They had just heard that there had not been one complaint, and Sir Edmund felt that some explanation was due from Dr. Collie's brother medical men, who were members of the Board, who had stood between him and fair treatment. Dr. Millar stated that he was not in a position to judge of the manner in which Dr. Collie had discharged his duties; but Dr. Millar, with the same opportunities, had considered himself able to judge of the manner in which the matron had discharged her duties, and had made no objection to that officer being favourably reported to the Local Government Board. But Dr. Millar, under exactly the same circumstances, could not find himself able to report regarding the medical man—Dr. Millar's own brother professional man. This action looked very much like persecution. It looked like an abuse of power when men who were unable to say a single thing against an officer—an officer who had ever done his duty towards the sick and suffering poor, an officer of acknowledged eminence in his profession—endeavoured thus to shunt him. Sir Edmund thanked the Chairman for the manner in which he had kept the managers to the one issue before them, and thanked Sir John Tilly for the courage he had shown in going against his Committee. The managers should vote for the motion, and thus show the officers that, when it was proved they had done their duty by the sick poor, the managers would stick by them.

Mrs. CHARLES, amid much laughter, said she should consider it immoral to vote one way or the other.

The CHAIRMAN pointed out to Mrs. Charles that the Local Government Board wanted a decision on the subject.

Mr. ELLIOTT, who took an active part in the inquiry, said that, in the early part of that affair, he went dead against Dr. Collie; but, being convinced of Dr. Collie's innocence in the matters which came before the Commissioners, he was against the innocent being punished for the guilty. The speaker asked the managers to give Dr. Collie, without fear of the guardians they represented, the benefit of their own judgment; and he commented, in adverse terms, upon the silence maintained by Dr. Latham, the Chairman of the Committee, who had succeeded Mr. Hodges, and who had avoided voting by leaving the room. Mr. Elliott supported the motion.

The members of the Committee who had shown themselves adverse to Dr. Collie were again invited to give any reasons against the adoption of the motion; but they continued silent. The vote was first taken by show of hands, and 22 voted for Sir John Tilly's motion, and 14 against. A division was called for, and then Dr. Felce followed Dr. Latham's example by leaving the room, as did some other members sooner than have their names recorded; and Mrs. Charles, with Commissary-General Downes, and Mr. Bengough, refused to vote. On the division, the motion was carried by 25 to 12, and it was decided to report to the Local Government Board that Dr. Collie had, in the opinion of the managers, satisfactorily discharged his duties during the past nine months.

The returns showed that, during the last four weeks, the increased numbers of 247 fresh cases had come into the fever-asylums, that 27 had died, and 121 had been discharged, leaving 430 scarlet fever cases, 3 typhus cases, and 54 enteric fever cases, a total of 487 in the asylums, an increase of 99 upon the returns a month ago. During the same period, one small-pox patient was received on board the hospital-ship, and he died. There was not one case, in any of the asylums, of small-pox.

In respect to Hampstead (the North-Western) Asylum, which had now no patients, and a diminished staff, the Committee requested the managers to consider the position of Dr. Gayton, the medical superintendent, and the matron, whose positions were unsatisfactory, now that the hospital was closed. The managers, by the special provision of the Act of Parliament, cannot dismiss a medical superintendent, a provision made to give the medical men independence in the treatment of the sick poor, and the subject was referred to a Committee of the Board to report as to the steps which should be taken under the circumstances. At the Western Hospital, it was reported, special provision was being made to meet the demands for cases arising from the increase of scarlet fever.

With regard to the imbecile asylum for children at Darenth, complaints came from several parishes that they had such children in their workhouses and sick wards, and that there was not sufficient accommodation for them at Darenth. It was suggested that the Hampstead Hospital should be used for these helpless classes, the guardians being very anxious to transfer the helpless and troublesome cases to the asylums of the managers. They also suggested that the Winchmore Hill Hospital for convalescing scarlet fever patients should be made available for these imbecile children.

Mrs. CHARLES declared that, as a result of a short visit she had made to the Darenth Asylum, she had found there children who were not imbecile.

The CHAIRMAN said Mrs. Charles was making a charge against the parish authorities and their medical officers, who certified such children for the asylum, and who wanted the managers to provide for more. While upon this subject, the Chairman called attention to a misstatement made at a so-called "conference" of metropolitan guardians, at which there were eight persons, when the Chairman of the Conference regaled his hearers with the statement that the managers proposed to spend £21,000 or £25,000 upon new drainage at Darenth, the fact being that the sum was about £400.

Commissary-General DOWNES called attention to another statement reported, to the effect that the Winchmore Hill Hospital had been "disused," because the patients could not be got up the hill without injury; the fact was that the asylum had never been opened, and was only just about to be taken over. The hospital would not be furnished until the necessity for it was proved.

Mrs. CHARLES, returning to the subject of the imbecile asylums, said an Act was passed last session, which was a new attack upon the liberty of the subject.

The speaker was not allowed to proceed any further, new Acts of Parliament not being the business of the Board; and on Mrs. Charles stating she had a notice of motion to give, she was informed that she must give it to the clerk. It was then decided that the subject of providing more accommodation for imbecile children should be referred to a committee, as was also an application from guardians to visit the asylums.

The reports from the other asylums, and the detail business having been discharged, the managers adjourned for two weeks.

THE HOSPITAL FOR WOMEN, LIVERPOOL.

A LARGE meeting of the medical profession in Liverpool was held at Dr. Imlach's residence in Liverpool on the evening of September 28th; Dr. GEE, ex-President of the Liverpool Medical Institution, presiding.

The CHAIRMAN stated that this representative meeting of medical men had been called at the instance of several practitioners interested in obstetrical and gynæcological medicine, to consider the treatment of a case of hydatid mole to which exception had been taken in one of the daily papers. He added that the patient had been treated in the Hospital for Women, and then called upon Dr. Imlach to make his statement.

Letters of apology for non-attendance from several influential members of the profession, expressing sympathy with the objects of the meeting, were read; also a letter giving the editor of the newspaper in question the opportunity of being represented by a medical man at the meeting.

Dr. IMLACH said that, after the termination of "Casey *v.* Imlach," several letters appeared in the daily papers animadverting upon the treatment pursued at the Hospital for Women. One of these letters contained charges of so libellous a character that he felt bound to institute proceedings against the writer of the letter and the publisher of the paper in which it appeared. [This letter was read to the meeting.] Dr. Imlach, resuming, proceeded to describe the case in question and the treatment adopted. The patient was admitted into the hospital suffering from severe and protracted uterine hæmorrhage. Hydatid mole was diagnosed, and the usual treatment promptly adopted, with a successful result. The patient insisted upon leaving the hospital at an earlier period than was advised, and, on quitting the institution, expressed her gratitude. Dr. Imlach heard nothing more of the case until the publication of the letter in a newspaper on August 18th last, in which subsequent debility, etc., was ascribed to the treatment the patient had undergone at the hospital.

The hospital books and other documents were examined by those present.

Dr. ARMSTRONG moved, and Mr. CAYZER seconded, the following resolution, which was supported by several gentlemen and carried *nem. con.*:

"That this meeting, having heard Dr. Imlach's statement of the medical treatment of Mrs. Noble, the patient referred to in a newspaper (here named) of August 18th last as treated in the Hospital for Women, and having examined the hospital books and other documents bearing upon the case, is unanimously of opinion that the treatment adopted was proper, and was carried out in accordance with recognised methods."

Dr. WILLIAMS moved, and Mr. MARSH seconded, a second resolution to the following effect:

"That Dr. Imlach, having the full confidence and support of this meeting, do, at its special request, withdraw from the further prosecution of the proceedings for libel against the newspaper in question."

This was carried unanimously, and Dr. IMLACH thereupon said that he would have pleasure in carrying out the wishes of the meeting in this respect.

The proceedings concluded with a vote of thanks to the Chairman.

PRESENTATION.—The students attending the Newcastle-on-Tyne Throat and Ear Hospital, the medical staff, and other friends, have presented the Senior Surgeon, Richard Ellis, Esq., F.R.C.S.Edin., with a handsome silver claret jug and salver, as a token of their esteem.

THE SANITARY INSTITUTE CONGRESS.

ON the Section dealing with sanitary science and preventive medicine resuming its sittings in the theatre of the Museum, York, under the presidency of Professor F. S. B. F. de CHAUMONT, the subject of Milk and Disease was treated by Dr. LOUIS PARKES, who, in the course of his address, said that if cows' milk was a perfect food containing, in the right proportions, all the dietary constituents necessary for healthy growth and nutrition in the young, yet its use in an uncooked state was attended with a possibility of very serious dangers, derived partly from the animal source of supply and partly from causes which might operate on it between its origin from the cow and its consumption by man. Having dealt at length with that aspect of the question relating to the transmission of disease of the cow through its milk-secretion to human beings, Dr. Parkes said that the transference by the Contagious Diseases (Animals) Act, 1886, of power from the county magistrates to the local sanitary authorities, should effect a great improvement in the regulation and management of dairies, cow-sheds, and milkshops. Thus country and provincial medical officers would at last have the control of dairies so long denied them, and still denied to their metropolitan brothers, and they might expect a fairly efficient control and regulation of the milk trade. It would be necessary, under the light of recent experience, for medical officers of health who desired to perform their duties thoroughly to acquire some veterinary knowledge, and to keep themselves cognisant of all that was now being learnt of cow disease in relation to the spread of epidemics.

Dr. WRIGHT NEESON (Hull), Professor CORFIELD, Mr. S. W. NORTH (York), Mr. SYKES, Mr. ARMSTRONG, and Dr. HILL (Birmingham) took part in the discussion which followed.

Mr. JOHN OAKLEY read a paper on the Prevalence of Defective Eyesight. He said that the greatest damage was done to infants' eyes by what was commonly called purulent ophthalmia. According to Dr. Haltenhoff, it had caused the blindness of 33 to 50 per cent. of the total number of blind in various countries. There could be no doubt that the number to be classed under the head of permanent impairment of one or both eyes would far exceed the number of those totally blind. Myopia was, without doubt, increasing, and in the presence of an increasing educational pressure, it was of great importance that they should pay much attention to it. Surgeons were agreed that the present resources of medical science were, if used in time, sufficient to prevent the ravages arising from ophthalmia which occurred in infancy. The proper use of the eyes was a matter of education, and although that was generally an unconscious process, it was, nevertheless, one which parents must promote by judicious supervision.

Among those who spoke on the subject was Dr. J. H. BUCHANAN.

A paper on Sanitary Associations was read by the Rev. J. MALET LAMBERT (Hull), who, in the course of his remarks, observed that the present chasm between sanitary science and sanitary practice was great. They might best popularise sanitation by working on individuals, and also by acting on public bodies who had control of the laws. What was needed was a voluntary association of men of all classes, creeds, and politics, whose motives were above suspicion, and whose business it should be to ascertain clearly the actual position of affairs, to make it public, and then to put in motion the forces most calculated to bring about improvement.

Mr. NICHOLSON (Hull), Surgeon-Major PRINGLE, Mr. OAKLEY, Dr. SYKES, and Professor CORFIELD spoke on the subject, after which a short paper was read by Mr. WILLIAM BOUSFIELD, chairman of the Metropolitan Provident Medical Association, on the Medical Treatment of the Working Classes.

A paper by Lord BRABAZON, on Open Spaces and Physicial Education, was also read, in which the principle was enunciated that open spaces were not luxuries, but necessities of health. If a people's average standard of vitality were lowered, that people would assuredly be handicapped in the same proportion as much as that standard had been lessened. It was a well known and universally recognised axiom of hygienic science that, other things being equal, the health of a population was in inverse ratio to its density; in other words, that the more people were congregated together, the more unhealthy they became. This being the case, it would be readily seen that unless steps were taken to counteract the operation of this natural law, the inhabitants of our towns must degenerate in health, which was as much as to say that this was the destined fate of two-thirds of our population; for at this moment there were in Great Britain two men living in towns for everyone living in the country. Now, what were the most obvious steps to be taken to counteract this natural tendency of disease to dog the steps of men when crowded together? Lord Brabazon urged that all who had the health of the people in view

should assist in forming a public opinion favourable to the maintenance of open spaces, of the provision of gymnasia, and to such alterations in the Education Code as would bring up a generation of English men and women physically capable of bearing the burden of high civilisation and extended empire they had inherited from their forefathers.—A discussion followed the reading of this paper.

Mr. PERCY F. FRANKLAND, in dealing with the subject of the Filtration of Water for Town Supply, said it was to the beautiful methods of bacteriological investigation that the great advance which had recently been made in our knowledge of the sanitary conditions of water supply, and more especially of water purification, was due. By this means it was possible to determine the number of micro-organisms in a volume of water, and to discover whether or not the water had been properly filtered.

Dr. ARTHUR HILL, Dr. TEMPEST ANDERSON, Dr. WILSON, and the CHAIRMAN, joined in the discussion of this paper.

Surgeon-Major PRINGLE read a paper on the Collection and Storage of Rain and Drinking Water, describing in detail his system.

The Ventilation of Factories and Workshops was the subject of a paper by Mr. TATTERSALL.

Mr. J. VICKERS EDWARDS read a paper on the Sanitation of our Dwelling-house, following which was a paper on American Sanitation, by Mr. J. B. GASS, discussions following the reading of each paper.

Mr. J. MANSERGH gave an address on the subject of the Supply of Water to Towns.

Sir T. SPENCER WELLS, Bart., President, at the close of the general meeting, after speaking of the pleasing reception which they had received in York, expressed the hope that possibly the visit of the Congress might be of some little use to the city, and excite an attention to sanitary matters which might be reflected in the neighbourhood. It was announced that the Institute had been invited to hold the Congress of 1887 at Bolton.

MEDICAL FEES IN LUNACY CASES.

A STATEMENT has been sent to us by Mr. W. C. Steele to the effect that the relieving officer of a board of guardians called on him, bringing an official printed order, signed by the chairman of the magistrates for a town, commanding him to visit a very poor girl in the neighbourhood, who had been reported to him by that poor-law official as being insane. He was also directed to send, by that night's post, his opinion respecting her condition. He did so, reporting that he felt hardly able to certify her as being insane, but advising that she should be admitted into the workhouse infirmary, where she might be watched. This could not be done, owing to lack of suitable accommodation, and it appears that the girl was not sent to an asylum. An application for payment of the medical fee was entirely fruitless, although brought before the magistrate who signed the order, the clerk to the magistrates, the guardians, the Local Government Board, the Commissioners in Lunacy, the clerk to the County Board, the authorities of Scotland Yard, and again, the magistrates of the town. Mr. Steele writes:

"The magistrates refused my application on the ground that, although the relieving officer had applied to them" (meaning the guardians, we suppose) "for assistance; and the girl, although not in actual receipt of poor-law relief, was, nevertheless, virtually a pauper, the guardians could not be made responsible, because she was not on their books as a pauper, and also for the astounding reason that I was unable to establish her lunacy. Therefore, it would appear that if she had been a pauper and not a lunatic, or if she had been a lunatic and not a pauper, or if she had been a lunatic possessed of means and at large, or if she had possessed sufficient, and I had failed to certify her as insane, I had no claim on the magistrates or guardians, even though I had been, in each instance, ordered by the magistrates to attend."

This interpretation by Mr. Steele is not quite accurate. It is a question whether the putting into operation part of the machinery of the Poor-law did not of itself suffice to make the patient, for the time being, legally a pauper. But, waiving this, if the girl had been one about whose pauperism there could be no doubt or quibble, the guardians could not have legally refused to pay a fee, if ordered to pay it by the justice who had caused her to be examined by the medical man. The words of the Act are: "It shall be lawful for any justice or justices, causing any person to be examined by any physician, surgeon, or apothecary, under the provisions hereinbefore contained, if he or they think fit to do so, to make an order under his or their hand and seal, or hands and seals, upon the guardians of the union or parish or the overseers of the parish to which such person is chargeable, under the provisions herein contained, for the payment of such reasonable remuneration to any such physician, surgeon, or apothecary, for the examination of such person," etc. The guardians were only able to evade the payment of the fee in the case referred to by, firstly, declaring the patient, who was practically at least, if not in a complete legal sense, a pauper, to be no pauper; and, secondly, taking advantage of a defective wording of the Act, which apparently fails to specifically provide for the payment of a fee when the alleged lunatic is not a pauper and not wandering at large, but is not under proper care and control, or is cruelly treated or neglected by those having the care or charge of him, and is brought before a justice or justices, if such person be not ordered to be confined as a lunatic in an asylum, lunatic hospital, or licenced house. But should such person be sent to such institution, payment of the fee in question is provided for under Clause 118.

We believe that boards of guardians, as a rule, pay the fees of medical men in cases similar to the one forming the basis of this commentary. The Lunacy Acts Amendment Bill, 1886, which was before the Houses of Parliament last spring, and fell in "the massacre of the innocents," dependent on the defeat of the Government and the dissolution of Parliament, contains a section which admirably meets the point, and places upon a just and reasonable basis the question of the remuneration of medical men who are directed by a justice to examine any alleged lunatic. This forms another ground for our hope that the Bill, in its latest form (April 6th, 1886), and after some inconsiderable but desirable modifications are made, may become law in the ensuing session. The words of the Bill are: "Whenever a justice directs an alleged lunatic, whether a pauper or not, to be examined by any medical practitioner, the justice directing the examination, or any other justice having jurisdiction in the place where the examination took place, may make an order upon the guardians of the union in which the examination took place, for payment of such reasonable remuneration to the medical practitioner," etc.

REPORT OF THE SANITARY COMMISSIONER FOR MADRAS, 1884.

THE Government of India, some years ago, fixed June 1st as the date on which the sanitary reports should annually be presented to the local governments throughout the Indian Empire. We observe that every year the Secretaries to the various governments open their review of the sanitary reports with a complaint that this order of the Government is not complied with, and is invariably followed by a rebuke for the delay. The author of the report under notice, Deputy Surgeon-General Bidie, shows that it is impossible to comply with the order in question, in consequence of the unavoidable delay in obtaining from district officers the vast amount of statistical information on which these elaborate annual reports are based; and, not unreasonably, complains of the "unpleasantness" of these annually recurring rebukes for non-compliance with an impossible demand; at the same time, suggesting that the day of submission should be postponed till July 1st.

The Sanitary Commissioner observes on the gradual improvement in the work of registration in municipal towns, and, to some extent also, in villages; he justly adds that, to ignorant men, the duties of registration must appear so purposeless, that it is difficult, without constant supervision, to get the *kurnams* of villages to carry out registration with diligence and accuracy.

The average population of the Madras Presidency, per square mile, was, for 1884, 220.6. The births were in the proportion of 29.3 per 1,000 of population, being the highest on record, and believed to be the nearest to the true ratio than any hitherto obtained. The deaths in a population of 28,157,952, for whom returns were received, numbered 650,335, being at the rate of 23.1 per 1,000 of population, against 19.0 per mille in 1883. The increase in the death-rate is attributed to the prevalence of epidemic disease, and partly also to improved registration. More Hindus died than Mohammedans, and more of the latter than Christians.

The death-rate from cholera was 2.6 per 1,000; from small-pox, 2.1; from fevers, 7.6. Suicide accounts for 1,514 persons, of whom 870 were females and 644 males; 2,290 of the population perished from snake-bites and the attacks of wild beasts. The year 1884 was one of extensive cholera prevalence; it prevailed in all the districts of the Presidency, South Canara excepted. The district of Tanjore, as usual, bore the brunt of the epidemic, the deaths from the disease amounting to 23,671, being 11.1 per 1,000 of the population. It is recorded that, during the eighteen years in which registration has existed, this unfortunate district has not once escaped a visitation from cholera. The Surgeon-General, who, by order of Government, reported on the causes of this constant presence of cholera in the Tanjore district, found that the disease has become epidemic there, and attributes this to the fact

that the soil and water in Tanjore closely resemble the soil and water in Bengal, although the climatic conditions of the two regions differ widely. In every epidemic, the disease lingers longer in Tanjore than in any other district in the Presidency. It is interesting to note that there, as elsewhere, water plays an important part in the propagation of the disease. "The people," the Surgeon-General reports, "live in the midst of irrigated lands, and, when the rivers have dried up, take very little care of the source of their drinking supplies." While the district is a wealthy one as regards its agricultural productions, "the labourers are very poor, and live in wretched hovels, built on a damp, porous soil." To those who dispute the action of impure water in propagating cholera, we commend the following passage from Surgeon-General Furnell's report to his Government on the subject of cholera in Tanjore; this officer says: "The peculiarity of the water-supply, and the habits of the people, favour in every possible way the propagation and retention of the disease." Dr. Furnell describes the manner in which the water-courses, beds, and banks of rivers are contaminated; he shows that these water-courses are the feeders of the tanks which supply the drinking-water to the people of Tanjore, and that the tanks themselves are still further contaminated by the women who bathe, wash their clothes, and the clothes of sick people in them. The Surgeon-General exhibited to the Native Municipal Commissioners of Tanjore six samples of water, taken from different tanks in the town, and had some difficulty in persuading them that the green offensive fluids were samples of the ordinary drinking-water of the people. We think it our duty to give prominence to this investigation into the causes of the prevalence of cholera in Tanjore, as the best corrective to the doctrine, so persistently put forward by Dr. James Cunningham, who, to the last days of his official life, as Sanitary Commissioner with the Government of India, denied that impure water played anything but an insignificant part in the propagation of cholera.

Small-pox was very fatal in the Presidency in 1884, the ratio being 2.1 per 1,000 of the population. As we might expect, the disease was particularly fatal where large numbers of young people are unprotected, or only imperfectly protected by vaccination; 39,292 of the deaths, or nearly 60 per cent., were in children under 12 years of age. In the Black Town district of Madras, 74 per cent. of the total deaths occurred in children under 3, and over 21 per cent in children above 3 and under 12 years of age. The Sanitary Commissioner reports one good result that came out of this severe epidemic, it gave an impulse to vaccination amongst all classes of the community.

It has often been said that a bad cholera year in India is a bad fever year also. So it was in the Madras Presidency in 1884, when the total deaths from this cause amounted to 215,977, being at the rate of 7.6 of the population. The deaths from bowel-complaints, always most numerous in cholera-years, amounted to 28,775.

The strength of the European army in the Madras Presidency during 1884 was, on January 1st, 10,774; on January 1st, 1885, 11,220. It is highly satisfactory that the death-rate was only 8.5 per 1,000, the lowest death-rate ever recorded, and this notwithstanding the fact that it was a year of great sickness and mortality among the civil population.

Cholera caused 12 deaths. This comparatively small mortality is remarkable when we consider the extent of country over which the disease was epidemic. Only 19 cases are recorded in the whole force. There were 762 cases of paroxysmal fevers, without a single death. Typhoid fever gave 129 cases, with 18 deaths, the ratio of admissions being 11.9 per 1,000 of strength, and the deaths 1.6. Bangalore had, as usual, the largest number of cases. On this, the Sanitary Commissioner observes: "Bangalore is thus becoming notorious for enteric fever," attributed as usual to "its impure water-supply." Out of 602 cases of dysentery, there were only 4 deaths; and diarrhœa gave 452 cases, with 1 death.

There were 310 admissions and 23 deaths from hepatic diseases, an admission-rate of 28.6 per 1,000, and a death-rate of 2.1. The figures we have just given of the health of the British troops in Madras in a cholera-year reflect the greatest credit on the medical officers of the army, and furnish a more than sufficient answer to a reverend military chaplain, who has, in a publication recently issued, given it as his opinion that the medical officers of the army receive no instruction in tropical medicine.

DR. BRIDGES will lecture at Newton Hall, Fetter Lane, at 8 P.M., October 3rd, 10th, and 17th, on Health: Physical, Mental, and Moral.

QUARANTINE.—The Board of Trade have received, through the Secretary of State for Foreign Affairs, a copy of a telegram from Her Majesty's Representative at Rome, declaring that Sardinia and Sicily are suspected of cholera from September 13th.

THE MEDICAL SCHOOLS: ALTERATIONS IN THE BUILDINGS.

At ST. BARTHOLOMEW'S HOSPITAL, the operating-theatre has been greatly enlarged, so that it will contain a much larger audience.

At ST. GEORGE'S HOSPITAL, very extensive additions to the school-premises have been made since the end of the summer session. The dissecting-room has been enlarged, and two new physiological laboratories, with an additional class-room, have been built.

The most extensive alterations undertaken in connection with any metropolitan medical school have been carried out at the LONDON HOSPITAL Medical College. These improvements have involved the almost complete reconstruction of the old buildings, and the erection of an extensive series of new rooms. On entering a new doorway, which has replaced the older structure, the visitor finds immediately on the right the Warden's office and a large board-room; passing on, he enters a handsome hall, from which a fine central staircase rises; on this (ground) floor, a new theatre for the lectures on anatomy, medicine, and surgery has been built, and, adjoining it, is a private room for the lecturers. The old materia medica museum has been enlarged; fronting the hospital grounds, a large new library, with two bow-windows, has been built, and is now in process of decoration with moulded cement work. When completed, this will be a very handsome and convenient apartment. It is lofty, well lighted, and surrounded by a gallery. A commodious dining-room is also in progress, and opening off it is a students' common-room, which has been formed out of the old library. The new museum is a lofty room, well lighted by top lights, and provided with a gallery; a curator's room adjoins, and on the same floor is a room for practical pathological histology, which will be under the superintendence of Mr. Eve. Rooms for practical physiology and for histology have also been fitted; the former opens off the new physiological theatre, which is designed to seat 150 students; the room for histology is adapted for a comparatively small number, as it is considered preferable to subdivide the body of students into several classes. The dissecting-room, on the top floor, is brilliantly lighted by top lights; it is warmed by hot water coils, and well ventilated; the floor is slate, and there is a slate dado, about four feet high; rooms for the prosectors and demonstrators, and a large lavatory, are provided on this floor. On the first floor, two large rooms have been assigned for class-rooms, and a special entrance into the museum has been made from them. A lift connects the dissecting-room with the basement, where are the mortuary and injecting-room, and also with the ground floor, so that subjects can be easily taken from the dissecting-room to the anatomical theatre. From the curator's room, near the museum, a second small hand-lift descends to the ground floor for the conveyance of specimens. The building throughout is extremely well lighted, and has been planned with much skill and good taste by the architect, Mr. Rowland Plumbe. The cost, which it is understood will not fall far short of seventeen thousand pounds, has been met by a private company.

The authorities of St. MARY'S HOSPITAL Medical School are striking out a new course, by providing, in the school extension upon which they are engaged, very complete arrangements for the teaching of pathology. Most medical schools have, in recent years, recognised the necessity for more advanced training in physiology, but such training conducts the student only half way in his course. To remedy this defect, and to teach thoroughly the scientific methods of modern medicine and surgery, pathological laboratories have been in existence for some time, in connection with the Edinburgh and Manchester schools. A few of the examining bodies, too, such as the Cambridge, Edinburgh, and Victoria Universities, have instituted special examinations in pathology. For the department of bacteriology, especially, it is advisable that a completely equipped laboratory should be attached to every large hospital, not merely for teaching purposes, but for the investigation of the infectious diseases which occur in the wards; while for hygienists, also, bacteriology is becoming specially important. The members of the St. Mary's staff have thought it desirable to provide for these requirements by the erection of a pathological laboratory, which will be equipped with all the modern apparatus, etc., required for research. It is thought that senior students will find an advantage in receiving here an introduction to original work, and especially that those who are engaged in preparing a graduation thesis, such as is now required by some of the universities, will be able to follow out completely and conveniently the subjects upon which they are engaged. The pathological department consists of a large general laboratory, of which one portion will be fitted up specially for the study of pathological chemistry, and the remainder for microscopic and experimental pathology. This main laboratory communicates with a theatre, in which the lectures on pathology are given, and has at-

tached to it a room for the storage of pathological specimens not designed for the museum. The classes in pathological histology will be held in a large well-lighted room on the first floor, where the practical classes in physiological histology are also to be given. In this way the main laboratory will be kept free for individual original work. From the laboratory a passage runs for some little distance, to the *post mortem* theatre, in which the necropsies of the hospital are made, and the organs removed are demonstrated to the students by the lecturers on pathology. In connection with the *post mortem* room is a mortuary, and a second store-room for specimens. At a higher level than the large laboratory, and approached by a winding staircase, is a room designed specially as a bacteriological laboratory. Considerable care has been taken to isolate this room as much as possible from all other parts of the school-premises, so as to ensure freedom from outside infection. The plans have also been arranged so that the *post mortem* and preparation rooms, while still in connection with the laboratories, are so far removed that they cannot taint the air of the chief work-rooms.

At the MIDDLESEX HOSPITAL Medical School, no important structural alterations have yet been made. Plans and estimates have been accepted for a very important addition to be made on ground which has just come into possession of the school. These buildings will forthwith be erected and completed for next session. Operations will also be at once commenced on the new residential college already mentioned in these columns.

In the Anatomical Department of UNIVERSITY COLLEGE, LONDON, extensive alterations and improvements have been made. The internal structure of the theatre has been entirely remodelled. The lighting has been improved by the construction of additional skylights in the roof. The old seats, which left much to be desired in the way of comfort, have been replaced by others more conveniently arranged. And five commodious and well lighted work-rooms have been constructed for the use of professors and their assistants, fitted with all conveniences for the preparation of lecture-demonstrations and for research. In the large dissecting-room, also, several improvements have been carried out, with a view to increasing the comfort of students and facilitating work. The chief of them are: the introduction of hot-water coils, to furnish a part of the necessary heating in cold weather; the substitution for the sun-lights of thirty six-light gaseliers, so that each table may have its own illumination; and the provision of a number of covered tanks, in which parts undergoing dissection may be kept in spirit, when not being worked upon.

The WESTMINSTER HOSPITAL Medical School, which was only erected last year, has not required to be altered. The out-patient department of the Hospital, however, has been completely rebuilt on the site of the old school premises; a small theatre has been constructed at the hospital for clinical lectures, and a room provided for urinary examination.

At UNIVERSITY COLLEGE, LIVERPOOL, structural alterations of great importance have been carried out since last year. The New Chemical Laboratories, fitted up at a cost of about £20,000, were opened in April last; and the old chemical department has been converted into physiological laboratories. Last year, the anatomical department was almost entirely rebuilt, so that the school-buildings are now thoroughly well adapted to their purpose.

PRESENTATION.—On Monday, September 6th, Mr. Edward Garraway, an old and much respected medical practitioner in Faversham, was presented with a testimonial at a large meeting, presided over by the Right Hon. Earl Sondes. The testimonial consisted of a silver salver, a book containing an address and the names of the subscribers, and a cheque for three hundred and sixty-five guineas. The salver was beautifully chased, and altogether a very handsome piece of plate. It bore the following inscription, surmounted by the recipient's crest: "Presented to Edward Garraway, Esq., M.R.C.S. Eng., J.P., etc., of Faversham, with a purse of three hundred and sixty-five guineas, by 280 of his friends, in token of their respect and esteem, and in remembrance of a long and arduous professional career, during which his great ability and zeal have been no less conspicuous than his many acts of considerate kindness to his poorer patients. September 6th, 1886." The book containing the address and names of the subscribers was handsomely bound in morocco, each page being beautifully illuminated. The presentation was made by Earl Sondes, and was appropriately acknowledged by Mr. Garraway. A vote of thanks to his lordship concluded the proceedings.

BACTERIOLOGY.—Mr. Crookshank's *Practical Bacteriology* has been published in French by M. Carré. An appendix has been added upon photomicrography, illustrated with permanent autotypes, which are printed in special colours.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 20th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, September 29th, 1886.

NOTICE OF QUARTERLY MEETING FOR 1886. ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

A meeting of the Council will be held on October 20th, 1886. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before the meeting, namely, September 30th, 1886.

Candidates seeking election by a Branch Council should apply to the secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The opening meeting of the session will take place at the Hackney Town Hall on Thursday, October 21st, when an address will be given by Dr. Playfair. The chair will be taken at 8.30 P.M. by the President of the Branch, J. Syer Bristowe, M.D., F.R.S. All medical men will be welcome, whether members of the Association or not.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of the above District will take place at the West Kent Hospital, Maidstone, on October 20th. Gentlemen who wish to read papers, exhibit specimens, etc., are requested to inform the Honorary District Secretary, A. W. Nankivell, F.R.C.S., St. Bartholomew's Hospital, Chatham, not later than October 9th. Further particulars will be duly announced.—A. W. NANKIVELL, St. Bartholomew's Hospital, Chatham, September 11th, 1886.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—A meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 17th, at 4 P.M., Charles E. Oldman, M.D., of Bletchingley, in the chair. Dinner at 6 P.M., charge 7s., exclusive of wine. The following papers, etc., have been promised. Dr. Galabin: Modern Improvements in Cæsarean Section. Dr. Samuel West: On some Points connected with the Diagnosis and Treatment of Empyema. Dr. Oldman: A Case of Wound of the Orbit. Dr. Duncan, Mr. T. A. Richardson, Mr. A. Matthey: Pathological Specimens. Members desirous of exhibiting or reading notes of cases are invited to communicate with the Honorary Secretary, Dr. P. T. DUNCAN, Park House, Croydon, September 28th, 1886.

SOUTH MIDLAND BRANCH.—The autumnal meeting will be held at the George Hotel, Kimbolton, on Thursday, October 14th, at 2 o'clock P.M. By the kind permission of the Duke of Manchester, the members will have the opportunity of visiting Kimbolton Castle. Gentlemen wishing to bring forward communications, etc., at the meeting, are requested to send the titles of the same as soon as possible to the Honorary Secretary. Papers, etc.—DR. T. J. WALKER: An Apparatus for Irrigation of the Bladder. Mr. R. A. Milligan: Case of Popliteal Aneurysm cured by Ligature after failure of Pressure. Two large Calculi removed from Children by Lateral Lithotomy.—C. J. EVANS, Honorary Secretary.

MIDLAND BRANCH.—There will be a meeting of this Branch on Thursday, October 21st, at 2 P.M., at the Infirmary, Stamford, when it is hoped there will be a discussion on the Duration of Infectiousness in Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. Members desirous of reading papers or exhibiting cases are requested to communicate with me before the 4th October next.—W. A. CARLINE, Honorary Secretary.

WEST SOMERSET BRANCH.—The annual meeting of this Branch, which was appointed to be held at Minehead on July 30th, was put off in consequence of its being ascertained that probably only three or four members could have attended on that day. The Council have now fixed that the postponed meeting shall be held at the Railway Hotel, Taunton, on Thursday, October 14th, at 4 P.M. The business will be the same as that stated in the circular of July 6th, and the dinner will be at 5.30 P.M.—W. M. KELLY, M.D., Honorary Secretary.

STAFFORDSHIRE BRANCH.—The thirteenth annual general meeting of this Branch will be held at Burton-on-Trent on Thursday, October 28th. An address will be delivered by the President-elect, Dr. W. G. Lowe.—VINCENT JACKSON, General Secretary, Wolverhampton, September 22nd, 1886.

BORDER COUNTIES BRANCH.—The autumn meeting of this Branch will be held at the Keswick Hotel, Keswick, on Friday, October 22nd, 1886. The chair will be taken by the President, Dr. Eaton, Cleator Moor, at 1 P.M. Dinner at the hotel at 4 P.M. The Secretary will be glad to receive intimations of papers for reading, and specimens, or patients for exhibition, without delay.—H. A. LEDIARD, Honorary Secretary, 41, Lowther Street, Carlisle.

NORTH OF ENGLAND BRANCH.

THE twenty-second annual meeting of the Branch was held at the Town Hall, South Shields, on Thursday, July 29th. The retiring President, Dr. STAINTHORPE, took the chair, and there was a good attendance of members. After some introductory remarks, Dr. Stainthorpe vacated the chair in favour of Dr. GOWANS, the new President. Dr. Gowans then delivered his Presidential Address, in which he dealt in an interesting, able, and eloquent manner, with the advances made in pathology during the past few years, making special reference to the germ-origin of disease.—A vote of thanks to the President was then proposed by Dr. Philipson, and carried by acclamation.—Votes of thanks to the retiring President, to the Council, and to other officers, were also proposed and carried.

Places of Meeting for 1886-1887.—It was resolved that the annual meeting, 1887, be held at Stockton-on-Tees; the autumnal meeting, 1886, at Newcastle-on-Tyne; and the spring meeting at Sunderland.

Election of Officers.—The following officers were then chosen: *President-elect:* Dr. R. W. Foss. *Council of Management:* Drs. Barron, Blandford, Broadbent, David Drummond, Middlemiss, Morison, Murphy, Oliver, and Philipson. *Honorary Secretary and Treasurer:* G. E. Williamson, F.R.C.S. *Representatives of the Branch on the Council of the Association:* Dr. Drummond and Mr. Williamson. *Representative on the Parliamentary Bills Committee:* Dr. Philipson.

The President, Dr. Gowans, proposed a vote of thanks to Dr. Drummond (who was retiring from the office of Secretary), which was unanimously carried.

Dinner.—The members and their friends dined together after the meeting at the Royal Hotel, South Shields. Among the guests were the Mayor, the Town Clerk, and the Vicar of South Shields. The President occupied the chair, and Dr. Drummond the vice-chair.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

A MEETING of the above District was held on Thursday, September 23rd, at the National Art Treasures Exhibition, Folkestone. Twenty-eight members were present. The chair was taken by Dr. THOMAS EASTES.

Election of Chairman.—Mr. JAMES REID was elected Chairman of the next meeting, to be held at Canterbury in November.

Papers.—The following were read.

Dr. C. E. FITZGERALD (Folkestone) read an interesting paper on Some Practical Points in the Treatment of Ulceration of the Os Uteri.—Mr. Rigden and Dr. Ormsby took part in the debate.

Dr. GOGARTY read a paper on a Case of Ascites, in a boy, aged 11. There was no apparent cause for the accumulation of fluid. No fever, pain, nor organic lesions were detected. Recovery was rapid. Digitalis and iron were given. This was the second case which had been described. The other was in a girl, aged 7, who made a good recovery under iron and good feeding. Reference was made to the literature on the subject of ascites in children. Recorded cases were adduced, and Trousseau's remarks were quoted.—Dr. Tyson suggested that some of these cases were of a tuberculous origin, and quoted two cases in support of this view.—Dr. Bowles thought that simple ascites might exist in the same way as simple hydrothorax; he also referred to the great value of giving a large quantity of sour milk in many cases of dropsy, due to various causes.—Dr. Gogarty replied.

Dr. THOMAS EASTES read a paper on Three Cases of Visceral Abscess.—Dr. England, Dr. Bowles, and Mr. Ashby Osborn took part in the subsequent discussion.

Dr. BOWLES, at the close of the meeting, showed some small calculi, removed from the tonsil.

Previous to the afternoon meeting, the members and their friends were entertained at luncheon, in the Exhibition, by Dr. T. Eastes.

The members dined together, at 5.30, in the Exhibition; Dr. T. Eastes in the chair.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Hysterical Apoplexy.—Disappearance of Ascites in Hepatic Cirrhosis.—Puncturing the Uterus in Acute Hydramnios.—Rectal Injections of Medicated Gases.

HYSTERICAL apoplexy is a complaint which has hitherto apparently been overlooked. Nevertheless, cases are by no means of rare occurrence. At a recent meeting of the Société Médicale des Hôpitaux, M. Debove communicated the following facts. On July 10th, a healthy man, aged 31, suddenly became insensible as he was leaving the dinner table; he remained in a comatose condition for twelve hours. On recovery, he presented motor paralysis of the left side; there was an absence of convulsions. The following morning, when he appeared at the hospital, there was motor paralysis on the left side, accompanied by hemi-anæsthesia. All the symptoms of the case established the diagnosis of ordinary apoplexy. M. Debove believed it to be hysterical. The patient was certainly strong and robust, and not of hysterical aspect. Nevertheless, on the left side, the skin, mucous membranes, ear and muscles were insensible. The pupil was contracted; the patient was unable to detect violet, and had monocular polyopia. On applying a magnet, anæsthesia shifted from the left side to the right. On repeating the experiment, the left side became anæsthetised, and the right side presented its normal sensibility. When there was absence of organic lesion, motor paralysis was generally co-existent with sensor paralysis of the region attacked. Professor Charcot admitted two varieties of anæsthesia,—one hysterical, the other organic; the latter was rare. M. Debove's view was supported by a paper by M. Vulpian, which had appeared in a medical journal. The patient referred to in it presented hemi-anæsthesia, preceded by sudden loss of consciousness; these and other symptoms had led M. Vulpian to localise the cerebral lesion. At the necropsy, the two cerebral hemispheres were completely normal. M. Debove, in consideration of certain phenomena exhibited by his patient, affirmed that the case was nervous apoplexy. Notwithstanding the ætiological objection to the word hysteria, the disease might be called hysterical apoplexy, as it was a term under which was included a certain class of symptoms similar in kind. Hysterical apoplexy with anæsthesia was not astonishing. M. Debove reminded the meeting that, quite recently, in some cases of anæsthesia from alcoholic intoxication, or saturnine, or mercurial poisoning, the anæsthetic condition was connected with hysteria, and the anæsthesia was rather symptomatic than toxic.

M. Dujardin-Beaumetz has noted in his wards a very interesting case. A patient, aged 38, was suffering from cirrhosis, accompanied with considerable ascites, when he entered the Cochin Hospital. Five litres of fluid were removed by means of a puncture. Atrophying cirrhosis was diagnosed. The cachectic condition gradually disappeared, the patient became stronger, and the general condition improved. Ascites did not reappear; the patient appeared to be cured, and was allowed to leave the hospital. He immediately afterwards resumed his habit of getting drunk, was found insensible on one of the boulevards, and was removed to the hospital, where he died of pneumonia. The necropsy revealed the presence of pulmonary lesions and hepatic cirrhosis. Microscopic examination confirmed the accuracy of the previous diagnosis. M. Dujardin-Beaumetz, in treating the case, remembered that cirrhosis was most often cured after an acute complica-

tion, such as severe diarrhœa, and that Dr. Poulet had recently prescribed hippurate of lime for hepatic cirrhosis; he therefore administered to his patient daily four to eight grammes of hippurate of lime, in a mixture. M. Beaumetz could not assert that this mixture had any curative power, but it was perfectly harmless, and might be generally tested. Medical authorities were not agreed as to the time when the abdomen ought to be tapped, in a case of cirrhosis. Some said as soon as a certain quantity was accumulated, others advised it only when asphyxia was threatened. M. Dujardin-Beaumetz believed that a puncture ought to be made as soon as ascites reached a certain development. At a recent meeting of the Société Médicale des Hôpitaux, M. Troisier showed a patient whom he believed to have hepatic cirrhosis. Ascites, after having been marked, disappeared. At the time he entered the hospital, there was considerable œdema of the lower limbs, and ascites. The subcutaneous abdominal veins were much swollen, and the patient owned to drinking on an average three litres of wine a day; nevertheless, he did not present any symptoms of alcoholism. A few days after his entry at the hospital, ascites increased, and pushed upwards the diaphragm; the fluid was estimated to represent four litres. The patient was put on milk-diet; the urine rose from five hundred grammes to five litres and a half. Eight days later, the abdomen regained its normal volume, and ascites had not reappeared. The liver and spleen were slightly hypertrophied, the patient's complexion was yellowish, and he was thin; he nevertheless appeared to be recovering from his complaint.

M. Tillaux's wards are always fruitful in clinical teaching. A most interesting case is now under his care. A woman, aged 37, apparently of a healthy temperament, was sent to the hospital. The patient believed she was pregnant; it was five months since she had menstruated. She had borne five children, two of these were twins, and had lived only twenty days. Delivery had always been easy, without any complications or sequelæ. Since the last delivery, she was excessively susceptible to the influence of cold; when she was chilly, the abdomen became swollen and painful. The enormous development it presented was rapidly attained; the diaphragm was pushed upwards, and threatened the patient with asphyxia. It was difficult to ascertain whether the swelling was present previous to the disappearance of her period. The patient's answers to questions encouraged the belief that a tumour had existed longer than five or six months. When M. Tillaux examined the tumour, he ascertained that it was full of fluid. A few days after this first examination, on the left side and in front certain symptoms were observed which were opposed to the hypothesis of a unilocular cyst. Dropsy of the amnion was suggested, but not admitted. A few days later, the patient was examined, and the signs were favourable to the belief of a unilocular cyst. The surface was equal, and the resistance uniform. An operation was necessary, as the patient was almost suffocated, and could neither eat nor sleep. She was tapped, and the fluid that escaped was clear, slightly yellow, and free from viscidity, which suggested that it was amniotic. M. Tillaux, whilst allowing the fluid to escape, kept his hand on the surface of the tumour, and felt it harden and contract, like the uterus during parturition. The patient declared that she felt labour-pains at the onset. This enormous tumour, which contained at least twenty litres of fluid, was a uterus dilated at the fifth month of pregnancy by subacute hydramnios. M. Tillaux decided, in the interest both of mother and child, to diminish the quantity of amniotic fluid, but, nevertheless, to leave a sufficient amount in order that the infant should be surrounded by normal conditions. Seven litres were withdrawn; the patient was much relieved. Collodion was painted over the trocar-wound. A hypodermic injection of half a centigramme of morphine and an injection containing laudanum stopped the uterine contractions. The patient continued in a satisfactory state. A few weeks subsequently, the patient left the hospital, and then felt uncertain about the fœtal movements; but the patient will be kept in sight, and the further history will be published.

Rectal injections of medicated gases as a method of treatment is based on a physiological principle established by Claude Bernard, that the introduction of toxic substances into the rectum is not dangerous so long as pulmonary elimination is perfectly normal. Dr. Bergeron has adopted this method of treatment in several affections, and publishes the results obtained in pulmonary phthisis. A current of from four to five litres of carbonic acid gas is passed through 250 to 500 grammes of mineral water, containing sulphur (Eaux Bonnes, Allevard, Saint Honoré, Challes), and then introduced into the rectum; in the course of 24 hours two injections are made. After two days had elapsed this treatment had cured the cough which troubled the patients; expectoration was also modified in quantity and character. The profuse perspiring of phthisical patients was removed, and their general condition improved, even in the confirmed stage.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

Opening of the Session at the Owens College.—The Medical Chronicle.—The Medical Societies.

THE winter session at the Owens College, which usually begins without any address or any formal opening ceremony, is this year to be opened with a *soirée*, given by the Principal, Professor Greenwood, and the Dean of the Medical Faculty, Professor A. H. Young. The *soirée* is to be held in the buildings belonging to the medical department, every part of which will be open to the visitors. Various objects of interest will be exhibited. Demonstrations will be given by Professor Stirling and other professors and lecturers, and there will also be the report, and an address by the Dean. The *soirée* will be on a larger scale than has hitherto been attempted, and the occasion is likely to prove of great interest. I hear that thirteen hundred invitations have been issued, chiefly to the medical practitioners in this city and neighbourhood.

Some changes are announced in the management of the *Medical Chronicle*, a monthly periodical published in this city, which has just completed the second year of its existence. Dr. Sinclair, who has held the editorship jointly with Dr. Niven since the commencement of the journal, now retires, and the latter will henceforth be sole editor. The labours of Dr. Sinclair have been unceasing and unwearied, and it is much to be regretted that he is unable to give the necessary time to the work; he certainly deserves well of the profession here for his public-spirited, though somewhat thankless, labours. In order to lighten to some extent the work of the editor, it is being arranged that a staff of abstractors should be organised, each special subject being in charge of a sub-editor, who should arrange for the abstracting of his subject. The journal will consist, as heretofore, of original articles and copious abstracts from English and foreign journals.

The local medical societies are all showing signs of reanimation. The Medico-Ethical held its first meeting last week, when Dr. Wahltuch, one of the honorary secretaries, introduced the subject of "Consultation Grievances," which formed a popular subject for debate. This is the only one of our medical societies which prefaces its labours by a substantial repast. It is by no means the least popular, as its crowded meetings testify. The Medical Society held a general meeting of its members last week to discuss the question of re-engaging, for another year, the reading-room of the Literary and Philosophic, in George Street, as a central room for the use of members who do not find it convenient to go to Owens College to change their books or see the journals. It was decided, by a large majority, that it was not worth while incurring the expense for another year, as the central room and telephone had been very little used during the past year. It was arranged, however, to hold some of the meetings in town. The annual meeting of the Pathological Society takes place next month.

BEQUESTS AND DONATIONS.—The Adelaide Hospital, Dublin, has received £387 17s. 4d. under the will of Mrs. Elizabeth MacCarthy.—Miss Ryland and a lady friend have each given £250, and Mrs. Hitchman, £100, to the Warneford, Leamington, and South Warwickshire Hospital.—The Drapers' Company have given one hundred guineas towards the building fund of the Tottenham Hospital.—Mrs. Mary Ann Gresham has given £100 to the Derby Infirmary.—Mr. J. H. Coates bequeathed £100 to the Clayton Hospital and Wakefield General Dispensary.—The Grocers' Company have given fifty guineas, and the Goldsmiths' Company £50, to the Cheyne Hospital for Sick and Incurable Children, Chelsea.—The trustees of the Cholmondeley Charities have given £50, additional, to the Ventnor Consumption Hospital.—Mr. George Sturge has given £50, first instalment, to the Great Northern Central Hospital.—"A Friend" has given £50 to the Surgical Aid Society.—The Mercers' Company have given twenty-five guineas to Mary Wardell Convalescent Home for Scarlet Fever Patients.—Captain T. J. Perry has bequeathed £5,000 to the Wolverhampton and Staffordshire General Hospital.—The Sussex County Hospital, Brighton, has received £500 under the will of Dr. Hallifax, and £121 14s. 5d., the proceeds of a ball at the Royal Pavilion.—The Leeds General Infirmary has received £500 less duty, under the will of Mrs. Hague, of Crow Nest, Dewsbury.—The Public Hospital and Dispensary, and the General Infirmary, Sheffield, have each received £228 3s. 1d., less legacy duty, under will of Mrs. Mary Ann Potter.—Miss Hannah Domager, of Bath, has bequeathed £200 each to the Royal United Hospital, and the Mineral Water Hospital, both in that city.—The Gloucester Infirmary has received £250 from "A Legacy, B. J. T."—"S. S." has given £50 to the City of London Hospital for Diseases of the Chest.—"W. A. R. G. C." has given £50 to the London Fever Hospital.

CORRESPONDENCE.

☞ To Correspondents. ☜

Our correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return and hold over a great number of communications, chiefly by reason of their unnecessary length.

DIRECT REPRESENTATION OF THE PROFESSION ON THE GENERAL MEDICAL COUNCIL.

Sir,—I learn by telegram received to-day that I have been nominated, as the result of a ballot taken by the Committee on Direct Representation at Birmingham, for election as a direct representative of the profession on the General Medical Council.

Owing to the miscarriage of the post, I have not seen the recent numbers of the medical journals, and I am not, therefore, aware of what may have been the previous steps, or how it happens that this honour has fallen to me. I wish, however, with your courteous aid, at once to make it known in the profession that, while highly appreciating this mark of the confidence and favour of my professional brethren—as one which I shall always treasure as a valued recollection—I am at present unwilling to accept nomination for election to the General Medical Council, and I have, therefore, requested that my name may be withdrawn.—I have the honour to be your obedient servant, Ernest Hart.

Prague, September 26th.

Sir,—The selection of the three candidates, Mr. Wheelhouse, of Leeds; Sir Walter Foster, of Birmingham; and Mr. Ernest Hart, of London, was duly announced in your issue of last Saturday. It now behoves the Committee to use their best endeavours to secure the election of the men of its choice. But, unfortunately, since the selection was made, Mr. Hart, who is abroad, has telegraphed, saying that he "gratefully declines" to stand. In this event, which is, on many accounts, to be regretted, the Subcommittee have resolved to adopt the candidature of Dr. Glover, whose name stood fourth on the list.

It must be gratifying to every member of the British Medical Association that the choice of the Committee should have fallen upon three men each of whom is so highly distinguished, either in the governing body, or on the working staff of the Association.

Mr. Wheelhouse, for almost the whole of his professional life, has been an active member of the Association. Five years ago he was chosen President of its Council, and in that capacity he showed the greatest tact and zeal in the management of its affairs; whilst now, as a Vice-President, he continues to give it the benefit of his ripe experience. His place in the estimation of the profession at large is sufficiently indicated by his place at the head of this poll.

Sir W. Foster, who succeeded Mr. Wheelhouse in the Presidency of the Council, is well known as one of the most active workers for the Association. Like Mr. Wheelhouse, he is in complete touch with the general practitioners, and possesses a full knowledge of their wants and interests. It is to Sir W. Foster's exertions in Parliament that the general practitioner owes the possession of three votes in the General Medical Council. Our gratitude for this ought to secure one of these seats for Sir W. Foster.

Of Mr. Ernest Hart, now that he has declined to stand, it is unnecessary to speak. Indeed, his works speak for him. By his talents and exertions he has raised our Journal to the first rank, and he has influenced very greatly the passage of every legislative measure calculated to benefit his professional brethren.

Dr. Glover, who steps into the place intended for Mr. Hart, is well known to all who have followed the course of medical politics as an active worker in the field of medical reform, and, as a member of the staff of the *Lancet*, has endeavoured to advance the interests of the profession in many ways. Dr. Glover is also intimately acquainted with the working of the General Medical Council, and will doubtless prove an ardent reformer of its abuses.

Each of these gentlemen is so well known and highly respected, not by the members of our Association alone, but by the whole of the profession, for whose interests they have so long striven, that it appears to be both right and proper that every member of it should use his best endeavours to secure their election.

The Committee, on its part, will not relax their exertions. No stone will be left unturned, no labour will be thought too great, to secure the end which it set itself to obtain at the outset. Derived from no less than 161 towns, comprising 363 members, large additions to which are daily being claimed, it cannot be said to have resulted in "failure," or in a *fiasco*. It will use the whole of its influence in every town and village in England and Wales to secure the election of the candidates it has selected. For it is of the highest importance to the honour and the interests of the whole profession that the men now to be sent to represent it on the General Medical Council should be men of tried ability and integrity; men of the world, possessed of a knowledge of affairs, and with a thorough acquaintance with the wants of every branch and grade of the profession. A mistake made at the outset would not easily be remedied, and prestige and respect once lost would not soon be regained.—I am, dear sir (on behalf of the Committee), yours obediently, William Strange, M.D.,

Worcester. Chairman.

Sir,—The Committee, to the composition and representative character of which Dr. Taaffe now takes exception, was the Committee to which, at his request, the following letter was read on September 14th.

"45, Old Steyne, Brighton, September 6th, 1886. Dear Sir,—You will see by the British Medical Journal, September 4th, page 5, that I am a candidate for direct representative on Medical Council. I shall feel obliged by your kindly placing my name before the Committee you are organising on the 14th instant.—I remain, dear sir, yours faithfully, R. P. B. Taaffe."

The Committee has at least done one good thing. It has brought before the profession the names of three gentlemen of conspicuous ability, who, but for its instrumentality, would probably not have come forward, as they had given no indication of any desire to increase the number of those candidates who recommended themselves. There are only two ways by which a candidate can be introduced to the favourable consideration of any constituency. Either his merits must be recognised by others, who then, as a committee, urge him to stand; or they must be recognised by himself, and urged by himself. Of these two ways, the former is generally considered the preferable one. Dr. Taaffe adopts the latter.

It is much to be hoped that the three gentlemen selected will take a different view of the situation from Dr. Taaffe, and will consider the wish of a decisive majority of a Committee composed of representatives from no fewer than 163 towns and districts sufficiently indicative of the probable feelings of the majority of the profession to induce them to be willing to place their services at its disposal.—I am, sir, yours faithfully, William Carter.

Liverpool.

Sir,—The general practitioners of this country have at last secured that voice in the management of their affairs which has been so long withheld. Having now the opportunity of realising their long cherished wish of appointing their own representatives, it is to be hoped they will not stultify themselves by permitting gentlemen to be appointed who have not a distinct claim to speak on behalf of the general body.

Surely, as we are asked to nominate representatives of our own in the Medical Council, it becomes our duty to find them from our own ranks; and if, among the whole number of practitioners in this country, three first rate representatives cannot be found, then we deserve to go without.

It is little less than an insult to our intelligence for names to be submitted such as some of those already put before us. It does not follow that because a man holds a very high position as a consulting physician, or as an eminent teetotal authority, he is the most fit man for our representative—most persons would suppose quite the contrary—and we cannot expect to have our interests watched, our wrongs remedied, and our professional position enhanced, unless our representatives are fully in accord with the sentiments and wishes of the mass of general practitioners throughout the country.

There are only two classes of men who can do this for us: those in general practice holding a sufficiently high position to command respect, or those acting in an official capacity, such as the editors of the leading medical journals, who have the means of knowing the wishes and the wants of medical men scattered throughout the country far better than anyone else.

On these grounds, therefore, it seems to me we cannot do better

than vote for the accomplished and indefatigable editor of our JOURNAL as one candidate, and the two best of the other candidates before us, who are also general practitioners.—I am, etc.,

Hanley, Staffordshire. W. D. SPANTON.

SIR,—In order to correct misunderstandings which have arisen from the manner in which a meeting of medical practitioners at Birmingham was reported in the JOURNAL, I think it desirable, as one of those present, to remind your readers that the meeting was wholly unofficial, and that the British Medical Association, at its recent annual meeting at Brighton, decided that it would take no part in the selection of candidates to represent the profession on the General Medical Council. As several of the candidates have published lists of supporters, containing already double and treble the number of names which appear on Dr. Carter's Committee, the Birmingham meeting cannot in any way be considered as representative of the profession, neither can it expect that the candidates selected by its members will be generally adopted by the profession at large.—I am, sir, yours faithfully, GEO. DANFORD THOMAS.

SIR,—Your article in the JOURNAL of September 25th, on "Direct Representation in the General Medical Council," shows that you have been so seriously misinformed, that I hope you will find space for this letter.

You say that the Selection Committee "was projected at an annual meeting of the Association, which was of the most public character, and where every kind of general or personal objection to the principles or very existence of the Committee could be freely debated." Also, that "the circumstances of the establishment of the Committee necessitated that it should be intimately connected with the name of the British Medical Association."

Now, the British Medical Association at Brighton, in general meeting, declined to take any part whatever in the selection or election of candidates. The small private meeting held at the Grand Hotel, Brighton, had no right to pledge the Association in any way.

Thus, no candidate or candidates can make use of the name of the Association, nor can he or they claim to be its nominees in any shape or form.—I am, yours truly, WM. ARMSTRONG.

Harpurhey, Manchester.

[*** The passage to which our correspondent refers simply noted a coincidence of time and place, and did not imply any official connection with the Association of any kind whatever.]

SIR,—I entirely agree with the sentiments expressed by your correspondent, Dr. Taaffe, of Brighton, which appeared in the BRITISH MEDICAL JOURNAL of September 25th, concerning the nomination of candidates to represent us upon the General Medical Council.

For the first time, and after a great struggle, we have given to us the privilege of selecting from amongst us a brother practitioner to represent us, whom we know and can trust. Now, I cannot possibly understand how we can exercise that privilege if we are confined to the few who were selected by the meeting held at Birmingham some time ago. There are, I believe, over 17,000 medical practitioners who are the electors.

Now, I maintain that every one of those electors should be enabled to vote for one, two, or three medical men of his own choice, and those who obtain the greatest number of votes should be selected as the ones nominated, and that those nominated should offer themselves for election. This is the only way in which I can see that the election can be fairly carried out.—I am, sir, your faithful servant,

Harrold, Beds. THOMAS EDWARDS.

SIR,—I beg to be allowed, through the medium of your JOURNAL, to draw the attention of foreign graduates of all universities to the importance of unitedly supporting, at this juncture, a candidate specially interested in their favour, and to express the hope that they will not overlook the claims of Sir Walter Foster, through whose instrumentality the clause in the new Medical Act, authorising the registration of foreign degrees possessed by registered practitioners, was inserted, and who has also done much useful work for the profession in general, but that they will do their utmost to show their appreciation of such services by returning him to the Council, as one of the representatives.—I am, etc., J. JOHNSON BAILEY, M.D.,

Marple, Cheshire. Hon. Sec. For. Grad. Assoc., Gt. Brit.

SIR,—The letter addressed to you by Sir Andrew Clark, published in the JOURNAL of September 25th, gives a well recognised view of the intention of, and what the further representation of the medical profession should be at the Board of the General Medical Council Whilst humbly endorsing this view, permit me to add that, as London is more than sufficiently represented already, the new representatives should be gentlemen distinctly from the provinces, in no way identified with London interests or practices. In the provinces, there is a very large body of practitioners who are well known in the profession and amongst their professional brethren as "consultants." These gentlemen are quite alive to the wants of the profession, and are well in touch with the body of general practitioners. From amongst these, both as leaders amongst general practitioners and as representative men, should selection be made.

The interests of Public Medicine, too, Sir, should not be overlooked. One member of the five new representatives might be selected for eminence in preventive medicine as the others are in curative.

And, lastly, Sir, as Scotland and Ireland are honoured by having one more representative each given to them, allow me to remind Welshmen of their particular claims to representation; that they should be guided in making their selection of gentlemen to whom their interests are directly known. Wales would do well to have one candidate of her own. Permit me now to propose to them the name of the President of the North Wales Branch of the British Medical Association (Dr. Eyton-Jones, of Wrexham), a gentleman who has for thirty years taken the deepest interest in the welfare of the profession, and has both guarded and advanced these in the Principality and in the administrative of the Association; and who has, moreover, the honour to be a member of the Court of Governors of the University College of Wales, situated in North Wales.—I am, etc.,

J. LLOYD-ROBERTS,

Denbigh. Ex-President of the North Wales Branch.

SIR,—Allow me, in the first instance, to thank Sir Andrew Clark for his letter. He clearly does not owe his exalted position to a fortuitous concourse of atoms. As I am a candidate, I shall not put on paper the thoughts which his letter suggested to my mind.

On the subject of the approaching election, let me point out to provincial candidates the absolute necessity for being legally represented at the scrutiny of votes. It is simply astounding that the Privy Council should allow the Branch Councils, or rather their registrars, to go behind the *Medical Register*. Add to this that the votes are not to be attested, and the absolute necessity for approaching the Privy Council, if need be, in order to ask them to insist upon the usual course being followed—of candidates being represented at the scrutiny—will be seen at a glance.

I have addressed a formal communication on the subject to the Irish Branch Council. No man, at the approaching election, should be allowed to vote from behind the screen.—Yours truly,

Cashel. THOMAS LAFFAN.

SIR,—The meeting of the Committee at Birmingham was, as Dr. Taaffe says, a failure; and I, with many others, shall not vote as directed by any such Committee. Still, I think the idea of forming such a body was laudable, because, after all, the sole wish of the promoters of it was to get the best candidates. How does Dr. Taaffe know what candidates are in the field? I think that the work ought to be done by our Branches. It is the Association which has gained for us direct representation, and it should carry out the election of the men who are to sit at the Council Board. The names chosen by the different Branches should be published in the JOURNAL, and the electorate then left to vote as it pleases.

Exception must be taken to the views of Sir Andrew Clark (all honour due to him for sacrificing himself to his own opinions). The general practitioners do not necessarily feel that it must be simply country doctors who are to represent them. What they want is men who have touch of the great body of workers, and who know more, or even as much, about them as Mr. Ernest Hart. Him we must name, and I should like to see a parish medical officer as his colleague, and, perhaps, an army surgeon as well.—Yours, etc.,

COUNTRY DOCTOR.

WE are asked to notify that the following gentlemen have been added to the "Committee for ascertaining the wishes of the medical profession as to the most suitable representatives to return to the General Medical Council:" Dr. Evans (Northampton), Dr. Hughes (Droitwich), and Dr. W. H. Walter (South Petherton, Somerset).

BEQUESTS AND DONATIONS.—Mr. Robert Charles Ransome, of Ipswich, bequeathed £100 to the East Suffolk Hospital, and £100 to the Suffolk Convalescent Home, Felixstowe.—The British Home for Incurables has received £100 under the will of Mrs. Stewart Barclay.

THE CRIMINAL LAW AMENDMENT ACT, 1885.

SIR,—An important and, as I believe, unique case (Reg. *v.* Moses Turner) was tried before Mr. Justice Wills at the last September sessions of the Central Criminal Court. The prisoner, a married man, was indicted under two separate counts, one under the Criminal Law Amendment Act, 1885, for having carnal knowledge of an imbecile woman, aged 18; the other, under 24 and 25 Vict., c. 100, s. 47, for a fraudulent assault upon the same woman, occasioning her actual bodily harm. The bodily harm was caused by her infection with syphilis. The prisoner was convicted of both offences, and was sentenced to two years' imprisonment with hard labour for the carnal knowledge—this being the maximum punishment for the misdemeanour—and five years' penal servitude for the assault. This latter conviction is, however, to be considered by the judges in the Court for Criminal Cases Reserved; as, although there have been two previous convictions in England for a similar offence, the Irish judges have, in a recent ruling, differed from the English judges, and it is deemed desirable to have the law settled. This is the first reported conviction at the Central Criminal Court, or, perhaps, anywhere, for the unlawful carnal knowledge of an imbecile woman. It cannot be too widely known that such intercourse is unlawful, even if, as was alleged in the case of Turner, the woman invites the embraces of the man. An imbecile woman can give no valid consent to the immoral act. That a man having immoral sexual intercourse with a woman whilst he is knowingly suffering from syphilis or gonorrhœa is liable to prosecution, and to a sentence of penal servitude if he infects the woman, will take many people by surprise. That such is the English law, unless the conviction of Moses Turner be quashed, there can, however, be no doubt. That so few convictions for infection have taken place is due either to the difficulties of proof being too great, or, as is more probable, the two previous convictions have been lost sight of. It may be well, therefore, to draw attention to them more explicitly.

In Reg. v. Rennett, tried before the late Mr. Justice Willes, at the Taunton Assizes, in 1866 (Foster and Finlayson's *Reports*, p. 1105), the girl was aged 13, and apparently gave her consent to the act, but it was held that this consent was vitiated by fraud on the part of the prisoner, who infected the girl with syphilis.

In Reg. *v.* Sinclair, tried at the Central Criminal Court, August, 1867, before the late Mr. Justice Shee (13 *Cox's Criminal Cases*, p. 28), the girl was just above 12 years of age. The prisoner, knowing that he had gonorrhœa, had connection with her, without informing her of the fact, and infected her. It is manifest that there must have been some evidence of consent to the act on the part of the girl, else the conviction would have been for rape.

The Irish case, which has tended to discredit the ruling in the above mentioned cases, was a civil action (Hegarty *v.* Shine) for breach of promise of marriage, and assault in giving the plaintiff (with whom the defendant was living) venereal disease (14 *Cox's Criminal Cases*, pp. 124, 145; and 4 *Irish Law Reports*, p. 288). The case went to appeal, and the decision of the inferior Court was affirmed that the action would not lie, and that the mere concealment on the part of the defendant that he had the disease did not constitute such a fraud as to vitiate the consent of the woman to the immoral act.

It may be remarked in this connection, that in no one of the three cases last referred to was the female an imbecile.

Until the judges shall have decided the law with reference to the case of Reg. *v.* Moses Turner, I refrain from commenting upon it further; but as the conviction has such important bearings upon immorality and upon medical practice, I think it well to bring it under the notice of the medical profession.—I am, etc.,

London. THOMAS STEVENSON.

M. PASTEUR'S PROPHYLACTIC.

SIR,—On September 18th, 1886, I published in your columns the real facts concerning many of the points upon which M. Pasteur's theory of treating hydrophobia depends, in answer to some statements (which I thought I showed to be erroneous), adverse to that theory, advanced in a letter dated September 4th, 1886, by Dr. Dolan, of Halifax.

On September 25th, 1886, Dr. Dolan published a second letter, re-asserting four of the points which I had already refuted, and at the same time, by his silence, acknowledging the validity of my contradiction of the remainder. These four points are:—1. Control experiments. 2. The presence or absence of the virus in M. Pasteur's inoculation material. 3. The value of M. Pasteur's statistics. 4. The pathology of tubercle.

1. *Control Experiments.*—On September 4th, Dr. Dolan said: (1) Pasteur neglected control experiments, (2) that injection of any material beneath the dura mater would produce in rabbits "the same kind of affection," that is, rabies. He now adduces, in support of the reassertion of these statements, the experiments of Frisch and Spitzka respectively. I must repeat that M. Pasteur did perform control experiments.

Next, Frisch's experiment, though valuable as adding to our knowledge of rabies generally, was in no sense a control experiment of M. Pasteur's method, for he simply applied the treatment (by protective inoculation) to animals inoculated with the acute virus by trephining. As M. Pasteur's patients are not infected with the disease by trephining, but by a small wound in the skin, Frisch's experiment is clearly irrelevant. Finally, I am at a loss to understand why Dr. Dolan should have brought forward Spitzka's experiments in support of his second assertion, since, according to his own showing, they merely produced a hitherto unheard of disease, namely, pseudo-dumb rabies. My six experiments were amply sufficient to demonstrate the fact that M. Pasteur's method was adequate, and that all the symptoms of rabies could only be produced by inoculation with the virus of that disease.

2. As regards the presence and quantity of the rabid virus in M. Pasteur's inoculative material, Dr. Dolan charges me with omitting to state that "some of the injections must be absolutely inert, and that in the case of the boy Meister, five of the ten injections were proved to contain no virus ....." And he concludes that "Meister must have been protected by only five inoculations." These passages prove that Dr. Dolan is quite mistaken as to the principle of M. Pasteur's method of treatment. They show clearly that Dr. Dolan believes his principle to be, in fact, an attempt to protect the patient from hydrophobia by inoculating him with the weakened virus of rabies in progressively increasing strength; this is not so.

It is true the virus is present in increasing strength, as I proved in my letter of the 18th, but it is so only as an unavoidable adjunct. The whole principle upon which M. Pasteur bases his treatment is as follows. (I give Pasteur's theoretical principle of action in detail as he gave it to me, not merely to show that Dr. Dolan's observations respecting the quantity of virus, etc., are beside the mark; but, in order to justify a thought expressed at the end of my letter of September 18th, namely, that before anyone disputes the principle upon which M. Pasteur bases his treatment, he ought, in fairness, to make himself thoroughly acquainted with it.)

In view of the fact that the virus of most acute specific diseases is believed by many (M. Pasteur included), for reasons which I can not detail here, to check its own further progress by manufacturing from the tissues of the animal it attacks, a product or products (waste?) inimical to its active existence, just in the same way as inorganised ferments do, it occurred to M. Pasteur that the virus of rabies probably does the same thing, and therefore that it may manufacture from the tissues of its host, a substance (we will call it x) which, if it could be isolated and introduced into the system of some animal in sufficient quantity would render that animal proof against rabies, for the simple reason, of course, that the rabid virus would not be able to flourish in tissues so dosed.

This may seem, to many, a far-fetched hypothesis. Possibly, but I have nothing to do with the hypothesis, or with the discussion of its probability. I merely bring it forward, in order to demonstrate the irrelevancy of Dr. Dolan's strictures on M. Pasteur's inoculation material, for the presence or absence of the virus has clearly nothing to do with the treatment in its application by M. Pasteur.

3. As to M. Pasteur's statistics, I regard this as the point upon which much stress will ultimately be laid respecting the value of his treatment, but as our information on this point is still incomplete, I personally consider that the question is an open one. What I objected to in his letter of September 4th, was Dr. Dolan's statement that Pasteur's successful cases were only either those of persons bitten by non-rabid dogs or merely actuated by curiosity. He now, without withdrawing this wholly incorrect statement, puts it forward again only slightly qualified, and this time confirming an impression which I derived from his letter of the 4th, namely, that he considers the being licked by a rabid dog to be practically innocuous, whereas, in fact, it is one of the most dangerous forms of inoculation of rabies.

4. Dr. Dolan *re-asserts* his previous statement that Villemin's experimental deduction that the transmissibility of tubercle from animal to animal depends on inoculation with tuberculous material is incorrect. He objects, he says, to learn from me that modern pathology fully endorses Villemin's deduction. I have no wish to be his instructor; however, as he quotes in support of his re-assertion the well-known experiments of Drs. Wilson Fox and Burdon Sanderson, I feel it necessary to inform him that these experiments have been

acknowledged by their authors to be inaccurate, and have been disowned by them in favour of Villemin's deduction.

In conclusion, Sir, let me repeat that which I said in my letter of the 18th: namely, that M. Pasteur's system is on its trial; I have written these two letters, explaining his principles, refuting those objections which were based upon imperfect knowledge and understanding of them, not as a partisan, but simply because I regret to see unfounded criticism pass unchallenged in our JOURNAL, for the scientific reputation of which we are all justly so jealous.—I am, sir, yours sincerely, VICTOR HORSLEY.

80, Park Street, Grosvenor Square, W.

MEDICO-LEGAL AND MEDICO-ETHICAL.

CUSTOMARY CONDITIONS OF PARTNERSHIP.

THE questions submitted by "Inquirer" would, mayhap, have been more fitly addressed to an old and experienced medical agent than to ourselves; for, although we are always willing to render, as far as practicable, helpful advice, such points as those in question are not only difficult to solve, but can scarcely be regarded as falling within our prescribed legitimate work. Be that as it may, ere we can offer any practical suggestion for his guidance in the matter, it is necessary that we should be furnished with definite information on various points and probable contingencies, the nature of which we will communicate by private note, and, on receiving replies thereto, will carefully consider the matter, and, ere long, acquaint him with our views thereon. It must, at the same time, be distinctly understood that, in acceding to our correspondent's requests, it is not to be held as a precedent for any future like inquiry, come whence it may.

A QUESTION OF FEES.

THOUGH we cannot for the moment call to mind any "scale of fees suggested by the Committee of the British Medical Association," as stated by a correspondent, who has probably been misled by the fact that the medico-chirurgical tariffs issued by the late Shropshire Ethical Branch are advertised, and occasionally quoted, in our columns, we shall willingly render him such assistance as lies in our power if he will submit to us a detailed account, based on his own view of a fair charge for attendance on the case, in preparing which we would suggest the omission of such, if any, visits as could not conscientiously be regarded as really and absolutely necessary, a suggestion which we venture to make in consequence of the comparatively large number of daily visits made for a prolonged period at a distance of nigh three miles. It is scarcely necessary to add that specially desired visits, however numerous and unnecessary, are justly chargeable. We shall also be glad to know what was the termination of the lady's illness.

M.R.C.S.Eng. writes: About two months ago, I was called to see a child, aged 2, that had been run over by a wagonette containing eight persons. The wheel passed over the right thigh, causing a simple fracture and considerable bruising. The wagonette was a hired one, and no negligence was attributed to the driver. The gentleman whose family were being driven out in the trap came for me, and offered to pay my bill if I would look after the child, although in no way himself to blame for the accident, as he was only a passive spectator. Will you kindly inform me what would be a fair charge to make? I am desirous of making a moderate charge. The case has gone very well, and, altogether, some twelve visits will have been paid.

*** If our correspondent will refer to the *Tariff of Surgical Fees* issued by the late Shropshire Ethical Branch, he will find that the suggested fee for reducing fractures of the femur varies from two to five guineas, according to class, and that visits made subsequently thereto should be charged as for attendance in ordinary cases of disease, and which also, in the case of general practitioners so-called, vary from 1s. 6d. to 5s., exclusive of medicine, etc., and from 2s. 6d. to 10s. 6d. inclusive thereof. We would therefore, under the circumstances mentioned, recommend M.R.C.S.Eng. to adapt his charge to the class of life of the patient, and not of the gentleman who holds himself responsible for payment; that is to say, if the little patient be of the plebeian class, our correspondent will do well to regulate his fee accordingly, and make such a charge as he would have done had the parents of the child themselves called him in.

PROFESSIONAL ETIQUETTE.

EUONYMUS.—The contention of "Mr. C" in the transcript of his note forwarded to us, that he had an unquestionable "right to examine and give advice to his parents when asked to by them," without the sanction of, or previous communication with, the practitioner in attendance, is not, excepting in a case of emergency, in accordance with the code of medical ethics; and, moreover, his remark that, "if there is time to let you know, I shall be happy to meet you at —— on any future occasion," indicates to our mind a sad lack of the true ethical principal of doing unto others as we would wish to be done by, the one paramount rule by which all should be guided. At the same time, we are of opinion that our correspondent would have acted wisely had he, notwithstanding the provocative incident, assented to the request relative to the medicine prescribed by Messrs. C. and P. To the latter, we would advise him to accord the benefit of the existing doubt in regard to his intentional participation in the proceeding complained of.

In further reply to his private request for advice as to his future attendance on the patient (Mr. C.'s stepmother), we would, while earnestly counselling him (especially as he is "the only medical man on the peninsula eight or ten miles long") to render his professional advice and assistance in so serious a case, recommend him to respectfully but firmly intimate to the family that he can only do so conditionally, and that he must be treated with the customary professional courtesy due to him, as the ordinary medical attendant, alike from patient and consultant. The preceding remarks will equally apply to the final query relative to meeting Mr. C. in consultation.

TEMPORARY CARE OF PATIENTS.

THE patient having been left under the care of "B." during the absence of "An Old Member," the former ("B.") should, on the return of the latter, have at once resigned the case to him, and courteously but firmly declined further attendance, except in consultation; and his retention of the case, under the circumstances stated in our correspondent's note, constitutes, in our opinion, a grave breach of professional etiquette.

NAVAL AND MILITARY MEDICAL SERVICES.

VOLUNTEER SURGEONS.

A CORRESPONDENT who has been appointed acting-surgeon to a battery of Volunteer Artillery, would be glad to receive from any member who has passed the examination of efficiency information giving the result of his experience of the examination, and stating what books should be read, and the nature of the questions asked.

THE NAVY.

FLEET-SURGEON A. G. COLQUHOUN has been placed on the Retired List, with the rank of Deputy Inspector-General of Hospitals and Fleets. He entered the Royal Navy December 14th, 1861; became Staff-Surgeon, March 31st, 1874; and Fleet-Surgeon, February 17th, 1883. Deputy Inspector-General Colquhoun was promoted for his services during the Ashanti Campaign in 1873-74, when he was employed in the *Himalaya*, the hospital ship for the Naval Brigade, and additional hospital ship to the *Victor Emmanuel*, off Cape Coast Castle (medal). He served in the *Iris* throughout the Egyptian campaign in 1882, and was present at Port Said at the seizure of the Suez Canal on August 20th (medal, and Egyptian bronze star).

Fleet-Surgeon W. H. ADAM has also been placed on the Retired List, with the rank of Deputy Inspector-General. His commissions are dated: Surgeon, May 17th, 1853; Staff-Surgeon, September 27th, 1861; and Fleet-Surgeon, May 2nd, 1876. Mr. Adam (says the *Royal Navy List*) was employed in boats of *Brisk*, on detached service off the Isle of Pines, West Indies; compelled to return to the ship by an outbreak of yellow fever; in the White Sea, 1854; at the bombardment of Solovotski, and destruction of town of Puchlakta, by the boats of *Miranda* and *Brisk*; employed in boats of the *Boscawen*, on detached services on the West Coast of Africa, 1858-60; was sent to Dartmouth to organise and take charge of sick quarters for reception of scarlet fever patients from *Britannia*, 1863-64; wrecked in *Megæra*, on the Island of St. Paul's, Indian Ocean, June, 1871, and remained nearly three months on the island.

Mr. ALEXANDER FLOOD, Staff-Surgeon, has been appointed to the *Scout*.

MEDICAL STAFF.

SURGEON C. R. BARTLETT, serving in Bengal, has been appointed to the civil medical charge of Chuckrata, *vice* Surgeon F. W. C. Jones, who has been transferred to the Bombay Presidency.

Surgeon S. R. WILLS, serving in Bengal, is appointed to the civil medica charge of Ranikhet, *vice* Surgeon-Major G. Andrew, M.B., transferred to Madras.

The undermentioned officers are placed on general duty as stated, all being in the Bombay command: Surgeon-Major T. M. O'BRIEN, Mhow Circle; Surgeon R. W. FORD, Poonah Circle; Surgeon G. W. B. CREAGH, Poonah Circle; Surgeon A. F. RUSSELL, M.B., Mhow Circle; Surgeon F. W. C. JONES, Mhow Circle; Surgeon A. DODD, on return from field-service in Burmah, Poonah Circle. Surgeons F. W. C. JONES (station hospital, Neemuch), V. E. HUNTER (station hospital, Ahmednugger), and S. J. W. HAYMAN (station hospital, Mhow), have been detailed for service in Burmah.

THE INDIAN MEDICAL SERVICE.

THE services of Brigade-Surgeon C. J. J. JACKSON, M.D., Bengal Establishment, are replaced at the disposal of the Government of Bengal.

Surgeon F. D. C. HAWKINS, Bengal Establishment, Civil Surgeon of Sultanpore, has been appointed to the visiting charge of the civil medical station of Pertabghur during the absence, on leave, of Mr. S. P. Bond.

Surgeon-Major E. A. FITZGERALD, Bengal Establishment, Civil Surgeon of Bareilly, is appointed to the visiting charge of the civil medical station of Budaun during the absence, on deputation, of Surgeon-Major G. M. Govan, M.D.

The services of Surgeon-Major T. C. SPENCER, Madras Establishment, Civil Surgeon of Cochin, are replaced at the disposal of the Military Department.

Surgeon J. CRIMMIN, Bombay Establishment, has been directed to proceed for service in Burmah.

The undermentioned gentlemen have obtained leave of absence for the periods specified: Surgeon-Major H. JOHNSTONE, M.D., Bengal Establishment, for one year on medical certificate; Surgeon H. C. HUDSON, for three months on medical certificate, in extension; Surgeon-Major A. N. ROGERS-HARRISON, Madras Establishment, for three months, in extension, on medical certificate.

Mr. T. P. DEVLIN is appointed Acting-Surgeon to the 1st Orkney Artillery Volunteers.

Acting-Surgeon JOSEPH LAMB has resigned his appointment in the 1st Cheshire Engineer Volunteers, which bore date May 1st, 1880.

QUARANTINE.—It is announced from Constantinople that vessels with passengers from Raab, Pesth, and other places on the Danube, as far as and including Sulina, since September 12th, will be subjected, at Cavak, and in the other Ottoman ports of the Black Sea, to a quarantine of five full days' observation. The vessels may, however, leave their passengers at the Lazaret, at Cavak, and pursue their voyages under the surveillance of two health guards, whom they will leave at the Dardanelles.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE SECOND QUARTER OF 1886.

THE vital and mortal statistics of the twenty-eight towns dealt with by the Registrar-General in his weekly return are summarised in the accompanying table. During the three months ending June 30th last, 75,101 births were registered in the twenty-eight large English towns, equal to an annual rate of 33.1 per 1,000 of their aggregate population, estimated at more than nine millions of persons. In the corresponding periods of the two preceding years 1884-5, the birth-rate in these towns was 35.0 and 32.9 per 1,000 respectively. The birth-rate last quarter in London did not exceed 31.9 per 1,000, while it averaged 34.2 per 1,000 in the twenty-seven provincial towns, among which the birth-rate ranged from 24.9 in Brighton and in Huddersfield, and 29.3 in Bradford, to 39.0 in Preston, 39.3 in Newcastle-upon-Tyne, and 42.0 in Cardiff.

The 42,134 deaths registered in the twenty-eight towns during the second quarter of this year were equal to an annual rate of 18.6 per 1,000, against 21.5, 20.8, and 20.6 in the corresponding quarters of the three preceding years. In London the rate of mortality did not exceed 17.2 per 1,000, while in the twenty-seven provincial towns it averaged 19.8 per 1,000. The lowest rates in these towns were 15.3 in Brighton, 16.6 in Birkenhead, 16.7 in Hull, and 16.8 in Bristol; in the other towns they ranged upwards to 23.9 in Portsmouth, 25.1 in Blackburn, 25.2 in Manchester, and 30.3 in Preston. During the quarter under notice, 4,214 deaths were referred to the principal zymotic diseases in the twenty-eight large towns, equal to an annual rate of 1.86 per 1,000. The lowest zymotic death-rates in these towns were 0.63 in Huddersfield, 0.65 in Norwich, and 0.75 in Hull; while they ranged upwards to 3.88 in Blackburn, 4.33 in Bolton, 5.48 in Portsmouth, and 6.93 in Preston. The 4,214 deaths from the principal zymotic diseases included 1,341 which resulted from measles, 1,306 from whooping-cough, 611 from diarrhœa, 336 from "fever" (including typhus, enteric fever, simple and ill-defined forms of continued fever), 317 from scarlet fever, 294 from diphtheria, and 9 from small-pox. The 1,341 deaths from measles registered during the quarter under notice in the twenty-eight towns were equal to an annual rate of 0.59 per 1,000, against 0.56 in the first quarter of the year; this disease was somewhat less prevalent in London than in the aggregate of the twenty-seven provincial towns, among which the rates of mortality from measles were highest in Blackburn, Bolton, Portsmouth, and Preston. The rate of mortality from whooping-cough, which had been 1.00 per 1,000 in the first quarter of the year, declined to 0.58 during the three months now under notice, and was below that recorded in the corresponding period of either of the two preceding years; in London the death-rate from whooping-cough was equal to 0.76 per 1,000, while it did not average more than 0.42 in the twenty-seven provincial towns, among which it caused the highest rates in Newcastle-upon-Tyne, Manchester, and Salford. The death-rate from diarrhœa was equal to 0.27 per 1,000, which corresponded with the rate recorded in the same quarter of last year. The 336 deaths referred to different forms of "fever" were equal to an annual rate of 0.15 per 1,000; this rate showed a further decline from those in the two preceding quarters, and was lower than in any quarter on record. In London the rate of mortality from this disease did not exceed 0.12 per 1,000, while it averaged 0.17 in the twenty-seven provincial towns, among which it showed the highest proportional fatality in Derby, Preston, and Portsmouth. The death-rate from scarlet fever, which had been 0.26 and 0.18 per 1,000 in the two preceding quarters, further declined during the three months under notice to 0.14, a rate lower than any on record; in London the rate of mortality from scarlet fever was only 0.10 per 1,000, and in the twenty-seven provincial towns it averaged 0.17, and was highest in Salford, Manchester, and Leeds. The 294 fatal cases of diphtheria were equal to an annual rate of 0.13 per 1,000, against 0.17 in the first quarter of the year; this disease was proportionally twice as fatal in London as in the provincial towns, among which, however, diphtheria was somewhat fatally prevalent in Portsmouth, Wolverhampton, and Oldham. Only nine deaths were referred to small-pox in the twenty-eight towns during the three months ending June last; of these, 3 occurred in Bristol, 2 in London (exclusive of 7 of London residents registered in the Metropolitan Asylum District Hospitals situated outside Registration London), 2 in Liverpool, one in Birkenhead, and one in Blackburn. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 11 at the commencement of the quarter, rose to 35 by the end of May, but declined to 10 at the end of June. The number of new cases admitted weekly to these hospitals averaged 5 in April, 9 in May, and 5 in June.

Public Health Statistics relating to Twenty-eight Large English Towns, for the Second Quarter of 1886.

Towns.	Estimated Population middle of 1886.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Rate per cent. of Uncertified Deaths.	Deaths of Children under one year of age to 1,000 Births.
				Births.	Deaths.	Principal Zymotic Diseases.										
28 Towns	9,693,817	75,101	42,134	33.1	18.6	1.9	4,214	9	1,341	317	294	1,306	336	611	2.8	133
27 Provincial Towns	4,944,284	42,121	24,366	34.2	19.8	1.8	2,235	7	804	215	106	521	215	367	3.1	140
London	4,149,533	32,980	17,768	31.9	17.2	1.9	1,980	2	537	102	188	786	121	244	1.2	124
Brighton	116,416	723	443	24.9	15.3	0.9	26	—	—	—	4	20	1	1	1.4	108
Portsmouth	136,278	1,242	811	36.6	23.9	5.5	186	—	117	5	10	24	18	12	1.2	150
Norwich	92,028	807	301	35.2	17.1	0.7	15	—	—	1	1	4	2	7	2.0	114
Plymouth	76,584	618	409	32.4	21.4	2.2	42	—	19	4	2	5	4	8	1.5	121
Bristol	220,915	1,686	925	30.6	16.8	1.5	82	3	16	7	3	28	10	15	3.4	130
Wolverhampton	80,012	726	370	36.4	18.6	1.5	29	—	—	3	6	8	2	10	1.9	132
Birmingham	434,381	3,618	2,132	33.4	19.7	2.5	269	—	169	9	11	31	13	36	2.3	146
Leicester	139,606	1,194	603	34.3	17.3	0.8	29	—	7	4	1	7	2	8	2.8	147
Nottingham	217,733	1,972	980	36.3	18.1	1.5	79	—	31	1	2	15	11	19	1.5	132
Derby	91,828	739	386	32.3	16.9	1.1	24	—	—	—	—	14	6	4	2.8	124
Birkenhead	95,370	792	394	33.3	16.6	1.3	31	1	11	4	3	6	4	2	1.8	134
Liverpool	586,320	4,997	2,945	34.2	20.2	1.3	186	2	31	22	20	43	35	33	5.1	136
Bolton	111,214	991	640	35.8	23.1	4.3	120	—	86	6	3	15	5	5	2.5	144
Manchester	376,895	3,441	2,370	36.6	25.2	2.2	203	—	10	34	7	91	21	40	2.1	157
Salford	211,241	1,745	988	33.2	18.8	2.1	109	—	3	15	4	51	7	29	4.7	160
Oldham	130,216	1,089	733	33.6	22.6	2.4	77	—	42	2	11	14	—	8	5.5	147
Blackburn	114,689	1,077	718	37.7	25.1	3.9	111	1	75	3	—	4	5	23	2.9	186
Preston	101,340	984	766	39.0	30.3	6.9	175	—	131	2	2	15	11	14	2.5	224
Huddersfield	88,670	550	389	24.9	17.6	0.6	14	—	1	5	—	3	3	2	2.8	136
Halifax	78,287	602	431	30.9	22.1	0.8	16	—	—	3	4	3	—	6	7.2	145
Bradford	219,411	1,600	995	29.3	18.2	1.3	72	—	33	12	1	1	8	17	2.0	159
Leeds	339,057	2,856	1,620	33.8	19.2	1.0	83	—	4	35	5	10	10	19	1.6	125
Sheffield	310,957	2,611	1,324	33.7	17.1	1.2	93	—	10	19	—	34	16	14	4.9	134
Hull	191,501	1,676	795	35.1	16.7	0.8	36	—	1	6	—	15	6	8	5.7	116
Sunderland	127,487	1,212	537	38.2	16.9	0.9	27	—	1	3	1	10	3	9	2.6	110
Newcastle-on-Tyne	155,117	1,518	811	39.3	21.0	1.6	62	—	4	7	2	35	9	5	2.7	136
Cardiff	100,736	1,055	460	42.0	18.3	1.5	38	—	2	3	3	14	3	13	2.0	121

The rate of infant mortality in the twenty-eight towns last quarter, measured by the proportion of deaths of children under one year of age to registered births, was equal to 133 per 1,000, against 137 and 147 in the corresponding periods of 1884 and 1885. While the rate in London did not exceed 124 per 1,000, it averaged 140 in the twenty-seven provincial towns, among which it ranged from 108 in Brighton, 110 in Sunderland, and 114 in Norwich, to 160 in Salford, 186 in Blackburn, and 214 in Preston.

The causes of 961, or 2.3 per cent., of the 42,134 deaths registered in the twenty-eight towns during last quarter, were not certified, either by registered medical practitioners or by coroners. The proportion of uncertified deaths in London did not exceed 1.2, while in the provincial towns it averaged 3.1 per cent., and ranged from 1.2 in Portsmouth and 1.4 in Brighton, to 5.5 in Oldham, 5.7 in Hull, and 7.2 in Halifax.

DR. JOSEPH ROGERS.

We hear with regret that Dr. Joseph Rogers has been compelled by continued ill-health to resign his appointment as medical officer of the workhouse and infirmary, and public vaccinator of the Westminster Union.

At a meeting of the Board of Guardians of the Westminster Union, held on Friday, September 24th, a communication was read from Dr. Rogers tendering his resignation on the grounds that he was no longer capable of performing the duties, whereupon the following resolution was passed.

"That the Board has received with much regret the letter just read from Dr. Joseph Rogers resigning the office of workhouse medical officer and public vaccinator for the union, on account of his continued ill-health; and while now accepting such resignation, the guardians desire to convey to him their deep sympathy that he should thus be compelled to sever his connection with the Board after many years of faithful service, and to record their high sense of the zealous and efficient manner in which he has discharged the duties of his offices, and of the warm interest he has at all times taken in questions affecting the proper treatment of the sick and infirm poor."

We still entertain the hope that the state of Dr. Rogers's health may allow of his continuing in the future his great work on behalf of the poor-law medical officers, to whose interests in the past he has devoted so large a share of his attention and time.

HEALTH OF ENGLISH TOWNS.

In the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,775 births and 3,942 deaths were registered during the week ending Saturday, September 18th. The annual rate of mortality, which had increased in the five preceding weeks from 18.9 to 22.6 per 1,000, was again 22.6 during the week under notice. The rates in the several towns, ranged in order from the lowest, were as follow:—Bristol, 14.9; Derby, 15.3; Huddersfield, 17.1; London, 17.6; Birkenhead, 19.7; Bradford, 20.5; Brighton, 20.6; Halifax, 20.7; Newcastle-upon-Tyne, 23.9; Leicester, 23.9; Wolverhampton, 24.1; Nottingham, 24.4; Liverpool, 26.2; Birmingham, 26.4; Cardiff, 26.4; Sunderland, 26.6; Plymouth, 26.6; Sheffield, 27.9; Oldham, 28.4; Leeds, 29.1; Blackburn, 30.0; Hull, 30.8; Bolton, 31.0; Manchester, 31.4; Salford, 33.8; Portsmouth, 36.0; Preston, 39.6; and the highest rate during the week, 40.8 in Norwich. In the twenty-seven provincial towns the death-rate averaged 26.8 per 1,000, and exceeded by no less than 9.2 the rate recorded in London, which, as before stated, was but 17.6 per 1,000. The 3,942 deaths registered in the twenty-eight towns during the week under notice included 925 which were referred to diarrhœa, 58 to "fever" (principally enteric), 49 to whooping-cough, 43 to scarlet fever, 32 to measles, 25 to diphtheria, and not one to small-pox; in all, 1,132 deaths resulted from these principal zymotic diseases, against numbers increasing from 717 to 1,199 in the preceding five weeks. The zymotic death-rate was equal to 6.5 per 1,000. In London the zymotic rate was 3.1, while in the twenty-seven provincial towns it averaged 9.3, and ranged from 2.1 in Bristol, 4.0 in Derby, and 4.1 in Huddersfield, to 15.0 in Hull, 17.2 in Portsmouth, and 18.1 in Norwich. The fatal cases of diarrhœa, which had risen in the previous ten weeks from 222 to 995, declined during the week under notice to 925, and caused the highest death-rates in Bolton, Portsmouth, Sunderland, Hull, and Norwich. The 58 deaths referred to "fever" showed an increase of 9 upon those in the previous week; they were proportionately most numerous in Cardiff and Portsmouth. The 49 fatal cases of whooping-cough were within 1 of the number in the previous week, and caused the highest death-rate in Oldham. The deaths from scarlet fever showed a further decline from recent weekly numbers, and showed the greatest mortality in Birkenhead, Salford, and Blackburn. The 32 fatal cases of measles were fewer than those returned in any previous week of this year; the highest death-rate from this disease occurred in Nottingham. The 25 deaths referred to diphtheria showed an increase of 5 upon the number in the previous week, and included 13 in London, 3 in Birmingham, 3 in Liverpool, and 2 in Manchester. No death from small-pox was registered in London or in any of the twenty-seven provincial towns. The Metropolitan Asylum Hospitals contained but one small-pox patient on the previous Saturday, which had been admitted during the week to the hospital-ship off Dartford. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.1 per 1,000, and was below the average. The causes of 63, or 1.6 per cent., of the 3,942 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

During the week ending Saturday, September 25th, 5,599 births and 3,657 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had been 22.6 per 1,000 in each of the two preceding weeks, declined during the week under notice to 21.0. The rates in the several towns, ranged in order from the lowest, were as follow:—London, 16.0; Bristol, 17.7; Brighton, 18.8; Birmingham, 19.7; Birkenhead, 19.7; Bradford, 20.5; Leicester, 20.6; Bolton, 20.7; Derby, 21.6; Huddersfield, 21.8; Oldham, 22.4; Nottingham, 23.5; Plymouth, 23.8; Halifax, 24.0; Salford, 24.5; Hull, 25.9; Blackburn, 25.9; Manchester, 26.6; Newcastle-upon-Tyne, 26.9; Leeds, 27.4; Liverpool, 27.5; Sunderland, 27.8; Cardiff, 28.0; Sheffield, 28.4; Portsmouth, 31.5; Wolverhampton, 32.0; Preston, 37.1; and the highest rate during the week, 43.7 in Norwich. The death-rate in the twenty-seven provincial towns averaged 25.2 per 1,000, and exceeded by as much as 9.2 the rate recorded in London, which, as before stated, was only 16.0 per 1,000. The 3,657 deaths registered in the twenty-eight towns during the week under notice included 933 which were referred to the principal zymotic diseases, against 1,199 and 1,132 in the two preceding weeks; of these, 724 resulted from diarrhœa, 58 from "fever" (principally enteric), 53 from scarlet fever, 37 from whooping-cough, 29 from measles, 28 from diphtheria, and not one from small-pox. These 933 deaths were equal to an annual rate of 5.4 per 1,000. The zymotic rate in London during the week under notice did not exceed 2.9, while it averaged 7.4 per 1,000 in the twenty-seven provincial towns, and ranged from 2.2 in Birkenhead, and 4.0 in Brighton and in Bristol, to 11.1 in Portsmouth, 11.7 in Hull, 15.7 in Wolverhampton, and 21.0 in Norwich. The deaths referred to diarrhœa, which had been 995 and 925 in the two preceding weeks, further declined during the week under notice to 724, and showed the largest proportional fatality in Sunderland, Nottingham, Hull, Wolverhampton, and Norwich. The fatal cases of "fever," which had been 49 and 58 in the two previous weeks, further rose to 63, and exceeded the number in any week since November, 1884; this disease caused the highest death-rates in Leicester, Newcastle-upon-Tyne, Plymouth, and Portsmouth. The 52 deaths from scarlet fever exceeded by 9 the number in the preceding week, and showed the highest proportional fatality in Leeds and Salford. The fatal cases of whooping-cough, which had been 50 and 49 in the two preceding weeks, further declined during the week under notice to 37. The 29 deaths referred to measles also showed a further decline from recent weekly numbers; this disease was proportionally most fatal in Preston, Wolverhampton, and Halifax. The fatal cases of diphtheria, which had increased from 19 to 25 in the three preceding weeks, further rose during the week under notice to 28, of which 15 occurred in London, 2 in Birmingham, and 2 in Manchester. No death from small-pox was registered during the week either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in the Metropolitan Asylum Hospitals during the week under notice. The death-rate from diseases of the respiratory organs in London during the week was equal to 1.9 per 1,000, and was considerably below the average. The causes of 73, or 2.0 per cent. of the 3,657 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns, having an estimated population of 1,283,977 persons, 791 births and 465 deaths were registered during the week ending Saturday, September 18th. The annual rate of mortality, which had been 17.7, 19.4, and 20.6 per 1,000 in the three preceding weeks, declined again to 18.8 during the week under notice, and was 3.8 below the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 11.8 in Greenock, 13.9 in Edinburgh, 14.0 in Aberdeen, 14.8 in Leith, 16.4 in Perth, 17.7 in Dundee, 20.8 in Paisley, and 24.1 in Glasgow. The 465 deaths registered during the week under notice in these towns included 73 which were referred to the principal zymotic diseases, against numbers increasing from 63 to 93 in the five preceding weeks; of these, 57 resulted from diarrhœa, 20 from whooping-cough, 7 from scarlet fever, 4 from "fever," 4 from diphtheria, 1 from measles, and not one from small-pox. These 73 deaths were equal to an annual rate of 3.8 per 1,000, which was 2.7 below the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Paisley, Leith, Aberdeen, and Glasgow. The deaths from diarrhœa, which had increased in the five preceding weeks from 18 to 57, declined to 45, of which 19 occurred in Glasgow, 8 in Dundee, and 5 in Paisley. The 11 fatal cases of whooping-cough showed a decline of 9 from the number in the previous week, and included 6 in Glasgow, and 2 in Edinburgh. The 7 deaths from scarlet fever, of which 6 occurred in Glasgow, corresponded with the number in the previous week. The deaths referred to "fever," which had been 7 and 4 in the two previous weeks, rose again to 6, and included 3 in Paisley, and 2 in Glasgow. Two of the 3 deaths from diphtheria, and the fatal case of measles, were returned in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 2.6 per 1,000, against 2.1 in London. The causes of 60, or 13 per cent., of the 465 deaths registered during the week in these towns were uncertified.

In the eight principal Scotch towns, having an estimated population of 1,283,977 persons, 786 births and 415 deaths were registered during the week ending Saturday, September 25th. The annual rate of mortality, which had been 20.6 and 18.8 per 1,000 in the two preceding weeks, further declined during the week under notice to 16.8, and was as much as 4.2 per 1,000 below the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the death-rate was equal to 11.8 in Greenock, 12.2 in Aberdeen, 12.6 in Leith, 12.7 in Dundee, 16.5 in Aberdeen, 19.0 in Glasgow, 19.7 in Perth, and 27.8 in Paisley. The 415 deaths registered during the week in these Scotch towns included 43 which were referred to diarrhœa, 18 to whooping-cough, 9 to scarlet fever, 4 to "fever," 2 to measles, 2 to diphtheria, and not one to small-pox; in all, 78 deaths resulted from these principal zymotic diseases, against 93 and 73 in the two preceding weeks. These 78 deaths were equal to an annual rate of 3.2 per 1,000, which was 2.2 below the average zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Perth and Paisley. The deaths referred to diarrhœal diseases, which had been 57 and 45 in the two preceding weeks, further declined to 43, and included 12 in Glasgow, 8 in Edinburgh, 8 in Dundee, and 8 in Paisley. The 18 fatal cases of whooping-cough showed an increase of 7 upon the number in the previous week; 16 occurred in Glasgow, and 2 in Paisley. The deaths referred to scarlet fever, which had been 7 in each of the two preceding weeks, rose during the week under notice to 9, of which 6 occurred in Glasgow. The 4 fatal cases of fever showed a decline of 2 from the number in the previous week, and included 2 in Perth. The 2 deaths from diphtheria showed a further decline from recent weekly numbers. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to

2.8 per 1,000, against 1.9 in London. The causes of 67, or more than 16 per cent. of the 415 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

In the week ending September 11th, the total number of deaths registered in the sixteen principal town-districts of Ireland was 380. The average annual death-rate represented by the deaths registered was 22.9 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000:—Armagh, 5.2; Belfast, 27.0; Cork, 25.3; Drogheda, 21.1; Dublin, 25.5; Dundalk, 17.5; Galway, 10.1; Kilkenny, 8.5; Limerick, 17.5; Lisburn, 4.8; Londonderry, 17.8; Lurgan, 15.4; Newry, 10.5; Sligo, 9.6; Waterford, 9.3; Wexford, 8.6. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 4.5 per 1,000, the rates varying from 0.0 in ten of the districts to 6.8 in Belfast; the 115 deaths from all causes registered in that district comprising 2 from scarlatina, 1 from typhus, 1 from whooping-cough, 4 from diphtheria, 1 from ill-defined fever, 9 from enteric fever, and 11 from diarrhœa. One of the 4 deaths registered in Dundalk was caused by scarlatina. In the Dublin Registration District, the births registered during the week amounted to 187—103 boys and 84 girls; and the deaths to 175—92 males and 83 females. Thirty-nine deaths from zymotic diseases were registered in Dublin; they comprised 7 from scarlet fever (scarlatina), 1 from whooping cough, 1 from ill-defined fever, 3 from enteric fever, 26 (including 20 of children under 5 years of age) from diarrhœa, etc. Seventeen deaths from diseases of the respiratory system were registered; they comprised 9 from bronchitis, 2 from pneumonia or inflammation of the lungs, and 2 from croup. The deaths of 19 children (including 14 infants under 1 year old) were ascribed to convulsions. Nine deaths were caused by diseases of the brain and nervous system (exclusive of convulsions), and 10 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 21 deaths, mesenteric disease 6, and cancer 2. Three accidental deaths and 1 case of suicide were registered. In 39 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending Saturday, September 18th, the total number of deaths registered in the sixteen principal town-districts of Ireland was 403. The average annual death-rate represented by the deaths registered was 24.3 per 1,000. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 15.5; Belfast, 26.1; Cork, 24.7; Drogheda, 25.4; Dublin, 27.0; Dundalk, 21.8; Galway, 13.4; Kilkenny, 16.9; Limerick, 9.4; Lisburn, 29.0; Londonderry, 8.9; Lurgan, 25.7; Newry, 14.0; Sligo, 19.2; Waterford, 37.0; Wexford, 8.6. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 4.8 per 1,000, the rates varying from 0.0 in seven of the districts to 9.3 in Waterford; the 16 deaths from all causes registered in that district comprising 4 from diarrhœa. Among the 111 deaths from all causes in Belfast were 1 from scarlatina, 2 from whooping-cough, 1 from diphtheria, 1 from simple continued fever, 3 from enteric fever and 20 from diarrhœa. A death from typhus was registered in Wexford, and 1 from scarlatina in Dundalk. In the Dublin Registration District, the deaths registered during the week amounted to 186. Forty-five deaths from zymotic diseases were registered during the week; they comprised 2 from scarlet fever (scarlatina), 1 from typhus, 1 from whooping-cough, 2 from diphtheria, 1 from ill-defined fever, 3 from enteric fever, 4 from "infantile cholera," 29 (including 23 children under 5 years old) from diarrhœa, etc. Twenty-two deaths from diseases of the respiratory system were registered; they comprised 17 from bronchitis. The deaths of 28 children (including 21 infants under 1 year old) were ascribed to convulsions. Two deaths were caused by apoplexy, 2 by epilepsy, 3 by other diseases of the brain and nervous system (exclusive of convulsions), and 7 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 12 deaths, mesenteric disease 10, and cancer 5. Four accidental deaths were registered. In 32 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

It appears, from statistics published in the Registrar-General's return for the week ending September 18th, that the annual death-rate recently averaged 29.5 per 1,000 in the three principal Indian cities; it was 21.1 in Bombay, 26.6 in Calcutta, and 43.9 in Madras. Cholera caused 33 deaths in Calcutta, and diarrhœal diseases 32 in Bombay and 71 in Madras; "fever" mortality showed the largest excess in Madras. According to the most recently received weekly returns, the annual death-rate averaged 27.2 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded by 4.6 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 26.3, and showed a slight increase upon the rates in preceding weeks; the 467 deaths included 99 from diarrhœal diseases, 11 from "fever," and 5 from small-pox. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 25.9, and ranged from 22.5 in Stockholm to 29.8 in Copenhagen; diarrhœal diseases caused 52 deaths in Copenhagen, 35 in Stockholm, and 18 in Christiania; 5 deaths from diphtheria and croup occurred in Christiania, and 2 from typhoid fever in Copenhagen. In Paris, the death-rate was equal to 21.2, and exceeded the rate that prevailed in London by 3.6; the deaths included 186 from infantile diarrhœa, 22 from typhoid fever, and 18 from measles. The 186 deaths in Brussels included 56 from diarrhœal diseases, 3 from measles, and 2 from "fever," and were equal to a rate of 22.2. The rate in Geneva did not exceed 18.0, and no fatal case of zymotic disease was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 26.6, the several rates being 23.4 in Rotterdam, 25.9 in Amsterdam, and 32.2 in the Hague; croup and diphtheria caused 5 deaths in Amsterdam, measles 5 in the Hague, and scarlet fever 3 in Rotterdam. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 32.5, and ranged from 22.7 in Vienna and 30.8 in Prague, to 37.9 in Buda-Pesth and 38.5 in Breslau. Diarrhœa fatality was the main cause of the high death-rates in these German cities; diphtheria caused the greatest mortality in Hamburg and Dresden, and 24 fatal cases of small-pox were recorded in Buda-Pesth. The mean death-rate in three of the principal Italian cities was 24.7, the rates ranging from 19.6 in Turin to 27.9 in Venice; cholera caused 11 deaths in Venice, typhoid fever 8 in Turin, and small-pox 5 in Rome. The death-rate was 27.4 in Cairo and 53.9 in Alexandria; diarrhœal diseases caused 147 deaths in Cairo, and 58 in Alexandria, small-pox 2 in each of these cities, and typhoid fever 17 in Cairo. In four of the largest American cities, the recorded death-rate averaged 24.6, and ranged from 19.9 in Philadelphia to 28.3 in New York. The mortality from diarrhœal diseases was considerable in each of these cities; diphtheria caused 28 deaths in New York, and 12 in Brooklyn; and 19 deaths from typhoid fever were recorded in Philadelphia.

It appears from statistics published in the Registrar-General's return for the week ending September 25th, that the annual death-rate recently averaged 27.0 per 1,000 in the three principal Indian cities; it was 20.8 in Calcutta, 22.6 in Bombay, and 37.0 in Madras. Cholera caused 24 deaths in Calcutta; and "fever" the highest death-rate in Madras. According to the most recently received weekly returns, the annual death-rate averaged 28.5 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded by no less than 7.5 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 25.3, and showed a further decline from the rates in previous weeks; the 450 deaths included 83 from diarrhœal diseases, 13 from scarlet fever, and 7 from diphtheria. In three other northern cities—Copenhagen, Christiania, and Stockholm—the death-rate averaged 27.4, and ranged from 21.4 in Christiania, to 33.6 in Copenhagen; diarrhœal diseases caused 57 deaths in Copenhagen and 30 in Stockholm, and diphtheria 8 both in Copenhagen and Christiania. In Paris, the death-rate was equal to 21.5, differing but slightly from the rate in the previous week, but exceeding the rate in London by 5.5; the deaths included 61 from typhoid fever, 14 from diphtheria and croup, and 9 from measles. The 248 deaths in Brussels, of which 80 resulted from diarrhœal diseases, and 1 from small-pox, gave a rate of 29.6. The rate in Geneva was but 15.1, and no fatal case of zymotic disease was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 26.3, the rates ranging from 23.4 in Amsterdam, to 30.4 in the Hague; diphtheria caused 4 deaths in Amsterdam, scarlet fever 2 in Rotterdam, and measles 2 in the Hague. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 38.5, and ranged from 19.9 in Vienna and 25.6 in Prague, to 38.7 in Hamburg, 39.7 in Munich, and 50.1 in Breslau. Diarrhœal mortality was the main cause of the exceedingly high death-rates in most of these German cities, especially in Munich and Breslau; diphtheria caused the greatest mortality in Dresden, Hamburg, and Berlin; and the 294 deaths in Buda-Pesth included 32 from small-pox, 15 from scarlet fever, and 3 from cholera. The mean death-rate in three of the largest Italian cities was 23.7, the several rates being 20.9 in Turin, 25.7 in Rome, and 27.2 in Venice; cholera caused 12 deaths in Venice, diarrhœal diseases 23 deaths in Rome, and in Turin 5 deaths from typhoid fever and 5 from diphtheria and croup, were recorded. The death-rate was equal to 48.9 in Alexandria, and 50.7 in Cairo; diarrhœal diseases caused excessive mortality in each of these cities; 2 deaths from small-pox occurred in Alexandria, and 17 from typhoid fever in Cairo. In four of the largest American cities, the mean recorded death-rate was 23.6, the rates ranging from 19.1 in Baltimore to 26.9 in New York. Diarrhœal diseases caused excessive mortality in each of these American cities, and diphtheria showed considerable fatality in New York and Brooklyn; 22 fatal cases of typhoid fever occurred in Philadelphia.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

BRANDON AND BYSHOTTLES.—Mr. W. C. Blackett had to contend with a serious amount of zymotic sickness during 1885. The district is large, and is inhabited by the workmen of the collieries. There is, naturally, a great deal of social intercourse between their families, and this is a fertile source for the spread of epidemic disease. The year commenced with a prevalence of small-pox, and, as this dwindled or died out, measles flourished. Whooping-cough was also epidemic, and, at the close of the year, scarlet fever threatened to spread, as sporadic cases had arisen in four separate and distinct colliery villages. No less than 800 cases of measles occurred, with 42 deaths. The utility of temporary hospitals for infectious diseases is fully demonstrated by Mr. Blackett, who compares the rate of mortality from small-pox now and some twenty-seven years ago. During the recent epidemic, it was 1.3 per 10,000 living. In 1858-9, it was 3.35 and 1.97 annually per 10,000. There were three temporary hospitals in the district, to which were admitted 108 patients, who were treated by their own medical attendants. The total cost was a little over £600. Mr. Blackett states that not a single case of small-pox occurred among those who had been revaccinated. The zymotic death-rate was 5.54 per 1,000. Measles was most destructive of life; pneumonia and bronchitis, as a rule, supervening and contributing greatly to the mortality. The total of deaths from all causes represents a rate of 22.60 per 1,000.

GLASTONBURY.—Dr. Whitfield Perkins's report affords evidence of a satisfactory condition of the public health in this town. The total mortality was 57, or 15.3 per 1,000, as against 18.2 per 1,000 in the preceding year. The zymotic proportion of the general rate was 1.07 per 1,000, and comprised one death from small-pox (imported), and one each from diphtheria, whooping-cough, and diarrhœa respectively. That each of these diseases was confined to a single case speaks well for the sanitary precautions exercised. There were two outbreaks of scarlatina, also limited to solitary cases.

HARTISMERE RURAL.—Dr. Barnes has the satisfaction of recording for this district the exceptionally small death-rate of 13.6 per 1,000. This is considerably lower than any previous year since the commencement of the records in 1874. Not only was the mortality from zymotic diseases decreased, but the infant mortality was below the average. Scarlet fever prevailed throughout the district to a limited extent, but no death was registered. Two small outbreaks of small-pox occurred, but were speedily arrested. One of an exceedingly mild character, affecting two houses and three patients, could not be traced to its origin, although carefully investigated. The other was an isolated case, imported from an adjoining sanitary district. Typhoid

fever and diphtheria were almost absent, but one case of the latter disease proved fatal. Zymotic diseases caused only six deaths, which is less than one-third the average number of deaths in former years.

WORKINGTON.—The death-rate for 1885 was 18.7 per 1,000, while, in 1884, it was but 16.2. Dr. Lowe, however, significantly points out that, had it not been for the deaths of forty-eight children caused by an epidemic of measles, within a few weeks, he could have shown the low death-rate of 16.4 per 1,000. The epidemic was instructive as showing the value of school-closing as a preventive measure. Dr. Lowe's recommendations on the subject were not adopted until the most serious consequences had resulted; but when at last the schools were closed on December 4th, the epidemic speedily declined, and disappeared, as far as could be ascertained, about twelve days after. There was not only the opposition of the ratepayers to contend with, but also an adverse feeling on the part of a large proportion of the public. It was said that the closure of the schools meant a loss to the town of £300 or £400. The predominance of monetary considerations in questions of life-saving is as absurd as it is deplorable. Dr. Lowe says that had the forty-eight children "been suddenly killed by an explosion of dynamite, there would have been a tremendous sensation, and precautions to prevent future disasters would have been adopted forthwith." A brief account is given of the sanitary condition of the district, and also of the water-supply, which is stated to be materially improved.

CARLTON.—The high rate of infantile mortality in this district has for years been notorious, and Mr. J. T. Knight does not record any abatement in this respect for 1885. No less than 42 deaths of children under one year of age occurred out of a total of 88 deaths. The general death-rate shows great improvement, 15.17, against 18.96 per 1,000 in 1884. There were a few scattered cases of measles and scarlet fever, each of which caused one death. Typhoid fever was slightly more prevalent than in late years. Some four or five cases occurred in a row of houses where the well was not protected from surface water, and the drain was not provided with a stench-trap. Mr. Knight is convinced that the old wells in the district are a source of danger, since they are for the most part loosely constructed, and contain water "not above suspicion." There was a satisfactory diminution in the mortality from diarrhœa and from zymotic diseases generally. In the previous year, no less than 29 deaths occurred from such causes, more than double the number for 1885, when there were only twelve deaths. The general trade of the district has for some years been depressed, and as a sign of the times, Mr. Knight mentions that half as many more out-door paupers were attended by the district medical officer as in any previous year.

INDIA AND THE COLONIES.

INDIA.

MEDICAL AID FOR WOMEN.—It has been decided to establish at Dhoolia a branch of Lady Reay's "National Association for Imparting Medical Aid and Instruction to Women." It is satisfactory to know that this good work, which was first undertaken by Lady Dufferin, at the suggestion of Her Majesty the Queen, continues to grow. The fact that few women in India know English makes it the more necessary that they should have female doctors with whom they can converse in their own language. A Managing Committee has already been formed for carrying out this object.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE ROYAL ALBERT ASYLUM.

THE annual report of the Royal Albert Asylum for idiots and imbeciles of the northern counties, Lancaster, states the present number of inmates of the asylum to be 537—365 males, 172 females. Of these, 251 were from Lancashire, 174 from Yorkshire, 33 from Cheshire, 33 from Durham, 21 from Cumberland, 15 from Northumberland, 7 from Westmoreland, and 3 from other counties. The general health of the inmates had compared favourably with that of former years, and the institution had been free from epidemic disease. The new Idiots Act would afford additional facilities for the care, education, and training of imbecile children. The report was adopted, and the usual resolutions of thanks to the committee and officers were passed. The total amount received from all sources was £28,382, being £19,170 for the Maintenance Fund; £8,191 (legacies, etc.) for the Sustentation or Endowment Fund; and £1,020 for the Recreation Hall Fund. The contributions from the Associated Counties to the Maintenance and Sustentation Funds has been £13,868. The annual subscriptions had increased in Lancashire and Cheshire, and declined slightly in Yorkshire.

MEDICAL NEWS.

UNIVERSITY OF DURHAM FACULTY OF MEDICINE.—At the recent examination for Degrees in Medicine and Surgery, the following candidates satisfied the examiners.

First Examination for the Degree of Bachelor in Medicine (Old Regulations).—F. J. McArdle, University College, Liverpool; J. W. B. Pogson, Queen's College, Birmingham.

Examination for Certificate of Proficiency in Sanitary Science.—T. McInerney, L.R.C.S.I., L.K.Q.C.P.I.; J. V. Salvage, M.D., L.R.C.P., M.R.C.S.; J. Wilding, M.B., L.R.C.P., M.R.C.S.

Second Examination for the Degree of Bachelor in Medicine (New Regulations).—*First Class Honours.*—E. R. White, King's College.

Second Class Honours.—O. E. Higgins, St. Mary's Hospital.

Pass-list in Alphabetical Order.—S. J. Allden, College of Medicine, Newcastle-upon-Tyne; O. W. Andrews, St. George's Hospital; E. Bowker, The Owens College; N. Faichnie, University College; H. Fowler, The Owens College; R. H. French, London Hospital; G. Gautby, College of Medicine, Newcastle-upon-Tyne; D. G. Halsted, London Hospital; W. Molesworth, Bristol Medical School; W. J. Stephens, College of Medicine, Newcastle-upon-Tyne; J. S. Walton, College of Medicine, Newcastle-upon-Tyne.

First Examination for the Degree of Bachelor in Medicine. (New Regulations).—The following satisfied the examiners.

H. B. Angus, College of Medicine, Newcastle-upon-Tyne; A. P. Arnold, College of Medicine, Newcastle-upon-Tyne; W. A. Atkinson, College of Medicine, Newcastle-upon-Tyne; F. Bulman, College of Medicine, Newcastle-upon-Tyne; B. Cox, College of Medicine, Newcastle-upon-Tyne; R. F. Craggs, College of Medicine, Newcastle-upon-Tyne; A. Crick, St. Thomas's Hospital; G. B. S. Darter, St. Thomas's Hospital; A. E. Davis, College of Medicine, Newcastle-upon-Tyne; G. W. Davis, L.R.C.P., M.R.C.S., St. Thomas's Hospital; C. M. Hardy, College of Medicine, Newcastle-upon-Tyne; T. Hartley, The Owens College; W. A. Hatton, London Hospital; O. E. Higgens, St. Mary's Hospital; E. Jepson, M.R.C.S., L.S.A., St. Bartholomew's Hospital; A. M. Jones, M.R.C.S., L.S.A., Guy's Hospital; I. N. Paris, University College; E. Rye, The Owens College; R. H. Shaw, College of Medicine, Newcastle-upon-Tyne; E. E. Shires, Yorkshire College, Leeds; F. Trevelyan, St. Thomas's Hospital; T. Watts, The Owens College; E. R. White, King's College; A. M. Wilson, St. Thomas's Hospital.

The following passed in Anatomy and Physiology.

W. F. Fisher, London Hospital; W. S. E. Raines, College of Medicine, Newcastle-upon-Tyne; R. A. Welsh, College of Medicine, Newcastle-upon-Tyne.

The following passed in Chemistry with Chemical Physics, and Botany with Medical Botany.

A. C. Baca, St. Bartholomew's Hospital; G. H. Francis, London Hospital; W. E. Peacock, College of Medicine, Newcastle-upon-Tyne.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—THE DOUBLE QUALIFICATION.—At special sittings of the examiners, which commenced on September 16th, the following gentlemen passed the second professional examination, and were admitted L.R.C.P. Edinburgh and L.R.C.S. Edinburgh.

P. H. S. Mellish, Kent; W. H. Shand, Kircudbright; F. J. B. Bateman, Norwich; J. Smith, Coleraine; G. E. Claxton, India; S. Herriot, Cheshire; R. S. Smith, Edinburgh; C. A. Edwards, Wiveliscombe; J. U. Downing, Birkenhead; R. W. Long, Cork; S. H. Craig, co. Derry; T. E. Moore, co. Derry; T. Godley, co. Kerry; A. O'Reilly Blackwood, co. Down; A. D. Dunn, Canterbury; W. Chalmers, Cornwall; W. M'Coull, Ovington; W. H. Chamberlain, Leicester; R. J. Beacon, co. Tyrone; B. O'Regan, co. Mayo; W. C. Graham, co. Antrim; H. J. Augustine, Bengal; F. W. Gibbon, co. Durham; F. Evans, Cork.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, September 23rd, 1886.

Evans, William Edward, St. Mary Church, Torquay.
Gedge, Arthur Johnson, Methwold, Brandon, Norfolk.
McIlroy, John Black, Derwent Villa, Shooter's Hill.
Rutherford, Vickerman Henzell, Elswick Road, Newcastle-on-Tyne.
Stelfox, Harold, 36, Rotherhithe New Road.
Woodhouse, Robert Hall, 1, Hanover Square, W.

MEDICAL VACANCIES.

The following vacancies are announced.

BRIGHTON AND HOVE LYING-IN INSTITUTION.—House-Surgeon. Applications by October 10th to the Secretary.

CHILDREN'S HOSPITAL, Birmingham.—Resident Medical Officer. Salary, £80 per annum, with board and lodging. Applications by October 6th to the Secretary.

CHILDREN'S HOSPITAL, Birmingham.—Assistant Resident Medical Officer. Salary, £40 per annum, with board and lodging. Applications by October 6th to the Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Clinical Assistant. Applications by October 11th to the Secretary, 24, Finsbury Circus, E.C.

GREAT NORTHERN CENTRAL HOSPITAL, Caledonian Road, N.—Clinical Assistant. Applications to Dr. Burnet, 94, Wimpole Street, W.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Clinical Assistant. Applications by October 16th to the Secretary.

MIDDLESEX HOSPITAL, W.—Second Chloroformist. Applications by October 8th to the Secretary.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Senior Resident Medical Officer. Salary, £60 per annum, with board and lodging. Applications by October 8th to W. Bristow, Esq.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Salary, £30 per annum, with board and lodging. Applications by October 8th to W. Bristow, Esq.

NOTTINGHAM GENERAL HOSPITAL.—Resident Surgical Assistant.—Applications by October 11th to the Honorary Secretary of the Medical Board.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner in Medicine. Applications by October 6th to the Secretary.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—Two Examiners in Midwifery. Applications by October 6th to the Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications by October 5th to the Secretary.

ROYAL SURREY COUNTY ASYLUM, Guildford.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by October 4th to Thomas Taunton.

SUNDERLAND AND BISHOPWEARMOUTH INFIRMARY.—Honorary Physician. Applications by October 4th to T. Robinson, Esq.

THE KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Two Honorary Vacancies on Medical Staff. Applications by October 19th to T. W. Dobson, Esq., The Dispensary, 13, Kilburn Park Road, N.W.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea.—House-Surgeon. Honorarium, £50 per annum, with board and lodging. Applications by October 4th to Commander Blount, R.N., Secretary.

WEST BROMWICH DISPENSARY HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, etc. Applications by October 2nd to W. Bache, Esq., Churchill House, West Bromwich.

WIRRALL CHILDREN'S HOSPITAL, Birkenhead.—Resident House-Surgeon. Salary, £40 per annum, with board and lodging. Applications by October 6th to the Honorary Secretary.

WORCESTER GENERAL INFIRMARY.—Surgeon. Applications by October 16th to W. Stallard, Esq., Worcester Chambers, Pierpoint Street, Worcester.

MEDICAL APPOINTMENTS.

COLLIER, Joseph, M.B., B.S.Lond., F.R.C.S.Eng., re-elected Resident Surgical Officer to the Manchester Royal Infirmary.

WEBB, Malcolm, M.D.Lond., re-elected Resident Medical Officer to the Manchester Royal Infirmary.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Specimens will be shown by Dr. Lewers and Dr. John Phillips. Papers: Dr. Swayne and Dr. Cox: Cases of Rupture of the Uterus. Mr. Alban Doran: Papilloma of Fallopian Tube. Dr. Champneys: On the Obstetrics of the Kyphotic Pelvis.

FRIDAY.—Clinical Society, 8.30 P.M. Dr. Charlewood Turner: A Case of Congenital Malformation of the Heart, with Systolic and Pre-diastolic Basic *Bruits*, with observations on the causation of *bruits* preceding the cardiac sounds. Mr. Pearce Gould: A Case of Undeveloped Sexual Organs associated with Congenital Defect of the Tonsils. Mr. F. Treves: A Case of Pulsating Tumour of the Head with Raynaud's Disease. Mr. Butlin: Further Notes of a case of Renal Lithotomy, published in the *Transactions* of the Society, Vol. xv, p. 113, 1882. Living Specimen: Mr. Treves' case of Pulsating Tumour of the Head.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

BIRTH.

MEREDITH.—On September 26th, at 6, Queen Anne Street, Cavendish Square, W., the wife of W. A. Meredith, M.B., C.M., of a daughter.

MARRIAGES.

BURDWOOD—WARING.—September 23rd, at Holy Trinity Church, Colchester, Essex, by the Rev. J. B. Early, Dr. James Watson Burdwood, Medical Officer of Health, of West Cottage, Bourne, Lincolnshire, to Caroline Raymond (Mrs. Henry Waring), of Lessenden Villa, Lexden Road, Colchester, Essex. No cards.

COLDSTREAM—FRASER.—At Queen's Road Presbyterian Church, Brighton, on September 28th, by the Rev. Donald Fraser, D.D., London, uncle of the bride, assisted by the Rev. A. Hamilton, D.D., Brighton, Alexander Robert Coldstream, M.D., F.R.C.S.E., Florence, to Janey Speirs Playfair, eldest daughter of the Rev. William Fraser, M.A., Brighton.

CORBIN—CAMPBELL.—On September 22nd, at the parish church, St. Peter Port, by the Rev. G. E. Lee, M.A., rector, assisted by the Rev. F. E. Lowe, M.A., vicar of St. Stephen's, and the Rev. E. Hoskins, M.A., rector of St. Mary Magdalene, London, Edward Kinnersly Corbin, sole surviving son of M. A. Bazille Corbin, F.R.C.S., to Mary Louise, eldest daughter of J. H. Campbell, The Hermitage, Guernsey.

LOUDON—HORSBURGH.—At St. Alban's Road, Edinburgh, on September 23rd, by the Rev. Pearson Macadam Muir, John A. Loudon, M.B., C.M., Leyton, Essex, to Jessie Fanny Louisa, eldest daughter of John Horsburgh, Esq.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p. Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W. 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30; Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

Reducing Weight.

M. A. P. wishes to be informed where he can learn particulars of the treatment for the reduction of weight by living on beef-steak and drinking hot water. He believes that the system has been introduced by an American gentleman named Salisbury. Is there any pamphlet published on the subject?

Body-Weight in Health and Insanity.

W. F. M. writes: Can you or any of your correspondents inform me where I can obtain the results of any investigations on "body weights," either in health, or with special reference to insanity?

Inquirens.—Is there an inexpensive school where a boy, aged 12, could be placed? He does not possess by any means anything approaching an average amount of intelligence, yet could not be classed as imbecile. He is dull, mischievous, and given to outbreaks of violent temper.

Specialists and Teachers in Europe.

C. F. P. asks where he can find a list of the continental specialists, and the names of teachers in the continental medical schools.

*** Facts of the kind desired by our correspondent will be found in the *London Medical Record*, September 15th, 1886.

Home for Imbecile Boy.

Inquirens asks for a home (not "Earlswood") for imbecile boy, aged 10, of poor parents.

Treatment of Tinea Circinata.

M.B. inquires what is the best means of curing a most obstinate case of tinia circinata, situated on the hands, fore-arms, and elbows. The treatment that has hitherto been adopted has been the following, locally:—Liquor potassæ, an ointment composed of red iodide of mercury and vaseline; and, latterly, the chrysophanic acid ointment; this latter seemed to have almost effected a cure, but the patient gave up wearing the dressings for a time, when it returned as bad as ever. Internally, the patient has had liquor arsenicalis, decoction aloes, bicarbonate of potash, decoction sarsæ, etc.

*** Friction with sapo mollis once daily, and, when the parts have been washed and dried, painting with tincture of iodine is a method of treatment that experience shows to be generally successful, even in obstinate cases of tinea circinata. The diagnosis has presumably been confirmed by microscopic observation.

ANSWERS.

Steel Screws for Horses.

A. D. K. writes to say that, for many winters past, he has used nothing but screws for his horses' shoes, and they have given him such satisfaction, that he should now never dream of having them roughened in the old way. He always carries with him a canvas bag, containing a number of sharp screws, and a key for screwing them in. Whenever he stops to make a visit, his coachman overhauls the shoes, tightens any loose peg, or, if one is lost, replaces it. If the shoes and screws are well fitted, he does not, in the course of a season, lose over 5 per cent. of them. The system, he says, has many advantages; it saves the hoofs of the horses, it is economical (a set of shoes lasted him last winter from December 8th to April 15th), and can be applied at any moment. The shoes can be supplied by an ordinary country blacksmith.

Mr. E. M. Rodwell, of Loddon, Norwich, writes in reply to "M.B., M.A.," that he has used steel screws for the past four winters instead of having the horses roughed, and finds they answer admirably, being easily put on and taken out of the shoes, and, moreover, are very easily made (almost any blacksmith can make them). If "M.B., M.A." desires further particulars, Mr. Rodwell will be happy to furnish them, and send a specimen of those which he uses.

Duration of Infectiousness in Measles, etc.

Messrs. Alder Smith and C. E. Shelly, Honorary Secretaries of the Medical Officers of Schools Association, write: In reply to "Inquirens," we may state that "the date of the appearance of the rash" is the meaning intended to be conveyed by the words which he quotes from the code issued by the Medical Officers of Schools Association.

Medical Jurisprudence.

A Member.—There are several excellent English text-books on medical jurisprudence, such as the works of Dr. Meymott Tidy, and Drs. Taylor and Stevenson, which are very complete, and the more condensed treatises by Dr. Abercrombie, and by Drs. Guy and Stevenson.

Practice in the United States.

A Yankee Practitioner writes: In respect to L.R.C.S.I.'s inquiry in Journal of September 25th, anyone can practise in the majority of the forty States, whether qualified or not, and L.R.C.S.I. is sufficient for registration in Illinois and Pennsylvania States. A degree (M.D.) would be of material advantage to anyone who contemplates practising in the States, being the only degree granted over there. The mass, who are better posted than the corresponding class in this country, look down upon any other diploma; even medical men know but very little about our diplomas, and great difficulty is experienced for anyone except a graduate to be admitted a member of a medical society.

Epsom College.

In reply to "Country Practitioner," a correspondent advises his first sending the boy to the Preparatory School, Parade, Epsom, in connection with the college, which, from personal experience, he believes would meet the requirements for a highly nervous boy.

Training of Midwives.

T. G. Rose.—The British Lying-In Hospital, Endell Street, W.C.; Queen Charlotte's Lying-In Hospital, Marylebone Road; General Lying-In Hospital, York Road, Lambeth, are among the hospitals where training in midwifery is given. We cannot undertake to recommend any particular hospital.

A Means of Locomotion.

"Baffled" might apply to Mr. T. McIlroy, 45, Grafton Street, Fitzroy Square, who has an invalid tricycle, which is propelled by the use of the hands alone.

Mr. H. J. Lange, surgical mechanician, 47, Arthur Road, Tollington Park, Holloway, N., writes, offering to give the requisite information if "Baffled" will communicate particulars as to whether the conveyance is required for outdoor or indoor use.

Mr. S. J. Noake, of Halton, near Leeds, writes, pointing out that Singer and Co., of Coventry, are the makers of a handsome tricycle, especially adapted to the case referred to. He suggests that a crank for the feet should also be added for use occasionally; this might be arranged so as to enable the crank to be put in and out of gear when desired, so that, when at rest, it would act as a footrest while being propelled by the hands.

C. D. G. H. refers "Baffled" to the following advertisement, which appears in this week's *Exchange and Mart*. "Hand tricycle, velociman, by Singer. Capital Condition. Price £8. Edgar Loames, Bromley, Kent."

Mr G. Fraser Henry, of 84, Whiting Street, Bury St. Edmunds, will also furnish "Baffled" with all information on this subject if he will communicate his address.

Another correspondent refers "Baffled" to the Bicycle and Tricycle Sale Rooms, 60, Chancery Lane, W.C.

NOTES, LETTERS, ETC.

Sporting Accidents on Remote Moors: a Suggestion.

Dr. A. D. Keith (Aboyne, N.B.) writes: I quite agree with the opinion expressed in your annotation in the Journal of September 25th, that the lamented death of the Earl of Dalkeith might have been averted "had skilful treatment been available immediately after the accident." On grouse moors and in deer-forests, skilful assistance must, in the nature of things, be absent in ninety-nine cases out of the hundred; but I would venture to make a practical suggestion. Let every gillie carry in his game-bag a yard of ¼ elastic cord (Esmarch), half a dozen spring-artery forceps, and some mixed silk twist, and be taught how to use them. I have no hesitation in saying that, in any part of Scotland, medical men would be found only too happy to teach them.

Cucaine in Hæmorrhoids: a Correction.

In Dr. J. P. Stallard's surgical memorandum on this subject (Journal, September 25th, p. 586), at the end of the description of "Case II" "hydrochlorate of cucaine" was accidentally substituted for "chloral hydrate." The passage should have read, "The solution used had been kept for three months, and contained one grain of chloral hydrate in a drachm."

Triple Qualification of Scotland.

Dr. Charles Frederick Knight (Dublin) writes: Allow me, through the medium of your columns, to draw the attention of medical tutors to the fact, that candidates for the first professional examination of the triple qualification are now required to produce a six months' certificate of practical anatomy instead of nine months as heretofore. At my request, the joint committee made this alteration in July last. A candidate, however, cannot present himself for examination until he has been nine months registered as a "medical student," consequently, he can devote the summer session to practical physiology.

Teachers wanted for Ambulance Classes.

Mr. Hodgson Pratt, President of the Working Men's Club and Institute Union, writes: There is a great desire on the part of many of the members of workmen's clubs and institutes in the metropolis to form classes for receiving instruction such as that contemplated by the St. John Ambulance Society. Our workmen friends are naturally very much alive to the importance of being able to give timely succour in case of the numerous accidents which they often witness, both at home and out of doors.

There is, however, a practical difficulty which stands in the way of the general extension of this greatly needed kind of education, that is, the cost attending the formation of such classes. The Working Men's Club and Institute Union, to which most of these clubs are affiliated, has resolved to supply any class which may be formed with requisite apparatus, diagrams, and books, while the clubs will willingly meet the expense connected with the examinations held by the St. John Society for the grant of certificates of competency. There remains, however, the serious cost for working men of paying the lecturer's fees, and it has occurred to the Council of the Union that perhaps young medical practitioners who have some spare time, or qualified medical students, would consent to render the generous and useful service of giving such lectures free of charge. If a dozen such friends would each of them undertake to give one course during the coming winter at some club, the difficulty would be fully met. Travelling expenses would, of course, be gladly paid, and I need not say that the members would be most grateful for the generous service thus invited.

I have been associated with these institutions for twenty years, and I know how pleasant it is to have friendly relations with the intelligent men who belong to them. Should anyone seeing this letter be willing to respond to this appeal, I would ask him to send his name and address to the Secretary of the Club Union, 31, Southampton Street, Strand.

Early Child-bearing.

F.R.C.P. writes: In a recent number of the Journal, a correspondent stated that he had attended a girl in her confinement, aged 14½ years, and spoke of it as one of the most remarkable cases on record. I am now attending a case of fever, where a trained nurse had to be telegraphed for from London, and she casually informed me one day of her marriage in England (she is a Spaniard) at 14, and confinement one month before reaching her 15th year; more than this, she was present (when training for a nurse) at Queen Charlotte's Lying-In Hospital, London, at a confinement of a child only 11½ years of age, whose parents produced certificate of the girl's birth in proof thereof. This confinement occurred, she thinks, in 1880 or 1881.

Induction of Premature Labour.

Dr. J. R. Purdy writes to say that the question he meant to ask at the end of his obstetric memorandum (Journal, September 25th, p. 586) should have been, "Was I right in inducing premature labour?" Craniotomy was not performed.

Instruction in Hospitals.

In the list of hospitals where instruction is given, published in the British Medical Journal, page 556, *et seq.*, the name of the Throat Hospital, Golden Square, London, was omitted.

We are informed that Mr. Startin has ceased to be a member of the staff of St. John's Hospital for Diseases of the Skin.

The Evolution of Pathogenic Organisms.

Mr. William Sykes, M.R.C.S. (Mexborough) writes: There are two rival theories of the origin of zymotic disease: one, that they have their birth in unsanitary conditions to which their victims are exposed—the *de novo* theory—now little accepted; the other, that each case has its birth in the infective material left by previous outbreaks, expressed in the formula "omnis typhoidis e typhoide." Does not the bacterial theory of origin of this class of diseases provide an explanation of the apparently anomalous cases which occur which cannot be explained by the above formula? If the infective material in each case is a microzyme, one can imagine that it has a possibility of external life unconnected with the human frame; that it was originally, in fact, a harmless creation or development which, accidentally conveyed into the circulation, found there a suitable soil for growth and development, and, by the theory of natural selection, of increased vigour. But that other microzymes of the same species remained (and remain) as scanty growths sparsely scattered under less favourable conditions, which may occasionally find accidental entry into the human economy, as, in the first instance, must have been the case with the original *materies morbi*. We find, then, that there is no specificity in zymotic disease; that the low forms of life causing it exist partly in, partly out of, the body; that the body provides a soil of superior fertility, and that, therefore, the microzymes in it flourish more, increase more rapidly, and are more numerous, than those outside it; that, therefore, most outbreaks of zymotic disease originate in the numerous and vigorous microzymes thrown off in the secretions of previously diseased persons; but that a small number of cases are produced by the accidental introduction of the weaker and less numerous external microzymes, and are examples of the anomalous *de novo* origination of disease.

More numerous observations must be made on the life-history of microzymes, their behaviour under a series of cultivations in unfavourable natural media, for example, earth or water. Careful search must be made among media not infected by the bacteria of disease for growths resembling these microzymes attenuated by cultivation in unfavourable environments.

Protracted Pregnancy.

Mr. S. W. Woollett (Southwold) writes: The following case is, I think, of interest medico-legally, and I should be very glad to have the opinion of any gentleman of the medical profession on it.

A girl, aged 16, is stated to have repeatedly had connection with a man, the last occasion being on the night of June 12th, 1885. Her menstruation had ceased on June 10th, and since that date has not recurred. I was called to visit her on the night of March 19th, 1886, having previously been engaged to attend her in her confinement. I found the labour-pains strong and regular, and the patient was greatly troubled with vomiting. On examination *per vaginam*, I discovered the os dilated to the size of a shilling, and I felt the membranous bag tense and presenting. I saw her again on the next day. The os was then dilated to the size of a florin, but the pains were feeble, and the vomiting had ceased. On March 21st, the pains were entirely absent. On March 22nd, milk had appeared in both breasts. For the next ten days or so, I attended the patient daily. She suffered from intense frontal headache, frequent vomiting, hæmorrhage from the bowels, and abnormal temperature. On the evening of April 23rd, she was confined naturally of a well developed female child, unfortunately not weighed at the time. From June 12th, 1885 (the date of the last admitted connection), to March 19th, 1886 (the date of the first symptoms of labour), an interval of 280 days took place. From June 12th, 1885, to April 23rd, 1886 (the date of confinement), an interval of 315 days took place. Judging from the absence of menstruation, the attempt at labour on March 19th (the normal date), the appearance of lactation three days later, and the excessive disturbance of the patient's system for the next month, is it possible for a sexual connection taking place on June 12th, 1885, to result in the birth of a child on April 23rd, 1886?

Simpson has recorded cases of protraction, in which pregnancy extended 336, 332, 319, and 324 days after the cessation of the last menstrual period. Dr. Meadows has mentioned a case that extended over ten months. Numerous other instances have been recorded by well known obstetricians. Dr. Playfair has, in his work on *Midwifery*, described two cases very similar to mine.

I think it is time that steps should be taken, not to fix the duration of pregnancy, but to relieve the mind of the unprofessional public of the absurd notion that protraction beyond a rigid period of time is impossible. Is the human race so distinct from all other species of living beings that separate laws should be created for it? It is a well admitted fact that cows and mares are subject to protracted pregnancies; why not women?

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. J. W. Axe, Newark; Mr. R H. S. Carpenter, London; Dr. Alder Smith, London; Dr. Ker, Halesowen; Mr. W. Pardoe, London; Mr. T. Cantrell, London; Mr. W. Armstrong, Manchester; Dr. C. Orton, Newcastle-under-Lyme; Dr. C. T. Williams, London; Dr. J. J. Bailey, Marple; Mr. J. R. Purdy, Oulton; Dr. C. D. G. Hailes, Clifton; Dr. H. Dalton, Harrogate; Dr. Keith, Aberdeen, N.B.; Mr. G. F. Henry, Bury St. Edmunds; Mr. S. J. Noake, Halton; Dr. C. F. Knight, Dublin; Mr. E. Howard, London; Dr. Lindsay, Belfast; Mr. J. Lloyd-Roberts, Denbigh; Our Manchester Correspondent; Mr. J. Oliver, London; Dr. G. V. Poore, London; Dr. J. C. Waddell, Longton, Staffs.; Mr. J. J. Powell, London; Mr. R. Bradley, Bentham; Dr. A. W. Edis, London; Mr. J. P. Stallard, Manchester; Mr. W. Williams, Abergele; Mr. W. F. Menzies, Maidstone; Professor W. T. Gairdner, Glasgow; Mr. W. Berry, Wigan; Mr. M. H. A. Jacobson, London; Mr. G. M. Bluett, London; Sir T. Spencer Wells, London; Mr. J. M. Ryan, Colchester; Dr. H. Mackenzie, Edinburgh; Dr. W. Webb, Wirksworth; Mr. W. Watson Cheyne, London; Mr. H. J. Jenkinson, Keswick; Miss Isabel Thorne, London; Dr. Spender, Bath; Mr. C. H. Wells, London; Dr. H. Fox, London; Mr. O. R. Travers, St. Leonard's-on-Sea; Mr. J. B. Medland, London; Messrs. Burroughs, Wellcome and Co., London; Dr. Maxwell, Woolwich; Dr. Mickle, London; Dr. R. McDougall, Glen Innis, N.S.W.; Mr. A. Carter, London; Dr. W. D. Spanton, Hanley; Mr. W. Adams Frost, London; Mr. W. V. Chester, Ramleh, Alexandria; Mr. E. M. Rodwell, Norwich; Mr. B. B. Le Tall, York; Mr. G. W. B. Calcott, Oundle; Dr. Currie, Totnes; Mr. W. P. Hourigan, Freshford; Dr. S. Deakin, Bombay; Mr. P. H. Pye-Smith, London; Mr. A. C. Dutt, London; The Secretary of the Pathological Society, London; Mr. R. A. N. Pourys, London; Dr. T. Stevenson, London; Mr. W. W. Millard, Edinburgh; Mr. A. Crespi, Wimborne; Mr. A. T. Brand, Driffield; Mr. H. J. Lange, Holloway; Mr. London, Coventry; W. F. M.; Mr. F. J. Tisdall, Liverpool; Mr. J. Dixon, Dorking; Dr. W. J. Simpson, Calcutta; Mr. A. Duke, Dublin; Dr. W. Walter, Manchester; Mr. R. McBride, Gelford, co. Down; Dr. J. J. Ridge, Enfield; Mr. T. J. Morrington, Brighton; Dr. Biggan, Harlesden; Mr. Vincent Jackson, Wolverhampton; Dr. J. E. Eylandt, Bournemouth; Dr. T. Cranstoun Charles, London; Mr. G. E. Williamson, Newcastle-on-Tyne; Mrs. Britton, Harrogate; Dr. B. Anningson, Cambridge; Mr. A. V. Griffiths, Henton; Dr. W. Strange, Birmingham; Mr. W. C. Clarkson, Pateley Bridge; Dr. M. W. C. Gori, Amsterdam; Dr. J. Mortimer Granville, London; The Secretary of the Middlesex Hospital; The Secretary of the Charing Cross Hospital; The Secretary of St. Bartholomew's Hospital; Dr. Withers Moore, Brighton; Dr. Buchanan Klophel, Memphis, U.S.; Mr. Jonathan Hutchinson, London; The Dean of St. George's Hospital; The Secretary of St. Thomas's Hospital; The Dean of Westminster Hospital; Dr. J. W. Hunt, London; The Secretary of King's College; Mr. J. C. Taylor, Luton; Mr. W. J. Tyson, Folkestone; Mr. A. Cooper Key, London; Mr. T. Churchill, Edinburgh; Dr. B. Chevallier, Ipswich; Dr. R. Wade Savage, London; Dr. T. T. Laffan, Cashel; Mr. G. Y. Eales, Torquay; Mr. E. C. Spicer, Truro; Dr. J. G. Black, Harrogate; Dr. E. FitzGerald, Folkestone; Mr. H. G. Shaw, London; Mr. G. Greene, Kilmore; Mr. J. Hamilton, Glasgow; Mr. J. Kitching, Mossel Bay, Cape Colony; Dr. J. Williams, Sheffield; Mr. T. Blair, Leeds; Mr. R. Wood, Driffield; Mr. W. Eassie, London; Dr. Tatham, Salford; Mr. R. Hagyard, Hull; Dr. P. T. Duncan, Croydon; Dr. Willoughby, London; Dr. W. Carter, Liverpool; Messrs. J. and A. Churchill, London; Dr. R. G. Herbertson, New Cummock; Mr. T. Edwards, Harrold; Mr. W. Stevenson, Shirehampton; Dr. W. Strange, Worcester; Dr. D. Thomas, London; Mr. St. V. Mercier, London; Dr. Davidson, Battle; The Dean of the Medical Department of King's College, London; Mr. M. G. Biggs, London; Mr. W. R. D. Davies, Chelford; Mr. J. H. Bridges, Wimbledon; Mr. G. Terry, Frome; Dr. Scriven, Duffield; Mr. A. F. Turner, Southampton; Mr. C. Gaine, Bath; Dr. D. Noel Paton, Edinburgh; Dr. Watson, East Wemyss; Mr. Munro Scott, London; The Dean of Guy's Hospital, etc.

BOOKS, etc., RECEIVED.

Clinical Manual for the Study of Medical Cases. Edited by James Finlayson, M.D. London: Smith, Elder and Co. 1886.

The Science and Practice of Midwifery. By Dr. W. S. Playfair. Vols. I and II. London: Smith, Elder and Co. 1886.

South Africa as a Health-Resort. By Arthur Fuller, M.B., C.M. London: W. B. Whittingham and Co. 1886.

The Normal and Pathological Histology of the Human Eye and Eyelids. By C. F. Pollock, M.D., F.R.C.S., F.R.S. London: J. and A. Churchill. 1886.

A Manual of Diseases of the Nervous System. By W. R. Gowers, M.D. Vol. I. London: J. and A. Churchill.

Ambulance Work, Illustrated. Lectures by R. Lawton Roberts, M.D. Second Edition. London: H. K. Lewis. 1886.

The Diagnosis and Treatment of Syphilis. By Tom Robinson, M.D. London: J. and A. Churchill. 1886.

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AN ADDRESS
ON
MEDICAL WORK AND MEDICAL DUTY.

Delivered, after the Distribution of Prizes, at the opening of the Winter Session of King's College Medical School.

By GEORGE JOHNSON, M.D., F.R.S.,
Emeritus Professor of Clinical Medicine; Consulting Physician to King's College Hospital.

THAT my colleagues should, for the second time within a period of six years, have assigned to me the task of opening the medical session by distributing the prizes and delivering an address, is, I feel, to confer a great honour, and also to impose a grave responsibility—a responsibility which I should not have sought, but which I felt that I should not have been justified in declining.

Before proceeding to the main subject of my address, I have to express, in a few words, the sorrow which we all feel on account of the recent sudden death of Mr. Royes Bell.

During the many years of his connection with the hospital, Mr. Bell was remarkable for thorough devotion to the double work of tending his patients and teaching his pupils, with the result of obtaining the esteem and affection of all who came in contact with him. Thoroughly unselfish as he was, and full of consideration for others, he was surrounded by a numerous circle of deeply attached friends. In the wards of the hospital, I have often been indebted to him for surgical aid, skilfully and kindly rendered to my patients. His loss will long be deeply felt by us all.

The vacancy thus occasioned in the surgical staff of the hospital has been filled by the appointment of Mr. Barrow, a former King's College student, and a well-known skilful surgeon and successful teacher, to the office of Assistant-Surgeon; while, to relieve Dr. Burney Yeo of the labour of out-patient work, which he has faithfully discharged for a number of years, Dr. Dalton, who has already done good service in the department of pathology, has been appointed Assistant-Physician of the hospital.

It is probable that most men who have lived beyond middle-age, have sometimes indulged the wish that they could begin life again, with the aid and guidance of such experience as they have acquired during their past career. The wish is obviously vain, and impossible of fulfilment; but it may be permitted, and, on such an occasion as this, it may perhaps be expected, that one who has reached the autumn of life should endeavour to draw from his stores of knowledge and experience some materials which may be of service to those who are yet in the spring-time of existence. And that is the object which I shall endeavour to keep steadily in view, while I address myself to those who are just commencing, or who have already made some progress in, the study of subjects connected with the science and practice of medicine and surgery.

Let me beg of you not to suppose that I assume to be a living exemplification of the precepts which I am about to submit to you. Rather I desire to perform the humble but useful part of a whetstone, in accordance with the familiar passage: "Fungar vice cotis, acutum reddere quæ ferrum valet, exsors ipsa secandi;" which I will venture to paraphrase by saying that, while making no claim to special acuteness myself, I desire, if it may be, to contribute to the sharpening of your intellectual and moral faculties.

My object is to offer you some advice, which may be of use to you during your student-career, and also to make some suggestions for your guidance when, hereafter, you assume the duties and responsibilities of medical and surgical practice.

You will scarcely need to be told that very weighty, though, at present, unforeseen and incalculable results, to yourselves and to others, depend upon the manner in which you spend the four or five years during which you have to qualify yourselves for the practice of your profession. If, unhappily, any of you should neglect the opportunities which will now be afforded you for laying a solid basis upon which to erect the superstructure of professional knowledge and skill, it is scarcely possible that, by any future effort, you will be able to retrieve the lost time.

In pursuing your studies, you will do well to follow exactly the course prescribed for you by authority. You will find hereafter, if you do not already see, that there is good reason for the order in which the various subjects are brought before you.

The three great subjects to which your attention will first be directed are anatomy, physiology, and chemistry; and, unless you have mistaken your vocation, you will find in these studies an abundant source of interest. It scarcely need be insisted upon, that a knowledge of the structure and functions of the human body is an essential foundation for the practice of medicine and surgery.

It may not appear so obvious, but it is not less true, that some knowledge of chemistry is absolutely necessary for every practitioner. Apart altogether from its practical utility, a diligent study of the facts and laws of chemistry will prove an invaluable means of mental training and discipline. Observation, memory, and the reasoning faculty are each and all exercised and strengthened by a thorough study of that delightful science. The subject is so extensive that a lifetime scarcely suffices for the thorough mastery of all its details and principles. But, without aspiring to be profound chemists, it will be your duty to acquire such a theoretical and practical knowledge of the subject as will be required in the daily practice of your calling. A man ignorant of chemistry cannot write a prescription without the risk of combining ingredients which are incompatible, and so bringing about most unexpected and undesirable results. A knowledge of chemistry is essential for understanding the operation, and therefore for the successful administration, of antidotes for poisons. It is equally essential for the testing of the various secretions, by which the most valuable information as to the presence and progress of disease is obtained.

The time will come when circumstances or your own deliberate choice will decide for each of you what department of practice you shall adopt; whether you will become consulting physicians or surgeons or so-called general practitioners, or whether you will select some such special department of practice as obstetrics, lunacy, or ophthalmic, aural, or dental surgery. Now, I desire to impress upon you that the only sure and safe foundation for specialism is a thorough knowledge of disease in general. It should be said with truth of the specialist, not that he knows less of general disease, but that he has more knowledge of the nature and treatment of some special class of diseases. Let me now give you some proofs and illustrations of this statement.

There are few, if any, special departments of practice which have so indisputable a *raison d'être* as ophthalmic surgery, for the successful practice of which a special manual dexterity, and constant practice in the performance of delicate operations, are essential. But again, there are few diseases which afford so many, and such striking, illustrations of the close relationship between various tissues and organs, and the dependance of apparently local structural changes upon remote and often general constitutional conditions as those which affect the eye. Thus, in one case, defect of vision may, by the aid of the ophthalmoscope, be seen to be caused by a degeneration of the retina, the result of Bright's disease of the kidney; in another case, blindness may be seen to result from obstruction of a retinal artery by a portion of blood-clot which has been detached from a diseased valve of the heart; while, in yet another, loss of vision may be traced to degenerative changes in the optic nerve, consequent on the growth of a tumour in the brain. Now, from these facts, it is manifest that an ophthalmic surgeon, who had no knowledge of diseases of the kidney and the heart and the brain, would often fail to correctly interpret the ocular defects with which he has to deal; while, on the other hand, a physician who undertakes the study and treatment of renal or cardiac or cerebral disease, without having acquired the power of inspecting the interior of the eye by the aid of the ophthalmoscope, is at a manifest disadvantage.

The same principle, namely, the dependance of apparently local disease upon remote pathological changes, may be illustrated by affections of the larynx. The use of that simple instrument, the laryngoscope, enables us to demonstrate that while, in one case, loss or impairment of voice is caused by structural change within the larynx, in another case, the vocal defect is a result of an aneurysm or other tumour in the neck or within the chest, pressing upon one or other of the nerves which supply the organ of voice; while, in yet another class of cases, the laryngeal trouble is traceable to disease within the brain or spinal cord. Obviously then, a mere laryngoscopist, that is, one whose vision is limited to the larynx, would be very incompetent to deal successfully with the diseases of that organ.

My object in referring to the facts which I have here briefly set forth, has been two-fold. First, I wish to impress upon you that, between the various organs and functions of the body, there exists, both in health and in disease, a correlation, and, to use a modern phrase, a solidarity, the recognition of which is of the highest practical importance. There is a strictly scientific truth in the familiar apostolic doctrine, "whether one member suffer, all the members suffer with it."

The universe is governed by all-pervading immutable laws. As the astronomers, relying upon the constancy of the laws of gravitation and of planetary motion, have discovered a previously unknown planet by observing the perturbed orbit of one before known; as the biologists, in reliance upon the constancy of organic types, have been enabled, from a fragment of a skeleton, or from a tooth, to reconstruct the whole framework of an extinct reptile or bird or mammal, so the pathologist and the practising physician, familiar with the laws of physiology, which, although modified, are not suspended by disease, have learnt that a disease commencing in one organ may involve, as a necessary consequence, widespread structural changes in other parts.

For a man ignorant of general pathology to claim to have special knowledge and skill in the treatment of some particular class of diseases would be as baseless an assumption as that of a would-be astronomer who, while ignorant of the elementary fact that the sun is the centre of our planetary system, pretended to have acquired a special knowledge of the orbit and phases of the moon, and the flux and reflux of the tides. Such a pretender would be rightly looked upon as the type and embodiment of lunacy.

It should be clearly understood that the main reason and justification for certain forms of specialism consists in the convenience, and even the necessity, of a division of labour, and not in the possibility of separating the body into different parts, and then making one of them the exclusive object of study and practice.

The second object which I have had in view, has been to insist upon the value of all physical means of diagnosis, and especially of two of the most recently introduced, the ophthalmoscope and the laryngoscope. No student, whatever his future line of practice may be, can be considered to have completed his medical training until he has learnt to use these simple but invaluable instruments, which have, in a very real and literal sense, shed an entirely new light upon a large and important class of diseases, and by the aid of which our knowledge of many facts tending to establish the correlation and interdependence of pathological conditions has been greatly extended.

I exhort you earnestly to avail yourselves to the utmost of the special opportunities which will be afforded you for obtaining a practical knowledge of these and other physical methods of diagnosis. And, in connection with this subject, I venture to protest against the rapid increase of small and uncalled-for special hospitals. Most of these institutions, whatever personal advantage they may bring to those who promote them, are certainly not, on the whole, beneficial to the public at large. There are two ways in which their existence is a public detriment.

1. They divert funds from the general hospitals, most of which are in sore need of more liberal support.

2. By attracting special classes of patients, they lessen the materials for teaching which, in all the hospitals connected with medical schools, are utilised for the practical instruction of their students, and so obviously for the public benefit.

If there should be any amongst you who feel a painful shudder on first entering the dissecting-room or the operating theatre, you may be assured that, without any diminution of that reverence for the dead, or that sympathy with suffering, the loss of which would be indeed deplorable, you will soon cease to be troubled by those distressing emotions, the continuance of which, in their original intensity, would be a serious bar to your usefulness. The explanation of the fact that while painful passive impressions grow weaker by being repeated, the practical habits which they are designed to promote are formed and strengthened by repeated acts, is admirably given by Bishop Butler in the fifth chapter of the *Analogy*. The whole passage is too long to quote, but the substance of it is the following:— "Perception of distress in others is a natural excitement, passively to pity, and actively to relieve it; but let a man set himself to attend to, inquire out, and relieve distressed persons, and he cannot but become less and less sensibly affected by the various miseries of life with which he must become acquainted; when yet, at the same time, benevolence, considered not as a passion but as a practical principle of action, will strengthen; and whilst he passively compassionates the distressed less, he will acquire a greater aptitude actively to assist and befriend them."

Herein lies the explanation of the fact that a surgeon, while retaining all his active kindliness of heart, becomes a bold and skilful operator, never losing his presence of mind, even in the most trying circumstances. A conspicuous example of the combination of these high qualities was afforded by the great surgeon who was the friend and teacher of many generations of students in this college. I scarcely need say that I refer to the late Sir William Fergusson.

Alfred Lord Tennyson, in a poem entitled "In the Children's Hospital," says of a surgeon, whom he introduces into the narrative, "He was happier using the knife than in trying to save the limb." I venture to express my conviction that the Poet Laureate never met with such a surgeon, and it is to be regretted that a great poet who has written so much to delight and instruct mankind should have given publicity to a fictitious character, the idea of which must surely have had its origin in a troubled dream. My experience of surgical practice differs essentially from that of the poet. All the surgeons with whom I have the honour and the happiness to be acquainted, whatever may be their political opinions, are, without exception, pre-eminently conservative in the practice of their profession; and, although they often have reason to be proud of the radical cures which they accomplish, they are staunch unionists. To bring about and to maintain union is always the first intention of the surgeon, and when, in an extreme case, he is reluctantly compelled to have recourse to dismemberment, he acknowledges with regret that the resources of civilisation and of surgery have failed to accomplish their primary aim and object.

When you come to the study of disease, you will learn that one of the most important duties of the practitioner is the correct interpretation of symptoms, the object being to get behind the symptoms, so as to ascertain their cause. And this great subject has a two-fold aspect: first, we endeavour to ascertain the seat and nature of the functional derangements, or the structural changes within the body which have given rise to certain symptoms, such symptoms as, for instance, pains or other perverted sensations, loss or impairment of motor power, difficult breathing, cough, palpitation, dropsical swelling, etc. Secondly, a most important subject of inquiry is what, in the habits or the surroundings of the patient, has caused his illness. In illustration of this, I need only refer to the numerous instances in which contaminated water or milk, or air-pollution by defective drainage or overcrowding, has been the cause of serious and often widespread disease.

During about ten days in the month of September, 1854, 600 people died of cholera within a very limited district in the neighbourhood of Golden Square; and this terrible outbreak was traced to the contaminated water of a well in Broad Street, to which the whole neighbourhood was in the habit of resorting.

In the prompt recognition and demonstration of such like sources of disease our profession is daily conferring incalculable benefits upon mankind. Who shall estimate the amount of suffering and of mortality daily and hourly prevented by the now general use of antiseptics in the practice of surgery?

But there are yet other fruitful causes of disease. Here I quote a sentence from Sir Thomas Watson. "It is ours to know in how many instances, forming, indeed, a vast majority of the whole, bodily suffering and sickness are the natural fruits of evil courses, of the sins of our fathers, of our own unbridled passions, of the malevolent spirit of others."

I have before insisted on the value and importance of physical methods of diagnosis; and now let me impress upon you that as man is something more than a cunningly devised machine, so he is the subject of disorders which escape all physical means of research. If you cultivate that power of sympathy with which all are more or less endowed, and the importance of which was so ably and eloquently insisted upon by the Lord Bishop of London in the address which he delivered here last year, you will learn that there are mental pains and disorders which exceed in their distressing results any merely bodily ailment. The student of physiognomy, as every practitioner of medicine ought to be, will often see in the anxious and troubled expression of the patient the mental source of his suffering, and so will not seldom find the way to afford relief.

The question will often arise in substance, though not in words, identical with that addressed to the doctor by Macbeth.

> "Canst thou not minister to a mind diseased;
> Pluck from the memory a rooted sorrow;
> Raze out the written troubles of the brain;
> And, with some sweet, oblivious antidote,
> Cleanse the foul bosom of that perilous stuff
> Which weighs upon the heart?"

It is not surprising that the unsatisfactory reply of the doctor should have driven the indignant inquirer to speak disdainfully of physic.

It may be that in some cases, as the doctor said of Lady Macbeth, the patient "more needs the divine than the physician;" but judicious medical treatment will often do much for the relief of this class of sufferers; and a method of treatment which has often proved successful is indicated by the physician who was ministering to the troubled mind of King Lear:

> Our Lester nurse of nature is to pose,
> The which he lacks; that to provoke in him
> Are many simples operative, whose power
> Will close the eye of anguish.'

The successful result of the physician's treatment is shown in a later scene. The old king had slept so soundly that they had been enabled to change his garments without awaking him. When at length he is awakened in the presence of his daughter Cordelia, although his words and manner indicate the doubt and confusion of one just aroused from a terrible dream; yet the physician's encouraging language is fully justified:

> "Be comforted, good madam, the great rage
> You see is killed in him."

There are few results of medical treatment more entirely satisfactory than the calm which often comes over a delirious brain under the timely operation of an opiate; and one of the most important practical lessons which every medical man has to learn is the true use, while he avoids the abuse, of narcotics.

You will find hereafter, when you enter upon the practice of your profession, that, under the heading of Medical Ethics, many rules have been laid down for the guidance of the medical man in his conduct towards his patients and his brother practitioners. If we could all learn and earnestly endeavour to act upon the comprehensive maxim to love our neighbour as ourselves, to do to others as we would wish others in like circumstances to do to us, few additional rules would be required for our guidance. The very nature of our studies, and of our daily work, should teach us the duty of absolute truthfulness in all our dealings both with our professional brethren and with our patients.

Upon this point I may quote the advice of the sagacious though rather garrulous old gentleman, Polonius.

> "To thine own self be true,
> And it must follow as the night the day,
> Thou canst not then be false to any man."

Perhaps it may not be without advantage if I forewarn you that to proclaim a truth is not seldom attended with unpleasant consequences. Thus, after due consideration, you deem it your painful duty to announce to a patient or, it may be to some member of his family, that he has an incurable disease. The result often is that you at once lose your patient, not by his death, but by his going to one consultant after another, in the hope that he will find someone to reverse your verdict, and to give a more hopeful opinion. The late Dr. P. M. Latham, referring to cases of this kind, said: "He consults an infinite number of medical men, and it is remarkable that he gets no comfort or satisfaction from those who understand his disease the best, and the greatest comfort and satisfaction from those who understand nothing about it."

Before giving utterance to an opinion as to the existence of an incurable disease, it is obviously the practitioner's duty to make sure of the evidence upon which his opinion is based. A hopeless prognosis deduced from insufficient evidence inflicts unnecessary pain upon others, and brings discredit upon the erring practitioner. But, having satisfied himself of the existence of a disease which is beyond human aid, the possibility of losing his patient in the manner which I have before indicated, should not deter the medical attendant from the timely intimation of a state of things with which, for various reasons, it may be of the highest importance that the patient and his family should be made acquainted.

Again, it may be that, after the expenditure of much labour and time, you discover some new fact, or you arrive at some conclusion from previously known facts which you believe to be both new and true, and of sufficient importance to be made public. Now, you will probably be disappointed if you expect that the publication of your discovery will be received with general acclamation. To borrow a sentence or two from *The Autocrat of the Breakfast-Table*, "Every real thought on every real subject knocks the wind out of somebody or other. As soon as his breath comes back, he very probably begins to expend it in hard words. These are the best evidence a man can have that he has said something it was time to say."

Although I have given you this warning, I trust that neither the anticipation nor the actual experience of factious opposition will hereafter deter any of you from earnestly contending for that which you believe to be true. Without doubt, the general reception of truth is often retarded by senseless and selfish opposition and prejudice; but truth is all-powerful, and in the end it will prevail.

It is sometimes painful to witness local and temporary rebellion against truths which all sane and sensible men have long accepted as indisputable. As an instance of this, I may refer to the notorious town of Leicester, a large proportion of whose inhabitants refuse to obey the law which wisely decrees that every child shall have the benefit of the proved protection of vaccination. Now this is a subject respecting which it is quite safe to prophesy. It is as certain as that the sun will rise to-morrow that at no distant period small-pox will invade the town of Leicester, and that the result will be such a massacre of the innocents—innocent victims of parental ignorance and prejudice—as will probably suffice to carry conviction to that eccentric member of the House of Commons who lately had the assurance to ask for the appointment of a Committee to inquire into the practice of vaccination.

On the subject of consultations, I venture to offer a few words of advice. Some practitioners appear to think that the suggestion of a consultation implies a mistrust of their knowledge and skill, which they resent as a personal affront. Now this surely is a very short-sighted and selfish view of the matter, and one which takes no account of the natural anxiety of the patient's family and friends. The most skilful and experienced practitioners, clearly perceiving the limits of their own resources, and sympathising with the anxieties and fears of the patient's friends as to the result of a dangerous illness, are, as a rule, the most willing and anxious to agree to, and indeed are often the first to suggest, a consultation. On the other hand, the medical attendant has a right to expect that his feelings and susceptibilities shall meet with due consideration from the patient and his friends. When they desire a consultation, it is their duty at once to make their wish known to the gentleman in attendance. The practitioner has good reason for displeasure if, without adequate reason, he is taken by surprise, and finds that a consultant has been sprung upon him without notice. It scarcely needs to be insisted on that a practitioner who declines to join in a consultation when requested to do so by his patient's family incurs a grave responsibility.

It goes without saying that the welfare of the patient is the main and primary object of every consultation; that being duly safeguarded, care should be taken that the credit and reputation of the medical attendant suffer no detriment.

You will not, I trust, fall into the error of supposing that when you have completed the usual course of lectures and examinations, and have obtained your legal qualification to practise, your student days are at an end. The conscientious practitioner of medicine must continue to be a diligent student to the end of his active life. When a man is too old to learn, he is too old to practise. In these days of active research, continual additions are being made to our knowledge of subjects more or less directly bearing upon the science and practice of medicine. The science of bacteriology is of comparatively recent origin, but it has already been productive of a copious literature, and has been fruitful of lively controversy. Amidst much that is as yet open to doubt and discussion enough has been firmly established to entitle the workers in this new and difficult field of research to the gratitude of mankind. Although those who possess the requisite qualifications and opportunities for successfully conducting researches of this kind are comparatively few; on the other hand, there are few who cannot avail themselves of the practical results arrived at by others.

As, in general terms, knowledge is power, so every addition to medical knowledge brings with it an increased power of doing good to our fellow men, and the conviction of this fact should act as a continual stimulus to exertion.

That which Lord Bacon has eloquently said of all knowledge is in an especial manner and degree applicable to the knowledge which it will be the chief business of your lives to acquire, and to use for the benefit of mankind. "It is not a couch whereupon to rest a searching and restless spirit, or a terrace for a wandering and variable mind to walk up and down with a fair prospect, or a tower of state for a proud mind to raise itself upon, or a fort or commanding ground for strife and contention, or a shop for profit or sale, but a rich storehouse for the glory of the Creator and the relief of man's estate."

How Stringent "Liquor Laws" are Evaded.—The subterfuges to which the lovers of alcoholic beverages resort in the States where the sale of alcohol is forbidden, afford a never-failing source of amusement to American journals. One of the latest stories comes to us from the *Therapeutic Gazette*. In Iowa, a recent law prohibited the sale of alcoholic drinks; coincidently, the sale of a reputed medicine called "Hopeine" appeared to increase; one drinking saloon, which had gone into this trade in "Hopeine" rather extensively, was prosecuted. Various witnesses were called, who swore that they had partaken of "Hopeine," and nothing else. "Do you know," said the judge to one of the witnesses, "the difference between beer and whiskey when you taste it." The witness said he did. "Now," said the judge, "you will tell the jury whether Hopeine that you drank was beer or whiskey, and you will be committed to gaol for contempt until you answer the question." "It was beer," said the witness.

AN ADDRESS
ON
ST. THOMAS'S, PAST AND PRESENT.

Delivered at the Opening of the Winter Session 1886-87, at St. Thomas's Hospital.

By J. S. BRISTOWE, M.D., F.R.S., F.R.C.P.,
Senior Physician and Joint Lecturer on Medicine at the Hospital.

At the request of my colleagues, I appear before you to-day to give the introductory address. I need scarcely say that I deeply appreciate the honour which they have done me, and the privilege it confers upon me of delivering myself as I please on whatever subject I may choose as suitable for the occasion; yet I must confess I would gladly have declined the honour and foregone the privilege had I dared. For, as we are constantly reminded by our critics, we orators of the 1st of October rarely say anything particularly new or particularly worth hearing; and it requires some exercise of moral courage for one who acknowledges that he has nothing new or important to say, and who finds himself for the third time in this unhappy position, to brave the adverse criticism which he feels that he shall deserve, and which has been passed upon him over and over again by anticipation. On the other hand, for reasons which I will briefly state, I have always been a consistent advocate of the maintenance of the custom which we are met this day to honour. It is admitted that the duties of the lectureship are difficult of adequate fulfilment; but, if difficult, so much the more is success worth achieving, and, at any rate, the mere endeavour to do one's best is a wholesome experience (I am saying this for the benefit of my younger colleagues). The occasion is one which, as I believe, most old pupils regard with interest; and certainly it never fails to attract, besides new faces, many old friends whom it is a pleasure to greet. The introductory speechifying, moreover, however poor many of the addresses may be, or may be thought to be, is made the occasion by the daily papers of drawing the attention of the public to the large hospitals and to the important educational work which is being systematically carried on in them and in the medical schools associated with them. Lastly, the oratorical display of October 1st is a time-honoured institution which links the present with the past, and on which respect for our predecessors and veneration for what is old should restrain us from laying violent hands. I felt it, therefore, my duty to accept—and I accepted readily, but not without misgiving—my present responsibility.

I have alluded to the fact that this is the third occasion on which it has fallen to me to give the introductory lecture. The first was eight-and-twenty years ago, and my lecture was delivered in the grand old hall of the hospital in the Borough, before an audience of ladies and gentlemen (for ladies at that time were invited to be present), and prior to the distribution of prizes, which then also took place on October 1st. I was a young man then, and felt it a high honour to be invited by my older colleagues to represent them on the occasion; and, like a young man, I did represent them in a speech of such eloquence and floweriness that now, in a calmer and more critical period of life, I can scarcely understand how it was I had the presumption to deliver it, or even to write it; and so full of admirable advice, that it might have been in this respect the joint production of the Archbishop of Canterbury and my friend Mr. MacKellar. Nevertheless, it was kindly received, and, if any felt the amusement in hearing it which I felt in recently reperusing it, they did not show it.

My second lecture was given four years later. In the interval, vast changes had occurred. The old Borough Hospital had been sold to a railway company; the institution had just found a temporary home in the Surrey Zoological Gardens; and what the future was to be was a problem awaiting solution. Crude sanitary notions were at that time rampant; sanitary reformers inveighed against the iniquity of retaining establishments for the treatment of the sick in towns, and the enforced removal of St. Thomas's was hailed by them as a glorious opportunity for translating their theories into fact at the expense of one of the largest and richest metropolitan hospitals. Unfortunately, too, the treasurer for the time being, and some of the more influential governors, were largely under the influence of the prevailing sanitary craze, and also were inclined to transport the hospital, wholly or in part, into the country. The plan which most commended itself to them was to erect and maintain a small receiving-house or hospital for acute and urgent cases in London, and to build a large hospital some miles away in the country, to which convalescent and chronic cases, and, in fact, all patients who were not likely to be injured by the journey, should be conveyed. The views of the governors had not been submitted to the medical officers for consideration, nor had their collective opinion been sought in any way; nor, again, had the medical officers (not accurately knowing what was going on) held any meeting to discuss and consider the state of affairs. I need scarcely say that the position was a very difficult and critical one, and the prospect exceedingly gloomy. The hospital and school, both of which had been in abeyance for a few months, opened simultaneously on October 1st. The inaugural ceremony, including the distribution of prizes, attended as before by ladies, took place in a large tent erected for the occasion. My address, I admit, presented occasional outbreaks of grandiloquence quite worthy of my former self; but I am pleased to say that, on the whole, my style had become much more sober than it was in my earlier essay; nor did I again venture, after so short an interval, to inflict a sermon on my younger auditors. The occasion, in fact, was unique; and I gladly availed myself of the opportunity it afforded me to discuss the future of the hospital and school, arguing, as strongly as I could, in favour of retaining them wholly in London, and refuting, as vigorously as I dared, the views (so far as I understood them) of the treasurer and his supporters. I cannot pretend that my lecture had any direct influence; but it was, I believe, the first distinct public expression of opinion adverse to the views of the sanitary crotchet-mongers, who, if they had had their way, would have ruined our school, and converted our great hospital into a mere sanatorium. Subsequently, other men of greater influence and greater ability than myself took up the matter energetically, from the same point of view as I had done; and, before long, common sense was triumphant, and the danger which seemed imminent was averted. Few persons now know how much we are indebted to Mr. Simon and the late Mr. Whitfield for the acquisition of the magnificent site on which the hospital now stands.

My third appearance occurs under very different circumstances from those which attended my first two lectures. I was then young; I am now, I prefer not to say old, but at any rate no longer young. I was then at the bottom of the hospital staff; I am now at its summit. I then lectured to students whose younger sons are probably listening to me for the first time to-day; the troublous times have passed, and we are now, and have been for some years, in the sunshine of assured prosperity.

What should be the subject of my discourse on the present occasion? I have already uttered more good advice than I ever knew how to follow, and I do not care to furbish up my old lecture. I scolded the authorities at an important crisis in the history of the hospital, but there is no crisis now, and no occasion of quarrel. Even if there were, I would avoid it. You may perhaps agree with me, gentlemen, in thinking that the fact that the dates of my three addresses correspond to three important periods in the history of our hospital and school suggests, as the obvious answer to my query, that my present address should be mainly retrospective.

The first seventeen years of my professional life, during which I was successively student, teacher, and physician, were passed in connection with the hospital in the Borough—the hospital of Meade, Fordyce, Elliotson, and Robert Williams; the hospital of Cheselden, the two Clines, Travers, and Green. It is not unnatural, therefore, that I should still feel affection and veneration for that ancient and ennobled building, and should look back wistfully to the many happy and instructive hours spent within its walls. At the time at which I became a student, the school of St. Thomas's had just emerged from that cloud of failure and disaster (the causes of which I need not enter upon) under which it had lain for many years, and though the entries were still few, the school, on the whole, was extremely well managed, and the teachers, as a rule, were exceptionally good. The hospital, of which an excellent model is preserved in our central hall, was one of the largest and best appointed in the United Kingdom. The greater part of it dated from the early years of the last century, and bore a close resemblance to the older part of Guy's. The old wards were not, perhaps, exactly the kind of wards that one would erect nowadays; but they were roomy, well ventilated, and healthy, and answered their purpose. Two new wings, abutting on the High Street, had been recently erected, and it was intended that all the ancient part of the hospital should (as funds allowed) be taken down, and replaced by blocks on the same plan. The new wings were handsome structures, and the wards the noblest I have ever seen. Had the reconstruction been completed, St. Thomas's in the Borough would have been, I think, even a grander hospital than its grand successor, though possibly its arrangements might not have so well fulfilled all the sanitary requirements of this fastidious age. The school buildings

were compact and well arranged, with a magnificent lecture-theatre, and an excellent museum, library, dissecting-room, and chemical laboratory.

Among the physicians, surgeons, and other teachers, were many men of high eminence. Robert Williams, the author of the classical work on *Morbid Poisons*, and one of the most philosophical physicians of this or any age, was the senior physician in my first year, and died in the course of it. I only have a vague recollection of seeing him occasionally cross one or other of the hospital squares. Next to him was Dr. Burton, whose name is identified with the discovery of the blue line on the gums in connection with plumbism. He was, as far as my memory serves me, a quiet, amiable, gentlemanly man, and much liked; but he died of cholera in the epidemic of 1849, and I never, therefore, became very well acquainted with him. Dr. Barker and Dr. (now Sir) Risdon Bennett were also members of the staff, and before long were joined by the late Dr. Peacock. It was to these three able physicians mainly that the students of the period to which I am now referring owed their training in clinical medicine. Many an old student will recall the Dr. Barker of those days, twirling a quill pen windmill-like between his finger and thumb as he walked from ward to ward. I think most of us were a little bit afraid of him; but we all acknowledged his great qualities as a physician, his intimate acquaintance with morbid anatomy, his remarkable accuracy of diagnosis, and his simplicity and directness of treatment. Very few of those who wished to learn medicine failed at one time or another to attend his *clinique*. Dr. Bennett, again, is not likely to be forgotten by those who studied with him at that time. He, too, was recognised as an admirable physician, and as one who gave special care to the therapeutical and dietetic treatment of disease. There was never a more painstaking, accurate, and methodical physician than Dr. Peacock. He took the notes of all his cases in great detail, and generally dictated them to his clerks. His teaching, therefore, though excellent in quality, was perhaps a trifle dry and unattractive; nevertheless, it was highly appreciated. Among the surgeons, Joseph Henry Green took the lead. He enjoyed an immense reputation, and, I believe, deserved it. He was of lofty stature and commanding presence, with a handsome intellectual face. He was a man of rare endowment and wide culture, and an admirable surgeon. He was a consummate orator. I did not know him at his best; for, though he did his work in the hospital and school, he had ceased to take much interest in it. His lectures were the lectures which he had delivered without change for years. In the hospital visits, he was always accompanied by his assistant, Mr. Solly, who did most of the duties under the eye, and liable to the correction, of his superior. John Flint South was a man of a very different stamp. He was kind-hearted, but hot-tempered and crotchety, and delighted to put on a roughness and not unfrequently a coarseness of manner which those who knew him could pardon on account of his many excellent qualities, but which to strangers and patients was often offensive. But he was a most industrious man, and performed all his duties with remarkable thoroughness and conscientiousness. I suppose people now rarely consult his great edition of Chelius's *Surgery*, of which his own notes formed by far the larger portion, and, I am inclined to think, by far the more valuable. It would be impossible, in the limits of a brief address, to speak of all the members of the staff; but I must not overlook Samuel Solly, Le Gros Clark, and John Simon. Solly was a brilliant and enterprising surgeon; but he was more than that, for he wrote a work on the anatomy of the brain, which had and deserved a high reputation; and he was a landscape-painter of no mean skill. Of Le Gros Clark and John Simon I should like to say much more than I dare. Suffice it for the moment that to these two great surgeons, and to South and Solly, probably more than to any others, students were indebted for their surgical education.

Although there was abundant opportunity of learning medicine and surgery in the wards and in the out-patient rooms, students were not required, as they are at the present time, to take clinical appointments, and most of the more valuable posts that are open to them now did not then exist. The clinical clerkships were got for asking, and those who did not ask were not appointed. There was no such post as that of house-physician, but all medical duties in the absence of the physicians and surgeons were performed by the apothecary and his assistant. The dresserships were more sought for, and, indeed, they were of remarkable value, for the dressers enjoyed much more freedom in dealing with patients and in taking responsibility in the emergencies of practice than they are allowed at the present time. But house-surgeoncies were instituted in my own early days (I was one of the first to fill the post), and curtailment of the privilege of dressers began to take place.

We were provided with good teachers. Members of the staff were responsible for the systematic lectures on surgery and medicine, but, in addition, Dr. Marshall lectured on nervous diseases, and Dr. Gregory discoursed on the exanthemata. But it was, I think, in the anatomical and physiological departments that the teaching was most systematic and best. We had no practical physiology in those days, but the systematic course of lectures was efficiently carried out. Richard Grainger had been associated with his elder brother for some years in teaching anatomy and physiology in the Webb Street School, and had been imported into St. Thomas's three years before I joined it. He was an excellent physiologist, one of the best of his day, and his lectures were singularly instructive, clear, and attractive. He was a striking illustration of the fact that a man who is in earnest may be a first-rate lecturer, in the sense of being able to make his meaning clear, and to command the attention of his audience, without being in any sense an orator or even a fluent and consecutive speaker. Mr. Grainger was a tall, gentlemanly, quiet, amiable, and aimable-looking man, who took a great interest in his work, as well as in his pupils, who, in return, held him in the greatest affection. I may, perhaps, recall the fact that latterly much of his time was given to sanitary investigations, and that he was one of the pioneers in the field of public health. Mr. Le Gros Clark was the lecturer in anatomy; and those who know how he speaks now may judge how well and pleasantly he lectured then. Perhaps in relation to this I may venture to recall a little incident of my student-days. I recollect that, when I went into the anatomical theatre to hear my first lecture, I had no notion until the lecturer entered the room what kind of man he was, and I have to acknowledge that I was so far attracted by the personality of the lecturer that, though I was a fairly industrious student, I proceeded to spend my time in taking his portrait in my note-book, instead of paying due attention to his discourse.

I shall not recall all the excellent men who at one time or another taught in the dissecting-room. But in my second year a gentleman became chief demonstrator who, I believe, had previously for a short time occupied the same post, and who continued chief demonstrator for more than thirty years. I speak of George Rainey, who was in the fulness of his powers, I think, during the period to which I am now specially referring. There were men at the hospital of higher intellect, of wider culture, of more imposing presence, and of greater refinement than he; but there was not one whose lessons were more highly appreciated, who had greater influence among the students, or who stands out more prominently among the memories of those days. He was a small, spare, ill-dressed, untidy man, with a bald head, auburn hair, a ruddy face, which in form, features, and expression bore a close resemblance to that of John Stuart Mill, and a weak, husky voice. He passed his time almost wholly between the dissecting-room and a small apartment with a bay window looking into the dissecting-room from above, where the chief part of his microscopical work was done. It was in this room that most of those fine injections for the microscope, with which his name is identified, and of which our museum contains a choice collection, were made; and it was here that he carried out most of those inquiries which brought him reputation as a physiologist and a thinker. Possibly some here present may call to mind one occasion when, in the midst of a winter session, he obtained leave of absence for six weeks. It was naturally thought he was out of health, and wanted change of air. But he passed the whole of the time (excepting the nights) in his den above the dissecting-room, where he could be seen from below deeply engaged in some physiological investigations. His demonstrations were very clear and simple, and largely done by putting questions to those whom he was teaching. But the most interesting feature about the man, and that which chiefly explains the great influence he had over his pupils, was his habit, usually about luncheon time, and later in the afternoon when the daily work was drawing to a close, of sitting in front of the dissecting-room fire, and entering into conversation with such pupils as happened to congregate around him. The conversations were on all kinds of topics. But, no matter how they began, they generally, before long diverged into discussions concerning science, morality, or religion. A favourite method with him was to fix upon one man, to ply him with questions on the Socratic principle, and then, as often happened, having led him into contradictions, or having made him display his utter ignorance of the subject he was talking about, or having induced him to express views or sentiments which were absurd or reprehensible, to lay bare the unhappy victim's errors and inconsistencies, to overwhelm him with a torrent of chaff, sarcasm, and logic, and to wind up by expressing his own views with a manner and in language which were singularly impressive. Many a student retired from such encounters a good deal crestfallen, but few, if any, showed resentment, and many I am sure were benefited by them.

The celebrated Dr. Thomas Hodgkin had been imported from Guy's Hospital to be the demonstrator of morbid anatomy at St. Thomas's, but he remained only a short time, and had left before I entered. The growing importance of pathology, however, was fully recognised, and it was as a pathologist, with clinical duties, that Mr. Simon shortly afterwards was introduced into St. Thomas's Hospital. I recollect well the introductory address he delivered in the grand hall of the hospital, before the governors, the staff, and the students, on the occasion of his appointment, and its striking eloquence. It is needless to say that whatever Mr. Simon undertook to do, he did with all his strength, and admirably. His lectures on general pathology were always eagerly attended, and were valuable not only for what they taught directly, but for their suggestiveness, and for the impulse they gave to pathological work in the hospital. Among others who lectured at one time or another during this period, were some men of assured eminence, and some who were then comparatively unknown, but have since achieved greatness. Among the former were Mr. Thomas Taylor and Dr. Dundas Thompson, distinguished chemists; among the latter, Dr. Gladstone (now a well-known member of the School Board, and a chemist of the first rank as an investigator and discoverer), and Mr. Huxley.

Any picture of the old St. Thomas's would be incomplete which did not include a sketch of the apothecary and medical secretary. There was no more striking figure in the institution than Mr. Whitfield, the third and last of his name who had filled these important posts. He was then a handsome man, in the prime of life, and occupied a position which gave him immense influence. He was the apothecary, and that meant, not only that he was at the head of the drug and dispensing department, but that he was the resident medical officer, and exercised control over patients, over house-surgeons and dressers, and over nearly everybody and everything else, and that he shared with the physicians the medical fees. He was the medical secretary, and in that capacity had more authority than anyone else over the medical school and all its arrangements. He was the depository of all the unwritten rules and traditions of the hospital and school. Moreover, he was in fact, though not in name, the treasurer's prime minister. He was thus the most powerful subject in the hospital kingdom. Nor was he the man to let any advantage or influence which he possessed slip from his grasp. As a rule, he no doubt exercised his legitimate and his usurped powers for the benefit of the place, at any rate for what he thought its benefit, and took an active part in introducing useful reforms. But there is also no doubt that he was instrumental in introducing changes of which the staff did not approve, and which many of us thought, and think, were detrimental in their effects. He was a man of much liberality and kindness of heart, and ever a real friend to the student, and all who were in need.

In some important respects the times to which I am referring were times of transition; and not only were great changes actually in progress, but the foundations were being laid of improvements which have since been effected. In my early days, the nursing at St. Thomas's, like that at all other hospitals, was, to say the least, discreditable. The sisters were, for the most part, respectable women, if not trained nurses, and some were women of remarkable ability and fitness. But the nurses generally were slovenly, dirty, and disreputable, which is not to be wondered at when it is borne in mind that they not only nursed the patients, but scrubbed the floors, purchased and cooked their own food, and slept (many of them) outside the hospital. But, after a few years, the treasurer of that time, the late Mr. Baggallay, with the aid mainly of Mr. Whitfield, and our present excellent matron, cleansed the Augean stable, and gradually introduced the system of nursing, which has become perfected with time, and now prevails. The reconstruction of the nursing department led, in the course of a few years, to further far-reaching arrangements. For when, shortly after the Crimean War, Miss Nightingale had decided that the national testimonial which had been presented to her should be devoted to the establishment and maintenance of a school of nurses, she, on account of the recognised excellence of our nursing arrangements, entered into negotiations with the governors, which resulted in the establishment of the Nightingale School, in connection with St. Thomas's—a school which for more than a quarter of a century has provided skilled nurses for hospitals and infirmaries throughout the British dominions, has helped to develop and still further improve our own nursing, has been the parent of many similar institutions, and still flourishes in our midst. As I have already stated, the house-surgeoncy was instituted within my recollection. The creation of this office foretold the creation of the corresponding office of house-physician. But although the importance of such an appointment was fully recognised, it was not possible to make it until the retirement of Mr. Whitfield should leave the authorities free to deal with the clinical portion of his duties; and that was not to take place for a good many years. And lastly, the medical and surgical registrarships, appointments, valuable for the hospital and valuable for those who held them, were created towards the end of this time. It may be interesting to recall the fact that the first registrar was my colleague, Dr. Ord; the second, my colleague, Dr. Stone.

It will be acknowledged, I think, gentlemen, that St. Thomas's in the Borough during the time I knew it was a great and growing institution, and that the survivors of those who were then connected with it, and their heirs, are justified in looking back upon it with pride. The hospital itself was a grand hospital. As I have shown, among the physicians and surgeons were men of the greatest eminence in their profession; among the lecturers and teachers, men whose teachings were unsurpassed. I am bound also to acknowledge that, though we were not always on such good terms as were desirable with the treasurer and the governors who acted with him, these gentlemen had the good of the hospital and school at heart, and did much in many ways, and much successfully, to promote their interests and advancement. The school, too, was successful. Students had excellent opportunities afforded them, and on the whole were well taught; and many men who have since achieved eminence were turned out by us in those days. Our numbers, too, had been gradually increasing, so that latterly we were treading on the heels of our successful rival, Guy's. When I delivered my first address in 1858, there was no suspicion of the fate that was impending; everything was prosperous, and prosperity seemed assured. A few domestic troubles occurred, indeed, about this time; but they were temporary troubles affecting the staff and teachers, and not the students, and could have had little, if any, injurious effect on the progress of the school. In 1862, the hospital became the property of a railway company, and for some months hospital and school were in abeyance.

When the crisis came, it was a subject of serious consideration among those who were in authority whether the hospital should remain dormant until a new permanent hospital was erected on a new site, or whether, in the meanwhile, it should go into lodgings. By the adoption of the former plan much money would have been saved, which could have gone towards defraying the cost of the new buildings; by the adoption of the latter, the continuity of the beneficial functions of the hospital would be secured. I think the governors did right to adopt the latter alternative. But it was also a serious question among the members of the medical and surgical staff and the lecturers whether, even if the hospital should continue its functions, the medical school should be maintained; for some thought that the maintenance of a failing school would be attended with no credit or advantage; and everyone knew that, as in order to keep the school together the expenditure would have to go on as before, there was not only a strong probability that the surplus for division would prove scarcely worth dividing; but a possibility that the lecturers and teachers might have to put their hands into their pockets to pay for the privilege of teaching. It was decided to continue the school; and again I think the right course was taken. I may mention, however, that the latter anticipations were, in the main, justified; for, on looking through my memoranda for the purposes of this address, I find that for seven years of those passed in our temporary abode, my average yearly income from the school was just £16 10s., and in one year amounted to the magnificent total of £12. I was lecturing on physiology with Dr. Ord. The site acquired for the temporary hospital and school was the old Surrey Zoological Gardens, which had ceased for some few years to fulfil their original functions, and in which there had subsequently been erected a large hall for music and dancing, where also Thackeray lectured and Spurgeon preached. With no little skill the building was converted into a hospital of three floors, of which the lowest one was devoted half to the purposes of a ward, half to the out-patient department, and of which each of the upper two floors constituted one magnificent ward, holding upwards of eighty patients. The hospital contained about half the number of beds the old hospital had contained. It was designed only for temporary occupation, and its plans and arrangements had, of course, to be made conformably to the capabilities of the building to be adapted. Nevertheless, the arrangements were really good; the wards were very imposing, light, airy, and convenient, and they remained sweet and healthy to the last. The infectious cases were accommodated in the giraffe-house. The museum, library, dissecting-room, and lecture-theatres were distributed about the grounds, some occupying the monkey-house and other former abodes of beasts or birds. The school buildings, though they had been hastily prepared, and were somewhat rough in character, were fairly convenient, and no one had much reason to complain of them. But the charm of the place was the beautiful and large garden

in the midst of which the hospital and school were placed, with its pretty walks, its avenues and copses, its flower beds and lawns, and its picturesque lake of one or two acres or more in extent.

By this time many changes had taken place in our staff of medical officers and lecturers, and many others occurred before we found ourselves in the building in which we are now assembled. Green and South had retired from the surgical staff, and Grainger from the physiological lectureship, and, among others, Dr. Brinton had been added to our number. Before we left the Surrey Gardens, Barker and Bennett, Solly, and Le Gros Clark had all taken farewell of us, and Brinton had died. I may add that few of the later vacancies thus created were immediately filled up; not, however, because suitable applicants were not forthcoming, but partly because a large staff was not needed for the work of the hospital, and partly because it was thought best that the inauguration of the new hospital that was preparing for us should be made the occasion for strengthening the staff by the addition to it of a careful selection of men of eminence or of promise, whether educated in our school, or attracted from other institutions.

There are two men whose names are identified with the later history of the old hospital and the earlier history of the temporary hospital of whom I may venture to speak. Dr. Brinton became connected with the school, as Mr. Grainger's coadjutor in the chair of physiology, at a time when Mr. Grainger was beginning to find his strength failing and unequal to the work required of him. He was a man of much ability and brilliancy, an eloquent and effective lecturer, and, as a physiological lecturer should be, an excellent draughtsman. After a few years, he was appointed one of the physicians, and at once took a leading position as a clinical teacher. His career unfortunately was a short one, and he died while quite young of kidney-disease. The other was a man whom I have not yet named, and who I daresay has long slipped out of the memory of many here who were once familiar with him. I speak of Edmund Montgomery, who for several years was our demonstrator of morbid anatomy. I think, however, some may manage to recall that tall, slim, handsome young man, with his profusion of crisp, curly, dark hair; with his British name but German accent, for he had been brought up from infancy in Germany among Germans, and when he came to England a few years before he joined us knew little or nothing of the English language. Some of us who were intimate with him knew that he possessed a depth and striking originality of thought, an extent of knowledge, and a command of language which casual acquaintance would probably never have suspected of him. It must be more than twenty years since he left us, and nearly as many since circumstances took him to the wilds of Texas, where he has since resided, leading (not from choice) the precarious and hard existence of a backwoodsman. It will surprise most, and I hope gratify many, of those who were his friends to learn that, among his rough, uncouth, and uncongenial surroundings, in spite of continuous daily toil and penury, he has continued to pursue his philosophical studies, and that his papers published during the last few years, discussing with exquisite eloquence profound metaphysical problems, have secured for him at length a foremost place amongst American, and I believe European, philosophers.

Although our migration to the Surrey Gardens, and our sojourn there, were, in many ways, of serious injury to most of us; although our labours there were carried on under many discouragements, and with much inconvenience; although for the second time within the memory of some among us, the school had become unprosperous, and, although we looked forward to the better days which we saw approaching, I must acknowledge that I look back to our nine years' sojourn in the Surrey Gardens with much more pleasure than pain. There was much good fellowship between all those who were banded together to carry on the work of the institution. The few pupils we had were of more than average merit; they were, I think, content, and certainly were loyal. And there are few more pleasing recollections than those of the academic shades haunted by the studious and meditative, of the grassy lawns alive with cricketers and others who indulged in athletic exercises, and of the frozen lake gay with its crowds of skaters.

The scene once more changes. In 1871 Her Majesty opened the magnificent hospital within the walls of which we are now assembled—a hospital, as far as I know, unsurpassed, and which, whatever its faults may be, and despite all the adverse criticisms of native fault-finders, is the admiration of almost every foreigner that visits it. We turned our backs on the old Surrey Gardens, over which the tide of time has since swept, carrying away with it everything of interest and beauty that adorns its surface, and leaving only a sediment of bricks and mortar; and we entered on our new career with the commencement of the winter session. The hospital, which was now practically completed, had been three years building. During this time, arrangements (in which the medical officers had had no unimportant share) were carefully made for strengthening, by the infusion of new blood, the staff, which had been undergoing attenuation through the successive retirement of some of its most experienced and ablest members, and for effecting many improvements in the hospital and school. Among those who are invited to become members of the staff were, on the surgical side, Mr. (now Sir William) Mac Cormac (who, indeed, joined us ere we left the Surrey Gardens), recommended to us by his brilliant services during the Franco-Prussian War, and by his recently published *Notes and Recollections of an Ambulance Surgeon*; Mr. Francis Mason, one of Sir William Fergusson's favourite pupils; and Mr. Henry Arnott, who has since left us for the Church, but whom we selected on account of his scientific promise;—on the medical side, Dr. Murchison, whose reputation was even then world-wide; Dr. John Harley, who had passed a distinguished career at King's College; and Dr. Payne, who had already made a reputation for himself as as a pathologist;—and, lastly, in the ophthalmic department, Richard Liebreich, at once oculist, artist, and musician. It will probably still be allowed, as I think was acknowledged at the time, that the selection was, on the whole, well made, and that the addition of these to a still larger number of able and distinguished men, already fellow-workers for years, constituted a strong and many-sided staff. Among the beneficial reforms introduced into the hospital, were those relating to the resident medical appointments. The long-delayed retirement of the apothecary, who, however, retained his medical secretaryship, made it possible to put the drug and dispensary departments under the care of an educated pharmaceutical chemist, and to bring the arrangements for the care of the medical patients, during the absence of the physicians, into harmony with the corresponding surgical arrangements. I will not discuss details; but all who know anything about the hospital, are aware that the plan of having a resident assistant-physician and a resident assistant-surgeon, who enjoy supreme control in the absence of their superiors over the medical and surgical patients respectively, house-physicians and house-surgeons, who are responsible, under these rules, for the specific care of groups of patients, and clinical clerks and dressers, at the bottom of the scale, who perform various subordinate but necessary duties in respect of the patients and make records of their cases, has answered admirably in practice; that the scientific interests of the medical officers, the educational interests of the pupils, and the sanatory interests of the patients alike have been more and more advanced; and that, while no doubt the nursing of the hospital has been undergoing gradual improvement under the direct and indirect influence of the Nightingale School, the relations between the nursing department on the one hand, and the medical students and others who work in the wards on the other, has become more and more friendly and pleasant. Indeed, the experience at St. Thomas's has shown, in the most striking manner, that a large medical school and a large nursing school may be carried on concurrently in the same institution not only without jealousy and without quarrels, but with the maintenance of the most cordial relations, and to their mutual benefit. Among the clinical improvements, it must not be overlooked that the obstetrical has advanced like other departments, and that the specialties, more particularly, perhaps, those relating to the eye and throat, have been developed with singular success.

As regards the school, old lectureships and demonstratorships were rearranged, and new lectureships and demonstratorships were created; a redistribution of appointments was effected, and the newly added members of the staff had freely allotted to them such posts as seemed best suited to their abilities and their lines of work. It would be impossible within the limits of time at my disposal to discuss all the changes that were made. Moreover, many further changes have occurred between that time and the present. I may, however, refer to two or three matters.

A few years ago, practical physiology as a course for medical students was undreamed of, but a department of practical physiology was provided for in the new school, and has been, and is being, conducted with much success. It is only within the last few years that the pathological importance of microbes has been discovered, and bacteriology has come to be recognised as an important part of medical study. Thanks to the energy and scientific spirit of Mr. Ballance and Dr. Theodore Acland, a bacteriological laboratory has been established, and is in work. It is well known that the museum of St. Thomas's Hospital has always been peculiarly rich in pathological specimens, and that it contains a series of preparations which are of great historical interest, notably Sir Astley Cooper's collection, including many of those from which the illustrations for his work were taken. The museum was much damaged by its two removals, and during its sojourn in the

Surrey Gardens; but since it has again found a suitable home, its importance and value have increased year by year, and now, in its way, I should think it is almost unrivalled. We are indebted for the progress, largely to the enlightened liberality of the treasurer and governors, but directly to the admirable labours of two successive curators: Professor Charles Stewart, who was with us for many years, and who was a year or two ago, much to our loss, elevated to the curatorship of the museum of the College of Surgeons; and Samuel Shattock, who now occupies the post, and has signalised his brief tenure of office by the most splendid work, and of whom I may mention especially that during the last few months, with the aid of Dr. Stone and Mr. Plowman, he has re-arranged, renovated, and enlarged the museum of Materia Medica, which, now that it is completed, is probably the finest, most perfect, and most serviceable museum of the kind in existence.

Year by year, gentlemen, during the fifteen years we have occupied our present site, our school, which had been so often and so seriously checked in its career, has increased in usefulness and prosperity, until once more it occupies a leading position among the metropolitan schools of medicine. Nor can I see any cloud in the horizon—any reason why our success should not be maintained in the future. But, while the school grows and prospers, those who contribute to its progress drop out one by one, and one by one new comers fill the places thus vacated. Fifteen years is a short time—at any rate seems short to those whose journey of life approaches completion, and for whom the abyss into which all must finally plunge is already within easy distance. Yet many changes have occurred even in this short time; and not only have we had losses amongst those who were with us from the beginning, but some of those who joined us later have disappeared from our midst. Some have died; some have left us from age or from ill health; some have transferred themselves to other spheres of usefulness. Our late treasurer, Sir Francis Hicks, under whose reign the present hospital was built, and to whose sagacious energy we are indebted for the carrying out of most of the improvements which I have discussed, died, after a short illness, nine years ago. Mr. Whitfield passed away a year earlier. Poor old Rainey, whose laborious and useful career among us had extended over so many years, worked with us for a time at this hospital; but he was falling into ill health, and probably few of those who only knew him here could form any conception of what kind of man he had been. He retired on a pension some years ago, and died but recently. Peacock and Murchison are both dead; and it is only within the last four months that poor Frank Mason, whose genial temper and kindness of heart had won for him the warm affection of all his colleagues, and of everyone who knew him, whose musical accomplishments were our admiration and delight, and whose eminence as a surgeon was universally recognised, was, to our infinite loss and grief, snatched away by death, in the prime of life, in the fulness of his powers, and when there seemed for him the promise and the assurance of a long and prosperous career. But great though our sorrow is when those we love are removed from among us, Time, the healer, brings its compensation in the hallowed memories that remain when the sting of loss is no longer acutely felt. And irreparable though our loss may seem when eminent colleagues and great teachers depart, they are yet not wholly lost to us, for their names, their examples, and their works survive, and add accumulating lustre to the school which they adorned.

I have now completed, however inadequately, the task which I had set before myself; and it only remains for me to give, on behalf of myself and colleagues, a cordial welcome to you who come among us to-day for the first time; to advise you to do your duty, and work systematically at your studies, for you have much to do, and little time to do it in; and to urge you here, and in the future, to show yourselves worthy heirs of those proud traditions which are the common heritage of all who join our ancient hospital and ancient school; and lastly, to thank you, Mr. Treasurer, and you my audience, for the kind patience with which you have listened to my address.

ADULTERATION OF BEER IN PARIS.—There is evidently a strong and creditable desire on the part of the authorities in Paris to put a stop to the adulteration of beer, and the recent agitation has, it is believed, already been attended with good results, and several foreign brewers are said to have given up its use. Dr. Chautemps and the Committee of the Municipal Laboratory do not, however, mean to rest satisfied with half measures. They have had a recent interview with the Minister of Justice, in which they asked that adulterated beer should be thrown away as soon as it reached the frontier, or, if that were not possible, immediately after it enters the Paris railway tations.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

BRAIN-SURGERY.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

BY VICTOR HORSLEY, B.S., F.R.S.,

Surgeon to the National Hospital for the Paralysed and Epileptic, Queen's Square; Assistant-Surgeon to University College Hospital, etc.

THE following paper is necessarily, owing to the brevity of the time at the disposal of those reading papers at the meeting, a simple description of that method of operating on the brain which I have adopted as one which successfully meets the various difficulties and dangers of the task.

Since in many very essential points my method differs from what are considered by some the canons of surgery, I think the subject may best be handled by my describing, in detail, the treatment of an imaginary case, illustrating the same by these photographs[1] and specimens removed from the patients[2] you see before you, and from the lower animals the subjects of experiments.

Preparation of the Patient.—The day before the operation, the patient's head is shaved, and washed with soft soap and then ether; next the position of the lesion is ascertained by measurement, and marked on the scalp. The head is then covered with lint, soaked in 1 in 20 solution of carbolic acid, oil-silk and cotton-wool, being thus thoroughly carbolised for at least twelve hours before operation. Finally, the patient has the usual purgative administered the evening before, followed by an enema on the morning of the operation.

Anæsthetic.—The method of narcotising the patient is most important, and consists of the administration, by hypodermic injection, of a quarter of a grain of morphine, after which the patient is chloroformed. The object of giving the morphine is two-fold. In the first place, as is well known, it allows of the performance of a prolonged operation, without the necessity of giving a large amount of chloroform. In fact, the amount actually used in an operation lasting two hours, I have found to be very small. The second reason for employing morphine is, perhaps, the more important, since it is based upon the fact determined by Professor Schäfer and myself, from experiments on monkeys—namely, that this drug causes well-marked contraction of the arterioles of the central nervous system; and that, consequently, an incision into the brain is accompanied by very little oozing if the patient be under its influence. I have not employed ether in operations on man, fearing that it would tend to cause cerebral excitement; chloroform, of course, producing, on the contrary, well marked depression. Naturally, if there existed any heart-complication, the above theoretical considerations would be disregarded in favour of the safer narcotic. In the case of the second patient I show you to-day, from whom I removed this tumour, the heart is displaced outwards, and the lower lobe of the left lung rendered practically of very little use by repeated attacks of pleurisy; but I did not consider this condition was sufficient to negative the use of chloroform. In a case where considerable heart-mischief exists, no doubt an operation of the kind might be done under the influence of cucaine. If this be attempted, care must be taken to employ a very strong solution when the dura mater is exposed, since that membrane is extremely sensitive (being supplied by branches of the fifth cranial nerve), a fact which appears to be unknown to clinicians, although it is obviously of immense importance in considering the causation of intracranial pain, cranial tenderness, etc.

Although solutions of cucaine can, it is said, be made perfectly aseptic, further confirmation of this assertion must be produced before it is used as I have just suggested, since it can hardly be repeated too often that asepsis is the one cardinal point on which brain-surgery rests.

[1] Very kindly made for me by Dr. Wilson, Senior House-Physician to the National Hospital.

[2] By the courtesy of the Board of Management of the National Hospital for Paralysis, etc., the patients have been sent to the meeting at Brighton at the charge of the institution—an effort to aid the progress of medicine which I am sure the Association will fully appreciate.

Treatment of the Wound.—It is notorious that, for the last thirty or forty years, the operation of trephining has been in exceedingly evil repute, owing to the very high mortality which followed its practice. This mortality was evidently caused by the frequency with which septic meningitis followed opening of the dura mater, the danger of which procedure, by the way, was fully realised by Pott and his school, who employed the trephine very freely. Consequently, there had gradually arisen opposition to surgical interference with the brain. In the absence of antiseptic precautions of a most stringent nature, caution is of course praiseworthy; but, thanks to the teaching of Sir Joseph Lister, no one conversant with the splendid principles of scientific surgery discovered by his genius, need hesitate to follow the dictates of reason and common sense, and proceed to operate. I shall not enter here into a critical examination of vague statements which one sees paraded in our journals, respecting the treatment of wounds, since, even were the language in which they are couched worthy of notice, I must not waste the time of the meeting by discussing the first principles of surgery. I will now give briefly the results of a fairly wide experience on this question, having performed a large number of operations on monkeys, with only one failure, while similarly the application of the same methods to man has hitherto always been followed with success. As I shall frequently have to quote from experiments on the lower animals, I wish here to make a brief comment upon the opinions of those who seem to consider that the processes of repair of tissue in the lower animals differ greatly from those in man, and that, therefore, safe deduction cannot be made from one to the other. While admitting, of course, that the tissues of the lower animals are not so frequently the seat of fatty and other forms of degeneration, it is the greatest possible error to imagine that wounds heal in a manner different from that which we see in man. Indeed, to obtain primary union in some animals—for example, the horse—it is necessary to adopt the most elaborate precautions. The stereotyped views on this subject have no doubt hindered the progress of brain surgery, since the time when Dr. Ferrier and Professor Yeo fully demonstrated at the meeting of the Association at Cambridge, that the popular views concerning operations on the brain were erroneous.

The experience I have gained during the last two years will, perhaps, as Brown Professor of Pathology to the University of London, warrant my stating distinctly that the generally received opinion on this question is absolutely groundless.

To return to the point under consideration—namely, the treatment of the wound—I consider that, in view of the fact that almost all methods have disadvantages which entail great responsibility on the surgeon, the safest is strict Listerian; meaning by that expression the use of the carbolic spray, 1 in 20 carbolic lotion, and, for the first few days, at any rate, dressings of carbolic gauze. Although, of course, one meets with idiosyncrasies against carbolic acid, now and then leading to some inconvenience, it is surely better to use it, as being the most powerful, and at the same time safest disinfectant, until some better is discovered. I need hardly say that the use of sublimate wool, the skin being protected by carbolic gauze, or other slight modifications, may prove more serviceable; but good carbolic gauze is quite elastic enough to obtain the best results.

Line of Incision.—It is the general custom to remove the soft parts from the cranium by means of a cruciform cut. I would point out that this method is practically inconvenient, since four distinct flaps have to be held back, requiring as many assisting hands, all very much in the way. If, on the contrary, a semi-lunar flap be raised, it can be simply thrown back, and requires no more holding. One or two details will not be out of place here. 1. The incision must be carried vertically to the bone, and all parts superficial to the periosteum raised with the flaps. 2. The curve must be a shallow one, to avoid cutting collateral vessels. 3. It must be so drawn as not to divide the main arterial trunks supplying that portion of the scalp. (This can be very easily done without interfering with the first twenty-four hours' drainage of the wound, even if the flap be turned downwards, since, as the patient lies in the supine position, the discharge can always escape freely from the posterior border.) The periosteum should be reflected by a crucial incision from an area corresponding to the first trephine-hole, and subsequently as more bone is cut away.

Removal of the Bone.—Our present means of removing the bone are open to considerable improvement, no doubt, but one of the safest and most rapid is to make a couple of trephine-holes at the opposite extremities of the area to be removed, then to half cut through the sides of such an area with a Hey's saw, and, finally, to complete the division with a powerful bone-forceps. Assuming that the dura mater has been, by means of the trephine-holes, separated as far as possible from the under surface of the bone to be removed, I should have premised that, as no doubt will be usually the case where exploration has to be made, the opening of the skull will have been commenced by the removal of a large disc with the trephine. It will be found, I think, that the most convenient sized instrument for this purpose is one two inches in diameter. Where it is possible to preserve the dura mater intact, the portions of the bone removed should be preserved in warm aseptic sponges, and, at the end of the operation, should be placed between the skin and dura mater, having previously been divided into small fragments after the manner indicated by Dr. Macewen.

Treatment of the Dura Mater.—The dura mater should be incised round four-fifths of the circumference of the area exposed at ½-inch distance from the edge of the bone, so as to render it possible to stitch the edges together afterwards. The dura mater is best opened first by incision with the scalpel, and then by blunt-pointed curved scissors, great care being taken not to wound the meninges beneath. The main branches of the middle meningeal artery are best secured by a ligature passed through the dura mater just outside its cut edge, and knotted before the vessel is divided.

Treatment of the Brain.—The first practical point to notice after the division of the dura, is whether the brain immediately bulges into the trephine-hole or not. Although my experience on this point in man is founded on five cases, three of which were cases of tumour cerebri, I am inclined to believe that the fact of the brain bulging very prominently into the wound, indicates pathological intra-cranial tension—a piece of evidence which, if true, is obviously of the highest importance, since, other things being equal, it will indicate the existence of a tumour. I have never, in experiments on healthy animals, observed such immediate bulging, and, conversely, it has never been absent in the three cases of tumour. (The two cases not accounted for in this paper are respectively: 1. The case reported by Dr. Bennett and Mr. Godlee in the *Medico-Chirurgical Transactions*, vol. lxviii, p. 249. 2. A case of tumour cerebri just operated upon by me.)

If nothing obviously abnormal presents itself in the membranes, the next point, or systematic observation of the brain, is its colour. Experience alone will give adequate familiarity with the appearance of the living brain, and, consequently, warrant anyone giving a decided opinion on the subject. As I am one of those who do not consider it justifiable to try an experiment on man before I have found it to be harmless to the lower animals, I regret very much that existing legislation makes it almost impossible for operating surgeons to acquire this fundamentally important experience. I lay special stress on this point, since the existence of a slight yellowish tinge, or, possibly, the contrary condition, namely lividity, will indicate the existence of a tumour beneath the cortex in the corona radiata.

The condition of the vessels and the perivascular lymphatics must next be investigated, and particular note taken of any yellowish white patches in the walls of the latter, indicating old mischief. I may here note that an accurate knowledge of the arterial and venous supply of the brain is highly necessary, since, not only for this purpose, but also for the more difficult one of removing portions of the brain, is it of great service to see at once what portions of the brain are actually, or likely to be, deprived of their blood-supply. Alterations in the density of the brain must next be observed; but it must be remembered that cerebral tumours situated beneath the cortex are scarcely to be detected, save by exploratory incision.

The examination of the brain exposed being supposed to be completed, the next point to consider is the mode of removal of a portion of the brain or tumour.

Perhaps the one dread of attacking the brain surgically has been the fear of hæmorrhage. This is as unreasonable as the taking of precautions against septic changes in the wound is indispensable. However, we must devote a little time to its consideration, for it has been the custom to avoid the supposed danger by the use of the actual cautery, a barbarous plan, which is accompanied, of course, by secondary inflammatory troubles, as proved by experimental investigation.

A moment's thought shows us that in the brain, just as in the kidneys, the vessels (and it is the arterioles we are most concerned with) are directed perpendicularly to the surface. Everyone who has had experience of operating on the kidney knows that a free incision of the knife into that organ is followed by profuse—and, to some, alarming—hæmorrhage, but that this bleeding will permanently cease if the wound be plugged for a few minutes with a piece of sponge.

With this suggestive fact in view, it seemed to me that we ought to treat the brain in exactly the same way, and thus, while being conservative as far as possible, we should obtain in addition a cleanly cut surface most favourable to rapid union. It will be

noted, in connection with this point, that when considering the anæsthetisation of the patient, I showed that much of the hæmorrhage[3] could be guarded against by the use of morphine. Perhaps, considering the terminal character of the cerebral arteries, it is scarcely necessary to urge that, where possible, every main vessel should be left intact; but I may be allowed to point out that, owing fortunately to the fact of their running in the pia mater, they can be raised from the brain, and especially out of the sulci, so as to allow of the subjacent brain being removed, while, at the same time, the vessel-wall is so little damaged, that any resultant thrombosis will be of a very temporary nature.

Further, in incising the brain, the cuts in the cortex must be made exactly vertically to the surface, and directed into the corona radiata, where necessary, in such a manner as to avoid damage of the fibres coming from the portions of cortex, and surrounding the seat of operation. This, of course, is easily done by remembering the paths taken by the fibres from the cortex to the internal capsule. There are many other points connected with the physiology and pathology of the brain which will regulate operative treatment of the same, such, for instance, as the taking care to leave, if possible, portions of each centre, so that the representation of the movements of any particular joint may never be totally destroyed, for total destruction means obviously a permanent paralysis on the opposite side of the movements previously regulated by that cortical centre.

A portion of brain removed, whether normal or abnormal, does not leave, as might have been supposed, a permanent gap with vertical sides, for, even in a very short time, the floor of the pit—that is, the corona radiata—bulges almost to a level with the surrounding cortex. In addition, the cut edges become slightly everted, and if less brain than bone is removed, they are extruded into the opening in the skull. Thus, owing to the mechanical relations between the brain and the skull, there is, normally, a tendency to hernia cerebri, as you see well shown in these photographs of a monkey's brain operated upon successfully under these conditions.

I do not at all propose to discuss the causation of hernia cerebri, as it is usually understood, since that condition can only occur when the the reflected flap of scalp has not united by the first intention, a further necessary factor being decomposition in the wound, and conversion of the latter into a suppurating cavity.

The advantage of raising a large flap of scalp, which can be laid down again like the lid of a box, will now be obvious, since, being continuous throughout, it offers plenty of resistance to the upward pushing brain, which the point of meeting of four cross cuts can never do; this, indeed, on the contrary, favouring the very thing one wishes to avoid. The principal resistance to this hernial protrusion of the normal brain is, of course, supplied in other ways. (See Drainage and Dressing, below.)

Closure of the Wound.—All oozing, etc., having been made to cease by gentle pressure with a soft sponge, the flap must be laid down and secured with medium silk sutures at distances of one centimètre, and between these, horsehairs.

With the closure of the wound, we are brought to consider the important question of drainage. I suppose that, at the present time, I shall be accused of insanity if I propose to lay down the dictum that, as a rule, wound-cavities produced by removal of portions of the brain are not to be drained for more than twenty-four hours; but it is, nevertheless, my intention to make such a proposition. Let us consider for a moment the conditions of the problem. We wish to obtain union by the first intention—that is, firm union in four or five days. We also wish to secure pressure on the brain, which, as just mentioned, is tending to extrude; and, finally, we wish to arrange matters so that, when the wound is finally healed, the flap of skin may be separated from the brain beneath by a cushion of soft normal (that is, non-inflammatory) connective tissue. All these latter conditions are to be obtained by allowing a certain amount of tension of wound-exudation within the cavity. During the first twenty-four hours, there is a steady oozing of blood and serous fluid from the cut surfaces. This is best removed; and therefore I put in a drainage-tube at the most dependent point of incision (that is, as the patient lies in bed). This tube is to be taken out the next day, and the wound carefully dressed, firm but gentle pressure being made over the centre of the flap. If the wound-exudation that subsequently collects in the cavity accumulates to any appreciable extent, on the third day the patient may complain of some pain and throbbing in the wound, which, when exposed, will be found to be distended in the centre, the periphery being firmly united. Now comes a most difficult point in the treatment—namely, the question whether this tension is to be allowed to proceed, or whether it should be released. By adopting the latter measure, the advantages of the pressure will be lost; so that the point in question is one requiring special attention. The practical feature upon which it is to be decided is the very simple one whether the primary union is in danger of being broken down by the pressure or not. If the former is the case, the pressure can easily be diminished by gently opening up the track of the drainage-tube with a probe, and liberating some of the exudation. The value of the tension in reducing the tendency to hernial protrusion is obvious; but I wish to draw attention to the fact that, until it is finally absorbed, the heightened pressure serves two purposes. In the first place, it compels the lymphatics of the brain meninges to absorb the fluid, just as the peritoneal vessels do after ovariotomy, so admitting of rapid union of the whole skin-wound; and, in the second place, it acts as a kind of scaffold for the building up of normal connective tissue in the part. This latter point is very obvious in the lower animals, in which, if we reopen the wound at the end of a few days, the cavity is always found filled with a delicate, spongy, pink connective tissue, the meshes of which contain the above-mentioned wound-exudation. It is this connective tissue which is to form an elastic barrier between the scalp and the brain. As a general rule, it will never be necessary to do more than relieve the tension in the wound once. At the end of a week or five days, the wound may be lightly covered with a little powdered boracic acid, cotton-wool, and collodion; and the stitches may be removed at any time after the first week. It will always be found that the scalp tends to fall in a little at the seat of operation; but, if the foregoing directions have been faithfully followed out, the hollowing will be slight.

It may be considered as a point of practical importance whether a patient will not run considerable risk in pursuing his avocations with a large gap or gaps in the skull. As a matter of fact, this is of little account, as evidenced by experience.

It may here be conveniently observed that, supposing a second operation to become necessary, it will be found that the cicatricial tissues referred to above, will be more vascular than the normal tissues, and that the dura mater is slightly adherent to the surface of the brain close to the cut margin on the dura mater. Finally, old cicatrices in the substance of the cortex cerebri, above all those which have healed by suppuration, and which fill up cavities produced by traumatic loss of substance, frequently displace large vessels, and often afford passage for large veins.

The preceding paper is only intended to be a brief sketch of the chief points I have found it to be practically useful to observe in operating on the brain; but I am very glad to have this opportunity of expressing my indebtedness to the Association, which, by its Scientific Grants, has made possible the performance of the experiments upon which the foregoing methods are based.

THREE CASES, ILLUSTRATIVE OF THE FOREGOING PAPER.

The following cases, which I have treated according to the method just described, afford many points of general interest, and suggestions for future treatment. Perhaps I shall do better to enumerate these where they naturally occur in the clinical histories. I shall, however, recapitulate, at the end, those points which appear to me specially worthy of attention.

I wish, however, first to express here my great indebtedness to Dr. Wilson, senior House-Physician to the National Hospital for Paralysis and Epilepsy, Queen Square, for his assiduous care of the following cases.

CASE I.—James B., aged 22, was admitted into the National Hospital for Paralysis and Epilepsy, under the care of Dr. H. Jackson and Dr. Ferrier.

Past History.[4]—At the age of 7, the patient was run over by a cab, in Edinburgh. He was at once admitted into the Royal Infirmary, under Professor Annandale, who found a depressed comminuted fracture, with loss of brain-substance, in the situation mentioned below. The fragments of bone, etc., were removed, and the wound ultimately healed, although it suppurated freely, and hernia cerebri occurred. The patient was hemiplegic for some time, but gradually (seven weeks) the paralysis disappeared. At about 15 years, the patient began having fits, which were very intermittent. He was admitted into the hospital in 1885, when he had an enormous number

[3] No doubt one additional reason why the hæmorrhagic oozing so soon stops in a brain-wound, is that clotting is induced early by the presence, in considerable quantity, of the lecithin proteid compound which exists in quantity in the brain, and has been discovered by Dr. Wooldridge to play a very important part in the process of coagulation. *Vide* Reports of the Brown Institution, etc.

[4] Owing to the great courtesy and kindness of Professor Annandale, who supplied Dr. Ferrier with an elaborate description of the case while under his care, I am fortunately able to furnish an accurate history of the injury causing the epilepsy.

of fits, and for some days was in the *status epilepticus*. After discharge from the hospital, he had no fit for seven weeks, at the end of which period they returned, and for three days before admission he was again in the *status epilepticus*.

Present State.[5]—On the left side of the vertex of the head (the exact site as determined by measurement being the centre of the upper third of the ascending frontal convolution; that is, posterior to the hinder end of the superior frontal sulcus) there was a quadradiate scar, opposite the centre of which the bone could be felt to be wanting, so as to form an oval opening in the skull, the long diameter of which was about 1 inch, and parallel to the sagittal suture. Pressure on this scar always gave pain, which was very greatly increased when the patient was suffering one of his paroxysms of fits.

Fits.—The fits, which occurred in batches (at this time the patient had 3,000 in a fortnight), were almost always of the same character, usually commencing in the right lower limb, sometimes in both the right limbs, simultaneously. An example of a fit of the first category, is as follows.

"The right lower limb was tonically extended, and the seat of clonic spasm. The right upper limb was then slowly extended at right angles, to the body, the wrist and fingers being flexed; the fingers next became extended, and clonic spasms of flexion and extension affected the whole limb, the elbow being gradually flexed. By this time, spasms in the lower limb having ceased, but those in the upper limb continuing vigorously, spasm gradually affected the right angle of the mouth, spreading over the right side of the face, and followed by turning of the head and eyes to the right."

To sum up, the parts affected were so in the order of lower limb, upper limb, face, and neck; the character of the movements was, first, extension, then confusion, finally, flexion[6], showing clearly that the focus of discharge was situated around the posterior end of the superior frontal sulcus, this point coinciding, as mentioned above, with that found by actual measurement. Before going on to describe the surgical treatment, it is important to mention that the patient was distinctly hemiplegic, even ten days after the last fit, but he could perform all the movements of the right limbs, though about half as strongly as on the left side, there was no affection of sensation on the right side, while the reflexes, superficial and deep, were exaggerated in both the right limbs.

Operation, May 25th, 1886.—According to the method described in the foregoing paper, the bone around the old opening was freely removed, the dura mater, arachnoid, and skin being found to form a homogeneous mass of fibrous tissue; the former was raised with the flap. The scar in the brain was found to be highly vascular, of a deep red colour, and about 3 centimètres long and 2 broad. The membrane covering the brain around appeared to be very opaque, and the brain of a slightly yellower tinge than usual. The scar, and about half a centimètre of surrounding brain-substance was excised to the depth of 2 centimètres. It was then found that the scar-tissue penetrated a few millimètres further into the corona radiata fibres of the marginal convolution. This portion was then removed, and the wound closed. In the removal of the mass, three fair-sized veins, coming directly from the middle of the area for the upper limb, had to be ligatured, since they passed directly into the scar. The wound completely healed in a week. The tension of serum was twice relieved (once, probably unnecessarily). The most interesting point now to be recorded is, that after the operation the patient was at first completely paralysed in digits of the right upper limb; and for further flexion of the wrist and supination of the fore-arm. Coupled with this motor paralysis, there was loss of tactile sensibility over the dorsum of the two distal phalanges of the fingers. He could not localise the touch anywhere below the wrist within the distance of one internode; finally, he could not tell the position of any of the joints of the digits. Then we have here, apparently, a distinct instance of loss of tactile sensibility and muscular sense, coupled with motor paralysis, all due to lesion[7] of the cortex. It cannot, however, be too clearly understood that it is very possible that some of the fibres coming from the gyrus fornicatus in the corona radiata may very probably have been injured. This condition of motor and sensory paralysis gradually disappeared in the course of the next two months. Up to the present time the patient has had no fits.

CASE II.—Thomas W., aged 20, was admitted into the National Hospital under the care of Dr. Hughlings Jackson.

Family History.—There was nothing important, save that a paternal aunt died of consumption.

Past History.—He had had many attacks of pleurisy after the age of 15.

History of Present Illness.—He began, in January, 1884, to have "cramps" in the left thumb and forefinger, these consisting of clonic opposition of the named digits, and occurring about twice a day for three months. The first severe fit occurred in March, 1884. Spasm spread up the arm, and the patient fell. He had the second in January, 1885. Then followed a series of remissions of the twitchings, until, in August, 1885, another severe fit commenced a series of fits, occurring once or twice a week, until admission on December 4th, 1885. The character of the fits was almost always the same. They began by clonic spasmodic opposition of the thumb and forefinger (left), the wrist next, and then the elbow and shoulder were flexed clonically, then the face twitched, and the patient lost consciousness. The hand and eyes then turned to the left, and the left lower limb was drawn up. The right lower limb was next attacked, and, finally, the right upper limbs. Paralysis of the left upper limb frequently followed a fit. At frequent intervals every day the patient's thumb would commence twitching, but progress of the convulsion could often be arrested by stretching the thumb or applying a ligature. In February and March, 1886, the twitchings frequently commenced in the face, but in April again the thumb was the most frequent seat of origin of the fits.

Present State (much abbreviated). *Motion.*—The grasp of the left hand was 45; of the right, 85. He could perform all movements with the left upper limb, though those of the hand were rather enfeebled. The left thumb was frequently in a state of rigidity, alternating with clonic spasm. (This state could easily be induced by manipulating the thumb.) *Sensation.*—There was no affection, save loss of muscular sense (that is, sense of position, etc.) in the left thumb. *Deep Reflexes* were exaggerated in the left upper limb. The patient frequently had severe headache, beginning at the occiput, and shooting forward, especially to the right parietal region. The *Optic Discs*, examined by Mr. Marcus Gunn, appeared to be normal, though very pink (physiological hyperæmia).

Diagnosis.—In a paper referred to in the foregoing case (No. 1), Dr. Beevor and myself have shown that the movement of opposition of the thumb and finger can be elicited by minimal stimulation of the ascending frontal and parietal convolutions at the line of junction of their lower and middle thirds. Dr. Hughlings Jackson witnessed one of our experiments demonstrating this fact, and expressed his belief that this patient (Case II) was suffering from an irritative lesion of unknown nature, situated in the part of the brain thus indicated. Confirmation of this opinion was to hand in the order of march of the spasm, which was in nature and arrangement in exact accord with the results of the investigations referred to. An exploratory operation was therefore decided upon.

Operation (June 22nd, 1886).—The seat of the lesion having been determined by measurement, the large trephine was applied; and on raising the dura mater, a tumour came into view. More bone was removed above and in front, so as to completely expose the mass to which the dura mater was adherent. The border of the tumour stood out about one-eighth of an inch from the surface of the brain, and it was much denser than the brain-substance. It appeared to be only half an inch broad, but as the brain-substance all round it for more than half an inch appeared dusky and rather livid, I removed freely all the part apparently diseased. (As is shown in the photograph and specimen, this procedure was fully justified, since the growth spread very widely under the cortex.) Before closing the wound, the centre of the thumb-area was removed by free incision. This detail Dr. Jackson and myself had resolved to carry out in the possible event of there being no obvious gross organic disease, in order to prevent, as far as possible, recurrence of the epilepsy.[8] Numerous vessels were ligatured, especially three or four at the upper border of the growth proceeding from the rest of the cortex, for the movements of the upper limb. The wound was closed as before. Five-sixths of it healed by the first intention in a week, in spite of the fact that there was considerable œdema of the scalp, due to irritation by the carbolic gauze (removed speedily by changing to eucalyptus gauze). The remaining sixth, just at the lower border of the flap, gave way, and healed by granulation, after separation of a small piece of skin at the edge. The after-condition of the patient was most interesting and im-

[5] Only those facts are given which directly bear on the cerebral disturbance.

[6] See a paper by Dr. Beevor and myself to be shortly published by the Royal Society in the *Philosophical Transactions*.

[7] By this I mean, of course, the disturbance in the area for the upper limb produced by the ligature of the veins coming from it, as noted above.

[8] To discuss this point in detail would entail excessive lengthening of this paper; but I wish to point out that, as strongly urged by Dr. Jackson, the removal of an epileptogenous focus is not only justifiable, but called for. The exact localisation could be ascertained by the use of the induction current, the employment of which means I resorted to for diagnosis nearly three years ago. *Brain*, vol. vii, p. 232.

portant. There was, next day, partial motor paralysis of the left side of the face (lower division), complete motor paralysis of the left upper limb, from and including the shoulder. On the 27th June, there was noted left hemianæsthesia to a light touch (sensibility to pain unaltered), localisation of a prick of a pin very deficient all over the left side, perfect on the right, complete loss of muscular sense in the left upper limb below the shoulder. On the second day after the operation, when making an effort to move the left upper limb, the patient suddenly put his hand to the wound, and said he felt a "buzzing" in the head there. When the left upper limb was passively moved, he also complained that pain seemed to shoot up the "bones of the limb," side of the neck, and through the hand to the wound. The deep reflexes were much exaggerated on the left side in both limbs. All the above conditions gradually improved, and at the date of the meeting, the patient had regained everything, except that the grasp of the left hand was not quite so good as before, and the five movements of the fingers remained hampered. Further, the deep reflexes on the left side are at the present time still very much exaggerated. The patient had, in July, a few slight twitches in the three right fingers; none in the thumb or index; no fits since operation. The tumour was composed of dense fibrous tissue, with two caseated foci, microscopical examination proving it to be tubercular.

Case III.—George W. J., aged 24, was admitted into the National Hospital, under the care of Dr. Buzzard.

The *family history* presented nothing important.

Past History.—There was none, save that he had had otitis media.

History of Present Illness.—At 5 years old, the shaft of a carriage fell on the vertex of the head, inflicting a wound and slight punctured fracture. At 13 years old, the patient was kicked by a horse on the same spot. Three months later, the fits began. Fits occur usually in batches of three or four every three weeks.

Present State.—The patient was a tall, powerful young man, with numerous scars about the head, due to falls, etc., when fits had occurred (he also had most of his teeth kicked out by horses when he had fallen down near them, his occupation being that of a stable-help). There was the scar and minute depression of a right depressed fracture in the upper anterior angle of the left parietal bone, close to the middle line. This scar and the scalp around were very tender to pressure. The patient frequently had intense headache at this point, always increased (with also the tenderness) when the tendency to fits came on. There was almost complete right hemianæsthesia, the patient neither feeling a touch, nor a prick with a pin. Although this, also, is a very important point, I may pass it by in saying that Dr. Buzzard ordered the application of a strong faradic current to the affected side, which completely dispersed the hemianæsthesia, but left the fits unaltered.

Character of Fit.—The aura was entirely abdominal. The patient had a feeling as if he were going to defæcate, accompanied sometimes by a sharp pain in the left side of his abdomen. This was followed by tightness in the throat, and sometimes a spasmodic cough. The head (and frequently the eyes) then turned to the right; the right arm was jerkily protruded, and the patient lost consciousness. All the limbs became affected, that is, powerfully flexed, as a rule; the lower limbs, however, being frequently extended. After the fit, the patient stated that the right arm felt weak for some time.

Diagnosis.—In a paper (*Proceedings of the Royal Society*, No. 231, 1884) by Professor Schäfer and myself, it is shown that, situated in the marginal convolution on the mesial surface of the hemisphere are motor areas for the muscles of the trunk, and that the abdominal centres are just opposite the hinder end of the superior frontal sulcus. Professor Ferrier has shown (*Functions of the Brain*) that the area for movement of the head and neck lies below this sulcus, and that the area for protrusion of the arm lies about its hinder end. This last point has been confirmed by Dr. Beevor and myself. These facts led Dr. Buzzard to diagnose an irritative lesion situated in the posterior third of the superior frontal convolution, that is, just under the slight depression in the skull. Fully concurring in this diagnosis, I performed the following exploratory operation.

Operation, July 13th, 1886.—A flap being raised from the skull, and the bone trephined close to the left depression, it was found that there had been splintering of the inner table, so as to form a rough coronet round the inner orifice of the minute puncture in the skull, the said puncture being filled with scar-tissue. Further, the dura mater was found to have been torn by the original injury, and projecting downwards into a cavity in the brain was a rough small plate of bone. These fragments being removed, and the dura mater freely opened, the cavity just mentioned was found to be wedge-shaped, and about one to five centimètres deep, by one centimètre broad, filled with fluid and loose connective tissue. It was situated exactly where diagnosed (*vide supra*). By means of a circumscribing cut, at a distance of about five millimètres, the cavity was then removed.

The wound was completely healed in four days. One week after the operation, the patient complained of weakness in the whole right upper limb. All movements were affected, especially those of the hand. This paresis is extremely interesting, as being, without the slightest doubt, an example of male hysterical paralysis, and its connection with the functional anæsthesia before the operation is obvious. The interval of six or seven days before its appearance exactly coincides with that given recently by Professor Charcot. This paresis had, at the date of the meeting, practically disappeared.

Want of time compels me to proceed to formulate, without further observations, certain deductions which, I think, are warranted from the foregoing details.

1. In man, temporary (cortical) paralysis of motion and possibly of muscular sense may follow ligature of the vessels supplying that part of the "motor area" in which the lost movements are represented.

2. Temporary paralysis of sensation and movement of the so-called hysterical or functional type may follow operations upon the "motor area" in man.

3. The arrest of oncoming epileptiform seizures by the application of ligatures or by extension of the part contractured and rigid, suggests, further, the possibility of the so-called muscular sense being represented in the excito-motor area.

Mr. Erichsen (President of the Section) said that it would be difficult to overrate the interest of Mr. Horsley's paper, which he might characterise as pure science applied to the advancement of practical surgery.

Professor Charcot (Paris) said it had given him very great pleasure to come into the Surgery Section and listen to the interesting demonstration given by Mr. Horsley. He thought that British surgery was to be highly congratulated on the recent advances made in the surgery of the nervous system. Not only had English surgeons cut out tumours of the brain, but here was a case in which it was probable that epilepsy had been cured by operative measures. The cure was very creditable not only to the surgeon who operated, but also to the surgeon and the physicians who had so accurately diagnosed the case.

Dr. Hughlings Jackson warmly congratulated Mr. Victor Horsley on the success of his operations on the brain. He (Dr. Jackson) had long felt confident that there was in every case of epileptiform seizures a very local change of some kind. Very often there was tumour (frequently syphilitic), but occasionally no such coarse product. When there was tumour, the fits were not owing, he thought, to repeated irritations of the brain by the growth (a "foreign body"); there was some persistent, and yet varying, change in some small part of the cortex on which change—become independent of the growth which had produced it—the fits directly depended. As he would put it, there was in every case of epileptiform seizure a persisting "discharging lesion;" that that "discharging lesion" was produced by tumour might be confidently diagnosed in cases where there was double optic neuritis and severe headache. When there are epileptiform seizures without these complications, we cannot tell whether there is tumour or not. In the case of his patient operated on by Mr. Horsley, there were no signs of tumour—no optic neuritis and no severe headache, no signs of, indeed, no history of, injury. Dr. Hughlings Jackson drew particular attention to the fact that he had advised operation in this case, bearing well in mind the possibility of there being no tumour. And in any future case of epileptiform seizures of the same kind, could he be certain (which he could not) that there was no tumour, he would still advise operation. Believing that the starting point of the fit was a sign to us of the seat of the "discharging lesion," he would advise cutting out that lesion, whether it was produced by tumour or not. He had formerly said that operation should not be attempted in cases of epileptiform seizures (with, perhaps, the exception of cases of fits limited to one arm, and very frequently repeated), unless there was also double optic neuritis to, so to speak, guarantee tumour. Here was a change of opinion. In this patient's case, cells of the "thumb-centre" having become highly over-unstable (that centre, or part of it, having become a "discharging lesion"), Dr. Hughlings Jackson advised that the centre should be cut out. The tumour was found and removed, but the "thumb-centre," or part of it, was cut out too. He had recently under observation in the London Hospital a patient who had 1,945 fits in about fourteen days; each fit began in the left thumb. Recently, Dr. Beevor and Mr. Horsley, following on Ferrier's lines, had made a minute map of the so-called motor area of the cortex. Dr. Hughlings Jackson was

much impressed by the certainty and precision with which Mr. Horsley, on gently faradising a small part of its cortex, put a monkey's thumb in exactly the position that of the patient just alluded to got into at the onset of his seizures. He determined that, in future, cases where the spasm began very locally, deliberately, and where the fits were often repeated, he would advise cutting out the part of the cortex which physiological experiments have shown to represent, especially the peripheral part first in spasm, besides removing a tumour if there were one; this, he hoped, would be cutting out the "discharging lesion," the very local cause of the fits. The case of the patient operated on by Mr. Horsley showed the great value of experimental researches on the cortex of monkeys; clinical knowledge is not yet precise enough for minute localisation. Not believing in the current doctrine of "abrupt localisations," he used the term "thumb-centre" merely as a name for that part of the cortex where the most special movements of the thumb were represented. That Mr. Horsley had cut out this, or part of this centre, was shown by the fact that the patient who could move his thumb, had lost the most "delicate" movements of it. Dr. Hughlings Jackson believed there would be further compensation (directly after the operation the whole arm was paralysed); even if the fits recur, the patient is well rid of a tumour; if they recur, Dr. Hughlings Jackson would advise removal of more of the cortex, believing it better to have some permanent paralysis than to be subject to fits, some becoming universal. He considered it quite certain that epileptiform seizures would be impossible if enough of the so-called motor area was removed. He concluded by speaking of some difficulties in diagnosis.

Dr. ROYLE (Manchester) was very glad to hear the lucid and satisfactory demonstration which Mr. Horsley's cases had afforded, and the practical and useful benefits which might fairly be hoped to follow from the line of treatment. He (Dr. Royle) had at present a young man, about 25 years of age, previously very healthy, never had any fits, free from any gout, rheumatism, or syphilis, and who, in December last, was knocked down by a horse, jerking him over a rail in the ground, bruising his right side, and bumping his head on the ground. He was rendered for some time insensible, gradually recovered consciousness in a few days, but was unable to get about, from the bruised thigh and hip, etc. Of these he gradually but slowly improved, yet grew very nervous and sensitive, and, without any preliminary warning, was occasionally taken with fits of a very violent character—of an epileptic hysterical character. His memory was more or less defective: and on the right side, on closing his eyes, he was perfectly insensible to pain even when a needle was pushed under the finger-nails or passed all over the right half of his body, and was unaware that any trial had been made of his sensitiveness. The attacks were so violent and sudden that he had been seized and fallen in the street, and been taken up by the police as being unable to take care of himself. Latterly, the symptoms had assumed such a form that there was fear of his mind becoming permanently deranged. The cases brought forward by Mr. Horsley led them to hope that, with watchful care and skill, something might be done to help a young man like this case to be restored to health and rendered capable of earning his living, and freed from the terrible calamity of such dangerous seizures.

Professor E. P. THURING (Brooklyn) had been present, by invitation of Mr. Horsley, at the operation at the National Hospital, London, in Case No. 3. He took measurements and diagrams at the time, and sent an account of the same to New York surgeons. The case awakened attention there among many who were looking with admiring interest upon the audacious, yet intelligent and successful, experiments of our English and Continental colleagues. Last spring, he had the satisfaction of treating a case of chorea and epilepsy, of six years' standing, where no evidence of tumour was found. The artificial trance, on two occasions, was induced after the example of recent experiments at the University of Nancy. The athetosis of the arms and facial contortions were arrested. The fits, which had occurred several times a day, ceased entirely, and did not return.

Dr. GIBBON (London) said that, as a physician, who was not a specialist, he could not help congratulating Mr. Victor Horsley on the splendour of his success in the treatment of a class of cases (epilepsy and paralysis) which were the despair of the practical physician. The fact that the cases on which he had operated upon had been practically cured since the operation, three, two, and one months ago respectively, and rescued from what might be justly termed "a living death," and cured without a single hitch in a brilliant operation, was a sure guarantee that this splendid and successful surgery would be perpetuated. It was too soon to predicate the permanence of the cure; but not too soon to thank the author of the paper for bringing his cases before the profession.

RESECTION OF THE ENTIRE SHAFT OF THE TIBIA FOR NECROSIS, WITH REPRODUCTION OF THE BONE: RECOVERY.

Presented to the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

BY W. C. WILE, M.D.,
Newton, Connecticut.

ON May 8th, 1883, I was consulted by the parents of Willie W., in relation to a running sore on the shin of his left leg. On external examination, I found three openings leading through sinuses, which were found to lead to dead bone. The tibia was much enlarged, and the boy showed a decided limp in his gait. He suffered considerable pain, especially at night, which had been controlled chiefly by anodynes. The boy was 12 years old, with hereditary scrofulous tendencies, and had the history of a fall, striking his shin violently against the iron rail of a railroad-crossing, causing, at the time, quite a severe contusion, which was followed by considerable inflammation. Soon afterwards, the bone commenced to enlarge, and had continued to increase in size up to the date of my first visit. The sinuses had opened about a year before, and continued to discharge ever since. The boy's general health was poor, he giving every evidence of the exhausting character of the discharges; and it was quite evident that the injuries he had received three years previously had lit up an inflammation of the periosteum, which had led to grave destruction of bone-tissue. It was also quite evident that, if the impairment of the general health was allowed to go on, the result could not be other than death; and the struggle, apparently, could not be a long one. I advised operative interference—of exactly what character, however, it would be hard for me to say until after an exploratory incision had been made. The family consenting, I put the boy upon a month's preparatory treatment, getting the secretions in perfect order, building up the general health with cod-liver oil, iron tonics, and liberal diet—beef, peptonoids, and Murdoch's liquid food—on which I largely depended to build up the patient. On May 11th, with the assistance of Dr. J. J. Barry, of South Norwalk, who kindly administered the ether, and Dr. S. T. De La Mater, of Bridgeport, I made an incision along the line of the tibia down to the bone, cutting through the diseased periosteum, and carefully lifting it away. I found the bone to be badly diseased; so much so that, after consultations with the two physicians, it was decided to remove the entire shaft. In its removal, I was particularly careful not to injure the periosteum, peeling it up cautiously, and, as nearly as possible, keeping it intact. After removing the shaft, a considerably quantity of diseased bone, at each end, was removed with the gouge. After this was all removed, I packed the cavity with absorbent cotton moistened with a solution of carbolic acid (one to twenty). The boy rallied nicely from the operation; and, under the influence of the same treatment that was pursued in the preparation of the case, healthy granulations sprang up, and there was soon evidence of the production of new bone. After two months, the shaft was strong enough to allow the fitting of the shoe, to which were attached braces at the side, with the joints at the ankle, the upper ends of which grasped the limb just below the knee by a steel padded band. By this time, the external wound had healed, and the boy was put upon crutches. From this time out, the progress was uninterrupted. The tibia is now strong and well formed, and the termination of the case is all that could be desired.

ANEURYSM TREATED BY A NEW COMBINATION.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Brighton.

BY RICHARD BARWELL, F.R.C.S.,
Senior Surgeon to, Charing Cross Hospital.

MY object in this paper is to bring more prominently before the profession than has yet been done a method of treating large aneurysms for which deligation is impracticable. Especially do I wish to show this preparation, because, although I have as yet had no opportunity of repeating this method, and, therefore, am not able to report a successful case, yet I venture to believe that, if surgeons will examine this specimen, they will see in it such promise as to induce them to try the treatment, of which I will now give a brief account.

Let me, however, first say that the man, aged 39, had been under my care about seven months, and had, under the rest-and-diet-treatment, considerably improved; then the symptoms had become worse. The case was really a hopeless one at the time I tried this plan. But

when the deterioration in his state had, after improvement, become pretty strongly marked, I had been considering whether it was not my duty to intervene, even though with but slight hopes of success. I could, however, think of no other method that would be justifiable, save the introduction of some solid substance and galvano-puncture.

The results of these methods have not been encouraging; they have hitherto been used singly; and it appeared to me that the cause of failure in the former method was the softness of the clot produced in the latter, the small area of blood exposed to the galvanism. From this I deduced that a combination of the two modes would have a greater chance of success.

With the assistance of Dr. Montagu Murray, who managed the battery, I proceeded thus. The skin over the aneurysm was punctured with a bistoury, and a small hollow needle of ivory sharpened like a subcutaneous injection needle was introduced into the sac, and thereby about ten feet of the finest steel wire was passed into the aneurysm; this was connected with the positive pole of a Garnet's battery; the negative being applied by means of a large pad of spongio-piline to the back, over the spine and left scapula. Thus, a current equal to nine or ten milliampères was passed for an hour and ten minutes, the man feeling no pain or inconvenience; there was no change in the tumour. The man appeared, at the end of twelve hours, very much better, the tumour more solid, and the pulsation more distant. But four days after the operation a tumour appeared on the right of the sternum, which the man told me had existed two years previously. The attempt was unsuccessful; the man died a week after, and I bring the parts with me, because it is evident from the condition that, although the method failed in this particular instance, it contains the elements and great promise of success.

I need hardly detain this meeting with a description of the condition of the lungs, which could hardly have failed to cause death; but I do wish to call attention to the clot formed in the aneurysm. Some of it has evidently been brushed from the wire in opening the sac, but the wide coils of that material are surrounded by thick, firm, colourless clot, which in many places bind the wire to the sac-walls; thus strengthening them, and rendering rupture hardly possible wherever the wire had penetrated. This had not occurred in the secondary sac. It appears that this mode offers, therefore, a method of dealing with large internal aneurysms which may hereafter prove valuable, and which, when opportunity occurs, I shall test again.

SUPRAPUBIC LITHOTOMY.

By THOMAS ANNANDALE, F.R.S.E.,
Regius Professor of Clinical Surgery, University of Edinburgh.

In the JOURNAL of January 2nd of this year, I published an account of a new method of performing suprapubic lithotomy in male children, and I reported a case in illustration. Since then, further experience has convinced me that this method is an improvement in the case of adults, as well as in the case of children; and I therefore trust that some of my surgical friends will try this method, and report their experience of it.

Briefly stated, the steps of the operation are:

1. The gradual and thorough dilatation of the bladder by the injection of some antiseptic fluid.

2. The introduction of a lithotrite, and the seizing and fixing of the stone in its blades.

3. The depression of the handle of the lithotrite, so as to press the stone against the abdominal wall immediately above the pubes, in the middle line.

4. Cutting down through the abdominal wall, in the middle line, upon the pubes, and immediately above it, in the usual way, until the bladder is reached.

5. Depressing the handle of the lithotrite still more, so as to stretch the wall of the bladder over the stone, and make it prominent at the wound.

6. Incising the stretched bladder wall upon the stone, to a sufficient extent, in a direction downwards, and then protruding, through the opening, the stone and blades of the lithotrite.

7. Gently opening the blades of the lithotrite and removing the stone, and in withdrawing the lithotrite, catching one end of an India-rubber catheter in its blades, and bringing it out through the urethral orifice, the other end of the catheter being left in the bladder.

8. Stitching the wound in the abdominal wall, and introducing a drainage tube at its lower end.

If the wound in the bladder wall be small, I think it is better not to stitch it, but if it be large, two or more catgut sutures should be inserted.

The dilatation of the rectum is not, in my opinion, required, and if employed, only complicates the operation.

NOTES ON TWO CASES OF CIRRHOSIS OF THE LIVER.

Read before the Gloucestershire Branch.

By J. C. GOODING, M.D., Cheltenham.

I do not propose to enter at any length into the subject of cirrhosis of the liver; its nature, causes, and diagnosis are, no doubt, known to all of us; but I wish to call in question the prognosis and treatment which are to be found laid down in works on the subject, and my warrant for so doing will be made good by the histories of two cases, to which I shall invite your attention.

We are told, and I believe, that alcohol—the most frequent cause of this disease—is taken up, much as it is swallowed, by the radicles of the portal vein, is conveyed by that vein into the parenchyma of the liver; that, in the capillaries, it comes into direct contact with the delicate areolar tissue—the continuation of Glisson's capsule; that the cells of this scarcely more than granular structure, irritated by it, proliferate, greatly increase, and form a substantial interlobular tissue, so causing increased size of the liver by its physical addition, and more by the impediment it offers to the circulation. The earliest increase of the connective tissue is upon the finer subdivisions of the vessels in the interior of the liver. After a time, the contraction of this cicatricial tissue compresses, and takes the place of the gland-substance; and the smaller subdivisions of the portal vein are narrowed and obliterated. The origins of the bile-ducts at the periphery of the lobule are destroyed, too, by its pressure, producing ascites, derangement of the digestive functions, and a crowd of other symptoms. We are further told that the "prognosis is always unfavourable, and the main question regarding treatment is the possibility of relieving the disorders of function which threaten life, and so delay the fatal termination."

The first case came under my observation when the effects produced by the contracting tissue were extremely marked. The patient was a laundress, aged 55. She lay on her bed, propped with pillows, and her legs drawn up. She was much emaciated, and had a yellowish skin. The digestive functions were wholly disorganised. Ascitic fluid distended the abdomen, and embarrassed respiration. I undertook to treat her, on one condition, that she absolutely obeyed all my directions, any breach of such at once terminating my attendance. She solemnly agreed. My first order, rather unexpected by her, was total abstention from alcohol in every form. Within a week, because of the difficulty of breathing, it was necessary to tap her; a pailful was withdrawn. The tapping had to be repeated after six weeks. In the meanwhile, she was taking small doses of calomel, frequently repeated, and the salivation so produced was persistently maintained, in a mild form, for seven or eight weeks. This experiment was based on the well known power of mercury in causing the removal of adventitious material, and the marked benefit which attends its use externally in splenic and other glandular enlargements. After the second tapping, the fluid ceased to be effused. The mercury was discontinued, and, at the expiration of a few days, when all traces of salivation had disappeared, nitro-hydrochloric acid and bitters were administered. The appetite improved, the evacuations became healthy, the skin gradually lost its yellow tinge, strength returned, and the patient became ruddy and fat.

The other case was that of a well known tradesman, aged 60, not a drunkard, but fond of his sherry at dinner, and his whisky at night. He was on several occasions seen by me for pain in the right hypochondrium, yellowish skin, and gastric disturbance. Caution as to what he was bringing about failed to shake his faith in the virtues of his "mountain dew." At last the yellow skin became persistent, the colour deepened, his appetite completely failed, and flesh was steadily lost. He still refused to stop all alcoholic drinks, as I desired, but he gradually reduced them; yet, after months, no progress was made, except in emaciation. After twelve or fifteen months I got him to give up all stimulants; but, after two months of abstention, he still lost flesh, continued jaundiced, and could scarcely walk. There was no ascites. He went to Folkestone for change. I offered a consultation, while passing through London, with a distinguished physician. I detailed the history, and the difficulty I had had in getting the patient to become a total abstainer. The physician agreed

in the diagnosis, and suggested hydrochlorate of ammonia. After three weeks the patient returned home, and informed me that the physician had ordered him a glass of beer at lunch, a glass of whisky at night, and if he liked a glass of port he might have it! Indignant at this reversal of my advice, I asked an explanation; the physician replied that as the old man had "fatal cirrhotic liver," "I don't think, at the last, a glass of grog at night will do much harm!" I immediately stopped the alcohol again, persisted in administering nitro-hydrochloric acid in increasing doses, and had his legs sponged every night for a quarter of an hour with the acid bath. He had previously had a long course of bichloride of mercury. After several weeks I had the gratification of seeing indications of improvement, which gradually became more and more evident, till at last he perfectly recovered. Now, three years after, he is a healthy, rosy old man.

I cannot tell at what stage of cirrhosis such treatment would be fruitless; but, in both these cases, alcohol had, through years, been doing its characteristic work in the liver, and the effects produced indicated a condition of the extremest gravity. In the latter case, in Dr. Wilks's opinion, a hopeless condition had been produced. They both perfectly recovered. It is exceedingly difficult to get people to give up drink; but my experience proves this to be imperative, if success is to be obtained.

These are the only two cases of far advanced cirrhosis of the liver I have so treated. They are a proof of the old adage, that "while there is life there is hope," if you can get the patient to give up alcohol.

ABSTRACTS OF INTRODUCTORY ADDRESSES DELIVERED AT THE METROPOLITAN MEDICAL SCHOOLS.

ST. GEORGE'S HOSPITAL.

THE Introductory Address was delivered on October 1st by Dr. WADHAM, Senior Physician to the Hospital, and Dean of the Medical School.

Dr. Wadham began his address by referring to the addition and improvements which had been made in the school premises, the increased facilities which had been provided for the study of physiology, and the appointment of Dr. Délépine as special physiologist. He also mentioned the arrangement which had been made with the Normal School of Science at Kensington, by which students could, for a small fee, study, before entering the hospital, the subjects required for the preliminary scientific examination of the London University. He then alluded to the competition which was taking place between the medical schools, and the questionable system of offering entrance scholarships. He warned the students that the medical profession was comprehensive and difficult beyond most others; that it required for its study more than average abilities and energy, and that to master even its scientific portion, they would have to make use of their brains as well as their memories.

Dr. Wadham then gave to his audience salutary advice as to their conduct, and warned them against the evils of overlooking the existence of religious and moral principles, whilst absorbed in scientific studies.

In referring to the difficulty which students experienced in passing their numerous examinations in the four years supposed to be sufficient for that purpose, he noted that, as a rule, this was only done by students of exceptionally good abilities and memories, and only by such of them as had the good fortune not to fail in any of their examinations. It would be better to recognise this fact, and extend the period of study by at least another year. This would be fairer to parents who were now systematically deceived as to the length of time during which their sons had to remain at the school; and would be a decided relief and advantage to the latter. The authors of the conjoint scheme appeared to have some inkling of this matter, for they invited students to present themselves for examination in several subjects immediately after registration. In other words, they invited, but did not compel them, to study, before entering the medical schools, chemistry and physics, and pharmacy and materia medica. In the latter case, they asked students, before they knew anything of disease, to come and be examined as to their knowledge of the medicinal action of the agents used for its relief. The effect of this regulation was either that students were crammed in these subjects beforehand, or else had to commence their studies with an amount of work which they ought to get through during their first year, but which the could only accomplish by a process closely allied to cramming here. In this manner they learnt an innumerable number of facts, but had no time to assimilate or co-ordinate them. They acquired information, but not knowledge; not even the knowledge of how to put the information to practical account. This information they delivered over to their examiners as much as possible in the very words in which they received it from their teachers; and, unless gifted with very good memories, forgot it immediately. This regulation was also unfair to the schools, as it obliged them to maintain a staff of teachers upon subjects which students were allowed, if not encouraged, to study elsewhere.

Unless a student, by the end of his first year, was successful in passing his examinations in all these subjects, with the addition of elementary anatomy and physiology, he had either to sacrifice his next winter session in order to get them up, or else to study higher anatomy and physiology, and to dissect at a time when his mind is busy with some, or all, of these other subjects. In either case, the result was that he fell behind with his work, and probably took nearer six than four years to obtain the qualification to practise. It was true that an attempt had been made to bring the examinations within the capacity of students, by issuing synopses as to the range of most of the subjects, and allowing them to take them up for examination one at a time. The privilege had also been lately granted of allowing students to postpone, until the second stage of their examinations, the subjects of pharmacy and materia medica. By this arrangement, the student, without being once rejected, might have to appear nine times before his examiners, in order to obtain the double qualification under the conjoint scheme. These synopses, however, were either so obscurely worded as to render their meaning difficult, or else some of them were of such a nature as to be very imperfect guides to the students, and could hardly be said to bind the examiners at all. Dr. Wadham explained this objection by quoting from some of these synopses. It seemed, moreover, an anomaly to tell the unfortunate first year's student that he was informed in the synopsis that the anatomical knowledge required of him was merely an acquaintance with the bones, and the attachments of the muscles to the bones of the upper and lower extremities; and, at the same examination, to ask him to enumerate the principle changes which food underwent in the mouth, stomach, and intestines. In short, some reform was needed in the present system of examinations, and the studies of the first year's student should be made less burdensome. These synopses should also be made clearer and more definite, should indicate all the questions that could possibly be asked, and, in addition to being a guide to the student and teacher, should be binding on the examiners.

The best reform would consist in an extension of the period of study. The student should be obliged to pass an examination in such subjects as chemistry, and physics, and pharmacy, and materia medica (excluding therapeutics), before he entered a medical school, or at least before he commenced the study of human anatomy and physiology. If animal and vegetable biology were substituted for pharmacy and materia medica—which latter more concerned the chemist than the physician—and therapeutics were included in the examination in medicine, it would be a better arrangement. The examinations in elementary anatomy and physiology might with advantage be abandoned. These repeated examinations worried the student, and interrupted his work, and were merely tests of his progress, which might be much better carried out by the school authorities.

Should the Conjoint Board ever take this view of the subject, they would find the materials for teaching ready to their hands at the London University, in the arrangements of some of the larger schools, and in that which St. George's, in common with some of the smaller schools, had made with the normal School of Science at Kensington. In this manner, students would have time and facilities for studying and understanding subjects which they now only got up by memory for examination, and a check would be put to the pernicious system of cramming. The period of study being thus prolonged, the expenses of medical education would be apparently increased; this increase, however, would be more apparent than real, for the intelligent student from choice, and the dull one from necessity, invariably occupied more than the conventional four years in acquiring even the rudiments of his profession.

Speaking of the suggested discipline of students, and the proposal to found colleges or residences in connection with all the schools, the lecturer said: "I allude to this all the more willingly, because I think that, in the treatment of this subject, the public have not used the wisest method of arriving at a just conclusion. They have placed theory before experience, and the visionary before the practical, and

in forming their opinion, have been influenced more by their feelings and sentiments than by their reason or judgment. It is a subject upon which I am quite open to conviction, but at present I have neither read nor heard any argument in its favour which my own knowledge and experience does not enable me to refute. Few men have seen more of students than I have; I have known them living under the roofs and protection of their own parents; in small parties under the care and supervision of gentlemen of upright character, and having a full sense of their responsibilities towards them and towards their parents; and I have known them living in lodgings free from all control. I can truthfully say that the last of these students were as a rule quite as good as the first; and that my experience of the result of associating students together has been anything but encouraging to an extension of that system. So far as my experience goes, this tends far more to idleness, gossiping, and card-playing, than to habits of industry and study; and not unfrequently in these small coteries the evil influence is stronger than the good. Some of those who have proposed the foundation of these establishments have probably done so from an amiable desire to obtain for medical students the advantages of the collegiate system as it exists in the two universities, and probably in ignorance of its many drawbacks even there. They have, however, overlooked the fact that these colleges exist as the result of past liberality and benevolence; and that the authorities by which they are managed are supported by funds derived from the same source. Here they would have to be built and managed upon such conditions as would make them successful mercantile enterprises, and this I hold to be impossible except at an expense to students greater than their parents would be prepared to pay. The fact is also overlooked that the most important factor in the university system is, not that the students themselves are much controlled, but that the authorities possess the power of controlling and suppressing throughout a considerable district many of the temptations to idleness and dissipation and vice which exist unchecked and uncontrollable in this metropolis. What advantage, for instance, would there be in gating a student in this town at ten, at nine, or even at eight o'clock in the evening? Long before that hour, if so disposed, he would find out opportunities to commit all the sins in the decalogue, and a good many indiscretions outside it. It was with students as with every other living product of creation, a case of the survival of the fittest."

ST. MARY'S HOSPITAL.

THE Introductory Address was delivered at this Hospital on October 1st, by Mr. MALCOLM MORRIS, F.R.C.S.Ed., Surgeon to the Skin Department.

Mr. Morris began by directing the attention of his audience to the element of mysticism in medicine. Medicine and mystery were, to a savage, interchangeable terms. Noise, panic, and mystery were the three accessories of aboriginal medicine. The "medicine man" was a protoplasmic element in evolution, a primitive admixture of the charlatan, the fanatic, and the mountebank. He was, nevertheless, the germ from which, as a profession, we must acknowledge descent, our prototype in an age when science was but a slender figure arrayed in the too exuberant drapery of mysticism. This same germ developed into the physician of the middle ages, a gloomy compound of ignorance and superstition. He was still deeply mysterious, but in his art was less of falsehood, more of truth. He sought to impress the common mind by means of mystic crucibles, and worked hand in hand with the astrologer and the magician. But he was withal less of the quack and more of the student of science. There was an earnestness in his unwearied search for the elixir of life and the philosopher's stone. This element of mystery was not wholly unproductive of good. It saved the life of science when threatened by a bitter fanaticism. At great risk, the scientist toiled on in anxious seclusion. He held a position of great power, though the true spirit of scientific medicine was in the feebleness of infancy.

Nearer to our own time, the supernatural was not quite abandoned, but a more tangible foundation for true learning was arising from the study of human anatomy. At this period was propounded the mystery of the humours of the body, the lymphatic, splenetic, and the like. The condition of the patient was said to be dependent on an admixture of these or the predominance of one of them, and it was the physician's work to endeavour to remove or to modify these humours. The belief in drugs was at its zenith, as the old formulæ proved.

Two questions naturally arose out of these considerations: 1, How was the mystic element evolved? and 2, Has it entirely disappeared from the enlightened medicine of our own time? It had been forced upon medicine by the public. It was the result of the absolute knowledge demanded by the laity, and the more or less extensive ignorance of the professor of the healing art. This ignorance, where it existed, he must not acknowledge. An admission of ignorance would be fatal from the lips of a medical man. With him nothing must be admitted that would disturb that most potent factor in therapeutics, absolute and implicit faith. Medicine, despite strides it had made in modern times, was still extremely defective. This scanty lore tended to be supplemented by fiction. The public insisted upon absolute knowledge. This could not be obtained; it must, therefore, be invented. Athwart our paths might still be traced the track of the astrologer. There remained in the people a belief in the efficacy of drugs as drugs, a belief that as for every bane there must be an antidote, so for every disease there must be a curative leaf or root. Nature was distrusted, disease was still represented as some evil influence to be exorcised. In the popular mind, disease walked the earth as a devouring fiend, and had a personality about it as of old. Our very phrases, "stricken with disease," "visitations," and "seizures," were survivals of the conceptions of primitive times. There was still to-day a demand for perfect knowledge from all professors of the healing art, and, as of old, the flaws in medicine—which was far from being an exact science—had to be filled with fiction, though less, it was true, in amount, and less unwholesome, also, in character. The mysticism survived in the courtly phrase and the ambiguous language of the practitioner of modern times. When sorely assailed by the sick man, the physician's armoury was equivocation, from which he draws such verbal weapons as "the state of the constitution," "the tone of the body," "the general health," "lowered vitality," and a vicious circle of ambiguous platitudes, diluted to vagueness by the admixture of scientific terms. Were not these in some sort a survival of the circle of the horoscope? This antagonism between the public and professional mind had crippled investigation, and placed the medical man in a false position, in which his dealings became artificial and his utterances evasive. At no far distant day, however, there was hope that medicine would have shed for ever the last vestige of mysticism, and the power that would thus rid it of such unworthy disguise would be a more carefully educated public. A great step in this direction was already being accomplished by the introduction of the elements of physiology and the laws of health as essential features in scholastic training.

Mr. Morris then spoke of the element of scepticism in medicine, an influence which would probably have no small share in moulding the medical man of the future. Intellectual development has been the most prominent feature of the present age. Both in extent and variety, the attainments of science and of art have been prodigious. The lecturer referred to steam locomotion, gas, the electric telegraph, and Darwinism. Our age was one of tumultous mental activity. Scepticism was rampant among us at this moment. Speculation was rife, and it was a blemish which medicine had not escaped. Where to-day was the implicit belief in drugs, which was a dogma of the healing art in past times?

The extreme sceptic boldly avowed his entire disbelief in the potency of any drug whatever; others, less dogmatic, content themselves with acknowledging the value of a drug or two. The position was attained where scepticism, wrapped in its own self-confidence, once and for all repudiated all aids and accessories, briefly it stated its deliberate opinion that disease was infinitely better left to itself. The natural physiological energy of the body was the prime element in the healing process. This is neither more nor less than modern fatalism, waiting on events. Such a doctrine, if successful, would be fatal to medicine. Without doubt, the element of interference had been far too prominent in the past. But there were absolutely no just grounds for rushing to the opposite extreme and forswearing the use of remedies, merely because they had once been administered in gross excess. The antidote was as bad as the poison. There was no use blinking at the fact: young men were, and always would be, naturally attracted by scepticism. There was about it a sensational fascination congenial to the developing and active mind. It was a bias, however, most vigorously to be withstood. Scepticism, as such, was too often adopted as the alternative to careful reasoning and the patient examination of facts. In training the intellect, the student would find it advantageous to cultivate that form of it which was the chief characteristic of the judicial mind. A judge's duty was two-fold. It was not sufficient that he should be able to arrive at a just decision upon the facts presented for his consideration; he had, in the first instance, also to decide what facts were admissible as evidence. On these, and on these alone, must his final judgment be based. The rules of evidence were known to every advocate; but, having the whole case to handle, he could not devote so much attention to the question of the acceptance or rejec-

tion of this or that evidence as could the judge, who was less hampered with details. Like the judge, we had not only to sift that which was given us, but to watch and to seek out whence it came, and to look to it lest any who may have pet theories to support might find for us so-called facts to fit them. Special pleaders were by no means monopolised by the bar. Whatever we professed, whatever we denied, let us see to it that were able to give "a reason for the faith that is in us," and that reason is at least our very own.

Mr. Morris concluded by referring to materialism in medicine. This was a useful and indispensable feature in the study of medicine. It was the absence of this element as a firm basis and starting point that was mainly productive of the mischievous results considered under the head of mysticism. Medical science suffered at the hands of the alchemist and astrologer; was it in no like danger from the well intentioned but too restricted efforts of the materialist? The mind required a field neither too large nor too small. Formerly, the tiny light of science wasted all its rays in the vain attempt to illumine regions far beyond its ken; the result was mysticism. To-day, materialism threatened to err almost as much in the opposite direction by throwing all the little light it could command upon a pin's point. The man of science in the middle ages lifted his rushlight to the skies, and, soaring, lost its glimmering aid. In our own time, he stooped so low as practically to hide its light beneath a bushel. While we were minutely inspecting matter as matter, we were narrowing our vision, and shutting out the broad issues which must be read with it, if we would rightly comprehend those enigmas of life to which matter affords the only key. While we minutely analyse the details, our eyes were out of focus for the broad truths which the sum of them should teach us. Medicine should attempt not only to acquire facts, to accurately record phenomena, to compare kindred appearances; but it must go a step further, and strive to grasp their wider significance, their general bearing. Many questions had been practically shelved, because men had become absorbed in the process of grubbing over a few minute details. The mind had been led away from a right conception of the whole, by a too minute consideration of the part. In saying this, the practice of fact accumulation need not be discouraged. It is of incalculable value as a means to an end. But in modern medicine, we were apt to make too much of a fact by itself. Let us have a care that in moulding the medicine of the future, the constructive power claimed its due and proper share of our consideration. At present, the process was one rather of disintegration. Disease was being studied almost exclusively in regard to its minutest issues. We were greatly concerned in the microscopic investigation of disease, having traced its source, as was confidently asserted, to bacteria. Time was when consumption was attributed to certain humours in the blood. Further investigation led to the conclusion that it owed its origin to a small particle, the tubercle; and now, in our own time, scientists had pushed their inquiries to such an extent, that the most minute living particle known was reputed to be the parent of this fell disease. Wonderful as the discovery was, did we know any more concerning the disease itself? did we save more lives than did our forefathers? This was the crucial question which should be the touchstone whereby to measure our success. In the examination of disease, it must not be supposed that all truth lay at the bottom of the microscope. While men were worshipping facts as facts, Darwin was busy constructing his great theory. Facts were the basis upon which he built his grand superstructure; but no amount of unreflective pursuit of mere detail, however persistent, would have given the world the Darwinian theory. Pure materialism in medicine might then be carried to an injurious extreme. In modern pathology, while men were actively contesting as to the nature or formation of a certain cell, they were likely to lose sight of the real bearings of the case. A collection of facts taught nothing till it had been arranged. The tendency at present was, in the majority of instances, to collect everything, and to arrange, and, therefore, to adduce nothing.

Mr. Morris finally exhorted the students to "work for work's sake." The days of walking the hospital were over; it was now working in the hospital. The students of St. Mary's Hospital now had a hospital and school wherein to work of which they might justly be proud; and they had in the Dean an example of energy and perseverance worthy of imitation. It was to Mr. Field that St. Mary's was chiefly indebted for its present position among metropolitan schools. There was on all sides a constant cry for rest; but the life which the student must look forward to was one that could only stimulate the imagination of the strong man. A vast multitude of the practitioners of medicine died in harness; they died as they had lived. They never attained to that oasis of rest to which their long labours gave them so earnest a claim, and they were debarred the very peace which they have been instrumental in bestowing upon others.

MIDDLESEX HOSPITAL.

THE Introductory Address was given on October 4th by Dr. C. Y. BISS, Assistant Physician to the Hospital.

Dr. Biss dwelt upon the value and importance of medicine as a calling. The "fool of the family" rarely attempted to become a doctor, and if he did he usually came to grief. Although there was not yet a proper ability in the public mind to differentiate the physician from the quack, and the surgeon from the bone-setter, nor to see through the trickery of self-advertisements, a great advance was taking place in the right direction. Medical men were equal to all other professional men in knowledge, culture, and gentlemanly feeling, while in devotedness and self-denial they were probably ahead of all. It was the medical physiologist who would solve many of the yet unsolved problems, tracking the footsteps of Nature not only in her hours of health and activity, but along the devious paths of disease up to the point of that supreme ruin called death.

In conclusion, Dr. Biss spoke in commendation of that movement, happily fast becoming of wider and wider extension amongst the general practitioners of our country, for the Collective Investigation of Disease; and, in doing so, he noted the excellent opportunities which it afforded to us all for the cultivation of the philosophical spirit in our work. The man who observed, recorded, classified, and then contributed his facts to the general fund of knowledge, was conferring a greater advantage upon himself than upon the world, for the discipline to his mind was invaluable. The importance to medical science of such observations, if intelligently made, was self-evident. The day that saw the great body of practitioners take up this toil in good earnest would surely bring us nearer to the elucidation of much that was now moot and indefinite. Three great lines of inquiry were before us, which, on account of their command of material, could best be worked out by the men who engaged in general practice; firstly, the varieties and relationships of the acute contagious disorders; then the value and use of drugs in clinical treatment; lastly, the complete examination and estimation of the value of family histories in relation to the etiology of disease.

UNIVERSITY COLLEGE.

THE Introductory Address was given on October 4th, by Mr. A. E. BARKER, Assistant Professor of Clinical Surgery and Teacher of Practical Surgery to the College, and Surgeon to University College Hospital.

The lecturer spoke in favour of the principle of giving introductory addresses, and regretted the prevailing tendency to disparage them. The introductory lecture offered to new comers an opportunity of meeting their teachers for the first time, and receiving a welcome at that critical moment of their lives, when they are launched for the first time on the wide sea of life in London. In respect to the profession of medicine, the public failed to realise its incalculable benefits, and needed to be reminded of the blessings which our profession can shower down upon the community, the protection of life from disease, the cure of disease, and the reduction of the death-rate. Mr. Barker urged for the profession more public recognition, and thought that some of its leaders should be nearer the throne, and should occupy places in the Privy Council, or even in the Upper House.

WESTMINSTER HOSPITAL.

THE Introductory Address was delivered on October 4th by Mr. JAMES BLACK, Lecturer on Anatomy to the School.

The lecturer began by discussing the question how the student might best employ his time. The hours for lectures and demonstrations were arranged for his benefit, and they extended over the greater part of the day. Recreation was, however, absolutely necessary; and Mr. Black, through personal experience, spoke in favour of the practice in vogue at the old English universities of encouraging, or almost enforcing, a certain amount of daily relaxation from studies, and this was done entirely through the force of public opinion amongst the undergraduates. He spoke against a morbid fascination for incessant study, and hoped that the hospital athletics would be patronised by all the students. On the other hand, a middle course must be steered between work and play, and some games, like cricket, took up too much of a student's time, when conducted in the usual manner. It would be advisable that arrangements should be made for cricket limited to Saturday afternoons, so that the student's usual time for study need not be prejudiced in the interests of any recreation, however healthy. The cultivation of the fine arts was also necessary, to a limited extent, as so many ornaments of the profession had successfully affected. Literature might be fascinating to many, and a power of writing should be cultivated; but Dr. Wendell Holmes, so distin-

guished as a literary member of the profession, had remarked that literature was a good staff for walking with, but not a good one to lean upon. It could not be doubted that literary pursuits might become too fascinating. Jenner was a good violinist and flute-player, and deliberately cultivated music as a necessary relief from the cares which were entailed by his researches in vaccination and the opposition which they provoked. Turning from relaxation once more to study, Mr. Black strongly deprecated self-imposed over-study, but impressed upon his audience the value of practical work performed by the students in common, in the dissecting-rooms and laboratories. The value of anatomy, histology, and chemistry, was incalculable; and the student could not entirely dispense with natural science. The lecturer then referred to Mr. Marshall's proposal to introduce a whole year of pre-professional education, preliminary to registration as a medical student, for the purpose of devoting due attention to physics, chemistry, and biology. The proposal had not been adopted by the Medical Council, and Dr. Acland had expressed objections to the educational specialising of youths, intended for the profession, too early, so as to remove them too soon from the benefits of general education. A safeguard against a similar evil had been provided by the Committee on Naval Instruction, and a similar safeguard might surely be introduced into medical education, so that the very young student might pass a preliminary examination, and return to school for a year or so. The lecturer spoke strongly in favour of the study of biology at school, for the benefit of future medical students.

Mr. Black then spoke encouragingly of the prospects of an M.D. being obtainable in London on similar conditions to those which have long existed at certain universities. No doubt the degrees of recognised universities were of high value both for their intrinsic social reputation and for the sound course of study which they implied; but a large proportion of medical students could not avail themselves of a university education, yet required in after-life a title understood by the public who sought medical aid. The lecturer explained how just it would be to make an arrangement permitting the privilege of a professional title to those less favoured students, and noted the observation of Sir Andrew Clark that it was a real practical grievance, which affected medical men in London not only socially and materially, but even in their relation to their professional brethren, when the holder of a degree was held in higher estimation than the holder of the diplomas of the two Colleges. In conclusion, Mr. Black held up as examples two great Westminster surgeons: Cheselden, who practised in the Westminster as well as in St. Thomas's Hospital; and Guthrie, whose name was about to be conferred on one of the annual awards of the medical school.

TOXICOLOGICAL MEMORANDA.

A CASE OF POISONING BY ACONITE.

On September 16th, at 7.30 P.M., I was summoned to attend a woman, aged 46, at a village a mile from my residence. I arrived at the house at 7.65, and found that the woman was dead. On placing my hand over the heart, I was surprised to find the surface of the body quite cold, although she had only been dead about half an hour. I was told that she had been subject to "fits," which were described as being accompanied by pain in the chest, and great difficulty in breathing; the symptoms described were so like those of angina pectoris, that I came to the conclusion it was an instance of this affection, as the real facts of the case were withheld, although I made full inquiry.

On subsequent inquiry, it was ascertained that the woman had admitted taking poison, and an empty two ounce bottle, that had contained some liniment, was produced.

At the inquest, on September 18th, it was proved that the bottle had contained liniment of aconite, three drachms of which had been prescribed for neuralgia nine months ago. As it was only used twice, there was probably about two drachms left, the whole of which was swallowed. A verdict of suicide while in a state of temporary insanity was returned.

I have since the inquest, by careful inquiry, ascertained the following particulars. The woman had been drinking for some days. The poison was taken at 6.45 P.M.; an emetic of salt and warm water was given at once, which acted in two or three minutes. She had no pain, but a succession of shiverings or rigors. In about twenty minutes after she had been helped upstairs, she began to lose power in her lower extremities, and fell on her knees. She was helped into bed, and, in a few minutes, her head fell to one side, and it was found she was dead. She was quite conscious up to the time of her death, which occurred about half an hour after she had taken the poison, and was speaking to those about her. I was not summoned as a witness, although I had been in attendance on the woman a week prior to her death, and she had not been seen professionally by a medical man for six months previously. It is to be regretted that a *post mortem* examination was not made.

W. W. Barré, L.K.Q.C.P.I., L.R.C.S.I.,
Ellesmere Port, Cheshire.

CLINICAL MEMORANDA.

CASE OF GANGRENE OF BOTH LEGS IN A YOUNG GIRL, DUE TO ARTERITIS.

G., aged 18, first seen on August 17th, 1882, had been suffering such severe pain in both legs and feet, as to deprive her of all sleep, and to reduce her to a state of collapse in the morning. The pain was evidently in the course of the femoral arteries and their branches; and pressure over them could not be tolerated. Both feet were cold and tallowy-looking, the toes already having a bluish appearance, and giving the impression of commencing gangrene. There was no cardiac disease. She had been out to tea the previous afternoon, and been taken with the severe pain on returning home. Stimulants, abundance of nourishment, and opium were given, and she rallied. The gangrene, however, spread on the right side to Scarpa's triangle, and to the knee on the left, the pain along the course of the arteries being a most marked and distressing symptom. The toes were shrivelled and dried up; blebs, however, formed higher up the legs. Towards the end, a sharp attack of bronchitis, with a considerable rise of temperature, developed, and death resulted from exhaustion. She was always an extremely anæmic girl, and had been under treatment several times for anæmia. She had never had any serious illness. She died on September 12th. The father drank, and the mother was both nervous and anæmic. In the early part of the attack, whilst the legs were dark looking, they were noticed one morning to have assumed a bright red tint, but were quite cold; the patient declared, however, that she felt something running in them. The diagnosis of arteritis was based on the absence of any other cause, and the presence of marked and severe pain along the course of the arteries, with tenderness, most acute on pressure. The bronchitis was looked upon as probably secondary to some embolic plugging.

M. G. Biggs, Northcote Road, Wandsworth.

ANOMALOUS CASE OF SCARLET FEVER.

On September 9th, a young girl, aged 6, was brought to my surgery, suffering from an itching in the skin. She looked well, and nothing was to be seen but a red rash, which was distinct on the front of the chest and over the scapular regions, extending upwards on to the back of the neck. I could trace no error in diet nor presence of worms to account for it. I sent her home, and called next day, and very carefully took her temperature, which I found to be normal. I gave her some alkaline medicine, and she went on well, the rash disappearing next day. Her mother told me that she was feverish, and complained of sore-throat on August 22nd, and that she gave her a cooling aperient, which dissipated the attack. On September 20th, I was sent for to see a younger child, whom I found to be suffering from a pronounced attack of scarlet fever, the rash well out, and the temperature 103°. On examining the elder child, I found coarse, heavy desquamation on the cheeks and neck. This has continued over the entire surface of the body; the hands and feet are now desquamating.

Whiteway Wilkinson, F.R.C.S.E.,
Richmond Road, Barnsbury.

West London Medico-Chirurgical Society.—The following gentlemen will be office-bearers for the session 1886-87. President: Dr. Alderson. Vice-Presidents: Mr. E. C. Barnes, Dr. Campbell Pope, Mr. Hemming, Mr. Keetley. Council: Mr. Swinford Edwards, Dr. Hart Vinen, Mr. R. F. Benham, Dr. Owles, Dr. Thudichum, Dr. Bullock, Dr. Wells, Dr. Pickett, Mr. Gunton Alderton, Mr. Lloyd, Dr. Spicer, Dr. Savill. Treasurer: Mr. F. Lawrance. Secretaries: Mr. H. Percy Dunn, Dr. Clippingdale. Auditors: Dr. Blenkinsop, Dr. Gloster.

The Sanitary Condition of Florence.—Information has been received from the Italian Consul-General to the effect that the Syndic of Florence states that, owing to the precautions adopted for the preservation of health, the sanitary condition of that city and its environs is excellent, there having been, during the months of June, July, and August, a notable diminution of deaths both from common maladies and also from those which especially manifest themselves during the hot season.

REVIEWS AND NOTICES.

CANCEROUS AFFECTON OF THE SKIN. By GEORGE THIN, M.D. J. and A. Churchill. 1886.

THERE is much to attract notice in Dr. Thin's small work on cancerous affections of the skin. It forms a very complete monograph on epithelioma of the skin, and that curiously allied disease which we know by the name of rodent ulcer. And as it is now some years since special attention was drawn in England to the latter subject, the profession will be glad to see it discussed by so good a microscopist and so able an observer as Dr. Thin. Moreover, the engravings which accompany the text are a relief to the reader, who has had to be content with explanatory letterpress, and few or no illustrations in the textbooks which have lately appeared upon surgery.

The description of epithelioma is clear and good, but in this it would be difficult to improve upon the writings of previous authors, and especially of Sir James Paget, who is freely quoted. It is in the histology that we look for new light at Dr. Thin's hands, if it is to be found. And here we find that the author, as might be expected, does not look upon the laminated capsules or "birds' nests" as distinctive of the disease, for, though often luxuriantly developed, they may be wanting, and they are sometimes to be found in conditions not allied to cancer, as, for example, in lupus, and in the hyperæmic zone of cicatrices. A more constant morbid element, and one never found in healthy epithelium, is the swollen colloidal cell, which may stand alone in the midst of a mass of apparently normal cells, or form the centre of the nests. Whether so-called "mother cells" give rise by division or proliferation to the smaller isolated cells found in the tissue, is a question which he thinks not proven. The so-called "daughter cells" he considers more likely to be wandering leucocytes, and the pathological and physiological process of increase by cell-division in formed cells, has not been seen, though accepted by authors upon the evidence of its occurrence in young cell elements. The author's views are that, whilst unable to discover any evidences of multiplication by cell-division or endogenous cell-growth in the cancerous epithelium, he has observed appearances which seem to him to indicate that the "wandering cells" take on the epithelial characters, and become epithelial. While these changes are taking place, the connective tissue also undergoes characteristic changes. There is at first an increased migration of leucocytes, constituting a so-called small-cell infiltration. With this is found a gradual disintegration of connective tissue; the large strong bundles of white fibrous tissue are split up into small elements, which are really finer component bundles. These bundles gradually disappear, and the included rows of leucocytes increase in number, and apparently form the new abnormal epithelial growth. The diseased epithelium possesses the faculty of destroying connective tissue, and of finding its way into lymphatic vessels, and so into the system. This is the keynote to the pathology of epithelioma, in the author's opinion. Cancerous epithelium is a connective tissue poison. Its first effect on the sub-epithelial connective tissue is to modify the normal function of the capillary blood-vessels, and lead to the escape of leucocytes; and this is followed by the breaking down of the connective tissue bundles, a process utterly unlike what occurs in simple inflammatory processes, and not traceable to the simple cutting off of blood-supply by the encroachment of growing masses of epithelium.

Attempting to learn what may be the nature of this poison-power, the author does not appear to throw much light upon the most important part of the study. It is here, in the Section on Etiology, that we think the work under review is incomplete. We should have been glad to see some reference to general though obscure influences which may prove important in the causation, and, therefore, in the treatment of this form of cancer. Diet, occupation, and geographical distribution should, we think, be considered as well as age, sex, and the part affected. The diagnosis of epithelioma in its early stages is necessarily obscure, but the author gives what can be given to distinguish it from lupus and tertiary syphilis. Free removal by the knife is the treatment preferred to the use of caustics, though he gives Kaposi's formula for a useful preparation of arsenical paste. It is rather, however, the patient's fears than the surgeon's judgment which prompts the use of caustics.

The second part of the work is concerned with the less known, and therefore, perhaps, the more interesting subject of rodent ulcer. Clinically, it was first recognised by English surgeons, and the descriptions given by them still hold good in advanced text-books; pathologically, its special characters were made out in Germany, Thiersch showing that its clinical peculiarities were due to its being a form of cancer, with certain histological peculiarities. Later writers have not grasped the import of Thiersch's observations, and have refused more than one kind of epithelioma of the skin. The tendency recently has been, both by clinical observers and by pathologists, to consider rodent ulcer and epithelioma as one disease; and the author calls attention to the paradox of trained observers a few years ago being unable to recognise cancerous elements in this growth, but now, apparently, being unable to distinguish it from ordinary cancer. This, which we think is overstating the position, he accounts for by the advance of histological methods of research.

The author's own description of the disease is clear, and follows the same lines as Paget, Hutchinson, Hulke, and other English writers; but Dr. Thin's *forte* is histology, and he devotes considerable space to this aspect of the subject. He gives in essence his report, which is well-known, and which appeared in the *Pathological Transactions*, vols. xxix and xxx. The essential feature of the growth is the peculiar smallness of the cells compared with other epithelial growths, and, in fact, their epithelial nature is difficult to show. They never enlarge into the flat horny cells which characterise epithelioma, and never form the so-called nests, and the effect of eosin differs in the two cases. The newly formed cells, as well as the older ones, in epithelioma, are coloured a deep orange red, but those which are found in rodent ulcer are not similarly affected. It is only by very slow hardening of the tissue that the epithelial nature of the cells can be shown. The neighbouring connective tissue does not undergo the peculiar changes described in epithelioma.

The point of origin of the growth he cannot find to be either the rete mucosum or hair-sheaths, or sebaceous glands, but he has observed appearances in the sweat-glands which strongly suggest that they afford the first point of departure of the growth; and in this view he is supported by the observations of Cornil and Ranvier, who, under the term tubular epithelioma, describe a growth apparently identical with rodent ulcer, and taking its origin in the sweat-glands.

No light is thrown upon the etiology of the disease, and Dr. Thin very rightly says that to speak of constitutional proclivity does not advance our knowledge. Diagnosis between rodent ulcer and epithelioma is of importance to patient and surgeon. But this is, in many cases, very difficult—nay, for the time, impossible. Still, he looks to the possibility occurring in the future with improved methods of observation, and with larger clinical and pathological experience. He differs from Mr. Hutchinson in not limiting rodent ulcer to the upper part of the face; but he allows the extreme rarity of its appearance elsewhere, and acknowledges that, if the glands become affected, we almost certainly have to do with epithelioma. And the marked difference in the extension of the two diseases is an important distinction, while the length of time which rodent ulcer may continue slowly extending has been shown in one case to have been as much as forty-three years. It is a comfort that, after thorough removal, there is no return, and the completeness of the removal is wisely urged while it is yet possible. If left to itself, there is no cure, but there is a certainty of increased destruction. And the thoroughness of its removal almost absolutely necessitates excision rather than cauterisation.

The author is to be congratulated upon having produced a work which is likely to be the standard one for these allied diseases, but it is doubtless for the histology and pathology of rodent ulcers that it will prove most valuable.

THE REFRACTION AND ACCOMMODATION OF THE EYE. By E. LANDOLT. Translated by C. M. CULVER, M.D. Young J. Pentland. 1886.

THIS book will supply a real need, and will probably for many years be the standard work on refraction. We naturally compare it with the English translation of Donders' great work, published by the New Sydenham Society in 1864. Since that date, however, many new modes of estimating the refraction of the eye have come into use; calculations have been immensely simplified by the introduction of the metrical system of numbering lenses; and the clinical history of myopia, and the causes that lead to its increase in the individual and in the race, have been more extensively investigated. Donders' book, moreover, possessed more of the mathematical than of the clinical element, and, for that reason, repelled many who were not well-read in mathematics. The work before us, while omitting nothing essential, is written in so clear a style, the illustrations are so numerous and well chosen, and the translation so well executed, that the meaning is never obscure; and, although mathematical formulæ are freely introduced in the physical portion, yet the plan of

the book is so laid that they can be omitted without rendering the remaining text unintelligible.

The book is divided into three parts, the Physical, the Theoretical, and the Clinical: an arrangement that involves a good deal of repetition, but is probably the best that could be devised.

The physical or optical portion is very thorough and clear. The diagram on page 4 (Fig. 2), illustrating the *rationale* of the law of refraction, and the comparison between the old and the metrical system of numbering lenses, showing how formulæ may often be simplified by the latter, are perhaps the best portions; but the whole section is admirable. The omission, however, of all description of a cylindrical lens is an oversight.

It is not clear to us why the second portion is called "theoretical." This epithet would certainly have been as applicable to the optical portion. Physical and physiological optics would, we think, have better indicated the nature of these two portions of the book. This second portion deals first with the optical properties of the eye in all conditions of refraction, and then with the various modes in use for measuring the refraction. No attempt is made to describe the various optometers and ophthalmometers, although the principles upon which they depend are fully explained. Here, no doubt, the author was wise; yet it is difficult to see why Thomson's ametrometer should have a whole page of description as well as a figure, while other instruments which are of much greater practical use are merely mentioned or altogether omitted. We should have thought that Culbertson's prisoptometer deserved mention, as it is one of the latest instruments introduced, and utilises a principle which is, we believe, employed in no other test. Dr. LANDOLT'S estimation of the value of the shadow-test (which he names "koroscopy") seems to be a much lower one than is usually held in this country.

The clinical portion, although consisting of but a single chapter, occupies nearly half the book, and is by far its most valuable portion. The author never leads his readers to look upon the eye merely as a passive optical instrument, errors in the refraction of which can be treated by a rule of thumb when once they have been measured. The physiological relation between the refraction, accommodation, and convergence is constantly insisted on, as well as the importance of studying the individual needs and habits in each case. This is, perhaps, most apparent in the section dealing with anisometropia.

In several respects the author's treatment differs considerably from that adopted generally in this country; for example, he leaves a very considerable amount of hypermetropia uncorrected as long as the accommodative power is good, and, even in slight degrees of myopia, does not permit the patient constantly to wear the full correction. This is emphasised by printing the following rule in small capitals: "A myope must be prohibited from wearing a concave glass for any distance at which he can see clearly without accommodation." A rule such as this, if carried out, would entail considerable inconvenience upon myopes of slight and moderate degrees, without any compensating advantages. Myopia in a young subject, when of moderate degree, and not increasing, can, we believe, be fully corrected, and the correcting glasses be constantly worn, not only with perfect safety, but with advantage. Such a patient soon learns to use the necessary amount of accommodation (which is, of course, only the same as that required by the emetrope), and is saved the annoyance of having frequently to remove or change his glasses.

The section on Progressive Myopia is very complete, and the author gives all the more plausible theories that have been advanced to explain the production of this form of myopia, without definitely committing himself to any of them. He calls attention to a factor of possible importance which has not hitherto received much attention—namely, the great change in the amount of accommodation required when a slight variation is made in the position of an object which is held very close to the eye. It is possible that the frequent changes in the condition of the ciliary muscle which a myope of high degree is thus called upon to make, may have even more influence in increasing his myopia than a constant contraction.

Dr. Culver is to be congratulated upon the excellent translation he has produced; the style is always clear, and there is an entire freedom from French idiom.

The style in which the book has been published leaves nothing to be desired; the print and the illustrations are excellent; and the very complete index will much enhance the value of the work as a book of reference.

GLANDERS IN NEW YORK.—Cases of glanders and farcy have become so frequent in New York that the Board of Health have found it necessary to take special steps to enforce the articles of the Sanitary Code which compel the notification of cases.

HOW TO USE OUR EYES. By JOHN BROWNING, F.R.A.S. London: Chatto and Windus. 1886.

"WHERE to Buy our Spectacles" would have been a title more consistent with the contents of the book, and would have indicated a subject of which the writer would apparently have been more competent to treat. Mr. BROWNING falls into the error, which is natural to one of his vocation, of looking upon the eye too much as a passive organ, of which it is only necessary to measure the focus, and to give glasses accordingly. He has even carried this to the extent of prescribing glasses by correspondence.

The author is of opinion that opticians who sell spectacles merely as a commercial undertaking are "quacks," and that, before supplying glasses, they should give their advice "as a physician or surgeon would." Now, we must say that our view of the case is exactly the reverse of this. A patient who buys glasses at an optician's does so at his own risk, and has no more reasonable ground of complaint if he suffers for his folly, than he would have if he bought a cucumber at his greengrocer's and suffered from indigestion as a consequence. The optician does not give advice as a physician or surgeon, for the simple reason that he is neither; and, in our opinion, it is only when he does give advice which he is not qualified to give, that he becomes a "quack."

We readily admit that Mr. Browning intends to do his best for those who consult him, and that "when he can detect disease, or even functional derangement," or "when disease is present or imminent," he sends his customers to seek professional advice. But we wonder in how many of the cases of "very difficult" and high myopia, which Mr. Browning corrected with so much satisfaction to himself, disease was imminent, and how the symptoms are to be recognised without the use of the ophthalmoscope.

We confess, however, that we are most disappointed with the preliminary part of the book. It does not indicate a correct knowledge of the optical properties of the eye; thus, the diagram on page 19, which is intended to show the course of the rays, is entirely wrong; while, on page 62, it is stated that hypermetropia is the condition in which the eye is too long! We must confess that we also (like his fellow-passengers) are tempted to doubt the sanity of Mr. Browning's friend, who, after learning that the retinal images of external objects were reversed, preferred to read with his book upside down. He is not the first person whose head has been turned by a little knowledge, although the result is not generally so obvious. Mr. Browning's evident belief that a real advantage was thus gained shows a deficiency of physiological knowledge.

The illustration depicting one man endeavouring to make out the time by a church clock through convex spectacles which are too strong for him, while another, of very similar appearance, perambulates the opposite pavement with the familiar dog and stick, conveys a caution in so graphic a manner that we are loth to spoil the effect by pointing out a fallacy.

SHORT SIGHT, LONG SIGHT, AND ASTIGMATISM. An Elementary Guide to Refraction. By G. F. HELM, F.R.C.S. London: J. and A. Churchill. 1886.

AN "elementary guide," which is "intended to serve as an introduction to more advanced manuals upon the same subject," should surely treat chiefly of elementary matters; namely; in this case, of optics, and so deal with them as to render the "advanced" books more intelligible. We look, however, in vain for any elementary optics. A large number of facts are, indeed, enumerated, which the reader is apparently intended to accept without question as articles of his creed, but no attempt is made to show that they rest upon any physical basis; indeed, the laws of refraction are not even mentioned, while the figures, far from rendering the text more intelligible, are for the most part themselves puzzles. Nor, making all possible allowance for what might be called diagrammatic licence, are they even correct, every figure that is intended to illustrate the passage of rays through a convex lens, shows them passing not through it, but on either side of it, or at best only through its extreme periphery, the only part that should have been avoided.

In what is intended to be the practical part of the book, the author exhibits no comprehensive grasp of his subject, but is again content to string together statements (which are sometimes incorrect) often without any logical sequence. This is the more to be regretted since, from want of space or other reason, he has purposely omitted the only tests which are of value in a difficult case. Had elementary optics been clearly explained, and their bearing upon the phenomena of astigmatism been shown, the reader might have supplied himself

with what was further wanted out of the "more advanced manuals." As it is, all is confused, and we are convinced that a student obtaining his introduction to the subject of refraction through this book, would acquire a very exaggerated idea of its difficulty, and would probably give it up in disgust. We have neither space nor inclination to point out the numerous errors, but we cannot pass over such as the following: p. 13, "An eye in connection with refraction may be considered as made up of (1) certain refractive media—cornea, aqueous humour, lens—(2) of the retina." Pp. 54, 55, and 56, the author here attempts to make clear to his readers the term "visual angle," which he considers as having a constant value of five minutes. P. 57, the fact that a myopic eye has a larger retinal image of an object at a given distance than an emmetropic eye is stated to be due to the larger size of the visual angle. An attempt is made to illustrate this by means of a figure (20). In an endeavour to make it agree with the text, the drawing is exaggerated beyond all reason, but even so the difference between the two angles, which it is wished to demonstrate, is almost imperceptible. From the evident satisfaction, however, with which the author regards his supposed proof, we cannot avoid a doubt whether he really means by the "size of an angle" the same that other people do.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CONCENTRIC COMPOSITE PILLS.

MAY I bring under the notice of the medical profession and of pharmaceutists, through your columns, a new method of administering drugs in pills, which appears to me to possess many important advantages? So far as I am aware, it has not hitherto been suggested or adopted. Instead of compounding the several drugs in a mass, to their mutual detriment, they are arranged in concentric layers, with such coatings between them as secure their separate digestion.

For example, when it is desired to give a drug which shall be dissolved in the stomach with one which shall be dissolved in the intestine, the latter is coated with keratin, which is not acted upon by the acid secretion of the gastric organ, but which dissolves readily in the alkaline fluids of the intestine, while the drug to be digested in the stomach is deposited on the pill in a layer outside the keratin, and coated in the ordinary way. There are many coatings which will at once occur to practical dispensers as being suitable for the formation of partition walls, as it were, between the layers of the concentric composite pill.

The method of manufacture will be self-evident. The core of the pill, which is to be last exposed to the digestive process is first made, and the pilule is coated. This is then rolled in a mass of the drug, which it is desired should dissolve higher up in the intestine, and thus the keratin is applied so that, whatever may be placed outside again, will be dissolved quickly in the stomach. When rolling the pills successively in the several drugs, they must be weighed before and after each additional layer is applied, to ensure their being compounded of proper quantities. The process is not really as elaborate as it appears on paper, and the very great advantage of being able to give drugs with precision (on physiological principles) will compensate for some little trouble to attain the end in view. Thus, if we desire to give calomel or bismuth to be liberated in the intestine, this can be coated with keratin, and a layer of some stomach drug superimposed.

It may be contended that it would be less trouble to give two pills; but those practitioners who need to study the tastes of their patients, will often find that it is much easier to secure the taking of one pill—say twice or thrice daily—than it would be to induce the same person to take two pills; there are also cases in which it is desirable to secure the directly successive action of different drugs. I am now giving sulphide of calcium pills with an outer layer of iridin.

I must apologise for this communication on a matter of pharmacy, but the subject is, I think, one of considerable interest, and the new mode of making pills opens up a wide field of opportunities for scientific medication. J. MORTIMER GRANVILLE, 14, Hanover Square.

DR. SHERBURN has been presented with a requisition to be nominated as Sheriff of Hull, and has consented.

BRITISH MEDICAL ASSOCIATION SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 9th, 1886.

THE INTRODUCTORY ADDRESSES.

THE inaugural speeches, at such of the London hospitals where the old custom of delivering these orations yet prevails, were of a good average this year. The decline of the custom, which Mr. A. E. Barker regretted, apparently tends to make the few who have to speak take pains to speak well. The perennial criticisms about the platitudes which are heard during the first few days of October at the schools are not unanswerable, for they proceed from the experienced section of the profession, whilst the introductory lecturer is addressing the inexperienced, to whom certain questions of duty, leisure, and prospects are offered for consideration for the first time, so that those dissertations are, to them, not platitudes at all. The lecturer, moreover, cannot possibly avoid speaking to the uninitiated about what the initiated know. Still, in these days, when medical politics are occupying the minds of hospital officers as much as they occupy the attention of practitioners, the lecturer always says more or less about them, speaking, to a great extent, over the heads of the new-comers, for the benefit of his own colleagues, and even of his seniors.

Dr. George Johnson's address was marked by careful thought and good diction. It proves how the terrible "platitudes" to which allusion has just been made may be handled by a skilled speaker, so that what "we all know well enough" may interest us, and at the same time instruct the freshman. Especially to be commended was Dr. Johnson's judicious manner of implying throughout that the patient, the doctor's brother-man, was first to be considered. The patient rather than the disease, was to be thought of; his mental anxieties were to be tranquillised; false hopes were not to be allowed to deceive him; gloomy prognoses were not to be announced till after grave deliberation; and the medical attendant's self-esteem must be put aside when the patient desired consultation even for trivial reasons. In fact, the patient is always somebody to be pitied and cured. He may represent a common case, or a rare case, or a most interesting case; but that matter, important as it may be, is a secondary consideration, to him at least, and his doctor must never forget this fact. Dr. Johnson spoke, towards the conclusion of his discourse, of the wise men of Leicester, and of the terrible responsibility which they will realise on the next occasion that an epidemic of small-pox attacks that metropolis of the anti-vaccinators.

Mr. Malcolm Morris based his lecture on certain accessory, though constant questions, bearing upon the medical profession and its relation to the public. Many of the evils to which he referred are ineradicable, depending on the laws of human nature; still he did well in reminding his hearers that there is a great deal of sand in the founda-

tions of some wings of the medical edifice. The mysticism of mediæval times depended greatly on that self-deception which is the inevitable fruit of any fallacious yet profound system of learning. Alchemists and astrologers were by no means necessarily rogues nor impostors. Truth is more likely to rise out of error than of confusion, and their "humours" and "spirits" were part of a convenient scaffolding of terms not originally intended to promote ignorance. Mr. Morris was, however, right in implying that medical men must not rely on terms. We may observe that abstracts are often less abused than concrete words. To speak of a good constitution is quite scientific, to say that a patient has a bad constitution is generally unscientific, but in avoiding a generalisation, the physician tends to jump to conclusions in favour of specificity, and say "ah, he is strumous," or "well, he is gouty." This is a worse kind of mysticism than talking of bad constitutions or of debility. The latter terms are never absolutely incorrect, though they are ever insufficient. The former may be absolute truth, but they may, on the other hand, be absolute error, especially when hastily seized upon to give a definite tone to the physician's decision, and thus to inspire confidence in himself as much as in his patient. Mr. Morris spoke much about scepticism in science, which, like everything else, has its uses. Many may question his judgment in intimating to students that bacteriology may be an extinct superstition very shortly; yet undoubtedly he was right in insinuating that the student must learn all that he is taught, yet take nothing for granted.

Mr. James Black devoted much of his address to the relations between work and leisure in medical student life. He chose a peculiarly difficult subject. The student generally works too much or too little. Unfortunately, cricket is apt to get into the hands of a relatively small minority of students, and it is the same with other sports. The real object of serious consideration is the loafer—the idle student of non-athletic habits. As to the recluse, the student who overworks, he must be left alone; any interference will most assuredly be misunderstood by him, and, if he change his habits merely at the suggestion of others, he may, at the best, become a third-rate cricketer or a bad whist-player. The athletic student certainly wastes time, technically speaking, but he lays in a stock of health—a great necessity in after-life.

Dr. Wadham's address was especially to be noted in connection with his observations on resident colleges of which he spoke unfavourably, but he exaggerated the disadvantages, and said little or nothing about the benefits of such institutions. Public opinion appears to disagree to a great extent with Dr. Wadham's opinions, but outside the profession the resident college system is as likely to be unduly extolled, as within it that institution is often unfairly deprecated. A good Warden, a fine building giving no idea of shabbiness to its inmates, and a system of special favour to senior students desiring admission, will go far to ensure success in a college. We feel assured that the system of collegiate residence is one which is greatly needed to give character, elevation, unity, and depth of purpose to student life in London. The accidental imperfections and shortcomings of particular institutions should not blind individuals, as they certainly will not mislead the profession, into undervaluing such aids to progress. Perhaps, when St. George's gets its collegiate home like many other hospitals, some future lecturer will see the advantages of such institutions more clearly, and dwell less exclusively on their shortcomings.

Dr. Biss wisely dwelt upon the danger of encouraging youths of inferior capacity to earn a livelihood out of the profession, and Dr. Bristowe appears to have given an address mainly devoted to local subjects. He spoke at St. Thomas's Hospital of St. Thomas's Hospital. There is little doubt that enthusiasm about his own school is wholesome to the student, and hence Dr. Bristowe's subject was of value for its immediate purpose, while it constitutes an interesting and useful historical document which we are glad to put upon record. The student who is told all about his hospital by a respected member of the staff, will, in all probability, take more interest not only in his surroundings, but also in his studies. To be proud of belonging to such and such an hospital, is a sentiment generally associated in the student with that of being proud of distinguishing himself for the honour of that hospital.

ON THE RELATION BETWEEN THE WATER-SUPPLY AND THE PREVALENCE OF CHOLERA IN SPAIN IN 1885.

It is scarcely necessary to state that, in Spain, sewerage, as we understand it, is unknown. In Madrid alone is there any attempt at the water-carriage of excreta; and the sewers, though well arranged as regards construction, alignment, and gradient, are of the Paris pattern, and would not find favour in the eyes of an English or German engineer of the present day. Moreover, the question of the ultimate disposal of the sewage has not been settled. At present, it finds its way by open channels to the river Manzanares, which, in summer, is no better than an open sewer.

Valencia is fairly drained, according to the notions prevalent half a century since; that is, there are privies, and ill-laid and badly formed brick drains, originally intended to carry off rain-water only, but now receiving the overflow of cesspools also. There are some such drains in Granada, but, everywhere else, the old-fashioned cesspit, generally pervious, is met with.

Under these circumstances, we are the better able to judge of the connection between the water-supply and the incidence of the disease, both as regards time and space. Madrid suffered heavily from cholera in 1865, the number of cases, at one time, amounting to no fewer than 800 to 1,200 a day. The works were then completed, but the new water-supply had not been made available. Last year the whole number of cases was 2,207, and of deaths 1,366. The majority of these occurred in the houses along the course of the Manzanares and the open sewage-canals, those in the city being sporadic, and for the most part isolated. On the first appearance of the disease, the municipal authorities closed the whole of the wells and pumps, except the Fuente de la Reina, and the fountains, five public and four private, supplied therefrom.

Madrid, Malaga, Seville, and Jerez are the only towns in Spain which are provided with pure public water-supplies. That of Madrid is taken from the river Lozoya, near its source in the Guadarama Mountains, whence it is conveyed by a series of magnificent works, partly covered, partly open, for fifty miles to covered reservoirs. The service is constant, there being no cisterns. Seville, except in the suburb of Triana, where a poor population of 30,000 still use the water of the Guadalquiver, is supplied from springs at Alcala, six miles distant, by old Moorish covered conduits, and under considerable pressure, by works recently constructed by an English company Jerez also possesses an excellent supply, brought down from the

mountains a few years since by a Spanish company at a cost of £30,000.

On the first appearance of cholera in the province, the authorities of Seville authorised the English company to lay on a temporary pipe to Triana, with a number of hydrants at which the people could draw without charge.

Seville, one of the cleanest towns in Spain, has no sewerage whatever, cesspools being attached to every house. But the only cases of cholera were about nine, with seven deaths in five houses, the occupants of which did not avail themselves of the Company's water; and Jerez escaped entirely, while every other town in the district suffered more or less severely.

On the Tagus, below Madrid, stands Aranjuez, the summer residence of the royal family; and still lower down Toledo, a bad specimen even of Spanish towns. Both take their supplies from the river, and Aranjuez was more than decimated by the cholera. But at Toledo, the governor, with commendable promptitude, stopped the pumps, compelled the inhabitants to bring their water from a spring some miles away, and forbade them even to bathe or wash their clothes in the river. The hardship was greatly felt, but the city was saved.

The case of Malaga is scarcely less instructive. The streets are narrow, unventilated, and intolerably filthy; but, though many of the old wells are still used, the better parts of the town have, for the last five years, been provided with an excellent supply, derived from springs at Torremolinos. No severe measures were enforced to preclude the use of unsafe sources of water, but not more than 200 cases of cholera occurred from first to last in a population of 116,000.

In Granada, Murcia, and Valencia, on the other hand, we have striking illustrations of the consequences of using water from sources contaminated by the poison of cholera.

Granada is supplied with water from the rivers Genil and Darro, which irrigate the fertile plain on which the city stands, the canals by which it is brought to the town being uncovered, and exposed to every kind of pollution; through the streets it is conducted in earthenware pipes, many of them being the same as those laid down by the Moors before the conquest of the city by Ferdinand.

The cholera broke out in the middle of July, spreading with fearful rapidity. In August, the number of cases officially reported was 450 a day. By the middle of September, the epidemic had exhausted itself, the total number of deaths having been, according to official reports, 5,093, though in reality far in excess of this number; some, indeed, maintaining that these figures should be doubled. The authorities were, in fact, completely paralysed by the rapidity and extent of the outbreak, that, at one time, there were no fewer than 400 or 500 corpses lying piled up in the cemetery awaiting interment. The course of the epidemic followed the rivers Genil and Darro, wherever they were used for the purposes of drinking.

Murcia, whence the cholera was believed to have been imported into Granada, also suffered heavily. It received the disease indirectly from Valencia. The inhabitants, for the most part, take their drinking water from the river Segura, or the numerous irrigation canals connected with it, but the better class store a year's supply in cisterns or in huge jars, of Moorish origin, in fact, like those which served to conceal the forty thieves in the tale of Ali Baba. Thus stored, it passes through a stage of decomposition, but ultimately becomes clear and palatable, as used to be the case with the water-casks on board ship. In Murcia, the disease was chiefly confined to the cottages which stud the surrounding plains along the banks of the canals, and to the poorer quarters of the town, where the people used the water direct from the river; those whose supplies were derived from a previous year, when the river was as yet uncontaminated by choleraic excreta, generally escaping.

Valencia is, for a Spanish town, fairly drained and clean, though less so than Seville. Starting from Alicante, in 1884, the cholera reached Jativa, a town on one of the affluents of the Jucar, which, with the Turia, waters the plain of Huerto, that is, the Garden of Valencia. In the spring of 1885, the disease, which had been dormant during the winter, broke out afresh, and travelled down the rivers, attacking the various towns on their banks. At Alcira, it was especially severe, but ceased immediately when the inhabitants discontinued the use of the river water, and had recourse to a spring at some distance from the town. Following the network of canals it reached the Turia, and in the middle of May it burst out in the city of Valencia. At one time, in June, the cases numbered 700 daily, and by the end of September, when it subsided, 4,234 persons, according to the official reports, had been attacked, out of a population of 144,000.

Lastly, Saragosa, the capital of the former kingdom of Aragon, situated on the right bank of the Ebro, and with 84,000 inhabitants, derives its water from the river near Tudela, by a canal used also for navigation. The water is stored in reservoirs, in which the mud subsides, and is then passed through charcoal filters. Part of the population, however, drew their water from an irrigation canal, fed by the river Jalon, and others from the Ebro itself.

The cholera, which had for some weeks prevailed in various towns both on the Jalon and on the Ebro, above Saragosa, reached this city in July, attacking no fewer than 10,000 persons, or one-eighth of the population, though the mortality was not so high as in some other places. But the disuse of the water of the Jalon, enforced by the authorities, was followed by a remarkable diminution of the disease in that particular quarter of the town.

We thus see that the sanitary conditions of the various towns, being nearly equally bad, made very little difference, the incidence of the disease being everywhere in direct relation to the water-supply. Where, as in Seville, and Malaga, Jerez, and Madrid, the water was good, the disease was slight or even absent, where the water-supply was polluted by the choleraic excreta of the neighbouring population, the epidemic was severely felt; and, most striking of all, at Toledo, where the unsanitary conditions and filthy state of the town, at the best of times, could not but have been intensified by the deprivation of the usual sources of supply, the compulsory employment of a pure water, though scarcely more than was absolutely necessary for drinking purposes, had the effect of completely averting the pestilence. Filtration, such as it was, seems to have been of little use, but a pure supply, whether from springs or from mountain streams, was invariably successful.

PUBLIC KITCHENS.

THE question of the establishment of public kitchens, for the supply of cheap cooked food for the poorer classes, has for some time been within the range of practical social politics. It is more than two years since the Cheap Supply of Food Company, promoted by Sir Edward Sullivan, established such a kitchen in Emmeret Street, West India Docks; and the Restaurant Company founded another at Gateshead-on-Tyne

and since then the value of the system has been making itself more widely felt. It is a method of enabling the poverty of the masses to make itself more endurable by the help of its old-standing and most powerful ally, co-operation. If a thousand neighbouring families each cook their own meals at a thousand fireplaces at the same time, there is an obvious waste of labour, of fuel, and of food. If all the food were cooked together, even though every one were not obliged to have exactly the same constituents for his meal, yet a great saving could be effected in each of these three items; there might be less labour spent, less fuel burnt, and more cooked food produced, for the same money.

If that is really true, it may be very readily objected, the stern pressure of the iron hand of poverty would surely have proved a sufficient motor power to bring men to some such system already, with the aid of a very little common sense. A man will do a good deal to save himself and his family from being starved; but the truth is that, of all conservative strongholds, the habits of food and feeding are some of the most irrationally conservative, and anything that can bring about a change in them will have shown proof of very remarkable power, even under a more sagacious guidance than poverty, and more capacity of combination than exists in the extremely destitute. There are various small difficulties in the way which have all the power of initial friction in preventing the first turn of the wheel. If a public kitchen is to be both self-supporting and cheaper than any home-cookery, it must no doubt be large; and that implies considerable initial expenses, which can only be met by wide and well-organised co-operation—unless, indeed, charity, or at least friendship, steps in to lend capital and incur risks. The space in any such crowded neighbourhood as is likely to be able to support a public kitchen is probably expensive, the apparatus considerable. The trained labour fit to carry out fair cooking with cheap materials may be not easy to obtain. To overcome these and other initial difficulties, a good deal of time is required from a skilful organiser, who is not likely to get anything but thanks in return; and such a person is not always at hand. Further, granted that the project is started, it has to fight a war to the knife with the small retail dealers; for a public kitchen can only maintain itself by wholesale dealing in its purchase of provisions, and by cutting off the profits of the retailer. That is a serious matter enough when the retailer is first in the field, and has established a connection with his customers which a few showy Christmas presents and loudly advertised "reductions" here and there may do much to strengthen. Besides, he is so much more at hand; he lies in wait for his customers at their very doors; whereas it is hardly likely that the public kitchen can be less than a few streets distant, and no one quite likes having to carry home "something hot" for a quarter of a mile in the rain.

Of course, it is very easy to point out some difficulties in any change; in such matters as these, the mere fact that it is a change is a difficulty. But the more important point is the estimate of the value of the gain, certain or possible. An excellent lecture, by Captain M. P. Wolff, "On the Rational Alimentation of the Labouring Classes," which he gave at the Parkes Museum of Hygiene, and has just been published, furnishes a clear picture of the advantages, not drawn from fancy nor overcoloured, unless it be that the good sense of the poorer classes whom he advises has one or two extra touches of high lights. He calls in the aid of practical experience, as well as of physiological experiment, to show what is the cheapest attainable price combined with sound and sufficient food, which, after all, is the most radical and important question. He gives an estimate of the average daily fare desirable for a healthy hard-working man. It is a trifle more than is allowed to the French and German armies on a peace footing, a trifle more than English prison-diet for a man on hard labour. It amounts to about the following: Bread, 26 oz.; butter, 1 oz.; cheese, 2 oz.; beef, 4½ oz.; potatoes, 17 oz.; peas, 2 oz.; lard, ½ oz.; in all, about 3¼ lbs.; and, as a variation, instead of the beef and peas, he suggests pork, 4 oz.; lentils, 4 oz. Of course, there might be many other variations. The cost of such food for the day, prepared in a public kitchen in London, is estimated at 8d.; and an "emergency" diet, in which there is no meat, but only some more cheese and oatmeal, is set down at 7d. This is certainly less than what it costs at home, even when the fuel and labour are excluded from the home estimate. There are many cases certainly, where the fire at home could not be spared, and many where the labour saved would be practically valueless; but there are also not a few where the fire, especially in summer, could be saved, and the time gained could be turned to some account. The English working man is often excessive in the amount of food he eats; but, of course, it would be quite out of the question to attempt to teach him moderation by limiting the quantities supplied by any public kitchen to an individual; still a somewhat brief *menu*, prepared with a little tact, might lead some people, especially if they were half-starving, to the practical discovery of some sorts of food which they had never sought for, or perhaps met with. That the world, rich and poor, educated and uneducated, does not rightly understand the nutritive value of foods, is a doctrine that physiology has never been tired of preaching from the house-tops; and, though Liebig may have been a little too positive about phosphates, and the reckoning of the value of nitrogen, yet science has more practical lessons to teach from the physiology of digestion than the experiments of untrained men have ascertained, and it would be a disgrace to her if she had not. This, then, would be an opportunity for the scientific philanthropist to show that he has some science in him, as well as true philanthropy. The establishment of public kitchens may sound trivial enough; but it would, in fact, be a point gained in political economy and in social science, and it might be a point gained in hygiene, of no small value.

Dr. de Colleville, of Brighton, has received a bronze medal and its diploma, from the Royal Society of Medicine, Brussels.

Sir William Stokes (Dublin) and Mr. Ernest Hart (London) have accepted the office of Vice-Presidents of the International Medical Congress, Washington.

The inaugural dinner of the Glasgow University Club, London, will take place on Friday, October 22nd, at 7 P.M., at the Holborn Restaurant. All communications should be addressed to Dr. Heron, 57, Harley Street, W.; or Mr. McIlraith, 3, Furnival's Inn, E.C., the Honorary Secretaries.

The Merthyr guardians, who were deputed to visit the Bridgend Asylum and inquire into the alleged hardships arising to Welsh patients through none of the medical men being able to understand the Welsh language, have reported that, as far as the patients of that union were concerned, the alleged hardships had been very much exaggerated, but suggested that, in future appointments, a Welsh-speaking officer be chosen, provided he is equally efficient with other candidates.

A PROFESSOR OF PHILOGENY.

It will be remembered that some time ago Herr Paul von Ritter, of Basle, gave the sum of 300,000 marks to the Jena University for the furtherance of scientific inquiry on the basis of Darwin's theory. It has now been decided to employ half the interest in the maintenance of a "Ritter Professorship for Philogeny." The chair is to be filled by Dr. Arnold Lang, formerly scholar and assistant of Professor Häckel, of Jena University.

THE SOCIETY FOR THE STUDY AND CURE OF INEBRIETY.

The President and Council of the Society for the Study and Cure of Inebriety, will give a reception to their associate, Mr. Axel Gustafson, author of *The Foundation of Death*, on his return from America, in the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, W., on Tuesday afternoon, October 12th, 1886, at 4 P.M.

DEATH FROM HYDROPHOBIA.

A mechanic named Thomas Oates, who is said to have been bitten by a cat, about eighteen months ago, and who was seized with illness at a late hour on the night of Thursday, September 30th, died in the Infirmary at Rotherham on the following day.

THE TEMPERATURE IN BELLADONNA-POISONING.

It is generally stated that, in cases of poisoning by belladonna, the temperature is lowered, or at the least not raised. In nine cases recently observed in Germany by Kratter and Strassman, the temperature was distinctly raised in every instance. If this proves to hold good generally, it would afford one more argument for using belladonna as a stimulant instead of alcohol.

MEDICAL AID TO INDIAN WOMEN.

A meeting of the National Association for Supplying Medical Aid to Women in India was held at Simla on September 20th; Lady Dufferin presided, and Sir Charles Aitchison and Sir Lepel Griffin were among the speakers. Details were given of the great and useful work which is being done by the Association, and an appeal was made for funds to enable it to extend its operations. It was proposed to make a special effort to promote the object of the Association in connection with the Queen's Jubilee.

THE UNUSUAL WEATHER.

Such exceptional hot weather as that which prevailed at the earlier part of the week, it is interesting to note, has not for many years been experienced at so late a season of the year. On Monday, the thermometer registered in some districts 78° in the shade, and 108° in the sun. Perhaps within the recollection of none has there, during the autumn months, been such a spell of brilliant weather.

THE ENTRIES AT THE MEDICAL SCHOOLS.

It is as yet too soon to forecast, with any approach to accuracy, the number of students who will enter the Metropolitan Medical Schools this session; but, from reports which have reached us, we fear that there is no reason to hope that there will be any marked increase, as compared with recent years.

HOSPITAL SUNDAY FUND.

This year's Hospital Sunday Fund, now in course of collection at the Mansion House, has already reached more than £40,000, being the largest sum ever received for that object. There are still fifty-four collections from churches and chapels outstanding, besides a bequest of the late Dr. Wakley. If to this amount the sum of £78,700 subscribed since the spring for the relief of the unemployed poor in London be added, an aggregate of nearly £120,000 has been raised and distributed in aid of the poor and sick of the metropolis alone during the present mayoralty.

TYPHOID FEVER AT SWANSEA.

There is another outbreak of typhoid fever at Swansea. Several deaths have already occurred, and there are many cases of illness. It has just been discovered that a stream, which runs into the reservoir which supplies the west end of the town, has been subject to pollution from farmyard refuse. This source of supply has now been cut off, but the greatest indignation is expressed at the carelessness which allowed such an evil to remain undetected or unremedied until it had scattered disease over the town.

THE PASTEUR INSTITUTE.

M. Pasteur now finds, it is stated, that the 2,000 square mètres of ground, of which the City of Paris has granted him the free use for ninety-nine years, are insufficient for his purposes. The plan for his future Institute is said to be an ambitious one; and he, therefore, asks the Municipal Council to let him have a large plot of ground adjoining his allotment, for which he is willing to pay. It is thought that M. Pasteur will obtain it at a rent scarcely more than nominal.

POISONING BY PTOMAINES.

Two deaths are again recorded, believed to be due to the formation of alkaloidal poison in the arrested putrefaction of smoked meat. Two women, at Bangor, in the north of Ireland, were recently seized with all the symptoms of irritant poisoning, which terminated fatally. The whole of the family partook of German sausages, and all suffered subsequently from vomiting and diarrhœa. After a thorough investigation, the result arrived at was, that death was due to the development of poisonous alkaloids in the German sausages, of which the whole family had partaken.

POST-GRADUATE COURSE IN BIRMINGHAM.

During the winter session, a post-graduate course of lectures will be delivered at Queen's College, Birmingham, by Dr. C. W. Suckling, Professor of Therapeutics and Materia Medica, on the Diagnosis of Diseases of the Brain, Spinal Cord, and Peripheral Nerves. The lectures will be given on the Tuesdays during November and December, ending on December 21st. Dr. White will demonstrate the use of the ophthalmoscope and perimeter. When possible, typical cases will be shown after each lecture, which will commence at 5 P.M. Practitioners and students of medicine proposing to attend this course, are requested to signify their intention to Professor Windle, Honorary Secretary, Queen's College, Birmingham.

OVERTIME WORK.

The Secretary of State for War, prompted by a desire to promote the health of the workmen in the Government factories, as well as the good of the service, has issued an order that all overtime work at Woolwich Arsenal and other Government factories is to be discontinued, and the workmen, who have been for the most part employed four extra hours daily for the past twelve months, revert to the ordinary average of nine hours a day. The Secretary of State for War speaks wisely when he says that he does not think that men can work continuously thirteen hours a day in confined workshops without suffering ill consequences, and that when they are fatigued by long hours, they are unlikely to work so well as they can within reasonable restrictions, even with the stimulus of increased pay at the rate of time and a half. This is an example which many other large employers of labour would do well to follow.

THE DISTRESS IN CHARLESTON.

The medical men practising in Charleston, U.S.A., have suffered severely during the recent earthquakes; not only have they had to endure, like the rest of the community, the destruction of their houses, but they have been chained to the doomed town by a sense of duty, and have been compelled, for the same reason, to minister to the wants of their townsmen without the hope of any immediate return—

if, indeed, the services rendered in a time of emergency are ever recognised. Meanwhile, the necessaries of life in Charleston are at famine prices. Under these circumstances, the *New York Medical Record* opened a special relief fund on September 11th; in response to this appeal, a sum of nearly three hundred and fifty dollars was immediately received. The buildings of the Medical College have been shattered, and the lectures this winter will have to be delivered in a temporary structure.

DR. JAMES ALEXANDER GRANT, CANADA.

THE following is a short note of the career of Dr. Alexander Grant, who was recently appointed an honorary member of the British Medical Association. James Alexander Grant, M.D., M'Gill University (1854), and Member of the Royal College of Surgeons, England, was elected Fellow of the Royal College of Physicians in 1882; he has been a Member of the Council of the College of Physicians and Surgeons, Ontario, for more than twenty years, and was President in 1867. He is an Ex-President of the Dominion Medical Association; an Honorary Vice-President of the International Medical Congress, 1887; a Fellow of the Royal Society, Canada, and Member of Council. Various contributions to medical science have appeared from time to time, during the past thirty years, in British and Canadian medical journals from his pen. In medical education in Canada, he has taken a deep interest, and has been instrumental in bringing about necessary reforms. He has recently been a delegate to England on the subject of a reform in medical legislation, which, through the endeavours of Sir B. Walter Foster and his associates, has been carried into effect, fully meeting the wishes of the Canadian medical profession. For a period of nearly a quarter of a century Dr. Grant has been the physician to the representatives of Her Majesty in Canada.

CREMATION IN GERMANY.

CREMATION, it would appear, is making great progress in Germany. There has recently been held at Gotha a "Diet" of delegates from the various cremation societies in Germany, as well as of several other countries, including Italy, Switzerland, Holland, and America, the last being represented by Mr. Storer Cobb, of Boston, who is at present lecturing in Germany on the disposal of the dead by fire. The Diet discussed and approved the statutes of a general association of societies for funeral reform and optional cremation, and this association was joined by the local societies of Berlin, Potsdam, Frankfort, Darmstadt, Liegnitz, Chemnitz, Heidelberg, Dresden, Leipsic, Hamburg, Vienna, etc. These societies have already their journalistic organs in the shape of two magazines, called *Gesundheit* and *Neue Flamme* (Health and New Flame). The delegates inspected the crematorium at work in the churchyard of Gotha, and they were assured by the burgomaster that the repugnance of many to this form of burial had been completely overcome by the sight of the decorous and befitting manner in which bodies are reduced to dust by the rapid action of fire, and then inurned.

INFECTIOUS HOSPITALS.

A POINT of some interest to other towns has arisen in connection with the Sussex County Hospital, at Brighton, where there is a proposal on foot to form a sanatorium in connection with the institution. This project is said to be looked upon with considerable dissatisfaction by the Sanitary Committee of the Town Council, a deputation from which has waited on the committee of management with regard to the reception of fever patients, and urged that advantage should be taken of the proposed rearrangement of the establishment to discontinue the practice. It was specially pointed out that both at Brighton and in the neighbouring town of Hove, the local authorities had provided hospitals for infectious cases (these hospitals being in each instance outside the boundaries), and it was urged that, besides refusing to receive fever patients, the managing committee should induce such patients to go to the borough sanatorium, and similar institutions elsewhere, provided for the treatment of infectious diseases. The hospital committee represented that they were bound, by their statutes, to receive fever cases to the extent of their accommodation, and that there would be only six beds, including those for cases arising on the establishment; but, it was promised that an attempt would be made to alter the statutes. As it is generally agreed that the introduction of fever cases into the town, under any pretext, is highly undesirable, it is expected that the hospital authorities will make this concession to public opinion.

DR. FRANÇOISE RIBARD.

Il Secolo gives some interesting particulars of Mademoiselle Françoise Ribard, the lady-doctor attached to the French Mission in Tonquin, whose premature death is widely deplored. Born at Chagny (Saône et Loire) in 1851, Françoise Ribard obtained the diploma of Laureate in Belles Lettres in August, 1872, and in Science in August, 1873. In 1877, she graduated in medicine, and exercised her profession at first in Nantes, and afterwards, in 1880, in Cairo. Returning to France in 1884, she was charged by the Government with the medical inspection of the female schools in the city of Paris. She was shortly after attached to the mission to Tonquin in the capacity of Medical Officer to the Residency. Despite the severe studies to which she had devoted herself, Mademoiselle Ribard remained essentially a refined and graceful woman. She knew almost all the languages of Europe, and spoke Arabic fluently and correctly. She was a distinguished pupil of Drs. Wecker and Galezowski, and was especially skilful in diseases of the eye. Her fame in this line of practice caused her to be sent for to Hué, where she operated successfully on several high officials and mandarins. She was also engaged to operate on the Queen-Mother for cataract; but hardly had she began to attend her, when she was seized by the scourge of that country, malarial dysentery, which, in a few days, caused her death at the early age of 35 years.

DR. ALFRED CARPENTER.

ON Tuesday evening, October 5th, 1886, Dr. Alfred Carpenter, J.P., the President of the Croydon Literary and Scientific Institution, gave a *soirée* to some of its members and the principal residents, to celebrate the re-opening of the hall after its renovation. Advantage was taken of the occasion to unveil a marble bust of Dr. Carpenter, sculptured by Mr. E. Roscoe Mullins, which was exhibited in the Royal Academy this season, and at the same time to present Dr. Carpenter with an illuminated address from the subscribers to the bust, expressing their appreciation of his indefatigable exertions in furthering the interests of the Croydon Literary and Scientific Institution during the last thirty years. The bust (of heroic size) is a well-executed likeness of Dr. Carpenter, in statuary marble, on a bracket of dove-coloured marble, with a carved background of the same material; the face of the bracket bears the following inscription: "This bust was presented to the Croydon Literary and Scientific Institution by several friends, in admiration of the zeal and energy shown by Dr. Alfred Carpenter, J.P., for many years in furtherance of its development and prosperity. October 5th, 1886." Mr. A. Hunt, editor of the *Croydon Guardian*, occupied the chair. Mr. Alderman Rymer, J.P., accepted the gift on behalf of the directors, who act as trustees for the institution, and handed the address to Dr. Carpenter, who gratefully acknowledged the gift. A vote of thanks to Dr. Strong, who has acted as honorary secretary, closed the proceedings, the rest of the evening being occupied by music, and sketches by Mr. Corney Grain.

DEATHS FROM LAMP EXPLOSION.

IN consequence of the numerous fatalities through the breaking or exploding of lamps, the Metropolitan Board of Works have, with a view to lessening the dangers arising from ignorance or carelessness in using paraffin lamps, issued, for the general guidance of the public,

suggestions of which the following are the most important: "The oil reservoir should be of metal rather than of china or glass; the wicks should be soft, not highly plaited, dried at the fire before being put into the lamp, and only just long enough to reach the bottom of the oil reservoir, and should be wide enough to fill the wick-holder without having to be squeezed into it; lighting—when the lamp is lit the wick should be first turned down and then slowly raised; extinguishing—lamps which have no extinguishing apparatus should be put out as follows: The wick should be turned down until there is only a small flickering flame, and then a sharp puff of breath should be sent across the top of the chimney, but not down it." It will be seen that the above recommendations are almost identical with those drawn up by Sir Frederick Abel last year, to which we have frequently called attention. It is satisfactory to note that additional publicity is now to be given to them. We are glad to observe that more than one enterprising firm is busying itself in producing a lamp without the many objections to those most commonly in use, and with such improvements as will render accidents such as those which have recently occurred with such frequency less common.

THE *HOSPITAL*.

THE first number of this new weekly periodical appeared on Saturday October 2nd. It is, apparently, brought out under the auspices of the Hospitals Association. Its contents are varied, and include an article which professes to state the *raison d'être* of the publication, and its policy; a serial story, relating to a patient just discharged from an infirmary; an article on Hospital administration, in which the query as to the necessity of providing alcoholic drinks, recently raised in the columns of the BRITISH MEDICAL JOURNAL, is answered in the affirmative; some remarks as to words of consolation to the sick and afflicted; others relating to flowers, ferns, and ward decorations; four columns of notes and news relating, more or less closely, to hospitals and cognate institutions; the early history of the London Hospital; a biographical notice of the late Dr. J. G. Wakley, which draws attention to his connection with the Metropolitan Hospital Sunday Fund; an Editor's letter box; a column for queries respecting difficult cases, and general subjects, and another for finding employment for patients on their discharge; a page for prize competitions; and, finally, a list of the chief metropolitan hospitals, of the hours at which out-patients are seen, and of the names of the physicians and surgeons who may be consulted thereat. Several pages are devoted to advertisements anent hospitals, sanitary arrangements, the drugs of manufacturing chemists, and medical publications. Altogether, it may be remarked that, if any journal of this kind is really required for the heterogeneous multitude who take a lively interest in hospitals and infirmaries, this present publication may be found to supply such a want. Its type and paper, and general finish, are good.

A DIFFICULT CASE.

A CASE recently came before Mr. Bushby, at the Worship Street Police Court, in which a young man was charged with gross misconduct in the third-class carriage of a train, on the North London Railway, in the presence of a married woman, travelling in the same compartment. No assault was complained of, and, from the nature of the case, no confirmatory nor exculpatory evidence was, or could be, forthcoming. The defence was confined to a suggestion that the prosecutrix was suffering from nervous excitement, and was the victim of a hallucination. On the ground that nothing in the character or antecedents of the prosecutrix tended to show that she was at all likely to fabricate such a story, or be the subject of hallucinations, the magistrate condemned the prisoner to three months' hard labour. Without any special reference to the particular case, we may call attention to the extreme difficulty of deciding such cases as these, where the offence is purely moral, and where no circumstantial evidence can be procured, nor effectual contradiction made. The whole question, therefore, turns upon the characters of the parties involved, and this may very easily leave room for errors of the most serious description. With all respect for the decision of the magistrate, who was probably far better able to form a correct opinion than anyone not present at the hearing, we would suggest that the case was one in which searching inquiry should have been instituted before sentencing the prisoner. Medical evidence might usefully have been had recourse to with the view of ascertaining whether or not the complainant had ever given signs of nervous instability. If her physical and moral character were satisfactorily proved, then a medico-legal inquiry into the mental condition of the prisoner would be called for. It is rare that these extreme erotic tendencies suddenly develop, and some facts might very possibly have been elicited with regard to his past history, which would have thrown some light on his moral state. In any case, an examination into the mental condition of the accused was certainly called for, since, if the allegation were true, his conduct was hardly that of a man who should be permitted to continue at large. Perhaps one of these days our railway companies will consider the propriety of reserving special compartments for ladies unaccompanied by a protector, following in this an old-standing custom on foreign lines of railway. As things are at present, men of good reputation are as much entitled to claim protection as women, and this they might secure if the railway authorities would make a rule forbidding ladies unaccompanied by a smoker to enter smoking-compartments. The danger of wrongly condemning an innocent man to the detriment of his whole career will thus be minimised.

PRECAUTIONS AGAINST RABIES.

AN Order in Council has been issued, under the Contagious Diseases (Animals) Act, dealing with the regulation and control of dogs. The order, which is cited as "The Rabies Order of 1886," provides for the extension of the Acts of 1878 to 1886, so that "dogs shall be animals and rabies shall be a disease" for the purposes of those Acts. The duty of the police on notice of rabies is defined, and special regulations are laid down for the guidance of local authorities as to the muzzling of dogs and the disposal of stray dogs, and as to the movement of dogs affected with or suspected of rabies. The order extends to England, Wales, and Scotland, and came into operation on Oct. 1st. The following note on the steps taken in continental countries for the extermination of hydrophobia, has been sent by a correspondent to a contemporary, and will be read with interest. Writing from Geneva, he says:—"The outcry against the order of Sir Charles Warren, with reference to the control of dogs in the British metropolis, is causing some little astonishment, in this as well as in other continental countries. The law relating to dog-muzzling which is periodically enforced over here is not unpopular, and statistics seem to show that in most cases it has considerably lessened the terrible disease of hydrophobia, and in some it has stamped it out altogether—notably in Norway. There, a few years ago, there was an outbreak of rabies; but as it was not considered serious, the law was not exercised, and the disease seemed to die out. The following year, however, there was a serious recrudescence, and an order was at once issued, that all dogs were to be securely muzzled, that no dogs would be allowed to be imported until they had been officially certified as being free from disease, and that any dog found without a muzzle would be instantly killed. This order was put into execution with an iron hand, and was kept in force for a whole year. The result is, I believe, that there has not been a case of hydrophobia or rabies in the country since. In Italy, a still more summary mode of procedure is in force. An edict goes forth that dogs are to be kept under control, which there means that they are not to be allowed out at all unless led by the owner. There is no ambiguity as to what 'proper control' signifies. In all the towns and villages men go about with a cart covered with a net. The men are armed with long sticks, to which a formidable knife is attached. If a dog is met 'not under

control,' he is instantly seized and pitched into the cart, the net holding his prisoner. If the wretched animal attempts to bolt he is pursued, the long sticks and knives are brought into play, and, in nine cases out of ten, the hacked and mutilated carcase of the poor animal is tossed into the cart, and as more frequently than not the creature is not killed outright, its suffering may be imagined. To all travellers and residents in Italy these ghastly loads are common and painful sights. When the cart is full it is taken to a specially appointed place, and the animals are despatched. This mode of stamping out hydrophobia is revolting, but it is certainly effectual, since the disease is very rare in Italy. In France and Germany periodical muzzling is also strictly enforced, and very little mercy is shown to animals found without the muzzle. In Switzerland, where there is a perfect craze for keeping dogs, every canton can issue an order at any moment, compelling owners to muzzle their dogs; and the instant rabies is suspected, the law is rigorously put in force—often on very insufficient grounds; and it is no uncommon thing for dogs to remain muzzled in some cantons for six months out of every twelve. During the time the order is in force, spies are specially employed to keep a look out for unmuzzled curs, and every dog so found, no matter what his value may be, is seized, kept for a few hours, and if not then claimed, is despatched; while every gendarme and garde de la paix is empowered to kill a dog instantly, wherever it may be, if it shows the slightest signs of madness. Though the law might unquestionably be more humanely carried out, it must be confessed that hydrophobia has become very rare in this country."

A BONESETTER'S VICTIM.

THE border country seems to be just now the great home of the bonesetters, who drive a prosperous trade, on a market-day, in many northern country towns. A sad instance of the disastrous results which are liable to follow the clumsy methods of these ignorant pretenders is afforded by the case of Edward Johnston, stonemason, of Wigton, in Cumberland. He met with a serious accident while working a crane on September 11th. Dr. Tiffen, who saw him a few minutes later, stated in evidence that there was a severe compound dislocation of the right ankle, with fracture, the bone protruding about two inches. The bones of the left foot were also injured. The face was cut, but not deeply so. Dr. Tiffen adjusted the bone properly, and dressed the wound with carbolic solution. As the patient was very restless, he fixed the legs with sand-bags, leaving the wound in a convenient position for dressing. On the following day, Dr. Tiffen strongly advised the removal of the patient to the Cumberland Infirmary, but was told that "Mr. Wilson, the bonesetter, was coming," and, therefore, ceased to attend. On September 13th, being pressed to see the patient again, he consented on condition that a surgeon from Carlisle met him in consultation. Johnston's father agreed to this, and he telegraphed for Dr. Lediard, of Carlisle, who attended. They went to the house, and, when Dr. Lediard began to remove the bandages, Johnston's father insisted that they were not to touch the foot, but only to attend to the body, Mr. Wilson would attend and be responsible for the leg. This action on the part of the father, which so well illustrates the extraordinary ignorance and credulity of the bonesetters' dupes, of course compelled Drs. Lediard and Tiffen to retire. The unfortunate young man was next seen by a medical practitioner on September 16th. Dr. White, who was then called in, thus described the condition of things to the coroner's jury. The patient was delirious, and symptoms of collapse were appearing; the leg, which was in a filthy condition, and badly attached to a splint, presented a large collection of dark ichorous matter posteriorly. No antiseptic or other sanitary precautions appeared to have been taken. The bed was a mass of fœtid matter, which had percolated through it from the leg, and no provision had been made for absorbing the discharges. The foot was twisted. A slight pulsation could be felt in the dorsal artery of the foot. The toes were cold, and without sensation, with the exception of slight sensation in the fourth and fifth. He visited the man again about 5 P.M., and found the splint completely kicked off. He applied suitable dressings, and gave stimulants. No attempt had been made, so far as he could see, by the bonesetter to fix the splint. The patient died at 4 A.M. on September 17th, death being due, in the opinion of the medical attendant, to gangrene and septicæmia. The coroner held an inquiry; and, at the conclusion of the evidence, observed that the jury had to consider whether the want of skill on the part of one who professed to have skill was such as to amount to manslaughter; he advised the jury that a verdict of manslaughter could not be found, but left it to them to say whether the death of the deceased had been accelerated by the want of proper treatment. The jury in the end shirked the question, and returned a verdict of "Accidental Death."

NELSON'S PHYSICIAN OF THE FLEET.

IN a letter to his sister, dated January, 1805, published in this week's *Times*, Dr. Leonard Gillespie, who was physician to the fleet under Lord Nelson, in his ship *Victory*, gives a very pleasing account of his life and occupations, and of the great personal kindness with which he was treated. He writes:—"I am at present fully established in my office as physician to this fleet, which is (thank God) in the best possible order as to health, discipline, spirits, and disposition towards our gallant and revered commander, Lord Nelson. As a proof of the state of health enjoyed by the seamen, I may instance the company of this ship, which, consisting of 840 men, contains only one man confined to his bed from sickness, and the other ships (twelve of the line), of from 84 to 74 guns, are in a similar situation as to health, although the most of them have been stationed off Toulon for upwards of 20 months, during which time very few of the men or officers (in which number is Lord Nelson) have had a foot on shore. You will perceive from this account, my dear sister, that the duties of my office are not likely at present to prove very laborious, and my duty as Inspector of the Naval Hospitals will occasion me to visit, as may be found necessary, Malta, Sicily, Gibraltar, and perhaps Naples, so that, from all appearances and my experience hitherto, I have no reason to be displeased with the comforts, duties, or emoluments of the office I at present fill, my salary being £465 *per annum*, and being situated so as to live in a princely style, free from any expense. This exemption from expense arises from my having the honour of forming one of the suite and family of Lord Nelson, whose noble frankness of manners, freedom from vain formality and pomp (so necessary to the decoration of empty little great men), can only be equalled by the unexampled glory of his naval career, and the watchful and persevering diligence with which he commands this fleet. On my coming on board, I found that the recommendation which my former services in the Navy had procured for me, from several friends, had conciliated towards me the good opinion of his lordship and his officers, and I immediately became one of the family." And again on January 18th:—"I have commenced the duties of my office without any difficulties to encounter, the business being very familiar to me. It consists in receiving returns of the state of the sick on board from their respective surgeons, visiting the ships as occasion may require, recommending to the surgeons the modes of treatment which to me seem most judicious, causing the surgeons and the sick under their care to be supplied with the medicines, refreshments, and necessaries which they may require, all which offices are very agreeable to me."

OBSTETRICAL SOCIETY OF LONDON.

THE first meeting of this Society for the ensuing session was held on Wednesday, October 6th. Dr. Malins exhibited a dermoid ovarian cyst removed from a woman aged 53, together with a fibroid outgrowth from the uterus; the latter was severed from its connections by means of the thermo-cautery. Dr. Lewers showed microscopical sections of a uterus, affected by malignant disease, removed by him seven months ago; the patient was still in good health, and showed no signs of recurrence of the disease. He also exhibited a fœtus from a case of ruptured tubal gestation, successfully removed through Douglas's pouch ten days after rupture. Dr. J. Phillips brought forward an instructive specimen of a fœtus and membranes expelled from the uterus thirty-five days after conception, according to very fair evidence. Dr. R. Boxall read notes of a case of sudden dyspnœa, during

a fit of coughing, in a lying-in woman, followed by more serious thoracic symptoms and death. The pericardium was very deficient, and the heart appeared to have been dislocated during the violent attack of coughing. It lay in the left pleural cavity. The thoracic viscera were exhibited. Dr. William Duncan and Mr. W. B. Sutton exhibited a pair of ovaries and tubes, showing hæmatocele traced to hæmorrhage from the left ovary. There had been dysmenorrhœa and menorrhagia following labour, and the appendages were successfully removed. A pair of ovaries removed for dysmenorrhœa were also shown. A paper on cases of Rupture of the Uterus was read for Drs. Swayne and Cox. It gave rise to a very active discussion, in which the relative merits of Porro's operation and the Cæsarean section were considered. The results of the variety of Porro's operation performed when the uterus is ruptured are very unsatisfactory, as was shown in the valuable tables published by Dr. Godson in the JOURNAL of January 26th, 1884. Dr. Champneys, in the course of the discussion, noted Sänger's practice of suturing a wound in the uterus. Deep silver-wire sutures were passed through the uterine walls, but not allowed to include the mucous membrane, so as to shut out any sepsis which might enter the wound from the uterine cavity. Superficial silk sutures were employed to unite the peritoneal margins of the wound, which was itself trimmed, if necessary, to insure perfect union. A paper was read by Mr. Alban Doran on Papilloma of the Fallopian Tube, and the Relation of Tubal Disease to Hydro-peritoneum. The discussion on this monograph was deferred, on the motion of Dr. Routh, till the next meeting of the Society.

THE BRITISH GUIANA BRANCH.

THE inaugural meeting of this resuscitated and reorganised Branch of the British Medical Association took place in the Colonial Hospital, Georgetown, on September 9th. There was a representative gathering of medical men, the chair being taken by Dr. Robert Grieve, the President of the Branch, who, in the course of his address, pointed out that the colony, by its geographical position, lost somewhat in facility for intellectual progress, being not in the current of any of the lines of human intercourse likely to be traversed by men of light and leading. As a rule, they were compelled to glean their knowledge from newspapers and books; medicine as a science was not exempt from disabilities of the kind, and it behoved them, as its disciples, to do their best to render them harmless. Such an attempt was the re-establishment of this Society. They were thus privileged to take their places in what had become the largest and most influential of medical societies. Through its admirably conducted JOURNAL they were kept, as far as reading had the power, in touch with every phase of work and thought in the wide range of medicine. His own belief was that in the continuation and active work of such a Society lay the best chance for progress in scientific medicine in British Guiana. Dr. Grieve then paid a well-deserved compliment to Dr. Blair and his work on *Yellow Fever*, of which the colony might, he said, well be proud. It had been stated by Dr. Blair that some forms of disease common enough in England at that time, were, at the same date (1847), unknown in British Guiana; others, though known, were of rare occurrence. Amongst the complaints mentioned were some that, in his experience, were frequent enough at the present day. This difference, assuming that it existed, naturally suggested the question, How had this change come about? From Dr. Blair's list, a few diseases had been chosen in which the contrast was most striking, and where the change, it was thought, best illustrated local ways of disease production and dissemination, and pointed most directly to a practicable means of prevention. Among the ills from which, Dr. Blair said, the colonists were then entirely free was rabies. Another disease from which the colonists were nearly free in his day was tubercle; there was a common belief that there had been a marked increase of consumption; there was 32 per cent. of deaths from tubercle in the present against a little over 5 per cent. in the past. This he attributed largely to the overcrowding in their dwellings. There was, he observed, a lingering regret for the days when, in our balmy air, men slept under their primitive shelters of leafy boughs; these were, at all events, healthier than the cottages of to-day. Aneurysm was another instance of the extension of disease in the colony, it was said to be quite as common if not more so than in England. It was evident that, whilst the health of the people was improving generally, there were still directions in which it was deteriorating. The health of the community was to be safe-guarded by vigilant watchfulness over comings and goings. People must be taught that if they live together it should be under conditions which render a healthy existence possible, and individuals were to be brought to see that freedom from vice meant a greater immunity from suffering. In season and out of season, this great lesson of sanitary science might well be reiterated, that only in purity was there safety. A discussion followed, in which Dr. Berbarva and Dr. Finlayson took part. Success to the British Guiana Branch of the British Medical Association was proposed by the Attorney-General, and the President replied. The meetings of the Branch are to be held quarterly on the second Thursday in the month.

RAILWAY ACCIDENTS AND THEIR CAUSES.

THE slaughter on railways in England is diminishing, but the "butcher's bill" is still heavy, and exceeds the loss of life from war. The Board of Trade returns for 1885 show that during that year 470 servants were killed and 5,325 injured, being a decrease of 115 killed and 582 injured in 1884. This decrease, it was stated at the annual congress of the Amalgamated Society of Railway Servants, was undoubtedly due to improvements adopted by the companies, but it was regretted that so large a number of lives were sacrificed annually, and a still larger number maimed for life, owing to the companies not adopting a safer method of coupling. It was unfortunate that the Board of Trade maintained such a passive attitude in this matter, as otherwise the companies would be stimulated to take greater precautions for the men's safety. It was reported that the Society had published a pamphlet containing twenty-three "suggestions," which, if carried out, would reduce railway accidents to a minimum; and it was also reported that £350 had been awarded by the Society as prizes for non-automatic and automatic couplings, and that copies of the report and awards had been forwarded to the principal railway companies in the kingdom. Only a certain portion of train-accidents were inquired into, and attention was directed to the fact that the return for 1885 as to lines worked under the absolute block system was very misleading. Allusion was also made to the anomaly that, whilst large numbers were out of employment, there were railway companies that compelled a large proportion of their servants to work excessive hours, nearly 80 per cent. of signalmen and the majority of those in the traffic department having to work twelve hours and upwards a day. The Chairman of the Society stated that in nearly all the more calamitous of the great railway accidents of the last few years, all the worst consequences would have been either prevented or very greatly mitigated if the train had been fitted with an efficient automatic continuous brake. He also urged that it was the duty of all railway companies to raise their platforms to the standard height, and to fit their carriages with a high continuous footboard, so as to prevent passengers falling between the platform and the train. He condemned the cord-system of communication as unreliable.

GERMAN SCIENTIFIC AND MEDICAL ASSOCIATION.

THE fifty-ninth meeting of the German Scientific and Medical Association (Versammlung deutscher Naturforscher und Aerzte), which has just been brought to an end in Berlin, has been a great success. Though this meeting is the fifty-ninth, the Association has been sixty-four years in existence, war or pestilence having prevented five meetings. At the first meeting, in Leipsig, in 1822, there were only thirteen members present; now the Association, which corresponds, to

a great extent, with the British Association for the Advancement of Science, numbers 1,752 members, and 1,483 associates, and is compelled to distribute its work amongst no fewer than thirty sections. Professor Virchow opened the proceedings, on September 18th, with an address on the history of German Scientific Associations, especially as regards natural science in its relation to medicine, from the beginning of the present century. The city of Berlin showed abundant hospitality, and crowned all by a grand festival on the closing evening, when about 6,000 guests were present. The addresses given at the second general meeting were as follows: on Vital Theories, by Prof. Ferdinand Cohn, who expressed the opinion that, in the future, the gap between organic and inorganic life may be closed up; on Europe's Tasks and Prospects in Tropical Africa, by Herr G. Schweinfurth followed by the formation of a Commission to Examine into the Laws of Colonisation; the address of Professor His, of Leipsig, on the Development of the Zoological Station in Naples, and the Increasing Necessity for Scientific Central Establishments; and finally, a paper by Professor Stricker, of Vienna, on the value of Ocular Demonstration in Teaching, with Repetition of the Demonstration by the Electric Microscope. The next meeting will be held at Wiesbaden, with Professors Fresenius and Pagenstecher at its head. Science appears to find its home in Germany, which delights to honour its votaries. Even the hotels and chief restaurants in Berlin were decorated for the late meeting.

DAVOS PLATZ.

THE proposed contruction of a railway to Davos Platz is a step which will be likely to open up a new future for this delightful health-resort of the Engadine. Not only have the authorities decided to put Davos in railway communication with Landquart, but they have agreed with other communes to subsidise the undertaking to the extent of one-fifth of its estimated cost. Those by whom the proposition has been made look with great hope to a large increase in the prosperity of this deservedly favourite Alpine health-resort. It is stated that the railway, twenty-five miles in length, will traverse the Prättigau, and consist of a narrow-gauge system. The engines will be constructed so as to embrace the combination of the ordinary principles of locomotion and also those adopted on the Rigi line, which latter it will be only necessary to use in the ascent of one steep incline. The railway is expected to be completed by the commencement of the summer of 1889, and Davos must then necessarily become the terminus for visitors to the Engadine. The majority of the resident medical practitioners do not regard with the alarm, which some others show, the proposed experiment. Already the extension of one of the hotels has commenced, and other building operations will follow; and, doubtless, from its increased accessibility and its known purity of air, Davos will acquire extended popularity.

QUALIFIED MEN AND UNQUALIFIED ASSISTANTS.

A VERY serious charge of an unqualified practitioner being covered by a medical man transpired at an inquest held by Mr. A. Braxton Hicks at Westminster last week. A Mr. Davenport has a dispensary in Peter Street, and another, apparently, in Vincent Square. The former was said to belong to a Dr. Day, whose name, it was stated, was "inside, and on the private door." This Mr. Davenport (who, it was stated, had already been fined £20 for the illegal practice of medicine, and who said he was "registered as a medical student but not as a medical man") was called in on the Wednesday to see a man named Wadley, aged 53. The patient, being then in a dying condition, was subsequently seen, it was stated, by Dr. Pugh. A death-certificate was, however, given by Dr. Day, notwithstanding the fact that the deceased had not been seen by him. At the inquest, this gentleman contented himself with asserting that Mr. Davenport was only doing what thousands of unqualified assistants were doing, and that the practice of signing death-certificates without having seen the patient was common enough, even in hospitals. The coroner very properly remarked that, even if this were true (and we believe it is not), the practice was, nevertheless, a bad one, and should be put a stop to. He expressed his intention of sending a copy of the depositions to the Public Prosecutor, as he considered there had been an infringement of the Registration Act. Meanwhile, Mr. Davenport may expect a little more attention of the nature which involved his being fined £20 on a previous occasion. He mentioned, incidentally, that of this £20 he had only paid £7; of this statement it would be interesting to have an explanation. The whole facts, for the time being, may be left to the consideration of the Public Prosecutor; but if, on a careful examination of them, it should appear that Dr. Day has been guilty of the offence alleged in the coroner's remarks, it will, perhaps, be as well to call the attention of the licensing body whose diploma he holds to the admitted facts in order to ascertain their views on the subject. The offence is not a new one, and has, on more than one occasion, been somewhat severely punished. A few examples would serve to make it universally known that giving death-certificates for patients who have not been attended by the certifying medical man, is a practice which is apt to be attended with serious personal inconvenience to the donor.

THE HEALTH OF SOUTHPORT.

THE table in the returns of the Registrar-General, for the second quarter of the year, which proposes to give the death-rates of the leading health-resorts and watering-places of England, is not an altogether reliable index of the healthiness of those places. The Registar-General, having no official cognisance of the limits of the resort itself, takes the sub-district in which it is situated as representing it with sufficient accuracy for his purpose. But as the medical officers of health of Rhyl recently pointed out in a letter to a contemporary, this plan often gives the most misleading results, especially where diphtheria—a disease more prevalent in rural districts than in towns, is in question. It is not often, however, that we have to record an absolute mistake made by the Registrar-General's usually very careful staff. That an error was made in the case of Southport this year is made clear by some correspondence which has just been published between Dr. Henry H. Vernon, the health officer of that place, and the Registrar-General. The annual rate of mortality from zymotic diseases in the North Meols (Southport) sub-district, was given in the return as 1.19 per 1,000 living. It was actually 0.19 per 1,000, the error being evidently a typographical one, though, unfortunate, as giving Southport a zymotic death-rate sixfold that which had actually occurred. As a matter of fact, there appear to have been only two zymotic deaths in the district during the quarter—one from fever and another from diarrhœa. Examination of this table would, we think, have shown at once that the rate announced by the Registrar-General was erroneous. Though Southport was, unfortunately, deprived of the high rank amongst health-resorts that was properly its due, yet we hope and believe that no harm will have befallen it in consequence of the Registrar-General's mistake, now frankly acknowledged.

SCARLET FEVER AT NEW QUAY.

PROFESSOR NETTLESHIP contributes to our columns to-day a letter explanatory of certain of the points raised in our observations of last week on his letter to the *Times*, concerning the concealment of scarlet fever by the inhabitants of New Quay. There has been, also, some further correspondence on the subject in the *Times* itself; though the only important point elucidated by it is that Mr. Nettleship's landlord has been fined £10, under Section 128 of the Public Health Act, at the instance of the local authority. The professor excuses himself for not proceeding under Section 129 because he had not taken the precaution of catechising his landlord, and, also, because his anxiety for the recovery of his son overbore any natural desire to get the offender punished. It may be noted, in passing, that the wording of Section 129 by no means make it necessary for the hirer of infected rooms himself to prosecute. This might, as a rule, well be done by the local authority, as an earnest of its intention to stamp out infec-

tious disease by all means in its power; though, of course, the evidence of the hirer would be necessary to prove the case. It is not worth while to discuss, in any detail, the other contributions to the discussion. Mr. Curtis, of Fulham, thinks he makes a great point by saying that the farmhouse in which Professor Nettleship's child contracted the fever is outside the district of the New Quay Local Board. It is not the fault of any particular authority that is in question, but the crass ignorance and wilful carelessness manifested by the inhabitants of a place that claims the title of a health-resort. The Wesleyan minister of the village finds consolation in the fact that scores of families have passed the summer at New Quay without the slightest ill effect. He is on firmer ground when he points out the danger to which watering-places are exposed by the immigration of convalescents from the infectious fevers. If we mete out punishment to the lodging-house keepers who forswear themselves as to the presence of infectious disease in their houses, we must be equally severe with those who take patients to sea-side lodgings whilst still in the desquamative stage. The fact is, that the annual exodus of families to the seaside requires to be conducted much more circumspectly and deliberately than is the case at present. Lodging-houses for the reception of visitors should be certificated by the local medical officer of health as a preliminary condition of being let at all, and in the general conduct of such houses the sanitary authority should exercise much more influence than it is able to do under the existing law.

SCOTLAND.

ROYAL HOSPITAL FOR SICK CHILDREN, EDINBURGH.

THE Monthly Report of the Hospital for Sick Children, Edinburgh, states that the number of patients treated in the institution during September was 96. Forty-two were admitted during the month, and 54 were in the hospital at the end of August. There were 30 discharged from the hospital cured, and 7 were relieved. The average daily sick in the institution was 50. There were 641 patients treated at the dispensary, and 24 were vaccinated, making in all 665. Of the new cases during the month, 244 were from the city, 51 from Leith, and 24 from the country. The total number of patients treated at the hospital during the month was 761.

BEQUESTS BY THE LATE MR. ANDREW CUNNINGHAME.

THE late Mr. Andrew Cunninghame, late town clerk depute, Glasgow, has made a number of bequests to charitable institutions in Glasgow, among which are the following to medical charities: Glasgow Lying-in Hospital and Dispensary, £250; Glasgow Lock Hospital, £250; Glasgow Eye Infirmary, £250; Glasgow Eye Infirmary, £250; Glasgow Western Infirmary, £5,000; and the Glasgow Royal Infirmary, £5,000. Mr. Cunninghame also appoints the Glasgow Royal Infirmary his residuary legatees, and, as such, it is expected that the infirmary may receive a further sum of about £5,000.

LEGACIES TO THE EDINBURGH ROYAL INFIRMARY.

THE following donations and legacies of over £100 have been paid to the Edinburgh Royal Infirmary and Convalescent Home during the last half-year, namely: to the Royal Infirmary, legacy by Edmund Thornton Crawford, R.S.A., Leemount, Broomieknowe, £1,946 1s. 7d.; by Mrs. Margaret Gordon of Kay, sometime of Aberdeen, late of 11, Broughton Street, Edinburgh, £90 13s. 3d.; by Mrs. Elizabeth Jamieson Gladstone, 10, Devonshire Place, Claughton, Birkenhead, £200; by Miss Elizabeth Romanes, Friarshall, Melrose, £450; by John Orphat, Leuchars, Fife (balance of legacy of £3,000), £1,000; by John Hoyes, of Ainslie Place, Edinburgh, £500 18s. 7d.; by Charles Jardine, of Thorlieshope, Riccarbon, Roxburghshire, £2,259 2s. 3d.; by the Rev. Archibald Stirling, sometime Minister of Rosslyn, late of 19, Bernard Terrace, Edinburgh (further payment to account), £28 2s. 2d.; by Miss Ann Callender, 27, Upper Gray Street, Edinburgh, being a payment to account to residue of her estate, £2,000; by Mrs. Erskine, The Priory, Melrose, £300; by Alexander Bogie, of Balass and Newmill being the sum from his estate for past year, £57 7s. 6d.; donations from the Edinburgh Football Association, £105; and from the Sick and Accident Fund of the Forth Bridge Working Men's Club, £100. To the Convalescent Home: donation by the trustees of the late Miss Marianne Miller, of Earnock, 11, Ainslie Place, £300.

WEST OF SCOTLAND SEASIDE-HOMES.

THE seventeenth annual meeting of the donors and subscribers to the West of Scotland Convalescent Seaside-Homes, Dunoon, was held last Monday, Mr. W. Maitland, Vice-President, in the chair. The report showed that the work of the Homes during the year had been carried on with most successful results. During the 17 years the Homes had been in existence 32,298 cases have been treated there, while 2,829 have been admitted since the last report was issued. Of these, 2,678 were restored to health, 37 were relieved, 102 failed to improve, 2 died, while 173 remained under treatment. The financial account compared favourably with that of any previous year, the total income from all sources was £4,629 8s., and the expenditure amounted to £4,567 4s., leaving a balance of over £62. The Chairman, in his remarks, alluded to the loss sustained by the institution by the death of Mr. Matthew Waddell, one of the directors, one of the most able and willing on their staff of workers, who was one of the victims of the melancholy Lochfyne disaster. The progress of the Homes was shown by the fact that during the first year only 640 patients were received, while last year there were 2,829; and that the income for the first year was £1,100; while for the last year it had been £4,629.

IRELAND.

THE medical examinations of the Royal University of Ireland are now in progress.

BALLINA UNION.

THE outbreak of fever in Coolcarney, near Ballina, has greatly decreased. Last week an inspector of the Local Government Board, in company with the dispensary medical officer, visited the place, and were in a position to report favourably. The police have returned to their barracks, which they had been obliged to vacate in consequence of the prevalence of the disease. There are at present only five cases of fever under treatment in the workhouse.

HEALTH OF BELFAST FOR SEPTEMBER.

THE total births registered numbered 665, and the deaths 483. Of these latter, 146 were among children under one year of age, and 122 occurred from lung-affections. The average death-rate from all causes was 22.7; from lung-affections, 5.7; and from zymotic affections, 4.4. These statistics show that the general death-rate was not in excess, and that the rate for lung-diseases was lower than it has been for a considerable period. The death-rate from zymotic diseases was higher by 2 per 1,000 than the previous month, owing to the prevalence of diarrhœa and enteric fever.

QUEEN'S COLLEGE, CORK: ANNUAL REPORT.

THE report for the session 1885-6 shows that the total number of students on the books of the College was 249, the new students numbering 70. The President reports favourably of Berkeley Hall as a residence for Protestant students of the College, and hopes that similar halls for other denominations will shortly be established. The library, or rather the room set apart for this purpose, has for years proved inadequate; the number of books has so increased by purchase and donations that it has long since not only overflowed into the examination-hall, but quite filled up all available space there,

the books on the shelves being in many cases doubled, so as to be very inconvenient for reference. Additions have been made to the Natural History Museum and Herbarium, and the Materia Medica and Pathological Museums are stated to be in excellent order. The Chemical Laboratory is very inadequate for its requirements, and for several years the President has made application for a new laboratory, but, so far, without success. The report concludes with some suggestions for improving the clinical teaching in the various Cork hospitals.

THE CHAIR OF SURGERY AT QUEEN'S COLLEGE, BELFAST.

WE are glad to see that Mr. John Fagan, F.R.C.S.I., L.K.Q.C.P.I., who is a candidate for the chair of surgery in the Queen's College, Belfast, has printed testimonials which contain, as might have been expected from his high professional position, testimonies of the highest character to his capacity as a surgeon and teacher. The position which Mr. Fagan holds as a member of Council of the North of Ireland Branch of the British Medical Association sufficiently indicates the excellent position which he holds in the profession, and that he enjoys the entire confidence of his professional brethren.

KING AND QUEEN'S COLLEGE OF PHYSICIANS.

THE annual meeting of the Fellows of this College, for the election of its officers, etc., will be held, as usual, on St. Luke's day, Monday, October 18th. At the last business meeting, Dr. James Little, Physician to the Adelaide Hospital, and formerly Professor of Medicine in the Royal College of Surgeons in Ireland, was nominated for the Presidency, and, there being no other candidate, will be elected. Dr. Cruise, whom Dr. Little will succeed, has presided over the College during his two years of office with great efficiency and dignity, and has been most observant, courteous, and punctual in the performance of his important duties. Two of the four censors retire after holding the office for two years, in accordance with custom. For these vacancies four Fellows have been nominated, and the two other Censors, at present in office, also seek re-election. There will be no other contest, except for the Examinership in Chemistry for the First Professional Examination.

THE DIRECT REPRESENTATION OF IRELAND ON THE GENERAL MEDICAL COUNCIL.

A MEETING of members of the profession residing in Dublin and the adjoining districts, summoned by circular, was held in Dublin on September 29th, to support the candidature of Dr. George H. Kidd, for the office of Direct Representative of the Profession in Ireland. The meeting was well attended, and Sir George H. Porter, Surgeon in Ordinary to the Queen, in Ireland, occupied the chair. Resolutions expressing the approval of the meeting of the candidature of Dr. Kidd, and forming those present into a committee, with power to add to its number, to support his candidature, were unanimously adopted. The following were appointed as the Executive Committee: Drs. Bennett, Corley, Gordon, Mapother, and William Stoker. A meeting of the profession, resident in and near Drogheda, was held in that town also last Monday, at which Dr. Kidd's candidature was approved. Dr. A. H. Jacob, of Dublin, is likewise pursuing an active candidature, and has issued cards to the electors, with the object of ascertaining whether it is their intention to vote for him at the approaching election. Mr. Thomas Laffan, of Cashel, has also sent out a brief circular soliciting the electors' votes and interest, and begging them to peruse his address "in the *Lancet* and BRITISH MEDICAL JOURNAL of August 7th."

MEDICAL MAGISTRATE.—Dr. Morgan has been placed on the Commission of the Peace for the Borough of Sunderland.

SUNDERLAND INFIRMARY.—It has been decided to amalgamate the Infirmary and the Hospital for Sick Children at Sunderland, and to erect a new wing to be called "The Hartley Memorial Wing," in memory of the late Mr. James Hartley, J.P., formerly M.P. for the town.

NEW GOVERNMENT MEDICAL SERVICE IN BRITISH GUIANA.

A VERY thorough reorganisation of the medical service has recently been completed in the large and important colony of British Guiana. An act or ordinance has been passed by the Colonial Legislature to enforce the registration of all practitioners in medicine or surgery in the colony on very similar lines to those embodied in the statutes affecting the medical profession in this country, and at the same time it has established a Government Medical Service, armed with very large administrative functions and authority. The medical service connected with the immigration department of the colony, which has hitherto had a certain independence under the direction of the immigration Agent-General, has been amalgamated with the medical service of the public hospitals and asylums, and general sanitary services of the colony, and the whole department thus formed has been placed under the authority and control of a surgeon-general, subject only to the directions of the Governor of the Colony. The surgeon-general is assisted by a medical inspector, and a body of Government medical officers, at present 46 in number, for whose salaries, as well as for all other expenses of the service, the Combined Court, which rules over the financial affairs of British Guiana, undertakes to provide the necessary funds, charging one-half of the total cost against the general revenue of the colony, and making the other half a charge on the planters who are employers of immigrants.

The officers above enumerated constitute the new medical establishment, but for consultative and administrative purposes, a Medical Board has been appointed, which is limited to the Surgeon-General as Chairman, the Medical Inspector, and to six others who are duly qualified as practitioners in medicine and surgery, together with a Government medical officer as Secretary to the Board. The six practitioners who form the members of the Board are appointed by popular election, every person duly licensed to practise medicine and surgery, or either medicine or surgery, in the colony being entitled to vote at their election. The votes may be either recorded personally at Georgetown, or, if a voter be unable to attend, he may vote by letter or writing duly signed. It will thus be seen that the new Medical Board is of a highly representative character; and as it is arranged that all acts of the Board are to be decided by the majority of those who are present, the members of the medical profession in the colony manifestly have a large share in the management of all professional matters affecting their interests and welfare. The Medical Board is invested with great authority in all sanitary matters. Whenever the Governor refers to the Medical Board any question relating to the public health for investigation and report, the Board may summon and examine witnesses on oath, and exercise the same powers for procuring and compelling the giving of evidence as are possessed by stipendiary magistrates. Authority is also given to the Medical Board for granting certificates of competency to any persons who are qualified to practise as chemists, dispensers, or midwives.

The colony, in order to ensure the more convenient working of the medical and sanitary service, is divided into a number of medical districts, to each of which a Government medical officer is assigned. His duty is to act as sanitary adviser, and as the medical officer to the plantations on which there are immigrants, and also as medical attendant to the hospitals certified under the immigration laws within the district assigned to him. At the same time, the surgeon-general has power to visit at any time any plantation on which immigrants are employed, to inspect their dwellings, to examine into the state of any hospital in a district, and to ascertain that all the records in connection with them are duly kept.

It is not practicable, nor is there any need for describing in detail all the provisions made by the recent act of the legislature in British Guiana for the sanitary and medical administration of the colony. Sufficient has been stated to show that the members of the medical profession in the colony have been united into a very comprehensive and compact body, and that such an organisation and authority have been conferred on the establishment as may well warrant the expectation of important benefits resulting to the colony from the exercise of its functions in the future.

In the early part of last month, a dinner was given in Georgetown by the members of the medical profession in the colony to His Excellency the Governor, and to the heads of all the official departments, together with a large number of other guests, to celebrate the inauguration of the new medical service; and, in concluding his reply to the toast of his health, His Excellency remarked: "If the members of the medical profession will be loyal to their science, if they will be loyal to their profession, if they will be loyal to themselves, and to the gentleman who has the privilege of being at the head of

the service" (Surgeon-General Dr. Grieve, the chairman on the occasion), "there will be every prospect, I think, that the medical service of British Guiana will be a service of which the colony will be proud, and which will effect a vast amount of good in this portion of Her Majesty's dominions."

There seems to be every reason for hoping these anticipations will be fully realised. The dinner on this occasion possesses an additional source of interest to members of the British Medical Association, for the opportunity afforded by it was turned to account in celebrating the resuscitation of the British Guiana Branch of the Association—an event which appears to be one of the outcomes of the newly united position in which the profession has been placed by the recent enactments of the local legislature.

In concluding this notice, it may be useful to some of the junior members of the profession, if we make known the following remarks, which have been sent to us from Demerara, by an authority who is thoroughly qualified to speak on the subject: "My belief is," writes our correspondent, "that, to a young man who has a taste for travel, and who is willing to undergo the difficulties inseparable from tropical work, there will be no better field than that offered by the British Guiana service, provided always it is fully understood there is work to be done. The medical institutions here are large, and liberally provided for, and in them there is a chance of labouring in matters of great scientific and professional interest." The scale of remuneration, according to length of service and position, has been sent to us, and it appears to be framed on a sufficiently liberal basis; while we are informed that medical officers enjoy the same privileges, in respect to leave of absence, pensions, etc., as other officers of the Government in civil employment.

CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

This annual compilation has just been published by the Council of the College; from it we ascertain the following facts.

It appears that there are 1,124 Fellows on the *rôle* of the College, of whom 639 obtained the Fellowship by examination, 7 were elected as Members of twenty years' standing under Section 5 of Charter, 15 Vict., and 2 are *ad eundem* Fellows. There are 17,040 Members, and 957 Licentiates in midwifery (the examination for this distinction having been suspended for the last eleven years). The Licentiates in dental surgery number 590.

The examiners in elementary anatomy and physiology appointed in conjunction with the Royal College of Physicians, under the scheme for an examining Board in England, are elected annually. There have been four examinations during the past year; 716 candidates presented themselves, of whom 474 passed in both subjects; 77 passed in elementary anatomy; 96 passed in elementary physiology; 55 candidates were referred in both subjects; 63 were referred in elementary anatomy, and 63 were referred in elementary physiology. The fees received from candidates for this examination amounted to £3,581 16s. 3d., the examiners receiving in fees £506 15s.

The examiners in anatomy and physiology appointed in conjunction with the Royal College of Physicians, under the scheme for an examining board in England, are elected annually. They have conducted the primary examinations for the diploma of Member under the old regulations, as well as the second examination of the examining board, and have held during the year four examinations, at which 1,079 candidates presented themselves, of whom 262 passed in both subjects; 173 passed in anatomy; 246 passed in physiology; 97 were referred in both subjects; 240 were referred in anatomy, and 214 were referred in physiology. The fees received from the candidates for this examination amount to £4,363 14s., the examiners receiving £2,259.

The Board of Examiners in Anatomy and Physiology for the diploma of Fellow consists of nine members annually elected by the Council from the Fellows of the College, and has held during the past collegiate year two examinations; 117 candidates presenting themselves, of whom 62 passed and 55 were referred. The fees received from this examination amount to £829 10s.

The Court of Examiners consists of ten members, elected by the Council from the Fellows of the College, all of whom, however, are members of the Council except Dr. Humphry, Mr. John Langton, and Mr. T. Pickering Pick. During the year, the Court has held two examinations for the Fellowship and four for the Membership; at the former, there were 51 candidates, 28 of whom passed, 19 being referred for one year, and 4 for six months. For the Membership, there were 1,048 candidates, 319 of whom obtained their diplomas, 270 passed in surgery only, 103 were referred for three months, 320 for six months, 14 for nine months, and 22 for one year. The fees paid by candidates amounted to £12,737 16s.; the fees paid to the Court of Examiners amounting to £6,027 7s.

The Board of Examiners in Dental Surgery has held two meetings for the examination of 28 candidates, 21 of whom obtained their diplomas; the fees paid by them amounted to £220 10s., of which the Board received £88 4s.

The income of the College from all sources during the past year amounted to £40,742 11s. 5d., derived principally, as already shown, from fees paid by candidates for the diplomas of the College, namely, £21,753 8s. 3d.; rents from chambers adjoining the College produced £1,520 0s. 6d.; dividends on stock, £1,154 19s. 2d.; from Members of the Council and Court of Examiners, on their election, £76 6s.; from sale of stock, £12,500 7s. 1d.; from trust funds, sale of calendar and synopsis, £273 6s. The expenditure of the year amounted to £40,137 5s. 7d., the largest item being £12,816 7s. 7d., for purchase of house, No. 44, Lincoln's Inn Fields; the next largest amount appears in fees paid to Examiners; namely, £9,446 6s. Salaries, wages, and pensions for officers and servants of the College, in the three departments—library, museum, and office—amounted to £4,645 14s. 6d.; taxes, rates, diploma stamps and insurance, absorbed the large sum of £1,670 1s. 9d.; half expenses for the New Examination Hall, £5,978 5s. 5d. Under miscellaneous items, extraordinary expenses, alterations and repairs, about £4,000 appears as having been expended.

The metropolitan hospitals are represented on the Council by Mr. W. S. Savory (President), Sir James Paget, Bart., Messrs. H. Power and T. Smith, of St. Bartholomew's Hospital; King's College Hospital, by Mr. J. Wood and Sir Joseph Lister, Bart. (Vice-President); Guy's, by Messrs. T. Bryant and A. E. Durham; University College, by Messrs. John Marshall, F.R.S., Christopher Heath, and M. B. Hill; the London Hospital, by Mr. Jonathan Hutchinson, F.R.S. (Vice President and Chairman of the Court of Examiners); the Middlesex, by Messrs. J. W. Hulke, F.R.S., G. Lawson and S. W. Sibley; St. Thomas's, by Sir William Mac Cormac, Messrs. John Croft, and S. Jones; and Westminster, by Mr. C. N. Macnamara.

MEETING OF THE PHYSICAL SOCIETY OF GUY'S HOSPITAL.

In order to mark the beginning of the session, the Pupils' Physical Society held their first meeting on the evening of October 4th, in the anatomical theatre, which was completely filled, there being only standing room for several members, both past and present. The treasurer and many members of the staff attended. Dr. Wilks, F.R.S., was in the chair, and in a short opening address he first referred to the great loss the Hospital had sustained in the death of Dr. Moxon, alluding especially to the manner in which he had, by his untiring industry, energy, and skill, enriched the pathological department, by the addition to it of the well-known and beautiful series of water-colour drawings of pathological specimens which now hang on the walls of the *post mortem* theatre. Dr. Wilks pointed out that, although the profession sustained, from time to time, great individual losses, yet the profession itself went on, and that we must, by hard work, keep ourselves ever ready to fill up the gaps in the ranks. After congratulating the new students upon having entered a school which he loved so much, of which he thought so highly, and at which the opportunities for work in all the departments were so numerous; the speaker went on to tell the students of the antiquity of the Physical Society of Guy's, which is the oldest Medical Society in London. He then mentioned the distinguished men, such as Dr. Jenner, who had spoken in the same theatre as that in which the Society now holds its meetings, and read extracts from the addresses delivered on similar occasions, many years ago, by such men as Dr. Babington and Mr. Allen. Finally, after telling the new students that, by joining Guy's, they had taken upon themselves an obligation to work for the credit and fair name of the school to which they were attached, he called upon the reader of the paper of the evening.

Dr. Ryle, whose paper was entitled the Rise and Progress of Medicine, gave a most interesting and full account of our advance from the time of Hippocrates downwards, showing that that father of medical art and science had a most wonderful insight into many of the problems of his craft, and that often there was an exactitude in his observations which it would be well if we now-a-days were sometimes to imitate. Dr. Ryle proceeded to read several very instructive reports of Hippocrates' cases, making comments upon them in passing. He then touched upon all the epoch-marking periods of medicine, alluding especially, first of all, to Galen, who had done as much to retard medicine as to advance it, by promulgating, with his great

authority, many ill founded theories. After alluding to Harvey and some of the later masters in medicine, Dr. Ryle concluded his paper. A brisk debate carried on by the past and present members of the Society followed, and the reader of the paper replied. A vote of thanks to the Treasurer was proposed by Mr. Lund, the senior house-surgeon, and seconded by Mr. Beard, the junior house-surgeon. The Treasurer, in replying, alluded, in sympathetic terms, to the death of Dr. Moxon; he added that it was a great pleasure to him to attend these meetings, and that he never failed to go away instructed by having learnt something new, and by having heard something which gave him material for deep thought. Mr. E. W. Goodall, M.B., the senior house-physician, proposed, and Mr. Beard seconded, a vote of thanks to Dr. Wilks for presiding. In the course of his remarks, Mr. Goodall said how great a pleasure it was to the students that Dr. Wilks, although consulting physician to the hospital, still came down often in the afternoon, and gave them the benefit of his great knowledge. After a brief reply from Dr. Wilks, the meeting broke up. During the evening, the museums were lit up, so that the past students had an opportunity of refreshing their memories by again looking at the famous specimens and wax models for which the Guy's Museum is so well known. Many microscope specimens were exhibited, and all who attended appeared to have had a very pleasant evening.

SIR HENRY ACLAND ON THE PROGRESS OF PHARMACY.

THE Introductory Address at the commencement of the forty-fifth session of the School of Pharmacy, was, on Wednesday, delivered by Sir HENRY ACLAND, K.C.B., M.D., F.R.S., Regius Professor of Medicine in the University of Oxford, and President of the General Medical Council.

After saying that he studied dispensing and pharmacy forty-five years ago, with Mr. Squire, in Oxford Street, and Mr. Bullock, Liebig's pupil, Sir Henry Aclandremarked that nothing seemed to be more certain in the future of science than that analytical and synthetical chemistry would continue to extract new secrets from Nature, that these secrets would be revealed only to genuine experts in scientfic chemistry; and, lastly, that the action of the new chemical products thus discovered would throw fresh light on the changes which take place during the life-history of living organisms, whether considered individually or as a correlated whole. The latter secrets would be revealed only to the skilled physiologist, to the precise pathologist, and to all observant practical physicians who have been both scientifically and clinically trained. Under these terms were included, not only those students of nature who deal with the composition and heredity of man, but those also whose vocation leads them to investigate the habits, the health, and the disorders of any portion of the animal or the vegetable world, whether for the advance of pure knowledge or for the utilitarian objects of commerce or of art. The lecturer next spoke of some of the medical agents contained in the *Pharmacopœia* of 1651; for example — silkworms, toads, kittens, grasshoppers, ants, swallows and their young, earthworms, wagtails, green frogs, scorpions, moles, vipers, foxes, and many others too numerous and too nauseous to be named; and remarked that it was surprising how so monstrous a list could have been authoritatively issued after Linacre had lived and taught in that great college which he founded, and which was destined to shed lustre on the history and character of medicine. It was promulgated after literature and science had each begun to deliver their messages to the later middle ages through persons of such exceptional power and wisdom as Linacre and William Harvey. There was nothing akin to this in history, except in the grosser forms of superstition, which have been ever entangled among higher religious convictions, and which have stamped their dismal footprints on the sands of time. Sir Henry Acland next spoke of the step about to be taken by the Pharmaceutical Society—namely, the establishment of a laboratory for special research into the exact chemical constitution of drugs and alleged remedies, with a view to precisely fixing the constitution of alkaloids of acknowledged or hypothetical value, to discovering others, and generally the guaranteeing to the experimental therapeutist and the physiological inquirer absolutely pure bodies of known chemical constitution, whether existing in commerce or not. After giving an interesting history of the successive issues of the English, the Scotch, and the Irish *Pharmacopœias*, Sir Henry Acland stated that, by recent resolution of the Medical Council, steps had been taken which would practically insure the best methods of revision by either addition, subtraction, or alteration, and by annual report through competent advice on any subject bearing on the progress of any department of the *Pharmacopœia*. This constant watchfulness, without too frequent meddling and change, was certainly called for. It was sufficient to name such recently introduced remedial agents as nitro-glycerine, amyl nitrite, physostigmine, salicylic acid, pilocarpine, the whole class of antiseptics, and hypodermic injections, to remind ourselves of the revolution which pharmacy and pharmacology are undergoing and have undergone in the last twenty-five years—a revolution of ideas as great as that which modern embryology has introduced into the conceptions of morphology, and into the study of evolution. The real object of a *Pharmacopœia* was to help to heal by the best and quickest and pleasantest methods, excluding inferior, spurious, and worthless agents. A small volume which would lay down by international consent the mode of obtaining with certainty the best remedies, made in the best manner, with rules of how to preserve them in all climates, and how readily to distinguish them, would be hailed with satisfaction by practitioners and by pharmacists in every part of the world, and especially in districts—of which there were many—which are in a markedly transitional condition. It was certain that the Medical Council, charged by the law of Great Britain to maintain the *British Pharmacopœia*, would not fail to aid any step by which, within the limits of its legal power, it could promote the perfection of scientific pharmacy. There were great opportunities for this among the English-speaking race, of the Old and of the New World alike, and co-operation in this matter with the active scientific pharmacists of the United States of America might be certainly relied upon. It cannot be doubted that there was much yet to be learnt by us from India and from our cousins in the New World as to the constitution of remedies originating in the hotter climates, and specially adapted to them. It was a source of regret that no steps had been taken to obtain representatives from India, from the Dominion of Canada, and from Australasia to co-operate in England directly in future researches connected with the *Pharmacopœia*. This would seem the more desirable and reasonable as, by a recent Act, colonial and foreign practitioners were to be entered upon the British *Medical Register* after the present year.

THE OPENING OF THE MEDICAL SCHO OLS.

HOSPITAL DINNERS AND CONVERSAZIONES.

ST. BARTHOLOMEW'S HOSPITAL.

THE annual dinner of old students of St. Bartholomew's Hospital was held on October 4th. Dr. Church, who was in the chair, was supported by about 130 guests. Among the distinguished visitors present were the Treasurer (Sir S. Waterlow, Bart.); Sir Henry Acland, K.C.B.; Sir Frederick Abel, K.C.B.; Professor Flower; Professor Attfield; Dr. Latham; Sir T. Crawford, K.C.B.; and Mr. Trimmer. The usual loyal and patriotic toasts were given. Sir Thomas Crawford, Surgeon C. Strickland, and Surgeon Wingate Saul, responded to the toast of the Army, Navy, and Reserved Forces. Mr. Savory, whose re-election to the Presidency of the College of Surgeons had been mentioned by Surgeon Saul in response to an unanimous call for a speech, made a few observations. The health of the Treasurer was proposed by Mr. Henry Power. The toast of "The Visitors," proposed by Sir James Paget with his customary felicity, was responded to by Sir Henry Acland. The health of the Chairman, proposed by Dr. Andrew, and that of Mr. Butlin, the Secretary of the dinner, proposed by Mr. T. Smith, having been duly honoured, the company adjourned to the Library, where Mr. Morrant Baker's valuable collection of engravings of the hospital and school was exhibited.

ST. GEORGE'S HOSPITAL.

THE annual dinner of the St. George's Hospital School was held at the Criterion Restaurant on the evening of Friday, October 1st. Dr. Clifford Allbutt, F.R.S., was in the chair; and there was a large attendance of past and present students, and some lay governors of the hospital. In speaking after dinner, Dr. Allbutt found much upon which to congratulate St. George's Hospital in the newly built physiological laboratory and the appointment of Dr. Délépine as physiological lecturer, and the arrangements that had been made for joining in the lectures on the preliminary sciences at South Kensington. He expressed his warm sympathy with the school, which had been to him, after Cambridge, his second *Alma Mater;* and his very high estimate of the opportunities it offered—more free, perhaps, than anywhere else from irksome restraint—for a thorough clinical education and acquisition of practical familiarity with disease. Sir Prescott Hewett, Mr. Holmes, Mr. Brudenell Carter, Dr. J. H. Bridges, Dr. Barnes, and Mr. Jervis, also spoke. The proceedings after dinner were enlivened by some excellent songs and violin solos, and Mr. M. Sheild gave a humorous original recitation.

ST. MARY'S HOSPITAL.

THE annual dinner of the past and present students of St. Mary's Hospital was held in the Venetian Room of the Holborn Restaurant, on the evening of October 1st. Mr. Edmund Owen, M.B., F.R.C.S., occupied the chair, and was supported by the other members of the staff. The company numbered 149, and included Colonel Duncan, M.P., Surgeon-General Gordon, and Mr. Cantlie. The usual loyal and patriotic toasts were proposed by the Chairman, and drunk with enthusiasm. In replying for the Army, Colonel Duncan spoke in high terms of the Army Medical Service from his own personal experience. During the evening, the Dean (Mr. George Field), to whose exertions the increasing success of the School is largely due, announced that the number of new entries was greater than ever before obtained at St. Mary's. Mr. Anderson Critchett, Mr. Ernest Lane, Mr. Lewin, and Mr. Thornton much increased the pleasure of the gathering by the songs they rendered.

THE MIDDLESEX HOSPITAL.

THE annual dinner of past and present students took place at the Holborn Restaurant, on October 4th, Mr. Andrew Clark presiding. Nearly 120 gentlemen were present, and the proceedings were of a most cordial and hearty character. The Chairman proposed the toast of "The Middlesex Hospital Medical School," to which Mr. Hulke, the senior surgeon of the Hospital, responded. Dr. Charles West then gave "The Middlesex Hospital," in which he referred to his previous connection with the institution, and the pleasant recollections he had of it. Major Ross, M.P., Chairman of the weekly Board, responded, and alluded to the improvements that had been made, and that were in contemplation, in the nursing and other departments. He warmly testified to the valuable services rendered for many years by Miss Thorold, the lady superintendent. The toast of "The Past and Present Students," was given by Mr. T. W. Nunn, and responded to by Sir Oscar Clayton and Mr. Nash (Broderip Scholar). Dr. Edis proposed the health of "The Orator of the Day," which was acknowledged by Dr. Biss. Mr. Morris then proposed "The Health of the Chairman," who, in turn, gave that of "The Visitors," which was acknowledged by Mr. Burdett, who concluded by proposing "The Health of the new Dean," Mr. Pearce Gould. The proceedings were greatly assisted by some excellent singing by Dr. Pringle, Messrs. Critchett, Hepburn, and Fulkerson, and by Herr Ganz, who kindly gave one of his admirable performances on the pianoforte. The company separated at a late hour, after singing "Auld Lang Syne."—After Dr. Biss's introductory address, delivered on Monday afternoon, October 4th, the prizes obtained during the past session were distributed by Dr. Greenhow, F.R.S., one of the consulting physicians to the hospital. The dean, Mr. Pearce Gould, read his annual report of the progress of the school during the past year, in which he referred to the appointment of Mr. Bland Sutton, as assistant surgeon, and of Mr. W. Hern, as assistant dental surgeon; to the number of students successful at the Examining Boards, and to the contemplated extension of the school buildings, and the erection of a Residental College. The chief awards were gained by Messrs. Nash, Corkill, Lewis, and Larkham. Dr. Greenhow, in a few suitable words, congratulated the prize-winners; and the proceedings closed with a vote of thanks to the chairman, moved by Mr. Hulke, seconded by Dr. Biss, and carried by acclamation.

ST. THOMAS'S HOSPITAL.

THE annual Old Students' dinner was held in the Governors' Hall, on October 1st; Mr. C. W. Chaldecott, of Dorking, was in the chair. A large number of old students were present. The toast of the evening, "Prosperity to the Medical School," was proposed by Mr. J. R. Lunn, of Notting Hill, in the absence of Mr. John Simon, C.B., and responded to by Dr. Ord, the Dean, who gave an interesting account of the latest improvements in the School.

UNIVERSITY COLLEGE.

THE annual dinner of the Faculty of Medicine, which took place on October 4th, at the Freemasons' Tavern, under the presidency of Sir William Roberts, of Manchester, proved to be a very enjoyable reunion of old friends. The guests numbered about 100, and included students of the Faculty whose years of entry spread from 1834 to 1886. Among those present were Mr. Bluett, of Chesterfield, Dr. Morris, of Spalding, Dr. Russell Reynolds, Dr. George Buchanan, Dr. Michael Foster (Cambridge), Dr. Burdon Sanderson (Oxford), Dr. William Wood, Mr. Humphreys, of Shrewsbury, Dr. Wilson Fox, Mr. C. Heath, Mr. Waggett, Mr. Berkeley Hill, Dr. Hewitt, Dr. Ringer, Mr. Bowreman Jessett, Dr. Henry Maudsley, Mr. Marcus Beck, Dr. F. T. Roberts, Dr. Allen, of Hastings, Dr. Snow, of Bournemouth, Mr. Buckston Browne, Mr. Barker, Mr. Godlee, Mr. Victor Horsley, Dr. Easmon, of the Gold Coast, Mr. Twynam, of Sydney, Mr. W. Gill, Mr. Swift, Mr. Rigden, Mr. J. P. Bartlett, Mr. Peter Giles (Hereford), Dr. Beevor, Dr. Murray, Dr. Pasteur, Dr. Embleton, Dr. Julian Evans, Dr. Price (Cardiff), Dr. Corfield, and Professor Schäfer. Among those who were unable to be present was Dr. Alexander Henry, whose indisposition was a subject of great regret to his numerous friends. Mr. Erichsen, Mr. Marshall, and Sir H. Thompson were all unavoidably prevented from being present. The proceedings were enlivened by excellent speaking on the part of the Chairman, Dr. Buchanan, Dr. Michael Foster, Dr. Burdon Sanderson, and Dr. Wilson Fox, and by some very good singing on the part of Dr. Roberts, Dr. Beevor, Mr. Copley, and Mr. Campbell Williams. A vote of thanks to Dr. Poore and Mr. Stonham, who had organised the dinner, brought the proceedings to a close.

WESTMINSTER HOSPITAL.

THE annual dinner of past and present students took place at the Holborn Restaurant on October 4th, the Hon. Mr. Justice Wills in the chair. In proposing the toasts, Sir Alfred Wills expressed the great interest he felt in the future of the Westminster Medical School, which, he considered, offered very great advantages, especially as regarded practical work. He was glad to be enabled to congratulate the staff and the governors of the hospital on the very marked improvements which had been effected in the out-patient department of the hospital, and expressed his conviction that, as matters were a present, there were few schools which could rival Westminster in the facilities offered in the hospital for efficient and careful study. Colonel Sparks, in replying to the toast on behalf of the governors and staff of the Westminster Hospital, alluded to the flattering successes of various Westminster students in the competitive examinations for the services. Mr. Cowell expressed his satisfaction at the cordial relations existing between the staff and the governors and house committee of the hospital, and his sense of the indebtedness of the school to the generous co-operation of the hospital authorities. Colonel Duncan, M.P., replying on behalf of the visitors, took occasion to speak highly of the alterations which had been introduced into the Army Medical Service—alterations which, he said, were indispensable to the proper conduct of that important department. When in command during the Egyptian campaign, he had had ample opportunities of witnessing the skill and devotion of the medical staff, whose behaviour under very trying circumstances was indeed beyond all praise.

THE MEDICAL SCHOOLS: ALTERATIONS IN THE BUILDINGS.

AT QUEEN'S COLLEGE, Birmingham, a pathological laboratory has been fitted up with all necessary apparatus for practical work in every branch, including bacteriology. The pathological museum has been largely augmented. A very large number of specimens has also been added to the Anatomical Museum; among these is a complete set of coloured bones in revolving cases. A private dissecting-room has been fitted up for the use of the Professor of Anatomy and the Prosectors. The Materia Medica Museum has been removed to a new room; many specimens have been added, and a small laboratory has been fitted for pharmacological work. A new examination hall capable of holding 300 persons for lecture purposes, or about 150 under examination, has been opened.

At OWEN'S COLLEGE, MANCHESTER, the new biological laboratories are nearly completed, and will probably be ready for use before Christmas. The rooms then vacated will be placed at the disposal of the Medical School, and will be made use of to increase the space available for the physiological department. The physiological theatre has been altered, so as to provide increased accommodation.

At the LONDON SCHOOL OF MEDICINE FOR WOMEN, considerable alterations and additions to the school premises in Henrietta Street, Brunswick Square, have been made during the vacation. A large room has been erected in the garden for physiological teaching, and the lecture-rooms, laboratories, museum, students' dining and reading-rooms in the main building have been re-arranged and refitted so as to adapt them for the increasing number of students.

A SUM of £2,000 has been bequeathed by the late Miss Tanner, of Upper Clapton, to the British Asylum for Deaf and Dumb Females, an institution, established in 1851, for the education, religious instruction, and technical training of adult female mutes, for whom it also provides a home.

ENTRANCE SCHOLARSHIPS AND PRIZES.

ST. BARTHOLOMEW'S HOSPITAL MEDICAL COLLEGE.

THE Open Scholarship in Science, of the value of £130, tenable for one year, for students under 25 years of age, has been awarded to Mr. E. L. Jones, B.A.Cantab.; the open Scholarship in Science, of the value of £130, tenable for one year, for students under twenty years of age, to Mr. H. J. Waring, of Owens College, Manchester; and the Jeafferson Exhibition, of the value of £50, to Mr. F. M. Mangan.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.

THE Entrance Scholarship of £30, tenable for one year, has been awarded to Mr. Robert Douglas Muir; and that of £20, tenable for one year, to Mr. William Stainton Mercer.

LONDON SCHOOL OF MEDICINE FOR WOMEN.

THE Entrance Scholarship, value £30, has been awarded to Miss Madgshon, of Jarrow-on-Tyne.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

THE Entrance Scholarship in Natural Science, of the value of one hundred guineas, has been awarded to Mr. C. P. Lovell, B.A.; the three Entrance Scholarships in Natural Science, of the value of fifty guineas each, to Mr. L. E. Parkhurst, B.A., Mr. W. B. Winston, and Mr. F. W. Lewis; and the Scholarship of fifty guineas, open to students from a university, who have not entered at any London Medical School, to Mr. E. L. Sortain, B.A.

THE CHOLERA.

A ST. PETERSBURG telegram says:—Advices from Vladivostock report that cholera is making frightful ravages at Seoul, Corea, and the neighbouring district. Hundreds succumb daily to the disease.

THE CHOLERA IN EUROPE.

THE following are the cholera returns from October 2nd to October 6th:—Trieste, 44 cases, 7 deaths; Pesth, 10 cases, 7 deaths; Ponticello, 2 cases, 2 deaths; Torre dell' Annunziata, 17 cases, 10 deaths; Pesth, 23 cases, 10 deaths; Santagnello, 4 cases, 3 deaths; Castiglione, 10 cases, 8 deaths; Sestri, 5 cases, 2 deaths; Casarsa, 4 cases, 4 deaths; Cagliari, 25 cases, 10 deaths; Padua, 7 cases, 3 deaths; Taranto, 13 cases, 5 deaths; Szegedin, 28 cases, 11 deaths.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 20th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, September 29th, 1886.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The opening meeting of the session will take place at the Hackney Town Hall on Thursday, October 21st, when an address will be given by Dr. Playfair. The chair will be taken at 8.30 P.M. by the President of the Branch, J. Syer Bristowe, M.D., F.R.S. All medical men will be welcome, whether members of the Association or not.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of the above District will take place at the West Kent Hospital, Maidstone, on October 29th. Gentlemen who wish to read papers, exhibit specimens, etc., are requested to inform the Honorary District Secretary, A. W. Nankivell, F.R.C.S., St. Bartholomew's Hospital, Chatham, not later than October 9th. Further particulars will be duly announced.—A. W. NANKIVELL, St. Bartholomew's Hospital, Chatham, September 11th, 1886.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—A meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 14th, at 4 P.M., Charles E. Oldman, M.D., of Bletchingley, in the chair. Dinner at 6 P.M., charge 7s., exclusive of wine. The following papers, etc., have been promised. Dr. Galabin: Modern Improvements in Cæsarean Section. Dr. Samuel West: On some Points connected with the Diagnosis and Treatment of Empyema. Dr. Oldman: A Case of Wound of the Orbit. Dr. Duncan, Mr. T. A. Richardson, Mr. A. Matthey: Pathological Specimens. Members desirous of exhibiting or reading notes of cases are invited to communicate with the Honorary Secretary, Dr. P. T. DUNCAN, Park House, Croydon, September 28th, 1886.

MIDLAND BRANCH.—There will be a meeting of this Branch on Thursday, October 21st, at 2 P.M., at the Infirmary, Stamford, when it is hoped there will be a discussion on the Duration of Infectiousness in Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. Members desirous of reading papers or exhibiting cases are requested to communicate with me—W. A. CARLINE, Honorary Secretary.

WEST SOMERSET BRANCH.—The annual meeting of this Branch, which was appointed to be held at Minehead on July 30th, was put off in consequence of its being ascertained that probably only three or four members could have attended on that day. The Council have now fixed that the postponed meeting shall be held at the Railway Hotel, Taunton, on Thursday, October 14th, at 4 P.M. The business will be the same as that stated in the circular of July 6th, and the dinner will be at 5.30 P.M.—W. M. KELLY, M.D., Honorary Secretary.

STAFFORDSHIRE BRANCH.—The thirteenth annual general meeting of this Branch will be held at Burton-on-Trent on Thursday, October 28th. An address will be delivered by the President-elect, Dr. W. G. Lowe.—VINCENT JACKSON, General Secretary, Wolverhampton, September 22nd, 1886.

BORDER COUNTIES BRANCH.—The autumn meeting of this Branch will be held at the Keswick Hotel, Keswick, on Friday, October 22nd. The President, Dr. Eaton, Cleator Moor, will take the chair at 1 P.M. Dr. Speirs, Cleator Moor, will read Notes of a Case of Poisoning by Spirits of Salt. Dr. Eaton will read An Obscure Medico-legal Case, involving the Consideration of Deaths from Alcoholic Poisoning, Suffocation, and Epilepsy. Dr. Black, Keswick, will contribute Notes of a Case of Hydatid of the Liver. Morbid specimens will be shown by Dr. Welby l'Anson and others. Dinner at the Hotel at 4 P.M. The Secretary will be glad to receive immediate notice of papers for reading, and patients or specimens for exhibition.—H. A. LEDIARD, Honorary Secretary, 41, Lowther Street, Carlisle.

SOUTH MIDLAND BRANCH.—The autumnal meeting will be held at the George Hotel, Kimbolton, on Thursday, October 14th, at 2 o'clock P.M. The President, J. Hughes Hemming, Esq., invites the members to luncheon at his house, from 1 to 2 o'clock, and will be glad of a reply from those gentlemen intending to be present. By the kind permission of his Grace the Duke of Manchester, members will have the opportunity of visiting Kimbolton Castle. Gentlemen wishing to bring forward communications, etc., at the meeting, are requested to send the titles of the same at once to the Honorary Secretary. Papers, etc., promised—DR. T. J. Walker: An Apparatus for Irrigation of the Bladder. Mr. R. A. Milligan: 1. Case of Popliteal Aneurysm cured by Ligature after Failure of Pressure; 2. Two Large Calculi removed from Children by Lateral Lithotomy. Mr. J. Crew: Short Notes of a Case of Brain-Lesion. The subject of the Election of Representatives to the General Medical Council will be brought before the meeting.—C. J. EVANS, Honorary Secretary.

OXFORD AND DISTRICT BRANCH.—The next meeting of this Branch will be held at the Radcliffe Infirmary, Oxford, in the afternoon of Wednesday, October 27th. Members who wish to show cases or read papers are requested to communicate with one of the Secretaries on or before October 18th. Dinner, at 5s. (exclusive of wine), will be provided for those only who give in their names before Monday, October 25th.—Dr. DARBISHIRE, 60, High Street; W. L. MORGAN, Esq., 42, Broad Street, Oxford, Honorary Secretaries.

THAMES VALLEY BRANCH.—Meetings of the Branch will be held on November 10th, January 26th, and March 30th. Members willing to read papers or exhibit cases are requested to communicate with the Honorary Secretary, CHARLES C. SCOTT, M.B., St. Margaret's, Twickenham.

DORSET AND WEST HANTS BRANCH.—The next meeting will be held at Portland, on Wednesday, October 13th, 1886. The business meeting will be held at the Victoria Hotel, at 1.30 P.M. Agenda: Election of Officers for 1887. Election of New Members of the Branch. Dr. Batterbury will move: "That it is advisable that three meetings of the Branch be held every year, instead of two, as at present." In the event of the above resolution being carried, it will be moved that by-law 10 be altered in accordance therewith. Communications—Mr. Pridham: Case of Large Fibroid Polypus of Uterus; Removal; Specimen. Mr. Parkinson: Two Cases of Extra-uterine Fœtation; Rupture and Death from Hæmorrhage. Dr. Batterbury: Specimen; Salivary Calculus. Dr. McLean: 1. Two Cases of Conservative Surgery of the Hand; 2. Two Cases of Empyema, illustrating Different Modes of Treatment; 3. Case of Nævus, cured by Injection of Tincture of Iodine. Dr. Macdonald: Observations on some of the new Hypnotics. Discussion—The Treatment of Hæmorrhage from Internal Organs; for example, Lung, Liver, Stomach, Kidneys. Dinner at 4.15 P.M.; charge 6s. each, without wine. Members intending to be present are requested to notify the same to Dr. McLean, Portland, on or before Monday, October 11th.—WM. VAWDREY LUSH, M.D., Weymouth; C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

The Pathological Action of Corrosive Sublimate.—On the Antiseptic Action of Bile.—A New Fact in Testing for Sugar in Blood.—Local Electrisation and Rise of Temperature.—Gelosine.—General News.

SINCE corrosive sublimate (mercuric chloride) has been so generally used in surgery, and especially in obstetric practice, the attention of medical men has been attracted to the various intestinal lesions which have fallen under their notice. It has been asserted that mercuric chloride can produce deep lesions in the large intestines. Complex clinical facts may be interpreted in different ways, and have, therefore, not furnished convincing proofs of this assertion. Some authors suppose that, in cases of parturition where the sublimate has been used, the visceral lesions are due to the septic condition existing in the patient, and that the sublimate is not to blame. Experimental data, especially those obtained by Prévost's experiments, described in the *Revue Médicale de la Suisse Romande*, 1882, p. 553, indicate that visceral lesions often result from the effect of corrosive sublimate. Similar lesions to those observed in patients were experimentally provoked in animals; ecchymosis and hæmorrhage, but neither gangrene nor ulceration were observed. MM. Charrin and Roger used an aqueous solution of corrosive sublimate at 1 per 1,000, and 1 per 4,000, which was injected under the skin or into the veins; this last method required smaller doses. After injecting two milligrammes under the skin of a guinea-pig weighing 500 grammes, several ulcerated areas were observed; the injection of 5 milligrammes given in the course of eighteen days, or 3 milligrammes in six days, were powerless. These animals, experimented on by MM. Charrin and Roger, did not present during life any important symptoms of intestinal lesion; they grew thinner, had albuminuria, but rarely diarrhœa, and never intestinal hæmorrhage. When the dose of mercuric chloride was weak, the animals did not succumb to it; they were killed at successive periods, in order to follow the course of the lesions. It was observed that the morbid appearances were localised in the large intestines, and especially in the ascending colon and cæcum; sometimes the ileo-cæcal valve and the terminal portion of the ileum were attacked. The earliest lesion consisted of small spots of hæmorrhage dotted about on the intestinal mucous membrane, the peritoneum, the omentum, the outer surface of the kidneys, and especially the tissue of the lung. At a later stage these spots appeared as small ecchymoses, forming lines parallel to the axis of the intestines, varying in length from three to four centimètres. Later on, these ecchymoses became more extended, and the central portions sloughed away. A black eschar was thus formed, which gradually fell off and left an ulcerated spot. The contiguous portion of peritoneum sometimes showed signs of inflammation. Intestinal perforation has never been observed by these investigators. Thus the principal lesion which occurs after free administration of corrosive sublimate, is apparently intestinal hæmorrhage, which slightly tumefies the intestinal mucous membrane, and thus disables it as a factor in the process of nutrition. This hypothesis was verified by microscopical examination, which revealed the presence of spots of hæmorrhage in the areolar tissue. The mucous membranes became detached and sphacelous without any glandular change taking place, as might be supposed would result from the elimination of the poison. These facts in experimental physiology applied to human patients indicate that a dose of 24 centigrammes of corrosive sublimate is necessary to produce intestinal ulceration in a man of sixty kilogrammes; but the conclusion is not applicable unless the sublimate be given in hypodermic or venous injections. It remains also to be proved whether human susceptibility to the influence of this substance is the same as that of the lower animals; some clinical facts suggest that smaller doses of corrosive sublimate act on the human subject and provoke intestinal lesions. Nevertheless, MM. Charrin and Roger do not consider that the possibility of these accidents ought to be urged as a reason for proscribing the use of corrosive sublimate as an antiseptic agent.

Many physiologists believe that bile acts as an antiseptic agent on the organised ferments of the intestines; clinical facts appear to support this hypothesis. In jaundiced patients, when the bile does not flow into the intestines, intestinal putrescence increases. MM. Charrin and Roger have endeavoured to study the direct action of bile on micro-organisms observed in the upper part of the small intestines. Fresh intact bile, added to sterilised broth, in the proportion of sixty-six cubic centimètres (or even more) of bile per litre of sterilised broth, was not found to prevent the microbes from developing. These artificial cultivations became turbid, and emitted a fœtid odour. If slightly shaken, gases collected on the surface. If, instead of intact bile, some of its component elements were used, it was observed that each separate constituent of the bile exercised a different action. Biliary salts were more energetic in their action than bilirubin; this was especially true of the taurocholates. The antiseptic properties of bilirubin were very slight. Lecithin and cholesterine are apparently inert as antiseptic agents. Intact bile was less energetic than its constituent elements taken separately. Bufalin came to the same conclusion, after studying the action of bile and its constituent parts on ferments.

At a recent meeting of the Biological Society, M. Quinquand stated that, having ascertained that there were several errors in the existing method of testing blood for sugar with the usual reagents, he had modified the system of analysis, and used isinglass. He obtained precise results, and ascertained from them that the proportion of sugar contained in the blood was inferior to that stated by C. Bernard. At the same meeting, M. Quinquand stated that he had succeeded, by means of local electrisation of a group of muscles in a dog, in increasing the central temperature to such an extent as to produce death in a short time. The blood returned in the veins of the region thus stimulated contained less sugar than the blood in the veins of the corresponding group of muscles on the opposite side of the animal. Therefore, animal heat could be increased experimentally, and the resulting physiological phenomena carefully studied. M. Quinquand's experiments apparently furnished a therapeutic means of increasing the temperature of patients.

At a recent meeting of the Société de Thérapeutique, M. Guérin read a paper on Gelosine, a mucilaginous substance extracted from a Japanese alga, which is sold in the form of dry whitish leaves. Gelosine is an excellent base, mixing easily with all pharmaceutical substances, soluble in alcohol and water, and in acidulated or alkaline water; it served as a medium for salts, powders, and different tinctures, and was of great utility in preparing suppositories. Gelosine gradually contracts and expels the water and medical substances it contains, which are thus spread over the surface of wounds or cavities, in which it is placed in any form. Gelosine thus gradually regains its original volume, but can be used more than once for the purposes cited above. Gelosine, therefore, appeared to be preferable to liniments and ointments. M. Guérin showed specimens of cylinders and slabs of gelosine, containing camphor, creosote, sulphate of zinc, cucaine, tincture of belladonna, iodoform, corrosive sublimate, carbolic acid, and coal-tar. In order to use gelosine as a medium, the quantity required should be immersed in its weight of hot water; the therapeutic agent is then added and incorporated. When the mixture becomes as thick as syrup, it is poured into moulds. These operations were completed in a quarter of an hour, and the expense was slight. Sterilised gelosine might be utilised in bacteriological research.

The French Society of Otology and Laryngology will meet in Paris at the Town Hall, Place St. Germain-l'Auxerrois, on October 27th and 28th, at eight o'clock in the evening.

Several cases of pelagra have recently broken out among the foot-soldiers in barracks at Montpellier; the disease is supposed to have been contracted through the men wearing caps which had previously been worn by men affected with the complaint, and which had not been disinfected.

DR. THOMAS LINNINGTON ASH, of Holsworthy, is a candidate for the coronership of the Okehampton district of the county of Devon, vacant by the decease of Mr. Fulford.

GLASGOW.

[FROM OUR OWN CORRESPONDENT.]

Bequests to the University and Infirmaries.—University Examinations.—The Natural History and Medico-Chirurgical Societies.—The Faculty of Physicians and Surgeons and Dr. Bell.—The Disaster at the Lochfyne Quarries.

ANOTHER munificent bequest has fallen to the lot of the University. The late Mr. Andrew Cunningham, formerly town-clerk depute of Glasgow, has bequeathed £5,000 for completing the tower. When that is accomplished, the University will be practically finished, as proposed in the late Sir Gilbert Scott's plans. Within recent years a remarkably large amount of money has been presented for building purposes. The Marquis of Bute built the Bute Hall; the late Mr. Randolph left a very large sum for similar purposes; Mr. Pearce has removed the old college-gateway from its original site, and is rebuilding it as a lodge at one of the university-gates; and an unknown donor has given the money for a students' union building, which is now in process of erection. Thus, in the course of litte more than six years, nearly £120,000 have been presented to the University in the form of stone and lime; yet, with all this magnificence, the teachers in several of the departments suffer from insufficient accommodation, and from paucity of funds to meet working expenses and expenses of laboratory equipments. The professor of anatomy has had to erect, for the accommodation of his students, an iron addition to his dissection-room that is not beautiful to look upon; the professor of physiology has to maintain and add to his apparatus at his own cost; and the professors of botany and zoology have to use, as laboratories, rooms never designed for these purposes, and have no equipment other than they themselves provide. If future benefactors of the University would follow the example of Dr. Muirhead, of Cambuslang, and endow additional lectureships, or provide funds for the equipment of laboratories, the direct benefit to generations of students would be infinitely greater. Mr. Cunningham has also bequeathed large sums (£5,000 each) to the Royal and Western Infirmaries, and has generously remembered in his will the Eye Infirmary and several other similar institutions.

The winter's work at the University began on October 6th with the preliminary examinations in general education for medical students, for which no fewer than 344 candidates have entered. The professional examinations begin on October 11th. There are 168 candidates for the first examination, 129 for the second, and 81 for the third.

The various scientific societies of Glasgow have already begun, or are about to begin, their work for another session. The Natural History Society held its first meeting on October 28th, under the presidency of Dr. James Stirton, F.L.S.

The Medico-Chirurgical Society has already held two preliminary meetings, at which various recommendations for increasing the interest and usefulness of the Society were considered. It is proposed to establish four Sections especially devoted to the subjects of Medicine, Surgery, Midwifery and Gynæcology, and Pathology; a final decision will be taken on October 8th.

At a meeting of the Faculty of Physicians and Surgeons, held on October 4th, the case of Dr. Bell was finally disposed of, for a time, by Dr. Bell being suspended from all the privileges of a Fellow for the period of six months; and this, in spite of the fact that he had humbly apologised to the Faculty for his connection with a patent medicine, and had withdrawn from the position he took up at a former meeting. The new President of the Faculty, in room of Dr. Fergus, whose term of office is completed, is Dr. James Morton.

No additional fatalities have occurred from the explosion at the Lochfyne Quarries. The injured who were removed to Greenock Infirmary, among them Dr. H. B. Wilson, have recovered, and have been able to return home. An investigation, conducted by Colonel Ford, into the circumstances of the disaster has been completed, but no report has yet been issued.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Opening of the Winter Session at University College.—The Hospital for Women.—Annual Meeting of the Literary and Philosophical Society.—The Disposal of Cases of Scarlatina.

ON the afternoon of October 2nd, the usual formal opening of the winter session of University College, took place in St. George's Hall. Lord Derby presided; among the visitors present was Sir Philip Magnus, Director of the City and Guilds of London Institute for the Advancement of Technical Education, who on the evening before delivered the prizes to the students of the Liverpool School of Science. The annual statement, which followed an address from the chairman, and which was read by Principal Rendall, dealt with the more striking features of the work of the past year. These were—the remarkable increase in the number of registered students in arts and science, which greatly exceeded any previous record; the increasing proportion of students preparing for university degrees, and for various public examinations; and the transfer of the chemical teaching to the new buildings, opened in May last by Sir Lyon Playfair. The result of this last has been to give the required accommodation for physiological work; but, in spite of this, and of the enlargement of the dissecting rooms, and the rearrangement of the cloak-rooms, etc., the college is still seriously hampered by lack of space and want of lecture-rooms, a new lecture theatre for medicine and surgery being especially needed. Professor Conway, M.A., the Roscoe Professor of Art, delivered the introductory address, on the Succession of Ideals. In the evening the annual dinner was held at the Adelphi Hotel, under the presidency of Dr. Caton, and was attended by an unusually large number of leading members of the profession from Leeds, Manchester, and other towns.

The medical gathering at Dr. Imlach's residence on September 28th was a decided success. A day or two ago, a statement appeared in the newspaper to which the second resolution passed at the meeting had reference, to the effect that formal intimation of the discontinuance of the legal proceedings had been received, and that Dr. Imlach had paid the costs. Some further observations in reference to the matter followed, which were not altogether in good taste when it is considered that quite recently the President of the Hospital for Women wrote in his official capacity to the daily press, to request the public to suspend their judgment until the conclusion of the inquiry that is proceeding.

The annual meeting of the Literary and Philosophical Society, held on the evening of October 4th, proved of especial interest to medical men and others interested in sanitary science. The President, Dr. Carter, had selected as the subject of his second inaugural address "Some Results of Recent Sanitary Legislation, with Suggestions as to its Safe Extension." In the course of a most able and exhaustive address, he referred to Condorcet's prophetic observations on the subject; to the fact that forty-three years ago a paper read before the Society by the late Dr. Duncan, and which was published by the Government of that day, had given the impulse to the work of sanitary reform that has done so much good in Liverpool; he drew a contrast between the sanitary condition of England, and more especially Liverpool, forty years ago, and its sanitary state now. Dr. Carter, in conclusion, considered the direction in which changes in public health law might be safely and advantageously made, remarking that, in view of past experience, whatever change is made should be on the principles and in the direction of the Public Health Acts of 1872 and 1875. In referring to the various branches of sanitary work, the attempt to compel notification, even on the part of the householder, in every case of infectious disease, without instituting at the same time the most careful precautionary measures, was condemned.

During the past few weeks, a difficulty has arisen in regard to the disposal of cases of scarlatina. This disease has been, and is, prevalent here; and the Health Authorities have been placed in an awkward position by the action of the Select Vestry, in objecting to receive any more cases into the Workhouse Hospital. The Netherfield Road Hospital is not yet in perfect sanitary condition; and, on that account, no cases have been of late sent there. But, at the last meeting of the Health Committee of the City Council, it was stated that during the week ending September 25th a few urgent cases were removed to Netherfield Road. During the week referred to, forty-four cases of scarlet fever were reported, of which seven were sent to hospital.

NEWCASTLE-UPON-TYNE.

[FROM OUR OWN CORRESPONDENT.]

New Infectious Hospital at Jarrow.—Sick Children's Hospital.—Carlisle Poisoning Case.—North of England Medical Society.—Newcastle Clinical Society.

THE foundation-stone of a new hospital for infectious diseases was laid a few days ago at Jarrow. Two acres of land have been purchased from the Ecclesiastical Commissioners, and will be enclosed by a 14-feet wall. There will be an administrative department and a ward block 118 feet long. This latter will consist of four wards, two female and two male, providing accommodation for thirteen patients. The

building will be of brick, with stone facings, and is expected to cost between £3,000 and £4,000.

A vacancy has been declared on the staff of the Children's Hospital by the resignation of Dr. Housemin, one of the physicians. Dr. H. S. Baumgartner and Dr. W. C. Beatley are the only candidates at present in the field. Dr. Baumgartner studied at Guy's Hospital and in Newcastle, and has had some experience of the work; he has held no professional appointments. Dr. Beatley studied at Charing Cross Hospital and in Newcastle. He has held the appointments of resident medical officer at Charing Cross Hospital, senior assistant at the County Asylum, Somerset, and resident medical officer at the Newcastle Dispensary. The governors of the hospital will have some difficulty in deciding to whom they should award their votes, and the contest will no doubt be a close one.

Dr. Walker, of this city, has sent me a report of his analytical and biological examination of the various articles of diet used at the fatal wedding breakfast at Carlisle. The articles consisted of bridecake, corn-flour, tea, and mace; in addition, he received two bottles of vomit. Dr. Walker examined each article separately by the ordinary methods for all mineral poisons, and by Dragendorff's method for all alkaloids and glucosides, in every case with a negative result. Dr. Walker then examined the hare-soup and vomits for ptomaines; in no case was any trace of poison detected. Being struck with the resemblance of the symptoms to those of "bacilli-poisoning," Dr. Walker procured portions of the ham used at the breakfast, made various extracts of it, and administered them, together with the ham, to various animals, but in no case was there a positive result. On microscopical examination among other varieties of organisms, bacilli were discovered, which appeared as short rods with rounded ends, generally in pairs joined by their extremities. All attempts at cultivation failed; and Dr. Walker says: "This appears to indicate that the bacilli are dead, and if so, explains why the ham was not poisonous to the animals experimented upon."

The annual meeting of the North of England Medical Society was held on Thursday last. Dr. Hume was elected President for the coming session; and Dr. Farquharson and Dr. Oliver were elected Joint-Secretaries. About sixteen members subsequently dined together at the Douglas Hotel.

The first meeting of the Clinical Society for the session 1886-87 will be held this month. The session promises to be a useful one; already the syllabus of papers promised for each meeting is made up. Amongst the subjects promised are papers on Intestinal Obstruction, Diseases of the Kidney, Rickets, Herniotomy, the Relation of Infection to the Puerperal State, Waters and Filters, and General Paralysis of the Insane; it is hoped that Dr. Page, of the Local Government Board, who is an honorary member of the Society, will bring some subject before the members, should he pay a visit to the North.

CORRESPONDENCE.

☞ To Correspondents. ☜

Our correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return and hold over a great number of communications, chiefly by reason of their unnecessary length.

DIRECT REPRESENTATION OF THE PROFESSION ON THE GENERAL MEDICAL COUNCIL.

Sir,—The letter of Dr. Strange, the Chairman of the Birmingham Committee, which you published on October 2nd, and your leader of that date, have informed the profession that, from regard to my place in the test ballot by that Committee, they have now invited me to be their third candidate. The profession will naturally expect to hear the decision of my Committee, and my own opinion in regard to that invitation. I will ask you with this view kindly to publish the resolution of my Committee and my letter to Dr. Strange in reply to his overtures acting as Chairman. In announcing this resolution, I wish to acknowledge with gratitude the courtesy of Dr. Strange and his colleagues. I am well aware of the value of organisations, but at all hazards we must preserve freedom.—I am, yours very truly,

25, Highbury Place, N. James Grey Glover.

"25, Highbury Place, October 2nd, 1886.

"Dear Dr. Strange,—I lose no time in informing you of the result of the consideration by my Committee of the proposal of your Committee that I should stand as the third candidate of your nomination for the office of direct representative of the profession in the General Medical Council. The resolution of the Committee is as follows:

"'That this Committee, having considered the letters written by Dr. Strange and Mr. Ker, on behalf of the Birmingham Committee, in which Dr. Glover is informed that he has been adopted as the third candidate on their list, and in which, further, they express the desire that this Committee, formed (two months since) to promote Dr. Glover's candidature, should amalgamate with the Birmingham Committee to promote the election of Messrs. Wheelhouse, Foster, and Glover—the three candidates now selected by the Birmingham Committee as the most suitable to represent the profession in the General Medical Council, do hereby resolve that the best thanks of the Committee be given to the members of the Birmingham Committee for their proffered aid in advancing the election of Dr. Glover, and for the way in which they have mentioned his suitability for the post, as well as his claims on the profession; but, as many members of his Committee have already promised their support to other candidates, and many other members decline to have their freedom of selection curtailed, it is impossible for the two Committees to amalgamate to fulfil the objects of the Birmingham Committee.'

"I need not say how gratifying it is to me to stand well in the estimation of so many members of your Committee, nor what a pleasure it would have been to me to co-operate with you, and to be associated in a joint candidature with Mr. Wheelhouse and Sir Walter Foster.

"But I am bound to say that I heartily concur with my Committee. What we want above everything is to aid the free and spontaneous expression of the views and preferences of the profession, and to avoid mechanical ways of tying candidates and voters together. I shall still prize the support of the individual members of your Committee. I trust to your kindness and courtesy, of which I have had not a little proof, to believe that, in electing to stand as an independent candidate, I am only doing what I feel to be right in the interest of the profession which we all have at heart.—Believe me, dear Dr. Strange, yours very truly, James Grey Glover."

Sir,—Will you kindly allow me, in answer to the letter of Dr. Carter in the Journal for October 2nd, to explain that I sent the letter he quotes to the Birmingham Committee, just as I sent my advertisement to your valuable Journal, to make known my candidature. On re-perusing my letter, I do not find that it contains any request for support; neither do I find in it any allusion to my own "merits."—I remain, etc., R. P. B. Taaffe.

45, Old Steyne, Brighton.

Sir,—Permit me to say that, as Dr. Lush, late M.P., who had charge of five of the seven Bills drafted by the Medical Alliance Association for the amendment of the Medical Act of 1858, and to whose exertions on behalf of medical reform, we, the Medical Alliance, most unhesitatingly assert the appointment of the Select Committee of the House of Commons, and the subsequent Royal Commission to inquire into the Medical Acts are due, is unable, in consequence of continued ill-health, to accept our invitation to come forward as a candidate for a seat in the Medical Council, we have, in conjunction with others, not members of the Alliance, invited Dr. R. H. S. Carpenter, the Chairman of the Medical Alliance, and Mr. George Brown, the Honorary Secretary of the Medical Reform Association, to accept our invitation to them to become representatives of the general practitioners of England, and that both these gentlemen have acceded to our wishes, and have pledged themselves to us to go to the poll.

To Dr. Carpenter's eleven years' continuous efforts to suppress illegal practice, which, as part of his work in this direction, has resulted in fifty-six prosecutions; to his earnest efforts to secure a reform which would be beneficial to the rank-and-file of our profession, as is shown by his drafting the seven Bills of the Alliance—the only Bills which guarded the interests of the general practitioners, it is needless for me to allude further, as they are well known to the profession.

Of Mr. George Brown, the founder of the Medical Defence Association, and the holder of gold and silver medals, and many other medical prizes as well, and whom we consider alone entitled to the credit due for the work done by the Medical Defence Association, I shall not speak, further than to say that for Dr. Carpenter he would be a most worthy colleague.

Both these gentlemen are *bonâ fide* general practitioners, they both know the material wants and interests of their own class of "struggling practitioners" (as Dr. Lush used to speak of them); they have both shown by these past services, by the way they have devoted their time, and ungrudgingly opened their purses for the

benefit of the profession at large, not only a determination to guard with their best efforts the privileges the profession now have, but to obtain by legislation a protection for them against the invasion of those privileges by unqualified practitioners, and the usurpation of their titles by medical impostors.

I challenge any of the candidates now in the field to compare their past services with the services of Messrs. Carpenter and Brown; and remain, Sir, your obedient servant,

JOHN PAGE HENTSCH,
Honorary Secretary to the Medical Alliance Association.

4, Portland Place, Camberwell.

SIR,—In the JOURNAL of October 2nd, I find a letter written by my kind friend and associate, Dr. Lloyd-Roberts, proposing me as a candidate for the British Medical Council, on the ground that Wales should have one of the vacant seats. This intended kindness I must gratefully decline: first, because I have not the time; secondly, because I feel I do not possess the really peculiar qualifications necessary for the appointment; for, though at the Birmingham meeting I stated that I thought the provinces ought to have the selection, I yet maintained that the services of the best men should be secured. I proposed Mr. Wheelhouse as such, knowing him to have served an apprenticeship; to have been a general practitioner; to have been a hospital surgeon and lecturer; to have served on the Council of the College of Surgeons; and, from an intimate acquaintance with him, as President of the Council of the Association. I did this in no sense of loyalty to the Association, but because I considered him as an all-round man, equal to any other general practitioner in the kingdom, and one who, honestly and fearlessly, will maintain their best interests. I also feel, without any regard to the Association, that Sir W. Foster is entitled to a seat, owing to the fact that, but for his persistency in the House of Commons, the third seat would not have been obtained; and that, owing to his Parliamentary knowledge, great experience in the management of the affairs of the Council of the Association, and, above all, his admitted and well-known administrative talent, I think, without a doubt, if elected, he will be a most valuable representative.

Should the third be Dr. Dolan or Dr. Glover? I am unable, through want of knowledge of these gentlemen, to advocate the claims of either; but, from what I have read, I should think they would either of them make excellent representatives from the general practitioner's point of view.

As to the opinion that Wales should possess one of the three seats, I quite agree with Dr. Lloyd Roberts's opinion, and at the meeting held at the Grand Hotel at Brighton proposed Sir William Roberts, of Manchester; but, it being expressed to me that most probably the Victoria University would pay him the compliment of returning him as its representative, I took no further step in the matter. If my fellow-countrymen wished for one of the seats to be allotted to Wales, they should have urged this before the passing of the Bill; and, if they yet wish for a Welsh candidate, I would suggest the name of Dr. Edwards, of Cardiff, who filled the presidential chair with such ability and courtesy. Looked at from a Welsh point of view, the idea is by no means a pleasing one that the Saxon wishes to absorb the Welshman into his capacious maw, and to destroy his nationality; for, whenever a question like the present is started, we are always snuffed out with the statement that we are an integral part of England, though we are really the only Celtic portion that has retained its ancient language and customs. Of this I am quite sure, that, however much Wales might desire it, or possess one fit for the appointment, the English people do not possess the generosity to give it.—I am, sir, yours truly,

T. EYTON-JONES,
President of the North Wales Branch.

SIR,—As you have liberally opened your columns to the discussion on the above subject, perhaps you will permit me to say a few words to the general practitioners on this important crisis.

In the first place, I do not think the names selected at the Birmingham meeting are at all representative. What we general practitioners want are men who know, from experience, the difficulties and disadvantages that general practitioners have to put up with. We constantly read in the JOURNALS of the overcrowding of the profession; why not, then, have representatives who will promise to do all in their power to abolish unqualified assistants, unqualified midwives, prescribing chemists, and quacks? We read in the London papers daily of men being brought before the magistrates for publishing obscene literature; why not try to put a stop to those filthy publications which are gratuitously distributed in our London streets, which have been the ruination of many credulous youths, besides taking practice out of the hands of the properly qualified? Again, we want representatives who have held club and union appointments. Some legislation is required to save medical men from the suicidal effects of the present club-system, as it exists in many parts of the country; none but men who have been actually engaged in this practice can understand the depths of degradation to which it is driving our profession. As regards Public Health and Poor-law appointments, our representatives should have some knowledge of the very low remuneration medical officers receive at the hands of the Local Government Board. In other Government appointments, men receive pensions after so many years' labour; why not so in our branch?

Lastly, I would advise general practitioners to look out for representatives who will endeavour to obtain for physicians and surgeons the title of Doctor from the Colleges to which they belong, without having to take a trip to Belgium, Germany, or the United States.

General practitioners would do well to bear the above points in mind when recording their votes.—Yours truly,

JAMES LESLIE CALLAGHAN.

HEALTH OF SOUTHPORT.

SIR,—On page 379 of the JOURNAL of August 21st, there is a paragraph relating to the prevalence of infectious disease in watering-places.

This paragraph adopts the table published by the *Sanitary Record* of August 15th, which gives in detail the health-statistics of forty-six watering-places. The table in the *Sanitary Record* in its turn is practically identical with Table viii, p. 14, of the Registrar-General's Report (No. 150) for the quarter ending June 30th of this year.

I have to point out that the table in the *Sanitary Record* is seriously incorrect as regards the town of Southport, and that your paragraph therefore fails to put Southport in its due comparative position, as you doubtless would have done if you had had the correct figures before you.

The *Sanitary Record* has adopted the incorrect figures of Table viii of the Registrar-General's Report for last quarter, which gives the zymotic death-rate of Southport as 1.19 instead of .19 per 1,000 *per annum*. The *Sanitary Record* is perhaps only very slightly to blame for not perceiving that two deaths in a quarter could not possibly yield a rate of 1.19 on a population of 42,004. But whether blameable or not, it is a very serious matter to any watering-place which exists solely and entirely upon its health reputation to find its zymotic death-rate overstated six-fold in the Registrar-General's table and in the columns of the leading sanitary journal.

I have drawn the attention of the authorities at Somerset House to the error, and to the serious damage which must inevitably accrue to Southport from it. The error is the more annoying because Table vii, p. 13 of the same quarterly return gives the figures correctly. Unfortunately no one looking up Table viii for the special purpose of learning the health-position of watering-places would turn back to look at Table vii. Again, if the editor of the *Sanitary Record* fails to see the discrepancy between the actual numbers given as dying from zymotic diseases and the rate quoted, what is the probability that the public will discover it?

Allow me to point out that the zymotic death-rate of Southport for the June quarter was the lowest after Littlehampton, Tenby, and Weston-super-Mare, which showed no zymotic death-rate at all; and absolutely the lowest of all the seventy-eight other towns tabulated by the Registrar-General for the June quarter.—I am, etc.,

HENRY H. VERNON, M.D.,
Southport. Medical Officer of Health.

SCARLET FEVER AT NEW QUAY.

SIR,—May I be allowed to make a few remarks in your valuable columns, with reference to your article on Unhealthy Health-Resorts, of October 2nd?

My landlord was, on September 28th, three days after I wrote to the *Times*, fined £10, under Section 128 of the Public Health Act of 1875, the prosecution having been undertaken at the instance of the St, Columb Local Authorities. I believe that under Section 129 I should have had no legal standing, as I had not taken the precaution of catechising either my landlord, or the persons who recommended me his lodgings, as to the existence of infectious disease in his house. I did not think so ill of human nature as to suppose that anyone, with a full knowledge of the state of things, would have cordially recommended me the lodgings. But I hope that others may be more prudent in future.

There were, however, circumstances in the case which would have rendered it virtually impossible for me to prosecute on my own account. My child was seriously ill, and his condition, for a week at least, caused me real anxiety. He and his nurse were necessarily im-

prisoned in the farmhouse (a very small one) in which I had taken rooms; and even had it been possible to move them, no one in New Quay would have taken them in. They were thus dependent on the landlord and his wife for quiet in the house, and the hundred little services necessary in such a case. With regard to my landlord and his wife, I will only say that had I absolutely threatened to prosecute them, they might have produced a state of things in the house which would have seriously retarded the child's recovery. His recovery was, of course, the first object with me, and it was necessary to find a *modus vivendi*. I did so by threatening them with prosecution in case they failed in the very least of doing everything to help on the recovery of the child.

After giving the matter the fullest consideration, I came to the conclusion that a prosecution, whoever instituted it, would do little or nothing towards a radical cure of the evil. The general public would probably never hear of it, or if they did, they would learn nothing of the prevalence of the fever in New Quay, and the causes which produced it. Nothing short of a public exposure would, I thought, avail, and I am now glad to learn from a correspondent that my opinion is supported by many of the residents in New Quay itself.—I am, Sir, your obedient servant,

H. NETTLESHIP.

17, Bradmore Road, Oxford.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL SCHOOL.

THE winter session of the Army Medical School commenced on Friday, October 1st, when the introductory address was delivered by Surgeon General Sir T. Longmore, C.B., Professor of Military Surgery. There were sixty-six surgeons on probation present, forty-one being candidates for commissions in the British Medical Service, and twenty-five in the Indian Medical Service.

VOLUNTEER MEDICAL OFFICERS.

WHAT constitutes the requirements of the Board of Examination to enable volunteer medical officers to obtain certificates of proficiency is a question so often asked, that the reproduction of the following information will not be unacceptable.

The following books are recommended, the first only is essential: 1. *Army Medical Regulations*, 1885, price 2s. 6d. 2. *Manual for the Medical Staff Corps for 1885*, price 2s. 3. Longmore's *Gunshot Injuries* (especially chapters on Administration, Equipment, etc.) 4. Parkes's *Hygiene*. 5. Wolseley's *Soldiers' Pocket-Book*. 6. Cantlie's *Accidental Injuries*, price 1s. 7. Evatt *On Ambulance Organisation, Equipment, and Transport*, price 1s. The examination is generally written, but may be partly or entirely *viva voce*. The questions are such as can be answered after careful reading of the *Medical Regulations*, supplemented by the perusal of one or more of the books named. Questions on bearer-company drill are not asked.

The desire of the Director-General, observes Mr. Walter Pearce, Acting-Surgeon, 20th Middlesex (Artists) Rifle Volunteers, to whom we are indebted for the above information, is to make the examination a real test of proficiency, and several rejections have recently taken place. Further information can be obtained through the adjutants of volunteer regiments from the Principal Medical Officers of their respective districts.

THE TROOPS IN BURMAH.

THE detachment under Major Meacham, which has been surrounded for some time past at Thabyabin by Boshway's force was, says a *Times* correspondent, relieved on September 28th, by a force of 120 of the South Wales Borderers, and found to be in a terrible condition. Out of 50 of the South Wales Borderers, 17 had died from fever, and 32 were sick and disabled, only one man remaining fit for duty. A company of the 16th Bengal Infantry, which formed the remainder of the force at Thabyabin, had also suffered from fever, two Sepoys having died and a number being disabled. No casualties had occurred among the officers.

THE NAVY.

THE following appointments have been made at the Admiralty during the past week: T. H. KNOTT, Fleet Surgeon, to the *Lion*; WILLIAM ROCHE, Fleet-Surgeon, to the *President*; JOHN TYNDALL, Staff-Surgeon, to the *Brilliant*, for temporary service; R. G. BROWN, Staff-Surgeon, to the *Hecla*; JAMES DUNLOP, M.D., to the *Egeria*; A. F. HARPER, Surgeon, to the *Algerine*; H. J. M'C. TODD, Surgeon, to the *Ganges*; A. S. NANCE, Surgeon, to the *Swallow*.

Deputy Inspector-General F. W. DAVIS has been appointed to Jamaica Hospital

MEDICAL STAFF.

SURGEON-MAJOR F. HOWARD, M.D., who is serving in the Madras command, has passed the examination for the lower standard in Persian.

Surgeon-Major H. W. A. MACKINNON, serving in the Madras command, is, on return from Upper Burmah, ordered to do general duty in the Eastern District.

Surgeon R. KIRKPATRICK, M.B., who has been doing duty at the Kamptee Station Hospital, in the Madras command, is directed to proceed in medical charge of the 2nd Battalion Royal Munster Fusiliers, under orders to Upper Burmah.

Surgeon A. E. TATE, doing duty at the Station Hospital, Secunderabad, Madras command, is directed to proceed to Belgaum, and assume medical charge of the 1st Battalion Rifle Brigade, under orders to Upper Burmah.

Surgeon H. T. BAYLOR, serving in the Madras command, has been granted leave to England for six months on medical certificate.

Surgeon-Major R. M. CRAIG (doing duty at Poona Station Hospital), Surgeon E. W. KELSALL (Kirkee Station Hospital), Surgeon P. M. ELLIS (Colaba Station Hospital), Surgeon W. G. BIRRELL, M.B. (Mhow Station Hospital), and Surgeon R. H. HALL (Kurrachee Station Hospital), all in the Bombay command, have been detailed for service in Burmah.

Brigade-Surgeon J. PAXTON, M.D., Surgeon-Major C. S. CLOSE, Surgeon-Major W. F. SAMUELS, Surgeon G. H. K. M. O'CALLAGHAN, serving in the Bombay command, and whose term of foreign service will expire during the season 1886-7, will proceed to England in Her Majesty's Indian troopships, doing duty with troops on the voyage.

THE INDIAN MEDICAL SERVICE.

THE services of Surgeons G. M. NIXON and J. F. MACLAREN, M.B., of the Bengal Establishment, are temporarily placed at the disposal of the Government of the North-West Provinces and Oudh.

Surgeon-Major D. P. MACDONALD, M.D., medical officer to the 11th Prince of Wales's Own Bengal Lancers, is appointed to the medical charge of the Bundelcund Political Agency, *vice* Surgeon P. Mullane, proceeded on duty to Burmah.

Brigade-Surgeon (now Deputy Surgeon-General) J. H. THORNTON, C.B., M.B., Bengal Establishment, is appointed Deputy Surgeon-General, with temporary rank, for the period during which he held the appointment of Principal Medical Officer at Suakin, namely, from June 4th to November 15th, 1885.

Surgeon-Major C. H. JOUBERT, M.B., Bengal Establishment, Officiating Civil Surgeon of Burdwan, is appointed to act as Professor of Anatomy at the Medical College, Calcutta, during the absence, on furlough, of Surgeon-Major D. O. Raye, M.D.

Brigade-Surgeon A. GARDEN, M.D., Bengal Establishment, Civil Surgeon of Saharunpore, is to be in visiting charge of the civil medical duties of the Moozufernugger District from August 21st.

Surgeon-Major O. BAKER, Bengal Establishment, is transferred from Moulmein to Rangoon, to perform the duties of Junior Civil Surgeon during the absence of Surgeon-Major H. Johnstone, M.B.

Surgeon G. T. THOMAS, Madras Establishment, is transferred from Rangoon to Moulmein, to fill the post of civil surgeon.

The services of Surgeon-Major C. SIBTHORPE, of the Madras Establishment, have been replaced at the disposal of the Commander-in-Chief.

Surgeon-Major T. C. H. SPENCER, Madras Establishment, whose services have been replaced at the disposal of the Military Department, is directed to do duty at St. Thomas's Mount, *vice* Brigade-Surgeon C. T. Eves, retired.

Brigade-Surgeon G. Y. HUNTER, Bombay Establishment, who has been on sick furlough, has received permission to return to duty.

Surgeon-Major C. OGILVIE and Surgeon H. B. BRIGGS (in medical charge of the 12th Native Infantry), both of the Bombay Establishment, have been detailed for service in Burmah.

The undermentioned gentlemen have obtained leave of absence for the periods specified: Surgeon-Major O. T. DUKE, M.B., Bengal Establishment, medical officer 16th Native Cavalry, for one year on medical certificate; Surgeon G. JAMESON, Bengal Establishment, for 182 days.

SURGEONS G. C. TAYLOR, M.B., and F. F. LEE, of the 1st Wilts Volunteers, have been granted the honorary rank of Surgeon-Major.

INDIA AND THE COLONIES.

INDIA.

MORTALITY IN INDIAN GAOLS.—Attention is once more being directed, in India, to the extraordinarily high death-rate in the gaols in Bengal. In no less than nineteen of the gaols the death-rate varied from 200.2 per 1,000, to 61.2. The *Englishman* gives the following as the "returns" from the worst gaols:—Jalpáiguri, 200.2 per 1,000; Hazaribugh, 180.8; Dinajpur, 170.3; Ragsháhai, 169.5; Purnia, 133.1; Rungpur, 119; and Monghyr, 111. The mortality is reported to have been greater among newly arrived prisoners than among the older inhabitants of the prisons. How is this terrible mortality explained? It is a well-known fact that the health of the criminal classes in India, even when at large, is bad, a fact to be accounted for chiefly by their precarious calling; they are usually more than half starved on admission, and when to this the barely sufficient food of an Indian prison dietary and the depressing influences insoparable from prison life and discipline are added, it to some extent explains the little resistance to disease of which the wretched inmates of Indian prisons are capable. Most of the prisons named are in unhealthy districts, suffering much from malaria. In one gaol, that of Jalpáiguri, the medical officer reported that, out of 513 prisoners, 80 were in bad, and 321 in indifferent, health on admission, and, out of this number, 20 died. After a liberal allowance has been made for the operation of the causes assigned in

explanation of this enormous death-rate, and for the prevalence of cholera in the various districts where the gaols are situated, from which the inmates suffered to some extent, it must be allowed that this excessive mortality demands a searching inquiry. As the matter stands, the "death-penalty" falls on a very large number of criminals whose offences against society, however "worthy of bonds," are surely too severely punished by death. All the world over, the two chief causes of excessive prison-mortality have been overcrowding and insufficient food. We all know what our prisons in England at one time were, loathsome pest-houses, and that now the death-rate of their inmates is lower than that in any class of the population. In a time of general sickness, perhaps, the safest place of refuge in the present day is an English prison. It may not, perhaps, be possible, in such a climate as that of India, to bring up the health-standard of Indian prisons to that of our English gaols, but surely something should be done to improve the condition of the prisoners, and lessen the enormous mortality, which is a blot on our administration.

MEDICO-LEGAL AND MEDICO-ETHICAL.

FEE FOR ATTENDANCE ON MEMBERS OF THE PROFESSION.

SIR,—I shall feel greatly indebted for advice as to what I should do in the following circumstances. Some time ago, I was asked to visit a medical man—a total stranger to me—who lived in a country village about fourteen miles from my house. On visiting him, I found him to be very dangerously ill, and requiring regular medical attendance. My patient, however, absolutely refused to allow any of the neighbouring practitioners to see him; so I was urgently pressed to undertake the attendance on him, which I did, making in all eleven visits, some of them at great inconvenience to myself. I was asked several times, on his recovery, to charge a fee, which, however, I did not do. Some time afterwards, the patient called on me, to thank me for my attention during his illness; and again he pressed me to charge him a fee. I said that I did not think it was customary to do so in the case of a brother medical. To this he replied that the circumstances were quite exceptional, each visit taking from three to four hours, on account of the travelling out and back to town. The railway fares alone came to 35s. My patient is a man in good practice; I am one of the assistant-physicians to the chief hospital in this town. Am I justified, in these circumstances, in charging a fee? and, if so, what would be a reasonable fee to charge? Yours truly, M.D.

*** As the most authoritative reply (which has unwittingly been delayed) to our correspondent's question, we would refer him to the following suggestive rule, extracted from the second edition of the *Code of Medical Ethics*, ch. ii, sect. 2, page 53, on the principle laid down in which we unreservedly advise him to act.

"All legitimate practitioners of medicine, their wives, and children while under the paternal care, are entitled (not as a matter of right, but) by professional courtesy, to the reasonable and gratuitous services—railway and like expenses excepted—of the faculty resident in their immediate neighbourhood, whose assistance may be desired. In the case, also, of near relatives who are more or less dependent upon a professional brother (other than wealthy), it will likewise be well, at his request, to forego or to modify the usual fee. On the other hand, a son or daughter altogether independent of the father, or the widow and children of a practitioner left in affluent or well-to-do circumstances, should be charged as ordinary patients, unless feelings of friendship, or other special reasons, render the attendant practitioner averse to professional remuneration; in such case, the rule need not apply. Moreover, if a wealthy member of the faculty seeks professional advice, and courteously urges the acceptance of a fee, it should not be declined, for no pecuniary obligation ought to be imposed on the debtor which the debtee himself would not wish to incur."

OBITUARY.

DR. FRANCIS HAY.

DR. FRANCIS HAY was the son of Mr. Francis McD. Hay, of Peterhead. He graduated at the University of Edinburgh, where he took the degree of M.A. in 1871, and the M.B. and C.M., with highest honours, in 1874. He practised for about twelve months in Perthshire, and then went to the Continent and continued his studies at Berlin, Vienna, and Paris. On returning to England, he settled at St. Helen's, Lancashire, and enjoyed an extensive practice there for about six years; but his health gave way from overwork, and about two years ago he returned to Peterhead, and resumed practice there. About three weeks ago he was attacked by erysipelas, but recovered sufficiently to resume work. While visiting a patient on Thursday evening, September 30th, however, he was taken so ill that he had to remain for the night. Next day he went to his home, but getting worse, was taken to his mother's house in Cairntoddlie, where he died on October 4th, at the early age of 37. He was unmarried.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE SANITARY CONDITION OF THE THAMES.

THE recommendations of the Royal Commission on metropolitan sewage-discharge, that no crude sewage be discharged into the Thames at any point above the Nore, are, according to the half-yearly report of the Port of London Sanitary Committee of the Corporation, likely to remain as a recommendation, and nothing more. It is stated that in "two cases at Gravesend, where large and offensive outfalls existed, the owners have been compelled to carry the pipes out to low-water mark, and thus minimise the nuisance. With regard to the great and serious question of the sewage of London, no fresh action has been taken by the Metropolitan Board of Works. As was expected, they continue to treat the sewage at the present outfalls. The result up to the present time is exactly what was foreseen—namely, whenever the weather is hot and dry for a week or two, the river becomes discoloured, and gives off the old familiar smell. Happily, the summer, up to the present time, has been a cool and wet one, and there have been but few spells of weather favourable to the complete development of the Thames nuisance. On a few occasions, the water has been discoloured, and the foul smell has obtruded itself upon the public notice. The nuisance is not, however, a constant one. With a spell of warm weather, it becomes marked, and is at once taken up by the public and the press. With the advent of cool weather and rain, the trouble is diminished, and the subject is once again forgotten."

Mr. W. Chippendale Cotton, on the other hand, states that the Board of Works have arranged for experiments being carried out at Crossness pumping-station for treatment of London sewage by means of filtration. This method will—(1) entirely dispense with the "fleet of vessels" for carrying the solid matter to the ocean; it will (2) permit the affluent being turned into the river freed from all objectionable or noxious matter; and it will (3) convert the solid refuse, in conjunction with the filtering material, into a valuable fertiliser, which can be carried away either in blocks or in a powdered state. The results already achieved at Wimbledon, he adds, leave no doubt as to the ultimate success of the larger scheme at Crossness, both from an economic and hygienic point of view.

HEALTH OF ENGLISH TOWNS.

IN the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,539 births and 3,592 deaths were registered during the week ending Saturday, October 2nd. The annual rate of mortality, which had been 22.6 and 21.0 per 1,000 in the two preceding weeks, further declined to 20.6 during the week under notice. The rates in the several towns, ranged in order from the lowest, were as follow:—Brighton, 15.2; Bradford, 16.9; London, 17.0; Derby, 17.6; Plymouth, 18.4; Huddersfield, 18.8; Sunderland, 20.1; Portsmouth, 20.3; Birkenhead, 21.3; Birmingham, 21.5; Nottingham, 21.6; Leicester, 22.0; Oldham, 22.0; Bristol, 22.4; Sheffield, 23.2; Newcastle-upon-Tyne, 23.9; Hull, 24.3; Cardiff, 24.3; Salford, 24.5; Blackburn, 24.6; Norwich, 24.9; Halifax, 26.0; Liverpool, 26.4; Wolverhampton, 27.4; Leeds, 27.7; Bolton, 27.7; Manchester, 29.2; and the highest rate during the week, 29.4 in Preston. In the twenty-seven provincial towns, the death-rate averaged 23.7 per 1,000, and exceeded by as much as 6.7 the rate recorded in London, which, as before stated, was but 17.0 per 1,000. The 3,592 deaths registered in the twenty-eight towns during the week under notice included 532 which were referred to diarrhœa, 61 to scarlet fever, 59 to fever (principally enteric), 33 to diphtheria, 32 to measles, 29 to whooping-cough, and not one to small-pox; in all, 746 deaths resulted from these principal zymotic diseases, against 1,199, 1,132, and 933 in the three preceding weeks. The zymotic death-rate was equal to 4.3 per 1,000. In London, the zymotic rate during the week under notice was 2.4 per 1,000, while in the twenty-seven provincial towns it averaged 5.8, and ranged from 2.4 in Huddersfield, and 2.7 in Plymouth, to 8.5 in Leeds, 9.1 in Norwich, 10.4 in Wolverhampton, and 12.4 in Preston. The fatal cases of diarrhœa, which had declined from 998 to 724 in the three preceding weeks, further fell during the week under notice to 746, and caused the highest death-rates in Sheffield, Norwich, Cardiff, Wolverhampton, Hull, and Preston. In London, the diarrhœa rate did not exceed 1.4 per 1,000. The deaths referred to scarlet fever, which had been 43 and 52 in the two previous weeks, further rose during the week to 61, and exceeded the number recorded in any week since the end of 1884; they were proportionally most numerous in Liverpool, Bristol, and Salford. The 59 fatal cases of "fever" showed a decline of 4 from the number in the preceding week, and caused the highest death-rates in Portsmouth, Norwich, and Plymouth. The deaths referred to diphtheria, which had increased in the four previous weeks from 19 to 26, further rose during the week under notice to 33, a higher number than in any week since February last; 20 occurred in London, 4 in Liverpool, 2 in Leeds, and 2 in Cardiff. The fatal cases of measles, which had steadily declined from 57 to 29 in the five preceding weeks, rose again during the week to 32, and caused the highest death-rates in Halifax and Blackburn. The 29 deaths from whooping-cough showed a further marked decline from recent weekly numbers, and were proportionally most numerous in Norwich and Wolverhampton. No death was referred to small-pox, either in London or in any of the twenty-seven provincial towns. The Metropolitan Asylum Hospitals contained but one small-pox patient at the end of last week. The death-rate from diseases of the respiratory organs

in London during the week under notice was equal to 2.4 per 1,000, and was below the average. The causes of 87, or 2.4 per cent., of the 3,592 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, October 2nd, 790 births and 452 deaths were registered in the eight principal Scotch towns having an estimated population of 1,283,977 persons. The annual rate of mortality, which had declined from 20.6 to 16.8 per 1,000 in the three preceding weeks, rose again to 18.3 during the week under notice, but was 2.3 per 1,000 below the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 9.8 in Perth, 13.0 in Paisley, 14.4 in Dundee, 14.7 in Edinburgh, 19.2 in Leith, 19.5 in Greenock, 19.9 in Aberdeen, and 21.7 in Glasgow. The 452 deaths registered during the week under notice in these towns included 63 which were referred to the principal zymotic diseases, against 73 and 78 in the two preceding weeks; of these, 31 resulted from diarrhœa, 14 from whooping-cough, 8 from scarlet fever, 4 from "fever," 2 from diphtheria, 1 from measles, and not one from small-pox. These 63 deaths were equal to an annual rate of 2.6 per 1,000, which was 1.7 below the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Dundee, Aberdeen, and Glasgow. The fatal cases of diarrhœa, which had been 57, 45, and 43 in the three preceding weeks, further declined in the week under notice to 34, which, however, considerably exceeded the number in the corresponding week of last year; 15 occurred in Glasgow, 6 in Dundee, 4 in Edinburgh, and 4 in Aberdeen. The 14 deaths referred to whooping-cough showed a decline of 4 from the number in the preceding week, and included 10 in Glasgow and 3 in Edinburgh. The fatal cases of scarlet fever, which had been 7 and 9 in the two previous weeks, were 8 during the week under notice, of which 7 occurred in Glasgow. The 4 deaths referred to "fever," corresponded with the number in the preceding week, and included 2 in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice, was equal to 3.0 per 1,000, against 2.4 in London. The causes of 66, or 14.6 per cent., of the 452 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

In the week ending October 2nd, 358 deaths were registered in the sixteen principal town districts of Ireland. The average annual death-rate represented by the deaths registered was 21.6 per 1,000 of the population. The deaths registered during the week under notice in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 20.7; Belfast, 19.3; Cork, 26.0; Drogheda, 16.9; Dublin, 22.4; Dundalk, 8.7; Galway, 33.6; Kilkenny, 25.4; Limerick, 31.0; Lisburn, 24.2; Londonderry, 16.0; Lurgan, 25.7; Newry, 3.5; Sligo, 24.1; Waterford, 18.5; Wexford, 8.6. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 3.7 per 1,000, the rates varying from 0.0 in nine of the districts to 6.7 in Galway; the 10 deaths from all causes registered in that district comprising 1 from simple continued fever and 1 from diarrhœa. Among the 82 deaths from all causes in Belfast are 6 from scarlet fever, 1 from typhus, 1 from whooping-cough, 4 from enteric fever, and 5 from diarrhœa; and the 40 deathsin Cork comprised 3 from typhus, 1 from diphtheria, 2 from diarrhœa. One of the 2 deaths registered in Dundalk was caused by scarlatina. In the Dublin Registration District the deaths registered during the week amounted to 154—78 males and 76 females. Thirty-three deaths from zymotic diseases were registered in Dublin, being 1 over the average for the corresponding week of the last ten years, but one under the number for the week ending September 25th; they consist of 8 from scarlet fever, 2 from enteric fever, 21 (including 13 of children under 5 years old) from diarrhœa, and 2 from dysentry. There were but 11 deaths from diseases of the respiratory system registered during the week, being 9 under the number for the preceding week, and 12 below the average for the thirty-ninth week of the last ten years; they comprised 6 from bronchitis. The deaths of 16 children (including 12 infants under one year old) were ascribed to convulsions. Two deaths were caused by apoplexy, 7 by other diseases of the brain and nervous system (exclusive of convulsions), and 13 by diseases of the circulatory system. Phthisis, or pulmonary consumption, caused 18 deaths, mesenteric disease 3, and cancer 3. Three accidental deaths and 1 case of suicide were registered. In 23 instances the cause of death was uncertified, there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

It appears, from statistics published in the Registrar-General's return for the week ending October 2nd, that the annual death-rate was recently equal to 21.8 in Bombay, and 23.0 in Calcutta. Cholera caused 15 deaths in Calcutta, and the mortality from fever showed the largest excess in Bombay. According to the most recently received weekly returns, the annual death-rate averaged 28.2 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded by as much as 7.6 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 24.4, and showed a decline from the rates in recent weeks; the 434 deaths included 70 from diarrhœal diseases, 15 from scarlet fever, and 8 from "fever." In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 27.0 per 1,000, and ranged from 17.5 in Stockholm to 36.6 in Copenhagen; diarrhœal diseases caused 56 deaths in Copenhagen, and 38 in Stockholm, while 15 deaths were referred to diphtheria and croup in Christiania. In Paris, the death-rate was equal to 20.2, and showed a decline from the rates in recent weeks, although it exceeded by 3.2 the rate that prevailed in London; the deaths included 16 from typhoid fever, 13 from diphtheria and croup, and 152 from infantile diarrhœa. The 199 deaths in Brussels, of which 62 were due to diarrhœal diseases, and 1 to small-pox, gave a rate of 23.8. The rate in Geneva did not exceed 15.8, and no fatal case of zymotic disease was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 25.4, the several rates being 21.8 in Amsterdam, 23.1 in Rotterdam, and 37.5 in the Hague; a fatal case of small-pox, and 10 deaths from measles, were recorded in the Hague. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 34.4 per 1,000, and ranged from 20.8 in Vienna and 26.7 in Prague, to 37.9 in Munich, 42.3 in Breslau, and 56.0 in Trieste. Diarrhœal diseases were fatally prevalent in each of these German cities; diphtheria caused the highest mortality in Berlin, Hamburg and Dresden; small-pox caused 35 deaths in Buda-Pesth, measles 28 in Trieste, while 16 fatal cases of cholera were returned in Buda-Pesth. The death-rate was equal to 18.3 in Turin and to 27.9 in Venice; typhoid fever caused 6, and measles 3, deaths in Turin, while 14 cases of cholera occurred in Venice, against 11 and 12 in the two preceding weeks. The death-rate was 46.2 in Cairo and 48.7 in Alexandria; diarrhœal diseases caused 128 deaths in Cairo, and 55 in Alexandria; typhoid fever 23 in Cairo, and 8 in Alexandria. Among the principal American cities, the death-rate was equal to 19.8 in Philadelphia, 20.4 in Baltimore, and 24.0 in Brooklyn; 68 deaths were referred to diarrhœal diseases in Brooklyn, and typhoid fever caused 13 deaths in Philadelphia and 7 in Baltimore.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

River Tyne Port.—Mr. H. E. Armstrong's report for 1885 gives details of the work of a period of much anxiety, owing chiefly to the continuance of cholera abroad, and the consequent need for exertion at home. The movements of vessels from cholera-infected or suspected ports were closely watched. All such vessels arriving at the port were boarded, and the condition of the drinking-water inquired into. On two vessels, cases of diarrhœa occurred, and the drinking-water was changed. The orders of the Local Government Board, with regard to the importation of rags, received due attention. Mr. Armstrong gives some interesting particulars bearing on the transmission of the infection of disease from place to place. Eleven patients were admitted to the floating hospital, five being cases of small-pox removed from the brig *Edissa*. Fourteen vessels were fumigated on account of infectious sickness on board, either shortly before arrival or whilst in port; and, in forty-three cases, the drinking-water was changed and the tanks cleansed and purified.

Whitby.—Dr. Johnson Herbert sends a fairly satisfactory report of the public health of this borough during his first year of office. The death-rate from all causes was 20.62 per 1,000. There were 46 deaths from zymotic diseases, including 22 from whooping-cough, and 15 from measles. A single fatal case of typhoid fever was imported. The epidemic of measles affected chiefly the east side, which is the most populous and unsanitary part of the town; the board-school had to be closed. Dr. Herbert's experience as to the ignorance and want of proper precaution in isolation on the part of parents is common to all health-officers. A case of small-pox was imported into the town in March, 1885. Prompt measures of precaution were taken, but another member of the family contracted the disease, although in a mild form. A prosecution arose out of this case for wilfully exposing and transmitting infected clothing, and a conviction was obtained. The erection of an infectious hospital, for which the Board is endeavouring to secure a suitable site, will be a great boon to the town; and until it is provided, Whitby cannot regard its sanitary defences as perfect.

MEDICAL NEWS.

Society of Apothecaries of London.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise, on Thursday, September 30th, 1886.

Barrett, Ernest, 15, Elm Road, Dulwich.
Horner, Charles Julian, M.R.C.S., Fern Hill, Walthamstow.
Sibley, Walter Knowsley, 7, Harley Street, W.
Stevenson, George, 466, Edgware Road, W.

MEDICAL VACANCIES.

The following vacancies are announced.

BRIGHTON AND HOVE LYING-IN INSTITUTION.—House-Surgeon. Applications by October 30th to the Secretary.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Registrar and Pathologist. Applications to the Secretary.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Three Clinical Assistants. Applications to the Secretary.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Assistant Physician. Applications by October 16th to the Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Clinical Assistant. Applications by October 11th to the Secretary, 24, Finsbury Circus, E.C.

CLIFTON DISPENSARY.—Resident Medical Officer. Salary, £175 per annum. Applications by October 23rd to the Rev. R. W. Southey, 4, Royal Park, Clifton, Bristol.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by October 14th to the Secretary.

ECCLES AND DISTRICT MEDICAL ASSOCIATION.—Senior Resident Medical Officer. Applications to J. Ramsdale, Esq., 1, Milton Terrace, Cromwell Road, Patricroft.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Clinical Assistant. Applications by October 16th to the Secretary.

LONDON HOSPITAL.—Medical Registrar. Salary, £100 per annum. Applications by October 25th to the Secretary.

MEDICAL AID ASSOCIATION OF BIRSAY, HARRAY, AND SANDWICK, Mainland of Orkney.—Medical Officer. Salary, £27 per annum, with house. Applications by October 23rd to the Rev. J. A. Selbie, Birsay, Stromness.

METROPOLITAN FIRE BRIGADE, Eastern District.—Medical Officer. Applications by October 18th to the Clerk of the Metropolitan Board of Works, Spring Gardens, S.W.

NOTTINGHAM GENERAL HOSPITAL.—Resident Surgical Assistant.—Applications by October 11th to the Honorary Secretary of the Medical Board.

ROTHERHAM HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum, with board and lodging. Applications by October 31st to the Honorary Secretary.

ST. THOMAS'S HOSPITAL.—Assistant Dental Surgeon. Applications by October 23rd to the Secretary.

ST. THOMAS'S HOSPITAL.—Assistant Surgeon. Applications by October 23rd to the Secretary.

THE KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Two Honorary Vacancies on Medical Staff. Applications by October 19th to T. W. Dobson, Esq., The Dispensary, 13, Kilburn Park Road, N.W.

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, W.—Assistant Surgeon. Applications by October 23rd to the Secretary.

WORCESTER GENERAL INFIRMARY.—Surgeon. Applications by October 16th to W. Stallard, Esq., Worcester Chambers, Pierpoint Street, Worcester.

MEDICAL APPOINTMENTS.

ANDERSON, James, M.D., M.R.C.P., appointed Assistant Physician to the London Hospital.

BLACK, James, F.R.C.S., appointed Aural Surgeon to the Westminster Hospital.

COLLINGWOOD, F. W., M.R.C.S.E., L.R.C.P.Lond., appointed Junior House-Surgeon and Dispenser to the Torbay Hospital and Provident Dispensary, *vice* G. Y. Eales, M.R.C.S.E., L.R.C.P.Lond., promoted.

CUSSE, Ernest, M.R.C.S.Eng., L.S.A., appointed Resident Medical Officer and Secretary to the Bournemouth Cottage Hospital and Dispensary, *vice* T. G. Parrott, M.R.C.S., L.R.C.P.Lond., resigned.

DOVE, Augustus Charles, M.B., M.R.C.S., appointed Junior House-Surgeon to the Cancer Hospital, Brompton.

EALES, George Young, M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Torbay Hospital, Torquay, *vice* W. G. B. Tyrrell, resigned.

GUTHRIE, Leonard L., M.A., M.R.C.S., L.S.A., appointed House-Surgeon to the Paddington Green Children's Hospital, *vice* Dr. George Parker.

HASLEWOOD, A. O., M.R.C.S., appointed Honorary Medical Officer to the Devonshire Hospital and Buxton Bath Charity, *vice* W. H. Flint, L.R.C.P., resigned.

PARROTT, Thos. Godfrey, M.R.C.S., L.R.C.P.Lond., appointed Resident Medical Officer to the National Sanatorium for Consumption and Diseases of the Chest, Bournemouth, *vice* Dr. Humby, resigned.

SHAW, Hugh Grosvenor, L.R.C.P., M.R.C.S., appointed Senior House-Surgeon to the Cancer Hospital, Brompton, *vice* E. W. Paul, M.R.C.S., etc., resigned.

SHEILD, A. Marmaduke, M.B., F.R.C.S., appointed Assistant Surgeon to the Westminster Hospital.

STAVELEY, W. H. C., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

WELSFORD, George Frederic, M.B.Cantab., M.R.C.S., appointed Medical Officer for the Second District of the Woodstock Union.

WILLIAMS, D. W., M.B.Lond., M.R.C.S., appointed Assistant Resident Medical Officer to the Bristol Royal Infirmary, *vice* H. C. Thurston, M.R.C.S., L.R.C.P., resigned.

WILKINSON, J., M.B. and Ch.M.Edin., appointed Resident Medical Officer to the Eastern Dispensary, Bath, *vice* A. M. Irwin, L.R.C.S.I., resigned.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Hunterian Society, 8 P.M. Mr. Hutchinson: On the Value and Measuring of Certain Symptoms.—The British Gynæcological Society, 8.30 P.M. Dr. Meadows: On Cæsarean Section. Mr. Lawson Tait: On Extra-peritoneal cysts. Specimens will be shown by Dr. Edis, Dr. Fancourt Barnes, and others.—Royal Microscopical Society, 8 P.M. Papers: Mr. T. B. Rosseter, Trichodina as an Endoparasite; Desiccation of Rotifers; The Abbe-Zeiss new Objectives, and Eyepieces.

FRIDAY. Society of Medical Officers of Health, 7.30 P.M. Address by President: A Consideration of the Various Modes of House-Refuse and Sewage Disposal.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

BIRTH.

LITHGOW. On October 2nd, the wife of Dr. T. G. Lithgow, F.R.C.S., L.R.C.P. Lond., Stirling House, Farnborough, Hants, of a son.

DEATHS.

ASHMEAD. On the 4th inst., at Talbot House, Brierley Hill, Staffordshire, Helen Wilhelmina, the beloved wife of George Ashmead, L.R.C.P. and L.R.C.S. Edin., and youngest daughter of the late Captain Henry Walker, of Castle Stuart, Inverness-shire, deeply regretted.

PEARCE.—On October 1st, at Eastbourne, Dr. George Pearce, of Leicester, aged 47.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's(Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.; St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p. Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W. 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

Ophthalmoscopic Lamp.

Mr. W. Sykes (Mexboro', near Rotherham) desires to be recommended the best and cheapest lamp for ophthalmoscopic or laryngoscopic purposes.

Treatment of Asthma by Sprays.

H. M. G. (Camberwell) desires to learn who introduced the treatment of asthma by spray-inhalations, whether the treatment is a successful one, and where particulars of the *modus operandi* can be obtained.

ANSWERS.

B.A.Cantab.—We regret we do not see our way to interfere in the matter, which is obviously one of personal selection.

M.D.—We believe not.

E. Howard.—The lecture referred to appeared in the pages of *Nature*.

W. would do better to address a communication to the Commissioners of Lunacy, Whitehall.

Dr. Williams has evidently misconceived the character of the Committee. It is unofficial, self-appointed, and not identified with the Association, but open to all members of the profession; it acts spontaneously and for itself.

R. J. J.—Not at present, we fear.

Mr. Geo. P. Atkinson, Pontefract, quite mistakes the nature of the notice which he criticises. The words used are not those of the Medical Officer of Health himself, but are editorial comments based upon the facts recorded in the report.

Asylums for Officers' Wives.

Surgeon-Major A. F. Turner.—There is no special institution for the wives of army officers suffering from mental disease. If curable, they would be eligible for Bethlem Hospital, Southwark, S.E., provided they could not afford to pay for a private asylum. For a moderate sum, they would be cared for at the registered hospitals for the insane, as St. Andrew's, at Northampton, etc.

A Means of Locomotion.

R. L. B. writes to say that a patient of his, with disease of the knee-joint, has for the past two years constantly used a tricycle worked by the hands alone, and reports most favourably of it. He uses it to go to and from his place of business, and often undertakes journeys of twenty or thirty miles. The machine in question is called the "Velociman," and is made by Singer and Co., of Coventry.

Body-Weight in Health and Insanity.

Mr. C. Roberts writes: W. F. M. will find the body-weight in health and in idiocy (but not in insanity) dealt with in my *Anthropometry* (Churchill). If W. F. M. is interested in the weight of idiots and imbeciles, and will send me his address, I will send him a special table and chart referring to them.

Steel Screws for Horses.

F.R.C.S.E. writes: In answer to M.B.M.A., in the Journal for September 25th, I find, after using steel screws for years, that they constitute the best method of roughing harness horses. If the groom is careful, there is double economy: in actual outlay, and in avoiding the knocking about of the horse's hoofs by the smith. A third screw in each hind toe is requisite in severe frost. For saddle horses I use frost-nails, not passing through the hoof, and applied by my groom as desired. Both may be obtained from H. Wooldridge, Horse-shoe and Nail Maker, Lye, near Stourbridge.

Treatment of Tinea Circinata.

Dr. G. Wright Hutchinson writes that M.B. will find cases of tinea circinata speedily cured by the inunction, twice daily for ten minutes, of an ointment of goa powder (pulv. ararobæ), consisting of 15 grains of the powder to the ounce of lard or vaseline. Arsenic and iron (as a blood-tonic) and cod-liver oil should be given internally at the same time.

NOTES, LETTERS, ETC.

A Centenarian.

J. D. writes: Mr. Kilner's letter with the above heading illustrates the way in which the occurrence of centenarianism is so often believed in. A man had been an inmate of the workhouse "since it was built in 1836," and at that time was "supposed to be about 55 years of age." "Supposed to be" should be "proved to be," if the report is to have any value. Surely, Mr. Thoms must have written in vain if people are still willing to accept as true the vague account which common people give of their age.

The Treatment of a Form of Diarrhœa.

Dr. Wm. W. Millard (Edinburgh) writes: I did not obtain my information of the use of hydrag. perchlor. in this form of diarrhœa from Dr. Ringer's excellent work, as Dr. Macdonald perhaps supposes, but from probably the same source that Dr. Ringer obtained his, of which, to anyone that knows, the book bears many traces, namely, from homœopathic treatises. But it matters not whence the knowledge comes, I know it to be an excellent remedy in the form of diarrhœa I previously described; if not adopted too late in the case, it is invariably successful. I have lately had four cases to test its merits; two recovered, and two were in a state of almost collapse when seen, one of these dying one hour after my first visit; in the other, the diarrhœa was checked after three or four doses, but the infant, a very weakly child, died from convulsions a few hours afterwards.

Consultants and General Practitioners.

L.K.Q.C.P.I. writes: Will you permit me to suggest to "An Assistant Hospital Physician" (Journal, September 4th, page 476), the observation of a rule which we were taught when students by a senior hospital physician: "Never to believe a patient's statement of another medical man's diagnosis, etc." From my own experience, I should say that three years' practice would have afforded sufficient facts to enable a person of average powers of perception and reflection to have formulated a similar rule for himself.

Varix of Labium.

Dr. John G. Scroggie (Aberdeen) writes: On reading Mr. Atkinson's case of varicose dilatation of the veins of the vulva (Journal, August 28th, p. 413), I thought I might bring under his observation two cases which have lately occurred in my own experience. That the treatment adopted by me would have prevented rupture of the varix in his case, I will not venture to affirm. Case I. – The patient was a multipara; delivery was effected at full time without any accident. As much care as possible was used during delivery to prevent undue pressure on the swelling, which was about the size of a fœtal head, tense, fluctuating, and very thin-walled on the vaginal aspect. The swelling began in the earlier months of pregnancy, gradually increasing until it attained the above mentioned size. The patient was ordered to wear an abdominal bandage (to lighten the pressure on the pelvis), which had attached to it a T bandage, retaining an adapted pad *in situ* against the swelling, and to increase its size as the tumour enlarged, attention at the same time being paid to cleanliness and the state of the bowels. As the patient was the wife of a working man, a great amount of rest could not be obtained. There was neither the same sense of weight nor irritation about the parts which she had experienced in her former pregnancy. The varix disappeared immediately after delivery.

Case II.—Here also the patient was a multipara, who has large varicose veins of the legs. She is adopting practically the same treatment, and I hope it may have the same happy termination. In both cases, the varix existed on the right side only.

Amputation of Thigh: Complete Primary Union, without the Aid of Spray.

Mr. R. H. A. Hunter (Battersea Park, S.W.) writes: E. C., aged 3 years, suffering from strumous disease of her left knee-joint of fourteen months' standing, was placed under my care in the early part of July, 1886. As the joint was wholly disorganised and full of pus, and the child was rapidly losing flesh, I decided to remove the limb rather than subject my patient to the risks attending any other treatment. On July 15th, with the assistance of my partner, Dr. Grigor, and Dr. Watson, another local practitioner, chloroform was administered, and I amputated at the lower part of the middle third of the thigh by anterior and posterior flaps. After sawing through the bone, and ligaturing the femoral and one other artery with carbolised Chinese silk, and closing one or two smaller vessels by torsion, I well sponged the wound with a one per cent. solution of carbolic acid, and then brought the flaps together with seven silver wire sutures and strapping. The stump was then dressed with lint soaked in a one per cent. solution of carbolised oil, carbolised gauze, and a gauze bandage. On July 21st, when I removed the stitches, the wound had completely healed.

Protracted Pregnancy.

Dr. W. Arnold Thomson (Anspthill) writes: With regard to Mr. Woollett's interesting case of protracted pregnancy, in the Journal for October 2nd, I would wish to draw attention to a case I related to the Obstetrical Society of London, and published in the last volume of their *Transactions*, which is almost precisely similar to the case now recorded by your correspondent.

Hydrophobia.

Dr. Oliver Scattergood (Leeds) writes: Dr. Dolan's letter of September 4th is calculated to mislead many who, like myself, have not made themselves more than superficially acquainted with M. Pasteur's process of hydrophobia-inoculation. The substance of this letter can be condensed into two assertions: 1. Dr. Dolan says that injection of "almost any kind of diseased material into the same region favoured by M. Pasteur" (afterwards explained to be "the rabbit's medulla") will produce the symptoms, namely, paralysis, etc., which M. Pasteur rightly judges to be specific, and due to rabies.

In the first place, M. Pasteur does not inoculate the medulla at all, but injects the rabic virus into the arachnoid cavity on the surface of the hemispheres.

In the second place, the symptoms produced are absolutely characteristic (and distinct from those arising from the inoculation of putrid matter, which are themselves no less characteristic); after inoculation, no symptoms whatever appear until the fifth day, and death occurs on the ninth or tenth day—a variation of twenty-four hours in the length of the illness being extremely rare; the temperature again runs a most significant course. Dogs inoculated in a similar manner exhibit typical canine rabies, which they can and do transmit by the ordinary method of biting to other dogs placed within their reach.

Moreover, some few rabbits prove refractory, or insusceptible to the rabic virus, and consequently never exhibit the specific symptoms. Yet these, although inoculated intracranially with what Dr. Dolan must include under the head of "diseased material," namely, rabic brain or medulla mashed up with sterilised *bouillon*, exhibit no symptoms whatever. It is possible for a bungling operator to cause death by septicæmia or pyæmia, or perhaps cerebral irritation and abscess, etc.; but M. Pasteur's operation on rabbits, if properly performed, is attended by no local symptoms, nor, in fact, by any but the specific symptoms.

2. Dr. Dolan asserts that M. Pasteur inoculates his human patients with merely "sterilised *bouillon*," arguing, of course, that the death of rabbits and dogs inoculated with the same material is due to the brain-injury.

It is plain that Dr. Dolan's interest in M. Pasteur's work has not been sufficiently great to induce him to read the report of the French Commission thereupon. Nineteen dogs which had been protected by M. Pasteur, and, I think, twenty-three unprotected dogs, were inoculated by the Commission with M. Pasteur's material. Of M. Pasteur's nineteen, one died of diarrhœa, the rest showed no symptoms; of the unprotected twenty-three, eighteen or nineteen died rabid. Five of each class were inoculated intracranially, of which all the five unprotected, and not one of M. Pasteur's, died. Comment is needless. I may say that M. Pasteur, at the commencement of his experiments, made all his inoculations hypodermically, but soon rejected that method on account of the uncertainty of its results. The remainder of Dr. Dolan's letter calls for no comment.

Medical Degrees for London Students.

Sir,—With reference to the alleged want of instruction in biological and physical science among London students, it may be worth the consideration of the Joint-Committee of the Royal Colleges that while, in 1885, 1,884 medical students were registered, 910 of them in England, 181 of these passed the Matriculation of the University of London. As these matriculated students may be presumed to read for, even if they do not pass, the stiff Preliminary M.B. Examination, it is evident that at least one-fifth of the men have done an extensive course of reading in these subjects. As a considerable number of the

680—the probable number of the 910 who will eventually qualify—will go to Scotland or Ireland, and pass in the subjects before graduating, I think we may assume that at least one-third of the London students will go through a full course of natural science before qualifying.

How much longer do the London hospital authorities intend to hesitate before they arrange to grant fair degrees to their students? It is pitiable to read (*Lancet*, May 1st, 1886, page 836) that, while 265 students entered at Edinburgh, 164 at Glasgow, and 90 at Cambridge, only 88 entered at St. Bartholomew's, 50 at St. Thomas's, 41 at Guy's, 39 at University, and 34 at King's. London is losing way terribly, and, when she tries to reform, she will find, as the Indian Medical Service is doing, that a reputation once gained cannot always be trusted on for ever.

SHIRLEY DEAKIN, F.R.C.S.Eng.

Bumm, Punjab.

INCREASED COST OF MEDICAL EDUCATION AND THE APPRENTICESHIP SYSTEM.

MR. W. P. HOURIGAN (Freshford, co. Kilkenny) writes: In the course of communication with my provincial brethren, a very important question has been raised with regard to the heavy charges which such of us as have sons going into the profession have to pay for them.

Allow me now to point out to my provincial brethren that this has been brought about by the entire exclusion of countrymen from the governing body of the profession. We have been without voice or vote, and our lot has been like the lot of all unenfranchised masses. We stand almost alone in regard to the absence of any extra facilities for the introduction of our sons into our own calling. The attorney, the engineer, and others enjoy, through the agency of the apprentice system, these facilities which are now denied to us. Even the barrister, through the increase of the apprenticeship system, really, though not nominally, is enabled to give his son his profession on easier terms than an outsider can receive it.

Now, in former times, this was not the state of things which existed, and I desire to call pointed attention to the fact that this was brought about by the operation of the classes who have hitherto held exclusive sway over us in the Medical Council. A new scheme was introduced into the Irish College a few years ago, and advantage was taken of it by the presidents and councillors of that institution to abolish clinical recognition of the provincial hospitals. Furthermore, when the partial remaining provincial privilege allowed by it, namely, one year with a provincial practitioner, was seen to be likely to be availed of more and more every day, the representative of that body on the Medical Council moved and carried there a resolution increasing the compulsory attendance at medical schools, thereby strangling the poor privilege accorded us.

THE PROPOSED NEW MEDICAL DEGREE.

BETA writes: I do not gather, from the correspondence in the medical journals on the subject of the proposed new medical degree, whether any provision is contemplated for the admission to the degree without further examination of men who are already Fellows of the Royal College of Surgeons of England, or Members of the Royal College of Physicians of London; but I cannot help thinking that, if this proposal were fairly considered, it would receive the support of the "powers that be."

It must be remembered that, before the University of Durham made its present liberal provision for practitioners of fifteen years' standing, some men in practice, moved by a laudable desire to possess a higher qualification than that which they had obtained at the close of their career as students, passed the examination for one or other of the above-mentioned distinctions; and some have done so who, having been less than fifteen years in practice, were not at the time eligible for the Durham degree.

Now, I think it will be admitted by all that a man who has obtained the superior qualification of either of the two London colleges must be, from a professional point of view, more completely trained and educated than the ordinary run of men, and might, therefore, most appropriately be admitted at once to the new doctorate without being subjected to the annoyance of any further examination-test; perhaps, even, the University of Durham itself, if this matter were laid before their Senate in a proper light, might be willing to concede that the incorporations among their own graduates of the few men who might desire admission from among those to whom my remarks refer, would not be likely in any way to damage the prestige of their degree, while those who were so incorporated could hardly fail to derive much gratification from being thus recognised by, and connected with, one of the great educational centres of the kingdom.

INQUESTS AND MEDICAL MEN.

MR. R. M. CRAVEN (Southport) writes: I should like to ask whether there is any obligation, either legal or moral, upon a medical man to report to a coroner concerning the death of any person. Are we not all of us medical jurists—educated, examined, and licensed by law as such? Why then shall we consider ourselves called upon to report to the coroner, who is probably a solicitor, and knows far less of the probable cause of death than we do ourselves? Is a coroner's officer (who is probably a policeman) or a coroner's jury, which most likely consists of a few respectable shopkeepers, with one or two offscourings from the adjoining bar-parlour to complete the number, taking the places of absentees who have been warned to attend, more competent to sift evidence, and to express an opinion thereon as to the cause of death than we are?

As Mr. Hussey expresses it, "Some registrars think that, when information of the death is given by the friends of the deceased person, with the certificate from a practitioner, their duty under the Registration Act is to register the death, and the cause of it, as stated in the certificate, without further question.

Registrars who think thus are perfectly right (*vide* Births and Deaths Registration Act), and those who act otherwise, and refuse to register the death when a certificate of a practitioner is produced, are liable to a heavy penalty (on conviction) for their illegal act.

I submit that the medical attendant (who is a legally qualified medical jurist) is more competent than the coroner or his officer to express an opinion on the necessity or otherwise for holding an inquest. Neither the coroner nor the Lord Chancellor has any power whatever to prevent the registration of a death, the cause of which is certified by a practitioner; and it is equally absurd to suggest that a practitioner should, even for an hour, withhold a certificate "until he has the sanction of the coroner to give it," as Mr. Hussey expresses it, for no coroner has any power or authority either to give or withhold such "sanction."

A medical man who obtains the sanction of the friends of the deceased to such a course, is at liberty to make a *post mortem* examination of the body of a deceased person without any instructions from the coroner, if he considers that such examination is necessary in order that he may arrive at a correct opinion as to the cause of death.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. J. H. Pugh, London; Dr. Cranstoun Charles, London; Dr. C. Y. Biss, London; Dr. G. H. Mackenzie, Edinburgh; Dr. Dolan, Halifax; Mr. T. W. Lacey, Woolwich; Dr. H. W. Williams, London; Mr. J. West, London; Dr. W. Squire, London; Mr. B. J. Tuck, Seaford; Mr. F. W. Barry, Settle; Mr. J. L. Callaghan, Street; The Rev. M. de Colleville, Brighton; Sir T. Longmore, Woolston; Dr. H. Vernon, Southport; Mr. A. Browne, Nottingham; Dr. J. D. Miller, London; Dr. Hutchison, Chipping-Norton; Mr. W. Sykes, Mexboro'; Mr. J. Quale, Finchley; Mr. J. Black, London; Dr. J. D. Hayward, Liverpool; Mr. H. Whates, London; Miss C. Young, Galcorm; Dr. P. Duncan, Croydon; Dr. J. Stephen, Brighton; Mr. T. G. Parrott, Bournemouth; Mr. J. P. Hentsch, London; Mr. H. Nettleship, Oxford; Mr. W. Partington, Tunstall; Dr. H. Barnes, Carlisle; Mr. C. Roberts, London; Mr. W. Pearce, London; Mr. F. E. Pirkis, Nutfield; Mr. John Hughes, Workington; Dr. Wagstaffe, Sevenoaks; Mr. C. J. R. McLean, Yeadon, near Leeds; Dr. Taaffe, Brighton; Dr. Maxwell, Woolwich; Our Paris Correspondent; Dr. Wadham, London; Mr. E. S. Warburton, Pontypridd; Mr. W. S. Elliott, Downpatrick; Mr. W. H. Spurgin, Maryport; Mr. A. W. Sinclair, Selangor, Straits Settlements; Mr. W. P. Howrigan, Freshford; Mr. Cooper, Dartford; Professor Annandale, Edinburgh; Dr. Mapother, Dublin; Mr. Pratt, Dublin; Dr. G. Johnson, London; Mr. J. Currie, Totnes; The Bon Food Supply Co., London; Dr. P. L. Batterbury, Coventry; Mr. Gresswell, Louth; Mr. T. G. Lithgow, Farnborough; Dr. E. Casey, Windsor; Messrs. Bennett and Co., London; Mr. A. P. Fiddian, Cardiff; Dr. Brailey, London; Mr. A. D. Pithie, Greenock; Our Newcastle-on-Tyne Correspondent; Dr. D'Arcy Adams, London; Dr. Baines, Croydon; Registrar-General, New Zealand; Sir Henry Thompson, London; Dr. Edwards, London; Dr. Kerr, London; Mr. S. Smyth, Rouxville, Orange Free State, South Africa; The Hon. Mrs. Stanley, Allerton; Mr. George Birch, Lower Clapton; Dr. A. T. Myers, London; Mr. W. P. Brown, Sowerby Bridge; Dr. James Anderson, London; Dr. James Grey Glover, London; Mr. Halewood, Buxton; Dr. W. G. V. Lush, Weymouth; Mr. W. Arnold Thomson, Ampthill; Mr. A. J. Garland, Oamaru, New Zealand; Mr. R. W. Barnes, Sandown; Mr. E. Baines, Henley-on-Thames; Mr. C. C. Scott, Twickenham; Mr. G. Ashmead, Brierley Hill; Mr. G. H. Williams, Barrow; Mr. H. T. Legat, Salisbury; Mr. H. Harlock, Wivenhoe; Mr. D. Christy, Letterkenny; Dr. V. Idelson, Berne; Our Liverpool Correspondent; Dr. Strong, Croydon; Dr. T. Eyton-Jones, Denbigh; Dr. G. H. Mackenzie, Edinburgh; Mr. T. H. Moore, Leicester; Dr. Smith, Ramsgate; Dr. J. Morton, Glasgow; Mr. F. W. H. Penfold, Rainham; Mr. G. F. Welsford, Woodstock, etc.

BOOKS, ETC., RECEIVED.

Lectures on Medical Pathology delivered at the London Hospital, 1885. By H. G. Sutton, M.B. London: Baillière, Tindall, and Cox. 1886.

Food Grains of India. By A. H. Church, M.A. London: Chapman and Hall. 1886.

A Manual of Diseases of the Nervous System. By W. R. Gowers, M.D. Vol. I. London: J. and A. Churchill.

Ambulance Work, Illustrated. Lectures by R. Lawton Roberts, M.D. Second Edition. London: H. K. Lewis. 1886.

The Diagnosis and Treatment of Syphilis. By Tom Robinson, M.D. London: J. and A. Churchill. 1886.

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BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

ACUTE MYXŒDEMA FOLLOWING THYROIDECTOMY.

Read at the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

By Sir WILLIAM STOKES.
President of the Royal College of Surgeons, Ireland.

The following case tends to confirm the alleged connection between complete thyroidectomy and myxœdema, the disease so well described by Sir William Gull; a condition which some surgical operators of eminence, notably Kocher, Baumgärtner and Reverdin, have observed to occur in a substantial proportion of their cases after thyroidectomy; and which Professor Victor Horsley's experiments go so far also to establish.

A young woman, aged 18, came under my care in the Richmond Hospital on September 25th, 1885, suffering from an extensive enlargement of both lobes of the thyroid, the size and form of which can be best appreciated by reference to the accompanying illustrations from photographs taken previously to any operative interference. The patient was otherwise in excellent health, fresh complexioned, and well nourished, and there was no evidence in the family history to indicate a tendency to the disease she suffered from. As far as intellectual capacity was concerned, she was looked upon by her family as exceptionally favoured. Besides the trouble that the deformity naturally caused to a young girl of her age, she suffered at times from very severe attacks of dyspnœa, which came on usually during the night; on one occasion this was so great as almost to necessitate an immediate tracheotomy, an operation which, under the circumstances, would have been attended with exceptional difficulties and dangers. The urgency, however, of this symptom happily subsided, but it made me determine to lose no time in endeavouring to remove its cause. On October 21st, 1885, the patient having been fully anæsthetised, and the strictest antiseptic precautions taken, I proceeded to remove the tumour, dealing in the first instance with the left lobe. I operated as closely as possibly on the lines indicated by Kocher, and which have been described so accurately by Sir William MacCormac. The difficulties of this operation can only be appreciated by those who have undertaken similar procedures, and in this case they were exceptional; for, although the utmost care was taken to secure by dual ligatures every vessel before its division, still the hæmorrhage was excessive and at times apparently uncontrollable. It appeared to come from every part of the tumour, with an energy and persistency which made me somewhat apprehensive that the patient's strength would not admit of my completing the operation; the pulse became hardly perceptible, the extremities cold and the face deadly pale. After the usual restoratives were applied, which included a hypodermic injection of ether, the patient rallied, and after another difficult, tedious, and protracted effort, I was successful in removing the entire left lobe. The wound was then carefully treated with sublimated dressings. I had purposed removing, if possible, the right lobe also, but during the removal of the left one, the patient had lost so much blood and was in a state of such collapse, that it was quite out of the question to proceed any further at that time.

After the operation, the progress of the case was most satisfactory, nothing specially occurring that would justify record. In fact, the convalescence was uninterrupted, and the patient returned home completely relieved as regards the dyspnœa; and, what was also satisfactory, there was apparently a sensible diminution in the size of the right lobe, so much so that I ventured to express the opinion that it was quite possible the diminution in the size of the tumour might continue, and render the performance of a second operation unnecessary. Events, however, did not justify this prognosis; for, in the course of six weeks, the right lobe was as large as, if not larger than, before; and the strong thrill and the dyspnœa were again present in an intensified form. In all other respects, the patient's health was excellent, and she and the parents were most urgent that the second operation should be undertaken, and without delay.

On February 3rd, I proceeded to complete the thyroidectomy by the removal of the right lobe. If the difficulties and dangers surrounding the first operation were great, those surrounding the second were still greater. The vessels were larger, and apparently more friable. It seemed that, wherever the tumour was even touched, it gave rise to fierce and uncontrollable hæmorrhage. On three different occasions during the operation, the patient's collapse was complete; so much so that once one of my colleagues feared that life had become extinct. Happily, however, this calamity did not occur, and I was enabled to complete the operation, the time required for so doing being an hour and a half. The tumour weighed seventeen ounces at the time of its removal. During and immediately subsequent to the operation, the patient's strength was mainly kept up by hypodermic injections of ether and small enemas of brandy. Had these not been diligently administered, I have no doubt whatever that the patient would have succumbed in the operating-theatre.

As regards the dressing of the wound I have nothing to say, except that the edges of it were brought together by numerous points of fine carbolised catgut sutures. No drainage was employed. The wound was thoroughly asepticised by zinc-chloride, previously to the application of dry sublimated dressings.

On the completion of the operation, the patient being again in a state of great collapse, another hypodermic injection of ether was administered, and also a few teaspoonfuls of brandy by the mouth. Hot jars were applied to the feet, and she was allowed to rest on the operating-table, wrapped in hot blankets, for half an hour, before being removed to the ward. During the day, she was fed on brandy and milk, beef-tea and Brand's extract, administered in small quantities every hour. Vomiting occurred four times during the day. At 10 P.M., the pulse was imperceptible. Temperature 100°; respirations 35. Small quantities of beef-tea and brandy were ordered to be given during the night.

February 4th. Patient had a fair night, but was still very weak. The radial pulse, 132, had returned, still very weak.

The following record, made by my assistant, Mr. J. O'Connor, gives a good idea of the progress of the patient during the first ten days after the operation.

February 5th. Marked improvement in condition of patient. Slept well during the night; vomited once only; this did not recur during the day; appetite good; good union taking place; no pus production. Morning temperature 100.1°, pulse 108, respiration 33; evening temperature 100.2°, pulse 116, respiration 34.

February 6th. Improvement continues; appetite good. Morning temperature 100.1°, pulse 108, respiration 33; evening temperature 100.2°, pulse 116, respiration 34.

February 7th. Condition of patient unchanged; wound dressed. Morning temperature 99.8°, pulse 92, respiration 22; evening temperature 100.2°, pulse 96, respiration 20.

February 8th. Morning temperature 98.6°, pulse 80, respiration 25; evening temperature 99.2°, pulse 92, respiration 26.

February 9th. Morning temperature, 100°, pulse 90, respiration 21; evening temperature 100.4°, pulse 100, respiration 25. Wound dressed; firm union of wound.

February 10th. Morning temperature 100.2°, pulse 92, respiration 24; evening temperature 101.2°, pulse 108, respiration 28.

February 11th. Morning temperature 100.4°, pulse 92, respiration 22; evening temperature 101°, pulse 100.

February 12th. Morning temperature 100, pulse 94, respiration 23; evening temperature 101.8°, pulse 100, respiration 20. No apparent cause for evening rise of temperature. Patient does not complain, and says she feels quite well. Appetite good; put on Parish's syrup 5j twice daily.

February 13th. Patient had a good night, but complains of slight pain in knees. Morning temperature 99°, pulse 88, respiration 22; evening temperature 101.2°, pulse 94.

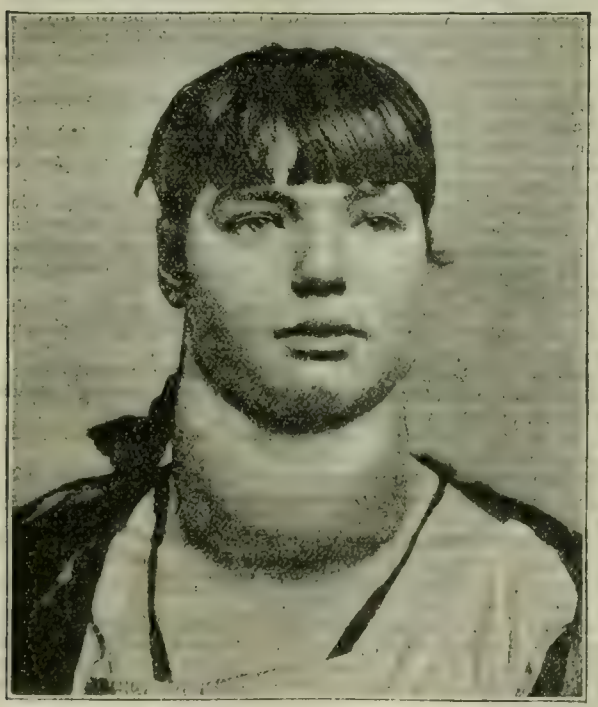
On February 14th, I found all going on satisfactorily as regards pulse, temperature, respiration, and appearance of the patient generally. Her appetite was good, and she had slept well. The only thing she complained of was a "dull aching pain" which she suffered from in her legs and knee-joints; no local cause for this pain could be ascertained.

On the following day, I was grieved to learn that the patient had, at 6 A.M., a convulsive seizure, "resembling epilepsy," as my assistant stated, lasting about a minute, and characterised by clenching of the hands, dilatation of the pupils, slight stertorous breathing, eyes wide open and staring, frothy discharge from the mouth, and marked acceleration of the pulse during the fit. These symptoms only lasted, as I have stated, about a minute, and she then fell asleep.

On subsequently examining the patient, I observed a puffy swelling about the eyelids, and a similar condition on the backs of the wrists, and over the metatarsus of both feet. There seemed also some mental torpidity indicated by the length of time she took before answering a question, and the slowness of her utterance. The answers, however, when made, indicated that she understood the interrogation.

On the 15th, there was no change, the patient not complaining of anything except occasional pains in the arms and legs.

The following day these pains were more intense, and she had, in the afternoon, another convulsive seizure resembling the one she had on the 14th. It lasted, however, longer, and the symptoms intensified, namely, great lividity of the face, stertorous breathing, dyspnœa, quick pulse, eyes staring and protruding, pupils dilated, carotids throbbing, and the attack ending by a copious perspiration, after which she fell quietly asleep. On the following day, the report was favourable. The temperature and pulse were both reduced, the former to 100° Fahr. and the latter to 84. She was free from pain in her wrists, but complained of them in her knees; immediately below the right one, there was a slight but still distinct puffy œdematous swelling. No albumen in the urine was determined. I observed, however, an increase in her mental torpidity, the eyelids were more puffy, and the expression of her face, naturally an intelligent one, had an aspect of imbecility which I had never previously noticed. From this on to the 20th, the symptoms already mentioned became more intensified. The convulsive seizures recurred with greater frequency, each one leaving the patient weaker than before, and with the intellect more impaired. On the 21st, she had two such attacks, and on



Case 1, Fig. 1.—Before first Operation.

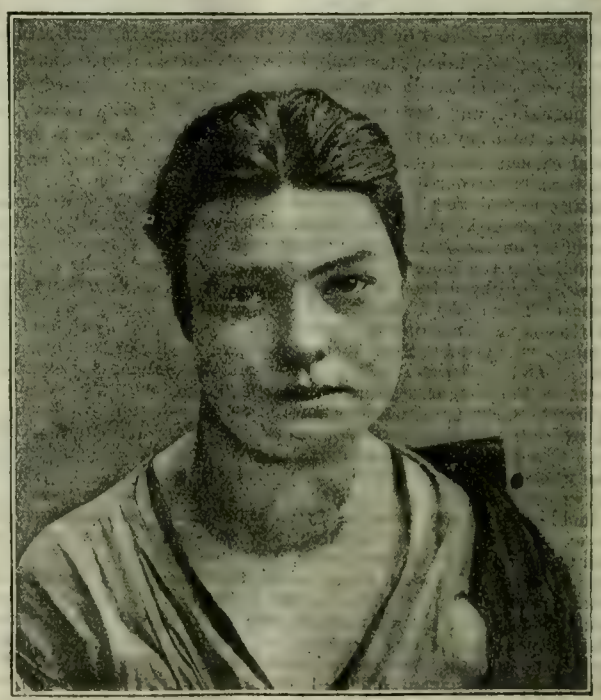
this day there was evidence of pulmonary infiltration. On the following day, there was no improvement, and the patient was, intellectually, more dull and listless than ever. On the 22nd, she had two more convulsive seizures, and the pulmonary infiltration was much more intense, and it was painful to watch her unavailing efforts to clear the air-passages. These symptoms continued unaffected by treatment for the two following days, when the patient sank, apparently, from exhaustion. Professor Purser, of Trinity College, who kindly examined the brain, heart, and lungs for me, found nothing abnormal in the two former organs, but found the lung "highly œdematous. The epithelium of the air-vesicles was swollen, and many of the cells were loosened and desquamating." In fresh preparations, he could see that many of the swollen cells contained fat. Further than that, the portion of lung examined presented no change of note. I may also mention that Professor Purser examined a small nodule of the tumour that was left on the front of the trachea, and found it composed of glandular tissue resembling that of the normal thyroid body.

In the investigation of the minute anatomy of the tumour, I had the advantage of the able assistance of Dr. Alexander McKee, the Curator of the Museum in the Royal College of Surgeons, who has kindly furnished the following exhaustive report on its histology.

Microscopic Examination. — Both lobes display the same morbid changes. Their connective tissue is increased, and contains here and there large quantities of a hyaline material. The embryonic cells commonly met with between the follicles have mostly disappeared. The smaller vessels appear to be less numerous than normal.

The most important structural alterations are seen in connection with the follicular epithelium. They are progressive, consisting in proliferation and hypertrophy of the cell-elements; and retrogressive, terminating in the formation of cysts. Three varieties of epithelium can be distinguished. In those follicles which have not participated in the cystic formation, and most nearly retain their normal characters, the cells are generally small, rounded, or oval, and furnished with a nucleus of the same shape; the follicles themselves are abnormally large. In others, more especially in the neighbourhood of the cysts, the epithelium is cubical; while here and there follicles are found lined by a beautiful cylindrical epithelium, with a basally-placed, long, oval nucleus.

The cysts are never formed by distension of a single follicle. They occupy part or the whole of a small lobule, using the word to denote



Case 1, Fig. 2.—After first Operation.

the smallest congeries of follicles having a common connective-tissue capsule. Degeneration frequently commences in or near the centre of a lobule, and progresses towards the periphery, the glandular epithelium undergoing colloid transformation. But the epithelium of a lobule is rarely entirely destroyed. In some of the cysts, the situation of the follicles if still mapped out by rows aud groups of cells, which, imbedded in the hyaline substance, have not as yet undergone degeneration. In others, the cellular remains are confined to the periphery, the whole of the centre of the lobule now consisting of homogeneous colloid material. Into the cavity of some of the large cysts, papilloma-like projections occur. These latter are generally fringed with cylindrical epithelium, and, in many places, have a central core of connective tissue in which a capillary vessel runs; in other places, they appear to be nothing more than the remains of follicles which have withstood the process of degeneration. This appearance is, on the whole, exceptional.

The origin of the cysts is explainable on the supposition that a hypertrophy and hyperplasia of the glandular epithelium first of all took place. That such progressive changes have actually occurred may be inferred from the disappearance of the interfollicular embryonic cells (though it must be confessed that the latter may not have undergone development into new acini, but may equally well have succumbed to pressure), from the unusually large size of some follicles; and from the presence of the large cylindrical epithelium. Since these progressive changes take place in lobules bounded by dense connective tissue, it is evident that an approximation of the follicles to one another must necessarily result; and this can be only at the expense of the interfollicular spaces in which the capillaries run. As soon, therefore, as the obstruction to the capillary stream becomes sufficiently pronounced, the hypertrophy and hyperplasia must give place to retrogressive changes, and the epithelium begins to degenerate.

In general terms, the case may be spoken of as a colloid goître. It presents many of the characters which, according to Wölfler, go to make up the proliferous cyst-adenoma; but its development from embryonic glandular formations, in his opinion differentiating the adenomas from the hypertrophies, could not be traced.

But my purpose on the present occasion is chiefly to draw attention to the clinical aspects of the case, which I think are of much importance, having regard, namely, to the primary operation being followed by so prompt a diminution in the dimensions of the right lobe of the gland, which was untouched at that time, and the operation not being attended with any serious ulterior consequences; and, again, the rapidity of development and acute character of the myxœdematous symptoms



Case II, Fig. 1.—Before Operation.

after the complete removal, such as weakness, weight or the limbs, pains in the arms and legs, mental torpidity, slowness of speech, swelling of the eyelids, face, hands and feet; together with other phenomena already observed after thyroidectomy, such as convulsions, dilatation of the pupils, disturbances of respiration, and rapidity of pulse.

I am not aware of the record of any case in which these were developed so rapidly after the operation, or whether Mr. Victor Horsley has noticed the supervention of them so soon after any of his thyroidectomies on the lower animals; but the case will certainly go far in strengthening the views of Kocher, Baumgärtner, Reverdin, and others, who have drawn attention to the liability of such fatal phenomena being induced after complete excision of the thyroid—phenomena not observed by Billroth, Wölfler, or, as far as I am aware, by any British surgeons.

In connection with this important subject, I may mention also two other cases of bronchocele I operated on, in one of which the partial removal of the enlarged gland was followed by a permanently good result, and the other in which the division of the isthmus also had a satisfactory issue. The first of these cases is illustrated in the accompanying illustrations, taken from photographs, in which it will be seen that the tumour is mainly one of the isthmus, though the enlargement of the lateral lobes is very apparent. In this case, I removed the central tumour only, and the operation, which was attended, as usual, with much difficulty, was followed by a shrinking and almost entire disappearance of the lateral enlargements, which, happily, have not reappeared, nor has there been any myxœdema or cachexia strumipriva, as it has by some been termed. The third case was that of a youth, aged 15, on whom I operated three years ago. The thyroid enlargement, in his case, was not so well marked as in the others, but still sufficiently large to give rise to much deformity. This enlargement was steadily increasing. This case seemed a suitable one for testing the operation of simple division and ligature of the isthmus, in the manner recommended originally, I believe, by Sir D. Gibb. The result of the operation in this case was most satisfactory. The lateral enlargements sensibly diminished, and although, unfortunately I cannot report on his actual condition now, having lost sight of him, I may mention that I saw him five months subsequently to the operation, when I was pleased to observe that there was no evidence of any return of the tumour.

These three cases I deem of much interest: the first as showing how rapidly symptoms of myxœdema may be developed after a complete thyroidectomy; the second showing that a partial removal of the enlarged gland may be followed by a shrinking and disappearance of the remainder of the enlargement; and the third strengthening the view that the same results in certain selected cases may be obtained by the comparatively simple operation of division of the isthmus.



Case II, Fig. 2. After Operation.

A MARBLE bust of the late Dr. King was unveiled at the Town Hall, Kingston-upon-Hull, on Saturday last, by Sir A. K. Rollit, M.P. There was a large number of public men present, admirers of the late gentleman during his life, and subscribers to the fund. The inscription was as follows: "As a memorial of long and faithful services to the town of Kingston-upon-Hull, as Mayor, Sheriff, Alderman, President of the Literary and Philosophical Society, and in many other public positions, this bust of the late Kilburne King, J.P., M.D., F.R.C.S., is presented to the Corporation by many of his fellow-townsmen. 1886."

ON THE SURGICAL TREATMENT OF CERTAIN TUMOURS OF THE NECK.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association held in Brighton.

By FREDERIC BOWREMAN JESSETT, F.R.C.S.Eng.,
Surgeon to the Cancer Hospital.

The number of cases of tumour of the neck, both malignant and innocent, that have presented themselves to my notice during the last few years, has led me to examine more carefully into their relations, and to consider the best mode of dealing with them.

Surgeons, up to quite recently, have been inclined to look upon all tumours that are deeply seated under the deep cervical fascia and sterno-mastoid muscle, and apparently or really more or less fixed to some of the deep structures, as beyond any surgical interference, partly from the dread of setting up deep-seated cellulitis, partly on account of their intimate relations to so many important vessels and nerves, also on account of the great uncertainty of being able to remove the whole of the diseased mass.

These certainly appeared to me to be good and cogent reasons why we should not attempt the removal of these deeply-seated tumours, but from further experience I am convinced that many of the tumours may be removed with perfect safety, and in these days of free drainage and antiseptic surgery, deep cellulitis need not be dreaded; and it has been proved over and over again that ligaturing the carotid artery, and jugular vein may be practised with but little fear of any untoward results accruing. That the division of the vagus, sympathetic, phrenic, laryngeal or facial nerves, may be attended with unpleasant symptoms, I suppose there can be no doubt, but even the pneumogastric and phrenic nerves, as I shall show presently, have been divided, and only temporary inconvenience been caused.

Now, sir, it is not my intention to go fully into the different varieties of the tumour to be found in the neck, neither would the time placed at my disposal allow of my doing so, but I wish to discuss what I consider to be the best method of dealing with these tumours, whether innocent or malignant, that one so often meets with, situated in the anterior or posterior triangles, and under the sterno-mastoid muscles and deep fascia.

At this point, the more clearly to deal with this subject, I think it will be as well to inquire briefly into the anatomical relations of these parts, and also into the physiological effects produced by injury to any of the important structures that are found in this space.

The parts themselves form almost a parallellogram, bounded in front by a line extending from the chin to the sternum, behind by the anterior margin of the trapezius muscles, below by the upper border of the clavicle, and above by the lower border of the inferior maxilla and a line extending from the end of the jaw to the occiput. This parallellogram is divided into two triangles by the sterno-mastoid muscle, and the whole is covered by the integuments and deep and superficial fasciæ and platysma.

In the floor of this space are found the carotid artery and internal jugular vein, and vagus nerve enclosed in a commons heath; in front of this sheath are a few filaments of the descendens noni nerve, and behind is seen the inferior thyroid artery, the recurrent laryngeal nerve and the sympathetic nerve; in the upper part are branches of the facial and superficial colli and spinal accessory nerves, with the bifurcation of the carotid vessel and the branches of the external carotid artery, with the hypoglossal nerve crossing or curving round the occipital artery, the floor of the space being here formed by the larynx and muscles of the pharynx. Posterior to the sterno-mastoid are the spinal accessory nerve, the descending branches of the cervical plexus and phrenic nerve; and in the lower part above the clavicle, the third portion of the subclavian artery curves outwards and downwards, with the brachial plexus of nerves lying above and in close contact with it.

This brief summary of the anatomical relations is sufficient, I think, to show with what important structures we have to deal, and to demonstrate that the surgeon must not undertake the removal of large deeply seated tumours in this region without, in the first place, realising his position as to what complication he may have to contend with, and also, as far as possible, to define the relation of the tumour to these parts. These tumours must be treated with the greatest respect by the surgeon, as they must be in close apposition to some, perhaps all, these important parts.

It is not difficult to see, however, what urgent and distressing symptoms may be occasioned by the pressure of any tumour upon these parts. The carotid artery and internal jugular vein may be so compressed, as to interfere materially with the circulation of the blood to and from the brain, while if the vagus or laryngeal nerves be implicated in the growth, more serious symptoms may arise.

Perhaps, however, the most important and interesting effect that may be produced by pressure of tumour in this region, is that caused by pressure upon the sympathetice nerve and its cervical ganglion. A case recently came under my care, whose photograph I now hand round. The patient was a man, aged 30, who presented himself, as you will see, with a considerable enlargement of the left side of the neck, which he attributed to a strain in April, 1885. Shortly after this, he noticed a small movable lump in the left side of the neck; this gradually got bigger. It is only within the last few weeks that the growth has been fixed. Two months ago, a lump came under the chin. At present he has on the left side of his neck a mass of round growths, varying in size from that of a walnut to that of a hazel nut; these are all more or less movable, but under these, deeply seated, is another large growth, extending from the ear nearly to the clavicle, quite immovable. He has no pain, and is in good health; he has, however, congestion of the conjunctiva, and some opacity of the cornea, with a central ulcer; also drooping of the upper eyelid. The left half of his face is redder, and apparently warmer, than the right. The eye congestion and ulcer were treated for a week without any visible improvement. I then operated upon him with a view of removing the



Fig. 1.—Case of Enlarged Glands, implicating sympathetic, causing drooping of the eyelid, etc.

tumours, thinking that the state of the eye might be the result o pressure of the tumour upon the sympathetic ganglion.

The small growths were found to be glands, with extensive caseous degeneration; and the large growth behind was found to be a large cyst, extending backwards to the spine, and pressing firmly upon the gullet and bodies of spine. The man made a very good recovery; but the point of interest here is that the eye rapidly recovered, and within a week was quite well, and the drooping of the eyelid had disappeared.

If you will examine this photograph attentively, you will observe that there is considerable drooping of the upper lid, and well marked diminution in the size of the palpebral fissure, caused not only by the drooping referred to, but also by elevation of the lower eyelid.

This same state of things has been observed by Dr. Ogle, who has recorded, among others, a case of a soldier with abscess on the right

side of the neck involving the sympathetic. At first, his wife noticed that the right eye appeared smaller than the left. Two years afterwards, the palpebral fissure of the right eye was narrower. The right eyeball was somewhat retracted. The pupil was very much contracted, and acted but slowly to light. The conjunctiva was congested. The skin in the right cheek and ear was pinker than the corresponding parts on the left side. The right side was invariably hotter; notwithstanding this higher temperature, the man asserted he only sweated on the left side of the face; that, though abundant mucus was discharged from this nostril, none ever came from the right; when walking in the wind, the left eye alone watered; and, lastly, the right side of the mouth was drier than the left. The rest of the body sweated equally.[1] Oculo-pupillary phenomenon such as this is much more commonly caused by carcinomatous growths in the neck than by glandular swellings.

Surely, gentlemen, these are most interesting facts, and such as demand our careful study when dealing with these deeply seated tumours of the neck; but I must not dwell longer upon them, as time will not permit.

Much distress is often caused by these tumours from pressure on the trachea and gullet; in many cases, the trachea and larynx is pushed considerably on the opposite side; such a case was that of a man whose photograph I now show you. His voice was nearly inaudible, and the difficulty in swallowing was very great.

When a patient presents himself, then, with a tumour in the neck, it is most essential, before deciding upon the course of treatment to be followed, to determine, in the first place, whether such a tumour is o

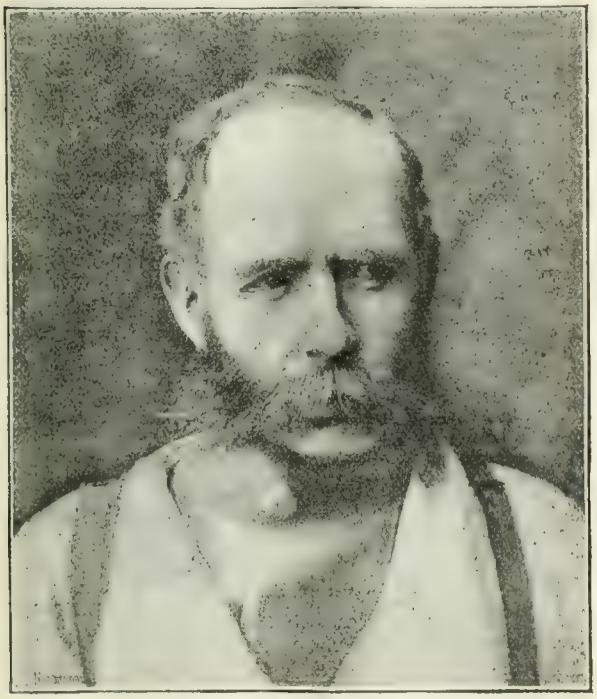


Fig. 2.—Case of Secondary Carcinomative Affection of the Glands, involving carotid sheath, and pushing windpipe over to left side.

an innocent or malignant character, and then as to the probable relation of its deep attachments to the important structures already referred to. This point, so far as the circulation is concerned, may be determined to a great extent by noticing the amount of venous congestion above the tumour, also by observing whether the arterial circulation is impeded; this may be ascertained by comparing the state of the pulse in the temporal arteries on either side. And, lastly, we must notice how far the functions of deglutition and respiration are interfered with, or the existence of laryngeal irritation, which would point to implication of the vagus, phrenic, or laryngeal nerves, or to pressure upon the œsophagus or windpipe.

[1] *Vide* Dr. Long Fox, The Influence of the Sympathetic Nerve on Disease, *Dictionnaire Encyclopédique des Sciences Médicales*, Article: Sympathetique (Grand). François Franck.

Should the tumour be so far advanced as to implicate the skin, as shown in this photograph, all surgical interference must necessarily be out of the question. Neither in the case of malignant tumour would one be justified in submitting a patient to so formidable an operation, if it is found to be firmly fixed, and extending deeply into the deeper structures of the neck, implicating the important blood-vessels and nerves, and probably implicating the windpipe or gullet. If the tumour is innocent, although it may press upon these structures, it will be enclosed in its own capsule, and, by careful dissection with a blunt instrument, or by keeping the knife or scissors close to the tumour, the surgeon will most likely be enabled to avoid injury to these structures.

A well authenticated case of this description is that recorded by Mr. Spence in the *Dublin Quarterly Journal of Medical Science*, November, 1863, of the removal of an enormous enchondroma, weighing over seven pounds, from the neck and face, extending from the zygoma nearly to the clavicle, and from the spine to the cricoid cartilage. Mr. Barker has also lately drawn attention to the surgical treatment of these cases, and has recorded in the *Lancet* of January 30th, 1886, and May 11th, five cases in which he had removed very large tumours from the neck. In one of these cases, Mr. Barker had the benefit of the advice and assistance of our worthy President. The carotid artery and jugular vein were ligatured in one of his cases, and the tumour pressed very closely upon the important nerves. One case was looked upon as a cystic sarcoma. All the patients did well, and up to the time of the report there had been no recurrence.

A case that in the first instance caused me to think of this subject more hopefully, was that of a man, aged 50, who was admitted into the Cancer Hospital in February, 1885, suffering from cancer of the tongue, implicating the fauces and pharynx, accompanied by a large mass of glands infiltrated with carcinomatous disease in the neck, extending some distance down the carotid sheath. This man was in such agony from the disease of his tongue, and was threatened with early starvation, from the difficulty in swallowing, that he begged me to do something for him. I therefore, upon his earnest solicitation, determined to remove the diseased mass, and at the same time endeavour to remove the affected glands; on dissecting round these, the jugular vein and carotid artery were found to be so surrounded and incorporated with the disease, that it was impossible to remove them without dividing these vessels above and below the mass; this I accordingly did, afterwards removing the tongue and diseased tissues from the mouth, by Kocher's method. The man made a perfectly good recovery, and had no bad symptoms whatever. He lived in comparative comfort for the next nine months, when he had a recurrence of the disease in the neck, and died.

We often, however, meet with tumours which have their origin in the anterior triangle of the neck, extending underneath the sterno-mastoid muscles, pushing the carotid vessels and sheath over to the middle line, or, perhaps, these vessels may be felt to lie directly over or under the tumour; these tumours are usually innocent in character, and more or less freely movable, and in each case may be easily and safely removed by making a free incision along the anterior edge of the sterno-mastoid, through the platysma and fascia; and then, by careful dissection with some blunt instrument, opening up the capsule of the tumour, when it will often very easily shell out.

Only a short time since, a gentleman, aged 24, consulted me for an enlargement on the left side of the neck, which had been gradually growing for some months. There was no history of syphilis or malignant disease in the family. On examination, I found he had a string of enlarged glands, extending from the angle of the jaw along the carotid sheath, under the sterno-mastoid to the clavicle; there were, also, others along the posterior edge and under the sterno-mastoid muscle; the glands varied in size from a nut to that of a small Tangerine orange. I treated him for some time with iodide of potassium and arsenic, but the glands continued to increase in size. He then consulted Sir J. Paget, who recommended a sea-voyage and the continuance of the arsenic treatment, but considered any surgical interference contraindicated, on account of the position and nature of the growth, which he considered to be a case of lymphadenoma. The patient had some slight enlargement of the glands of the axilla and groin. The growths, however, continuing to grow somewhat rapidly, I determined, five months after he first consulted me, to endeavour to remove them. The operation was performed with but little difficulty, the glands all shelling out with comparative ease, excepting the largest one, which was situated deeply underneath the clavicular end of the sterno-mastoid muscle. The wounds healed quickly and well, and a fortnight after the operation he was convalescent. In this case, the carotid sheath was pushed considerably forwards towards the middle line, and some of the glands were very deeply seated behind this structure.

Other cases very similar to this have come under my care, all of which I have operated upon with most favourable results.

Carcinomatous disease of the glands of the neck, secondary to carcinoma existing in the line of the lymphatics, runs a very rapid course, and produces quite early most distressing symptoms, causes severe pain from pressure on the nerves, interferes with the blood-supply from pressure upon the carotid vessels and internal jugular vein, causes displacement of the windpipe, and, by pressure upon the gullet, often interferes materially with deglutition. The skin becomes early implicated, leading to ulceration.

Primary carcinoma of these glands is extremely rarely met with; when it does occur, numerous glands become affected in succession. Carcinomatous disease of the glands, when existing secondary to the disease, being present in some other part, that is, tongue, lip, etc., is usually found in those glands which are intimately connected with the carotid sheath, and unless seen early, are most difficult to remove by any surgical interference, as they quite early become firmly fixed and incorporated with the sheath; and the neoplasm extends round it so as in many cases quite to encircle the vessels. In such cases, it is hopeless to attempt their removal unless, as in the case I have related to you, you are prepared to ligature and divide the carotid artery and internal jugular vein, both above and below the growth, and this undoubtedly to my mind is what the surgeon should be prepared to do, as it is giving the unfortunate sufferer the only possible chance of life; a very poor chance, I am prepared to admit, but in any case his life may be considerably prolonged if the operation is successful. I have seen many cases in which these carcinomatous

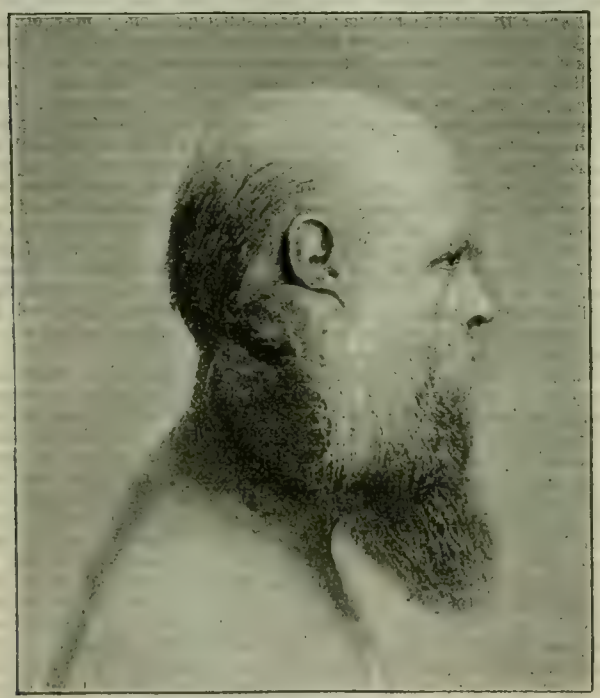


Fig. 3.—Large Recurrent Sarcomatous Growth, filling posterior triangle of the neck (side view).

glands have been removed with the best possible results; and although, in the majority of cases, the disease will return again in approximate glands, in due course, yet you have the satisfaction of having prolonged life, and considerably mitigated suffering. I am certain, from observation of cases that have come again and again under my notice, that, if these patients had not been operated upon, life would have been considerably shortened, and death very much more painful.

I am free to confess that these operations, which at first appear to be tolerably easy of accomplishment, often assume proportions which one had very little expected. But it is from cases such as these that one has been able to learn experience; and it is astonishing how quickly and firmly these extensive operations heal up, and what little inconvenience is experienced by the patients afterwards.

Sarcomata are commonly met with in this locality; they usually grow very quickly, and, from their deep attachments, are often difficult to remove. They are nearly always of primary origin, and usually will be found to be completely encapsuled, and tolerably easily removed. It is often, however, most difficult to determine if these growths are free, or whether they spring from some of the deep structures of the neck, as they are nearly always so firmly bound down by the deep fascia, that it is difficult to determine if they be movable or not; and it is not until this has been divided, and the tumour explored, that we are enabled to determine the depth to which the growth extends.

These tumours are more frequently found in the posterior triangle of the neck than the anterior, as shown in these two photographs. It is, therefore, in this class of malignant tumours that much may be done by bold surgical interference; and here let me again assert, unless the operator is prepared to act boldly, he had very much better leave matters alone, as, unless he is able to remove or destroy the whole disease either by the knife or caustics, he may be sure it will recur with increased malignancy at an early date. But, if he can remove the disease thoroughly, he may be equally sure that he can prolong the patient's life considerably; and, although the disease may and probably will return, it may be again removed; and, although the patient may have to submit to operation again and again, the intervals will become longer, and eventually, in some cases, the disease may be eradicated.

A case of this description came under my care about three years since. He had been operated on twice previously at another London Hospital for what was evidently a deeply seated sarcomatous growth seated just below the mastoid process on the left side of the neck. In removing it, the portio dura had been divided. The growth recurred



Fig. 4.—Back view of same.

very shortly after the first removal. He was again operated upon by the same surgeon, but the disease recurred within two months. He then came under my care. I removed the growth, which had extended backwards very thoroughly; but there was one point at which the growth seemed to extend deeply into the pterygo-maxillary fossa. I burnt this thoroughly with a Paquelin cautery. The wound healed quickly and firmly, and he attended as an out-patient from time to time. The disease did not return until five months afterwards. He was at once admitted into the hospital again; and the disease, which was not nearly so large, was again removed, and then burnt thoroughly out with chloride of zinc, the wound being allowed to heal from the bottom. This it did very quickly and firmly. He was again discharged, and the disease did not return again for seven months, when it showed itself quite at the anterior part of the original wound. The cicatrices of the later operation being quite free, and the growth com-

paratively small, I removed this as on the last occasion, using the chloride of zinc freely. He made again a good and speedy recovery. Between each operation the man was able to resume his work, and it is now over three years since he was operated upon first. I do not hesitate to say, had this man not submitted to these repeated operations, he would have succumbed to the disease some time since; whereas at present he is at work and enjoying good health.

Now, one word as to the method of performing these operations. I consider the main object is to make a free incision through the skin and superficial structures in the first place, so as not to be hampered for room when proceeding with deep dissection; and, in very large tumours, I consider that perhaps a large crucial incision is the best, as by dissecting back the flaps thus formed, the surgeon has a thoroughly free field to work in.

In ordinary tumours, situated either in the anterior or posterior triangle, or under the sterno-mastoid, an ordinary linear incision is usually sufficient. Should the glands or growth be large, however, and situated in both triangles, and also under the sterno-mastoid, it will be necessary to make two incisions, the one in front and the other behind the sterno-mastoid muscles. By these incisions, it is astonishing how easy it is to remove even very large growths from under the muscle; by pushing with the finger of one hand, the growths are very easily removed through the opposite incision. These were the incisions I adopted in the case of lymphadenoma I have already narrated to you. Dieffenbach recommends these incisions to be adopted even in very large tumours, with the object, apparently, of obviating the division of the sterno-mastoid muscle.

In other cases, I have practised the making a triangular flap, having its base upwards, and apex at the posterior or anterior edge of the insertion of the sterno-mastoid muscle, as the case may be; by turning the flap so formed up, the surgeon has ample room to manipulate the growth, and dissect it from its bed.

In some very large growths, it will be found necessary, as in Mr. Spence's case of enchondroma, to divide the sterno-mastoid muscle across. If such a proceeding is deemed necessary, it is better to do it at once, since it gives as full a view as possible of the whole extent of the growth, and enables the assistant to compress the main vessels, and push them aside out of the way. The division of the sterno-mastoid muscle, however, is not often necessary, and should be avoided, if it is possible to remove the growth without.

In cases of large growths in this region, the surgeon should always clear the lower margin in the first instance, so as to allow of his assistant having complete control over the vessels. Having done this, I consider the posterior and upper edges should be defined, and, by putting considerable traction upon the growth, the connecting tissues between it and the surrounding parts are put upon the stretch, and are often easily separated, either by some blunt instrument, such as a director, raspatory, or the handle of the knife; if they should be so firm as to resist these instruments, the surgeon can dissect the growth out, as a rule, without injury to the nerves and important structures that will be probably found stretched over it, by means of blunt pointed scissors, or by keeping the edge of the knife close to the tumour. Langenbeck, Barker, and others have shown that both the carotid artery and jugular vein may be divided without compromising the success of the operation; and even the vagus has been divided, and yet the patient made a good recovery. Such a case was that of a man, aged 42, on whom I assisted my colleague, Dr. Herbert Snow, to remove a large sarcomatous growth, extending from below the right ear to within a short distance of the clavicle. The tumour, before the operation, seemed to be fairly movable, yet, when Dr. Snow came to dissect it out, it was found to completely encircle the carotid sheath with its contents, and to extend deeply into the pterygo-maxillary fossa. In this case, Dr. Snow ligatured the carotid and jugular vein above and below the growth, and it is difficult to understand how the tumour could have been removed without division of the pneumogastric nerve; in fact, after the operation, for some time the patient showed symptoms such as are attributed to division of that important nerve. The man made a good recovery, and, although the growth returned in the course of six months, the patient was considerably relieved by the removal of the original tumour.

In the removal of malignant growths situated very deeply in the neck, such as the one just narrated, and in which it is found to be impracticable to dissect out the deep connection of the growth, I have been in the habit lately of dissecting away as much as I could, and then scraping away with a Volckmann spoon as much more as is possible; and finally, either with Paquelin cautery deeply burning the remainder of the growth, or applying solid chloride of zinc—of the two, I have had better results from the application of the chloride of zinc—then dressing the wound from the bottom with strips of carbolic oiled lint. A large slough separates, and it is astonishing how quickly the wound heals with a good firm cicatrix.

In the case of innocent tumours, that is, glands, enchondromata or fibrous tumour, they may as a rule always be safely removed, as they rarely, if ever, implicate any of the important vessels or nerves to such an extent as to preclude their being dissected from the growth without injury.

The after-treatment of all growths that can be removed without the use of the cautery or caustics should be treated upon the same principle; namely, first washing out the wound thoroughly with solution of perchloride of mercury, and thorough and good drainage at the most dependent part of the wound; and here I have often found it desirable to make an opening through the skin below or behind the original incision, thus thoroughly preventing any bagging of blood or serum; it also is useful as enabling the original wound to heal by first intention. Having thoroughly established this, I invariably pack the neck with some of the antiseptic wools. I prefer the wood-wool wadding, prepared with a preparation of the perchloride of mercury, or salicylate or iodoform wool. By this means, you are enabled to establish a good firm pressure over the whole surface.

To sum up, then, I consider: 1, all innocent tumours in these regions may be safely removed; 2, that malignant growths may be removed when situated in the triangles of the neck, provided they are fairly movable, that the skin and superficial structures are not implicated, notwithstanding their size and the possibility of the large vessels being implicated in the growth.

A CASE OF SUPRAPUBIC CYSTOTOMY FOR TUMOUR OF THE BLADDER.

Read before the Lancashire and Cheshire Branch of the British Medical Association, July, 1886.

By F. A. SOUTHAM, M.B.Oxon., F.R.C.S.,

Assistant-Surgeon to the Manchester Royal Infirmary, and Surgeon to the Clinical Hospital for Women and Children.

T. H., aged 41 years, was admitted into the Manchester Royal Infirmary on May 4th, 1886, suffering from symptoms which pointed to the presence of a papilloma, or villous tumour, of the bladder. He stated that for four years he had been in the habit of passing blood with his urine. At first, the attacks of hæmaturia came on about once a month, lasting three or four days on each occasion, and being unattended by any pain or other symptoms, but, latterly, blood had been almost constantly present, and micturition had become not only extremely painful, but also much increased in frequency. For a fortnight before admission, he had suffered from retention, only a few drops of bloody urine being passed with much straining at each attempt to empty the bladder.

When admitted, the patient presented a very blanched appearance, being in an extremely debilitated condition. The bladder was distended with urine, which, when drawn off with a catheter, was found to be of a dark-red colour, containing, mixed with it, large quantities of blood-clot. This condition of the urine continued during the time the patient was in the hospital previous to operation, and it was observed that more blood was generally present at the end than at the commencement of micturition. The quantity passed per diem averaged about 100 ounces, and it was always faintly acid, and of low specific gravity, varying from 1006 to 1010.

On several occasions, Mr. Gilchrist, who was acting as dresser, and to whom I am indebted for the notes of the case, detected typical villi under the microscope in the sediment which was deposited from the urine.

On exploring the bladder with a sound, it was found to be very capacious, but no distinct evidence of the presence of a tumour could be detected, and a rectal examination likewise gave negative results.

The history of the case, the symptoms that were present, and the fact that villi were found in the urine, clearly showed that the patient was suffering from a papilloma of the bladder. Operative treatment was therefore determined on, in spite of his debilitated condition, and the fact that the kidneys were probably the seat of secondary degenerative changes, as proved by the low specific gravity of the urine, and the large amount that was secreted. For it was evident that, unless some measures were taken, he must rapidly sink from the severe drain on the system from constant loss of blood.

It was accordingly decided to first explore the bladder from the perinæum, and, if possible, remove the growth or growths, as the case might be, through an opening in the membranous urethra, as recommended by Sir Henry Thompson. If, however, they were found to be not easily removable by this means, it was resolved to proceed at once to perform suprapubic cystotomy, so as to obtain more complete access to them; the successful cases of suprapubic lithotomy recently published by Sir Henry Thompson showing that opening the bladder from above the pubes is attended by much less danger than is generally supposed.

On May 13th, the membranous urethra was opened from the perinæum on a grooved staff, and the finger introduced into the bladder. On exploring its interior, it was at once evident that the growths were very numerous, and of considerable size, involving not only the left half of the trigone and lateral aspect of the bladder on the same side, but also its anterior wall, extending upwards behind the pubes. As from their extent and situation it appeared to be impossible to remove them completely through the perineal opening, it was decided to open the bladder from above the pubes. A full-sized catheter was accordingly passed into the bladder through the perineal wound, and about ten ounces of water injected into its interior; this was readily retained on making pressure with a sponge over the perineal opening.

Without any preliminary distension of the rectum, an incision three inches long was then made in the middle line immediately above the pubes, and, with an ordinary director, the recti muscles were separated from one another, and the anterior surface of the bladder, uncovered by peritoneum, was exposed after a little careful dissection. On depressing the handle of the catheter (introduced through the perineal wound), its end could be felt projecting beneath the bladder-wall, at least three inches above the pubes. By means of curved needles or handles, two silk ligatures were passed through the walls of the bladder immediately above the pubes at a distance of about an inch from one another. An incision, 1½ inches in length, was then made into the bladder midway between the ligatures, on which gentle traction was maintained, so as to draw the bladder upwards and forwards, and prevent it from collapsing. It could then be seen that the bladder was full of masses of recent blood-clot, some of which were lying loose, while others were attached to processes of the villous growths; these were removed as far as possible with the fingers and a lithotomy scoop. Then, by scratching with the nails of the two forefingers, which, when introduced into the bladder—the one through the perineal, the other through the suprapubic opening—could easily be brought into contact, the growths were successively detached and brought out through the upper opening, with large masses of clot adherent to them.

The constant oozing of blood rendered it impossible to gain a view of the growths as they lay within the bladder. When all had been removed, the nozzle of a Higginson's syringe was introduced through the upper opening, and the bladder was washed out with water at a temperature of about 120°, until the fluid issued quite clear. It was then sponged out as dry as possible, and some solution of tincture of steel applied to the surface from which the growths had been detached. By these means all bleeding was quite arrested.

The silk ligatures were then withdrawn, and the suprapubic incision was left quite open, being simply dusted over with iodoform, and covered lightly with a layer of absorbent cotton-wool. No drainage-tubes or catheter were left in the bladder. The growths removed varied considerably in size; the largest was about 2 inches in diameter and rounded in shape, its villous processes being from ½ to ¼ an inch in length, and branching out in all directions from a central mass, which possessed no pedicle, but was somewhat constricted at its base of attachment to the bladder-wall. Upwards of a dozen more distinct tumours, some the size of a walnut, others not larger than a bean, were also extracted, and in addition innumerable smaller masses of growth, in the form of soft flocculent tufts, which sprang directly from the vesical mucous membrane; examined microscopically, they are found to be typical examples of papilloma.

The after-treatment consisted in changing the cotton-wool as soon as it became saturated with urine, dusting the wound with iodoform, and the parts about the groins, scrotum, etc., with powdered boracic acid; by these means the wound was kept quite sweet, and the parts in its neighbourhood fairly dry.

For some hours after the operation, the urine was slightly tinged with blood, especially that which came by the perineal opening; but after the second day it was almost free from any traces of it. On the 7th day, blood was entirely absent, even on testing with guaiacum and ozonic ether; on the 13th day, some urine was passed by the natural channel, very little coming through the perineal wound, which was healed on the 18th day.

After this date the abdominal opening rapidly closed; on the 28th day, all the urine was passed *per urethram*, and he was up and walking about the ward. During the last four weeks of his stay in the hospital, the urine was free from blood, except on one or two occasions, when, after washing out the bladder with a solution of boracic acid, a faint trace was observed to be present. Micturition was unattended by the slightest pain or straining, and the water could be held comfortably for four hours at a time.

The patient left the hospital on July 3rd, seven weeks after the operation, having gained 31bs. in weight during the last fortnight, and being entirely free from any evidence of a tendency to recurrence of his former symptoms.[1]

REMARKS.—The course adopted in this instance is one which should, I think, be generally followed in cases of tumour of the bladder.

The bladder should first be explored with the finger; in the male, by opening the membranous urethra from the perinæum; in the female, by dilating the urethra. By these means, a certain proportion of simple growths, especially if small, single, pedunculated, and situated about the trigone, can be readily removed, as the results of Thompson and Whitehead prove.

If, however, after exploring the bladder in this way, the tumours are found to be multiple, and of large size, and especially if involving portions of the bladder-wall beyond the reach of the finger, suprapubic cystotomy should be performed. The double opening is an advantage rather than otherwise, as tending to facilitate drainage of the bladder, and if any infiltration of urine should subsequently occur, an external opening will be present in the most dependent position through which it can escape.

The same course should also be adopted if any one of the three conditions be present, to which Whitehead and Pollard (*The Surgical Treatment of Tumours of the Bladder*, p. 9) call attention as liable to interfere with complete exploration of the interior of the bladder; namely, depth of the perinæum, enlargement of the prostate, and narrowing of the pelvic outlet.

As regards the after-treatment of the suprapubic opening, no attempt should, I think, be made to close the wound in either the bladder or the abdominal walls. However accurately the former may be sutured, the margins of the divided mucous membrane do not readily unite; consequently, there is always a risk of some escape of urine subsequently taking place, and if the abdominal wound has completely or even only partially closed, the urine may infiltrate the cellular tissue round about the bladder, a complication which it is very desirable to avoid.

An additional advantage gained by not attempting to close the suprapubic wound, is the free drainage that continues so long as it remains open, usually for at least three weeks or a month. This will necessarily prevent the bladder from becoming distended with accumulation of urine, such as may happen even with a perineal opening from accidental blocking of the tube when one is employed. The result is, that the organ will be kept fairly empty, and also in a state of rest—a condition which must necessarily promote healing of the surfaces from which the growths have been detached.

In conclusion, I may add that, a fortnight ago, I adopted a similar course in another case of papilloma of the bladder occurring in a man 58 years of age. An attempt was first made to explore the bladder from the perinæum, but this was found to be quite impracticable, owing to the depth of the perinæum, and a co-existing enlargement of the prostate. Suprapubic cystotomy was accordingly performed, and the tumour readily removed. The operation was followed by an entire cessation of the hæmorrhage from which the patient had previously suffered, but being in an extremely cachectic condition at the time of its performance, from previous loss of blood, he gradually succumbed, and died on the tenth day from simple asthenia.

In this case (particulars of which I hope to publish), as in the preceding, no dilatation of the rectum was employed, and when the bladder is not contracted, but capacious and capable of moderate distension, I am inclined to agree with Mr. Barwell, that this proceeding, on which much importance has been placed by Sir H. Thompson and other surgeons, is not necessary, for in neither of my patients was the peritoneum exposed, nor, as far as one could judge, in danger of being wounded during the operation.

[1] When last seen, in the middle of September, his condition was the same, except that slight traces of blood were occasionally perceptible in the urine, especially after active exercise.

THE will of Dr. William Anderson McKellar has been proved at Glasgow; the personalty was valued at £12,047.

ENORMOUS FIBRO-CYSTIC TUMOUR IN THE PAROTID REGION.

By Surgeon S. J. RENNIE, M.S.,
Staff-Surgeon, Cawnpore, India.

The following case is of interest, as showing to what an enormous size these tumours may grow, if neglected. The patient, a Hindoo woman, aged 42, with a good previous history of general health, applied for treatment at the Civil Dispensary, Cawnpore, on August 8th, 1886. When I saw her, I found that she was very much reduced and exhausted from the constant dragging and worry of the unsightly mass which hung down from the left cheek and rested on her shoulder.

The history given was, "that she first noticed a small swelling over the left parotid region, at the age of 14. This continued to grow very slowly up to three years ago, when, after a slight illness, from which she suffered at that time, it commenced to enlarge rapidly, and soon attained its present size." Owing to the weight of the growth, she was unable to sit up, and had to constantly support it with her hand. Latterly, she had suffered frequently from malarial fever, probably induced by her exhausted condition.

On examination, the tumour was found to be freely movable, and attached by three pedicles; one to the zygomatic arch, a second to the angle of the lower jaw, and the third along the ramus of the jaw opposite the mental foramen. It appeared to consist of several large separate cysts, with a hard irregular mass at its most dependent part. The lobe of the ear was involved, and the skin stretched tightly over the tumour everywhere, that on the posterior surface being thickened, infiltrated, and beginning to ulcerate.



Early removal was resolved upon as soon as the patient was in a condition to bear it, and, chloroform being given, this was done under the steam spray on August 12th. A triangular flap was marked out from the skin on the upper and anterior surface of the growth to cover the resulting hole in the neck, and the ear dissected out. The flap was then reflected, and the tumour enucleated, being particularly awkward to deal with owing to its great size. In doing this, the vascular supply running along the before-mentioned pedicles was found to be very extensive, the facial, and also fifteen or sixteen large hypertrophied arterial branches being divided. These, however, were easily seen, and were picked up previous to division, in consequence of which she lost but little blood.

In "digging out" the inner surface of the tumour, great care was needed to avoid the external carotid artery, which was in immediate contact with it, and which, when the mass was removed, lay pulsating in the bottom of the wound. The skin flap was then pared to fit, brought down over the face and neck, sutures and a drainage-tube introduced, and the patient removed to bed; a dose of liq. opii sedatives being ordered. There was only a slight rise of temperature next day, the wound healed rapidly, and the patient recovered her strength quickly, once relieved of her burden, and did well up to the twelfth day after the operation, when she suddenly got an attack of cholera, which was prevalent at the time, and died in six hours.

After removal, the tumour weighed 12 pounds, and measured 2 feet 7 inches in its long circumference, and 1 foot 9 inches in its transverse circumference. On examination, it proved to be a soft fibrous tumour, with three large and several smaller cysts developed in its tissues. The photograph will serve to show the position and size of the growth.

I may mention a little fact in regard to the ligature of arteries, which I have never seen noticed in the text-books, but which I have found very useful. It is this: when picking up an artery of any size to give the vessel a complete twist on its own axis. It is easily done by twirling the forceps between the finger and thumb whilst holding them for the ligature to be applied. This accomplishes two things: first, by temporarily closing the artery, it prevents any blood oozing between the blades of the forceps; and, secondly, by freeing its divided end from the surrounding connective tissue, it causes it to "stand out," so that it can be easily seen and ligatured without any risk of including other structures. I have found this little manœuvre so valuable in dealing with large vessels, that I venture to put it on record here.

CLINICAL MEMORANDA.

ECZEMA-ERYSIPELAS.

The following case seems to belong to this category; see Mr. Hutchinson's remarks in the Journal for July 24th, p. 148.

Mrs. T. is a stout, active, florid lady, aged about 80. She comes of a long-lived family; several sisters have died in old age of malignant disease in the pelvis. She eats and drinks freely, taking whisky, etc. She is liable to (1) frequent slight attacks of erysipelas of the face, for which she habitually applies a powder; (2) eczema, of which she has had at least two severe spells at long intervals, once on the leg and foot about fifteen years ago, and about the perinæum, groins, etc., two years ago. Her tongue has generally a congested and swollen edge, she is prone to diarrhœa (probably beneficial to her), and the urine has contained during the present and one previous attack a small quantity of sugar.

On July 11th, she noticed some redness and soreness on the neck. Within a few days, there came out, almost concurrently, around the neck, on the ears, on the right forearm and wrist and dorsal surface of the first phalanges, and in the finger-clefts, about the anus, and in the transverse furrow across the hypogastrium, an eruption of the following character. The skin was red and œdematous over a well defined area, and near the centre of this area were one or two groups of minute, closely set, vesicles. The central part of the patch faded in colour, but the edge remained red, and extended in a serpiginous manner from day to day, creeping in this way up the arm to midway between the elbow and shoulder, and creeping down from the neck on every side, until it was lost below the level of the breasts. The eruption had not this fully developed character in all its sites; there was, in some parts, merely redness without distinct vesicles. On the right hand, the vesicles coalesced and enlarged, until the sides of the fingers presented several bullæ of half an inch to one inch diameter. Slight redness and papules appeared for a short time on the left forearm and fingers of the left hand. During a few days, fugitive patches of redness, with some swelling and papulation, were found on both legs, mainly about the knees and ankles—all were well defined and irregularly symmetrical. The face was affected later on with typical erysipelas and much œdema. Very little pyrexia and constitutional disturbance existed; one severe rigor occurred on August 5th, and there were frequent chilly sensations, "shudders" passing down one or other arm and leg. Some catarrh of the nose and throat, with hoarseness, co-existed during the early part of the attack; and, on August 13th, severe gastric pain set in, and lasted off and on for a few days, suggestive of an outbreak of the eruption on the stomach mucous membrane.

The eruption continued to recur again and again, coming out in

one place whilst it disappeared in another, during about six weeks. The forearm and hand, which had been of all parts the most severely affected, underwent prolonged desquamation, large laminæ of skin being shed for a week or more. The face, neck, and perinæum peeled to a less extent.

The treatment which appeared most successful was to pack the affected parts, under oil-silk, with lint saturated with lead and spirit lotion (methylated spirit was considered objectionable), to which a small quantity of Wright's coal-tar solution, about 1 in 64, was added. The tar was omitted when the erysipelatous element prevailed, and increased when the eruption simulated a simple eczema. The patient was restless, and good nursing was found to be the chief element in success. Internally, alkalies were not found of much use, and arsenic did not promise any good; it had been found useless in a former attack. But tinct. ferri perchlor., in twenty-minim doses, was well borne, despite the plethora, with two doses of quinine (two or three grains), in each dose, daily, and a morning draught containing sulphate of magnesia. Under this treatment, progress was made, and, at last report, the patient was almost free of the eruption.

The points of interest in this case seem to be (1) the combination, in varying proportion, of the symptoms of eczema and erysipelas; (2) the generalised, irregularly symmetrical type of eruption, occurring mainly in the flexures, but also on parts exposed to friction; (3) the association with glycosuria; (4) the successful use of iron and quinine, although the local treatment is, no doubt, of the principal importance.

R. Hingston Fox, Finsbury Circus.

PATHOLOGICAL MEMORANDA.

HYPERTROPHY OF THE BLADDER IN DIABETES.

In an interesting paper by Dr. Maguire, on the Occurrence of Albuminuria in the course of Diabetes (Journal, September 18th, p. 543), he mentions that thickening of the bladder has been observed by him in *post mortem* examination of diabetic patients. He will be pleased to learn that this statement is confirmed by another careful and experienced pathologist, the late Dr. Fagge, in whose *Principles and Practice of Medicine* the same condition of hypertrophy is referred to (vol. ii, p. 423). Moreover, Dr. Windle, in a paper published in the *Dublin Medical Journal* for September, 1883, states that he found hypertrophy of the bladder in thirteen out of 40 cases of diabetes, on examination after death.

I will use this opportunity, if Dr. Maguire will allow me, to take exception to his application of the term "fatty degeneration of the kidney" apparently as synonymous with chronic tubal or parenchymatous nephritis—the large white kidney of Bright's disease. As he well knows, true primary fatty degeneration of the kidney never gives rise to albuminuria, and has no connection with the secondary degeneration which befalls the inflammatory products of nephritis as it does those of phthisis or of cancer.

P. H. Pye-Smith, Harley Street.

GYNÆCOLOGICAL MEMORANDA.

NON-GRAVID HYDRORRHŒA.

Some time ago, in the Journal, I drew the attention of the profession to an anomalous uterine function manifested by the discharge, more or less frequently and in varying quantity, of a slightly opalescent watery fluid from the cavity of the uterus; to this I applied the term non-gravid hydrorrhœa. The secretion or excretion, whichever it may be considered, is truly comparable with that from the renal organ.

That the uterus should, by some freak, perform a function wholly foreign to us is quite intelligible. In many of the lower organisms, where structural differentiation is ill-defined, vicarious function is readily fulfilled. The animal may, for example, be turned inside out with impunity, and the vital state of the organism thereafter be maintained unimpaired. The endoderm as yet but feebly specialised and set apart for assimilation, now discharges the function hitherto performed by the ectoderm, that of elimination, whilst the ectoderm, on the other hand, readily fulfils the function of the endoderm, that of assimilation. The reproductive and urinary organs, it is to be remembered, are, by a process of gradual evolution, developed from the middle of the three germinal layers—from the temporary organs named Wolffian bodies. These bodies, when fully formed, occupy nearly the whole of the abdominal cavity, and constitute a pair of symmetrical organs, closely related in structure to the permanent kidneys. It is not, therefore, astonishing that an organ developed in common with the kidneys, from the same primordial structure, should occasionally reveal the manifestation of a function so closely related to that normally displayed by the renal organs.

James Oliver, M.B.Edin., F.R.S.Edin.,
Assistant Physician to the Hospital for Women, Soho Square.

SURGICAL MEMORANDA.

A CASE OF RHINOLITH.

The following may be of interest as an addition to the small number of recorded cases of rhinolith. A male Hindu, aged about 40, emaciated and in poor health, attended at the Motihari Charitable Dispensary, with complete obstruction of the left nostril. The assistant-surgeon in charge believed the case to be malignant disease, and on a casual examination it looked so.

For about two years there had apparently been discharge and obstruction. The whole of the left side of the face was much swollen and there was well marked facial paralysis, ptosis, and epiphora of the left eye. The nose was turned, and the septum naris bulged, towards the right side, and the mouth was drawn to the same side. On examining the mouth, an oval swelling was found on the left side of the roof; several teeth were lost or decayed. There was a sanious and highly offensive discharge from the left nostril.

A solid body, which occluded the left nostril, was seized by dressing-forceps, and found to be movable, but as it was too large to be extracted through the nostril, and too hard to be crushed by these forceps, it was broken with a pair of cutting bone-forceps. The fragments weighed, when fresh, four drachms. The dried fragments that have been preserved weigh, after several months, 165 grains. The largest fragment measures 1 inch by $\frac{3}{4}$ by $\frac{1}{2}$ inch. After its extraction, a large cavity was left in the left nostril, and the palatine process of the upper jawbone was found to be atrophied on the right side by the pressure of the stone. No dead bone was discovered. The nostril was syringed out with carbolic acid lotion.

The patient only attended for five days as an out-patient subsequent to the operation, during which time the ozœna and swelling subsided, and the facial paralysis seemed to be disappearing.

In shape, the stone appeared to have been a laterally compressed mass, and showed some signs of vertical lamination. No nucleus was seen, nor could any analysis of the stone be made, but it appears to be similar in composition to the ordinary rhinoliths.

It is extremely difficult to get a clear history out of natives of India, especially if they should belong to the lower classes, for although they may not wish to deceive, they make extraordinary statements, having not the remotest idea of time. It could not therefore be ascertained whether the facial paralysis or the symptoms of stone in the nose occurred first, but probably the paralysis was due to the stone. The history of the case also probably extends over a much longer period than two years.

Edward Bovill, F.R.C.S.

Bequests and Donations.—Messrs. John Brooke and Sons have given £500 to the extension fund of the Huddersfield Infirmary.—The Carmarthenshire Infirmary has received £500, under the will of Mr. T. C. Morris, of Brynmyrddin.—Mr. Frederick Dodsworth, of Newcastle-upon-Tyne, has bequeathed £250 to the Convalescent Home at Whitley, and £200 to the Hospital for Sick Children.—Mercers' Hospital, Dublin, has received £100 under the will of Mr. Robert Stafford, and £100 under that of Mr. Charles Crotty.—The Worcester Infirmary has received £100, "In memory of the late T. Blizzard, of Tewkesbury."—The Edinburgh Royal Infirmary has received £100 from the Forth Bridge Working Men's Club.—The Cumberland Infirmary has received £500 under the will of Miss Rooke, of Skiddaw Lodge, Keswick, and become entitled to £500 under that of Miss Barnes, of Hartington Place.—The British Home for Incurables has received £500, less duty, under the will of Mr. William White, and fifty guineas from Mr. George Jackson, and fifty guineas from Mr. J. W. Torre.—The Leeds Hospital for Women and Children has received £200, less duty, under the will of Mr. Edward Howarth, of Porchester Terrace, formerly of Leeds.—The Duke of Westminster (owner of Ormonde, winner of the St. Leger) has given £50 to the Doncaster Infirmary.—Miss M. Gibbins has given £50 to the Seamen's Hospital, Greenwich.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

STATION HOSPITAL, RAMLEH.

LIVER FLUKE (FASCIOLA HEPATICA).—DEATH.—NECROPSY.

(By Surgeon W. L. CHESTER, M.B., Army Medical Staff.)

PRIVATE W., age 21, arrived in Egypt, from England, in March, 1886. On being medically inspected, he was found "unfit" to proceed "up Nile," and was detained at the depot, Ramleh.

On July 12th he was admitted to the Station Hospital, Ramleh. He was then a weak, delicate, and nervous looking youth; his symptoms at first were simply febrile. His temperature, on the evening of admission, was 105°; during the forty-eight days he was under treatment, the evening temperature varied from 101 to 104°, and the morning temperature from normal to 101°. The pulse was weak and rapid (120 to 140°; respirations were 24 to 32. The bowels were constipated throughout, and the tongue was generally brown and furred. He also suffered from some bronchitis during the earlier period of the disease. The case was looked upon as one of enteric fever, with irregular symptoms.

On August 9th, he complained of pain in the liver, for the first time: on August 19th, the liver was found to be enlarged, but so tender that percussion could not be endured; on August 21st, both the hepatic and splenic dulness were found to be greatly increased, the liver was very tender, and at times extremely painful. He was noticed to be constantly picking at his nose, which he frequently made bleed; he also had nausea, and was several times detected trying to induce vomiting, by putting his finger down his throat. He had no rigors. He became very anæmic, and towards the end suffered from hectic fever. Abscess of the liver, at this period was suspected.

At 2 P.M., August 29th, he suddenly became collapsed, and died at 11.30 P.M.

At the *post mortem* examination, held twelve hours after death, the abdominal cavity was found to contain a large quantity of blood; a very large clot of blood was found lying under the right lobe of the liver. There was no peritonitis. The liver was much enlarged, and weighed 5 lbs. 13 ozs. A large cavity, about the size of a hen's egg, had ruptured in the base of the right lobe: this was the source of the hæmorrhage; inside this cavity a living fluke was discovered. On making sections of the liver, a large number of similar cavities were found, varying in size from a hazel nut to a hen's egg. Some of the smaller of these cavities appeared to be dilated bile ducts, with thickened walls, and contained bile, but the larger number contained blood in various conditions. In some, the blood was fluid, or semi-fluid, and all these contained living flukes, the larger-sized cavities were all of this class, except one, in which coagulation of the blood had recently taken place, the fibrine being separated, leaving a clot precisely similar to those so frequently found in the ventricles of the heart. No fluke was found in this, or in any of the cavities in which coagulation had taken place. Some of the smaller cavities had organised walls, and contained firm blood-clots. In none had suppuration occurred. Over a dozen specimens of living flukes were discovered in the liver, and doubtless there were many more.

No entozoa were found elsewhere. The spleen, which was soft and enlarged, weighed 15 ounces, was perfectly exsanguine, and of a light pink colour. All the other organs were healthy in structure; they were very pale and devoid of blood. The intestinal canal was healthy throughout.

The largest fluke measured 1 inch in length, and ½ inch in breadth; it was flat, and of an elongated oval shape; the head extremity was rather pointed, the other blunt and rounded; the margins were undulated, the colour light grey; at the tip of the pointed extremity was a small orifice, and about ½ inch from this, in the middle line on the ventral surface, a very conspicuous, elevated, circular orifice, which, in the fresh state, appeared to contain a red clot of blood.

REMARKS BY SURGEON CHESTER.—The parasite is, doubtless, fasciola hepatica. In all respects, it accurately corresponds to the description of that trematode as given by Cobbold, except that the posterior extremity is much rounder than in the specimen figured by him, but he states elsewhere that this extremity is sometimes rounded.

A case of Chinese fluke (Distoma Simnot) recorded by Dr. McConnell (Treatise on Entozoa, Cobbold), appears to resemble closely the present case in the symptoms presented during life. This case, so far as I have been able to study the literature of the subject, appears to be unique, the flukes being found in the substance of the liver, and their presence being the direct cause of death. I have no reason to suppose that this parasite, occurring in man, is less rare in Egypt than in other countries. None of the civil practitioners in Alexandria, to whom I have mentioned the case, and shown the specimens, have met with any such in their very large experience.

GREENOCK INFIRMARY.

NOTES ON THE SYMPTOMS AND TREATMENT OF THE VICTIMS OF THE LOCHFYNE DISASTER.

(Under the care of Dr. Fox, Visiting Physician.)

[Reported by ALEXANDER D. PITHIE, Assistant House-Surgeon.

ON Saturday, September 25th, a large number of excursionists went by steamer to witness the explosion of seven tons of gunpowder at Crarae Quarries, Lochfyneside. These quarries are situated on the side of a hill, and form a large bowl, with only a narrow entrance. After the explosion, the excursionists landed and walked to the quarries, about a quarter of a mile distant. No sooner had they entered the bowl of the quarry, than they began to stagger about and drop down in all directions. With difficulty they were brought out, when it was found that six were dead, and a great number unconscious. Eventually, all recovered under the treatment used by medical men on the spot, except seven, who were removed to this institution.

On admisssion, all were found to be comatose, except one man who had been comatose, but subsequently became violent; after admission, he could be kept in bed by gentle coaxing.

The general symptoms were as follows: breathing was slow, deep, and stertorous (in the fatal case, it was short and shallow, with stertor); the faces were flushed, the veins on the neck and forehead distended, the eyelids were closed, the pupils, in every case, were widely dilated, but responsive to light-stimulus. (In the fatal case, the pupils contracted just before death.) The extremities were cold; there had been involuntary evacuation of the bowels, but, as to the bladder, it was impossible to say. On passing the catheter, only a few ounces of urine could be drawn off. There was a very strong odour from the breath, which might be described as sweet and feculent. The pulse, in each case, was slow, but full and regular. The temperature in all the cases was at first subnormal, and all the patients were unable to swallow.

On admission, they were at once stripped and put to bed, sinapisms were applied to the extremities, the nape of the neck, and the spine. Hot bottles were placed between the legs, along the thighs and sides, and also to the feet. The catheter was passed, and any urine drawn off. The bowels were first cleared out by a purgative enema of castor oil and turpentine, and, afterwards, stimulant enemata of beef-tea and brandy were administered at intervals of about three-quarters of an hour. Friction was applied to the extremities, and body. In the fatal case, ether was given hypodermically, when the pulse began to fail (which it frequently did), with the effect of temporarily restoring the heart's action. The tongue was drawn well forward. Strong friction, with rough towels, was used to the extremities and sides. Ammonia vapour was also tried, and galvanism along the spine. These means were, however, of no avail, as the patient died about 9 A.M. on September 26th. Just before death, very strong reaction set in; there was extremely profuse perspiration, the pupil contracted, and the temperature rose to a little over 101°.

The peculiar odour of the breath was noticeable in every case; also the widely dilated pupils, and involuntary evacuation. As to the condition of the bladder it was impossible to say anything about involuntary micturition, inasmuch as, although the patients clothes were wet, this might be attributed to the heavy rain which fell at the time. The fact that the temperature in all the cases was subnormal, might or might not also be attributed to the inclement weather; perhaps it was also in part due to the long journey in the steamer before they reached the hospital. These remarks might also apply to the cold extremities.

After being put to bed, and the means described above used, all the patients became bathed in a warm perspiration.

In two cases the transition from coma to consciousness, was accompanied by delirium; this in one case was so violent as to necessitate the application of a strait-jacket. After the full return of consciousness, all the patients felt very weak and much prostrated, and in one

case (the longest unconscious) there was frontal headache and giddiness, on any mental exertion, five days after the accident. In no case was there any secondary complication.

The shortest time, after admission to the hospital, within which consciousness returned, was twelve hours after the accident, and the longest forty hours.

All the patients, except one, stated that they did not remember any peculiar feeling or premonitory symptoms at the time of the accident. The one patient, above mentioned, stated that he felt as though he were being suffocated by sulphur fumes.

To sum up, it may be stated that every patient had the appearance of narcotic poisoning, and that the lines of treatment were based on the management of such cases.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 8TH, 1886.

Mr. THOMAS BRYANT, F.R.C.S., President, in the Chair.

A Case of Congenital Malformation of the Heart, with Systolic and Prediastolic Basic Bruits.—Dr. CHARLEWOOD TURNER described this case, and made some observations on the causation of *bruits* preceding the cardiac sounds. The case was that of a cyanotic boy, aged 6, under observation for four years with the same symptoms. A systolic *bruit* was audible over the pulmonary valve, followed by a well-defined "prediastolic" *bruit*, running up to an accentuated second sound, and accompanied by a slight thrill. The *bruit* was conducted down the sternum. In regard to this case, it was pointed out: 1. That the character of the "prediastolic" *bruit* and the associated phenomena proved its endo-cardial origin, and that a basic valvular *bruit* of this character could only be due to regurgitation, arrested by delayed closure of rigid valvular curtains. 2. That with a rigid and defective but not incompetent valve, there must be some reflux which would, if of sufficient duration, produce a *bruit* resembling that heard in this case, and the occurrence of such cases showed that the interval of the diastolic period preceding the second sound, might be sufficiently prolonged for the production of a distinct *bruit*, while their rarity showed that this interval was appreciable under exceptional conditions only, as with a high degree of stenosis of the pulmonary orifice and hypertrophy of the right ventricle in the present instance. In regard to the bearing of such cases on the question of the causation of the "presystolic" *bruit*, it was pointed out: 1. That with a rigid and defectively acting, but not incompetent, mitral valve also, there must be reflux in the interval of the systolic period preceding the closure of the valve and first sound, which would, if of sufficient duration, produce a *bruit* with the distinctive features of the presystolic *bruit* in these, being referrible to predominance of vibrations in the freely hanging curtains of the patent valve over fluid vibrations in the production of the *bruit*. 2. That the conditions were much more favourable to the production of a "presystolic" than of a "prediastolic" *bruit* by reflux; (*a*) the general expulsive ventricular systole which commences from a state of relaxation being slower than the impulsive action of the elastic resilience of the distended vessels; and (*b*) its commencement at the apex of the ventricle being separated by an interval from the first acts of the contraction of the cavity by the muscular fibres encircling the mitral orifice. This basal contraction, closing up and drawing aside the interpapillary space, and propelling the blood into the apex and infundibulum, being preparatory to the general systole by which the blood is grasped and expelled, and seeming to represent the passage of vermicular contraction along the first limb of the vascular loop, of which the heart is a development. Thus the occurrence of a "prediastolic" basic valvular *bruit* implied the more frequent occurrence of "presystolic" mitral *bruits* similarly produced. This fact seemed thus to fully corroborate the views of the late Dr. Barclay, as to the causation of this *bruit*, and at the same time to remove the basis on which the alternative auriculo-systolic hypothesis rested—the assumption, that is, that there could be no appreciable interval between the acme of auriculo-ventricular influx and the first sound. To this hypothesis it was directly objected that to refer a *bruit* running up with progressive intensification to an accentuated first sound, supposed a forcible and impulsive ventricular contraction, of which there appeared to be no evidence or probability, and was incompatible with the character of cardiographic tracings in such cases, which showed a well marked interval between the summit of the auriculo-systolic elevation and the ventricular systoles. Supposing these elevations to represent the force of influx into the ventricle, the tracings seemed to be inconsistent with the hypothesis, but reasons were given for regarding them as indicative of the completion of the auricular systole, that is, of the first act of ventricular contraction, and commencement of "presystolic" reflux where the valve was rigid. Reference was made to the occurrence of a "presystolic" *bruit*, or modification of the first sound with that character, in the absence of mitral stenosis, as another clinical observation according with Dr. Barclay's views, but not satisfactorily explicable on the alternative hypothesis. The conviction was expressed that Dr. Barclay's view of the causation of the "presystolic" *bruit* not only afforded a sufficient explanation of the clinical facts, but the true interpretation of them.—Dr. R. E. CARRINGTON inquired what was the rhythm of the *bruit*. He thought it was like a *bruit* which at Guy's Hospital was called post-diastolic. In an apparently similar case, Dr. Moxon did not believe there was marked narrowing of the mitral orifice, as, at the necropsy, the left auricle was found full of blood-clot.—Dr. COUPLAND was not quite disposed to coincide with Dr. Turner as to the mechanism of the *bruit*; it corresponded more with a *bruit* over the aorta or pulmonary valves than over the mitral. He thought these questions as to the exact causation of *bruits* were often overstudied and thought out in relation to the direction of the blood-current. The great point was to determine the nature of the anatomical lesion.—Dr. TURNER, in reply, reiterated his former statement as to the nature of the *bruit*, and thought it was important that the direction in which the blood was flowing that produced *bruit* was a very important factor in determining the exact nature of the cardiac lesion. He had not met with a prediastolic *bruit* without stenosis of the auriculo-ventricular orifice.

A Case of Undeveloped Sexual Organs associated with Congenital Defect of the Tonsils.—Mr. PEARCE GOULD exhibited this case, and read notes respecting it to the meeting. The patient was 27 years of age, over six feet high, slender, with fair, soft, smooth face, a boy's voice, and no hair on his face. The penis was small, the testicles were both quite small, but the right epididymis was thickened, which Mr. Gould attributed to a blow on the part when the boy was 11 years of age. The prostate could scarcely be felt through the rectum, and the seminal vesicles could not be felt. The man had no sexual desire; the only sign of any sexual activity was occasional slight priapism. There was an oblique inguinal hernia on the right side. The pillars of the fauces were close together, and only very small tonsils could be seen or felt between them. Mr. Gould said the case raised the question whether there was any intimate connection between the tonsils and the testicles. It was a popular notion that excision of the tonsils before puberty endangered virility, and Dr. Shorthouse, quoted by Dr. Ogle, was named as a writer who spoke of such an effect as a matter of common observation. The shrinking of enlarged tonsils, and the cessation of repeated attacks of tonsillitis at puberty, were adduced in support of the influence of sexual maturity upon these organs. On the other hand, in Zanzibar, where all boys have their tonsils excised, the testicles were well developed, and the operation now was so common that, were it liable to be followed by such a grave result as non-development of the sexual organs, abundant evidence of this fact would be forthcoming. The removal of an enlarged organ was different from its imperfect development, and might be attended with different results. Mr. Gould had seen two women with absent or undeveloped ovaries, and in whom the tonsils were of full size; and Dr. Langdon Down, who had seen many cases of imperfect sexual development, had not observed any associated change in the tonsils.—The PRESIDENT said that he had never yet in his practice seen anything to support the view that there is any real connection between atrophy of the sexual organs and atrophy of the tonsils.—Dr. F. SEMON remarked that the prejudice was very widely present in this country that there is a connection between the tonsils and the generative organs. He was of opinion, from his own observations in practice, and from queries which he had addressed to many individuals who had had their tonsils removed, that such persons produced as fine a progeny as others who had not been so treated. The size of the tonsils varied immensely in adults; but he did not think the connection, if it existed at all, was between the tonsils and the testicles, but between these latter organs and the adenoid tissues generally, especially during the period of development of the body. He did not believe the blow on the testicle had anything to do with the small size of the tonsils in this man. In some cases of absolute congenital absence of the tonsils, he had noticed also congenital defective development of the arch of the palate.—Mr. WARRINGTON HAWARD observed that usually, when the tonsils were removed, there was previous hypertrophy of those organs. He did not think that Mr. Gould's patient had much smaller tonsils than many other people. Young women sometimes had swelling of the tonsils at the menstrual period.

—Dr. HINGSTON FOX did not think there was any connection between the tonsils and the generative organs. The tonsils being a lymphatic organ, were concerned in the manufacture of leucocytes; and as, after the period of adult life was reached, the necessity for leucocytes diminished, the lymphatic organs generally, and not the tonsils alone, then decreased. This diminished demand for leucocytes had to do, as he supposed, with the stoppage of the growth of the tonsils, rather than with the period of puberty as such.—Mr. GODLEE asked if Mr. Gould's patient had ever had mumps.—Mr. GOULD could not answer this question decisively, though he had never heard of his having that disease. He admitted that the man had tonsils, and that Mr. Heath and Mr. Haward did not apparently think them remarkably small; but he himself and many other members of the Society thought them quite abnormally deficient in size. He believed the impression that the tonsils and testicles were closely connected was erroneous. At the period of puberty, there was, apparently, a change in the condition of the tonsils, exemplified by the change manifested in affections of those parts before and after that time.

A Case of Pulsating Tumour of the Head, with Raynaud's Disease. Mr. F. TREVES contributed this case, and produced the patient for examination. The patient, a lad, aged 17, complained of severe frontal headache, vomiting, and vertigo. These symptoms had existed for twelve months. Both carotids were considerably enlarged, as were also the temporo-facial and internal jugular veins. Over the arteries a loud and harsh *bruit* was to be heard, and a thrill felt. There was no arterio-venous communication. Certain vessels of the scalp were dilated. The right side of the face was a little larger than the left, the right facial muscles also acted with greater vigour. The right side of the tongue was larger than the left. The right eye was more prominent than the left, and the right palpebral fissure was the larger. There were nystagmus and occasional diplopia. The left internal rectus was weak. The patient was liable to "hot sweats." Over the left mastoid region was a cirsoid aneurysm of peculiar character. It was the seat of an intense *bruit*. The skull beneath the tumour was marked by a number of irregular channels. There was a second pulsating tumour over the occiput. It was venous, and communicated through a fissure in the skull with the superior longitudinal sinus. It was the seat of a certain pulsation, but presented neither thrill nor *bruit*. The tumour was readily reducible. The sphygmographic tracings of the two swellings revealed remarkable differences. In the venous tumour the respiratory curve was evident. The pulsation in this tumour was derived from the brain. The skull presented certain irregular gaps and fissures, which appeared to have been caused by veins in a state of congenital dilatation.—The PRESIDENT thought the communication very valuable.—Dr. HALE WHITE considered that too great a burden had been laid upon the sympathetic nerve in the accounting for the symptoms; probably the human sympathetic nerve differed greatly from the sympathetic nerve in animals; so that its anatomical relationships in the lower creation must not be expected to hold good also in the human body. Again, those who examined the sympathetic nerve at necropsies were generally biassed in favour of finding it diseased. He had found as serious lesions in the sympathetic of people who had died without disease referable to it as in those who had the most serious diseases said to be due to disease of the nerve. In the largest book on the sympathetic which he had read, almost all diseases of the body were found to be accompanied by special affections of the sympathetic nerve. Thus hernia, atheroma of the arteries, etc., were so mentioned. He thought the case might be related to some cases of exophthalmic goître; and that there was much venous congestion.—Mr. TREVES, in reply, said that he had avoided all explanations that were referable to the sympathetic system of nerves. As to Raynaud's disease, or local asphyxia, the suggestion that the patient might have it was only negatively bad. He certainly had not venous congestion; that would be a positively bad explanation of his condition.

Renal Lithotomy.—Mr. BUTLIN gave further notes of a case of renal lithotomy, published in the *Transactions* of the Society, Vol. xv, page 113, 1882. In a letter received on February 3rd, from the patient's father (a medical man), he said:—"About a fortnight ago he had a good deal of pain in the left loin, very much as he used to have in the right. I found he was passing small pieces of calculus, soft and friable, and that the urine was alkaline. I kept him quiet for a few days, and gave him nitro-hydrochloric acid. The wound is now entirely healed, the urine normal except for the presence of a little mucus occasionally, the pain in the loin quite gone, and he is progressing most satisfactorily." In December, 1882, Mr. Butlin received a note from the patient, to say that at the end of a year he was quite sound and in excellent health. Again on September 15th of the present year Mr. Butlin received information that the patient was quite well, and enjoying himself in South Africa. It had, he said, been proposed that, in cases similar to this one, the entire kidney should be removed. If this had been done in the present instance, not only would the risk have been materially increased, but when the other kidney was attacked, the danger would have been very great.—The PRESIDENT thought Mr. Butlin had set a very good example in giving the subsequent history of his case. The *Transactions* of the Society would be made much more valuable if the example were generally followed by other contributors.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, OCTOBER 6TH, 1886.

J. B. POTTER, M.D., President, in the Chair.

Specimens.—The following specimens were shown: (1) Dr. MALINS: A Dermoid Ovarian Cyst.—(2) Dr. LEWERS: Microscopical Sections of a Uterus affected by Malignant Disease, and a Fœtus from a Ruptured Tubal Cyst, successfully removed through Douglas's pouch.—(3) Dr. J. PHILLIPS: An Ovum, expelled thirty-four days after Conception.—(4) Dr. R. BOXALL: Thoracic Viscera of a Woman who died in Childbed, with Symptoms of Pulmonary Thrombosis, due to Dislocation of the Heart into the left Pleural Cavity,—(5) Dr. W. DUNCAN and Mr. W. B. SUTTON: The Ovaries and Tubes from a case in which there was a Hæmatocele, due to Rupture of the Left Ovary; a Pair of Ovaries, removed for the cure of Dysmenorrhœa.

Four Cases of Ruptured Uterus.—Dr. J. G. SWAYNE read notes of four cases of ruptured uterus, occurring in his practice. In two the rupture was incomplete, in the other two it was complete. The first occurred about the middle of utero-gestation, and was not clearly traceable to any accident. The uterus appeared to have given way during the effort to expel a putrid five months' fœtus. The woman died undelivered, and a laceration was found in the anterior wall of the uterus, through which the child had passed, so that it lay between the uterus and bladder, in a pouch formed by the peritoneum, reflected from one to the other. In the second case, labour had been induced at eight months, and the rupture had apparently arisen from a transverse presentation, and the spontaneous expulsion of the fœtus in a doubled state. In neither of these cases was the peritoneum torn. The third case was one of complete laceration, and the accident took place during the course of an ordinary labour at full term, in a woman with slight pelvic deformity. She was delivered by craniotomy, but died on the fifth day after delivery. The fourth case was one of complete rupture, and occurred in a multipara, during an ordinary labour. The child, which had partly escaped into the abdomen, was delivered by turning. Laparotomy was performed, the abdomen was thoroughly cleansed, and the wound in the uterus united by several sutures. Death took place within an hour afterwards.

Case of Rupture of the Uterus.—Dr. RICHARD COX read notes of another case of this accident. A multipara, aged 38, was taken in labour at 8 A.M., on May 2nd, and was attended by a midwife. Till 3 P.M. everything had appeared normal, when suddenly the patient screamed, and became faint and sick. The expulsive pains ceased, but she complained of an agonising pain in the abdomen. Dr. Cox was sent for, and being from home, arrived about 6.30 P.M. The patient was then moribund. After administering some stimulant, he passed his hand into the uterus, which was empty. Finding a rent of five inches in the anterior wall of the uterus, he was able to seize a leg, and bring the child back from the abdomen, together with the placenta, and to deliver them pretty quickly. There was some difficulty with the head, which was arrested at the brim by a slight contraction. The patient died shortly afterwards. Her previous confinements had been natural.—Dr. BRAXTON HICKS said that so many points presented themselves, that it was difficult to select the most important. He thought that where delivery had been effected and the uterus was found paralysed, and where the rent was so large as to allow of a prolapse of the intestines, in such a case the best plan was to perform Porro's operation, rather than to leave the case to its almost inevitable fate.—Dr. HORROCKS thought that operations performed through the vagina were difficult, if not impossible to carry out, and that abdominal section seemed to be the only method offering any hope. The question between carefully stitching up the rent, or removing the uterus, should be decided after carefully examining the site and size of the rupture, and more particularly the condition of the torn parts. If the laceration were severe, as usually was the case, Porro's operation would be the best. If the edges were clean cut, they might be carefully brought together by sutures.—Dr. ROUTH said that, while agreeing with Dr. Braxton Hicks, there was another rule not one whit less important. When rupture of the uterus was discovered, it was an unnecessary piece of cruelty and malpraxis to attempt to

extract the child through the vagina, irritating the bowels with the hand, and running the risk of enlarging the tear in the uterus, as well as increasing hæmorrhage and shock. The rule should be to proceed at once to abdominal section. Whether in cases of the tear being very ragged, Porro's operation were preferable to sewing up the uterus, might admit of question. In any case, however, the child should be extracted without delay, by abdominal section, and not through the vagina.—Dr. GALABIN thought that, notwithstanding the improvements in modern surgery, rupture of the uterus involving the peritoneum would always be a very fatal accident. He had no doubt that, when the child had escaped through the rent, and the patient's condition permitted any interference, the operation should be abdominal section, and not removal of the child by the vagina. The empty and partially contracted uterus would occupy more of the pelvic diameter than when stretched over the fœtus, and extraction through the pelvis might be difficult, and increase the injury to the soft parts. He thought that Porro's operation would be rarely advisable, as in all the cases which he had met with the rent had commenced in the vagina or lower segment of the uterus, and in such cases it would be impossible to remove the whole rent by Porro's operation. When the rent was higher and ragged, Porro's operation might be advisable.—Dr. CHAMPNEYS thought everyone must agree with Dr. Routh that, after the diagnosis of rupture of the uterus and escape of the fœtus was once made, no attempt should be made to extract the fœtus through the natural channels, nor should any second person examine through the vagina. He thought that Porro's operation, taking advantage, as it had, of all the latest antiseptic improvements, had been compared with the old-fashioned not aseptic Cæsarean section, and to the advantage of Porro's operation. The recent improvements in the Cæsarean operation by Sänger, who used numerous deep silver and superficial silk sutures, so as to leave no communication between the uterus and peritoneum, had shown that the comparison was fictitious. He doubted whether Porro's operation should in any case be preferred, as part of the rent is so frequently below the line of amputation, not to mention the additional injury which it involved.

Papilloma of the Fallopian Tube, and the Relation of Hydroperitoneum to Tubal Disease.—Mr. ALBAN DORAN read this paper. Papilloma of the interior of the Fallopian tube had hitherto been considered a pathological curiosity. Only one case had been noted (Author, *Trans. Path. Soc.*, vol. xxxi), in which it gave rise to definite symptoms. A second case had recently occurred, and was described by the author in this paper. In the first case (Bickersteth and Wells), which commenced with symptoms of inflammation of the right ovary, the papillomatous growth distended the tube considerably, but the ostium of the tube remained unobstructed. This unusual condition (the fimbriated extremity being almost invariably closed in all forms of tubal disease) allowed the escape of exudation from the growth into the peritoneal cavity and hydroperitoneum, and, later on, pleuritic effusion occurred. The diseased tube was removed in April, 1879. The effusion into the peritoneum never recurred, and the patient remained free from disease of any kind in 1886. In the second case (Bantock), the patient had been subject for a year to pelvic pain and difficulty in micturation and defæcation. The cavity was filled by a resistant, obscurely fluctuating tumour. There was no free fluid in the peritoneum. The abdomen was opened, and a tumour of the tube containing papillomata was removed; the ostium was entirely closed. A cyst, not containing any kind of growth, lay in Douglas's pouch; it could not be removed. The patient died on the fourth day. Both cases occurred in women who had recently passed the menopause. From certain symptoms observed in these cases, the author arrived at the following conclusions: Papilloma of the Fallopian tube was either a very rare disease, or had been frequently overlooked. It might, however, exist and produce marked symptoms. A pelvic tumour, which might extend to the hypogastrium, always existed. Pain did not appear to be an essential symptom. The papillomatous growth was not malignant, and might be of the character of similar growths observed on the external parts. If so, the disease in question was a special form of salpingitis. The effusion into the peritoneal cavity in the first case, where the ostium of the affected tube was unobstructed, suggested that so-called hydroperitoneum, "in which there is no organic or tangible disease discovered, beyond the conditions of the peritoneum itself, to which the collection of fluid can be referred" (Matthews Duncan) might frequently be caused by tubal catarrh, where the ostium of the tube remained unobstructed. In rare instances, this catarrh might be due to papillomatous growths on the tubal mucous membrane. In such a case, the tubal catarrh must be of a mild character, for, in severe forms, the ostium rapidly became closed, so as to save the patient, not so much from the comparatively harmless "hydroperitoneum," but rather from acute general peritonitis. The less irritant discharge in the milder form succeeded in escaping into the peritoneal cavity, through the patency of the ostium, and simply caused peritoneal effusion.

REVIEWS AND NOTICES.

MEDICAL REPORT OF THE HOSPITAL SERVICE CONNECTED WITH THE ESCORT WHICH ACCOMPANIED THE AFGHAN BOUNDARY COMMISSION, 1884-85. By Surgeon R. HAVELOCK CHARLES, M.D., Indian Medical Service.

THE present very valuable as well as interesting report, which has been furnished us by the Surgeon-General's Office, Her Majesty's Forces, Military Department, Government of India, is the work of Dr. HAVELOCK CHARLES, the officer late in medical charge of the Half Field Hospital and Escort.

This is probably almost the first occasion on which a field-hospital has been employed for native troops; and the new system, for the management of which the medical officer in charge was reponsible to the head of the mission, and not to the individual officers commanding the troops, worked most admirably, as it is always sure to do under similar circumstances, provided that the medical officers in charge be supported by a sufficient and suitable staff of subordinates.

The report opens with a brief account of the strength of the escort, and with a sketch of the history of the mission. From the very instructive "Brief Notes on the Physical Geography and General Topography" of the countries which were passed through, we learn that the winds are certainly the most unpleasant of the climatic conditions, although it is probable that without them the heat would be unbearable. The north-west wind, for example, blows constantly at stated periods; there are also frequent dust-storms, one of the causes of the prevalence of eye-diseases amongst the inhabitants. The climate of North-Western Afghanistan is very dry, and the Europeans of the mission were improved, both in health and stamina, by their sojourn there. The vegetable supply was excellent, and the fruits very numerous; and sheep, goats, and black cattle were plentiful, but the fish had a very "muddy flavour." Nine-tenths of the milk is made into a staple article of diet called "krot," a kind of sour curd compressed into balls, and dried in the sun. Leeches swarm in some of the streams, and snakes abound all over the country. A poisonous bug is also to be met with, and the ordinary vermin is only too common. The water-supply is variable. In the city of Herat itself, the "tanks for storage of water are merely places in which the water is rendered filthy," the most of the drinking-water being brought in from canals outside the walls. Great praise is given to the *numdahs* served out to the men to sleep on, which, together with their waterproof sheets, served their owners well on many trying occasions. *Kibitkas*, also, were found to be of exceeding value, and are greatly recommended for field-hospitals, because even in the coldest weather an equable temperature can be maintained in them, and, therefore, in the treatment of pulmonary affections they are much more suitable than tents. Their framework, too, is light, and, although intricate, folds up into small compass; while the felt of which they are made is in no danger of fire, and rain and high wind are not to be felt inside them in the least. One of these kibitkas, exhibited by Sir Peter Lumsden, is to be seen, we believe, in one of the open courts of the Kensington Exhibition. Its only fault, when compared with a tent, is its weight, but this might be greatly diminished by the use of a lighter felt. Dr. Charles objects very strongly to the use, as military quarters, of the large ruined *Robats* (caravanserais) and forts, which are scattered about these countries. Generations of travellers, and herds upon herds of cattle, have passed through them, and they have thus become modern Augean stables, the animal excreta in some of them being fully four feet deep; and yet the medical officers had often great difficulty in preventing them from being used. The Russians, indeed, at several of their stations, owing to their temporary occupation of similar old buildings, suffered terribly; and we have been told that, after the first Afghan campaign, the 5th Punjab infantry experienced frightful misery from having been quartered in old Cabul buildings and huts, diphtheria and like complaints, and a peculiar fatal œdema of the glottis, having been very prevalent. As Dr. Charles forcibly states, the personal habits of the Afghan soldiery are not of such a description as to render an occupation of their vacated quarters pleasant to their successors.

The better health of the mission on the return, as compared with the upward march, is ascribed chiefly to the marching having been done by day; the up-journey was done by night. The marches,

moreover, were of more equal length, and the halts better timed. The temperature during the day is also an important element; and accordingly it is advisable, in hot countries, to divide the day's march into a morning and an evening one. Seeing that the total distance covered on the expedition was upwards of 2,316 miles, the time of march was therefore worthy of careful consideration.

According to the tabulated statements of diseases given in the Report, we see that bronchial catarrh, fevers (ague, remittent, etc.), dysentery and diarrhœa, were the most frequent; cases of frost-bite, conjunctivitis and eye-affections generally, syphilis, skin-diseases, and rheumatism, also being very numerous. As to the diseases prevalent amongst the inhabitants of the countries on the line of march, it appears that intermittent and remittent fevers, often virulent, are of common occurrence. Cholera has been very rife in the past in the Herat valley. Small-pox is very common, and much of the mortality of the townspeople and villagers is apparently due to enteric disease. Examples of syphilis in all its forms abound. Alopecia areata is very general, but only two or three cases of tubercle were seen. Malarious enlargement of spleen is very frequent. Scurvy is exceedingly prevalent among the Turkomans, the Heratis, and the Amir's soldiery; while cases of stone in the bladder were met with in great numbers all the way from the Helmund to the Murghab. Dysentery and rheumatism are particularly common; also impotence amongst all classes, and eye-affections of every kind from the most trivial to the most severe. In the dispensary of the Half Field Hospital, the work done for the natives of the country was most extensive and varied, much pain not only having been relieved, but great and permanent benefit conferred on suffering humanity.

The probable causes of the diseases amongst the escort and followers are ascribed to climatic causes: direct rays of sun, winds, dust, extremes of temperature; to marching, when long continued, with ill-timed halts, and with hurried cooking, the sick-list always being smaller with day-marching; to filthy water, malaria, and over-eating, particularly of fruit; to cooking when naked; and to absence of urinals, owing to which the top-soil became saturated with urine. The great freedom which the mission enjoyed from typhus, oriental plague, etc., is attributed, in the Report, to the absence of overcrowding, and to the living in tents or kibitkas, and the eschewing of old buildings of all kinds.

Some of the recorded cases are highly interesting, but reference can only be made to a very few. Amongst those which the general reader may study with profit was a case of traumatic hernia of the lung, successfully treated by ligature and excision; and a most interesting case of snake-bite, followed by chronic snake-poisoning. Hypodermic injections of liquor ammoniæ and ether, excision of part and cautery with silver nitrate, stimulants, sinapisms to the extremities, and shampooing, and the administration of tonics, ultimately cured the patient. A great many operations were successfully performed. Most excellent results were likewise obtained in dysentery with the usual large doses of ipecacuanha powder. In ague and remittent fever, great benefit accrued from administration of the hottest water possible, swallowed till diaphoresis occurred, and then followed by quinine in twenty to thirty grain doses. Relief was generally almost immediate. Arsenic was found useful in chronic ague, especially when there was enlarged spleen; and chloral, with potassic bromide, was useful when the fever-heat was intense and much nervous excitement present.

Tea, Dr. Charles considers, should find a place in all therapeutic equipments, owing to its "utility in stimulating and restoring the nervous system in the depression consequent on great fatigue, its potency against the effects of heat and cold, and its purifying action on water."

The Moseley Khajawa, as supplied to the field-hospital, is severely criticised; and the Persian ambulance is objected to on account of its being too top-heavy and cumbersome; but the Khajawa couch in common use amongst camel-men is specially recommended.

In the conclusion of the Report, reference is made to a subject which is well worthy of inquiry. The syces in a native cavalry regiment are, it seems, the servants of the Sowars, and not of the Government. They are, therefore, not under the supervision (save for treatment) of the medical officer of the regiment; and thus it happens that, owing to no regular inspection of them taking place, while the fighting men may be "fit," the followers are often to the extent of 50 per cent. "unfit." The officer commanding does not, as a rule, interfere. That some more direct control should be exercised is, however, plainly manifest; for it appears, when the present expedition was being prepared, that the majority of those syces who had been rejected by the medical officer as unfit were yet retained, and, as the result, either died on the journey, or, while escaping with their lives, suffered most severely, and were the cause of much unnecessary trouble. The words of Colonel Prinsep, on the surgeon representing the unfitness of these followers, were: "The men must go, even if they die. I am your senior officer, and I take the responsibility." The cause of humanity as well as of discipline surely demands that this should form the subject of a question in the "House."

We congratulate Dr. Charles on his Report, and on the success that attended his labours; as also upon the well-merited promotion conferred on him in his recent appointment to the Chair of Anatomy and Physiology in the University of Lahore, and to the civil surgeoncy of the Lahore Hospital.

NOTES ON BOOKS.

Regional Surgery, including Surgical Diagnosis: A Manual for the Use of Students. Part III. The Abdomen and Lower Extremity. By F. A. Southam, M.A., M.B.Oxon., F.R.C.S., Assistant-Surgeon to the Manchester Royal Infirmary, etc. (London: J. and A. Churchill.)—Two years since, in noticing the second part of this work, we expressed a hope that the third might be issued as soon as possible, as perhaps the only serious defect in *Regional Surgery* was the piecemeal manner of its publication. It is, therefore, satisfactory to be able to announce the issue of the final instalment of Mr. Southam's work. Consistently with an opinion just expressed, we may suggest that an issue of the entire manual in one volume would be advisable. In fact, a three-volume "manual" is a contradiction in terms, since portability decreases in direct ratio to multiplicity of volumes; moreover, such an arrangement is irksome for purposes of reference. The third part of *Regional Surgery* keeps up the reputation maintained by the previous issue. One of the best features of the work is the equal importance given to every morbid condition of a part. The surgeon may be puzzled as much or more by a trifling affection as by a grave or deadly disorder, and the young practitioner commencing his private duties may as well bear in mind that there are other things than tumours, aneurysms, and similar serious complaints which he may be called upon to treat. As before, Mr. G. A. Wright has assisted the author in the preparation of this part. In regard to the entire publication, we believe that it merits what we have had occasion to observe in reviewing the first two parts, namely, that it is now a standard work of reference, of highutility.

L'Année Médicale. Huitième Année. (1885.) Résumé des Progrès réalisés dans les Sciences Médicales. Publié sous la direction du Dr. Bourneville. (Paris: Librarie Plon. 1886.)—The eighth number of this annual publication contains the usual series of articles on the progress effected during the previous year in anatomy, physiology, medicine, surgery, obstetrics, and therapeutics. A considerable amount of space is given to the so-called microbial pathology. The list of new remedies contains many suggestive notes, but would have been more useful if the references to the articles quoted had been more systematically given. The value of the volume is considerably enhanced by the two indices—the one of matters, and the other of authors.

Manual of Differential Medical Diagnosis. By Condict W. Cutler, M.S., M.D. (New York and London: G. P. Putnam's Sons. 1886).—This handbook is doubtless intended to be used by students in preparing reports of cases at the bedside. It contains a short introductory sketch of the method of making a complete systematic examination of a patient. The various organs are then passed in review, the diseases effecting them enumerated, and tables of the symptoms by which the various diseases may be distinguished from each other given in parallel columns; under "pneumonia," for instance, are four tables, in which the symptoms produced by that disease are contrasted with those produced by acute pleurisy, pleurisy with effusion, broncho-pneumonia, and acute phthisis. Tabular statements of this kind are useful additions to certain chapters in text-books where the symptoms are discussed, but a huge collection of such tables does not make an interesting book. Minds are so variously constituted that it would be rash to say that there are not some students to whom this book may be useful; it has at least one negative merit, that it could not be used as a "cram-book," except, perhaps, by a "calculating-boy."

Bequests and Donations.—Mr. John Holdship, of Montagu Place, Montagu Square, bequeathed £10,000, subject to certain life interests, out of his pure personalty, to such hospitals in Middlesex and Sussex as his executors shall in their discretion select.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A NEW HYPODERMIC POCKET-CASE.

We have received from Messrs. Burroughs and Wellcome, Snow Hill, London, a new hypodermic pocket-case, with a syringe, made of solid silver. The pocket-case is much smaller than those usually met with, and has space for from ten to fifteen varieties of hypodermic tabloids in a leather cover of the following dimensions—3¼ × 2½ × ⅝ in. This case, being of morocco, and mostly sewn, is thought to be better adapted for use in tropical climates, than those which are lined with velvet, and pasted together. The syringe, the smallest in the market, is made of solid silver throughout, and is, therefore, non-corrodible. It is enclosed also in a solid silver case, which protects it, and prevents the drying of the piston packing. It is an instrument which may be relied upon in cases of emergency when other syringes are so likely to be found broken, or with dried up packing, or rusty needles. The cap of the case answers admirably for a mortar in which to crush and dissolve the tabloids, while the piston-rod and handle answer for a pestle. A civil surgeon in India says that he has used one of these syringes in that country continuously for two years without any mishap whatever. Inside the flap is fastened a small sheet of silicated paper convenient for memoranda, from which pencil marks can be readily erased. This part is so constructed as to be suitable for carrying cards.

As the hypodermic tabloids are eminently suited for administration by the mouth, owing to their smallness and ready solubility, the new hypodermic pocket-case will supply the profession with a good variety of concentrated medicines ready for immediate use, which can be conveniently carried in the waistcoat-pocket; and, while answering the purpose of an ordinary card case, will occupy but very little more room. The prices are as follows—twelve tubes of tabloids, 12s.; case, 4s.; solid silver syringe, 10s. 6d. The price of the case complete with syringe, and twelve tubes of tabloids, is 25s. It is a model of compactness and fitness.

DRY SPARKLING COCA WINE.

Messrs. Corbyn, Stacey and Co., of 300, High Holborn, W.C., have recently introduced a dry sparkling coca wine, for which it is claimed that it is an improvement on the coca wine hitherto introduced. It is free from the taste of coca, and is prepared with the dry sparkling wine. Each bottle represents about two ounces of the finest green coca leaves, and it forms a most agreeable mode of administering this now popular remedy. It is of great value to those suffering from nervous exhaustion or mental fatigue, and forms a refreshing and gentle stimulant.

A NEW BULLET-PROBE.

Mr. Alan Reeve H. Manby writes: If Surgeon-Major Wilson will refer to the report of the surgical instruments exhibited at the International Exhibition of 1873 by Mr. Hawksley (see *Lancet*, vol. i, 1873, page 611), he will see the chief feature of his flexible probe there described.

The following extract from a letter of Mr. Hawksley's, nine and a half years later (November 13th, 1882), will explain one, and the principal, reason why my probes were allowed to drop out of manufacture; the other is that, after I had undergone the throes usual to inventive delivery, I found that the same idea had been developed and abandoned by the great John Hunter.

Extract from Mr. Hawksley's Letter of November 13th, 1882.

"They cannot be cleaned. I lent for use one of your long probes, a year ago, to search for a bullet. I boiled it, and soaked it in carbolic acid for a week or more; yet, a few weeks ago, when I gave the same probe to a surgeon at the hospital to pass down a tortuous sinus, he inquired if it had ever been used before. I said it had, but was again clean. He quietly gave it to me again."

Centenarians.—Centenarianism is certainly more prevalent than formerly, if we are to believe the newspaper reports. Mrs. Ann Lanchester, of Hunton, Yorkshire, is at present enjoying good health in the 105th year of her age, having been born at Galley Hill, near Bowes, on Royal Oak Day, 1782. She has quite recently been haymaking, and teaching some of her great grandchildren to use the sickle. There is now residing in the parish of Wender, near Saffron Walden, Essex, an old gentleman named Richard Nicholson, who has turned his 103rd year. He is hale and hearty, and in full possession of all his faculties. And within the last few days the death of the widow of a staymaker at Christopher Buildings, Marylebone, was reported, at the age of 106; of that of Stephen Phipps, in Staines Union Workhouse, at the age of 101; and of that of the widow of a lighterman, in Queen Street, Southwark, at the age of 100.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

Subscriptions to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 16th, 1886.

DIRECT REPRESENTATION IN THE GENERAL MEDICAL COUNCIL, AND THE BRANCHES OF THE BRITISH MEDICAL ASSOCIATION.

It is not surprising that our columns continue to be occupied by an abundant correspondence concerning the selection of direct representatives of the profession in the General Medical Council. The matter is one of immediate interest to the profession at large, which looks forward with hope, probably not unmingled with doubts, to the future influence which it will be able thus to exercise upon the proceedings of the body. That these hopes are in some quarters much exaggerated is evident from many of these communications. These exaggerated anticipations arise in many instances from an inadequate appreciation of the avowed objects, the statutory powers, and the legislative limitations under which the Council is formed, and by which it is restrained.

It has often been the fashion to speak of the General Medical Council as the Medical Parliament, and a considerable movement was once inaugurated, and carried on to the formal point of petitions and memorials signed by some thousands of practitioners, which assumed that the Medical Council has powers and functions of which it is in fact entirely destitute. There are those who think and argue that it is the business and within the power of the General Medical Council to effect numberless internal reforms in the profession: to improve remuneration and raise the status of the general practitioner, and to alter beneficially in all directions their relations to each other and to the general public; and some of these erroneous and fanciful attributes are even ascribed to it by implication, in the addresses of certain candidates. In all this there is little that is real or serious.

Promises, or declamatory statements, tending in this direction may serve to fill an address, and to excite the interest of intending voters; but it is, of course, well known to all who know anything at all of the subject, or have considered it seriously, that the General Medical Council is a body whose functions are closely limited. It has the regulation of medical education, the registration of authorised diplomas with a view to the protection of the public against persons falsely pretending to hold such authorised titles, and the preparation and promulgation of a pharmacopœia. These functions are in themselves large and important; they are very imperfectly performed, and they should by no means be undervalued. The principle of direct representation of the profession in the Council is one for which we have long contended, and its acceptance and recognition is a matter of congratulation. Nor can we see anything but satisfaction in the fact that there is a lively contest

amongst a number of competent persons for the honour of representing the profession in the Council in each division of the kingdom, and that this contest, carried on by the usual parliamentary methods, is awakening very active interest throughout the kingdom. It is inevitable, and it is, from many points of view, not wholly undesirable that, with the discussion of the general principles on which the candidates respectively found their claims, there are mixed up many personal considerations and individual rivalries. These are the invariable concomitants of a popular election. Very dignified persons of academic tastes are naturally inclined to regard such proceedings with a high minded and supreme sentiment of contempt, and there is no reason for surprise if some are just now pointing to the slight turmoil of the present contest as already indicating some of the dreadful consequences which very eminent persons liberally prophesied before the Select Committee of the House of Commons, as being the inevitable result of trusting the medical profession to elect a certain number of representatives from its own body into the Council. The result, as at present shown, may be regarded with the most perfect equanimity, and without any misgiving. There is no reason why the profession should not take a very lively interest in the matter, and if all the addresses are not couched in terms of equal discretion and restraint, and if they do not all show an equally exact sense of the limits of the power of the General Medical Council, these are incidental defects which leave no ground for anxiety, and may be regarded as part of that political education which the masses of the profession have as much right and as much need to receive as the masses of the people generally.

These are our own affairs, and it is very well that we should discuss them freely: that we should have some power in our own house, and opportunities for using that power. The methods pursued may not be, and are not likely to be, strictly academic; but they are none the less thoroughly reasonable, completely in accordance with the national custom, and with the spirit and genius of representative institutions. Of the candidates, individually, we have no need and no wish to enter into any minute analyses, or to test all the claims put forward and all the promises made; but there are certain misconceptions in respect to the course adopted in maintaining the candidature of various persons, which may very well be cleared away. There are two customary modes by which a candidature is established on such occasions: there is the system of personal candidature, by which the individual announces himself to the electors, and summons to his aid all the friends he can muster, establishing a committee, which sets to work to secure as large a number of votes as possible; another method is that by which a number of gentlemen, who have not yet decided upon any candidate, but who wish to obtain some general collective opinion as to the merits of persons considered to be suitable, but not likely to undertake to put themselves forward, take means to investigate public opinion, and to submit a series of names for preliminary selection.

It seems to be thought very independent that any particular gentleman should announce himself as a candidate, and form his own committee; but there is some mysterious reason which makes it less accordant with the liberty of the subject that a committee of several hundreds of practitioners should themselves, after consultation and a ballot, invite persons of their own selection to become candidates. If it is not unreasonable for a gentleman to "impose himself upon the profession" by forming his own committee, it seems at least no more unreasonable that gentlemen who have been invited by a large and influential body of independent persons to allow their names to be put forward, should accept the nomination thus honourably offered. There are numerous candidates before the profession, and it will be able to judge for itself whom it pleases to support. It was sufficient evidence of the impartiality and of the absence of any spirit of cliqueism in the committee which is now supporting the selected candidates, Sir Walter Foster and Mr. Wheelhouse, that failing the third candidate it has adopted and is supporting the fourth on the list, Dr. Glover, who certainly cannot be accused of being a member of the British Medical Association, or of having taken part in any of its active work. The danger is not, however, that the committee which supports Mr. Wheelhouse and Sir Walter Foster will show either an overweening activity, or possess an overwhelming influence. Committees formed and directed by the candidates themselves are much more apt to be active and efficient than committees formed of a scattered body of practitioners situated all over the kingdom, acting as a public body, and without the impulse of private ambition or individual determination. Their power is often much more nominal than real, and their organisation more showy than effective. Mr. Wheelhouse and Sir Walter Foster have innumerable friends in the British Medical Association, and the services which they have rendered to the profession are known throughout the Association and in all its local councils. But, if their election is to be assured, there should be something like local organisation with that object.

It has been stated that, at the general meeting, it was decided that the Association would not officially take any step in this matter. That, however, is incorrect as stated; as the report shows, the resolution of Dr. Carter, which would have provided affirmatively for such action, was brought forward at a time and under circumstances which made it impossible even fairly to discuss it, and no resolution was come to, but it was left for the Branches and for individuals to take whatever action they chose. The Branches and the Branch Councils are entirely free in the matter to act as they choose, and to do whatever they think best in support of the candidature of the best men. It would be absurd to suppose that bodies organised like the Branch Councils of the British Medical Association, intended to ascertain opinion in their own district, and to assist in giving organised expression to that feeling in all that concerns the interests of the profession, should be in any way powerless on the present occasion. It would seem that the election of representatives to the General Council is precisely one of the questions which local Branches of the British Medical Association would be most likely to discuss effectively, and in which they could be most useful in helping to give effective support to candidates who had the approval of the leading persons in the district and of the majority of the profession.

If the election of Sir Walter Foster and Mr. Wheelhouse is to be secured, it would seem very desirable that active steps should be taken in all the Branches of the districts to support their candidature by those who recognise their eminent fitness to serve the profession in the General Medical Council, and who desire to see them elected. A general committee which desires to operate throughout a great constituency such as the present, spread throughout England, must needs do so by means of local organisations. Such local organisations exist in the Branches of the Association; but it is, of course, clear that it is for those Branches to take individual and unfettered action in the

matter, and only to give such support as they think fit after having debated the matter freely among themselves, and resolved to act in the best interests of the profession. The British Medical Association is, officially and as a body, not committed in the matter; but a very large proportion of the members will certainly feel desirous of seeing the candidature of Mr. Wheelhouse and Sir Walter Foster succeed, and that success can best be secured by voluntarily utilising the organisation which they possess in their own Branches.

It is to be regretted that Dr. Glover's committee has not coalesced with the committee formed at Birmingham, and the reasons alleged appear to us to be far more plausible than convincing; but that is entirely their own business. Dr. Glover has behind him a very potent influence, which is being used with excellent effect. He has a strong committee, and he has all the qualifications necessary for the post; and we trust that his candidature will be successful.

ABSORPTION BY THE SKIN.

Much controversy has raged round the question of the capacity for absorption possessed by the skin, and its suitability as a medium for the administration of remedies. Not only have the results of experiment been, to a large extent, conflicting, but the validity of many of the experimental methods employed has been called in question, and in some cases, at least, with much apparent justification. We propose to glance briefly at the question from four different points of view, and to consider the capacity of the skin for absorbing: first, simple fluids such as water or milk; secondly, non-volatile salts dissolved in a fluid menstruum; thirdly, volatile salts and gases; and lastly, metallic salts, vegetable alkaloids, etc., applied by inunction.

It seems now amply proven that the skin has a very limited power of absorbing simple fluids such as water or milk. Such fluids can, indeed, be taken up to an appreciable extent by the superficial layers of the cuticle, but they are subsequently lost by evaporation, rather than absorped into the blood-vessels or lymphatics. The elaborate weighings which have been made to show that the body gains weight after prolonged immersion are really valueless (even if the results obtained were constant instead of being highly conflicting), because the alleged gain can be plausibly explained as the result of the check to the cutaneous secretion. It is credibly related that shipwrecked sailors in the tropics, when destitute of water, have found great relief to thirst from bathing in the ocean, and hence it has been rather hastily concluded that water is absorbed by the skin. More probably the relief is the result partly of diminished transpiration and partly of the cooling of the skin. It is popularly believed that life may be maintained for long periods by simply immersing the body in milk, and hence the deduction that milk is absorbable by the skin. There is no satisfactory evidence to justify this belief, and it must be remembered that conclusions drawn from all such experiments, even if otherwise unimpeachable, are liable to be invalidated by the accumulating proofs that the capacity of the human body to endure deprivation of nourishment for long periods has been much underrated.

The evidence of the power of the skin to absorb non-volatile salts is hardly less unsatisfactory. It was once confidently asserted that iron, digitalis, aconite, opium, etc., could be readily absorbed by the skin, but the weight of evidence is now quite against this view. The few cases of a successful result, as compared with the long list of failures, are sufficiently explained as the consequence of the existence of sores or abrasions on the cutaneous surface. We used to hear a good dea about the beneficial effects of applying infusions of digitalis to dropsical swellings, but we doubt if many practical physicians continue to place any reliance on this method of practice. Poppy-head fomentations are still largely used for the relief of pain, and with apparent benefit, but it would be an error to conclude that absorption takes place. More probably the effect is exercised upon the nerve terminations in the skin.

Hitherto, our conclusions have been mainly negative, but there can be no doubt of the absorptive power of the skin for volatile substances, gases, and for non-volatile salts and alkaloids applied by inunction. Turpentine and iodine are examples of volatile substances which can be absorbed by the skin, but any quantitative estimate of the amount of the substance absorbed is rendered hazardous by the difficulty of excluding, in such cases, the absorption which usually goes on through the mucous membrane of the air-passages.

There can be no doubt of the great capacity of the skin for absorbing various metallic and other substances applied to it by inunction. The recognition of this fact may almost be said to have inaugurated a new branch of therapeutics, which has many useful applications. Mercury, for example, as is well known, may be administered by inunction so as readily to excite constitutional symptoms without entailing the digestive disturbance which so often follows from the ordinary method of using this valuable drug. The efficacy of the method of inunction seems to depend upon two considerations—first, the vehicle employed for the application of the drug to the cutaneous surface, and secondly, the thoroughness with which the inunction is practised. For many years, lard was the vehicle commonly employed, until vaseline came into general use, while quite lately a new substance, lanolin, a keratinous fat, isolated by Professor Oscar Liebreich as the natural fat of the skin-surface, has excited much attention as promising to afford a basis for ointments superior to anything hitherto known. Ample time has now elapsed for deciding between the claims of the former two, and we think the balance of evidence is strongly against vaseline. Most practitioners have probably been from time to time greatly disappointed with the effect of various drugs when applied as ointments of which vaseline was the basis, and there is little doubt that while vaseline is admirable as a protective, it tends to hinder, rather than promote, absorption. Lanolin is too recently in the field for its value to be sufficiently adjudged, but it has good promise of usefulness; and if, as alleged by many excellent observers, it enables us to ensure greater effects with a materially reduced strength of our preparations, it will make good another claim to attention on the score of economy. The effectiveness of this method of medication is in exact relation to the thoroughness with which inunction is practised, as the results of all experiments combine to prove.

If we take a general view of the subject, we must admit, on the one hand, that the absorptive power of the skin has been very greatly over-rated, and on the other, that in certain cases and with certain precautions, it affords a convenient and effective method for the application of remedies. We shall probably soon have more numerous reports as to the uses of lanolin from English practitioners. Abroad it has rapidly won its way into extraordinary favour, as a basis for ointments and salves; and for purposes of inunction and dermatic medication it is rapidly gaining a preference. It is stated that it is so much more active than other substances in promoting absorption, that

mercurial inunctions with lanolin, for example, should only be employed of half the strength.

ENTHUSIASM OR PROVIDENCE: A NURSING QUESTION.

'HERO-WORSHIP, done differently in every different epoch of the world, is the soul of all social business among men." So wrote Thomas Carlyle, adding, in his character as Cassandra-prophet, his grounded opinion that "we, on the whole, do our hero-worship worse than any nation in this world ever did it before," and that accordingly "we must learn to do our hero-worship better." The ceremony which took place at Walsall on October 11th is in some degree a proof that we, as a nation, are beginning to learn to do our hero-worship better. To the people of Walsall, who knew her life-work best, Miss Dorothy Pattison was in truth a heroine, recognised as such during her life, and ungrudgingly honoured after her death. The working men for whom she toiled once subscribed fifty pounds to present her with a pony and carriage; and, as a crowning evidence of how her work was valued, the people of Walsall and the surrounding districts assembled to the number of 40,000 to witness the unveiling of a statue of "Sister Dora," standing in hospital dress in the act of unrolling a bandage.

"All men, especially all women, are born worshippers," and the example of such as Miss Nightingale and Miss Pattison has fired the enthusiasm of many a young woman. Nursing has been eagerly seized upon, as opening an essentially feminine career to the ambition of woman; for a time it even threatened to become fashionable, but that danger was never serious; nursing is a serious business, involving hard work, and the running of many risks, conditions happily fatal to dilettantism. The women who really become nurses are in earnest; recruits are drawn from all classes, from rich and poor, high-born and plebeian. But though all are subjected to the same, or nearly the same, conditions, the poor woman stakes more than she who has a competency. Sister Dora was an educated lady, and "comparatively wealthy;" she sought honour in a hard field, and found it, but at the cost, though of a robust constitution, of health. All nurses cannot be well-born, with hosts of friends, and "comparatively wealthy." A nurse, indeed, might well be excused if she soliloquised in Falstaffian fashion: "Honour pricks me on. Yea, but how if honour prick me off when I come on? how then? Can honour set to a leg? no; or an arm? no; or take away the grief of a wound? no"; or make provision against old age? no. Of the nobility of the calling, and of the lofty purpose which should actuate those who follow it, much has been well and truly written, and it will not be out of place to say a word on a practical point, bearing on the future welfare of the nurses of the sick, whose praise is in every mouth.

The establishment of some system of pensions for nurses is an enterprise well worthy of the attention of some of the ladies and gentlemen who take a benevolent interest in nursing questions, and it appears most desirable that it should be established on provident principles. It is said that a nurse seldom continues in full activity for more than twenty years; her wages during that period will probably not exceed an average of £30 a year. The general history of a competent nurse is that she receives her training at some one of the nursing homes attached to a large hospital; that she remains in that hospital for a few years as a salaried nurse; and that then she either passes on to some other smaller hospital, where she attains to a position of greater responsibility with a somewhat better salary, or she joins an institution for supplying the public with sick-nurses. The hospitals with training schools have the pick of the nurses, and, of course, permanently retain the services only of the most competent. While health and strength continue, the lot of a competent, steady, industrious woman is not to be pitied; there may be room for improvement in the way she is lodged and fed in some hospitals, and that improvement is already in progress. Her wages, if not high, are about the same as those of "upper servants," and her work, if arduous, is full of interest. A time comes, however, when the necessity for making provision for the time when working days shall be over is, sooner or later, borne in upon her; the course then followed is too often unwise. Many excellent nurses endeavour to set up for themselves, arguing that if the public are willing to pay a guinea and a half or two guineas a week for their services, it is only fair that that sum should go directly into the nurse's pocket without paying a heavy toll to the Nursing Institution. Commonly this attempt ends disastrously, and the savings of many industrious years are dissipated in a hopeless attempt to get a connection together. The public and private nursing institutions pay the nurses a salary, and provide them with board and lodging in the intervals of waiting between one case and another. If a nurse become unable longer to discharge her duties, she has, of course, no further claim on the institution. Nurses who continue working in hospitals for many years are not, as a rule, in much better case. There are exceptions here and there, but, as a general rule, they are not considered to have any claim for pension; indeed, it may fairly be doubted whether hospital authorities would be justified in devoting any considerable part of the funds entrusted to them for the specific purpose of treating the sick to pensioning nurses, who, as a matter of fact, receive wages corresponding to the market value of their services. When the free board and lodging is taken into account, the salary of a nurse is better than that of many clerks, and a good deal more than the sum upon which most labourers manage to maintain families, and keep up the subscriptions to their clubs.

It may be urged that the difficulties in the way of founding and working a system of provident assurance for nurses are very great. It will be said that many nurses abandon their calling at an early age in order to marry or because its duties are uncongenial; it would probably not be beyond the resources of actuarial skill to meet these objections. Again, it may be said that the majority of nurses soon leave the training-schools, and often entirely sever their connection with them; this objection, however, need not have much weight, for a nurse always looks back on the hospital at which she was trained as to an Alma Mater, and it might reasonably be hoped that habits of providence fostered during the first years spent in her new occupation would be retained; moreover, the fact that the subscriptions had been paid for a certain number of years would be the best incentive to their continuance.

There is an organisation in existence directed to the alleviation of the very hard cases which frequently arise. This is the "Trained Nurses Annuity Fund;" it grants annuities of £15 a year to nurses of at least fifteen years' standing; the provident principle is so far recognised that each annuitant is required to contribute £15 to the funds on election, and preference is given to candidates who can show that they have saved that sum out of their wages. The operations of

the Society are, however, on an extremely small scale, and it is essentially a charitable undertaking. At Guy's Hospital a provident system was set on foot some thirty years ago, and its operations still continue; the nurses pay a certain quarterly sum to a fund which is augmented by a quarterly subscription of like amount from the Governors. The modern system, however, under which nurses no longer remain, as a matter of course, connected for a life-time with one hospital, has diminished the number of applicants for pensions, as nurses who leave after a few years can withdraw the amount of their contributions.

The advantages accruing to the public and to hospitals from the establishment of a system of provident assurance for nurses are obvious. It would tend to attract and retain a steady and industrious class of women; it would give them a feeling of independence and self-reliance, and would nerve them to the discharge of their often dangerous duties, just as it may happen that a soldier will confess that the recollection that a grateful country will provide for him if disabled, has buoyed him up in moments of direst danger. It would also have the effect of rendering it far more easy for hospitals to retain the services of the best nurses, who are at present tempted away by the hope of obtaining a larger income from private nursing.

We shall be glad to do anything in our power to further the initiation of an Association which would have this practical object in view, and to receive and publish communications from persons interested in this important question.

THE Bradshaw Lecture, at the Royal College of Surgeons, will be delivered by Mr. Henry Power, on December 2nd.

THE Harveian Oration will be delivered by Dr. Pavy, F.R.S., at the Royal College of Physicians on Monday next, the 18th instant, at 4 o'clock in the afternoon.

THE Lord Mayor has received a further sum of £200, collected between July 10th and October 8th, in Dr. James Aveling's "Mechanical Begging Boxes" at the Colonial and Indian Exhibition, in aid of the Hospital Sunday Fund.

THE Library of the Royal College of Surgeons of England will be closed on Friday, October 15th, and on the following Tuesday, Wednesday, and Thursday, at 4 o'clock. The Museum will be closed on Tuesday and Wednesday, October 19th and 20th, for the purposes of the College Examinations.

THE fund raised by the *New York Medical Record* to relieve the pressing needs of medical men and their families who have suffered during the recent earthquakes at Charleston, U.S.A., amounted on October 2nd to nearly 600 dollars. It is proposed to raise a further sum to assist the medical faculty in rebuilding the Medical College of the State of South Carolina.

MEETINGS OF LONDON SOCIETIES.

NEXT week is a busy one for the London medical societies. The opening meeting of the Medical Society of London for the present session will take place on Monday evening next, October 18th, that of the Pathological Society on Tuesday evening, October 19th, and that of the Ophthalmological Society on Thursday evening, October 21st.

POISONED BY TINNED MEAT.

ANOTHER case of poisoning is reported at Stockport from the eating of tinned meat, five persons who had eaten some tinned mutton for their supper having been seized with colic, diarrhœa, and prostration. Of these, four recovered, but one remained in a serious state.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

THE monthly meeting of the Executive Committee of this Society will be held on Wednesday next, October 20th, at 38, Wimpole Street, W., at 4.30 P.M. This will be followed, at 5 P.M., by a combined meeting of the General and Executive Committees, when a report will be presented on the finances and progress of the Society for the quarter ending September 30th.

A LOCK HOSPITAL FOR WOMEN.

AT a meeting held a few days since at which the Earl of Mount-Edgecumbe and Lord Morley were present, it was resolved to start a voluntary hospital for women, who were formerly treated under the Contagious Diseases Act. Admiral Phillimore intimated that Government had determined to subscribe to the institution in the interest of soldiers and sailors.

CABS AND INFECTION.

WITH a view of assisting the metropolitan police in checking the spread of contagious and infectious diseases, the Committee of the Seamen's Hospital Society have given the very proper and wise instructions that the number of every cab which brings a patient to the hospital suffering from any contagious or infectious disease should be communicated to the Commissioner of Police, with a view to the cab being disinfected.

THE MILROY BEQUEST.

THE late Dr. Gavin Milroy, a brief record of whose distinguished services to sanitary science was published in the BRITISH MEDICAL JOURNAL of February 27th, bequeathed to the Royal College of Physicians the sum of £2,000 for the endowment of a Lectureship on Public Health and on Sanitation. We understand that the bequest was paid over to the College a few months ago, and that a committee will probably shortly be appointed to draw up a scheme under which a lecture or lectures will be delivered annually, in accordance with the provisions of Dr. Milroy's will.

WORKHOUSE DIETARIES.

DR. DE HAVILLAND HALL, of Westminster Hospital, read a paper at the Poor-Law Conference of the South Midland district, held at Luton, this week, on workhouse dietaries. In this paper he specially advocated the importance of greater variety in the dietary. He considered excessive economy was the cause of debility in the inmates, and observed that he did not think a diet costing less than 2s. 6d. a head per week could reasonably be expected to maintain children in health and vigour. Representatives of several unions stated that fish dinners had been tried in their workhouses, but that in every case, except in that of Royston, it had proved a failure.

SANITARY CONDITION OF WINDSOR.

IN fulfilment of the promise which he recently made to the deputation that waited upon him from Windsor as to the sanitary condition of that town, Mr. Ritchie has commissioned Dr. Airy, one of the medical inspectors, and Mr. Arnold Taylor, one of the engineering inspectors of the Local Government Board, to investigate the matter; and, during the last few days, these officers have been prosecuting their inquiry, which promises to be a heavy one, on the spot. It is to be hoped that a satisfactory settlement will result from this inquiry of the vexed questions lately raised as to the health and condition of the royal borough.

THE ENTRIES AT THE MEDICAL SCHOOLS.

IT is impossible to publish this week a list of the number of students entering at the medical schools in England. Students continue to enter up to the end of this week, and the authorities of the medical schools, to whose courtesy we are annually indebted for the opportunity of publishing the interesting table of entries, naturally prefer only to supply the statistics in a complete and final form.

SCHOOL-PUNISHMENT.

THE practice often adopted in schools, of punishing children of any age by compelling them to stand for lengthened periods on a stool or form, has nothing to recommend it beyond its antiquity, while at the same time it is open to very serious objection, as being in itself a very dangerous practice, especially when the child is of tender age. A painful illustration of this occurred only last week, when a child—it might almost be said an infant—three years old, living at Rock Ferry, was, for some alleged offence, compelled to stand on a form. How long it had stood there is not quite clear, but ulimately the child fell, alighting on her head, and sustained concussion of the brain, which was followed by death. At the inquest, the coroner and the jury strongly condemned the practice of punishing children in this manner.

SOCKS OF NESSUS.

A CORRESPONDENT writes to us:—I should be glad to know whether any steps could be taken by the Board of Health to stop the sale of socks dyed with irritant dyes. I have recently seen several cases in my practice of severe irritation and skin-disease caused by wearing for several days in succession socks—woollen and silk—dyed with bright red and yellow stripes or mixtures, of a colour very attractive to the eye. The eruptions produced have been of a severe character, and, in one case, erysipelatous inflammation. On examining the socks, I found, in two instances, that picric acid was present. The other dyes appeared to be impure aniline dyes, with traces of arsenic. It seems to me that steps should be taken to have these "socks of Nessus" examined. Other medical officers of health might, with advantage, look into the matter, and you would render a public service by ventilating the subject.

"DAMES SEULES."

THE comment which we made last week upon the case in which Mr. Busby condemned a young man to three months' imprisonment for alleged misconduct to a female in a railway carriage, has elicited a letter from a "nervous physician," not unworthy of attention. Many an "unprotected man" has been thrown into tremors, not to say agonies of apprehension, by the sudden entrance of a female passenger into a carriage in which he has been sitting alone, or by the departure of another passenger, leaving him perhaps *tête à tête* with an unprotected woman, it may be in an express train with a tunnel in view. The disquietude of the lady may often be greater still. But it is certain that the existing railway arrangements are frequently a source of much anxiety, and open the way to insult on the one hand, and to extortion or unmerited public charge on the other. The proper remedy is the provision of compartments for ladies travelling alone, here, as on the continent. The number of carriages at disposal in each train is usually much more considerable here than on the continent, and duly lettered boards to meet varying needs might be at the disposal of the inspectors, at each principal station. Public opinion alone enforced the provision of smoking carriages on English railways, and only the like force will provide us with compartments for "dames seules."

WHITE-LEAD POISONING.

THE dangers to life incidental to working in white lead are not confined to the factories in which it is made, but extend also to the paint factories, in which powdered white lead is converted into pigments. The Factory Inspectors have the power of imposing certain regulations as to dress and ablutions which diminish the amount of poisoning resulting from the handling of the lead. In March of last year, we had to notice the fact that eleven cases of white-lead poisoning were admitted into the Shoreditch Infirmary alone during the year 1883-84, and in January of 1885 three more were admitted from the same factory, two of whom died. But even the scanty and insufficient precautions enforced in so-called white-lead factories do not seem to be observed in white-lead paint-works. At an inquest held at Greenwich before Mr. Carttar on the body of a labourer engaged at the Poplar lead-stores, it was stated that the precautions of providing overalls and respirators, enforcing ablutions, and supplying suitable drinks, were not observed. This is obviously a matter for the immediate interference of the Home Office, which surely ought to enforce these necessary and ordinary precautions upon the employers of people working in mixing-factories. White-lead poisoning causes tedious and fatal disease of the most painful and lingering kind, intra-cranial inflammations, epileptiform convulsions, severe colic, paralysis, and death. It is a very slight offering to the Moloch of commerce that though no special precautions are employed, and no medical man provided, the men who work at the white-lead paint receive an extra one shilling a week. The grim irony of such a statement speaks volumes at once for the recklessness, the poverty, and the submissive ignorance of the classes who consent to undertake work fatal to their health, and often productive of early death in its most miserable forms, at so wretched a pittance in addition to their ordinary wage. The wages of women and children and other operatives employed in lead-factories are, however, usually very small; such factories are apt to be carried on at the East End amongst the poorest of our population, and one main element in the mortality obtaining among these victims of lead-poisoning is their insufficient diet, and the unsatisfactory conditions with which they are surrounded. Another is their want of cleanliness, and their personal recklessness, largely due to ignorance. We repeat that this inquest discloses a case for the immediate interference of the Home Office.

SOCIETY FOR THE STUDY AND CURE OF INEBRIETY.

A SOCIAL gathering of the members of this Society was held on Tuesday at the rooms of the Medical Society, Chandos Street, to welcome Mr. Axel Gustafson, the author of *The Foundation of Death*, a book which deals in a remarkable manner with the subject of intemperance, on his return from America. Among the visitors was Dr. Simon Fitch, another temperance advocate from Halifax, N.S. To this gentleman also a special welcome was accorded by Dr. Norman Kerr, on behalf of the Society. Attention was drawn to the fact that England is far behind Nova Scotia with regard to legislation for the restraint of habitual drunkards. Mr. Gustafson briefly replied to a formal resolution. He described the public feeling which exists in the United States on the subject of temperance as at fever-point, and expressed a belief that, in the course of a few years, it will be impossible to obtain a glass of wine or whiskey there. He referred to the moral and political agitation going on simultaneously for the suppression of the drink-traffic there, and to the growing opinion that it is the duty of the State to avoid placing temptations before the people. On this point he quoted Mr. Gladstone, who had said that the function of the State is to "make it more difficult to do wrong, and more easy to do right."

EELS IN METROPOLITAN WATER-MAINS.

THE East London Waterworks Company deserve at least some commiseration, for, as the results of an accident, they are now involved in a difficulty from which it will require all their energy and ingenuity to free themselves. Some years ago one of their filter-beds gave way, and "some eels of very minute size" found their way into the Company's mains. Since then these creatures have grown, and rapidly increased in numbers, and periodically, in the warmer months, they have manifested their presence in certain localities, despite all the efforts of the Company's staff to get rid of them. Occasionally a communication-pipe becomes blocked, and examination discloses a dead eel to be the cause. In several cases the water from the pipe has been noticed to be bad, and those who have drunk of it have suffered from more or less severe illness. The cause has been found to be a putrid eel. Quite recently a case of typhoid fever in the West Ham district has been investigated, and one of the causes alleged is the presence in the water of a dead eel. However this may be, it is

not pleasant to have any doubts raised as to the purity and wholesomeness of the water from the household tap. The puzzling part of the whole matter is that eels are able to exist in the mains in spite of the enormous pressure of water, which varies from 30 lbs. to 100 lbs. to the square inch. And further, upon what do the creatures live, since the water is presumably pure? Is the water as free from organic impurity as it professes to be; or is there something in it which serves the eels for food, and which, apart from the eels, might of itself, under favouring circumstances, prove injurious to the drinkers of the water? There is one way by which the consumers of this water can protect themselves, and that is by boiling it before use. This course is habitually adopted by many prudent housekeepers in districts where eels are not known to exist, and we commend its adoption in the present case. It is a pity the process of boiling cannot be applied to the eels in the mains. They could scarcely be expected to resist that "pressure," and their dead bodies could no doubt then be finally flushed out.

GAS EXPLOSIONS.

We have repeatedly called attention to the danger resulting from explosions of coal gas as affecting life and property, and it would appear that the lesson must be taught as long as illumination by gas exists. The last explosion, causing injury to three persons, occurred at Brixton, but only persons who are accustomed to reading daily the provincial papers can form even an approximate idea of how frequently disasters occur owing to the carelessness with which the gas-supply is treated. Many accidents have resulted in public thoroughfares owing to the explosion of gas-mains, and the consequences have been lamentable. But until a separate record is kept and published of deaths from gas-explosions in houses, or the resulting casualties therefrom are brought together in tabular form, the full extent of the danger cannot be appreciated. The owner of a house, for instance, orders the meter to be turned off at a certain hour, and he fairly supposes that, when the domestics see that this is done, they will at once reverse the taps; it is to the neglect of this precaution that very many explosions are due. People are also apt to be careless about an escape of gas made evident, very faintly, by smell; it is not until the space between the joists and overhead ceilings are charged with the gas, and until an accidental flame is introduced, that they realise the danger. The destruction to life and property due to gas-explosions can only be obviated by constant precautions against faulty joints, cracked seams, and pinholes in the pipes; the only method of testing the soundness of pipes is by shutting off the gas at the meter, burning out the gas left in the pipes, and charging the pipes by a force pump with atmospheric air, the pump being placed in front of a mercury gauge. If, when the air has been forced into the pipes, and pumping has ceased, the gauge falls, it is certain that somewhere the air escapes, as would consequently the gas. An ingenious system of discovering the presence of leaks in gas-pipes was published by Mr. Eassie, C.E., of Argyll Street, London, some time ago, and is still practised by him with much success.

"THE UNIVERSITY COLLEGE GAZETTE."

About a year ago, all the various students' societies connected with University College, London, were amalgamated, chiefly through the exertions of Professor Henry Morley; the first number of a new magazine, which will be the organ of the Society, was published on October 1st. *The University College (London) Gazette* will be edited by Mr. John Gower, a person of literary tastes, after whom the street in which the College stands is said to have been named; but as Mr. Gower labours under the disadvantage, as an editor, that he is compelled to date his letter from the Church of St. Mary Overy, where he was buried nearly 500 years ago, it is safe to conjecture that the energetic principal of University Hall will assume the duties of acting editor, and that, therefore, the new magazine will not fail for lack of zeal, or of the speaking of plain truths in vigorous English. The first number contains a leading article in which the arguments in favour of creating a teaching university for London, under the wing of the existing University of London, are forcibly set forth. There is also an article stating the reasons which have at length impelled the hospital authorities to set about obtaining funds for rebuilding, and a long extract from Mr. N. H. Nixon's pamphlet on the history of the Hospital. The total number of students working at the College in 1885-6 was stated to have been 1,246, of whom 405 were medical students; in addition to these numbers, the school contained 668 boys.

CREMATION.

With the consent of Her Majesty the Queen, by and with the advice and consent of the Legislature of New South Wales, in Parliament, an Act has been passed which legalises cremation in that colony. Under this enactment, crematoria may be established, provided that the site and plans are approved by the Board of Health, as constituted under the authority of the Infectious Diseases Supervision Act of 1881, and every applicant for a license for a crematorium must satisfy the Governor that he is the owner in fee simple, and has general consent to allow of cremation upon the land, otherwise the cremation of the body of any human being is held to be illegal, and a common nuisance. The conditions relating to the performance of cremation are interesting, and it is evident that the Legislature in Australia has more or less closely followed the rules formulated by the Cremation Society of England. Cremation must not be proceeded with—

I. Unless upon the receipt by the Registrar of a certificate from some legally qualified medical practitioner, stating that such practitioner had been in professional attendance on the deceased for at least four days immediately prior to the day of death, and that the deceased died from natural causes; or

II. Unless a legally qualified medical practitioner shall, after a *post mortem* examination of all the vital organs of the deceased, certify to the registrar that the deceased died from natural causes; or

III. Unless a coroner or justice of the peace, who has held an inquest or inquiry as to the cause of such death, shall first have certified to the registrar that such cause has been duly inquired into, and that no further examination of the body was necessary.

Unless an attested memorandum be left with the authorities, cremation is forbidden; and if any person has any pecuniary interest in any policy of life insurance on the deceased, or entitled in expectancy to any real or personal property, he is forbidden to give any certificate concerning the death; any violation of this rule may subject the delinquent to ten years' penal servitude. Before any crematorium is licensed, the scale of fees and by-laws must be approved by the Governor, and no charge for cremation, other than a charge specified in an approved scale of fees can be recoverable in any court. The second reading of the Bill was moved by the Hon. J. Mildred Creed, and a report of his speech was extensively circulated in the colony, at the wish of great numbers of the inhabitants.

TYPHOID FEVER AT SWANSEA.

It is positively affirmed that the outbreak of typhoid fever at Swansea is not due to the presence of animal pollution at the watershed, where a new reservoir is being constructed, as has been reported, but to pollution of the Cwmdonkin reservoir, which, till recently disused, was taken into use as a storage-reservoir for the distribution of drinking water to the west-end of the town. Most of the water with which this reservoir is supplied comes from the Velindre reservoir, but it has been discovered within the past few days that into the Cwmdonkin reservoir runs a small stream, which comes partly from a "pistyll;" on its way down to the Cwmdonkin reservoir, it passes a pond in a farm in which there are all kinds of animal deposits. The recent rains have made this pond overflow, and the refuse has, therefore, run into the stream, and has thus been conveyed into the reservoir. It is needless to state that the brook has been cut off, and energetic means

adopted to thoroughly cleanse the polluted reservoir; then the water from the Velindre reservoir will not be used except for flushing purposes, and additional steps are being taken to prevent the possibility of any contamination from the works at the Upper Lliw, where a great number of navvies are now at work. This discovery at the Cwmdonkin reservoir was made by the Water and Sewers Committee, with the medical officer of health and analyst, and has caused very great indignation amongst the inhabitants, who naturally think that the pollution could have been discovered and prevented earlier. Many deaths have already occurred, and there are a great number of cases in the town; the fever is of an exceptionally virulent type. The authorities state that the water-supply is now thoroughly pure, and that soon the water from the Blaennant Ddu reservoir will be available. That the Cwmdonkin reservoir alone is responsible for the outbreak is proved by the fact that the epidemic is confined to the district supplied from this source. At the works of the new reservoir every sanitary precaution is taken, and with so much success that, although several hundred men are now employed there, there is no reason to believe any case has resulted from water supplied direct from Velindre.

CLINICAL SOCIETY OF LONDON.

THE first meeting of this Society after the long vacation took place on October 8th, and was well attended. The President, Mr. T. Bryant, welcomed back the members to another session of useful work. He presented a copy of the *Transactions* of the Society for last session, and remarked that, in size, it was not below its predecessors, though it contained no reports of special committees. The Society had committees now sitting to inquire into myxœdema and other subjects, and their reports might possibly be presented to the Society during the present session. Dr. Charlewood Turner read a closely reasoned paper, on systolic and prediastolic basic *bruits*, founded on a case of congenital malformation of the heart. Mr. Pearce Gould described a case of undeveloped sexual organs in a male, over six feet high, associated with congenital defect of the tonsils. In his remarks, he combated the opinion so widely prevalent in this country, that there is a connection between the tonsils and the sexual apparatus, and in this attack he was upheld by Mr. Bryant, Dr. Semon, Mr. Haward, and Dr. Hingston Fox. Mr. F. Treves related a case of pulsating tumour of the head, with Raynaud's disease, in a youth aged 17. The patient had a cirsoid aneurysm over the left mastoid region, in which a loud *bruit* could be heard; there was a second pulsating venous tumour over the occiput, which communicated through a fissure in the skull with the superior longitudinal sinus; it was reducible, and presented neither thrill nor *bruit*. Moreover, in this swelling the respiratory curve was evident, whilst its pulsation was derived from the brain. Mr. Treves, in his remarks, dwelt upon the supposed relationship of this condition to abnormality of the cervical sympathetic, a position which Dr. Hale White combated, at the same time that he thought the case related to some cases of exophthalmic goitre. Mr. Butlin gave some later notes respecting a case of renal lithotomy, which was published in the Society's *Transactions* in 1882. The President highly commended the example thus set by Mr. Butlin, and remarked upon the increased value which the *Transactions* would acquire if this good example of publishing the sequels of cases were more generally followed.

DILUTING SKIMMED MILK.

A NOVEL defence, raising the question of the liabilities of milk-sellers, was made in a case which came before the Brighton magistrates on Saturday, October 9th, when Mr. William Edwards, one of the members of the Town Council, was prosecuted by the corporation officials for selling skimmed milk adulterated with 40 per cent. of added water. The offence was not denied, but the defendant's solicitor relied for the defence on the fact that, after a previous prosecution on a similar charge, Mr. Edwards had given formal notice to the chief constable, the borough officials, and all whom it might concern, that he had never intended, and did not intend to sell pure milk, but only skimmed milk and water, or milk adulterated with water. The stipendiary magistrate ruled that such a notice could not be held to absolve the defendant, inasmuch as, however widely circulated, it could not be considered to make it patent to the mind of every purchaser, that milk was sold to them adulterated with water. Still he thought the notice lessened the offence, as it showed there was no intention to deceive or be dishonest, and he consequently imposed a smaller fine than he would otherwise have done. Defendant was fined twenty shillings and costs, or seven days' imprisonment.

LEVEL CROSSINGS.

LEVEL crossings are a standing danger to the public and the railway men; as they cannot be abolished without compelling the railway-companies to incur an enormous outlay, it only remains to endeavour to diminish their dangers. Recently, an old gate-man was killed by a passing train near Mortlake, and the coroner's jury added the following rider to their verdict: "While exonerating the South-Western Company from blame, they considered all level crossing gates should be worked automatically by a lever from the gateman's cabin. This would avoid the dangerous necessity of opening and closing gates by hand, as at present." This appears a simple and reasonable recommendation; but, unfortunately for the suggestion, another inquest was held in a different part of the country a few days earlier, upon the body of a little girl who got her head between the bars of such a gate, and was killed when the automatic apparatus was set to work. The remedy is worse than the disease, for the automatic apparatus, if it diminishes the risks run by the gate-men, materially increases those encountered by the public.

SALICYLATED BEER IN FRANCE.

THE propriety of adding salicylic acid to beer as a preservative is much discussed in Paris at the present time. The beers incriminated are principally of Bavarian origin; and the outcry, whatever may be the justice of the allegations, looks suspiciously like a determined attempt on the part of the influential wine-interest to hamper the import and sale of these foreign drinks, the annually increasing consumption of which has long been a thorn in its side. The addition of salicylic acid to milk is, in this country, considered an adulteration, less, possibly, on account of its physiological effect than because it enables the dairyman and milk-factor to relax to some extent the extreme precautions of cleanliness otherwise necessary to keep the milk fresh and sweet. The injurious effects alleged to result from the ingestion of salicylic acid in beer have not been demonstrated with legal exactness, but it may nevertheless be condemned as an unnecessary and possibly hurtful ingredient. The subject has also been under discussion in Germany, with the curious and instructive result that the addition to beers for exportation has been authorised, but forbidden in beers destined for home use. This is a striking departure from the very excellent maxim about doing unto others as we would have others do unto us, and justifies to some extent the rigorous measures which it is proposed to take in regard to such beers in France. While engaged in preventing the importation of beers prejudicial to health from Germany, the authorities would do well to inquire a little into the composition of the native product. Whatever noxious ingredients may enter into the manufacture of the German beers, one fact is certain, that almost the only drinkable beers in Paris are foreign. Many of the French beers manufactured in the districts around Paris are, according to one of our correspondents, too dreadful to do more than contemplate. Served up iced, as they generally are, a violent attack of colic following a single glass is but a mild result of their unwholesomeness. If the experiment is pushed to the extent of a second glass, a parched dry mouth will be the result; and, should a third *bock* be indulged in, nothing short of Niagara will quench the ardent thirst which will probably follow this recklessness. The quantity

of alcohol in French beer is extremely small; indeed, if some recently published reports are to be believed, considerably less, possibly, than certain teetotal drinks on this side of the Channel have been alleged to contain; so that the unpleasant effects alluded to above must clearly be due to some other ingredient than alcohol. At the Municipal Laboratory in Paris, anybody can have an article analysed at a very moderate cost, a certificate being delivered of the results of the analysis. More than 50 per cent. of the specimens of beer and wines submitted have been declared "injurious to health." The certificate given by the analysts may serve to gratify the curiosity of the inquirer, but is not much benefit in any other way. It bears the caution, printed in red characters, that, if any use be made of the certificate, the holder will be exposed to heavy penalties for defamation; so that, for all practical purposes, the certificate might as well be withheld.

THE NEW UNGUENT: LANOLINE.

M. Doyon, in an article in the *Annales de Dermatologie*, states that the new substance, introduced into medicine by Professor Oscar Liebreich, called lanoline, is rapidly absorbed by the skin. After being rubbed with lanoline, the skin appears firmer and more turgescent, and, at the same time, the surface is almost dry; whilst, with vaseline, it preserves a shiny appearance, even after energetic friction. This rapid absorption, which may be shown experimentally, seems to be due to the intimate connection existing between lanoline and the fat of the epithelium. Lanoline has been shown experimentally to have no injurious action upon healthy or unhealthy skin, but acts favourably on morbid phenomena occurring in the deep layers of the skin. Doyon has used ointments prepared with lanoline, instead of vaseline or glycerine, in four hundred cases of persons affected with cutaneous lesions, and has not found injurious effects in any one of them, not even in those cases where there was great irritability of the skin. In the case of a child suffering irom impetiginous eczema of the skin of the head and face, the use of lanoline, containing salicylic acid at 2 per cent., produced cure. In cases of ulcerated impetigo, or of inflamed eczema, immediate benefit has been derived from the use of the following ointment: Salicylic acid, 2 grammes; lanoline, 50 grammes; zinc oxide, starch, āā, 24 grammes. In the case of a patient who had suffered for several years from a severe and rare form of pityriasis, three frictions of the following ointment sufficed to destroy the parasite: Salicylic acid, 2 grammes; precipitated sulphur, 10 grammes; lanoline, 100 grammes. In affections of the skin of the head, carbolic lanoline and sulphur suffice to remove furfuraceous desquamation. Doyon advises the addition of tincture of benzoine, in a rough state of the skin. His clinical experience fully confirms the favourable views which others have expressed of lanoline as a great improvement upon either lard or vaseline as a basis for unguents and cosmetics.

EPITHELIOMATOUS TUMOUR OF CÆCUM.

In the *Progrès Médical* of October 9th, a rare case of primary cancer of the cæcum, occurring in a male, aged 51, is recorded by M. Paul Blocq. Malignant disease primarily attacking this part of the gut is rare, and this case is interesting from the fact that death resulted from perforation of the bowel in the neighbourhood of the new growth, producing fatal collapse, and not, as has happened in recorded cases of a similar nature, from obstruction. The patient had, fifteen months prior to seeking advice, complained of pain of a stabbing character in the right side. Shortly afterwards, he could detect by the hand the presence of a small tumour, about the size of a walnut. He became rapidly emaciated, and had a cachectic look. He never evinced any special symptoms indicative of grave disturbance of the gastro-intestinal tract, no vomiting, no constipation, no diarrhœa. The tumour was not apparent to the eye, but was readily felt by palpation; it was painful to the touch, smooth, somewhat hard, and mobile. The patient died after having been under observation four months, or fifteen months after the development of distinct symptoms. At the necropsy, a small pedunculated sloughing growth was detected close to and invading the ileo-cæcal valve, as also a small perforation in the wall of the gut, which had been the immediate cause of death. The greater part of the neoplasm, owing to putrefactive change, resisted the action of the stains for microscopic examination; those sections, however, which took up the colouring agents revealed the characters of a cylindrical epithelioma. There was no evidence of cancerous disease in any other organ of the body.

SCARLET FEVER AT NEWQUAY.

Justice to the Newquay Local Board demands that we should give publicity to a statement signed by the chairman and the medical officer of health, to the effect that, though it is true scarlatina of a very mild type has been for some prevalent in Newquay, yet the cases have been almost entirely confined to small houses in the back streets. In many instances the attack has been so slight that a medical man has not been called in; but, in all cases which have come under the notice of the medical officer of health, proper means for preventing the spread of the disease have been adopted. Some weeks since, when the disease became epidemic, the Local Board issued notices to each householder, drawing attention to Section 126, Subsection 1, of the Public Health Act. These notices were seen by many visitors, and became the subject of common conversation among them. A severe epidemic of typhoid fever visited Newquay twelve years ago. The place was then entirely undrained. Immediately after its disappearance, action was taken, and up to the present time £6,500 has been spent on a system of drainage, and at least an equal amount in providing a water-supply—a large sum for a population of less than 1,700 souls. For the past five years there has not been a single case of typhoid in the place. The following is the death-rate for the past five years: 1881, 13.1; 1882, 14; 1883, 13.4; 1884, 12.4; 1885, 9.2. The number of deaths from zymotic diseases for the same period was as follows: 1881, 2; 1882, *nil*; 1883, 1; 1884, 3; 1885, *nil*.

METROPOLITAN HOSPITAL ACCOMMODATION FOR NON-PAUPERS.

The provision, in Mr. Sclater Booth's *omnium gatherum* of miscellaneous legislation, the Poor Law Act of 1879, which gave power to the Metropolitan Asylums Board to enter into contracts with the local sanitary authorities of the metropolis, for the reception into the Asylums Board's hospitals of the infectious cases amongst non-paupers occurring in the districts of those authorities, was but a clumsy makeshift. At that time, public opinion was running strongly in the direction of making the Asylums Board the authority charged with providing infectious hospitals for the whole metropolis; influential memorials were presented to the Local Government Board, asking that the constitution of the Asylums Board might be enlarged accordingly. But, on the hackneyed plea that the time was not opportune, Mr. Sclater Booth declined to go as far as this, and only permitted the managers to make contracts with the sanitary authorities for the reception of non-pauper cases. The result was what might have been expected. The local authorities being conscious that if they assumed responsibility for cases sent into the hospitals their own district would have to pay the expenses, whereas, if they left the cases to be removed under the machinery of the Poor-law the cost would be spread over the entire metropolis, naturally pursued a temporising policy. The managers attempted some years ago to make them declare their intentions; but nothing definite was ever done, and the matter drifted into oblivion. The managers have, however, lately raised the question again, and at their meeting of last Saturday discussed a report concerning it which had been drawn up by the General Purposes Committee. This report stated that it had been found (as was proved before the Royal Commission) that the managers not only have to take care and provide for the pauper classes affected with infectious diseases, such as small-pox and fever, who fall chargeable to the guardians, but they have also cast upon their hands the classes for whom the sanitary authorities of the metropolis ought to provide, very few indeed of these authorities hav-

ing taken any steps to provide accommodation against epidemics. The Local Government Board made it permissive upon the local boards having charge of sanitary matters to contract with the managers, and the result has been that, upon the managers inviting the local boards to enter into contracts, only fourteen of these authorities had shown willingness to do so, fifteen had declined, seven had sent replies which were ambiguous, or of an argumentative character, and four had given no definite replies. The managers resolved to send this report to the Local Government Board, with an intimation that nothing more could be done in the matter by the managers until Parliament had made it compulsory upon the local boards to discharge their duties.

IODOFORM OINTMENT IN TUBERCULAR MENINGITIS.

DR. MARTEL, in the *Revue des Sciences Médicales*, calls attention to some cases of tubercular meningitis which were all cured by Dr. Warfwinge, a Swedish physician, by means of an ointment composed of iodoform and vaseline (1 to 5). This was rubbed into the shaven scalp, twice a day, five grammes of the ointment being used each time and a cap of some impermeable material worn constantly. The time required for cure varied, in the five cases in which this treatment was tried, from nine to thirty-two days. Dr. Martel remarks that the fact of five patients having been all cured is quite sufficient to recommend this method. "The future will tell us what it is really worth, and instead of remaining passive in presence of this disease, hitherto considered incurable, which has claimed such a multitude of victims, especially in Paris, it is the physician's imperative duty to make trial of every method of treatment which experiment, observation, and clinical experience places within his power." Though Dr. Martel speaks of this treatment as quite new, it was first proposed and employed by another Swedish physician, Dr. Emil Nilsson, who used an iodoform ointment of the strength of 1 to 10. A short account of a case in which it proved successful in his hands appeared in the JOURNAL of November 21st, 1885 (p. 983).

LORD DERBY ON HOSPITALS.

IN an address on Hospital Work delivered at the Manchester Hospital for Consumption and Diseases of the Throat, on Friday in last week, Lord Derby dealt with the objection so well urged by Dr. George Johnson, in his recent address, against the multiplication of small hospitals for special purposes. It was, he said, needless to speak in defence of hospitals; but it was, no doubt, a question which was open to discussion whether hospitals for one particular class of patients were desirable. For himself, he thought the multiplication of them tended to become excessive. Where they were established on a very small scale, they caused a certain waste of funds; but he did not think that that principle applied to the case of hospitals for relief of a disease so general as consumption, which were sure never to have a bed vacant. He had been for many years President of the Hospital for Consumption at Brompton; and great as had been the alarm with respect to the sums expended on that institution, he doubted whether, by any other investment of capital and energy, it would have been possible to do more for the relief of human suffering. Assuming hospitals to be necessary, how, he asked, ought they to be maintained? There were four ways. They might depend on endowments, on subscriptions, on payments by patients, or by public aid in the shape of grants either from local rates or general taxation. No one would meddle with the endowments which already existed, but new ones could not speedily be established on a large scale. Assistance from rates was not in principle objectionable, for a hospital had certainly as large a claim on the score of public utility as a school of drawing; but that was a resource which was heavily drawn upon already for many purposes, and it did not seem desirable to increase the public burdens. The problem, therefore, was how to make charity and self-help not antagonistic, as on the face of matters they were apt to appear, but supplemental one to the other. They were face to face with the eternal difficulty how to help without pauperising, how to be kind without being unjust, and just without being unkind; and he did not pretend to be able to solve the problem. The man did not live who could steer a steady course between those extremes, and the best they could do was to avoid harshness on the one hand, and maudlin sentimentality on the other. He believed it was of great importance that means should be afforded of studying the causes of consumption; and, in his opinion, that could only be done in hospital practice.

SANGUINARY LITERATURE AND CRIME.

A GOOD deal has been written on the pernicious influence of certain classes of literature on the mental development of rising generations, and some salutary checks have been placed, of late years, on the indiscriminate publication of works belonging to the section which is hurtful because obscene. There are, however, other departments of literary depravity, the effects of which are probably quite as injurious, in different directions, as the indecent. To this category belong romances of the Dick Turpin type, where highway robbery with violence is raised to the level of a fine art. Somewhat allied to this class of literature, but superior to it in point of style and sentiment, are the novels in which red Indians tomahawk and scalp with the utmost gusto and enthusiasm. The proceedings at a recent assize court in France demonstrate the fact that these exciting and bloodthirsty tales cannot be told with impunity to some very weak-minded youths with a criminal bent of mind. After a course of this literature, translated into their own language, two young countrymen, sons of rich farmers, one already a *clerc de notaire*, took unto themselves the names of the "Trailing Snake," and the "Red Bear," respectively, and proceeded to mature a plan of abduction, rape and murder, to be followed by suicide, which they first worked out in the form of a narrative, and then proceeded to carry into execution. The victim was a girl of fifteen, the daughter of a neighbouring farmer. She allowed herself to be taken into a lonely place, where the young heroes carried out their plans, and finally left the girl with fifteen stabs, from the effect of which she speedily died. There was a hitch in the suicidal arrangements, and the youthful assassins were arrested the next day; among their papers being found the "plan of attack." Notwithstanding an able and eloquent defence by their advocate, they were each sentenced to fifteen years' penal servitude. In addition, their parents were condemned to pay £800 damages to the father of the victim. This ghastly history shows to what an extent certain undeveloped minds are capable of being misled. That these lads were naturally of feeble mental stamina may fairly be assumed, but it is nevertheless quite possible that but for this fortuitous excitation, they might have grown up into very tolerable citizens.

TUBERCULOSIS AND SCROFULA.

ABOUT two years ago, as the result of some observations of his own, Dr. Arloing found that both the guinea-pig and the rabbit were affected by the inoculation of pulmonary tuberculosis, while glandular scrofula did not cause any visceral lesions in the latter animal. He did not, on this account, feel justified in believing the two affections to be absolutely distinct, but, at the same time, he was forced to the conclusion that if they had a common origin, its activity was markedly attenuated in scrofula. With this idea, he has since applied himself to find out whether it was possible to augment the virulence of scrofula to such an extent, as to enable it to affect either animal indifferently. The guinea-pig is extremely susceptible to both tuberculosis and scrofula, and the latter invades its economy with such ease, and assumes such a malignant character, that it occurred to him that, by inoculating it through several generations in the guinea-pig, he might be able to increase its activity enough to overcome the resistance offered to its invasion in the organism of the rabbit. The experiment, however, showed that this was not the case. Among the bone and joint affections of human beings known as local-

ised tuberculosis and surgical tuberculosis, some are beyond the reach of art, while others are improved, if not cured, by surgical intervention; the latter are scrofulous lesions, the former tubercular, though of a milder form than that occurring in the lungs and serous membranes. Now, if rabbits and guinea-pigs be inoculated simultaneously with material drawn from lesions of this kind, it sometimes happens that the guinea-pigs develop the characteristic lesions of miliary tuberculosis, while the rabbits escape with a little localised suppuration, or a formation of fine granulations in the subcutaneous connective tissue, just as in the case of inoculation with scrofulous matter. But if other rabbits be inoculated with the tuberculosis thus developed in the guinea-pig, they almost invariably contract well marked pulmonary tuberculosis. The organism of the guinea-pig is thus capable of augmenting the intensity of feeble tubercular virus, but is unable to do this for the virus of glandular scrofula. Dr. Arloing is of opinion that this curious disparity merits attention, more especially as the present tendency is to group scrofulous and tubercular manifestations under the same head, whereas there are undoubtedly very material differences between them—enough, indeed, to render further evidence of the identity of the virus in the two affections necessary before their common origin can be accepted.

PASTEURISM.

AT a lecture given in the Sorbonne, Paris, on Sunday, October 10th, by Dr. Chautemps, of Paris, Vice-President of the Paris Municipal Council, on M. Pasteur's method, the lecturer stated that out of a total of 1,583 French patients, only 10 deaths occurred, of which 2 were attributable to accidental causes. He desired to deal only with the cases under treatment previous to August 1st, in order to leave an ample margin of seventy days. They amounted to 1,276. Ten per cent. of these were bitten by dogs manifestly mad, and in 70 per cent. of the cases the dogs were scientifically shown to have been rabid. The remaining 20 per cent. were doubtful cases. Hence, out of 1,276 persons, 973 were bitten by dogs ascertained to have been mad. In the natural order of things, 155 deaths would have taken place, or 145 over the insignificant rate. Dr. Chautemps was satisfied M. Pasteur had saved 145 lives. Cases of rabies were of more frequent occurrence than was generally supposed. In the space of five months, 81 cases of dog bites came to the knowledge of the Paris Prefecture of Police. It was a significant fact that only 10 of M. Pasteur's patients died, while he (M. Pasteur) had heard, almost by accident, of 12 unvaccinated cases ending fatally. Several of his failures might be set down to the long interval that elapsed between the bite and treatment, but even this risk would no longer exist when Pasteurian virus stations were established in Russia, at New York, at Buenos Ayres, and elsewhere.

STAINING MICROSCOPIC SECTIONS WITH CHLORIDE OF GOLD.

THE value of chloride of gold for the purpose of staining sections of animal tissues is well known to microscopists, and so also is the difficulty and uncertainty of its use. Many ways of using it have been proposed, every histologist of note appearing to have a method of his own, but a considerable proportion of failures appears to be the rule with all of them. Under these circumstances, a method lately brought under the notice of the Odontological Society of Great Britain by Mr. Arthur Underwood may be worthy of trial. Mr. Underwood was anxious to verify, if possible, the statement of Dr. Bödecker, of New York, that the presence of protoplasm between the prisms of enamel could be demonstrated by staining sections with gold chloride. Dr. Bödecker described his method as follows: he first decalcified the tooth by means of chromic acid, then cut sections, and stained these by placing them in a solution of chloride of gold, and exposing them to the action of sunlight for twenty-four hours or more. Mr. Underwood's results with this method having turned out uniformly unsatisfactory, he undertook a series of experiments in order to ascertain the best mode of using the reagent, and finally adopted the following. He immersed the section, whether cut from a decalcified tooth or ground down from a hard one, in a solution of carbonate of soda for an hour. Then he placed it in a solution of chloride of gold, which must be neutral, and left it in the dark for another hour. It was then again placed in the carbonate of soda solution for a few minutes, and then transferred to a 1 per cent. solution of formic acid, and kept warm over a water-bath for about an hour and a half. Finally, the section was mounted in glycerine jelly, not in Canada balsam. Sections which had been decalcified by chromic acid took longer to stain than those which were fresh, but the whole process only occupied from three to four hours instead of several days, as is the case with the methods commonly used, those of Dr. Klein and Professor Schäfer for instance; Mr. Underwood claims also that the results are more satisfactory. Those who are interested in the subject will find full particulars in Volume xviii of the *Transactions of the Odontological Society* (1885-86), which has just made its appearance.

SCOTLAND.

ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL, EDINBURGH.

PROFESSOR SIMPSON will succeed Dr. Halliday Croom as physician on duty at the Royal Maternity Hospital on November 1st, with Dr. Berry Hart as assistant-physician. The present house-surgeons, Mr. J. A. Armitage, B.A., M.B., C.M., and Mr. Henry Harvey Littlejohn, M.A., M.B., C.M., will be succeeded on November 1st by Mr. Joseph Tillie, M.B., C.M., James-Scott-Scholar, and Mr. Nutting S. Fraser, M.B., C.M., M.R.C.S.

SOCIETY FOR THE RELIEF OF THE DESTITUTE SICK, EDINBURGH.

THE quarterly meeting of the directors of the Destitute Sick Society, was held last Tuesday. Lord Provost Clark, President of the Society, was in the chair. The report of the treasurer stated that during the summer quarter the visitors had 318 new cases of sickness and destitution, and made over 3,140 visits, distributing among the sick poor over £520 in money, meal, coal, and clothing. A donation of £5 from the Caledonian Hunt was announced. A subcommittee was directed to arrange for a sermon to be preached in the city, on behalf of the Society, at an early date.

ABERDEEN CITY HOSPITAL.

THE Public Health Committee of Aberdeen Town Council have sanctioned outlays on the City Hospital, to the extent of £700. The improvements are to include the introduction of a new disinfecting apparatus, and the provision of a hot-water-circulation system.

THE HEALTH OF GLASGOW.

SCARLET fever still prevails in Glasgow. On October 5th, it was reported to the Town Council that the disease was scattered all over the town, especially in the East End. Of 387 fever-cases in the hospital, 301 were scarlet fever.

THE SCARLET FEVER EPIDEMIC IN HAMILTON.

A SPECIAL meeting of the Hamilton Police Commission was held on Monday to consider, in view of the epidemic of scarlet fever which has been raging for some time, whether the 150th section of the Burgh Act should not be enforced, compelling householders, under a penalty, to report all cases as they occur. Exception was taken to this proposal, as being an interference with, if not a superseding of, the Sanitary Committee, to whom all the powers of the local authority had beeen delegated. After a good deal of discussion, the matter was left in the hands of the Sanitary Committee.

FORFAR INFIRMARY.

THE annual meeting of the directors of the Forfar Asylum was held last Monday; the President, Mr. David Warden, in the chair. The report stated that there were 83 patients treated in the in-

firmary during the year; this was a considerable decrease on the previous year, when 111 were treated. It was stated that a legacy of £900 has been received from the trustees of the late Misses Strachan, Broughty Ferry; and of £45 under the settlement of the late Mr. J Laird, Forfar. The factories in Forfar continue to contribute sa... ...ctorily. The financial report stated that there was a balance in favour of the infirmary of £164 5s. 10d.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

THE statutory annual meeting for the election of office bearers was held on October 4th. Dr. James Morton was elected President, Dr. Alexander Robertson, Visitor, and Dr. James Dunlop, Councillor. For the examinership for the licence, there were this year two contests. In the first, Dr. James A. Adams succeeded in securing his reappointment as Examiner in Anatomy, his opponent being Mr. J. T. Carter, Lecturer on Anatomy in the Western Medical School; while, in the second, Dr. James M. Milne, Lecturer on Chemistry, replaced Dr. John Clark as examiner in that subject. For the first time, a special board was elected to examine for the Fellowship, the examination hitherto having been conducted by the board for the licence. On the Dental Board, Dr. John Dougall was elected an examiner in room of Dr. Alexander Lindsay, resigned. The system of nomination for office came into operation for the first time, with the result of considerably expediting the course of business.

DUNDEE LUNATIC ASYLUM.

THE monthly meeting of the directors of the Dundee Lunatic Asylum was held last Monday. Captain Clayhills, Invergowrie, presided. The medical report stated that there were at present in the asylum 279 patients, compared with 321 the previous quarter. The Committee of Management was authorised to appoint an assistant medical superintendent in room of Dr. Baker. The treasurer reported that for the last six months the board of the inmates amounted to £4,482, being £132 less than at the same date last year. It was resolved to dispose of feu duties, which would realise about £7,000, and agreed that this sum should be paid into the bank to reduce the building account, which stands at present at £59,490. The directors also agreed to sell the ground on which the old asylum chapel stands for £798, this sum including the redemption of the feu.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

THE first meeting of the session of this Society was held on October 11th, and a very considerable amount of interesting material was brought before the meeting. Dr. Joseph Coats showed a case of severe injury of the head from blows with a hatchet, in which hemiplegia and epileptic attacks supervened, the latter beginning with localised spasm, and going on with a uniform course to general convulsions. Dr. Macewen showed a specimen of subungual exostosis removed from the ungual phalanx of the great toe of the left foot of a healthy girl. Dr. Newman exhibited little masses passed periodically from the left ureter of a man, which were found to consist of large crystals of triple phosphates cemented together by bacilli. Dr. Paterson brought before the Society a case of dislocation of the wrist, and one of gunshot-wound of the larynx, from which Dr. Newman had removed a splinter of a ball by the endo-laryngeal method. Dr. G. S. Middleton showed a salivary calculus. The future meetings of the Society are to be held on the second and fourth Monday of each month. No arrangements have been made this session, as during last session, for the special discussion of one particular subject.

THE DIRECT REPRESENTATION OF SCOTLAND ON THE GENERAL MEDICAL COUNCIL.

A LARGELY attended meeting in favour of the candidature of Dr. James Morton, President of the Faculty of Physicians and Surgeons, was held in Glasgow on October 8th. The meeting formed itself into a general committee for the promotion of Dr. Morton's return. Very favourable reports were given of the results of the circular issued by Dr. Morton's friends, and it was announced that already Dr. Morton had sufficient assurances of support to guarantee his standing very well forward in the election. Dr. Bruce, of Dingwall, late Examiner in Medicine in the Aberdeen University, is also in the field, and has put out an excellent address. Dr. Bruce has long held a most distinguished position as one of the foremost general practitioners of Scotland. He was the President of the Northern Counties Medical Association, and the founder of the North of Scotland Branch of the British Medical Association. The Address on Medical Education which he gave to the Northern Counties Association is remarkable for the knowledge shown of the details of the subject, and for the vigorous spirit of reform which it breathes. Dr. Bruce rendered a notable service to the cause of medical education in Scotland, and to the body of general practitioners, in asserting the benefits to be derived from selecting from that class some of the assessors at the University Examination. He was the first general practitioner so elected in the Aberdeen University, which precedent has been a fruitful one. As a general practitioner of culture, vigour, and knowledge, and peculiarly well informed on questions of medical education, he combines in an unusual degree qualifications for the post of representative member of the General Medical Council of Education, and his candidature will doubtless secure extended sympathy and support.

THE PURIFICATION OF THE CLYDE.

A PUBLIC meeting, convened by the Lord Provost, in response to a requisition, was held in Glasgow, on October 8th, for the purpose of taking steps to promote, in the next session of Parliament, a Bill for the formation of a Board, with power to undertake such works as might be authorised, to prevent the continued pollution of the Clyde, the Carl, and the Kelvin. In the absence of the Lord Provost, Mr. J. G. A. Baird, M.P., was called to the chair, but there was a singular absence from the meeting of practical men, who might have been expected to face the very difficult problem of Clyde purification. The result was that the object of the promoters of the meeting entirely failed; the motion for the appointment of a committee to promote a Bill was lost, and in its place a motion was carried: "That the citizens of Glasgow, in public meeting assembled, resolved to represent to the Town Council of Glasgow the urgent desirability of the purification of the river Clyde, and that they (the Town Council) make a representation to the present Government thereanent." Reference was made to the fact that the last proposal before the Town Council,—that of Sir John Hawkshaw,—involved an outlay of three millions, and the meeting seemed to think the disgraceful condition of the river more endurable than the increased rates that its purification would entail. The mover of the original motion said he had received a letter from an influential gentleman, who once occupied the civic chair, in which he stated that it had never been proved, and he did not believe that the Clyde, in its present condition, was the cause of disease. The speaker very rightly went on to remark that he was not aware that any particular fever or cholera, or any other specific disease that could be called "Clyde," had ever been discovered; but he would say this, that if the filthy and obnoxious condition of the Clyde was not hurtful to health, he did not know any condition of affairs that could be hurtful to health. It is evident that, at present, there is almost no public opinion of any value on the subject of the polluted state of the river; and when the public, who are to be benefited by any purification scheme, is so apathetic in the matter, it is not likely the Town Council will bestir itself in the business.

ARTIFICIAL BUTTER IN DENMARK.—The Minister of the Interior in Denmark has found it necessary to lay a Bill before the Folkething regulating the trade in artificial butter. If his Bill be carried, dealers will be compelled to pack such "butter" in cases marked "margarine." As no mention is made of any provision in the Bill compelling the retailer to state to his customers that he is selling butter, it is to be feared that consumers will not benefit to any great degree.

IRELAND.

We understand that Mr. John Fagan, to whose candidature for the Chair of Surgery in the Queen's College, Belfast, we last week referred, holds at this time the exceptional position of being at the same time President of the North of Ireland Branch of the British Medical Association, and President of the Ulster Medical Society, having been elected to the latter office two years in succession.

THE ELECTION OF DIRECT REPRESENTATIVE.

Many of the circulars from the various candidates may fail to reach voters who have changed residence, or who have been lately added to the *Register*. It is therefore fair to suggest to such that they should apply for copies of the addresses of the four candidates who it is said are to be nominated, namely: Dr. Jacob, Dublin; Dr. Kidd, Dublin; Dr. Laffan, Cashel; and Dr. McMordie, Belfast.

THE LATE DR. T. J. MORRESSY.

At a public meeting held recently in Tipperary, the following resolution was adopted in reference to the late medical officer of the workhouse: "That we, the inhabitants of Tipperary, in public meeting assembled, desire to give expression to our sense of deep sorrow at the death of Dr. T. J. Morressy, who, for nearly forty years, practised as medical officer amongst us, in which profession, by his ability and courteous disposition, he endeared himself to all classes of the community, especially to the sick poor, who always found in him a kind physician and friend, and we beg to tender to Mrs. Morressy and family our heartfelt sympathy in her sad bereavement." The meeting also endorsed the candidature of his son, Dr. Patrick Morressy, for the vacant appointment.

IRELAND AND THE INTERNATIONAL MEDICAL CONGRESS.

In addition to Sir William Stokes, President of the Royal College of Surgeons in Ireland, whose appointment as a Vice-President of the International Medical Congress of next year was noticed in the Journal, last week, Dr. Banks, Regius Professor of Physic in the University of Dublin, and the prospective President-elect of the British Medical Association, has also been enrolled as a Vice-President. Dr. John William Moore, a well known Dublin physician, meteorologist, and sanitarian, has likewise been made a Vice-President of the Section on "Medical Climatology and Demography." We are glad to hear of these honours, looking upon them as compliments to the profession in Ireland in the person of some of its representative members. At first, it looked as if Ireland was going to be ignored; for in the list of officers of the Congress that was recently published, the name of one Irish medical man only appeared.

THE KING AND QUEEN'S COLLEGE OF PHYSICIANS.

The President and a large number of Fellows of this College waited on his Excellency the Lord-Lieutenant of Ireland, on Friday, October 1st, to present him with an address on his assumption of office. His Excellency was accompanied by the Marchioness of Londonderry. The address, which was couched in the usual loyal terms, having been read by the President, and presented, His Excellency replied. In the course of his remarks he said: "In no part of the Empire, indeed, I might add, in no country of the civilised world, does there exist a more admirable system of medical charities than that which has been established in Ireland; and it is most gratifying to find that, by the efforts of institutions such as yours the beneficent provisions of the law for enabling our sick poor to obtain gratuitous medical assistance are so carefully carried out in all parts of the country. I sincerely trust that your good work may increase and prosper, and that the world-wide fame of the medical schools of our metropolis, won for them by the genius of the great Irish physicians in the past, may ever be maintained by the ability and worth of their successors. In all matters relating to the public health, Her Majesty's Government shall continue to look to you for advice and assistance."

DUNDRUM CRIMINAL LUNATIC ASYLUM.

It has been lately advanced that the main and primitive object of a criminal asylum is, and should be, a strict confinement of its inmates, and consequently that it ought to be regarded essentially as a gaol, thus rendering curative treatment secondary to secure incarceration. From this doctrine, the inspectors of lunatic asylums in Ireland, in their recent report, dissent, their contention being that any person labouring under an aberration of mind, who may have broken the law while so affected, or who after a criminal act becomes insane, ought to be treated as a lunatic; for in the first instance insanity condones the offence, however punishable in itself; and in the second, entails a condonation during its existence, thus excluding such a convict from the category of common prisoners undergoing punishment after conviction. During the past year, 208 persons were under treatment in this asylum, of whom 24 were discharged; 10 of these recovered, and 11 died. Towards the close of last year, two Commissioners, after an inquiry of several weeks, carefully inspected the asylum, and as a result various improvements of an essential character were recommended; as these suggestions have been approved by Government, and the expense sanctioned by the Treasury, it is expected that they will speedily be carried out.

THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

The annual meeting of the Victorian Branch of the British Medical Association was held, under the presidency of Dr. Henry, in the hall of the Royal Society, Victoria Street, on August 13th. It was reported that a circular letter had been received from the University of Sydney with reference to a proposal to hold a meeting of the scientific societies of Australasia in Sydney during the centennial year, and asking the council (if they were disposed to take part in the movement) to appoint members of their council to meet the Council of the Royal Society of New South Wales, and of other societies, for the purpose of making arrangements for the proposed meeting, and of forming an Australasian association for the advancement of science on the lines of the British Association.

The circular was referred to the council for their consideration.

The annual report, read by Dr. Springthorpe, showed that sixteen new members had been admitted during the year, making the total number of members eighty-eight. There had been ten meetings of the Branch, at which fourteen papers had been read, and two discussions of unusual interest had taken place. One discussion was on the present condition of the Melbourne Hospital, when a resolution was passed to the effect that it was desirable in the interests of the sick poor of the colony to have the institution removed to a situation that would afford space to erect a new building embracing all the improvements of modern sanitary science. The balance-sheet showed a satisfactory financial condition.

The following members of the council for the current year were elected:—Drs. Neild, Springthorpe, Willmott, Graham, Henry, Cutts, Simmons, Fishbourne, and Meyer, and Mr. Rudall. The council then elected the following office-bearers:—President, Dr. Willmott; vice-president, Dr. Simmons; hon-treasurer, Dr. Graham; hon. secretary, Dr. Springthorpe.

Dr. Henry, the retiring president, delivered an interesting address, dealing specially and severally with the subjects of hospitals, the disposal of excreta, influence of food and education on health, and proprietary medicines, concluding with a retrospect of medicine, surgery, and gynæcology. After reading the address, Dr. Henry retired from the presidential chair, and his place was taken by Dr. Willmott. On the motion of Dr. Haig, a vote of thanks was passed to Dr. Henry for his

able address, and for his valuable services as president during the past year.

At the conclusion of the meeting, the members present were entertained by the President at supper.

SANITARY REPORT OF THE PUNJAB FOR 1885.

THIS is the last report that will be presented by Deputy Surgeon-General H. W. BELLEW, C.S.I., as this officer has, we understand, retired from the service, and returned, after a useful and distinguished career of public service, to his native land. We are glad to see that in the concluding paragraph of the official review of this report, the Lieutenant-Governor has recorded his appreciation of the efforts made by the Sanitary Commissioner "to promote during his tenure of office an intelligent assent among all classes to the claims of sanitation and hygiene." Sir Charles Aitchison adds his belief that "Dr. Bellew's intercourse with the people of the Punjab on these subjects has been attended with marked success, and has been the means of disseminating much valuable instruction in this important subject." The Lieutenant-Governor might perhaps have said more—he could not have said less—in recognition of Dr. Bellew's services to the Government he has served so well. In our review of Dr. Bellew's work on Cholera, we were constrained to give expression to opinions on the propagation of cholera widely differing from his, more particularly on the relation between impure water and the prevalence of that disease. The valuable article on this subject in our issue for October 9th, "On the Relation between the Water-supply and the Prevalence of Cholera in Spain in 1885," contains evidence on this important subject calculated, we are sure, to convince Dr. Bellew himself that our criticism on his opinions, on this portion of his work, was well founded. Be this as it may, we are glad of the opportunity afforded to us, in noticing his final official publication, to offer to Dr. Bellew our congratulations on his retirement from an important and laborious post "with honour."

The death-rate in the Punjab for 1885 was 27 per mille, against 35 per mille in the previous year. During the year, 731,934 births were registered; 390,797 were males and 341,135 females. The births in the province were less by 77,978 than in the previous year, which was one of sickness with a high death-rate.

The classified mortality was as follows:—Cholera, 1,936; death-rate, 0.10. Small-pox, 7,575 (0.40). Fevers, 346,763 (18.40). Bowel complaints, 17,711 (0.94). Injuries, 5,551 (0.29). Other causes, 127,604 (6.77). The civil surgeon of Farozepore records the following outbreak of cholera caused by drinking-water fouled by cholera-discharges. "I visited," he reports, "the village of Dhilwán this morning (May 4th, 1885). I ascertained that two brothers arrived by the morning train of April 23rd from Hárdwár; one of them was ill with cholera. He recovered, but his companion, who had washed the sick man's soiled clothes at the village well, or rather at one of the two wells, was seized with cholera and died. A sweeper, who took water from the well, at the time the clothes were being washed, also took cholera. This was on April 24th. No other case occurred until two days after. On the 27th the disease began, and between that date and May 2nd, 70 deaths are said to have taken place. "The outbreak" (Dr. Bellew adds 'so says the civil surgeon,' as if with the intention of hinting a doubt on what, to others, seems a plain matter of fact, however contrary to the Sanitary Commissioner's well known 'views') "is clearly shown to have been caused by the contamination of water by cholera discharges."

There is another point of interest in this narrative. The two brothers are reported to have come from Hárdwár. It is well known that the writer of this report, as well as Dr. James Cuningham, was among the foremost to deny the propagation of cholera by pilgrims returning from the great Hárdwár fair. Here we have the officiating Civil Surgeon of the Karnál district reporting a death of a person just returned from Hárdwár. We observe, also, that twenty-four deaths were registered in the Amritzar district.

Dr. Penny prefaces his account of this outbreak with the statement that cholera had been anticipated, "for, on March 16th, 1885, a letter was received from the agent of the S. P. and D. Railway, requesting the entertainment of extra staff in order that all trains from Hárdwár on going to the Rawal Pindi Durbar should be inspected. On Sunday afternoon, April 19th, the hospital assistant on duty at the station discovered five persons suffering from cholera amongst the passengers arrived by special train from Sahâranpúr. They were all pilgrims. Two were dead, and the remaining three, who were all moribund, were removed to hospital. Next Monday, nine more pilgrims arrived, either dying or dead, so that, in the first two days, there were fourteen cases at the railway station amongst Hárdwár pilgrims only; nine of them were fatal. On the 23rd, three more arrived by train, and turned out to be cases of virulent cholera;" once more "all were pilgrims."

On Wednesday, April 22nd, the Hárdwárees were again in the majority; five fresh cases were recorded. Our readers will not be surprised to learn that after this the disease appeared in the cantonments, although not in an epidemic form; neither should they be surprised that Dr. Penny could not trace direct communication between affected pilgrims and those attacked; this is a commonplace of cholera experience, once the disease is introduced into a community from Hárdwár, or any other infected place. The Sanitary Commissioner says: "It will be seen from the above narrative of the first cases of cholera in the province, that they were almost all of pilgrims from the Hárdwár fair. But the returns showed that in the great majority of instances the disease did not assume an epidemic character in the localities in which the pilgrim cases occurred." Dr. Bellew accounts for this "by the unusual state of the weather during the months of April and May." Great credit is given to the sanitary and civil authorities for the energy with which measures for stamping out the disease were taken. Our space will not admit of further notice of this very important report. We can only dwell for a moment on the great mortality from fevers, amounting, as we have seen, to 346,763 in the province, once more illustrating the fact so much dwelt on by Dr. Cornish, that, although cholera excites more attention, the death-rate from it, taking one year with another, is small, compared with that from "fevers." It is by malaria that death reaps its largest harvests in India.

THE OPENING OF THE MEDICAL SCHOOLS.

OWENS COLLEGE: THE MEDICAL SESSION 1886-1887.

THE medical session at Owens College was opened on Monday night by a *conversazione*, which was held in the Medical School at the College, Oxford Street, Manchester. In addition to the attractions described by our Manchester correspondents on another page, an attractive programme of music was performed, under the direction of Herr Fr. Vetter. Shortly before 9 o'clock, a meeting was held in the anatomical theatre, to receive the annual report of the Dean of the Medical School (Professor A. H. Young), and to hear his opening address. Mr. ALFRED NEILD, Chairman of the Council, presided. From the report we take the following sentences:—"The total number of students attending the medical department during the session 1885-6 was 323. The statistics show that there is a considerable increase in the number of students attending the department of medicine, and also of those who have been successful in passing the various professional examinations. It is also gratifying to observe that the number of new students who have entered for the degrees of the Victoria University is proportionately greater than at any previous period. Dr. William Stirling has been appointed Brackenbury Professor of Physiology; and those who are acquainted with his brilliant scientific career, and with the result of his work as Professor of the Institutes of Medicine in the University of Aberdeen, will readily believe that he will prove a not unworthy successor to Professor Gamgee. Dr. J. Dixon Mann has been appointed to the Lectureship on Medical Jurisprudence, rendered vacant by the election of Dr. Cullingworth to the Professorship of Obstetrics. During the year, Mr. J. Collier has resigned the Lectureship on Dental Anatomy and Physiology, and has been succeeded by Dr. A. M. Paterson. Mr. Leonard Matheson, having left Manchester, has retired from the Lectureship on Dental Surgery, and this appointment is now vacant. Many additions have recently been made to the museum of the medical department; the pathological section in particular has been enriched by numerous valuable contributions. For most of these we are indebted to the Manchester Royal Infirmary and to the Salford Royal Hospital; and to these, as well as to individual donors, the thanks of the College are given."

Professor YOUNG, in his address, said that of late years no special ceremony had been adopted on the opening of the Medical Department of the College, but for some time it had seemed to him and his medical colleagues that the medical session might usefully be inaugurated by a meeting of a social nature, such as would give an opportunity, on the one hand, to members of the medical profession in the district to become acquainted with the means at the command of the College for teaching medicine, or rather the sciences on which medicine was based; and, on the other hand, to those responsible for the conduct of the Medical School to become more familiar with the requirements and opinions of those who were directly interested in medical education. To the new students he desired to say that the

reputation and prestige of a medical school did not depend alone upon the completeness of its resources or the eminence of its teachers, but also upon the character and attainments of those who were trained within its walls, and therefore each student should recognise that he shared with his teachers a responsibility he had no right to ignore. During the last twelve or thirteen years, few medical schools had made such rapid and substantial progress as had that of Manchester, which, from the position of being a comparatively unimportant provincial school, had reached the front rank amongst the great centres of medical education. This gratifying result was due not only to the energy of the governing body and the devotion of the teachers, but also to the persevering efforts and hard work of the students themselves. In the remarkable progress of the Medical School of Manchester, two important events stood out in bold relief—the amalgamation of the Medical School with Owens College, and the granting of a supplemental charter to the Victoria University, conferring upon it the right to grant degrees in medicine and surgery. By the amalgamation progress became possible, and it was made certain by the election of energetic and distinguished men as teachers. Before the amalgamation it was exceptional for a student at Manchester to take the highest honours of the University of London; in recent years, it had been exceptional to find the honours-list without the name of a Manchester student occupying a prominent position. The position of the Manchester students on the pass-lists of the principal examining bodies compared favourably with that of any from any other schools. Then, again, not only had many Manchester students taken high rank as practitioners, but some of them occupied important positions as teachers in the Manchester and other schools of medicine. The most lasting test of the efficiency of a school of medicine must be found in the number of competent practitioners sent out from it who were thoroughly prepared to undertake the responsibilities of medical and surgical practice. He had no hesitation in expressing his opinion that students were now much more completely prepared for practical work than they were a few years ago, and that, in the teaching of the scientific branches, there was now a keener appreciation than formerly of the practical requirements of the student in his subsequent career. Since the medical charter had been granted, the Medical School had year by year progressed, and students were more and more appreciative of the value of university degrees. The Manchester school had every reason to be satisfied with the measure of success that had been achieved. Progress was inevitable, and the time would come when the majority of the students would look for a degree of the Victoria University as the natural stamp of their complete education in the Owens College. Before they could expect that, they must pass through a stage of probation. The medical degrees must be established on a substantial basis. The school had yet to be judged by its graduates. It might fairly be claimed that the Owens College and the Victoria University offered exceptional opportunities to the student in every department of, or connected with, medicine. They offered also, to such as made use of these opportunities, a degree in medicine which was so far accessible, that it was within the reach of every student who completed his course of study. In conclusion, Dr. Young suggested the establishment of regularly organised system of post-graduate courses of instruction. Professor Greenwood also briefly addressed the meeting.

ENTRANCE SCHOLARSHIPS AND PRIZES.

GUY'S HOSPITAL MEDICAL SCHOOL.

Mr. Frederic Hewlett Brown, of Magdalen College, Oxford, and Mr. George Marlow Pratt, of Dulwich College, were bracketed equal for the Entrance Scholarship of 125 guineas in Classics, Mathematics, and Modern Languages; and Mr. Bertram Whewell Hogarth, of Yorkshire College, Leeds, obtained the Entrance Scholarship of 125 guineas in Chemistry, Physics, Botany, and Zoology.

KING'S COLLEGE.

The Sambrooke Exhibitions in Science of £60 and £40 have been awarded to Mr. Thomas Grigor Brodie and Mr. Arthur Robert Savell respectively; the Science Exhibitions given by the Clothworkers' Company, of £50 and £20 per annum for two years, to Mr. Walter William Lott and Mr. Arthur William Ranken respectively; and the Warneford Scholarships, of £25 per annum each, for three years, to Mr. Bernard Bevill Gilpin and Mr. Ernest Maitland Tause Coffin respectively.

LONDON HOSPITAL MEDICAL COLLEGE.

The Entrance Scholarships of £60 and £40, in Physics, Botany, Zoology, and Inorganic Chemistry, have been awarded to Mr. W. Howard Sturge and Mr. Andrew Hallidie Smith respectively; and the Buxton Scholarships, value £30 and £20, to Mr. Kenneth Mackenzie and Mr. P. A. Green respectively.

MIDDLESEX HOSPITAL MEDICAL COLLEGE.

The Entrance Scholarships, value £100 and £60, have been awarded to Mr. Arnold Lawson and Mr. A. E. Rock respectively; and an Exhibition of ten guineas to Mr. Prynne.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.

The Open Scholarships in Natural Science, value £100 and £60, have been awarded to Mr. Charles Petre Lovell, and Mr. Medwin C. Clutterbuck, respectively.

UNIVERSITY COLLEGE.

The Entrance Exhibitions of £100, £60, and £40, have been awarded to Mr. W. A. Savage, Mr. H. Tilley, and Mr. W. A. Stevens, respectively.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.

The Entrance Scholarships of £40 and £20 per annum for two years have been awarded to Mr. W. H. Gossage and Mr. A. W. Harrison respectively; and that of £20, tenable for two years, after examination in Chemistry and Experimental Physics, to Mr. A. S. Coleman.

DIPLOMAS AND UNIVERSITY DEGREES IN THE MILITARY MEDICAL SERVICES.

The following table has been sent to us. It is intended to show the numbers of the different university degrees and diplomas obtained in the three divisions of the kingdom, as they are distributed among the 1,535 medical officers who comprise the British and Indian Branches of the Army Medical Department. It is explained that the figures are drawn from the *Medical Directory* for 1886, and that where an individual holds a degree as well as a diploma, the former only is taken into account in the table. This lessens the numerical value of the statistics, as does also the fact that, although several diplomas are held by a large number of the medical officers, only one diploma is tabulated in each instance.

	Indian Army Medical Service.		British Army Medical Service.		Whole Army Medical Department.	
	Number	Percentage.	Number	Percentage	Number	Percentage
English Degrees ..	22	4.06	14	1.4	36	2.3
London	19	3.5	6	.6	25	1.6
Oxford	0	0.0	0	0	0	0
Cambridge..	2	.37	2	.2	4	.26
Durham	1	.2	6	.39	7	.45
Scotch Degrees....	137	26.0	162	16.3	299	19.4
Edinburgh	61	11.2	79	8.7	140	9.1
Aberdeen	46	8.5	47	4.7	93	6.0
Glasgow	17	3.1	19	2.0	36	3.0
St. Andrew's ..	13	2.3	17	1.7	30	1.9
Irish Degrees.....	100	18.4	236	23.7	336	21.8
Queen's	66	12.2	110	11.06	176	17.6
Royal	0	0	16	1.6	16	1.04
Trinity Col. ..	34	6.26	109	11.0	143	9.3
All Degrees	259	47.8	412	41.5	671	43.7
English Diplomas..	158	29.1	271	27.3	429	28.0
F.R.C.S...	6	1.1	6	.6	12	.8
Ordinary..	152	28.0	265	26.7	417	27.2
Scotch Diplomas ..	80	14.8	113	11.4	193	12.5
F.R.C.S...	10	1.9	7	.7	17	1.1
Ordinary..	70	12.9	106	10.7	176	11.4
Irish Diplomas	45	8.3	197	19.7	242	15.7
F.R.C.S...	9	1.7	5	.5	14	.9
Ordinary..	36	6.6	192	19.3	228	14.9
All Diplomas	283	52.2	581	58.5	864	56.3
Total Degrees and Diplomas	542		993		1535	

DIRECT REPRESENTATION OF THE MEDICAL PROFESSION ON THE MEDICAL COUNCIL.

It may be as well to call attention to the advertisements in our columns last week, October 9th, by which formal notice was given that every nomination paper of candidates for the direct representation must be received on or before November 9th, and that every nomination paper must be accompanied by a declaration in writing, signed by the person nominated, acknowledging that he consents to be nominated. Every candidate must be nominated by a separate nomination paper. The necessary documents should be addressed to W. J. C. Miller, B.A., at the Medical Council Office, 299, Oxford Street, W., London, in the case of English candidates; to James Robertson, 4, Lindsay Place (George IV Bridge), Edinburgh, in the case of Scotch candidates; and to Robert Lynn Heard, M.D., 35, Dawson Street, Dublin, in the case of Irish candidates. Forms of nomination-papers may be obtained from these gentlemen.

At a meeting of the Medico-Chirurgical Society of Aberdeen, held on October 5th, Professor Struthers, President of the Society in the chair, the following resolutions were unanimously agreed to.

1. The Society views with satisfaction that the long urged claim of the general body of the profession to be represented directly on the Medical Council has at last been granted by the Medical Act of 1886.

2. In view of the approaching election of a direct representative for Scotland on the Medical Council, the Society is strongly of opinion that, in view of the very full representation already accorded to the Medical and Surgical Corporations and the Universities, the direct representative for Scotland ought to be one who is unconnected with the Governing Body of any of the Corporations, or with the professoriate of any of the universities.

CHOLERA.

The following are the reported cholera-returns from October 9th to October 13th: Trieste, 41 cases, 9 deaths; Pesth, 93 cases, 42 deaths; Szegedin, 27 cases, 20 deaths; Rome, 3 cases, 1 death.

It is officially announced that the epidemic of cholera may now be considered as quite finished at Venice, and that the sanitary condition of the town is excellent.

THE COMING MEETING OF THE ROYAL COLLEGE OF SURGEONS.

We once more take the opportunity of reminding the Fellows and Members of the Royal College of Surgeons of England that the annual meeting will be held in the College Buildings, Lincoln's Inn Fields, on Thursday, November 11th, for the purpose of receiving the report of the Council. The holders of the two diplomas must not forget that united action is needed, and that, to secure such action, previous deliberation will be necessary; this involves time, the meeting, however, will take place within a month. A fair consideration of Members' rights on the part of the Fellows, and a reciprocal feeling on the part of the Members must, of course, form the basis of action. The aims of the Members' Association are, in a general way, to obtain for Members of a certain number of years' standing, the right to vote at the election of the Council of the College, and to gain a further just privilege, namely, that a certain proportion of Members (about a quarter, or a third) should sit as members of Council, as representatives of the body of Members of the College. This claim has already been expressed in the Association of Members' petition, published this week in our advertisement columns. The ulterior object of this movement is, by the voice of representatives of the general practitioners, to obtain a better system of education for that body, and to foster in the Council a greater regard for the interests of those in general practice. The Association will not be able to formulate its plans, until the report of the Council, promised for issue on October 18th, is in its hands. The Fellows' Association is also awaiting this report.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A quarterly meeting of the Council of the College was held on Thursday, October 14th.

A resolution adopted on August 5th, removing Mr. Edwin W. Alabone from being a Member of the College, in consequence of his having, in the opinion of the Council, advertised or published matters prejudicial to the interests and derogatory to the honour of the College, and disgraceful to the profession of surgery, was confirmed.

The Council also confirmed a resolution refusing to admit to further examination a person who had been convicted of perjury, nor to allow him to become a Member under any condition whatsoever.

Dr. Goodhart was elected an Examiner in Medicine, and Drs. J. Baptist Potter and John Williams were elected Examiners in Midwifery.

Sir Joseph Lister was re-elected a member of the Committee of Management.

On the report of the Committee of Management, the Council adopted a recommendation that candidates rejected at the second and third or final examinations be required, before being admitted to re-examination, to furnish additional certificates of further professional study in the subjects of the examination. In the case of the second examination, the time of additional study must extend to three, and in the third examination to six, months subsequently to the date of his reference. In the case of the third, three months' practical instruction in midwifery subsequent to rejection will also be required.

The President stated that he had chosen Mr. Henry Power as next Bradshaw Lecturer. The lecture is to be delivered on Thursday, December 2nd, 1886, at 4 P.M.

The Council approved the draft of the report to be presented to Fellows and Members at the meeting appointed to be held on Thursday, November 4th.

The report may be had, on application by any Fellow or Member, on and after Monday, October 18th next.

Diagnostic Value of the White Streak in Scarlatina.—*L'Union Médicale du Canada* writes: This phenomenon, which can be produced by rubbing a soft body upon the skin which is affected with the scarlatinal eruption, is considered by the author an important diagnostic sign of scarlatina which has hitherto been overlooked. When, in the normal condition, one draws a line upon the skin with a smooth surface, as the rounded extremity of a pencil, and uses moderate pressure, there may be observed at the points touched a white line which lasts for some time. This paleness is due to the moderate excitation of the vaso-motor nerves, and the contraction of the smaller vessels which follows it. If the pressure has been very strong, in place of a white line a red line bordered by two white ones is produced. The excitation in this case has paralysed, temporarily, the small vessels instead of contracting them, while in the area which is contiguous, where the pressure has been less strong, the excitation has only led to constriction of the vessels. In certain diseases the effects which are obtained by this procedure vary greatly. Trousseau, for example, has shown that in patients suffering from meningitis, a red line is produced by pressure with the greatest ease, and this has been called the meningitic line. It may also be produced in all the diseases which lead to perturbation of function in the nervous system. Thus, it may be produced in many cases of typhoid fever, in erysipelas, variola, rubeola, and the diphtheritic eruptions. But it is not the same in appearance in scarlatina during the entire period of the eruption. In place of getting the red meningitic line, a pale, rather persistent line, is produced, which extends plainly to the bottom of the eruption. This fact was long ago noticed by Bouchet, and was considered a valuable sign as a means of diagnosis, both in children and adults. It is not equally prominent and distinct at all periods of the eruption, Velpeau having observed that it is not produced when the efflorescence of scarlatina is at its highest degree of development. In the diphtheritic eruption which resembles that of scarlatina accompanied by angina, the excitation of the skin produces a red line and not the white one of scarlatina. This sign is especially valuable in those cases of measles in which the eruption closely resembles that of scarlatina. The same is true in variola in which other differential signs are often absent. It must be borne in mind that the important feature in making this test is that the white line appears upon the surface which is covered by the eruption.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 20th day of October next, at 2 o'clock in the afternoon.

Subcommittees will meet as follows. At 161A, Strand, W.C.—Tuesday, October 19th, 1886: Committee on Collective Investigation 5 P.M. Premises Committee, 6 P.M. Wednesday October 20th, 1886: Journal and Finance Committee, 11.30 A.M.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, September 29th, 1886.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

THAMES VALLEY BRANCH.—Meetings of the Branch will be held on November 10th, January 26th, and March 30th. Members willing to read papers or exhibit cases are requested to communicate with the Honorary Secretary, CHARLES C. SCOTT, M.B., St. Margaret's, Twickenham.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The opening meeting of the session will take place at the Hackney Town Hall on Thursday, October 21st, when an address will be given by Dr. Playfair on Defective Sanitation as a Cause of Puerperal Disease. The chair will be taken at 8.30 P.M. by the President of the Branch, J. Syer Bristowe, M.D., F.R.S. All medical men will be welcome, whether members of the Association or not.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

BORDER COUNTIES BRANCH.—The autumn meeting of this Branch will be held at the Keswick Hotel, Keswick, on Friday, October 22nd. The President, Dr. Eaton, Cleator Moor, will take the chair at 1 P.M. Dr. Speirs, Cleator Moor, will read Notes of a Case of Poisoning by Spirits of Salt. Dr. Eaton will read An Obscure Medico-legal Case, involving the Consideration of Deaths from Alcoholic Poisoning, Suffocation, and Epilepsy. Dr. Black, Keswick, will contribute Notes of a Case of Hydatid of the Liver. Morbid specimens will be shown by Dr. Welby I'Anson and others. Dinner at the Hotel at 4 P.M. The Secretary will be glad to receive immediate notice of papers for reading, and patients or specimens for exhibition.—H. A. LEDIARD, Honorary Secretary, 41, Lowther Street, Carlisle.

OXFORD AND DISTRICT BRANCH. [*Amended Notice.*]—The next meeting of this Branch will be held at the Radcliffe Infirmary, in the afternoon of November 3rd. Members who wish to show cases or read papers are requested to communicate with one of the Honorary Secretaries on or before October 25th. Dinner, at 5s. (exclusive of wine), will be provided for those only who send in their names before Monday, November 1st.—Dr. DARBISHIRE, 60, High Street; W. L. MORGAN, Esq., 42, Broad Street, Oxford, Honorary Secretaries.

STAFFORDSHIRE BRANCH.—The thirteenth annual general meeting of this Branch will be held at the Masonic Hall, Burton-on-Trent, on Thursday, October 28th. An address will be delivered by the President-elect, Dr. W. G. Lowe. The chair will be taken at 3 P.M. by the President, Mr. J. T. Harthill; and all medical men, whether members of the Association or not, will be welcome. The dinner will take place at the Queen's Hotel at 5.15 P.M. Tickets, 7s. 6d. each, exclusive of wine.—VINCENT JACKSON, General Secretary, Wolverhampton.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting will be held at the Bush Hotel, Farnham, October 28th, 1886, at 3.30 P.M., J. A. Lorimore, Esq., in the chair. The following papers, etc., have been promised. 1. Noble Smith, Esq.: A Report on a series of Consecutive Cases of Disease of the Spinal Column. 2. C. B. Lockwood, Esq.: On Contractions of the Digital and Palmar Fascia. 3. J. A. Lorimer, Esq.: A case of Abscess of the Liver cured by operation. Dinner will be provided at 6 P.M. at the Bush Hotel, Farnham.—A. ARTHUR NAPPER, Honorary Secretary, Broad Oak, Cranleigh, Surrey.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of the above District will be held at the West Kent General Hospital, Maidstone, on October 29th, at 3.30 P.M., John Knowles, Esq., in the chair. Papers already promised: 1. M. A. Adams, Esq.: Remarks on Simplified Linear Extraction of Cataract. 2. F. Penfold, Esq.: A case of Intussusception, with specimen. The dinner will take place at the Star Hotel, at 6 P.M.; charge, 6s. 6d., exclusive of wine. Gentlemen who intend to dine are particularly requested to signify their intention to the Chairman, J. Knowles, Esq., Ashford Road, Maidstone, not later than October 27th. All members of the South-Eastern Branch are entitled to attend this meeting, and to introduce friends.—A. W. NANKIVELL, Honorary Secretary of the District.

MIDLAND BRANCH.—A meeting will be held at the Infirmary, Stamford, on Thursday, October 21st, at 2 P.M., when the following will be brought before the meeting. 1. Resolution passed at annual meeting, held June 17th, 1886, namely: "That the Secretaries of the four divisions of the Midland Branch be instructed to ascertain and be prepared to report to a future meeting the view of the members of the several divisions as to the reorganisation of the Branch." 2. The Duration of Infectiousness in Scarlatina, Small-pox, Measles, Mumps, and Diphtheria. 3. Dr. Newman will exhibit cases showing the results of operation. 4. Mr. Sympson: On injury to the Ulnar Nerve treated by suture. 5. Mr. Cant: On a peculiar Symmetrical Disease of the Retinæ in a Child. Other papers are expected. It is proposed to visit Burghley House in the morning, leaving Stamford at 10.30. Luncheon will be provided by the President at the Infirmary at one o'clock. Members who hope to be present at luncheon, and those who intend visiting Burghley House, are requested to send an early intimation to Dr. Newman, Stamford.—W. A. CARLINE, Honorary Secretary and Treasurer.

NORTH OF ENGLAND BRANCH.

THE autumnal meeting of the above Branch was held in the Library of the Newcastle-on-Tyne Infirmary, on Tuesday, September 28th, at 2.30 P.M. The business was as follows.

Introduction of Patients.—Dr. Philipson: A Case of Empyema successfully treated by Incision, Removal of a Portion of Two Ribs, Drainage, and Antiseptic Dressing.

Papers.—Dr. Drummond: On the Symptoms and Diagnosis of Floating Kidney.

Dr. Morison: A Short Note on three Cases of Stricture of the Rectum.

Dr. Munro: A Case of Intestinal Obstruction.

Mr. Williamson: Successful Operation in a Case of Acute Intestinal Obstruction.

Dr. Murphy: A Case in Medical Jurisprudence.

Dr. Oliver: On some Points in the Clinical Examination of the Urine.

Dr. Mantle: Description of the Methods employed in the Investigation of Diseased Organs for Bacteria, together with the Bacteria found in Rheumatism.

Dr. Mantle gave a Demonstration of Specimens under the Microscope after the reading of the papers.

An animated and interesting discussion, bearing chiefly on the question of removing a portion of rib, followed the introduction of Dr. Philipson's case. Drs. Munro, Lawrence, Stainthorpe, Mantle, Oliver, Embleton, Black, Frain, and the President, spoke; and many interesting cases were quoted in which the chest had been drained without removing part of the rib. Dr. Philipson, in replying, said that, as a physician, he wished, in cases of empyema, to have the cavity completely and continuously drained, and kept antiseptic. The question of removing a portion of the rib he would leave to the surgeon. Dr. Mantle's description and demonstration of the methods employed in the investigation of disease for bacteria, and especially his account of the bacteria he had discovered in rheumatism, was followed with the greatest attention; and, at the conclusion of his demonstration, he was warmly complimented by the President. The three papers on Intestinal Obstruction, by Dr. Morison, Dr. Munro, and Mr. Williamson, were then read, and Mr. Williamson reintroduced his patient. Drs. Philipson, Murphy, Gibson, and the President, discussed these cases, but the time was too short, and several who wished to speak were unable to do so. The other papers, by Dr. Drummond, Dr. Oliver, and Dr. Murphy, stand over till the next meeting. Forty members were present at the meeting.

In the evening, the members and their friends dined together; the President (Dr. Gowans) occupied the Chair, and the Secretary the Vice-Chair.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

On the Absolute Acidity of the Animal Fluids.—Urethan.—Indirect Innervation of the Skin.—The Physiological Function of the Pulmonary Tissue during Exhalation.—Pneumotomy.—Pneumothorax in Children.—Chronic Zona.

AT a recent meeting of the Académie des Sciences, M. Berthelot read a note from M. Ch. Blarez, in which he stated that it was impossible to determine in the salts of phosphoric acid the absolute quantity of the base, inasmuch as a molecule of acid can combine, according to circumstances, with one or two equivalents of the base, or even more, the quantity of the base which combined with the acid being influenced by the surrounding conditions. These experiments verify M. Berthelot's statements, founded on his calorimetric researches on this substance. As phosphoric acid and phosphates are contained in the constituent principles of the fluids of the animal organism, it is impossible to determine the absolute acidity of these liquids, in presence of bodies which combine with bases in quantities varying according to the surrounding media.

M. Berthelot has also presented to the Académie des Sciences a note by M. G. Jacquemin on the analysis of urethan. If mercuric chloride were first added to a solution of urethan, and then potash, a white precipitate was deposited, which, when heated with urethan in excess, is dissolved, but again precipitated whilst cooling. With an excess of potash, a yellow precipitate of mercuric oxide fell, and was insoluble in alcohol and ether. This precipitate dissolved under the influence of slight heat; and when passed into urethan, it left, on cooling, a white precipitate. M. Jacquemin further stated that urethan was precipitated by murcuric salts in solution, in the proportion of 1.50 per 1,000. In order to detect urethan in weaker solutions, such as .00005 gramme per cubic centimètre, potash was added, and bichloride of mercury drop by drop. A yellow precipitate gradually formed, and again dissolved so long as urethan remained. Nitrate of mercury and acetate of mercury acted on urethan, in the presence of potash, like chloride. These two salts precipitated urea, but precipitated urethan only in the presence of potash. Normal urine, much diluted and treated with the mercuric salt, deposited a white precipitate, which became black on boiling. In order to extract urethan from urine, M. Jacquemin shook up the urine with ether, and then washed several times with water; the residue from the evaporation of ether was dissolved in very little water, and treated as described above.

At a recent meeting of the Académie des Sciences, M. Vanlair, in a note on the indirect innervation of the skin, stated that in numerous instances it had been observed that sensibility remained after some of the principal nerves had been cut; in some instances, sensibility of the peripheral nerve-end remained intact, though totally severed from its central extremity. MM. Arloing and Tripier have contended that the phenomena of recurrence and of peripheral diffusion explained the apparent paradox of the existence of sensibility in the peripheral nerve-end after section. These hypotheses, based on the excellent scientific researches of MM. Arloing and Tripier, have been accepted by all physiologists; but these investigators, believing in an intimate relation between these two phenomena, have neglected to define the part played by recurrence and by the collateral diffusion of the fibres, and have likewise passed unnoticed that the return of sensibility after its preliminary suppression occurred independently of nerve-regeneration. These special points were examined by M. Vanlair experimentally; he concluded that recurrence and collateral diffusion were two entirely independent phenomena. The latter was by far the more important, and alone assured cutaneous sensibility after severing the nerves. Exchange of nerve-force among the peripheral nerves occurred among branches of the same nerve, and also among nerves belonging to the same plexus; the collateral fibres pass through the deep tissues of the limb, and issue from the surface of the aponeuroses to enter the skin separately. Suspension of sensibility did not result from paralysis of the peripheral end, but from an inhibitory action proceeding from the point of lesion. This influence was gradually exhausted, and sensibility gradually returns.

Wolfberg and Nussbaum have shown that the tension of carbonic acid in arterial blood is almost the same as that of the gas liberated in the pulmonary alveoli. Pulmonary exhalation of carbonic acid thus occurs under unfavourable physical conditions. M. Garnier, at a recent meeting of the Académie des Sciences, described his researches, made in order to ascertain if a chemical action does not facilitate the liberation of carbonic acid when in contact with the air contained in the pulmonary alveoli. Chemical analysis did not succeed in extracting a definite acid, but the pulmonary tissue of different animals (oxen and sheep), cut up in cold water, furnished a fluid, which, even when mixed with blood, which is alkaline, remained slightly though distinctly acid. Pulmonary tissue, when in a bloodless condition, was slightly acid, and this acidity was not due to carbonic acid; ultramarine, injected into the lungs of a guinea-pig, became, in time, discoloured. This discoloration could only take place in the presence of a strong acid, carbonic acid and taurine being inert. M. Garnier believed that a substance which acts as an acid existed in the pulmonary tissue, and that this acid body acted on the carbonic compounds of venous blood, and thus led to the liberation of carbonic acid.

M. Reclus recently described, to the Paris Surgical Society, a case which showed that the diagnosis of pulmonary hydatids was sometimes excessively difficult. A hydatid cyst of the chest was diagnosed in a young girl; an exploratory puncture was made. The contents of the cyst were vomited by the patient, and it was believed that she had a pulmonary cyst. In order to open the sac more completely, M. Reclus performed resection of the twelfth rib. This operation showed that the patient was suffering from hepatic cyst. She was ultimately cured. M. Bouilly stated that M. Moutard Martin had performed thoracentesis on a patient who, it was believed, suffered from empyema, and he discovered that a hepatic hydatid tumour had opened into the bronchi; the sac was lined with pulmonary tissue.

At a recent meeting of the Société Médicale des Hopitaux, M. Sevestre read notes of two cases of pneumothorax observed in children of sixteen months old. The author's investigations on this subject demonstrated that this affection occurred much more often among children than was supposed, and that the symptoms were the same as those presented by adults.

M. Leudet, of Rouen, read a communication at the Medical Congress at Nancy on chronic zona. He had met with it under three forms—(1) local chronic zona, (2) zona propagated from one nervous branch to another, (3) remote and successive zona. Zona was often secondary to peripheral, cerebral, or medullary lesion in the track of the nerves. The first case in which zona was observed was that of a child attacked by pulmonary tuberculosis, chiefly affecting the same side as that of the nerve-lesion. MM. Chaudeleit, Lesser, and Cadet-de-Gassicourt had collected notes of cases which demonstrated the influence exercised by chronic lesions of the pleura on the development of zona. A chronic form of zona had been remarked by M. Leudet in the case of two patients, the subjects of pulmonary tuberculosis, simultaneously with recrudescence of tuberculous growth. The cutaneous lesion provoked new ulcerations of the scars, sometimes accompanied by pseudo-phlegmon. This state might continue for three or even six months, at the same time inducing keloid. Recurrent zona in the same patient might occur in the same or other parts of the body.

NEWCASTLE-UPON-TYNE.

[FROM OUR OWN CORRESPONDENT.]

Opening Ceremony of Medical College.—Chair of Physics.—Physiciancy at Children's Hospital.—Infirmary Finances.—Resignation of Dr. Heath at the Eye Infirmary.

THE opening ceremony of the College of Medicine took place on Tuesday, October 5th, 1886, in the Wood Memorial Hall. The chair was occupied by Dr. Gibson, in the absence of Dr. Heath, the President of the Council, through indisposition. Mr. B. C. Browne, Mayor of the City, distributed the prizes to the successful students, and delivered a short address. The students, now a somewhat numerous body, were much quieter than usual, and gave most of the speakers a favourable hearing. Some years ago, the delivery of an inaugural address was done away with, so that the proceedings are now very much curtailed. The Principal and most of the Professors of the College of Science were present; it is apparent, therefore, that the two bodies are in perfect harmony, in spite of the fact that the latter have decided to build a college for themselves, instead of the two bodies arranging to have a conjoint building.

Professor A. S. Herschel, having resigned the Chair of Experimental Physics, has been appointed Honorary Professor. Dr. H. Stroud has been appointed in his stead. Dr. Stroud studied at University College, Bristol, at Owens College, and at St. John's College, Cambridge, and was eighth wrangler in 1885. He is D.Sc. London.

The vacancy for a Physician at the Children's Hospital is exciting a keen contest; two more candidates, Dr. Robertson and Dr. Blair, have entered the field.

A crisis has arisen in connection with the Newcastle Infirmary. It appears that the expenditure needed to maintain the present efficiency of the institution exceeds the income by from £5,000 to £6,000 a year; it is clear that, unless something is done, the institution must close its doors. It is therefore proposed that the number of patients be reduced to 200, and that there should be a reduction in the paid officials. This proposal will be discussed by the governors on November 4th. It is much to be hoped, however, that some other way out of the difficulty may be found, and that the hospital may continue its benefits to the fullest extent; at present, the number of beds occupied is 271.

Dr. Heath has resigned his appointment as Surgeon to the Eye Infirmary; no candidate for the vacancy thus created is eligible unless he has had a special instruction in ophthalmic work in London, Edinburgh, or Dublin. Mr. Williamson, F.R.C.S., who is an eligible candidate, has had charge of the ophthalmic department at the Infirmary, and has made himself personally popular with the majority of his students.

MANCHESTER.

[FROM OUR OWN CORRESPONDENTS.]

Conversazione in Owens College.—Introductory Lecture by Professor Stirling.—Combe Lectures by Professor Stirling.—Medical Dinner.—Lord Derby at the Hospital for Consumption.—Victoria University Degrees.

WITH the reopening of the enlarged Medical Department of Owens College, Manchester, this flourishing medical school shows evidence of still greater vigour. All round may be seen manifestations of well-directed energy, both on the part of the professors and the students, for where there is enthusiasm in the former, it is sure to have its due reflex in the latter. The medical session was most auspiciously opened on October 4th, by a conversazione, given by the Principal, and Dr. Young, the Dean of the Medical Faculty. Invitations were issued to the medical students and the practitioners resident in and around Manchester. About 600 guests accepted the invitation. Owens College—or, at least, the medical department of it—was the scene in the evening of a brilliant display of teaching appliances, exhibited in the several departments. In the dissecting-room, which was decorated for the purpose, Dr. Young displayed a large collection of anatomical and pathological specimens, which had been recently added to the Medical Museum. Professor Marshall showed various forms of microtomes, and the mode of using such microtomes as are required for cutting a series of sections in order, as in embryology. In the magnificent physiological laboratories, Professor Stirling had a specially attractive display. The walls of the laboratories and the passages leading to this department were covered by numerous large diagrams; while, in the laboratories themselves, were displayed numerous physiological appliances, such as are of interest to medical men, including various forms of recording apparatus, and experiments on muscle and the heart. In the optical room there was a large display of physiological optical appliances, including arrangements for studying contrast, irradiation, astigmatism, colour-blindness, etc., and Kühne's artificial eye. In the physiological chemical laboratory there was a large exhibit of food and food stuffs, including dietaries. Professor Stirling gave a demonstration on the Use of Models as Aids in the Teaching of Physiology. This demonstration attracted an unusual amount of attention, as the numerous models, all of the simplest and most elementary kind, made the subjects treated very plain. A contrast was drawn between the value of models and diagrams. To many of the older practitioners, and even to many recent graduates, the method expounded by Professor Stirling seemed to come as a revelation in the art of teaching. Professor Dreschfeld gave a most interesting account of Pasteur's researches on vaccination, as a protection against hydrophobia; while Professor Leech gave a demonstration on the action of drugs on muscle. Professor Young read the Dean's report, which gave a highly satisfactory account of the progress of the medical school, which is numerously attended, while the students have been remarkably successful in their past examinations, although no system of tests preparatory to admission to an examination is practiced in Owens College. Altogether the conversazione was acknowledged to have been a great and decided success, and it showed to medical men the splendid teaching resources and appliances that exist in Owens College. More frequent reunions and exhibitions of this sort would probably do much to stimulate the already rapid growth of Owens College as a great medical school.

Professor Stirling, in opening the class of physiology, referred to the necessity of a teacher devoting all his energies to elaborate and improve his methods of teaching; for teaching was a difficult art. He dwelt also on the necessity for a diffusion of sound physiological knowledge amongst all classes of the community. He announced that, under the auspices of the Combe Trustees, he intended during the present session to give a short course of lectures on physiology, the subject to be treated from the hygienic point of view. These lectures will be given once a week on certain evenings, and are to be free to all students of Owens College. This is an extension of the very successful courses of lectures which, under the auspices of the Combe Trustees, Professor Stirling inaugurated and carried out when he held the chair of physiology in Aberdeen.

The medical dinner which was held on Thursday evening in Manchester, under the presidency of Sir William Roberts, was socially and numerically a great success. About one hundred practitioners were present, and during the evening the question of the admission of the Leeds College as one of the colleges of the Victoria University was freely discussed. It remains to be seen how such a system of conjoined colleges will work. Among the visitors were Messrs. Mitchell Banks, and Caton (Liverpool), Teale (Leeds), the Vice-Chancellor of Victoria University, and the Mayor of Manchester.

Lord Derby visited Manchester last week for the purpose of opening the new out-patient department of the Hospital for Consumption and Diseases of the Throat. The old out-patient department was situated in a private house in St. John Street, but is now located in a handsome building capable of accommodating 100 patients, with well-fitted waiting and consulting rooms. The hospital itself was removed about two years ago to the more salubrious atmosphere of Bowden. As usual, the inevitable lunch followed the opening ceremony, and a subscription was set on foot, with by no means insignificant success.

At a recent meeting of the Court of Governors of the College, Dr. Dixon Mann, Lecturer on Medical Jurisprudence in the College, was nominated as one of the lecturers in Victoria University.

We understand that the number of students entering the medical department of Owens College is satisfactory. At an early date, Victoria University will be called upon to grant its M.D. degree on one of its graduates, and already the question is being discussed as to whether there ought not to be some more public ceremonial for the conferring of degrees.

CORRESPONDENCE.

☞ TO CORRESPONDENTS. ☜

OUR correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the JOURNAL, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return and hold over a great number of communications, chiefly by reason of their unnecessary length.

THE ARRANGEMENTS OF THE BUSINESS OF THE ANNUAL MEETINGS.

SIR,—I am not one addicted to making complaints—indeed, the *rôle* is a very unusual and ungrateful one for me, and, in the present instance, I have nothing whatever to do with it personally; but I was unable to avoid, at Brighton, taking note of one or two incidents in the conduct of the sectional business of the Association, which (as one greatly interested in the success of a meeting which I hope will be held two years hence in Glasgow) I think it right to bring under your notice, and, through you, under the notice of those who may be able to arrange differently, and, if possible, may let it be known in advance that a change has been made.

I am certainly not inclined to object to those formally arranged discussions which have of late years occupied so large a place in the sectional work; for they have been most valuable, and I have myself contributed to them on more than one occasion; but it is quite obvious that, if they are allowed to trespass on the ground of voluntary papers, so as practically to exclude the majority of these from possible consideration, the effect in the end must be that no voluntary papers will be written.

Now, on the first day of the Medical Section at Brighton, a most interesting discussion took place, and was prolonged to so late an hour that only two out of nine papers set down for reading could be read; and the remaining papers were not even included in the next day's work, but were wholly sacrificed. One of these, I know, contained valuable, and probably original, suggestions of a kind likely

to have cost its author some trouble to put in order for the meeting; and, in another case, I also know that a gentleman who came from Scotland expressly to have a particular paper read, was in like manner shunted, without even the chance of a hearing. Further, another gentleman of high standing in the profession came from London on the last day of the sectional meetings, entirely for the purpose of reading a paper which he had been specially requested to prepare; but, owing to the papers being taken at 10 A.M. instead of in the afternoon on that particular day, he found the section adjourned, and had no opportunity of giving effect to what was really the cause of his visit. Thus there were papers blocked out on the first day, which might quite well have been read on the last day (when there was plenty of time), but were not brought forward again; and papers were set down for the last day which were not read, because the section adjourned earlier than was expected.

Incidents like these must be very annoying to the readers, or intending readers, of papers, and very likely to stop the flow of such communications in future.

Is there any remedy? This, I think, is open to consideration, and ought to be very carefully and maturely considered, I can only throw out one suggestion, which is partly derived from Dr. Clifford Allbutt, who mentioned it to me in conversation as having been mooted (I think) in the Council.

If the addresses, and the work connected with the business meetings, could be left till the afternoon, beginning (say) at 3 P.M., a great deal of time might be saved which is now totally wasted. The sections might begin even at 10 A.M.; and, with the ample facilities that exist for relays of office-bearers, the formal adjournment for lunch need never take place at all. Sectional meetings might go on continuously from 10 A.M. till 3 P.M., as in the Committees of the House of Commons; and if you think it advisable to have even the semblance of a break at all, it might be arranged that the initial discussions (such as those on heart-disease this year) should necessarily terminate at a fixed hour, so as to give place to the reading of papers.—I am, etc.,

W. T. GAIRDNER.

Glasgow.

DIRECT REPRESENTATION OF THE PROFESSION ON THE GENERAL MEDICAL COUNCIL.

SIR,—It is not desirable that controversy on this subject should be further embittered. I, for one, will only ask you for a few lines in final reply on two points only, and I trust to your courtesy to give them insertion in your next issue.

Indeed, the present crisis is too important, too pregnant with the well or ill being of our common profession to make it a time for controversial recrimination. It is a time, rather, when all of us should unite in the single effort to secure three good men to represent us on the Medical Council. Whether these men be consultants, or general practitioners, or both, or nominated by one or other Committee, matters nothing. But it does matter that they should know the educational and other wants of the general practitioner, and be able to make these wants heard and respected at head-quarters.

With this preface, I will proceed to remark upon the two points to which I wish to call the attention of your readers.

The first is the alleged want of freedom of action in this matter. Will any one point out in what way the freedom of the electors is interfered with, or can be interfered with, by our Committee? Each elector will sign his voting paper in the privacy of his own consulting room. It will be a ballot, in fact, no one except the returning officer necessarily knowing how any one has voted. In every election, voters are plied with addresses, cards for promises, and all the artillery of persuasion. What of it? The ballot gives us full protection from any interference with our freedom, and each of us can afford to throw all these paper-bullets of which we do not approve into the waste-paper basket. Then, as to "pressure," what is the difference between that exerted by one Committee for one man, and that of a Committee which recommends three men? As to numbers, I find one candidate has a Committee of not less than 600 working for him, whilst ours has only 400; surely the pressure here must be in the proportion of six to four.

And this leads me to explain a point which is perplexing many as to the action of our Committee. Our Committee was instituted to select three fit and proper persons by what was, in effect, a ballot. It is by no means the desire of that Committee to compel those who agree with their general principle to vote for all those three candidates *en bloc*. Many are pledged already to some other candidate, and all we ask is that the profession at large will well consider the claims of Messrs. Wheelhouse, Foster, and Glover, and vote for such of them as they may feel at liberty to do.

Now to my second point. Several of your correspondents, as well as some candidates and members of their committees, still continue to apply the terms *caucus* and *clique* to our Committee. Now, it has been already fully explained that our Committee was formed absolutely without reference to any particular persons to be recommended. Over a thousand members of the profession were asked to form a Committee; and, of the 360 who responded, nothing was known of their sentiments with regard to any candidate. Therefore, whichever three persons had obtained the largest number of votes, those three persons must have been adopted by the Committee. Is this a caucus? And is it possible to call 360 gentlemen, scattered all over the country, few of them having any personal knowledge of each other, a clique? So absurd do these accusations appear to us here, that we consider it would be a waste of our time to take further notice of them.

Before concluding, I would like to caution voters against forming too high an estimation of the powers conferred by the Medical Act upon our direct representatives. Too great expectations will, I fear, only lead to disappointment. From the numerous letters you have published, and from the tenor of the addresses of some candidates, we might be led to expect the regeneration of the profession itself from the efforts of these gentlemen. But it must be remembered that the General Medical Council has authority only over education and registration. It may raise the standard of education; it may look sharply after the licensing and examining boards; and it may punish criminous persons by removing their names from the *Register*; but I do not see how it can deal with club or union practice, or interfere with quacks or unlicensed persons. These points require further legislation.—I am, yours very faithfully,

Worcester. WILLIAM STRANGE, M.D.

SIR,—I have been very much astonished to read that the meeting held in Birmingham on September 14th has been called a caucus, and that much censure has been passed upon those who were present for nominating candidates for direct representation of the profession on the General Medical Council, likewise upon the 363 members of the Committee for selecting from those candidates three gentlemen as the most eligible representatives. As a member of the Committee, I desire, most emphatically, to disclaim that the word caucus can, wit the slightest justifiability, be applied to our proceedings. I accepted membership upon the understanding that I was to have a free hand and a free tongue, and I know of no member who was biassed in favour of any would-be representative. The Committee was called together to nominate three candidates; but as only thirty-five members were present, Mr. Nicholson, of Hull, strongly opposed any selection being made then and there, and suggested that all the names which had been mentioned should be sent to each of the 363 members of the Committee, and that the three gentlemen who received a majority of the votes should become the candidates of the Committee. That has been done, and we are pledged to support Sir B. W. Foster, Mr. Wheelhouse, and Dr. Glover. I feel strongly that the course which has been adopted is a proper and constitutional one, our freedom of selection has never been interfered with, none of us have been wire-pulled; neither do we want (in fact, how can we?) to imperil the free action of any voter.

Three hundred and sixty-three medical men have, by a majority of votes, recorded their opinion that three well known gentlemen are best fitted to represent them on the Medical Council, and, because they have done so, they are told they are a caucus, and that their action is destructive of a free vote and liberty of selection. How so? Surely 363 medical men have as much right to form themselves into a Committee for the purpose of selecting, and then furthering, the election of three candidates, as a lesser or a greater number have for the purpose of furthering the interest of one candidate, the only difference, so far as I can see between these two bodies, is that the initial work of the former was more difficult, more important, more discriminating and impartial than that of the latter. In the exercise of our just rights, we intend to do our utmost to return at the head of the poll Sir B. W. Foster, Mr. Wheelhouse, and Dr. Glover, for we feel sure that, if elected, these gentlemen will be the best direct representatives the profession can have. All three are men of mark, men who have made themselves eminent by their business capabilities, by

heir thorough acquaintance with the aims, requirements, and the many new departures which the profession has long been crying out for, and because it has had no voice, its cry has never yet penetrated within the four walls of the Council Chamber of the present Medical Council. The eloquence, knowledge, and the business tact and capability possessed by Sir B. W. Foster, Mr. Wheelhouse, and Dr. Glover, point them out as the most eligible candidates, and, if elected, they will be found by the whole profession to be representative, not only direct by election, but by their consistent, fearless, and outspoken conduct.—Believe me, faithfully yours, VINCENT JACKSON.

Wolverhampton.

SIR,—In the letter you did me the favour of publishing on October 9th, I am made to speak of Mr. George Brown as the hon. secretary of the Medical Reform Association, whereas I intended to state that he was the hon. secretary of the Medical Defence Association.

I see that it is stated in the *Lancet* that the Medical Alliance *attempted* to prosecute illegal practitioners, which does not agree very well with a letter we hold from Dr. Glover, congratulating us upon the large amount of our successful prosecutions. We maintain that Dr. Glover is no friend of the general practitioners—by which we mean men who visit their patients, and supply them with medicine. Dr. Glover does not do so, and, therefore, in our estimation, cannot fairly be considered as belonging to that class of the profession. But we fully admit, and are glad to have the opportunity of saying so, that we consider him highly qualified to represent the highest class of the profession—a class already too highly represented in the Medical Council.

In our eleven years' efforts to obtain protection for the profession against illegal practice, we have had no help from Dr. Glover, nor from any other man in the field for election.—I am, Sir, your obedient servant, JOHN PAGE HENTSCH,

Hon. Sec. to the Medical Alliance Association.

4, Portland Place, Camberwell, S.E.

SIR,—Dr. T. Eyton-Jones, of North Wales, has struck a cord in his letter to you last week which I imagine, and hope, will be kept vibrating for some weeks to come, and, I anticipate, with good results. Had my humble pen the weight and authority of Dr. Jones, I would have written to you long since with the same suggestion. I now cordially endorse his view, and would beg to suggest a gentleman who was born in Wales, who served his apprenticeship in Wales, who practised for some years in Wales as a general practitioner, and who has kept up his Welsh sympathies. For many years he has had considerable experience, both as a teacher and examiner—I allude to Dr. John Williams, F.R.C.P., of University College Hospital.

There are very few general practitioners in the country who can find the time to devote to these important duties, and this fact should not be lost sight of. It will be a difficult matter for us to find a man who can fill the post as well as Dr. Williams, hence I hope all Welshmen will rally round him.—I am, your obedient servant,

Morriston. E. RICE MORGAN.

QUALIFIED MEN AND UNQUALIFIED ASSISTANTS.

SIR,—A paragraph appears in the JOURNAL of October 9th, commenting on an inquest which took place in Westminster on October 2nd, before Mr. Hicks, which contains statements which are entirely opposed to the real facts of the case, and which are calculated to mislead your readers and to damage my professional reputation. It came out during the inquest that I had seen deceased two days before his death, and prescribed for him. How, then, can you assert that I certified without having seen deceased? As to Mr. Davenport having been fined £20 for the illegal practice of medicine, such a statement is entirely false. He has, since becoming my assistant, never attempted to assume the status of a qualified man, although he has passed the Final Examination of the Royal College of Surgeons of England, both in medicine and surgery, and paid his full fee for the diploma, after an honourable career at Guy's, and is only barred from taking his diploma by not having passed in midwifery. Further, I am reported as having said that it was a common practice at hospitals for death-certificates to be given for patients whom certifiers had never seen. It is highly improbable that such a ridiculous statement would be made by any medical man, and I here most positively deny that I said anything of the kind. As to the assertion, on oath, of the hospital surgeon, who made the *post mortem* examination, that medical students never did the work of qualified men, either in or out of hospital, I should like to ask him how he reconciles it with the fact that it came out, during the cross-examination of one of the medical witnesses, that one of the students of the hospital in question had been employed by him as *locum* during his absence. I had also myself employed this same student and another from the same hospital as *locum*. Is there no *esprit de corps* among members of the Royal College of Surgeons that one of them should be so lost to the dignity and honour of the College as to endeavour to cause a student who has passed the College final, in all but midwifery, to pose before the public as a common and ignorant quack?

As to your threats of the righteous wrath of the "examining bodies," I think I can afford to disregard them, even if my offence were a real one instead of existing only in the mind of your correspondent. I may here inform you that as the jury, in spite of the marked evident endeavour on the part of the coroner to get a rider directed against myself, simply brought in a verdict of "Death from natural causes," and openly expressed their objection to having a coroner's court turned into a police court, I do not think there is much to be feared from the Public Prosecutor.—I remain, yours truly,

WALTER H. H. DAY, M.B.Trin. Coll., Toronto, M.R.C.S., etc.

MR. W. J. DAVENPORT also writes from Guy's Hospital:—In the first place, I am not covered by Dr. Day, but am acting as his *bonâ fide* assistant. In the second place, I have never been find £20 for the illegal practice of medicine, nor for anything else. May I state as briefly as possible what my position is? I have had a full curriculum at Guy's Hospital, during which time I was a pupil of my uncle, the late Sir Alexander Nisbet, M.D., Honorary Physician to the Queen, etc. I have passed the primary professional at the Royal College of Surgeons, and the final in surgery and medicine, and paid twenty guineas for the diploma of that College; have been dresser for six months at a provincial infirmary containing 200 beds, and acted as house-surgeon for one month at that infirmary during the temporary absence of the house-surgeon.

*** The inquest in question was on a case of a child treated at a dispensary in Westminster kept by Dr. Day, and at which Mr. Davenport was in attendance. The report of the inquest on which we commented appeared in the daily papers of Monday, October 4th; and the comment in our columns was based upon those reports, and those alone, and not, as Dr. Day suggests in a passage in his letter which we have omitted, upon any communication from any correspondent.

THE CHARGE OF MANSLAUGHTER AGAINST A MEDICAL ASSISTANT.

SIR,—The subjoined petition to the Home Secretary, relative to the case of John W. Irvine, L.R.C.P.& S.(Edinburgh), is now open for signature to those members of the profession who may wish to sign it. I regret the delay in this matter since the insertion in your columns of my letter of June 26th, but I can only say that it has not been caused by me. I would urge that those who wish to have their names appended should communicate with Dr. Littlejohn, of Edinburgh, as soon after October 16th as possible, seeing that there is so short a time in which to work. I should add that the memorial is under the direction of, and supported by, Dr. Littlejohn, who was asked by the Council of the Colleges of Edinburgh to inquire into the whole affair, concerning as it did, and does, the welfare of one of their licentiates.—I am, Sir, yours faithfully,

C. R. ILLINGWORTH, M.D.

"*To the Right Honourable the Secretary of State for the Home Department.*

"SIR,—We, the undersigned, practitioners of medicine and surgery, do beg to enter our most solemn protest against the manner in which John William Irvine, physician and surgeon, was tried at the Manchester Assizes in May last, found guilty of manslaughter, and sentenced to six months' imprisonment; and to submit that, in our opinion, further evidence should be brought to bear upon the case, for the ends of justice, and for the solution of the great uncertainty in which it is involved. This action on our part has been determined upon by a consideration of the following facts. Firstly, the prosecution was incomplete, in not presenting an analysis of the undoubted contents of the bottle of laudanum from which the fatal medicine was compounded. (This bottle of medicine is still in the hands of the authorities, and available for examination.) Secondly, the defence was necessarily of the most incomplete description, owing to counsel receiving his brief from the solicitor only half an hour before the trial—time quite insufficient to enable a barrister to grasp satisfactorily the facts of

a case involving questions as to the compounding of medicines and the strength of medicinal preparations.

"The 'further' evidence desired is as to the medicinal preparations of opium or morphia which must have been added to the other ingredients of the fatal mixture in order to have produced the appearances found by Mr. Thompson, the analyst, seeing that the colour of the mixture itself testifies to the presence of certainly not more than two drachms of laudanum, or of a fluid like it in colour.

"We have the honour to subscribe ourselves, Sir, your most obedient servants."

M. PASTEUR'S PROPHYLACTIC.

SIR,—I have read Mr. Horsley's letter with much interest and satisfaction. It is this kind of criticism I wish to evoke, for many others besides myself are sceptical, and, like Goethe, we ask "for more light."

1. Mr. Horsley supplies us with some information we cannot so clearly gather from Pasteur's own utterances; and, acting as a kind of interpreter, if I may so use the word, he gives us something to take a tangible hold of, as I shall presently show when I touch upon the theory or principle upon which he says M. Pasteur bases the efficacy of his prophylaxis. Mr. Horsley again assures us that the method is on its trial. M. Pasteur himself, if words have any meaning, did not think so when he gave the Academy of Sciences almost an assurance that he had discovered a method which he would dare to call perfect. I allow the widest latitude to a scientist of M. Pasteur's eminence, and give him a kind of poetic licence to alter his theories and statements. M. Pasteur has certainly altered his since he first started on this quest. Mr. Horsley assures us that control experiments have been performed. Control experiments are of different kinds. I pointed out Frisch's experiments as an example of one class of control experiments. They have turned out adverse to M. Pasteur's method, but Mr. Horsley states "they were in no sense control experiments on M. Pasteur's method." Now Frisch has been largely quoted as a strong advocate of M. Pasteur's method, and Mr. Horsley admits the value of some of his experiments, but he rejects those which do not suit his own views. As all your readers cannot refer to original papers, I may briefly summarise Frisch's observations and experiments. I throw in on Mr. Horsley's side the fact that Frisch is as strongly disposed to M. Pasteur as Mr. Horsley himself. He enjoys an equal scientific position. Frisch raised the following objections.

Before performing experiments on human beings, Frisch thought that a number of animals should be subjected to the bites of rabid animals; some of the bitten animals should receive preventive inoculations, and some not. If the method be effective, the first lot will remain healthy, and the others will die of rabies. To guard against error, Frisch went further. Believing in the activity and certainty of action of Pasteur's virus, he proposed that the virus be injected into animals, and that preventive inoculations should be made on the same animals, and he called this an experiment analogous to the case of human beings who had been bitten.

Frisch failed to understand why, in treating human beings, the rabic virus was given at first in minimal, and then in gradually increasing, doses. Now Frisch, friendly to Pasteur, proposed these control experiments. Frisch himself performed the experiments, as Mr. Horsley truly describes, coming to the conclusion after, I believe, faithfully carrying out all the details of his experiments, that, as regards rabbits and dogs, M. Pasteur's preventive inoculations cannot prevent rabies, if infection has taken place. I give this instance for what it is worth, and let your readers decide between Messrs. Horsley and Frisch. I mentioned Spitzka to show that mine was not captious criticism, and that experimentalists of some note were raising objections stronger than my own. I quoted Frisch, a friend of Pasteur's; I quoted Spitzka, a sceptic, and gave some of his experiments; Spitzka goes further than I do; on M. Pasteur's studies, he says: "Dissected by logical critics, in the manner Dulles, of Philadelphia, has followed, they appear inaccurately studied, hastily arrived at, based on insufficient premises, and in value actual fallacies." If I am sceptical, I err with very good company, as the late Dr. Guerin, Dulles, Richards, Lutaud, Frisch, Spitzka, and others, with men who, though not all sharing the same views, point out objections against this method.

2. As to M. Pasteur's theory of the action of his prophylactic, I have endeavoured to gather what it is, from M. Pasteur's published writings. "The presence or absence of the virus has clearly nothing to do with the treatment in its application by M. Pasteur," says Mr. Horsley, in his letter of October 2nd. Now, if we turn to Mr. Horsley's letter of September 18th, we find that, amongst the "facts," he says: "Dr. Dolan appears to be unaware of the fact that the first few inoculations contain very little virus.....Further, although he states that redness or swelling follows the last inoculation, he does not seem to recollect that those are the most virulent." It appears to me that, according to Mr. Horsley's own words, the presence or absence of the virus has a great deal to do with it; otherwise, why does Mr. Horsley insist on the two stages in the treatment? There is no change of front as regards the principle upon which I base M. Pasteur's treatment; and, still more, I am of opinion, admitting the theoretical principle, as detailed by Mr. Horsley, that it gives force to my objection in reference to the five injections of the boy Meister. Mr. Horsley says "he proved, in his letter of September 18th, that the virus is present in increasing strength, but only as an unavoidable adjunct." I fail to see why, if this theory is true, the ten inoculations are fixed on. In the case of the boy Meister, admitting what Mr. Horsley calls a "far-fetched hypothesis," with which he "has nothing to do," M. Pasteur must have some definite idea as to dosage, so that the rabid virus might not be able to flourish in tissues so dosed. With Meister he tried ten, or rather eleven, doses; and, I take his own statement, "five were useless." Meister was one of the test cases. To an ordinary reasoner, with Mr. Horsley's explanation, there is a relevancy in my pointing out this discrepancy. Mr. Horsley forgets that, in the BRITISH MEDICAL JOURNAL, April 24th, 1886, M. Vignal gave an analysis of M. Pasteur's researches. On the virus question, M. Vignal gives M. Pasteur's views:

"Can it be admitted that inoculation with a virus of always the same degree of virulence, produces a condition rendering the animal inoculated refractory to hydrophobia, if at each daily inoculation an increasing quantity of virus is used? This is an interpretation of the facts obtained by my experiences which I am now testing." Here it was a question of a virus. M. Vignal continues, "M. Pasteur appears more inclined to consider the bearing of the following facts. A great many microbes appear to produce certain substances which are hostile to their own development. These phenomena led M. Pasteur to consider the probability of the constituent parts of rabid virus being composed of two distinct substances, one living, capable of developing in the nervous system; another, deprived of vitality, but if present in a sufficiently large proportion, capable of arresting the development of the former."

So much for the virus. "M. Pasteur admits that this method of inoculation, as a preventive treatment for hydrophobia, may be interpreted in many ways" (BRITISH MEDICAL JOURNAL, p. 768, April 24th, 1886). Mr. Horsley again harks back to the insinuation that I do not understand M. Pasteur's principles. I have tried to do so from M. Pasteur's own words. My interpretation supposes a rational method. A virus is in the system, and a prepared *bouillon* is introduced, for a rational purpose, to cut off pabulum upon which the virus lives. We may call this by any name, but the principle remains. Hence my words, "if given to counteract a virus already in the system, the theory fails." We cannot conceive that the inoculations are used for any other purpose.

3. It is clear that M. Pasteur has had a number of persons under his care who have been bitten by rabid dogs; I mentioned the different classes who have been to him, about whom we have evidence. Those bitten by non-rabid dogs, or those licked by healthy dogs, could never contract hydrophobia. The question narrows itself down as to how many were bitten or licked by rabid dogs, and what proportion the deaths bear to this number, and then a comparison must be made with other data, and other statistics. I am well aware of the difficulties attending such a computation, and how statistics of this kind may be made to work two ways. How Mr. Horsley could come to the conclusion that I overlooked the possibility of the communication of rabies by licking, I fail to see. I was referring to such cases as are alluded to in the following extract, taken from the *Birmingham Medical Review*, September, 1886. Dr. Saundby is the editor; his name is sufficiently well known to entitle it to some consideration. The article is headed "Pasteur and Rabies."

"Here is an amusing instance of Pasteur's carelessness of the real nature of his patients' injuries. Mademoiselle X's pet dog dies of apparently some wasting illness. She remembers that during the last days of its life it had not seldom licked her hands and face. She goes at once to the Ecole Normale and is inoculated. Hearing this, her groom imitates her prudent action, for he also remembered to have been licked, and naturally concluded he must likewise be affected. Such cases appear to form a considerable proportion of the 1,500 inoculated patients; for the presiding genius in the Rue d'Ulm has no love for historical research. Any contribution of humanity is thankfully received."

It is fortunate that we have on record only comparatively few cases of hydrophobia caused by licking of a rabid animal.

4. Villemin's case illustrates the difficulty of arriving at facts. It is not by any means yet disposed of as to the accuracy of his deductions. For instance, Wooton (*Experimental Researches on Tuberculosis and Scrofula*, 1886, Dublin, Falconer, p. 10) asks: "Can tuberculosis be induced by mechanically irritating any organ or part of the body?" He answers, after detailing methods, "Yes." Of course, this leads us off into a big question of what is tuberculosis. I regret, owing to my not seeing proof of last letter in time, I was unable to put within inverted commas a quotation from Bristowe (Edition 1880, *The Theory and Practice of Medicine*). Villemin was brought in as an illustration—a weak one, it may be, but still only an illustration.

In conclusion, I may say I regret to find that my letters have been perverted to uses with which I have not the slightest sympathy, and I protest against the use of my name. I have no desire to discredit M. Pasteur, even if I had the power. M. Pasteur does not, however, require to be hedged round against the rude winds of criticism, and treated as an exotic; the more criticism he is exposed to, if he is right, the more will he shine. M. Pasteur himself has carried on in his time numerous controversies, and I am certain cannot object to being himself exposed to criticism. I am still more anxious, for the credit of scientific medicine, not to have a system of treatment adopted which our reason does not enable us to follow: I think that any system should be comprehended by the masses of the profession, and should not depend on what might be thought by many "a far-fetched hypothesis."—I remain, yours, etc.,

T. M. DOLAN.

CONSULTANTS AND GENERAL PRACTITIONERS.

SIR,—Your correspondent "An Assistant Hospital Physician," whose letter in your issue of September 4th I have only just seen, is apparently a good all-round man; but, on the evidence of the cases recorded, he is not a consultant, as this term is understood in London. Any man who can get on a hospital staff is free to do so. Being there, he must justify his title to the privileges of the honourable class he has entered by practising only as a pure physician, a pure surgeon, an obstetric, or in one of the more limited special subjects. As it is, your correspondent is to some extent a general practitioner in the disguise of a consultant—an anomalous position which those in ordinary general practice rightly, and on high grounds, resent, because the so-called consultant has formed a false estimate both of himself and of the dignity of his calling in undertaking a too various range of subjects, the demands of which his intellect cannot adequately fulfil.

The very breadth of our work prevents us from mastering all our cases. We therefore suffer no loss of dignity in employing those who, by a process of specialisation, have higher knowledge and insight. As a matter of fact, I think the request for a consultation comes but too seldom from the practitioner in attendance. However this may be, he will do justice to his patient by selecting consultants on the lines indicated above.—I am, Sir, yours faithfully,

Stroud Green, N. T. H. SAWTELL, M.D.

THE DORUNDA "CHOLERA" CASES.

SIR,—My attention has been directed to a paper in the JOURNAL of September 25th, wherein Surgeon-General W. R. Cornish, F.R.C.S., etc., endeavours, laboriously I think, to prove that the cholera cases (if they were cholera) on board the *Dorunda* steamer, from Batavia to Brisbane, were due to the steamer's calling at Batavia for coal. Mr. Cornish quotes a portion of my letter to the *Brisbane Courier*, to prove that cholera existed in Java two months before the steamer called, making, I consider, a distortion of what I said. My letter was based on these facts:—That I had lived in Batavia for six months, and was there when the *Dorunda* called. That there are a million inhabitants in Batavia, and over six thousand Europeans. That during that time, as far as I know, there were only three cases of cholera reported amongst the population. That there was absolutely no cholera in Batavia at the time the *Dorunda* called there, and among the twenty-seven million inhabitants of the island only a few cases were reported along the coast, and further, that the Queensland authorities were the laughing-stock of the whole European community, and especially, as far as I could ascertain in conversation, of the medical portion thereof. How far, therefore, Mr. Cornish was justified in using my letter to prove that cholera existed in Batavia I leave you, Sir, to judge.

But my object in writing this letter is to say that if, instead of collecting a mass of evidence to prove a pre-conceived idea, Mr. Cornish had observed this fact, that the first "unmistakable seizure with cholera" (BRITISH MEDICAL JOURNAL, p. 578), occurred on December 9th, eleven days after the ship left Batavia, but only two days after leaving Thursday Island, he would have been prepared for a different conclusion; and I now beg your leave, Sir, to inform Mr. Cornish that the Governor of Thursday Island admitted to Captain Phillips of the *Merkara*, that a case, or cases, similar to the cases on the *Dorunda*, had occurred at Thursday Island a day or two before the *Dorunda* arrived from Batavia, and that, in Captain Phillips's opinion the disease was probably brought on board at that place. I am not aware that this has been made public before; but I do think, Sir, that it is a pity you should aid in the perpetration of what, to all the inhabitants of East India, seems a meaningless scare, without foundation, and so prevent passengers from visiting one of the most beautiful places in the world.

In conclusion, may I ask you, Sir, what is the value of evidence of this "specialised" character, when so many hundreds of vessels are yearly leaving Batavia for Dutch and British ports, and this solitary example can only be quoted as to the necessity of such quarantine regulations as those to which the Queensland authorities subjected the passengers from Batavia. I have the deepest reverence for the results of scientific investigation, and often sit at the feet of the doctors with lively satisfaction; but the disadvantage of casuistry is that it often defeats itself.—I am, Sir, etc.,

E. C. SPICER, M.A., late British Chaplain, Batavia.

St. Agnes, Truro, Cornwall.

REMOVAL OF SUPERFLUOUS HAIRS BY ELECTROLYSIS.

SIR,—I have received a number of letters relative to the above operation. I may say, for the information of those who wish to pursue this subject, that a Stohrer's battery of twenty cells is the most useful. It is portable, easily put in and out of action, and, when properly charged, will remain in working order for months. From six to ten of these cells are sufficient to destroy the papilla. I use a No. 14 needle, which answers admirably, and, if kept clean, will last any length of time. It is absolutely necessary to destroy the papilla, or the hair will return.—I am, sir, faithfully yours,

41, Newhall Street, Birmingham. GILBERT SMITH.

DIRECT REPRESENTATION AND THE TITLE OF DOCTOR.

SIR,—I have noted with much surprise the absence of any correspondence recently in the JOURNAL on the subject of the title of doctor.

Now or never is surely the time for the advocates of conferring it upon all qualified and registered medical men, to come forward and obtain from candidates for the direct representation of the general practitioner, their promise to support this act of justice.

Let me say that I would not for a moment interfere with the just monopoly of graduates of universities of their M.D. or M.B., which they would still continue to affix to their names; but I do contend that we should be in legal possession of this means of indicating to the public that we are qualified medical practitioners.

By the regulations of the new Medical Act, the quack is subject to a penalty if he assumes the name of doctor, but the anomaly is that at present the "physician and surgeon" has no claim to it either. I call upon all those who have written in favour of this reform, and their sympathisers, to insist upon giving their votes only to those candidates who will promise to support the measure. In this way the inauguration of the direct representation of the general practitioner in the Medical Council will be fitly celebrated.—Yours truly,

W. PERRIN BROWN, Physician and Surgeon.

Orrell House, Sowerby Bridge.

ABDOMINAL PALPATION.

SIR,—May I trouble you once more with a communication on the subject of "Abdominal Palpation in Obstetrics," as I find my previous letter has been commented on in the JOURNAL of September 25th? The only point I wish to refer to is my diagnosis.

The patient had an abdominal swelling about equal in size to that of pregnancy at full term, and the point was, "Is she pregnant or not?" On account of scarlatina occurring in the cottage hospital, the young woman had to be disposed of, as the hospital was to be closed for cleaning, etc. In case of pregnancy, she would most probably have come under my care at the workhouse; in case of non-pregnancy, she would be sent, as she was, to the Hull Royal Infirmary.

On abdominal examination, I was perfectly satisfied there was no pregnancy, and it scarcely required the verification got from vaginal examination. Furthermore, I thought the physical signs pointed to

multilocular cyst of the left ovary; at any rate, I thought I was right in diagnosing ovarian disease.

I heard first, some time after, that a pint of fluid had been removed by aspiration, and, in my own mind, I thought this confirmed my opinion, inasmuch as I supposed a division of a multilocular cyst had been tapped.

The next news I got, and only at third hand, for my informant was not present at the necropsy, was that the patient was dead, that the ovaries were diseased, and that there was extensive peritonitis. Such being the case, I thought I was right in my diagnosis, and said so in my letter. However, I find I was not altogether right, for though the ovaries were in a state of caseous degeneration, there was no cyst.

There is another useful lesson to be derived from this case, and I think it is more useful than that deduced by Dr. Wood. It is this: that abdominal palpation is a most excellent means of diagnosis in all, and especially in advanced, cases of abdominal tumours simulating pregnancy; and I would strongly recommend it to Dr. Wood, and to any others who may be in doubt in a similar case. They will find it fully and admirably set forth in the JOURNAL of July 10th, and to this I would earnestly direct their attention.—Yours faithfully,

A. T. BRAND, M.D.

Driffield.

WINE-DINNERS.

SIR,—I am annually invited to attend the Old Students' Dinner of my Alma Mater. The charge is one guinea for each person, inclusive of wine. Being a total abstainer, and conscientiously opposed to assisting my neighbour to intoxicate himself to any degree, I am obliged to refuse to pay for intoxicating liquor which is supplied *ad libitum* for the guinea. Hence I am shut out from the feast altogether, and deprived of the pleasure of renewing old acquaintances.

But, apart from personal considerations, I wish to enter a protest. It seems to me that, by countenancing a guinea dinner, including wine, since it is well known that half that sum will amply suffice to pay for a most luxurious feast, exclusive of wine, and leave a handsome margin of profit, the medical profession publicly declares that half a guinea's worth of intoxicating liquor is a proper average quantity for an adult man to consume at one meal. Shades of Anstie and Parkes! What think ye of that? Such an arrangement is a direct encouragement to excess, and this view of it must, I think, compel reform. The medical profession is bound to set a better example. The annual dinner of the Association is differently arranged; and though I think every wine-drinker should be left to pay for whatever he orders, yet the very least I can ask for is that a separate charge shall be made to those who desire to take intoxicants, and that abstainers shall be able to join the feast without complicity in the curse of the country. Please lend this reform your powerful aid.—Yours faithfully,

NEPHALIST.

NAVAL AND MILITARY MEDICAL SERVICES.

VOLUNTEER AMBULANCE DEPARTMENT.

A CLASS, of forty-one members of various metropolitan corps, which has been under the instruction of Acting-Surgeon Pearse, Artists' Rifle Volunteers, was inspected at the Guildhall on October 6th, by Surgeon Beevor, M.B., of the Scots Guards. A large number of metropolitan corps were represented in the ranks, comprising, among others, the 2nd Middlesex Artillery, 2nd V.B. West Surrey, 1st Surrey, 1st V.B. Royal Fusiliers, 4th West Surrey, 5th (West) Middlesex, 12th Middlesex (Civil Service), 21st Middlesex, 1st Essex, Artists', London Rifle Brigade, 3rd Middlesex Artillery, 2nd Tower Hamlets, City of London Artillery, London Irish, 1st West Surrey, Victoria's, St. George's, and the 2nd West Kent, the latter presenting a smart little detachment not trained by the leader of the class. Among those present were Surgeon-Major Purvis, 2nd West Kent, besides Surgeon Pearse and Lieutenant Maclure; Sergeant-Instructor Small of the Medical Staff Corps, and Mr. Vallantine, the Assistant Honorary Secretary of the Department. All the different forms of drill were gone through; and at the close Surgeon Beevor, addressing the volunteers, said he had never seen a class drill so well, for they not only understood the drill, but had learned to apply their knowledge to the surrounding circumstances, so that when they met with obstacles when carrying the wounded, they were able to surmount them in a most able manner.

Lieutenant Maclure expressed his satisfaction at hearing such words of commendation from the inspecting officer.

It was announced that a new class would commence drill in December, at the Guildhall, under Surgeon Pearse.

BRIGADE-SURGEONS IN INDIA.

WE invite the attention of our military medical readers to the subjoined letter, and we hope the authorities in the India Office will see the reasonableness of conceding the point at issue between them and Brigade-Surgeons serving in India. There is not, and never has been, any disposition on the part of the local Government of India to indulge in extravagance in the pay of army medical officers. When the Governor-General of India in Council, as in this case, sees that justice and sound policy alike call for concession, and when concession is not only supported by the unanimous opinion of the press of India, but has also the sympathy of all branches of the public service, the Secretary of State may well defer to such a concensus of opinion, and withdraw opposition to a just demand.

"Sir,—With reference to the movement now on foot to bring to the notice of the Secretary of State the claims of Brigade-Surgeons serving in India, permit me to say that printed 'statements of claims and suggestions for redress' are available, and copies may be obtained by application to Holt, Lawrie, and Co., the departmental agents.

"Brigade-Surgeons serving in England, who may have Parliamentary interest, are requested to kindly obtain one of the printed statements with a view to its being laid before the Secretary of State for India. It is well known—in fact is on official record—that the Indian Government has not only not opposed the grant of a staff-allowance to Brigade-Surgeons (a simple act of justice), but actually recommended it. Unfortunately, the Secretary of State took an adverse view, no doubt on insufficient data, and refused his sanction.

"The present movement is practically unanimous, and nearly every Brigade-Surgeon in India is using his influence to get his position righted. The grant of a staff-allowance would be the barest act of justice, but in addition the performance of routine duties, such as taking charge of troops by rail, frequently under command of a subaltern, is pointed to as a contravention of the Warrant of 1879.

"During last cold season, Brigade-Surgeons were several times employed in this manner, and when respectful protests were made, they were not listened to. The presumption is that it is necessary that Brigade-Surgeons should be 'available' for duty with troops to entitle them to free passage by rail, but this point could easily be settled by placing them on the same footing when travelling as Deputy Surgeons-General. The Indian press has expressed itself very strongly on the whole subject; and even the *Indian Medical Gazette*, a paper subsidised by Government, has taken up the case of the Brigade-Surgeons with no uncertain sound.

"As a matter of fact, promotion to the rank of Brigade-Surgeon in India is a positive injury, as the Brigade-Surgeon is called on to perform far harder work than the rejected Surgeon-Major, while at the same time he is debarred by the nature of his duties from all extra appointments and private practice, and seldom or ever gets charge of a hill-depôt or station-hospital in the Himalayas.

"The feeling of disgust and irritation is intense, and every branch of the army sympathises with the sufferers. The matter is now being taken up in earnest, and with your powerful aid we hope to see it carried to a successful termination. X."

ACTING VOLUNTEER MEDICAL OFFICERS.

INTENDING ACTING-SURGEON desires answers to the following questions.

1. Can an acting-surgeon pass the proficiency examination? 2. What steps must he take to do so? 3. Can he go for training to Aldershot, and how is that accomplished, that is, to whom must application be made? 4. Does he, when undergoing such training, receive any money allowance? 5. Do all medical officers of recent appointment wear the Volunteer Medical Staff Corps uniform? Can they do so? 6. What rank does an acting-surgeon hold? 7. Are there, or will there be, Regulations published?

THE NAVY.

SURGEON A. W. RUSSELL and W. E. BRETON have been promoted to be Staff-Surgeons, they having served twelve years as Surgeons. The former is reappointed to the *Hannibal*, the latter to the *Kingfisher*.

The following appointments have been made at the Admiralty during the past week: W. L. CHUTE, to be Surgeon and Agent at Sandgate; Deputy Inspector-General DUNCAN HILSTON, to Haslar Hospital; C. C. GODDING, Staff-Surgeon, to the *Britannia*; J. E. LANGAN, to be Surgeon and Agent at Portnoo and Lochrus.

The undermentioned are appointed to do duty with the troops proceeding to England in H.M.'s troopship as stated:—Brigade-Surgeon R. W. Berkeley, Surgeon-Major J. R. Rahilly, Surgeon E. North, and Surgeon J. Hickman, Bengal Presidency, on troopship *Euphrates*, sailing on October 16th. Surgeon-Major I. Hoysted, Surgeon-Major C. J. L. Bushe, M.B., and Surgeon A. P. O'Connor, Bengal Presidency, on troopship *Serapis*, sailing on October 30th. Brigade-Surgeon J. Jameson, M.D., Surgeon-Major P. L. Kilroy, Surgeon H. J. R. Moberly, Madras Presidency; and F. J. Lambkin, Bengal Presidency, on troopship *Crocodile*, sailing on November 18th. Brigade-Surgeon J. Mackenzie, Madras Presi-

dency, Surgeon-Major J. R. Murray, M.D., and Surgeon O. Todd, M.B., Bengal Presidency, on troopship *Jumna*, sailing on November 20th.

In addition to those given in the preceding paragraph, the following, serving in the Bengal command, whose tour of foreign service will expire during the trooping season of 1886-7, will proceed to England during the ensuing trooping season, and will be detailed by the Surgeon-General, H.M.'s forces, for duty with troops embarking in the several troopships :—Brigade-Surgeons H. F. Paterson, M.D., J. Inkson, M.D. ; Surgeon-Majors A. Brebner, M.D., D.C. Grosse, J. O'Reilly, M.B., A. A. Macrobin, M.D., H. Stannard (in exchange with Surgeon-Major R. Blood, M.D.), A. Kirwan ; Surgeons J. F. Williamson, M.B. (in exchange with Surgeon A. Sharpe, M.D.), J. G. W. Crofts, S. C. B. Robinson, W. J. Baker, H. K. Allport, M.D., S. Townsend, M.D., J. Gibson, M.B., and G. T. H. Thomas (in exchange with Surgeon T. P. Woodhouse).

MEDICAL STAFF.

Surgeon-Major E. F. Boult has retired upon temporary half-pay ; his commissions are dated : Assistant-Surgeon, March 31st, 1866 ; Surgeon, March 1st, 1873 ; and Surgeon-Major, March 31st, 1878. Surgeon-Major Bolt served in the recent campaign in the Eastern Soudan, and has the medal and clasp therefor.

Surgeon H. E. B. Flanagan, serving in the Madras Command, has passed the examination in Hindustani.

Brigade-Surgeon John Mackenzie, M.D., doing duty in the Bangalore Division and Ceded Districts, Madras, is ordered to do general duty in the Eastern District.

Deputy Surgeon-General W. L. Farmer died at Worcester on the 16th ultimo. He entered the service April 24th, 1855 ; became Surgeon May 6th, 1868 ; Surgeon-Major March 1st, 1873 ; Brigade-Surgeon April 25th, 1881 ; and retired, with the rank of Deputy Surgeon-General, October 15th, 1881. He does not appear to have had personal experience of war.

Surgeon G. S. O'Grady died at Cork on the 8th ultimo, at the early age of 32. His commission as Surgeon bore date July 30th, 1881, since which time he has been engaged in Ireland chiefly, but partly in British Honduras.

THE INDIAN MEDICAL SERVICE.

Surgeon C. Mallins, M.B., Madras Establishment, medical officer of the 1st Infantry, Hyderabad Contingent, is appointed to the medical charge of the 1st Cavalry of the same contingent, *vice* Brigade-Surgeon G. D. Riddell, whose services have been replaced at the disposal of the Government of Madras. Surgeon F. J. Doyle, who has been officiating as medical officer to the 3rd Infantry Hyderabad Contingent, has taken Surgeon Mallins's place as medical officer to the 1st Infantry.

Deputy Surgeon-General John Brake, of the Bengal Establishment, has retired from the service, which he entered January 24th, 1855. He served during the Indian mutiny in 1857-59, and was at the siege of Delhi, in the operations in Oude, at the action of Biswah, the pursuit of Ferozeshah, and the operations in Bundelcund ; he was mentioned in despatches, received the thanks of the Government of India, and was granted the Indian mutiny medal.

Surgeon-Major J. B. Eaton, M.B., Bombay Establishment, officiating assistant civil surgeon, Poona, is directed to officiate as Staff-Surgeon at Poona, in addition to his own duties, *vice* Surgeon G. H. Bull, M.D, who reverts to his substantive appointment in the 1st Lancers on the departure of that regiment from Poona.

Surgeon C. Monks, Bombay Establishment, has been permitted to return to duty.

Surgeon G. H. Baker, Bengal Establishment, is appointed to the officiating medical charge of the 2nd Battalion, 2nd Goorkhas, *vice* Surgeon G. Bomford, M.D., temporarily transferred to civil employ.

Surgeon J. A. Nelis, M.B., Bengal Establishment, is appointed Medical Officer to the 5th Goorkhas, in the place of Brigade-Surgeon G. Farrell, appointed Principal Medical Officer to the Burmah Field Force.

The services of Surgeon-Major E. Levinge, Madras Establishment, are temporarily replaced at the disposal of the Commander-in-Chief.

Surgeon-Major C. Sibthorpe, Madras Establishment, is appointed to the medical charge of the army head-quarters while in Burmah.

The undermentioned gentlemen, all of the Bengal Establishment, have been granted leave of absence, on medical certificate, for the periods specified : Surgeon J. G. Hancock, Medical Officer to the 5th Punjab Cavalry, for 182 days ; Brigade-Surgeon H. Cayley, for three months in extension ; Surgeon-Major W. Finden, for six months in extension.

Surgeon-Major W. Nolan, M.D., Bombay Establishment, Superintendent of the Lunatic Asylum at Colaba, is allowed furlough to Europe for one year on medical certificate.

Mr. A. J. Jefferson, M.B., is appointed Acting Surgeon to the 1st Cheshire and Carnarvon Artillery Volunteers.

Acting Surgeon George Wilson, 2nd Volunteer Battalion of the Royal Warwickshire Regiment (late the 2nd Warwick Volunteers), has resigned his appointment ; his commission dated from April 19th, 1876, but he did not join the 2nd Warwick till the 1st October following.

MEDICO-LEGAL AND MEDICO-ETHICAL.

BONESETTER *v.* REGULAR PRACTITIONER.

A decision recently given in the Cockermouth County Court, by His Honour Judge Ingham, is one which, if followed, would have a serious effect on the medical profession. The facts, shortly stated, seem to be as follows. In June, 1884, Mr. Nicholson, who is a solicitor, met with an accident, which injured his ankle, and called in Mr. W. H. Spurgin, a surgeon, who had previously attended him. Mr. Spurgin and his qualified assistant, Mr. Moule, pronounced the injury to be a sprained ankle, and treated Mr. Nicholson accordingly ; but he did not recover as quickly as he thought he ought, and, at the end of a fortnight, dispensed with their services, putting himself in the hands of a bonesetter, named Wilson. He pronounced the ankle to be dislocated ; and, according to his own statement, and that of Mr. Nicholson, set it, and shortly afterwards Mr. Nicholson became better, and was able to use his foot, which previously he had been unable to do. After his recovery, he neglected to settle Mr. Spurgin's account for professional services, not only in respect of the ankle, but also for other matters. At last Mr. Spurgin brought an action in the County Court for £13 8s., the total amount of his claim, £4 13s. only being for attendance on the ankle ; Mr. Nicholson then for the first time set up the defence that Mr. Spurgin had been so unskilful that he was not entitled to payment for his services, and also counter-claimed for £50 damages, which he alleged he had sustained by reason of wrong treatment.

The case was heard in July last ; and after hearing the evidence of Mr. Nicholson and Mr. Wilson, and also of Mr. Spurgin and his assistant, who swore the injury was a sprain, Judge Ingham reserved his judgment. This he gave, on September 29th, against Mr. Spurgin, holding that the bonesetter was right in saying that the injury was a dislocation, and that Mr. Spurgin ought to have discovered it, and treated Mr. Nicholson for it. We give the concluding words of the judgment, as they appear in the report before us. The judge says : "Without putting this as a case of pure ignorance, which I do not do, I think there has been such a degree of carelessness in not making a more careful examination of the part affected, as amounts to absolute negligence, and so disentitles the plaintiff from recovering his charges ; and my verdict must be for the defendant, with costs. As to the counter-claim, I enter a nonsuit, with costs, believing that it would not have been set up, providing the plaintiff had not brought this action."

It is apparent that the judge here contradicts himself ; for he holds that Mr. Nicholson has failed to establish his counter-claim, although he is excused from paying Mr. Spurgin's bill on the ground of his negligence. The law is clear that a medical man is liable to pay damages for gross carelessness and unskilfulness in his treatment of a patient. Judge Ingham decided that Mr. Spurgin had been negligent, but yet that Mr. Nicholson was not entitled to any damages for having been laid up and in pain for a fortnight. We suppose Mr. Spurgin ought not to complain of the mistake, as, if the judge had been logical, he might have been ordered to pay damages, besides failing to obtain payment of his bill. As it is, the decision, being self-contradictory, loses much of its weight, and the finding that Mr. Spurgin was negligent is deprived of its sting. A particular judge has, on a scientific question, chosen to rely on the evidence of an unqualified bonesetter and his patient, a solicitor, rather than on that of two duly qualified medical men. Like other men, county court judges are fallible—some of them very much so—and the judge in question has given a decision of the correctness of which he himself had evidently great doubt. Whether any superiority on the part of the defendant's advocate over the plaintiff's, either in professional skill or in favour with the court, led to the result, we cannot, from the materials before us, form an opinion. The judge must somehow have got a wrong appreciation of the facts, as he deprived Mr. Spurgin, not only of his fees for attending to the ankle, but also of the rest of his claim, which was for other matters totally unconnected with it. His decision, however wrong though it appears to be, cannot be impugned. There is no right of appeal from county courts, where the amount claimed, as in this case, is under £20 ; and even if the amount had been larger, it would have been useless to appeal against a decision of fact turning, as this did, on the credence given to evidence which undoubtedly was legally admissible. Members of the medical profession and most lawyers would probably not have attached much weight to the opinion of an unqualified bonesetter ; and the decision of Judge Ingham is not likely to be followed.

PROFESSIONAL CONDUCT.

B. writes : A. is called to attend at a house in the absence of B., who has been previously sent for and failed to come. A. knows that B. is the usual medica[l]

attendant at the house, but is not told at the time that B. had been previously sent for. Is A. bound to inquire why he was sent for, and, before agreeing to continue his attendance, what should be his conduct towards B.?

A. and B. live several miles apart, but have always been on friendly terms for many years.

*** Although there is not, so far as we are aware, any specially defined rule by which a practitioner "is bound to inquire why he was sent for," it is usual and, we think, well to do so; in regard to the case in question, with his knowledge that "B." was the ordinary medical attendant, it was, in our opinion, ethically incumbent upon "A." to do so, and to have acted in accord with the principle laid down in the following rule (7), extracted from the *Code of Medical Ethics*, page 69. "When a practitioner is called to an urgent case, either of sudden or other illness, accident or injury, in a family usually attended by another, he should (unless his further attendance in consultation be desired), when the emergency is provided for, or, on the arrival of the attendant in ordinary, resign the case to the latter; but he is entitled to charge the family for his services."

LIABILITY OF RAILWAY COMPANIES FOR ATTENDANCE IN ACCIDENTS.

F.R.C.S., at the request of the station-master, attended and treated a railway labourer, who sustained a fracture of the humerus while following his employment. The station-master has printed instructions to inform a medical man sent for under such circumstances that the Company will only be responsible to pay for the first attendance. In this instance, the railway company refused to pay anything.

*** Attendance having been given at the station-master's request, his employers would certainly seem to be liable. The refusal to pay dates back ten months, and the claim, therefore, is open to the objection of being somewhat stale. If proceedings are taken, there should be no further delay. It would be well, before taking out plaint in the county court, to consult a respectable solicitor, and show him all the correspondence which has passed.

ATTENDANCE ON SCHOOLBOYS.

W. ASKS advice as to how he ought to act in these circumstances. Dr. X. is the usual attendant of a certain school. He was away for his holiday, leaving a partner. The master called, and requested W. to attend a boy with acute illness, saying he had not confidence in the partner. The boy was convalescent by the time Dr. X. returned. It may be assumed that this boy had not been ill before. Dr. X. and W. are friendly but not intimate. Ought W. to charge and to pocket the fees, or ought he to place his visits to the credit of Dr. X.

*** In reply to our correspondent's request for advice on the exceptional point involved in the case submitted, we would refer him to the following rules 6 and 7, which will be found in the *Code of Medical Ethics*, second edition, ch. ii, sect. 5, page 69, the principle laid down in which is, in our opinion, justly applicable to the incident in question. "6. When a practitioner is ill or absent from home, and the patient wishes to have a medical man of his own choice rather than the officiating friend or *locum tenens*, the practitioner so selected should act in accordance with the following rule. 7. When a practitioner is called to an urgent case, either of sudden or other illness, accident or injury, in a family usually attended by another, he should (unless his further attendance in consultation be desired), when the emergency is provided for, or on the arrival of the attendant in ordinary, resign the case to the latter; but he is entitled to charge the family for his services."

MR. MCLEAN.—The title of C.M. (Master of Surgery) granted, as we assume, by the University of Edinburgh, being a registrable qualification under the Act of 1858, would allow the holder to place the word "Surgeon" after his name, on a plate or otherwise, in any part of the United Kingdom or Ireland, without risk of being compelled to remove the same. He certainly would not be liable to any penalty under the above Act (see Section 40) for assuming the title, as he is justified in doing so. Under Section 31 of the Act of 1858 he is only strictly entitled to practise and recover charges in respect of any qualification actually registered with the Medical Council; but our opinion is, that this section would not enable any person to require him to remove a description of himself, which is true in fact.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF DURHAM.

FACULTY OF MEDICINE. (IMPORTANT NOTICE.)—The Senate has now instituted a new degree of Bachelor of Surgery (B.S.), the examination for which will be held together with that for the degree of Bachelor in Medicine, and will comprise, in addition to the surgical part of the examination for the degree of Bachelor in Medicine, a practical examination in surgical operations, and in the use of surgical instruments. Candidates must produce certificates of attendance on a course of operative surgery and on a course of regional anatomy, in addition to the certificates required for the degree of Bachelor in Medicine.

For the degree of Master in Surgery (M.S.), candidates must be of not less than 24 years of age, and must have obtained the degree of Bachelor in Surgery, above-named, and must have been engaged for a period of at least two years subsequently to the date of acquirement of that degree in attendance on the practice of a recognised hospital, or in the Services, or in medical or surgical practice. The subjects of examination will be surgery, surgical pathology, surgical anatomy, surgical operations, and clinical surgery.

The Senate has also instituted a Licence in Sanitary Science (L.S.Sc.), every candidate for which at the date of examination must be a registered medical practitioner, and must produce certificates of attendance on certain courses of instruction during a year of professional study at the University of Durham College of Medicine. It is not necessary that this year of professional study should be distinct from that required in the case of a candidate for the degree of Bachelor in Medicine. The examination will comprise sanitary chemistry and physics, sanitary legislation, vital statistics, meteorology with climatology, etc., sanitary medicine and practical hygiene, and will be divided into written, practical, and *vivâ voce* parts.

The following regulations are now in force, as applying to candidates for the degree of Bachelor in Medicine.

Candidates who have completed part of their curriculum elsewhere, may pass the first and second examinations previously to entering at Newcastle-upon-Tyne, and are recommended to commence their year of residence at Newcastle-upon-Tyne at the beginning of the winter session. Candidates will be admitted to each of these examinations, after duly certified attendance at a recognised medical school on courses of instruction in the various subjects of the examinations, as set forth in the schedules of certificates issued by the University. These may be obtained on application to the Registrar of the University of Durham College of Medicine.

Each examination must be passed before the next can be proceeded with, and each must be passed in its entirety, except the first examination, which may be taken in two parts, at different times, one part comprising elementary anatomy and elementary physiology, and the other part chemistry with chemical physics, and botany with medical botany. Failure in one of the subjects comprised in either part of this examination will entail rejection in that part.

A candidate who has passed the first examination of the Conjoint Board in England of the Royal College of Physicians of London and the Royal College of Surgeons of England, will be exempt from the first examination of the University of Durham, except in the subjects of chemistry with chemical physics, and botany with medical botany, on which he will be examined.

A candidate who has passed the first and second examinations of the University, will be exempt from the first and second examinations of the Conjoint Board in England, and will be entitled to present himself for the final examination of the Board on the completion of the necessary curriculum.

Candidates who hold a qualification from a recognised Licensing Board in the United Kingdom, at the date of entry for the first examination for the degrees in medicine, are in every case required to pass in chemistry with chemical physics; and also required to pass botany with medical botany, if they have not previously passed in that subject at one or other of their examinations for qualification; but they are exempt from examination in elementary anatomy and physiology. All candidates for the first examination for the degrees in medicine, whether exempt from a portion of it or not, are required to pay the full fee, £5. The dates of the examinations will be as follows; namely, the first examination for the degree of Bachelor in Medicine will be commenced on April 18th, 1887, and again on September 19th, 1887. The second examination will be commenced on April 25th, 1887, and again on September 26th, 1887. The third examination will be commenced on December 6th, 1886, and again on June 13th, 1887. The examination for the degree of Bachelor in Surgery will be commenced on the same date as the third examination for the degree of Bachelor in Medicine. The examination for the licence in sanitary science will be commenced on April 25th, 1887, and again on September 26th, 1887.

Calendars of the University of Durham College of Medicine, and all information in reference to the examinations, may be obtained by application to the Registrar of the College.

OWENS COLLEGE, MANCHESTER.

BISHOP BERKELEY FELLOWSHIPS.—Two Fellowships are offered for award in December next, and applications must be sent in to the Registrar of the College on or before November 15th. The following are extracts from the conditions. The candidate must give evidence of having received a sound and systematic education either in literature or in science, such as the possession of a degree of an English university, or a certificate from the authorities of an English school of medicine or science of good repute, showing that he has passed through his curriculum with distinction, or in default thereof such

other evidence as shall be satisfactory to the Council of the College that he is qualified to prosecute some special study or investigation. The holder of the Fellowship is expected before the close of the year to give evidence of progress by the preparation of a thesis, the delivery of a lecture, the completion of some research, or in some other method. The value of the Fellowship is £100 for one year, but the Fellow may be re-appointed for a second year. Previous to the present year, the Fellowships have only been awarded in certain literary and scientific subjects, but a new departure has this year been made, and candidates are invited to apply in any of the following subjects in addition to those previously adopted, namely, physiology, pathology, and pharmacology, the aim being to encourage young and promising medical men to the devotion of a year or two to the scientific study of one of these branches of their profession. Good work has already been accomplished in the arts and science subjects.

Doubtless the opportunities offered for studying under such distinguished professors as Dr. Dreschfeld for pathology, Dr. Leech for pharmacology, and Dr. Stirling for Physiology, will lead to a number of duly qualified medical candidates presenting themselves for the competition.

Further details will be seen in our advertising columns.

UNIVERSITY OF ABERDEEN.

THE University Court of Aberdeen, on Friday, October 8th, appointed the following six gentlemen to be extra Examiners in Medicine in the University:—Dr. J. Macdonald Brown, Edinburgh; Dr. W. D. Halliburton, London; Dr. A. D. Leith Napier, Dunbar; Dr. R. W. Philip, Edinburgh; Dr. W. R. Smith, London; Dr. Fras. Warner, London.

OBITUARY.

MR. BENJAMIN BOOTHROYD, M.R.C.S., L.S.A.

THE intelligence of the death of Mr. Benjamin Boothroyd, M.R.C.S., of Hanley, and an alderman and Justice of the Peace for that borough, at an advanced age, will be received with regret by his very numerous circle of friends. Mr Boothroyd, who came of a Lincolnshire family, was born at Donington, and at a comparatively early age was apprenticed to Dr. Cammack, of Spalding, after which he went to Guy's Hospital, London, to finish his professional education. He became M.R.C.S. England in 1831; and in the year following took up his abode in Hanley.

Very shortly after settling down in the town, he began to identify himself with the movements then in progress for the moral and social improvement of the inhabitants; and this interest in the people and the town of his adoption has been evidenced in a remarkable degree throughout his long career. For his encouragement of and active participation in those measures, he will be long and honourably remembered. He was a member of the old Highway Board and of the Market Trusts, being the chairman of the latter body before the incorporation of the town for which he laboured. For many years he had been the chairman of the Sanitary Committee of the Town Council, and was such up to the time of his death. He took a prominent part in connection with local Bills, and was likewise a member of most of the principal committees of the Council. He was invited, on more than one occasion, to accept the office of mayor, though on only one occasion, namely, in 1861, was he induced to accept that office. He was made a borough magistrate in 1865. Mr. Boothroyd will also be remembered for the part which he took in connection with the establishment of the joint hospital at Bucknall.

Mr. Boothroyd was never married; he led a quiet and unostentatious life, and will be much missed in the town with whose institutions he was so long identified, and for which he had done so much.

HOSPITAL AND DISPENSARY MANAGEMENT.

A CIRCULAR HOSPITAL.

H.R.H. PRINCE ALBERT VICTOR OF WALES opened, on Wednesday, at Burnley, the new Victoria Hospital, erected from designs approved by Professor John Marshall, F.R.S., University College Hospital, on his circular plan. Our readers are aware that Professor Marshall considers, and that many architects agree with him, that freedom from stagnation of the air, which is apt to stagnate in corners, a relative increase of wall space and cubic air space in relation to the size of the ward, with equable heating and ventilation, are obtained on the central system. The circular wards are of one story, surmounted by sun-rooms, and provide for the free admission of sunlight, and the exercise of patients and convalescents. In the centre of the principal sick wards are the flues for the extraction of smoke and air, and around them a spiral staircase leads to the sun-room—a circular room, which is glazed externally. There is a wide asphalte walk outside and around the sun-room. All the surfaces of the ward are impervious, and floors are of waxed polished oak. The heating is by steam. The administrative block is placed between the two circular ward-blocks, separated from them by corridors with cross ventilation. A boiler-house, mortuary, etc., are attached to the hospital. The architects are Messrs. Waddington and Sons, of Burnley. The two principal sick-wards provide each for twenty patients. The total cost appears to have been about £15,000, of which £4,000 was subscribed by the working-classes. The Prince was welcomed by the local authorities, and suitable addresses were delivered.

THE PROPOSED WEST HAM HOSPITAL.

THE total receipts from the exhibition and bazaar given in aid of the proposed West Ham Hospital amounted to £903. It is estimated that £3,000 will be required to erect the proposed hospital, and of this sum £2,000 has been subscribed or promised; but a sustentation fund will be necessary, subscriptions towards which should be sent to Mr. F. Mulley, Secretary of the West Ham Dispensary; to Mr. George Hay, Chairman of the Bazaar Committee; or to Mr. Fitzpatrick, the Treasurer of the Friendly Societies' Committee.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE METROPOLITAN "SANITARY AUTHORITIES" AND PROVISION FOR EPIDEMICS.

AT the last meeting of the Metropolitan Asylums Board, Sir E. H. CURRIE, as Chairman of the General Purpose Committee, brought forward a matter of great importance with reference to the managers making contracts with the sanitary authorities of the metropolis respecting the care of the patients of the middle and working classes afflicted with infectious diseases. It had been found, as was proved before the Royal Commission, that the managers not only had to take care and provide for the pauper classes afflicted with infectious diseases who fell chargeable to the guardians, but they had also cast upon their hands the classes for whom the sanitary authorities of the metropolis had to provide, very few indeed of these authorities having taken any steps to provide accommodation against epidemics. The Local Government board, when they undertook to deal with the subject, made it permissive upon the local boards having charge of sanitary matters to contract with the managers, and the result had been that, upon the managers inviting the local boards to enter into contracts, fourteen of these authorities only had shown willingness to do so, fifteen had declined, seven had sent replies which were ambiguous, or of an argumentative character, and four had given no definite reply. The Committee recommended that this report should be sent to the Local Government Board with an intimation that nothing more could be done in the matter by the managers until Parliament had made it compulsory upon the local boards to discharge their duties.

Mr. TATTERSALL moved, as an amendment, that the matter should go to a special committee, with power to confer with the Local Government Board on the subject. He considered that the difficulty could be got over by the managers, through the poor-relief authorities, obtaining payment from those who could afford to pay for their maintenance in asylums.—Mr. DAVIS seconded this. The amendment was opposed by Mr. STRONG, who strongly objected to the managers taking any steps to bring into connection the classes who were apart from the poor law and the officers of relief. Such connections, in his experience, invariably led to pauperism of a confirmed character.—The CHAIRMAN also hoped the amendment would be rejected. The subject had been before the managers for years, and the difficulties now experienced were owing to the Local Government Board, in drafting the Bill which dealt with the subject, putting in the word "may" instead of the word "must." The Local Government Board were informed of the effect, but no heed was given to those whose

experience of local boards was sufficient to enable them to know what would be the result of the use of such a word.

Sir E. H. CURRIE hoped that the managers would be guided by the experience of others in this matter, and he took occasion to warn local bodies that, in the case of an outbreak of disease, the managers would not hold themselves liable to take in all cases which were sent them. The managers had to make all sorts of provision, and the local bodies were warm in denunciation of the cost, and this could not go on. He warned the local authorities that they must really begin to realise the position in which they had placed themselves with respect to the care of the non-pauper patients.

Only three voted for Mr. Tattersall's amendment, and forty-four voted against it. The report was then carried unanimously.

The returns showed that, during the fortnight since the last meeting, eighty-six patients had been admitted into the Eastern Asylum (Homerton), forty-eight into the Western (Fulham), and thirty-nine into the South-Eastern (Old Kent Road). The North-Western (Hampstead), and the South-Western (Stockwell) were empty. During the fortnight, fifteen patients had died, and ninety-five had been discharged, leaving 552 under treatment on Friday, an increase of sixty-three on the figures of the last report, when there was also a great increase upon the previous fortnight. Of the 552 patients in the wards of the three asylums, 239 were in Homerton, 149 in Fulham, and 164 in the South-Eastern Asylums, and 476 of the whole were scarlet fever cases, seventy-five enteric cases, and one was a case of another disease of a febrile character. Of small-pox, there had been only one case in the fortnight. This had occurred in the east of London, and had been at once transferred to the hospital-ships from the Eastern Asylum. The patient now remained on board the *Atlas*, and was the only patient with the disease who had come under the cognisance of the poor-law officers of the metropolis. The report of the Caterham Asylum showed that, during the fortnight, five patients had been admitted, five had died, and two discharged, leaving 1,968 under treatment.—On the motion of Mr. ROBINS, the report was adopted.

THE DISPOSAL OF REFUSE.

THE Whitechapel Board of Guardians are successfully adopting a plan for the effectual disposal of dust and refuse without danger to the health of the inhabitants, which is pursued by some other bodies. Under the supervision of Mr. W. La Rivière, the architect and surveyor to the board, works on an extensive scale have been erected in Wentworth Street, where the contents of the East End dust-bins are simply cremated, the smoke being, by an ingenious process, purified of any noxious gases it may possess, and then carried away through an upcast shaft 180 feet in height. Taking the foundations into account, the whole structure is 213 feet in length. The refuse is brought up on an inclined plane in the dust-carts of the board, and emptied out on a platform, whence it is immediately discharged into the "destructor," which consists of eight cells, placed back to back in pairs. These cells are very strong draught furnaces, which in a short space of time reduce the unsavoury mass to a heap of clinker, which is taken out and carted away. The smoke makes its way to the shaft by an underground flue 7 feet high and 4 feet wide. It is stated that a considerable saving will thus be effected. Up to the present, the board have been obliged to cart the "dust" away to Bow, and sometimes even to Temple Mills, a couple of miles, or perhaps more, beyond Stratford, at a cost of from 1s. 6d. to 3s. 6d. a load. By means of the "destructor," the refuse can be destroyed for 2½d. to 3½d. a load, and thus the cost of the freehold site and construction, amounting to about £13,000, will be speedily recouped. This favourable experience will, no doubt, influence the authorities of other districts.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Physiology at a meeting of the Board of Examiners on October 9th, and, when eligible, will be admitted to the pass-examination.

E. E. Dufty, student of the Sheffield Medical School; H. F. Parsons, of Bristol Medical School; J. Robertson, of Guy's Hospital; W. F. Coy and A. F. McVety, of Kingston, Canada; E. Latchmore, of Middlesex Hospital; A. Crompton, E. Carnall, E. A. T. Harris, and R. H. King, of St. Bartholomew's Hospital; J. Ash, E. O'Ferrall, and H. H. Folker, of Charing Cross Hospital; W. F. Gardner and C. A. Morgan, of St. Thomas's Hospital; B. J. E. Wright, of King's College.

Passed in Anatomy and Physiology on October 11th.

M. C. Naylor, of Sheffield; D. Wallace, W. J. Smyth, J. McNidder, A. G. Verner, E. E. Greville, and H. Vine, of Edinburgh University; J. McLurg and J. W. Peaker, of Toronto; G. H. Cooke, of Owens College, Manchester; E. H. Wheeler, of Dublin; R. T. Fallon, C. J. Lownds, and J. L. Hague, of Westminster Hospital; A. J. Weatherley, of Bristol Medical School.

Passed in Anatomy only.

M. Ap Iwan, of Edinburgh University; T. Thornton, of Leeds.

Passed in Physiology only.

W. M. Hamilton, of Belfast and Galway; A. H. Wilson, of Dartmouth and Harvard; J. M. Swanson, of Charing Cross Hospital; A. B. Northcote, of Edinburgh University; N. P. Cadel, of Guy's Hospital.

VICTORIA UNIVERSITY.—The following are the results of the Examinations just held.

Degree of M.B. Intermediate Examination.—*First Division:* J. H. Barker, Owens College; J. C. Thresh, Owens College.—*Second Division:* J. F. Aspinwall, Owens College; J. Brown, Owens College; J. H. Lightbody, University College; J. Teare, University College.—*Distinguished in Anatomy:* J. H. Barker, J. C. Thresh.

Preliminary Examination in Science (Faculty of Medicine).—*Second Division:* W E. Barker, Owens College; G. F. Chadwick, Owens College; S. G. Moore, University College; R. W. Nesfield, Owens College; F. Robinson, Owens College.

Entrance Examination in Arts (Faculty of Medicine).—*First Division:* H. C. Cadman, A. W. Cuff, J. De Freitas, C. H. G. Ramsbottom.—*Second Division:* H. W. Ashworth, T. S. Collin, J. Mawdsley, J. H. Rowland, W. M. Steinthal.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—The following Licentiates in Medicine, having complied with the by-laws relating to Membership, pursuant to the provisions of the Supplemental Charter of December 12th, 1878, have been duly enrolled Members of the College.

A. Ashbury, Lic. Med. 1877, A.M.S.; C. E. Macnamara, Lic. Med. 1874, British Guiana; K. I. O'Doherty, Lic. Med. 1857, Brisbane.

The undermentioned candidates have been awarded the Certificate in Sanitary Science granted by the College, at the October Quarterly Examination.

C. E. Macnamara, M.K.Q.C.P., British Guiana; W. T. Mullally, M.D.Q.U.I. Gowran, Co. Kilkenny.

At the Quarterly First Professional Examination, held on Monday, Tuesday, and Wednesday, October 4th, 5th, and 6th, 1886, the following candidates were successful.

S. McKee, J. C. O'Sullivan, J. D. Sexton.

At the usual Monthly Examinations for the Licences of the College, held on Monday, October 4th, 1886, and following days, the undermentioned candidates were successful

For the Licence to practise Medicine and Midwifery. F. J. Cruise, Dublin; B. A. Daniell, Aberavon, Glamorgan; R. L. Island, M.D. Univ. Trin. Coll., Toronto; V. E. Ludlow, Newcastle, New South Wales; J. A. Maloney, New Malden, Surrey; J. J. Myers, Suir Island, Clonmel; L. van Overbeke, London; W. J. Scott, Dublin; J. Toppin, Tramore, Co. Waterford; C. S. Woodwright, Malahide, Co. Dublin; W. H. E. Woodwright, Malahide, Co. Dublin.

For the Licence to practise Medicine only.—H. Davison, Hawarden, Chester; K. D. B. Dobbs, Castlecomer, Co. Kilkenny; G. A. Holroyd, Scarborough, Yorkshire; F. P. Roesch, Leeds; J. Lagan, Maghera, Co. Derry; J. T. Thomas, Newport, Monmouthshire; F. W. Stokes, Moseley, Birmingham; C. L. Warke, Liverpool.

For the Licence to practise Midwifery only.—W. T. Mullally, M.D.Q.U.I., Gowran, Co. Kilkenny.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 7th, 1886.

Day, Stewart Butler, 21A, Berners Street, W.C.
Fitz-Henry, George William, 26, Charlwood Street, S.W.
Mason, Francis John Gorringe, M.R.C.S., 7, Rectory Place, Woolwich.
Nash, Charles, 16, Burney Street, Greenwich.
Pettingill, Alfred Ernest Albert, Regent Street, Great Yarmouth.
Sparrow, John Elliotson Pennington, 28, Millman Street, Bedford Row, W.C.
White, Julian Henry, 4, Clarendon Place, Hyde Park Gardens.

The following gentleman also on the same day passed his Primary Professional Examination.

Roe, Henry Havilland, King's College.

MEDICAL VACANCIES.

The following vacancies are announced.

BRIGHTON AND HOVE LYING-IN INSTITUTION.—House-Surgeon. Applications by October 30th to the Secretary.

BURY DISPENSARY HOSPITAL.—Senior House-Surgeon. Salary, £100 per annum, with board and apartments. Applications by October 20th to the Honorary Secretary, Dispensary, Bury, Lancashire.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road, W.C.—Registrar and Pathologist. Applications to the Secretary.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Three Clinical Assistants. Applications to the Secretary.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Assistant Physician. Applications by October 16th to the Secretary.

CLIFTON DISPENSARY.—Resident Medical Officer. Salary, £175 per annum. Applications by October 23rd to the Rev. R. W. Southey, 4, Royal Park, Clifton, Bristol.

ECCLES AND DISTRICT MEDICAL ASSOCIATION.—Senior Resident Medical Officer. Applications to J. Ramsdale, Esq., 1, Milton Terrace, Cromwell Road, Patricroft.

HARTLEPOOL HOSPITAL AND DISPENSARY.—House-Surgeon and Secretary. Salary, £60 per annum, with board and residence. Applications by October 25th to Dr. Proud.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Clinical Assistant. Applications by October 16th to the Secretary.

JAMAICA LUNATIC ASYLUM.—Medical Superintendent. Salary, £600 per annum. Applications to the Private Secretary, Colonial Office, S.W.

LETTERKENNY UNION.—Medical Officer. Salary, £60 per annum and extras. Applications by October 22nd to John Storey, Esq.

LIVERPOOL DISPENSARIES.—Assistant-Surgeon. Salary, £80 per annum, with board and residence. Applications by October 25th to the Secretary, 34, Moorfields, Liverpool.

LONDON HOSPITAL.—Medical Registrar. Salary, £100 per annum. Applications by October 25th to the Secretary.

LURGAN UNION.—Medical Officer. Salary, £100 per annum and extras. Applications by October 25th to W. T. K. Ruddell, Esq., Termoyra House, Lurgan.

MEDICAL AID ASSOCIATION OF BIRSAY, HARRAY, AND SANDWICK, Mainland of Orkney.—Medical Officer. Salary, £27 per annum, with house. Applications by October 23rd to the Rev. J. A. Selbie, Birsay, Stromness.

METROPOLITAN FIRE BRIGADE, Eastern District.—Medical Officer. Applications by October 16th to the Clerk of the Metropolitan Board of Works, Spring Gardens, S.W.

NEWCASTLE-ON-TYNE EYE INFIRMARY.—Surgeon. Applications by October 30th to the Honorary Secretaries.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Physician. Applications by October 30th to the Secretary, 216, Tottenham Court Road, W.C.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND SEAMEN'S INFIRMARY.—Resident Medical Officer. Salary, £120 per annum. Applications by November 1st to the Secretary.

ROTHERHAM HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum, with board and lodging. Applications by October 31st to the Honorary Secretary.

ROYAL HOSPITAL FOR WOMEN AND CHILDREN, Waterloo Bridge Road, S.E.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications by October 19th to the Secretary.

SPALDING UNION.—Resident Medical Officer. Salary, £51 per annum, with extras. Applications to the Clerk to the Guardians.

ST. THOMAS'S HOSPITAL.—Assistant Dental Surgeon. Applications by October 23rd to the Secretary.

ST. THOMAS'S HOSPITAL.—Assistant Surgeon. Applications by October 23rd to the Secretary.

THE KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Two Honorary Vacancies on Medical Staff. Applications by October 19th to T. W. Dobson, Esq., The Dispensary, 13, Kilburn Park Road, N.W.

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, W.—Assistant Surgeon. Applications by October 23rd to the Secretary.

WORCESTER GENERAL INFIRMARY.—Surgeon. Applications by October 16th to W. Stallard, Esq., Worcester Chambers, Pierpoint Street, Worcester.

MEDICAL APPOINTMENTS.

BARTLETT, B. Pope, M.R.C.S.Eng., L.S.A., appointed Medical Officer to the Second Division of the Mere Union, *vice* G. P. Francis, L.R.C.S.Ed., resigned.

BEVAN, F., M.B.Dur., M.R.C.S., L.S.A., appointed Junior Assistant Medical Officer to the Middlesex County Lunatic Asylum, *vice* E. C. Kingdon, M.B., resigned.

CARR, J. W., M.B., B.S.Lond., appointed House-Surgeon to University College Hospital.

DEANE, E., L.S.A., L.F.P.S.G., appointed Assistant House-Surgeon to the Royal Berks Hospital, *vice* G. A. Barton, resigned.

FETHERSTONHAUGH, Robert T., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to St. Peter's Hospital for Stone, *vice* P. Edgelow, M.R.C.S., L.S.A., resigned.

GORDON, F. W., L.R.C.P.Lond., M.R.C.S.Edin., and L.M., appointed Medical Officer to the Norwich Friendly Societies' Medical Institute, *vice* J. Balfe, L.R.C.P., L.R.C.S.E., L.M., resigned.

HABERSHON, S. Herbert, M.A., M.R.C.S., appointed Honorary Physician to the St. Marylebone General Dispensary, *vice* T. T. Pyle, M.D., resigned.

HARDING, C. O'B., appointed Surgeon to the Holloway and North Islington Dispensary.

HAWKES, L. A., M.B., M.Ch.Edin., appointed Assistant Resident Medical Officer to the Children's Hospital, Birmingham, *vice* G. W. Powell, M.B., B.Ch., B.A., resigned.

KEAY, John, M.B., appointed Resident Medical Superintendent to the Mavisbank Asylum, Edinburgh.

LEWERS, Arthur H. N., M.D.Lond., appointed Physician to the Out-patients at Queen Charlotte's Lying-in Hospital.

LOW, A. Bruce, M.D., M.R.C.P.Ed., appointed Honorary Physician, Sunderland and Bishopwearmouth Infirmary, *vice* W. H. Dixon, M.D., resigned.

POWELL, G. W., M.B., B.Ch., B.A., appointed Resident Medical Officer to the Children's Hospital, Birmingham, *vice* W. A. Payne, M.R.C.S.Eng., resigned.

FROZEN MEAT.—It is seen from the report of the Medical Officer of the Port of London that, although the condition of frozen meat arriving in this country is generally good, there are occasional exceptions. During the past year, one vessel alone was freighted with 730 sheep, which were condemned; another vessel with 603; and another with 156½. It would appear that the condemned meat, in each instance, came from the River Plate, and, it is a little satisfaction to add, from the same consignee. Attention is called to the strange dictum of a "metropolitan authority," who has recently decided that eggs do not come within the terms of the Public Health Act, being "neither fish, flesh, nor fowl." The question, we are told, can only be settled by inserting the word "eggs" in the Act. Meanwhile, it is satisfactory to know that the medical officer takes upon himself to consider eggs food, and declares his determination to seize such as are unfit for human consumption.

BEQUESTS AND DONATIONS.—Mr. James Little, of Fremont, West Derby, near Liverpool, bequeathed £5,000 to the local charitable institutions, including £500 to the Royal Infirmary, £500 to the Northern Hospital, £500 to the Royal Southern Hospital, £300 to the Infirmary for Children, £200 to the Home for Incurables, £100 to the Woolton Convalescent Hospital, £100 to the Eye and Ear Infirmary, £100 to the Ladies' Charity, £100 to the Dental Hospital, £100 to the Hospital for Consumption, £100 to the Hospital for Cancer and Skin Diseases, £100 to the North Dispensary, and £100 to the South Dispensary.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Opening Address by the President, Mr. R. Brudenell Carter. Mr. Frederick Treves: Hernia of the Cæcum.

TUESDAY.—Pathological Society of London, 8.30 P.M. Mr. Eve: Hemiatrophia Facialis. Mr. Treves: Malignant Cysts of Neck. Dr. T. D. Acland: Excavation of Lung simulating Pneumothorax. Mr. Stoker: Cancer of Thyroid. Mr. D'Arcy Power: Dermoid Cyst of Testis. Mr. E. H. Fenwick: Carcinoma of Left Lobe of Prostate. Dr. Savill: Meningeal Hæmorrhage. Mr. S. Paget: Malignant Disease of Thyroid (card specimen).

THURSDAY.—Harveian Society of London, 8.30 P.M. Dr. John Phillips: Hydramnios, and its Relation to certain Fœtal Disorders. Dr. A. Tucker Wise: Some Remarks on Alpine Winter Climate.—Ophthalmological Society of the United Kingdom, 8.30 P.M. Living and Card Specimens at 8 P.M. Dr. W. A. Brailey: Rapidly occurring Blindness, with Ptosis and Ophthalmoplegia Externa and Interna. Messrs. Critchett and Juler: Case of Orbital Tumour. Mr. W. Adams Frost: 1. Ophthalmoplegia Interna, with Absence of Knee-Reflex, persisting over two years without other Symptoms; 2. Pigmentary Retinitis, with a Layer of Pigment on Anterior Capsule. Mr. W. Lang: Change in Yellow Spot Region. Mr. Humphry Haines: New Instrument for Facilitating Retinoscopy. Papers: 1. Dr. Sidney Coupland: Ophthalmoplegia dependent upon Thrombosis of Cavernous Sinuses. 2. Messrs. Edmunds and Lawford: On the Condition of the Optic Nerves in Head-Injuries.

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. Charters Symonds: A Case of Removal of the Scapula for Osteo-sarcoma. Mr. Thomas Smith: Ligature of the Common Iliac Artery with Kangaroo-Tendon; Yielding of the Knot; Ligature with Silk; Gangrene of the Limb; Death. Mr. Butlin: A Case of Axillary Aneurysm for which the Subclavian Artery was Ligatured in the Third Part of its Course; Slipping of the Ligature shortly after the Operation; Re-ligature; Collapse; Death. Mr. Wainewright: A Case of Vertical Fracture of the Head of the Radius, complicated by Fracture of the Coronoid Process of the Ulna, and possibly a Split between the Condyles of the Humerus. Living specimens: Mr. S. Paget: Two Cases of Congenital Abnormality of the Eyes: 1, Absence of Iris in Mother and Child; 2, Pigmentation of Conjunctivæ.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d. which should be forwarded in stamps with the announcements.

MARRIAGES.

KARKEEK—PATON.—October 9th, at Northiam Parish Church, Sussex, by the Rev. J. W. Lord, Paul Q. Karkeek, M.R.C.S., etc., Torquay, to Elise, daughter of the late A. A. Paton, H.M. British Consul at Ragusa.

KINGSBURY—EDELSTON.—On October 14th, at Christ Church, Blackpool, by the Very Rev. George A. Chadwick, D.D., Dean of Armagh, cousin of the bridegroom, assisted by the Rev. C. H. Wainwright, M.A., Vicar of the parish, George C. Kingsbury, M.A., M.D., T.C.D., of Blackpool, to Ada, only daughter of James Edelston, of Preston and Blackpool.

O'CONNELL—BEVAN.—September 29th, at Bombay, Surgeon D. V. O'Connell, M.D., to Alice Susannah, daughter of the late Richard Bevan, of Dunstable (by telegram).

SHEEHY—HAWES.—On October 9th, at Mapledurham Parish Church, near Reading, by the Rev. F. St. John Thackeray, M.A., Vicar, W. H. Patmore Sheehy, L.R.C.P.Lond., etc., of Claremont Square, London, son of the late W. H. Sheehy, L.R.C.P.Edin., to Myra, only daughter of the late George William Hawes, of Southfields, Wandsworth, and granddaughter of the late Major Hawes, of Spring Gardens.

DEATH.

STEDMAN.—On October 12th, at Great Bookham, in his 20th year, Ernest Alan Stedman, lately a student of St. Thomas's Hospital, third son of Arthur Stedman, Surgeon.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's(Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30; Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

R. N. wants to know the best method of preserving gum-elastic catheters in a hot climate. Is vaseline beneficial or otherwise?

F. P. asks how long after the subsidence of all febrile symptoms the virus of typhoid fever exists in the stools, and for how long disinfection of them ought to be carried on?

HOME FOR A CASE OF CHRONIC RHEUMATISM.

J. A. P. asks to be informed of any hospital or home where a patient suffering from chronic rheumatism, and quite unable to assist herself in any way, could be taken in. She is able to pay £40 *per annum*, which amount is at the present time all used up in paying for nurses, etc.

FUNCTIONAL APHASIA.

STAUBBACK writes: Some weak humorists think it funny to say "creet sweature," instead of "sweet creature." I have met with a case where this seems a constitutional infirmity. A well-educated lady, who enjoys fairly good health, will, when tired or worried, talk of "a dansome hog," instead of "a handsome dog," and a "douring pet way," instead of a "pouring wet day." Sometimes she is conscious that she has made a mistake, and corrects it immediately; sometimes she is not. She never interchanges initial vowels. The same blunder occasionally occurs when writing, and she falls into the additional error of spelling some words backwards; they are always short ones. There is no defect in articulation, and no substitution of another word for the one meant.

*** We have referred this letter to Dr. de Watteville, who writes:—The case is clearly one of functional aphasia of the "atactic" category. I have recently heard of a similar case, in which there were alcoholic antecedents, though it is impossible to say how far the latter were causally related to the former. In actual disease of the third frontal convolution (Broca's centre), one occasionally observes curious phenomena connected with the initial letters of words, which sometimes are substituted for one another in much the same way as that described by your correspondent. With reference to the treatment, the removal of the cause, if discoverable, on minute investigation, is obviously the first indication. Systematic exercises on selected groups of words might assist in breaking the habit. Some German neurologists state that the localised galvanisation of the cortical centres has a therapeutic value. Such a case offers a fair opportunity for testing the method.

ANSWERS.

OLD SUBSCRIBER (Pontefract).—Under the provisions of the Medical Act, no one is allowed to assume medical titles, unless he possesses registerable medical degrees, and has registered them.

AN OLD MEMBER.—It is an ordinary pamphlet of a patent medicine vendor recommending his secret wares, and is unworthy of notice.

HAMPDEN: AN INQUIRER.—The report will be published as an official document. Address the Professor-Superintendent of the Brown Institution, Wandsworth, S.W.

MR. J. EDWARDS.—If, as stated, cards, such as those forwarded are left, as stated, at nearly all the houses of the district, the practice is decidedly unprofessional, and is much to be regretted.

NOTES, LETTERS, ETC.

M. PASTEUR'S CURE OF HYDROPHOBIA.

DR. C. R. DRYSDALE (London) writes: Dr. Dolan, of Halifax, evidently considers that Pasteur's treatment of hydrophobia is as useless as all others have hitherto been. I cannot take that view, for my observation of the treatment pursued in that gentleman's laboratory in Paris has led me to believe that he has saved a great number of lives by it. Let me remind Dr. Dolan and your readers of some facts which are now historical.

In 1879, a veterinary practitioner of Lyons, M. Galtier, mentioned, in a note to the Academy of Sciences, that rabies in the dog was communicable to rabbits, and that, in this instance, the incubation period lasted only eighteen days. When Pasteur commenced his experiments, he knew this fact, and also knew that the true seat of rabies was in the brain, as Dr. Dubouè, of Pau, had shown in 1879. Pasteur then injected pieces of a rabid dog's brain beneath the dura mater of healthy dogs, and these became rabid in less than fourteen days in every case. He then inoculated rabbits in the same way, and found that, after a few such inoculations, the incubation period of the disease in rabbits was only eight days. This last experiment, commenced in November, 1882, he has carried on up to this date, and has thus had, without fail, a virus of perfect purity, which, at any moment, can be used to cause rabies in dogs or other animals (and, of course, inferentially on man) when inoculated beneath the skin or beneath the dura mater. Next came the process for mitigating the virulence of the rabid virus by hanging up the rabid brain for a shorter or longer time in dry warm air in sterilised bottles. And, last of all, ensued the proof of the preventive inoculation made by this mitigated virus. Pasteur accomplished this by inoculating fifty dogs with some of this mitigated virus, and gradually increasing the strength of the virus used. After ten days of this treatment, these fifty dogs were found to be proof against inoculations of the strongest virus of rabies.

Pasteur, in his communication to the Academy of Sciences, in October, 1885, said, "In such a case, the dog is rendered proof against rabies. We may inoculate on it the virus of rabies subcutaneously, or place it on the surface of the brain by means of trephining, but no rabies will follow. By the application of this method, I have made fifty dogs of all ages and races proof against rabies, without meeting with one exception."

No wonder that MM. Vulpian and Graucher, on hearing this, advised that the human race should have the benefit of this discovery. And, although statistics cannot prove a law of nature, still the results, in my opinion, fully bear out the good hopes these able observers had of the process. Thus, of 96 patients bitten by dogs, which were indisputably rabid, because their bite proved fatal to other animals, and also because their brain, when inoculated, caused the disease, only

one died, up to April 22nd, 1886; and of 644 other patients bitten by dogs which were certified to be rabid by the local veterinary practitioners, only 3 died, that is, only 4 patients treated by Pasteur died out of 740 bitten by rabid dogs; whilst, in London last year, out of 26 deaths, 5 children died from hydrophobia from the bite of one dog in Poplar. Dr. Dolan may, of course, say that all statistics are valueless, but until I have more to convince me to the contrary, I shall think that Pasteur's process, which is so constantly protective in the case of dogs, has been the cause of the excellent results I mention, and recommend persons bitten by rabid dogs to make use of the process.

PRACTICE IN AUSTRALIA.

LOUIS FITZPATRICK, J.P., L.R.C.P. and S.Ed. (Queanbegan, N.S.W.), writes: I have frequently observed letters appearing in the columns of the BRITISH MEDICAL JOURNAL making inquiries regarding Australia as a field for medical practitioners. Most of the letters in reply warned men against embarking for the Antipodes, a few only encouraging the idea. Perhaps, Sir, a few remarks from a resident may not be without their weight.

Personally, I cannot complain, yet I feel bound, when viewing the question on broad and impartial grounds, to join my voice with those who cry "Stay at home." Certainly there yet remains many parts of the colonies where openings exist, and where there are no local medical men within twenty, thirty, or fifty miles. But the population is so scattered, and living, with keep of two or more horses, so very expensive, that all earnings are soon swamped. The thinness of the population can be the more readily understood when we consider that the entire area of New South Wales is upwards of 310,700 square miles, and the population not quite 1,000,000. (For full information regarding the Colonies, their medical appointments, institutions, etc., I recommend the study of Bruck's *Australian Medical Handbook and Directory*, 1886. London: Bailliere, Tindall and Cox.) The long journeys necessitate the keep of two or three horses, and the late severe seasons, droughts, etc., have raised the price of forage to a high figure.

Emigration is almost discontinued at present, and, consequently, servants of every class ask large wages. A groom, for instance, gets 25s., and, in some places, 30s. per week, with board.

The chances of payment, in return for these long journeys, are, in many cases, very uncertain. This is owing to loss of stock and failure of crops, due to the continued dry weather. The farmers, throughout the entire of this colony (N.S.W.) are in a struggling condition just now. The district in which I practise was, formerly, one of the finest agricultural portions in the country; but things have now come to such a deplorable state that all forage—oats, hay, corn—used in the town is imported principally from New Zealand.

Some few years ago, a great many young medical men, upon arriving here, derived a fair income (about £350 *per annum*) as travelling medical examiners for the different life insurance offices. By these means, they saw a great part of the "Bush," gained experience, and had good facilities to select a town and district for their future homes. Now, however, all this is changed. The business of life-insurance in the country is nearly done, and only a few offices are employing travelling medical men.

It is a great pity that parents will persist in sending their sons into such an expensive and overcrowded profession as medicine now undoubtedly appears to be. If men are determined to come out here, they must disabuse their minds of the idea that there are homes and lucrative appointments waiting to engage their services. If they want these things, they must pay for them. My advice, therefore, to all intending to come to Australia, is first to possess themselves with sufficient means to purchase the practices of established medical men anxious to retire or go home. Under these circumstances, they cannot go astray; the issue rests with themselves.

One word regarding the cities. "They are full." Unfortunately, at present, we possess no laws relating to the general practice of medicine. The large towns are, therefore, inundated with hordes of the most consummate charlatans from all parts of the world.

When the Government of the country creates laws to banish these pests, the practice of medicine will be on a more equal and honourable *status*, and the general public will be the richer in health and pocket.

Mr. Fitzpatrick encloses in his communication the words of the late Dr. F. O. Hodson, which recently appeared in the *Australasian Medical Gazette* and graphically described the hardships of bush-practice.

ERRATUM.—In Dr. Scattergood's letter on Hydrophobia (BRITISH MEDICAL JOURNAL, October 9th, p. 707) the phrase in the second line should be read "calculated to mislead many who, like *himself*, have not made themselves acquainted," etc. It ought also to be stated that the letter was written on September 15th, before the publication of any reply to Dr. Dolan's letter.

THE RIDLEY FUND.

MRS. RIDLEY begs to tender her most grateful thanks to all who have supported the above fund.

SURGEON writes: Relative to Dr Bryden's successful case of strangulated inguinal hernia, treated by puncture, I should like to say that, in 1875, in the *Indian Ann. of Medical Science*, Surgeon Joshua Duke published a paper on the subject, headed "Inguinal Hernia treated by Dieulafoy's Aspirator."

COMMUNICATIONS, LETTERS, etc., have been received from

Mr. H. H. Latham, London; Dr. O. Scattergood, Leeds; Mr. W. Fraser, Ashburton; Mr. C. H. Wells, London; Mr. V. Jackson, Wolverhampton; Dr. Edwards, Harrold, Beds; Dr. Turley, Whitby; Dr. W. H. H. Day, London; Mr. B. C. Manby, Dublin; Mr. H. W. Holder, Manchester; Dr. J. Johnson Bailey, Marple; M.D.; Mr. John Page Hentsch, London; Dr. A. E. Harris, Sunderland; Mr. J. Oliver, London; Mr. Arthur Pearce, Kingsbridge; Mr. F. A. Floyer, London; Our Manchester Correspondent; Mr. R. M. Whitham, Holyhead; Dr. Halliburton, London; Dr. Simpson, Calcutta; Dr. Walsham, London; The Secretary of the Richmond Hospital, Surrey; Miss Lyne, London; Dr. Edwards, London; Dr. W. A. Carline, Lincoln; Mr. M. J. Geary, Clonmel; Professor Stirling, Manchester; Messrs. Warwick Steele and Ashton Ellis, London; Mr. J. H. Morgan, London; Dr. J. Ward Cousins, Southsea; Mr. C. B. Lockwood, London; Mr. A. Duke, Dublin; Mr. R. Walker, Aberdeen; The Medical Battery Company, London; Mr. W. H. Bradley, Leeds; The Secretary of the Victoria University, Manchester; Mr. J. Dowson, Evesham; Mr. W. Pearce, London; Dr. W. F. Cleveland, London; Mr. J. P. Johnstone, Langport; Dr. T. Wylie, Skipton; Mr. R. Jones, Liverpool; Mr. B. Pope Bartlett, Zeals, Bath; Mr. J. H. Parkinson, Sacramento; Dr. Dolan, Halifax; An Intending Acting Surgeon; Dr. C. R. Illingworth, Accrington; Sir B. W. Foster, Birmingham; Mr. J. Gopal, Lahore, India; Dr. Vernon, Southport; Mr. Gubb, London; Mr. W. P. Mears, Newcastle-on-Tyne; Dr. Hack Tuke, London; Mr. D. Christie, Carrigart, co. Donegal; Mr. A. B. Fiddian, Cardiff; Dr. De Watteville, London; Our Paris Correspondent; Dr. Withers Moore, Brighton; Mr. R. Marcus Gunn, London; The Secretary of the Clinical Society of London; The Secretary of the Pathological Society, London; Dr. J. T. Windle, Ovenden, Yorkshire; Mr. A. Arthur Napper, Cranleigh; Mrs. Isabel Thorne, London; The Secretary of St. Thomas's Hospital, London; Dr. J. W. Moore, Dublin; Dr. Fagan, Belfast; Mr. Ernest H. Jacob, Leeds; Dr. Strange, Worcester; Dr. R. Kirk, Glasgow; Mr. C. J. Whitby, London; Mr. J. H. Crisp, Lacock; Mr. A. Robottom, London; Mr. H. Bruce, Dingwall; Dr. R. J. W. Orton, Newcastle-under-Lyme; Mr. Alfred W. Hill, Stamford Hill; Messrs. W. Pease and Co. Darlington; Mr. J. Vesey Fitzgerald, Birmingham; Mr. W. L. Winterbotham, Bridgewater; Dr. Chambers, Ascot; Dr. W. Macvie, Bootle, Liverpool; Messrs. T. Christy and Co., London; Mr. A. W. Pearse, Downham, Norfolk; The Honorary Secretary of the Dispensary, Bury; Mr. R. M. Simon, Birmingham; Dr. Rickards, Birmingham; Mr. J. Tursworth, Liverpool; Mr. H. A. Powell, Beckenham; Mr. M. J. Davenport, London; Dr. A. H. N. Lewers, London; Mr. E. D. Kirby, Birmingham; Dr. B. Faraday Giles, Wem, Salop; Our Newcastle Correspondent; Mr. A. W. Nankivell, Chatham; Mr. J. W. Carr, London; Mr. H. Percy Dunn, London; The Secretary of the Faculty of Physicians and Surgeons, Glasgow; Surgeon-Major N. Alcock, Ballybrack, co. Dublin; Mr. E. Duke, St. Leonard's; Mr. J. Edwards, Liverpool; Mr. J. P. Doyle, Dublin; Mr. J. N. Moore, Moreton-in-Marsh; Mr. A. Primrose Wells, Douglas, Isle of Man; Mr. Silas Mainville, London; Miss Arkell, Upper Norwood; Mr. G. F. Poynder, Gravesend; Dr. E. D. Mapother, Dublin; Dr. G. Litzel, Munchen; Dr. R. J. Banning, London; Dr. Eastes, London; Mr. Alfred Pegler, London; Dr. Joseph Rogers, London; Mr. W. N. Barre, Ellesmere Port; Dr. Styrap, Shrewsbury; Mr. James Niven, Oldham; Mr. J. Hunt, Dalston; Mr. J. S. Pugh, London; Mr. T. M. Hovell, London; Mr. W. M. James, Winchester; The Secretary of the North of England Branch, Newcastle-on-Tyne; etc.

BOOKS, ETC., RECEIVED.

Life of Sir Robert Christison, Bart., M.D., D.C.L., LL.D. Edited by his sons. In two Volumes. Vol. II: "Memoirs." Edinburgh and London: William Blackwood and Sons. 1886.

Refraction of the Eye. By A. Stanford Morton, M.B, F.R.C.S.Ed. Third Edition. London: H. K. Lewis. 1886.

The Functions of the Brain. By David Ferrier, M.D., LL.D., F.R.S. Second Edition, re-written and enlarged. Illustrated. London: Smith, Elder and Co. 1886.

The Diagnosis and Treatment of Syphilis. By Tom Robinson, M.D. London: J. and A. Churchill. 1886.

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ABSTRACT
FROM
THE HARVEIAN ORATION,
ON THE
RELATION OF BACTERIA TO DISEASE.

Delivered before the Royal College of Physicians of London, Monday, October 18th, 1886.

By F. W. PAVY, M.D., F.R.S.,
Senior Physician to Guy's Hospital.

THE orator began by reciting the objects of the Harveian Oration, and incidentally referred to the recent benefaction of £2,000 by Dr. Milroy to the College, for the foundation of a yearly lectureship on State Medicine and Public Hygiene. After giving an analysis of Harvey's methods, and reciting some of his great discoveries, Dr. Pavy proceeded as follows.

In every branch of study relating to our art, immense progress has been made in recent years. It is true, all gain in knowledge must be regarded as contributing to the improvement of our position, but at the same time it is not permitted to us to see in each gain a direct applicability to a useful end. I will, however, refer to one issue of research derived from the labours of the present day which has already yielded much good and useful fruit, and gives promise of yielding much more.

Belonging to the realm of living nature there are small organisms, of the existence of which we must have remained unconscious in the absence of the aid of the microscope. The organisms to which I refer are rod-like in form, and of such minute dimensions, as to require a good magnifying power to enable them to be brought into view, and some of them also, to be rendered visible, require to be stained with a colouring agent. These bodies are known by the name of bacteria or bacilli; and, whilst some difference of opinion has existed, it is generally thought that they are organisms belonging to the vegetable kingdom. There is nothing in their appearance to strike the observer that they possess any significance, and yet by recent research it has been found that they play a most important part as constituents of the living world. The character from which they mainly derive importance is the facility and rapidity with which they become developed. This contributes to their wide distribution, and counterbalances their minuteness.

It is only recently that the life of these organisms has been known to produce effects of any particular interest to us. Some while ago they gave rise to a discussion upon the subject of spontaneous generation, which was carried on throughout several years with at times a considerable amount of warmth. The fact had been observed that, when a liquid containing organic matter was exposed to the air, it more or less quickly, according to the prevailing temperature, became tenanted with an immense number of these micro-organisms. The question arose whether they sprang into existence from the fortuitous concourse of disuniting atoms of the organic matter, or whether they were derived by parentage from pre-existing organisms. Spallanzani, who lived in the eighteenth century, performed the experiment of placing the organic liquid in a vessel, hermetically sealing it, and afterwards exposing it to a temperature sufficient to destroy the life of any living matter present, and found that under these circumstances no organisms became developed. It was suggested that the presence of air might be a necessary condition for the rearrangement of the elements of the organic substance into living matter; and through this being excluded in Spallanzi's experiment, it might be thereby rendered fallacious. Schulze and Schwann came upon the field just about fifty years ago, and devised an experiment which stands invested with historical renown. They placed the organic liquid in a flask, and boiled it to effect the destruction of any life that might exist. The flask was closed, but provided with tubes, through which air could be made to reach the interior, and, as the essential part of the experiment, the air thus made to enter was transmitted either through sulphuric acid or a heated tube, for the purpose of killing anything of a living nature that might happen to be present. Thus circumstanced, and under the frequent renewal of air in contact with its surface, the liquid remained for any length of time free from living organisms, but when the mouth of the flask was unclosed, and its contents were freely exposed to the air, they were soon found to be swarming with living beings. The natural conclusion to be drawn from such an experiment is that it goes far towards absolutely establishing that the air contains the germs of living organisms, and that it is these that constitute the source of the microscopic organisms found to become developed in the presence of organic matter, which some have contended take rise spontaneously. This view is supported by the researches of the present day, and nothing that would bear the scrutiny of strict investigation has ever been adduced against it. It stands at the foundation of our modern notions regarding the part played by bacilli, and thus occupies a position of weighty importance with reference to the matter.

Both upon dead and living organic matter, these organisms exert an influence productive of wide and strikingly-marked results. Although known to become developed in decaying animal and vegetable infusions, it was not until recently suspected that they stood in any other relation than as a simple growth in a suitable medium—certainly, it was not suspected that they held the position that is now assigned to them. Whilst life exists in any particular being, there is a round of actions carried on—a round of changes occurring in a definite and fixed direction, giving rise to the phenomena that are observed. When death occurs, another set of changes is seen to set in. The affinities and operations formerly in play, which held the elements together in specific combinations, and led to the occurrence of a specific line of changes, ceasing to prevail, the conditions become free for new affinities to come into force and produce new combinations, and, with this, for a new line of changes to occur. Such was, until recently, looked upon as furnishing a representation enabling us to understand the *rationale* of the passage of a substance into a state of putrefaction. Instead, however, of regarding the elements of organic compounds as simply splitting asunder, as a result of the removal of the influence of life, to form others generated by new affinities starting into existence after death, we are brought by the evidence now before us to look upon putrefaction as the issue of the influence exerted by the living organisms, to which our attention is being given.

However much, viewed superficially, the process may appear to arise from spontaneous disintegration, no such disintegration takes place unless there is the necessary agency present to excite it, and this agency consists of living organisms comparable in the effect they produce to the living cells of yeast, which have the power of exciting the transformation of sugar by what is styled fermentation. It is only, then, in the presence of the organisms in question that putrefactive decomposition occurs. Exclude them in any way that may be chosen, and the organic product, whether milk or any other article, remains without undergoing change.

The step from the action exerted by bacteria as agents exciting the decomposition of organic products to that which brings them before us as a source of disease is not a great one. In the one case they lead to change which would not otherwise occur, and in the other they disturb the order of changes naturally taking place, and thus induce an abnormal state; and although there is nothing in their morphological characters to show the reason, different trains of phenomena—in other words, different diseases—are occasioned by different kinds of bacilli.

It is in the group of disorders falling under the denomination o contagious or infectious febrile diseases—a form of disease taken in its entirety, constituting one of the greatest scourges besetting the human race—that we are brought most manifestly into contact with bacilli. Very diverse views have been held at different times regarding the nature and mode of production of the affections belonging to the class in question, but by recent research it may be considered as having been rendered evident that they depend upon the introduction of bacilli into the system, to the growth and multiplication of which are due the phenomena that are observed. Opinion has for some time past been advancing to this point. Our countryman, Dr. William Budd, devoted special attention to cholera and typhoid fever, and in 1849 stood prominently forward in urging that a living microscopic organism constituted the source of the diseases of their kind. For a while, however, fever germs were only talked about, without their reality being regarded as established. The discussion at the Pathological Society, in 1875, on the germ theory of disease, marks an epoch in the history of this subject, and shows that up to this time much progress had not been made towards settling the question; for, whilst some spoke in favour of the theory, no less an authority upon fevers than the late Dr. Murchison expressed himself strongly against it. Since then, knowledge has advanced in great strides; and, now, not only has the fact been ascertained that different kinds of organisms productive of different diseases exist, but through the indefatigable researches of Pasteur and others, the distinguishing form and life-history of certain of these organisms have been clearly made out.

Placed under suitable conditions, it has been found that they can be reared or cultivated artificially, and one of the most marked and important characters belonging to them is the enormous extent of self-propagating power they possess. This accounts for the rapid spread of an infectious disease that is observed to take place if allowed to progress without controlling measures being brought to bear upon it.

We have to deal, then, with something that lives and grows by virtue of a power pertaining to itself. Permit this living growth—this parasite, in fact—to become dispersed, and to enter the system of a living person, and presuming it has lodged upon a soil supplying suitable conditions for its development, it will thrive and multiply, and give rise to a series of phenomena, which the physician has no power to arrest. Once the bacillus implanted and the disease established, all that the physician can do is to see that the patient has fair play—that he is kept under the most favourable conditions for battling successfully against his enemy. What is to be philosophically aimed at, however, is to check the spread—to bar the transmission of the parasite from one person to another, by attacking it outside the body; and this, with the application of the proper measures of disinfection, can with facility be done, but naturally the facility of preventing extension stands in proportion to the degree of limitation at the time existing. The spark of fire is with the greatest ease extinguished, but let it kindle into flame, and, in proportion as the flame spreads, the difficulty becomes greater to get the conflagration under.

This is one way in which the attack upon the bacillus may be made, and the ravages of disease restrained. Another way, by quite a different line of tactics, presents itself; and the knowledge of this is due to the researches that have been recently conducted. The vulnerable point to which I am alluding lies not in connection with the bacillus itself, but with the condition of the medium upon which it may chance to fall. It has been found that the parasite requires virgin soil for its growth. This observation stands in harmony with the result of common experience as regards disposition to contract infectious disease. It has been from remote times generally known that a person who has passed through one attack of an infectious disorder is not liable to the same extent as before to become affected on exposure to contagion. An influence has been exerted giving rise to more or less protection being afforded against a recurrence of the disease. Now, it happens that, by certain means, the bacillus may be brought into such a weakened state as only to occasion, when introduced into the system of an animal, an effect of a mild nature, not dangerous to life, instead of the ordinary form of disease; but the effect produced—and this is the great point of practical importance—is as protective against a subsequent attack as the fully developed disease.

There are two methods by which attenuation in virulence of the disease-producing organism may be brought about—by conducting their artificial cultivation in a particular way, and by transmission through the system of an animal differing in nature from that in which the disease naturally occurs.

When the chain of discoveries reached the point of showing that bacilli could be reared outside the body, in an artificial soil or cultivating medium, a great advance was made towards obtaining a full knowledge about them, as it placed the observer in a more favourable position for the successful prosecution of research by enabling him to vary and control his conditions in a manner that could not otherwise have been effected.

Although much has been accomplished, it must be said much still remains to be done. In the case of a few bacilli, the life-history has been pretty clearly made out. Cultivated in a certain way, they retain their virulence, no matter through how many successions they pass. The last product in a series of successive cultivations is as virulent as the parent-stock. By modifying the conditions under which the cultivation is carried on, the successive products of descent may be gradually weakened until they become harmless. Such being the case, any desired degree of attenuation may be obtained, and by inoculation with a virus brought down to the proper strength, the non-fatal affection may be occasioned which gives immunity from subsequent liability to take the disease under exposure to contagion. The knowledge thus acquired has been already practically turned to account upon a large scale for checking the ravages of that exceedingly fatal disease amongst cattle known as anthrax, or splenic fever, and, through the success attained, much sacrifice of life has been averted.

If this can be accomplished for one disease, and more than one can be mentioned, is there not ground for believing that means will be found for placing others of the class in the same position? Attempts are being made in this direction. All eyes throughout the civilised world are, indeed, at the present moment fixed upon the work of Pasteur in Paris with reference to hydrophobia. It would be a great achievement for this frightful disease to be brought under subjection, and certainly the results that have been obtained appear to give hopes that an approach to something of this kind has been arrived at.

Looking at the nature of the disease, there is nothing inconsistent with its being dependent upon a bacillus, or microbe, as Pasteur calls it. On the contrary, owing its origin as it does, when occurring naturally, to inoculation with the poisoned secretion of an affected animal, and taking into view the facts that have been learnt in connection with its transmission by artificial inoculation, evidence points to such in reality being the case. If due to a bacillus, why may not this bacillus be open to attenuation in the same manner as that of anthrax? If thus open to attenuation, why not susceptible of producing a non-fatal form of affection? And if this condition has been produced and passed through, why should not protection be thereby given against the subsequent development of the disease as a result of the primary inoculation from the bite of the rabid animal? Such a train of reasoning is quite legitimate, and for the application of the principle of action to which it leads, there is this advantage on the side of hydrophobia, that from the prolonged period usually taken for incubation after the introduction of the poison in the ordinary way, time is given for the artificial inoculations by subcutaneous injection to produce their effect, and to render the system refractory to the the further development of disease. I have been an eye-witness of Pasteur's work. It is from the nerve-centre, the seat from which the symptoms of the disease start, that he obtains his virus. Employed for inoculation in a fresh state, it produces a fatal disease, and the disease has been transmitted successively on through a number of animals, with the result that the last affected animal yields as strong a virus as the first. Kept in a pure dry air, attenuation advances, and, after a certain time, the nerve-centre loses its disease-producing power. Used for inoculation at a given period of preservation, it produces an effect which renders an animal resistant to the influence of inoculation with the virus in a fresh state; and Pasteur contends that it acts similarly when the virus has been introduced in the ordinary way. The treatment of persons bitten by rabid animals by inoculation with attenuated virus has now been on its trial a considerable time, and a large experience gained. Judgment, it must be stated, still stands in suspense; but it must also be said that the results obtained tell decidedly in favour of the view advanced.

The other method by which it has been recently experimentally found that the virulence of bacilli can be weakened, is by transmission through an animal of a different nature from that in which the disease naturally occurs. This, in reality, represents the principle at the foundation of the system of vaccination, discovered by Jenner at the close of the last century. It may now be regarded as an accepted conclusion that vaccine-lymph is the virus of small-pox, modified by transmission through the cow. Jenner's discovery consisted in showing that the result of vaccination with the lymph of cow-pox affords as much protection against small-pox as an attack of small-pox itself. This was the fact he educed, but the knowledge possessed in his time did not permit of its being looked at in any further way than as a simple fact or truth of nature. Viewed, however, with the light that has been thrown upon it by the researches of the present day, we see not only the fact, but also its explanation—we see that the principle of action of the procedure proposed by Jenner, which has conferred such incalculable benefit upon mankind, is based upon the attenuating effect upon the small-pox virus of the human species by transmission through another animal; and, knowing this, the prospect is presented of its being rendered susceptible of application for the control of other diseases. Whether this should prove so or not, at all events, advantage is gained by the knowledge acquired.

Need I say anything more to exhort you in accordance with the duty that has devolved upon me? Surely the acquirement of knowledge, giving us, as it does, greater power in the exercise of our calling, and thereby promoting the high and noble object of rendering our lives more useful to our fellow-creatures—surely this is a sufficient incentive, following the words of Harvey, "to search and study out the secrets of Nature by way of experiment."

REDWOOD TESTIMONIAL FUND.—It is announced that the subscription list of the Redwood Testimonial Fund will be closed in December. The sum already received is not sufficient to carry out the object of the movement, which is the foundation of a scholarship. It is hoped that those who know and value Dr. Redwood's labours in Materia Medica, and more especially in connection with the *British Pharmacopœia*, will subscribe to the fund. Contributions should be sent to the Honorary Secretary, Professor Dunstan, 17, Bloomsbury Square, W.C.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

ON LANOLIN.

Read in the Section of Therapeutics and Pharmacology at the Annual Meeting of the British Medical Association in Brighton.

By OSCAR LIEBREICH, M.D.,
Professor of Materia Medica in the University of Berlin.

At the present time, the object of experimental pharmacology is twofold. On the one hand, we have to investigate remedies which have already gained a fixed position in practical medicine; while, on the other hand, we must study products which have been made the subject of experimental and pharmacological inquiry, but which have not yet been tested practically.

It is this experimental pharmacological method which more especially claims my attention; and I am of opinion that it is a most important mode of investigation; at the same time, I readily admit that the results of clinical experience must never be lost sight of.

The principal aim which I have in mind is to make, not only abstruse physiological or chemical experiments, but to turn these experiments to account in the light of my pharmacological studies. Even those which appear to have a purely theoretical interest, become the origin of practical discoveries.

Pharmacology must unite with all other branches of medicine, and pursue an exact experimental course. There can be no doubt that products obtained by the pharmacological method must inspire more confidence than those which are simply introduced by empirics.

There is a great difference between recommending a drug which has been studied from a pharmacological point of view, and only introducing it in order that it may be tried in practice without previous experiments. In the latter case, a certain substance is introduced, and the decision on its merits is left to those who try it on their patients, and who judge by the results of their statistics.

One of the branches of pharmacology which has been most neglected is that which refers to drugs used in the treatment of skin-diseases. In consequence of our pathological studies into the nature of diseases, the local treatment has become more and more important. The method which I have employed, and the substance itself which makes the subject of my paper, are so simple, that I should be unwilling to occupy your time with them, if I had not, at the same time, to present to you some important considerations which will have soon to be studied by anatomists and physiologists. These studies may lead to new discoveries concerning the composition and metabolism of our body.

I wish to speak to you of a substance which I have called lanolin, the biological importance of which I have already had occasion to mention in this country. Lanolin is a cholesterin-fat which differs from the ordinary fat of the panniculus adiposus through its containing, instead of glycerine, the brilliant crystals of cholesterine, which are so well known to every microscopist.

Besides cholesterine, these fats contain other substances which are similar to cholesterine, but which have nothing in common with glycerine. In order to give you an idea of the differences which exist between these two sorts of fat, I may mention that cholesterine fats are not decomposed by boiling with alkaline solutions: that is to say, they do not form soaps; while on the other hand, glycerine fats are easily split into soap and glycerine when treated in the same way. The decomposition of glycerine fats into fatty acids and cholesterine or cholesterine-like substances, can only be produced by the action of a strong solution of alkali in alcohol. We have, therefore, to deal with a very stable chemical compound.

I have found yet another difference between these two sorts of fat. Lanolin absorbs water very readily. By simply stirring together a cholesterine fat and water, more than 100 per cent. of the latter can be incorporated with it, and a soft yellowish mass is formed, which is the lanolin properly so-called. I have named lanolinum anhydricum, the cholesterine fat deprived of water. Neutral glycerine fats, vaseline and petroleum fat, do not absorb water, or only absorb it in very small quantity.

Lanolin can be extracted from the fat contained in the wool of sheep; this fat, when unpurified, is called wool oil. It has been known for a very long time among the agricultural and cattle-breeding populations, and its old designation was œsypus.

I could not, without taking too much of your time, give you the history of this œsypus. I shall simply tell you that œsypus was already used in the time of Herodotus. Dioscorides describes the preparation of œsypus from wool, and his description is reproduced in most of the pharmacopœias published up to the eighteenth century. It was also used by the ancients as a cosmetic, and Ovid mentions it in his "Ars Amatoria." The Roman ladies anointed their faces and skin with œsypus brought from Athens, and this in spite of its repulsive nature. Lanolin continued to be employed during the middle ages as Mr. Milton has pointed out to me; he has found the œsypus mentioned in the Sloane edition of *Hieronymus Frascatorius*.[1]

Œsypus was bound to be abandoned, as the impurities which it contained, especially the rancid fatty acids, often produced irritation of the skin. Many substances, called by fantastic names, have been recommended as substitutes for œsypus, but they all contained fatty acids; and many impure substances of this nature have been produced since my researches, and the name lanolin, which I have introduced for a definite substance, is improperly applied to them.

In my opinion, the best method consists in separating the lanolin from its emulsion by centrifugal action. The emulsion must be previously sterilised by the action of heat and alkalies. Distillation can, unfortunately, not be used, as it causes a partial decomposition, and an increase in the quantity of fatty acids. When lanolin was first introduced by me, I recommended to mix it with fat; but I am pleased to be able to withdraw this opinion, as I have succeeded in removing from lanolin the sticky cholesterine fats. It has thus become possible to obtain a substance which, in the state of lanolinum anhydricum and of lanolin, possesses the necessary softness. Referring to what I said in the beginning of my communication, I must now examine if lanolin is, unlike vaseline and fats, a substance similar to the fat contained in the skin and keratinous tissues.

My researches have led me to believe that it is always present wherever keratinous tissue is formed. As to the origin of this cholesterine fat, it may be asked whether it is secreted by glands, or formed simultaneously with the keratinous tissue. I can answer that the horny tissues are full of lanolin, even where there are no glands to produce it. The degree of brilliancy and elasticity of the horny tissue is in direct proportion to the amount of lanolin contained in it. I must not forget to say that some researches made by French experimenters have been of great interest to me while I was working on the subject, Berthelot[2] has shown, many years ago, that it is possible to combine synthetically cholesterine and fatty acids; he has also foreseen that this fat might be found in Nature. I have found that the researches of Hartmann and Schultze have brilliantly confirmed those of Berthelot. I have, moreover, shown that lanolin is nearly always present in keratinous tissue.

On the other hand, Ranvier has discovered in the skin microscopical fatty globules, which have been called by him eleidin; we can also mention in this place the very important investigations of Waldeyer. We have here, possibly, the beginning of a series of researches which may lead ultimately to a more exact knowledge of the formation of lanolin in the cells of the skin. I say, therefore, gentlemen, that the constant presence of this fat in keratinous tissue and the discovery of the substance itself are the true base of the general therapeutical indications.

I have first of all shown that lanolin can be rubbed into the skin with great ease. When this rubbing is repeated several times, the skin becomes distinctly softer. This application of lanolin to the skin has been found very useful for massage by Dr. Ewer[3]. It is a great advantage that lanolin does not require to be removed with soap and water after massage. I may mention, also, that the easy penetration of the skin by lanolin explains the good results obtained with it in seborrhœa sicca.

It stands to reason, that the permeability of the skin varies in different persons; it is evident, also, that an epidermis already saturated

[1] *Hieronymus Frascatorius de Sympathia et Morbis Contagiosis.* London: 1884. Publications of the Sloane Society. "Interea si membra dolor contabuit palleat foeat corpus prorsus lenire dolorem Mastichen potes oleo." Meanwhile, should severe pain assail the limbs, hasten to assuage the torment with oil.

[2] Depuis lorsque j'observai que il ne paraît pas impossible que quelques-uns de ces acides, le composé stéarique notamment, existent à l'état naturel sur l'économie dans l'économie animale. Berthelot. *Chimie organique fondée sur la Synthèse.* Tome i, p. 161. Paris, 1860.

[3] Die Anwendung des Lanolins bei der Massage, *Deutsche Med. Wochenschrift* 8 July, 1886. Berlin.

by its natural lanolin cannot be impregnated with more fat as easily as a dry epidermis. Dr. Pawlowsky has therefore recommended to free the skin from its natural fat by means of ether before using the lanolin; there is no doubt that grey ointments prepared with lanolin are preferable to the ordinary ointments; this is the opinion of the well known authority in Aix-la-Chapelle, Dr. Brandis (*Behandlung der Syphilis.* Berlin, Hirschwald. 1886. Third Edition).

It is certainly better to draw conclusions from a few carefully observed cases than from statistics, which are more or less misleading in cases of this kind.

The following may prove interesting to you. One of my colleagues in Berlin prescribed to a patient an inunction of grey ointment made with lanolin. He observed already, after two inunctions, an irritation of the skin and the apparition of acne pustules. Wishing to enlarge my experience, I examined the ointment, and found no trace of lanolin in it. The chemist admitted that I was right, and said that a mistake had been made. After the disappearance of the skin-eruption, neutral, carefully prepared lanolin mercury ointment was used, and no return of the irritation was observed.

I took special interest in a case of sycosis vulgaris, which had been wrongly diagnosed as parasitic sycosis. The patient, a young man aged 19, had suffered five years from the disease, and had been treated without success, not only by all the usual means, but also by a preparation of lanolin; the latter, however, was of bad quality, and a rapid improvement took place as soon as the pure substance was employed.

I could mention to you many other cases in support of this view, but I think that the unirritating nature of lanolin is already generally admitted.

I wish now to make a few observations concerning the absorption of drugs through the skin. It must not be supposed that a substance applied to the skin, even in combination with lanolin, can be absorbed as quickly as through the intestines. It is also necessary to remember that a comparatively large quantity must be applied externally in order to produce the same general effects as a small quantity given by the mouth; the dose of mercury, for example, must be sixty times larger when used in the form of the ordinary grey ointment than when administered internally. Although lanolin mercury ointment is more readily absorbed than the ordinary one, it is quite certain that the quantity of mercury used must be much larger than what one would give internally.

I must now explain shortly, with the aid of this drawing, why absorption through the skin is slow. The superficial layer is the stratum corneum; then comes the stratum lucidum; then the granular layer, in which lanolin is probably formed; then the deep cells of the epidermis; and, at last, the papilla, with one vascular loop. When fat is rubbed into the skin, it finds only this one loop through which it can be absorbed; in the intestine, on the contrary, every villus contains numerous blood-vessels; hence the great difference in the power and rapidity of absorption.

I must end with a few remarks on a point of importance, concerning the use of lanolin, which shows very evidently the difference between it and ordinary fat; when lanolin is used on mucous surfaces it never forms a scab; this has been, I believe, first noticed by B. Fraenkel, of Berlin. It may be explained in the following way. Lanolin has a great affinity for water, and this peculiarity explains why it adheres intimately to mucous membranes; fat and vaseline, on the contrary, remain separated from the mucous surface by the natural watery secretion.

It would lead me too far if I were to consider in detail the distribution of lanolin in the body, but I have reason to believe that it is found not only in the keratinous tissues, but also in the blood, liver, and other organs; never in the panniculus adiposus. Further researches will elucidate this question.

It has been objected to me that lanolin, which was known to the ancients, and used for centuries, would not have been abandoned if it had been really useful. To this I answer that what they used was œsypus, that is to say, impure wool-oil, which has many disadvantages and dangers. I cannot therefore lay too much importance on the fact that pure neutral lanolin must be used, not those substances which are sometimes falsely called lanolin, but which are in reality only impure and acid wool-oil or products of distillation, which contain still larger quantities of acids.

We see something analogous in the case of opium; after it had been used in the form of electuarium theriaca, that is to say, of an impure compound of opium, it fell into discredit for a long time, partly also through prejudice; and you know that Paracelsus was the first to reintroduce it in its pure state under the name of laudanum.

Thus, in lanolin, I introduce to you a substance which, like many others, is old as history in its primitive forms—new as our most modern research in its derivative form. To transform the old, to apply to it the alchemy of science, to purify it, and to utilise it for the benefit of mankind—this is our aim. This has been my labour. I have the ambition and the belief to have rendered a service to humanity.

A new fatty substance, neutral, mixable with water, highly absorbable by the skin, is a desideratum. Such is lanolin, which I introduce to you, and for which I predict a long career of great usefulness in the dermatological therapeutics and in the hygiene of the skin.

Dr. JOHN SHOEMAKER, of Philadelphia, United States of America, stated: I think it was in 1879 that I showed by a series of experiments, which were reported before the Medical Society of the State of Pennsylvania, that the commonly accepted basis of ointments—the petroleum products—were often injurious to use for the skin, owing to the irritation which they frequently occasioned; and further demonstrated, by both clinical and physiological investigations, that these same products had less affinity for animal tissue than animal fats, and therefore the latter had deeper penetration, and were better borne and better to use as a vehicle for the external application of various drugs. In 1884, at your meeting at Belfast, when I had the honour to address you on the Oleates, I repeated the statements just referred to, and the results of my experiments were reported in your MEDICAL JOURNAL. Professor Liebreich, in his first paper read upon Lanolin, announced the same fact, namely, that, by experiment with lanolin (and remember it is an animal fat), side by side with the petroleum products, the latter having medicinal substances incorporated with them, proved almost inert; while the former, containing the same drugs, showed decided activity. These investigations have, I think, proved conclusively that animal fats are better adapted for external application, and possess what the petroleum products do not —power for deep penetration into the skin. I therefore at this time regard lanolin as one of the best vehicles for the basis of ointments. It also possesses two other most valuable qualities which make it superior as a basis for ointments. First, it will cling or adhere better to the skin than any other fatty substance, and will not melt and run off like lard and other fats, and it therefore serves better to keep the medicinal material in it upon the part for absorption. Secondly, it can be incorporated with oils and other substances, so that the lanolin can be brought in contact with the skin at any and all consistencies. This latter quality which lanolin possesses is a most valuable one, particularly if it is necessary to make the fat of the consistency of a liniment, so as to apply it well to parts of the skin covered with hair. In reference to the therapeutics of lanolin, I might add that it has many most valuable uses. It possesses a mild and soothing action upon the skin. It will assist in overcoming all rough and irritable conditions of the integument, used alone or in combination with other substances. It is well adapted for application in the dry form of seborrhœa, or what is known as seborrhœa sicca. In a like manner, it is effective to use in alopecia, especially if the loss of hair is due to the collection of scales and crusts upon the scalp. Chronic eczema—particularly of the scalp, palmar, and plantar surfaces—will not only in many cases improve, but will frequently quickly yield to the application of lanolin. It is not only useful in the above disease, but acts equally efficacious in very many other inflammatory affections of the skin. It soothes, relieves, and often cures all irritable states of the skin which occur from what is known as chapping. Lanolin is also a most decidedly useful application for boils, carbuncles, piles, cuts, and wounds.

Dr. MACKEY remarked that the main value of promoting absorption of effective drugs, for example, iodide of potassium in rheumatic arthritis and gland-enlargement, mercurial application in laryngeal congestion, etc., and especially in the scaly skin-diseases; for example, chrysophanic acid (one-half strength), in psoriasis, depended on rubbing in rather than on laying on.

Professor LIEBREICH briefly replied.

WEXFORD UNION.—Dr. Duff having resigned as Medical Officer of Bridgetown Dispensary District, the following resolution has been passed by the guardians: "That we regret to hear that Dr. Duff's health has not made the improvement it was hoped it would; and, as he has been obliged to send in his resignation through his inability to perform the duty, we hereby accept it, and wish to express our appreciation of his attention and kindness to his patients for the short time he was able to do the duty." An election for his successor will take place on November 2nd.

FOUR CASES OF SUPRAPUBIC LITHOTOMY BY THE MODERN METHOD, WITH REMARKS.

By W. H. A. JACOBSON, F.R.C.S.,
Assistant Surgeon, Guy's Hospital; Surgeon, Royal Hospital for Children and Women.

THE writer thinks that the following cases may be useful to any surgeon who is about to perform the recently modified high operation for the first time.

As all the calculi were small, these cases are not such good tests of the operation as those of larger stones, especially if combined with enlarged prostates and atony of the bladder. Still, as the ages in these four cases varied from forty-eight to five, as two of the adult patients had been the subjects of serious disease of pelvis and spine, as cystitis was present in all the cases, and as, in two of the adults, the urine was ammoniacal, the operation may be said to have been fairly tried.

CASE I.[1] *Multiple Oxalic Calculi in a Young Adult; Cystitis; Pneumonia after Operation; Hæmorrhage Two Weeks later; Recovery.*—A. F., aged 19, an Essex labourer, was sent to the writer at Guy's Hospital by Dr. Day, of Harlow, January 21st, 1886, for stone in the bladder. Irritability of this organ, day and night alike, had been present all his life; symptoms of stone, especially the stream often "stopping dead," and a great deal of pain on getting about the first thing in the morning, and when jolted in country carts, had been well marked for five years; cystitis had been present for the last twelve months.

A hard and ringing stone was readily felt at the neck of the bladder; so closely did it fit here, and so readily did it return after being pushed away, that considerable elevation of the pelvis was required before a lithotrite could be made use of. Both this and the sound gave evidence of more than one stone. The bladder was at first very irritable, expelling its contents even when the patient was quite under ether. For the next few days it was washed out with carbolic acid, 1 in 100, its reaction just becoming acid before the operation, but pus was still present.

It was decided to perform lithotomy rather than lithotrity (1) on account of the multiple calculi; (2) the hardness of one of these, and its constant position at the neck of the bladder; (3) as to the size of the largest calculus; this, as appeared later, had twice been correctly gauged as very moderate—one inch and a quarter in its long diameter; but with regard to this point, the writer was inclined to think that the above diameter was the shorter, owing to the rectal examination giving the impression of a larger stone. Both in this case and in one in which Professor Humphry performed suprapubic lithotomy for a stone which actually weighed about one ounce and a half, the coats of the bladder, no doubt thickened, closely embraced the stone, and thus gave an impression that the latter was larger than it really was.

Lithotomy being decided on, the hypogastric operation, as recently improved by Professor Petersen (Ueber Sectio Alta. *Langenbeck's Arch.*, 1880, Bd. xxv, Hft. 4) and Sir H. Thompson (*The Suprapubic Operation of Opening the Bladder.* London: 1886), was preferred on account of the age of the patient, the fact that the symptoms of calculus had certainly lasted over five years, and, perhaps, throughout life, and that thus it was not improbable that the structure of the kidneys was impaired, and, if so, it seemed reasonable to think that an incision made into the anterior surface of a bladder distended with antiseptic fluid, and brought safely into reach, would be more successful in the long run than one into the neck of the bladder, with its complicated surroundings and far more intricate structure, and abundant vascular and nervous supply.

The operation was performed on the lines laid down by Sir H. Thompson in his recently published book. (*Op. cit.*) The patient being under ether, one of Sir H. Thompson's pyriform bags was introduced, well coated with eucalyptus oil and vaseline, pushed well above the sphincters, and then distended with ten ounces of water. The urine in the bladder being then drawn off, eight ounces of warm carbolic acid were introduced, the catheter withdrawn, and a Jaques' India-rubber catheter tied round the penis. The bladder could now be both seen and felt distended for two-thirds of the distance between the umbilicus and pubes. An incision, three inches long, was then made in the middle line down to the symphysis; after division of the linea alba and fascia transversalis, an abundant layer of fat, with veins, bulged up into the lower angle of the wound, this being carefully torn through with a director, the anterior surface of the bladder, pink-red and showing clearly detrusor fibres, came into view. The peritoneum was never seen, and could only be very indistinctly felt. A tenaculum[2] being passed into the bladder, and a scalpel introduced at this spot, the left index finger followed on, and at once felt a stone; the opening being dilated with the other index-finger, the stone was removed between them. In this dilatation, the bladder was felt to tear readily, but without hæmorrhage. Careful and repeated search, including those parts of the bladder behind the prostate and pubes, failed to detect the other calculi, whose presence was suspected. While it appeared at the time that the bladder cavity was immediately under reach, and that every part had been explored, the failure to detect the two other calculi, which were after all present, arose from one of two causes, perhaps from the two combined. (1.) The writer being desirous that, as the bladder emptied itself over the recently cut tissues, the first flow should be of antiseptic fluid, allowed too little fluid to escape during the exploration of the bladder. The weight of the two smaller calculi, when in fluid, must have been extremely slight; and stones, so small and so light, may have been easily displaced in currents set up in so much fluid, and thus rendered very difficult to find and seize. (2.) Ten ounces of fluid in the rectal bag may not have been sufficient to raise the bladder evenly and completely, and thus some depression or pouch may have been temporarily formed, and not reached by the finger.

Mr. Barwell also held this view at the discussion at the Medico-Chirurgical Society on the cases brought forward by himself, Mr. Rivington, and the writer. It certainly seems probable that a pyriform bag will raise chiefly the middle portion of the base of the bladder, and tend to leave sulci at the sides. Messrs. Weiss have lately made a new bag, flattened in shape, for Sir H. Thompson, to raise the bladder more evenly. One of these bags was used by the writer in his fourth case.

No attempt was made to suture the wound in the bladder, owing to the previous cystitis; two deep stitches (carbolised silk) were placed in the linea alba and two others superficially.

Carbolic gauze-dressings were applied at first, but, during the greater part of the time, iodoform gauze and boracic acid lint were made use of, iodoform being freely used in the wound, and the soft parts kept smeared with eucalyptus and vaseline.

After the first twelve hours, the patient was turned on his side every six hours; and the dressings were changed every three or four hours at first.

There was never the slightest sign of extravasation or cellulitis, but the healing was retarded by an attack of pneumonia following on the operation, and due, in part, to the ether, and, in part, to the bitter weather of last winter.

For the first three weeks there was frequent cough, respirations of 32 to 34, labial herpes, and much tenacious blood-streaked expectoration, with tubular breathing, and crepitation over both bases, especially the right.

On the fourth day the wound and urine were distinctly ammoniacal, this condition lasting for thirty-six hours, but yielding at once to washing out the bladder with Thompson's fluid. Two weeks after the operation, when the wound was rapidly granulating, about 5 A.M. one morning, the patient felt as if he was passing water *per urethram*. It was then found that considerable hæmorrhage had taken place both from the urethra and wound. It was venous in character, and when the writer saw the patient, about an hour later, it had been almost completely arrested with ice; it was readily and entirely stopped by the introduction of a small piece of sponge, well powdered with iodoform and steel sulphate, attached to silk, and pushed down to the bottom of the wound. A few hours later, on the removal of the sponge, a small smooth oxalic calculus was found in the lower angle of the wound.

Two days later a second, but much smaller hæmorrhage took place, yielding at once to ice, and a second small calculus came away.

Three weeks after the operation, five or six ounces of urine were passed naturally, this quantity gradually increased till the fifth week, when all the urine was passed the right way.

Before the wound closed the patient was carefully sounded by probes pushed through it, as well as sounds introduced *per urethram*, without any other calculus being felt.[3]

While the above case cannot be considered such a good test of the

[1] An abstract of this case was read before the Medico-Chirurgical Society early in the present year.

[2] If the bladder is well raised by the bag, and if fluctuation can be clearly perceived, the use of this instrument would appear superfluous.

[3] The patient was shown in the theatre at Guy's, previous to the writer's operating on a third case, June, 1886. The wound was soundly healed, the patient in robust health, free from any bladder trouble whatever, and more than a week later an Essex labourer.

value of the operation, as one in which a larger stone and an older patient are dealt with, it yet presents some features of interest, such as the absolute immunity from any symptoms of cellulitis or extravasation of urine from first to last; in fact, local inflammatory symptoms were never present; there was a little tenderness the first night around the wound, but this was all.

The ammoniacal condition of the wound on the fourth day was due, in part, to the previous cystitis, and, in part, to the fact that, just at this time, the pneumonia was making head, the patient dull and apathetic, and, when turned on to his side, sinking, as far as possible, on to his back again. The way in which this ammoniacal condition yielded at once as soon as the fluid which bears Sir Henry Thompson's name was used, saturated boracic acid having been used for thirty-six hours without good result, was very noteworthy; it is bland, unirritating, and most efficient.

The hæmorrhage which occurred twice in the after-treatment of this case can in no wise be put down to the operation, or be considered as in any way detracting from its merits. It was due here entirely to the writer having failed to find the two smaller calculi, as these made their way out through tender granulations, at that time still bathed in urine, they easily caused considerable venous hæmorrhage. While it is well known that an inflamed bladder may give rise to hæmaturia, the same viscus in a healthy condition is not generally considered a very vascular organ.

The following case, which came under the writer's care at the same time as the above case of lithotomy, shows how grave a hæmorrhage may take place from the opening of one vein in the healthy bladder. A young, muscular adult attempted to commit suicide from London Bridge. In his fall he struck a buttress, sustaining a severe fracture of the pelvis. Rising to the surface, he was carried by the tide as far as St. Paul's before he was taken out of the water by a Thames-police galley. When seen by the writer about an hour afterwards, he was in a condition of fatal collapse, with fractured pelvis and ruptured bladder. On *post mortem* examination, a most extensive hæmorrhage, chiefly retro-peritoneal, was found occupying the brim of the pelvis, right iliac fossa, and the lumbar region as high as the right kidney. All this hæmorrhage, more than a pint and a half, had come from a vein in the upper and anterior part of the bladder, opened by a small rent, half an inch in length, which had been caused by a sharp projecting fragment of the right horizontal ramus of the pubes.

CASE II.—*Lithic Acid Calculus, in a Middle-aged Man, with Cystitis, Hæmorrhoids, and great Spinal Deformity; Recovery.*—Mr. H., aged 40, was sent to me by Drs. Turtle and Warner of Woodford, March 31st, 1886. Patient, born in Essex, had spent two years of his life in Norfolk. For the last year has had irritability of bladder; now can only hold his water for half an hour; gets up five or six times at night; stream stops occasionally; has suffered badly from hæmorrhoids; when 12 years old, was the subject of spinal caries, and is now dwarfed, and hunchbacked. A hard, uneven stone felt at neck of bladder, an inch in length; urine ammoniacal; bladder very irritable. Patient has now a ring of external piles recently inflamed.

Owing to the ammoniacal urine and the evidence of piles, which were said to be frequently inflamed, it was decided to remove the stone by suprapubic lithotomy rather than by lithotrity. This was done April 4th, 1886. Owing to the large hunchback, and the consequent thoracic deformity, there was only an inch and a half between the xiphoid cartilage and the umbilicus. The anæsthetic (ether) was taken with much fixity of chest, and jerking backwards and forwards of the abdominal walls, by which respiration was almost entirely performed. The rectal bag being introduced with some difficulty (owing to the presence of piles and the small condition of parts) well above the sphincters, twelve ounces of water were introduced with a syringe. This, of itself, caused some prominence of the bladder. A double silk-web catheter being passed, ten ounces of carbolic acid solution, 1 in 100, were introduced with a syringe, and a Jaques' catheter tied round the penis. The bladder could now be felt, just like a large cocoa-nut, or the uterus after a labour, evident both to the eye and hand.

At this stage, violent respiratory contractions of the abdominal walls took place, and the bladder was supported with the hands. An incision, three inches and a quarter long, being made in the middle line, the linea alba was slit up, the fascia transversalis divided, and the distended bladder was punctured between two veins, a tenaculum being first inserted. A jet of fluid was violently expelled, and the finger at once felt a stone, which was readily extracted. Two carbolised silk stitches were inserted in the linea alba, and three in the skin. Iodoform gauze-dressings. A little blood-stained mucus came away after the emptying and withdrawal of the bag. Dr. Warner has kindly furnished me with the following notes:

"Dressings changed at first every four hours. April 6th. Temperature, 99.2°. This was the highest temperature throughout the case. Has passed water *per urethram* several times. April 7th. Urine from wound still a little blood-stained. Patient suffers a good deal from flatulence, and the abdomen is a little distended. April 8th. A pint of urine passed *per urethram*. There is a little tendency of the urine to bag in the subcutaneous tissue in the lower angle of the wound, the opening in the bladder not corresponding exactly to that in the skin, being a little lower and to the left. April 9th. Owing to the spinal disease and the consequent deformity, the respiration is almost entirely abdominal, thus causing more movement of the edges of the wound than would otherwise be the case. The superficial stitches were removed, as there was no union, and strips of strapping applied. April 11th. As the urine was still ammoniacal, with a little phosphatic deposit, the bladder was now washed out with Thompson's fluid, 1 in 8. April 21st. Urine has been acid and clear since the 16th. Wound looking well, and closing up quickly. There has been a marked improvement since Thompson's fluid was substituted for carbolic acid. April 22nd. Patient up to-day, the eighteenth day. April 24th. Twenty-two ounces passed *per urethram*. Urine only comes through wound in small quantities, and when patient is passing water *per urethram*. May 1st. No urine was passed by the wound after this date. May 12th. Patient went into the country for a change, the wound being almost entirely healed."

June 12th. The patient called on the writer to-day, his first occasion of seeing him since the operation. The wound was soundly healed, and he was able to hold his water for three hours.

This patient, considering his old spinal deformity, was not a very favourable subject for any severe operation. Nothing, however, could have been more favourable than his recovery. Dr. Warner, who had the entire charge of the case, informs the writer that the details of the after-treatment presented no difficulty. The operation itself was remarkably easy, owing to the full distension of rectum and of bladder; but, as will be alluded to later on, the writer is of opinion that, in injecting ten ounces into the bladder, after putting twelve ounces in the rectal bag, he had reached what were very nearly the safe limits of distension in this case, when the deformity of the patient and its effects on his respiration are considered.

CASE III. *Suprapubic Lithotomy in a Man, aged 48; Lithic Acid Calculus of ¾ ounce, Elongated and Flattened; Cystitis; Old Pelvic Disease; Recovery.*—H. D., aged 48, a patient of Dr. Howse, of Swindon, came under my care at Guy's Hospital on June 4th, 1886. For the last twelve months the patient had suffered from symptoms of stone. A Wiltshire man, and of steady life. Face earthy grey in tint; weak and emaciated; much pain in the bladder when moving or sitting. Free hæmaturia on passing a sound. Stone felt readily. Meatus and urethra very small; prostate enlarged. Old puckered scars connected with pelvis on both sides, dating to disease lasting three years in boyhood. Urine fœtid and ammoniacal, containing phosphates and blood.

The bladder was washed out during the next few days with Thompson's fluid (1 in 10), but as the hæmaturia continued, and as, even after slitting up the meatus, the urethra was too small to admit evacuating tubes, it was decided to perform suprapubic lithotomy.

June 11th. The patient being under the influence of chloroform, suprapubic lithotomy was performed. Some difficulty was met with in pushing the bag as well above the sphincters as in the two previous cases. After this had been done, however, no difficulty was experienced in introducing 12 ounces of water. About an ounce of foul-smelling, turbid, blood-stained urine was then drawn off, and 10 ounces of tepid carbolic solution (1 in 80) introduced. This went in from the syringe without difficulty, though the fluid tended to escape as the patient strained, breathing heavily under the anæsthetic. A Jaques' catheter was then tied round the penis, and the operation begun. This only differed from the two preceding ones, in the large amount of extra peritoneal fat met with bulging up into the wound. This was partly torn through with the director, partly hooked up out of the way with the left index. By these means the anterior surface of the bladder, pink-red, fasciculated with involuntary muscular fibre, came into view. Prominence of the bladder and fluctuation were less distinct than in the two previous cases, but puncture with a scalpel gave vent to a jet of fluid, and a calculus was at once felt, and readily hooked out with the right index finger. One vein was tied in the bladder itself. Three carbolised silk sutures were placed between the recti and cut short, three of silver wire in the skin wound, none in the bladder. Iodoform dusted in wound, and iodoform gauze and boracic acid dressings applied. The stone was a lithic-acid one, flat and elongated, and measuring between 1¼ and 1½ inches in its long diameter.

The after-treatment of the case was retarded by the patient's extreme nervousness and mental depression, but the wound never caused any anxiety.

June 12th. Abdomen soft, supple, undistended, and free from tenderness.

June 15th. Thompson's fluid, 1 in 10 to 1 in 6, has been used daily, and the urine is becoming sweet. Wound granulating well.

June 20th. About this time the patient became extremely troublesome to manage, at first miserably depressed and hypochondriacal; he took to pulling off his dressings, getting out of bed at night, etc.; for some days small sloughs, probably connected with the abundant extra-peritoneal fat, coated with phosphatic deposit, appeared in the lower angle of the wound. This condition yielded easily to injections of dilute nitric acid (℥i—℥i).

By July 5th the patient was passing a pint of urine, *per urethram*, and the wound was nearly closed.

On July 20th he went home, by his own desire, there being still a small sinus above the pubes, through which some urine came.

In answer to a letter at the end of August, Dr. Howse kindly replied that the patient had gone to the sea-side with the wound completely healed.

Case iv. *Small Mixed Calculus in a Child aged 5; Cystitis; Suprapubic Lithotomy; Recovery.*—G. W., aged 5, has lived all his life in Bermondsey. Symptoms of stone noticed about three months. With the aid of chloroform, a small rough calculus was readily detected. Urine turbid, containing muco-pus and phosphates. While the child was under chloroform, the bladder could be made to contain three ounces of fluid easily, this bringing the bladder up midway between the umbilicus and pubes.

It was decided to perform suprapubic lithotomy in this case, in order to give the reintroduced operation as full a trial as possible.

August 24th. The child being under chloroform, and the bladder emptied with a No. 5 double silk-web catheter, the rectal bag thoroughly emptied of air, folded up, and well smeared with eucalyptus and vaseline, was introduced, and pushed above the sphincters, its introduction being followed by the escape of some liquid fæces (the remains of the enema given in the morning). This bag, which had been made most carefully by Messrs. Weiss, with especial attention to the seams, and of as thin India-rubber as is consistent with security, held as its maximum three and a quarter ounces; it was distended, by means of a syringe carefully marked at three ounces, with two and three-quarter ounces of water. The same amount of Thompson's fluid (diluted 1 in 10) was then thrown into the bladder, the catheter withdrawn, and a bit of fine drainage-tube tied round the penis. The result of the combined distension was to raise the bladder well midway between the umbilicus and pubes, the bladder being injected very gently owing to some straining which now took place, and rigidity of the abdominal muscles, though the child appeared well under the influence of the anæsthetic. An incision, upwards of three inches long, was then made in the middle line, numerous small vessels bleeding rather freely, and being closed with Sir Spencer Wells's forceps. The left pyramidalis was exposed below. The fascia transversalis, extraperitoneal layer, thickly fatty, were then torn through. The fat lying over the bladder next came into view; and, in exposing the bladder itself, some slight hæmorrhage took place, a perfect network of small veins lying in immediate contact with the bladder, one of which required temporary closure with a Spencer Wells's forceps. The bladder being next punctured with a scalpel, the usual jet of fluid took place, and the stone was readily felt, and, after a few attempts, extracted with forceps, some little difficulty being met with here, as the stone lay high up in the apex of the bladder, well above the wound. When pressed down by the fingers outside, and brought into the right axis, it came out readily. Three silk stitches were placed in the linea alba, and cut short, and five in the soft parts above, none in the bladder. The bag came away easily, without any blood-stained mucus.

August 25th. Dressings have been changed every three or four hours. Abdomen a little full below, but moves in respiration. Temperature 102.8°; respirations 40; pulse 130. Takes two or three drops of laudanum every six or eight hours. Later on in the day, the child was bright, clear, and free from pain. Tongue clean. No sickness. Bowels acted a little this morning naturally. Urine coming away freely from wound.

August 26th. What distension of abdomen there was has entirely disappeared. Temperature 100°. Child free from pain, and bears moving well.

The condition continued most satisfactory, both locally and generally. When I left London to take my holiday, about September 8th, or a fortnight after the operation, the child was passing two or three ounces of urine naturally, the wound granulating up, and quite superficial. All the skin-sutures had been removed; only one of those in the linea alba had come away. Three weeks later, the wound was healed.

[*To be continued.*]

CASES OF ŒDEMA OF OBSCURE ORIGIN:

THEIR RELATION TO KAKKÉ (BERI-BERI).

By Surg.-Major SHIRLEY DEAKIN, F.R.C.S.Eng., I.M.S.

About six years ago (1879-81), numerous cases of chronic œdema, chiefly of the lower extremities, were to be met with in civil dispensaries and gaols in the North-Western Provinces, and, indeed, I believe, generally throughout Upper India. The period at which the disease occurred had been preceded by a time of high prices and famine, or, as the authorities prefer to call it, "scarcity." To this succeeded a severe epidemic of periodic fever, which is recorded to have carried off one and a half millions of the population in 1879. The *post mortem* conditions were enormous enlargement of the spleen, which organ was extremely soft and friable, of a deep mulberry colour, the capsule resembling moist, thin, bank-post paper. Cases are on record where the slightest blow over the spleen when the stomach was full was followed by fatal rupture. Surgeon-Major G. C. Hall saw one case where a prisoner, walking along, stumbled and fell in his presence; he died, and a *post mortem* examination revealed a ruptured spleen. The lungs and brain were congested; the serous cavities contained more or less fluid; and the blood which flowed during life, more like thin claret than blood, was very dark-coloured, and showed a great tendency to coagulate. In one case, I traced a dark-coloured clot from the heart to the arteria dorsalis pedis without a break. The pathological conditions were such as to support Dr. M. D. O'Connell's hypothesis (*Ague or Intermittent Fever*, Thacker, Spink, and Co., Calcutta, 1885) that ague is due to excess of water in the blood, though this writer endeavours to prove that the intermittent and remittent forms of periodic fever are due to different causes. That either disease is due to any specific germ or bacillus (excluding all cases of marked enteric or typho-malarial fever), I do not believe. There is no warrant for introducing a virus of any kind into the pathology of so-called malarial fever. It is always seasonal and climatic fever, and there are only two main factors in it—cosmical conditions and the susceptibility of the individual. Primary and direct disorder of the heat-regulating centre by heat or chill is alone sufficient to carry us through all the phenomena of malarial fevers, if the principle be applied with full knowledge (Creighton, *Unconscious Memory in Disease*, 1886, p. 85). Here we had persons greatly emaciated and weakened by want, exposed to extreme chill by excessive rainfall, and diurnal variations of temperature causing heavy deposition of aqueous vapour. An atmosphere, saturated with moisture, deposited a heavy dew on persons who insisted on sleeping on the ground to avoid demons (Temple's *Punjab Folk-Lore*), insufficiently protected by woollen clothing and blankets from the severe chills of the early mornings. As food became more plentiful, and when the climatic conditions had changed, symptoms of a chronic form prevailed. Cases of firm œdema of the legs—sometimes of the right, sometimes of the left, or of both—were met with in adults. The cases I saw were chiefly males, of all ages. There was rarely any sign of albumen in the urine. Prisoners might have been in gaol[1] for many weeks when they were attacked. The patients were often in a good state of health as far as general appearances went; the gums often firm, not spongy, nor ulcerated. Such patients would be admitted from work in the various factories, mills, or gardens.

The Inspector-General of Prisons was inclined to consider this œdematous disease, as well as pneumonia of a marked solid form, and dysentery, which then prevailed, as due to a scorbutic taint. This idea was not in accordance with the views of those whose patients presented no other symptoms of scurvy, being fed with an ample supply of potatoes, vegetables, lime-juice, and other preserved anti-scorbutics. I was of opinion that one particular source of water-supply was responsible for several cases I saw, but subsequent observation negatived this view. I have not met with any such cases during the past three years, which has been a period of plenty, since the serious depreciation of the rupee does not appreciably affect the poor natives of this country, who use only country produce.

What the disease really was long remained a mystery to me.

[1] An increased dietary scale, including a large variety of articles, was introduced about this time, with good effect.

Some papers in the Japanese *Sei-i-Kwai Medical Journal*, by Surgeon-General K. Takaki and Dr. Wallace Taylor, on *Kakké*, or Beri-beri, have satisfied my mind that the disease with which we had to do was a mild and obscure form of beri-beri, a disease met with in Ceylon, the Malabar coast, Burmah, and other parts of India, the East, and Africa. Pernicious anæmia is probably the same disease in Europe (Sir J. Fayrer). Wallace Taylor's observations show that anæmia is not a predisposing cause, the average corpuscular richness for 134 cases examined being 94 per cent.; patients of a weak constitution, ill-fed and poorly nourished, are the exception among beri-beri cases. He found that there was a diminution in the hæmoglobin, the average in 101 cases being 81 per cent., the amount being as low as 65 per cent. in some cases. The most susceptible age is from 16 to 32 years; about 16 per cent. of the patients are women; Japanese authorities give the percentage as 4 to 6 only; the puerperal stage being particularly obnoxious to kakké, and fatal. There was rarely any trace of albumen in the urine, though paralysis of the bladder is not uncommon. The marvellously satisfactory results of treatment, by change of dietary, obtained by Surgeon-General Takaki in the instance of the prisoners of the Japanese Navy, leave little doubt, in my opinion, that the true etiology of the disease is the deficiency of the nitrogenous and the excess of the starchy constituents of the food. He reduced the amount of rice, and substituted barley and wheat, "which, since they contain so large a quantity of nitrogen, was almost sufficient to counteract the excess of carbon, so that the nutritive process was performed almost normally, and hence the non-appearance of kakké." Dr. Takaki gives the following tables, showing the result of dietetic treatment.

TABLE I.

Table of Kakké Cases among the Prisoners in the Japanese Navy.

Year.	Average No. of Prisoners.	No. of Kakké Cases.	Percentage.
1883	118	69	61.06
1884	128	73	57.03
1885	168	0	0

TABLE II.

Quantity of Nitrogen and Carbon contained in the Food taken daily.

Year.	Nitrogen.	Carbon.	Proportion.
1883	216 grs.	7.054 grs.	1 to 32.65
1884	258 grs.	6.614 grs.	1 to 22.63
1885	289 grs.	5.839 grs.	1 to 20.20

He points out that 1 to 15 is the proper proportion of nitrogen to carbon, so that even the 1885 dietary was not theoretically perfect.

Whole-meal bread, cheese finely grated and dissolved in beef-tea or soup, skim milk and eggs, would thus appear to be necessary for our œdema cases, especially if complicated with dysentery, rather than a diet of the orthodox "hospital comforts"—sago, arrowroot, and port wine, rum or brandy.

Dr. Taylor states that beri-beri was not recognised in China of late years, yet that skilled observers, "Drs. Lambuth and Park, of Fuchow, and Dr. Boone, of Shanghai, had met with a number of cases. These gentlemen are of opinion that there are many cases of beri-beri among the Chinese."

The cases of œdema of obscure origin reported in the *Lancet* of June 26th, 1886, p. 212, appear to me to be cases of beri-beri in England, though two of them occurred in females. A dressmaker's (I fear) too frequent diet of tea and white bread and butter, would develop this disease, which, though it is not true scurvy, is, like it, a dietetic disease, due to deficiency in certain constituents of the food. In all cases of chronic anæmia and in pernicious anæmia, a careful inquiry should be made as to whether the patient, if a young child (and I have seen one such case), receives a dietary consisting of starch foods, with a deficiency of milk. In the case of adults, inquiry should be made as to the amount of fresh meat, green vegetables, cheese, and whole-meal bread or porridge partaken of. In Dr. Hadden's paper, nothing is said as to the diet or treatment; this is, however, in accordance with the fashion of the day, which, taking for its motto, "the first point in medicine is diagnosis; the second is diagnosis, and the whole is diagnosis," calmly ignores the fact that some patients would like to be treated, and cured.

ON THE OCCURRENCE OF JAUNDICE, ICTERIC URINE, AND HÆMATINURIA, IN REMITTENT FEVER.

By R. H. FIRTH, F.R.C.S.Eng.
Surgeon Army Medical Staff.

WITHIN the past year it has been my privilege to see two cases of remittent fever complicated with jaundice, icteric urine, and hæmatinuria. This complication cannot be considered altogether a common clinical phenomenon in these fevers. Out of 1,033 cases of intermittent fever, I find 26 to have been accompanied by jaundice simply, that is, 2.5 per cent.; none with icteric urine; and only 11 with hæmatinuria, or about 1 per cent. These are all cases drawn from India. By the courtesy of various medical officers serving in India, I have been able to get reliable information as to 221 cases of true remittent fever. Of these, including my own two cases, I find that 4 had well-marked jaundice alone; 2 had jaundice, together with hæmatinuria; and 2 had jaundice, hæmatinuria, and icteric urine. Both of these last two cases died. Jaundice, hepatic tenderness, hypercholia, and vomiting of yellowish green fluid, seem to have been common to all these eight cases. In the two fatal cases, there seems to have been a tendency to suppression of urine, together with icteric and hæmatinous urine.

My own two cases may be thus briefly described.

The first was under my care at the station-hospital at Meean Meer during the hot season of 1885. The patient, a young soldier, had remittent fever of a severe type. The fever ran high, and was marked by irregular and short remissions. There were hepatic tenderness and enlargement, hypercholia of the alvine discharges, vomiting of biliary fluid, and well-marked jaundice. The appearance of this latter symptom was followed on the next day by dark smoke-coloured urine, which contained casts of bile-pigment, and gave the biliary reaction in response to Gmelin's and to Pettenkofer's tests. The urine, until two days before death, quite failed to give evidence of albumen; it contained a few blood-corpuscles, but, with the spectroscope and with guaiacum and ether, showed the extensive presence of blood-pigment. The subsequent *post mortem* examination of the patient revealed no marked organic changes in the liver, nor any obstruction of the bile-ducts. The alvine discharges during life were markedly bilious.

The second case I saw at Amritsar in the autumn of the same year. The patient had remittent fever of a severe kind, irregular and short remissions, jaundice, hypercholia, vomiting of bright yellow viscid fluid, and hæmatinic, but not icteric, urine. The urine in this case was at no time albuminous; but the spectroscope and guaiacum, with ether, demonstrated the presence of the colouring matter of blood. This patient eventually recovered. His urine at no time responded to Gmelin's or to Pettenkofer's tests for bile or biliary pigment.

The occurrence of these symptoms—jaundice, with icteric and hæmatinous urine—is, I think, of great interest, as bearing on some recent researches upon the blood in the malarial cachexiæ.

From a consideration of the general pathology of jaundice, we may thus summarise the state of our knowledge on the subject.

1. Hæmatinuria alone is not uncommon in the intermittents; jaundice occurs in the remittents not unfrequently, and often is accompanied, not only by hæmatinic but by icteric urine.

2. In health, whatever bile fails to pass out by the alvine discharges, undergoes a re-absorption and transformation. But, in non-malarial jaundice, independent of occlusion of the biliary ducts, such metabolism of re-absorbed bile fails to take place; resulting in the circulation of, and a deposition of pathological pigmentary material; namely, icterus.

3. In malarial fevers this failure of the metamorphosis of re-absorbed bile-pigment is not essential to, or the only cause of the production of a jaundice. Nor is it adequate to account for those cases in which a severe jaundice exists without any evidence of biliary pigments in the urine. The missing link in the chain for the production of malarial jaundice, and a corresponding pathological urinary pigmentation is supplied by the definite discovery of an actual disintegration of the red blood-cells, followed by the liberation of their contained hæmoglobin, which latter can be traced as escaping either in the plasma or in the body of some leucocyte into the main current

of the blood, and into the tissues; there it undergoes modification, resulting eventually in definite pathologico-cutaneous, and pathologico-urinary pigmentary changes.

Finally, I would draw these conclusions.

a. Hæmatinuria, occurring alone in an intermittent fever, need not be regarded as a grave symptom *per se* (an apyrexial hæmatinuria is common in Europe), though it is a clear sign of blood corpuscular disintegration.

b. Jaundice, alone or accompanied by hæmatinuria, occurring in a case of remittent fever, must be looked upon as a grave symptom, and as indicating intensity of malarial action upon the coloured elements of the blood.

c. The occurrence of an icteric urine combined with jaundice and hæmatinuria in remittent fever, must be ever regarded as an index of most intense disintegration of the red blood-cells. It calls for a correspondingly grave prognosis to be given as to the termination of such cases.

CLINICAL MEMORANDA.

A CASE OF ACUTE PERITONITIS, ATTENDED BY VERY UNUSUAL SYMPTOMS.

THE obscurity which surrounded the diagnosis of the following case will, I think, be understood after its perusal.

A well-developed man, with a previous history of good health, was taken somewhat suddenly ill on the day before I say him, with pain in the abdominal region, accompanied by constipation.

I found him lying on his back with his legs extended, and complaining of a slight feeling of soreness in the left hypochondriac region. There was no abdominal enlargement, and so little tenderness that kneading the abdomen gave no pain. He looked drowsy, but answered at once, quite coherently, the various questions put to him during my examination. The respirations were greatly increased in frequency, as was also the cardiac action, notwithstanding which no pulsation, of even the faintest description, could be appreciated in either radial artery. His tongue was clean, but very cold to the touch. There was no vomiting or nausea, but the bowels were obstinately constipated, and the urine was suppressed. Death took place within two hours after I first saw him. At the *post mortem* examination, the abdominal cavity was found to contain a considerable quantity of sero-fibrinous effusion, the peritoneum was intensely injected, and the intestines were covered with flakes of recent lymph. No intestinal perforation was discovered, nor any appreciable organic disease.

I think that the above case will prove interesting to the readers of the JOURNAL, for the following reasons: (1) The suddenness of the onset; (2) the absence of any recognisable cause for the attack; (3) the remarkable absence of pain; (4) the disappearance of the pulse, notwithstanding the presence of rapid and powerful cardiac action; and (5) the rapid progress of the case to a fatal termination.

R. H. QUILL, M.D.,
Surgeon-Major Medical Staff.

Woolwich.

TOXICOLOGICAL MEMORANDA.

POISONING BY AN ANILINE PENCIL.

H. C., aged 23, a discharged soldier, sent for me at 3 P.M. on October 5th, 1886. He was then in a state of partial collapse, sweating and almost pulseless. He had vomited, and suffered severely from diarrhœa, not in any way characteristic. He had been subject to dysentery abroad, and had been drinking on October 2nd. I gave him a stimulant stomachic, with two grains of grey-powder and five of compound ipecacuanha powder, every four hours, with other directions. On seeing him the next morning, I found that he had revived, and had been sick after every powder, vomiting some blue liquid, unfortunately thrown away. He now showed me an indelible aniline pencil, which he had used on October 3rd, to push out a fang of a tooth, left after partial extraction on October 1st. On the same day he was seized with vomiting and purging, and just before I saw him he was said to have had an epileptiform fit. He recovered from all symptoms in a few days, only some weakness remaining.

ARTHUR PEARCE, M.R.C.S.E., Salcombe, South Devon.

MEDICAL MAGISTRATE.—Dr. John Harker, of Hazel Grove, has been placed on the Commission of the Peace for the county of Lan-

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

NEWCASTLE-UPON-TYNE INFIRMARY.

HEAD INJURY: ERYSIPELAS: SUDDEN DEATH: CEREBRAL ANEURYSM.

(Under the care of Drs. DRUMMOND and ARMSTRONG.)

[Reported by F. P. MAYNARD, M.B., House-Surgeon.]

J. L., aged 45, a labourer, was admitted on April 9th, at 10.25 A.M., having been struck on the head by a heavy iron crow-bar, which had fallen twelve feet. There was a contused wound, two and a half inches long, running down the left side of his forehead, the bone being bare, but apparently not injured. The wound had bled freely. He was delirious, almost maniacal, and vomiting blood. There was no bleeding from the ears. The left pupil was contracted, and did not react to light; but there was no bleeding from the ears. The pulse was 140, and small; the respirations were quick, and shallow.

One hour later, he was quite rational. The left side of his face was blank, and the left eye unclosed; the tongue was protruded to the left, and he could not lift the mouth up on the left side. The left pupil was fixed. The pulse was 90, and regular; respirations normal.

The patient seemed to be doing well up to April 18th, when he had what was described as a "convulsive fit," and mild cutaneous erysipelas set in. Two or three days later, signs of cerebral irritation came on, and he lay on one side curled up with his head in extreme extension. He resented interference of any kind, and was incoherent, and rambling in his talk. After remaining in this condition for five or six days, he improved mentally, though he became weaker. Whisky was given, but produced delirium, as did bromide and chloral, so they were not persevered with.

On May 5th, twenty-six days after the accident, he had a fit, which commenced without any warning with a shriek, and died. The facial paralysis, which persisted throughout, disappeared during the fit, and his pupils became widely dilated.

At the *post mortem* examination, made by Dr. Drummond, there was found old-standing disease of the lungs, granular kidneys, cirrhosed liver, hypertrophied left ventricle, and atheroma of the auricular surface of the mitral valve. There was no fracture of the skull. The surface of the brain was yellow, and lymph was present. The arteries at the base of the brain were diseased. The under surface of the cerebellum, pons, and medulla was covered by a clot, extending as far forwards as the locus perforatus posticus. This was composed chiefly of old, dark loose blood-clot. Buried, partly in this old, and partly in recent clot, at the junction of the posterior inferior cerebellar artery with the right vertebral artery, was an aneurysm, about the size of a small cherry, which had ruptured. The recent clot around it extended into and formed a cast of the fourth ventricle. Blood, effused into the two dilated lateral ventricles, had formed firm and partially organised clots, in both posterior cornua and in the right anterior cornu. The basal ganglia were soft. Blood-clots extended down the whole length of the spinal cord, from the medulla to the cauda-equina, in places recent, but, for the most part, old; in the mid-dorsal region, there was a small calcareous plate, about the size of a sixpenny-piece, on the surface of the clot, in the arachnoid. Both cerebral and spinal clots were situated beneath the arachnoid.

REMARKS BY MR. MAYNARD.—The medico-legal is the most important aspect of the case. The most probable course of events was that there had been slight hæmorrhages going on, for some time, into the lateral ventricles and along the cord; that a slight rent was made in the aneurysmal sac at the time of his receiving the blow; that blood was poured out in sufficient quantity to cause laceration of the brain, but that more extensive hæmorrhage was prevented at the time by a clot blocking up the rent; and that the final bursting of the sac, on the morning of May 5th, with its consequent gush of blood into the fourth ventricle, caused the epileptiform convulsion and death. The medico-legal question arises: Whether death was directly or indirectly due to, accelerated, or unaffected by, the injury to the head? That his death was accelerated by the injury can hardly be doubted, when it is remembered that, up to the time of its receipt, he had always been considered erroneously, of course—a healthy man, unless it is to be supposed that the injury coincided,

in a remarkable manner, with the commencement of hæmorrhage from the aneurysm. And it is still more certain that a sound man would most probably have recovered from a similar injury. The injury also formed the starting-point of the erysipelas, though he had apparently recovered from that. Meningitis, after erysipelas, is said (Erichsen) to be "very rare, except in cases of erysipelas attacking a compound fracture of the skull, or spreading into the fat of the orbit." The fact of the meningitis being limited to the upper surface of the brain makes one inclined to attribute it to the erysipelas more than to extension from the irritation of the basal clot; and, if this were so, the injury would be more to blame than at first sight appeared. The importance of a *post mortem* examination, obtained with some difficulty in this case, is self-evident.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, OCTOBER 19TH, 1886.

J. SYER BRISTOWE, M.D., F.R.S., President, in the Chair.

Sections of the Entire Brain.—Professor HAMILTON, of Aberdeen, exhibited a remarkable series of sections of the human brain in the normal, and also in certain pathological, conditions. The sections from diseased brains were from two cases. The first case was an instance of tumour of the occipital lobe, with enormous enlargement of that side of the brain. The whole of the medullary substance was beset with a network of connective tissue (neuroglia) cells, extending throughout the whole of the occipital and part of the frontal lobe. Professor Hamilton observed that this widespread overgrowth appeared to occur in all cases of tumour of the brain of whatever nature, and had a special interest, inasmuch as it might have something to do with the descending optic neuritis. The tumour in this case was composed of endothelial cells, and was apparently secondary to a tumour of the lung. The second specimen was from a woman, aged 53, who had been totally imbecile from infancy. A cast of this brain showed a loss of the first and second frontal convolution on the right side, and almost total destruction of island of Reil, and the adjoining convolutions on the left side. In addition to numerous sections through the entire brain from both of these cases, Professor Hamilton exhibited a large series of preparations which showed the cerebral tissues in their normal relations. The sections were made in various planes, and were of extreme beauty. In order to make such sections, the brain must be obtained quite fresh, and the vessels must be long enough to be injected; the brain could be thoroughly hardened by injecting Müller's fluid into the vessels. It was necessary to keep up the injection, by means of a suitable apparatus, continuously for a week. To cut into a brain in the *post mortem* room was, in Professor Hamilton's opinion, a barbarous method of investigation. True localisation was only possible after the brain had been thoroughly hardened; the grey and white matter were beautifully distinguished in preparations thus made. The next step was to cut slices in any desired plane, about one inch thick. These slices were then placed in a solution of sugar and gum, which could be easily frozen. After soaking for one week in this fluid, the slices were cut into sections with a large microtrome. When properly made, the sections were thrown off the blade, and fell without fracture on to the surface of the liquid contained in a large vessel placed in front; a large glass slide, covered with gelatine, lay at the bottom of the vessel, and by gently lifting out the slide, the section remained extended upon it. The specimen was then covered with a second layer of gelatine, so that the section was enclosed in a capsule of gelatine. The slide was then dried. The next step was to place it in a solution of potash for one or two hours. The gelatine then easily stripped off the slide, and was dried again. The section was next placed in Müller's fluid; it swelled to twice or three times its former size, and the preparation was, at the same time, thus stretched to a third or a half larger than natural. This process of stretching increased the differentiation between the white and grey matter. The specimen was then placed in running water for two hours; it was next covered with glycerine jelly, and was then soaked in glycerine and potash. On removal, the edging was cut off, and a little acid glycerine jelly was run round it, in order to prevent deposition of lime-salts. The final operation was to mount the specimen in glycerine jelly, to cover with a second glass, and cement the two with solid asphalte.—The PRESIDENT thanked Professor Hamilton for bringing his specimens before the Society, and referred to the immense labour involved in their preparation.

Hemiatrophia Faciei.—Mr. EVE showed a woman, aged 42, in whom the right side of the face was atrophied. The atrophy was limited to the third division of the fifth nerve; the skin and subcutaneous tissues were atrophied, and the muscles had completely disappeared. The hair of the head was atrophied on the right side; the tongue and eye were unaffected. The condition was not congenital. At 17 or 18 years of age, she suffered severely from neuralgia, and it was only after this date that the face began to waste. She had suffered from neuralgia until within seven years, and was still subject to hemicrania. The bone was, so far as could be ascertained by measurement, not atrophied, and sensation was unaffected.

Pulmonary Excavation simulating Pneumothorax.—Dr. T. D. ACLAND showed a lung in which the excavation was so extensive that the physical signs resembled those of pneumothorax. A very noticeable point was that, in spite of rapid excavation, the quantity of expectoration was small. He also referred to a second similar case, which had been under his care, where the only physical sign of pneumothorax which was absent was the metallic percussion-note. In the case he showed, this physical sign was not searched for.—Dr. MITCHELL BRUCE said that in one case he had seen, the bell-sound was present. He added that in one case he had been brought to a correct diagnosis by noticing the position of the apex-beat. Most of these very large cavities occurred on the left side; and in such a case the heart was drawn to the left, instead of being displaced to the right, as in pneumothorax.—Dr. W. H. WHITE asked if there were any bulging of the intercostal space on respiration.—Dr. ACLAND said that, in the case he had observed, there was no respiratory movement at all.

Malignant Cysts of the Neck.—A paper on this subject was read by Mr. TREVES, who showed a living specimen and microscopical sections from three other cases. Though clinically similar, the microscopical appearances were different; all the patients were about fifty years of age. In every case, there was a large cyst with very little surrounding tissue. The cyst in each case contained a clear fluid, but the walls were formed, in two cases, of carcinomatous, and in two cases, of epitheliomatous tissue. In the first case, the physical signs were those of chronic abscess, but, on puncture, a thick glairy fluid, which contained much mucus, was obtained. The tumour at first collapsed, but subsequently the discharge became mucopurulent, and, finally, hæmorrhage occurred. The exterior of the cyst was smooth, and looked very like the inner surface of the left ventricle. The cyst-wall was nowhere more than half an inch thick; its periphery was not defined, and the growth had involved the carotid artery, jugular vein, and vagus nerve. As the tumour had pressed upon the thyroid body, and produced some atrophy, he thought it possible that, in some way, this atrophy might have produced an effect upon the rapidly growing tumour, which led to the mucoid degeneration. The tumour might have originated from the accessory thyroid, which had been recently described as existing near the hyoid. When first observed by the patient, the growth was solid; he lived about five months after that date. There was no other tumour in the body. In the second case, that of a woman, the cyst and its fluid contents had the same characters, but the amount of solid material was larger. In the third case, the patient was suffering from epithelioma of the right corner of the tongue; no enlarged gland was present on either side. He remained well for fourteen months; no recurrence in the tongue occurred, but he returned with a fluctuating tumour on the left side of the neck, which, on incision, gave exit to lymph, the contents of the cyst became purulent, and the man died of hæmorrhage. The cyst-wall was not more than one-sixth of an inch thick. The walls were smooth; the surrounding tissues were infiltrated, and the fatal hæmorrhage was due to the jugular vein having been opened up. In this case, the tumour was an epithelioma. In the living patient shown, the cyst very distinctly fluctuated, and when punctured, some fluid was obtained which had the chemical characters of lymph, and yielded a deposit containing some epitheloid cells. Mr. Treves referred to cases recorded by Dr. Sharkey and Mr. Godlee, but in which secondary growths were present, and to cases described by certain German observers.—Dr. HADDEN did not think the mucin-forming function of the thyroid was by any means established.—Mr. BUTLIN said that three weeks ago he had removed a cyst of this kind from a patient who had previously been operated on for epithelioma of the tongue. The cyst contained clear fluid; and its walls were smooth, looking like the inner surface of the left ventricle. His impression was that a lymphatic gland had been secondarily affected, and that the duct had become compressed, leading to accumulation of its secretion.—Mr. MARMADUKE SHEILD mentioned a case in which cysts containing glairy fluid were found in a tumour in the thigh.—Mr. D'ARCY POWER said that a specimen, probably of this nature, had recently been added to the Museum of St. Bartholomew's Hospital. It was removed from the body of a woman aged about 47, who died very

suddenly of asphyxia. The cyst, which was about the size of a pigeon's egg, was filled with clot. Its thin walls contained carcinomatous tissue. It was probably connected with the thyroid body.—Mr. A. Q. SILCOCK thought the cells in the first two cases were probably endothelial, and that the tumour had arisen in connection with lymphatic glands.—The PRESIDENT said that he had published a case of malignant disease of the abdomen, originating in the pelvis, in a woman, in which a large cyst containing clear fluid had formed in a secondary growth in the groin. In another case which he had recorded of multiple tumour, every growth contained a cyst. In a third case of sarcoma within the abdomen, the interior of the growth was cystic.—Mr. TREVES replied, and consented that the growths should be referred to the Morbid Growths Committee.

Cancer of Thyroid.—Mr. STOKER showed a specimen of cancer of the thyroid, which had produced complete paralysis of the left vocal cord, and partial paralysis of the right. Tracheotomy was performed, and the patient died of bronchitis. The recurrent laryngeal nerve on the left side was involved in the growth, which was situated most on that side. There was atrophy of both posterior crico-arytænoid muscles, but this was greatest on the left side. There were no secondary growths. Microscopical examination showed that the tissue of the gland was entirely replaced by the new growth.

Sarcoma of the Thyroid.—Mr. STEPHEN PAGET showed a specimen of sarcoma of the thyroid, which involved the left lobe only. Enlargement of the gland had been noticed for thirty years. The growth had grown backward into the trachea, and had stretched and flattened the œsophagus.

Dermoid Cyst of Testis.—Mr. D'ARCY POWER showed a specimen of a rare form of congenital tumour, a dermoid cyst of the testis. The cyst occurred in a healthy child, aged 4 years, and had been observed for three years. As the tumour then began to grow rapidly, castration was performed. The cyst was situated on the right side, as was the case in the majority of the few cases which were on record. Within the cyst were numerous smaller cysts, containing gelatinous tissue. The walls contained fat, and, in a few places, calcified cartilage; certain of the smaller cysts contained hairs. The dermoid tumour occupied the whole of the body of the testis, and was enclosed in the smooth and somewhat thickened tunica vaginalis; the epididymis was present.

Carcinoma of the Prostate.—Mr. E. H. FENWICK showed a specimen of carcinoma of the right lobe of the prostate occurring in a patient, aged 51. The first symptom, which was observed six weeks before death, was some difficulty in defæcation. A large tumour of the prostate was found projecting into, and partially obstructing, the rectum. This tumour increased rapidly in size, and finally ulcerated and fungated. The bladder and the urethra remained uninvaded, but were so pressed upon towards the end, that the catheter had to be used. Profuse hæmorrhages and almost complete obstruction supervened, and left lumbar colotomy was performed, to the great relief of the patient. The chief interest of the case was in the extreme rapidity of the growth, in the absence of all pain until the ulceration occurred, and, finally, in the freedom of the bladder and urethra from invasion.

Card Specimens.—Dr. PASTEUR: Ulceration of Main Branch of Pulmonary Artery from a Cavity at the Root of the Lung.—Mr. LARDER: Mediastinal Tumour involving Superior Vena Cava.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, OCTOBER 8TH, 1886.

F. H. ALDERSON, M.D., President, in the Chair.

President's Address.—The subject of this address was "The Wants of the General Practitioner." The greatest and most general want was a larger income. Dr. ALDERSON had devoted much time and thought to the various causes of the contraction of medical incomes, and mentioned many proposals for their possible expansion. He alluded to the crowded state of the profession; and, giving some statistics to verify what he considered might be accepted as an axiom, he asked if it would not be a question for our future direct representatives whether some steps should not be taken by the Medical Council to reduce this excess, and to bring our too easily made doctors more within the requirements of the public and profession; for excess in numbers meant poverty in quality. Dr. Alderson suggested that the Arts examination of the medical student should not be passed before the age of eighteen or nineteen; that the first class second division of the College of Preceptors should be the lowest standard for acceptance for registration by the Medical Council, and that some knowledge of Greek should be required of every aspirant to medicine; and that one or two years should be spent either as an assistant to a medical man or as house-surgeon, house-physician, or resident obstetric assistant at a hospital, after the usual hospital course was completed, before commencing independent practice. Other important causes of reduced incomes were noted, as the improved health of our cities and towns; and for this reason he advocated the principle of "health-assurance," namely, the practice of paying medical men annually, ill or well, a certain fixed payment, which, if universal, need not be large. By this means of remuneration, it would be to the interest of medical men to improve the public health by every means in their power. They would vie with each other, not as to the length of their patients' lists, but in the healthiness of the district in which they practised; they would become preservers of health as well as healers of disease. The appointment of a Minister of Health would follow; for medical men would have to see as to the causes of the differences in the mortality-averages, which, he believed, might be still further reduced. Amongst the propositions suggested for the expansion of medical incomes, were the appointments of pathologists in every district, by which medical men in general practice would be relieved from making *post mortem* examinations—a custom certainly not conducive to the public health—the appointment of school visitors, and of school board examiners from the ranks of medical men. Death-certificates should be paid for; they would then become more valuable, because, perhaps, they would be still more accurately and less hastily written. The author thought that all hospital appointments should be paid for; more time and thought could then be given to hospital patients, and many would apply for these valuable appointments that cannot do so now. The extra expense could be met by grants from the State. A little of the immense sum lavished by our school boards might have better results if spent in restoring the health and preserving the lives of the labouring poor. Dr. Alderson referred to the rule by which many hospitals exclude any person in general practice from being eligible for either the post of physician or surgeon. By such a regulation, he considered that surgical skill was limited and surgical knowledge narrowed, and asked if it were not a professional grievance, and a blot on deserving men? In respect to the ethics of consultations, the author thought that consultants should never neglect to follow the practice of certain distinguished members of their class, who always send their prescriptions accompanied by a courteous letter to the practitioner, even in a case when the patient had applied on his own account. The opinion of the consultant was more valuable, and would tend to the nearer approach to the exact sciences in correctness, if it were his custom to see no patient who was still under, or had been recently under, medical treatment by a general practitioner, except in his presence and in consultation with him. Dr. Alderson gave two telling illustrations of his personal experience, where a wrong prognosis was given and proved erroneous by subsequent facts, through the consultant seeing the patient without the presence, and the advantage of the previous experience of, the general practitioner. Home, fever, and private hospitals and dispensaries were all shown to be antagonistic to the interests of the general practitioner. The recent passing of the Medical Act Amendment Bill was alluded to. Dr. Alderson considered that there was much that was wanting, but he thought that, by a wise selection of direct medical representatives, the Act might become both powerful and effective. He observed that the Lunacy Act Amendment Bill was still waiting completion, and medical men were hesitating at signing certificates, yet he believed the time was not far off when, if not relieved of the duty, every medical man who, in good faith, signed a lunacy certificate, could be secured from vexatious actions on the parts of the recovered lunatic or his friends. Dr. Alderson alluded to the late deeply lamented death of a well-known and accomplished physician by his own act. The author was induced to advise mental sanatoria for cases of insanity, where no patient could remain longer than one calendar month. He believed that this time would, in many cases, be sufficient for the recovery of the patient, and by this great distinction from asylums, would do much to obliterate the stigma which was now so unfortunately attached to those persons whose temporary aberration of intellect has hitherto demanded asylum treatment.

Vote of Thanks.—A hearty vote of thanks, proposed by Dr. THUDICHUM, seconded by Mr. LAWRANCE, and unanimously carried, was accorded to Dr. Alderson for his able and comprehensive address.

MISTAKEN IDENTITY AT AN INQUEST.—A body was, some weeks ago, picked up in the Thames, which was identified as that of a person who had resided at Slough. An inquest was held, and later on the insurance was paid to the survivors. The individual, however, of whose identity no question arose at the time, has since been discovered alive in the Holborn Union Infirmary, Highgate.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, OCTOBER 15TH, 1886.

ALFRED HILL, M.D., President, in the Chair.

President's Address.—Having thanked the members of the Society for the honour they had done him in electing him their President, Dr. HILL went on to treat of the various methods of sewage and house-refuse disposal. His choice of subject had been influenced by two considerations—(1) that it had not, he believed, been dealt with by any former occupants of the chair; and (2) that at present many persons had not come to any definite conclusion on the matter. The term "sewage-disposal" he took to embrace the disposal of excreta, whether it be intercepted from, or admitted into, the sewers. He referred to the evil effects of some methods of sewage-disposal, such as the pollution of air, soil, and water. In what was called the earth-closet we had, as the absorbent, dried earth instead of ashes. Theoretically, this system, based on Nature's own method of deodorisation, was absolutely perfect; but, practically, it was impossible to employ earth for deodorisation in large towns, for, among other reasons, it had been calculated that, with a population of 100,000, over 200 tons of suitable earth would be required a day. The speaker next referred to the Goux system, which he described as a modified form of earth-closet, now in use in Halifax. The advantages of this arrangement were dwelt upon by Dr. Hill, who pointed out, however, that, under the most favourable circumstances, the Rochdale system, as it was called, had many drawbacks. The water-carriage system of sewage-disposal was next reviewed. Dr. Hill reminded his coadjutors that, within the memory of many living, the introduction of excreta into sewers was strictly prohibited; it afterwards was winked at, then freely permitted, and finally made compulsory where sewers existed; so that now every town with a system of sewage was already conveying a sewage essentially excremental in character; and, as was well known by those who had studied the question, the sewage of a town having no water-closets was only slightly better than that of a water-closet town. Analytical results obtained by Dr. Frankland were given confirming this statement. Dr. Hill next dealt with the argument of those who hold that owing to defective condition, sewers too often produced ill-health, showing that such an argument applied to any system when it was improperly carried out, while the frequent allegation of an insufficient supply of water was, he believed, often much exaggerated. The difficulty of obtaining land suitable for irrigation was, he considered, made far too much of, especially as experience had proved, as illustrated by experiments made by Dr. Frankland, that soils of the most different kinds were or might be made capable of affecting the purification of sewage. With regard to the area of land necessary for the purpose, Dr. Hill stated that the quantity provided by the Birmingham Tame and Rea District Drainage Board was one acre to every 500 persons. The mode of treatment which the Birmingham sewage underwent was next explained, the speaker asserting that, after years of experience, it had neither proved a nuisance to the adjoining residents nor injurious to health, while it had not turned out altogether unprofitable, as shown by the large quantities of produce sold each year, over £20,000 being realised for the sale of stock and produce last year. The speaker then touched upon the question of the quality of the produce, maintaining that the dangers which the opponents of sewage-farms had alleged to exist from the consumption of milk, butter, and vegetables from such a source had no foundation in fact. The crowning merit of the water-carriage system consisted in the fact that matter was carried instantly and readily by gravitation, and sent to its proper destination—the land; while the defect of all conservancy methods was that they retained what was offensive and injurious until it became still more so. Disposal of sewage by throwing it into a river or sea was condemned as wasteful and pernicious; and the reader stated that, if the sewage of the metropolis, instead of being discharged into the Thames, were utilised on land as at Birmingham, it would realise in vegetables, milk, and meat a sum of £200,000. All processes of utilisation by precipitation alone—that is, without application of the effluent to land—were regarded as wasteful in an agricultural and unprofitable in a pecuniary sense. The question of dry house-refuse was finally touched upon, and the employment of destructor furnaces strongly recommended. As a result of the consideration of the various modes of sewage-disposal, the following conclusions were arrived at: 1. That all intercepting or conservancy methods were false in principle and, on a large scale, hurtful in practice. 2. That the system of providing for the most complete absorption and deodorisation, and the most frequent removal, was the one to be preferred where water-carriage was impracticable. 3. That the water-carriage system was preferable to every other on the grounds of convenience, health, and economy.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

ORDINARY MEETING, FRIDAY, OCTOBER 8TH, 1886.

SOLOMON C. SMITH, M.D., President, in the Chair.

The late Dr. Chadwick.—The PRESIDENT, in his opening remarks, alluded to the recent death of the first President of the Society, Dr. Chadwick.

Suture of Tendons.—Mr. JESSOP showed three patients in whom he had united divided tendons in the hand with very good results. In one example, the ends of the tendons were as much as two inches and a half apart. He remarked that frequently in these cases the distal end of the tendon was further from the scar than the proximal end, although the latter was connected with the muscle.

Trephining for Paralysis.—Mr. MAYO ROBSON showed a patient whom he had trephined over the brachial centre nine weeks previously for paralysis of the right arm, caused by a blow on the head a week before admission. The man, when exhibited, was perfectly well, and had every movement of the arm perfect. Details of the case will be published.

Innominate Aneurysm: Distal Ligature of Carotid and Subclavian.—Mr. HARTLEY showed a case in which he had performed the operation of simultaneous distal ligature of the right carotid and subclavian arteries for an aneurysm of the innominate artery. The operation was performed on September 1st, 1885, the patient being then almost moribund, from the pressure of the aneurysm on the larynx and œsophagus. He slowly recovered, and still remained in very fair health; but there was now a return of pulsation in the innominate region. Full details of the case will be published.—Mr. WHEELHOUSE suggested the employment of galvano-puncture.—Dr. CHURTON mentioned a case of his that died twenty minutes after galvano-puncture, due to the rupture of another part of the aneurysm; and there was only a soft gelatinous clot in the sac, which, he thought, would only be a source of danger, without giving the probability of relief.—Dr. BARES thought galvano-puncture ought to be tried. He mentioned a case of Dr. Allbutt's where it had relieved, and another in which no benefit had been derived from its employment.—Mr. WARD mentioned three cases of Mr. Jessop's of distal ligature of the subclavian and carotid. In the first, silk ligatures were used, and secondary hæmorrhage caused the patient's death on the forty-ninth day; in the second, catgut ligatures were used, but the aneurysm was not cured, and the patient was lost sight of; in the third, silk ligatures were employed, and secondary hæmorrhage occurred, which was stopped for two days by a ligature applied to the carotid, and, on a recurrence of the hæmorrhage, by galvano-puncture. He remarked on the advisability of using catgut ligatures.—Mr. MCGILL suggested that Mr. Hartley might tie the vertebral artery. He said that he had on several occasions tied large arteries with silk ligature with good result.

Laparotomy for Intestinal Obstruction.—Mr. LAWFORD KNAGGS read two cases in which laparotomy had been performed for chronic obstruction of the small intestine. In both, tubercular disease was found to have caused the obstruction by matting the intestines together. One case proved fatal; the other recovered from the obstruction from the date of the operation, though the operation was limited to an exploratory incision. In discussing the cases, he laid stress upon the satisfactory course that the tubercular disease had taken after the operation, and suggested the possibility of the incision having exercised a salutary effect upon the disease. He went into the subject of operative treatment of chronic obstruction of the small intestine, and tried to show so large a proportion of cases might be relieved, that, in all cases not obviously hopeless (as from cancer), exploration should be undertaken. The methods that had been adopted hitherto seemed to have been (1) enterotomy, (2) division of adhesions, (3) resection; and he suggested that a fourth operation might be found useful, namely, the union of the intestine above the obstruction with the intestine below it, after the same manner in which cancer of the pylorus had been recently treated by gastro-enterostomy.—Mr. PRIDGIN TEALE mentioned a case of his where, after obstruction for a month, laparotomy was performed, and there was found to be cancer of the sigmoid flexure, but, curiously, before colotomy could be done, the patient's bowels were freely moved.—Mr. MAYO ROBSON said that he had had a similar experience in laparotomy in tuberculous peritoneum, for in two cases where he had opened the abdomen for other purposes, and had found the peritoneum covered with tuberculous masses, great relief to hectic and other symptoms had followed.—Mr. M'GILL, Mr. WARD, and the PRESIDENT spoke.

A case of Chronic Anterior Poliomyelitis: Gradual Wasting and Paralysis of all Limbs: Recovery.—Dr. CHURTON read notes of th

case and showed the patient, a woman, aged 26, who, after being paralysed for several months, had now recovered both muscles and strength. The progressive atrophy began after her delivery of twins in January 1884; the paralysis of limb was almost complete in August 1885; sensation perfect. Faradism and tonics seemed useless; iodide of potassium, even in small doses, did harm. Nevertheless, a hopeful prognosis was given, though, of course, with reserve. She was subsequently well cared for in a healthy house in the country, but neither took drugs nor used faradism, etc. In August, 1886, she could walk fairly well, now almost perfectly. The deltoids and other muscles were also normal. Dr. Churton thought this a striking example of the tendency of tissues, originally tolerably sound, but damaged by temporary causes, to reassert themselves under favourable conditions.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

MONDAY, OCTOBER 11TH, 1886.

JAMES FINLAYSON, M.D., President, in the Chair.

DR. FINLAYSON, on taking the chair, thanked the members of the Society for the honour they had done him in electing him President, and referred in fitting terms to the death, since the last meeting, of Dr. Robert Scott Orr.

Lympho-sarcoma of the Mesentery and Intestine.—Dr. JOSEPH COATS showed the specimen and read the clinical record of the case. —Dr. W. T. GAIRDNER, in the course of some remarks, referred to the difficulty often experienced in the diagnosis of such cases.

Lympho-Sarcoma of the Neck.—Mr. MAYLARD showed a child, aged 4 years, in whom an enormous tumour of this kind existed on both sides of the front of the neck. The superficial veins were much enlarged, and the breathing was considerably affected.

Subpericardial Hæmorrhage in Pernicious Anæmia.—Drs. ALEXANDER ROBERTSON and DAVID NEWMAN showed this specimen. Besides the hæmorrhages beneath the pericardium, similar effusions were present in the pleura.

Case of Injury of the Head from Blows with a Hatchet, in which Hemiplegia and Epileptic Attacks have supervened.—Dr. JOSEPH COATS showed the patient, and read a careful account of the case, after which he discussed the advisability of operative interference. The epileptic seizures began with localised spasm, and went on with a uniform course to general convulsions. An interesting discussion following, in which Professor Gairdner, Mr. H. E. Clark, Dr. Alex. Robertson, Dr. H. C. Cameron, Dr. D. C. McVail, and Mr. A. E. Maylard took part.

Subungual Exostosis.—Dr. WM. MACEWEN showed a specimen removed from the great toe of the left foot of a healthy girl, 16 years of age, who had been previously treated for ingrowing toenail.

Masses composed of Triple Phosphates and Bacilli from the Ureter. —Dr. DAVID NEWMAN showed microscopic specimens of these masses, which were passed from the left ureter of a man, who, with the exception of occasional renal colic, enjoyed good health.

Salivary Calculus.—Dr. G. S. MIDDLETON showed a specimen, which had been sent to him by Dr. Macpherson, of Cambuslang. The calculus was spontaneously discharged.

CAMBRIDGE MEDICAL SOCIETY.

FRIDAY, OCTOBER 8TH, 1886.

J. B. BRADBURY, M.D., President, in the Chair.

Removal of Depressed Fractured Bone of Skull.—Professor HUMPHRY showed a young boy who had recovered after a compound fracture of the frontal bone. There was a wound three inches in length, and a fracture of two inches in length, with a gutter depression. He was unconscious, but could be roused. The depressed portion was removed, by sawing the contiguous bone with a Hey's saw, and elevating the depressed bone. The dura mater was not injured. The boy appeared no better for the operation the next day, and only on the fourth or fifth day became conscious. Soon after he completely recovered. Professor Humphry commented on the great fluctuation in the treatment of injuries to the skull that had taken place during this century. In olden times the practice was always to trephine, and the patients almost all died. The tendency afterwards was not to trephine at all, and the results were more satisfactory. Recently, since the introduction of antiseptics, operative interference was more frequent, and the cases better selected. Professor Humphry thought the compression symptoms were due, not to the depressed bone, but to the injury to the brain at the time of the accident; and the removal of the depressed portion often appeared to give no immediate relief, as in the above case, though it might prevent the onset of inflammatory affections from the irritation of sharp pieces of bone. He would advise operative interference in cases of compound fracture of the skull, with depression, but not in simple fractures.—An interesting discussion followed, in which Mr. HEMMING, Mr. ALLEN, Dr. BOXALL, Mr. WHERRY, and others, took part.

Incomplete Pericardial Sac: Escape of Heart into Left Pleural Cavity. —Dr. BOXALL showed the thoracic organs of a woman, who died with symptoms simulating pulmonary thrombosis on the third day after the birth of her third child. The necropsy, however, showed that a very peculiar accident had occurred. The pericardium on the left side was represented only by a sickle-shaped fold attached to the diaphragm, and forming a pocket three-quarters of an inch deep. The heart was found lying in immediate contact with the lung, its apex being situated nearly three inches to the left of this pouch, from which it had evidently escaped during a severe attack of vomiting on the second day after delivery. This accident was followed by dyspnœa and collapse, in which the patient died thirty hours later.

Cancrum Oris.—Mr. WHERRY related a case of cancrum oris, lately under his care in Addenbrooke's Hospital. He briefly mentioned the reasons for drawing a distinction between cancrum oris and other conditions somewhat similar, as ulcerative stomatitis. It was not a case of acute necrosis of the upper jaw, though, as yet, no organism had been isolated from the blood or tissues, nor had the disease been inoculated; it seemed probable that, in the future, as in the case of anthrax, a definite micro-organism would be discovered. In cancrum oris, animals injected with the blood died of septicæmia, usually with peritonitis.

Anthrax.—Mr. HEMMING, of Kimbolton, described two interesting cases of anthrax, contracted while cutting up a beast just killed; both patients recovered after injections, about the slough, of carbolic acid.—Sir GEORGE PAGET elicited that a dog and cat died from eating of the entrails of this beast, but that a farmer, who begged for some of the meat, took it home, boiled it, and he and his family for a week lived on it, and received no hurt. He considered that the micro-organism in the meat had been destroyed by the boiling.

REVIEWS AND NOTICES.

A NEW ENGLISH DICTIONARY: On Historical Principles, founded mainly on the Materials collected by the Philological Society. Edited by JAMES A. H. MURRAY, LL.D. Parts I and II: A to Batten. Oxford: The Clarendon Press.

IN the New Sydenham Society's *Lexicon*, and its predecessor, Mayne's *Medical Vocabulary*, the meaning and derivation of technical medical words are given, but not their actual history. This omission is, to some extent, supplied in the medical terms admitted into the present work, but it must be owned that this is not done with a perfect measure of success, and we lay the work down with a feeling of regret, either that the editor included so many medical words, or that he omitted so many others of equal or superior value.

The claim of this *Dictionary* to novelty rests in an attempt to show by a series of quotations, ranging from the first known occurrence of each individual word to the latest—when, how, in what shape, and with what signification it became English. And specialist words belonging to the medical and cognate sciences are admitted if they be English in form; or, if they be not English in form, when they are in common use (like hippopotamus, geranium, focus, stratum, bronchitis), or belong to the more familiar language of science, as mammalia, lepidoptera, invertebrata, etc. A favourable example of this method of treatment of a medical word is to be found under the head of acupressure.

"Acupressure [f. L. acu with a needle + PRESSURE.]

"(See the quotation), 1859, *Proc. of Royal Soc. of Edin.*, December 19th, 'Professor Simpson made a communication on Acupressure as a New Mode of Arresting Surgical Hæmorrhage.'

"1865, *Reader*, May 13th, 540-1, 'Acupressure.....consists of the artificial arrestment of the hæmorrhage from cut or wounded arteries, by the pressure of a metallic needle or pin passed across their mouths or tubes.'"

Here we have, in a few lines, the derivation of the word, the name of the inventor, and occasion of its earliest use, and, in a happily chosen quotation, an excellent definition is supplied. Anyone who would re-edit the New Sydenham Society's *Lexicon* on this principle would confer a benefit on medical philology, and even on the history of medicine, not easily to be overestimated. Were the whole of the professional words admitted into the *Dictionary* so well illustrated, we should have nothing for it but praise; but neither their selection

nor historical treatment is worthy of a work of this class and character, which proposes to do for the English language what Grimm and Littré have accomplished for the French and German.

We have stated the principles of selection of technical words acknowledged by the editor; but in practice he seems to have gone on a principle of decimation, taking a certain number of words from the New Sydenham Society's *Lexicon*, and rejecting the rest, without much regard to either the importance of the words admitted or the usefulness of those rejected. How otherwise can we account for the fact that anthracosis, athetosis, and adiposis are excluded from the *Dictionary*, while anabrosis and albuminosis are inserted; that amygdalitis finds admission, but not adenitis; that adenalgia is taken, and adenodynia left?

It cannot be that the above words are admitted because they are used by medical or general writers more often than those rejected. The only authority quoted for the use of most of them is the New Sydenham Society's *Lexicon*, while some of those discarded are employed by such writers as Paget, Warburton-Begbie, Allbutt, and Quain, and are of every-day occurrence in medical periodicals. On the contrary, it would be difficult to find their more fortunate neighbours in any literature outside the boards of the *Lexicon* or *Dictionary*. Indeed, the whole choice of terms of this class in the *Dictionary* appears to be arbitrary to the last degree.

To fulfil the aim of the projectors of the work, one of two courses might have been taken: (*a*) only specialist words occurring in general literature might have been accepted, all professional authorities being tabooed as outside the scope of the *Dictionary;* or (*b*) classical professional writers, such as Potts, Hunter, Abernethy, Cooper, Brodie, Paget, Holmes, Lister, etc., might have been consulted, and their vocabulary admitted, as forming as much a part of the English language as that of Shakespeare or Milton. Are not their works consulted and admired to-day almost as extensively as when they were written? The direct language of Abernethy, the easy style of Cooper, and the eloquent periods of Paget are as much valued as examples of pure English as for their professional and scientific value.

Even in the words inserted there is an inequality in the quotations used to illustrate their history. Amygdalitis, for instance, is inserted on the authority of a translation of a *German Pathology* (Wagner's); while the much more important word aphasia has no better authority or example quoted than *Chambers's Journal*—a most respectable periodical, but scarcely representative either in its English or its scientific accuracy. Surely, if a translation of Wagner ought to obtain admission, the following note from a translation of the classical *Lectures* of Trousseau would not be out of place, more especially as it supplies the very information it is the boast of the *Dictionary* to contain.

"The affection I am about to describe was in 1841 termed alalia by Professor Lordat, and in 1861 M. Broca changed this name for that of aphemia; but M. Chrysaphis, a very distinguished Greek scholar, and a Greek himself, although accepting the term alalia, proposed, however, as a better one, that of aphasia, derived from the Greek ἀ, privation, and φάσις, speech. M. Littré, whose authority is so great, and Dr. Briau, have likewise preferred the word aphasia; and all three concur in rejecting aphemia. I had at first adopted the name of aphemia, on M. Broca's authority; but I have now, on the authority of the *savants* whom I have named, substituted for it that of aphasia." (New Syd. Soc. edition of Trousseau's *Clinical Medicine*, vol. i, p. 218, 1868.) (M. Trousseau appears to have published the word first in the *Gazette des Hôpitaux* for 1864.)

What renders it more remarkable that M. Trousseau's name should not be mentioned in the *Dictionary* in connection with this word is, that alalia and aphemia, rare and disused words, are credited by it to M. Lordat and M. Broca respectively.

In acritochromacy again, no hint is given of the authorship of the word, and the only authority offered is the New Sydenham Society's *Lexicon* of the date 1879 and modern dictionaries, while of the derivative adjective acritochromatic, no mention is made. This word was introduced by Mr. Dixon in his *Guide to the Practical Study of Diseases of the Eye*, p. 261, 1855, and an excellent illustrative quotation will be found in Holmes's *System of Surgery*, 2nd edition, iii, 138, 1870, "Art. Dis. of Eyes by Dixon." "I have suggested the word acritochromacy as implying an inability to discriminate between colours." The corresponding adjective will also be found at the same reference. "Hitherto, very few dissections have been made of the eyes of acritochromatic persons."

In astigmatism, again, the very distinguished character of the inventor of the word, Dr. Whewell, should have insured the mention of his name, while Mr. Dixon's synonym, "astigmism," though approved of by Dr. Whewell, and accepted by Dr. Quain in his *Dictionary*, is not inserted at all. Apertometer has no earlier date or quotation given than *Nature*, 1880, whereas M. Abbé's original description of it appeared in the Journal of the Royal Microscopical Society, vol. i for 1878, p. 19.

For aconelline, a quotation is given from Harley's *Materia Medica* for 1876, which is copied *verbatim et literatim*, without the slightest acknowledgment from the New Sydenham Society's *Year-Book* for 1864, which again took the extract from the *Pharmaceutical Journal* for the same year (v, p. 317), where the original mention of the term was made.

Among the words which should have been inserted under the rule that all scientific words, English in form, find admittance, are:—Absorbing (var., of absorbent, Abernethy), achromatous, acrid (sb. in Dr. Friend's *Emenologia*, and Ziemssen's *Cycl.*), additamentary, adelomorphous, adenomatous, aerobe, aeroscope, afebrile, aged sight, agrammatism, albuminuric, ambulant, amenorrhœic, amœboid (sub., Carpenter), ankle-clonus, anisotropous, anorchism, aponeurotome, archiblastic, Argyll-Robertson (adj.), arthrectotomy, atalectic, autogenetically, azoted, back-splint, bacteriform, balneo-therapeutics, bar (at neck of bladder), bar-shot (calculus).

This is not a small list, but when there is added to it "as coming under the other rule of insertion of the more familiar language of science," such words as acholia, actinomycosis, adenitis, agar-agar, alexia, angeioleucitis, angioma, anthracosis, archebiosis, arthralgia, athetosis, a heavy charge of omission is made out against a work of which only two parts have been published.

Nor is the *Dictionary* much more satisfactory in the historical quotations it inserts, than in the words it omits: 1859 for the earliest use of anteflexion (of the uterus) is not a re-assuring suggestion; while we give below, in contrasted dates, some of those supplied for certain words by Dr. Murray, and some noticed by ourselves in a quite casual consultation of a few standard authorities. It is certain that any one with an ordinary library to consult, and a few hours to spare for the work, would be able, without much trouble, to supply still earlier instances than those noted. In the succeeding list, the first date supplied is that of the *New English Dictionary;* in every instance, the second that of the present writer. Abortifacient, 1875, used in New Sydenham Society's *Retrospect* for 1861, Adenoid, 1873, Paget, 1870; Œsthesiometer, 1871, Marshall's *Physiol.*, 1867, Æsthesodic, 1878, Marshall, 1867; Alkaloid, 1831, *Edin. Med. and Surg. Jour.*, 1829; Amaurotic, 1839, Wardrop's *Essays on Morbid Anatomy of Eye*, 1818; Amnesia, 1878, N. Syd. Soc. *Year-Book*, 1862 (from the German of 1772); Anæmia, 1836, 1829; Anencephalous, 1836, 1829; Apiol, 1872, 1864; Apoplectiform, 1876, 1860; Asthenopia, 1875, 1863. We could and very many more instances of inaccuracy; but enough has been given to show that the aims of the *New English Dictionary* have not been fulfilled, at least in its medical vocabulary. That those aims are of value, goes without saying; and any man, or combination of men, who would write a dictionary of medical terms on these lines, would confer a benefit on medical literature. Such a work would be indispensable to the author, since it would not only give the history of the words used, but also the date of their invention, and the name and nationality of their inventor; being, in its sequence of quotation, even an index to the bibliography of each term. And the task of producing such a work would be by no means overwhelmingly difficult. The current vocabulary of a nation can only imperfectly, and with difficulty, be traced to its origin in the literature of past ages; its constituent words are many of them antecedent in origin to all literature. Not so with the terminology of a science like medicine; it has had intelligent birth in the comparatively late times, when science alone has flourished; every one of its words represents a definite discovery, made by a thinker, and was his invention to make the thing he had found out intelligent to his fellow-man. Therefore, each word has, like a child, its birth-day and its god-parents, and only needs a slight search to find its register of birth as well. We trust that such a general register, as is here suggested, may, at no distant time, be furnished on the model of the *New English Dictionary.*

Though we have shown how defective is the work in question, we by no means wish to leave the impression with our readers that it is valueless; in the ordinary vocabulary of common life it is good, and in the older English words almost perfect. In words of more modern invention it is not so good, and we imagine a slight search would discover both earlier, later, and more representative examples of most of these. In the technology of many sciences—botany and chemistry, for example—the work is fuller, and, on the whole, we recommend it to our readers, as a new departure in a right direction. Its high price (12s. 6d. per part) may be prohibitive to some.

We have given one extract from the *Dictionary;* we will conclude with another, non-professional, but equally good with the former.

"Agnostic, sb. and a. [f. Gr. ἄγνωστος, unknowing, unknown, unknowable (f. ἀ- + γνω—know) + -ic., Cf. Gnostic; in Gr., the termination -τός, never coexists with the privative ἀ-]

"A. Sb. One who holds that the existence of anything beyond and behind natural phenomena is unknown, and (so far as can be judged) unknowable, and especially that a first cause and an unseen world are subjects of which we know nothing.

"[Suggested by Professor Huxley at a party held previous to the formation of the now defunct Metaphysical Society, at Mr. James Knowles's house on Clapham Common, one evening in 1869, in my hearing. He took it from St. Paul's mention of the 'altar to the unknown God.' R. H. Hutton, in letter, March 13th, 1881.]"

Then follow four excellent quotations (two from the *Spectator*, and one each from Professor Mivart and Bishop Fraser) at various dates from 1870 to 1880. Afterwards comes the adjectival use (B), with four as excellent quotations, of the *Quarterly*, Principal Tulloch, Birdwood, and Froude, dated from 1873 to 1882.

INSANITY. MODERN VIEWS AS TO ITS NATURE AND TREATMENT. By W. T. GAIRDNER, M.D., LL.D., Professor of Medicine in the University of Glasgow. 1886.

PROFESSOR GAIRDNER here, as elsewhere, shows his manysidedness. He has also the faculty of putting down in the simplest but at the same time in effective language, the views which occur to him, apparently just as they came into his own mind. If this results, at times, in lack of methodical exposition, it has the good effect of interesting and attracting the reader. A lecture which Dr. Gairdner delivered in Edinburgh in 1879, in connection with the Morrisonian Trust, was the foundation of this pamphlet. It was re-delivered in the form of an address, before the Glasgow University Medico-Chirurgical Society in 1885. The main object of the author appears to be twofold—to insist upon the fact that the principles which are at the root of the present treatment of the insane, are those which are accepted in bodily affections, and that the delicate questions arising out of lunacy can no longer be submitted to persons who, however well educated medically, are quite ignorant of psychological medicine. On both points there will, we should suppose, be very little difference of opinion, if any; and we think that, as a matter of fact, there are but few medical men, now-a-days, who would care to involve themselves in lunacy cases who had not had some considerable experience. We are glad to see that the Medico-Psychological Association has taken practical steps to provide the public with some guarantee that medical men offering to give an opinion in mental disorders, have some knowledge of the subject. A certificate of efficiency in psychological medicine is now given, provided candidates comply with certain conditions, and pass a satisfactory written and oral examination. The conditions are certainly not too severe, in fact we think they err on the side of laxity. If the Association does not demand a sufficient amount of actual experience, the public will not be satisfied with the promised guarantee. Professor Gairdner, lately the President of this Association, will doubtless see the force of this observation, and use his influence in the right direction.

The manysidedness of the author's mind, to which we have referred, leads him to comment upon John Stuart Mill's mental history, upon the Subjection of Women, Christianity, Witchcraft, Demoniacal Possession, and other questions. But here we must leave the professor, with thanks for the pleasure afforded by his pleasant if somewhat desultory address. There are few subjects in the range of medicine upon which we should not be glad to have his fresh opinion.

MANUAL OF OPERATIVE SURGERY. By W. ARBUTHNOT LANE, M.B., M.S., F.R.C.S., Senior Demonstrator of Anatomy, Guy's Hospital, Assistant-Surgeon to the Hospital for Sick Children. London: George Bell and Sons.

THIS manual appears to be chiefly adapted for the use of demonstrators of operative surgery, who are exposed to all kinds of questions from their pupils, on matters of detail, important or otherwise. Any surgeon, generally experienced or not, when called upon to perform some operation with which he has had no previous practical acquaintance, may find some useful hints in its pages. The work is hardly suited for the student. It is of a kind which may be taught from, but not learnt from. The author must have spent much time in its composition. With equal pains, we believe that, as an active young member of an institution so rich in sources of surgical, clinical, and pathological knowledge, Mr. Lane may yet produce a work of far greater value and utility.

The author has rightly laid stress on many of the rarer, newer or more special operations, which have been established as legitimate, and have become more or less widely practised. This process of selection involves some inconsistencies; thus, there is a good description of excision of the pylorus, but no mention of suprapubic lithotomy. The diagrams are very clear, but many more would have been desirable, as in the case of the paragraphs on Ogston's and McEwen's operations. The useful diagrams at page 209, relating to Mr. Gowan's treatment of anterior and lateral curves of the long bones, render the text relating to that subject particularly clear. On comparing with it the description of McEwen's operation, the want of illustrations to explain the steps of the latter becomes very manifest.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A METHOD OF INOCULATING FLUID CULTIVATING MEDIA.

SIR,—One of the obstacles in the way of the employment of liquid media in bacterial cultivations is the liability, and this in some places is really great, to contamination of the cultures during the exposure incurred in the inoculation of fresh flasks. To obviate this difficulty, I have devised an instrument consisting of a small glass bulb, into the neck of which a long hypodermic needle or rather large bore has been fused. Any one may, with the aid of a good flame, in a short time and at little expense, construct as many of these "needle-bulbs" as are necessary.

Before use these bulbs must be sterilised. This is done by forcing the needle into a flask closed with cotton wool, and subsequently heating the whole in the sterilising box. Many bulbs may thus be sterilised at one operation. The needle having, when cold, been removed from the flask in which it was sterilised, and its end received in some sterilised wool held in the left hand, is pushed just through the plug of the flask from which we wish to make fresh cultures, and (the left hand still holding the cotton round the needle to protect the point on its extraction) the bulb warmed in the right palm, the needle then plunged into the liquid, and the right hand removed; on cooling a partial vacuum forms and, consequently, a few drops of the culture are pressed up into the bulb. The various infusions are now inoculated, the necessary precautions being taken.

The upper part of the wool, with which the flasks are plugged, is turned over the rim, and there fastened with thin wire. Over this, to prevent deposition of dust, a piece of lint should be loosely tied. This latter is removed before making the inoculations.

Thus, having obtained a pure culture of a micro-organism by the gelatin method or otherwise, we may, without fear of contamination from external sources and, therefore, without the necessity of control experiments, continue its cultivation in liquid media, and repeatedly transmit to the daughter-flask only that which exists in the mother-flask.—I am, Sir, yours truly,

Newcastle-on-Tyne. R. CROSIER.

STROPHANTHUS.

MESSRS. THOMAS CHRISTY AND CO. inform us that they have received specimens of the leaves, pods, stem, and root of strophanthus, and that they will be happy to show them to any who may feel interested. They state that it has been found, since the publication of Professor Fraser's results, that the whole pod and seeds can be used to advantage, and that a stronger preparation might even be made from the tincture of the whole plant.

HELMSLEY.—Dr. Bruce Low fully realises his responsibility as Health Officer for this district, and he has spared no pains to interest others in his work. Dr. Low relates the oft-told tale of contagion concealed, and suffering entailed upon families by this carelessness and neglect. A lad was sent home to Harome for change of air, after an attack of scarlet fever. The nature of his illness was not intimated, and, while in the peeling stage, he spent a week in free contact with his companions in the village. A whole crop of cases resulted, of which two proved fatal. Some interesting particulars are given, with regard to a case of enteric fever, the only one for four years. It was found that the origin of the disease was due to the digging up of an old choked drain, into which the specific poison of the fever had found its way ten years previously, when a case of fever occurred in a house to which the drain was connected. No further case occurred. The vaccination arrangements were fully carried out. Dr. Bruce Low is of opinion that some system of compulsory re-vaccination should be adopted, to protect the nation, and suggests that all children leaving school should be revaccinated at the public cost. On the whole, the record of the year is favourable. The infantile deaths were very few, and the general mortality somewhat less than in 1884. The death-rate was 16.15 per 1,000 of the population, and the zymotic death-rate 0.75 per 1,000. One death was certified from blood-poisoning. The patient was a nurse, waiting on a fatal case of pneumonia. She had an abrasion on her thumb, and, in washing out the pocket handkerchiefs of the patients, she inoculated her hand with the expectoration from her patient.

BRITISH MEDICAL ASSOCIATION SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 23rd, 1886.

WHO IS TO STOP UNQUALIFIED PRACTICE? A GRAVE QUESTION FOR THE PROFESSION AND THE COLLEGES.

AMID the stir of political interest which has been excited by the pending election of direct representatives of the profession in the General Council of Medical Education and Registration, other matters of grave and immediate moment may easily be overlooked. One of the most important provisions of the recent amended Medical Act was that which called upon the examining bodies to enter into union, and gave legislative approval to their union, for the purpose of giving a conjoint qualification, and which provided against the contingency of existing bodies refusing to make such union comprehensive and complete. The provision in question authorised any examining body with which the other existing bodies refused to enter into union to apply for the appointment, under the authority of the General Medical Council, of such examiners as were necessary to enable it to complete its examinations, and to give a thorough qualification in Medicine, Surgery, and Midwifery. The body most immediately affected by this provision, and which was held in view when the Bill was framed and was under consideration in the House of Commons, was the Apothecaries' Society of London. That corporation has, as the profession is aware, applied, since the passing of the Act, to the Royal College of Physicians and the Royal College of Surgeons of England to be admitted to the Conjoint Board in order that the three corporations may give a joint qualification. This application will very shortly come under the consideration of the two London Colleges, which are now in union. At first sight, the question might appear to be one of minor importance. It would be hasty, however, to assume that the Colleges of Physicians and Surgeons are either at liberty, in considering this application, to consult their own interests only without regard to those of the profession at large, and to the principles of general equity, or that they have any disposition to do so. On the other hand, it would be folly to ignore the fact that recently the two Colleges have entered into a very close and exclusive union, and have declined to admit the Apothecaries' Society into that union. And it is possible that even under the altered circumstances created by the new Medical Act, they may feel that their interests and their dignity require them to continue to take the same view. For our own part, and if the matter were merely one of the conflicting interests of corporations, we should be inclined to leave the matter, with little comment, for settlement by the parties, without anticipating the probable verdict.

The medical corporations of England have grown up under a variety of influences, as the result of public needs and various interests finding their expression in the union of individuals to accomplish public work, for which they have obtained special charters. We have no particular sympathy with the desire of perpetuating one corporation rather than another. All must be judged by their public usefulness, and by the part which they play in fulfilling public and professional requirements. The College of Physicians and the College of Surgeons have undoubtedly the advantage of the Apothecaries' Society in numbers, in dignity, in learning, and in wealth; and the desire, often expressed, to see the Apothecaries' Society extinguished as an examining body is probably not confined to the minds of the most aristocratic portions of the profession, or based upon any merely selfish grounds. The Apothecaries' Society, it is true, has rendered very great service to the cause of medical education. At a time when the College of Surgeons sadly neglected the duty of providing adequate examinations for the class of general practitioners, and had much to reproach itself for in respect to its examinations and to its organisation, in respect alike to the public and the profession, the Apothecaries' Society showed a very lively sense of what was due to educational progress, and was needed to meet the public requirements, and was for many years by far the best of the English examining boards which gave licences for conjoint practice. The march of events has left it in the rear; and, if it could be allowed to die out by a process of painless decay, without injury to any other interests than those which may be described as of a purely private and limited kind, there would be no reason why the profession should adopt any other attitude than that of philosophic and kindly submission and regret. But this is not exactly the state of the case; there are other and very grave public interests involved in the decision which the Colleges of Physicians and Surgeons of London will shortly be called upon to take in this matter—interests of very high moment to the whole profession in England, except, perhaps, the class of consulting surgeons and physicians, who constitute at present the governing body of these two Colleges.

The Apothecaries' Society is the only corporation in this country which possesses any power of limiting the evil practices of prescribing chemists, and of setting a limit to the constantly increasing encroachments which that class of persons make upon legitimate medical practice, or of protecting the public from the manifold evils and dangers arising from the practice of medicine by a class of unqualified persons. As it is,—in spite of the pains and penalties which the Apothecaries' Act enables that Society and the various private societies which have been constituted to aid in enforcing, in the police-courts, the penal provisions against unqualified practitioners and prescribing chemists who undertake medical duties,—this class of persons is steadily on the increase, and their dangerous malpractices are checked with great difficulty.

The General Medical Council of Education and Registrat
as we have always maintained, shamefully failed in their duty in declining to institute any prosecutions against the persons who infringe what is known as the penal clause of the Medical Acts. That clause, however, even if they did enforce it (as they have long obstinately and wrongfully refused to do), affords only the most limited and scanty protection to the public and the profession. It provides only against the false assumption of registered medical titles; it makes no provision whatever against the habitual practising of medicine by unqualified persons who do not assume such titles. Among this class of

offenders, a most numerous and by far the most dangerous, are the chemists and druggists in poor neighbourhoods who, with gimlet eye, assume to penetrate the physical coverings of the patients who apply to them across the counter, and to prescribe for their ailment as described by themselves.

A yet more threatening abuse is that of chemists and druggists who add to their dispensing business the function of visiting patients in their homes, and supplying them with medicines. Against persons so offending, the Apothecaries' Act affords the only safeguard. The poor need to be attended everywhere in crowded districts by persons who are willing to accept small remuneration. The terrors of the penal clause of the Apothecaries' Act have for years been effectually invoked to hold in check this most dangerous class of prescribing quacks; if the Act has not altogether succeeded, it is not only far more effectual than the penal clause of the Medical Acts, but it is the only weapon by which the class of prescribing chemists have been and can be restrained. Anyone who is acquainted with the history of the successful prosecutions by the Medical Defence Association and the Medical Alliance, must be well acquainted with this fact, and they must know that, were the Apothecaries' Society to be allowed to die out, there would not exist any means by which the rapid growth of this prolific source of dangerous quackery could be arrested; so that a whole tribe of prescribing and visiting chemists would spring up to take the place of the defunct apothecary. They would have all the *prestige* and all the glamour of the mystic coloured bottles in the window of the apothecary's shop, and of the knowledge of some uses of medicines. This would, when once their practice ceased to be illegal, readily be assumed by the ignorant masses, and not by them alone, to constitute adequate qualifications for practice.

It is well known that all efforts failed to induce the Government to introduce into the Medical Reform Act these clauses from the Apothecaries' Act, and it has always been alleged by the Parliamentary supporters of medical reform that the House of Commons would not consent to introduce any new penal disabling clauses, and that, to attempt to do so, would be fatal to the cause of educational reform, and would ensure the failure of the Bill.

The committee of the College of Surgeons and the College of Physicians, which will have to consider very shortly the application of the Apothecaries' Society, will do well to remember that they have in their hands a very grave question, fraught with serious importance to the rank-and-file of the profession, and to the poorer classes of the community. It is within their power to refuse to combine with the Apothecaries' Society now, as they have done on a recent occasion, but their doing so now would have a much more serious public importance than it had then, when the question was only one of the action of two Corporations which had but to consider their own educational requirements and their own views of dignified organisation. If this committee should refuse still to accept the Apothecaries' Society as one of the elements of the Conjoint Board for England, they may readily inflict a very deadly blow, not only on the Apothecaries' Society, but through the Apothecaries' Society on the interests of general practitioners at large, and especially those attending the poorer classes, who are at present excluded from a voice in the governing functions of these bodies; and they will incur the risk of flooding the country with the most insidious and dangerous class of unqualified medical practitioners.

In proportion as the educational standard of the conjoint examinations is advanced to a high level, and in the degree that medical education is made more costly, more protracted, and more difficult, does it become more and more necessary to see that the working classes and lower middle classes are not left without some provision for their treatment, at the moderate rates of payment which alone they are able to afford. If the Apothecaries' Society be extinguished, and the Colleges of Surgeons and Physicians, who take rightly a high view of the minimum standard of qualification, proceed to legislate without regard to these circumstances, very dangerous consequences may ensue; and it is obvious that those dangers would be greatly enhanced if at the same time and by the same stroke, the only corporation, whose character gives it the power of keeping a check on prescribing chemists, should be extinguished. When the question of a joint examination board was mooted, the Colleges of Surgeons and Physicians were very glad to join with the Apothecaries' Society. They did join in all the preliminary stages, and a very complete scheme for the creation of a joint board was elaborated and agreed upon, which was destroyed only at the last moment, by the College of Surgeons drawing back. The Apothecaries' Society are not in any degree responsible for anything which occurred in bringing about that unfortunate *fiasco*.

If now the two Colleges insist on excluding this Cinderella of corporations from any share in the examinations, there will remain for the Society of Apothecaries only the alternative of applying to the General Medical Council to take part with them in creating a new authorised surgical examination so as to enable them to give a complete qualification to apothecaries. In this way, there would be again called into existence, so to speak, a third order of the profession—an order of Apothecaries who would probably practise, especially with a view to the needs of the poorer classes of the population. They would correspond, more or less, to the Officiers de Santé of France, and to the district practitioners of Germany. This may be the best solution of the question, but the matter is not one, as we think all will agree, to be settled hastily, or with a selfish regard to the interests of particular corporations only. If the colleges, then, should decide to reject the application of Cinderella, we can only hope that they will fully appreciate the extreme importance and danger of the step they are taking, and of the far-reaching consequences which it may have on the whole constitution of the profession, and upon the welfare of the population. If they do so, they should at any rate, at the same time, make up their minds to use their influence with the General Medical Council to accede to the application of the Apothecaries' Society to give them a separate corporate existence, for in the existing state of the law we do not hesitate to say that the extinguishing of the Apothecaries' Society, and the loss of the powers given under their Charter, would be an irretrievable misfortune to the profession and the public. There is, of course, the proverbial third course of getting an amended penal clause, but that is a perfectly hopeless one. It has been impossible to obtain it during the whole of the long struggle for medical reform, when other accessory forces were at hand to help; and it would be out of the question now, when medical reform questions have, for a time, been set at rest in Parliament, and when it is more than unlikely that Parliament would even listen to an application which, unpopular in any connection, would be summarily rejected if it came by itself as a single proposal.

We regret to state that the accounts produced and read at the quarterly meeting of Governors of the Lincoln County Hospital showed a balance due to the Treasurer of £1,300 14s. 7d.

CHOLERA IN EUROPE.

THE announcement of the existence of cholera in several towns of Austria, which has been made known by telegraph during the present week, reinvests with interest the account of the European history of that disease during 1884 and 1885, which Dr. Buchanan has just published in the form of a report addressed to the President of the Local Government Board, and issued as a Parliamentary paper. It would appear from this Blue-book that the mantle of the late Mr. Netton Radcliffe, as reporter on exotic diseases in general, has fallen upon Dr. Thorne Thorne, for an important part of the volume is taken up by a summary account from his pen of the recent prevalence of cholera in Southern Europe, and a *resumé* of the proceedings at the abortive International Conference held at Rome last year. In ordinary circumstances, a report on events which happened so long ago might well be dismissed without ceremony, as belonging to "ancient history;" but the possibilities of the march of cholera north and west, now that it seems to have gained a foothold in Austria, make it desirable to retrace its developments in 1884 and 1885 in some little detail.

Dr. Thorne's summary is as complete as circumstances have allowed, though it is admittedly imperfect. It shows that the prevalence began in an outbreak at Toulon in June, 1884, and that before the end of the year about 5,000 deaths occurred throughout France, including 1,125 in Paris alone. In Italy, the disease made its appearance at Genoa in July, 1884, and, about the same time, among refugees from France who were quarantined near the mountain frontier. From thence it rapidly spread through the country with such terrible results, that by November, 858 communes had been invaded, and out of 27,030 cases, 14,299 had proved fatal. Of these, 12,325 cases and 7,086 deaths occurred in the district of Naples. In Spain the disease began late in August or early in September, in Alicante, and caused about 270 deaths. In 1885, Spain was the first country to be attacked, and it is officially reported that, before the close of the year, 338,685 cases occurred, of which 119,620 were fatal, and that the population subjected to the epidemic amounted to 6,575,641. In France, 1,039 and 314 deaths occurred in Marseilles and Toulon respectively, besides some others in the Department of Finistère. Italy also was visited, and, in 152 communes invaded, 6,397 cases occurred, of which 3,459 proved fatal. Palermo ontributed 5,535 of these cases, and 2,959 of the deaths.

As regards our own country, on one or two occasions, cases believed to have been of the nature of cholera reached our shores, at Cardiff and at Bristol, in the persons of sailors from he Mediterranean; but, as the result of sanitary precautions promptly taken, the disease did not in any case spread. Dr. Thorne gives some significant illustrations of the relation between filth and the cholera epidemic. Among these he quotes a pungent statement of our Consul at Marseilles, that "Marseilles has herself to blame very much for the frequency of these epidemics by neglecting sanitary precautions. When the disease is here in our midst great improvements are promised; when it is over nothing is done. The drainage system is atrocious, the main drains emptying themselves into the docks where the vessels lie; and no person, who has not had the misfortune to experience it, can form an adequate idea of the effluvia arising from these drains on a warm summer's night."

Dr. Thorne's report of the proceedings of the International Conference at Rome is a clear account of what must have been to him a somewhat unsatisfactory mission. The idea of the Conference originated with Italy, which had the laudable desire to settle such a basis of an international agreement on the measures for preventing the spread of epidemics from one country to another, as might be acceptable to all Governments taking part in the conference. England did not, for many good reasons, show any particular anxiety to share in the deliberations of the proposed conference. As Dr. Buchanan points out, England's views concerning cholera in Europe, obtained from her own experience, and strengthened by what she can learn of other countries, are that for European communities which have secured their soil, water, and air against befoulment, there is little or no danger of cholera, even though the disease be actually brought into their midst; whereas communities which have not obtained this result have to encounter an unknown and serious measure of risk from cholera, when it chances to be introduced among them. English medicine holds that cholera in Europe has, at times, a power of spreading from the sick to the healthy, exerting this power in the presence of filthy local circumstances, and most effectively where sources of drinking-water have got contaminated by discharges from cholera patients. England puts her trust in measures which shall secure purity of earth, of water, and of air, and regards this purity as sufficient to prevent the spread of cholera in an European community. And as the measures which shall protect herself and other countries from such danger as attaches to intercourse with already infected places and communities, England relies, and exhorts other countries to rely, upon this same purity of local surroundings as the means for rendering that intercourse inoperative for harm. Accordingly, she would dispense, in land and sea traffic alike, with those detentions known as quarantines, having found them in practice to result rather in hazardous concealments and evasions than in any effectual exclusion of cholera.

Our Government, however, eventually agreed to take part in the Conference which Italy had proposed, and, at Rome, the British delegates kept the above outline of England's policy constantly in view, as well as its logical consequences. They demanded on behalf of Great Britain that she should deal as she saw fit with such vessels as sailed to her own ports without touching elsewhere during the voyage, and they also maintained that each country should be allowed to deal as it chose (that is, by medical inspection, or by the imposition of quarantine restrictions), and, where it chose, with regard to vessels bound for its own ports. They found, however, but scant support of this common-sense view among the delegates from other countries. Considerable diversity of opinion was manifested during the discussion of the various proposals put forward, and the Conference was, ere long, postponed in order that communication might be had with the several Governments. But at the date in November last, appointed for the reassembling of the Conference, the opinions of the Governments were found to be too diverse to allow of any hope of agreement upon the questions, and the continuance of the Conference was therefore abandoned. Doubtless this was the best course to take. Dr. Buchanan thinks, however, that "some useful result will have been gained by this Conference, though its labours have thus far been inconclusive." Dr. Thorne expresses the opinion that "in some respects the conclusions arrived at indicate progress since the conferences of Constantinople and Vienna, in regard to the measures which may be properly applied towards the prevention of cholera," and that "on no occasion

has the value of the adoption of sanitary measures, as the principal safeguard against cholera, been more prominently recognised than was the case at Rome." It has, at times, been alleged that the views of Great Britain on the quarantine question are largely influenced by commercial and financial considerations. This is, of course, quite unfounded, and Dr. Thorne did good service in refuting it at the Conference. The average amount of money raised in England and Wales for purposes mainly of a sanitary character is very large. Dr. Thorne points out that during the period 1875-6 to 1883-4, it exceeded £8,500,000 *per annum*. Moreover, these expenditures are, with very trivial exceptions, voluntarily incurred in the interests of public health, and it may, therefore, be readily assumed that if quarantine measures had been proved to be beneficial to the public health, English patriotism would be found making the sacrifices necessary to carry them out.

The possibilities of an international agreement on the subject of the prevention of the spread of epidemics appear to be of the most slender description. With the first alarm of cholera, nations which profess the warmest devotion to scientific methods of isolation and prevention instantly clap on quarantine against all arrivals, healthy or sick, with the result that, instead of keeping out the disease, they foster it and multiply its breeding-places. If there is one thing that superabundant experience has taught, it is that cholera spells dirt; and until some glimmerings of this truth penetrate the minds of continental and eastern nations, it is idle, in the present activity of commercial intercourse between all parts of the world, to shut the disease out by the inefficient barrier of quarantine.

THE COMING MEETING AT THE ROYAL COLLEGE OF SURGEONS.

In accordance with what may now be regarded as an annual custom, the Fellows and Members of the Royal College of Surgeons will meet on Thursday, November 4th, to hear the report of the Council which will be submitted to them. It will be remembered that the first of these meetings took place in March, 1884, when the Fellows and Members were called together to receive a report on certain proposed alterations in the charters of the College, which had received the approval of the Council, and also to take advantage of the opportunity to make any suggestions which they might choose to offer regarding the affairs and management of the College.

At this meeting, Mr. Paul Swain brought forward his well-known resolutions with the object of giving the Fellows a larger share in the management, and a wider interest in the affairs of the College, and of placing the election of the President in the hands of the Fellows instead of in those of the Council, as at present. In consequence of the action of the Council, which subsequently ignored these resolutions, there were formed two associations, of the Fellows and Members respectively, for the purpose of advocating the changes which were involved by Mr. Swain's resolutions. The former of these set to work, with much energy and discretion, to maintain and extend the rights of those who hold the higher diploma of the College. They were supported by prominent and influential surgeons, and the moderation of their views was shown by a series of recommendations which were forwarded to, and considered by, the Council, who, however, conceded very little to the views thus expressed. The Committee of the Fellows' Association was not deterred, and worked on earnestly to promote the objects for which it had been brought together. In May, 1885, a letter was forwarded to the Home Secretary, praying that no fresh charter might be approved until the views of the Fellows had been considered.

At the meeting held at the College on October 29th of last year, the Fellows took no active part, with the exception that Mr. Paul Swain, by way of protest, moved one of his original resolutions, which was carried by general consent. The proceedings at that meeting were mainly confined to the vigorous assertion by the Members of their right to a share in the management of the College affairs, and on this point they were supported at the adjourned meeting on December 17th by an able and powerful advocate in Mr. Timothy Holmes.

We give this short history of the Fellows' Association because, although the tangible effects of its labours have not resulted in any great concessions on the part of the Council, there has undoubtedly been brought about, indirectly, a disposition towards a modification of the charter, so as to include to a considerable extent some of those changes which have been urged by that body. On March 13th of the present year, a Committee of this Council was appointed to consider the mode of obtaining the Fellowship, and the two methods, which had been reported on by it, of widening the basis upon which the Fellowship was obtained, were adopted by the Council. By one of them, the Council would elect to the Fellowship every year a certain number, not exceeding ten, of Members of the College of not less than twenty years' standing, who were distinguished by scientific or professional ability, or by good service rendered to the profession or to the public, and who were recommended by ten Members of the College, of whom at least half should also be Fellows, but not members of the Council. By the second, Members of not less than fifteen years' standing would be exempted from the first examination in Anatomy and Physiology, and would be required to pass only the second examination in Surgery. The Council also adopted the recommendation that two honorary Fellows should be annually elected, who, whether Members of the College or not, have rendered distinguished service in the advancement of surgery or allied sciences.

These subjects will be brought forward in the report of the Council at the coming meeting on November 4th; they are satisfactory indications that the Council are alive to the fact that there are many among the Fellows and Members of the College who are anxious to see the College of Surgeons of England a more typically representative body, and one that holds together its *alumni* by closer ties of interest, if not of affection. It has been for many years a matter of widespread regret that the College has not fulfilled a higher function in the interests of the profession, and there can be no doubt that the resistance which, for a long time, was shown by the Council to any movements or suggestions of change was due, not to general satisfaction, but, on the contrary, as it was well put by Mr. Swain, to the fact that the action of the Council in the past had alienated the profession from the College.

In another direction, also, one of the recommendations of the Association—that the President should hold office for a longer period than one year—seems likely to be accepted. Mr. Savory has already been re-elected for a second and consecutive year of office; and if, in view of the coming year, when the College of Surgeons, like other corporations, may be expected to seek some favours which will mark the jubilee of Her Majesty's reign, it be thought desirable to place in office one who has an intimate knowledge of the College affairs, and who holds a high position in the profession, a precedent, at least,

will be established for the presidency extending over three years, as was suggested by the Fellows' Association.

It is true that there are many other subjects upon which the Council have turned their back; such, for instance, as the monopoly by members of the Council of the position of examiners, and other questions; we shall watch with some interest the attitude of the Fellows' Association at the forthcoming meeting. Will they be content with the results of their past labours, or will they press the Council with fresh arguments for changes? On the one hand, they have much cause for satisfaction, not only at the partial recognition of their wishes, but also with the fact that three members of the present Council are and have been prominent members of their own committee. This has been in nowise brought about by any canvassing or pressure on their part. Doubtless, the more moderate of the members of the Association of Fellews would prefer to trust to those Members of the Council who agree with them to bring forward their views; this section, moreover, would undoubtedly find many sympathisers among the general body of Fellows. On the other hand, there are doubtless some whose ideas are of a much more progressive type, and who would be willing to acquiesce in many, if not all, of the claims which are put forward by the kindred Association of Members.

The Association of Members will do well to put forward as its spokesmen persons of much more statesmanlike view and more thoughtful character than some of those who took up a prominent position at the last meeting, and who certainly did little to advance the cause which they advocated. The gentlemen who are most disposed to volunteer speeches at public meetings are not always those best fitted to represent a great body of Members; and some care should be taken to put forward authorised persons, well instructed in the programme of the Association, and capable of maintaining it in moderate and cultured language. In nothing will the action of the College of Surgeons more seriously affect the interests of the profession at large than in dealing with the constitution of the conjoint examining board under the new Act, and in determining, as it is about to do, upon the attitude to be observed towards the Apothecaries' Society. There is great reason to fear that in this matter the question will be decided by consulting surgeons, who, from their very position, are far removed from intimate acquaintance with the needs and sufferings of the poorer class of general practitioners, and of the poorer population with whom they have to deal.

The College of Surgeons is supposed, in this matter, to be acting for the interests of the whole body of their Members and of the English profession. At the present time, there is only one general practitioner on their Council, and he a gentleman who was admitted possibly as much on account of his former connection with a hospital staff, and from the personal esteem with which he is regarded by consulting classes in London, as from his representative claims. As we have indicated in a previous column, the question to be decided will be one of momentous importance to the whole body of general practitioners, and there is great reason to fear that, in the arrangements come to, their interests and those of the public may suffer to an irreparable extent. To this point of view the Council, or their two or three delegates who have settled, and are likely to settle, the final bases of the conjoint scheme, do not as yet appear to have given any attention. They will meet three distinguished Fellows of the College of Physicians equally removed from the pressure of conditions which make the general practitioners of the country deeply conscious of the vast importance of maintaining intact all the powers of the charter of the Apothecaries' Society. We are not aware that the attention of the Association of Members of the College of Surgeons has even been directed to the subject, but it is certainly a topic which might with great advantage be discussed at the forthcoming general meeting of the College. We would invite the Members generally, seriously to consider this matter, and to attend with a view of obtaining a discussion of the subject and a statement of the views of the Council. It seems important that some definite resolution should be moved on the subject; and, at any rate, the very fact that so momentous a question happens to arise at the moment of this meeting of the Members of the College indicates the exceedingly important purposes to which such meetings may be put if properly utilised. The circumstances also suggest the rightful nature of the claim of the Members that they shall, at no distant time, be fully represented on the Council. The pretence that the Council of the College of Surgeons is, or should be, a Council of Fellows, is a singularly bold assumption in face of the fact that, together with the College of Physicians, they are now assuming under the Medical Act the regulation by Parliamentary monopoly of the great body of general practitioners of England, whose interests are at least as important as those of the purely surgical class.

THE PRESENT POSITION OF THE MEDICAL SCHOOLS IN LONDON.

The movement which has for its object to place the title of "Doctor" within the reach of every diligent student in the London medical schools will undoubtedly gather fresh strength when the statistics, published at page 784, of the number of entries at these schools this year have been carefully studied. The position of the metropolitan schools is far from satisfactory; in spite of the increased facilities both for scientific and clinical instruction which have been provided in recent years, with much spirit and at great expenditure; in spite of the unsurpassable opportunities for gaining a clinical knowledge of our profession afforded to students by the hospitals of London, the total number who enter the metropolitan medical schools tends to diminish rather than to increase. It has fallen from 732 in 1881 to 623 in 1886; even when the most liberal allowance is made for increased accuracy in the statistics, it is difficult not to believe but that the remarkable decrease in the returns, equivalent to 15 per cent., represents a distinct downward movement in the popularity of the schools, and in the numbers seeking the diplomas of the two Colleges.

As we have indicated above, the chief reason for this decrease is not far to seek; it has frequently been stated in these columns, and has been elaborately brought out in the valuable report published by the Council of the Metropolitan Counties Branch. Parents and guardians and intending students have now come thoroughly to understand that a legitimate right to the title of doctor is a valuable possession in practice, and it is not surprising that students flock to the places where this privilege can be obtained by the expenditure of a due amount of time and money more easily than in London, where the University of London blocks the way, and the Colleges are still hesitating as to the course which they shall pursue. Dr. Johnson is reported to have said, with his customary *animus* against all things Scotch, that the finest prospect in Scotland was the road to England; parodying this, it might now be said that the best prospect for

English medical students is to take the road to Scotland. Patriotic Scotchmen may contend that students are attracted chiefly by the excellence of the teaching on the other side of the Tweed, but so long as the metropolitan medical schools continue to be handicapped by the want of any corporate body which can grant degrees on reasonable terms to medical students in London, it is impossible to say that the excellence or otherwise of the teaching has much to do with the gross result. The absence of any notable increase in the number of students who enter at Owens College, Manchester, is a significant fact. Complaints have been made that the curriculum enforced by the Victoria University is long and inelastic, and that the examinations are unnecessarily severe in the early years of the student's career. Whether true or not, the effect of these complaints may probably be traced in the failure of Owens College materially to improve its position on the roster.

The University of London has never attempted to meet the wants of the average student, and recent events make it extremely improbable that it will take any effective steps in that direction. London is at present trading upon its old reputation as a medical school, and upon promises that something shall be done soon to remedy the admitted existing grievance. The Royal College of Physicians and the Royal College of Surgeons have appointed a committee to see what can be done; the Association for promoting a Teaching University for London is supposed to be going to do something some day; and there are even a few sanguine persons who believe that the existing University of London may spontaneously take some step. Experience, however, is showing that students are not to be caught by vague words and indefinite promises. The sooner some definite, tangible scheme is promulgated the better; popularity is easily lost and but slowly regained; every student attracted away from London means a loss which may, and probably in many cases will, extend itself over several generations.

But this is a narrow point of view from which to regard the question. The important point is, that a real injustice is being done to a large majority of the students who are now entering the London schools. When the time comes for them to enter practice, they will find themselves at a distinct disadvantage as compared with Scotch and Irish graduates who have passed through a parallel curriculum. This disadvantage might be at once and for ever removed if the body of teachers in London could be induced to lay aside jealousies, and pull together for the attainment of this undoubted right. It becomes yearly more clear that the Colleges of Physicians and Surgeons of England must be prompt in taking steps to give the title of doctor at the end of the full curriculum which they require, and the extended series of examinations which they impose, if the reputation of London as a centre for medical education is not to be permanently damaged.

THE first edition of Dr. Quain's Harveian Oration having been exhausted, Messrs. Longmans have issued a second edition.

MANY persons in Calne are said to have been seized with symptoms of acute lead-poisoning from drinking home-made wines brewed in earthern pans, lead having been extracted from the glaze by the fermenting liquor.

MR. VINCENT JACKSON, F.R.C.S., Senior Surgeon to the Wolverhampton and Staffordshire General Hospital, has been unanimously nominated, by the Municipal Council, Mayor of Wolverhampton for the coming year—the year in which the celebration of the Queen's Jubilee is to take place.

THE 113th session of the Medical Society of London was commenced on Monday last, when a paper was read by Mr. Frederick Treves. Papers for subsequent meetings have been promised from Dr. Beevor, Mr. J. Astley Bloxam, Dr. F. De Havilland Hall, Dr. Lewers, Mr. Milner, Mr. Stephen Paget, Mr. Bernard Pitts, Dr. Samuel West, Dr. Whipham, and others.

THE proportion of imbeciles officially reported, appears to be a good deal higher among the rural than the urban population. The highest proportion is to be found in Herefordshire, and then follow Gloucestershire, Wiltshire, and Somersetshire, all agricultural counties. The same number of natives which in the case of the whole of England gives 1,000 idiots, gives in Herefordshire 1,437.

MESSRS. CROSBY LOCKWOOD, and Co. will shortly publish a work by Alexander Stewart, F.R.C.S.E., entitled *Our Temperaments: their Study and Teaching*. The author who treats the subject popularly, but fully, endeavours to make it practicable to recognise and name the temperaments, and assign their associated mental traits, and to show that such knowledge is valuable to education, the choice of profession, the promotion of health, and in daily life. A classification of faces is illustrated by a selection from Lodge's historical portraits.

GENERAL MEDICAL COUNCIL.

THE next meeting of the General Medical Council will commence on Tuesday, November 16th. The Executive Committee will meet on the previous day.

DEATH OF A MEDICAL MAN FROM CHOLERA.

A TELEGRAM from Vienna states that Dr. Schmidt, who held a leading position in the administration of the State Railway Company, was attacked by cholera on Saturday, on his return from Pesth, and died on Sunday night.

DEATH FROM EATING HAWBERRIES.

A SINGULAR case of death from the eating of a large quantity of hawberries was the subject of an inquest held this week before Mr. Carttar, the West Kent coroner. The deceased was aged 17. The berries are not poisonous, and death appears to have been caused by excessive nervous irritation and gastro-intestinal inflammation, due to the swallowing of an indigestible mass of berries and seeds.

OXFORD MEDICAL SCHOOL.

THE new anatomical rooms for the use of the medical school at Oxford were completed in time for the beginning of term and are now occupied. The dissecting-room, which has ample accommodation for seventy students, is stated to be admirably designed. It is constructed after the best models, and is furnished with all modern appliances for the study of anatomy.

THE NEED OF PUBLIC MORTUARIES.

IT is high time that the authorities were awakened to a sense of the disgraceful lack of adequate mortuary-accommodation which still obtains in more than one large district of the Metropolis. Dr. Mullar, the Divisional Police Surgeon of Kilburn, recently stated, at an inquest, that he thought it right to call attention to the fact that no public mortuary existed in the whole large district of Kilburn, and that only a few days ago the body of a child had to be conveyed from Kilburn to a mortuary at Willesden, where there was no accommodation for making *post mortem* examination.

REGISTRATION OF PLUMBERS.

With regard to the registration of plumbers—a work of the greatest importance for the preservation of the public health—we are glad to see that in the advertisements for the Chichester Infirmary sanitary improvements, it is a condition of the tender that the whole of the plumbing work is to be executed by registered plumbers.

SANITARY REGISTRATION OF BUILDINGS.

It was stated at the last monthly meeting of the Council of the Sanitary Association that Dr. Farquharson, M.P., had undertaken, at the request of the Council, to re-introduce the Sanitary Registration of Buildings Bill next Session, and that the following members had consented to again back the Bill:—Sir Henry Roscoe, F.R.S.; Sir W. Guyer Hunter, M.D.; and Dr. Charles Cameron.

THE NEW ISSUE OF THE "BRITISH PHARMACOPŒIA."

The impression of 20,000 copies, the first issue of the *British Pharmacopœia* (1885) having been exhausted, the edition has been reprinted from electrotype plates, and the opportunity has been taken to introduce the necessary corrections in the text. The list of corrections can still be obtained by purchasers of the first issue by application to the publishers, or at the office of the General Medical Council.

HOMŒOPATHY IN THE UNITED STATES.

It is stated that, in the United States, there are more than 10,000 homœopathic practitioners, and that there are fourteen colleges for educating students in homœopathy. The homœopaths set forth their views in 143 societies and twenty journals, and give their valuable services to the public at fifty-one hospitals and forty-eight dispensaries. Our usually well-informed contemporary, the *New York Medical Record*, appears to accept these figures as at least approximately correct, though at the same time it expresses the belief that Americans are outgrowing their curious love for this worn-out theory.

DIPHTHERIA AT CAMBERLEY.

Diphtheria has again broken out at Camberley and York Town, in the Aldershot and Farnborough neighbourhood of the Farnham Registration District. A number of cases, several of them fatal, have already occurred. The outbreak seems locally to be associated with the milk distributed from a certain dairy. Diphtheria has of late years clung somewhat tenaciously to this locality. In 1884, a large mortality from the disease was registered in the Frimley subdistrict. In Camberley, the military element naturally predominates, and the residences are mostly of the better class.

THE DEATH-RATE OF SUNDERLAND.

The death-rate of Sunderland last quarter was equal to 20.30 per 1,000, as against an average of 23.97 per 1,000 for the last ten years. Mr. Harris, the medical officer of health, congratulates his authority on the fact that the health of the borough remained so good, "notwithstanding that Sunderland, in common with nearly all England, suffered heavily from a severe visitation of diarrhœa." There seems to have been seventy-seven deaths of infants from this disease during the quarter (sixty bottle-fed and seventeen suckled); but how many more deaths occurred from it in children over one year old and adults is, curiously enough, not stated in the report, though the deaths from all the other zymotics are chronicled.

A PRIZE FOR GENERAL PRACTITIONERS.

The offer made by Dr. Ward Cousins to present, at the annual meeting of 1887, a prize for the best essay on the pathology and treatment of abortion has been accepted by the Council of the British Medical Association. The competition will be open to all general practitioners who are members of the Association, and the judges will be appointed by the Council. Essays bearing a mark or motto, and accompanied by a sealed letter containing the name and address of the sender, must be sent to the General Secretary on or before June 30th, 1887.

THE REPRESENTATION OF THE VICTORIA UNIVERSITY ON THE GENERAL MEDICAL COUNCIL.

The Victoria University has not shown any great alacrity in availing itself of the privilege granted to it under the Medical Act (1886). It was provided that, "after the passing of this Act, the General Medical Council shall consist of the following members," and in the list appears one person chosen from time to time by the Victoria University. Though the General Medical Council will meet in less than a month, we have not yet heard that any steps have been taken by the governing body of Victoria University to choose a representative.

MANCHESTER MEDICAL SOCIETY.

At the annual meeting of the Manchester Central Medical Society, which, it is gratifying to hear, is now highly prosperous, held on October 19th, the following officers were elected: *President:* F. H. Walmesley. *Vice-Presidents:* Leslie H. Jones, M.D.; S. Woodcock, M.D. *Treasurer:* C. H. Braddon, M.D. *Librarian:* A. Wahltuch, M.D. *Members of Committee:* B. Addy, M.D.; W. Armstrong; W. Bain; W. H. Barlow, M.D.; H. W. Boddy, M.D.; G. Bowman, M.D.; S. Buckley, M.D.; J. Ferguson; C. F. H. Hitchen; W. N. Maccall, M.D.; F. M. Pierce, M.D.; W. J. Sinclair, M.D.; A. W. Stocks, M.D.; W. Walter, M.D.; J. Westmorland. *Two Auditors:* A. Samelson, M.D.; T. Smith, M.D. *Two Secretaries:* T. C. Railton, M.D.; S. H. Owen, M.D.

AN EPIDEMIC OF MEASLES.

The outbreak of measles at Driffield, to which reference has been made in the daily Press, began, we are informed by the medical officer Dr. Brand, early in the year, and, though of an exceedingly mild type, was very extensive, scarcely a family escaping. The schools were closed for several weeks. The epidemic having finished at Driffield, seems still going on in the neighbouring villages. No deaths resulted—that is to say, none due to measles *per se*, though one child died from chill. The epidemic of measles was accompanied by one of whooping-cough of a very severe character, numerous deaths being due to it, especially among children teething, who died of convulsions while suffering from it. Nearly all the children suffering from whooping-cough were attacked by measles, and many had the latter disease alone. There appears to have been several deaths at the workhouse at Driffield after pertussis. Several adults and many children who had had the malady before suffered from measles during this epidemic.

IMPROPER FEEDING A NATURAL CAUSE OF DEATH.

The conduct of coroners' inquests, and the verdicts that are returned, are often far from satisfactory. There is much conventional misuse of language which is based upon legal custom, and there is much misuse beyond which has no such justification; but we seldom remember a more striking instance than that to which a correspondent draws our attention as occurring at Aston on October 11th. An infant, aged one month, had been fed on bread and milk, and had died; and an inquest was held by Mr. Joseph Ansell, deputy coroner for Central Warwickshire. Mr. Smith, surgeon, who performed the *post mortem* examination, stated that the death had been "due to the very distended condition of the stomach, the consequence of the administration of improper and indigestible food. The Coroner: Then death really resulted from improper feeding? Mr. Smith: Yes. The jury returned a verdict of 'Death from natural causes.'" We take our account from the *Birmingham Daily Mail*. The case, as reported, showed very clear facts, the coroner's conclusion was clear enough, and the verdict was clear too, but, unfortunately, contradictory to the coroner's con-

clusion, and only in accordance with the facts, if we suppose it to be conceived in a spirit of grim humour. If we are to have it gravely set forth that to stuff a baby a month old with bread and milk is a "natural" cause of death, we may very easily learn to believe in the wickedness of the natural man, but we must almost despair of teaching mothers and nurses a little common sense, or to put it more accurately, perhaps we ought to say, in keeping them out of criminal habits.

INFECTED CLOTHING OF SEAMEN DYING ABROAD.

In his last report to the Corporation as to the health of the Port of London, Dr. Collingridge complains that there is still much trouble caused by effects belonging to seamen who have died abroad being brought to this country either actually without any disinfection, or, what practically amounts to the same thing, with no satisfactory evidence that they have been so treated. In spite of the circular of the Board of Trade, clothes are from time to time sent by officers of the mercantile marine, which, in the absence of the necessary papers, have to be disinfected in London. In January last, a circular note was addressed to all shipowners and brokers, calling attention to the circular of the Board of Trade, and advising them to give instructions to their captains and agents not to receive any effects of seamen or others unless accompanied by a certificate from a responsible officer that they were not "infected," or that they had been properly disinfected. All cases where clothes have been sent home in this lax way were reported to the Board of Trade, and various reasons, more or less satisfactory, were given by the officials concerned. Evidently some more stringent measures must be adopted for stopping the importation of such clothing, which might conceivably harbour the germs of cholera, or some other exotic disease, that, under favouring circumstances, might ravage the country.

TREATMENT OF ASPHYXIA OF THE NEW-BORN.

Several physicians in the United States have recently recommended the treatment of asphyxia in the new-born child by holding it up by the heels. The theory is that the blood gravitates towards the brain, and thus produces a stimulation of the medulla, intense enough to induce a spontaneous respiratory effect, even when the child has been born for a considerable time. There has been some discussion as to priority of publication, but Dr. E. Reynolds, of Boston, writing to the *New York Medical Record*, suggests a modification which seems to combine the advantages of this so-called gravitation method with those of artificial respiration. The child lies on its back, head downwards, upon the forearm of the operator, who grasps it with his fingers hooked over the shoulder; the child's arms fall down when the hand is lowered, and, in this way, the weight of the arms and thorax expand the chest. If the thorax is now compressed against the operator's forearm, and suddenly released, a satisfactory respiration occurs. The method has the further advantage of favouring the escape of mucus from the air-passages.

POLICE PRECAUTIONS AGAINST RABIES.

Sir Charles Warren has just issued a statement showing the result of police action in enforcing the provisions of the Dogs Act during the last month:—1,301 summonses were taken out against owners of dogs not under control. The total number of dogs taken by the police was 2,552; of this number, 47 were killed in the streets as being rabid or savage; 67 persons, including 10 police-constables, are known to have been bitten by dogs during the month. It was reported at the Central Police Station, Hull, last week, that, on Wednesday, a rough-haired terrier dog entered the Primitive Methodist day school, Hessle Road, and attacked several of the children. Before the animal could be driven out eight of the scholars were bitten, some of them severely. This is the second time within a few days that schoolchildren have been attacked at Hull; and one of the victims of the first attack, which took place previously in the playground of a school, was reported a few days since to be still suffering from the shock to such an extent that she is not expected to recover. It is not known whether both attacks were made by the same dog. Much alarm has been created in Lurgan by several persons being bitten by a mad dog. Two dogs have been shot by the police after an exciting pursuit, and the magistrates have issued a proclamation requiring all dogs to be chained or muzzled till December 1st. The outbreak has now, apparently, abated. Mr. Matthews, a gentleman who was bitten, has been accompanied to Paris by Dr. Rowlett, and placed under the care of M. Pasteur; and three boys, aged 9, 10, and 19 years respectively, are being sent to Paris to undergo the same treatment.

RAILWAY-PLATFORM ACCIDENTS.

There is a rule, and a very wise one, which is pretty generally obeyed at the numerous stations on the Metropolitan Underground Railway, and some others, of shutting the gate by which admission is obtained to the platform, immediately a train has entered the station. That many an accident has been prevented and life saved by this salutary rule it would be idle to deny, and certain it is that if such a rule had been enforced at the Wandsworth Road Station, the man Watkins, on whose body an inquest was held a few days ago, would not have been killed. In this case the deceased, who had gained admission to the platform as a train was passing at a good speed out of the station, made a rash attempt to turn the handle of one of the doors and to enter the carriage, but missed his footing in the attempt, and fell between the platform and the train. Before he could be rescued the carriages had passed over him, and his body was much mutilated. The deceased, it was stated, paid no heed to the request of the guard and others to stand away from the train. It is to be hoped that all railway-companies will take effectual means to prevent a recurrence of a disaster which might have been so easily averted.

THE BELGIAN MEDICAL FEDERATION.

At the annual meeting of the Belgian Medical Federation, which was partly of a consultative and partly of a convivial character, a proposition affirming the desirability of increased weight being given in medical examinations to the subject of medical jurisprudence was discussed. The resolution before the meeting further recommended the establishment of a special diploma in State medicine, giving the title of "Médecin Légiste," and that courts of justice should be obliged, where possible, to give the preference to those possessing the special diploma when medical evidence was required. The discussion was long and animated, and was ultimately adjourned without any vote having been taken. Another subject which provoked a great deal of discussion was the recent action of the Minister charged with the supervision of the State railways in reducing the sum paid for medical attendance on their men, and in obliging the latter to go to dispensaries which have been established instead of to the private consulting rooms of any of the medical officers they might prefer, which was the former system. Then the remuneration allowed was regulated by the amount of attendance, now a medical officer receives a fixed sum (five francs it is said) for each man on his list. The change has been very unpopular, both amongst the medical officers and the *employés*, and a proposal was brought forward to agree to a protest to be sent to the Minister, but it was ultimately decided that the bureau should draw up a report to be considered at an adjourned extraordinary meeting. The subsequent banquet was attended by a large number of members.

THE ISOLATION OF DIPHTHERIA.

There was one rather important omission from Dr. Thorne Thorne's elaborate and very valuable report on the use and influence of Hospitals for Infectious Diseases, which was printed as a Parliamentary paper in 1882. He did not discuss at any length, in his summary report, the extent to which such hospitals had been employed throughout the country, for the isolation of the different kinds of infectious

disease. Small-pox and scarlet fever are, of course, the disorders in which the advantages of isolation are most generally recognised; but it would have been most useful to know what results to the patient and to the community at large had followed the attempt at isolating in hospitals such diseases as enteric fever and diphtheria. The question as to the isolation of the latter disease has lately been directly raised by an application from the Metropolitan Asylums Board to the authorities at Whitehall, for permission to admit to their hospitals persons suffering from diphtheria. Before deciding the point, the Local Government Board took council with the Royal College of Physicians, as to whether persons suffering from diphtheria can be regarded as patients suffering from "fever," within the meaning of Section 69 of the Metropolitan Poor Act, 1867. The opinion of the President of the College, Sir William Jenner, has been given as follows:—

> "If the words in the Act had been for patients suffering from 'fevers, I should most certainly have considered diphtheria to be included under the term 'fever,' but the separation of small-pox from fevers seems to signify that the word 'fever' was intended to include only fevers of a special type, those cases, that is to say, to which the word 'fever' is specially applied, as scarlet fever, typhus fever, and typhoid fever."

In these circumstances, the Local Government Board have decided that if cases of diphtheria are to be admitted into the fever hospitals of the managers, there ought to be express legislation for this purpose; and the Board have told the managers that the question whether legislation on the subject should be proposed will receive their consideration.

THE LEPERS OF MOLOKAI.

An appeal has been made, in the columns of a contemporary, by the Rev. H. B. Chapman, Vicar of St. Luke's, Camberwell, "for the poor leper flock of the heroic Father Damien in the island of Molokai." This has been followed by a letter from Agnes Lambert, recounting facts which are full of melancholy interest, showing, as it does, not only the extent of the direful malady, but the intense devotion of a Belgian priest, who volunteered his services, and proceeded to the settlement in 1873, where he has laboured until he has himself become a victim. This disease, with which it is calculated that there are 135,000 human beings afflicted in our Indian Empire alone, has, it is stated, increased so much in recent years in the Sandwich Islands that the Government of that little kingdom has been obliged to enforce the segregation of the affected, and has set apart the island of Molokai for the purpose. She adds: "One heroic priest after another has cut himself off from his kindred and all that makes life glad, in order to devote himself to their service. In 1873, Father Damien, a young Belgian priest, just ordained, volunteered his services for the settlement, then numbering 800 lepers, of whom between 400 and 500 were Catholics, and who, dying at the rate of from 8 to 12 per week, had for long been without the aids and comforts of religion. For thirteen years, besides ministering to their spiritual wants, Father Damien has been 'doctor, nurse, magistrate, school-teacher, carpenter, painter, gardener, cook, and even in some cases undertaker and grave-digger'—in fact, all things—for his stricken flock. But at last he has himself fallen a victim to the terrible disease." After quoting a letter from Father Damien, in which he announces that he has himself contracted the disease, she adds "that small things, as well as substantial aid, can comfort and brighten the dreary existence of these unhappy people. Blankets, and even chromo-lithographs, illustrations from *Harper's Weekly*, the *Graphic*, and such like, have already been welcomed by them, and would be welcomed again. So that the least among us can help to give some little solace to the sad lives of the doomed exiles of Molokai."

SANITARY SURVEY OF THE POTTERIES.

A Blue-book lately published gives an elaborate account of the state of preparedness of the various ports and coast urban sanitary districts of England and Wales against a possible introduction of cholera into this country, as ascertained by the medical inspectors of the Local Government Board in the course of their recent sanitary survey. Reports by two of the senior medical inspectors of the Board, Dr. Ballard and Dr. Blaxall, on the general results of the survey, are also printed in the volume. These reports state in a comprehensive manner the general results of the inspections, and are well worth study, not only as they concern the prevention of cholera in England, but also for the sake of the evidence they afford respecting the general working of the health-administration of the country. Of course, this survey was designed rather to discover faults than to observe excellences; and, accordingly, a great many defects in the local health-arrangements are recorded. The sanitary circumstances of port and riparian districts, upon which our security against the spread of cholera must very greatly depend, have been found, in places, excellent; in other places, seriously defective. The general outcome of the inspectors' reports is that the duty of caring for the public health is becoming increasingly apprehended by English communities, and the recent survey will, no doubt, have conduced to a more general fulfilment of sanitary duty by the representatives of those communities. In fact, so satisfied does the Local Government Board appear to be with the results of the survey, that it has decided to extend it to some of the large inland towns and certain specified areas in the provinces. For instance, the Black country has been inspected, and the Potteries are under inspection now. The North of England and the manufacturing districts of Yorkshire are also on the rota. It is satisfactory to find that these inspections are revealing evidences of real improvement, even in the most unpromising places. Dr. F. W. Barry, who has been inspecting the Pottery towns, reports that the progress of most of them during late years is really wonderful, especially in the cases of Hanley and Stoke. Other parts of the district, however, come in for severe condemnation. We reported, a few weeks ago, Dr. Barry's description of the state of affairs at Newcastle-under-Lyme. At Batley, the system of excrement-disposal is even worse. Dr. Barry said, "he had not seen a single privy from one end of the town to the other that was constructed on sound principles. He had never, in the whole course of his inspection, for a period of eight or nine years, seen so many cases of excremental filth soaking into houses. Their building by-laws were extremely deficient;" and two columns more to the same effect. At all the places inspected, Dr. Barry met the local authority in formal conference—a great improvement on the old method of making a quiet inspection and sending in an exhaustive printed report six months after everyone had forgotten the occasion of the visit. Dr. Barry seems to have spoken his mind with commendable freedom, and in most cases his remarks were received with attention and respect. As they have been fully reported in the local newspapers, it may be hoped that the authorities will take Dr. Barry's strictures seriously to heart, and endeavour to secure improvements in the directions that he recommends.

MEDICAL PROVIDENCE FOR THE POOR.

In an address to the Midland Branch of the Association, its President (Dr. W. Newman) drew attention to the necessity for some systematised plan of provident insurance by the poorer classes, so as to secure medical aid in times of sickness, without resort to poor-law relief. He limited the scope of his remarks to small towns and villages, leaving the larger communities out of the question. After stating the familiar reasons in favour of some such plan, namely, the inability of the poor to make large payments, their great need of medical care, and the injustice of indiscriminate gratuitous aid, Dr. Newman gave facts and figures relating to nine medical provident societies, and proceeded to lay down certain principles which he thought should govern such societies. These were: management by a committee; that payments should be made in advance, not more frequently than half-yearly; that the society should be open to all practitioners willing to co-operate; that the payments should be on such a scale as to meet all ordinary demands, but should be aided by subscriptions to meet part

of the expense of midwifery and surgical cases. In treating of the nine societies, Dr. Newman stated that the average payment made to the medical officer was about 3s. for each case dealt with, an amount that at once placed the scale of remuneration at a low point, and showed that the societies were rather on a basis of eleemosynary aid than independent assurance. As the result of inquiries among the labouring and artisan classes, he stated that he had found a consensus of opinion that one week's wages per year might be set aside to secure medical assistance when needed; a percentage of income, it may be noted, which it has been found quite impossible to obtain from members in the towns. Perhaps the part of Dr. Newman's interesting address which will command most general agreement, is that in which he points out the necessity for inquiry and improvement, and suggests that the initiative in this direction should be undertaken by the Branches of the Association. No doubt the question is one that requires solution, and will never be satisfactorily dealt with until it is taken up in earnest by the profession. Whenever this is done—and it cannot be too soon—it will be found that there are several difficult problems to solve, among them being (1) how to confine treatment at special rates to those classes whose means entitle them to share in it; (2) how to deal with the poor who do not make provident insurances, but must be treated when sick; and (3) how to check the practically indiscriminate gratuitous medical treatment, which is a potent force in deterring the portion of the population who ought to contribute from making these provident payments.

HOSPITAL SATURDAY FUND.

THE treasurer of the Metropolitan Hospital Saturday Fund, Mr. H. N. Hamilton-Hoare, is justly proud of the fact that, in spite of the long-continued depression of trade and industry in all its branches, the amount collected by the Hospital Saturday Fund has continued to increase every year since the establishment of the fund. It is stated, as a promising feature in this year's collections, that increased support has been given by employers of labour, who have, in many instances, supplemented by donations the amount collected by men in their employment. It appears that during the past twelve years, "Hospital Saturday" has contributed nearly £75,000 to the medical charities of London. During the present year, up to this date, upwards of 2,000 receipts have been issued, and the amount in hand is considerably in excess of that in hand at the same date in any former year. Upon the Governing Body of the fund are representatives of many important warehouses and factories in the metropolis. Apart from the original purpose of the fund, there has been established in connection with it a seaside convalescent home for working men, at St. Margaret's Bay, Dover, where over a thousand men have been admitted during the past three years; and further, a scheme has been organised for the supply of surgical appliances, at the offices of the fund, which is reported to be working satisfactorily. In the growth of such movements as this lies the most hopeful outlook for hospital administration. Once the working-classes begin seriously and continuously to take part in the maintenance of the funds of the hospitals, they may be expected to take an interest in the abuse of those funds by improper applicants, and especially in the out-patient departments. For this, among other reasons, we should be glad to see working men representing these funds admitted to a full share of the responsibility of hospital government. No school is so instructive as that of administrative responsibility.

FEVER IN LONDON.

THE annual report of the South-Eastern Asylum, the sister institution of the Eastern Hospital, throws great light on the extent and distribution of fever in London, and should be carefully studied by local medical officers and their boards. It is important to know which districts and streets are the chief nurseries of fever. Dr. McCombie, the medical superintendent, states that, during the year, 348 patients were treated in the fever wards, and 580 small-pox cases were admitted. Of the fever cases, 275 were discharged recovered, and 30 died, 43 remaining at the end of the year. Of the whole, 167 were cases of scarlet fever, 37 were cases of enteric, and 42 were cases of typhus. Of these 42 typhus cases, no fewer than 40 came from Camberwell, and were mostly Irish persons living in Peckham New Town. "But," adds Dr. M'Combie, "for the prompt isolation in hospital of the cases as soon as they occurred, there would probably have been a smart epidemic in that district." Three officers of the institution contracted different forms of fever; but all recovered. The prevalence of fever this year has been light; the parishes which sent the cases were: Greenwich (with Deptford) 38, as against 66 last year; Camberwell 87, as against 71 last year; St. Olave's 65, as against 69; St. Saviour's 56, as against 65 last year; Woolwich only sent 6, as against 14 last year, and other parishes sent numbers under 10 each. In regard to small-pox, Camberwell headed the list with 170, as against 116 the year before; Greenwich and Deptford sent 94, as against 114 the year before; Woolwich and Plumstead sent 27, as against 23 the year before; St. Saviour's Southwark sent 131, as against 98 the previous year; St. Olave's Southwark sent 97, as against 91 the previous year; Lambeth 22, as against 6 the previous year; and Lewisham sent 14, as against 13 the previous year. The other parishes sent under 10 patients each. Of the whole admissions of small-pox patients, 184 died, which is a death-rate of 31 per cent.

SANITARY ARRANGEMENTS IN LONDON AND PARIS.

THE Paris Municipality adopts the enlightened course of, from time to time, sending delegates to other great cities, to compare municipal arrangements. If anything is better done in London or elsewhere than in Paris, they wish to see it, and to profit by it. At a meeting of the Islington Vestry, held recently, Mr. F. Murray presiding, Mr. W. F. Dewey, vestry clerk, said he learnt that some delegates from the Municipal Council of Paris had visited the Islington mortuary, and he subsequently received a communication, dated October 8th, from Mons. L. Pasquet, stating that "delegates of the Paris Municipality, charged with the study of the question of mortuaries, had visited the mortuary of the parish of Islington, and they desired to have the following information:—(1) What is the number of the inhabitants of the parish? (2) what is the mean of the annual deaths? (3) how many bodies have been transported to the mortuary since its opening in 1876?" Further, M. Pasquet asked for a copy of the last annual report of the vestry. In reply, Mr. Dewey expressed "on behalf of my vestry and its officers, their regret that delegates from the Municipal Council of Paris should have visited the parish of Islington without affording an opportunity to the vestry and its officers of personally conducting them over any points of interest in the parish," and adding (1) that the population of the parish in 1881 was 282,865, and was at present estimated to amount to 310,000; (2) that the number of deaths during 1885 was 5,323, or 16.7 per 1,000 of the population, the annual average during the past ten years having been 18.4 for each 1,000 of the population; (3) that the number of bodies admitted to the mortuary between March 23rd, 1874—when it was first opened—and March 31st, 1886, had been 6,600. With this information was forwarded a copy of the report of the vestry for the year ending Lady-day last. M. Pasquet thanked the vestry-clerk, and stated that the delegates would have desired to be presented to the vestry of Islington, but they had not sufficient time. Our London and English municipalities might profitably follow this example. There are many things better done in Paris than in our great cities—notably, the night medical service, and the washing of the asphalte pavements.

NINTH INTERNATIONAL CONGRESS, WASHINGTON.

WE have received one or two letters asking what are the probable arrangements for the reception of visitors in America at the next International Congress to be held at Washington. The arrangements are, we believe, still incomplete, but are in rapid progress. It will be

very desirable that members of the profession in Great Britain proposing to visit America to be present at the Congress should, as early as convenient, communicate with Dr. G. B. Harrison (Washington), one of the associate secretaries, so that their names may be enrolled, and the probable number of guests from Great Britain may be known beforehand in order to facilitate arrangements with the steam-boat companies. From some intimations we have received, we learn that arrangements are in progress for facilitating the passage of parties of medical visitors at reduced rates; and American hospitality will undoubtedly be equal to the large demands likely to be made by a host of visitors. Without entering at present into details, and counting the cost of the Transatlantic passage, and of a visit which everyone will be anxious to make—to Niagara, the total outlay for the six weeks which might well be spent in the visit to America and the return to England may probably be estimated at about £60. Among the excursions contemplated by the executive are a visit to the great coal-mines of Pennsylvania, the beautiful scenery of Wanklyn's Glen, the Falls of Niagara, and the beautiful rivers of Susquehanna and Hudson—all within twenty-four hours' journey of Washington. The rates of steam-travel, hotels, etc., will be subsequently arranged by the Executive Committee to the best of their ability. The time necessarily involved in the visit would not be less than thirty days, allowing ten for the outward-bound passage, ten for the Congress and excursions, and ten days to return. The daily expenditure is calculated at 10 dollars, say, 300 or 350 for the whole time. This is only an approximate estimate; seeing that the event is still nearly ten months distant, the arrangements are naturally not yet completed, and the information which we have on this head is not to be considered an official statement; but we have good reason to believe that this calculation may be relied upon as reasonable and correct. Intending visitors may also with advantage communicate their intention of being present at the Congress to Dr. Henry H. Smith, the Chairman of the Executive Committee of the Ninth International Medical Congress, at 1800, Spruce Street, Philadelphia.

THE HARVEIAN ORATION.

It is not easy to form a clear idea of the function which the Harveian "Orator" is now-a-days expected to discharge; but it would appear to have become understood that he stands somewhat in the position of a popular lecturer who endeavours to give to the general public a sketch of the advances made in recent years in some department of medicine or the allied sciences. The exceptions have chiefly been in those cases where the Orator took up his task from the historical or biographical point of view. If, as sometimes happens, the daily newspapers do not think it worth while to give more than a few lines to the "Oration," then it would seem in a great degree to fail of its effect, for it surely cannot be any satisfaction to the Fellows of the College of Physicians to listen to the thrice-told platitudes through which a perplexed "Orator" seems often to feel himself compelled to wander during a dreary hour. This year, Dr. Pavy, after the preliminary flourish which suffices to occupy the first half-hour, contented himself by giving a somewhat perfunctory sketch of the indebtedness of medicine to bacteriology. The subject thus treated is worn rather threadbare. The day has passed when anything more than a languid interest can be felt in a discussion of the hypothesis of spontaneous generation, and of the many interesting questions now occupying the attention of bacteriologists; either the "Orator" had an imperfect conception of these points, or he feared to discuss any doctrines which lay under the disadvantage of being novel. It is a little surprising that Dr. Pavy, who has done excellent work as a chemist, should have failed to give prominence to the chemical problems involved by the phenomena of bacterial action. M. Pasteur's hypothesis as to the mode in which his successive inoculations operate to prevent the development of hydrophobia assumes the existence of a body of peculiar chemical constitution, which possesses the power of producing this change in the tissues of the organism. The hypothesis may be incorrect, but it at least shows the drift of opinion in the minds of those who have given most attention to the subject; moreover, it does not stand quite alone, for Dr. Salmon, of the United States Department of Agriculture, has apparently shown that animals may be protected by the successive injection of the fluids in which the micro-organism has grown, but in which it has ceased to exist. Moreover, Dr. Cash's most interesting experiments with perchloride of mercury would lead to the belief that the physician need not be quite so helpless before disease, even after it has entered the system, as Dr. Pavy assumes. It is not, however, to any particular oration, but rather to the system which requires their annual delivery, that critical attention may with most advantage be directed. The time has surely come when the Royal College of Physicians might bestir itself in this matter. In recent years, and especially, perhaps, since it committed its fortunes to the distinguished leader who is at present at its head, the College has shown a commendable degree of public spirit; and no time can be better than the present to reconsider the conditions under which the senior Fellow is called upon to waste his time in preparing and delivering a "Harveian Oration." It cannot be any longer necessary slavishly to abide by the obsolete provisions of an antique bequest. It will not be difficult to find a precedent for change; the Charity Commissioners have been well abused, but they have taught the public at least one useful lesson—that it is the spirit and not the letter of the provisions made by pious founders that is to be obeyed by later generations.

SCOTLAND.

SCARLET FEVER IN ABERDEEN.

The Public Health Committee of Aberdeen Town Council have increased the sanitary staff by the appointment of a temporary assistant-inspector. This is in consequence of the outbreak of infectious diseases, notably of scarlet fever, of which disease there were 107 cases last month.

EDINBURGH WINTER SESSION.

The winter session in the Edinburgh Medical School commenced this week, and all the classes, systematic, practical, and clinical, are now at work. There is no new feature to be specially noticed. In the University, the inaugural lecture was delivered by the Principal, Sir William Muir, who touched on a variety of topics interesting to students, and referred to the honour that had been done the University in the knighthood of Sir Douglas Maclagan and Sir William Turner. He also stated that, through the munificence of one of the citizens, it is likely that the buildings of the new University will soon be completed.

THE POST-GRADUATE COURSE.

The first course of post-graduate instruction in the Edinburgh Medical School concluded last week, and from beginning to end it has been conspicuously successful, so that those who entered upon the undertaking with some fear and trembling have reason to congratulate themselves, and to look forward to subsequent like courses without anxiety. The practitioners who have benefited by the course of instruction have not been slow to recognise the benefit they have received, for, at a meeting of the members of the post-graduate course, held on October 11th, 1886, John James Rygate, M.B. London, in the chair, it was proposed by Surgeon-Major H. B. Purvis, Bengal Army, and seconded by W. Fligg, M.B., M.R.C.S. England, Grahamstown, South Africa, and unanimously agreed "That the cordial thanks of this meeting be given to the professors and teachers of the University of Edinburgh, and the other medical schools, who have so ably conducted the valuable courses of lectures and demonstrations. This meeting also wishes to record its high appreciation of the very practical way in which all has been carried out, and would venture to express the hope that the example thus set may be followed in subsequent years. It also desires to express its grati-

tude to the governors and to their resident staff, who have all done so much in promoting the great success of the teaching arrangements."

REPRESENTATION ON THE GENERAL MEDICAL COUNCIL.

THE candidature of Dr. Robert Sinclair, of Dundee, as a representative on the General Medical Council is being actively pushed by a large number of practitioners, who consider that it is very desirable, seeing the overwhelming university influence of the Scottish representatives on the General Medical Council, that the elected representatives should belong to, and be thoroughly in sympathy with, the class of general practitioners. Dr. Robert Sinclair has held for many years the secretaryship to the Forfarshire Medical Association, one of the most active and useful in Scotland. He is not in favour of lowering the examinations, considering "that a stringent entrance examination for all students who are not graduates in Arts is one of the best safeguards against the admission to the profession of men who are unsuited by nature and education for its practice." Dr. Sinclair's candidature is based largely upon the high opinion which the practitioners of Forfarshire and surrounding districts entertain of his character and capacity, and is likely to meet with much sympathy throughout Scotland.

SCARLET FEVER IN GLASGOW.

THE medical officer reports that there are at present in hospital 327 cases of scarlet fever, 42 of enteric fever, 15 of whooping-cough, 10 of typhus fever, 10 of measles, 7 of erysipelas, and 2 of chicken-pox, in all, 413 cases, as compared with 366 a fortnight previously, and 286 at the corresponding period of last year. During the preceding fortnight, 149 cases were admitted to the fever hospital, 84 dismissed well, and 17 died. During the fortnight ending October 9th, 457 deaths were registered, as compared with 433 in the preceding fortnight, an increase of 24, representing a death-rate of 22.8, in place of 21.6 per 1,000.

SCIENCE LECTURES ASSOCIATION OF GLASGOW.

THIS Association, which has been dormant for the past two years, is again beginning to show signs of reanimation. The last two or three winter courses of lectures that were held were not financially a success, but the Association was saved by the large balance which the success of its early years had accumulated. It was, therefore, thought desirable to allow one or two winters to pass without lectures, in the hope that the public interest might by that time revive. A balance of £250 remains in hand, and the Committee thinks of endeavouring to arrange for a course this winter. The task of securing eminent scientific men as lecturers has been entrusted to the Honorary Secretary of the Association, Professor McKendrick, F.R.S.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

AT a meeting of this Society, held on October 15th, the office-bearers for the session 1886-87 were elected. At a previous special meeting, the Society had decided to form four sections, for Medicine, Surgery, Pathology, and Midwifery, and a vice-president, secretary, and two councillors for each section fell also to be elected. The following are the principal officers elected: *President:* Professor McLeod; *Treasurer:* Dr. Hugh Thomson; *Secretaries:* Dr. Wallace Anderson and Dr. W. G. Dun; *Vice-President and Secretary for Section on Medicine:* Dr. McVail and Dr. Middleton; *Vice-President and Secretary for Section on Surgery:* Dr. Paterson and Dr. Barlow; *Vice-President and Secretary for Section on Pathology:* Dr. Coats and Dr. Steven; *Vice-President and Secretary for Section on Midwifery:* Dr. Stirton and Dr. T. F. Gilmour.

GLASGOW SOUTHERN MEDICAL SOCIETY.

AT the annual business meeting of this Society, held on October 14th, the following were elected office-bearers for the current session: *President:* Dr. F. A. Freer. *Vice-President:* Dr. E. McMillan. *Treasurer:* Dr. T. F. Gilmour. *Secretary:* Dr. James Hamilton. *Editorial Secretary:* Dr. James Erskine. *Seal-keeper:* Dr. W. J. Shaw. *Councillors:* Drs. Knox, Rankin, and Archibald Johnston.

CASE OF POISONING BY NITRO-MURIATIC ACID.

A CASE of irritant poisoning is reported from Lochmaben. A child twenty-seven months old swallowed about two drachms of fluid from a bottle which had been procured from a pedlar, and was used for cleaning the metal parts of harness. Well-marked signs of corrosive irritant poisoning immediately ensued, excoriation of the lips and retching of blood, together with severe pain. Ere medical aid could be procured, the child was in a collapsed condition, and for four hours after it had been obtained, showed no signs of rallying; by-and-by, however, she recovered a little, but still remains in a critical condition. Dr. Reid, Lochmaben, was assiduous in his attendance on the patient. The material in the bottle contained nitro-muriatic acid, but had no label indicating this, nor any warning as to its dangerous contents.

HOW A SCHOOL BOARD ACTS WITH REGARD TO EPIDEMIC DISEASE.

DURING the past few weeks, a somewhat extensive outbreak of various infectious children's diseases has prevailed in the east of Fife. Precautions were adopted to isolate the disease by the local authorities and school boards, but the condition of matters grows no better. The Board of Supervision sent a letter to the local authority of Cellardyke (where there is a large number of cases) asking for a report from a medical officer stating the nature of the outbreak, the number of cases, the probable cause, and the measures taken to isolate the disease. Dr. Craig, the medical officer of health, has prepared a report, attributing the outbreaks of the disease to overcrowding and the want of a proper drainage-system and water-supply. There were 103 cases of scarlatina, 21 of diphtheria, and 23 of measles. He recommends the closing of all the schools, but considers that it would be impossible to practise hospital isolation of cases, as they are too diffused. The school board of Anstruther, superior in their wisdom to any practical suggestion from the medical officer of health, have refused unanimously to close the schools, as from their pre-eminent knowledge of such a subject, they consider such a course of action unnecessary. The local authority have resolved to reply to the Board of Supervision that they have been prevented from carrying out a drainage-system which they had begun by failing to come to terms with a proprietor.

A YEAR'S WORK AT GREENOCK EYE INFIRMARY.

THE annual report of the Greenock Eye Infirmary shows a large amount of most useful work done by the institution. Dr. Cluckie, the oculist, reported at the annual meeting of trustees held last week that, during the year, there had been 2,003 new cases, of which 1,558 had been dismissed as cured by medical treatment, 405 cured by surgical operation, 23 improved by surgical operation, and 17 dismissed as incurable; 69 cases had been admitted into the wards for special treatment, 27 of whom were blind from cataract in one or both eyes, and these, after operation, had been able to see, and to leave the institution without assistance. It was also noticed that large numbers of the patients were children, from infancy up to 12 years of age, the cause of the ophthalmic disease in the majority being inherited constitutional disease, aggravated by poverty and insufficient clothing. The financial report was highly satisfactory, the income exceeding the expenditure by nearly £80.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.

AT the annual meeting of this College, held on October 20th, the following office-bearers were elected for the ensuing year:—*President:* Douglas Argyll Robertson, M.D. *Vice-President:* John Smith, M.D., LL.D. *Secretary and Treasurer:* Joseph Bell. *Librarian:* Archibald Dickson, M.D. *President's Council:* James Donaldson Gillespie, M.D.; Henry Duncan Littlejohn, M.D.; Patrick Heron Watson, M.D., LL.D.; Francis Brodie Imlach; Thomas Annandale; John

Duncan, M.D., LL.D.; *ex officio*, John Smith, M.D., LL.D.; Joseph Bell. *Representative on General Medical Council:* Patrick Heron Watson, M.D., LL.D. *Examiners:* James D. Gillespie, M.D.; Henry D. Littlejohn, M.D.; Patrick H. Watson, M.D., LL.D.; David Wilson, M.D.; John Smith, M.D., LL.D.; Joseph Bell; John Duncan, M.D., LL.D.; Robert J. Blair Cunynghame, M.D.; Alexander G. Miller; Peter H. Maclaren, M.D.; Johnson Symington, M.D.; Francis Cadell; James Dunsmure, M.D.; William Craig, M.D.; Charles E. Underhill, M.B. *Dental Examiners:* Patrick H. Watson, M.D., LL.D.; Henry D. Littlejohn, M.D.; David Wilson, M.D.; John Smith, M.D., LL.D.; Andrew Wilson, L.D.S.; George W. Watson, L.D.S. *Assessors:* William Brown; Archibald Inglis, M.D.; Francis B. Imlach; Sir William Turner, Knight. *Conservator of Museum:* Robert J. Blair Cunynghame, M.D. *Clerk:* James Robertson, Solicitor. *Officer:* Colin Mackenzie. *Assistant to Conservator:* George Reid.

IRELAND.

SOUTH EASTERN MEDICAL SOCIETY.

THE South-Eastern Medical Society held its usual meeting at the Leper Hospital, Waterford, on Monday. The members present decided to vote for Dr. Kidd, of Dublin, and Dr. Laffan, of Cashel, at the election of direct representatives for Ireland on the Medical Council. It was unanimously resolved that the sanitary officer's fees for inspecting labourers' cottages ought to be 10s. 6d.

QUEEN'S COLLEGE, GALWAY.

THE report of the President for the session 1885-6 states that the students attending lectures numbered ninety-four, of whom thirty-four were in the department of medicine. For the past few years the decrease which has taken place in the number of students attending this institution has been mainly felt in the Faculty of Medicine—that department of the College which, it was foreseen, would be particularly affected by the reversal of the university system. The President, however, hopes that, if the College be allowed to prosecute its work without any disturbance from without, it will yet, participating in the general improvement of the country, resume its former career of progress and public usefulness.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

AT the Annual Stated Meeting of the College, held on St. Luke's Day (Monday, October 18th, 1886), the following officers were elected for the ensuing year:—*President:* James Little, M.D. *Vice-President:* John Magee Finny, M.D. *Censors:* J. Hawtry Benson, M.D.; J. Magee Finny, M.D.; Stephen Miles MacSwiney, M.D.; Wm. Josiah Smyly, M.D. *Examiners in Midwifery:* Andrew J. Horne; J. Rutherford Kirkpatrick, M.D. *Additional Examiners:* George F. Duffey, M.D.; Arthur Wynne Foot, M.D.; Christopher J. Nixon, M.D.; John Mallet Purser, M.D.; Walter George Smith, M.D. *Extern Examiners for the Certificate in Sanitary Science:* Wm. Kaye Parry, C.E.; George R. Price, B.L. *Professor of Medical Jurisprudence:* Robert Travers, M.D. *Registrar:* John William Moore, M.D. *Treasurer:* Aquilla Smith, M.D. *Representative on the General Medical Council:* Aquilla Smith, M.D. *Representatives of the College on the Committee of Management under the Conjoint Examination Scheme:* Lombe Atthill, M.D.; Samuel Gordon, M.D.; Thomas W. Grimshaw, M.D. *Librarian on Sir Patrick Dun's Foundation:* Samuel Wesley Wilson. *Agent to the Trust Estate:* Charles Uniacke Townshend. *Law-Agents:* Stephen Gordon and Son. The following were elected to the Fellowship: Charles Edward FitzGerald, M.D. Univ. Dub.; Wm. Cox Neville, M.D. Univ. Dub.

OWENS COLLEGE.—The Dauntesey Entrance Medical Scholarship (£100 for one year) has been awarded to Herbert Horrocks; and the Robert Platt Physiological Scholarship (£50 *per annum* for two years) to A. E. Giles.

REPRESENTATION OF THE PROFESSION IN THE GENERAL MEDICAL COUNCIL.

AT the meeting of the Council of the British Medical Association on Wednesday, October 20th, a resolution was passed to the following effect:

"That this Council learns with great satisfaction that its President, Sir Walter Foster, and its Ex-President, C. G. Wheelhouse, Esq., have been nominated by a large number of the practitioners of England and Wales for the representation of the profession in the General Medical Council, and expresses its hearty wishes for their success."

THE FIFTY-FIFTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, 1887.

AT the meeting of the Council on Wednesday, October 20th, Professor Edward Bennett, Vice-President of the College of Surgeons of Ireland, and George Duffy, M.D., F.K.Q.C.P., attended as a deputation from the Dublin Branch of the British Medical Association, and from the great medical bodies of Dublin, to convey a cordial invitation to the British Medical Association to hold its next meeting in Dublin. The following resolution was passed:—

"That the cordial and generous invitation of the Dublin Branch, supported by the University of Dublin, the College of Physicians and Surgeons, and other medical institutions in Dublin, to the British Medical Association to hold its annual meeting in that city in 1887 be heartily accepted, and that Dr. J. T. Banks, Regius Professor of Physic, University of Dublin, be appointed President-Elect."

The recollections of the great meeting of the Association held in Dublin in 1867 are still fresh in the minds of the large body of medical men who attended on that most successful occasion, and the meeting will be looked forward to as one of which the success is already assured beforehand. The arrangement to hold the meeting in Dublin will be welcomed by every member of the Association, and will, no doubt, attract large numbers of the profession. The meeting will be held on August 2nd, 3rd, 4th, and 5th.

THE CHOLERA.

AUSTRIA.

A DEATH from Asiatic cholera is reported to have occurred in Vienna. An official of the Austro-Hungarian State Railway, named Emmanuel Schmidt, coming from Buda-Pest, on Friday, was taken ill on his arrival at Vienna, on Sunday morning. He had been transported from his hotel to a hospital, as soon as the nature of his illness became apparent. This is the first case of Asiatic cholera that has happened in Vienna this year. By order of the sanitary authorities, the hotel where Herr Schmidt was taken ill has been closed, the railway carriage in which he travelled has been removed from traffic, and disinfected; all the deceased's clothes have been burnt, and three rooms through which he passed at the offices of the State Railway, on the Schwarenberg Platz, have been shut up. The necropsy revealed some of Koch's bacilli in the body, but it was also shown that the deceased had long been suffering from a severe gastric disorder.

A telegram from Vienna, under date October 19th, states that at Buda-Pest the cholera epidemic is assuming a more aggravated form. On October 18th and 19th, 47 cases are reported, with 19 deaths. In Vienna a notice has been issued, requiring all householders and lodgers to report suspicious cases immediately to the sanitary authorities, on pain of fine.

THE following are the reported cholera-returns from October 13th till October 20th; Pesth, 201 cases, 90 deaths; Trieste, 73 cases, 13 deaths; Trastevere, 3 cases; Szegedin, 19 cases, 7 deaths.

A TELEGRAM from New York, received *viâ* San Francisco, gives a dreadful account of the outbreak of cholera at Seoul, the capital of Corea. The deaths average 1,000 daily. The bodies of many of the dead are abandoned, owing to the difficulty and danger of interment. The absolute extinction of the city is threatened.

THE WINTER CAMPAIGN IN BURMAH.

A CORRESPONDENT favours us with the following interesting details of the arrangements for the campaign in Burmah during the cold season.

Brigade-Surgeon Farrell, of the Bengal Medical Service, who was appointed Principal Medical Officer of the Burmah Field Force under Major-General G. S. White, V.C., C.B., took over charge in August from Surgeon-Major H. W. Mackinnon, Medical Staff, who had acted as principal medical officer since February last. The sole reason of the change was that Surgeon-Major Mackinnon was considered too junior in the service to hold this responsible position, not having completed twenty-one years' service. The appointment of a more senior officer has been under the consideration of the medical authorities in India since March or April last, and has at last been carried out by the gazetting of Brigade-Surgeon Farrell to the post; he has been granted the rank of Deputy Surgeon-General.

At the time of the changes in the constitution of the force in April last, it was generally understood that Surgeon-Major Mackinnon would have been granted the local rank of Brigade-surgeon, which would have made him senior to all medical officers serving in the force. His departure from the force is much regretted by all; his courteous manner and accurate knowledge of his work made him a favourite with the other members of the headquarters staff with whom he had to work. He was much liked by the medical officers and subordinates, and succeeded in getting admirably good work out of them all, during a most unhealthy season, without unnecessary friction. Deputy Surgeon-General Farrell has seen much active service, and has the reputation of being a most energetic painstaking officer. He was principal medical officer of the second army corps at the last cold weather manœuvres at Delhi, and had an admirable opportunity of working the new system of general and field hospitals during the time of peace. He will now have to test it under very different conditions. With a force of over 30,000 men of all arms, composed of both British and native troops, with native levies, and a vast army of followers, scattered over a country the size of France, in 70 to 80 detached posts, varying in strength from 50 to 3,000 men, with flying columns of all arms, and bad roads (or, rather, tracks, for the roads are merely jungle paths), and a great waterway, the Irrawady, and its tributary the Chindwin, making over 700 miles of river, will try his administrative powers to the utmost. The transport of the medical stores and of the sick and wounded forms one of the greatest difficulties.

In addition to the force at present in the country (about 20,000 men), another force is under way from India consisting of 10,000 men, of artillery, cavalry, and infantry, with their followers. They commenced to leave India the second week in September, and will all be landed in Rangoon before the end of that month. It is hoped that this force, combining with the force now in Upper Burmah, will be able to quiet the country, and do away with the dacoiting. Most of these troops are coming over with the view of eventually relieving the troops which have become sickly from the severe service they have had in Burmah since the commencement of the operations in November last, and some troops who will have completed their tour of three years' service in Lower Burmah.

During the hot weather and rains, the troops in Upper Burmah have suffered severely from malarious fever and dysentery, but this has been much more marked in some stations than others, and particularly so amongst those troops who have had to go out into the jungles. Very little enteric fever has been seen during this campaign up to the present, and cholera has not prevailed to any extent since the early part of the campaign. Venereal diseases are still very rife amongst the British troops, but the native troops and followers, whether from their chastity or from their being more cautious in their amours, have not suffered to nearly the same extent.

Compared with the former campaigns in Burmah, the sickness and mortality in this one promises to be vastly less; this is no doubt due to the greater care taken of the men, the excellent huts and barracks in which they have been housed, the better food they get, the admirable way in which the Madras Commissariat Department has done its work under vast difficulties, and the better arrangements of the Medical Department, whereby a sick man comes at once under treatment, and is not sent back to duty till he is fit for it.

As the climate of Burmah is one in which sick and wounded men do not recover readily, invaliding to India and England has been carried out in the most liberal way for both British and Native troops, and for followers.

The Government has lately sanctioned the equipping of their steamship *Tenasserim* as a hospital-ship to cruise about the Bay of Bengal, in order to give such men as would be benefited by it the chance of a sea-trip.

Deputy Surgeon-General Farrell has applied and received sanction for the following medical arrangements for the additional force which is now coming over. The posts already held in the country are all supplied with hospitals. A general hospital for British troops of two hundred beds is to be established at Rangoon, in a portion of the splendid station-hospital, which has only lately been completed with the latest improvements. It is a splendid building, and admirably adapted in every way for its purpose. There is also to be a general hospital for native troops and followers of five hundred beds established in another set of buildings in Rangoon. The officers for these establishments are to be supplied in equal proportion from each of the Presidencies; and the medical and commissariat stores from Madras. A strong bearer-company will be sent from Bengal and Madras. Each corps unit will have its sanctioned medical establishment, stores, and equipment, consisting of three field hospitals of one hundred beds each for British troops, and four field hospitals of one hundred beds each for Native troops and followers. Each of these field hospitals is divisible into four sections, calculated for twenty-five beds. These hospitals are to be sent in equal proportion from each of the Presidencies. The carriage of sick and wounded down the river is carried on by hired steamers of the Irrawady Flotilla Company. Besides these hospital arrangements, fourteen medical officers, with hospital servants, are required for the more isolated posts. A medical store depôt has been established in Mandalay, under Surgeon D. Elcum, Indian Medical Service.

His Excellency the Commander-in-Chief, Sir H. Macpherson, with his head-quarters staff, consisting of Brigadier-General W. K. Elles, C.B.; Colonel J. A. Lilliard, R.A., Assistant-Adjutant-General R.A.; Captain D. Macpherson, A.D.C.; and Surgeon-Major C. Sibthorpe, Staff-Surgeon, left Madras on September 2nd for Mandalay. They will be joined by Major D. McLeod, Assistant Quartermaster-General; Major H. Hallett, Judge-Advocate-General; and Captain Beatson, Military Secretary.

THE FIRST MEETING OF THE BERMUDA BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE Bermuda Branch of the British Medical Association held its first meeting at the Town Hall on the afternoon of Saturday, September 25th, 1886.

The President having taken the chair, the Secretary proceeded to read the correspondence relative to the formation of the Branch, including the formal sanction and approval by the Council of the British Medical Association. The President, in congratulating the members on having succeeded in forming a Branch, pointed out the mutual benefits to be derived from its meetings, and, in introducing the subject for consideration at this meeting, drew attention to the great interest attaching to it.

Surgeon W. B. THOMSON, M.S., read a most interesting and instructive paper, giving his experience of enteric fever among the troops in Bermuda during the past three years; exhaustive notes of several cases, together with most carefully ascertained details as to the source of the disease, and its varied features under varying conditions, rendered this most admirable *précis* a very valuable addition to the literature of a malady which may be said to be the only one endemic in these islands. A discussion followed, in which Drs. Cowan Tucker, T. A. Outerbridge, Reid, A. Outerbridge, Michael Harvey Wilkinson, and the President, took part. Among other points noted, the very low rate of mortality obtaining among the civil population, from this disease, was emphasised. The President ventured to express a hope that the time would come when, owing to a more careful and rigid sanitation, and a more enlightened arrangement of water-supply, enteric fever would be unknown in Bermuda, and he considered its very existence a stain on the sanitary fame of a spot so favoured by nature in its climate, formation, and position, conditions which ought to place this "Madeira of the West," *facile princeps*, as the healthiest locality in the universe.

The proceedings terminated with a vote of thanks to Surgeon W. B. Thomson, for his valuable paper, and to the Mayor, Thomas T. J. Tucker, Esq., for his kindness in placing the Town Hall at the disposal of the Society.

The members adjourned to the Royal Bermuda Yacht Club, where they were entertained at dinner by the President of the Branch, C. Graves-Irwin, D.S.G.M.S., P.M.O. The usual loyal toasts, including that of the gallant, genial, and courteous Governor, were duly honoured. In proposing His Excellency's health, the President stated that His Excellency took a lively interest in the welfare of the Bermuda Branch of the British Medical Association, and wished it every success. Twenty-one sat down, and

the band of the York and Lancaster Regiment played during and after dinner. Present—Deputy Surgeon-General C. Graves-Irwin, President; Deputy Inspector-General M. W. Cowan, R.N.; Park B. Tucker, M.D.; Staff-Surgeon A. B. Tronsdell, R.N.; Staff-Surgeon Walsh, R.N.; Surgeon-Major Anderson, M.S.; Surgeon-Major McKutcheon, M.S.; Surgeon W. B. Thomson; Surgeons H. J. Michael and C. Birt, M.S.; Surgeon N. M. Reid, M.S.; Drs. E. C. Wilkinson, C. H. Butterfield, T. A. Outerbridge, A. Outerbridge, C. W. T. Smith, Henry J. Hinson, Richard O. E. Krueger, Ettore SarZana, Dudley C. Trott, and Eldon Harvey.

THE ENTRIES AT THE MEDICAL SCHOOLS.

By the courtesy of the Deans, Subdeans, Wardens, and Secretaries of the various medical Schools in London and in the provinces, we are enabled to publish the following authoritative list, which contains a summary of the number of students who have entered at the several schools this session.

Schools.	A.	B.	C.	D.	E.
St. Bartholomew's Hospital	125	13	0	*	138
Charing Cross Hospital	35	38	17	‡	90
St. George's Hospital	20	5	0	†	25
Guy's Hospital	69	13	0	10	82
King's College	41	19	0	14	60
London Hospital	64	43	0	5	107
Middlesex Hospital	33	32	9	‡	74
St. Mary's Hospital	60	23	0	20	83
St. Thomas's Hospital	88	43	0	8	131
University College	74	12	0	60	86
Westminster Hospital	14	1	0	‡	15
London School of Medicine for Women	22	5	0	0	27
Oxford University†	12	—	—	—	—
Cambridge University†	—	—	—	—	—
University of Durham College of Medicine§	36	42	0	—	78
Bristol Medical School	18	1	0	0	19
Owens College, Manchester	60	24	7	30	84
Queen's College, Birmingham	24	21	1	11	45
Yorkshire College, Leeds	38	5	0	1	43

A. Number of students who have entered for the full curriculum.
B. Number of students who have joined for special courses.
C. Number of dental students.
D. Number of students who have joined classes for preliminary scientific instruction.
E. Total, excluding students attending classes for preliminary scientific instruction.
* In compliance with the regulations of the University of London, students attending these classes are not counted as medical students.
† Returns not yet complete.
‡ Students for these classes enter the "Science and Art Department" under the arrangements recently made.
§ The number in column E represents those who have entered for the required term of "residence" for the degree.

According to these returns, which we believe may be implicitly relied upon, 623 students have entered this year for the full curriculum at the medical schools in London (excluding the London School of Medicine for Women). This number is almost precisely the same as entered in 1882.

The following table shows the numbers of entries for the full curriculum at the eleven metropolitan schools since 1879, the earliest date at which the complete figures are available.

1879	720
1880	703
1881	732
1882	622
1883	605
1884	587
1885	647
1886	623

VIBURNUM PRUNIFOLIUM IN HABITUAL AND THREATENED ABORTION.—A writer in the *Russian Medical Review* gives an account of fifteen cases in which extract of viburnum prunifolium, in doses of two grains four times a day, was successful in preventing abortion. In six of the cases, hæmorrhage, pain, and dilatation of the os uteri had already commenced. The remaining nine were cases in which there was known to be a tendency to abort. In some of the former class of cases, it was impossible to keep the patients in bed, as they were very poor and were obliged to get about the house and do their ordinary household work.

ASSOCIATION INTELLIGENCE.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

THAMES VALLEY BRANCH.—Meetings of the Branch will be held on November 10th, January 26th, and March 30th. Members willing to read papers or exhibit cases are requested to communicate with the Honorary Secretary, CHARLES C. SCOTT, M.B., St. Margaret's, Twickenham.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting will be held at the Bush Hotel, Farnham, October 28th, 1886, at 3.30 P.M., J. A. Lorimore, Esq., in the chair. The following papers, etc., have been promised. 1. Noble Smith, Esq.: A Report on a series of Consecutive Cases of Disease of the Spinal Column. 2. C. B. Lockwood, Esq.: On Contractions of the Digital and Palmar Fascia. 3. J. A. Lorimer, Esq.: A case of Abscess of the Liver cured by operation. Dinner will be provided at 6 P.M. at the Bush Hotel, Farnham.—A. ARTHUR NAPPER, Honorary Secretary, Broad Oak, Cranleigh, Surrey.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of the above District will be held at the West Kent General Hospital, Maidstone, on October 29th, at 3.30 P.M., John Knowles, Esq., in the chair. Papers already promised: 1. M. A. Adams, Esq.: Remarks on Simplified Linear Extraction of Cataract. 2. F. Penfold, Esq.: A case of Intussusception, with specimen. The dinner will take place at the Star Hotel, at 6 P.M.; charge, 6s. 6d., exclusive of wine. Gentlemen who intend to dine are particularly requested to signify their intention to the Chairman, J. Knowles, Esq., Ashford Road, Maidstone, not later than October 27th. All members of the South-Eastern Branch are entitled to attend this meeting, and to introduce friends.—A. W. NANKIVELL, Honorary Secretary of the District.

SOUTH EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above district will be held at Canterbury, on Thursday, November 11th; Mr. James Reid in the chair. Members wishing to send communications should write to the Honorary Secretary at once, W. J. TYSON, 10, Langhorne Gardens, Folkestone.

SOUTHERN BRANCH: SOUTH EAST HANTS DISTRICT MEDICAL SOCIETY.—The ordinary meeting will be held at the Grosvenor Hotel, Queen's Gate, Southsea, on Friday, October 29th, 1886. The chair will be taken by the President, Surgeon General J. Lamprey, M.B., at 4.30 P.M. Gentlemen who are desirous of introducing patients, exhibiting pathological specimens, or making communications, are requested to signify their intention at once to the honorary Secretary. Dinner at 6.30 P.M.—J. WARD COUSINS, Honorary Secretary, Southsea.

SOUTHERN BRANCH.—The next meeting of the South Wilts District will be held at the Bath Arms, Warminster, on Wednesday, November 3rd, at 4 o'clock. New members will be proposed for election, and papers will be read by Mr. Hinton, Mr. Kingscote, and Mr. Manning. The members will dine together after the meeting; tickets (not to include wine) 5s. Members intending to be present, to communicate with the Honorary Secretary, H. J. MANNING, Laverstock, near Salisbury.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT MEDICAL SOCIETY.—The ordinary meeting will be held at Daish's Hotel, Shanklin, on Thursday, October 28th, 1886, at 4 P.M. David Lloyd, Esq., President. Proposed new members: Surgeon-Major W. C. Grant, Parkhurst; David Lloyd, Jun., Shanklin. Agenda: 1. T. A. Buck, M.B.: A Case of Suppuration of both Ovaries causing Volvulus of Sigmoid Flexure; Intestinal Obstruction; Laparotomy; Death. 2. J. M. Williamson, M.D.: Fracture of base of skull, ending in recovery. 3. R. Robertson, M.D.: Pulse tracings in Pulmonary Consumption. Gentlemen who are desirous of introducing patients, exhibiting pathological specimens, or making communications, are requested to signify their intention at once to the honorary secretary. Dinner at 6 P.M., charge 6s., exclusive of wine.—W. E. GREEN, Honorary Secretary.

OXFORD AND DISTRICT BRANCH.—[*Inserted Notice.*] The next meeting of this Branch will be held at the Radcliffe Infirmary, on Wednesday, November 3rd. Members who wish to show cases or read papers are requested to communicate with one of the Honorary Secretaries on or before Oct. 30th. Dinner, at 5s. (exclusive of wine), will be provided for those only who send in their names before Monday, November 1st.—Dr. DARBISHIRE, 69, High Street; W. L. MORGAN, Esq., 42, Broad Street, Oxford, Honorary Secretaries.

STAFFORDSHIRE BRANCH.—The thirteenth annual general meeting of this Branch will be held at the Masonic Hall, Burton-on-Trent, on Thursday, October 28th. An address will be delivered by the President-elect, Dr. W. G. Lowe. The chair will be taken at 3 P.M. by the President, Mr. J. T. Hadhill; and all medical men, whether members of the Association or not, will be welcome. The dinner will take place at the Masonic Hall at 5.15 P.M. Tickets, 7s. 6d. each, exclusive of wine.—VINCENT JACKSON, General Secretary, Wolverhampton.

BATH AND BRISTOL BRANCH.—The first ordinary meeting of the session will be held at the Museum and Library, Bristol, on Wednesday evening, October 27th, at 8 o'clock, R. C. Grabe, Esq., President. The following communications are expected: Mr. J. Greig Smith: Removal of a Cancerous (and Pregnant) Uterus per vaginam, with specimen. Dr. Barclay Baron: An Unusual Case of Laryngeal Œdema. Mr. W. H. Harsant: Cases Illustrating the Use of Inflation of the Tympanum. Dr. R. Shingleton Smith: A Case of Thoracic Aneurysm treated by Galvano-puncture, with specimen. Dr. E. Maitland Sherritt: An Anomalous Form of Non-assimilation of Fat, with specimen.—E. MARSHAM SHERRITT and R. J. H. SCOTT, Honorary Secretaries, Clifton.

WEST SOMERSET BRANCH: ANNUAL MEETING.

THE forty-third annual meeting was held at Taunton, on Thursday, October 14th, at 4 P.M. Thirteen members attended.

The retiring President, J. BAIN SINCOCK, Esq., resigned the chair to his successor, T. J. OLLERHEAD, Esq., who proposed a vote of thanks to Mr. Sincock, which was carried by acclamation.

The minutes of the last general meeting were read and confirmed.

The Report of Council, signed by Mr. J. Bain Sincock, stated that, since the last annual meeting, the Council had met six times. The Council expressed their very great regret and disappointment that this present meeting, which was appointed to have been held at Minehead, on July 30th (and from which so much enjoyment was anticipated), had to be put off, in consequence of its being ascertained that probably only three or four members could have attended on that day. In the belief that a successful meeting would have taken place had an earlier date been fixed upon, the Council, at their last meeting, passed a resolution to this effect, namely, that it is desirable, for the future, that the annual meetings be held at an earlier date than the latter end of July.

The proceedings of the Branch during the past year had been very satisfactory. The summer meeting at Bridgwater was a great success, and thanks were due to the President, Mr. Sincock, and his friends.

At the autumnal meeting, Mr. Treves's address, on the Treatment of Obstinate Constipation, and the discussion which followed, were highly instructive and interesting.

The communications at the spring meeting, made by Mr. Hensman and the President, were just such as it was desirable to have brought forward and to have discussed at these meetings. The attendance throughout was quite up to the average.

The various subjects proposed by the Collective Investigation Committee, on which returns are invited from members of the Association, had been mentioned at the several meetings of the Branch, and the Honorary Secretary will be happy to supply forms to any members who desire them. The Council called attention to the notices on the subject, which appear weekly in the BRITISH MEDICAL JOURNAL.

The Treasurer's accounts showed a balance in hand of £6 19s. 3d.

The number of members in the Branch had suffered a slight reduction during the year. Three new members joined, but by death, removal, and resignation, five had been lost. There were at present only 55 on the list as against 57 last year.

The Council, in conclusion, while congratulating the Branch on its prosperous condition, and on the healthy manner in which it performed its functions, considered that it might perhaps not be improper to repeat what had often before been said: that, to maintain its strength and vigour, new and young blood must be infused. If members found that any good men and true came to settle down in their neighbourhood, the Council would be glad to receive the names of any such as recruits.

The Treasurer's accounts, audited by Mr. Rigden, were laid before the meeting.

It was proposed by Mr. Cornwall, seconded by Mr. Gibson, and resolved: "That the Report of Council and the Treasurer's accounts be received and adopted, and that the thanks of this meeting be given to the Council and to the Treasurer for their services during the past year."

Next Annual Meeting and President-elect.—It was proposed by Mr. Rigden, seconded by Mr. Sincock, and resolved: "That Edward Stephens, Esq., of Ilminster, be the President-elect, and that it be left to the Council to settle as to the time and place for holding the annual meeting in 1887."

Intermediate Meeting.—It was proposed by Dr. Meredith, seconded by Mr. Rigden, and resolved: "That the Council be requested to arrange for holding an intermediate meeting early in the spring of next year."

Council of the Branch.—It was proposed by Dr. Kelly, seconded by Dr. Meredith, and resolved: "That Mr. Rigden, Mr. Kemmis, and Mr. Gibson be elected to fill the vacancies created by three members who retire in rotation."

Dr. Kelly was re-elected Secretary and Treasurer.

President's Address.—Mr. OLLERHEAD, in an excellent address, after some introductory remarks, gave a graphic description of the advantages which are now available to general practitioners from new remedies and drugs in a concentrated form, with various other improved modes of treatment, as contrasted with those which he found in use when he commenced practice. He then brought before the meeting a subject on which his mind had of late been much exercised, with a view to inviting a discussion thereon; this was the question whether croup and diphtheria were identical diseases. He first referred to the different opinions which have been expressed by leading authorities; and then, referring to observations made by himself in cases which had occurred in his practice, he stated that he had arrived at the belief that they were not identical diseases.—The President's address was warmly applauded, and a hearty vote of thanks was accorded to him for it.—Mr. Hensman, Mr. Liddon, Mr. Rigden, and others, joined in a discussion on the question which Mr. Ollerhead had raised in his address, and the general tenour of their opinions were in accordance with the view expressed by the President.

Direct Representation of the Profession on the General Medical Council.—This matter was brought forward by Dr. Kelly, and shortly discussed.

Dinner.—The usual toasts were given after dinner. In responding for "The Army," Brigade-Surgeon Hensman pointed out that, by medical science and treatment, the mortality in the army had been reduced to 8.42 per 1,000—a point never before reached; and Dr. Winterbotham, speaking for "The Volunteers," referred to the perfection of the ambulance arrangements now existing in volunteer regiments, as well as with the regulars, and which had been exemplified in this neighbourhood at the manœuvres and sham fights of the Volunteer Battalions of the Somersetshire Light Infantry, to which he had been attached for many years.

EAST SURREY DISTRICT: SOUTH-EASTERN BRANCH.

A MEETING of this district was held on Thursday, October 14th, at the White Hart Hotel, Reigate; CHARLES E. OLDMAN, M.D., of Bletchingley, in the chair.

Papers.—A paper was read by Dr. SAMUEL WEST "On some Points connected with the Diagnosis and Treatment of Empyema." Dr. West showed that sufficient pressure for evacuation could be obtained in most cases by a simple syphon-tube, the aspirator not being needed. He mentioned cases where injury had been done by the excessive suction of the aspirator, especially in pyo-pneumothorax. In his opinion, excision of a rib was not often required, except in septic cases, though paracentesis might have to be repeated several times. Considerable discussion followed, especially on the latter point of treatment.

Dr. GALABIN read a paper "On Modern Improvements in Cæsarean Section," in which he contrasted the results obtained by this and Porro's operation with craniotomy in cases of contracted pelvis, and described the recent improved methods of suturing the incised uterus. The various points raised were discussed by Drs. Braxton Hicks, Holman, J. H. Galton, and Walters.

DORSET AND WEST HANTS BRANCH: AUTUMN MEETING.

THE autumn meeting of this Branch was held at Portland, on Wednesday, October 13th; WILLIAM VICARY SNOW, M.D., President, in the Chair. There were also present thirty-one members and visitors.

Election of Officers.—Dr. John Comyns Leach, of Sturminster Newton, was elected President; and Mr. G. W. Graham, of Wimborne, and Mr. W. Hawkins, of Abbotsbury, Vice-Presidents for 1887. Dr. William Vawdrey Lush, of Weymouth, and Mr. C. H. Watts Parkinson, of Wimborne, were re-elected joint Honorary Secretaries and Treasurers.

Election of New Members.—Surgeon-Major Samuel Kyle Cotter,

M.D., of Dorchester; Mr. Thomas Godfrey Parrott, of Bournemouth, and Mr. Herbert Vaughan Rake, of Fordingbridge, were elected members of the Branch.

Next Meeting.—It was resolved that the May meeting be held at Blandford. It was also resolved that three meetings of the Branch should be held every year, instead of two, as at present.

Communications.—The following papers were read.

1. Mr. Pridham: Case of Large Fibroid Polypus of Uterus: Removal: Specimen.
2. Dr. Batterbury: Case of Salivary Calculus: Specimen.
3. Dr. McLean: Case of Conservative Surgery of the Hand.
4. Dr. McLean: Two Cases of Empyema.
5. Dr. McLean: Case of Nævus cured by Injection of Tincture of Iodine.
6. Dr. Macdonald: Observations on some of the new Hypnotics.

Discussion.—A discussion on the Treatment of Hæmorrhage from Internal Organs was opened by Dr. McLean, Vice-President, and taken part in by Drs. Moorhead, Childs, Frazer, Lilly, Lush, the President, and Mr. Graham.

Grant to the British Medical Benevolent Fund.—A donation of two guineas was granted.

Dinner.—The members and visitors dined together at the Victoria Hotel.

SOUTH MIDLAND BRANCH.

THE autumnal meeting was held at Kimbolton on October 14th, under the presidency of J. HUGHES HEMMING, Esq. Eighteen members of the Branch assembled, and five visitors.

New Members.—Three new members were admitted into the Branch, namely, Dr. Hallett, Kimbolton; Dr. Strahan, Northampton; and Dr. Cock, Turvey.

The PRESIDENT opened the proceedings with "Recollections of the Brighton Meeting," making special allusion to the paper of Mr. Victor Horsley on the Surgery of the Brain.

Papers, etc.—Mr. Lucas (Huntingdon) exhibited a large Calculus, weighing three ounces, recently removed from an adult; Mr. Milligan, two large calculi, one phosphatic, the other mulberry, taken from children; Mr. Bull also showed a calculus. All these were removed by lateral lithotomy; the cases were described.—An interesting discussion ensued, the consensus of opinion being in favour of the superiority of the suprapubic to the lateral method of operating. It was also pointed out that large stones cause less discomfort to the patient than small ones.

Dr. Walker exhibited and described an Apparatus for Irrigation of the Bladder, with a double-channel soft silk catheter, weak solutions only being injected. He threw out a hint as to the possibility of dissolving stones in the bladder by a continuous flow of a weak acid solution through that organ. Many members took part in the discussion; and Dr. Walker, in reply, strongly recommended the use of real oil of sandal-wood (not the compound of that name) in cystitis.

Dr. Latham (Cambridge) spoke of benzoate of ammonia as possessing the power of entirely removing putrescence of the urine.

Mr. Milligan read a case of Popliteal Aneurysm, in which pressure by the finger failed (the patient being unable to bear it); afterwards cured by ligature of the superficial femoral artery. In the remarks which followed, special stress was laid upon the irksomeness to the attendants of pressure in such cases.

Mr. Thomson read a case of Nervous Affection, the diagnosis of which was doubtful. The opinions expressed pointed to its being a form of epileptiform hysteria.

Mr. Crew read short notes of a case of Brain-Lesion suggestive of bulbar paralysis.

The Chairman closed the meeting with a few observations on the Election of Representatives to the General Medical Council.

Votes of Thanks.—Cordial votes of thanks were passed to the President for his hospitality and for his conduct in the chair; to the Duke of Manchester for his kindness in throwing open his castle to the visitors; and to the readers of papers.

Luncheon.—The members were hospitably entertained at luncheon prior to the meeting, and afterwards partook of tea and coffee at the President's house.

Visit to Kimbolton Castle.—By the kindness of the Duke of Manchester, the castle and grounds were thrown open to the visitors, who were conducted through them by the President, who courteously pointed out the various objects of interest.

Thus was brought to a conclusion what was by general consent felt to be one of the best and most successful autumnal meetings the Branch has held.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Treatment of Typhoid Conditions by Benzoic and Salicylic Acids.—Hysterical Amaurosis.—Instruments for Examination of the Retina.—Comparative Pathology.—Tænia Nana.—New Instruments.

AT a recent meeting of the Société Médicale des Hôpitaux, M. Albert Robin proposed a new method of treating typhoid conditions in which the organism is always overcharged with the incompletely oxidised residues of nutrition. These residues were eliminated with difficulty, owing to the fact that they are but slightly soluble in the fluids of the human body. There were certain pharmaceutical substances which combine with the nitrogenous residues of the human organism, and rendered them more soluble, and this facilitated their elimination. The principal agents which acted in this way were benzoic and salicylic acids, which, after combining with nitrogenous substances such as glycocol, passed into the urine as salicyluric and hippuric acids. M. Robin, in his first experiment, studied the physiological action of benzoic acid on combustible substances. He administered benzoic acid to persons in good health, whom he had previously dieted for a few days. Under the influence of this treatment, the solid constituents of urine slightly decreased, and there was also a smaller proportion of urea, consequently its relative proportion to solid matter was lower. These results could not be attributed to a moderating action of benzoic acid on combustion, but to the action of the acid in carrying away into the urine part of the combustible substances. On another occasion, M. Robin administered benzoic acid to five patients with typhoid fever, in whose urine he noticed an increase in the weight of urea and solid matter. Salicylic acid and salts gave the same results, as also did substances such as toluene, zylene, toluic acid, ethyl, and propylbenzine, which, in passing through the system, become transformed into benzoic acid.

M. Bernheim read a paper at the recent Medical Congress at Nancy, on Hysterical Amaurosis. In two cases in his wards, it was observed that there was complete amaurosis on the left side. M. Bernheim used an apparatus invented by M. Stœber, which was a modified form of Snellen's, and which served to detect simulated amaurosis. He placed a pair of glasses, which had one glass red and one green, in front of the eyes, and told the patient to read from a frame on which letters were printed on red and green glass alternately. M. Bernheim's patients were made to read with the right eye, to which the red eye-glass was adjusted, the left being shut; they could only distinguish the red letters, but with both eyes open they were able to read the letters on red and green glass. These patients saw equally well with the affected eye as with the unaffected. Hysterical achromatopsy was quite as psychical as hysterical amaurosis. M. Grenier has recorded a case of achromatopsia in a hysterical patient. To her left eye, all objects appeared grey; a coloured card printed green appeared green to the right eye, but grey to the left. If a prism were placed before the right eye, the patient, instead of seeing a green object and a grey one, saw two green ones. On repeating the experiment with the left eye, two grey objects were seen. M. Bernheim gave another case where the left eye was affected with achromatopsia, a red object seen with that eye appearing grey, but red with the right eye. On making the patient look through a prism, she saw double. If, with the affected eye closed, a prism was put before the right eye, only one red object was seen; but if the prism was placed before the left eye, the object appeared double and in its right colour. The prism gave the true colour, and removed the illusion by diverting the patient's morbid imagination. These cases were clearly instances of unconscious suggestion. The patient being unconscious of what he saw, M. Bernheim considered that it would be more rational to give the name of "visual amnesia" to this complaint; and he added that amaurosis and achromatopsy suggested by a hypnotic state were of the same nature. In conclusion, he stated that hysterical amaurosis had no anatomical localisation, that it was neither localised in the retina nor in the optic nerve, nor in the visual cortical centre, and had origin only in the patient's imagination.

At the Medical Congress at Nancy, M. Charpentier, of that town, showed a new instrument for the clinical examination of the visual functions. This instrument could be used (1) for examining luminous sensibility, by means of the minimum quantity of perceptible light; (2) for examining the perception of colours by the same method; (3) for examining the perception of the differences of light in white

or coloured light; (4) for examining the perception of colours by means of a new method, which consisted in causing a coloured object to appear upon an uncoloured ground. The colour was rendered gradually more and more intense, until it was recognised by the eye. This instrument was composed of a horizontal copper tube, about 5 centimètres in diameter, supported by a stem fixed to a wooden slab. This tube was closed at each end by a piece of ground glass, which could be replaced, when necessary, by a translucid paper or china disc. By the action of two almost contiguous convergent lenses, the image of the ground glass was thrown upon the front disc. A movable screen, with an aperture which could be made smaller or larger, was placed between the two lenses; different sections of the surface could thus be seen on these lenses, and the lighting of the front glass could consequently be regulated at will. The light thus thrown was in proportion to the free surface of the opening of the diaphragm in question. This free surface was always in the form of a square, the side of which was marked in millimètres upon an external graduation. The front glass, placed at the end of an ocular tube, was the eye-piece, and constituted, when the eye rested on the opening, a dark chamber. This ocular tube was united to the first tube with lenses, by a square box, of which the left side could be open or shut as desired. An oil lamp was used to give a constant illumination of the back part of the instrument. A special apparatus, placed between that part and the source of light, held the coloured glasses destined to determine the minimum of perceptible colour.

At a recent meeting of the Biological Society, M. Raphael Blanchard showed a lizard, which had a papilloma, probably of acarian origin, on its back.

At the same meeting, M. Blanchard described Tænia nana; this parasite was rarely met with. Leuckhart and other authors had incorrectly stated that its head was invaginated. A few muscular fibres, which extended behind the rostrum, drew back the head during contraction, a cavity was thus formed; this cavity was not the head, but the head was contained in it; in no tænia could the rostrum be inverted.

At a recent meeting of the Biological Society, M. Malassez presented a series of instruments. A colorimeter, a glass cylindrical receptacle for spectroscopic examination, a warm stage, and a heating plate for warming preparations. M. Malassez also drew attention to the advantage of using naptha-carbol in laboratories for lighting purposes; the light was white, steady, and gave off only a small amount of heat.

SWITZERLAND.

[FROM OUR OWN CORRESPONDENT.]

Opening the Mastoid Process.—Bacterioscopic Examination of Transudations and Atheroma.—Extirpation of the Bladder.—Sahli's Regulator.—Idiopathic Bubo-adenitis.—Arterial Transfusion.—Turpentine-Oil in Diphtheria.—Perchloride of Iron in Anthrax, and in Ingrowing Nail.—Dandelion as a Hepatic.—Plummer's Pill.—Iodine in Goître.—Tannate of Quinine in Whooping-cough.—Collapse from Antipyrin.—Antipyrin in Erysipelas.—Vulliet's Treatment of Uterine Cancer.—Leysin as an Alpine Station.—Differential Diagnosis of Diphtheria.—Calorigenic Region in the Brain.—Benzoate of Soda in Croup.—Phosphorus Necrosis.—Jubilee of Dr. Girtanner.—Trades and Military Service.—A Bequest.—A State Refuge for Paupers.

In the *Correspondenz-Blatt f. Schweiz Aerzte*, August 1st and 15th, 1886, Dr. H. Bircher, of Aarau, ably discusses indications for opening the mastoid process. According to his opinion, the operation "is indicated not only when immediate danger threatens the patient's life, but also in all chronic suppurations of the ear which do not yield to the treatment by dry or moist disinfectants and astringents, manifest a tendency to spread outwards or inwards, and are kept up by retention of pus within the mastoid process." The dangers of the procedure are less than those of existing otitis. All the eighteen patients operated on by the author recovered. Dr. Bircher condemns the use of a drill, and advocates a chisel and a sharp spoon. He insists also on employing strict antiseptic precautions both during and after the operation.

Dr. C. Garrè, lecturer at the Basle University, has examined atheromatous growths, removed from four patients, for bacteria. Microscopic examination and cultivation-experiments gave entirely negative results. Hence he arrives at the conclusion that the "microcoque sebacé" found by Dr. Poncet in chalazion is an artificial product. Dr. Poncet probably mistook for micro-organisms profuse precipitates of pigment appearing in the course of the staining procedures. Dr. Garrè did not find bacteria in the fluid from two cases of hydrocele subsequent to gonorrhœal epididymitis, in one case of hydrocele subsequent to syphilitic orchitis, one case of tubercular ascites, one case of serous tuberculous gonitis, one case of serous pleurisy, one case of acute rheumatism; neither were bacteria present in vesicles in the neighbourhood of vaccine pustules, in erysipelas, nor in bullæ due to burns and decubitus. The author, however, constantly found numberless very minute cocci and bacilli in acne and comedones.

At a meeting of the Berne Medico-Pharmaceutical Society, Dr. P. Niehans, of Berne, showed a boy, aged 6, in whom, two years before, he had extirpated the bladder (after Sonnenburg's method) on account of ectopia. The ureters were drawn forwards, and fixed in the epispadic groove on the penis. The patient wears a convenient urinal.

At the same meeting, Dr. Hermann Sahli, lecturer at the Berne University, demonstrated his automatic regulator for incubators, heated by petroleum. A detailed and illustrated description of the apparatus may be found in the *Zeitschrift f. Aerztliche Polytechnik*, or the *Zeitschr. f. Wissenschaftliche Mikroskopie*, May, 1886.

Dr. E. Mory, surgeon to the Dutch cruiser *Atjeh*, in Curaçoa, describes what he thinks to be a hitherto unrecognised morbid condition, which he calls "bubo-adenitis idiopathica endemica." He saw eighteen cases, all but one occurring in European new-comers, aged from 18 to 35. The disease developed itself, always rather acutely, in the course of three or four days, and consisted in the appearance of hard, painful, and very tender swelling of the inguinal lymphatic glands on one or both sides, the size of the tumour varying from that of a hen's egg to that of a man's fist. The swelling was accompanied by general malaise, slight fever (100° to 103° Fahr.), loss of appetite, and constipation. As a rule, the patients (sailors) remained disabled for about four weeks, then the swelling decreased, and pain was felt only after prolonged standing or walking. A complete resolution, however, was not observed in any of the patients up to the date of the article (for six months). Local therapeutic measures (iodine, mercurial ointment, iodoform, collodion, blisters, Goulard's water, cataplasms, massage, injection of a two per cent. solution of carbolic acid or ergotin) remained entirely useless. General means (salicyl, quinine, regulation of the bowels, absolute rest, light laxatives) only improved the constitutional state of the patients. Dr. Mory thinks that the disease in question is caused by an infection with the microbe of elephantiasis.

Dr. J. M. Ludwig, of Pontresina, details the case of a mountain-guide, aged 30, in whom extreme collapse followed an enormous hæmorrhage from a gastric ulcer, and who immediately recovered after the transfusion of 100 or 110 grammes of blood from the radial artery, the giver being an Italian lad. The transfusion was performed by means of an ordinary morphine-syringe with broken needle; not a drop of blood was lost. The operation took place eleven years ago; the patient is still alive, and enjoys good health.

The treatment of diphtheria by turpentine-oil has found an advocate in Dr. G. Schenker, of Aarau, who used the drug in thirty-six cases, and lost only five (13.88 per cent.). In four of the cases (11.1 per cent.) tracheotomy proved necessary; all the patients recovered. In one of the cases, a mixture of 50 grammes of turpentine-oil with 200 grammes of coal-tar was atomised by means of a steam spray apparatus in the patient's room. In several other cases, a mixture of 80 grammes of the oil with 200 grammes of the tar was burnt (after Delthill's method). In the remainder, the author gave internally from ten drops to a teaspoonful of the oil from one to three times daily, in milk, sugared water, or mucilage. No unpleasant secondary effects were ever observed.

At a meeting of the Lucerne Medical Society, Dr. Alfred Steiger made a communication on the local use of perchloride of iron in anthrax (as recommended by an English practitioner, of Buenos Ayres, whose name could not be ascertained). Seven patients treated by the author all recovered within a few days, after a single painting with liquor ferri sesquichloridi. "Perchloride of iron is," he said, "a true specific for anthrax; even advanced cases are cut short by it." He obtained, also, excellent results from the same drug in many cases of in-growing nails. After cleansing the ulcerated surface, he painted it twice daily with a fine brush, and ordered rest. Within a few days, the soft parts became hard and insensitive, and contracted, while the edge of the nail was raised from its groove. The internal administration of the drug gave very good results in Werlhof's disease, albuminuria after scarlatina, diabetes mellitus, and renal and vesical hæmaturia.

Dandelion root was recommended by Dr. Steiger, as a true hepatic

in chronic gastric catarrh, enlargement of the liver from chronic congestion or fatty infiltration, in jaundice and obesity. He prepared a decoction from a handful of fresh spring roots, in 700 or 800 grammes of water, and obtained 500 grammes of fluid, to which a teaspoonful of bicarbonate of soda was added. The decoction was taken in three doses during the forenoon. The course lasted three or four weeks. Dr. Steiger recommended Plummer's pills, as an energetic alterative and absorbent, in cases of syphilis in weak persons and children; in scrofula, with swollen glands; and in obscure cerebral disease, with paralysis of the abducens, headache, and giddiness.

Dr. Vogel, of Lucerne, has seen good results from treating small parenchymatous goîtres by iodide of potassium, which he administered both internally (half a gramme daily), and externally (in the shape of a solution of 10 grammes of the salt in 180 of water, or as a salve). Relapses, however, often occurred. Iodoform ointment was less reliable than iodide of potassium. In cystic goître, of a moderate size, he recommended injections of tincture of iodine (5 to 20 grammes) into the cyst after emptying, repeated every five or eight days.

Chocolate tablets of tannate of quinine, containing 15 and 25 centigrammes, have been recommended by Dr. Mueller-Pauly, of Kreuzlingen, as a good method of administering the drug in whooping-cough, and in febrile diseases of children.

Dr. Suchard, of Lausanne, saw a case of collapse, ending in death, from taking about half-a-bottleful of a mixture containing 1.5 gramme of antipyrin. The patient suffered from pulmonary phthisis with pleurisy. No details were given by the author. Dr. P. Demiéville, of Lausanne, saw grave collapse, followed by a comatose state lasting three days, in a patient who had taken 3 grammes of antipyrin in the course of two hours in two doses. Dr. H. F. Zimmer, of Lausanne, has been satisfied with the antipyretic effects of antipyrin (given in doses of 0.5 to 1.0 gramme, twice in the evening, at an interval of one hour) in cases of erysipelas (fifteen cases).

Dr. A. Wisard has recorded a case of primary cancer of the uterine cervix successfully treated by Professor Vulliet, of Geneva. His method consisted in (1) gradually dilating the cervix by scraping and the introduction of plugs; (2) in most carefully removing the whole disease by curettes of various sizes, the finger-nail, and red-hot iron; and (3) in introducing into the uterine cavity plugs soaked in a saturated solution of chloride of zinc. In all four cases treated after the above plan, complete and firm cicatrisation was obtained.

In the *Revue Médicale de la Suisse Romande*, September, 1886 p. 554, Dr. Louis Secretan, of the Lausanne Cantonal Hospital, draws attention to an Alpine village, Leysin (1,264 metres above the sea-level, with 300 inhabitants), near Aigle, which seems to possess qualifications for a winter climatic station of the same character as Davos. Practitioners residing in the Rhone valley obtain very good results from sending their phthisical patients to Leysin. Accommodation, however, is as yet very modest. Meteorological observations for four winter months in 1883-84 and 1884-85 showed that the average temperature was + 3.07° Cent. and + 2.45° Cent. respectively; the number of calm days, 83 and 85; that of bright days, 74 and 64; that of days when snow or rain fell, 16 and 23 (the respective figures for Davos were + 1.67° and + 1.85°; 107 and 91; 36 and 40; 33 and 30).

At the annual meeting of the Société Médicale de la Suisse Romande, at Geneva, Professor D'Espine, of Geneva, made a communication on the differential diagnosis between diphtheritic angina, and "non-diphtheritic angina with white patches." The former might be distinguished from the latter "by the presence of a bacillus which has the same dimensions and form, and gives the same colour-reactions, as Lœffler's rod." The microbe was found from the beginning, chiefly in pseudo-membranes. Sometimes it was present as a pure culture, sometimes mixed with the common leptothrix. The author never met with the rod in any other angina.

Dr. Girard confirms by his own experiments the recent statements of Drs. Aronsohn and Sachs that the cerebral calorigenic region occupies the median portion of the corpus striatum (on both sides) and the subjacent parts down to the base. "Hyperthermia," as produced by lesions of this region, was a phenomenon of excitation, and not of paralysis.

At a recent meeting of the Neuchâtel Medical Society, Dr. Dardel stated that he had successfully treated two cases of croup by inhalations of a 1 per cent. solution of benzoate of soda.

According to the *Berner Zeitung*, September 21st, 1886, twenty-seven cases of phosphorus-necrosis occurred during the period 1875 to 1885 amongst 250 workers employed at eighteen factories for phosphoric matches in Frutigen, Canton Berne. Only one case died; four recovered without any operative interference; in the remainder, necrosed parts of the jaw were removed. All the cases operated on remained capable of work, a more or less considerable disfigurement of the face being the only penalty inflicted upon them on account of the criminal neglect of their masters.

Dr. Girtanner, of St. Gall, has lately celebrated his sixtieth year as a medical practitioner. He is now 84 years of age, and enjoys excellent health and most active professional life, as well as the deep respect and love of all his colleagues.

In Switzerland, in 1885, among the recruits recognised as unfit for military service were 66 per cent. of the tobacco and cigar workers, 67 per cent. of the basket-makers, 60 per cent. of the tailors, 25 per cent. of the butchers, and 26 per cent. of the stonemasons and carpenters. Of 6,154 recruits in Canton Berne, 1,833 were refused; of these, 581 suffered from goître, and 162 from flat foot.

An eminent Swiss painter, Professor Rudolf Holzhalb, who lately died in Zurich, bequeathed 80,000 francs to ten hospitals and asylums of the town.

The Aargau Grossrath has resolved upon using a part of the money resulting from the abolition of nunneries for establishing a cantonal refuge for incapacitated and crippled paupers of both sexes.

CORRESPONDENCE.

☞ To Correspondents. ☜

Our correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return and hold over a great number of communications, chiefly by reason of their unnecessary length.

DIRECT REPRESENTATION OF THE PROFESSION ON THE GENERAL MEDICAL COUNCIL.

Sir,—As there appears a doubt as to Dr. Glover being a *bonâ fide* general practitioner, I propose that some one shall stand who is not only a general practitioner, but a L.R.C.P., L.R.C.S. also.

With Sir W. Foster and Dr. Dolan we ought to associate at least one man pledged to all-round uniformity. The medical titles question wants solving now or never, and in Sir Walter Foster and Dr. Dolan we have men who are not hostile. Let us then have one at least who is actively friendly to our claims, so that every physician and surgeon shall be entitled to take and use the title of doctor. Will none of the gentlemen who have for years agitated this *questio vexata* come forward now on the platform of uniformity of title as well as education and qualification? If he does, are there not enough physicians and surgeons in England to put him through?—Yours, etc.,

William Donovan, L.R.C.P., L.R.C.S.

*** There is no doubt whatever of Dr. Glover's being a *bonâ fide* general practitioner.—[Ed.]

Sir,—I shall feel obliged by your inserting the following remarks in the British Medical Journal. Up to this time, three candidates have applied to me for my vote to return one of them to the General Medical Council. Two of these gentlemen are Fellows, consultants, and specialists. One of these I have personally a great regard for, and would support had he not the above qualification. The other candidate is Dr. T. Laffan, of Cashel; his address can be seen in the Journal of August 7th. We general practitioners up to this have had very little voice in the management of anything connected with medicine or surgery; and now that we have, it is as well we use our vote properly by returning one from amongst ourselves to represent the interests of the general practitioners of Ireland in the General Medical Council. I would suggest that the general practitioners of Ireland call a meeting in support of Dr. Laffan's candidature.—I am, etc.,

J. P. Doyle, Physician and Surgeon.

69, Lower Mount Street.

Sir,—Two of our weekly medical journals have touched upon the candidates for the representation of the profession in Scotland, and give preference to those candidates, whom they represent as unconnected with teaching centres, universities, or corporations.

Now, is it desirable that, in the General Medical Council—a Council of medical education and registration—the chosen of the profession should not have experience and knowledge of those subjects with which he will be almost exclusively called upon to deal? Many practitioners think it is not. Besides, it is difficult to select a man of any position or weight who is not in some way connected with either university or corporation. As a matter of fact, it may be stated that, of the eight men whose claims have been mentioned, only

one is not known to be or have been connected with a teaching centre or corporation; and now his name is not in the field.

Professed zeal for the rights of the general practitioner should not be made a cloak to herald forth the claims of a favourite candidate, particularly when that candidate possesses so prominently all the objections which are urged as so fatal to the other claimants.—Yours respectfully,

R. POLLOK.

Glasgow.

SIR,—Having received several letters from Welsh medical men asking me to reconsider my decision, and agree to be nominated as a candidate for one of the seats for England and Wales in the British Medical Council, I ask permission through your pages to reply to one and all.

1. At this juncture I do not consider it wise to run any Welsh candidate, for he would not have a chance of success.

2. We may rely on it that nearly every medical man has made up his mind who he will vote for, and doubtless will vote for the best man according to his opinion and judgment, irrespective of whether he be a consultant or general practitioner, or whatever the nationality.

Therefore I think it is useless at the present time to raise the question of a Welsh representative; but this I do think, that it would have been more considerate and courteous to our national feeling to have mentioned specially in the Act a representative for Wales; and feeling, with many of my countrymen, that we have been slighted, I will join and work with any Welsh Committee to bring this matter before our members of Parliament with a view to its rectification. Englishmen, I regret to say, desire the extinction of national feeling, and the absorption of national sentiment into Anglo-Saxon ideas. This we know is strongly resented in Ireland. I know from personal observation in Edinburgh, Glasgow, and the Western Highlands, that Scotchmen will not have it; and from fifty years' intimate knowledge of my fellow-countrymen, through being conversant with the Welsh language, I can assert that Welsh national feeling is growing stronger than ever, and that to have representative institutions of their own is now strongly agitating the Welsh people. Next week, I start for three months' sojourn in that land of ancient and modern (social) plagues—Egypt; and if on my return with (I hope) restored health, my Welsh friends require my services, I shall be very happy to give them, to assist in obtaining such an alteration of the Medical Act as will satisfy their national aspirations.

Of this I am sure, that, until England recognises this national feeling in Scotland, Ireland, and Wales, so long will Parliamentary labours languish and become abortive, which you will allow is a great deal for an old fossilised Tory to admit, who, whilst placing the good of his country above every other consideration, cannot and will not forget that he is a Welshman.—Yours faithfully,

Wrexham. T. EYTON-JONES.

DIRECT REPRESENTATION OF THE PROFESSION AND THE SUPPRESSION OF UNQUALIFIED PRACTICE.

SIR,—In the JOURNAL of October 16th, Dr. Strange explained that the British Medical Council had no power to "interfere with quacks or unlicensed persons." Nevertheless, we general practitioners should only elect to represent us those gentlemen who will use their utmost endeavours to suppress quackery. It will be the duty of the Council to agitate until their privileges are extended to cope with unregistered individuals; for I fear the system of quackery is gaining favour in the eyes of even the more educated classes of society. But a short while since an eminent Cabinet Minister promised his protection to a class of practitioners scarcely to be equalled for their ignorance and knavery.

In a recent issue of the BRITISH MEDICAL JOURNAL we read that the evidence of two qualified gentlemen was set at naught by that of a bone-setter. I myself have known a coroner accept the evidence of a quack, and even compliment him, though a reputable Doctor of Medicine was present, and had attended the case.

Fully one half the medical practice of this country is carried on by unqualified assistants (known to the public as doctors, owing, as it were, to the guarantee of their qualified principals), herbalists, bone-setters, prescribing chemists, and what might be termed "general bogus practitioners."

It is right that our Government should protect the lives and interests of its dependents, and it can do so by giving more extended powers to the representatives of our body.—Yours, etc.,

MYER DUTCH.

DIRECT REPRESENTATIVES AND THE TITLE OF DOCTOR.

SIR,—Dr. Brown's letter, published on October 16th, will, I am sure, meet with the ready sympathy of most English, and especially London, qualified men.

It does appear monstrous that so cruel a grievance should apply only to them. The school is, above all others, best qualified to produce men of the highest attainment in their profession, yet they only are debarred from obtaining as a matter of course at the termination of their curriculum the M.D. degree. We see the Scotch schools crowded; all have it within their power to take a degree that shall give them a medical *status* higher than the more gifted, and generally better qualified, London students. The medical corporations see this—see the London schools gradually emptying. They know that it is, after all, only a mere name that is causing the exodus, and yet, from pride or obstinacy, and certainly want of patriotism, they refuse to do the act of justice required.

Surely it cannot be contended that London men are not equal in every point to any graduate of Durham, Edinburgh, Glasgow, or Aberdeen, and, if not, why should they alone be handicapped in the race of life? The grievance must be remedied, and certainly each candidate should be called upon to use his best influence in carrying out this object.—I am, etc.,

M.R.C.S. ENG.

THE ARRANGEMENTS OF THE BUSINESS OF THE ANNUAL MEETINGS.

SIR,—Many of the younger members of the profession will be grateful to Professor Gairdner for his letter published on October 16th, about the arrangements of the business of the annual meetings. I was one of the many who prepared papers that they had no opportunity of reading. I knew what to expect, and therefore did not feel personally aggrieved; but I had not experienced before the trouble and annoyance of taking diagrams, drawings, etc., to the meeting in the morning, and carrying them home again in the evening, perhaps on successive days, unused. It is not much trouble to carry the manuscript in one's pocket. If it is read, well and good; but it will be without illustration. If it is not, it can be sent to the editor of this or of one of the other papers.

Another point. I gave notice of a paper in more than one Section, and was much bothered, at a time when I was very busy, by requests from the Secretaries of the Sections for abstracts of my papers a fortnight before the meeting. My papers were very short, and it was difficult to hit the happy mean between a comprehensive title and the whole paper. Nevertheless, abstracts were sent, and were, of course, not of any use.

In conclusion, it is only right to say that the discussions, such as that on "heart-valve disease," were of much more general interest than any of the "shunted" papers were likely to have been; and that, without them, the attendance in the Sections would have been poor. Still, it is felt that, with better management and the impartial enforcement of rules, greater facilities for reading papers might be afforded, without sacrificing or injuring the discussions.—I am, yours, etc.,

"SHUNTED."

THE POSITION OF SHIP SURGEON.

SIR,—In the JOURNAL for July 3rd, you published a letter of mine under the above heading, in which I mentioned several sanitary defects in the Guion Line steamship *Arizona*, for drawing the Company's attention to which I was deprived of my appointment as surgeon to that ship. Perhaps you may consider the following additional particulars of sufficient importance to place before your readers.

On June 13th last, I forwarded, by registered letter, to the emigration officer, Liverpool, a report embodying the matters mentioned in my letter, besides other serious infringements of the laws governing the emigration service, but as I did not get any acknowledgment of my report, I wrote on August 9th, asking if any steps had been taken towards the investigation of the matters complained of. I was informed that my report had been forwarded to the Board of Trade, Whitehall, London. On August 11th, I wrote to the Secretary of the Board of Trade, and, on August 18th, received a reply to the effect that the Board of Trade "have caused inquiries to be made, and, from the reports received on the subject from their officers, the Board see no reason to question the satisfactory nature of the arrangements on board the *Arizona*."

Notwithstanding this, I reassert that the steerage-space I complained of was in a dangerously unsanitary condition. It had been used during the previous voyage as a coal-bunker, and was left unpainted, black, and grimy, with the iron rust hanging in loose scales all over the sides and ceiling; it was absolutely without direct ventilation

and only afforded a cubic air space of about 89 feet per head to the 90 passengers carried in it on the voyage in question. A numerously signed complaint was lodged with the purser by the passengers who occupied this space, and, when the ship arrived in New York, about twenty men were set to work, and the place was scaled and painted, so that it no doubt presented a somewhat better appearance on the *Arizona's* return to Liverpool.

As regards the ship's hospitals, I stated in my report that one of the hospitals was regularly used by the butcher for cutting up meat in. When I objected to this on board, my objections were overruled, and I was told "it could be got ready for patients at any time in half an hour."

I have been told that my complaint as to the risk of getting to and from the hospitals in bad weather was trivial, as the sailors have all to run the same risk in getting to and from the forecastle. My reply to this is that, taking into consideration that there are lives lost, and men maimed and crippled every winter in the trans-Atlantic service through running this very risk, it is time that steps were taken to prevent this, as far as possible, by having a 'tween-deck passage to the forecastle for use in bad weather, as the conditions that would ensure comparative safety on sailing ships, or slow steamers, are altogether inadequate on a powerful steamship driven at a high rate of speed into a head sea.

I also drew attention in my report to the case of a steerage-passenger, who was refused by the emigration medical officer as not in a fit state to proceed on the voyage, yet this man was not taken ashore, but was sent in the ship. I repeat my statement that the hospitals on the *Arizona* afford no means of isolating cases of infectious disease occurring in bad weather.

As in the face of these facts, which are all capable of proof, the Board of Trade "see no reason to question the satisfactory nature of the arrangements" on the ship in question, it would be interesting to know in what manner their investigations were carried out. The trans-Atlantic surgeon has no recognised position, and no direct authority in sanitary matters. If he makes complaint to the company, he is dismissed; if he appeals to a higher authority, his report is "shelved."—Your obedient servant,

W. V. Barré, L.K.Q.C.P., L.R.C.S.I.,
Ellesmere Port, Cheshire.

THE ALLEGED DANGER OF NARCOTICS DURING LACTATION.

Sir,—In a recent number of the Journal, a case was published of a child dying of opium-poisoning, as a result of the administration of the drug to the nursing mother. The infant received skilled medical care, was shaken up and moved about to prevent sleep, was dosed with coffee, and yet died comatose, with pin-point pupils and other distinctive symptoms. Many similar cases are recorded in medical literature, and medical students are warned against any but the most careful use of this and similar drugs to a suckling woman, on the infant's account. In addition, I have frequently heard practitioners at medical meetings recount cases where infants were markedly affected by narcotics, through the mother's milk, short of a fatal issue, and have known opium given to the mother for the purpose of influencing the crying and sleepless babe.

Nevertheless, Fehling, in the *Bullet. de Thérap.* for August 30th, 1885, wrote: "The narcotics are without effect upon the nursling. The strongest doses of opium, or of choral, administered to the nurses, have not produced any special physiological effect upon the nursling."

Several medical journals have quoted this statement without comment, notably the *Edinburgh Medical Journal* for March of this year. Surely the discrepancy is serious, and the point to be settled vital. The point is one which must be capable of easy and definite settlement, and this should be generally known to the profession.[1]—Yours, etc., John Davey Hayward, M.D.Lond.

Grove Street, Liverpool.

[1] Ringer, in his *Handbook of Therapeutics*, under Opium, writes: "It is important to bear in mind that the active principles of opium pass out with the milk, so that a child at the breast may be dangerously affected by opium given to its mother."

Superannuations.—Mr. Ralph Beardshaw, late medical officer for No. 5 district of the Leeds Union, has obtained a superannuation-allowance of £60 per annum for two years.—Mr. Francis Rawle, late medical officer for the Titchfield district of the Farcham Union has obtained a superannuation-allowance of £26 for one year.

NAVAL AND MILITARY MEDICAL SERVICES.

MEDICAL VOLUNTEER FORCE.

We understand that an application was recently made for pay and allowances for a volunteer medical officer after attending and passing the Medical Staff School at Aldershot, but the application could not be received, as provision in the Regulations has not yet been made for the officers of the volunteer branches of the service passing a school of instruction. This matter will, we believe, be made the subject of discussion at the Volunteer Medical Association; and an effort will be made to cause the provisions to be extended to volunteer medical officers, by making representations to the proper authorities.

CHANGES OF STATION.

The following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:—

	From	To
Brigade-Surgeon R. Lewer	C. of Good Hope	Hong Kong.
Surgeon-Major R. De B. Riordan	Fermoy	Cork.
,, F. P. Staples	Chatham	Aldershot.
,, R. W. Hare, M.B.	—	Chatham.
,, J. Langdon	Edinburgh	Fort George.
,, J. N. Stock	Madras	Portsmouth.
,, W. M'Watters	Dorchester	Bengal.
,, G. B. Mouat, M.D.	Woolwich	Madras.
,, H. T. Brown, M.D.	Barbadoes	Cork.
,, T. O'Reilly	Woolwich	Dublin.
,, S. K. Cotter, M.D.	Bengal	Dorchester.
,, A. W. Duke, M.D.	Sandhurst	Gibraltar.
,, J. W. O'M. Martin, M.B.	Dublin	Curragh.
,, R. H. Robinson	Curragh	Dublin.
,, G. B. Hickson	Golden Hill	Madras.
,, J. A. Smith	York	Newcastle.
Surgeon W. T. Johnston, M.D.	Birmingham	Sheffield.
,, A. C. J. R. Lundy, M.B.	York	Chester.
,, N. Leader	Egypt	Dublin.
,, A. W. P. Inman, M.B.	Buttevant	Dublin.
,, M. Martin, M.B.	Carlisle	York.
,, R. H. Forman, M.B.	York	Glasgow.
,, J. M'M. Bolster	Cork	Dublin.
,, M. F. Macnamara	Tipperary	Cork.
,, D. L. Irvine	York	Wrexham.
,, J. H. Nicholas	Newport	Sierra Leone.
,, D. Franklin	Aldershot	Shorncliffe.
,, H. Saunders	Shorncliffe	Aldershot.
,, A. J. Struthers, M.B.	Bengal	Woolwich.
,, A. T. Sloggett	Bengal	Devonport.
,, T. A. Dixon	Hulme	Burnley.
,, H. H. Johnston, M.B.	Edinburgh	Piershill.
,, E. M. Wilson	Gosport	Chatham.
,, W. G. Clements	Shorncliffe	Chatham.
,, C. S. Robinson	Egypt	Dover.
,, E. A. C. Smith	Shorncliffe	Bengal.
,, W. E. Berryman	York	Lichfield.
,, G. H. Symes, M.B.	Curragh	Sierra Leone.
,, M. T. Yarr	Beverley	Hong Kong.
,, C. H. Melville, M.B.	Glasgow	Bengal.
,, H. Cocks, M.B.	Leeds	Ashton-u.-Lyne.
,, F. W. Hennessy, M.B.	Aldershot	Bengal.
,, H. W. M. Kendall	Gosport	Bengal.
,, H. P. G. Elkington	Portsmouth	Bengal.
,, T. H. Corkery	Salford	Madras.
Quartermaster S. Evans	—	Colchester.
,, J. Horn	Devonport	Bermuda.

The gentlemen who were recently appointed Surgeons from July 28th last, have been stationed as follows:—

Surgeon T. H. Corkery	Madras.
,, W. R. D. Crooke, M.D.	Bengal.
,, W. P. Squire	Bengal.
,, C. L. Walsh	Bengal.
,, J. J. O'Donnell, M.B.	Barbadoes.
,, S. J. W. Hayman	Bomtay.
,, J. P. S. Hayes	Canterbury.
,, J. S. Davidson, M.B.	Aldershot.
,, J. Will, M.B.	Aldershot.
,, J. Moir, M.B.	Devonport.
,, J. Fallon	Dublin.
,, J. V. Salvage, M.B.	Woolwich.
,, J. F. S. Fowler, M.B.	Aldershot.
,, A. R. Aldridge, M.B.	Chatham.
,, R. A. Bostock	Aldershot.
,, J. Fayrer	Edinburgh.
,, C. P. Walker, M.B.	Bengal.
,, C. J. MacDonald, M.D.	Cork.
,, C. J. W. Tatham	Dover.
,, T. H. F. Clarkson	Portsmouth.
,, H. W. Austin	Devonport.
,, C. Garner, M.B.	Shorncliffe.
,, R. W. Wright	Woolwich.
,, W. F. Bailey, M.D.	Belfast.
,, E. Eckersley, M.B.	Sunderland.

		To
Surgeon	R. J. C. Cottell	Portsmouth.
,,	J. G. Deane, M.D.	Belfast.
,,	D. M. Greig, M.B.	Edinburgh.
,,	J. R. Burrows, M.D.	Cork.
,,	J. Keatly	Curragh.
,,	D. Hennessy, M.D.	Limerick.
,,	D. M. Saunders, M.D.	Aldershot.
,,	W. Kebbell, M.B.	Dublin.
,,	D. M. O'Callaghan	Curragh.
,,	M. J. Whitty, M.D.	Clonmel.
,,	H. A. Cummins, M.D.	Clonmel.
,,	R. E. Kelly, M.D.	Clonmel.
,,	J. F. Donegan	Devonport.
,,	J. Donaldson	Belfast.
,,	H. B. Mathias	Devonport.
,,	G. Kent	Chatham.
,,	G. H. Barefoot	York.
,,	F. R. Newland, M.B.	Dublin.
,,	R. J. Windle, M.B.	Portsmouth.
,,	R. J. D. Hall	Ashton-u.-Lyne.
,,	E. S. Marker	Portsmouth.
,,	C. W. Allport, M.D.	Aldershot.
,,	J. J. Russell, M.B.	Cork.
,,	A. J. J. S. Laye	Colchester.
,,	G. Scott, M.B.	Edinburgh.
,,	T. Browning	Curragh.
,,	A. L. F. Bate	Sligo.
,,	W. J. Trotter	Curragh.
,,	A. Hosie, M.B.	Edinburgh.
,,	G. F. H. Marks, M.D.	York.
,,	R. Holyoake	Colchester.
,,	R. N. Gust, M.B.	Ashby-de-la-Zch
,,	J. J. C. Watson, M.D.	Dublin.
,,	T. Whaite, M.B.	Portsmouth.
,,	H. T. Knaggs	Dublin.
,,	F. S. Le Quesne	Cork.
,,	V. E. Travers-Smith, M.D.	Colchester.
,,	N. Smyth, M.D.	Colchester.
,,	C. S. Cronin	Aldershot.
,,	W. Dowman	Aldershot.
,,	R. E. Foott, M.D.	Aldershot.

ACTING VOLUNTEER MEDICAL OFFICERS.

DR. WALTER PEARCE, Acting-Surgeon 20th Middlesex (Artists) R.V., sends the following replies to the questions asked in the BRITISH MEDICAL JOURNAL, October 16th, p. 747 :—

1. An Acting Surgeon is required to obtain the certificate of proficiency, in order to earn the special capitation allowance for his corps, *vide* Volunteer Regulations, 1884, Section viii, paragraph 837.

2. The application for an Examination Board is made by the commanding officer of a corps through the general officer commanding to the principal medical officer of the district, *vide* Volunteer Regulations, Section xxx, paragraph 990.

3. A course of instruction, for six weeks, can be taken at Aldershot, commencing in February and August. Applications to be made through the commanding officer, *vide* Volunteer Regulations, Section xxx, paragraph 990.

4. Pay and lodging allowances, which are received by officers of other branches of the volunteer service (Volunteer Regulations, Section viii, paragraphs 349 and 357), have not been extended to the volunteer medical officers.

5. Volunteer medical officers wear the uniform of their respective corps, with certain exceptions, as laid down in the Volunteer Regulations, Section xix, paragraph 761.

6. The rank of Acting Surgeon is that of lieutenant, *vide* Volunteer Regulations, Section iv, paragraph 58.

7. The Volunteer Regulations, 1884, are published, price 1s. 6d., to be had of all military booksellers.

DR. J. P. MASSINGHAM, Acting Surgeon 1st Shropshire and Staffordshire Artillery Volunteers, who has also been good enough to answer the questions, points out that the capitation grant earned is £2 10s. *per annum*, and offers to give further particulars by private correspondence.

FOREIGN AND ACTIVE SERVICE: SURGEONS IN INDIA.

SIR,—As the medical officers who come to India this trooping season may not be aware that they are liable for active service in Burmah or elsewhere, no matter to what Presidency they may be appointed, I think it right to inform them, through your columns, that, by a recent regulation of the Government of India, it has been decided that medical officers, immediately on arrival in India, are placed upon the top of the local rosters for active service, and for foreign service outside India, instead of at the bottom, as is done at home. Medical officers, especially those who are married and have families, should be careful to avoid involving themselves in any expense in the way of setting up house, buying furniture, carriage, etc., on first arrival in India, as they may find themselves ordered about from station to station at very short notice, and thus be obliged to sell off at a sacrifice. They should put up at a boarding house, or hotel, for twelve months. As for young surgeons, whose pay in India is absolutely less than at home, the best advice to give them is to avoid India, if they possibly can go to any other station, and this advice applies equally to the young medical officers of both services. Exchange is now so low, that a rupee is worth only 1s. 4½d.—Yours obediently, KUBBER DHAR.

THE NAVY.

THE following appointments have been made at the Admiralty during the past week :—ALEXANDER FLOOD, Staff Surgeon to the *Scout*; J. T. W. S. KELLARD, Surgeon to the *Shannon*; J. J. WALSH, Surgeon to the *Bann*; A. H. MILLER, Surgeon, to Ascension Hospital; JOHN DAWSON, Surgeon, to the *Wye*; Deputy Inspector-General BELGRAVE NINIS, to Jamaica Hospital; Deputy Inspector-General DUNCAN HILSTON, to Chatham Hospital; A. W. MCLEOD, Surgeon, to the *Seahorse*, additional; M. A. LYDON, to be Surgeon and Agent at Costello Bay and Spiddal; L. T. COLTHURST, Surgeon, to the *Royal Adelaide*.

MEDICAL STAFF.

SURGEONS B. W. WELLINGS, ROBERT SMITH, M.B., F. W. TREVOR, M.B., H. A. FOGARTY, M.D., HARVIE SCOTT, M.B., R. H. GARDNER, M.B., JAMES M'GANN, JAMES POWELL, S. H. CARTER, M.B., W. A. MAY, G. D. BOURKE, H. G. GARDNER, M.B., and JOHN HOYSTED, are appointed Surgeons-Major. All these gentlemen joined the service September 30th, 1874. Surgeon Hoysted served in the operations in the Malay Peninsula in 1875-76. Surgeons Wellings, Trevor, Carter, and Hoysted were engaged in the recent war in Afghanistan; Surgeons Smith, Scott and M'Gann in the Boer war of 1881; Surgeon Wellings in the campaign in Egypt in 1882, including the battle of Tel-el-Kebir; Surgeons Smith, Trevor, Powell and Bourke with the expedition up the Nile in 1884-85; Surgeon Wellings and Hoysted in the campaign in the Eastern Soudan in 1885; and Surgeons Powell and Bourke in the operations on the Egyptian frontier, under Sir Frederick Stephenson, in 1885-86.

Surgeon-Major J. WILLIAMSON, M.B., serving in the Bombay command, is transferred from the medical charge of the station hospital at Sattara, to the medical charge of the station hospital at Deolalee.

THE INDIAN MEDICAL SERVICE.

THE services of Surgeon-Major B. GUPTA, M.B., and of Surgeons B. DOYLE, T. H. SWEENY, L. A. WADDELL, M.B., T. R. MACDONALD, M.B., and F. S. PECK, all of the Bengal Establishment, are temporarily placed at the disposal of the military department.

Surgeon-Major W. NOLAN, M.A., M.D., of the Bombay Establishment, Superintendent of the Colaba Lunatic Asylum, who was appointed to officiate as meteorological reporter for Western India, having been granted one year's furlough by the Government of India, Surgeon J. PARKER, M.D., M.Ch. (Ireland), L.M. (Dublin), the officer appointed to act for him as Superintendent of the Colaba Lunatic Asylum, is also appointed to officiate as meteorological reporter of Western India during the absence on privilege leave of Mr. F. Chambers.

Brigade-Surgeon J. C. MORICE, Bengal Establishment, is appointed Deputy Surgeon-General, with temporary rank, during the absence of Deputy Surgeon-General Farrell, on field service.

Brigade-Surgeon C. P. COSTELLO, Bengal Establishment, is appointed administrative Medical Officer of the Quetta District, *vice* Brigade-Surgeon A. F. Bradshaw, proceeded to Egypt.

Brigade-Surgeon G. FARRELL, C.B., Bengal Establishment, who entered the service as Assistant-Surgeon, August 4th, 1856, is promoted to be Deputy Surgeon-General, *vice* Deputy Surgeon-General J. Brake, who has retired. Deputy Surgeon-General Farrell served in the recent war in Afghanistan, and was present at the forcing of the Sapri Pass, and at the action at Charasiah, on October 6th, 1879; on each occasion he was mentioned in dispatches for his services.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.

THE quarterly report of this institution, presented by Dr. Robertson, shows that 985 in-patients were admitted during the three months ending September 30th, being 108 less than in the corresponding quarter of the preceding year. It would not be right to assume, as is pointed out, that the smaller number of patients received was due to the occurrence of fewer cases of rheumatic character throughout the manufacturing, mining, or agricultural population; on the contrary, the severe weather in all parts of the country during those months added to the proportion of rheumatic sufferers. The cause is rather to be looked for in the straitened circumstances of the working classes, to many of whom the railway fares to and from Buxton make the charity almost, if not quite, unavailable. It is pointed out that it might be a valuable addition to the powers of the hospital if a railway-ticket could be provided for those who stood in need of such assistance. From a total number of 1,307 patients on the books during the three months, 1,034 were discharged improved, 13 no better, and the remainder from various causes; 113 out-patients were received during the quarter, and 128 were discharged improved. Of those concerning whom reports were received by post-card six weeks after leaving the hospital, 578 were improved, 260 no better, and 4 had died. Of the 985 cases under treatment, 119 are stated to have been cases of rheumatism attended by endocarditis, pericarditis, valvular disease, or some degree of heart-complication; 851 cases were grouped under the general head of cases of rheumatic or gouty character, and, therefore, likely to be benefited by the mineral water and elevated situation of Buxton. Two life-subscriptions were received during the quarter, and a legacy of £1,000 from Miss Nightingale. A large sum has been withdrawn from the investments of the hospital, to pay for the cost of extension, in addition to the grant from the governors of the Cotton Districts Convalescent Fund, and donations are much desired.

MEDICO-LEGAL AND MEDICO-ETHICAL.

CORONERS' INQUESTS.

In a long letter which appeared in the *Times* of Monday, October 18th, the Rev. J. Newton Heale, The Vicarage, Orpington, complains somewhat bitterly that an inquest was held on his child, aged 1 year, who died from the effects of scalds caused by the deceased falling into a bath of too hot water. The grievance, after all, is, perhaps, not so much the holding of the inquest, as that it did not take place until a week after the interment, thus necessitating the exhumation of the body, and, as Mr. Heale says, causing an "unnecessary interference with the sanctity of the grave," and a revival of the sorrow and distress consequent upon the death and the sad circumstances preceding it.

Regarding this matter from a strictly legal point of view, it is undoubtedly the duty of the coroner to hold an inquest in all cases of death arising directly or indirectly from violence or injury, etc.,—in other words, in all cases not arising from natural causes; and it is also the duty of the registrar of deaths to report to the coroner (on a printed form supplied by the Registrar-General for that purpose) all cases of death which, from the statement of relatives or friends, or from the medical certificate given, appear to have arisen from other than natural causes; and, further, it is his duty to withhold the burial order pending the coroner's inquiries and reply.

Had this course been adopted, or had the medical attendant or any of the relations of the deceased child communicated directly with the coroner, instead of consulting together with the registrar, the deputy registrar, and the local police, and ultimately procuring from the medical man "such a certificate of the cause of death as he, with the registrar, thought met the case," and then coming to the conclusion amongst themselves that no inquest was necessary, much of the distress and inconvenience that followed would have been avoided, and the inquiry would have taken place in the usual way, without disturbance of the body or interference with the necessary arrangements for the funeral. Mr. Heale further states that he "purposely postponed the funeral to the longest time possible, namely, from Monday till Saturday, chiefly in order that, if a coroner's inquest should be required, there should be ample opportunity for it. No notice came, and in due course the child was buried."

The question naturally arises, In what way did Mr. Heale expect a a notice would come? As the relatives, the medical man, the registrar, and the police had prematurely arranged amongst themselves that an inquest was unnecessary, they singularly failed, one and all, to make the necessary communication with the coroner, the only person who could settle this question. From inquiries we have made, it appears that the certificate given by the medical attendant "to meet the case" showed that the cause of death was "serous apoplexy," no primary cause being mentioned; and that the certificate was issued after consultation with the registrar. This in itself is a strange proceeding, and might, without explanation, readily lead to the supposition that some motive existed for concealing the real cause of the death. Again, it appears from the proceedings at the inquest that the death was never registered, and no "burial order" issued; and that the deceased child was buried without one—a series of irregularities which we trust the Registrar-General will strictly inquire into. Had the coroner been informed of the death, as he should have been, and might have been within twenty-four hours of its occurrence, he would doubtless, with all courtesy and consideration, have explained to those concerned in the matter the law upon the subject, and, in the subsequent conduct of the inquest, would have caused as little inconvenience as possible, having due regard to the natural feelings of relatives and friends.

We confess our surprise on reading that "the coroner threatened to enforce a *post mortem* examination if his wishes were not complied with;" but we learn on the best authority that this statement is incorrect, and that a *post mortem* examination was mentioned only by the coroner as a means of ascertaining the real cause of the death, should the cause as stated in the certificate be persisted in.

From what afterwards followed, it would appear that the coroner was not informed of the death until some days after the interment; and, being unable to see his way clearly out of a difficulty others had placed him in, and after communication with the Home Office, he acted as the law directed (not "because the coroner so willed it," as Mr. Heale suggests), and held the inquest, ordering, as a necessity, the disinterment of the body. As the law now stands, the coroner has no choice but to hold his inquiry *super visum corporis*, and he would have acted illegally had he not done so. Nevertheless, we are inclined to believe that a modification of the law, as regards the view of the body, would be appreciated not only by jurors, but by all others connected with the holding of inquests. The necessity for holding an official inquiry in all cases where death arises from injury or violence has been generally recognised, as cases of death supposed to be accidental previous to the inquest occasionally terminate in committals for manslaughter, and sometimes even for murder.

In connection with the present case, we may mention one in which a nurse in an asylum caused the death of a person by allowing the hot water tap of a bath to remain turned on, contrary to instructions, after the patient had stepped into the water, and she was committed to take her trial for manslaughter; so, in all such cases, it is for a jury to decide whether the death arose from the careless or culpable neglect of some other person or from purely accidental causes. The coroner is not empowered to decide this; much less, indeed, must the friends be allowed to do so; they, as a rule, being to a certain extent interested parties.

We have in our recollection another case, similar in nearly every respect, as far as we know the details, to the one under consideration, in which the mother of the deceased child was so enraged with a young servant-girl to whose negligence she attributed the death, that she actually stated in the open court that she should like to half kill her. The jury, after careful inquiry, were able to acquit the accused of the negligence imputed to her, and thus to restore a character which otherwise might have been seriously injured. The two examples given vindicate the necessity of holding inquests in all such cases, whether negligence is previously alleged or not.

With regard to the exhumation of the body, Mr. Heale suggests that this might have been avoided had an inquiry been held before a justice of the peace; but we would observe that this course can only be adopted if the police have reasonable grounds to suspect that the person interred came to his death by some felonious means; and even then someone must be charged, if only on suspicion.

From a sympathetic and sentimental point of view, we can condole with Mr. Heale and his family, but we cannot help thinking that, if timely notice had been given to the coroner, instead of apparently attempting to avoid the inquiry, the necessity for his letter, and his unfair strictures upon the coroner and his court, would have been avoided.

"FETCHING THE DOCTOR."

A Member forwards the following report of a case published in the *Leicestershire Chronicle*, on October 2nd, and raises the question whether it is the duty of a qualified medical man to attend a case on which an unqualified person has previously been in attendance.

Sad Death of a Woman.—An inquest was held on Monday afternoon at the Rainbow and Dove Inn, Northampton Square, touching the death of a married woman named Emma Seal, who lived with her husband, who is a trimmer, at 10, Newport Place, Northampton Street. It appeared that Mrs. Seal was 20 years old, and was confined on Tuesday, being attended by an unqualified practitioner, named Anderson, living in Bond Street. On Sunday night, while in bed, she woke her husband, asking him to fetch the doctor. Mr. Anderson was called in, and expressed his belief that he would "pull her through." He ordered brandy, and while it was being fetched Mr. Anderson went away. He returned later on with another man. Mr. Seal's sister-in-law expressed her belief that they were not qualified persons, and ultimately Mr. C. Crossley, surgeon, was fetched, but deceased did not rally.—Mr. Crossley's evidence was to the effect that he saw deceased at 12.30, and she was then in a dying state. She had lost a great quantity of blood, and was expiring from the effects. There were no suspicious appearances, and the woman died from exhaustion.—In reply to the Foreman (Mr. Baum), witness said that if Mrs. Seal had been attended by a properly qualified man, there was just a chance that her life might have been saved.—The Coroner: Have you heard of Mr. Anderson practising midwifery? Mr. C. Crossley: About twelve years ago he was an unqualified assistant to my father and Mr. Sidley. We have heard nothing of him until about a week ago, and it seems he had been with Mr. Dickson, of Sanvey Gate, but has left him.—Deceased's husband said it was his wife's suggestion that they should have Mr. Anderson, as she thought he would be cheaper. He was, however, under the impression that Mr. Anderson was qualified.—A verdict was returned in accordance with the evidence of Mr. Crossley.

"So exceptional and withal suggestively wrong in principle, is the question on which "A Member" has thought well to solicit our opinion, that, in the interest of the public and of the profession alike, we think it right unhesitatingly to affirm the opinion that in such cases as the one to which he specially refers, it is a duty incumbent on the qualified members of the profession, a duty emphasized by the dictates of humanity, to forthwith accept charge of such a case, notwithstanding that "an unqualified person had been in attendance;" and in the true Samaritan spirit of the orthodox profession, humbly seek, by the aid of science and art, to rescue from possibly impending death, or at least to mitigate the sufferings of the victim of ignorance or prejudice. Such is the clearly enunciated principle laid down in the *Code of Medical Ethics*, to which we would refer our correspondent.

DEATH-CERTIFICATES SIGNED BY UNQUALIFIED PRACTITIONERS.

A Provincial Member enquires if a registrar is entitled to register a death when the certificate is signed by an unregistered man. On the outskirts of a Yorkshire town, an irregular and unregistered practitioner attends patients as if

regularly qualified, boasts of his ability to give a death-certificate, and deludes the people into the belief that he is a member of the profession. When a case dies, he fills up the usual form (from a book, I suppose, supplied by the registrar) and signs himself "—— M.D.Phil., unregistered." The registrar (whose family are attended by this person) quietly accepts the certificate, registers the deaths; but, in his register, returns the deaths as "uncertified," saying nothing to the people, however, about the illegal nature of the qualification. Our correspondent raises the question whether it is optional with a registrar to accept or refuse a certificate signed by an unqualified person? If there is no rule on the point, he thinks it strange that a country registrar should be able to take under his protecting wing any charlatan who can secure his favour. If this state of affairs were brought to the notice of the Registrar-General, would it be likely to lead to any results?

The registrar's primary duty is to register all deaths occurring within his subdistrict. If the deceased person has been attended during his last illness by a registered medical practitioner, it is further his duty to require a certificate of the cause of death, signed by such practitioner. If the deceased has not been so attended, the law, and his regulation, still require the registrar to register the death, and also to record the cause of death, in accordance with the best information he can obtain. If the deceased has been attended by an unregistered practitioner (and the law has never yet attempted to interfere with the right of the public to call in ever so notorious a quack, if the public be foolish enough to prefer his services to those of registered practitioners), and a written statement of the cause of death signed by such practitioner is brought to the registrar, he must accept such information of the cause of death as the best that can be obtained, but the cause of death is entered in the death-register as uncertified, in precisely the same manner as if the deceased had had no kind of medical attendance during his last illness.

WITNESS.

THE fee allowed to a professional man for giving evidence in the High Court is from £1 1s. to £3 3s. *per diem*, and travelling expenses. Litigants who require skilled evidence are usually willing to pay extra for it, but it is advisable to have a distinct promise in writing, as to the amount payable. A witness, before being sworn, may demand payment of his expenses; after he is sworn it is too late to do so.

DEATH-CERTIFICATES.

SIR,—Mr. T. E. Lovegrove has been good enough to send me his questions and your answers, published in your JOURNAL of September 25th, p. 615, I having complained of his having given the certificate in question.

I think Mr. Lovegrove puts forward the wrong issue. I did not state that, in giving a certificate in case of violent or sudden death, a medical man would be committing a crime, for which he would be subject to a penalty, unless he did so with the wrongful intention of avoiding an inquest, there being (so far as I am aware), no statutory enactment inflicting a penalty in such a case. What I stated was that a medical man was not obliged to certify a violent or unnatural death, and that, if he did so, he might be the means of perverting justice by enabling the burial of the body without a proper inquiry. However desirable it may be that registrars should be well enough educated for them to know what to do with certificates, the simple fact is that many of them are not so; cases illustrating this have occurred in this town, and no doubt elsewhere. I will give two instances—in one case, almost exactly like Mr. Lovegrove's—namely, death by poisoning, the practitioner certified that the deceased had died from "gastro-enteritis," which was, no doubt, strictly correct, the unsuspicious registrar gave a burial order, and an inquiry was avoided, the circumstances not becoming known to the coroner until some weeks after. In the other case, the deceased's death was caused by injuries, and the medical certificate stated it to be due to "traumatic delirium." This also was doubtless true: and, to a Greek scholar, knowing the word τραυμα (a wound) would be intelligible, but several registrars and some medical men did not comprehend it; however, the death was registered, and no investigation took place. Do not these cases show the danger of giving certificates as to unnatural deaths?

Now let us try to ascertain from the Births and Deaths Registration Act, 1874, what the practitioner's duty is, bearing in mind that a certain course of action may be unjustifiable without being criminal. In the first place, Section 17 obliges a registrar who registers a death on a medical certificate to give a burial order; this shows that the object of the certificate is that it be registered, not sent to the coroner as suggested by Mr. Lovegrove—and its natural consequence is burial without inquiry. By Section 20, Subsection 2, the practitioner attending a person in his last illness is to give a certificate of death, but Subsection 3 of the same section says that he need not do so where an inquest is held, so that it is clearly not his duty to certify in all cases. This again is proved by Section 34, which imposes a penalty on a practitioner who "refuses or fails, without reasonable excuse," to give a death-certificate. What could be a more reasonable excuse than the knowledge or belief that the relatives of a person who had died an unnatural death, intended to bury the body without an inquest?

Now let us turn from the statute law to the common law on the subject. In the fourth edition of *Jervis on Coroners*, p. 197, it is thus laid down: "In all cases of sudden death, or death under any circumstances of suspicion, where the duty of informing the coroner is not by statute imposed upon any particular person,[1] it is the duty of those who are about the deceased to give notice to the coroner or his officer, or to the nearest officer of police, who then communicates with the coroner. If, in such cases, it is attempted to register the death in the ordinary way, the registrar, acting under his instructions from the Registrar-General, always refers the matter to the coroner. It is an indictable offence to bury a man who dies a violent death before a coroner's jury have sat." It may be contended that the last sentence but one of the above impliedly sanctions the giving of a certificate, but it merely points out the practice where an attempt to register a death is improper; *ergo*, a certificate should not be given to assist such an attempt. The last sentence of the quotation is important. One who *male fide* helps or enables another to commit an offence, is himself *particeps criminis*, and a practitioner who certifies a violent death, either renders himself liable to indictment on the one hand, or, at the least, lays himself open to the suspicion of not having acted innocently—alternatives which are both better avoided. Then again, I think Mr. Lovegrove will scarcely assert that all, or even the majority of medical certificates, are characterised by the same plainness as the sample he gives, namely, "poisoned through eating a fungus;" and when technical terms are so common and so available, is there not a temptation to resort to one which may lull suspicion and procure from the registrar the much desired burial order?

MR. Lovegrove tells me that, in future, he will give certificates in all cases when demanded; but, as a matter of courtesy, will also inform me of suspicious cases, and I thank him for his offer. No one appreciates a little courtesy more than myself, and I trust I do not fail to extend it to those medical gentlemen with whom it is my pleasure to be brought into contact; but it is an attribute not so plentiful in some quarters as in others; and surely Mr. Lovegrove will not contend that justice should be dependent upon courtesy.

Now I hope that I have demonstrated, if not the illegality, at any rate the inadvisability of certifying unnatural deaths; and I know that some of Mr. Lovegrove's professional brethren do not adopt his views; but there is another aspect of the question which I will slightly touch upon. What is the object of giving a certificate which the practitioner knows ought not to be registered? Is it not to avoid disfavour on the part of the patient's relations, and to throw upon the registrar the responsibility of reporting to the coroner? If this is so, surely it is not a very high-minded policy for a member of a learned profession to pursue, and no good reason for a practitioner deviating from his plain duty. I am well aware, however, that with some it is an important factor. Apologising for the unavoidable length of this letter,—I am, Sir, your obedient servant,

ARTHUR BROWNE, Deputy Coroner for Nottingham.

*** We agree that medical practitioners should be careful as to the certificates they give; and inasmuch as the registrars are not usually members o learned professions, it is most desirable that the cause of death should be stated in plain English, according to the example given by Mr. Lovegrove, and no wrapped up in technical phrases such as those quoted by Mr. Browne. If the certificate is given so as to point out to the registrar the true cause of death, we think the medical practitioner will have discharged his duty both legally and morally; but if, either from intention to spare the feelings of relatives, or from a pedantic fondness for high-sounding phrases, he uses language which does not convey to an ordinary mind the true cause of death, he cannot be said really to have discharged his duty to the public.

PRESCRIPTIONS FOR HOSPITAL PATIENTS.

SIR,—I have just been charged with a breach of professional etiquette, and should like your opinion on my conduct.

I have recenty resigned the office of house-surgeon to an infirmary, and was asked, before leaving, to give a patient the prescription of the medicine she was taking (prescribed by myself). I promised to do so, but it escaped my memory till the other day, when I sent it to her through the post. She was anxious to have the prescription, in order to get it made up at a chemist's any time that an attack of her complaint might come on. All patients' prescriptions were entered in a book kept in the infirmary, and they were seen and prescribed for by the house-surgeon. A non-medical friend has written and censured me. Is there anything wrong in my conduct?—Yours obediently, C. G. M.

*** Unless the regulations of the infirmary in question contain a prohibitive rule debarring members of the staff from giving to individual patients, for their own especial use, a copy of any prescription which they have personally written for them, as patients of the institution (an intolerant restriction to which no surgeon could submit), we consider that our correspondent had a perfect right to accede to the patient's pressing request, and, in so doing, performed a simple act of considerate kindness, without in any way committing "a breach of professional etiquette."

CORPUS.—The amount of walking which can be reasonably required from an assistant must, of course, be determined partly by the other work which he has to perform, and other reasonable considerations. Five or six miles a day would be a reasonable limit, but these are matters for personal adjustment. Unfortunately, principals are often unreasonable, and sometimes assistants are captious.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

IN the interests of public health, the medical officer of the Port of London has done right in refusing to accept the recent decision of a Metropolitan magistrate, who refused to convict a man who had 12,000 bad eggs in his possession, on the ground that eggs cannot be considered as coming within the terms of the Public Health Act, inasmuch as they are neither fish, flesh, nor fowl. Dr. Collingridge, in his report, emphatically states: "Whatever the strictly legal question may be, I have only to consider eggs as food, and shall continue to seize whenever found unfit for food."

LIVING OVER CESSPOOLS.

A DISCOVERY, by no means of an agreeable character, yet one which would, we fear, in houses of long standing, be often made if looked for, was reported by the sanitary inspector at a recent meeting of the Hornsey Local Board. On visiting a residence situated in Colney

[1] Gaolers, asylum superintendents, and registered owners of infant boarding-houses.

Hatch Lane, he stated that he had discovered three very large cesspools immediately under the living rooms of the house. One of these cesspools was said to be 25 feet deep, and all were quite full of sewage. It was stated that the family had been living over these cesspools for years, and that the occupier had, on several occasions, had builders in his house to attend to his drains and keep them in order.

THE TRUE DEATH-RATES OF LONDON DISTRICTS DURING THE THIRD QUARTER OF 1886.

In the accompanying table will be found summarised the vital and mortal statistics of the forty sanitary districts of the metropolis, based upon the Registrar-General's returns for the third quarter of the current year. The mortality figures in the table which we have prepared relate to the deaths of persons actually belonging to the respective sanitary districts, and are the result of a complete system of distribution of the deaths occurring in the institutions of London among the various sanitary districts in which the patients had previously resided. By this means alone can reliable data be secured upon which to calculate reliable rates of mortality.

During the third quarter of this year, 32,743 births were recorded in London, equal to an annual rate of 31.7 per 1,000 of the population, estimated to be 4,149,533 persons in the middle of this year. In the corresponding periods of 1884 and 1885, the metropolitan birth-rate was 32.8 and 31.5 respectively. The birth-rates in the various sanitary districts last quarter differed greatly, owing to the wide variations in the sex and age distribution of the population. In Kensington, St. George Hanover Square, St. James Westminster, and Hampstead, where the population contains a large proportion of unmarried females, chiefly domestic servants, the birth-rates were considerably below the average. On the other hand, in Fulham, St. Luke's, in the districts of East London, in Greenwich and in Woolwich, where the population consists largely of young married persons, the birth-rates showed an excess.

The 19,094 deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of 18.5 per 1,000, which, though slightly exceeding the exceptionally low rate in the September quarter of 1885, was lower than that recorded in the third quarter of any year since 1879, and considerably below the average death-rate in the corresponding period of the ten preceding years, 1876-85. Among the forty sanitary districts, the lowest death-rates last quarter were 12.3 in Hampstead, 13.0 in Plumstead, 13.5 in Kensington, 14.5 in Lewisham, and 14.7 in St. George Hanover Square. In the other districts, the rates ranged upwards to 23.7 in St. Olave Southwark, 24.2 in Stepney, 24.9 in Whitechapel, 27.8 in Holborn, and 31.5 in St. George-in-the-East. During the quarter under notice, 4,363 deaths were referred to the principal zymotic diseases in London, equal to an annual rate of 4.2 per 1,000 persons living, against 5.1 and 3.8 in the corresponding quarters of 1884 and 1885. The lowest zymotic death-rates in the forty sanitary districts were recorded in Hampstead, Plumstead, Kensington, St. George Hanover Square, and London City; the highest in St. Luke's, St. Olave Southwark, Whitechapel, Shoreditch, Fulham, Holborn, Stepney, and St. George-in-the-East. The 4,363 zymotic deaths included 2,127 which resulted from diarrhœa, 390 from measles, 295 from whooping-cough, 194 from different forms of "fever" (including 3 from typhus, 171 from enteric or typhoid fever, and 20 from ill-defined forms of fever), 181 from diphtheria, 174 from scarlet fever, and 2 from small-pox. Compared with the preceding quarter, the

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after complete distribution of Deaths occurring in Public Institutions, during the Third Quarter of 1886.

Sanitary Areas.	Estimated Population middle of 1886.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.
LONDON	4,149,533	32,743	19,094	31.7	18.5	4.2	4,363	2	390	174	181	295	3	171	20	3,127	220
West Districts																	
Paddington	111,135	711	456	25.7	16.5	3.7	101	—	10	—	4	16	—	2	—	69	224
Kensington	186,584	1,028	626	22.1	13.5	2.4	110	—	14	3	7	9	—	3	—	74	199
Hammersmith	90,008	774	409	34.5	18.2	4.3	97	—	2	3	3	8	—	5	1	75	196
Fulham	56,361	637	325	45.4	23.1	6.8	96	—	16	1	4	5	—	4	—	66	235
Chelsea	97,716	760	461	31.2	18.9	3.5	85	—	4	—	3	6	—	2	—	70	233
St George, Hanover Square	88,176	419	323	19.1	14.7	2.4	53	—	3	3	6	6	—	4	—	31	189
Westminster	56,484	403	305	28.6	21.7	4.3	61	—	1	4	5	7	—	1	—	43	263
St. James, Westminster	28,174	118	124	16.8	17.7	3.3	23	—	6	1	—	4	—	—	—	12	280
North Districts																	
Marylebone	150,884	1,179	714	31.4	19.0	4.0	151	1	19	2	3	10	—	8	1	107	204
Hampstead	53,758	297	165	22.2	12.3	2.3	31	—	—	—	1	5	—	3	—	22	180
St. Pancras	241,557	1,849	1,200	30.7	19.9	4.2	255	—	22	8	6	33	—	5	—	181	232
Islington	319,824	2,437	1,364	30.6	17.1	4.4	351	—	15	4	15	25	—	19	1	272	237
Hackney	224,768	1,682	879	29.8	15.7	4.5	252	—	12	25	13	19	—	19	1	163	212
Central Districts																	
St. Giles	41,348	272	245	26.4	23.8	5.9	61	—	23	—	2	5	—	1	—	30	217
St. Martin-in-the-Fields	15,721	96	67	24.5	17.1	3.1	12	—	—	1	—	—	—	1	—	10	271
Strand	30,114	182	172	24.3	22.9	3.6	27	—	3	—	1	2	—	1	—	20	297
Holborn	31,625	261	219	33.1	27.8	7.1	56	—	6	—	2	12	—	2	—	34	326
Clerkenwell	69,172	518	358	30.1	20.8	5.0	86	—	1	2	3	8	—	3	—	74	249
St. Luke's	52,000	486	287	37.5	22.1	6.0	78	—	10	1	3	3	—	1	1	59	237
London City	41,055	177	223	17.1	21.5	2.5	26	—	1	1	3	3	—	1	—	17	232
East Districts																	
Shoreditch	125,508	1,179	709	37.7	22.7	6.4	201	—	19	5	4	4	1	9	—	159	265
Bethnal Green	129,895	1,286	718	39.7	22.2	5.6	181	—	22	8	3	6	—	9	—	133	228
Whitechapel	68,345	570	424	33.5	24.9	6.1	104	—	19	12	5	9	1	3	1	54	261
St. George-in-the-East	46,403	441	364	38.1	31.5	8.9	103	—	11	6	2	1	—	2	—	81	252
Stepney	58,630	548	354	37.5	24.2	7.2	105	—	16	5	3	3	—	3	2	73	279
Mile End Old Town	111,607	1,032	532	37.1	19.1	5.4	150	—	8	7	8	7	1	5	—	114	211
Poplar	178,313	1,554	736	35.0	16.6	3.6	160	—	8	11	7	7	—	10	1	116	189
South Districts																	
St. Saviour, Southwark	27,525	203	139	29.6	20.3	3.8	26	—	1	1	2	1	—	—	—	21	241
St. George, Southwark	59,329	509	337	34.4	22.8	4.7	69	—	7	4	2	3	—	2	—	51	232
Newington	117,870	1,006	566	34.3	19.3	4.5	133	—	24	9	6	6	—	3	2	83	214
St. Olave, Southwark	10,502	88	62	33.6	23.7	6.5	17	1	3	—	4	—	—	—	—	9	273
Bermondsey	88,770	768	445	34.7	20.1	4.4	98	—	5	9	4	6	—	2	—	72	202
Rotherhithe	40,958	354	209	34.7	20.5	4.4	45	—	5	2	1	2	—	1	—	34	232
Lambeth	276,731	2,236	1,218	32.4	17.6	3.6	249	—	18	20	10	16	—	5	2	178	206
Wandsworth	265,826	2,181	1,068	32.9	16.1	3.7	248	—	7	8	10	17	—	11	3	192	207
Camberwell	236,001	1,722	956	29.3	16.3	3.5	207	—	24	5	11	15	—	10	1	141	221
Greenwich	148,545	1,360	693	36.7	18.7	3.6	133	—	19	2	11	7	—	5	—	89	208
Lewisham	56,080	431	203	30.8	14.5	3.1	44	—	—	—	2	—	—	2	—	40	179
Woolwich	36,871	325	189	35.2	20.6	3.6	33	—	4	—	1	2	—	3	2	21	167
Plumstead	78,730	666	255	34.0	13.0	2.3	45	—	2	1	1	2	—	1	1	37	119

fatality of scarlet fever, "fever," and diarrhœa showed an increase, while that of each of the other zymotic diseases declined. The deaths referred to small-pox in the metropolis, which had been 8 and 9 in the first two quarters of this year, declined during the three months ending September last to 2, one of which occurred in Marylebone, and the other was of a patient in the Metropolitan Asylum Hospital-ship *Atlas*, who had been admitted from St. Olave Southwark. Measles was proportionally most fatal in Whitechapel, Stepney, Fulham, and St. Giles; scarlet fever in Hackney and Whitechapel; diphtheria in Westminster, Hackney, Mile End Old Town, and Greenwich; enteric fever in Hackney, Shoreditch, and Bethnal Green. The rate of mortality from diarrhœal diseases, which had been 3.09 and 2.02 in the corresponding quarter of the two preceding years, was 3.03 during the three months under notice. Among the forty sanitary districts of London, the lowest diarrhœa rates were recorded in St. George Hanover Square, Kensington, St. James Westminster, London City, and Plumstead; the highest in Clerkenwell, Bethnal Green, Holborn, St. Luke's, Stepney, Shoreditch, and St. George-in-the-East.

Infant mortality in London last quarter, measured by the proportion of deaths under 1 year of age to registered births, was equal to 220 per 1,000, against 223 and 187 in the corresponding periods of 1884 and 1885. Among the various sanitary districts, the rates of infant mortality were lowest in Plumstead, Woolwich, and Lewisham; while they showed the largest excess in Shoreditch, St. Olave Southwark, Stepney, St. Martin-in-the-Fields, St. James Westminster, Strand, and Holborn.

COMPETITION.

At a meeting of the Medway Board of Guardians recently held, Dr. Watson, the medical officer for the Rochester district, applied for an increase of salary. It was stated that the salary was £70 per annum. The salary of the medical officer for the Gillingham district was £80. On the proposition of Mr. Breeze, seconded by Mr. Kidwell, the application was granted. A letter was received from Dr. W. J. S. Jefferies, stating that, should a vacancy occur for medical officer, he should be pleased to undertake the duties of public medical officer and vaccinator at the present salary. The application was not entertained.

POWERS AND DUTIES OF HEALTH OFFICERS.

SIR,—I live at a watering place on the east coast. Of course we have a medical officer of health, and we (the other practitioners) think him too officious. We may be mistaken, but you will perhaps give me your opinion in the following cases.

1. Is he justified, when he hears of a case of infectious disease, in calling and not only examining the premises, but also in examining the case, and giving his opinion; which, I may say, sometimes differs from that of the medical man who is attending?

2. Is it "professional" at the commencement of a season, to have leaflets printed, headed:—"Report of Dr. So-and-So, medical officer of health," to have these leaflets circulated broadcast, and placarded in public places?

3. Is it usual for a medical officer of health to have on his visiting cards, Dr. So-and-So, medical officer of health? I may say these are laid on the hatstand of lodging houses, when making a call.—Yours truly, M.D.

*** 1. The health officer, on learning of the existence of a case of infectious disease in his district, would be quite justified in visiting the house, ascertaining the circumstances, and endeavouring to trace the probable cause. But it would be an unprofessional act to examine the patient, or to offer any opinion as to the case, without the previous permission and concurrence of the medical man in attendance.

2. Watering places often seek to advertise themselves by quotations from the reports of their medical officers of health, as to the lowness of the death-rate or the like. Possibly the circulation of the leaflets was not the work of the health officer, but of the local authority or of a publicity association in the town.

3. When a medical officer of health finds it necessary to call at a house on sanitary business, it is convenient that his official position should be stated on his card. But it is not usual for a medical man holding this position to so describe himself on the cards which he uses in the course of his ordinary practice.

These are all matters in which taste and good feeling dictate the best course to pursue. The amenities of the profession in health-resorts are not always of the most satisfactory kind; but no advantage is gained by forcibly striving to suppress little *gaucheries* of the kind described. Rather, they should be met by dignified forbearance, and by a scrupulous observance of the courtesies of the profession on the part of those who are subjected to them.

PAUPER LUNATICS.

M NORFOLK states that, through his report in his last quarterly lunatic return, the Charity Commissioners requested the guardians to have a pauper lunatic examined with a view to proper control. He received a magistrate's order to do so, and certified for her removal. The magistrate did not consider it a fit case for removal. He asks whether he ought to apply for the usual fee? The guardians have always acted considerately towards him, and the point is raised as one of law and not of controversy.

*** It not unfrequently happens, when a magistrate declines to certify that this or that individual is a fit and proper person to be sent to an asylum, but may be dealt with in the insane wards of the workhouse, that the board of guardians may take advantage of this decision to refuse payment altogether. In the case before us, as the Commissioners in Lunacy have taken the initiative, and have called upon the medical officer to take steps with a view to the person's removal to an asylum, he is clearly entitled, in our judgment, to his fee, and an application to the board of guardians will probably secure it, especially as they have acted fairly towards him before. We advise that a statement of the case, and an application for payment, should be made to the board of guardians, and in the event of their refusal, the facts might be laid before the Local Government Board.

FEES IN CASES OF ALLEGED EMERGENCY.

BITTERS asks whether he can claim a fee of £2 2s. from the board of guardians, for attendance on a pauper (a case of adherent placenta), an order for his attendance having been refused at a previous meeting of the board on the grounds that, it being close upon harvest, the man, an agricultural labourer, was able himself to pay for attending his wife in her confinement.

*** Though not directly stating, we infer, from our correspondent's letter, that he did not receive an order from "the relieving officer," or "overseer," for his attendance on the case, and as the guardians refused an order only so recently, it is not likely that the board, if appealed to, would grant the fee, and if he was to sue for it in the County Court, he would have "no case." Still, it would be worth while to write to the board, giving the history of the case, and throwing himself on their generosity. In this way he might get something.

The letter of our correspondent exemplifies in a striking manner the unwisdom of district medical officers in going immediately to attend cases of alleged emergency. We believe, from our experience, that two-thirds of the Boards throughout the kingdom would refuse to grant a fee under the above-mentioned circumstances. We have repeatedly urged upon poor law medical officers to ask for an order in all cases, the attendance on which carries with it the prospect of a fee.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, October 9th, 5,691 births and 3,369 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had declined from 22.6 to 20.6 per 1,000 in the three preceding weeks, further declined during the week under notice to 19.3. The rates in the several towns, ranged in order from the lowest, were as follow:— Bristol, 14.2; Brighton, 15.7; London, 17.2; Birmingham, 17.5; Leicester, 17.6; Huddersfield, 17.7: Bradford, 18.3; Sheffield, 19.3; Nottingham, 19.4; Blackburn, 19.6; Plymouth, 20.4; Hull, 20.7; Halifax, 20.7; Derby, 21.0; Sunderland, 21.7; Leeds, 21.9; Birkenhead, 21.9; Portsmouth, 22.2; Wolverhampton, 22.2; Salford, 22.5; Norwich, 22.7; Manchester, 23.1; Oldham, 23.6; Cardiff, 23.8; Newcastle-upon-Tyne, 23.9; Bolton, 24.4; Liverpool, 25.4; and the highest rate during the week, 29.9 in Preston. The death-rate in the twenty-seven provincial towns averaged 21.1 per 1,000, and exceeded by as much as 3.9 the rate recorded in London, which, as before stated, was only 17.2 per 1,000, and was lower than that recorded in any week since June last. The 3,369 deaths registered in the twenty-eight towns during the week under notice included 578 which were referred to the principal zymotic diseases, against numbers declining from 1,202 to 746 in the four preceding weeks; of these, 324 resulted from diarrhœa, 70 from scarlet fever, 70 from "fever" (principally enteric), 42 from diphtheria, 30 from whooping-cough, and not one from small-pox. These 578 deaths were equal to an annual rate of 3.3 per 1,000. The zymotic death-rate in London during the week under notice was equal to 2.1, while in the twenty-seven provincial towns it averaged 4.3 per 1,000, and ranged from 1.2 and 1.4 in Huddersfield and Plymouth, to 6.5 in Portsmouth, 6.7 in Preston, 7.1 in Newcastle-upon-Tyne, and 8.5 in Wolverhampton. The deaths referred to diarrhœa, which had fallen in the four preceding weeks from 998 to 532, further declined during the week under notice to 324, and showed the largest proportional fatality in Norwich, Preston, Sunderland, and Wolverhampton. The fatal cases of scarlet fever, which had increased from 43 to 61 in the three previous weeks, further rose during the week to 70, and caused the highest death-rate in Salford. The 70 deaths referred to different forms of "fever" showed an increase of 11 upon the number in the preceding week, and exceeded those recorded in any week since October, 1884; they were proportionally most numerous in Halifax, Norwich, Derby and Portsmouth. The fatal cases of measles, which had been 29 and 32 in the two preceding weeks, further rose during the week under notice to 42, and caused the highest rates in Wolverhampton and Halifax. The 42 deaths from diphtheria also showed a further increase upon recent weekly numbers, and exceeded those recorded in any week since the beginning of 1885; they included 28 in London, 4 in Liverpool, and 4 in Portsmouth. The fatal cases of whooping-cough, which had declined from 50 to 29 in the four preceding weeks, were 30 during the week under notice; they were proportionally most numerous in Preston. No death from small-pox was registered during the week under notice, either in London or in any of the twenty-seven provincial towns, and only one small-pox patient was under treatment in the Metropolitan Asylum Hospitals. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.9 per 1,000, and was below the average. The causes of 72, or 2.1 per cent., of the 3,369 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

IN the eight principal Scotch towns having an estimated population of 1,283,977 persons, 547 births and 489 deaths were registered during the week ending Saturday, October 9th. The annual rate of mortality, which had been 16.8 and 18.3 per 1,000 in the two preceding weeks, further rose during the week under notice to 19.8, and slightly exceeded the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 8.3 in Greenock, 13.5 in Aberdeen, 13.7 in Dundee, 17.0 in Leith, 19. in Edinburgh, 23.8 in Glasgow, 24.6 in Perth, and 27.8 in Paisley. The 489 deaths

registered during the week in these Scotch towns included 25 which were referred to whooping-cough, 22 to diarrhœa, 21 to scarlet fever, 6 to "fever," 5 to diphtheria, 3 to measles, and not one to small-pox; in all, 82 deaths resulted from these principal zymotic diseases, against 78 and 63 in the two preceding weeks. These 82 deaths were equal to an annual rate of 3.3 per 1,000, which corresponded with the average zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic death-rates in the Scotch towns during the week under notice were recorded in Perth, Glasgow, and Paisley. The deaths referred to diarrhœal diseases, which had declined from 57 to 34 in the four preceding weeks, further fell during the week to 22, and included 8 in Glasgow, 4 in Edinburgh, and 3 in Dundee. The 25 fatal cases of whooping-cough exceeded by 11 the number in the previous week, and included 20 in Glasgow and 3 in Paisley. The deaths from scarlet fever, which had been 9 and 8 in the two preceding weeks, rose during the week under notice to 21, a higher number than in any week during the current year; 14 occurred in Glasgow, 4 in Dundee, and 2 in Paisley. The 6 fatal cases of "fever," showed an increase of 2 upon those recorded in the preceding week, and included 2 in Glasgow, and 2 in Paisley. The 5 deaths from diphtheria exceeded those returned in any recent week, and included 3 in Glasgow, where 2 fatal cases of measles also occurred. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 4.2 per 1,000, against 2.9 in London. The causes of 73, or nearly 15 per cent. of the 489 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

In the week ending Saturday, October 9th, the total number of deaths registered in the sixteen principal town-districts of Ireland was 324. The average annual death-rate represented by the deaths registered was 19.5 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000:—Armagh, 15.5; Belfast, 19.0; Cork, 10.4; Drogheda, 12.7; Dublin, 23.0; Dundalk, 4.4; Galway, 16.8; Kilkenny, 16.9; Limerick, 17.5; Lisburn, 0.0; Londonderry, 23.2; Lurgan, 20.5; Newry, 21.1; Sligo, 4.8; Waterford, 25.5; Wexford, 29.9. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2.5 per 1,000, the rates varying from 0.0 in thirteen of the districts to 4.1 in Dublin. The 81 deaths from all causes registered in Belfast comprise 3 from scarlatina, 3 from whooping-cough, 1 from enteric fever, and 5 from diarrhœa; and the 16 deaths in Cork comprise 1 from enteric fever, and 1 from diarrhœa. In the Dublin Registration District, the births registered during the week amounted to 168—85 boys and 83 girls; and the deaths to 156—75 males and 81 females. Thirty-one deaths from zymotic diseases were registered in Dublin; they comprised 6 from scarlet fever (scarlatina), 1 from whooping cough, 2 from cerebro-spinal fever, 1 from ill-defined fever, 3 from enteric fever, 17 (including 12 of children under 5 years of age) from diarrhœa, etc. Sixteen deaths from diseases of the respiratory system were registered; they comprised 7 from bronchitis and 5 from pneumonia or inflammation of the lungs. The deaths of 12 children (including 6 infants under 1 year old) were ascribed to convulsions. Two deaths were caused by apoplexy, 6 by other diseases of the brain and nervous system (exclusive of convulsions), and 11 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 22 deaths, and cancer 2. Six accidental deaths and 1 case of homicide were registered. In 19 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

It appears, from statistics published in the Registrar-General's return for the week ending October 9th, that the annual death-rate recently averaged 29.8 per 1,000 in the three principal Indian cities; it was 23.0 in Calcutta, 24.1 in Bombay, and 42.3 in Madras. Cholera caused 11 deaths in Calcutta, and diarrhœal diseases 41 in Bombay, and 74 in Madras; while the highest mortality from "fever" was recorded in Madras. According to the most recently received weekly returns, the annual death-rate averaged 28.4 per 1,000 persons estimated to be living in twenty-two of the largest European cities, and exceeded by, as much as 9.1 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 23.0, and showed a further decline from the rates in recent weeks; the 409 deaths included 4 from small-pox, 12 from scarlet fever, and 6 from "fever." In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 27.3, and ranged from 22.7 in Stockholm to 30.5 in Copenhagen; diphtheria and croup caused 19 deaths in Christiania, and 5 in Stockholm; while diarrhœal diseases were fatally prevalent in each of these three cities. In Paris, the death-rate was equal to 21.0, differing but slightly from the rates in recent weeks; the deaths included 28 from typhoid fever, and 20 from diphtheria and croup. The 209 deaths in Brussels, of which 51 resulted from diarrhœal diseases, gave a rate of 25.0. The rate in Geneva was 20.9, and no fatal case of zymotic disease was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 23.4, the several rates being 22.2 in Amsterdam, 22.8 in Rotterdam, and 27.4 in the Hague; fever caused 3 deaths in Amsterdam, scarlet fever 3 in Rotterdam, and measles 7 in the Hague. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 36.4, and ranged from 22.9 and 23.7 in Vienna and Prague, to 52.2 in Buda-Pesth, and 62.7 in Trieste. Small-pox caused 42 deaths in Buda-Pesth and 5 in Vienna; diphtheria showed fatal prevalence in Berlin and Hamburg; diarrhœal diseases in Berlin, Dresden, and Breslau; and 49 deaths were referred to cholera in Trieste. The death-rate was equal to 22.6 in Rome and to 21.5 in Venice; small-pox caused 5 deaths in Rome; while 5 fatal cases of cholera were reported in Venice, against 12 and 14 in the two preceding weeks. The death-rate was equal to 46.2 in Cairo and to 48.3 in Alexandria; diarrhœal diseases caused 122 deaths in Cairo, and 55 in Alexandria; and typhoid fever was fatally prevalent in both these cities. In four of the largest American cities, the recorded death-rates averaged only 21.4, ranging from 15.4 in Baltimore to 25.4 in New York. Diphtheria showed more or less fatal prevalence in each of these American cities, and typhoid fever caused 20 deaths in Philadelphia.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bolton.—Mr. Sergeant's report for 1884 is less satisfactory than usual, the death-rate being 24 per 1,000, an increase of 2.4 as compared with 1883. He shows, by a series of carefully prepared tables and diagrams, that the increased mortality was mainly owing to the unusual prevalence of diarrhœa, measles, and whooping-cough among children, while chest-affections proved equally disastrous to elderly people. There were three distinct outbreaks of small-pox during the year, and altogether eleven persons suffered from the disease, though not a single case proved fatal. As compared with the previous year, which was exceptionally free from infectious diseases, there were large increases of scarlet fever and typhoid. The circumstances connected with each case of the last named disease were investigated; but, with the exception of bad drainage from inefficient trapping, no common cause seemed to exist. The zymotic percentage of deaths amounted to 18.2, against 10.3 for 1883, and 17.4 for the preceding ten years. The Borough Hospital, founded in 1882 for the treatment and isolation of infectious diseases, is now in operation, and has done good work in preventing the progress of epidemics. During twelve months, sixty-two patients were admitted, at a cost of maintenance of £10 per patient, or £2 a week on the average duration of treatment. On these figures, Mr. Sergeant observes: "The amount spent ought to be taken as a form of public insurance against preventable disease, which, irrespective of the misery and death frequently occasioned, is enormously expensive to the individuals concerned; and often, by killing the bread-winners, whole families have to be supported by the guardians of the poor."

St. Giles' District.—Mr. Lovett finds grave cause for anxiety in the state of that part of his district surrounding Shelton Street. As far back as 1877, this street was reported as proper to be dealt with under Torrens' Act of 1868; and, upon representation being made to the board, the houses on the north side were put into tenantable repair, and ventilation improved where practicable. Owing to the uncleanly and destructive habits of some of the occupants, but a short time elapsed before they again became unsanitary; and, on further inspection, Mr. Lovett concluded that nothing short of demolishing the houses, under Sir Richard Cross's Act of 1875, and widening existing thoroughfares, would remedy the evil. An official representation, dealing with 108 houses, was made to the Metropolitan Board of Works in October, 1883; and, excepting an acknowledgment of its receipt, no steps were taken until July, 1884, a period of nine months. A local inquiry was held, by the direction of the Home Secretary, in 1885, and, subsequently, a visit was paid to some of the houses. The results of the inquiry were reported to the Board of Works, with a recommendation for their serious consideration, especially having regard to the high death-rate of the locality. At the time of publishing the report, no steps had been taken; but Mr. Lovett understands that it is "the intention of the committee to view the area on some future occasion." The absence of fevers in the improved areas of Wild Street and Little Coram Street, formerly centres of these diseases, is strong evidence in favour of the Dwellings Act of 1875. The small-pox epidemic of 1884 lasted until the middle of the third quarter of 1885, causing eighteen deaths in that year. Of these, eleven patients had never been vaccinated, and one showed very imperfect marks. The district was comparatively free from scarlet fever; and all other forms of zymotic disease, with the exception of diphtheria, were below the decennial average. The death-rate (23.6 per 1,300) was 2.5 less than in 1884, and the zymotic-rate was 2.3 per 1,000.

King's Norton Rural District.—The standard of health in this district seems to have been fairly maintained during 1885. The absence of infectious disease in epidemic form is a most satisfactory feature of the year's report. Mr. Hollinshead states that there were only nine deaths from zymotic sickness; measles, diphtheria, and typhoid fever sharing equally this fatality. It is a notable fact that no deaths occurred from diarrhœa, although ninety-one cases of sickness came under notice. There was one case of small-pox, of a mild character; it was immediately removed to the hospital, and there was no further spread. This speaks volumes for the principle of isolation, and the value of the hospital. Mr. Hollinshead reports a very high state of proficiency in vaccination, but he would like to see revaccination also made compulsory, as he is convinced that it is a positive safeguard against the disease. In all the cases of diphtheria and typhoid fever, inspection was made of the surroundings, and, with one exception, some sanitary defect was discovered sufficient to account for the outbreak. These were all remedied, with the effect of preventing an extension of the disease. The death-rate for 1885, exclusive of the deaths in public institutions, was 12.95 per 1,000. The death-rate from zymotic diseases was only 0.44 per 1,000, as compared with 0.78 in 1884. With the exception of 1883, when the zymotic rate was exactly the same, these are the lowest figures recorded.

Watford.—As diphtheria was the prevailing disease in this district, and as it has been unusually fatal, Dr. A. T. Brett devotes a considerable portion of his report to its consideration. From 1850 to 1877, this disease was very rare in Watford. From 1877 to 1882,

there were 11 deaths, one or more each year; in 1883, 6 deaths; in 1884, 5 deaths; in 1885, 29 deaths. It seems to have prevailed more in the autumn, and was more fatal the younger the patient. Of the 29 who died, 21 went to public elementary schools, 7 were too young to attend school, and one was a woman, aged 34. All the elementary schools had diphtheria traced to them, and most had one or more fatal cases. This is remarkable, because Dr. Brett found that the private schools had no diphtheria—at least, no fatal cases. The London Orphan Asylum, though not in the district, is connected with the same system of sewers. There was no diphtheria there among the 550 children, nor in the Watford Union or in the endowed schools. Dr. Brett does not enter elaborately into the origin of the disease in Watford. He does not consider it was caused by milk, or by ventilators, or drains, or water. It was not confined to any part of the district. An investigation was ordered by the Local Government Board, but the results of Dr. Sweeting's inquiry were not issued when Dr. Brett published his report. Children probably attended school while suffering from diphtheria, which is contagious in such a mild form that it was at once communicated. Schools were closed as a measure of precaution. It is a fact that the disease was almost confined to the public elementary schools. There was no death from any other zymotic disease, except seven of croup and one of diarrhœa, which Dr. Brett does not include in this group. Three times scarlet fever was apparent in different localities, but, by prompt isolation, an epidemic was prevented. The death-rate from all causes, excluding the Union House, was 16.7 per 1,000. The zymotic rate was 2.7 per 1,000, against 1.6 in 1884, and 1.13 the year before. The general health of the district was good. A large number of the deaths occurred in persons above 60 years of age; three persons, all women, were over 90 when they died. Consumption carried off 16, heart-disease 17, and lung-diseases generally, 38.

Spilsby Rural District.—Dr. J. West Walker's report for 1884 contains a record of serious mortality from diphtheria. Several cases of this disease were reported at the end of 1883, and it is probable that the thirty-seven cases noticed in the present report, were a continuance of the then existing epidemic. Fifteen deaths were registered for the months of January and February, and nothing more was heard of diphtheria for four months, when there was a fresh outbreak in the village of Friskney. It seems that, during this interval, several children had suffered from sore throats, and some mild cases had been under treatment, which were not notified to the sanitary authority. Dr. Walker considers the general dampness of this fenny district a most potent influence for this disease, its ill effects being not only such as are apparent at the time, but also those brought about by the noxious emanations of the soil in drying. The parish school was a fertile centre of infection. All the first cases were those of children previously attending the school, and a death actually occurred at the master's house. The school was closed, promptly disinfected, and sundry sanitary improvements effected in its construction. Dr. Walker suggests various precautionary measures against the spread of disease, and specially advocates the closing of schools as a means of checking the progress of epidemics. The death-rate for 1884 was 20.69, of which a large proportion was due to infant mortality.

Aston Manor.—Mr. May reports that the public health of this district has been very satisfactory throughout the year, with a marked absence of infectious sickness. The characteristic diseases of this locality are those connected with the rearing of infants, and those to which children are liable at school-age. Mr. May does not attribute any serious illness to educational pressure. His chief anxiety is from the liability of large schools to rapidly spread infection. Mr. May considers the keeping of children from school, when they, or any member of the family, are suffering from infectious disease, a necessary part of the work of prevention. Six cases of small-pox were reported, all in the first few months of the year. The only unvaccinated case (a child) proved fatal. Scarlet fever cases were comparatively few in number, and Mr. May thinks the reduction may, in some measure, be attributed to the improved ventilation of school-buildings, the diligent care of teachers, and the thorough disinfection of houses and schools. There were a few isolated cases of diphtheria and typhoid fever, while measles and whooping-cough assumed an unusually mild form. The opening of the permanent hospital for infectious diseases is a prominent feature of the year's work. The deaths from zymotic diseases were 92, equal to a rate of 1.5 per 1,000, while the general death-rate was 13.6 per 1,000. This is the lowest ever recorded by Mr. May, and the continued improvement in this respect may be taken as evidence of the sanitary well-being of the inhabitants. The principal part of the gain in life during 1885, was among children under five years of age.

Taunton Urban and Rural.—Dr. Alford relates, in his last annual report, some interesting experiences as to the value of isolation in preventing the spread of zymotic disease generally, and as to the influence of vaccination in cases of small-pox. The Borough of Taunton was the centre of an epidemic of this disease at the close of 1884. Through ignorance, and afterwards wilful concealment, it obtained a hold in the town; and in January, 1885, the epidemic was at its height. There were also cases in eleven parishes of the rural district, which were nearly all traced to direct infection from town cases. Had it not been for the protection afforded by the sanitary hospital, it is difficult to say how far the disease would not have spread. The sanitary condition of the town was unsatisfactory, and in spite of the constant labours of Dr. Alford and his subordinates, great improvements are still required. Another case of small-pox was reported in December, 1885. The man, a tramp, was admitted to the hospital suffering from a malignant form of the disease, and died. Owing to this prompt isolation there was no other case. Dr. Alford contrasts this with the consequences of concealment, as shown in the outbreak of 1884. Nearly all the hospital cases were adults, of whom many had not been vaccinated since infancy. All unvaccinated cases died. Two out of three brothers, adults, were re-vaccinated, the third refused. He contracted small-pox, of a severe confluent type, and died. There was a considerable increase in the mortality, each of the seven principal zymotic diseases being represented. Measles was epidemic, and scarlet fever was also prevalent. The death-rates were, for the borough, 23.6, with a zymotic proportion of 3.7 per 1,000; for the district 18.3, and 2.6 per 1,000. Dr. Alford hopes for the time when people will find it to their own interest, as well as that of their neighbours, to take every advantage offered for isolation and disinfection. "The man who would scout the idea of stealing a loaf, thinks nothing of spreading infection, and so, possibly, being the means of killing many of his neighbours. When human beings and human lives are valued as those of cattle are, possibly as stringent measures will be taken to check the spread of infectious diseases in the one case as in the other."

Swinton.—The history of an outbreak of scarlet fever, and the means taken for its suppression, form the principal portion of Mr. W. M. Jones's report for 1885. The Local Board offers a fee for the report of cases, yet the outbreak was allowed to take firm hold without a single case coming to the knowledge of the sanitary authority. Mr. Jones again urges the need of an infectious hospital, and suggests that active measures be taken to make compulsory the notification of infectious diseases. There was a large proportion of deaths from diseases of the respiratory organs, especially among children. Out of 60 deaths from these causes, only 14 were adults; and of a total of 187 deaths, 110 were deaths of children under 5. Mr. Jones looks to education as a remedy for this, as it is more ignorance than anything else that makes mothers so careless. An easy book on the care of children might, he thinks, be used in the upper standards of schools, instead of one of the ordinary reading-books. There were no cases of enteric fever or diphtheria reported during the year.

Lambeth.—A considerable portion of this report is taken up with an account of the epidemic of small-pox in the metropolis during the year 1884. With regard to the distribution of the disease in Lambeth, especially in the vicinity of Stockwell Fever Hospital, Dr. Verdon records some most interesting facts. Stockwell was the only district in which a larger number of cases was found in a small area. The drainage compares favourably with the other parts of the parish; the houses are comparatively new, not overcrowded, and are occupied by a respectable middle-class. The epidemic began in April; in May, six cases occurred in houses all within a quarter of a mile from the hospital; in June, the number of cases in the hospital having increased, there was proportionate increase in the quarter-mile area: 46.1 per cent. of all cases in Lambeth being found there; in July, patients were conveyed direct from their homes to the hospital ships, and to the camp, the epidemic then declining until the end of August. Dr. Verdon calls attention to the distribution of this disease in this epidemic, when a large number of patients were under treatment in the hospital, comparing it with a second outbreak in December. The system of direct transfer of patients being then in active operation, and the cases under treatment in the hospital fewer, there was a proportionate decrease in the quarter-mile area, the rate being only 13.7 per cent. The death rate from all causes was 20.2 per 1,000, which was somewhat below the metropolitan rate, the zymotic portion of it being 3.6. There was an increase in the deaths from diphtheria, whooping-cough and diarrhœa, but a falling off in measles, typhoid and scarlet fever. An outbreak of the latter disease occurred at the Hospital for Lying-in Women, York Road, and was exterminated with no little difficulty. This was attributed to insufficient stoving, the then process of dry heat being unreliable. A new stove has been con-

structed, with very perfect disinfecting apparatus, all articles being subjected to a moist heat of 300° to 320°, maintained for twenty minutes. The result is entirely satisfactory. Thanks to the prompt and energetic measures of Dr. Verdon, a great danger to the parish was averted. Some rags from Marseilles, collected during the cholera epidemic, were seized at the port of London, and ordered to be burnt at the city wharf. This proceeding would have been attended with great risk of infection, as the bales must have been opened before being put in the furnace. Ultimately the dangerous cargo was taken out to sea and there sunk.

CALVERLEY.—Dr. Kitto Giddings may fairly congratulate himself on the health of his district. Only four deaths from preventable diseases were registered in 1885; one was from neglected diarrhœa, which terminated in English cholera after about twenty hours' illness. The deaths from all causes show a continued decline, with the exception of bronchitis and its allies. The death-rate was 11.89 per 1,000. A favourable feature in the returns is the fact that 50 per cent. of the deaths occurred at ages from 63 to 81 years, the average being over 70 years.

REETH RURAL DISTRICT.—In comparing the report for 1885 with that for 1884, Mr. Turner is able to record a decrease in the general and zymotic death-rates, as also in the birth-rate. Whooping-cough was the most prevalent disease of the zymotic group, though the mortality was not high. Schools were closed while the complaint was general, and the half-yearly vaccination was postponed. Bronchitis and pneumonia were unusually fatal. The general death-rate was 18.1 per 1000. The deaths recorded from zymotic diseases were scarlet fever 1, whooping-cough 2, and fever 1, giving a rate of 0.8.

INDIA AND THE COLONIES.

INDIA.

MADRAS MEDICAL COLLEGE.—We have received a copy of the Annual Report of the above College for the year 1884-85, when the College completed half a century of its existence. It had a very humble beginning in 1835, under Dr. William Mortimer, and his assistant and successor, Dr. George Harding, both officers of the Madras army. The primary object of the medical school was to train young men, Natives and Eurasians, for the subordinate medical service of the State. It has supplied 1,523 members for this purpose, of whom 24 have become graduates of the College, 38 have taken University degrees, and 32 have, after being partially educated in the school, left to complete their training in Europe. From the "day of small things," in 1835, the school, after many difficulties and vicissitudes had, in its fiftieth year, developed into a College with a staff of fourteen professors and lecturers, and four assistants. The work which, at its start, consisted merely in imparting elementary instruction in anatomy, surgery, materia medica, and medicine, is now such that it fits its students to take medical degrees in India, and qualifies them also for obtaining registrable diplomas in England. At first, as might have been expected, Brahmans kept aloof, but of late years, under the persevering efforts of the able medical officers, who from time to time have been principals of the College, members of this proud and exclusive caste have enrolled themselves as students. Female medical education forms an important part of the work of the College, and is likely to be much extended in the future. The different sections of the community were represented as follows:—Europeans and Eurasians, 82; Native Christians, 40; Mohammedans, 8; Brahmans, 33; Sudras, 49; Parsees, 3. The small number of Mohammedans is a notable fact. As a rule, thirst for knowledge is not a characteristic of the followers of the Prophet in India. At Hyderabad, in the Deccan, where the first vernacular school of medicine in India was founded by Dr. Maclean, late of Netley, the pupils were, and we rather think continue to be, exclusively Mohammedans. But the influence of the Nizam's Government has always been on the side of that school. Parsees form a small part of the community of Madras, but in Bombay they furnish a large proportion of the students in the College there.

The lecturer on midwifery in the College is a lady, Mrs. Scharlieb, M.D., whose instruction, however, is confined to the female class. The total expenditure was 67,359.5 rupees, and there seems much reason to believe that ere long the College will be self-supporting. Altogether, we have read this interesting Report with much satisfaction. The Madras Medical College, like its sister institutions in Calcutta and Bombay, reflects the highest credit on the medical officers of the Presidency who have raised it from its small beginning to its present rank as a College, and on the local government for its enlightened support of an educational institution that has been a blessing and benefit to the native community.

OBITUARY.

JAMES DUNSMURE, M.D., F.R.S.E, F.R.C.S.E.

WE regret to announce this week the death of a highly esteemed Edinburgh surgeon, Dr. Dunsmure.

James Dunsmure was born in Edinburgh in 1814, his father being Secretary of the Fishery Board for Scotland; he was educated in Edinburgh University, and graduated M.D. there in 1835; in 1841 he became a Fellow of the Royal College of Surgeons, Edinburgh, and, later, a Fellow of the Royal Society there. He acted as clinical club- and house-surgeon with the eminent surgeon Lizars, with whom, according to the custom of that time, he had also been apprentice. After studying in various schools abroad, he returned to Edinburgh, where he soon acquired a sufficient practice. Devoting himself largely to surgery, he was appointed a surgeon to the Royal Infirmary, and, when his term of office expired, he was honoured by the managers by being appointed consulting surgeon to the institution, while he was presented by the house-surgeons and his assistants with a handsome service of silver plate. Subsequently he was an examiner, then assessor, in the Royal College of Surgeons, Edinburgh, and an examiner in Edinburgh University. He was surgeon to John Watson's Hospital, and to the North British Railway Company. Dr. Dunsmure was much respected within the profession, and was highly esteemed outside of it for his manly nature, and his large-hearted sympathy with many deserving benevolent schemes. For nearly forty years he was an elder of the Church of Scotland. He was much attached to field sports and healthy out-door exercises, and it may be mentioned that, as a member of the Company of Royal Archers (the Queen's Body-Guard in Scotland), he secured, by competition, the Queen's Prize three times, and on two occasions in consecutive years. His funeral took place on Wednesday, and was largely attended by the public and his many professional friends.

MEDICAL NEWS.

ROYAL UNIVERSITY OF IRELAND.—Second Examination in Medicine, Autumn, 1886.—The following is the official list of successful candidates.

Upper Pass.—R. Forsyth, Queen's College, Belfast; H. T. Gill, Queen's College, Belfast; *J. M. Hall, Queen's College, Belfast; *R. W. Haslett, Queen's College, Belfast; *J. Jackson, Queen's College, Cork; *G. W. Jenney, Queen's College, Cork; J. M'Connell, Queen's College, Belfast; J. W. C. Macpherson, Queen's College, Cork; *A. E. Mahood, School of Physic, Trinity College, and Ledwich School of Medicine; A. T. Morrison, Queen's College, Belfast; M. H. Quarry, Queen's College, Belfast; *J. V. Ryan, Queen's College, Cork; J. B. Smith, Queen's College, Cork; H. K. Smyth, Queen's College, Cork; W. J. Taylor, Queen's College, Galway; *R. Thomson, Queen's College, Belfast; W. Waddell, Queen's College, Belfast; R. Wilson, Queen's College, Belfast; *J. W. Wolfe, Queen's College, Cork. (Those marked with an asterisk will be admitted to the further Examination for Honours.)

Pass.—C. J. Beattie, Queen's College, Galway; P. L. Blewitt, Catholic University School of Medicine; J. Buchanan, Queen's College, Belfast; A. Burgess, Queen's College, Belfast; J. Campbell, Queen's College, Galway; J. P. Clarke, Catholic University School of Medicine; J. C. Connor, Queen's College, Belfast; E. Cuffey, School of Physic, Trinity College; W. N. Demery, Queen's College, Cork; T. J. Enright, Queen's College, Cork; R. Erskine, Queen's College, Belfast; T. W. Fisher, Queen's College, Belfast; A. B. Gass, Queen's College, Belfast; E. F. Hanrahan, Queen's College, Galway, and Ledwich School of Medicine; T. Hickie, Queen's College, Cork; S. Irwin, Queen's College, Belfast; P. P. Jennings, Queen's College, Cork; B. F. Jordan, Queen's College, Birmingham; J. F. Jordan, Queen's College, Birmingham; J. G. M'Cormick, Carmichael College of Medicine, W. P. M'Eldowney, Queen's College, Belfast; T. S. MacMahon, Queen's College, Cork; W. M. Macnaughton, Ledwich School of Medicine; W. R. Morris, Carmichael College of Medicine; T. Obre, Queen's College, Cork; M. J. O'Regan, Queen's College, Cork; S. J. Parker, Queen's College, Belfast; S. Tate, Queen's College, Galway; R. G. C. Thornton, Queen's College, Cork; F. K. Tweedie, Queen's College, Belfast.

In Subjects necessary to complete the Second Examination in Medicine.—T. Gorman, Queen's College, Belfast; H. G. Jamison, Queen's College, Belfast.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery and Midwifery, and received certificates to practise, on Thursday, October 14th, 1886.

Gardner, Frank Gower, Tatnall Hall, Broomsgrove.
Macintyre, Aeneas Donald Mackay, Ebchester, County Durham.
Morse, Frederick Batho, 14, Eastern Park Road, Shepherd's Bush.
Nason, Edward, Sparkhill, Warwick Road.
Ramsay, Frank Winsom, 29, Wickham Road, Brockley, S.E.
Sequeira, George William, Waltham Lodge, Tulse Hill, S.W.

MEDICAL VACANCIES.

The following vacancies are announced.

BRIGHTON AND HOVE LYING-IN INSTITUTION.—House-Surgeon. Applications by October 30th to the Secretary.

BURY DISPENSARY HOSPITAL.—Junior House-Surgeon. Salary £60 per annum, with board, apartments, etc. Applications by October 28th to the Honorary Secretary.

CAHERCIVEEN UNION.—Medical Officer. Salary, £90 per annum, with £15 as Sanitary Officer, and extras. Applications by October 28th to Daniel O'Connell, Esq., Derrynave Abbey, Waterville, County Kerry.

CHORLTON AND MEDLOCK DISPENSARY, Manchester.—Resident House-Surgeon. Salary, £100 per annum, with apartments. Applications by October 30th to W. Stones, Esq., 113, Market Street, Manchester.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Assistant Physician. Applications by November 11th to the Secretary, 24, Finsbury Circus, E.C.

CLIFTON DISPENSARY.—Resident Medical Officer. Salary, £175 per annum. Applications by October 23rd to the Rev. R. W. Southey, 4, Royal Park, Clifton, Bristol.

GRAVESEND HOSPITAL.—House-Surgeon. Salary £80 per annum, with board and apartments. Applications by October 30th to Frederick Mitchell.

HANTS COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, residence, etc. Applications by November 13th to the Committee of Visitors, Knowle, Fareham.

HARTLEPOOL HOSPITAL AND DISPENSARY.—House-Surgeon and Secretary. Salary, £60 per annum, with board and residence. Applications by October 25th to Dr. Proud.

LIVERPOOL DISPENSARIES.—Assistant-Surgeon. Salary, £80 per annum, with board and residence. Applications by October 25th to the Secretary, 34, Moorfields, Liverpool.

LONDON HOSPITAL.—Medical Registrar. Salary, £100 per annum. Applications by October 25th to the Secretary.

LURGAN UNION.—Medical Officer. Salary, £100 per annum and extras. Applications by October 25th to W. T. K. Ruddell, Esq., Termoyra House, Lurgan.

MEDICAL AID ASSOCIATION OF BIRSAY, HARRAY, AND SANDWICK, Mainland of Orkney.—Medical Officer. Salary, £27 per annum, with house. Applications by October 23rd to the Rev. J. A. Selbie, Birsay, Stromness.

NEWABBEY PAROCHIAL BOARD AND LOCAL AUTHORITY.—Medical Officer. Salary, £52 per annum. Applications by November 5th to Captain Stewart, Shambellie, Newabbey, Dumfries.

NEWCASTLE-ON-TYNE EYE INFIRMARY.—Surgeon. Applications by October 30th to the Honorary Secretaries.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Physician. Applications by October 30th to the Secretary, 216, Tottenham Court Road, W.C.

NOTTINGHAM DISPENSARY.—Assistant Resident Surgeon. Salary, £150 per annum, with apartments. Applications by November 24th to C. H. Preston, Esq., The Dispensary, Broad Street, Nottingham.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND SEAMEN'S INFIRMARY.—Resident Medical Officer. Salary, £120 per annum. Applications by November 1st to the Secretary.

ROTHERHAM HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum, with board and lodging. Applications by October 31st to the Honorary Secretary.

ROYAL PIMLICO DISPENSARY.—Resident Medical Officer. Applications by November 1st to the Secretary, 104, Buckingham Palace Road, S.W.

ROYAL VICTORIA DISPENSARY, Northampton.—Medical Officer. Applications by October 30th to the Honorary Secretary.

SEAMEN'S HOSPITAL, Greenwich, S.E.—Dispenser. Salary, £50 per annum, with an additional £20 as Electrician, with board and residence. Applications by October 30th to W. T. Evans, Esq.

ST. THOMAS'S HOSPITAL.—Assistant Surgeon. Applications by October 23rd to the Secretary.

ST. THOMAS'S HOSPITAL.—Assistant-Dental Surgeon. Applications by October 23rd to the Secretary.

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, W.—Assistant Surgeon. Applications by October 23rd to the Secretary.

WEXFORD UNION.—Medical Officer. Salary £100 per annum, and £15 as Medical Officer of Health, and extras. Applications by November 2nd to Michael Browne, Esq., Bridgetown, Wexford.

MEDICAL APPOINTMENTS.

BUDD, H. G., M.R.C.S., appointed Surgeon to the Worcester General Infirmary, *vice* T. W. Walsh, F.R.C.S., resigned.

COCHRANE, J., M.B. and B.Ch., T.C.D. and L.M., appointed Resident Medical Officer to the Spalding Union, *vice* W. C. Thompson, L.K.Q.C.P.I., L.M., L.R.C.S.I., resigned.

FETHERSTONHAUGH, R. T., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to St. Peter's Hospital, Henrietta Street, Covent Garden, *vice* P. Edgelow, M.R.C.S.Eng., L.S.A., resigned.

HILL, G. W., M.B., B.Sc.Lond., appointed Registrar and Pathologist to the Central London Throat and Ear Hospital.

JONES, H. C. W., B.A., M.B., M.R.C.S., L.S.A., appointed Senior Medical Officer to the Miller Hospital and Royal Kent Dispensary, *vice* J. B. Saundry, M.R.C.S., L.R.C.P., L.S.A., resigned.

MANN, Alfred, M.B. and C.M.Edin., appointed Resident Surgical Assistant to the Nottingham General Hospital, *vice* R. D. Barber, M.R.C.S.Eng., resigned.

MCCAUSLAND, A. S., M.D.Brux., M.R.C.S.Eng., appointed Second Chloroformist to the Middlesex Hospital, *vice* H. Davis, M.R.C.S., L.S.A., resigned.

NICHOLSON, H. Gilbert, M.R.C.S., L.S.A., appointed House-Surgeon to the Hereford General Infirmary, *vice* M. D'O. Gilkes, resigned.

RENDALL, Percy, M.D., M.R.C.S., appointed Resident Medical Officer of the St. George's Hanover Square Dispensary, *vice* Dr. C. S. Humphreys, resigned.

TURNBULL, James, M.B., C.M.Edin., appointed Parochial Medical Officer and Surgeon to the Fever Hospital, Dunbar, *vice* J. W. Turnbull, resigned.

WOODHOUSE, E. R., M.B., C.M., appointed House-Surgeon to the West Bromwich District Hospital, *vice* E. W. D. Kite, M.R.C.S.Eng., L.S.A., resigned.

YOUNG, Edward H., M.B., L.R.C.P., appointed Junior Medical Officer to the Miller Hospital and Royal Kent Dispensary.

THE DIAGNOSIS OF ANCHYLOSTOMUM DUODENALE.—Dr. J. Rutgers, of Rotterdam, gives, in the *Weekblad* of the *Nederlandsch Tijdschrift voor Geneeskunde*, a somewhat minute account of the entozoon known as Anchylostomum Duodenale or Dochmius Anchylostomum, with drawings. This worm was first described in 1838 by Dubini, of Milan, since which time outbreaks of disease due to its presence have been observed by various practitioners both in the old and new world, the most notable instance perhaps being the case of the workmen of the St. Gothard tunnel. Dr. Rutgers confesses that it is very difficult to diagnose an isolated case of anchylostomum, as the symptoms to which it gives rise are exceedingly like those of pernicious anæmia. In the parasitic disease, emaciation is preceded by pallor of the skin, whereas in pernicious anæmia this is not the case. Again, the anchylostomum causes œdema of the face to appear at an early stage of the disease. The parasites themselves are not to be found in the stools, as they remain firmly attached to the duodenum. Ova may, however, be found in the fæces, but they are not easy to see, and are very liable to be mistaken for ova of other species, especially for those of the oxyuris vermicularis. There is, however, sufficient difference to enable a practised observer to distinguish the one kind of ova from the other. Those of the anchylostomum are ovoid, with a long axis of 0.05 millimètre and a short axis of 0.025 millimètre; whereas those of the oxyuris, while presenting a long axis of the same length, have a smaller short axis, which is only 0.02 millimètre. They have therefore a more slender appearance. Those of Tænia Solium and T. Mediocanellata have thicker and less transparent envelopes. Those of Bothriocephalus latus are much larger, being 0.07 millimètre in length. The ova of Tricocephalus Dispar present clear spots at each extremity, and those of Ascaris Lumbricoides are rounder, have a double envelope, and are usually of a yellowish colour.

BASFORD RURAL DISTRICT.—As the major part of this report is, for the year 1884, compiled by the retiring medical officer, Mr. R. G. Buckby, there is little in it beyond bare statements of fact. The joint production of the old and new officers is somewhat confusing, as we do not quite understand whether the figures in Mr. Buckby's portion of the report are for the whole year, or only for the eleven months of it during which he represented the sanitary authority. The total number of deaths recorded was 872, equal to a rate of 18.47 per 1,000. Of these, 177 were due to zymotic diseases, an unsatisfactory increase accounted for by various epidemics of scarlet fever, measles, and diphtheria. Mr. Buckby records a severe outbreak of the last-named disease in the village of Calverton, due to its unsanitary condition. Stringent measures were taken; schools closed, wells cleansed and disinfected, and the disease has for a time disappeared.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Clinical Evening. Dr. C. T. Williams: 1. A Case of partially cured Aneurysm; 2. Abnormal Condition of Subclavian Artery. Mr. E. Hurry Fenwick: Pouch of Penile Urethra. Mr. William Adams: Couch for Treatment of Lateral Curvature, and other cases.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Gervis: A Case of Extra-uterine Gestation. Mr. Knowsley Thornton: On Three Hundred Additional Cases of Complete Ovariotomy, and Twenty Cases of Exploratory Operation.

WEDNESDAY.—British Gynæcological Society, 8.30 P.M. Specimens will be shown by Dr. Bantock, Dr. Fancourt Barnes, Dr. Mansell-Moullin, and others. Mr. Lawson Tait: On Extraperitoneal Cysts. Council at 8 P.M.—Hunterian Society 1 r. Lewers: On the Advantage of Preliminary Dilatation of the Urethra in Certain Cases of Supravaginal Amputation of the Cervix Uteri. Dr. Turner: Specimen of Cerebral Tumour.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s. which should be forwarded in stamps with the announcements.

DEATH.

EDWARDS.—On October 15th, at 98, Gloucester Crescent, Hyde Park, W. Mary Ann, the much-loved wife of Thomas E. Edwards, L.R.C.P.Lond. M.R.C.S.Eng., and L.M. Aged 62.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY.....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY.....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's(Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY.....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY.....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

Charing Cross.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

Guy's.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

King's College.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

London.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

Middlesex.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

St. Bartholomew's.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

St. George's.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

St. Mary's.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

St. Thomas's.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

University College.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

Westminster.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., S. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the office of the Journal, and not to his private house.

Authors desiring reprints of their articles published in the British Medical Journal, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

Correspondents who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered, are requested to look to the Notices to Correspondents of the following week.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

We cannot undertake to return manuscripts not used.

QUERIES.

Treatment of Stuttering.

Hesitation desires advice as to the best way of dealing with a boy of 12 years, who some time since contracted the habit of stammering from a companion. Is there any mode of drilling the utterance so as to correct it; and what course had better be followed with regard to his education, since it appears hopeless to send him to school?

Advantages of Sea-Bathing.

Inquirer asks whether there is any work dealing with the advantages of, and the cases likely to be benefited by, sea-bathing.

*** Of late years there have been various papers by German writers, as Bencke, Virchow and others, on the physiological action of sea-bathing, but they contain little that is practical about the treatment of disease. The French and Italians have of late years written a good deal on the subject, but we have not seen their books. We do not know that we can mention any English work which treats in detail of the use of sea-bathing in different diseases, since the old ones of Dr. Russell, 1769; Dr. White, 1775; and Dr. Buchan, 1810; but Dr. Parson's little book on *Sea-Air and Sea-Bathing*, 1877, offers a useful *résumé* of the subject.

Cucaine in Dental Surgery.

Molar asks how far cucaine has been used to procure local anæsthesia in the extraction of teeth; how it can be applied, and in what strength of solution.

English Physicians in Italy.

A correspondent writes to us: Having been invited, by some friends, to settle in an Italian city, I am anxious to know if I must take out an Italian degree in order to practise amongst the Anglo-American colony there. I understand that permission to practise is occasionally given to men holding English degrees, by the Italian Government, without further examination. I hold the degrees of M.B. and M.Ch. of the Royal University, and have been lucky enough to obtain honours with both.

*** A well-informed correspondent, to whom we have referred the above, writes: The Italian Government does not compel foreign medical practitioners, who have registrable qualifications for their own countries, and who wish to settle in any part of Italy, to practise among foreigners, to pass any examinations, or to take any degree from an Italian university.

To have permission to practise amongst Italians, an Italian diploma is necessary, though the law is often violated. Still, there are heavy fines for any such violation when brought home to the foreign physician, although I cannot recollect of hearing of any example having been made among the numerous foreigners practising in Italy, and systematically breaking the law in this respect. The government compels all such foreign physicians to pay it an income-tax, and the tax is, as is well known, very high in Italy; 13½ per cent., indeed, on the income assigned by the official assessors.

In settling in any particular city, the diploma or diplomas of the foreigner must be sent to the municipality for registration in the books of the city offices, and also for the purpose of finding out whether the degrees are genuine, or only bogus ones. When valid, no question usually arises, and the foreigner may settle in any locality he chooses.

Spes asks for assistance in the diagnosis and treatment of the following case, which, up to the present time, has defied everything that he has tried, likewise all the remedies which have been given by the medical men who have seen the case.

S. A., a married woman, aged 61, short, fair, and delicate looking, with seven children, complained, about twelve months ago, of a "stiff neck." Thinking it was from cold, little attention was paid to it; about a month afterwards, the stiffness seemed to increase and spread down over the left shoulder. The parts were not painful to the touch, nor was there anything abnormal to be seen externally. The case remained thus for four months, no improvement being noticed. At night, the head being placed upon the pillow, or held by the hand, was slowly, but with short and regular spasmodic contractions, drawn down and over the left shoulder. These movements were both visible, and audible to one standing by. The head being replaced in the straight position, the contractions would again draw it down. About this time, flashes of light were continually appearing before the eyes of the patient, so much so that the face would be suddenly buried in her hands; this new symptom lasted for a month, and then disappeared, but the contractions of the neck now appeared day and night, nothing giving relief but narcotics. The patient has become greatly emaciated, and is suffering from extreme debility.

ANSWERS.

In answer to "Inquirens," there is a small private home for boys of weak intellect at Lynchmere, Maberley Road, Upper Norwood, highly recommended by medical men.

Home for a Case of Chronic Rheumatism.

J. T. H., in answer to J. A. P. (Journal, October 16th), states that possibly the lady could gain admission into the Midland Counties Home for Chronic and Incurable Diseases, Leamington.

Far Away.—The Parkes Museum, 74A, Margaret Street, Regent Street, is open from 10 A.M. to 9 P.M. on Mondays and Saturdays, and on other days of the week from 10 A.M. to 7 P.M. It is open free on Mondays and Saturdays from 2 P.M. to 9 P.M., and on other days of the week from 5 P.M. to 7 P.M. Admission at other hours, 6d.

Remedy for Asthma.

Dr. Woodward (Worcester) recommends the following remedy for asthma: Take of Stramonium, Latakia tobacco, and bird's eye tobacco, of each equal parts, moisten the last named with solution of nitrate of potash (about three drachms to the ounce of water), and then dry well (on gas stove); cut all up very fine

and well mix; smoke in a pipe with a button at the bottom to prevent clogging of the stem. The mixture is prepared by Messrs. Virgo, and also by Messrs. George and Welch, of Worcester. Dr. Woodward finds it very cheap and effective, smoked last thing at night, nothing being taken after an early tea except a small quantity of black coffee, or alcohol, strong and hot.

PRESERVING GUM-ELASTIC CATHETERS IN HOT CLIMATES.

DR. H. DALTON writes that he has gum-elastic catheters now in use, which have seen many years' service in the West Indies. His method was to first remove the stilette, which rusts and spoils the catheter, then apply olive oil to each catheter, and wrap each separately in a fold of cotton-rag, or an old handkerchief. If kept dry and touching, they will form an adherent and useless mass when wanted.

NOTES, LETTERS, ETC.

CAUTION.

A MAN, apparently between 40 and 50, of good address, who speaks French fluently, with an Anglo-American aspect and accent, and says he hails from Paris, has been disposing of instruments stolen from London hospitals, and possibly from private practitioners. Any information concerning him will be thankfully received at Scotland Yard.

DANGER OF LARGE DOSES OF IRON.

DR. T. STRAHAN writes: In my paper (BRITISH MEDICAL JOURNAL, September 18th, p. 545) alluding to Laache's conclusions concerning the different effects of small, as compared with large doses of iron, I have unintentionally overlooked the prior work of Dr. Willcocks, of London (quoted by Laache). Dr. Willcock's papers will be found in the *Lancet*, March 6th, 13th, and 20th, 1880; December 3rd, 1881; and *Practitioner*, July and August, 1883. The last being thus a year earlier than Laache's paper..

MEDICAL ATTENDANCE ON PROFESSIONAL BRETHREN.

AN Edinburgh Graduate writes: I have noticed many letters on this subject in your columns lately, and would like to take up another side of the question.

I attend a large number of my brethren and their near friends, and I am indebted also for services to myself and family. As Christmas approaches, the old difficulty arises, "What shall we send to Dr. X, and what to Y?" and, "I do hope young Z won't think it necessary to send us anything."

The gifts to me are often more costly than a handsome fee, and yet are almost useless to me, while often, I know, out of proportion to the means of the donor.

Now, why should we be bound in the chains of sentiment? When I send Dr. X a clock, would not a £5 note be more useful to him, and spare my wife and myself much trouble and anxiety? Why should not X be able to be paid in cash instead of kind; and why should Z, who has difficulty in keeping above water, think I want to be feed by a present?

I am glad to attend all in the profession gratuitously, so why should presents be sent me; would it not be better for me, and better for my medical patients, if there was an understood tariff of cash remuneration, or that the presents were dropped?

WHOLESALE MANUFACTURE OF PTOMAINES.

THE manager of a co-operative society, at Long Eaton, has been convicted by the Derby magistrates of keeping 133 pieces of pork for sale which were unfit for food. The evidence showed that the system had been going on for some time, and that when meat was otherwise unsaleable, it was made up into sausages. The offender was fined half-a-crown for each piece and costs, £19 in all, or to be committed for two months in default. Cases such as this explain many of the outbreaks of unexplained irritant poisoning, which only attract attention where large parties are attacked after some common feast.

HEROIC TREATMENT.

G. M. SCOTT (West Ham Vicarage, E.) writes: In reading over some old family letters, I came across the following, which I think may interest some of your readers as illustrating the severity of the remedies (?) in use so late as sixty years ago. The patient was a great aunt of mine, then aged 20 years, and, as far as I can make out from the letter, seems to have been suffering from an attack of congestion of the lungs.

"In the night (of Thursday) some pain came on in the right side, and we sent immediately for Dr. R., who had her bled on his arrival, till she fainted. This was again repeated in the evening. On Sunday thirty leeches were applied, and a blister on Monday; antimony, calomel and digitalis being taken all the time. Some relief was obtained".... As the shortness of breath, etc., continued, "we sent yesterday (May 29th, 1830) for Dr. R. On his arrival, he appeared to think very badly of the case, stating that the only hope was in reducing the system to the greatest extent possible. He accordingly bled her till convulsions were produced, and she appeared to me dying. Another blister was laid on the chest, and the doses of medicine increased in strength, while every kind of nourishment, except occasionally a few spoonsful of barley-water or gruel, was forbidden.... Dr R. gives us strong hopes of recovery.... but says he has no doubt that if she were to drink freely of barley-water through one day, the disease would return as violently as ever." I may add that the lady recovered, and lived to attain the age of 74.

TESTING GAS PIPES.

IN the JOURNAL of October 16th we mentioned that the scientific method of testing gas pipes was described some time ago, in one of Mr. Eassie's books (*Sanitary Arrangements of Dwellings*). This, we find in answer to enquiries, is out of print, but we understand that the portion of the chapter which relates to the subject, will be reprinted in the *Sanitary Record* for November 15th (Smith, Elder and Co., London).

"HOMMES SEULS."

DR. WILBERFORCE SMITH writes as follows: I am glad to perceive your note on the need of railway compartments "for ladies only." Will you allow me to supplement it by a plea in favour of compartments "for gentlemen only." There are obvious reasons why male passengers may sometimes find it desirable, on a journey, to have a retreat from the presence of the opposite sex. It is notorious that this is not supplied by the existing smoking compartments. The female intruders are not in all cases immodest. They may have probably been accustomed to courtesy, consideration and protection from men. Merely lacking fineness of perception, and probably accustomed to the flavour of tobacco at home, such women prefer the smoking compartment to one that may contain only *dames seules*. Men, for their part, in nearly all cases secretly resent the intrusion into their proper sanctum.

By way of remedy, it is only necessary that smoking compartments, or at least some of them, should be labelled "for gentlemen only." Much travelling experience convinces me that this easily accomplished reform would be greatly welcomed and valued.

SHIPS' SURGEONS.

"ON DECK" writes: I have read with much interest your article in the JOURNAL for September 4th, 1886, entitled "Ships' Surgeons and Ships' Passengers. During the past year, I have noticed occasional communications on the subject and believing that "pegging away," which really means forming public opinion is the first step in this much needed reform, I think it well that those who have had some experience in the mercantile marine should give their views on the subject. From a theoretical standpoint, nothing can be worse than the existing state of affairs. Practically, the working of the medical department of a ship depends on two factors—an efficient medical officer, and an intelligent, civilised captain. Given these, and things will go very well and very smoothly at sea; but the combination is rare, and depends wholly on fortuitous circumstances. A good deal has been said as to the social position of the surgeon. This is a matter of little moment, and need not enter into the discussion. Men who choose to sail in companies, as the Cunard, which have objectionable rules, do so with their eyes open. The professional status of the medical officer is more important. As a matter of right, he has absolutely no authority. What he may exercise depends entirely upon the intelligence and courtesy of his commander. That official classes him mentally with the stewards and stewardesses, as somebody not pertaining to, or necessary for, the working of the ship. He may have some trouble with the passengers, especially the steerage, in sanitary matters, but it is in his relations with the crew that unpleasantness usually arises. Most steamers carry just enough men, but none to spare; if one man drops out of a watch, more work must be done by someone else. With the hands, this does not much matter, but, in the stokehole, it is of great importance. When a fireman "lays off," a coal-passer takes his place; and if two men are gone out of a watch, with hot weather, poor coal, and a light wind aft, it means a difference of several miles a day in the ship's run. The surgeon here has a three-cornered fight on his hands; the captain and chief engineer on two sides, his duty and his patient on the third. It can be made very unpleasant for him. Everything to physical persuasion may be used with the sick man to compel him to "turn to," and the only satisfaction that the medical officer can have, will be, when the ship is paid off, to see that his patient draws wages for the time he was sick on his orders. In the first class mail steamers, things are better managed, and as the surgeon is of more importance to the owners, his position is better defined.

Some lines attempt to create a service of their own by allowing the surgeon half-pay while his ship is in a home port, at the same time allowing him to go where he pleases; others, as the Royal Mail, Southampton, require the men ashore to "stand by" the ships in rotation. A few companies have a medical superintendent, and some sort of discipline is enforced. Government makes a feeble attempt at "doing something" by compelling owners to carry one or more surgeons, according to the number of heads on board, and by placing an emigration officer at certain ports, who "appoints" the medical officer. This proceeding is a mere formality. Having been accepted by the owners, you go before the officer, who satisfies himself that you have a diploma, and that it is your own; you are then given a blank form to fill out as a report, which, though sent to a government official, requires postage prepaid. Some of the Atlantic boats do not always carry two surgeons when they should, a noted exception to which is Ismay, Imrie, and Co., who employ an assistant on all steamers during the summer months.

Allusions have been made by some correspondents to the personal status of medical men at sea. This is hardly fair. In the mercantile marine to-day will be found representatives of all classes, young and old, competent and inexperienced, steady honourable gentlemen, and intemperate, disreputable nondescripts. To the vast majority it is an employment for the time only, a means of regaining health, a pleasure trip, or a stop-gap. Aside from the responsibility, the work is rarely excessive; the pay varies from £4 to £10 per month; in some companies wine money is added, this allowance being made if the liquor is consumed. Other employers, with commendable foresight, allow the amount to be drawn at the end of the voyage, so that a total abstainer in Alfred Holt's service draws at the rate of £11 17s. 6d. per month.

The foregoing indicates in a general way what efforts are made by the companies to secure competent officers, together with the inducement offered. It can readily be seen that, in the absence of an organised service, the whole thing will at times be reduced to mere haphazard. Suppose that a steamer is advertised to sail to-morrow, or the day after; something has happened to her surgeon, and he cannot join. The steamer must sail as advertised, and must carry a medical officer. The manager runs over his list, which, in a favourite company, will include one hundred names, and, picking out the most available, telegraphs until an affirmative answer is received. This is not an unusual occurrence, and really compels the company to take what it can get. The best men are rarely to be had at very short notice, as they earn something while waiting, and hold appointments which cannot be given up at twenty-four hours' notice. The best solution for these difficulties would be, as suggested, the formation of a government marine department; but while this is being consummated, there are several steps which would greatly tend to increase the standing of the surgeon at sea.

Of these, the first is to give him sole charge of the medical and sanitary police of the ship. He should furnish a report in the form of an abstract-log, this being accepted in evidence with the ship's log, the entries being verified in a similar manner.

Next, to compel owners to furnish a room, suitably fitted, as a surgery, where

the drugs shall be stowed; there should be convenience for compounding, and performing minor surgical operations, dressings, etc. Hospital accommodation should be provided, these hospitals being so arranged as to be serviceable (barring accidents) in all weather, and of sufficient size to allow one or more cots to be swung, in addition to the standing bunks. The law already determines when one or two surgeons shall be carried, and it would not be difficult to add that, where a surgeon is necessary, the foregoing are equally important. Until a regular service is organised, other questions must be left to self-adjustment.

COLONIAL PRACTICE: A VOICE FROM MELBOURNE.

A MEMBER writes: On reading Dr. Norry's letter of May 29th, I immediately inserted two prominent advertisements in each of the two leading Melbourne papers which circulate all over the colony of Victoria, requesting information as to an opening for a medical man. In reply thereto, I received two answers from persons desirous of letting their houses. I fail to perceive that his remarks at all coincide with your article of September 5th. I have never practised, and cannot but think that if Dr. Norry had come out with that object, and had spent more than "a few months," he would have been better informed. Though he had "the good fortune in Sydney to make the acquaintance of several of the leading men in private practice," who must therefore have been successful men, yet he proceeds to say that "apparently the successful men do not care to let us know their experiences;" is not such an idea utterly childish and unworthy? One would naturally infer that they must have given him a very glowing account of the land. The fault here, as at home, is for men to crack up their practices; but, as a rule, gentlemen in the position of consultants are not over well informed as to general practice. I do not believe "there are men now living at home upon incomes" made out here, but should it be otherwise, that does not prove that these incomes are to be made to-day. I think £700 would be a very fair average for country practices; and if the respective value of money be taken into consideration, the excess is not much in favour of this country. I am informed there are 700 medical students in Melbourne, besides those at Sydney, Adelaide, and, I suppose, in New Zealand, so your readers can form a very good idea for themselves whether there can be any deficiency of supply for four and a half millions of people, which represents the united populations of Australia and New Zealand. All the professions are overdone. Dr. Norry's remarks about specialists are somewhat conflicting. The question is, are there any specialists? I reply, any number. In Sydney there is a late physician to the Chelsea Hospital for Women, and I doubt not all the other branches are amply represented. In Melbourne, there are four specialists devoted entirely to the eye and ear, two devoted entirely to the throat and ear, and yet we are told that "surely a man of known ability would have many patients from distant parts of the country." How do these gentlemen live if their clients do not come from all parts? I regret that Dr. Norry should have passed such a slur upon those practising a speciality by insinuating that they are not men of "known ability." Are those "now qualifying" the right men to supply this deficiency? It is not a very common thing for a colonist "to make a voyage to England to obtain an opinion," though, of course, such does sometimes happen. There is but one inland town of 38,000 in the whole of Australia; the others are, for the most part, small. Many of them would be villages at home. I do not know one with a suburb; and all the inland towns in Victoria are either at a standstill or decreasing. The capital towns are increasing rapidly. I know all the suburbs of Melbourne and Sydney, and assert that the ground is fully occupied by medical men. There are but few suburbs in either but what I have seen men attempt to establish themselves and fail. I am not aware of any town where the medical men are not in excess of the requirements, for it may be estimated that two-thirds of the population are in clubs, for which there is the keenest competition. Without an introduction, it is difficult to establish oneself; and this is not to be obtained by purchasing a practice, for no personal introduction is given by the seller. Many men have made their money, not so much by their profession, as by successful mining ventures, and this means that a still greater number have lost the little they had. I assert that the incomes we hear of are grossly exaggerated. That "the supply does not exceed the demand" is literally absurd. The system of advertising in the public papers has no equal in England; and this alone is proof positive of the keen competition. In reading a correspondent's letter in the JOURNAL on South Africa, I could not help thinking how very aptly his remarks might be applied to this country.

PROTRACTED PREGNANCY.

DR. WILLIAM FRASER (Ashburton, Devon) sends the following note, which may be read in conjunction with the case published by Mr. S. W. Woollett, in the BRITISH MEDICAL JOURNAL of October 2nd. The wife of a well-to-do farmer had two confinements under the care of another medical man, and something went wrong each time, so that for the third Dr. Fraser was asked to attend her, and came to the conclusion that his services would be required either during Christmas week, 1882, or the first week in January. The time came; weeks, months passed, and he was not called till June 10th, 1883. She was delivered during the early hours of June 11th, with short forceps, of a fine female child, there being an inequality between the capacity of the pelvis and the head of child. This was fully six months after her expected time, and she could not explain her error, if error there was. He has twice since attended her, each time using forceps, for which she now asks, and the three children are all living, and doing well.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. P. T. Duncan, Croydon; Dr. W. Macvie, Bootle; Dr. Styrap, Shrewsbury; Dr. Aitken, Rome; Mr. W. Eassie, London; Mr. C. E. Richmond, Warrington; Mr. W. H. Hastings, London; Dr. H. Dalton, Harrogate; Mr. W. T. Grant, London; Mr. H. W. Holder, Manchester; Mr. Ralph Stockman, University of Edinburgh; Enquirer; The Secretary of the Manchester Medical Society; Mr. Alex. M. Stalker, Dundee; Mr. Duncan J. Reid, Dundee; The Clerk of the County Asylum, Fareham; Mr. A. F. Stevens, Ixworth; Mr. W. Donovan, Birmingham; Dr. Prosser James, London; Mr. Shirley Murphy, London; Mr. Price Morris, Colwyn, North Wales; Mr. Richard E. D. Robb, Glasgow; Surgeon-Major C. MacDonagh Cuffe, Calcutta; Mr. J. Phillips, London; Mr. J. Dysart McCaw, Belfast; Dr. Martin Oxley, Liverpool; Messrs. Burroughs, Wellcome, and Co., London; Dr. Joseph Rogers, London; Dr. Edwards, London; Mr. W. Wilberforce Smith, London; Surgeon-Major Sainbridge, Karachi; Dr. Mackenzie, Glossop, Manchester; Dr. A. M. Edge, Manchester; Dr. J. F. Edwards, Philadelphia; B.S., M.B.Lond.; Mr. Lennox Browne, London; Dr. Kelly, Taunton; Mr. Cheesewright, Rotherham; Sir Walter Foster, Birmingham; Dr. A. T. Myers, London; Mr. H. W. G. Macleod, London; Dr. J. Strahan, Belfast; Dr. Markham Skerritt, Bristol; Dr. Steele, Guy's Hospital; Mr. G. St. G. Tyner, Downpatrick; Dr. Lush, Weymouth; Dr. Pisam, Malta; Mr. J. A. Mackenzie, Farnworth; Mr. Carl Sielbers, London; Dr. W. Macfie Campbell, Liverpool; Dr. Collingridge, Greenwich; Miss T. Plowman, North Curry, Taunton; Dr. F. Hewitt, London; Dr. Macpherson, London; Nurse Clarke, London; Dr. J. Anderson, London; Mr. H. Percy Dunn, London; Dr. Pavy, London; Dr. I. K. Milne, Shipdham; Dr. J. Adam, Dingwall; Mr. H. Gilbert Nicholson, Hereford; Dr. H. Handford, Nottingham; Mr. Walter Pearce, Maidenhead; Dr. W. E. Hacon, Christchurch, New Zealand; Mr. J. W. Hickman, Delta, York Co., Pennsylvania; Mr. L. Humphry, Cambridge; Mr. R. Crosier, Newcastle-on-Tyne; Mr. Vincent Jackson, Wolverhampton; Mr. F. R. Humphreys, London; Mr. J. P. Massingham, Stoke-on-Trent; Dr. Maxwell, Woolwich; Dr. A. Midgley Cash, Torquay; Dr. Brailey, London; Dr. Percy Frankland, London; Dr. J. Lindsay Steven, Glasgow; Dr. W. Woodward, Worcester; J. T. H.; Dr. G. E. Shuttleworth, Lancaster; A Member of the B. M. A., and M.R.C.P.Edin.; The Misses Chreiman, London; Mr. W. Duncan, Ridgeway, Frome; Mr. J. F. Stevenson, Glasgow; Dr. Edwyn Andrew, Shrewsbury; Dr. M. Charteris, Glasgow; Mr. J. Vesey Fitzgerald, Birmingham; Mr. Paul Swain, Plymouth; Mr. W. H. Plaister, Tottenham; Professor Dunstan, London; Sir Francis Bolton, London; Dr. Bourneville, Paris; Mr. James Cantlie, London; Mr. J. Hadley, London; Mr. Blackett, London; Dr. J. W. Moore, Dublin; Mr. T. Bowes, Barton, Staffordshire; Dr. C. E. Ryan, Emly, Tipperary; Mr. P. H. Walker, Glasgow; Mr. A. Douglas, Birmingham; Mr. E. Arnold, Chichester; Dr. Brand, Driffield; Mr. Edward Cotterell, Bicester; Messrs. W. and A. S. Bradshaw, Nottingham; Mr. James Turnbull, Dunbar; The Secretary of the Royal Infirmary, Hull; Mr. A. H. Young, Manchester; Mr. J. Brindley James, London; Dr. J. Hutchinson, Glasgow; Mr. E. S. Jackson, Carnforth; Mr. George Eastes, London; Mr. R. M. Gover, London; Dr. Dolan, Halifax; Mr. G. Melmoth Scott, Cambridge; Mr. F. Treves, London; Messrs. Jevons and Ryley, Liverpool; Dr. A. Yule, Haslemere; Mr. R. McBride, Gilford, co. Down; Dr. J. Dreschfeld, Manchester; Mr. A. W. Loveridge, Cardiff; Our Paris Correspondent; Our Dublin Correspondent; The Secretary of the Medical Society of London; The Secretary of the Hunterian Society, London; Mr. William Wadham, London; Dr. C. R. Illingworth, Accrington; Mr. T. Scattergood, Leeds; Dr. Railton, Manchester; Mr. J. R. Stewart, Glasgow; Mr. A. Browne, Nottingham; Dr. W. H. Bellot, Leamington; Mr. A. J. Freeman, Aix-les-Bains; Mr. Myer Dutch, Crewe; Dr. A. A. T. Sloan, Edinburgh; Mr. Simeon Snell, Sheffield; Mr. J. H. Pugh, London; The Registrar of the University of Durham College of Medicine; Dr. J. Ryley, Great Yarmouth; Dr. Murdoch Brown, Edinburgh; Mr. R. M. Craven, Southport; Mr. P. Edward Dove, London; Mr. Cottenham Farmer, Hexham; Dr. E. Cresswell Baber, Brighton; Mr. W. Cody, Longford; etc.

BOOKS, ETC., RECEIVED.

A Commentary of the Diseases of India. By Norman Chevers, C.I.E., M.D. London: J. and A. Churchill. 1886.

Disease and Sin; a new Text-book for Medical and Divinity Students. By A Medical Muser. London: Wyman and Sons. 1886.

General Paralysis of the Insane. By W. J. Mickle, M.D. Second Edition, enlarged and re-written. London: H. K. Lewis. 1886.

Experimental Chemistry, founded on the work of Dr. Julius Adolph Stöckhard. By C. W. Heaton, F.I.C., F.C.S. New Edition. London: G. Bell and Sons. 1886.

Outlines of Lectures on Physiology. By T. Wellesley Mills, M.A., M.D. Montreal W. Drysdale and Co. 1886.

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INTRODUCTORY ADDRESS
ON
MEDICAL EDUCATION AT GLASGOW.

Delivered at the University of Glasgow, Medical Department, October 26th, 1886.

By G. H. B. MACLEOD, M.D., F.R.C.S.Ed.,
Surgeon in Ordinary to Her Majesty in Scotland; Regius Professor of Surgery to the University.

Gentlemen,—To-day I am called on for the second time to address the Medical Students of this School at the outset of a winter term, and to offer you the hearty greeting of the Faculty, which I for the moment represent. Twelve years ago the same duty devolved on me, and I regret that the experience gained in the interval has not enabled us to substitute a more convenient or interesting mode of marking the resumption of our work than that which I must now endeavour, as best I can, to perform. If it is an important event for you to enter upon or resume your medical studies, it cannot fail to be to us, on whom so much responsibilty rests, a period of anxious anticipation. As years roll on, the task that is set before a teacher in our department seems to augment in difficulty. The science we teach is ever enlarging. New facts, fresh discoveries, amended interpretations of old tenets, endless hypotheses come up for consideration, and it is our duty, for your guidance and instruction, to weigh and judge these so as to separate the wheat from the luxuriant mass of tares with which it is ever mixed. Every session the difficulty increases of overtaking, within the prescribed period, the work we have to do.

There has been, I am pleased to be able to note, much real progress made in this school since 1873, when I before gave the introductory address. Then we had hardly become settled in these buildings, and the magnificent hall in which we now meet had not been commenced by its noble donor. The venerable pile from which we had just removed still stood where for 400 years it had been the centre of light and culture. Its very site will soon be difficult to trace.

> "Men are we, and must grieve when even the shade
> Of that which once was great has passed away."

These buildings then seemed so spacious that there appeared no limit to our powers of expansion, but such has been the increase of students in all departments of the University, and so many new subjects or sections of subjects have now to be taught in order to keep abreast of the times, that we are already almost as much hampered for room as we were in the old place. It was, perhaps, inevitable that this growth could not have been anticipated, but the fact must be faced and provided for; and if the medical department in particular is not to be seriously crippled, and placed at a great disadvantage as compared with other schools, much more room must be supplied. There is hardly a medical class within this building which does not urgently require more accommodation. The anatomical department, which is the very foundation of the whole medical edifice, is lamentably deficient in space. I regret that the useful outgrowth, belonging, I fear, to no known order of architecture, which the distinguished Professor of Anatomy has hung out in so conspicuous a place, has not as yet extracted from some generous and scandalised critic a more æsthetic substitute. My own class-room has been long overcrowded, and is now almost unendurable. Constructed to hold 140, last winter it had to accommodate 245. The number of students of surgery during the last term of my distinguished predecessor was 128, and when I was myself a member of that class it only reached 62. Since this college was built, the number of students in all the departments has doubled, and the Glasgow School of Medicine is now the second largest in the United Kingdom. So much for the increment of fourteen years.

In the Medical School we require accommodation for training in the practical use of those many ingenious mechanical appliances which have proved in late years so useful in giving precision to medical investigation. Pathology, too, is as yet without a home, or the endowment for a professor; and valuable preparations in all departments are liable to loss and injury from want of proper stowage.

The academic and social life of the university will, however, be greatly promoted by the early completion of the Union Buildings, and I anticipate with much satisfaction the acclaim which you will accord to the generous founder when his modesty allows his personality to be divulged. Provision will be made in these premises (practically outside of the college) for waiting, reading, debating, and even smoking and, I hope, eating rooms; and it will be your own fault if, with such an establishment, and your Representative Council to express your wishes, the advantages to be derived from a residence here are not much augmented. I know it is a cherished wish of the donor of the Union Buildings that that institution should provide, as far as possible, those happy influences which prevail in similar societies in the English universities, where the intercourse and the customs do so much to promote propriety of manner and decorous behaviour. I may here say, in passing, that I would greatly rejoice if some form of intramural residence could be instituted in our Scottish schools, such as has been found to answer so well, and even to pay, in connection with some of the London hospitals. Such corporate life, if well regulated, is one of the most humanising and refining influences which can be brought to bear on young men.

But to pass on. There is, in my opinion, no want so clamant, amidst all our requirements, as a good working museum, which would contain the preparations of the various professors at present scattered in different parts of the building, and which, if combined with the valuable collection of William Hunter, and put under active management, would be invaluable for the illustration of lectures and for private study.

Further, the Western Infirmary hardly existed in 1873, and certainly our clinical work was not then organised as it is now. Two University teachers have been added to our staff, an extensive wing built, and the internal organisation so completed, that I know no hospital at home or abroad which is better arranged, or where more careful work is done; but here again our increased numbers cause embarrassment. The accommodation for patients is too restricted, and theatres for clinical instruction, and laboratories for special investigations and post-graduate courses are greatly wanted. Efficient clinical work is the very life of a medical school. It is as important for the patients as the students that thorough, methodical, and careful bedside investigations should be made. It is where such work is most minutely and conscientiously pursued that the welfare of the sick is best secured. Not to speak of the beautiful Children's Hospital, the two Eye Infirmaries, the admirable Fever Hospital, and the Aural and Dental Institutions, Glasgow possesses (between the Royal and Western Infirmaries) about 1,000 beds, which is the ideal at present aimed at in Edinburgh. The Western only requires funds to make it a perfect clinical hospital; and surely, notwithstanding the "bad times" of which we hear so much, there are many benevolent and spirited citizens in this great city who would rejoice to complete this important and beneficent work. It would be a noble monument to commemorate the Jubilee of our gracious Queen. Edinburgh, which is thought to be so much poorer than Glasgow, has lately spent £305,000 on her hospital, besides endowing it (notwithstanding a doubled outlay for maintenance) with a quarter of a million of stock. But besides this she has erected and equipped, in the most complete fashion, a magnificent medical school, and a private individual has just undertaken, at great expense, to build a Common Hall. Another gentleman, whose very name is suggestive—Dr. Duncan Vertue—lately bestowed £115,000 on the Edinburgh Infirmary. I much fear all the virtue in the West is hardly up to such a donation. With the most profound respect for those who so generously multiply our already numerous bursaries, or who are so good as to complete our steeples and our gateways, I would yet presume to suggest that infinitely more good would be done by providing larger class-rooms, a medical museum, clinical theatres, teaching fellowships, and removing the abiding disgrace (for it is little else when we remember what has been done for that department in Edinburgh and Aberdeen) of there being no endowed chair of pathology in the school.[1]

But, gentlemen, there is another point of view from which this financial question may be looked at. In Edinburgh, between 1865 and 1886, that is, in 21 years, the medical students (see recent address by Professor Chiene) are calculated, on carefully prepared data, to have spent for living the enormous sum of £1,760,000. Last year they spent upwards of £140,000. Now, though I know that our medical students alone are not so munificent as this, still the contributions to this city made by the whole body of our *alumni* (which greatly out-numbers the Edinburgh medical undergraduates) must have at least reached that huge sum. After all, then, it would not be so bad an investment if our citizens increased the capabilities of our University by enlarging her premises. But, without being forgetful of the very munificent aid we obtained when

[1] Notwithstanding the great sums already received in Edinburgh, a further movement has been started to enlarge the hospital still more; and Aberdeen is also making strenuous efforts to raise a large fund for the extension of her medical school.

this College was built, I may surely venture to appeal to the further generosity of our fellow-townsmen on a higher and more worthy ground than mere *quid pro quo*. Has not this venerable and esteemed seat of learning shed much renown and brought no little honour as well as indirect gain to this city? Though less prominent now than when the town grew up around her walls, and owed almost its very existence to her patronage, and though her voice is largely overborne by the increased din of the market-place, yet the still small voice of that science which it has been so long her glory to teach has done much to inspire the brains and quicken and direct the inventive skill of those men who have amassed the wealth of this great city and made her name famous to the very ends of the earth.

Before proceeding further, I must recall the melancholy fact that since 1873 death has removed many distinguished men from among us. Three Chancellors (the Dukes of Montrose and Buccleuch and Sir William Stirling Maxwell), one Rector (Lord Beaconsfield), one Principal, two Assessors to the Supreme Court, three Medical Assessors, eight Professors (the last and the not least loved of whom was laid to rest only a few days ago) as well as our Librarian and Registrar, have all died. Three Professors (including our present distinguished Rector) have passed into honourable retirement, and three have left us for other spheres of usefulness. Three new Chairs have been also founded during the same period.

I have referred to the remarkable prosperity which of late years has marked this and the other Scottish schools. This, as might have been anticipated, has given rise to no small envy beyond the walls. Local ambition suggests invasion and the division of what is called "the spoil," while others at a distance and nearer the seat of the legislature would gladly overturn a system of instruction which has attracted so many of their pupils to the North. The captivating term of "reform" has been applied by both parties to their desired aims. We live in a time of change, and, above all, of criticism and restlessness. Every institution which has a history, every custom which has become venerable—nay, every belief which is cherished (and in no small measure in proportion to the regard in which it is held), is assailed with perfect frenzy. The irresponsible critic is not, however, always the safest guide; and if, in inaugurating changes in the management, methods, or arrangements of great national institutions, like the Scottish universities, the authorities proceed with circumspection, do not suppose that they are unwilling to advance, or that they are blind to the signs of the times. The past history of the Scottish colleges, no less than their present healthy and flourishing condition, should be taken in evidence. As regards medical affairs, their past action reflects much honour upon them. Before the medical revolution of 1858, the Scottish universities had voluntarily secured for the medical student and practitioner most of the advantages now enjoyed; hence their class-rooms were crowded with students from every part of the civilised world. The English and Irish incorporated bodies took but little heed of the profession. The great English universities, engrossed in the cultivation of pure scholarship, not only gave medicine and the mere bread-and-butter sciences the cold shoulder, but actually diverted foundations intended for the advancement of medicine to other purposes. The Colleges of Physicians and Surgeons and the Apothecaries' Company were not teaching bodies. The first stood aloof in academic superciliousness from the mass of the profession, and became, according to the accusation of one of themselves, "little better than a gossiping club for Oxford and Cambridge graduates." The College of Surgeons give a qualification in surgery alone, so that it was left to the Apothecaries' Company mainly to direct and control medical education in the South. It was under its authority that the apprentice system came into use, which did so much to degrade the profession, by rearing a large class who were little better than peddling tradesmen. The only good I know which arose from apprenticeship was that it frequently provided the young lads who were pursuing their studies in the great towns with a home and the kindly influences of the family circle. It was in Scotland alone that an efficient and complete medical education was enforced, and a qualification bestowed to practise the whole science and art which was there taught.

Though not, perhaps, immediately belonging to my subject, I cannot avoid stating here what I lately saw recorded regarding the number of universities and their students in different countries, as I think it bears most honourable testimony to what this small and poor country of Scotland has done for education. While the great German Empire in 1883 (the year of these returns), with a population of forty-five and a quarter million inhabitants, had twenty-one universities and an aggregate of 25,000 students; and England, in the Universities of Oxford and Cambridge, Durham and Manchester, and with a population of twenty-six millions, had but 5,500 students; Scotland (which is, according to Sydney Smith, but the mere knuckle end of the joint) had four universities and 6,641 students, her population being under four millions (one-sixth of England). European Russia, again, with a population twenty-three times greater than Scotland (eighty-five millions), had but nine universities, and fewer students than those attending the Scottish universities.[2]

With all, however, that can be said regarding the past and present, the most important question is, What can be done in the future to extend and improve our system and methods of working? On that subject all I would venture to say is, that if more work is to be got through, that is, if the curriculum is to be further loaded by the addition of new subjects or divisions of subjects, *six* years is a more reasonable time to devote to your medical education than *four*. At present, subjects of vital importance, and above all, really efficient clinical training, cannot be mastered in the time set aside for the work. I was interested to find, when this season in Norway, that in so little considered a State as that, the medical course extended to seven or eight years. I hold as strongly now as I did in 1873, that the only alternative to the addition of one or two years to the course is either to make efficient provision for the preliminary study of those scientific branches which now chiefly occupy the early part of the course, or to curtail them largely, and bring them into more near relationship with, and give them a closer bearing on, the special subject of practical medicine. I heartily subscribe to all that can be said, and which I have heard so well said in this very place (and by none better than the Professor of Botany last year), as to the supreme good of these studies with their precise and exact methods in training the mind for professional pursuits; but I cannot assent to the practice which now prevails in all our schools of forcing these large, ever-extending, minute, and much elaborated subjects on all students alike, whether they intend to devote themselves to purely scientific pursuits, or desire merely to enter on the ordinary duties of medical practitioners.

Again, you are no doubt aware that, at this moment, a very lively controversy exists regarding extra-mural teaching, and that even free competition is not without its advocates. Every extra-mural teacher naturally considers himself vastly superior at all points to his counterpart within the walls. That the professor has an endowment derived from funds which have been dedicated to that purpose by the State or by individuals—that he has a status in virtue of his academic functions—that he examines for the degrees bestowed by the University of which he is an official, are all sources of heart-burning, and demand "reform." Of course, there is no envy at the bottom of all this desire for change—it is altogether a matter of pure principle. How often do we find, however, that this zeal cools when the reformer manages to scramble within the sacred precincts, and that what was before denounced as a grievance, becomes not only a legal, but a very reasonable arrangement. I have every reason to speak with gratitude of extra-mural training. It educates and prepares men for University work — it spurs on the intra-mural professors — it provides alternative courses if a college teacher is defective, or careless, or worn out. All this is good; but, that no evil may accrue therefrom, such teaching must be under the same rigid discipline and supervision as the University imposes. If this does not exist, the competition will be downwards to lower, and not upwards to increased, excellency. Without the independence which an academic position secures, and forced to attract pupils for sheer existence, there is a real risk of lax discipline, careless work, irregular attendance, and mere cram to satisfy the examinations, usurping the place of the ordered system which the corporate jurisdiction of a great university ensures. I am free to admit that in Edinburgh, where alone extra-mural teaching has taken firm root, private enterprise has, from the first, acted most beneficially. The great school now existing there owed its very existence to men at first unconnected with the College. It was mainly by their persistence that the University School was established. Botany was first taught, and instruction in both anatomy and surgery was given in the College of Surgeons long before they were represented within the University. Monro *primus*, the real founder of the Edinburgh Medical School, first lectured outside the walls, but finally became professor, at the magnificent salary of £15 a year. For upwards of half a century, the influence of the Monro family (that is, of the descendants of the great anatomist) prevented systematic surgery being taught in the University, and it was only by the institution, first, of a chair of clinical surgery, and

[2] The relative value put by the German Government and our own on Universities may be roughly guessed, when we consider that the former devote annually over £140,000 to their support, and that in a recent Bill an attempt was made to fix the grant to the four Scottish Universities, for all time coming and for all purposes whatever, at £43,000 a year.

afterwards of one of military surgery in the College (to the latter of which, by the way, Dr. John Thomson, father of our own distinguished professors, Drs. William and Allen Thomson), that the great hiatus was filled up pending the death of Monro *tertius*. In point of fact, a chair of surgery existed in this University sixteen years before it was established in that of Edinburgh. The Edinburgh Extra-mural School has thus a most honourable record, and at no time has it been stronger or more useful than at the present moment. In Glasgow, it has never attained the same importance; and I may say, without disrespect or disparagement, that of late years it has not advanced.

The German system of "Privatim docentes," of which, too, you have, I dare say, heard much, and the merits of which I frequently hear extolled, has little or nothing in common with extra-mural teaching as practised here. It does not imply any real competition with the professors. These private teachers are for the most part assistants, past or present, to the professors, and I may add, parenthetically, that, with Teutonic modesty, they do not suppose, or anyhow do not constantly affirm, that they are in all things superior to the university professors. They usually lecture on special departments, and are in no sense rivals of the intra-mural teachers. Now, in this there is real good, and it points in a direction which might be usefully followed in Scotland. I would be glad to see the privilege of teaching accorded within the University—under her discipline and control, and as part of her system—to all graduates with honours who show an inclination or aptitude for the work. With our increasing numbers, an augmented staff of teachers adjusted to various kinds of work is highly desirable. The Professor-in-Chief might be the cope-stone of the departmental edifice, and assistant-professors and lecturers, all animated with a desire to make the university training as perfect and complete as possible, would be his active co-operators. Such a scheme would, in my humble opinion, be easily adjusted.

The system which at present prevails of examining on subjects in groups at the end of the different years of study has doubtless much to commend it, and is certainly a far more effective test of a student's knowledge than the plan which it replaced, but there is this serious and fatal drawback to it, that the preparation which it entails on the student interferes most seriously with the regular work of the session, and is, as many of you know too well, an abiding source of distraction. The examination mania is not, I am glad to say, just so acute now as it was a few years ago, and reliance on the examination-test alone has fewer advocates. An examiner, who is also a teacher of the candidates, as with us, has the great advantage of watching the men during their whole undergraduate career, and so can form a far truer estimate of the acquirements, and their fitness to pass, than those whose opportunity of judging is confined to a few minutes at the examination-table, where nervousness, confusion, and inability to express himself clearly, may seriously handicap a careful and well-informed candidate. To examine well is a very difficult task, which requires not only experience, but special aptitude. It is Rousseau who says, "To question fitly is the art of a master."

Many forget that what is required is not to aim at exposing a student's ignorance, but to extract from him what he knows. This demands much experience in the examiner, and a wide and minute knowledge of the subject. Then only will the questions be duly varied so as to cover a large area, and the aspect in which the candidate looks at the point be correctly understood. Tact, patience, freedom from bias, and a fair, judicial mind are essential. Such qualifications are, I humbly submit, most likely to be found among men whose habitual business it is to deal with students. The preposterous suggestion that a professor is liable to be biassed at these examinations in favour of his own pupils is too contemptible to deserve notice. Does his official and independent position, or that of an irresponsible representative of another school, afford the best guarantee for capacity and fitness, for fairness and impartiality? The present arrangement, by which the teachers, aided by assessors chosen by the University Court, and so independent of the professors, are the examiners, seems to me to supply the best available arrangement for securing a searching, but fair trial.

But, to pass to other themes for the short time remaining at my disposal, I would express a hope that all of you who have become members of this ancient seat of learning are duly impressed with the privileges you thereby acquire and the responsibilities you assume, and are prepared to fulfil the duties which appertain to your acquired heritage. Many of you have just come from school. Pray remember that you are no longer schoolboys, but men. In your behaviour here, make it always apparent that you realise this fact. All childish habits, all thoughtless conduct is unbecoming, and unworthy of your new position. Be ambitious to uphold and increase the dignity of an institution which in all honour and repute has held the field for 400 years. The medical student of to-day is not the turbulent numskull of popular tradition. He has neither time nor inclination for foolish pranks, and I confidently anticipate that you will prove yourselves worthy successors to the many hard-working and conscientious men who have of late years filled our class-rooms.

Yes, gentlemen, the University is a serious and important place dedicated to the gravest pursuits. All trifling and idleness is both a folly and a crime. There is no sham work allowed here; everything is earnest and real. Thoughtlessness, believe me, is no venial offence; it is a grave and reprehensible outrage on yourselves and all with whom you are connected. Hear what Ruskin says about it: "I have no patience with people who talk about the thoughtlessness of youth indulgently. I had infinitely rather hear of thoughtlessness in old age and the indulgence due to that. When a man has done his work, and nothing can be materially altered in his fate, let him forget his toil; but what excuse can you find for wilfulness of thought at the very time when every crisis of future fortune hangs on your decisions. A youth thoughtless," he continues, "when the happiness of his home for ever depends on the chances or the passions of an hour! A youth thoughtless, when the career of all his days depends on the opportunity of a moment! A youth thoughtless, when his every act is a foundation stone of future conduct, and every imagination a fountain of life or of death! Be thoughtless in after years rather than now."

Gentlemen, it must never be forgotten that a true university training has a very exalted and noble aim. It is not its only—nay, according to some high authorities, it is not its primary or real purpose at all to supply special marketable knowledge. Its true aim, in the widest sense, is culture—that is, the development and bringing to maturity and perfection the whole of man's latent powers, so as to raise him towards the measure of the stature of the true man—the standard of the All-perfect, and this irrespective of all special pursuits. "A well educated man," according to Whewell, "is one who knows something of everything, and everything of something." A liberal education should till the whole soil of our being. It should eradicate all hereditary or acquired weeds. It should clear the mental eye of all motes, which cause prejudice or misconception, and enable it to see the right and true, so that the man may not only be able to prove all things, but hold fast that which is good. In this way, it begets that "self-reverence, self-knowledge, and self-control," which is the summing up of the whole matter. Education, I have said, aims at the development of the whole man—intellect, heart, and spirit. It awakens his sympathies, and binds him to others by the bond of mutual help. A recent writer (Momerie) defines "true morality" as "the identification of one's own life with the lives of others," and this is the first step to that higher development in which we sink and lose our lower and mere human life in that more perfect Divine lief which is hid in God—hidden with that Supreme Being who, though unrecognised till the mental ear is opened, most surely stands and knocks at the door of every human heart. It is this higher development which constitutes "religion."

But true education can only be worked out by each man for himself. It is a prize, however, which all can win. Teachers, books, companions, mutual intercourse, all help the discipline and "stretching" (to use Wendell Holmes's phrase) of the various faculties, and ripen them for use. "The end of life is not then to get, but to *be*." It is by what we become, and not by what we win of wealth or prosperity, that we will take our place in the eternal progress. In the concluding words of our Rector's eloquent address, I would say: "Every human soul bears the seed of a boundless destiny, which it is for each one to nourish and rear into fulness of growth, and make fruitful of abiding good by faithful unwavering devotion to truth and duty." Let the seed, then, which you sow be of the right sort (for by want of circumspection it may readily be mere tares). Let its growth be carefully tended. The harvest will not be reaped here alone, but throughout eternity; "for whatsoever a man soweth, that shall he also reap."

Now, gentlemen, the training of which I have spoken is essential for you if you aim at becoming worthy members of a profession which is ever trying, however vainly, to solve the most difficult problems which can be submitted to the head and heart, and which will bring you into contact with your fellow-men in every aspect of their lives, and, above all, in their hours of deepest need and sorest trial.

Again, of the many influences which go to mould a man's character, none perhaps are more potent than companions. The mutual effect for good or evil thus engendered is incalculable. From the time of Pythagoras downwards, this has been expressed in many ways. "Show me with whom he associates, and I will tell you his character," etc. "He that walketh with wise men shall be wise

but the companion of fools shall be destroyed." But who are the fools? Well, in the sense now spoken of, they are the libertine, the idle, the sceptic, and those whose coarse and unbecoming conduct repels you. Never associate with a man you cannot thoroughly respect and gain some good from. That is a simple and useful rule. Be master of yourselves in all things. "Keep a conscience void of offence." It is infinitely easier to avoid the beginning of evil than to renounce it afterwards. Temptation you must encounter. Resisting it strengthens the character as the tempest gives firmness and vigour to the fibres of the oak. Let not the holy temple of your bodies be defiled by any uncleanness. Remember Tom Hughes' advice—"The only thing to do with 'wild oats' is to put them carefully into the hottest part of the fire." A very trifling lapse from virtue may start you on the fatal path. A tiny grain may pollute and intrinsically alter a pure solution.

"The little rift within the lute,
That by and by will make the music mute,
And ever widening, slowly silence all."

Further, I must not omit to say that sufficient bodily exercise and well regulated amusement should find an important place in the scheme of your daily work. By substituting the word "medicine" for that of "law," you might well adopt the adage of the old Lord Chancellor:—

"Seven hours to medicine, to soothing slumbers seven;
Ten to the world allot, and all to Heaven."

The brain needs rest and variety of work just like an over-used muscle. As a foil to your special studies and as the best preservative against that narrowness which all mere professional pursuits are apt to engender, you should cultivate the writings of our great essayists, poets, and novelists, that is, the best thoughts of the best men in all countries. These will serve to render "distraction from labour beautiful, and not only beautiful, but beneficent."

It is a duty you owe to yourselves to attend sedulously to your health. If the flesh is weak, a spirit, however willing, can do no good. The tendency of late years, however, in all our schools is to give, perhaps, undue prominence to "sports," and to make a greater hero of the athlete than the student. That temperance (using the term in its widest sense), self-reliance and courage are largely promoted by athletic exercises, I am ready to believe, and so I should be glad to see them carefully cultivated, but always in their proper time and place. In this connection I would strongly recommend to your support the admirable gymnasium which supplies, at so trifling a cost, that exercise which our uncertain climate does not always allow of being otherwise obtained.

Gentlemen, you will find in this University the most perfect supervision, both in class and hospital-ward. This is a duty we owe to you, to your guardians, and to ourselves. Let me then entreat you to make a good beginning of your work. As you begin—diligent or idle—you will probably continue. It is usually easy to foresee from a very early period the future career of a student. Try to gain the good opinion of your teachers. It may prove of great, even vital, importance to you in after-life. Go up for each professional examination in its due place, and never roll two into one term. Trust your professors to accord you every aid and sympathy. "Good pupils make good teachers." I may be allowed to say that in Scotland the chairs are filled by men who have devoted themselves to the various subjects which they teach, and who on that account gained their academic positions. All make their teaching the main, and some make it the sole, occupation of their lives, and in this you have a guarantee that they will keep abreast of the time. If, as has been said, they do not contribute much to the ephemeral literature of the day, the explanation lies in their absorbing occupation.

I am done, and I thank you heartily for the patience you have shown me. You seek entrance into a profession whose repute each in his place can, in some measure, affect. If pursued in a right spirit, it will prove worthy of your utmost regard. It is beyond gainsay one of the most honourable and humanising of occupations; but no profession, however dignified, can ennoble those who embrace and pursue it with the sole sordid aim of gaining their daily bread. By you its honour can be sustained, and even increased; or you may convert it, as too many do, into a miserable trade, full of petty anxieties, marred by mean rivalry and jealousy, and passed in bitter toil.

BEQUESTS AND DONATIONS.—Mrs. Mary Elizabeth Tanner, of Upper Clapton, bequeathed £3,000 to the Hospital for Incurables, £500 to the Earlswood Asylum for Idiots, and £500 to the German Hospital at Dalston.

AN ADDRESS
ON
CHILDREN'S HOSPITALS AS MEDICAL SCHOOLS.

Delivered at the opening of the Medical Session at the Hospital for Sick Childen, Great Ormond Street, London.

BY TIMOTHY HOLMES, M.A.CANTAB., F.R.C.S.,
Surgeon to St. George's Hospital, and late Surgeon to the Hospital for Sick Children.

GENTLEMEN,—It is now nearly thirty years since I became an officer of this hospital, as assistant surgeon, and I have ever since retained a lively interest in its welfare. I did my best during the nine years which I served as assistant-surgeon, and surgeon, to promote the objects for which the charity was founded, and it is one of the pleasant memories of my life that the managers of the hospital were so far satisfied with my endeavours that they elected me an honorary governor. I have never since ceased to take an ardent interest in its well-doing, and I rejoice that not only does it flourish as a hospital, but that it is also advancing to take its deserved position as a school of medicine and surgery.

It is on this branch of the subject that I am to address you to-day. Far abler voices than mine have urged upon the public the claims of the Children's Hospital as a charity. I myself heard the greatest genius of the age, "the inimitable" Dickens, deliver at the anniversary dinner of the hospital by far the best speech which it was ever my privilege to hear, whether from the pulpit, the bar, or the tribune; and yearly since that time the same theme has been adorned by the eloquence of many of the greatest and best men of our time. But the question is one which does not want any argument. Not merely the advantages but the necessity of children's hospitals is admitted, and now the only question is how to make them as useful for medical instruction as they confessedly are for public charity.

The foundation of hospitals of this class was a noble and a fruitful idea, and I cannot but regret that while so many of the original founders of this institution are still alive, it should have fallen to the lot of one who is only one of their least distinguished followers and scholars to address you to-day. However, I must do my best, and, without further preface, will turn to my immediate subject; namely, the function of special hospitals, and of this Hospital for Sick Children in particular, in medical education.

Now, no one feels more strongly than I do, or has striven to express the feeling more strongly on all suitable occasions, how much medical education has suffered from special hospitals, and not only medical education, but public charity and public morals. I fear no contradiction when I say that there are many of these special hospitals which are in no sense public charities at all, but private speculations, intended not to relieve the sufferings of the poor, but to make the fortunes of their promoters; and that, so far from serving the cause of medical education, they withdraw from the general hospitals cases which are greatly needed for the instruction of students, which are especially adapted for clinical instruction, and which could be equally well (perhaps better) treated in the wards of a general hospital. We cannot in the present day afford to lose any of our clinical materials. The number of hospital-beds in London is not by any means adequate for the number of students who are to be taught medicine and surgery in those hospitals; and we have seen lately with amazement and with deep regret that royal hospitals, like St. Thomas's and Guy's, have obtained the sanction of the public authorities to withdraw a portion of their foundation from the service of public medicine, and transform it into a paid asylum, from which students are as completely excluded as from a sick chamber. The arrangement is said to be temporary; but depend upon it that, unless public attention is awakened and kept awake, neither I nor you will ever see the end of it. Abuses which ease the finances and save the labour of a great public institution can hardly be expected to cease of themselves.

It is, in my opinon, the chief objection to special hospitals, considered from the view of the public interest, that they take no part in the education of the medical profession. There was a time when they might be said to be necessary, when ophthalmic, obstetric, orthopædic, laryngeal, cutaneous, and other special departments had no

been introduced into general hospitals, and when therefore students were obliged to go elsewhere, at whatever cost of precious time, if they would acquire any adequate knowledge of such matters. But all this is changed now, and in all such departments of medicine our general hospitals afford ample instruction. Two great classes of cases are still either excluded or admitted in such small proportions that the student is practically without instruction in them; and as they are most important in practice, a great blot on our hospital system remains to be wiped out. I mean fevers and chronic cases. The Metropolitan Asylums Board own or supervise enormous hospitals in which such cases are treated in thousands, but they are as yet closed to students. Let us hope that this will soon be remedied. And let us hope also—for I should be sorry to abandon hope, even when expectation seems hardly reasonable—that the medical authorities will one day see their way to enlarging the time for study, and taking care that this precious time is spent as largely as possible in the actual observation of disease. At present, nearly all the time which is at the student's disposal is consumed in "working up," as it is called, the subjects for the numerous examinations by which the portal of the double qualification is guarded; and it is grievous to think that much of this labour is thrown away; that the knowledge so acquired is, to use Thucydides's phrase, not "a possession for ever, but only intended for the display of a moment." Why is it that so few students can find the time to study at hospitals like this? Not because they are indifferent to the absorbing interest of the actual study of disease, and the actual personal attendance on patients, but because the examining bodies will not let them alone. They must be going every day to their medical tutors to pump the daily drench of cram into them, or to stop the daily leakage of cram out of them; and, meanwhile, the acquisition of real knowledge of disease which can only be acquired by personal attendance on cases, must be managed in the hurried intervals of all this cram. Too much teaching, too little learning, is the besetting sin of the medical education of the day—it is too demonstrational, too little clinical.

However, it is not my part to give you a jeremiad on the faults of our system of to-day. With all its failings, and they are many, I am glad to think that it has this great advantage over that of my younger day—that it compels the student to work at something, if he would get his diploma. It is to be regretted that a great deal of this work is thrown away. Still, it is work; it disciplines the mind, and prepares the man for the hard work of his future life. The medical profession is a round of continuous labour (*travaux forcés en perpetuité*), and it is well for a man on his entry into it to be forced to work. Your presence here to-day shows that the better class of students can still find time for some work of supererogation, when such work brings with it the opportunity for studying diseases which, though common in practice, are rare in hospitals.

I say, then, that some means ought to be found for utilising the great institutions under the poor-law system, and more particularly for giving students practical tuition in the unspeakably important subject of fevers, a subject more neglected than any other in our present system of medical education, if we consider it in proportion to its vast importance to public hygiene. When this has been done, and when our students are freely taught the many lessons they could learn in the parish infirmaries, I think the chief function of special hospitals in medical education would have been discharged.

This hospital for Sick Children, however, is hardly described accurately as a special hospital. It is rather a general hospital, with limitations as to age. And it differs from the special hospitals I have referred to in this important respect, that it takes into its wards cases which cannot be admitted, in any large proportion, into the general hospitals, and which cannot be so well treated there as here; and, further, that its out-patient department furnishes to the student the best substitute that he can now find for that "apprentice system" by which your fathers learned the common round of every-day practice—things which are not and cannot be taught in lectures and text-books, but which are infinitely more important to the general practitioner than any exquisite points of medical diagnosis, or any refinements of operative surgery. Such things as the common eruptions of childhood, the febrile disorders, child-crowing and croup, the early symptoms of joint-diseases, and especially hip-disease, children's nervous diseases—and I might add indefinitely to the list—are what cannot be adequately studied in general hospitals; but a familiarity with which may make all the difference to a young practitioner between success and failure; and remember that this success and failure is not a matter that involves the practitioner only; but the patient has a most real "solidarity," as the French say, in the transaction.

It is singular how common is a total ignorance of the ordinary surgical affections of childhood, even among otherwise well informed practitioners. I had once an instance of this in my own practice, which I may mention. I was sent for a few miles from London to meet a gentleman well known to me by reputation, and of high standing in the neighbourhood, about the case of a little girl. It was a common case of subacute traumatic periostitis of the femur, presenting no difficulty whatever. Yet this gentleman, who had long held a leading position in one of the chief suburbs of London, confessed to the child's parents, as well as to myself, that he had never seen such a case, and had no idea what was the matter with the child. But the same want of familiarity with the surgery of childhood meets us literally at every turn. Why do we see so many deformed limbs—so many hopeless cripples—in our streets? The diseases which produce these deformities are not in themselves usually incurable, and hardly ever need involve such deformity as we commonly see. I do not say that the blame rests exclusively on the medical attendant. Diseases of this sort are of long continuance, and require minute care and proper instrumental support during a very long time; and, however, well they may be treated at first, and however good may be the advice which the parents receive, it is but too probable, in the circumstances in which these poor children are placed, that the advice will be disregarded, and the treatment given up. Still there are too many cases to which this explanation does not apply, and in which we are obliged to confess that the disease has been overlooked, or its treatment misunderstood. No surgeon of experience can have failed to see many cases in which hip or knee disease has been confounded with rheumatism, and still more in which the necessary application of an extending apparatus, or a splint, has been neglected until hopeless displacement has ensued. When this is the case, the natural cure which under proper treatment would have only involved a slight limp, is accompanied by deformity, which renders natural progression in some cases impossible, and compels the miserable patient to make use of cumbrous apparatus, and in some cases to have resort to dangerous and uncertain surgical operations, in order to restore the limb to the straight line, which it never ought to have been allowed to quit. I could quote cases of this sort to you by the score. Two of hip-disease I remember vividly, because the fathers were friends of my own, and were both army surgeons. In neither case was the father responsible for the failure of the treatment, since he was away on military service. Both children had been treated without splint or extending apparatus till deformity was incurable. In one, it was so great that it was thought necessary to divide the neck of the femur, but with a fatal result. Now, if neglect or ignorance such as this is met with among the children of professional men, what will be the case among those of the poor? I believe that no greater benefit in medical matters could be conferred on the public than the enforcing on the medical profession the necessity of proper apparatus in chronic disease of the hip and knee; and I am sure that nowhere could this lesson be learned better than in this hospital and its most useful offspring, the Alexandra Hospital for Hip-Disease, close by—an institution which we owe to the zeal and perseverance of a lady whom I need not name in this hospital, but whom I recollect as one of the best surgical nurses I ever knew, when I was surgeon to the old Children's Hospital.

The difference between the result of a case of hip-disease well and ill treated was strikingly illustrated in the course of an inquiry about excision of the hip, undertaken a few years ago by a Committee of the Clinical Society, of which I was a member. It had often been made a question whether the results of operation were or were not better than "the natural cure;" but surgeons had been rather in the habit of arguing the question as if the results of natural cure were uniform. In reality, every kind and amount of avoidable deformity is allowed to accompany the natural cure. We have a specimen at St. George's Hospital, in which the femur has been allowed to ankylose in an almost vertical direction upwards. It is very commonly at right angles; it sometimes crosses the other leg; and sometimes, as in Mr. Lucas's well known cases, both legs cross each other. If you contrast with cases like these the results of the natural cure carefully superintended through months or years of patient and judicious attention at the hospital in Queen Square, you will soon agree with me that the question above stated does not admit of argument, and that the limbs so treated are as far superior to those in which excision has been practised as the latter are to the neglected cases I have been indicating. But you must recollect that the care should be unremitting, and the treatment continued through months and years; abscesses early opened, frequently washed out with antiseptics, and thoroughly drained; the limb got into good position as soon as possible, and kept so, with the child in bed until all acute symptoms have long subsided, whilst the general health is carefully attended to.

I need hardly say how unfit our general hospitals are to deal with cases of this sort. They often require years of treatment instead of the weeks which they get at a general hospital. Nor are diseases of the knee different in kind, though I think they are not, on the average, so protracted as those of the hip. Consider the frequency of excision and amputation for diseased hip and knee in hospitals, as compared with their rarity in private practice, though diseases of those joints are by no means uncommon in the latter. Does not this point to a want of continuous hospital treatment for chronic diseases which might well be supplied in London at the parish infirmaries? These are now hospitals in all but the name, and have good nurses, and every appliance. Surely the money spent on the care and nursing of these chronic cases would be well invested in restoring multitudes of men and women to a life of activity and usefulness who now are allowed to become hopeless cripples.

Do not think I am wandering from my subject. You will never understand the wilful waste which is now made of the lives and limbs of the poor till you study the proper treatment of diseases of the joints in children's hospitals and convalescent institutions. I have chosen to dwell rather at length on this topic because it is one on which I have long felt strongly, and have so often had to lament, while performing an amputation or excision, the want of early care and attention which would have, in all probability, prevented any necessity for such extreme measures.

But there are many other parts of surgical practice which can only be studied thoroughly in children. I will mention a few of these, though time will only allow of a brief reference to them. One of the most urgent surgical questions of the day is with regard to radical operations for hernia—how far the cure is permanent after each kind of operation, and how far the operation is justifiable, considering the prospects of natural cure, the probability of relapse after operation and the danger of the operation itself. Now, as regards the large class of herniæ which are of congenital or nearly congenital origin, it is clear that these questions can only be settled by a wide inquiry into the life-history of a number of persons affected with hernia from infancy, and carefully treated with well-fitting trusses, on the one hand, or submitted to operation on the other. For such an inquiry there are ample materials at such institutions as these,[1] and we have means of following up our out-patients which are wanting at the general hospitals; for both here and at the Alexandra Hospital out-patient visitors are kept, whose duties are thus stated in the rules of latter hospital, "To attend in their own homes, under the direction of the surgeons, cases waiting for admission and children who have been discharged, and to keep a register of all the cases she visits." I confess that it often grieves me to think how much valuable material of this kind we allow to run to waste in consequence of the haphazard way in which we see patients under the present system. Does it not seem strange that on so ordinary a question as this, and one so extremely important, the experience of all our hospitals for many generations throws no light? Ask any surgeon what his opinion is as to the chance of the spontaneous recovery of a case of congenital inguinal hernia, allowing that a well-fitting truss can be sedulously applied, and you will find that although some have an impression that cure is very rare, and others, among whom I would include myself, that it is common, if the treatment be begun in the earliest period of infancy, no one knows positively anything about it. Meanwhile we are deluged with "statistics," as they are called, that is, the results of the experience of individuals who are concerned in advocating one or another of the various operations which are now coming so much into vogue; but the essential point, that is, whether these results are any better than those obtainable without operation, is left unsettled. Pray do not misunderstand me; I am in no way opposed to this operation. I have practised it and seen it practised by others, and with the happiest results. I am not at all sure that it ought not to be performed in early childhood, in most cases of inguinal hernia, when a truss has been properly applied for a considerable length of time without success. But without some more certain knowledge on the subject, I always find myself in great difficulty in giving advice, and hardly ever recommend operation in cases where the ring is of ordinary size. And again, perhaps, I ought to say that in speaking somewhat slightingly of the statistics of these operations, I have no idea of making any reflection on the trustworthiness of the narrators or on the truthfulness of the facts.

Another surgical subject, even more important than that of hernia (but I confess far more difficult to investigate) is syphilis. Of the benefit to mankind, which may result from successful researches on this subject—a subject, be it remembered, very far indeed from being exhausted—we have a striking instance in Mr. Hutchinson's discovery of the connection between interstitial keratitis and congenital syphilis, and the curability of the eye-disease by iodide of potassium and mercury. Thousands of persons owe their vision to this happy discovery, who would otherwise have been practically, if not totally, blind. It is a discovery which no one questions, and which, in fact, is susceptible of the most rigid proof, as far at least as the curability of the disease by anti-syphilitic remedies goes. Should I be too presumptuous if I say that there is not the same certainty in respect of the connection of what are often called "Hutchinson's teeth" with congenital syphilis? At any rate I think I may go so far as to assert that if congenital syphilitic stomatitis does produce any characteristic irregularity of the permanent teeth, there are other cases in which a very similar irregularity seems to have been caused by other affections; and the various affections of the mouth and teeth in infancy, together with their effects on the permanent teeth, would form a subject worth any one's labour, and one for which adequate material could scarcely be found elsewhere than in the out-patient rooms of hospitals like these. But, apart from the teeth, how many unsettled questions connected with infantile syphilis, congenital and acquired, offer themselves to the student of children's diseases? It is a very short time since a distinguished French pathologist wished to convince the world that rickets is nothing else than a form of congenital syphilis. This doctrine is now, I believe, universally regarded as erroneous, but much still remains to be done in tracing the connection between many of the bone-diseases of childhood and syphilis, although you know, gentlemen, as well as all the rest of the medical world, how much has already been achieved in this department of medicine by officers of this hospital, Dr. Barlow and Dr. Lees. You may judge of the wealth of material which is to be found in this hospital, by the fact that 218 cases among the out-patients in 1885 are classed as "syphilis," and these are, of course, by no means the only cases which would bear on the subject.

I must not weary you by endeavouring to go over all the particulars in which the surgery of childhood differs from that which we are accustomed to see in the adult. But I should like to mention one most important branch of surgery, of which you see little in general hospitals, while here there is a wide field for its study. I mean malformations. In this term I include those congenital tumours of which I saw a large number of every variety when I was surgeon here, but of which few have come under my notice since. Such tumours are of the most various kinds, and their behaviour is equally various. Some, —but very few indeed—are, I believe, cancerous. Some grow with frightful rapidity, but are perfectly innocent, and, if removed entirely, will never recur. I once saw a striking instance of this. A little puny infant (*Path. Trans.*, vol. xiv) was brought to me in the out-patient room at St. George's Hospital, with a large congenital tumour of the orbit, growing so rapidly that it had pushed the eye out of the baby's head, and its shrivelled remains lay on the top of the tumour. The child seemed at the point of death from exhaustion caused by the discharge and the rapidly growing mass. Still, I had seen enough of congenital tumours at this Hospital to feel sure that it was in itself innocent, and that, if the operation did not prove fatal, the child had a fair chance of permanent health. I explained the case to the mother, saying that I feared the child would die on the table; but if she wished we would give it the only chance for life. She urged that it should be done. The shock of the operation was all but fatal; but by the sedulous use of the galvanic battery, warmth to the extremities, and artificial respiration, in about an hour we were able to give the child back to the mother; and I saw the child a considerable time afterwards perfectly healthy and thriving. When growing rapidly, such tumours should be removed, even in the earliest period of life. I operated, in this hospital, on a large one in the nape of the neck at the age of fourteen days, and with success (*Path. Trans.*, vol. xii). Cases like these are sufficiently rare to be unfamiliar to the general practitioner; yet, in some instances, like the above, vigorous action is required to save life, while, in others, there is no motive whatever for hurry, or even if the growth is in a concealed and not inconvenient locality for any interference at all; and, again, in other cases, much the same appearance is presented by mere congenital "sclerosis," as it is called, of muscles (common in the sterno-mastoid) which, I believe, usually disappears of itself.

In the true malformations, such as hare-lip, fissured palate, imperforate anus, much progress has been made of late years. One of the earliest workers on the subject of fissured palate was the first surgeon to this hospital, my friend and teacher, Mr. Pollock; and surgery is greatly indebted to him for the promotion and development of the

[1] In the annual report for 1885 it is stated that 190 cases of hernia presented themselves in the out-patient room during the year, 116 being infants under a year old.

operation. It was during my period as surgeon to this hospital that Mr. T. Smith, then assistant-surgeon, introduced his happy modification of staphyloraphy by the invention of the gag which goes by his name, so that the operation could be performed under chloroform, and it was no longer necessary to wait till the patient became old enough to assist the surgeon. Like all other improvements, these became the starting-points of others, and the operation is now far simpler and far more successful than it was when I was young. I hope that I may say the same with respect to the group of malformations included under the general name of "imperforate anus." It is not so very long ago since all children born with imperforate anus were abandoned indiscriminately to death by many surgeons; but we now know that it is only a very small minority who are absolutely not viable, and that even the most formidable cases—those in which the lower bowel is actually absent—are not altogether without hope of surgical relief; while there are a large proportion where the rectum comes very near the surface or opens into the vagina, in which entire success can be obtained, and the patient restored to complete health and vigour. I was much interested a few weeks since in examining a woman who, when a little girl, was a patient of mine at this hospital, and on whom, here and at St. George's Hospital, I operated several times for the relief of a distressing deformity caused by the rectum opening freely into the vagina. When she first came under treatment, in early childhood, the small size of the parts, and the free communication between the rectum and vagina, caused very great difficulty in effecting a complete separation between the two tubes; and, after this was at length secured, it seemed at first as if there was no retentive power in the bowel. But this was at length acquired; and, when I last saw her, the parts were in all respects natural, and she was perfectly fit for all the functions of a wife or mother. I mention this case because it was a very difficult, and apparently, at first, a very unsuccessful one; and because it shows how completely the rectum may acquire the power of retention even in the absence of the regular sphincter; and also because it gives me an opportunity of recording my opinion that even at the present day we are not sufficiently active in our treatment of imperforate anus. Early operation, judiciously devised, would, I believe, restore many infants to health who are now allowed to die.

I trust that the few examples which I have selected from the specialities of children's surgery have been enough to convince you of the advantage you may derive in your future professional life from a diligent course of surgical study at this hospital. And there is another consideration, which must increase the interest with which surgeons regard practice on children, namely, the immense amount of good which is done in successful cases. It appears to me a very mistaken view of children's surgical diseases, which attributes them, in any larger measure, to ineradicable constitutional proclivities. I well remember when the operation of excision of the hip was first introduced, a common argument against its use was, "What is the good of removing the diseased joint, allowing that to be possible, while it is clearly impossible to remove the strumous constitution on which the disease depends?" Now I venture to say that very few indeed of these chronic joint diseases depend on a constitutional diathesis, though, no doubt, they are common in strumous children, and are more obstinate in them. But there is no doubt that a large proportion are the result of injury acting on a perfectly healthy constitution, and there can be no doubt that the removal of the diseased joint is followed by complete and permanent recovery. The days of my surgical service at this hospital are now remote, and most of my former patients have passed out of my observation, but I constantly meet with individuals on whom I operated here from twenty to twenty-five years ago, and who are still in good health; and I may say that cases of this kind are further useful in negativing the idea which has prevailed rather extensively in the case of the elbow, and, to a great extent, also, in that of the knee, that such operations inflict some unexplained general shock on the limb, and are followed by a general wasting and loss of power. The reverse is certainly the case in successful excisions. The limb gains in power and utility, and, if the patient was quite young at the time of the operation, he will probably soon use it almost as nimbly as the other, and with almost as much strength.

But the chief advantages of study in this hospital are to be found in a field which I am not competent to survey; and while I should fail in my duty if I did not point out to you how much there is to be learned in children's surgery, my address would be still more inadequate if it did not conclude by telling you that all this is but a trifle compared with the paramount necessity, for one who is to become a general practitioner, of familiarising himself with the medical affections of childhood and with their treatment, while he has the unequalled opportunity which this hospital presents to him.

I declare to you seriously that if I had a son who was entering into general practice, I would not permit him to do so without having made a special study of children's diseases any more than of those of women. For the latter, it is unnecessary to go beyond the walls of the hospital to which the student is attached. There is, I believe, a department for the study of women's diseases in every hospital to which a medical school is attached. But at none of the general hospitals is there, nor can there be, an efficient department of children's diseases. Even special children's wards are hardly compatible with the due and economic working of a general hospital—at least, that was the conclusion to which the authorities at St. George's came after a patient trial of the experiment many years ago. Hence the liberal and self-sacrificing offer of the physicians and surgeons of this noble institution to place the rich stores of their experience, and the abundant materials of their daily practice, at the service of the students of our London hospitals, is one which cannot be too highly appreciated. I am glad to see from Dr. Cheadle's speech at the last annual dinner that the lectures during last year were well attended, and that as many as 234 visits were paid by students to the hospital. I hope that the liberal invitation of the staff will, in this and future years, meet with the response it deserves, not less for the sake of the students who will acquire knowledge inexpressibly valuable to them hereafter, than for the sake of the many patients who will benefit by the knowledge so acquired.

With repeated good wishes for the success of the Hospital, and for your success in your studies here, I bid you very heartily farewell.

THE VALUE OF DISINFECTANTS,

Being part of an Address delivered at a Combined Meeting of the Cambridge, Huntingdon, and East Anglian Branches of the British Medical Association, at Ipswich, on Friday, July 9th, 1886,

By WILLIAM ALFRED ELLISTON, M.D.,

Surgeon to the East Suffolk and Ipswich Hospital; President of the East Anglian Branch.

In association with the management, treatment, and control of infectious diseases, the value of disinfectants is of great practical importance. We all know that disinfection, as ordinarily practised, is little more than deodorisation, or the substitution of a fresh odour, oftentimes unpleasant in itself.

I do not wish to detract from the value of many well-known so-called disinfectants, but their virtues are clearly more prized by the public than by the profession. The public faith in some latent power, which is to purify the sick chamber without free admission of fresh currents of air, should be shaken to its core. The great secret of successful nursing is cleanliness and ventilation, and it is possible to secure these without disinfectants at all, provided there be an abundant supply of clean bed- and body-linen. Nevertheless, properly selected disinfectants are valuable assistants in the preservation of cleanliness and sweet air, but they should be understood and appreciated at their real value, and not with an ignorant belief in their fetish power.

Professor Koch has related in the *Practitioner*, of November, 1882, some important experiments bearing upon the reliability of disinfectants. He put the ordinary ones to the test in three ways. First to ascertain whether a particular disinfectant is capable of destroying the resting spores of bacilli, which are the most difficult of all forms of life to destroy. No disinfectant can be safely trusted which cannot destroy the developing power of the resting spores. The resting spores of splenic fever were generally used. The second is to ascertain how the disinfectant behaves in regard to more easily destructive fungi, such as yeast, bacteria, bacilli, and micrococci; and thirdly, to ascertain if the disinfectant is capable of arresting the development of micro-organisms in suitable nutritive fluids.

Carbolic acid, in a 5 per cent. solution, only sufficed to arrest the developments of spores after two days, while a 1 per cent. solution was sufficient to destroy, in two minutes, the bacilli themselves. A solution of 1 in 850 sufficed to check the development of the latter. The fact was very noticeable that carbolic acid in oil, or in alcoholic

solutions, is absolutely without effect on the bacilli and spores. The spores after remaining 110 days and 70 days respectively, in a 5 per cent. solution of carbolic acid and oil, and in alcohol, were repeatedly found intact.

Salicylic acid and thymol showed unsatisfactory results, and even sulphurous acid, under such favourable conditions as are not obtainable in ordinary practice, fails to destroy the whole of the minute living organisms that may be present. Chloride of lime was also incapable in a 5 per cent. solution of weakening the power of the splenic fever spores.

After testing various substances, Koch arrives at the conclusion that the only reliable disinfectants are chlorine, bromine, and corrosive sublimate, and that, to arrest development, only corrosive sublimate, and certain ethereal oils, and allyl-alcohol are to be trusted. Bromine vapours are recommended for confined spaces. Chlorine is a little less satisfactory, but more so than has been supposed. It is comforting, however, to observe that, in corrosive sublimate, we have an invaluable germicide, and that solutions of 1 in 1,000 to 1 in 15,000 are sufficient to kill micro-organisms. A solution of 1 in 1,000 was sufficient to kill the resting spores in ten minutes, and, indeed, simple moistening of the earth with this solution is sufficient to arrest the power of development.

The experiments of M. de la Croix, conducted in a totally different manner, also point to the extreme value of the perchloride of mercury and chlorine.

Professor Konig, of Gottingen, also relates a personal experience of twenty years' experience of the value of fumigation of rooms by sublimate. The method he adopts is very simple. After closely shutting the windows of the infected room, the person who carries the disinfectant sprinkles about fifty or sixty grammes of the sublimate on a coal-shovel, over a glowing firepan, and then quickly leaves the room and locks the door. All chinks must be stopped beforehand. The sublimate evaporates quickly, and the room is now left exposed to the fumes for three or four hours. The door is then opened, and, in opening the window, care must be taken to hold a cloth over the nose and mouth. The door is immediately locked again, and the room is aired for several hours, the windows being left open. The windows are once again shut, and the room is fumigated in the usual way with sulphur, in order to render harmless the mercury which is still present. Professor Konig states he has never observed any harm to those who carried out this method, nor to the inhabitants of the cleansed room.

Professor Förster, of Amsterdam, also bears testimony to the value of a solution of from 7½ to 15 grains of sublimate in thirty-five ounces of distilled water, as a perfect disinfectant for the hands after contact with infection, while he regards the usual solution of carbolic acid and water, 2½ per cent., inadequate for the purpose.

It is satisfactory, therefore, to know that we have reliable chemicals that will stand the severe tests of modern investigation. It is still more satisfactory, I think, that boiling water is a perfect disinfectant. No contagium can resist a moist temperature of 212° Fahrenheit. Linen and clothes (of the material that will not be injured by boiling) can be perfectly disinfected by that simple process.

At the request of the German Government, Koch and Wolfhurzel experimented upon the comparative disinfecting value of dry heat and steam. They reported that, by the direct application of steam at 212° Fahrenheit for from five to ten minutes, even the virulence of dried anthrax blood was destroyed. Earth-spores, which have a reputation for tenacity of life at high temperatures beyond all others, were devitalised by fifteen minutes' exposure to steam, while they resisted the action of dry heat for three or four hours at 302° Fahrenheit.

Dr. Russell, medical officer of Glasgow, says that, during the last ten years, over a million of articles (from persons affected with every kind of contagion known in this country) have passed through the Glasgow laundry, and that he has never known a case of interchanged disease, although the women engaged in the laundry have occasionally suffered from handling the linen before the boiling process. In the disinfection of apartments, care must be taken to burn the collected dust, and thorough domestic cleansing is necessary, but it is clearly incumbent upon all sanitary authorities to make provision upon a scale adequate to the purpose, to secure steam disinfection in its varied systematic details.

There is yet another subject on which I would desire to say a few words, and with which I will bring these fragmentary remarks upon matters of importance to the nursing to a close, and that is the disposal of the dead. All sanitarians must, I think, be agreed that for hygienic excellence and cleanliness, cremation would dispose of the subject; but there are various circumstances and objections which are beyond the questions of sanitation, and which cannot be dismissed until the growing evil in a rapidly increasing population will necessitate its serious consideration. But I would specially remind those in favour of a continuance of the present Christian rites, that until the time of Charles II, coffins were rarely used in England, and it would be well if we returned to the more simple and more hygienic system of burial then in vogue, and thus secure an earlier and more complete disintegration of the body.

Gentlemen, I beg to thank you for your courteous attention to these remarks upon subjects in which, from the very nature of their calling, we cannot fail to take an absorbing interest.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

SCARLET FEVER IN RELATION WITH THE DISTURBANCE OF IMPURE SUBSOIL AND THE CONSTRUCTION OF SEWERS; FROM PERSONAL OBSERVATIONS DURING AN EPIDEMIC.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Brighton.

By PHILIP BOOBBYER, M.B.,

Medical Officer of Health to the Basford Sanitary District, South Notts.

I have here a few facts bearing on the propagation of scarlet fever recorded by me during a series of epidemics which visited my district in South Notts in 1885.

The fever existing only in a few scattered cases over the least populous part of the North-Western (Greasley) Division in December, 1884, gradually and unequally spread, from this date, to the colliery villages of the Erewash Valley and their neighbourhoods until, by the middle of the following March, it had invaded, more or less, almost every hamlet between Selston (north) and Kimberley (south), a stretch of 7 to 8 miles, on the eastern slope of the valley.

In the following February, during the course of this slow extension, two villages in Selston Parish, wide apart from one another, and separated by others, as yet unattacked, from the nucleus of the epidemic, were almost simultaneously invaded to a very general extent, whole families being infected at once. After careful inquiry, I could discover no peculiar facilities of the ordinary kind in the case of either place for the acquisition of the fever to this extent. In paying a visit, however, on one occasion, I was struck by the fact that, at both places, a considerable disturbance of old artificial soil around houses and distribution of midden contents had taken place. In the one case, the ground had been but superficially dug, cleared of rubbish, and manured. In the other, a considerable mass of soil from an old inhabited area has first been removed for the purpose of levelling, and the subsoil then treated as above. I may say that the middens were of the type too often found in such places, being deep, capacious, and leaky.

Contemporary with the scarlatina, enteric fever (a common complaint at all seasons in such districts as mine, and much health depression, with its attendant maladies) occurred in these hamlets. There was no diphtheria, however, and no tendency to epidemic extension of anything but the scarlatina. The mortality was abnormally low, if we accept the average as ten per cent. Exact figures I cannot give, but it could not have exceeded three or four per cent. of those attacked.

After the middle of March, this first epidemic declined at all points, its decline being naturally most noticeable where its invasion had

been most general, namely, in these two villages. Elsewhere it had shown but little tendency to concentration.

Towards the end of April, my attention was called to a renewal of the disease, without obvious cause, among the inhabitants of the outskirts of Kimberley township, which had previously been invaded by it. Three families at the lower end of a sloping street were now attacked, one only of which had suffered before. In the course of the following week, twelve other houses here, in a total of thirty-four, were invaded by the disease, eight of these having previously escaped infection.

A new drainage-system was in course of construction at Kimberley, and this street, which extends up a hill having an inclination of about 1 in 15, was one of the first to be laid with pipes. From the middle of the month onwards, considerable excavation of very foul artificial soil had taken place in preparation for the necessary connections between the houses and main sewer. The question now arose, and interested many persons in the neighbourhood, among whom was the chairman of our board, a very intelligent man, as to what artificial agent—for some there now certainly was—could be playing so important a part in the propagation of the fever, which appeared with remarkable regularity wherever the new works had extended. At first, I was inclined to think, with others, that the sewer and its connections acted simply as conducting channels for infection; but the light of previous and subsequent experience, more carefully applied, led me afterwards to the belief that the excavation was here the root of the mischief. It was urged, in support of the first hypothesis, that during this renewed epidemic, especially at the outset, the extension almost always took place in an upward direction, and, indeed, this was remarkably illustrated in several cases; but, allowing that the sewer system was a conducting channel—as sewers, doubtless, often are—such an explanation would be quite inadequate to account for the marked incidence of the fever upon spots where, no pipes having yet been laid, considerable excavation or superficial disturbance of soil had taken place in preparation for them.

One outlying part of Kimberley, known as Swing Gate, on a sandstone plateau about 300 yards to the south of the main street, had previously no artificial means of drainage, and was, moreover, chiefly inhabited by colliers—a class, in that neighbourhood, none too careful or cleanly in its personal habits—so that the subsoil had every opportunity of becoming saturated with impurities. The place was reputed especially unhealthy in summer and autumn. Here the fever spread, during the construction of the sewer and its connections, with remarkable generalness. The type, at the same time, was mild, as before, and many of the poorer people had no medical attendant. In several cases at Kimberley, a remarkable symptom was manifested in the discharge of muco-pus from the salivary ducts, and the not unfrequent suppuration of the glands, without the occurrence of other grave symptoms, the patients ultimately doing well. One young and remarkably robust medical man, attending some of these scarlet fever patients, was laid up at this time with suppuration in his right submaxillary gland, followed by a severe attack of catarrhal jaundice. In two cases which I observed, desquamation commenced during the fourth week after disappearance of the temperature; and, in many mild cases, I was told that its continuance was noticed as much as eight weeks after. I was also reliably informed by medical men that, in several instances, their patients had had a previous attack of the fever.

I have in this paper necessarily avoided lengthy detail, my main object being to lay before you with accuracy the broad facts as they struck me and other observers, of a close simultaneity in the appearance of scarlatina and the disturbance of old artificial porous soils containing, for the most part, much organic matter.

The interpretation of such facts must vary with the particular bias of individual judges; but, whether we regard them—to cite three possible solutions—as indicating an absorption and cultivation of the scarlet fever virus by decomposing organic matter, or as factors in its autogenesis, or as the simple outcome of health-depressing influence,—though the latter is most often seen in the case of scarlatina they are, to my mind, in the highest degree suggestive to practical sanitarians.

It has long been held that insanitation generally favours the extension and fatality of scarlet fever; and McLean and others have done much to elucidate the somewhat ill-defined connection between the exposure of soils laden with decomposing organic matter and the occurrence of health-depression, with the very various forms of malarial fever; but, if the above records are anything more than simple coincidence, for my part I cannot help thinking they indicate one new direction in which to look for further information concerning the life-history of scarlet fever.

SCARLET FEVER: THE BEST MEANS FOR ITS PREVENTION IN LARGE URBAN POPULATIONS.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Brighton.

By JOHN TATHAM, B.A., M.B., Trin. Coll., Dub.,
Medical Officer of Health, Salford.

No apology is needed for the introduction of this subject for discussion by the Public Medicine Section; because, of all the maladies which infest the overcrowded populations of our great towns, there is no disease of equal gravity, the spread of which sanitary authorities find it so difficult to control, and not one which, in ordinary times, exacts so heavy a toll, in sickness and death, amongst the younger section of these communities.

Inasmuch as the object for which we have assembled here to-day is eminently a practical one, I shall probably be forgiven if, instead of discussing the merits of the several systems in vogue in other English towns for the suppression of scarlet fever, I ask your leave to state simply the method adopted for this purpose in the community which I have the honour to advise. And, before proceeding further, let me in all gratitude remark, that whatever success has attended our local efforts at scarlet fever extinction, is very largely due to the conscientious manner in which, as medical officer of health, I have been supported by my brethren of the profession in Salford. For myself, and for the health department which it is my privilege to direct, I claim nothing further than that we have endeavoured faithfully to discharge the important and delicate functions with which we have recently been entrusted, and that we have loyally attempted to extract the maximum of protection for the public out of the confidential information with which, since 1882, we have been favoured by the medical practitioners of our town.

The borough which I have the honour to represent has, in past years, gained a somewhat unenviable notoriety as one of the most prolific scarlet fever fields in England. As the present paper is scarcely a statistical one, I shall not stay to inquire how Salford compares with other great centres of industry, as regards the degree of success which has recently attended her efforts in the direction of stamping out scarlet fever, but will adduce a few facts to show that our success in this respect has been at least worth striving for.

During the vicennium 1856-1875 which preceded the establishment of our local fever-hospital—in which period the only means available for the limitation of scarlatinal ravages were the disinfection of houses after sickness, and the removal of nuisances from amidst the houses of the people—the annual death-rate from scarlet fever averaged 135 per 100,000 of the population. In the following seven years—namely, the period which intervened between the establishment of the fever-hospital and the passing of the Compulsory Notification Act—the average annual rate was 98 per 100,000; whilst, during the three years that have elapsed since the passing of that measure, at the end of 1882, the rate has fallen to 50 in the same number living; or, excluding from the first and the last periods—the years of exceptional scarlatinal prevalence—we find that the rate of mortality during the years which preceded the erection of the fever-hospital was just three times the rate which has obtained since 1882, under the combined systems of notification and hospital-isolation now in operation in Salford.

There is nothing exceptional to report as to the legal powers existing in Salford for the control of scarlet fever, or, indeed, of any of the other infectious diseases notifiable under our local Act. We have obtained the powers, and those only, which were agreed upon a few years since by the Select Committee of the House of Commons on police and sanitary clauses. And if an experience of nearly four years warrants one in saying so much, I may state that I think the model clauses sanctioned by that Committee are sufficient, though not more than sufficient, for the purpose which they were intended to serve. Neither am I disposed to claim for our health department that we adopt exceptional measures in dealing with infectious cases generally when brought to our notice. But I think we are entitled to claim for ourselves credit for thoroughness in all that we undertake, and for

carefulness and punctuality in availing ourselves of the priceless information which we receive under the Notification Act.

In the first place, then, I may state my conviction, based on an intimate acquaintance with facts, that we obtain information with respect to a very large majority of the scarlet fever cases that occur in the borough; and, further, that the proportion of notifications to existing attacks is gradually increasing. I may also say, in the second place, that in every reported seizure, special care is taken (*a*) in case isolation is possible at home, that the most complete segregation practicable is secured, and (*b*) in case home-isolation is impossible, that removal to hospital (with consent) shall be effected with all necessary dispatch, and (*c*) that in event of recovery or of death of the patient at home, or, in case of removal to hospital, a very complete purification of infected premises and bedding shall be carried out under our own superintendence. Lastly, it should be mentioned that, on visiting an infected house, which is done as soon as may be after receipt of certificate, the inspector makes a careful survey of the house and premises, with a view of discovering (*a*) whether the disease present has been caused by unsanitary condition of the property, (*b*) whether infection has been imported from elsewhere, and (*c*) whether the house contains other children, who are in actual attendance at school; for, in this case, it is our invariable practice promptly to acquaint the school managers with the fact.

This then is, in brief, a statement of the manner in which we deal preventively with scarlet fever, in the protected town of Salford. As to the results already obtained, I give them for what they are worth, and I do not think that any candid mind will deny that they are in a high degree encouraging. In a word, let me state my conviction—which I submit with all deference—that in order to enable an Urban Sanitary Authority to deal at once economically and effectually with scarlet fever prevalence, it is essential that it should be furnished (1) with complete powers for securing the notification of such cases as occur; and (2), with a suitable hospital for the isolation of such cases as cannot safely be treated at home.

I am of course aware that there are many who will disagree with me here; but we shall all agree that, at any rate, in such a health-resort as that in which our present conference is held, the subject of scarlet fever prevention is one of extreme, not to say, vital importance. And if the sanitary authorities of our English health-resorts will not take steps to safeguard their territories from the inroads of infectious disease, I am in a position to state that the holiday-seeking public, who, living in such protected towns as Manchester and Salford, are accustomed to sanitary supervision at home, are fast becoming alive to the importance of selecting such localities only for their annual holiday as can furnish a reasonable guarantee of freedom from infectious disease. In a conversation I had this morning with the distinguished physician who guards the health of Brighton, I learnt that scarlet fever is never present here endemically, and that he can generally trace any sporadic case that may occur to imported infection from some outside district.

Knowing, as I do, that Dr. Taaffe is himself an advocate for disease notification, I trust that I shall not be deemed guilty of impertinence if I add my testimony to his, as to the protective advantage which must accrue to this and other health-resorts in England, by the extension to them all of powers for compulsory notification of infectious disease.

Mr. Shirley Murphy thought that notification of infectious disease without powers of compulsory removal was of much value, and that, without underrating the usefulness of occasional compulsory removal, this was by no means the chief part of the good that could be done. He referred to an outbreak of enteric fever due to infected milk-supply, which was allowed, for want of notification, to grow until a very serious injury was inflicted upon the district. Infected milk had been early suspected, but the continued use of the milk had been permitted, owing to the mistaken belief that no further cases were occurring.

Dr. H. F. Parsons remarked on the great and steady decline of scarlet fever mortality in recent years; and seeing that the majority of local authorities had not powers of compulsory notification of infectious disease, nor hospitals for the isolation of such cases, nor disinfecting apparatus, he thought that this decline must be mainly due to the adoption of home precautions, these being brought about by a growth of public opinion. He pointed out that, in the interest of the public, hospital accommodation should always be provided where compulsory notification was in force, as it would be hard to compel, for example, a shopkeeper to disclose the existence of infectious disease in his establishment, if there were no place to which the patient could be removed. He also pointed out that, under the Public Health Act, there was a power of compulsory removal in certain cases, as where the patient was "without proper lodging or accommodation;" but that these words had been determined by legal authorities to have reference to the well-doing of the patient, and not to the safety of others. If the clause could be explained in the latter sense, further powers would hardly be necessary.

Dr. Whitelegge (Nottingham): The power of compulsory removal is a desirable addition to compulsory notification, but not so essential that notification without removal is ineffective in checking scarlet fever. In Salford, with compulsory notification, a very large proportion of cases were removed without any compulsory powers. In Nottingham, only a very small proportion are removed, and still the scarlet fever sickness-rate and death-rate have fallen year by year since the commencement of notification, and have now reached a point far below that of any previous year. The same has occurred in each of the notified diseases, but in none of the non-notified zymotic diseases. The experience of several towns has now shown clearly that notification is efficient in combating the spread of scarlet fever, and is not in practice attended with the difficulties which, upon theoretical grounds, were prophesied for it. It does not appear to lead to concealment of cases, or to the employment of unqualified practitioners, or even to resentment on the part of the public or the medical profession, where the system is worked with due discretion. The experiment having been tried successfully in these towns, the time has now arrived for the extension of the principle to the country generally, and especially to those towns which, like Brighton, are centres of attraction for large numbers of visitors in addition to the stationary population.

Dr. Pringle remarked, with reference to this subject, that the case of Leicester was a very remarkable one; there scarlet fever raged last year to an extent which caused the Sanitary Committee of the Council the greatest alarm; isolation could not be carried out, the reason apparently being that the inhabitants in the infected houses objected to this interference with their liberty, and as they did not come under the Act which could compulsorily remove the infected cases, they remained at home to spread the disease. Dr. Pringle remarked further that, if the isolation of small-pox willingly submitted to in Leicester were equally willingly carried out in the case of scarlet fever, the disease would soon be stamped out. The cause of this difference was due to every man, woman, and child in Leicester being perfectly ready to submit to any amount of isolation, rather than give any cause for the carrying out of compulsory vaccination. With scarlet fever there was no such compulsion; hence the difference.

At the close of the discussion, the following resolution, moved by Dr. J. Tatham, and seconded by Dr. Grimshaw, was carried.

"That the Public Health Section, having considered the paper read and the remarks made, are of opinion that the time has arrived when the protection afforded by the powers for the compulsory notification of infectious diseases, should be extended to the population generally; and they therefore recommend the Council of the Association to consider, at an early date, the advisability of endeavouring to promote general legislation with this object in view."

ON THE INFLUENCE OF INCREASED MEANS OF ISOLATION IN CHECKING THE PREVALENCE OF SCARLET FEVER IN LONDON.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Brighton.

By WILLIAM SQUIRE, M.D., F.R.C.P.,

Physician to the St. George, Hanover Square, Dispensary; Member of the Epidemiological Society of London, etc.

Diseases propagated by personal infection, such as scarlet fever and small-pox, have shown no diminution under our extensive sanitary works, but require measures of isolation for their control; they are not checked by the great improvements in drainage and water-supply that have proved so efficacious against the prevalence of diarrhœal diseases, and specially in diminishing the amount of enteric fever. Both these points are proved in the reports of the Registrar-General for enteric fever; a table, page 73 in the last report, shows that the annual mortality from fevers other than scarlet fever have declined from an average of 20,000 first to 15,000 for the five years 1875-79, and then to less than 8,000 for the next five years. In London, the deaths from enteric fever only declined from over 1,000 in the years 1862 and 1878, to 700 in the year 1880 (they had been nearly 2,000 previously). The decline is continuous and progressive.

In the same report, other tables, pages 74 and 76, show the yearly scarlet fever mortality for all England to persist at above 12,000, except for the years 1860-61, with epidemic leaps, as in 1864 and 1874, to 20,000 and 30,000. In London alone, the mortality from this cause in 1870, the first year of compulsory school-attendance under the School Board Act, exceeded 6,000. There was a fall in 1872-73, but with that exception until the last two years, the deaths from scarlet fever in London have averaged in the last twenty-five years, or since a more accurate registration has been carried out, more than 2,000 annually.

Last year the mortality from this cause in London was 700; for the first quarter of the present year this was only 102, not much over half of any quarter of the previous year, less than one-third of what is recorded for 1884, and the lowest number registered in London from scarlet fever for the fifty years that registration has been established; the result, as I shall show, of recently improved and extended means of isolation.

Small-pox and scarlet fever must now be considered together; they with typhus are the only truly infectious diseases that have been dealt with on a large scale by isolation. The efforts of the Metropolitan Asylums Board to meet the requirements of the great outbreak of small-pox in 1870-71 first increased the necessary hospital accommodation. The various impediments encountered led to a further increase in this direction, and then to a greatly extended and improved ambulance system. Obstructions that interfered with the control of small-pox had the effect of diverting much of the increased hospital space to fever-patients. The spread of typhus, that had again threatened some parts of London, was arrested. Special wards for this and for enteric fever were found sufficient, but the need for convalescent quarters for scarlet fever and small-pox was soon apparent. The rapid and complete collapse of the small-pox epidemic when the Darenth establishment was complete leads to high expectations from the institution now near completion for scarlet fever convalescents at Winchmore Hill.

The first action of the London Asylum Board Hospitals was to reduce the small-pox mortality in London from 9,698 in the two years 1871-72, to 113 for the year 1873, and to 103 only for the two years 1874-75, lower figures than had ever been known for small-pox in London. Litigation and ill-advised restrictions had so far interfered with the means of dealing with the 1876 outbreak of small-pox that the epidemic increased the following year, was barely held in check till it rose to an epidemic again in 1881 and 1884, and was not finally repressed until last year. Then the camp for 1,000 convalescents at Darenth had so aided the hospitals that, in the latter half of 1885, the deaths in London from small-pox were 97; 13 of them in the last quarter of the year; and for the first quarter of the present year 1 only. All the other fatal cases, amounting to 13, had been removed from London, and were treated at the hospital-ships in Long Reach.

In 1884 and 1885, the hospital-ships were reinforced by the newly-fitted *Castalia*, and removed to Long Reach, below Dartford. In these two years, 10,718 cases were treated on board. Last year there were 5,644 admissions of small-pox patients, 4,069 from their homes, and 1,575 from other hospitals. The deaths were 444, being a mortality of 7·6 per cent. Dr. Birdwood, in his report for last year, says, page 7, "The severe cases are treated together; on the *Atlas*, 30 acute cases have been in bed at the same time on one side of the decks; on the *Castalia*, in No. 3 Ward 20, and in No. 8, 14 beds have been occupied by confluent cases for several weeks. Neither patients nor staff were injuriously affected." He further remarks, page 14: "The first use of the ships at Long Reach was to promote the recovery of convalescents. Mild cases were next received, then moderately severe, and now all cases except those in too extreme a condition of illness to be conveyed safely by the admirable steam river-ambulances, are sent direct to the hospital-ships as soon as the first symptoms appear. This early removal is of the greatest benefit to the patient, and one of the essentials towards the arrest of epidemics." The report of Dr. Philip on the River Ambulance Service shows that, from February 9th, 1884, to the end of 1885, the number of patients removed to Long Reach was 11,060; and of these 10,076 were brought back well. Instead of less than half the fatal cases occurring in hospital, as in 1877, more than three-fourths of all the deaths from small-pox are thus accounted for, and the control of the epidemic is assured. In the same way, the proportion of fatal cases of typhus treated in the board-hospitals increased from 10 per cent. in 1876 to 40 or 50 per cent. in 1881; and the whole number of deaths has fallen from 163 in the former year to about 30 annually.

This evidence of control over scarlet fever is, happily, increasing year by year. From 1875 to 1877, the proportion of scarlet fever deaths in the board hospitals was only 4 per cent. of the whole number of deaths in London; this has risen to 16·4 and 19 per cent., showing that the means of isolation have increased four fold. However groundless the fears entertained by the Royal Commission as to the possible ill-effects to small-pox patients from being treated in any numbers together, the limitation imposed by that Commission in the London hospitals set free many wards for the treatment of scarlet fever. An injunction in Chancery, practically closing the Fulham Hospital against small-pox, enabled a number of scarlet fever patients to be received from the neighbourhood, with marked good effect in the epidemic prevailing around. Again, these legislative hindrances, if they tended to an increase of small-pox by indirectly enforcing a sort of traffic with this disease through various parts of London, were productive of improved organisation of the methods and means of moving the sick. As late as 1878, some parishes used the same ambulances for small-pox and fever cases; friends of the patients were allowed to accompany them, instead of a special nurse; the driver had no distinctive coat kept at the ambulance station for his use when on duty, and insufficient means of disinfection allowed.

Scarlet fever differs from small-pox in three important particulars: first, in the shortness of the incubation period, or the rapidity with which the disease is declared; secondly, in the variety and duration of the complications which follow; thirdly, in the long convalescence and increased length of time during which infection persists. Separate wards are required for cases of different degrees of severity, and unless a convalescent department is available, the length of time necessary to retain patients, lest they should be a source of danger to others, seriously cripples the amount of available hospital-accommodation for acute cases, and this to the extent at least of half the whole number of beds.

Considering the rapidity of ingress in scarlet fever, the hospital for the reception of acute cases should not be at any great distance from the district to be benefited; a convalescent institution at some greater distance, accessible from the fever hospitals, is desirable. To carry out this necessary adjunct, the Metropolitan Asylums Board have nearly completed, at Winchmore Hill, a sanatorium for 416 scarlet fever convalescents. The number of beds provided for scarlet fever cases is about 500; this number could be increased on occasion as the number of beds provided for fever cases by the Asylums Board is 936; for small-pox cases, 600 beds are available. The ambulance system, with its centre at Norfolk House, Norfolk Street, Strand, close to the Thames Embankment, in telephonic communication with the different hospitals and ambulance-stations of the Board, ensures the prompt removal of either of these infectious illnesses which cannot be well attended to or isolated at home. A sixpenny telegram to Norfolk House from any qualified medical practitioner will at once be acted on, the question of parochial responsibility or personal payment for expenses being afterwards adjusted.

It may be premature to attribute the recent remarkable reduction in our small-pox and scarlet fever epidemics exclusively to our efforts towards isolation, but it is well to call attention to the coincidence. The periods for epidemic increase of both these diseases is again close upon us, and it is to be feared that a pause in these efforts may allow them to advance. There has been delay in sanctioning the necessary outlay at Darenth for a permanent establishment. Our authorities seem to accept the principle of isolation, and then to yield to popular prejudices by postponing the execution of the necessary works. Even Winchmore Hill is not completed; and, instead of being ready beforehand to meet the increase of scarlet fever always present in the autumn, and already noticeable, the Asylums Board wait till there is a more obvious public necessity for its installation. Are we always to be behind the changing requirements of the times?

The better classes can mostly be very efficiently isolated at their homes. The London Fever Hospital attend to all claims in emergency, and is of great assistance both to the upper and middle classes. In the lower middle classes and the poor, the Asylums Board's hospitals are now readily available, and are constantly extending their influence. We also gladly acknowledge the good work done by the careful and intelligent management of the sick at their homes, through the intervention of skilled nursing, and care as to isolation to be effected through kindly supervision and advice in illness. The efforts in this way to check the spread of scarlet fever in Hastings, by Mrs. Johnstone, have been found not ineffective in the more crowded parts of London and Westminster. Foremost in the effort to prevent the spread of scarlet fever, of so frequent occurrence during convalescence, must be placed the splendid effort of Miss Mary Wardell, in opening a convalescent establishment at Brockley Hill, where forty or more inmates may have the benefit of fresh air and every necessary comfort until health is re-established, and all fear of communicating the disease to others is passed. Until the opening of this institution, the London Fever Hospital

always kept its convalescents until all fear of infection was over; as this mostly exceeds six weeks, it is obvious what aid may be afforded by a convalescent home. In the first report of the home at Brockley Hill, it is satisfactory to see that thirty-four cases had been received direct from the London Fever Hospital, and twenty-two from other hospitals. Some relief has been afforded in this way also to the Asylums Board hospitals, as well as to numerous families.

In conclusion, I maintain that in scarlet fever, isolation is our only means of guarding against infection; we cannot provide for ourselves or others the immunity against this disease that vaccination affords against small-pox. No modified form of scarlet fever will ensure against its recurrence in a more severe form. Were we to inoculate from a mild case of the disease, it is likely we should set up a severe, and it might be a malignant or fatal, form of the disease; however mild a form might result, others would be in danger of being infected from it, and every case risks the well-known after-complications. The milder epidemics, conveyed through the medium of milk from the cow, would continue to spread, and give rise to serious effects, if not so narrowly watched and exterminated. The modified disease lately discovered in the cow, though it produced but slight illness in some cases, did not do so in all. I may refer to one case published by Dr. Julius Pollock, as sufficient to preclude the exposure of anyone designedly to this form of infection. It is not any unusual thing to see scarlet fever happen twice, as it were; a child has sore-throat and very little rash, or none, yet the illness is followed by desquamation, and, it may be, with other marked characteristic after-effects; a year or two after, this child is exposed to scarlet fever, and has well-marked rash, a short illness, and no desquamation. Reinfection from scarlet fever has recently occurred, to my knowledge, in a child four weeks after a first typical attack; the second attack being the more severe and both followed by desquamation. If the unmodified virus does not confer immunity from a future attack, it is not likely that a modified virus will do so. How are we to protect by inoculation in a disease not clearly self-protective? The only answer here, as in diphtheria, is by preventing the intercommunication of the sick with the healthy. Neglect of this leads, especially in schools, to the increase of diphtheria. Last year the deaths from this cause exceeded in number those from scarlet fever, and for the first half of this year the deaths from diphtheria in London were double those from scarlet fever. The latter disease has at length received attention and means of isolation are provided; the former is neglected, and children from infected families allowed to attend school, and also the convalescent and those with slight sore-throat.

Some instruction, but not much of practical utility, may be deduced from the recent occurrence at Hendon of a form of scarlet fever in cows. Two years ago Dr. Klein showed that scarlet fever could be conveyed from man to the cow. Now that it would seem to be transmissible from cow to cow, it would be difficult to say that the first of the series in the cow was not infected from man, perhaps by the hand in milking. The observation in those cases, that milk will not only attract or absorb the germs of disease, but that such germs actually would increase and proliferate in milk after it is drawn, brings one of the most typical of the purely infective diseases propagated in the tissue of the living body during the special disease process into relation with such germs as those of yellow fever and malaria, which only require a fitting external medium for their culture and multiplication, and very close to the more diffused infectiousness of influenza and cholera.

Dr. SYKES pointed out that the Ambulance Organisation for the removal of infectious diseases in London was mainly dependent upon the telephonic system of communication between the district boards and the Central Offices in Norfolk Street, both of which are in communication with the Central Telephone Office. Previous to the introduction of the telephonic system, the district boards were not in telegraphic communication. As the district medical and other officers notify the necessity for removal to the medical officer of health, at the office at the district board, and the medical officer of health passes on the message to the Asylums Boards Office, it is due to the introduction of the telephonic system that the extraordinary perfection of the Ambulance System of the Metropolitan Asylums Board is possible.

BEQUESTS AND DONATIONS.—The following legacies to medical and other institutions have been bequeathed, free of duty, by the late Mrs. Mary Gatley Litler (*née* Bellot), widow of Mr. Henry W. Litler, of Wallington, near Leamington:—£1,000 to the National Hospital for Paralysed, etc., Bloomsbury Square, London; £1,000 to The Royal Hospital for Incurables, Putney.

ON THE DURATION OF INFECTIVENESS IN SCARLET FEVER.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Brighton.

By H. ASHBY, M.D., M.R.C.P.,

Physician to the Manchester General Hospital for Children; Lecturer on Diseases of Children, Owens College.

THE duration of infectiveness of the zymotic diseases, more especially of scarlet fever, has an interest and importance which it is difficult to exaggerate, but which, unfortunately, it is not easy to state with the exactness which could be wished. It must be clear to all from the correspondence which occasionally crops up in the medical journals concerning the duration of the infectiveness of scarlet fever that considerable difference of opinion exists in the profession upon the subject; and this is hardly surprising when we remember the difficulty there is in tracing infection, and the many ways in which the poison may be conveyed from one to another.

This question is frequently coming up, both in private and public practice, sometimes much to the annoyance, and perhaps injury, of the officials most concerned, when it is alleged that the quarantine of convalescent fever patients has not been sufficiently lengthy. Many instances could be found to illustrate the charges made against hospital authorities for discharging patients too soon, and thereby spreading the disease, and it is curious to note that, in one instance at least, the charge was that of keeping convalescent patients too long, and a disagreement followed, which led to a deadlock for a time between the health authorities and the managers of the fever hospital. The former refused to pay for the detention of scarlet fever patients for more than six weeks, while the latter insisted that their medical officers in charge of the patients were the sole judges of how long the quarantine of the patients was to be maintained.

If the discussion which is now taking place is not likely to settle this question, it will at least play a useful *rôle* if it elicits the experience and practice of those who are concerned in the management of those institutions which receive fever patients. My own experience is derived from the fever ward of the Children's Hospital at Manchester, where, on an average, some two hundred convalescent scarlet fever patients are discharged annually. We have, perhaps, exceptional opportunities of following up such cases after discharge, inasmuch as the children received with fever come from districts in which our general work is done, and discharged fever patients are always requested to attend once as out-patients to report themselves, and the question is invariably put respecting the infection of any other members of the household since their return home. We have also information respecting the spread of infection through discharged cases sent to us by the health authorities.

The practice we usually follow in ordinary cases of scarlet fever, is to keep the patients in bed till the twenty-first day, up to this date sponging them with some disinfectant solution, and anointing them with an ointment containing fat, vaseline, and carbolic acid. After the twenty-first day, they are allowed up, and are bathed daily, including the head, till the forty-second day, when they are discharged if free from desquamation. No clothing used in the fever-ward is allowed to go home, and all blankets, etc., belonging to friends are carefully stoved. Should the desquamation be not complete, as it often is not, by the forty-second day, they are retained till the skin is clear; but I believe it is not necessary to wait till the last scrap of thick skin about the heel has been shed, which may not happen for many weeks, or even months, after the rest of the skin is clean and smooth. Is this retention for six weeks necessary? Individual instances, perhaps numerous ones, may be recalled in which children who are freely desquamating may be seen at school or at home, and where other children in the same house or court have escaped being infected; but it must be remembered that, in such cases, it is impossible to find out the mischief they may do, and that, also, the susceptibility to the fever strangely differs from time to time. As an instance that I can recall may be mentioned a case of undoubted scarlet fever which was by mistake sent up to hospital, a distance of four miles, in a closed van with five other children, and no one of the five contracted the fever. A case of what turned out to be an attack of scarlet fever occupied a bed in a children's ward of twenty-six beds for nearly three weeks, and no second case of fever occurred. The child had had a rash, which was thought not to be scarlatinal at the time, yet nephritis and convulsions occurred in the third week, from which it died. Instances such as these only show that, at times, children may be ex

posed to infection without contracting fever, and are of but little value in attempting to determine the duration of infectiveness. On the other hand, I have several times noticed that, when pushed for room for fever cases, and we have hurried patients home during the fifth week in order to make room for others, that they have apparently been the means of communicating the disease to other members of the family.

It may be worth while to inquire what has been the result of the rule which we have generally followed, namely, to discharge our convalescent cases on the forty-second day if free from desquamation. During the last six or seven years, I have kept careful notes of the discharged cases which have appeared to have been the means of infecting others after their discharge, and have attempted to find out, if possible, the cause. The number has differed in the different years, amounting on an average to from 2 to 4 per cent. of the discharges in each year. In assessing the value of these figures, it must be borne n mind that the re-infection of the household may be merely coinident with, and not dependent upon, the return home of the conalescent; clothes which have been stored away without disinfecon are brought into use when the patient returns, and are the eans of giving rise to a fresh outbreak, which is not unnaturally rred to the return of the convalescent. On the other hand, patients may be discharged from the hospital, and infect others without a knowledge of this being brought to the ears of the authorities. It must be clear from this that it is impossible to state with any degree of accuracy the number yearly discharged who are still infectious; but I believe that, in our own case, the numbers are approximately represented by from 2 to 4 per cent. of the discharges.

In reviewing the character of the cases discharged which have apparently infected others, one finds a certain number in which it is very difficult to explain the cause of their retaining their infectiveness beyond the usual time. Some cases have occurred in which especial pains have been taken to free them from infection, and who have been retained till the end of the seventh week, and in one or two cases beyond this period, on account of their belonging to a family where there were many children, and yet a reinfection of the household followed in a few days after their return home. These exceptional cases it is difficult to explain, unless one takes refuge in the belief that the infection must, in some way or other, have been conveyed from the fever ward to the household by means of the person or clothes, rather than by any infection given out by the patient himself. Our experience plainly shows that cases of fever attended by such complications as nephritis, empyema, otitis with discharge of pus from the ears, and suppurating glands, retain their infectiveness for a longer period than do uncomplicated cases of slight or medium severity. On one occasion, a case of empyema following scarlet fever was transferred from the fever to the general wards on the forty-ninth day; and on opening the chest antiseptically, and evacuating the pus, was followed, within forty-eight hours, by the nurse who attended it having an attack of scarlet fever, and two other cases in the ward. As an interval of several days elapsed after removal and before operating, it seemed most probable that the pus contained infecting materials. In some of our cases which have inadvertently been sent out with discharges from the ears or glands, it has appeared to me to have been the means of infecting others. I believe, also, that cases of scarlatinal nephritis retain their infectiveness for a lengthened period, the infection being, doubtless, given out in the urine. I have seen such cases which were quite free from desquamation, and having suffered from a mild attack of scarlet fever many weeks before admitted to a general ward, their admission being followed by an outbreak of scarlet fever. In such cases, however, it must be remembered that their urine is carefully saved, standing about in the ward for many hours, and is, consequently, more likely to infect than if thrown away at once, as urine would be in cases where no albuminuria exists. Concerning the desquamation, I may add that, while I believe in the importance of baths and ointments in order to remove the epidermis which has detached, yet I believe the importance of removing every little tag of skin, or of rendering smooth a more or less roughened skin as having been much exaggerated. Probably the poison is stored up in the epidermis, and the exfoliating skin is capable of communicating the poison to others, but it can hardly be held that the skin monopolises the whole of the poison to the exclusion of the internal organs, and, moreover, the application of baths and external application must assist in rendering the epidermis innocuous, while the internal organs more slowly give out the poison by means of the secretions and breath.

In conclusion, I venture to summarise my paper as follows.

1. If desquamation is complete, convalescent scarlet fever patients may be discharged at the end of the sixth week, though, in order to secure absolute immunity from infection, it is wiser to delay till the end of the eighth.

2. Cases complicated with nephritis, empyema, otitis, or glandular abscesses should be detained until the cure is complete.

3. That while it is important that desquamation should be as complete as possible, the detention of patients beyond the eighth week, in order that the epidermis should be removed upon the soles of the feet, etc., is unnecessary.

FOUR CASES OF SUPRAPUBIC LITHOTOMY BY THE MODERN METHOD, WITH REMARKS.

By W. H. A. JACOBSON, F.R.C.S.,

Assistant Surgeon, Guy's Hospital; Surgeon, Royal Hospital for Children and Women.

(*Concluded from page 761*).

The writer now proposes to deal with some of the more important steps connected with the operation.

A. *Distension of the Rectum.*—The bag used must be (1) of sufficient strength, (2) of the right shape. 1. With regard to the quality and strength of the bag, Sir H. Thompson has shown the importance of using India-rubber of sufficient strength, and supported by a canvas lining. M. Guyon (*Annales de Maladies des Organes Genito-Urinaires*, tom. i, pp. 1, 97) mentions one case in which the bag, being of thin India-rubber, did not support the bladder with sufficient firmness, and in which the organ yielding, on this account, to the pressure of the fingers, was difficult to open. In other words, a thin India-rubber bag will raise the bladder, but not support it steadily, when it is cut down upon. Any additional handling of, or difficulty in opening, the bladder, must increase largely the risk of cellulitis. 2. The shape of the bag was at first pyriform, a shape which tended to raise only the middle of the base of the bladder, while it left two sulci at the sides, a fact which, perhaps, accounted for the writer missing two small calculi in his first case. More recently, Messrs. Weiss have made, for Sir H. Thompson, bags flattened in shape, and of less coarse, thick rubber than that used in the original pyriform bag. In making two for the writer fit for use in the adult and child, Messrs. Weiss have paid especial attention to having the rubber as soft as is consistent with strength, and to making the seams as little prominent as possible. In two of his cases, the writer noticed a little blood-stained mucus follow the withdrawal of the bag. This was, he believes, caused by the needlessly thick and prominent seams in the pyriform bag. This discharge of blood-stained mucus was followed by no ill results whatever, but should, of course, be avoided, if possible. These flattened, less coarse bags are not only safer, while equally efficient, but they are also much more easy to fold up and introduce. The smallest of the three bags which the writer used in his fourth case, a child of 5, measured about 3½ by 2¾ inches, and held 3¾ ounces as its maximum. Mr. R. W. Parker has had a square, mattrass-shaped bag, made of very delicate soft rubber, to be distended with air for use in the rectum. One of these he very courteously placed at the writer's disposal, when he was about to operate on the fourth case. Nothing could be softer, more easily introduced, and less liable to injure the rectum; but the writer preferred to use a bag which would safely hold water, a means of distension which he considers preferable to air, as likely to keep the bladder more firmly and steadily raised, both while it is cut down upon, and, later, while in an emptying condition (a time when support is much needed), its cavity is being thoroughly explored.

3. *The Amount of Fluid.*—A flat bag, as described above, being well coated with eucalyptus and vaseline, is introduced in a folded state, and carefully emptied of air, well above the sphincters (the bowels will, of course, have been well emptied previously by aperients and enema). It is then slowly distended by means of its tubing, and a smoothly working syringe, with water varying from the amount of 2½ or 3 ounces in a little child of 5, to 10 or 12 ounces in an adult. Sir Henry Thompson gives the amount in the adult as 12 or 14 ounces. The writer would advise operators to be content with the smaller amount, unless the rectum be extremely capacious, or unless, in some special cases,—for example, an unusually large stone, a doubtful case,—or one of bladder growth, it be desired to give extra elevation and steadying to the bladder. Even after distension of the bag with 10 and 12 ounces thrown in gently and slowly, a little blood-stained mucus followed the withdrawal of the bag in the first two cases. No ill-results whatever followed, but if such large amounts as those

advised by M. Guyon[4] are made use of, it is evident that some risk is run of damaging the rectal mucous membrane. That this is no idle fear is shown by a case which came under the knowledge of Mr. Cadge, in which a distension of the rectal bag with 15 ounces was followed by a distinct tear of the mucous membrane.

B. *Distension of the Bladder.*—The urine being first drawn off, 8 or 10 ounces of Thompson's fluid (borax, 1 part; glycerine, 2 parts; water, 2 parts) diluted 1 in 6; carbolic acid, 1 in 100; corrosive sublimate, 1 in 1,000, are gently thrown in by means of a syringe which works smoothly. The patient should be well under the influence of an anæsthetic at this time, and, if any straining takes place, the injecting must be stopped, and the hypogastric region supported with the hand.

It may not be out of place to remark here that the surgeon will do well, in injecting the rectum and bladder, to make sure of injecting fluids only. If he make trial of the bag outside the body he will see, unless the bag be carefully emptied of air first, and unless the syringe act perfectly, how easy it is to send in air as well as fluids, and thus produce more distension than is intended. By the double distension of rectum and bladder, the latter will, if not visible to the eye, be felt by the left hand of the surgeon, which should most carefully keep touch of the suprapubic region, reaching about two-thirds of the distance between the umbilicus and pubes.

In injecting the bladder, often irritable in these cases, the surgeon must keep careful count of its resistance. M. Guyon's words may now be remembered: "On peut complètement supprimer sa sensibilité au contact, mais jamais sa sensibilité à la distension" (*loc. supr. cit.*, p. 111). After withdrawing the catheter, a Jaques' catheter (or, in a child, a small drainage-tube) is tied round the penis. In those cases of irritable bladder, where the contents are rejected immediately that a sound or lithotrite are introduced, attention must be paid, for a few days previous to the operation, to getting the bladder accustomed to gentle distension.

C. *The Operation itself.*—The pubes being shaved, the knees slightly flexed, and the shoulders a little raised, an incision is made, three to three and a half inches long, exactly in the middle line, and ending over the upper edge of the pubes; the subcutaneous fat, which varies much in amount, having been divided, and the small vessels in it carefully secured with Spencer Wells's forceps or ligatured, the linea alba is identified,[5] and slit up for three inches; the transversalis fascia then carefully nicked at the lower angle, and divided for the whole extent of the wound. Retractors being then used to draw the edges well apart, a layer of fat, often abundant and usually having numerous veins in it, will next come into view, lying over and concealing the bladder. This must be most carefully torn through with the blunt point of a director, or with Sir H. Thompson's ivory blunt dissector, which carries at one end a curved hook to draw veins out of the way. If any of these veins be opened at this stage,[6] the field of operation will be most troublesomely obscured. The hæmorrhage should be at once arrested with pressure-forceps; any prolonged manipulations at this stage may be the cause of that cellulitis later on which is so much to be deprecated. The anterior surface of the bladder will now be recognised by its pink colour, the fibres of the detrusor urinæ, and by its fluctuating under the finger. Veins are often met with again here, lying on the bladder itself; usually they are longitudinal in direction, and the incision easily made between them; if, however, a transverse branch lie across the site of incision, pressure-forceps must be applied if the bleeding does not stop on the removal of the stone. An incision being made in the bladder, which, if not distended, may be previously drawn up with a tenaculum, one index finger enters and feels for the stone. This is removed either by one or two fingers, if large, or, if preferred, by the use of forceps or scoop. The finger, if available, has the advantage of not risking any injury to the mucous membrane. As soon as the bladder has been thoroughly explored, an assistant should set the fluid running from the rectal bag as the emptying of this takes some time. Two or three carbolised silk sutures are then inserted in the linea alba, and cut short, and three or four more to draw the edges of the skin together.

The writer did not attempt to close the bladder-wound with sutures in any of his four cases. He holds the opinion very strongly that to do so is to run a very serious risk for an advantage which is by no means tantamount to the risk.

Cystitis was present in all his cases, especially in the first three; but at present, till a larger experience is gained, he would certainly not use sutures, even if no cystitis were present, and the stone were a single one, and removed without difficulty.

If the bladder be sewn up, either the catheter or the voluntary powers of expulsion must be trusted to. If the latter fail, and the catheter is made use of and left in, there is a risk of air entering the bladder and causing cystitis, or of the catheter getting blocked. In either case, whether the instrument be left in or not, there seems to the writer to be the most serious risk that, either by plugging of the catheter, or by its not being passed just when required, some urine, perhaps septic, may be forced out between the stitches, before the bladder-wound is firmly closed, a process which would take a few days. If this extravasation should take place deep down in a wound like this, especially if the wound be closed, there is the gravest peril of a fatal issue from purulent infiltration of the connective tissue of the pelvis and abdominal wall.

The writer does not wish to appear to forget such a case as Dr. Pilcher's, of Brooklyn, who, after the removal of a stone by this method in an adult, sutured the bladder, and used a catheter till the ninth day, the patient going out on the eleventh, and being shown to the New York Medical Society on the fourteenth day, "primary union having taken place throughout the whole extent of the wound without unpleasant symptoms of any kind."

Mr. R. W. Parker has also had a perfectly successful case of sutures of the bladder and primary union after suprapubic lithotomy in a child of three. But however satisfactory it may be to thus shorten the time and trouble entailed by the case, the writer cannot but think, for the reasons given above, that the risk run is far greater than any advantage gained.

A few words may be said here about the peritoneum. With such distension of the bladder as has been advised, and with a moderate incision into the bladder, it is most unlikely that anything will be seen of the peritoneum. It may be very indistinctly felt at the upper angle of the wound, but this is all.

If, after careful distension of the rectum and bladder, the peritoneum still seems to encroach too far upon the anterior surface of the bladder, it may be pressed upwards, and held out of the way by one or two fingers of an assistant, or even, if needful, gently peeled upwards off the bladder. In old people, with lax tissues and large stones requiring free incisions, the peritoneum, covered with its fatty layer, is more likely to be seen, rising and falling with respiration in the upper angle of the wound. If, what is most unlikely with the recent improvements in the operation, the peritoneum should be punctured before the bladder is opened, the puncture should be closed with fine silk or chromic catgut, and the completion of the operation deferred, or lateral lithotomy made use of.

If the opening is made after the bladder is opened, the surgeon must decide, according to the amount and nature of the urine which has escaped, between closing the opening, or enlarging it upwards, so as to thoroughly sponge out and cleanse the lower part of the peritoneal cavity. But both of these accidents are most unlikely nowadays.[7]

D. *As to the after-treatment.*—The writer has always used iodoform dusted in and around the wound once at least in the twenty-four hours; iodoform gauze and boracic acid lint externally. The buttocks, trochanteric regions, etc., should be smeared, two or three times a day, with eucalyptus and vaseline. If the above dressings are kept in position with a many tailed bandage, it only takes two or three minutes to renew them. This will be necessary, at first, every three or four hours; in fact, the surgeon who wishes to practise this operation successfully, will find that the local after-treatment will give him a good deal more trouble than is usually given to a case of lateral lithotomy, in which the patient is simply placed on a drawsheet and macintosh, and, perhaps, a lithotomy sponge, and his knees tied together for the first few hours.

It is only by keeping the wound aseptic by the frequent change of dressings, and the use, if needful, of Thompson's fluid; and, by turn-

[4] Five hundred cubic centimètres to fifteen cubic centimètres, these amounts being about equivalent to 17½ ounces to ½ ounces. For the amount of the bladder injection, M. Guyon gives 50 to 300 cubic centimètres, or 1¾ to 10½ ounces.

[5] If, instead of cutting off the linea alba at once, the surgeon expose one rectus or pyramidalis muscle, he need not trouble. Putting in retractors, he should proceed with the dissection of the operation. And [illegible] search for the linea alba will [illegible] which will search tediously when bathed in urine, and [illegible] with phosphatic deposit of the urine be ammoniacal.

[6] M. Guyon [illegible] case, met with most profuse venous hæmorrhage. "Nous [illegible] la plaie par une [illegible] sans cesse renouvelée." After repeated and fruitless attempts to arrest this hæmorrhage, the bladder was opened, and the stone removed, the hæmorrhage ceasing [illegible] on the closure of the rectal bag. The patient, aged 60, died with [illegible] of the sub-peritoneal connective tissue.

[7] During the discussion on suprapubic lithotomy at a meeting of the American Surgical Association (*Transactions*, vol. ii, p. 169), Dr. Gunn, of Chicago, mentioned a case in which, while this operation was being performed on the old lines, the patient vomited, and the peritoneum was ruptured. Nothing was said about the amount of fluid in the bladder, and, as no rectal bag was used, there was none of that steadying of the bladder already alluded to.

ing the patient on his sides for three hours at a time, after the first twelve or twenty-four hours, as recommended by Sir H. Thompson, that good drainage can be provided, and the risk of extravasation and cellulitis prevented, the two points in which this operation is, rightly or wrongly, said to be inferior to the lateral method.

The greater trouble, the longer time which this operation requires, both during its performance and afterwards, will not be grudged in these days, when it is so much the rule to give attention to the details of Surgery. Only time and a larger collection of cases will show how far, with much simpler structures to cut, brought safely into reach, and with modern antiseptic details at hand in the after-treatment, this lithotomy is a safer one than the far more brilliant lateral method.

THERAPEUTIC MEMORANDA.

THE USE OF ICE-WATER ENEMATA IN THE TREATMENT OF DIARRHŒA.

THIS means of treatment has frequently been adopted in cases of collapse occurring during the diarrhœa of young children at the Birmingham General Hospital. In cases occurring outside hospital-practice, I have found this method not generally known. Being convinced of its utility, I am tempted to record my experience.

Ice should be dissolved in water, and from two to three ounces injected. The immediate effect is commonly a quiet sleep and improvement in the collapsed condition. Subsequently, the effect upon the diarrhœa is also good, and it will rarely be found necessary to repeat the enema. Internal treatment may often have to be continued, but I have no doubt that the life of many a collapsed child has been saved in this way. No reference is to be found in Ringer's *Therapeutics* to this method of treatment, but doubtless it is known to many of the older practitioners, though its disuse has led to its being unknown to the younger members of the profession. It appears probable that it acts by an astringent effect on the loaded vessels of the intestines, and so at the same time warming the exterior of the body, and diminishing the materials for the intestinal flux.

It has sometimes been found expedient to give a few drops of brandy about the time of injection; but, in my experience, no depression or bad effect has ever resulted.

ROBERT M. SIMON, B.A., M.B.Cantab.,
Assistant-Physician to the Birmingham General Hospital.

A SPECIFIC AND PROPHYLACTIC FOR SCARLET FEVER AND DIPHTHERIA.

IN your issue of May 1st, you inserted a communication of mine relative to the biniodide of mercury as a specific for scarlet fever and diphtheria.

That it is a true specific for the former, is proved by the defervescence commencing immediately upon the administration of the medicine, instead of upon the fifth day, and by the absence of desquamation in consequence. That it acts as a specific in the latter, is shown by the rapid disappearance of the membranous effusion and reduction of temperature. The efficacy of the medicine depends, I think, upon the diffusible potassic iodide carrying the germicide biniodide to every portion of the circulation. Prescribed in this form, the biniodide of mercury has not, so far as I am aware, been used before for these diseases. C. R. ILLINGWORTH, M.D.

CLINICAL MEMORANDA.

SUPPURATIVE PERICARDITIS: DEATH: NECROPSY.

A., a Sinhalese cultivator, who stated that he was ill only for a week before, was admitted into the Government Civil Hospital, Kalutara, Ceylon, under my care, suffering from obstinate constipation, tympanitis, severe abdominal pain, with rigidity of the recti, swelling of the right testicle, which was of the size of a man's fist, and much painful induration of the cord. No dyspnœa, nor any symptom referable to the chest was present; the skin was cool; the pulse small, hard, and frequent; respiration and temperature normal; the face pinched, with an expression of great anxiety. He stated that his bowels had not moved for five days past, before which he suffered from indigestion, for which he had taken native medicines. The stomach was not irritable, and there was no history of syphilis or rheumatism, and no cough. He passed urine freely; large enemata came away without feculent matter. The patient was treated with calomel and opium, and turpentine stupes were applied to the abdomen, without relief. Enemata were repeated ineffectually. Five grains of calomel and four drops of croton oil at length moved the bowels thoroughly, and afforded instant relief. The pain, tenderness, and swelling of testicle disappeared almost immediately. The following day urgent dyspnœa set in, followed by marked failure of the heart's action and collapse. There had been no further action of the bowels. The patient became very restless and violent. There was urgent orthopnœa, with clammy skin; small, soft and frequent pulse, and no increase of temperature. The patient became quite restless, throwing up his arms wildly, and gasping for breath. The heart's action was feeble, with increased area of cardiac dullness. The treatment was anti-spasmodic and stimulant, with counter irritation. Death occurred suddenly on the fourth day after admission.

Necropsy.—Heart displaced considerably towards the median line and right side of chest. Pericardial sac distended, and thickened; its contents was found to consist of about a pint of fresh pus, and large flakes of semi-organised lymph in a state of purulent degeneration. Heart itself enlarged, its outer surface thickened, rough and covered with masses of disintegrating lymph of a villous character. Bowels firmly contracted, and their calibre diminished. No complete obstruction present; mesentery highly congested; liver and lungs congested. The patient had died asphyxiated.

I report this case especially, owing to its complication with marked symptoms of peritonitis and intestinal obstruction, so that the real disease was entirely masked. The testicular complication was at first believed by me to be acute hydrocele, such as that mentioned by Mr. Bond (*Lancet*, of April 25th, 1885, p. 748), but this was negatived by the disappearance of all such symptoms, as soon as the constipation was relieved.

HENRY A. KEEGEL, L.F.P. and S.Glas., Kalutara, Ceylon.

CONTINUOUS RECTAL ALIMENTATION.

IN the description of my artificial stomach, in the JOURNAL of June 19th, I stated that I found undiluted milk, digested for half an hour, and then passed through the milk-sieve, passed readily through the tubes, notwithstanding the coagulating effects of the pancreatic extracts. That was so; but different specimens of milk differ in density, and much depends on management of details.

Further observation has taught me that, in beginning the treatment of a case, when it has to be entrusted to inexperienced hands, it is well to order one-half hot water, added to one-half cold milk, and to raise the artificial stomach (the vessel containing the milk) about one foot above the level of the bed, instead of two as in the case of undiluted milk. In this way very satisfactory results are obtainable.

DUNCAN J. MACKENZIE, M.D., Glossop, near Manchester.

SURGICAL MEMORANDA.

AMPUTATION FOR SENILE GANRENE AT THE AGE OF EIGHTY-TWO: RECOVERY.

IN consultation with Mr. Laurence Potts, of Leatherhead, in April, 1886, and again in July, I had the opportunity of witnessing the progress of senile gangrene, commencing in the great toe of the left foot. The patient was an old lady, eighty-two years of age. She believed at first that a chilblain was affecting the toe; and, following the advice of her neighbours, she planted the foot in snow at various periods during the winter. As no improvement followed, she received further sage advice, and accordingly painted the toe freely with hydrochloric acid. When first I saw the case with Mr. Potts, gangrene of the great toe was fairly well advanced. Hypodermic morphine injections were being administered to relieve pain; and so bad was the nutrition of the limb that the punctures, where the nozzle of the syringe had entered at the affected (left) leg, remained unhealed for weeks. Temporising measures were recommended; but, as the gangrene slowly spread to other toes and the dorsum of the foot, it was resolved that a Teale's amputation just above the ankle presented the only chance of doing any good. This was accordingly done. The parts healed up, and a well-nigh perfect stump resulted.

The advanced age of the patient was the only interesting circumstance in the case, combined with the indications of abeyance of the recuperative powers from the previous punctures not healing. The fact of age was brought more acutely home to me at the time, as, three days previously, I had operated on a case of strangulated femoral hernia on a woman seventy-nine years of age, in Charing Cross Hospital, and she made a rapid recovery.

JAMES CANTLIE, M.B., F.R.C.S.,
Assistant Surgeon, Charing Cross Hospital.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 26TH, 1886.

G. D. POLLOCK, F.R.C.S., President, in the Chair.

A Case of Extra-Uterine Gestation. By HENRY GERVIS, M.D.—The case described was that of a woman, aged 35, who was admitted to St. Thomas's Hospital, on November 19th, 1885. She had ceased to menstruate on May 9th, and her pregnancy proceeded without incident until July, when she experienced severe pain in the abdomen, which continued until admission. In September, she passed by the vagina a pint of thick greenish fluid; similar discharges continued at intervals until she came under observation. There had been no uterine hæmorrhage, but a piece of skin was said to have come away with the discharge on one occasion. On admission, an ill-defined swelling was noticed in the hypogastric region, extending towards the right of the middle line; the lower segment of the uterus appeared expanded and fixed. A large quantity of offensive discharge, yellow in colour, was issuing from the vagina through the os uteri; this discharge was found to consist of broken-down muscular fibre and vegetable tissue. On December 14th she passed, by the vagina, the shaft of a fœtal tibia. On exploration, the decomposing body of a small fœtus was found lying, as it were, transversely in the uterine cavity. It was tightly fixed in its position, and all attempts to extract it were in vain; slight hæmerrhage occurred during the operation, and the patient died on the following day. The details of the *post mortem* examination were recorded. The great omentum and the intestines were adherent to the brim of the pelvis, and, under this mass, the remains of a partially disintegrated fœtus were found in the posterior half of the pelvis. Almost the whole of the posterior wall of the uterus had sloughed away. In some concluding remarks on the case, Dr. Gervis pointed out that he was unable to find any similar case of extra-uterine gestation occupying Douglas's pouch, communicating both with the uterine cavity and the small intestine.—Dr. C. H. ROUTH suggested that, as a rule, the only conclusion which could be arrived at when there was evidence of a growing tumour not in the uterus, with signs of pregnancy, was that there must be extra-uterine gestation. He had found it an invariable rule in extra-uterine pregnancy that the catamenia ceased at once, but came on again in about three months; and that pieces of decidua then came away. In this case, such a piece of decidua was probably passed. He thought that, if a sponge or sea-tangle tent had been used, followed by a Barnes' bag, it would have been possible to reach the cavity of the uterus and remove the fœtus.—Dr. GERVIS, in reply, said the tumour was not a growing one when it came under observation. The first diagnosis was extra-uterine gestation, but this was rendered doubtful by the passage of portions of the fœtus from the uterus by the vagina. The interest of the case was the unique direction taken by the fœtus (through the uterus).

On Three Hundred additional Cases of complete Ovariotomy and Twenty Cases of Exploratory Operation. By J. KNOWSLEY THORNTON, M.B., C.M.—After a brief reference to 188 ovariotomies and 22 other cases of abdominal section previously brought before the Society, the author referred to certain alterations in the arrangement of the tables in the present series. A brief description was given of the treatment adopted in ordinary cases, and of the method of drainage in cases requiring it. Cases of hysterectomy, oöphorectomy, nephrectomy, splenectomy, and hepatotomy were not included, as being better dealt with in separate papers. All the operations had been performed with full antiseptic precautions, but this question was not specially discussed. Septicæmia had not been quite banished, but much had been done in this direction, as shown by one consecutive series of 100 ovariotomies performed at the Samaritan Hospital without a death from septicæmia. A progressive decrease in mortality was shown, and a comparison given of the results obtained in this series with those published by some other leading operators. The existence of adhesions, the place of operation, the age and condition of the patient, the removal of one or both ovaries, and the weight of the tumour as influencing mortality, were discussed. The temperature and pulse columns were carefully examined and important facts noted, reference being made to Wunderlich's standard temperatures. The benefit of cold applications to the head and in the form of partial or complete wet packs was demonstrated. The influence of the onset of metrostaxis, and of the appearance of "sweat-rash," were referred to. Drainage was discussed. The speedy recurrence in cases where solid sarcomata were removed was pointed out, and in view of the serious after-mortality from malignant disease of peritoneum, avoidance of tapping and performance of early ovariotomy were strongly advocated in this latter connection. The effects of the removal of both ovaries on menstruation were clearly demonstrated in the tables. Brief details of each fatal case were given. Full tables of all the cases, especially full in the exploratory series, and an analysis of the temperature columns, completed the paper.—Sir SPENCER WELLS, Bart., observed that, in Mr. Knowsley Thornton's tables, comprising 320 cases, there were only 9 cases in which the Fallopian tubes were found diseased. The notion had sprung up that the Fallopian tubes were extremely frequently diseased, but his own opinion, that such disease was rare, was borne out by Mr. Thornton's tables. He then pointed out that Mr. Thornton's tables confirmed his own and the general experience, that the mortality had gone on steadily decreasing, and that this improvement was still in progress. He was especially glad to see that the mortality at the Samaritan Hospital had continued to decrease since he had ceased his active connection with it in 1878. Before the introduction of antiseptics, it was necessary in almost every case, at some stage, to resort to the use of the ice-cap, or some other cooling process; but since, it had only been necessary in a very small proportion of cases. He believed that he had only found it desirable to use any cooling process in twenty-five out of his last three hundred cases. Not since 1878 had he found it desirable to use a drainage-tube from the first, though he had used it subsequently in a few cases; but he agreed with Mr. Thornton, that the after-history sometimes made it probable that it would be wise to use it under certain rare circumstances. He could not agree that the tapping of a single simple cyst led, in anything like the majority of cases, to malignant disease of the peritoneum; on the contrary, he thought that, in the large majority of cases, a single tapping of a simple ovarian or extra-ovarian cyst was followed by cure. He referred to the occasional epidemic prevalence of tetanus; and, in conclusion, congratulated Mr. Thornton on the magnificent success of his series.—Mr. ALBAN DORAN stated that, after long experience in the wards and in pathological work, he had come to the conclusion that it was not justifiable to tap a cyst believed to be parovarian. The thin-walled broad-ligament cyst, which was as a rule not of parovarian origin at all, appeared to be curable by tapping. But it was impossible to diagnose this kind of tumour from the thin-walled cyst which bore papillomatous contents. The fluid was similar in both cases. Tapping the latter form had to his knowledge caused disastrous results. In one instance he operated upon a case which had been tapped, and found widespread disease; and as the tumour could not be taken away, he stitched its opened edges to the abdominal wound and drained. The patient lived several months. Tapping for diagnosis involved considerable risk from other sources. He (Mr. Doran) recently opened the abdominal cavity in a patient who appeared to be suffering from an ovarian tumour. He discovered a cystic fibroid of the uterus. Two small veins on the surface of the tumour were wounded. They bled very freely, and were secured. The abdominal wound was sewn up, and the patient was well in a week. Tapping for diagnosis would have exposed the patient to great risk of dangerous hæmorrhage from the wounded uterine tissue.—Dr. HEYWOOD SMITH agreed with Mr. Thornton that in those cases where there was much oozing, which it was impossible to check at the time of the operation, it was advisable to use the drainage-tube.—Dr. PLAYFAIR, after commenting on the great value of Mr. Thornton's statistics, observed that the spray was not the absolutely essential adjunct to successful ovariotomy that it was formerly supposed to be. It was true that he had never ventured to perform ovariotomy at King's College Hospital before Listerism had been introduced; but lately he had operated in five cases in succession in that hospital without the spray, and had not been able to notice any bad symptoms during recovery. The value of the spray was, that it had impressed the necessity for thorough antiseptic precautions on operators. The real advance was the washing out of the peritoneum with water, which spared the excessive sponging and mopping out with sponges; yet this practice was contrary to the original "aseptic" theory. A too bigoted adherence to the spray was to be deprecated, though he still intended to use it in his own practice.—Dr. GERVIS observed that, in the practice of thoroughly washing out the peritoneum, the Germans had been anticipated by the Americans.—In replying on the discussion, Mr. KNOWSLEY THORNTON first observed that the increasing success of abdominal surgery was largely due to Sir Spencer Wells, to the lines he had laid down, and to the careful way in which he had recorded his work in early years. With regard to the rarity of disease of the Fallopian tubes in his series, he observed that cases of large abdominal tumour were not those in which disease of the Fallopian tubes was likely to occur. The use of antiseptics had decreased enormously the necessity for using the ice-cap or other means of cooling, and he believed that custom had caused him to continue their employment

after the need had ceased. With regard to the use of the drainage tube he thought the important point was to remove it soon enough, before it began to irritate the peritoneum. He agreed with Mr. Doran with regard to the danger of tapping; it was a significant fact that the *post mortem* reports of the great general hospitals did not contain records of such cured cysts, although the practice of tapping had been long followed and widely spread. The removal of a simple cyst was an absolutely safe operation—as safe as any in surgery; he had not lost a single uncomplicated ovariotomy. As to the re-opening of a wound and the introduction of a drainage tube, he had hardly ever found it successful. He was not a bigoted believer in the spray and he was inclined to think that its great use was that it kept the hands of the operator, the instruments, and the abdominal walls constantly moist with antiseptic fluid. He was prepared to agree that the free washing out with water was a great advance; the water probably acted by carrying away, and by breaking up particles of septic material; even if not completely carried away, such particles when broken up into minute fragments, were less dangerous, because they could be more easily destroyed by the vital activity of the peritoneum.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 22ND, 1886.

Mr. SYDNEY JONES, F.R.C.S., Vice-President, in the Chair.

A Case of Removal of the Scapula for Osteo-Sarcoma.—Mr. CHARTERS SYMONDS read notes of this case. The patient was a man, aged 34, who remained well, and was shown at the meeting, two years having elapsed since the operation. Six months before admission, he fell and bruised his shoulder, attending for a month the Croydon Hospital, where he was told he had ruptured a muscle. One month after the accident a swelling appeared, and from that time advanced steadily, though without pain. The inconvenience was due entirely to its size, the man being unable to do heavy work. When admitted, he was healthy in other respects. To the dorsum of the scapula was attached a tumour, measuring nine to ten inches across, and projecting five inches from the surface. It moved with the scapula, and did not quite reach the glenoid cavity. The spine of the scapula could just be traced. On April 1st, 1884, the whole bone was removed, except the acromion and coracoid processes. The usual transverse and vertical incisions were made, one flap only being reflected at a time. First, the inner flap was dissected off, and the posterior border of the bone freed. Next, the inferior angle was isolated, and then the anterior flap was reflected and the axillary border freed, the various muscles being divided. The deltoid and trapezius muscles were divided close to the spine of the scapula, and the superior border was freed. The growth was found to extend to the glenoid cavity; so, after sawing off the acromion and coracoid processes, the capsule of the shoulder-joint and the muscles covering it were severed. The whole mass was then raised from the chest, and the serratus magnus divided. The subclavian was compressed during the operation, and all the large vessels were seized with two pairs of forceps before being divided. In this way little blood was lost. The same evening the man had an unexplained attack of dyspnœa, which lasted twenty-four hours, and interfered with sleep. The temperature rose quickly, reaching its highest point, 103.6°, on the fourth day, but instead of falling it passed into a hectic fever, which lasted till May 9th, and then suddenly ceased on the removal of the cause of suppuration—namely, the head of the humerus. Rapid recovery ensued. Another clinical feature of interest was œdema of the arm without redness, and with no special fever. This was attributed to thrombosis of the axillary vein, but as it disappeared within a few days of the removal of the head of the bone, some other explanation seemed called for. Mr. Symonds called attention to the fact that the continued suppuration seemed due entirely to the cartilage covering the head of the humerus. This structure was found in a suppurating state, and was being thrown off by granulating tissue, and the moment the entire surface was removed recovery began, and was so rapid that, within a few days, he was up, and the parts nicely healed, the man gaining flesh within three weeks. The supposition was that the complication was due to traumatic fever, which determined suppuration in the wound, and that this involving the joint structures, the cartilage, acting like a foreign body, maintained the suppuration. On these grounds, Mr. Symonds said he now always carefully removed all cartilage in operations involving joints, for that while, in many cases, immediate union did occur, when the cartilage was left, an occasional result, such as the present, would happen. The man was shown to the Society two and a half years after the operation, and had a useful arm. He could do much of the lighter work of his trade of a carpenter, being able to drive nails and screws and use a plane. He was able to earn a good living. The rhomboid muscle acted well, having obtained a partial attachment, so that the man could throw both shoulders back. He could rotate the shoulder and carry it backwards and forwards, but was unable to raise it from the side. The tumour was a hard osteo-sarcoma, having a basis composed largely of fibrous tissue.—Mr. R. W. PARKER had been astonished that Mr. Symonds had left a portion of the scapula at the operation, but, as the result was so successful, criticism was out of the question. He himself had had two cases of sarcoma of the scapula during the past year. Both were in young children. In both the tumours were removed and recurred, and death ensued. Had he taken away all the scapula, he thought he should have given his patients a better chance. He had had several cases of sarcoma in children, which he had removed; but only one case had so far recovered. The operation, in that instance, was done about nine months ago. It was a growth from the patella, and that bone was entirely removed. Hitherto it had not recurred.—Mr. SYMONDS, in answer to the Chairman, said that part of the growth was a round-celled sarcoma; that the mass of it consisted of osteo-sarcoma, with some fibres; and that it was generally of the less malignant kind of sarcoma.—Mr. BUTLIN mentioned a paper on removal of the scapula, which was published in the *Revue de la Chirurgie* of last year. In it 40 cases were given, of which 25 were probably malignant, and nearly all the cases were fatal. The case brought forward that evening was scarcely a case of pure sarcoma. Had it been such, it would have been a rare case, as the operation was, contrary to the general rule, successful. If the tumour were confined to the lower part of the bone, it would have been possible to leave the shoulder-joint intact; for if the portion of bone from which the tumour sprang were taken away, that was apparently enough. It did not seem to be necessary to take all the bone away, for the mere sake of removing it. An American writer had lately stated that in these cases the removal of a portion of the scapula was more dangerous than the removal of the entire bone. This, however, Mr. Butlin thought might be a pure accident.—The CHAIRMAN thought the tumour was of rapid growth. As to the leaving of parts of the bone at the operation, it was, of course, important not to touch the glenoid cavity, nor the acromion, nor the coracoid process to which muscles were attached, if it were possible to spare them.—Mr. SYMONDS thought that these outlying processes were apparently less liable to the disease than other parts of the bone. As the exact proper designation of the tumour would have been a very long name, he had preferred to call it by the more simple designation of osteo-sarcoma.

Ligature of the Common Iliac Artery, with Kangaroo Tendon; Yielding of the Knot; Ligature with Silk; Gangrene of the Limb; Death.—Mr. THOMAS SMITH gave a full account of this case. The patient was a discharged soldier, aged 52, who had inguinal aneurysm. He had served in India, and had had syphilis; for two years he was aware that something had been wrong with his groin, and for two or three months the right lower limb had been much swollen. He had an aneurysm reaching from below Poupart's ligament, up to a point midway between the crural arch and the umbilicus; there was a strong pulsation, but no *bruit*; in other respects he seemed a healthy man. The artery was tied above the aneurysm, on October 22nd, with a carbolised kangaroo-tendon, and the pulsation was at once arrested; next day the pulsation had returned in full force, the artery was again exposed, the ligature was found *in situ*, with no appearance of loosening, but the point of an aneurysm needle could be inserted between the vessel and the ligature; it was therefore removed, and two carbolised silk ligatures were placed on the artery, one above and one below the site of the first ligature; pulsation ceased at once. In forty-eight hours the pulsation returned, and continued until the day before death. The limb became gangrenous, amputation was performed, but the patient died three days afterwards, and twelve days from the date of the first operation. The *post mortem* examination showed that the common iliac had been tied just above its bifurcation; it was closed by clot for half an inch above the upper ligature. The external iliac was dilated in its upper third; its lower two-thirds formed a large fusiform aneurysm, extending beneath Poupart's ligament, and involving the common femoral. The internal iliac was closed by clot for one inch below the ligature; the common femoral was filled with dark adherent clot, as also was the superficial femoral and the profunda. No veins had been injured in the operation; the external iliac vein was normal; the common femoral and its tributaries were filled with clot, the veins being compressed by the aneurysm beneath Poupart's ligament. There was no general peritonitis, but some matting of the intestines in the immediate neighbourhood of the ligature. The aneurysm was filled with a firm clot, a large part of which was laminated. The fatal issue of the case was primarily due to pressure on the main vein, causing gangrene of the limb, one of the most

common causes of death in aneurysms in this situation. Mr. Smith attributed the yielding of the ligature to the slippery nature of the material used, the wound being very deep; it was probable that the first loop of the knot slipped to some extent before the second knot could be tied, and though for a time it controlled the pulsation, it probably yielded to a small extent afterwards; the artery being very large, the knot was subjected to a considerable strain. He called attention to the defects in the method of applying ligatures to large arteries in their continuity by the single thread fastened by a reef-knot. The object of the ligature being to constrict the vessel evenly at all points of its circumference, so that no one part of the vessel was pressed upon more than another, he maintained that the ordinary ligature did not fulfil these conditions, but that the knot dinted in the arterial coat where it lay over the vessel, and that when the ligature divided the artery, it was the knot that first penetrated the canal of the vessel; he also pointed out that where secondary hæmorrhage occurred it was usually at the situation of the knot. As a remedy for this, he recommended that the ligature should be passed twice round the vessel, as a clove-hitch, and the opposite ends be pulled firmly across the artery; this ligature having no knot, compressed the artery evenly at all points of its circumference, and was very firm and tenacious; he believed it to be quite trustworthy, and he gave a demonstration of its efficacy on India-rubber tubing of various sizes, with the various forms of ligature. Notwithstanding the accidents that occurred in the case related, Mr. Smith still believed the aseptic kangaroo-tendon was the best material we possessed for the ligature of large arteries in their continuity, and that there was no fear of its slipping, if the manner of securing it was adopted which he advocated. But if this method was not considered secure enough, the ends of the clove-hitch could be tied in a single knot after pulling the clove-hitch tight; this he believed to be superfluous; but if it were done, the knot would not be in contact with the arterial walls, and could do no harm. The views he entertained, he believed derived additional importance from the publication of Dr. Edmunds' and Mr. Ballance's paper, as they had proved that it was neither necessary nor desirable to injure the coats of an artery, in order to secure a permanent obliteration of its canal.

A Case of Axillary Aneurysm for which the Subclavian Artery was Ligatured in the Third Part of its Course; Slipping of the Ligature shortly after the Operation; Re-ligature; Collapse; Death.—Mr. BUTLIN contributed this case. The subclavian artery was tied in the third part of its course by Mr. Butlin for an aneurysm of the axillary artery in the axilla. The artery was large at the seat of ligature, and was slightly adherent to its sheath, but no difficulty was experienced in performing the operation. A slightly flattened kangaroo-tendon was used. The artery was tied in two places with an interval of about two-thirds of an inch between the two ligatures, and the vessel was divided. Half an hour after the operation, violent hæmorrhage occurred, and was controlled with difficulty by means of pressure. It was found that the ligature had slipped off the proximal end of the divided artery. A silk ligature was applied, but not before a large quantity of blood had been lost. The patient died the same night. The knot of the kangaroo-ligature had not slipped, but the ligature had slipped over the end of the retracted artery, probably from being drawn up against the outer border of the scalenus anticus muscle. The hæmorrhage was immediately preceded by a violent fit of coughing. It was not possible to ascertain, either during the application of the second ligature or at the *post mortem* examination, whether the kangaroo-tendon had divided the middle and internal coats of the vessel, but the sensation communicated to the operator was that they were not divided. The case was related to show that it was not safe to employ a ligature such as kangaroo-tendon in the tying of a large artery when the vessel was divided. Even if such an incident as that which had been related had not occurred, the knots tied in these ligatures were apt to slip. The case could not be employed as an argument against either the kangaroo-tendon or against the division of the artery between two ligatures; but might be used against the combination of the two methods.—Mr. CROFT inquired what, in Mr. Smith's case, was the condition of the artery within the grip of the ligature. What was the state of the middle and internal coats? as Mr. Smith had not mentioned it. (Mr. SMITH said this had not been quite certainly determined.) In 1881 he himself had placed a flat kangaroo-tendon on the femoral artery for an internal iliac aneurysm. He drew it as tight as possible, tied a first knot, and then a second one to make the first safe. He did not then consider whether the two inner arterial coats should or should not be divided. At any rate, he had intended to make a division in them; but he did not know whether or not he had done this, as the patient had made a splendid recovery. He liked, for ligature of a large artery in its continuity, to tie the vessel in two places, and divide it between the two ligatures. He was in favour of so placing the ligatures, and dividing the vessel between them, that the artery might easily retract at the time of operation; since, if the vessel could not then retract, it would do so subsequently when the vessel was divided by the ligature. He had done this once on the common carotid for malignant ulceration. The operation was quite successful. Mr. Smith's case was one of fusiform aneurysm with two openings, not a sacculated aneurysm with one opening. The simple recurrence of pulsation shortly after deligation of the vessel need not lead to the inference that the ligature had slipped; it was a result any surgeon might expect. And he was not even yet quite sure that, in Mr. Smith's case, the recurrence of pulsation was due to the slipping of the ligature.—Mr. SMITH said that neither was he strongly of opinion that the ligature did slip.—Mr. BALLANCE had had considerable experience in the ligature of arteries in horses and sheep; in fact, he had done over thirty such operations. He was doubtful if Mr. Smith's ligature had slipped. The kangaroo-tendon ligature was slippery and smooth directly after being taken from the oil; but he himself always used it after it had been soaking for one hour in the corrosive sublimate solution. It then became as supple as silk, and its surface opalescent and roughened, so that it would not slip. He had seen two large human arteries tied with kangaroo-tendons. In one case there was some slight suppuration of the wound, but the patient recovered. In another case of ligature of the femoral artery in a boy, aged 13 or 14, when the boy died on the third day, the reef-knot was then holding, and the artery was quite closed. The tube, which Mr. Smith was passing round the room, was not occluded by the clove-hitch with which it was tied. In no case in which he had used the reef-knot was there any damage of the wall of the vessel; still, he should certainly try the clove-hitch. He thought that, in Mr. Butlin's case, the blame should not be laid on the kangaroo-tendon; he thought the vessel should not have been divided. One kangaroo-tendon would have occluded the vessel. With the tendon it was extremely difficult, unless great force were used, to divide the coats of the vessel.—Mr. BARWELL said that when the wound in the first case was opened twenty-four hours after the operation, the ligature was so tight that it required an aneurysm-needle to be inserted to see if there had been any slipping. A number of collateral channels had probably been established, and in this way the return of pulsation on each occasion after the two tyings was doubtless effected. The vessel was not nearly so likely to be injured by kangaroo-tendon as by silk; the latter cut into the vessel. He thought that tendon used as a ligature, which lay soaking at the bottom of a suppurating wound for some time, did seem to become rotten. In a case of ovariotomy done by him, the girl was apparently doing well, when she sat up in bed and suddenly died. When examined, the ligature was found to have become loose. The reef-knot was perfect, and there was no slipping, but the length of the ligature had increased. He scarcely thought the clove-hitch safe. As to Mr. Smith's experiment with a hollow India-rubber tube, he would prefer to see it done with a solid India-rubber cord, stretched to the utmost. If upon the cord contracting the kangaroo-tendon tied in a clove-hitch around it should still hold firm, he would have greater faith in it. A flat ligature would not hold on a divided vessel, and the kangaroo-ligature was usually flat.—The CHAIRMAN was in favour of not tying a knot on the ligature. He had, a year since, treated an old man suffering from subclavian aneurysm by trying to tie the vessel. Blood welled up from the wound. The artery was then tied on each side of the bleeding point, and divided between the ligatures; and the man made a good recovery, and was now well. He was strongly in favour of the ligature of the artery in two places, and its division between the ligatures.—Mr. H. MORRIS had ligatured the femoral artery a year ago with chromicised catgut; but, as the knot was being tied, blood welled up from the wound. He then tied the artery above and below, and divided it, and eventually the case did well. He certainly thought the knot was the cause of the trouble by cutting into the vessel. Two days ago also he had tied the femoral with kangaroo-tendon in two places, dividing the vessel between them. Pulsation could now he felt down to the upper ligature. The amount of pressure which could be put upon a knot of kangaroo tendon was not so great as that obtainable from silk. He had tried experiments with each on the finger of his house-surgeon. He thought the ligature in Mr. Smith's case had not slipped; the flow of blood was probably due to other causes, such as the stream of blood in the epigastrics rather than to such slipping. In other cases he had seen the same return of pulsation, which soon quietly ceased, and recovery ensued.—Mr. SMITH said that the vessel in his case was small, and had three ligatures on it, so that it was difficult to say whether the knot of the kangaroo

tendon really did cut the coats. He believed that tendon did not, whilst silk did, cut the tunics. There were many old authorities for tying the vessel in two places and cutting it. The pulsation in the aneurysm, after the tying, was so forcible that it seemed possible the ligature might have ceased to control it. At any rate, his colleagues thought the knot had slipped, and certainly the aneurysm needle passed beneath it, possibly up one of the furrows made on such a large vessel by the ligature. He was glad to know that a corrosive sublimate solution put a little roughness on the tendon. Most surgeons were of opinion that the knot was a trying thing to the coats of the artery. Secondary hæmorrhage was peculiarly apt to occur when there was a knot. He quite believed in the efficacy of the clove-hitch.—Mr. BUTLIN said that in Mr. Smith's case he was sure the knot had slipped. It was loose at the time of the second operation; moreover, the pulsation was then great in the vessel just beyond the ligature.

Living Specimens.—The following were exhibited:—By Mr. STEPHEN PAGET: Two Cases of Congenital Abnormality of the Eyes; Absence of the Iris in a Mother and Two Children. By Mr. KEETLING: A Case of Erosion of the Condyles of the Left Femur.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, OCTOBER 21st, 1886.

GEORGE JOHNSON, M.D., F.R.S., Vice-President, in the Chair.

President's Address.—On taking the chair, Dr. JOHNSON, after a brief reference to the unavoidable absence of the President, who was engaged in the examinations at the College of Surgeons, delivered a short address, chiefly bearing on the importance of the early recognition of chronic renal disease, and of the great value of albuminuric retinitis in aiding an early diagnosis. He not seldom saw patients with an advanced stage of renal degeneration who state that, having lately suffered from defective sight, they consulted an oculist, who had surprised them by saying that they were suffering from Bright's disease. There was one part of the history of these cases with which, perhaps, he was more familar than most of his hearers; that was the long-contined latency of many cases of chronic Bright's disease. On inquiring into the history of cases of albuminuric retinitis, they often could trace back the renal disease to its origin in the attack of scarlet fever or diphtheria, or perhaps exposure to cold ten, fifteen, or twenty years before the onset of alarming symptoms. The practical inference was obvious; namely, that the urine of every patient, whether medical or surgical, no matter how apparently trivial his ailment, should be tested for albumen, and that too at different periods of the twenty-four hours.

Case of Orbital Tumour.—Messrs. CRITCHETT and JULER showed a young woman, aged 21, who, in August, 1885, first noticed that the left eye was becoming prominent, and that there was a swelling in the region of the left zygoma. When she came under their observation at Christmas, there was much proptosis, but the eye did not deviate, and there was no diplopia; there was a considerable degree of swelling about the zygoma. Six months later, the eye was still protruded straight forward, and there was a very marked tumour in the zygomatic region. Some carious teeth, which it was thought might have something to do with the causation, were taken out, but without any benefit. Iodide of potassium in ten-grain doses three times a day was ordered, and ever since there had been steady improvement, the proptosis having almost completely disappeared. Previous to this, they had regarded the case as one of malignant disease, and of hopeless prognosis.—In reply to Mr. Nettleship, Mr. JULER stated that the iodide of potassium was begun early, and, in reply to Mr. Power, he said that there was never any pulsation in the orbit.—Mr. F. R. CROSS mentioned a case under his care of tumour in the orbit, with much swelling in the pterygoid region, where very large doses of iodide of potassium and mercury had failed, the tumour gradually subsiding, when the cure was left to Nature, aided by tonics.

Case of Ophthalmoplegia Interna.—Mr. ADAMS FROST showed a patient with ophthalmoplegia interna of the right eye, and stated that the sight of this eye, when he first saw the patient, had been defective for three or four months, the pupil was inactive, measuring from three to five millimètres. The left eye had been normal in all respects until quite recently. There was loss of knee-jerk, but no other general symptoms of disease; he had been treated with iodide of potassium for some months.—In reply to Dr. Sansom and others, Mr. FROST added that there never had been any lightning pains, that his gait was normal, and that he could walk steadily with his eyes shut; he had not had diphtheria; there was no optic atrophy, but he was slightly hypermetropic.

Retinitis Pigmentosa.—Mr. FROST also showed a man, aged 35, with retinitis pigmentosa and a deposit of pigment on the anterior surface of the lens; his vision had rapidly failed during the preceding three months.

Penetrating Wounds of the Eyeball.—Mr. F. R. CROSS (Bristol) showed two patients in whom a penetrating wound of the sclerotic had occurred. In one (a girl) there had been very little escape of vitreous, and the scar was three-fourths of an inch long; in the other (a man) there had been considerable loss of vitreous; the ciliary body had escaped in both, and recovery had been good. He thought that these cases showed that an eye should not be too hastily removed for a penetrating wound. Dr. Brailey had met with an even more marked instance of recovery in a boy who had a great prolapse of vitreous after an injury, and yet the eye had been saved. Dr. Mules had twice removed a foreign body from the interior of the eye without any bad result following, and he attributed the absence of reaction in his cases to the removal having been very early after the injury.

Enlargement of the Lacrymal Glands.—Mr. POWER showed a boy who had come under his care with swelling at the outer side of each orbit. After referring to the great rarity of symmetrical enlargement of the lacrymal glands, Mr. Power said that iodide of potassium, mercury and iodine all failed when applied locally, and as the swelling, especially on the left side, was getting larger and more painful, the whole left gland was removed by an incision made through the skin. There had been no trouble whatever since the operation (a fortnight previously), and the cornea and conjunctiva were quite moist.—Mr. MCHARDY asked whether any cause could be assigned for this affection, and instanced a case where a very sudden enlargement of both glands had appeared to be due to suppression of tears, the swelling had subsided spontaneously. He had sometimes removed the gland after injuries, and had had some trouble with the flow of tears from portions that were left behind.—Mr. POWER, in reply, said that no cause could be made out. There was a history of two falls on the side of the head.

New Instrument.—Mr. STANFORD MORTON showed a new method of rapidly changing ophthalmoscopic mirrors.

Optic Neuritis in Head-Injuries.—Messrs. WALTER EDMUNDS and J. B. LAWFORD read a communication based on twenty-four cases of head-injury, in which the condition of the optic nerves had been observed either ophthalmoscopically or microscopically. The cases were divided into three groups. 1. Cases which ended fatally directly, from the severity of the head-injury; 11 cases, 4 of which had optic neuritis, were included in this group. 2. Cases which ended fatally, indirectly from complications; this group comprised 4 cases, 2 of which had optic neuritis. 3. Cases which recovered; 8 cases, 6 of which had optic neuritis, were included in this group. As to the cause of the optic neuritis, it was attributed to spread of inflammation from the seat of injury to the optic nerves; this might take place either along nerve-tissue, or by the meninges. The authors adopted the latter view because:—1. While in some of the cases in which there was optic neuritis, basal meningitis was found, it never occurred in those cases in which optic neuritis was absent. 2. Those cases in which the base of the skull or brain was injured, generally had optic neuritis, while those in which the injury was confined to the convexity of brain, such as punctured wounds, had not. 3. In some cases of neuritis, transverse sections of the optic nerves showed the inflammation most marked at the periphery of the nerves, and in the sheath space.—Dr. BRAILEY, referring to the microscopical drawings that were exhibited, said that it was evident that there were two distinct classes of cases, and his own experience quite confirmed this—one in which there was considerable effusion between the pial and dural sheath, and the other in which the bulk of the inflammation was found in the inter-trabecular tissue. How were these differences to be accounted for?—Mr. SILCOCK, referring to the case of injury to the vertex where there was no optic neuritis, asked whether there was any meningitis, at the base or vertex.—Mr. EDMUNDS replied that in that case there was meningitis of the vertex, but not of the base. In reply to Dr. Brailey, he pointed out that the drawings represented very different stages of the affection, that where the effusion took place outside the pial sheath was from a case that proved rapidly fatal in a few hours, the other represented the appearances when death took place some days later. He believed that would fully account for the apparent differences.

A Case of Ophthalmoplegia dependent upon Thrombosis of the Cavernous Sinuses.—Dr. SIDNEY COUPLAND read a paper on the case of an unmarried woman, 43 years of age, who was admitted into the Middlesex Hospital under his care on March 10th, 1886, suffering from cerebral symptoms, including bilateral ophthalmoplegia. Her

previous health had always been good; and, beyond the fact that her father and one of her brothers were said to have died of consumption, there was an absence of any inherited taint in her history. There was no evidence of syphilis. It was ascertained that in the months of January and February she had attended Moorfields Hospital, under the care of Mr. Hulke. From notes kindly furnished by Mr. W. Gay, her condition during this period may be summed up as "proptosis and more or less complete ophthalmoplegia externa of the left eye, following great supra-orbital pain, succeeded by proptosis of right eye, with ophthalmoplegia externa and (?) interna, but with no distinct ophthalmoscopic changes." The symptoms had commenced with headache and deafness of the left ear, four months before any ocular trouble, iridiplopia and strabismus, and then left ptosis, supervened. When admitted into the Middlesex Hospital, she was in a drowsy condition, but pointed to the right side of forehead when questioned as to pain. The face was dusky; but there was no enlargement of veins around orbits or elsewhere, and no œdema of lids; marked proptosis of each eyeball; complete ptosis of right lid, partial of left. Right eye absolutely immobile in any direction, and the left only retained a slight power of movement inwards. Both pupils were large, the right more dilated than the left; total reflex iridoplegia. No optic neuritis, or other notable ophthalmoscopic change; veins not dilated; ocular conjunctiva, especially of left eye, injected; on each side it was quite insensitive. Cutaneous sensibility of left side of face impaired, as compared with right, but not wholly abolished. No facial paralysis. Deafness, but degree could not be ascertained. No otorrhœa; some dysphagia. Tongue protruded straight; arms semiflexed; slight rigidity. Legs flaccid, but movements controlled by patient. No plantar reflex on right side, and but slight on left. Abdominal and epigastric reflexes absent on both sides. Knee-jerk absent on both sides; no ankle-clonus. Cutaneous sensibility impaired over lower limbs and trunk; loss of voluntary control over bladder. Next day, the patient lay with her head turned to the left, and cried out with pain if it were moved. This symptom remained till death, which occurred on March 12th, in coma. Towards the close, the left conjunctiva became chemosed. At the *post mortem* examination, there was found basic meningitis (both arachnitis and leptomeningitis) of recent date; no tubercle. The pituitary body was enlarged. The cavernous sinuses were plugged with old caseo-purulent and colourless thrombi; and so were the circular and transverse sinuses. The petrosal sinuses were empty. No disease of cranial bones or of internal ear could be detected. The cerebral ventricles were distended with fluid. No lesions in brain; bronchopneumonia of recent date in left lower lobe; slightly granular kidneys. Thus no cause of the thrombosis was discovered; and the clinical course, as well as the character of the exudation, proved that the meningitis was far more recent in origin than, and probably secondary to, the thrombosis. The ophthalmoplegia, at first unilateral, and then bilateral, was explained by the complete obliteration of both sinuses, the thrombosis starting in the left sinus. The absence of "choked disc" accorded with general experience, being attributable to the free inosculation of the facial and orbital veins; and to the same anatomical conditions might be ascribed the absence of œdema of the eyelids. Nor was the degree of proptosis much, if at all, more than might be ascribed to the ophthalmoplegia. The abolition of many of the spinal reflexes was not explained; nor was the symptom of deafness, which occurred early in the case. The paper concluded with a review of the causes and symptoms of thrombosis of the cavernous sinuses, with especial reference to the symptom of ophthalmoplegia.—In reply to Dr. Money, Dr. COUPLAND said the meningitis was quite recent, and the ophthalmoplegia could not, therefore, have been due to the blocking of a small artery supplying the nerve-centre for the internal muscles of the eye; and, in reply to Mr. Nettleship, he said that he had only found one case closely resembling his own.—Mr. LANG mentioned the case of a man who, after a blow, had proptosis and chemosis of one eye, suggesting the existence of an abscess, but puncture of the orbit yielded nothing. After death, the right cavernous sinus was found to be plugged by a clot, as to the origin of which no cause could be found; the ophthalmic vein was not plugged in its whole length. There was no bone-disease in the orbit, ear or elsewhere.

Rapidly Occurring Blindness, and Complete Ophthalmoplegia on one Side; (?) Hysterical.—Dr. BRAILEY communicated this case, the following being an abstract of his remarks: Anne R., aged 50, single, complained of pain round the left orbit, and numbness of the left side of the head three months previously. One month later she came up to Guy's Hospital, stating that she had also pain in the left eyeball, which was always much more severe about 4 A.M. The distant vision, after the correction of some hypermetropic astigmatism, was perfect. The right eye was totally blind, as the result of a blow with the cork of a soda-water bottle, some twenty years ago. Its movements, and those of the lid, were, and have since remained, perfect, except that the internal rectus seems weak. Its pupil is excluded, and the iris bulged. T.n. No other morbid condition can be found. The patient's manner is very quiet, and rather constrained. Again, three weeks later (five weeks ago), her friends noticed that the left upper eyelid drooped, and she complained of the sight being gradually worse till two and a half weeks ago, when it deteriorated very rapidly. Three days later, October 8th, she was led into the out-patient room totally blind. The right eye and lid moved as before, but the left lid drooped, the eye was immovable, and the pupil was three-parts dilated and fixed. The conjunctiva and skin appeared even more sensitive than normal. The fundus was normal. She was admitted as an in-patient, and was blistered that evening. The next day, October 9th, the outward movement of the eye, and that of the pupil, was still absent, but the others had come back slightly; still no p. l. She said she had the usual severe pain about 4 A.M.; pot. iod. gr. xv. ter. October 12th: Movements as on the 9th; still no, or very doubtful, p. l.; pot. iod. gr. xx, liq. hydrarg. perchlor. ♏80 ter. October 14th: Says she sees objects with the left eye on its nasal side, but we cannot assure ourselves of this from her answers. October 18th: Undoubtedly sees objects to nasal side, but her answers indicate that she does not always recognise a light held in the same position. October 19th. She undoubtedly counts fingers at a foot distance on the nasal side, in which direction she can see a light. She denies seeing it when held to the outer side. The movements above noted are, perhaps, rather more free. The others are still entirely wanting. The fundus is still normal. October 21st. To-day she can move the eye outwards for the first time just beyond the middle line; also the pupil acts very slightly to light. Vision exactly the same as on the 19th. The severe pains which she used to experience in the early morning have entirely disappeared. The reflexes normal; no deafness. Mr. E. C. Kingsford has also elicited that she had a mental attack, indicated by despondency and a supposed suicidal tendency, twenty-seven years ago. Her conduct at other times has apparently been perfectly good. Fourteen years ago, and again twelve years ago, she gave birth to a child. There is nothing pointing to specific disease. Like others, Dr. Brailey had seen many cases of blindness of one eye, the other remaining good; and also many cases of ptosis. He had observed also two cases of paralysis of one inferior rectus, which, from the appearances and after-history, appeared to be hysterical; but never a case of complete ophthalmoplegia externa or interna. Simulation appeared to him to be out of the question, though many points were unsatisfactory in her answers to our tests of vision. The case, however, was at present incomplete.—Dr. SHARKEY recollected a case under the care of Dr. Bristowe, in which a woman who had ophthalmoplegia and profuse bleeding from both ears died, and no lesion of the central nervous system could be found.—Mr. FROST thought it would be interesting to know what had been made out in regard to the field of vision in this case.—Dr. BRAILEY, in reply, said it had been impossible to take the field of vision at all. All the patient could do was to make out fingers on the nasal side; on the blind side, she had not even a perception of light. It was only that morning for the first time that the pupil had acted very slightly to light.

MEDICAL SOCIETY OF LONDON.

MONDAY, OCTOBER 18TH, 1886.

Mr. R. BRUDENELL CARTER, F.R.C.S., President, in the Chair.

Introductory Address.—At this meeting, the first of the 113th session of the society, an introductory address was given by the President, Mr. BRUDENELL CARTER. After deploring the loss of various members of the Society, especially of Mr. Gamgee, Mr. Carter proceeded to contemplate the work of the society in retrospect and in prospect. After referring in general terms to the marvellous progress in the healing art, which had been effected within the modern period, he observed that the Medical Society, which was a microcosm of the profession, had endured long enough to have been an active participator in the steps which had raised that profession from the level of a superstition to the dignity of a science. He claimed for the profession of medicine the very highest place among the forms of mental activity now practised by mankind, for the pursuit of truth raised both the intellectual and the moral character of those so occupied. The position of the profession was of a nature to entitle it to a voice and influence in the conduct of national education.

Hernia of the Cæcum.—Mr. FREDERICK TREVES read a paper on Hernia of the Cæcum, in which he particularly called attention to the error which had crept into the text-books. It was generally stated to be devoid of a sac, but he had almost invariably found a sac to be

present.—Mr. Lockwood said that after an examination of many specimens in the museums of London and Paris, he had come to the same conclusion as Mr. Treves with regard to the sac.—Mr. Sidney Jones wished to endorse the observations made by Mr. Treves, and added that the considerable volume of this kind of hernia was often an obstacle to reduction.

Monday, October 25th, 1886.

R. Brudenell Carter, F.R.C.S., President, in the Chair.

Clinical Evening.

Case of Paralysis Agitans, apparently of Traumatic Origin.—Dr. Samuel West showed a man in whom peculiar tremors of the right arm came on immediately after a blow on the head. The symptoms had gone on increasing in severity for ten years, and now extended to the legs, rendering walking difficult. Sensation was diminished in the affected limbs, and he had occasional attacks of vertigo, but no distinct evidence could be obtained of any cerebral lesion.

Case of Partially Solidified Thoracic Aneurysm.—Dr. C. Theodore Williams described the case of a man, aged 42, who first showed symptoms of aneurysm two years ago. He was treated by rest and ten-grain doses, given thrice daily, of iodide of potassium. Under this treatment, the pulsation subsided. The patient subsequently left the hospital, but was afterwards compelled to return; the pulsation was again present, but the dull area was of the same size; he had pain in the chest; his pupils were now unequal, the radial pulse was not equal on the two sides; and there was paralysis of the left vocal cord. Dr. Theodore Williams proposed to treat him again with complete rest and iodide of potassium.—Dr. Symes Thompson said that good results had been obtained from rest without the iodide.—Mr. Brudenell Carter alluded to Mr. Tufnell's plan of treatment by low diet and perfect rest in the recumbent position.—Dr. T. Williams replied.

Pouch in the Penile Urethra.—This patient was shown by Mr. Fenwick. No stricture existed at the present time, but the pouch was productive of inconvenience, and he asked for suggestions as to treatment.—Mr. S. Morgan suggested the use of steel sounds; but Mr. Bruce Clarke thought it would be better to interfere surgically, and excise the portion of urethra affected.—Mr. Brudenell Carter thought that a small catheter would be useful; but this Mr. Fenwick said had already been used with some benefit.

Excision of Ankle for Strumous Disease.—In this case Mr. Fenwick had removed the articular surfaces and a portion of the tibia, the medulla being removed up to the level of the tubercle to avoid leaving any tubercular disease. Recovery had taken place rapidly and completely, with fibrous ankylosis.—Mr. Keetley mentioned a case in which he had removed the medulla from a fractured femur, which was rendered compound by the existence of sinuses, and in which perfect recovery had taken place.—Mr. W. Adams was disposed to doubt the justice of attributing the good result to the removal of the medulla of the bones.

Carcinoma of Prostate.—Mr. Fenwick showed a patient who was suffering from carcinoma of the prostate, the straining caused by which had contributed largely to increasing the size of a pre-existing hernia. He also showed a model of the enlarged prostate. He had had seven such cases during the past year. Generally speaking, he did not find the growth became disseminated.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Thursday, October 14th, 1886.

Dr. Cleaver, President, in the Chair.

Tumour of Stomach.—Mr. Favell exhibited this specimen from a middle-aged man, who, during life, had suffered very little from stomach symptoms. He appeared only once to have vomited, and the pain experienced was relieved by eating. He suffered chiefly from bladder symptoms. The tumour was a long cauliflower-looking growth, and was found growing from the concave curvature of the stomach. The specimen was referred to the Pathological Committee to report upon.

Aseptic Surgery.—The President (Dr. Cleaver) gave an address on this subject, and laid particular stress upon the fact that many surgeons imagined they were practising aseptic surgery, when, in reality, they were only treating with antiseptics, of which there were many methods, and all of them more or less imperfect, whereas, in aseptic surgery, there was only one method, namely—that introduced by Sir Joseph Lister, which aimed at, and attained, a complete absence of putrefaction, and is therefore designated aseptic. Another fatal error was that aseptic or Listerian surgery was spoken of as treatment by the spray. On the other hand, Sir J. Lister, in an address to the Surgical Section of the International Medical Congress in London in 1881, brought forward results of investigations he had made, tending to show that the atmospheric dust is not nearly so much to be dreaded as we used to assume, and that the various forms of virus are far more likely to be introduced by contact with infected liquids or solids than from the air. Dr. Cleaver had reason to believe that other considerations had confirmed Sir J. Lister's impression that, as a purifier of the air, the spray is of little value, and that, therefore, he used it less than formerly. It should be borne in mind that if the spray were not used, greater care was necessary in other respects. Dr. Cleaver claimed as one of the results of aseptic surgery complete immunity from infective disease, including pyæmia, septicæmia, erysipelas, and hospital gangrene, diseases which, twenty years ago, were rife in hospital practice. In upwards of 300 cases of major operations performed at the Sheffield Children's Hospital during the last few years, not one single case of these diseases had arisen.—Remarks were made by Mr. Pye-Smith, Mr. Jackson, Mr. Favell, Dr. Martin, Dr. Gwynne, Dr. Keeling, Mr. Garrard, and Mr. Knight.

MANCHESTER MEDICAL SOCIETY.

Wednesday, October 6th, 1886.

James Hardie, F.R.C.S.Eng., President, in the Chair.

Nephro-Lithotomy.—Mr. Wright showed a calculus removed from the right kidney of a man, aged 28. Symptoms had existed five years. The usual T-shaped lumbar incision was employed. The stone was readily found lying in the kidney substance, not in the pelvis; it weighed forty-eight grains, and was composed of uric acid. No bad symptom followed; urine ceased to come through the wound on the twelfth day, and complete recovery took place.

Nephrectomy by Abdominal Section.—Dr. Cullingworth mentioned the case of a married woman, aged 43, on whom he had performed abdominal section on April 14th, 1886, for the removal of what was supposed to be an ovarian cyst. The woman had borne no children. The tumour had been noticed for about twelve months, and reached sufficiently low to be felt from the vagina lying in front of the uterus, displacing that organ backwards. Beyond a history of persistent pain in the loin, there were no renal symptoms, and the urine was normal. The tumour was found to spring from the middle of the outer portion of the left kidney. The cyst was tapped, four quarts of thick, brown, grumous fluid being taken away, and was then removed, along with the kidney in which it originated. The upper and lower ends and the pelvis of the kidney were normal in size, and healthy. A ligature was placed around the renal vessels and ureter, the pedicle thus formed being left in the abdomen behind the peritoneum. The edges of the divided posterior layer of peritoneum were left simply in contact, without stitches. The left ovary was of the size of a pigeon's egg and cystic, and was, therefore, removed. The patient had no bad symptom until the eighth day, when she began to suffer from sickness, general *malaise*, and some rise of temperature, without pain. On May 15th (the thirty-first day) there was discovered some deep seated fluctuation in the left lumbar region. On the 16th, an incision was made, some pus evacuated, and a drainage-tube inserted. In the evening, some fæces escaped by the wound. On the 18th, there was a sudden profuse discharge of pus from the wound in the loin, and with it there appeared the ligature and slough from the pedicle. After this, no more fæces escaped by the wound, the discharge rapidly diminished, and the wound healed. The patient was now at home, complaining of various symptoms of ill-health, but, so far as the operation was concerned, well. Dr. Dreschfeld reported the tumour to be of a sarcomatous character.

Cheloid.—Dr. Steell showed a case of cheloid. The patient was the subject of heart-disease, for which he had come under treatment. The cheloid growths had been noticed for sixteen months. The first seemed to have arisen from the scar of an acne pustule situated over the sternum, and was now the palest and least elevated of the growths. There were now several bands of growth, the largest being three inches in length and half an inch in breadth. They ran transversely across the front of the chest, and there were a few on the back, many of the latter apparently having taken origin in acne scars. Most of the growths sprang from two centres, which sent out processes towards one another so as ultimately to unite the whole, forming a dumb-bell figure. A few of the growths arose from a single centre, and tapered towards one extremity. At one part, two of the growths were united at their extremities by a fibrous band, which could be felt with the finger though invisible to the eye. The dumb-bell figure eventually gave place to a band-like figure by widening of the median portion.

The growths, for the most part, presented the ordinary appearance of vascular cicatrices, and were accompanied by distressing itching.

Disease of the Cauda Equina.—Dr. Ross showed two cases.

Paralysis following Chorea.—Dr. RAILTON showed a case.

Acute Osteomyelitis.—Mr. THOMAS JONES mentioned a case of this disease involving the tibia.

REVIEWS AND NOTICES.

THE SPRINGS OF CONDUCT: AN ESSAY IN EVOLUTION. By C. LLOYD MORGAN. London: Kegan Paul, Trench and Co.

THE search for the springs of conduct, when carried out with the enthusiasm, the honesty and the ability which Mr. LLOYD MORGAN shows throughout this book, takes the enquirer back at once *nolens volens* to metaphysics, and it is there that Mr. Morgan spends the better half of his time. He shows himself much more fully aware than many scientific men with whom he sympathises, that an appeal to fundamental hypotheses is inevitable sometimes, not for the crowd, certainly, but for the leaders of opinion; and that all fundamental hypotheses involve metaphysic, whether those who are making the hypotheses like it or not. They may utterly repudiate metaphysic, and honestly believe that they can do without it, or stand outside it, but any kind friend may easily show them how it underlies, and is involved in, what they take to be primary and fundamental. There is no work touching upon what is true metaphysic which it is more appropriate that a doctor should read than Bishop Berkeley's *Theory of Vision* (with perhaps J. S. Mill's essay upon it as commentary), and Mr. Morgan shows how much he has been struck with the masterly character of that little book. But what has fascinated him still more, is Clifford's much more modern hypothesis of a "mind-stuff," a conception that was the fruit of a most brilliant imagination which revelled as much in metaphysical paradoxes as in worlds of four dimensions. For if it is no longer playfully but seriously considered, "mind-stuff" is neither explicable nor explanatory. However, Mr. Morgan takes up the idea of it "to make a bridge from materialistic premisses to something like an ideal conclusion." He states fairly enough (p. 202) the various hypotheses of the relations between body and thought; he is inclined to a practical and materialistic view, and the admission that "the sensations and the relations between them are the elements of all thought;" and yet he "frets under the restraints of the phenomenal," and cannot help letting himself be drawn to a conclusion completely incompatible with the admission he began with—the conclusion, namely, that "thought is the one absolute reality we know." How then do we know these sensations at all, and how do we know that they are its elements? He takes a great interest in the physical side of "the organ of mind;" and shows a ready grasp of modern teaching as to the various domains of nerve-centres, and the varied methods of nervous action. He is not disposed to limit the "organ of mind" to the brain, but rather to regard "the whole body as the organ of mind; or, to express it in the old Latin phrase, *mens sana in corpore sano*" (p. 91). We cannot follow him into a discussion on Free-will (p. 277), which shows how resolved he is to shirk no difficulty; and this is hardly the place to consider his Methods of Ethics, in which he has had much help from Professor Henry Sidgwick, or his conclusions which have much resemblance to those of Mr. Herbert Spencer and the moralists of evolution. Mr. Morgan is anxious to lead us, by the light of reason, from selfishness to unselfishness, or, as he would phrase it, "from self-regard to other-regard," and he is eloquent in his appeal to our intelligence and emotions.

In his previous smaller books on *Water and its Teaching*, and *Facts Around Us* Mr. Morgan showed that lively suggestiveness which makes this larger volume very interesting, and his terse common sense and eager honesty of purpose carry his reader very pleasantly over the consideration of some thorny subjects.

A MANUAL OF DISEASES OF THE NERVOUS SYSTEM. By W. R. GOWERS, M.D., F.R.C.P. Vol. I. Diseases of the Spinal Cord and Nerves. Pp. 463. London: J. and A. Churchill. 1886.

OF late years much has been said and written for and against specialisation in medicine. Enthusiastic eulogy on the one hand and sweeping condemnation on the other have greeted the efforts of those who advocate the desirability of cultivating and practising any particular branch of the art of healing. As a mere matter of argument, there is doubtless much to be said on both sides of the question; and in this, as in other controversies, the truth is probably to be found in a judicious mean between the two extremes, and to fluctuate according to time and circumstances. Even the warmest opponents of professional specialisation admit that the science and art of medicine in modern times is so extensive and comprehensive a study, and involves such a variety of collateral branches of knowledge for its successful cultivation, that it is impossible for anyone, however talented or industrious, to master the whole with advantage. Certain divisions of medical labour are, therefore, now admitted by all to be legitimate, and certain so-called specialities are universally recognised to be suitable and profitable. The whole question at issue is the extent to which this subdivision should extend, as, if it is too narrow, the practice, however advantageous to the practitioner, is of questionable value to science and the public. The solution of the problem will always be open to dispute, and the decision must depend upon a sliding scale regulated by special requirements and the general state of knowledge.

Neurology has been classed as one of the doubtful specialities, but if we compare it with the other isolated branches of medical practice which have been established, its legitimate claim to an independent position can scarcely be questioned. The most convincing proof of this will be seen by an inspection of the literature of the subject, which, at the present day, has reached enormous proportions. The journals, memoirs, and papers annually published in all the leading countries, constitute a mass of material, the mere perusal of which more than taxes the energies of the most industrious. The general medical reader is from time to time kept *au fait* in the advance of science by the production of manuals or text-books, which consist of careful compilations and prudent selections by those whose diligence and personal experience on the subject enable them to decide what are the most suitable and essential facts for the instruction of the student and practitioner. The most recent production of this kind is the work whose title gives rise to the present remarks. A glance at this and similar books serves to explain how it is that neurology may be looked upon as a legitimate speciality. Therein it will be seen how large a field of labour has to be covered, how many and diverse are the details to be mastered, and what a number of collateral sciences have to be studied in order successfully to cultivate this branch of medicine. It is to elucidate all such matters, and to bring them within the reach of the general medical reader, that a systematic manual is intended, and the work of Dr. GOWERS fulfils, in an excellent manner, these requirements. So far, the first volume only has been issued; and this deals with diseases of the spinal cord and nerves.

Part I is devoted to general symptomatology, in which the motor and sensory symptoms, reflex action, changes in nutrition, and electrical irritability are described, and their mode of investigation explained. All these are given with considerable brevity, but the essential points are indicated. Then follows a short account of the muscles and their actions, evidently condensed from Duchenne's *Physiologie des Mouvements.*

Part II treats of diseases of the nerves, beginning with a short sketch of their structure and functions. Then follows in detail an account of their inflammation, degeneration, and the other diseases to which the ordinary and special nerves of the body are subject. The section concludes with a short account of so-called multiple neuritis.

Part III discusses diseases of the spinal cord. A brief account is given of what is known of its structure and functions; the general etiology, symptomatology and pathology of its diseases are detailed, and the chapter ends with a description of each of the special lesions and system-degenerations to which it is subject.

It is difficult, in the ordinary sense of the term, to review a work of this kind, as it does not profess to be an original memoir, but aims at laying down, in as brief and yet complete a manner as possible, the recognised principles and practice of neurology as accepted at the present time. Although—admittedly, owing to its scope and purpose—Dr. Gowers's book is more or less of a compilation, the contents are throughout tempered and controlled by the large scientific and practical experience of the author as a neurologist. The work, therefore, while serving to initiate the general reader in the elements of that science, ranks higher than a mere text-book on the subject. The author's object has been, in our opinion, skilfully and successfully carried out, and a perusal and study of this book will place the student and practitioner in possession of all the leading and essential facts necessary to investigate and treat diseases of the nervous system, according to the most recent improvements of our knowledge at the present day.

THE New Malden Local Board have increased the salary of Mr. Edwin Child, the Medical Officer of Health, from £10 to £20 per annum.

BRITISH MEDICAL ASSOCIATION
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to the General Secretary, 161A, Strand, London. Post-Office orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 30th, 1886.

THE COLLEGES OF PHYSICIANS AND SURGEONS AND THE SOCIETY OF APOTHECARIES—A GRAVE PUBLIC AND PROFESSIONAL QUESTION.

THE very important official communications, which we publish to-day, from Mr. Upton, the Clerk of the Apothecaries' Society, and from Mr. C. J. C. Pridham, the solicitor to the Medical Alliance Association, are clearly documents of a weighty character, which will, we hope, materially tend to the satisfactory solution of the really grave question which we raised last week concerning the probable action of the Royal Colleges of Surgeons and Physicians in relation to the Apothecaries' Society. The emotion which our observations of last week have produced throughout the profession is not without warrant. The question at issue at this critical moment is one of capital importance. It affects the welfare of the public, the rights of the profession, the duties of the Colleges, and it is intimately connected with another question not less serious, and that is the success or failure of this last effort of medical reform—the Act of 1886—to bring into existence a conjoint board with an uniform minimum standard for the general practitioners of England. The letter from Mr. Pridham, every line of which deserves to be carefully read and re-read, will perhaps convince the authorities of the two Colleges that we have not over-rated, and that it would be very unwise and unpatriotic at this critical moment for them to underrate, the vast importance of the powers which the Apothecaries' Act, and that Act alone, give to the medical profession to protect the public against the worst and most dangerous class of medical pretenders. It has long been well known, and has been very strongly pointed out by more than one speaker at successive annual meetings of the British Medical Association, that there was great danger of underrating the importance of that clause, and that, unless those powers could be transferred to the Medical Act, the profession and the public might be deprived of their only protection against the ever-threatening encroachments of the class of prescribing druggists. Against these the Apothecaries' Society has long been, and still is, the only bulwark. All efforts, however, to induce the Government to transfer those powers to the General Medical Council under the new Medical Reform Bill failed; and it was, as we have said already, intimated that any such attempt could not fail to wreck that Bill, and to destroy the other great objects in view.

We repeat what we said last week, that so long as the Apothecaries' Society retained its position as an independent legally-qualifying body, the Colleges of Physicians and Surgeons of England had some pretext for their contention that they were justified in receding from their previous arrangements and engagements, and in excluding the Apothecaries' Society from that share in the conjoint examinations for England to which they had previously admitted it by the preliminary arrangement which was shattered by the act of the College of Surgeons. But that state of things, which allowed them to consider their joint interests as paramount in any new arrangement into which they were about to enter, has been destroyed by the provisions of the last Act. It was felt, and rightly felt, to be an essential condition, for the importance of medical education and qualification, that henceforth no degrees should be registrable which did not confer a statutory licence after due examination to practise in all the three departments of medicine, midwifery, and surgery. The Apothecaries' Society can at present confer only a medical licence, although its examinations extend also to surgery. This probable danger was apparent to the Society of Apothecaries when the Act was passing through; in the proceedings of a deputation from the Society to the Privy Council on April 19th, of which the shorthand notes are before us, it was very clearly stated to Sir Lyon Playfair, the Vice-President of the Privy Council. The Bill proposed, and the Act provides, that, in case of colleges or universities declining to combine with an examining body placed as the Apothecaries' Society now is, the General Medical Council shall, if they think fit, have power to appoint assistant examiners, and thus constitute any such body a qualifying body under the Act, capable of giving a licence registrable in all the departments of practice. There was, however, some fear that the presence of the words "if they shall think fit" would deprive the Apothecaries' Society of the right to appeal to the Privy Council, and this subject was discussed with the draughtsman, who was present. Sir Lyon Playfair expressly said, on behalf of the Privy Council, "Our object in giving this security is that, if you are isolated, your examination shall be a fully qualifying one, and we put it on the General Council to see that it is so;" and he added, "we have provided for the right of appeal."

So far, therefore, Mr. Upton, on behalf of the Society of Apothecaries, has no doubt in expressing the confident opinion that, if the Colleges of Physicians and Surgeons should continue to exclude the Apothecaries' Society from a share in the general examination; and if their appeal to the General Medical Council to appoint assistant examiners in surgery should, under the influence of those bodies, fail, the Privy Council would still remain as a court of appeal; it was intimated repeatedly and distinctly in the course of the interview that it was not the intention of the Government to allow the Apothecaries' Society to be extinguished, and that this clause was indeed inserted with the express view of meeting the difficulties that might arise in the case of a body, such as their own, whose examinations were known to be excellent and comprehensive.

That may be a reason, and a good reason, why the Society of Apothecaries should not despair, and should feel a very confident anticipation that they will not and can not be extinguished. They hold a trump card, with which they feel confident of being able to take the trick. But we protest altogether against this game being played as though it was onein which the principal interests were those of contending corporations. These bodies exist and the laws are prepared not to keep alive rival corporations, or to serve the interests and enhance the dignity of individual colleges. Such laws are passed in the interests of the country which demands, as the preamble of the Medical Act states, that

the public shall be protected, and that the qualifications with which men practice shall be adequate. It cannot be a matter of indifference if through perversity or pride, or want of sagacity and statesmanship on the part of the leaders of the Colleges of Surgeons and Physicians, we see one great object of the Bill frustrated. The greatest of all its objects was to arrest the competition of rival qualifying bodies. If the College of Surgeons and the College of Physicians persist in excluding the Apothecaries' Society, they may, and, as Mr. Upton calmly intimates, they probably will, altogether fail to extinguish the Apothecaries' Society. But what they will have succeeded in doing in that case is to create a second rival Examining Board, seated in London, within a mile of the new Examining Hall, visited with so much pomp and circumstance by Her Gracious Majesty the Queen, with the confident belief of the whole profession that it would henceforth be the seat of the unified examinations for the general practitioners of England, with one portal, through which they would enter the profession fully examined and fully qualified.

If now they take exclusive steps, the result must be one of two alternatives: either the chief power which the profession has of affording protection to the public and to themselves against irregular practice will be destroyed, or a second competing board of minor degree in the metropolis will be created, and the last hope of that unified minimum examination which the Medical Reform Act was intended to establish as a great national institution will thus disappear. It is difficult to say in which event their action would be the more disastrous or the more blamable. To have seated in Blackfriars a competing corporation, which the Colleges of Physicians and Surgeons are now by their act openly however unjustly stigmatising as one with which it is beneath their dignity to stand on any terms of equality or companionship, would be at once to set up a dual competition of a downward tendency, to which it was the very aim of recent medical legislation to put an end.

We repeat the hope, then, that they will be better advised; and, in any case, we trust that the warning which we have given will cause the whole subject to be exhaustively canvassed in meetings of the whole body of the members and licentiates of each corporation, before any negative conclusion is finally arrived at. The meeting of the members of the College of Surgeons affords an opportune occasion on which to raise this most important question. We are not in the counsels of the Association of the Members of the College of Surgeons, but we cannot conceive any greater service which they could render to their College or to the profession, than by taking steps to have this question raised in a deliberate, authoritative, and complete manner, at the forthcoming meeting on November 4th.

Meantime, we trust that the Councils of the respective Colleges will take all the facts into their deliberate consideration, and will decide out of their love of the profession and their desire to serve the interests of the whole body, and will not take counsel of mistaken sentiments of dignity, or of a narrow love of hierarchical distinctions.

THE FUTURE OF HOMŒOPATHY.—A homœopathic journal published in New York has some sensible remarks on the future of homœopathy. Science, it says, has rendered obsolete many tenets of Hahnemann's system, and removed the last vestige of an excuse for maintaining an organisation under an exclusive title. Homœopathy has "fulfilled the complete measure of its usefulness as a separate organisation..... In the nature of things, there can be but one system of medicine recognised by science. Either homœopathy must absorb the old school, or be absorbed by it."

RECENT EXPERIMENTS ON THE PRODUCTION OF SYMPATHETIC OPHTHALMIA.

THE experimental researches of Deutschmann upon this subject are so widely known, and his views have found so many adherents, that the publication, in the June and September numbers of Knapp's *Archives*, of some experiments by Gifford, which in several respects are at variance with them, will be a surprise to many.

It will be remembered that Deutschmann, by injecting cultures of various pyogenic cocci into the vitreous in rabbits, succeeded in almost every instance in setting up a neuro-retinitis in the other eye. Typical sympathetic iritis did not occur; but this was attributed to the fact that the animals always died, apparently from systemic infection, soon after the appearance of the optic neuritis; this explanation received some support from an experiment in which the exciting material was introduced into the optic nerve of one eye, the nerve being ligatured on the proximal side, and in which iritis did appear in the same eye. After death, Deutschmann found micrococci in the sheath-spaces of both optic nerves along their whole course, in the chiasma, and in the papilla of the sympathising eye. These experiments seemed, therefore, to point to the conclusion that the micrococci had travelled up the first nerve, across the chiasma, and down the other nerve.

Although many have doubted the applicability of these results to sympathetic ophthalmitis as it occurs in man, yet until now the results themselves have been accepted without question. Gifford, however, using micrococci obtained from the same source, not only failed to produce any effect upon the other eye, but in no instance did the micrococci extend beyond the lamina cribrosa of the inoculated eye, and none of the animals died. Negative results, however, cannot disprove anything; much more important are those which Gifford obtained by injecting the bacillus of splenic fever. In three out of twenty-five cases he succeeded in tracing the bacilli to the second eye; but the results differed from those obtained by Deutschmann, both in regard to the route by which the bacilli travelled, and also in the part of the eye chiefly affected. That the second eye was not affected in more instances, was probably due to the fact that the animals always died early if the conjunctiva was inoculated, and that it was only towards the end of the series of experiments that a method of preventing this was discovered.

To explain the route taken by the bacilli, it is necessary to digress for a moment, to consider the discoveries recorded by Gifford in his earlier paper. By the injection of coloured substances, he found that, while the lymph-current of the sheath-spaces of the optic nerves was from the brain towards the eye, there was a return stream from the eye along the central vessels of the optic nerve, and that this left the nerve with the vessels, and followed the latter to the apex of the orbit. This discovery of an "up" and "down" lymph-current, no doubt, led Gifford to investigate the results of his inoculation-experiments from a somewhat new standpoint, with the result that he discovered that the bacilli had travelled to the second eye, not along the lymph-spaces of the optic nerve, as was believed to be the case in Deutschmann's experiments, but that they had passed with the "up" current along the vessels to the apex of the orbit, thence to the meninges over the chiasma, and had then been carried down the lymph-spaces of both optic nerves. In the second eye, he found numerous bacilli in the supra-choroidal space, but not in the papilla;

a fact which is consistent with the ease with which the supra-choroidal space can be injected from the intersheath space of the optic nerve. Although the course had been completed in only three cases, the appearances in the others were consistent as far as they went.

Should the results of these experiments be corroborated, although opposed to some of Deutschmann's conclusions, they will strengthen very materially the bacterial theory of sympathetic inflammation, both by adding independent evidence, and also by explaining many points which Deutschmann's experiments left obscure.

One of these (the difficulty of believing that the micro-organisms could travel in opposite directions in the two nerves) is, of course, entirely met. The fact that the supra-choroidal space became first affected in the second eye is consistent with the fact that, in sympathetic inflammation, it is the uveal tract that bears the brunt of the attack. The special proneness of wounds of the ciliary region to excite sympathetic inflammation, has always been a stumbling-block to the acceptance of the septic theory; one of Gifford's experiments possibly throws light upon this. The injection was made immediately behind the lens, and the bacilli were traced into Tenon's capsule (as Gifford thought, along the perforating vessels of the ciliary region), and thence to the retro-bulbar cellular tissue and the cranium. Is it not possible that it is the presence of numerous perforating vessels that give the ciliary region its dangerous character? The absence, as a rule, of all symptoms of meningitis is a difficulty common to both Deutschmann's and Gifford's theories; the suggestion of the latter, that stagnation of the micrococci is necessary to excite inflammation, is, at any rate, a plausible one.

THE ARMY MEDICAL SCHOOL.

In the daily newspapers of October 18th, we observe that Lord Wolseley conveys to those concerned the thanks of His Royal Highness the Duke of Cambridge, for the high state of efficiency in which the Commander-in-Chief found the troops of the Southern District under the command of Lieut.-General Sir George Willis; and the Adjutant-General concludes with the remark "that His Royal Highness was satisfied with all he saw at the Royal Victoria Hospital, Netley."

The Commander-in-Chief would have been hard to please if he had not been satisfied with the spotless cleanliness, the order, neatness—even elegance—of all that met the eye; the absence of the smallest taint of hospital air in the wards and corridors, even at this season bright with flowers; the man-of-war-like tidiness of everything; the well-cared-for look of the patients; the officer-like bearing of the staff; and the brightness given to the scene by the nursing sisters, moving about in their pretty and semi-military costumes, ministering to the wants of the sick.

We cannot, of course, say how far his His Royal Highness was satisfied with the arrangements made by the War Office for the comfort and well-being of the young surgeons on probation going through the Army Medical School. We are quite aware that, even if the defects and shortcomings we are about to notice had come under His Royal Highness's observation, they would not be commented on in a General Order from the pen of the Adjutant-General of the army. Be all this as it may, we believe that it is desirable to call attention to some of the disadvantages under which the work of the School is conducted.

The Army Medical School was one of the most important results of the inquiry into the health of the army by a Royal Commission. It is designed to teach those about to enter the Medical Department of the British and Indian armies the specialities of military medicine, surgery, pathology, and hygiene. Attempts are every now and then made by a few discontented and grumbling members of the Medical Staff, in the junior ranks, to show that when they emerge from the civil schools they are equipped with all knowledge necessary for the duties they have to do in every climate under the sun; capable of dealing, without special instruction, with the terrible battle-injuries of modern war; and although they never in their lives saw a shot fired, ready to undertake the duties of field-surgeons on a great battle-field; to select the proper stations for first-dressings, and the most advantageous positions for field-hospitals, to say nothing of all that concerns the transport of sick and wounded from the field-hospitals to the base. Where and how all this indispensable knowledge was acquired, the gentlemen who favour the British Medical Journal with complaints about "qualified practitioners being sent to school again," do not inform the Editor into whose ear those complaints are poured. We have had to hint gently to some of our correspondents that because they have somewhere read or heard that large doses of ipecacuanha are generally effective in the treatment of acute dysentery, this point of practice does not embrace all knowledge of tropical diseases to which soldiers are liable; and although they may have some elementary knowledge of the laws of health, the late Professor Parkes had, and his successor has, some important lessons to teach on the hygiene of armies in peace and war; and, little as the small class of self-sufficient grumblers may believe, Professor Aitken has some much-needed lessons to give on microscopic science and practice, and on the pathology of military diseases at home and abroad.

That instruction of this indispensable kind has been given by the professors of the Army Medical School from its foundation to the present day is a fact on which we need not enlarge. It is known and acknowledged on all hands; and experts sent by foreign governments to report on the Netley School have not been slow in their official reports to urge that like instruction should be given to the medical officers of their own armies.

Our object to-day is to show that the work of the Army Medical School has been, and is, carried on under difficulties which are unfair to teachers and taught, and which are a discredit to the Government.

The course of study at Netley has to be carried out, and the work tested, by a stringent examination, in four months. To enable the professors to do this, the arrangements were carefully considered, and so contrived that the surgeons on probation should have a complete course of instruction in the hygienic laboratory and microscope room extending over the whole period of four months. When the number of young medical officers is small, this is accomplished; but when, as has happened for several sessions, and as is the case in the present, the number is large, the space in the hygienic laboratory is so contracted that the class has to be divided, and the men get two instead of four months' instruction. Nor is this all. The above unavoidable division of the class into two parts necessitates such an alteration in the ward-work that, instead of having two months in each of the great divisions of the hospital (medical and surgical divisions), they only get one month in each. Thus the country is put to the cost of a staff of able professors and assistants, most anxious to do their duty; yet the surgeons on probation, for

whose benefit the school exists, are deprived of exactly one-half of the teaching for which the country pays. It goes without saying that the Senate of the Army Medical School has done its utmost to get the War Office to supply the needful space to enable the teachers to do their work.

It is a well-known fact that, again and again, plans for increased teaching-accommodation have been "submitted" and "approved," but when the time for action comes, the money is grudged, and the proposed "vote" is struck out of the Estimates, and thus it comes about that the young medical officers, session after session, leave the school with, on some important subjects, just one-half of the instruction for which the country pays.

Nor is this all; it appears that England, in the estimation of the authorities, cannot afford to give decent quarters to more than a certain proportion of the surgeons on probation going through the Netley course. At this present time, about twenty of them are distributed in mean lodging-houses in the neighbouring village, to the prejudice of their discipline, to their extreme inconvenience, and exposed to the chance of typhoid fever from unsanitary surroundings. Is this seemly? Is it even decent? Would the Government treat young men going through Sandhurst, the Staff College, the Naval School at Greenwich, or the School of Engineering at Cooper's Hill, in this fashion? If they did, a dozen military and naval officers would rise in the House night after night, until a remedy for so shameful a state of matters was found.

We confidently predict that when Parliament assembles, the War Minister will have to explain why young medical officers should be exposed to such unworthy treatment.

MR. LAWSON TAIT will read a paper on Monday next, November 1st, at the Medical Society, on the General Principles concerned in the Operation of Removal of the Uterine appendages. An active discussion is anticipated.

AT the meeting of the Senate of the University of London, on October 27th, Dr. Samuel Wilks, F.R.S., the newly elected representative of Convocation, took his seat for the first time. Sir William Gull was reappointed as representative in the General Medical Council.

THE Bowman Lecture at the Ophthalmological Society this year will be given by Professor Zehender, of Rostock, on Friday, November 12th. The lecture will deal with the parasitic diseases to which the eye is liable.

IT is stated that M. Pasteur was, a few days ago, requested to send one of his assistants to Lamargelle, where a mad dog had bitten a large number of cows; and that he refused to comply with the demand, because he was not certain that his vaccination would be effectual in preserving them from hydrophobia.

THE next meeting of the Medico-Psychological Association will be held at Bethlehem Hospital on Tuesday, November 9th, at 4 P.M., when Dr. Hayes Newington will read a paper entitled "What are the Tests for Fitness for Discharge?" Members intending to attend the dinner at the Holborn Restaurant are requested to communicate with Dr. Paul, The Terrace, Camberwell.

SURGEON-MAJOR MAUNSELL, the Senior Medical Officer of the European Base Hospital, Rangoon, Burmah, invites gifts of newspapers, especially illustrated newspapers, for the use of the sick of the force about to operate in Upper Burmah during the cold season.

PROFESSOR ARTHUR GAMGEE, F.R.S., Fullerian Professor of Physiology in the Royal Institution of Great Britain, will give an address at the annual public meeting of the Medical Society of University College, London. He has chosen for his subject, "Medical Education and Medical Degrees in relation to the present position of English Medicine."

ENTRIES AT THE MEDICAL SCHOOLS.

WE are informed that 113 freshmen at the University of Cambridge have indicated their intention to study medicine, and that when all the results of the previous examination held this month are known, a few more will probably give in their names. All available space in the dissecting-room, where 160 students are at work, is occupied, and as 170 students are at present attending Professor Macalister's lectures, it will be necessary to provide some further temporary accommodation for dissection next term. The number of students who have entered for the full curriculum at the University College, Liverpool, this session is 28; for special classes 5 have entered, and there are 2 dental students.

CREMATION.

THE eighth cremation took place at the crematory belonging to the Cremation Society of England on October 21st. The remains were those of a lady aged 64, who died from cancer of long duration. The cremation lasted a little over an hour. No shell was used. The ashes, when withdrawn, weighed 3¼ lbs., and were conveyed to the family vault at a suburban cemetery.

SHEFFIELD MEDICAL SCHOOL.

A MEETING, presided over by the Mayor of Sheffield (Alderman J. W. Pye-Smith), was held at Firth College, on Friday last, in aid of the fund for erecting a new school of medicine, which is intended to be subsequently affiliated with the College. The Archbishop of York moved a resolution to the effect that Sheffield, owing to its population of over 300,000 rapidly extending, the nature of its industries, comprising powerful machinery of a complicated nature, and the fact that in its different hospitals there were about 300 beds, afforded an excellent field for the acquisition of surgical and medical knowledge, and that its medical school was worthy of all support. The motion was carried. A further resolution, appointing a Committee to carry out the scheme, was moved by Sir Andrew Clark, seconded by Sir F. T. Mappin, M.P., and adopted. The treasurer (Mr. E. Birks) announced that, of the £6,000 required for the new buildings, over £3,000 had already been subscribed.

THE LONDON HOSPITAL MEDICAL SCHOOL.

THE period of office of Sir Andrew Clark as Physician to the London Hospital has recently ceased by efflux of time, the charter of the Hospital permitting the physicians to retain their posts for twenty years only. We understand, however, that Sir Andrew Clark's valuable services to the school are to be retained, at the unanimous desire of his professional colleagues on the staff, by his continuance in office as one of the teachers of clinical medicine. The vacant post of Physician has been filled by the advancement of Dr. Stephen Mackenzie, who previously held the position of Physician with care of out-patients; and the office of Assistant-Physician has been filled by the election thereto of Dr. James Anderson, the present Medical Registrar of the Hospital.

QUEEN'S COLLEGE, BIRMINGHAM.

THE Council of this College having determined to appoint a demonstrator to assist Professor Barling in the work of the Pathological Department, which has recently been enlarged so as to afford complete facilities to students for practical work in every branch of that science, have selected Dr. W. Arthur Foxwell, B.A.Cantab., M.R.C.P., to occupy the position. Dr. Foxwell formerly occupied the post of

Pathologist to the General Hospital, Birmingham, with which institution he is now connected as Assistant-Physician. During the past year he filled the office of Demonstrator of Anatomy in the Queen's College, to which, on his resignation, Mr. Frank Marsh, F.R.C.S., of the Queen's Hospital, has been appointed.

THE JAPANESE AND QUARANTINE.

THE intelligent and independent judgment exhibited by the Japanese in their application of knowledge acquired in Europe and America is well exemplified by the port sanitary regulations, which the *Indian Medical Journal* states to have been enforced during the prevalence of cholera in 1885. All vessels from infected localities were subjected to medical inspection before any communication with the shore was allowed; if the crew and passengers were found healthy, the vessel was allowed to proceed; if there were cases of cholera on board, or the corpses of persons who had died of cholera, the vessel was detained, the patients removed to hospital, and the corpses burnt, or buried after being disinfected, according as the friends preferred; the vessel and the crew and passengers were disinfected, and then allowed to proceed. These reasonable regulations, founded upon a scientific knowledge of the disease and of the nature of infection, are in striking contrast with the panic-stricken haste with which many European nations impose their so-called "rigorous quarantine." The Japanese appear to possess the rare power of learning from the experience of others.

THE FOOD OF PARIS.

THE following returns, taken from the Préfet's annual report of the quantities and description of food consumed in Paris last year, may be regarded as fairly reliable. Meat figures at 149,495,306 kilogrammes (146,825 tons), which is an increase of 445,952 kilogrammes on 1884. There has been a diminution in the consumption of pork to the extent of 147,389 kilogrammes, but there has been a great augmentation in the consumption of horseflesh, which is rising every year. The total quantity of this delicate viand eaten last year was 3,831,206 kilogrammes, and the increase on the year was 337,926 kilogrammes. The figures for the amount which was palmed off for something else are not available. The average price was 60 centimes per kilogramme for the horse, and 70 centimes for asses and mules, which is about 3d. and 4d. a pound respectively. The total of poultry and game was 25,044,149 kilogrammes, a diminution of 565,849 kilogrammes. Of fish, 25,631,404 kilogrammes were eaten. This increase was in part due to the large quantity of oysters eaten. The consumption of butter and eggs had fallen by 160,337 kilogrammes. Butter had been to a great extent replaced by fats and margarines.

THE ARMY MEDICAL SERVICE OF FRANCE.

A RECENT return shows that on October 15th the strength of the French Army Medical Department (Corps de Santé Militaire) was 1,174 officers, and that there were on that date, altogether, 126 vacancies in the various grades, the strength sanctioned being 1,300 of all ranks. The numbers, according to rank, on active employ were, médecin inspecteur général, 1; médecins inspecteurs, 9; médecins principaux, 1re Classe, 40; 2me Classe, 45; médecins-majors, 1re Classe, 295; 2me Classe, 468; médecins aides-majors, 1re Classe, 208; 2me Classe, 108; total, 1,174. There were, in addition, 134 commissioned "pharmaciens" of various grades, on active employ in the army, with altogether 52 vacancies in this branch of the medical service. The "pharmaciens militaires" in the French service all hold a diploma, either of Master in Pharmacy or of Pharmacien of the 1st Class; some possess a University title of Doctor, in addition to the 1st Class diploma of Pharmacien. The foregoing numbers show the strength of the medical department with the French army on active employment, but, beyond this establishment, there are two large bodies of medical officers, of different grades, borne on the rolls of the army of reserve, and of the territorial army of France.

THE FRENCH ARMY IN THE EAST AND ITS HOSPITAL SERVICE.

THE French Army of occupation of Tonkin and Annam has an effective strength of about 34,000 troops, of which number 15,000 are Europeans, 16,000 natives of Tonkin, and 3,000 natives of Annam. The army is organised as a division, divided into three brigades; and a certain number of hospital establishments are allotted to each brigade. The hospitals are of two kinds—fixed hospitals, organised on the ordinary regulation scale for field-service; and movable hospitals annexed to them, under the name of *infermeries ambulances*. There are altogether fourteen stationary hospitals, and twenty-five of the ambulance infirmaries. Owing to the nature and extent of the territory occupied by the troops, the difficulties in administering the hospital service have been unusually great; all the more so from the wide-spread and incessant demands made on the hospital establishments, and on the services of the medical officers, in consequence of the prevalence of remittent fevers of a severe type and other climatic diseases. The direction of the whole medical service of the army of occupation is in the hands of Médecin-Principal Dr. Dujardin-Beaumetz, whose headquarters are at Hanoï.

CONTAGIOUS DISEASES ACTS.

THE following communication anent the Contagious Diseases Acts has been issued from the War Office to generals having charge of military districts. "The Contagious Diseases Acts, although instituted for the benefit of soldiers and sailors in certain garrison towns and naval stations, have no doubt contributed much to the health of the civil population of those places, and the Secretary of State thinks it probable that the local authorities may desire to make some provision for hospital accommodation in place of that provided by the repealed Acts. In any such effort on the part of the authorities, the Secretary of State would gladly co-operate. I am to instruct you therefore to put yourself in communication with the mayor or other authorities of the towns situated in your command where the Acts have been in force, with a view to ascertain whether, with some assistance from this department, they are disposed to provide hospital accommodation. Mr. Sloggett, inspector of Lock hospitals certified under the late Acts, will gladly attend and confer with you as to any proposals you may receive in response to your application."

RIVAL FASTERS.

IT must be very annoying to Signor Succi, who would fain be considered the "champion faster," to find a fellow countryman, a certain Stefano Merlatti, ready to forestall his proposed demonstration in Paris. Merlatti, indeed, would out-do Succi, for he proposes to fast for fifty days and nights, and not to make use of any mysterious red liquid, but to content himself with filtered water. It is difficult to speak seriously about these so-called experiments, which are of about the same scientific importance as the search for a mode of perpetual motion; but one circumstance in connection with Succi's fast may be pointed to as affording the only available means of testing his assertion that he took no food. During the month in which it is alleged that he took no food, he only lost a little over two stone in weight, yet his temperature was maintained at the normal point, and the movements of respiration and of the heart were unaffected. It does not need a very profound acquaintance with chemistry and physics to know that the maintenance of these functions of the body necessitates the consumption of a large quantity of force-producing material. It has been estimated by Professor Foster that the work done every day by the heart alone is about the amount performed by a man in the ascent of Snowdon. But Succi fenced, rode, swam, took long walks, and otherwise conducted himself like an athlete in training, so that he had not only to maintain his internal vital processes, but to supply the additional force required for all these external exercises; yet he only lost 441 grammes, or rather less than one pound avoirdupois, a day. This is the only well established fact about the so-called fast; and, upon the face of it, casts the gravest suspicion upon the whole story.

This fact may be looked at from another point of view. The well-known experiments of Bidder and Schmidt have shown that a fasting animal loses as much as $\frac{1}{37}$ of its body-weight a day; and yet it would appear that Signor Succi lost less than two pounds a day, which is only equal to a daily loss of $\frac{1}{125}$ of his body-weight. If one of these fasters were rigorously watched, carefully weighed from day to day, and the amount of force expended scientifically measured, facts of some value with regard to the wasting of the human body in inanition, analogous to those obtained by Chossat, Voit, and Bidder and Schmidt, with regard to certain animals, would be presented to physiology. But when asked to believe that force can be created out of nothing by "will power," and that the fundamental laws of physics and physiology are suspended in favour of a young gentleman who has already passed some time in a lunatic asylum, men of science may be excused if they decline to waste their time in serving on committees of inspection, or in discussing such wild propositions.

THE MECHANICS OF SPEECH-MAKING.

It is a fact which is not as thoroughly appreciated by the speaking public as it should be, that the mechanical part of speech-making requires cultivation, if the listeners are not to be converted into innocent victims of the defective articulation, or indistinct voice of the would-be orator. The muscular efforts, which may be quite sufficient for ordinary conversational purposes, are wofully inadequate when applied to the articulation of an address to a crowded meeting, nor will mere exaggeration of those efforts be sufficient to overcome the difficulty; nothing short of a complete rearrangement of the working of the different parts of the vocal apparatus will suffice, and this can only be acquired by patient and deliberate cultivation. We have it on very good authority that the first requisite of a certain dish is to have caught the animal destined to the feast, and to be able to make a speech, an indispensable factor is the possession of sufficient powers of sound-production. It is just as ridiculous for a man to attempt to speak in public without such powers as it is for a vocalist without voice to attempt to sing, and the sooner would-be speakers and vocalists lay this fact to heart, the better will it be for a suffering and not always patient public. So essential is the production of a sufficient volume of sound, that a great many people are enabled to establish a reputation as orators with nothing more than perchance a dose of self-assurance. But even where this gift is not possessed to the extent of compensating for the absence of other minor requisites, enough may be available to do good service if only sufficient attention be paid to careful and distinct articulation, slow but not tedious utterance, and a proper division of the ideas into short sentences duly marked by a pause. It is needless to say that the pauses are but imperfectly replaced by the abortive cough or hawking with which many speakers round their phrases. In the interests of the public it would be well for persons whose laryngeal apparatus is congenitally defective, or has become imperfect from the vicissitudes of life, to communicate their ideas only with the pen. Mediocrity of ideas may, it is true, be covered by a brilliant delivery; but, on the other hand, the most creditable sentiments are rendered nugatory when uttered in a voice which is not audible, or, if audible, unintelligible. Orators cannot always reckon on the indulgence which is usually accorded to post-prandial efforts; the part of the audience whose attention is not taken up in vainly listening to the speaker, seeks some other means of passing the time, and not infrequently interjections more forcible than polite interfere with the periods, and destroy the symmetry of the oration.

DEATH OF ONE OF M. PASTEUR'S PATIENTS.

An inquest was held in the clinical room at St. Thomas's Hospital on Saturday last respecting the death of Joseph Goffi, aged 26 years, who, on September 4th, when engaged at Brown's Veterinary Institution, Wandsworth Road, and in the act of cleaning out a cage where a cat was confined, was attacked by the animal, which had become enraged, and flew at the deceased, severely lacerating and biting his left hand. The case is of much interest, owing to the doubt which surrounds the cause of death. Dr. Whitmarsh was on the premises and cauterised the wounds, which were five in number. The case appeared so serious, that Goffi was advised to attend at St. Thomas's Hospital. His brother accompanied him, and the wounds were redressed. It was ultimately arranged that the deceased should proceed to Paris. He left England in September, and submitted himself to the treatment of M. Pasteur. On his return from Paris on October 9th, he appeared very cheerful, and in good health. Three days after, he complained to his brother that he was suffering from serious pains over the abdomen. It was thought that the pains arose from drinking too much beer. The pains, however, increased, and symptoms of paralysis set in. He was admitted as an in-patient in St. Thomas's Hospital, where he died. Dr. Mackenzie, the resident assistant physician at St. Thomas's Hospital, said that he admitted the deceased on October 19th. Goffi was sensible, but very ill. He complained of acute pains in his stomach, and loss of power of both legs. The deceased stated that, on his return to this country from Paris, he got wet through. The case had been under the care of Dr. Bristowe. A *post mortem* examination had been made, but the examination of the spinal cord could not be completed in less than six weeks. Dr. Mackenzie noticed five wounds on the left hand, but they had healed. The deceased was treated for acute spinal paralysis, which had probably been brought on by cold, wet, and exposure. The *post mortem* examination did not point to hydrophobia, but it could not be positively said that death was not due to the bite of the cat. The coroner remarked that he had no power to pay the expense of the examination of the spinal cord; but Dr. Mackenzie observed that no doubt the general public would like to learn the result of the examination; it would be for the public good. The jury returned a verdict to the effect that death was due to acute spinal paralysis, acceler ated by cold, wet, and exposure.

OUTBREAK OF DIPHTHERIA AT CAMBERLEY.

It is satisfactory to learn that, since the first outbreak of diphtheria in the villages of Camberley and York Town, there have been no fresh cases. There have been 76 cases, and 13 deaths; and they have been entirely confined to these two places. Every effort is being made to trace out the cause of the outbreak; and as a large number of the families attacked obtained their milk from one dairy, suspicion is naturally directed to that source. The medical staff, both civil and military, have, it is asserted, completely got the disease in hand; the precautions taken by the authorities of both the Staff and Military Colleges have, it is stated by Lieutenant-Colonel King, so far been successful, and there have been no diphtheritic cases at either.

HOMES FOR DIPSOMANIACS.

During the past year, two new retreats, under the Habitual Drunkards' Act, 1879, have been added to the four houses already licensed under the Act. The first, situated at Wansford, was duly licensed by the Peterborough magistrates to Mr. F. M. Brown, but this gentleman suddenly broke up his establishment after it had been open only a few months, and went abroad. The second was opened by Mr. H. Branthwaite, F.R.C.S., at High Shot House, Twickenham, for the reception of ten male patients. This gentleman, in a report to the Inspector of Retreats, on the working of his establishment, says that, in his opinion, the Act would be infinitely more useful if an applicant could be admitted either without appearance before any magistrate, or even before one instead of two. It would also be very advantageous if an escaped patient could be taken back direct to the home, without having to be brought before a magistrate. On this subject the Inspector of Retreats says that all the licensees complain to

him of the difficulty they experience in obtaining the presence of two justices to witness the applicant's signature before admission to the retreat, as required by the Act, and they fear that this difficulty will be greatly increased, in consequence of a recent decision of the Home Office, namely, that the attesting justices must both be in the Commission of the Peace for the place (either borough or county) in which the attestation is made. The report states that all the retreats have been maintained in a condition fit for the reception of their inmates, whose health has, as a rule, been highly satisfactory. No death has occurred during the year. During the year 1885, 77 patients in all were admitted into the six retreats, and 83 were discharged. At the end of the year, 39 patients remained in the retreats, as compared with 45, who remained at the end of 1884.

THE FOOT-BALL ACCIDENT SEASON.

FOOT-BALL players, when the dangers attendant upon that peculiar form of amusement are pointed out to them, are in the habit of maintaining that serious accidents ought properly to be considered rare when due allowance is made for the very general prevalence of the game. As a matter of fact, only the most severe accidents are ever reported in the daily press. If a player is killed outright, or if he dies so shortly after the receipt of the injury as to necessitate an inquiry before a coroner, then a report appears; and, in a good many instances, some record of cases in which fracture of the leg or serious concussion of the brain occurs, may be found. Newspapers generally have a paragraph on Monday, giving particulars of a few of the accidents of the previous Saturday. This week, for example, two accidents are reported, both cases resulting in fracture of the leg. But as long as a man can walk off the ground, the injuries he may have received are not, as a rule, mentioned. Such trifles as a fractured collar-bone, or a dislocated shoulder, are apparently of such extremely common occurrence that the writers who contribute descriptions of foot-ball matches to local or sporting papers do not consider them worthy of mention. Another argument used by those who seek to defend this obsolete "sport" is that these accidents only occur in chance matches between scratch teams, and are due to some of the players not knowing the rules. But one of the accidents which occurred on Saturday happened during a county match between Sussex and Hampshire and Dorset. Medical students have, in the past, shown a curious love for this rough pastime, but there are not wanting signs that its popularity is declining among the better class of students, and that its place will soon be taken by more intelligent and manly ways of spending Saturday afternoon.

FOOD FOR BODY AND MIND.

WE have often expressed the opinion that underfeeding rather than overpressure lay at the root of those symptoms experienced by some of the children of our Board Schools, which have been so readily ascribed to this latter cause. It is, therefore, with great satisfaction that we see that a movement for providing free dinners is again about to be taken up in Southwark to meet the exigencies of the coming winter. The report shows that at the Farm House, Harrow Street, Mint (the headquarters of the movement), no fewer than 71,222 free midday meals of a substantial character were supplied to needy youths during last year. At the Board School, Webber Row, about 2,700 dinners were given; at All Hallows Mission Room, Union Street, 1,680 repasts were partaken of; while at Brent's Court, Borough, some 4,320 collations were distributed among the deserving, making a grand total of 79,922 free meals, as compared with 43,110 during the preceding year. The recipients of this benevolence included not only the poor children attending the Board Schools, but other children of the neighbourhood who required sustenance, and who were unable to pay any sum, however small, for even the common necessaries of life. As a preliminary step in the efforts towards meeting the anticipated distress, the Secretary of the Farm House Committee (Mr. Thomas Hunter) had paid visits throughout the locality, and has, in several instances, received reports of a most distressing character. It is intended to inaugurate the "free dinner" season early in the first week of November, the Committee (who have made no public appeal for aid) being desirous to render timely succour to the poverty-stricken children before the cold winter overtakes them.

THE COMING MEETING AT THE ROYAL COLLEGE OF SURGEONS.

AFTER considerable consultation between the two Associations of Fellows and Members, it has been unanimously agreed that the two following resolutions be moved at the meeting on November 4th: 1. That, in the opinion of this meeting, it would conduce to the welfare of the Royal College of Surgeons, and would tend to promote the interests of medical polity and education (*a*) if Members of the College were empowered to take part, separately or conjointly, with the Fellows in the election of members of the Council; (*b*) if Members of the College were eligible to sit on the Council, provided (1) that no Member of the College shall be entitled to vote till he have been such Member for a period of ten years; (2) that no Member of the College shall be eligible to sit in the Council till he have been such Member for a period of twenty years; and (3) that not more than one-fourth of the Council shall consist of Members of the College who are not also Fellows. 2. That, with a view to give effect to the recommendation in the foregoing resolution, the Council be hereby respectfully requested to empower certain members of its body to meet and confer with representatives of the Association of Fellows and of the Association of Members, together with, if necessary, an equal number of Fellows and Members who may not belong to either of the Associations, to be selected in any manner satisfactory to the Council. Fellows or members having resolutions to propose at the meeting are invited to send copies thereof to the Secretary of the College not later than November 2nd.

WORKHOUSE INFIRMARY NURSES.

NOTWITHSTANDING the great advances made in the nursing of the sick poor in workhouse infirmaries, there seems to be yet room for some improvements. The danger of employing aged women in the capacity of nurses in workhouse infirmaries was illustrated by the facts elicited at an inquiry, at the St. Pancras Coroner's Court, into the circumstances attending the death of a patient in the St. Pancras Infirmary, It was stated that, on Saturday week, the ward-nurse had just given deceased her medicine, when she asked to be lifted out of bed, and two very aged women, one the help, and the other an aged and infirm patient, endeavoured to do so. Deceased was a very heavy woman, and, as they were lifting her up, she suddenly screamed, "Oh, my arm!" and fell backward. This was at 9 o'clock; and, on the nurse coming to see what was the matter, she felt her arm, and considered it was fractured; but, as the medical man would be doing his rounds about 11 A.M., she did not send for him. Dr. W. M. Dunlop, the medical officer, said he saw deceased about 11, and, on examining her, found the upper part of the left arm fractured, and the shoulder dislocated. Such an occurrence might result from a person of deceased's weight being lifted up by the arms without blame to any one. The cause of death was acute rheumatism, accelerated by the fracture of the arm. The jury, in returning a verdict in accordance with the medical evidence, said that the fracture of the arm was accidental. They added a rider requesting that the guardians should see that younger and more able-bodied persons were employed in the removal of patients, and expressing the opinion that the nurse, on discovering the accident, should have notified the medical officer of what had happened. Dr. Adams assured the Court that the recommendation should be duly considered, and the proceedings closed.

THE OPHTHALMOLOGICAL SOCIETY.

THE seventh session of the Ophthalmological Society commenced on Thursday, October 21st, when Dr. George Johnson, F.R.S., occu-

pied the chair in the unavoidable absence of the new President, Mr. Hulke. The chief paper of the evening was by Dr. Sidney Coupland, who reported very fully a case of ophthalmoplegia, consequent upon thrombosis of the cavernous sinuses, the cause of which could not be determined. The paper constitutes a most important addition to our knowledge of the symptoms and causation of thrombosis in this situation, a subject which has been strangely overlooked by the writers of our medical text-books. Mr. Walter Edmunds and Mr. Lawford made a further and final communication on the mode of production of optic neuritis, basing their observations on this, as on a former occasion, on a study of cases of head-injury. The result of their labours may be very briefly summed up, for it comes to this: when there is no basic meningitis there will be no optic neuritis; when there is basic meningitis there will always be found optic neuritis. Of course it is understood that the absence of optic neuritis, or meningitis, can only be accepted when proved by microscopical examination. There seemed to be no inclination on the part of those present to controvert the position taken up by the authors, who are to be congratulated on having set at rest a long-disputed question.

CLINICAL SOCIETY OF LONDON.

At the last meeting of this Society, Mr. Charters Symonds read notes of a case in which two and a half years ago he had removed nearly the whole scapula of a man for osteo-sarcoma; the patient was shown to the meeting, and there was no recurrence of the growth. Mr. Thomas Smith and Mr. Butlin next detailed two interesting cases in which large arteries had been tied with aseptic kangaroo-tendon. Mr. Smith considered the tying of a large artery in its continuity by a single thread fastened by a reef-knot a defective operation, as the knot dinted in the tunic of the vessel at the part where it lay; when the ligature divided the artery it was the knot that first penetrated the canal of the vessel, and when secondary hæmorrhage occurred, it was usually at the situation of the knot. As a remedy for this, he recommended that the ligature should be passed twice round the vessel (an easy procedure with an aneurysm-needle, which may carry one end of the ligature forwards and bring back the other) as a clove-hitch, and then pulled firmly across the artery. This ligature had no knot; but if it were not considered to be secure enough, the two ends could be tied in a single knot after the tightening of the clove-hitch, and the knot would not then be in contact with the arterial wall. As Dr. Edmunds and Mr. Ballance had shown at the Royal Medical and Chirurgical Society last session, it is not necessary nor desirable to injure the coats of an artery in order to secure a permanent obliteration of its canal. The material recommended for the tying of large vessels by Mr. Smith, Mr. Butlin, Mr. Croft, and Mr. Ballance was carbolised kangaroo-tendon; the latter gentleman advised that, after its removal from the oil, when it was slippery, it should be placed in the corrosive-sublimate solution for one hour before being used; its surface was thereby rendered opalescent and rough, and it would not, in that case, slip when tied. Most of the speakers were of opinion that the return of pulsation, in Mr. Smith's case, was due to the establishment of the collateral circulation, and not to the slipping of the ligature. It seemed to be the opinion of some of the surgeons present, including Mr. Butlin, Mr. Croft, Mr. Sydney Jones, and Mr. H. Morris, that ligation of the vessel in two places, and its division between them, was the better procedure; whereas Mr. Ballance gave the preference to the one ligature. Most of the speakers thought it difficult to divide the inner coats of the artery with kangaroo-tendon, unless great force was used; but such division of the internal tunics was declared to be unnecessary for the complete permanent closure of the vessel. Mr. Morris had found that the amount of pressure which could be put upon a knot of kangaroo-tendon was not so great as could be borne by silk, but it was quite enough to close the artery that it encircled.

SHOEMAKERS' ULCER.

Dr. Danford Thomas has done well in drawing public attention to this peculiar form of industrial disease. While holding an inquest recently on the body of a shoemaker who had died suddenly at Queen's Road Station, Bayswater, from the bursting of an ulcer in the stomach, Dr. Danford Thomas said it was a pity that shoemakers persisted in pressing the boot to the stomach when engaged on their work, for the pressure was apt to produce an ulcer. We are informed by Dr. Lomas, an excellent authority on the subject, that a very large number of shoemakers suffer from stomach-diseases. Some years ago an upright bench for shoemakers was exhibited by the Society of Arts, which, it is believed, is now used in many boot-factories. The repairers of boots and shoes are the people who still carry on their work in the old way. In hospitals and dispensaries, he has met with some cases of hæmatemesis from pressure over the stomach. As a class, shoemakers are not healthy; many of them become very feeble at the age of 40 to 50.

SHOP HOURS REGULATION.

Next Monday a very well-intentioned, but we fear, sadly impotent, measure for the relief of over-worked young shop-people comes into force throughout the United Kingdom. The Shop Hours Regulation Act was piloted through the House of Commons by Sir John Lubbock, and that eminent philanthropist is usually so cautious in his legislative proposals that there was a disposition, especially in view of the general numbing of intellects by the shadow of the general election, to let the Bill pass, not in the expectation that it would come into general operation immediately, but that it would have, as the Archbishop of Canterbury expressed it, "a very considerable moral effect." Fortunately, the Act is only to "continue in force until December 31st, 1888, and the end of the then next session of Parliament," so that there will be an early opportunity of reconsidering its proposals. It enacts that a young person under the age of eighteen years may not be employed in or about a shop for a longer period than seventy-four hours, including meal-times, in any one week. "Shop" is defined to mean retail and wholesale shops, markets, stalls, and warehouses in which assistants are employed for hire, and includes licensed public-houses and refreshment houses of any kind; "young person" means a person under the age of eighteen years. In every shop in which young persons are employed a notice must be kept exhibited by the employer in a conspicuous place referring to the provisions of the Act and stating the number of hours in the week during which young persons may lawfully be employed therein. Where any young person is employed in or about a shop, contrary to the Act, the employer is liable to a fine not exceeding one pound for each person so employed. Where the employer of a young person is charged with an offence against the Act, he will be entitled to have any other person whom he charges as the actual offender brought before the Court at the time appointed for hearing the charge; and if, after the commission of the offence has been proved, the said employer proves to the satisfaction of the Court that he has used due diligence to enforce the execution of the Act, and that the said other person has committed the offence in question without his knowledge, consent, or connivance, the said other person shall be summarily convicted of such offence, and the occupier shall be exempt from any fine. It will be observed that no person or authority is appointed to put the law into force, and it is hardly likely that the young persons in shops will venture themselves to take their employers before the magistrates. Hence the Act is not likely to be, in its present form, at all events, a very pronounced success.

Decomposing Tinned Milk.—A seizure of tinned milk has been made at Tottenham. The sanitary inspector stated that he had seized no fewer than 300 tins, the contents of which were in a state of fermentation. They contained, too, a considerable amount of animal fat, insoluble in hot or cold water, and tasting very acid. They were ordered to be destroyed.

SCOTLAND.

A COURSE of lectures and demonstrations on diseases of the throat and nose will be given to medical practitioners in the Lecture-Room of the Glasgow Royal Infirmary, by Dr. David Newman, every Saturday during the winter session, commencing on November 6th.

MEDICAL EDUCATION OF WOMEN IN EDINBURGH.

THE reopening of the Extra-mural Medical School on Wednesday, October 20th, was marked by the readmission of women to medical education in Edinburgh, after an interval of more than twelve years. The first year's course comprises, as usual, anatomy and practical anatomy, chemistry and practical chemistry. The ladies' class consists at present of six students, most of whom have just passed the preliminary examination in arts held by the Educational Institute of Scotland on behalf of the Colleges of Physicians and Surgeons. The classes are conducted by Dr. Macdonald Brown and Dr. Stevenson Macadam respectively, and Dr. Sophia Jex-Blake is acting as organising Secretary.

EDINBURGH RECTORIAL ELECTION.

THE proceedings in connection with the election of Rector of Edinburgh University are attracting a considerable amount of attention among the students this week, and the event will be decided on Saturday, October 30th. Although only a triennial occurrence, it causes a certain amount of excitement; and this must to some extent interfere with the diligence of the matriculated in their studies proper, so that its early decision this year is not to be regretted. The issue has been narrowed by the withdrawal of the candidature of Mr. Freeman; so that it will be a contest between the present Rector, Lord Iddesleigh, on the one hand, and Sir Lyon Playfair on the other. The division of the classes between the old and new university buildings undoubtedly causes less appearance of stir among the respective partisans; and the condition of the old quadrangle, owing to the work on the dome, will modify the old scene of tumult during the polling.

SCOTTISH REPRESENTATION ON THE GENERAL MEDICAL COUNCIL.

ONE of the candidates for representative of the profession in Scotland on the General Medical Council, Dr. Bruce, of Elgin, addressed a meeting of medical men in Edinburgh last week. Professor Annandale presided, and there were present, among others, Professor Simpson, Drs. Milne Murray, Pattie, Philip, Gordon, and Duncanson. Dr. Bruce expressed his views on a variety of topics interesting to the profession. The meeting unanimously passed a motion, proposed by Dr. McLaren and seconded by Dr. Bramwell, that, in the opinion of the meeting, the direct representative for Scotland on the General Medical Council should be a general practitioner who is not officially connected either with the universities or corporations.—Dr. Bruce received a vote of thanks, but a motion in favour of his candidature was, at his own and the chairman's request, withdrawn. Dr. Bruce, addressed a meeting of medical practitioners of Glasgow and the neighbourhood, in Glasgow, on Wednesday last. There was a very good attendance, and the meeting was certainly very representative of the profession in the west. Dr. Goff, of Bolliwell, was called to the Chair, and in his remarks expressed his strong opinion that the member elected ought to have no connection officially with any university or corporation. Dr. Bruce, in his address, took his stand on this ground mainly, and urged that the member selected should be a true representative of the general profession. He then proceeded to discuss various questions connected with the power of the General Medical Councils, the method of examination, and the means to be taken for the more practical instruction of the student in the duties of his profession. The proceedings closed by the adoption of a vote of thanks moved by Dr. Glaister and seconded by Dr. Stirton.

GLASGOW DEATH-RATE.

DURING the last week the mortality in Glasgow was at the rate of 22 per 1,000 of the population per annum, as compared with 24 in the previous week, and 21, 25, and 26 in the corresponding weeks of the three preceding years.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

AT the annual business meeting of this society, held on October 20th, the following office-bearers were elected:—Hon. President, Professor Leishman, M.D.; President, Samuel Sloan, M.D.; Vice-Presidents, Abraham Wallace, M.D., and J. Stuart Nairne, F.F.P. S.G.; Treasurer, Robert Pollok, M.D.; Secretary, G. A. Turner, M.D.; Reporting Secretary, Robert Park, M.D.; Councillors, M. Cameron, M.D., G. Halket, M.D., J. Marshall, F.R.C.P.E., John Glaister, M.D., W. L. Reid, M.D., P. C. Smith, M.D.

POISONING BY VITRIOL.

LAST week we recorded a case of poisoning by nitric acid, this week we have to notice a sad accident due to sulphuric acid, which has resulted in one death and in serious illness of another patient. Two little children (a boy and girl), about 2 years of age, found in an occupied house a bottle containing sulphuric acid, somewhat diluted, and both drank of its contents. They soon became seriously ill, and were sent to the Glasgow Royal Infirmary by the police, to whom the case was made known. Notwithstanding what was done for her, the little girl died three hours after admission, while the boy remains seriously ill.

THE FOOD SUPPLY OF GLASGOW.

ARRANGEMENTS have just been completed by the local authority of Glasgow, in conjunction with the Town Council and Clyde Trust, for affording extensive facilities for the importation of live cattle from abroad. On October 19th new wharves were inaugurated on the Clyde, and at the proceedings connected with the ceremony, some very remarkable information was given regarding the development of this method of supplying the food of the people. In 1876 the number of cattle imported from the United States was only 302; four years later the number was 155,000. One of the speakers urged the necessity of refrigerators being provided for the preservation of dead meat brought from Australia and New Zealand. He pointed out that in the first nine months of 1886 no fewer than 472,000 carcases of sheep had been brought frozen from New Zealand; during the same period, from Australia 345,000, and from the River Plate 246,000. In Glasgow there was not sufficient accommodation for storing these and maintaining then in sound condition by freezing till they found a market. The new wharves provided by the local authority afford accommodation for 2,500 head of live cattle, designed to be home-fed for several months after arrival, and also accommodation for 2,000 cattle destined for immediate slaughter. One of the appliances is a refrigerator, built under the Haslam and Bell-Coleman patents, and fitted to discharge 110,000 cubic feet of cooled air per hour. In the refrigerating chambers 600 sides of beef can be hung. The total cost of the works has been nearly £70,000. The local authority deserves all the credit which has been accorded to them, for the valuable measures they have taken in this direction to do what is possible to cheapen and improve the food of the people.

IMPORTANT GIFT TO MEDICAL SCIENCE.

AN announcement has been made this week which is of much importance to the science of medicine, and which, when the scheme is carried out, will do much for the prosecution of original research in Edinburgh University. Dr. Gunning, formerly of Edinburgh, who lives in Rio Janeiro, has made a handsome gift of no fewer than eleven prizes, of the value of £50 each; the gift is designed to found Victorian Jubilee Prizes in the Faculty of Medicine. Each of these prizes is to recur triennially. The prizes have received names which commemorate previous Professors of Edinburgh University. Thus the first is the Monro

Prize for Anatomy, in memory of the three Monros; the second is the Bell Prize in Physiology, commemorative of Professor Sir Charles Bell; the third, the Edward Forbes Prize in Zoology; fourth, the Hatton Balfour Prize for Botany; fifth, the Joseph Black Prize for Chemistry; sixth, the Christison Prize for Materia Medica; seventh, the Lister Prize for Surgery, to maintain the connection between Sir Joseph Lister's name and the University; eighth, the Gregory Prize in Practical Physic, to commemorate the two Gregories; ninth, the John Thomson Prize in Pathology, to commemorate the Professor of that name (the father of Allen Thomson); tenth, the Simpson Prize in Obstetrics; and eleventh, the Alison Prize for Medical Jurisprudence and Public Health, commemorative of William Pultney Alison. The conditions for competition for the prizes are, that candidates must be Bachelors of Medicine or of Science of Edinburgh University of not more than three years' standing (except that, during the next three years, they may be of six years' standing); the prizes will be awarded, with the approval of the Senatus, either for special essays, or for graduation theses, or for original research conducted under the supervision of the professor of the department in which the prize is awarded. The essays are to be lodged with the Dean of the Faculty of Medicine on or before April 30th of the year in which the prize is awarded. There will be three prizes open one year, and four open two successive years, so that each one will be competed for and awarded triennially. The three open for competition in the current year are Anatomy, Chemistry, and Practice of Physic; and in April, 1888, Physiology, Botany, Surgery, and Pathology. This splendid liberality on the part of Dr. Gunning deserves, as its most suitable recognition, that thorough working out of the scheme in the interests of medical science, which Dr. Gunning evidently desired when he proposed to commemorate the Victorian Jubilee in a manner likely to do lasting good to medicine and to his old Alma Mater.

NEW CONVALESCENT HOME AT GILMERTON.

THE formal opening of the new Ravenscroft Convalescent Home at Gilmerton took place last week. A large number of ladies and gentlemen from Edinburgh and the district were present. The Secretary, Councillor Pollard, stated that the Home which had been vacated, and which was situated close by, was opened for the reception of adult convalescents on February 27th, 1879; since that time, 577 women and 493 men had passed through it. All these had remained in the Home on an average of three weeks each, at a total cost of £2,728. The new Home has been built at the cost of about £2,000, as the old institution was found insufficient for the growing demands made upon it. The sum of £1,400 has already been subscribed, and it is expected that the rest of the money will soon be raised. The subscriptions show no signs of falling off, and it is gratifying to know that some who have been patients in the Home have of their own accord contributed to its funds. The accommodation of the new Home is sufficient for twenty patients, as against twelve in the old Home, and there are also suitable rooms for the Superintendent and Matron and two servants. Numbers of friends spoke of the necessity and usefulness of the institution, and of the good accomplished by its smaller predecessor. In the afternoon, twenty patients took up their abode in the Home.

IRELAND.

AT a meeting of the Convocation of the Royal University of Ireland, held on Wednesday, October 27th, Dr. Whitla, of Belfast, was elected, by a large majority, a member of the Senate.

A MEETING of the Royal University of Ireland to confer degrees was held on Thursday last, October 28th, in the University Buildings. Dr. John Isaac Lyndham, Professor of Medicine, Queen's College, Galway, has been elected a Fellow in Medicine of the University.

DUBLIN HOSPITAL SUNDAY FUND.

THE annual collection in aid of this Fund will be made on Sunday, November 14th.

OPENING OF THE MEDICAL SESSION IN DUBLIN.

THE first introductory lecture of the session was given on Monday last, October 25th, in the School of the Royal College of Surgeons of Ireland by Dr. Alexander Fraser, Professor of Anatomy. He gave a historical outline of the rise and progress of scientific anatomy, and traced its development to its present importance. At St. Vincent's Hospital the inaugural address was given on Wednesday by Mr. McArdle. On Thursday, Dr. Guy Nugent delivered the introductory address for the session in the Richmond Hospital; and on Friday morning (yesterday) addresses were to be delivered in the Meath Hospital by Mr. L. Hepenstal Ormsby, and in the Adelaide Hospital by Mr. Francis T. Heuston.

CORPORATION GRANTS TO THE DUBLIN HOSPITALS.

THE usual presentments for the annual grants made to the city hospitals by the Corporation of Dublin passed that body on Monday last, after the apparently inevitable sectarian wrangle. A new grant of £100 was made to the recently established Lying-in Hospital, which was said by a town councillor to be "doing a splendid business." An amendment to reduce the grant to the Rotunda Lying-in Hospital from £250 to £200 was lost by one vote only.

DIRECT REPRESENTATION OF THE PROFESSION.

AT a meeting of medical men practising in Limerick and adjoining districts, held last week, a resolution was passed, pledging those present to support Dr. Laffan, as candidate for the seat on the General Medical Council, created by the late Act, and urging on all provincial practitioners to sustain him, as he was the only candidate whose freedom from connection with all the interested Corporations alone fitted him, among all the competitors, for independently defending the interests of the general practitioners.

THE LABOURERS' ACT.

THE Guardians of the Waterford Union, by a small majority, have recently rescinded a former resolution, which, if carried out, would have given to the medical officers the increase in their fees for inspecting labourers' cottages, under the Act, which the nature of their duties amply justify. Messrs. Coghlan, Jackman, and Cane, the medical officers, in a statement carefully drawn up, have given conclusive reasons why the fee should be half a guinea instead of five shillings. They state that the time occupied in these inspections is valuable and professional; that it interferes with ordinary and special medical duty; that the cottages are distant and many miles apart, involving loss of time and other incidental drawbacks; and that the fee tendered, in extensive districts where not more than one or two inspections can be made, does not remunerate them.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—On Wednesday, October 13th, a quarterly court of the directors of this Society was held at 53, Berners Street, the President, Sir James Paget, in the chair. One new member was elected, and the death of one reported. The treasurer announced the receipt of the legacy of £300 from the late Dr. H. B. Owen, a former vice-president. It was resolved that, owing to the numerous fresh applications for grants made during the year, a Christmas present, such as had been made the last few years, could not be made this year to the widows and orphans on the books. Applications for relief were read from sixty-three widows, six orphans, and three orphans on the Copeland Fund, and a sum of £1,313 was recommended to be granted at the next court. One fresh application for relief was read from a widow, and a grant made. A grant towards the self-maintenance of an orphan was also made. Four orphans were reported as having ceased, through age, to be eligible for further grants.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

THE quarterly meeting of the Committee of this Society was held on Wednesday, October 20th, at 38, Wimpole Street. Mr. Ernest Hart (Chairman) presided, and among those present were Dr. de Havilland Hall, Mr. Vincent Jackson (Wolverhampton), Mr. Major Greenwood, Mr. Edward Bartlett, Mr. E. Noble Smith, Mr. F. Wallace, Dr. J. Rickett, Dr. R. Lord, Mr. J. W. Hunt, and Mr. W. J. Stephens (Brighton).

It was stated there were now nine members on the sick list, and special reports were presented on each of the cases. The illnesses were locomotor ataxy, pelvic abscess, cirrhosis of liver and dropsy, two cases of sprain and injury to knee-joint, typhoid fever, injury to spine from a fall downstairs, pleuro-pneumonia and tumour of the rectum. The total sickness pay for the quarter was £446 17s.

The claims generally were of the description contemplated when the Society was founded, and some of them strikingly proved the usefulness of and necessity for its work. In at least two of the cases the claimants were young men, comparatively recently established in practice, and almost on the threshold of their careers. One of these had been completely disabled by a painful illness, and was now just recovering, after a claim of eight months' duration, while the other had suddenly developed a dangerous malady likely to incapacitate him for a long period.

The increase of members had been larger during the quarter than usual, 43 new proposals having been received, bringing the total, in two years and a half, up to 818. Several of these were accepted on the recommendation of the examining Subcommittee, while others were specially considered, and the Secretary instructed to write for fuller information or further medical evidence. Mr. W. J. Stephens (of Brighton), who had undertaken to act as honorary local secretary for that district, stated there was a likelihood of the Society being further increased from the neighbourhood.

A summary of the funds showed the total amount in hand to be now £12,724. In the Sickness Fund there was £5,665, an increase of £2,347 on the year; in the Annuity Fund, £4,710, an increase of £2,698; in the Assurance Fund, £1,161, an increase of £247; and in the Management Fund, £1,072, an increase of £401. The interest on investments had been £115 in the quarter, against £82 last year. The total increase for the year was £5,041, and for the quarter, £1,393.

Of the total funds nearly £11,000 was invested at an average of over 3¾ per cent., £3,683 having been advanced to the Burial Board of Clee during the past quarter at 4 per cent.; a loan was now sanctioned of £1,500 to the Western Division of the County of Suffolk at 3¾ per cent., which would reduce the bank-balance to the lowest safe point.

Some consideration was given to the new annuity table adopted at the general meeting at Brighton, under which the premiums of such members as assured for an annuity, and died before arriving at the age of 65, would be returned to their representatives in the proportion of 50 per cent. if members for five years, and 75 per cent. if members for ten years. Several letters had been received from gentlemen already members, inquiring on what terms an exchange could be made from the old to the new system. After some discussion, it was agreed that present members should, provided the exchange were made not later than March 31st, 1887, be allowed to exchange by payment of the difference according to their age at joining instead of their present age, and should have the option of antedating the exchange to any date not prior to their joining on payment of the arrears of extra premiums.

The Secretary produced a table exhibiting the extra payment necessary to secure a return of the annuity premium, of which the following are specimens at certain ages.

Age.	Annuity of £50.	Annuity of £25.
	s. d.	s. d.
25	5 2	2 7
30	6 9	3 5
35	8 8	4 4
40	11 2	5 7
45	14 2	7 1

It was stated that several members had already effected the exchange, and there were indications that the introduction of the new system would add to the popularity of the annuity branch.

General satisfaction was expressed at the position the Society was attaining, and the steady and continuous progress made; and the Secretary was instructed to prepare further papers explaining the principles and work of the Society. Copies of these, with proposal forms, and all information as to the Society, will be forwarded on application to Mr. C. J. Radley, Secretary, 26, Wynne Road, Brixton, London, S.W.

THE OPENING OF THE MEDICAL SCHOOLS.

GLASGOW UNIVERSITY.

THE session of the Medical School of the University was inaugurated, on October 26th, by an address by Professor G. H. B. Macleod, in the Bute Hall of the University, which is published at page 803.

GLASGOW ROYAL INFIRMARY.

THE Royal Infirmary Medical School was opened on October 26th, when an introductory address was delivered by Dr. John Barlow, F.R.C.S., on "What the Medical Profession Is, and How to Become a Medical Practitioner." Dr. BLACKIE, Lord Dean of Guild, presided, and in some opening remarks referred to the present position of the medical school, which had much diminished in numbers since the transference of the University to a distance of several miles from the Infirmary; he referred to the operation of the University regulations, which only allowed four out of the twelve classes required for a degree to be taken at the Royal Infirmary School. He described the steps which the managers had taken with a view to promote the welfare of the institution, and mentioned the memorial which was presented by a deputation to Government a few months ago, proposing that the privileges of the school should be extended and made in effect equal to those of the University, by having it provided that all the classes of the curriculum required for qualifying for a degree might be taken in it; for that purpose it was suggested that certain clauses might be inserted in the University Bill, which was expected to be brought before Parliament, by which the Royal Infirmary Medical School should be erected into a college of the Glasgow University. The movement was in complete harmony with the scheme brought before the General Council of the University by its committee a year ago, which was passed with great approval, and consequently should be supported by that influential body.

Dr. BARLOW, after giving a warm welcome to the students, alluded to the importance, in the interests of the patients, and for the advance of medical knowledge, of having medical students in attendance in the wards of the Infirmary. In order that the Medical School might be able to compete with its rivals in Scotland and in England, money was required for the purchase of instruments and models for teaching purposes, and for the endowment of certain of the lectureships, and an appeal was made to the friends of the Royal Infirmary to supply these necessities. In considering the subjects of the curriculum, the lecturer impressed upon the students the importance of obtaining a thorough knowledge of anatomy and physiology; and in connection with the latter subject he instanced Ferrier's experiments upon the localisation of the functions of the brain as an example of a purely scientific study, from which an important advance in the surgical art had been made in the treatment of diseases and injuries of the brain. Regarding the course of study, he expressed the opinion that systematic lectures were now, owing to the abundance of reliable text-books, less important than formerly, and that, in the future, students would largely receive their instruction by a combination of demonstration of objects and conditions, and of written and oral examinations on subjects previously announced. In order that full advantage might be taken of these methods, attendance in the wards and at the dispensary was necessary, even from the commencement of the medical training. In conclusion, the lecturer appealed to the new students to sustain, by their earnestness and good behaviour, the present reputation of the School, and thus do their share to correct the impression outside that every mad freak committed during the session was due to medical students.

ANDERSON'S COLLEGE, GLASGOW.

THE Introductory Address of this College was delivered by Dr. Wolfe, Lecturer on Ophthalmic Medicine and Surgery at the College, on October 26th. After referring to recent advances made in medicine and surgery generally, he went on to speak of those which, in his own department, had followed the invention of the ophthalmoscope. In the course of his review, he paid a glowing tribute to the memory of Desmarnes, who, by his brilliancy of conception and dexterity of execution, had revolutionised ophthalmic surgery; he spoke in terms of high admiration of the services rendered by von Gräfe, who, by his eminent success as a clinical teacher, by his introduction of iridectomy for the cure of glaucoma, and by the founding, in conjunction with Arlt and Donders, of the *Archiv für Ophthalmologie*, had done so much to establish the ophthalmological school of Germany on a scientific basis.

He considered that the monument which has been erected to von Gräfe in Berlin—the first placed there to a private citizen—did honour, not only to him, but also to the German nation. The symbolic groups, however, which had been added were as much a disfigurement to the statue as von Gräfe's method of extracting cataract was a detraction from his fair fame. Dr. Wolfe then traced the working out of his own operation for cataract, for transplantations of skin-flap and conjunctiva from the rabbit, and his operation for detachment of the retina. In the first, some of his recent cases had been specially interesting and critical; and he showed how to overcome complications. In one case he operated successfully on a gentleman of 91 years of age. His operation for detachment of the retina had recently come into much more general practice in consequence of various demonstrations of it which he had given, and especially that given in Paris in 1884.

The lecturer thus explained some of his endeavours to extend the sphere of eye-surgery, and to bring within the province of operative interference certain groups of cases which have, until recently, been considered incurable. With regard to further development, he said that the resources of eye-surgery are not yet exhausted.

Dr. Wolfe, in conclusion, referred to the arrangements which have been made for the removal of Anderson's College Medical School to the neighbourhood of the Western Infirmary.

ROYAL COLLEGE OF PHYSICIANS.

A MEETING of the Fellows was held on Thursday, October 28th; Sir WILLIAM JENNER, K.C.B., presiding.

The following gentlemen were admitted to the Membership of the College: J. S. Bury, M.D.Lond.; E. Hogben, M.B.Dubl.; H. W. G. Mackenzie, M.B.Cantab.; A. Martin, M.D.Lond.; F. W. Mott, M.B.Lond.; J. H. Philpot, M.D.Lond.; F. J. Smith, M.B.Oxon.; and F. J. Wethered, M.B.London.

The licence to practice was granted to eighty-nine gentlemen who had passed the required examinations.

The quarterly report of the Finance Committee was received, and the audited accounts of the College for the year ending September 29th were laid upon the table.

On the nomination of the President, Dr. George Johnson and Dr. Habershon were appointed Vice-Presidents of the College for the next twelve months.

A report was received from the Committee of Management with reference to the staff which will shortly be required for the efficient conduct of the business arrangements of the new Examination Hall. The suggestions made were approved by the College; and power was given to the Committee to define the duties of the several officials, and to nominate for appointment, by the two Colleges, persons properly qualified for the several offices.

The following additional regulations, relating to candidates referred at the Second and at the Final Examinations of the Examining Board, were suggested by the Committee of Management, and they were, after some discussion, adopted by the College.

"A candidate referred on the Second Examination is required, before being admitted to re-examination, to produce a certificate that he has pursued, to the satisfaction of his teacher or teachers, in a recognized place of study, his anatomical and physiological studies, or his anatomical or physiological studies, as the case may be, during a period of not less than three months subsequently to the date of his reference."

"A candidate referred on the Third or Final Examination, is required, before being admitted to re-examination, to produce a certificate, in regard to medicine and surgery, of having attended the medical and surgical practice, or the medical or surgical practice, as the case may be, at a recognized hospital, for a period of not less than six months subsequently to the date of his reference; and, in regard to midwifery, a certificate of having received, subsequently to the date of his reference, not less than three months' practical instruction in that subject by a recognized teacher."

Dr. Ord's tenure of office on the Committee of Management having expired, he was unanimously re-elected.

THE CHOLERA.

PESTH.

A THOUSAND cases of cholera altogether have occurred at Pesth since the present outbreak began. Military dispositions for the transfer of troops in some parts of Hungary are said to have been carried out regardless of the presence of cholera. Several divisions have been sent from Szegedin, where cholera has done much mischief, to stations far distant. The Government Commissioner is said to be actively examining all suspicious places. This step has not been taken too soon, for reports reach us of a case of criminal neglect of sanitary precautions. In one case, five persons were found to be living in a ground-floor den, in close proximity to where a cholera patient had been taken ill, no cleansing of any kind having taken place. In another instance, the clothing and bedding of cholera patients were allowed to be distributed without being washed. The Hungarian Government, it has stated from Vienna, has tardily taken steps to remedy the defective sanitary arrangements at Buda-Pesth, by appointing a State medical officer to act with the municipality.

RAGS FROM AUSTRIA AND ITALY.

IN view of the prevalence of cholera at Pesth, Trieste, and other places, the Local Government Board have issued an order prohibiting, until April 1st, 1887, the importation into this country of rags from Austria-Hungary. The Board have also extended until April 1st, 1887, the prohibition of the importation of rags from Italy.

CHOLERA ON BOARD A TROOPSHIP.

A TELEGRAM from Suez has announced that Her Majesty's Indian troopship *Euphrates* passed Perim on October 23rd, homeward bound, and that four deaths from cholera had occurred on board. This is all the information that is as yet known on this highly important matter; but we have reason to believe that the home authorities here are on the alert.

ASSOCIATION INTELLIGENCE.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

THAMES VALLEY BRANCH.—Meetings of the Branch will be held on November 10th, January 26th, and March 30th. Members willing to read papers or exhibit cases are requested to communicate with the Honorary Secretary, CHARLES C. SCOTT, M.B., St. Margaret's, Twickenham.

SOUTHERN BRANCH.—The next meeting of the South Wilts District will be held at the Bath Arms, Warminster, on Wednesday, November 3rd, at 4 o'clock. New members will be proposed for election, and papers will be read by Mr. Hinton, Mr. Kingscote, and Mr. Manning. The members will dine together after the meeting; tickets (not to include wine) 5s. Members intending to be present, to communicate with the Honorary Secretary, H. J. MANNING, Laverstock, near Salisbury.

OXFORD AND DISTRICT BRANCH. [*Amended Notice.*] The next meeting of this Branch will be held at the Radcliffe Infirmary, on Wednesday, November 3rd. Members who wish to show cases or read papers are requested to communicate with one of the Honorary Secretaries on or before October 29th. Dinner, at 5s. (exclusive of wine), will be provided for those only who send in their names before Monday, November 1st. —Dr. DARBISHIRE, 60, High Street; W. L. MORGAN, Esq., 42, Broad Street, Oxford, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT. The next meeting will be held at the London Hospital, on Thursday, November 18th, at 8.30 P.M., when Dr. Ord will show a number of cases of myxœdema, illustrating its various forms and stages. The chair will be taken by Sir Andrew Clark, Bart., F.R.S.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT. The opening meeting of the session will be held at the Athenæum, Camden Road, N., on Friday, November 12th, 1886, when an address will be delivered by J. Syer Bristowe, Esq., M.D., F.R.S. (President of the Branch). The chair will be taken at 8.30 P.M.; after which, a discussion will be invited by the chairman. All members of the profession are invited to attend. Members desirous of exhibiting cases or reading notes are requested to communicate with Dr. G. HENRY, Honorary Secretary, 302, Camden Road, N.

SOUTH EASTERN BRANCH: EAST SUSSEX DISTRICT. The next meeting of the above district will be held at the Queen's Hotel, Hastings, on Tuesday, November 16th. Dr. Humphreys will preside. Meeting at 3.30 P.M. Dinner at 5.30 P.M.; charge, 6s., exclusive of wine. The following communications are promised: 1. The Chairman: Notes of a case of Abdominal Tumour formed by a Scrofulous Kidney. 2. Dr. Penhall: Cancer of the Sigmoid Flexure, with repeated attacks of Intestinal Obstruction. 3. Dr. Allen: Intestinal Obstruction from Gall-stone: Operation. Gentlemen desirous of reading short papers or notes of cases, or of showing microscopical or other specimens, should communicate with the Honorary Secretary, F. JENNER VERRALL, 95, Western Road, Brighton. October 25th, 1886.

SOUTH EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above district will be held at the Kent and Canterbury Hospital, on Thursday, November 11th, at 3 P.M.; Mr. James Reid in the chair. Agenda.—Mr. W. Pugin Thornton: On some of the Practical Applications of Electrolysis, Faradism, and Galvano-Cautery. Mr. J. E. Schon: A case of Tubal Fœtation, with Specimen. Dr. T. Eastes: Short Notes of Two Cases of Laryngeal Obstruction. The dinner will take place at 5 P.M., at the Royal Fountain Hotel. All members of the South-Eastern Branch are entitled to attend these meetings, and to introduce professional friends. N.B.—All gentlemen purposing to dine are particularly requested to inform the Secretary by Tuesday, November 9th, that proper arrangements may be made.—W. J. TYSON, Honorary District Secretary, 10, Langhorne Gardens, Folkestone.—October 28th, 1886.

YORKSHIRE BRANCH.—The autumnal meeting will be held at the Royal Hotel, Scarborough, on Wednesday, November 10th, at 4 P.M. Members intending to read papers are requested to communicate at once with ARTHUR JACKSON, Secretary, Sheffield.

MIDLAND BRANCH.

A MEETING of this Branch was held at Stamford Infirmary, on October 21st, at 2 P.M., under the presidency of Dr. NEWMAN, about thirty members and friends being present.

Election of New Members.—W. Row, Esq., Market Overton, Grantham; E. Snell, Esq., Kitton, Rutland; Mark Sharman, M.B., Leicester; and Fredk. H. Moore, Esq., Anstey, Leicester, were elected members of the Branch.

Resolution.—After some discussion with regard to the advisability or otherwise of reorganising the Branch, it was resolved: "That the Honorary Secretary should ascertain, by a post-card or otherwise, the opinion of the Lincolnshire members with regard to the reorganisation of the Branch, and report to the next annual meeting."

Papers, etc.—Dr. Harrison opened an interesting discussion on the Duration of Infectiousness in certain Zymotic Diseases; in which Drs Carter, Handford, Walker, Paley, Broadbent, and Vores, took part.

Mr. Sympson narrated a case of Injury and Division of the Ulnar Nerve, which he treated by suture with satisfactory result.

A paper by Mr. Cant on "A Peculiar Symmetrical Disease of the Retinæ in a Child" was read by the Secretary.

Luncheon was provided by the President, at 1 o'clock, in the Infirmary; and in the morning some of the members visited Bingley House.

EAST LONDON AND SOUTH ESSEX DISTRICT: METROPOLITAN COUNTIES BRANCH.

THE inaugural meeting of the session was held at Hackney Town Hall on Thursday, October 21st, at 8.30 P.M. The chair was taken by Dr. BRISTOWE, F.R.S., President of the Branch, thirty-nine members and visitors being present.

After the transaction of formal business, Dr. Playfair read an address on Defective Sanitation as a Cause of Puerperal Disease. He stated that defective sanitary conditions were a much more frequent cause of puerperal septicæmia than was generally supposed, and cited four very striking cases in proof of his contention. He strongly urged a change in the law, by means of which architects, builders, and plumbers should be made legally responsible for defective workmanship.—An interesting and lively discussion ensued, in which Drs. Bate, Corner, Daly, East, Hewer, Stewart, and F. Wallace took part. —The President, in summing up, remarked that the cases brought forward by Dr. Playfair were highly suggestive, but he did not consider the matter fully proved.—Dr. Playfair replied.

Dr. BATE proposed, and Mr. HEWER seconded, a most cordial vote of thanks to Dr. Playfair for his valuable address, which was carried with much enthusiasm.

Dr. HENRY proposed, and Mr. VERE NICOLL seconded, a warm vote of thanks to Dr. Bristowe for presiding, which was unanimously carried.

The meeting then adjourned.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

The French Congress of Surgery.—Paronychia and Infectious Osteomyelitis. Hæmatemesis in Hysterical Patients of both Sexes.—Tolerance of Opium.—Cellular Division in Epitheliomata.—Treatment of Scrofulous Diseases by Sea-bathing.—Small-pox and Vaccination. —Hygiene in Warm Countries.

THE second annual meeting of the French Congress of Surgery took place on Monday, October 18th, at the Faculty of Medicine. Professor Ollier, of Lyons, was elected President. M. Royer, President of the Senate, was present to represent the Government, as the Minister of Public Instruction was prevented by previous engagements from attending the meeting. Some foreign members of the medical profession were present, among whom were MM. J. Reverdin (Geneva), Plum (Copenhagen), Severeance (Bucharest), Blane (Bombay), Thiriar (Brussels). M. Reverdin read a paper entitled "Contributions to the Study of Myxœdema consecutive to Total or Partial Extirpation of the Thyroid Body." M. Reverdin asserted that he was the first who discovered *myxœdème opératoire*, a term he applied to the myxœdematous condition resulting from extirpation of the thyroid gland. He established the analogy existing between myxœdema and *cachexia strumipriva*. He bases his belief on the clinical symptoms, namely, the pallor, and swollen hard œdematous condition of the face, hands, and feet, without albuminuria; the feeble intellect; the sensation of cold; the absence of perspiration; the dry scaly ichthyoidal skin; the falling off of the hair; the slow pulse, swollen tongue, and subclavicular lipomata. M. Reverdin considered that the recent work published by MM. Bourneville and Bricon, in which similar cases were described under the name of "cretinoid idiocy, with pachydermic cachexia," furnished further proof of the accuracy of his opinion. At the necropsies, the thyroid gland was found absent. M. Reverdin observed that Professor Victor Horsley's experiments verified his statements. M. Guyon's paper was on the "Indications and Contra-indications for Lithotrity." M. Thiriar described the results of his analyses of urine in abdominal surgery.

M. L. H. Petit made some interesting observations before the Medical Congress at Nancy with regard to whitlow and osteomyelitis. A paronychia involving the bone had partially healed; there was a slight purulent discharge and a small eschar, showing that the lesion was not entirely cured. An apparently trivial inflammation occurred in another region; pus was formed there, and symptoms analogous to those of pyæmia (suppurative arthritis and albuminuria) ensued. These conditions were generally observed in debilitated and cachectic patients, or in those suffering from serious infectious diseases; in this case they were interesting as examples of possible indirect sequelæ of paronychia. They proved, moreover, that in this complaint, which was considered benign, pathogenic microbes might be present, which, under the influence of some unknown cause, could find their way out of the blood-vessels, giving rise to purulent collections and to a serious febrile condition, so that paronychia may sometimes be a true infective osteomyelitis.

M. Auguste Ollivier, of Paris, read an important paper at the Congress at Nancy on hæmatemesis in the absence of the catamenia. In cases of hysteria in both sexes hæmatemesis was met with, and appeared due to a special condition of the nervous system. He asserted that this variety of hæmatemesis, which was too often regarded as symptomatic of ulcer in the stomach, was in reality a form of local hysteria, with gastralgia, accompanied by hæmorrhage. The absence

of any disturbance of the nutrition, the suddenness of the onset, the presence of nervous disturbance, and the prompt re-establishment of health, would generally serve as indications of the true nature of the complaint.

At a meeting of the Société Médicale des Hôpitaux, M. Moutard-Martin mentioned the case of a patient, aged 50, suffering from tuberculosis, to whom he had given 45 centigrammes (4½ grains) of opium in progressive doses, without producing poisoning, contraction of the pupil, constipation, or dryness of the tongue. M. Rendu, who attended the meeting, suggested the advisability of giving the best quality of extract of thebaine, in progressive doses, to the same patient; by that means it would easily be proved whether the man's tolerance of opium was not owing to the poor quality of thebaine dispensed in hospitals. Other cases were quoted at the same meeting by MM. Desnos and Sevestre of patients who had taken 2 grammes (30 grains) of morphine daily. In conclusion, M. Martin said that what appeared strange in the case of his patient was the fact of his being able to take the rapidly increased doses, from 20 to 45 centigrammes, in the course of five days.

At a recent meeting of the Academy of Sciences, M. Marey read a note from M. Cornil relating to a new method of segmentation which he has recently observed in the epithelial cells of epithelioma. In sections coloured by saffronine or logwood, the beginning of kariokinesis could be traced. A filament connected with the nucleus could be seen to present a trilobular aspect. This was the first change attending the phenomenon of division, which resulted in the formation of three new cells. In the second period, a further change took place, and three nuclear discs were seen in a single nucleus. Finally, complete evolution was attained by the nucleus and the cell dividing into three new cells.

In a paper read by M. de Valcourt, of Cannes, before the Medical Congress at Nancy, on the efficacy of sea-bathing in scrofulous diseases, it was stated that bathing in the North of France was attended by many disadvantages, owing to the variation of the tide, and the cold and fogs, which rendered bathing impracticable during the greater part of the year. In the South, and at Cannes particularly, those disadvantages did not exist. The tide there was not affected by currents, and the waves were not large enough to prevent bathing. The temperature was always sufficiently high to allow of baths being taken in the sea. Children suffering from coxalgia, scoliosis, and other diseases of the bones, were sent to Cannes every year with advantage. Those patients who could not bathe in the sea took warm sea-water baths. In order to enable the children of the poor to avail themselves of this treatment, M. J. Dolfus founded a maritime hospital at Cannes in 1881, and the results have been remarkably satisfactory. The season begins on October 1st, and ends on June 1st. Though the windows were kept open all day, no cases of bronchitis occurred.

The epidemic of small-pox, which has ravaged Marseilles during the past year, appears to be on the decline; but, during the twelve months, 1,972 deaths have occurred, half the number being children under 10 years of age. The disease spread to many of the neighbouring localities; in one case, a girl in a state of convalescence carried it from Marseilles, causing eighteen deaths from small-pox, thirteen in non-vaccinated persons. These facts have again drawn the attention of the public to the necessity of enforcing compulsory vaccination. The recent occurrences in Zurich furnish further proof of the necessity of such a law being strictly carried out. In 1881 the mortality from small-pox in Zurich was 7 per 1,000 from general causes; in 1882 there were no deaths from small-pox; in 1883 the number of deaths rose to 8. At that time the partisans of the anti-vaccination league were instrumental in getting the law on compulsory vaccination repealed; the following year 15 deaths occurred; in 1885 the mortality rose to 52, and this year it has amounted to 85. It is hoped that a law may be established in France to enforce compulsory vaccination and revaccination, and that it will be carried out in all the chief towns of each department.

The following suggestions, made in a paper read before the Congress at Nancy by M. Maurel, of Cherbourg, with regard to the salubrity of houses and clothing in hot countries, are of interest. In houses, whether constructed of stone, brick, straw, or wood, great attention ought to be paid to the way in which they are protected; they ought to be two storys high, as a more even temperature could be kept on the first floor, and malarial diseases were less to be feared on an upper story. Windows should be glazed, as a protection against malarial and intestinal complaints, and as rendering it possible to maintain a lower temperature. All domestic offices should be at some distance from the house, as a protection against fire and evil odours. It was desirable to wear flannel in hot climates.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

Victoria University, and its Representative on the Medical Council.—Conferring of M.D. Degree.—Combe Lectures to Students.

REFERENCE was made in the JOURNAL of October 23rd to the fact that, although the Medical Council meets on November 16th, Victoria University had not, so far, nominated a representative. We understand that the Council will, at their meeting of November 4th, elect a representative to the Medical Council.

The Victoria University will confer the degree of Doctor of Medicine for the first time on November 4th. The ceremony will take place in the Town Hall, in the Mayor's parlour. There will probably be a considerable display of academic silk on the occasion.

Professor Stirling's Combe Lectures on Food and Digestion will be eight in number, and will be delivered in the Chemical Theatre of the Owens College on successive Tuesdays, at 8 P.M. They will be largely experimental, and have reference to the preservation of health. They are free to all students of the College. This is the first occasion the Combe Lectures have been given out of Scotland, and it is hoped that the Combe Trustees may, in time, see their way to enable the public of Manchester to participate in the benefits derivable from such lectures.

CORRESPONDENCE.

☞ TO CORRESPONDENTS. ☜

OUR correspondents are reminded that prolixity is a great bar to publication, and, with the constant pressure upon every department of the JOURNAL, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to return and hold over a great number of communications, chiefly by reason of their unnecessary length.

WHO IS TO STOP UNQUALIFIED PRACTICE? A GRAVE QUESTION FOR THE PROFESSION AND THE COLLEGES.

SIR,—The Society of Apothecaries of London has read the article in the BRITISH MEDICAL JOURNAL of October 23rd, under the above heading, and I am desired on its behalf to make the following observations thereon; the more so, that in some respects those observations present the case of the Society in a stronger light before the profession and the public than the letter already addressed by it to the Presidents of the two Royal Colleges, and which, being still under consideration by those bodies, it would be improper at the present time to make public.

In the first place, whatever was the cause that in 1884 a combination with the Society was abandoned (admittedly it was not the fault of the Society), it ought to be well understood that, expressly to meet objections which had been raised to the Society being unable to combine under the powers of its Act of 1815 with other bodies, it (the Society) obtained in 1874 an Act known as "The Apothecaries' Act Amendment Act," which entirely removed the disabilities in question, and gave it the fullest power of combination; and it was after and as a direct consequence of the passing of that Act, that an elaborate scheme for a conjoint Board for England was framed between the two Royal Colleges and the Society, the abandonment of which has been fraught with injury to the medical profession and to the cause of medical education.

In the next place, without attempting to anticipate the reply of the two Royal Colleges to the Society's communication, it is manifest that, if combination again fail, a grave public scandal will arise, because two independent authorities will be existing within a mile of each other, each granting an equally valid statutory diploma in Medicine, Surgery, and Midwifery at different fees, and in other respects on different terms.

It is well known that the Society is already examining in surgery in compliance with the directions of the Medical Council, having, under its Act of 1874, elected three Fellows of the Royal College of Surgeons of England to conduct the examination in that behalf; but

it cannot at present grant (as it will for the future be able to do) a statutory diploma in surgery.

The proceedings of the deputation of the Licentiates of the Society to Sir Lyon Playfair show that the then Vice-President of the Council expressed himself in complimentary terms as to the efficiency and excellence of the examinations conducted by the Society in Medicine and Surgery, and that it is clear that, provided it is from no fault of the Society themselves that they are unable to combine, and that such failure arises from causes beyond their control, they may rely, in case of ultimate appeal, upon the authority of the Privy Council to remove any difficulty as to their being able to procure assistant examiners; in this way, at least, if by no other, they would continue to have the power to give a statutory diploma in Medicine, Surgery, and Midwifery.

The intention of the Government to perpetuate, and not to extinguish the Society, is further shown by the Medical Act of 1886 not repealing any portion of the Society's Acts of 1815 and 1874, and particularly its leaving untouched their power, which is especially referred to in the article under discussion, of prosecuting illegal practitioners. The extinction of the Society, and the necessary consequence of the falling into desuetude of this important power at present possessed by them, would be a fatal blow to a large number of qualified medical men; I may add that at this moment there is a proposal coming before the Society (which, I have no doubt, will be favourably entertained by them) that they should themselves for the future conduct these prosecutions, instead of merely giving a consent to their being instituted.

There are statements in the article in question with which the Society are necessarily not in accord. I will not, however, at the present time, trespass further on your space, but I am tempted to ask whether the title of "Cinderella" may not carry with it a warning to the two Royal Colleges, when they remember the ultimate prosperity and good fortune of that "younger sister."—I am, Sir, your most obedient servant, JAMES RICHARD UPTON, Clerk to the Society.

SIR,—In reference to the interesting article in the JOURNAL for October 23rd, entitled "Who is to stop unqualified practice?" I quite agree that, in the circumstances there mentioned, a grave question will arise, fraught not only with interest to the profession and the colleges, but also to the general public. Having, since 1875, acted as legal adviser to the Medical Defence and Medical Alliance Associations, and in that time gained a very considerable insight into the statutes protecting the profession and the public from unqualified practice, I am able, without arrogance, to very strongly and forcibly endorse and illustrate the truth of your observations concerning the power of the Apothecaries' Act of 1815 as a safeguard against quacks and quackery, and the loss which would accrue, and the imminent danger and risk which would arise by the extinction of its charter and statutory privileges.

The penal laws protecting practitioners and their patients are not now so strong that they can afford to be weakened by the destruction of their most powerful and effectual weapon, while the laxity and indolence (save as regards the Apothecaries' Society) with which they have been administered by the bodies to whom they have been entrusted, and the want of interest and just appreciation of them displayed by medical men as a class, have contributed to a result which, in view of the possible extinction of the Apothecaries' Society, it would be no figure of speech to describe as appalling. Of course, the possibility exists of getting an amended penal clause which will retrieve the loss of the Society's charter and statute, but the probability is so remote (to those who know the continuous and praiseworthy efforts which have been made by Mr. R. H. S. Carpenter and others for that purpose, and which have failed), that it may be safely put out of consideration in the remarks which I venture to address to you.

I propose only to occupy your space by a brief *résumé* of a few cases which illustrate the great public utility of the Apothecaries' Society and its statute.

As to the Society and its officers—my acquaintance with them now being of many years' standing—I am able to say they have always exercised the powers given to them by their penal clause with the greatest zeal, and, at the same time, with moderation and forbearance, and a true and honest regard to the interests and protection of all grades of the profession, whether licentiates of the Society or not. I have acted, I believe, on behalf of the Society, in nearly one hundred cases, between 1875 and the present time, and in no case has the licence of the Master and Wardens to proceed to recover the penalty been granted without a most careful examination into the allegations and the evidence in support of them, and not one prosecution which they have sanctioned can be justly or truly described as a persecution. The Society's consent has been confined to instances which revealed some particularly dangerous or insidious kind of illegal practice, and, as illustrating this, I beg to select and shortly refer to five cases: The Society *v.* Nottingham; the Society *v.* Wiggins; the Society *v.* Hamilton; the Society *v.* Pearson; and the Society *v.* Aspinall.

The Society *v.* Nottingham was tried before Baron (now Lord) Bramwell in 1876; and the facts were these: the defendant, who was a certified chemist, but not an apothecary, had established a partnership with a duly qualified medical practitioner. The impropriety of such a connection is obvious. In what in the defendant Nottingham's judgment appeared to be simple cases, he prescribed and made up medicines in the name of "Nottingham and ——;" but in serious illnesses he referred the patients to the medical man with whom he was in partnership, and they divided the profits of the business. It was proved in the evidence adduced for the Society that, in some instances where Nottingham had prescribed, his partner and colleague had been absent—miles away—and the learned judge, in summing up in favour of the plaintiff, pointed out very strongly the danger and impropriety of such a trade-union; and the result was—judgment for the plaintiff. In Wiggins's case, the defendant was a chemist practising in a densely populated and poor neighbourhood in London. It was proved that he did not confine his business to dispensing, but that he advised and prescribed medicines over his counter in simple cases. This defendant had all the advantage of being defended by a society then formed to protect the interests of pharmaceutical chemists; the facts were really not disputed; but he boldly claimed the right to prescribe on the ground that the rights of chemists and druggists, as they existed before 1815, were reserved by the statute of the Apothecaries' Society, and extended to prescribing and advising in simple cases. Mr. Justice Field, in referring to this defence, delivered a judgment of immense value to the medical profession, and exposed the fallacy of a contention so eminently dangerous and destructive to the interests of the profession and the public.

In the Society *v.* Hamilton, tried before Mr. Justice (now Lord Justice) Lindley in 1877, a most effectual check was put upon the career of one of the most successful of English quacks. "Dr." Hamilton's publications are well known in the streets of London to this day; but, at the time of the Society's action in 1877, he was doing an enormous practice in disorders which he described as of a special and private nature, his profits being described as fabulous. He had been followed up closely by my able and vigorous friend, Mr. R. H. S. Carpenter; but a prosecution instituted against him in 1876, under the 40th section of the Medical Act, for falsely assuming the title of "Doctor of Medicine," failed because it was proved that he described himself as a "Doctor of Medicine of the Metropolitan College of New York." Mr. Knox, who heard the case at Marlborough Street Police Court, considered that he had not described or represented himself to be a registered British practitioner, a person recognised by law within the meaning of the Medical Act of 1858, and this view was upheld by the judges on the appeal. Being a man of considerable means, he secured the best legal advice, and obtained a dismissal of the case against him on this point. Hamilton was triumphant; the point of law was so fine, that few people thoroughly understood it, and his career promised more prosperously than ever, when, fortunately, some evidence came into the hands of the indefatigable secretary to the Medical Alliance, which proved that he had "acted as an apothecary" within the meaning of the Act of 1815. Here was a plain and simple issue which no art or rhetoric could disturb. The Society interfered. The consequence was that after a trial extending over two days, in which the defendant was represented by some of the ablest advocates at the bar, the offence charged against him was proved, and the Society convicted him of "illegal practice."

In the case of the Society *v.* Pearson, tried before Judge Holroyd at the Southwark County Court in 1883, another very insidious phase of illegal practice was revealed. Pearson was, and probably still is, a chemist practising in the midst of a poor and populous neighbourhood. He was also district registrar of births and deaths.

But for the Apothecaries' Act, there was practically no check upon him, and presuming upon an immunity from prosecution which he had enjoyed for many years, he not only prescribed over the counter, but attended patients at the bedside. There was no fear of detection in his case through the medium of a coroner's inquest, for, being district registrar, he possessed the power of dispensing with a medical certificate, and accepting an ordinary information from a relative of a deceased person in case of death, and by entering the death as uncertified, stifling inquiry in any cases where death might be due to ignorant and illegal practice. In such a case, the Society acted wisely in interfering. They accordingly obtained a judgment against him, which had a most salutary effect in exposing his pretensions as "a doctor" in the neighbourhood where he carried on business.

The Society *v.* Aspinall was a case in which the Society took up the cudgels in the interest of the profession. Aspinall was an unqualified assistant to a medical practitioner practising in Manchester; he was clever and plausible, a very useful but also a very dangerous assistant. Having disagreed with his principal, he commenced and carried on practice for himself successfully for some time, enjoying a high repute among many residents in the neighbourhood, and it was reported attending as medical adviser even in the better classes of society. For a time he interfered with, and really injured, the practice of his duly qualified colleagues; but a representation having been made to the Society, they were so convinced of the injustice done to the medical profession by such a man as Aspinall that, contrary to their usual custom—the instance, in fact, being almost a solitary one within my experience—they permitted two prosecutions against him under the penal clause of their acts for the purpose of convincing persons of his class and the public generally that they were determined to suppress dishonourable conduct on the part of unqualified assistants.

I am afraid the narrative of these few cases will seriously trespass upon your space, but they will satisfy any reflective reader that the Society of Apothecaries has been doing a good and great work in supporting and upholding the interests of medical men, and in elevating the standard of medical ethics. Such work has been grievously neglected by the Medical Council; in fact, by every corporation, medical or surgical, except the Apothecaries' Society; and I submit that the only way in which the medical profession and medical men can show a proper recognition of the Society's labours and usefulness is by endeavouring to secure its admission to the Conjoint Board, in order that it may give a joint qualification with the Royal College of Physicians and the Royal College of Surgeons of England.—I have the honour to be, Sir, your faithful servant,

C. J. C. PRIDHAM (Pridham, Piper and Co.), Solicitor to the Medical Defence and Medical Alliance Associations.

1, Old Serjeants' Inn, E.C.

DIRECT REPRESENTATION OF THE PROFESSION ON THE MEDICAL COUNCIL.

SIR,—Dr. Stokes, the Chairman of my Committee, has received a note from a gentleman friendly to my candidature, but stating that, as "he believes me to be absolutely safe," he will use his third vote in favour of a personal friend who, he thinks, has done good service to medical reform. Will you allow me to point out that if my friends, who are numerous and kind beyond all my desert, act on this view, I shall find myself at the wrong end of the poll. Many fair chances of success have been dashed by this sort of feeling. Allow me, therefore, to ask earnestly for one vote of every member of the profession who thinks that, as a general practitioner, and one having some special knowledge of the working of the Medical Council, I can be of any use in it.

Accept my thanks for correcting an error used rather hardly by some who ought to know better, and honestly believed by others—namely, that I am not a *bonâ fide* general practitioner. It is, nevertheless, at once my lot and my pride to be a hard-working member of the profession in general practice.—I am, Sir, your obedient servant,

25, Highbury Place, N. JAMES GREY GLOVER.

SIR,—Having been a complete invalid for many months, I have had little inclination to take part in medical politics, and, therefore, the circulars emanating from the various candidates for representation on the Medical Council have been hardly looked at; but, seeing that the election will shortly be upon us, I take the liberty of asking you to insert the subjoined in favor of two of the candidates who are before us, and to permit me to state the grounds on which I ask my poor-law medical brethren and others to support them; and, in order to prevent the supposition that I favour one more than the other, I will take their names alphabetically, and first for Sir B. Walter Foster, of Birmingham.

This gentleman, during the too brief period that he was in Parliament, secured by his great ability the ear of the House, and was an active supporter of direct representation. He is in the full vigour of life, active, eloquent, and industrious. He is sure of a seat in the next Parliament, and, therefore, he is one whom it is desirable in every way to secure as a friend, and just that kind of representative that would make the dry bones that at present represent the various corporations stir a bit, perhaps re-clothe them with flesh. He must be thoroughly well known to the members of the Association for the active part he has taken in its proceedings.

The second candidate for whom I solicit support is Dr. James G. Glover, of 25, Highbury Place, London. Dr. Glover, to my personal knowledge, has for many years been the advocate of reform in the Medical Council. He was an active member of the Committee on Medical Education, which came into existence some years ago at the instance of Sir Andrew Clark; and, whilst acting on that Committee, I had an opportunity of noting not only the very able work he did, but the clearness with which he advocated his views, and the tenacity with which he adhered to them. There is, in addition, this fact in his favour—he is connected with one of our ablest medical journals, and, therefore, is not a person who can or will be swayed by those who represent the interests, and the interests only, of the corporations to the detriment of the bulk of the medical public.—I am, Sir, yours obediently,

JOSEPH ROGERS,
Chairman of the Poor Law Medical Officers Association.

31, Montague Place, Russell Square.

SIR,—I desire to state to my fellow-members and electors the reasons why I consider Messrs. Richardson, Glover, Foster, and Wheelhouse, ineligible persons to represent the general practitioners of England on the Medical Council. To Dr. Strange's adulatory praises of Mr. Wheelhouse and Sir B. W. Foster, I shall make no reply beyond saying that, to men of manly feeling, they would be simply intolerable. The above-named four gentlemen, in their flatulent addresses to the electors, have promised, if elected, to do many wonderful things, which they know, or ought to know, they will not and cannot do. These electioneering promises are made to catch votes; they are addressed, not to ploughmen, but to educated men; and it is amazing to observe the credulity of some of your correspondents who accept them as worthy of their belief. When the then Bill, but now Act, was in the House of Commons, it was supported by the four gentlemen of whom I am now complaining. The general practitioners were told by them that it would benefit them materially, and that they were bound to support it; but now that the Bill has passed and become a shameful Act of Parliament, and that thus "the stable door is locked," they are finding out some of its damaging defects, and promising impracticable efforts to amend it, though they know well enough that there will be no further Government general medical legislation for twenty years to come. Now to take these gentlemen singly, and in the order I have given them, I must speak of Dr. Richardson first. This gentleman is in favour of creating a new and inferior order of medical practitioners, as though the profession is not already in a sufficiently degraded condition. He gave evidence to the Royal Commission in favour of conferring a legal right upon chemists and druggists to practise medicine and surgery across their counters. Thus, he stated to the Commissioners, "that as a certain portion of counter-practice is absolutely necessary in the State, therefore there should be a certain recognition of it." Also, he said, "the very best course would be to allow a certain limited measure of counter-practice." Again, he urged that as "a chemist cannot give a certificate of death, and as you deprive him of that power, he should be allowed to exercise counter-practice." And yet again, he added: "I am quite sure that nothing can possibly prevent a certain amount of counter-practice. In the first place, it is not possible; and, in the second, it is not desirable to do so." So that, according to Dr. Richardson's evidence, the profession ought to be amalgamated with chemists and druggists. Dr. Richardson also advocates the registration of inferior foreign degrees, such as those of Brussels, etc. But my chief objection—far, far beyond those I have raised against him—is that he is a consulting physician of eminence, and not a general practitioner.

As to Dr. Glover, notwithstanding your statements to the contrary, this gentleman is sub-editor of the *Lancet*. He represented the *Lancet* at the Conference, and again before the Royal Commission, and in his correspondence with the Medical Alliance concerning professional matters. Dr. Glover proposed to the Medical Conference that

a clause should be introduced into the Bill then being drafted, rendering it punishable for general practitioners to dispense medicines for their patients. He advocated also, and now advocates, the punishment of general practitioners who use the prefix "Dr.," however high and numerous their qualifications may be, unless they hold some kind of doctorate, whether registrable or not; and so, to be consistent, he ludicrously addresses the holders of unregistrable Brussels' degrees as "Doctor," whilst he addresses the holder of the registrable and infinitely more respectable diplomas of the Colleges of Physicians as "Mr." He gave his opinion to the Royal Commissioners that quacks ought not to be subject to penalties. But above all this, as in the case of Dr. Richardson, my chief objection to him is that he is not a *bonâ fide* general practitioner, inasmuch as he does not supply his patients with medicines. He may practise as a surgeon and physician, if you please, but that alone does not constitute the practice of a general practitioner, and his antipathy to those who do so practice was well shown by his proposal to the Conference, that the supply of medicines should be made a punishable offence.

Of Sir B. W. Foster and Mr. Wheelhouse—the man who advocates the division of the profession into many grades—I shall speak collectively. They are both chiefs of the Medical Reform and the Journal and Finance Committees of the British Medical Association. They supported the present Act of 1886—an Act which will inflict numerous woes upon large classes of the general practitioners. But, as in the case of Dr. Richardson and Dr. Glover, my chief objection to these gentlemen is, that they are not general practitioners, and that, therefore, they do not and cannot know what the wants and interests of the general practitioners are. Had all these gentlemen been loyal to their promises and to their professions to their medical brethren, I have good and certain grounds for saying that an acceptable Act could easily have been obtained, instead of the Act we now have—an Act which is all in favour of the universities, of herbalists, of quacks, and of bone-setters.

Now, after what I have stated—and I have stated but little of what I have to complain—how can it be wondered at that the Royal Commissioners, in their report, based on the evidence above stated, should say, "We consider it undesirable to attempt to prevent unregistered persons from practising"?

Drs. Strange and E. Waters think their three nominees the best for election. Undoubtedly they are so, for their own very small and exclusive class of the profession, but, for the general practitioners at large, I think them three—and Dr. Richardson makes four—of the worst candidates to be found in the profession, whilst Dr. Dolan and Mr. George Brown are, in my opinion, two of the very best; and I intend to vote for them, both because they are *bonâ fide* general practitioners, and because I know of no others who equal them in their knowledge of what we general practitioners require.—I am, Sir, your obedient servant,

R. H. S. CARPENTER.

THE TITLE OF "DOCTOR" FOR LONDON STUDENTS.

SIR,—During a recent visit to London, I endeavoured, for the information of myself and my colleagues, to find out the scope of the movement to procure medical degrees for English non-university students. I had opportunities of conversing with many hospital physicians and surgeons, lecturers in medical schools, and examiners at the Royal College of Surgeons, on the one hand; and, on the other, with hospital house-surgeons and registrars, dressers and clinical clerks, and senior students, who all represented the young generation personally interested in the question.

I found a wide-spread dissatisfaction with the existing state of things, and a great desire that something should be done; but also a wide difference of opinion as to what that something should be, and still wider as to the mode by which anything should be accomplished.

It seemed to be generally admitted that the natural solution of the difficulty was impracticable, namely, that the University of London should grant its degrees on the lines of the Scottish Universities, so far as regards curriculum and examination.

I may here state that this would not make so much difference to London students as they seem to think.

The other schemes proposed are varied; some almost antagonistic to others.

1. English students should have access to a degree by the creation of an additional University, with a Senate, Educational Council, and Examining Board, containing representatives of all the non-university corporations and medical schools in England. The regulations for the M.B., C.M., and M.D. being on the lines of the Scottish universities; that is, the preliminary or matriculation for M.D. to include, as imperative subjects, Greek and Logic; and the first professional or primary examination to consist of Botany, Zoology, and Chemistry. This to be a higher qualification than M.R.C.S. + L.R.C.P.

2. The same scheme, but the curriculum and examination to be identical with those required for the double diploma of the Colleges of Physicians and Surgeons.

3. The Conjoint Councils of the Royal Colleges of Physicians and Surgeons to be created a University, with the power of granting degrees of M.B. and C.M. to those who pass the double examination. The M.D. to follow some years subsequently, after a further course of study or practice, and the presentation of a thesis on original research or observation, as in all universities now. This excludes the Society of Apothecaries.

4. The Conjoint Examining Board of the Royal Colleges of Physicians and Surgeons, without being erected into a University, to have the power, by some legal fiction, to grant university degrees—how, it was not explained.

These, I think, exhaust the various plans promoted or suggested by those who were interested in teaching or examining students.

5. But the intending or recently passed candidates seem to have quite a different idea. They do not aim at, or hope to attain, a real university degree. What they expect or wish is that some legislative enactment shall be passed by which, without having an university degree, they may use a title which indicates that they have. Their grievance seems to be that a man who has been educated at an university, or, in some few cases, has obtained an university degree without residence, can indicate that such is the case by putting "Dr." on his card and on his door-plate; while a man who has not a degree is not entitled to indicate that he is a graduate by using "Dr." The practical grievance is that the public have come to the opinion, gradually becoming more prevalent, that a man who has obtained an university education and degree is likely to be a more reliable practitioner than a non-graduate; and what is desired is some title which will indicate that the one is as good a man as the other. But nothing will satisfy the claimants except an identical title, so that there may be no means of distinguishing the graduate from the non-graduate.

The general desire seems to be that there should be some legislative enactment by which enrolment on the *Medical Register* of practitioners of medicine should confer the title of "Doctor," which at present, over the whole world, is the peculiar privilege of graduates of a university. In other words, in the United Kingdom the words "Doctor of Medicine" should by law be declared to have a different meaning from what they have in any other part of the world. I am not concerned to consider what effect that would have on medical education and graduation as at present conducted in the universities; but it seems to me to require the most serious consideration on the part of those to whom is entrusted the government of these national institutions, and of all who are interested in the higher education of the nation.

My object is to state, as shortly as possible, the various schemes which have been proposed to remedy an alleged grievance which is asserted to be the cause of the gradual diminution in the number of students who resort to the medical schools of London.

There is one point on which I find a widespread ignorance, namely, the legal authority to use the title "Doctor." No one who graduates in any university in the United Kingdom, or who receives the license of any college of physicians, is entitled to use the term "Doctor" on entering into practice at first. The universities give the degree of Bachelor and Master, but neither of these confers the title of "Doctor." The degree of M.D., which alone confers the title of "Doctor," is not obtainable till at least two years after the M.B., and involves evidence of practical work, and either a further examination or a thesis, before it is granted.

One young gentleman, M.R.C.S. and L.R.C.P.Lond., a house-surgeon in one of the London hospitals, intimated to me that he intended to go in November to Edinburgh, to take the L.R.C.P. there, in order to obtain the legal right to use the title "Doctor." He was greatly surprised when I told him that he would acquire no such right; and, in corroboration, referred him to the well known letter written on the subject by Dr. George Balfour, when President of the Royal College of Physicians of Edinburgh. He thanked me for having saved him from expending £25 to obtain a qualification which could give him no right which he had not already obtained as L.R.C.P.Lond.

May I give a hint to my London friends? Do not air your grievances. Work as hard as you can to attain your object by using influ-

ence in the proper way, but do not complain so continually in the public prints of the decadence of your school.

Suppose a father in the midland counties has a son destined for the medical profession; he has no special preference for any particular school, and he reads the article at page 774 of the BRITISH MEDICAL JOURNAL for October 23rd; he will probably say to his son, "Swim with the current. Don't you go to a falling school; go to one of the Scottish Universities. Depend upon it, there is something more than what appears on the surface to account for the popularity and progress of these Scotch schools, and something we don't know of to account for the falling off in the London schools." In nine cases out of ten, he has not the means or time to inquire very minutely into the difference between the university and non-university system of education, so as to decide which is best for his son; he only learns that some schools are rising, others are falling in popularity, and naturally concludes to send his son to the most vigorous and successful.

When I was in London, I devoted what time I could to ascertain if there was any part of the London system of clinical teaching which I could introduce as an improvement into my own course. I never visit the London or continental hospitals without getting and taking some useful hints. I can only say, in return, that some part of our university and clinical methods might, with singular advantage to the students, be introduced into the London schools and hospitals, if it were not for a system of rotation which seems to me to trammel, in no small degree, the vigour of medical education in London. I heard loud complaints by some of the teachers, who would have been willing to devote more of their time and energy to systematic clinical instruction, but were not able to do so, by a sort of routine which prevented them from meeting their students in full clinical attendance except at considerable intervals; and there is no systematic control or discipline like what we are accustomed to in Scotland.

The London system may be, and probably is, better for the 10 per cent. of earnest students, to be found in all schools, who will not allow anything to intervene between them and the most rigorous utilisation of every opportunity of learning, and can find out for themselves how, and where, and from whom they can get most benefit. But the bulk of average medical students require to be attracted, led, guided, and even judiciously driven; and for them something like our Scotch university discipline, which we extend even to our clinical theatres and wards, might with advantage be introduced. No doubt a clinical student of one of the great hospitals, as St. Bartholomew's or Guy's, who is accustomed to walk the wards according to his own free will, would be greatly surprised if he were introduced to our clinical courses at the working time, but he would be forced to admit that we utilise to the utmost the two hours every day that every one of the eight clinical teachers in the Western Infirmary devotes to clinical instruction.

The clinical material in the great hospitals of London is unexcelled in extent and variety; but I may be allowed to suggest that the method of utilising it, with the alternation and divided responsibility in instructing the students, is capable of very great improvement. For an unbiassed opinion on the clinical methods of education and examination for degrees in the Scottish universities, the reader may refer to the *Report on the Visitation of the Universities*, 1885, published by the General Medical Council, noting the explanations of the universities in their replies to the visitors.

GEORGE BUCHANAN.

Glasgow, October 25th.

SIR,—I entirely endorse the sentiments expressed by Drs. Brown and Donovan, and by "M.R.C.S.," as to the necessity for a practical movement with reference to medical titles, and I feel assured that such a movement would have the support of the great mass of English practitioners.

Perhaps the above-named gentlemen could suggest some line of practical procedure, for it is evident that individual letters "to the Editor" would be impracticable. How widely the need of a distinctive professional title is felt, and how suitable this popular one of "Doctor" is, is obvious. As a solitary example. In the town where I live, amongst a total of 71 practitioners, 44 are non-graduates (amongst the graduates are several M.B.'s and also a few holding foreign degrees), and of these non-graduates, 23 are licentiates of a College of Physicians. Of these latter a large number, on the strength of convenience, custom and common law, use the title of Doctor, both on their visiting cards and door-plates, as do also a few holding the qualifications M.R.C.S. and L.S.A.

In my opinion, every one of these 44 non-graduates should use the title engrafted, irrespective of qualification, on the profession by the custom of hundreds of years, and upheld by law. I have determined to vote only for a representative who will promote such a measure.—I am, Sir, your obedient servant,

L.R.C.P.

M. PASTEUR'S PROPHYLACTIC.

SIR,—Permit me to call Mr. Horsley's attention to a material oversight in his second reply to Dr. Dolan, concerning the subject of hydrophobia. He intimates that his opponent's citation of Fritsch's experiments involves a *non sequitur*, as Fritsch applied Pasteur's protective virus by trephining, whereas Pasteur applies it hypodermically. Mr. Horsley here places Fritsch's experiments on animals side by side with Pasteur's procedure with human subjects. This is unfair. Pasteur and Fritsch both experimented on animals—rabbits and dogs—by trephining. Fritsch learned Pasteur's method at the latter's laboratory, had unusually good opportunities and sufficient time to do so, obtained duplicate specimens of Pasteur's virus, and, although a careful and conscientious experimenter, strongly biassed in favour of Pasteur's conclusions, failed to obtain any results confirmatory of Pasteur's claim. It is, therefore, proper to regard (as Dr. Dolan does), Fritsch's experiments as tests of Pasteur's conclusions. Mr. Horsley, who is, if I mistake not, a member of the British Hydrophobia Commission, would do a great service to all who, on this side of the Atlantic are interested in the matter, by informing us what are the characteristic signs of rabies in the rabbit. It is impossible, in any of Pasteur's communications that are accessible to me, to find the slightest indication as to what evidence is satisfactory to Pasteur's mind. He says such and such animals develop signs of rabies, and die. The same unsatisfactory report is made of his human cases, the published history of one of which—a Russian one—reaches us through other sources, and indicates that two of the patients died, not of hydrophobia, but possibly of bad surgery. Mr. Horsley will find it a very difficult matter to keep any rabbit inoculated with fresh brain-material, by trephining, alive. I have been struck by the fact that, preserving the brain of ordinarily healthy animals, inoculation from which proved fatal or serious on the first day, according to Pasteur's method, diminishes its "virulency," and that inoculations practised with it after the fourth day are absolutely harmless.

I feel confident that so accomplished an experimenter as Mr. Horsley will confirm this statement if he test it. Nay, more, by successive inoculation of fresh brain material, obtained from the saliva of a dog dying in convulsions from artificially-produced meningitis, he may succeed in obtaining a virus which kills with the rapidity of a poisonous alkaloid. The brain material in these cases will not show any signs of meningitis, but of profound disintegration where life is sufficiently prolonged, and will prove nearly as rapidly fatal hypodermically, whether sterilised or no. On another occasion I failed to reproduce this virus.

All this shows that a number of facts could have been ascertained by control experiments with non-rabic material, which, while they may have little bearing on true hydrophobia, merit consideration in studying the sources of error, introduced by directly attacking the brain, as Pasteur does by trephining, and as Gibier does by terebrating. I believe I could satisfy Mr. Horsley by the ordinary rules of evidence applicable to such cases, that at least one epidemic of rabies, published and accepted as such without a word of criticism, was one of typhoid fever in the dog.

I also believe that Mr. Horsley has the means near at hand of ascertaining that the vast majority of human cases submitted to Pasteur's treatment are spurious, and that the agitation of the subject of hydrophobia has provoked the development of such cases.

Many readers of your valuable JOURNAL would doubtless be interested to obtain from someone who has had the opportunity of going to Pasteur's laboratory, answers to the following questions.

1. Why did M. Pasteur abandon the dog—an animal in which rabies is said to be characteristic—for the rabbit, an animal in which the signs of rabies, if differentiable from other conditions, are very obscure?

2. How does it happen that over 1,000 cases of alleged rabies in the human subject should be furnished by France in six months, so much in excess of the very worst epidemic of lyssa on record.

3. Is there any other epidemic disease or form of blood-poisoning in which the phenomena of the real disease are so closely simulated by the psychical results of terror and expectant attention, as the alleged form of disease known as lyssa?

4. What conclusion are we to draw from the fact that, as the BRITISH MEDICAL JOURNAL states in its issue of October 2nd, the police of London killed fifty-two dogs as rabid in a short time, while the British Hydrophobia Commission has been unable to obtain any material for its investigations?

5. Has the objection of Dulles—based on the fact that Pasteur's material is derived in its first generation from one and but one dog, obtained from the Parisian dog-pound, of unknown antecedents, and not carefully studied with regard to his symptoms—been answered?

I agree with Mr. Horsley that every innovator deserves fair play. At the same time, I do not see the necessity of stigmatising Dr. Dolan's procedures as "un-English," as Mr. Horsley does in his first letter. It would not, I believe, be profitable to start any racial questions anent this subject just now, in view of the peculiarly sensational form in which it has reached the United States, and which has induced not a few reflective persons to apply a racial designation to Pasteur's methods, which Englishmen, not so very long ago, were in the habit of applying to anything hasty, or unduly speculative imported from across the Channel. The earlier criticism is applied to an alleged new discovery or proposition, the more firmly will it become established, if sound; the more effectually disposedof, if unsound.

—Respectfully yours, E. C. SPITZKA.

New York.

THE COMING MEETING AT THE ROYAL COLLEGE OF SURGEONS.

SIR,—On Thursday, November 4th, at 3 P.M., the Members of the Royal College of Surgeons of England will again, it is hoped, fill their theatre in Lincoln's-Inn-Fields with a body of men determined to attain fitting representation on the Council of that Corporation. *L'union fait la force*, and no consideration of the personal inconvenience of individual members should stand in the way of their assembling in their hundreds, and ensuring for that meeting a success equally decisive with that of the meetings of last year. For two years and a half has this important question been under the consideration of the rulers of the College; and at last they are asking for a definite plan to be formulated for their better information as to the views of the Members and Fellows.

We are told "that it is not desirable to diminish the privileges of the Fellowship by depriving Fellows of the exclusive right of electing to the Council, and of being eligible to become members thereof;" and yet, while the principle for which we contend is rejected, we are asked to offer details.

Surely by this time the Council of the College knows what the Members are seeking for. If it does not, at least after November 4th, it can no longer plead ignorance, for it will then have the main lines of the demand laid before it in a resolution, the terms of which he who runs may read. Let it then reply to this resolution either with an emphatic "No," or by granting the request embodied in the second resolution, to be voted for that day, namely, to appoint a committee consisting of members of its own body, of deputies from the Associations of Fellows and of Members and of independent Fellows and Members of the College, the said Committee to draw up the detailed plan prayed for by the Council. Should the Council of the College refuse to grant these requests—which no impartial outsider could stigmatise as lacking in moderation—the Privy Council must be approached by a deputation of Members, including in its ranks, we hope, a contingent of Fellows, and bearing with it the petition a copy of which your readers will find on page 8 (advertisement) of the JOURNAL of October 16th, signatures to which are coming in apace.

In conclusion, we wish once more to draw the attention of Members of the College to that petition, earnestly begging their signature of the same, the present being a golden opportunity of their obtaining those rights which should never have been denied them.—We are, Sir, your obedient servants,

WARWICK C. STEELE, } Honorary Secretaries,
WM. ASHTON ELLIS, } Association of M.R.C.S.

HOMES ON THE RIVIERA.

SIR,—At the present moment, when so many invalids are anxiously making their winter plans, may I remind the profession, and especially members in the provinces, through your columns, of the "Homes for Invalid Ladies of Limited Means" established at Cannes, Mentone, and San Remo? An outlay of between £40 and £50 will cover all expenses, travelling, etc., of a winter in the South at one of these homes, and there must be many people who would gladly assist an impecunious relative or friend in the restoration to health by this sum.

We shall be glad to forward forms of certificates, etc., at any time for the home here, or they may be obtained direct by writing to Miss Macdonald Lockhart, The Lee, Lanark.—I am, Sir, yours faithfully, A. J. FREEMAN.

San Remo, Italy.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ATTENDANCE ON INCURABLE PATIENTS.

A. Y.—A careful, unbiassed consideration of our correspondent's lengthy statement (nineteen folio pages, the publication of which would, in our opinion, tend to prejudice rather than to better his case) leaves upon our mind the regretful impression that, from the nature of his note of explanation to the Local Government Board, they had no alternative but to convey to him their courteously and feelingly expressed admonition—the justness of which, in view of his explanatory admissions, we cannot fairly dispute: for it is scarcely necessary to remark that a practitioner is not justified in neglecting or abandoning a patient because the case is deemed incurable; for, even in the last stage of a fatal malady, his continued attendance may prove highly beneficial to the patient, and a comfort to the sorrowing relatives, by professional suggestions for the alleviation of pain, and the soothing of mental anguish and distress; and such would appear to have been the effect of Mr. ——'s impelled attendance in the case of Mrs. ——, referred to by the clerk to the board of guardians. In reference, moreover, to Mr. ——'s voluntary apologetic note of regret for the part he had felt it judicious, under the peculiar and exceptional circumstances, to take in the case, its non-acceptance by our correspondent is, we think, to be regretted.

We would, at the same time, venture to express an earnest hope that the more recent case, to which he briefly alludes, will not result in enforced resignation.

LOCUM TENENS COMMENCING INDEPENDENT PRACTICE.

MEM. BRIT. MED. ASSOC. submits the following statement: A., who was visiting friends near a large town of about 100,000 inhabitants, who had done so on many previous occasions, who knew the town well and many of the people living in the place, and whose birthplace was not far away, while thus visiting heard, through a London agent, that B., a practitioner in the said town, required a *locum tenens* for three weeks. A. (who was a perfect stranger to B.) accepted the engagement, and acted as his deputy for the three weeks. About two months afterwards, A., who had previously thought of the said town as a good opening for practice, and, in fact, as before stated, had numerous friends in the town and district surrounding, decided upon commencing practice in the place on his own account. When B. learnt that A. had decided upon starting, he objected to his doing so, on account of his (A.) having acted as his *locum tenens*. A. fixed upon a spot that was newly developing, and had no desire to interfere with any of B.'s patients.

Is A. doing anything professionally wrong in thus starting in the town? In conclusion, A. told B.'s wife, while he was acting as *locum tenens* for B., that he contemplated starting in the same town. A. and B., after the expiration of the engagement, parted on friendly terms.

*** Although we are not prepared to assert (assuming that the preceding statement be an accurate representment of all the facts of the case) that "A. is doing anything professionally wrong in thus starting in the town," we entertain a decided opinion that, under the circumstances of predetermined intention to commence practice therein, he acted very unwisely in accepting the position of *locum tenens*, even for so short a period as three weeks, since it could not fail to excite adverse comment, and eventually give rise to something more than suspicion as to his real object in so doing.

Moreover, though we do not think that A.'s brief sojourn in the town is calculated to injuriously affect B.'s practice, it will, in our opinion, be especially incumbent upon him (A.) to decline attendance on any patient whom he may have seen professionally as B.'s *locum tenens*.

LIABILITY OF RAILWAY COMPANIES FOR MEDICAL ATTENDANCE.

M.D. refers to the question of the liability of railway companies involved in the case of "F.R.C.S.," BRITISH MEDICAL JOURNAL, October 16th, p. 749, and asks whether the company would be liable in the following case.

The station-master sent for him to attend a gentleman who had been taken ill on the station premises; the patient was found unconscious from an apoplectic seizure, and our correspondent superintended his removal to an hotel, where his own medical man then took charge of him. In this case, who is responsible for the fee?

*** The patient is the person primarily liable. It is only in cases where his ability to pay seems doubtful, that any question as to the liability of anyone else can be important. Under the circumstances stated, it would be difficult to show that the station-master was the agent of the company, so as to make them responsible.

AN UNREGISTERED ASSISTANT: A CAUTION.

TRADITUS writes: I feel it my duty towards my professional brethren to give publicity to some recent experiences of my own, which may prove of great utility in enabling them to avoid the annoyances I have encountered. Finding myself recently in need of the immediate services of a fully qualified assistant, I advertised accordingly in the columns of an excellent professional paper, and received so promising a reply from a person in a large northern town, styling himself M.D., that I concluded with him at once, especially as I also received most promising references, and found his name and qualification in the *Medical Directory* for 1885, which seemed conclusive evidence in his favour. But, on his arrival, I learned from himself that he was not on the *Medical Register*. Now, even the

present regulations, no amount of diplomas can enable their owner to describe himself as "fully qualified," if not on the *Register*. I therefore urged him to get himself registered forthwith, to which he opposed much inexplicable demur; finally avowing that he had been on the *Register*, but subsequently struck off. Further cross-examination elicited from him the confession that his conviction for theft, and subsequent undergoing a sentence of six months' hard labour, was the cause. His excuse for his felonious doings was no less inadmissible, namely, that his excessive indulgence in the use (or abuse?) of chloral rendered him irresponsible for his actions, and had brought on kleptomania. I leave your readers to judge whether I should be justified in entrusting the lives of my patients to such hands, to say nothing of their *honoraria*, part of my practice being connected with benefit clubs, whose payments my assistant frequently receives for me. I felt myself, therefore, warranted in dismissing him with a sovereign towards his expenses, for which he expressed, at the time, grateful satisfaction; but, nevertheless, I subsequently have been annoyed by legal proceedings on his part for a month's salary and board. I have no time to waste in litigation, and, actuated, also, by sheer compassion for the man's unfortunate position, I consented to a compromise, and the matter is now at an end. But the moral of my story is this: Let no medical practitioner accept the services of any assistant without the strictest inquiry into his antecedents, and also as to the eligibility of the references he gives. Medical agents are certain not to neglect these precautions. I should, therefore, recommend that assistants be invariably sought through reliable intermediaries.

*** Under the circumstances stated, it was wrong to compromise the threatened action. The assistant could have had no legal claim, and his success in extorting money in one case may tempt him to try to do so again.

We do not know that all medical agencies are more to be trusted to make inquiries than are agencies connected with other professions. The only safe plan is to make personal inquiries.

NAVAL AND MILITARY MEDICAL SERVICES.

INDIAN MEDICAL SERVICE.

An Indian medical officer, who writes under the melancholy name of "Ichabod," complains of a "job," which seems to us, on his own showing, not to be a job at all. It appears that a young medical officer serving at Suakim, when two surgeons-major were invalided, fell into the charge of a station-hospital, and discharged the duty of this responsible position so much to the satisfaction of his superiors that, on his return to India, his good service was rewarded by a permanent appointment, over the heads of thirty-nine seniors. "Ichabod" uses the term "promoted," which, to those not acquainted with the facts, would mislead them into the belief that the young medical officer had obtained a step in rank over the heads of his seniors, which is not the case.

"Ichabod" having first given, as above, a good and sufficient reason for the substantial acknowledgment, on the part of the authorities, of this young officer's meritorious service, proceeds to find another and less creditable reason in the fact that he happens to be "the nephew of a surgeon-general who is mentioned as the next Director-General," an imputation of nepotism which, we venture to say, is not only not borne out by the facts as given by "Ichabod" himself, but is unjust to the authorities, who are often accused of unwillingness to reward good professional service. Had the fortune of war thrown an opportunity of professional distinction in "Ichabod's" way, followed by a mark of appreciation such as he complains of in the case of a fortunate junior, would the readers of the British Medical Journal ever have heard of any "grievance?" "Ichabod" winds up his letter with another complaint, holding the Government he serves responsible for the present state of the exchange, apparently forgetful of the fact that, by the depreciation in the value of the rupee, the Government is an annual sufferer to the extent of over three millions of pounds sterling; and he advises all young medical men not to enter the service of India "unless they obtain in writing a guarantee to be paid in gold!" To what branch of Her Majesty's Indian Service is such a guarantee given?

GOVERNMENT MEDICAL SERVICE IN BRITISH GUIANA.

In view of the many inquiries which have been made to us, since the publication of the article on the new medical service in British Guiana in our issue of the 9th instant, as to the terms of service and the scale of remuneration, the following official information will not be without interest. By a resolution of the Combined Court passed on July 20th, it is enacted that:

1. There shall be a surgeon-general, a medical inspector, and such number of Government medical officers as may be necessary, and for whom salaries may be provided by this Court.

2. The surgeon-general shall receive a salary not exceeding £1,200 per annum, with liberty to take consulting practice.

3. A medical officer, on joining the service, shall join as a supernumerary for two years, and shall receive a salary of £300 per annum and free quarters.

4. After serving two years, if appointed to the permanent staff, he shall receive £400 per annum, rising by increments of £25 annually up to £900 per annum.

5. A Government medical officer, on being appointed to a district, and a supernumerary, on being appointed to act in charge of a district, shall receive at the rate of £500 per annum, but shall not receive any increments thereto until entitled to such increments by length of actual service.

6. Every medical officer appointed to a district, or to act in charge of a district, shall receive a travelling allowance at a rate varying from £100 to £150 per annum, as the extent of the district may require.

7. A medical officer in charge of a district shall be allowed private practice.

8. The Government Medical Officer in charge of the Public Hospital in Georgetown and the Lunatic Asylum at Berbice shall be debarred from private practice, and shall receive in lieu thereof an allowance not exceeding £200 per annum, as may be determined by this Court. The Government Medical Officer in charge of the Public Hospital in New Amsterdam, or of the Leper Asylum, if debarred from private practice, shall receive an allowance varying from £50 to £150 per annum, as may be declared by this Court.

9. The health-officer in Georgetown, and the medical officer in charge of the Almshouse, shall be allowed private practice, but shall not be entitled to the increment provided by paragraph 4. They shall receive such special salaries as may be determined by this Court.

10. The Government Medical Officers shall perform such duty as may from time to time be required by the Governor, and shall afford the benefit of their professional services in accordance with such tariff as may from time to time be approved by the Governor and the Court of Policy.

11. One-half of the total cost of the whole of the service shall be defrayed from the general revenue, and the other half shall be a charge on the employers of immigrants.

THE NAVY.

The undermentioned appointments have been made at the Admiralty during the past week: E. B. Townshend, Surgeon, to the *Pembroke*, additional; H. B. Beatty, Surgeon, to the *Duke of Wellington*, additional; G. A. Dreaper, Surgeon, to the *Duncan*, additional.

Fleet-Surgeon John Buckley died at Haslar Hospital on October 15th, at the age of 45. He became Surgeon in the Royal Navy, November 21st, 1862; Staff-Surgeon, January 20th, 1869; and Fleet-Surgeon, August 27th, 1884, retiring in the following month. He was the author of "Modern Naval Hygiene."

MEDICAL STAFF.

Deputy Surgeon-General R. Webb has been placed on temporary half-pay on account of ill-health. His commissions are dated: Assistant-Surgeon, December 15th, 1854; Surgeon, October 23rd, 1867; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, April 4th, 1880; and Deputy Surgeon-General, July 16th, 1884. Deputy Surgeon-General Webb served in the Crimea in 1854-56, and was at the siege of Sebastopol and the battle of the Tchernaya (medal with clasp, and Turkish medal); he was also in the Indian Mutiny campaign in 1857-58, including the actions of Banda and Chitrakote (mentioned in despatches, medal), and in the war in Abyssinia in 1868 (medal).

Brigade-Surgeon John Davidge has been granted retired pay, with the honorary rank of Deputy Surgeon-General. He entered the service as Assistant-Surgeon, August 5th, 1858; became Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1873; and Brigade-Surgeon, September 10th, 1884. His war-services comprise the Bhootan campaign in 1865-66, when he had the medical charge of the Royal Artillery, and for which he received the medal and clasp, and the war in Egypt in 1882, for which he has the medal and the Egyptian bronze star.

Surgeons-Major J. M Fiddes, M.B., and W. M. Harman, M.B., have also gone on retired pay, with a step of honorary rank. Surgeon-Major Fiddes ranked as Assistant-Surgeon from November 1st, 1858; as Surgeon, March 1st, 1873; and as Surgeon-Major, September 24th, 1873. Surgeon-Major Harman as Assistant-Surgeon from October 2nd, 1866; as Surgeon, from March 1st, 1873; and as Surgeon-Major, October 2nd, 1878. The latter gentleman was engaged in the recent war in Afghanistan, and has the medal granted therefor, but the former has no war-experience.

Surgeon-Major Joseph Flemming, who went on half-pay on October 8th of last year, is now restored to the full-pay establishment.

Surgeon Robert Caldwell has been awarded the bronze medal of the Royal Humane Society, for the following act of bravery:—In October of last year, assisted by Sergeants Rennycooke and Busby, Duke of Cornwall's Light Infantry, he saved Private Cooper, of the Black Watch, on the Nile, the case, which was recommended by the late Colonel Barrow, having been unavoidably delayed till now. The man fell from the paddle-box of a steamer, and Surgeon Caldwell jumped in from the stern, in the dark, when a strong current was running, and held Cooper till assisted by the two sergeants.

THE INDIAN MEDICAL SERVICE.

Surgeon-General M. C. Furnell, M.D., C.I.E., of the Madras Establishment has retired from the service from October 9th; his commission as Assistant-Surgeon bears date February 7th, 1855, and he became Surgeon-General with the Government of Madras, April 5th, 1885. Dr. Furnell served in the Indian Mutiny Campaign in 1858-59, and was at the battle of Dowdepore in Oude, and took part in the pursuit of Beni Madhoo and Runmust Singh; he has the Indian Mutiny medal, and the pension for long and meritorious service.

Brigade-Surgeon C. K. Colston, of the Bombay Establishment, has also retired

from the service, which he entered as Assistant-Surgeon February 20th, 1856, attaining to the rank of Brigade Surgeon November 27th, 1879. The Army Lists do not credit him with any war service.

Brigade-Surgeon R. S. Bateson, Bengal Establishment, has retired from the service, which he entered February 20th, 1856, attaining to Brigade Surgeon October 24th, 1884; he was on the Indian Mutiny campaign in 1857-59 (medal).

Surgeon J. Anderson, Bengal Establishment, officiating civil surgeon at Allahabad, has been assigned the visiting medical charge of the Mirzapore district, vice Surgeon T. H. Sweeny.

Surgeon-Major W. R. Browne, M.D., Madras Establishment, is directed to act as Professor of Surgery and Clinical Surgery at the Medical College during the employment of Surgeon C. Sidthorpe on other duty.

The services of Surgeons D. C. Davidson and J. W. T. Anderson, of the Bombay Establishment, are replaced at the disposal of the Commander-in-Chief.

Surgeon G. J. Ward, Bombay Establishment, medical officer of the 5th Native Infantry, has returned to duty from sick-furlough.

Surgeon E. W. Young, Bombay Establishment, has obtained leave of absence for a further period of four months on medical certificate.

Surgeon J. Lucas, Bombay Establishment, has been granted leave out of India on medical certificate for one year from the date of being struck off duty.

The undermentioned Surgeons having been appointed September 30th, 1874, have become Surgeons-Major from September 30th: R. N. Stoker, G. Bomford, M.D., A. Barclay, M.B., and C. J. M'Cosmie, M.D., of the Bengal Establishment; W. O'Hara and T. Heme, M.B., of the Madras Establishment; and D. N. Patay, and J. Lucas, M.D., of the Bombay Establishment.

The Quetta Station Hospital is to be equipped for 12 per cent. on the authorised strength of the garrison, instead of 10 per cent. as at present.

The demand for medical officers in Burmah is steadily increasing, and a requisition has been received from the principal medical officer with the Burmah expeditionary force for the services of fourteen more commissioned medical officers. This requisition includes two brigade-surgeons from the Indian Medical Service, but as there are none of that rank available, two surgeons-major will probably have to be sent. Nine of the officers will be required to embark at once, and the remainder in a few weeks.

Acting-Surgeon T. D. Sanderson, of the 1st Cumberland Volunteers, has resigned his appointment. His commission dated from April 6th, 1877, but he did not join the 1st Cumberland until October 1st of that year.

Mr. Munro Mackenzie has been appointed Acting Surgeon to the 1st Glamorgan Artillery Volunteers, and Mr. Andrew Stewart to the 1st Cheshire Engineers.

Acting-Surgeon C. J. Trimble, who joined the 5th Lancashire Volunteers on September 19th, 1883, is now gazetted Captain in that corps.

Acting-Surgeon H. Gordon, M.D., has resigned his commission in the 1st Fifeshire Volunteers, which dates from August, 1875. Honorary Assistant-Surgeon R. Storrs also has resigned his appointment in the 2nd Volunteer Battalion of the York and Lancaster Regiment (late the 8th West Riding Volunteers), which he joined so far back as April 9th, 1860.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

Examinations for Medical and Surgical Degrees, Michaelmas Term, 1886: Preliminary Notice.—The examinations for the degrees of M.B., B.C., and M.C. will begin on the following days respectively. First M.B. examination, Friday, December 3rd; second M.B. examination, Friday, December 3rd; third M.B. examination, Part I, Tuesday, December 14th; third M.B. examination, Part II, Wednesday, December 15th; B.C. examination, Saturday, December 18th; M.C. examination, Friday, December 17th. The names of candidates for the third examination and for the examinations in surgery must be sent to the registrary (through the prælectors of their respective Colleges) on or before Wednesday, December 1st; those for the first and second examinations on or before Tuesday, November 23rd.

Forms, on which it is requested that the names may be written, will be sent by the prælectors. The certificates of candidates, accompanied by their postal addresses, should be sent to the registrary not less than seven days before the beginning of the examination for which they are entered. The fees of the examination must be paid to the registrary when the certificates are sent in.

INDIA AND THE COLONIES.

MALTA.

The University of Malta.—There are many universities of wider fame that prescribe a less comprehensive curriculum than the University of Malta. The subjects of the entrance examination are Latin, English, and Italian literature, intellectual and moral philosophy, botany, zoology, and inorganic chemistry. The first year is given to descriptive anatomy, organic chemistry, and practical chemistry; the second year to histology, pathological anatomy with demonstrations, materia medica, practical pharmacy and medical botany, physiology, general pathology, and therapeutics, and obstetrical anatomy and physiology; the third year to pathology (lectures and demonstrations), surgery, midwifery, hygiene, and clinical practice; the fourth year to clinical medicine, including the study of mental diseases at the Government lunatic asylum, clinical surgery, midwifery, gynæcology, and pediatrics, forensic medicine, and surgical operations on the dead body. Finally, a fifth year is required, and is to be given to hospital practice in Malta or abroad. Annual examinations which are partly written, partly oral, and partly practical are held. The examinations are conducted by a "Special Council," consisting of the Director of Education, all the Professors of the Faculty, and of three examiners not connected with the University, appointed by the head of the Government. Every student, before he can be admitted to the annual examinations, must produce certificates of diligent attendance and good conduct from each professor, and unless specially exempted, must have obtained the minimum number of marks at monthly examinations held in the various classes.

There is an excellent regulation requiring the Professor of Natural History and the Director to make continual additions to the museum of the University, and the correspondent to whom we are indebted for these particulars informs us that the School of Anatomy possesses a collection of wax models, including a series illustrating the forms of hernia, which are of peculiar excellence.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE EASTERN HOSPITAL REPORT.

Dr. Collie, the Medical Superintendent of the Eastern Hospital, has issued his annual report, which has been delayed, owing to circumstances already well known. Dr. Collie states that, during last year, the total number of cases treated in the fever hospital was 1,038, 843 of which were fresh admissions during the year. Of the whole, 614 were scarlet fever cases, which gave a percentage mortality of 12.081. The enteric fever cases numbered 112, and the percentage of mortality was 19.130. In typhus fever cases, the mortality per cent. was 46.153. Of other diseases than fever, but sent to the hospital as fever, there were 111 admissions, and the mortality was 21.714 per cent. It was noteworthy, Dr. Collie says, that the number of admissions of enteric fever was less than in any year since the opening of the hospital in 1871. Two nurses contracted enteric fever, and both recovered.

To the wards set apart for the reception of small-pox cases there were 618 admissions, of which 425 were vaccinated, 91 doubtfully vaccinated, and 102 confessedly unvaccinated. Of all the cases, 143 died, 499 were transferred to the ship-hospitals or discharged to their homes, and the mortality over all was 22.69; but these figures must be regarded as only approximately correct. Of the cases sent to the hospital as small-pox, 59 were found to be other diseases, and 1 child was born in the hospital. Bethnal Green sent the largest number of fever cases, and Holborn and Hackney were second and third in numbers, St. George's-in-the-East, Islington, Mile End Old Town, and Shoreditch being next in order.

OBITUARY.

ALEXANDER DYCE DAVIDSON, M.A., M.C., M.D.,
Professor of Materia Medica, University of Aberdeen.

The unexpected death of Professor Davidson occurred under unusual and almost dramatic circumstances. Professor Davidson was a young man, barely over 40, and seemed in perfect health, saving for some gouty attacks, to which he had now and then been subject. The winter session had just begun; and at the second meeting, on October 22nd, while he was lecturing to his class on preliminary matter, the history of the *Pharmacopœia*, etc., and emphasising his remarks by annotation ons the black board, he was struck down almost instantaneously by an apoplectic attack, and died an hour afterwards, surrounded by the last fresh traces of his life's work.

There have been many losses in the profession of the North of Scotland within the last ten years, but none have given rise to more sorrow than that caused by the death of Professor Dyce Davidson. His was eminently a sweet and lovable character, and nearly everyone who knew him feels that he has lost a dear friend. He retained to the last a frank, boyish openheartedness, and was always generous and appreciative in regard to others, even when they were his direct opponents. No bitterness of rivalry ever clouded his spirit; and professional brethren, private friends, patients, and students, all deeply lament his loss.

Professor Davidson passed through the University of Aberdeen as a student with great distinction. He took his degrees in Arts and Medicine with high honours, and afterwards studied for between one and two years in Paris. He was trained in ophthalmic medicine and surgery, under Galezowski and Desmarres, and in surgery under Richet, Alphonse Guérin, and others. He acted as *externe* in some of the Parisian hospitals at this period of his career. Returning to Aberdeen, he directed his attention chiefly to ophthalmology, and took a highly distinguished position in this science, and was appointed surgeon to the Blind Asylum, and subsequently ophthalmic surgeon to the Royal Infirmary, appointments which he held until his death. He was an excellent surgeon, but, by degrees, he abandoned general surgery in favour of ophthalmology, and gave a strong impetus, by his zeal and enthusiasm, to the development of this department in the Aberdeen School of Medicine. He was lecturer on Ophthalmic Surgery and Ophthalmoscopy in the University, and, at an early period of his career, became attached to the University of Aberdeen, as assistant professor of materia medica, Professor Harvey being then professor of this branch. Dr. Davidson was a leading spirit in introducing notable improvements in the practical teaching of the subject, and so much was his reputation enhanced by this, that on Professor Harvey's retirement, in 1878, he succeeded him unopposed, being appointed by the Crown, with the universal approval of the profession in Scotland.

Dr. Davidson was the author of numerous works, chiefly ophthalmological, and was a valued contributor to the medical journals of this and other countries, and to the *Transactions* of the Ophthalmological Society, the Aberdeen Branch of the British Medical Association, the Aberdeen Medico-Chirurgical, and other Societies.

He was highly gifted and cultured in matters of Art, and had many friends among men of Arts and letters, who were prominent in the frequent gatherings at his hospitable house. Throughout the Colonies he had friends and correspondents, who were constantly enriching his department of the university with collections of great value illustrative of materia medica; and from India, Central Africa, and elsewhere, objects unknown in most pharmacological laboratories and museums have been gathered together, arranged, and utilised in teaching by him.

He was always a warm and kind friend to the students, and never lost the feeling of being himself a student and one of them.

He leaves a wife and son to lament his premature decease.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE SANITATION OF DAIRIES.

We have long and, at last, successfully urged the legislative transfer of the dormant power of the Privy Council to prevent dissemination of disease by milk, to the local authorities. This reform was first urged and repeatedly enforced by Mr. Ernest Hart in his annual reports to the Parliamentary Committee of the British Medical Association, and his papers read before the International Medical Congress in London and the Sanitary Congress at Huddersfield. Now that it has become law, it behoves the local authorities to exercise the power and carry out the duties with which they are entrusted.

We are glad, therefore, to see that the Local Government Board have issued a circular to all urban and rural sanitary authorities in the kingdom, drawing attention to the provisions of the Contagious Diseases (Animals) Act, 1886, which transfers to that Board the power hitherto exercised by the Privy Council to make regulations concerning cowkeepers, dairymen, and purveyors of milk, and transfers to the sanitary authorities the duties of making regulations under, and enforcing the provisions of, the Dairies, Cowsheds, and Milkshops Order of 1885, issued by the Privy Council. The circular reminds the authorities that they are required to register all persons who may carry on the trade of cowkeepers, dairymen, or purveyors of milk, and to look after the lighting, ventilation, cleansing, drainage, and water-supply of dairies.

THE SCARLET FEVER EPIDEMIC IN LONDON.

The returns from the several hospitals belonging to the Metropolitan Asylums Board, presented at the fortnightly meeting held on Saturday last, showed an increase in the number of fever-patients in the metropolis. In all, 184 patients had been received in the fortnight, as against 173 in the previous fortnight, and there were on Saturday 622 patients in the three asylums, as against 546 the previous fortnight. Of the whole, no fewer than 520 were scarlet fever patients, 99 were enteric fever patients, and 3 were patients with other febrile diseases. During the same period, three fresh cases of small-pox had been admitted to the hospital-ships, and three remained under treatment, the one admitted the previous fortnight having been discharged.

THE METROPOLITAN ASYLUMS.

At the last meeting of the Board a letter was read from the Local Government Board, acknowledging the receipt of the managers' resolution respecting Dr. Collie, and that officer's appointment as medical superintendent of the asylum was confirmed.

A report dealing with the defective drainage of the Western Asylum was referred back to a committee, to which were added Captain Douglas Galton and other members. The sanitary condition of the Darenth School Imbecile Asylum also came under review, a report being presented from the Lunacy Commissioners giving it as their opinion that the children were, through defective sewerage, exposed to sewer-gas. With respect to the suggestion of the Islington guardians, transmitted through the Local Government Board, that the Northern Hospital should be opened for imbecile children, it was resolved to report that, as only twenty-five such children remained unprovided with places, provision for whom could speedily be made, it was unnecessary to open either the Winchmore Hill or Hampstead Hospitals for the purpose.

THE RIVER LEA.

Despite the most powerful social and political influences, the sanitation of the River Lea proceeds but slowly. In the special report prepared by Dr. J. W. Tripe, the medical officer of health for the Hackney district, on the present condition of the River Lea, he says: "The river now contains a large proportion of sewage near Tottenham, but it is not so bad in the Hackney district. About fifty yards from the Tottenham outfall, there is as much ammonia and organic matter in it as equals one-third of sewage and two-thirds of distilled water. On Monday the effluent contained as much ammonia and organic matter as sewage taken from the sewer in Mare Street, and smelt worse. The short time the new sewer has been used this year was insufficient to allow the river to obtain a good state before the effluent was poured in again on October 1st, but I am much disappointed with the present state of the river as compared with what I obtained at the end of last September."

Dr. Tripe has recommended that the Lea Conservancy be informed of this, and that the attention of the Tottenham Local Board of Health be called to the insufficiency of their disinfection, and the Hackney District Board of Health has decided immediately to take these steps. But disinfection is a costly palliative, at once unpromising and ineffective.

THE DRAINAGE OF RICHMOND.

The Local Government Board has appointed Mr. A. Taylor to hold an inquiry at Richmond respecting the joint application of the vestry and rural sanitary authority for power to borrow £100,000 for the construction of works of main drainage for the parishes of Richmond, Barnes, Mortlake, Kew, and Petersham. It is intended to convey the sewage by gravitation to a site on the banks of the Thames at Mortlake, and treat it by precipitation. The inquiry is expected to take place during November. Very little opposition is expected, as the promoters have entered into an arrangement with the principal opponents by which the authorities give them £2,500 for certain rights and small pieces of land, and the opponents agree to drop their opposition.

BUTTER SUBSTITUTES.

Sir Joseph M'Kenna's Bill on butter substitutes, which is to be submitted to Parliament next session, will, it is thought, if it becomes law, have the effect of suppressing the sale of butterine, while, at the same time, it will substitute that of oleo-margarine, which, according to a correspondent, "only becomes butterine after being churned with new milk, and more or less butter." Without entering into the question of the relative merits of butterine and oleo-margarine, there is still the objection to be urged, that, undoubtedly, large quantities of spurious compounds are fraudulently sold by retail dealers as pure butter. Whether the provisions of the sale of Food and Drugs Act are sufficiently exercised to check this evil, is a matter of doubt. If, as Mr. Otto Hehner, in a letter to a contemporary observes, magisterial benches would but consent to inflict a substantial penalty in all cases of adulterated butter proved before them, butterine would soon be sold

under its own name and on its own merits. If the public then choose o buy it in preference to butter, be it on account of its low price or t culinary virtues, no one would have any reason to complain. But the penalties at present generally imposed are so insignificant that they commonly fail to produce deterrent effects. It is probable that the penalties sometimes fall upon the wrong parties. A case which came before the Clerkenwell County Court this week, where the keeper of a chandler's shop having been fined for selling as butter at prices ranging from fivepence to one shilling and a penny per pound, a substance which, on analysis, was found to contain 75 per cent. of foreign fats, took action against the dealer by whom she had been supplied, but, as the defendant's butter was, when the sanitary inspector visited his shop, found to be genuine, the magistrate could not hold that the defendant was called upon to indemnify the plaintiff in the fine and costs inflicted. Although this case afforded no proof of the adulterations committed by larger dealers, there can be no doubt that it is not always the retail dealer who really commits the fault, although he has to suffer the punishment.

X. Y. Z. The names of recipients of the Government bounty for vaccination are not published, but the amounts paid in each union can be seen in every annual report of the Local Government Board.

FEES IN CASES OF ALLEGED EMERGENCY.

Our correspondent, Dr. Smith, appears to have wholly misunderstood the tenour of the advice given by Dr. Rogers, in his address at the recent meeting of Poor-law medical officers at Brighton. If Dr. Smith had been present, he would have found that Dr. Rogers had been referring to a series of cases where boards of guardians had meanly striven to evade the payment of fees for accidents and capital operations, on the grounds that no order had been given by anyone authorised to give such order; and for the future, in all such instances, he advised the refusal to attend, until such order had been obtained or promised. It would be simply absurd to refuse to attend to an ordinary case of illness such as described by Dr. Smith, or to suppose that Dr. Rogers intended to give such advice.

HEALTH OF ENGLISH TOWNS.

In the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,617 births and 3,287 deaths were registered during the week ending Saturday, October 16th. The annual rate of mortality, which had declined in the four preceding weeks from 22.6 to 19.3 per 1,000, further fell during the week under notice to 18.9. The rates in the several towns, ranged in order from the lowest, were as follow:— Bristol, 13.9; Birkenhead, 14.2; London, 16.0; Brighton, 16.6; Bradford, 17.6; Derby, 17.6; Sheffield, 18.1; Oldham, 18.4; Halifax, 18.7; Bolton, 18.8; Sunderland, 19.2; Cardiff, 19.2; Salford, 19.3; Leicester, 19.8; Norwich, 19.8; Birmingham, 20.1; Plymouth, 20.4; Portsmouth, 20.7; Huddersfield, 21.2; Nottingham, 22.3; Newcastle-upon-Tyne, 23.5; Liverpool, 23.8; Leeds, 24.3; Manchester, 24.5; Hull, 25.9; Wolverhampton, 26.1; Blackburn, 27.3; and the highest rate during the week, 34.5 in Preston. In the twenty-seven provincial towns the death-rate averaged 21.2 per 1,000, and exceeded by as much as 5.2 the rate recorded in London, which, as before stated, was only 16.0 per 1,000. The 3,287 deaths in the twenty-eight towns during the week under notice included 271 which were referred to diarrhœa, 79 to "fever" (principally enteric), 75 to scarlet fever, 51 to measles, 34 to diphtheria, 30 to whooping-cough, and not one to small-pox, in all, 540 deaths resulted from these principal zymotic diseases, against numbers declining from 1,202 to 578 in the five preceding weeks. The zymotic death-rate was equal to 3.1 per 1,000. In London, the zymotic rate was only 2.0, while it averaged 4.0 per 1,000 in the twenty-seven provincial towns, among which it ranged from 1.8 in Brighton and in Huddersfield, and 2.1 in Bradford, to 6.2 in Salford, 7.4 in Hull, and 8.2 in Preston. The fatal cases of diarrhœa, which had declined in the four preceding weeks, from 928 to 324, further fell during the week under notice to 271, and caused the highest death-rates in Blackburn, Preston, and Hull. The 79 deaths referred to different forms of "fever" showed a further increase upon recent weekly numbers; this disease was proportionally most fatal in Leeds, Halifax, Portsmouth, Plymouth, and Preston. The fatal cases of scarlet fever, which had steadily risen from 43 to 70 in the four previous weeks, further increased during the week under notice to 75, and exceeded the number in any week since November, 1885; they caused the highest death-rates in Salford, Liverpool, and Bradford. The deaths from measles, which had been 29, 32, and 42 in the three preceding weeks, further rose during the week to 51, and were proportionally most numerous in Wolverhampton. The fatal cases of diphtheria, which had risen from 19 to 42 in the six previous weeks, declined to 34 during the week under notice, and included 18 in London, 4 in Liverpool, 3 in Manchester, 2 in Birmingham, and 2 in Huddersfield. The 30 deaths from whooping-cough corresponded with the number in the preceding week, and caused the highest rate in Hull. No fatal case of small-pox was recorded during the week, either in London or in any of the twenty-seven provincial towns; and only one small-pox patient was under treatment on Saturday, October 16th, in the Metropolitan Asylum Hospitals. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 2.8 per 1,000, and was considerably below the average. The causes of 66, or 2.0 per cent. of the 3,287 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, October 16th, 882 births and 482 deaths were registered in the eight principal Scotch towns, having an estimated population of 1,283,977 persons. The annual rate of mortality, which had risen from 16.8 to 19.8 per 1,000 in the three preceding weeks, declined again to 19.5 during the week under notice, but slightly exceeded the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 11.1 in Greenock, 15.1 in Edinburgh, 16.4 in Perth, 16.7 in Dundee, 17.7 in Leith, 19.9 in Paisley, 20.7 in Aberdeen, and 23.8 in Glasgow. The 482 deaths registered during the week under notice in these towns included 88 which were referred to the principal zymotic diseases, against 63 and 82 in the two preceding weeks; of these, 46 resulted from diarrhœa, 21 from whooping-cough, 12 from scarlet fever, 6 from "fever," 3 from diphtheria, and not one from small-pox or measles. These 88 deaths were equal to an annual rate of 3.4 per 1,000, which slightly exceeded the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Glasgow, Aberdeen, and Paisley. The fatal cases of diarrhœa, which had steadily declined from 57 to 22 in the five preceding weeks, rose again last week to 46, of which 16 occurred in Glasgow, 9 in Edinburgh, 7 in Dundee, and 6 in Aberdeen. The 21 fatal cases of whooping-cough showed a decline of 4 from the number in the previous week, and included 15 in Glasgow, 3 in Edinburgh, and 2 in Paisley. The deaths referred to scarlet fever, which had been 8 and 21 in the two preceding weeks, declined during the week under notice to 12, of which 7 occurred in Glasgow and 3 in Aberdeen. The 6 deaths from "fever" corresponded with the number in the preceding week; 2 were returned in Glasgow and 2 in Edinburgh. The 3 fatal cases of diphtheria showed a decline of 2 from the number in the previous week, and included 2 in Glasgow and 1 in Leith. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 4.2 per 1,000, against 2.8 in London. The causes of 72, or nearly 15 per cent. of the 482 deaths registered during the week in these Scotch towns were uncertified.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen passed their primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on October 12th.

G. H. S. Daniell, of Cambridge, and E. S. Eastwood, of London Hospital.

Passed in Anatomy only on October 13th.

E. A. Humphreys, and F. C. Rogers, of Owens College, Manchester; J. H. B Allan, of McGill College, Montreal; J. F. de Sylva, of Edinburgh; G. S. Johnstone, of Birmingham; A. B. Cox, of Sydney and Edinburgh; A. J. Howlin, of Sheffield; J. S. Fox, of Liverpool; W. T. Parry, of Toronto; W E. Roth, of St. Thomas's Hospital; T. G. J. Moore, of Charing Cross Hospital; A. F. Bilderbeck-Gomess, of St. George's Hospital; H. B. Cardew of St. Bartholomew's.

Passed in Anatomy only on October 14th.

R. C Fraser and H. B. Shillingford, of Guy's Hospital; T. H. Dickson, of Cambridge; J. S. Part, of Westminster Hospital; E. N. H. Davidson, of St. Thomas's Hospital; J. A. Wood, of University College; W. F. Manners, of St. Thomas's Hospital.

The following gentlemen, having undergone the necessary Examinations for the Diploma, were admitted members of the College on October 18th.

C. Nash, L.S.A., Greenwich, S.E., Student of King's College Hospital; F. L. S. Sawell, L.S.A., Holland Park, W.; E. Barrett, L.S.A., Dulwich, S.E. and G. Stevenson, L.S.A., Edgware Road, of St. Bartholomew's Hospital; G. A. Holroyd, L.K.Q.C.P.I., Scarborough, of Leeds; M. C. Rohrsmann, L.R.C.P.Lond., Sydney, New South Wales, of University College; H. R. Bramwell, M.B., Carrington, Nottingham; A. E. Barlow, M.B.Edin., Rothwell, Northampton, of Edinburgh University; F. Wilson, Liverpool, of Liverpool and Glasgow; C. H. Mollison, M.B.Melb., of Melbourne; John Buchanan, M.D.Glas., Wigan, of Glasgow University; G. J. Woutersz, L.R.C.P.Lond., Ceylon, of Ceylon and Edinburgh University.

Two candidates were referred for three months, 14 for six months, and 1 for nine months.

Admitted on October 19th.

J. H. Blakeney, L.R.C.P.Lond., St. Heliers, Jersey; F. G. Gardner, L.S.A., Bromsgrove; F. J. J. Orton, L.S.A., Longford, near Coventry, Students of Birmingham; W. K. Sibley, L.S.A., Harley Street, of Middlesex Hospital; A. E. A. Pettengill, L.S.A., Great Yarmouth, of St. Bartholomew's Hospital; G. H. FitzHenry, L.S.A., Forest Hill, of St. Thomas's Hospital; B. Melland, L.S.A., Manchester; G. F. W. Braide, M.D.Vict., Warrington, of Manchester; C. G. Kent, M.B.Melb., and C. J. Shields, M.B.Melb. of Melbourne University; D. Roxburgh, M.B.Glas., Douglas, Isle of Man, of Glasgow University; S. E. Barrett, L.R.C.P.Lond., Stepney, of London Hospital; J. M. C. Cole, L.K.Q.C.P.I., Peel, Isle of Man, of Belfast; D. Wallace, M.B., Edinburgh, of Edinburgh University.

Three candidates were referred for three months; and 7 for six months.

The following gentlemen were admitted members of the College on October 20th.

L. Way, L.R.C.P.Lond., Belsize Road; H. H. Roe, Poyntington, Somerset, Students of King's College. W. L. Woollcombe, L.R.C.P.Lond., Plymton; T. W. Kelly, Apperley Bridge; C. E. Valpy, Hampstead, and M. Cheale, Great Ormond Street, of St. Bartholomew's Hospital. A. W. Pearse, L.R.C.P.Lond., Botesdale, and H. T. Bulstrode, Ipswich, of St. Thomas's Hospital; J. R. Bradford, Blomfield Road; H. A. Seagrove, Haverstock Hill, and J. H. Blamey, Penryn, of University College; O. A. Wickham, Arundel Square; H. Smith, Bow Road; J. Moore, Jersey; H. G. Lys, Bere Regis, Dorset, and C. H. C. Cosens, Dudley, of London Hospital. A. S. Barling, Leeds, and J. Ashby, Leeds, of Leeds General Infirmary; R. Leigh, Liverpool, of Liverpool Royal Infirmary; J. J. Clarke, Lincoln, of St. Mary's Hospital; W. R. Ackland, Exeter, of Charing Cross Hospital; M. Glanville, South Kensington; H. Lawson, Dorset Square, and G. E. Fitz-Gerald, Folkestone, of St. George's Hospital; R. F. W. Tucker, Bristol, of Bristol Infirmary; T. Martland, Wigan, of Manchester Royal Infirmary; C. Green, of Birmingham.

Three candidates were referred for three months, 10 for six months, and 2 for nine months.

Admitted on October 21st.

F. W. Gee, L.S.A., Regent's Park, and Edgar Jennings, West Hampstead, Students of University College; W. H. Tomlinson, L.S.A., Manchester, W. H. Idden, Southport; C. A. Craston, Wigan, and H. H. Corbell, Bolton, of Manchester Royal Infirmary; H. M. Doyle, L.S.A., Melbourne, and C. F. Wright, L.S.A., Great Yarmouth, of the London Hospital; R. J. Marks, L.S.A., Clifton, of Bristol Infirmary; S. Gregory, L.S.A., Calcutta, and F. Todd, Catford, of St. Thomas's Hospital; A. S. Taylor, Lewisham Road; T. Halliwell, L.R.C.P.Lond.; G. F. E. Morgan, Sharsted Street; W. Landsdale, Chelsham Road; W. H. Boger, Southwark; N. J. N. Bray, Aberystwith, and G. A. Slack, Uffculme, Devon, of Guy's Hospital; E. Antrobus, Birmingham, of Edinburgh University; G. G. Gidley, L.R.C.P.Lond., Honiton, Devon, of King's College; W. J. Colborne, L.R.C.P.Lond., Southsea, of Charing Cross Hospital; C. J. Ayres, L.R.C.P.Lond., Grosvenor Road, of Westminster Hospital; T. A. Mast, Buckingham Palace Road, of St. George's Hospital; E. M. Callender, Beckenham, and H. W. Scratchley, Taunton, of St. Mary's Hospital.

Two candidates were referred for three months, 6 for six months, and 2 for twelve months.

Admitted on October 22nd.

H. de B. Dwyer, L.R.C.P.Lond., Argyle Road; H. C. Hawkins, Eastbourne; L. de C. E. Harston, L.R.C.P.Ed., Clapton Common, Students of St. George's Hospital; H. J. Blackler, L.R.C.P.Lond., West Norwood; H. K. Roper, L.R.C.P.Lond., Upper Norwood; E. C. Kingsford, L.R.C.P.Lond., Clapham Common, of Guy's Hospital; F. Thomas, L.R.C.P.Lond., Marine Parade, Penarth, J. Girling, L.R.C.P.Lond., Colchester, and H. W. Denton-Carlew, Bloomsbury, of the London Hospital; H. F. Semple, L.R.C.P.Lond., Redlands, Bristol, of Bristol Infirmary; W. G. Pridmore, Junction Road, and R. A. Freeman, L.S.A., Caledonian Road, of Middlesex Hospital; F. Boxall, L.S.A., Horsham, of University College; G. A. Edsell, L.S.A., Upper Norwood, and J. A. Francis, L.S.A., of St. Bartholomew's Hospital.

One candidate was referred for three months, 4 for six months, and 2 for twelve months.

Admitted on October 25th.

A. W. Popert, L.R.C.P.Lond., Anerley, and J. H. Cox, L.R.C.P.Lond., Cape Town, of the London Hospital; R. D. Boase, L.R.C.P.Lond., Plymouth, of Middlesex Hospital; C. J. S. Kelsall, L.R.C.P.Lond., Bayswater, of King's College; C. Mortlock, L.R.C.P.Lond., Kensington Park; C. F. Williamson, L.R.C.P.Lond., Mildmay Park; F. R. Miller, L.S.A., West Liss; F. Sloman, Fanham, and J. Muriel, Hadleigh, Suffolk, of St. Bartholomew's Hospital; G. E. C. Wood, L.R.C.P.Lond., Portobello, of Edinburgh University; F. J. Dewes, L.R.C.P.Lond., South Lambeth Road, of St. Thomas's Hospital; F. W. Vernon, Plastow, of Edinburgh and London Hospital; A. E. Nelham and C. Freeman, of Charing Cross Hospital.

One candidate was referred for three months, 7 for six months, and 1 for nine months.

Admitted on October 26th.

R. Pearson, L.R.C.P.Lond., Westbourne Park, of St. George's Hospital; G. Winfield-Roll, L.R.C.P.Lond., Hove, Brighton; C. Brown, L.R.C.P.Lond., Wandsworth Common; J. T. Thomas, L.R.C.P.Lond., Camborne, and H. J. Macevoy, L.R.C.P.Lond., Camden Road, of St. Thomas's Hospital; E. D. Agnew, Soho Square, J. A. Manton, L.R.C.P.Lond., Wakefield, and W. Ingleby-Mackenzie, L.R.C.P.Lond., Guildford Street, of St. Bartholomew's Hospital; J. C. Michell, Taunton, A. H. Mexon, South Hackney, and J. M. Harper, South Hackney, of the London Hospital; W. E. G. Jackson, L.R.C.P.Lond., Addington, and F. S. Lambert, L.R.C.P.Lond., Red Hill, of St. Bartholomew's Hospital.

Two candidates were referred for three months, and 5 for six months.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination in Anatomy and Physiology, and when eligible will be admitted to the Third or Final Examination. October, 1886.

Shigeuchi Suzuki, Student of Tokio, Japan, and St. Thomas's Hospital; F. O. Simpson, of Liverpool; H. Gordon, of Owens College, Manchester; H. Caiger and F. Faichnie, of University College; W. Henderson, of Guy's Hospital.

Passed in Anatomy only.

W. Hall and A. G. Haydon, of St. Bartholomew's Hospital; H. W. K. Read, A. Greenwood, W. J. Proctor and M. A. Khan, of London Hospital; H. K. Ramsden, of Owens College, Manchester; H. J. Carstairs and R. H. Tompsett, of St. Thomas's Hospital; W. P. T. Daniel, of St. Mary's Hospital; F. W. S. Davies, of Guy's Hospital; A. J. Williams, of King's College; W. E. Jones, of Middlesex Hospital; H. A. Rudyard, of University College.

Passed in Physiology only.

A. Rollason, of Birmingham; E. T. Okell, of Liverpool; J. M. Crocker and H. E. Hick, of Leeds School of Medicine, R. F. E. Austin, of Bristol, C. E. Cornwall, T. S. Worboys, C. S. Wood, S. D. Willard, and H. A. Berryman, of St. Bartholomew's Hospital; H. M. Speechly, H. L. Penny, A. E. Joscelyne, and H. P. Cuthbert, of London Hospital; G. H. Lancashire, of Manchester; G. H. Dawes, of Sheffield; A. L. Morgan and G. L. Revill, of Charing Cross; A. M. Braund, of Middlesex Hospital; W. S. Fincham, C. W. Brisley and P. Coleman, of St. Thomas's Hospital; P. N. Jones, G. F. Gunn, and A. B. Battley, of St. Mary's Hospital; E. M. Goldie, of University College.

MEDICAL VACANCIES.

The following vacancies are announced.

ABBEYLEIX UNION.—Medical Officer. Salary, £160 per annum, with £15 as Medical Officer of Health, and fees. Applications by November 6th to the Clerk.

BRIGHTON AND HOVE LYING-IN INSTITUTION.—House-Surgeon. Applications by October 30th to the Secretary.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Three Clinical Assistants. Applications to the Secretary.

CHORLTON-ON-MEDLOCK DISPENSARY, Manchester. — Resident House-Surgeon. Salary, £100 per annum, with apartments. Applications by October 30th to W. Stones, Esq., 113, Market Street, Manchester.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Assistant Physician. Applications by November 11th to the Secretary, 24, Finsbury Circus, E.C.

GRAVESEND HOSPITAL.—House-Surgeon. Salary £80 per annum, with board and apartments. Applications by October 30th to Frederick Mitchell.

HALIFAX INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Salary £80 per annum. Applications by November 10th to J. Hodgson Wright, Esq., Halifax.

HANTS COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, residence, etc. Applications by November 13th to the Committee of Visitors, Knowle, Fareham.

LOUGHBOROUGH MEDICAL AID ASSOCIATION.— Junior Medical Officer. Salary, £120 per annum. Applications by October 30th to the Secretary.

MANCHESTER ROYAL INFIRMARY.—Administrator of Anæsthetics. Salary, £75 per annum. Applications by November 6th to the Chairman of the Board.

NEWABBEY PAROCHIAL BOARD AND LOCAL AUTHORITY.—Medical Officer. Salary, £52 per annum. Applications by November 5th to Captain Stewart, Shambellie, Newabbey, Dumfries.

NEWCASTLE-ON-TYNE EYE INFIRMARY.—Surgeon. Applications by October 30th to the Honorary Secretaries.

NORFOLK AND NORWICH HOSPITAL.—Assistant House-Surgeon. Applications by November 1st to H. Chester Nance.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Physician. Applications by October 30th to the Secretary, 216, Tottenham Court Road, W.C.

NOTTINGHAM DISPENSARY.—Assistant Resident Surgeon. Salary, £150 per annum, with apartments. Applications by November 24th to C. H. Preston, Esq., The Dispensary, Broad Street, Nottingham.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND SEAMEN'S INFIRMARY.—Resident Medical Officer. Salary, £120 per annum. Applications by November 1st to the Secretary.

ROTHERHAM HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum, with board and lodging. Applications by October 31st to the Honorary Secretary.

ROYAL PIMLICO DISPENSARY.—Resident Medical Officer. Applications by November 1st to the Secretary, 104, Buckingham Palace Road, S.W.

ROYAL VICTORIA DISPENSARY, Northampton.—Medical Officer. Applications by October 30th to the Honorary Secretary.

SEAMEN'S HOSPITAL, Greenwich, S.E.—Dispenser. Salary, £50 per annum, with an additional £20 as Electrician, with board and residence. Applications by October 30th to W. T. Evans, Esq.

STOCKTON-UPON-TEES HOSPITAL AND DISPENSARY. — House-Surgeon. Salary, £200 per annum. Applications by November 24th to J. Settle, Esq., Secretary.

SUNDERLAND CHILDREN'S HOSPITAL.—Two Honorary Medical Officers. Applications by November 20th to the Secretary.

WEXFORD UNION.—Medical Officer. Salary £100 per annum, and £15 as Medical Officer of Health, and extras. Applications by November 2nd to Michael Browne, Esq., Bridgetown, Wexford.

WORSHIPFUL COMPANY OF IRONMONGERS. — Medical Officer. Salary, £52 10s. per annum. Applications by November 15th to the Clerk, Ironmongers' Hall, Fenchurch Street, E.C.

MEDICAL APPOINTMENTS.

BARKER, Glanville, M.R.C.S., appointed House-Surgeon to the Central London Ophthalmic Hospital.

CROWTHER, G. H., M.R.C.S.Eng., L.R.C.P.Ed., appointed Medical Officer of Health for the Northowram District of the Halifax Union, *vice* T. Britton, M.D., resigned.

GAY, John, M.R.C.S., appointed Resident Clinical Assistant to the City of London Hospital for Diseases of the Chest.

MCDONNELL, Henry W., B.A., M.B., M.R.C.S., appointed House-Surgeon to the Royal Surrey County Asylum, *vice* W. H. Horrocks, M.B., resigned.

MOSELEY, G. W., M.B., appointed House-Surgeon to the Royal Hospital for Women and Children, Waterloo Bridge Road, *vice* E. H. Freeland, M.R.C.S., L.R.C.P., L.S.A., resigned.

PATTERSON, Thomas, L.R.C.P.Edin., L.R.C.S.Edin., appointed Medical Officer to the Letterkenny Union, *vice* William Dunlop, L.R.C.P.Edin., L.R.C.S.Edin., deceased.

RICHARDS, J. T., M.B., C.M., appointed Resident House-Surgeon to the Wirrall Children's Hospital, *vice* Miss Jane H. Walker, resigned.

WILLS, W. A., M.B., appointed House-Surgeon to the Victoria Hospital for Children, Chelsea, *vice* P. D. Turner, M.B., resigned.

THE following officers were elected at the last meeting of the West Kent Medico-Chirurgical Society, held on Friday, October 8th:—*President:* F. B. Jessett, F.R.C.S. *Vice-Presidents:* J. Brindley James, M.R.C.S.; C. H. Hartt, L.R.C.S.I. *Council:* Hugh G. Cable, M.R.C.S.; Ernest Clarke, M.B., B.S.; W. Collingridge, M.D.; Alexander Forsyth, M.D.; P. Horrocks, M.D., M.R.C.P.; F. Moon, M.B.; Thomas Moore, F.R.C.S. *Treasurer:* Prior Purvis, M.D. *Secretary:* H. W. Roberts, M.R.C.S. *Librarian:* Alexander Forsyth, M.D.

MANCHESTER PATHOLOGICAL SOCIETY.—This Society, which has completed its first year, has proved a very great success, and now numbers nearly 100 members. At the annual meeting, held at the Owens College on October 13th, the following were appointed officers for 1886-87. *President:* J. Dreschfeld, M.D. *Vice-Presidents:* A. W. Stocks, Esq.; J. Dixon Mann, M.D. *Treasurer:* Judson S. Bury, M.D. *Secretary:* A. H. Young, M.B. *Committee:* H. Ashby, M.D.; J. Broadbent, Esq.; H. R. Hutton, M.D.; T. C. Railton, M.D.; T. W. Rhodes, M.D.; T. Harris, M.D. *Auditors:* S. H. Owen, M.D.; W. Thorburn, M.D.

MEDICAL PRACTITIONERS IN THE UNITED STATES.—In a recent directory of the medical practitioners of the United States, says the *New York Medical Record*, the total number is given at 85,671, of whom 83,239 are men, the remaining 2,432 being women. If these figures are correct, and they are hardly likely to be over the mark, there is one medical practitioner to every 650 inhabitants; the proportion varies from 1 to 329 in Maryland, to 1 in 1,494 in New Mexico.

DEATH FROM ETHER.—A case of death while under the influence of ether is reported from Brooklyn. The patient, a woman, took ether in order that a carious tooth might be extracted. After the operation, she partly recovered, but again lapsed into unconsciousness, and died. As the patient was quite unknown to Dr. C. H. Moseley, the dentist, she could not be identified.

PRESENTATION.—Dr. Gammage has been presented by the members of the medical profession of Sunderland and other friends, through Dr. Waterston, with a purse containing eighty guineas, as a mark of the respect and esteem in which he is held by a large circle of friends. Dr. Gammage, who is retiring from practice, is leaving Sunderland in consequence of ill-health.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Mr. Lawson Tait will read a paper on The General Principles concerned in the Operation of Removal of Uterine Appendages.—Odontological Society, 8 P.M. Communications will be given by Messrs. S. J. Hutchinson, A. S. Underwood, Walter Coffin, Storer Bennett, J. H. Mummery, A. P. Reboul, W. A. Hunt, etc.

TUESDAY.—Pathological Society of London, 8.30 P.M. Dr. Sansbury: Tubercular Mass in Suprarenal. Dr. Sherrington: The Ascending Tract of the Spinal Cord. Mr. Sydney Jones: Tumour of Palm of Hand. Mr. Makins: Intra-bursal Fibroma. Mr. Sutton: Cysts in neighbourhood of Hyoid Bone. Mr. Treves: Melanosis of Hard Palate. Mr. Paget: Tumour of Palate. Dr. S. West: Acute Necrosis of the Fourth Cervical Vertebra. Card Specimens: Mr. Fenwick: Calculus Formed round an Umbrella Ring; Mr. Shattock: Parts after Removal of the Ovary six months previously; Dr. S. Coupland: Genito-Urinary and Suprarenal Tuberculosis.

WEDNESDAY.—Obstetrical Society, 8 P.M. Specimens will be shown by Mr. Doran: Papilloma of Fallopian Tube—adjourned debate. Dr. Champneys: On Obstetrics of the Kyphotic Pelvis. Dr. Dakin: Mercurialism in Lying-in Women. Dr. Herman: Case of Lupous Structure of Urethra.

THURSDAY.—Harveian Society of London, 8.30 P.M. Clinical evening. Dr. T. Buzzard: A case of Nerve Lesion. Mr. Victor Horsley: Photographs Illustrative of Epilepsy in Guinea-Pigs. Also medical and surgical cases of interest.

FRIDAY.—West London Medico-Chirurgical Society. Pathological specimens to be shown by Mr. H. Percy Dunn: The Liver of a Child, showing Extensive Indentation upon its Surface, the Result of Pressure of Rickety Ribs; The Brain from a case of Cerebral Haemorrhage; Carcinoma of the Œsophagus, showing the Effects of the Extension of the Disease. Drs. Scanes Spicer, and H. Bamber: Carcinoma of the Bladder; Large Exfoliation from the Skull, following a Severe Burn. Clinical cases by Dr. Spicer. Mr. R. Fitzroy Benham: A Calculus passed per Urethram, by a Child aged 3 years. Papers.—Dr. Owles: Notes of a case of Epithelioma of the Œsophagus and Stomach. Mr. Keetley: Further Remarks on the Radical Cure of Hernia by Injection.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

DAVIS.—On 26th instant, at 14, St. James Square, Bath, the wife of Robert Davis, of a son.

FLINN.—September 22nd, at 37, Merville Place, Kingstown, Dublin, the wife of D. Edgar Flinn, F.R.C.S.I., of a daughter.

WALLER.—On October 21st, the wife of Dr. Augustus Waller, Lynden House, 29, Abbey Road, N.W., of a daughter.

MARRIAGE.

STONHAM—TAYLOR.—October 21st, at St. Paul's Church, Astley Bridge, by the Rev. George Forrester, B.A., Vicar of St. Paul's, Clapham, uncle of the bride, assisted by Rev. T. Dickinson, Vicar of St. Clements, Openshaw, also uncle of the bride, and the Rev. L. R. Hearne, Vicar of the parish, Thomas George Stonham, M.D.Lond., M.R.C.S., of Claremont, Ventnor, to Lilian Isabel, eldest daughter of Rowland Taylor, Esq., Solicitor and Coroner of Bolton, Lancashire.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

TREATMENT OF CHRONIC GLANDULAR ENLARGEMENT.

U. writes: Can any of my brother members suggest treatment in chronic enlarged inguinal glands, not due to specific influence, but occurring in a strumous constitution? Sulphide of calcium, oleate of mercury, iodine, prolonged rest, etc., have all been tried, but without success. Would extirpation by knife be justifiable?

BETA asks for information of any situation suitable for the daughters of a medical man not well off, and getting very old, who very much dislike being governesses. They are well educated, and would be glad to go abroad if there would be a better chance than at home.

ANSWERS.

DR. HUTCHINSON.—The *Therapeutic Gazette* is published by G. S. Davis, Detroit, Michigan, U.S.A. The English agent is Mr. H. K. Lewis, of Gower Street.

H. H.—We see no objection to the formula, "Physician and Surgeon," which correctly expresses the professional status conferred by the diplomas of the Colleges of Physicians and Surgeons.

REGISTERED.—Anyone can give evidence in a court of law, and any other rule would be impossible and absurd. Only registered practitioners can hold office in the public services, civil or military, or recover fees for medical or surgical attendance.

L. M. GRIFFITHS.—The data are already in printed form. The best opportunity of publishing them in the JOURNAL shall be considered.

CUCAINE IN DENTAL SURGERY.

MR. J. M. ACKLAND, M.R.C.S.Eng., writes: For teeth-extraction, cucaine is best used in the form of a solution, and I find the result most satisfactory with a 10 per cent. solution of the hydrochlorate of that drug. I put ten minims of this strength into a hypodermic syringe (made for the purpose) with a very fine point, and piercing the gum about half an inch below the neck of the tooth, I inject five minims on the outside, and the same quantity on the inside; after waiting from one and a half to two minutes, I proceed to extract with a warm pair of forceps.

Many people keep one-grain powders of the hydrochlorate of cucaine, and make their own solution at the time of using it; but, as I employ it pretty frequently, I get a 100 minims made at a time, and find it answers very well. For abscessed teeth, the prick of the needle is often very painful, and I do not advise its use in all such cases.

HOME FOR A CASE OF CHRONIC RHEUMATISM.

IN answer to "J. A. P." (JOURNAL, October 16th), Miss Phipps, of St. Luke's Home, 29, Manor Road, Walworth, S.E., would take such a case; she can give information of several other homes.

MEDICAL OFFICERS OF CONVICT PRISONS.

M.B., M.A.—The pay in Her Majesty's convict prisons commences, as was stated in the BRITISH MEDICAL JOURNAL on January 26th, 1884, p. 203, at £250 a year, and afterwards depends on the length of service and the particular prison. Application should be made to the Secretary, Her Majesty's Convict Prisons, Home Office, Whitehall, S.W. See also leading article in the same issue of this JOURNAL.

NOTES, LETTERS, ETC.

A NEW WAY OF CHARGING VACCINE-TUBES.

DR. WOODWARD, Public Vaccinator, Worcester Union, finds the following method of charging vaccine-tubes convenient. Obtain some capillary tubes of extra size (they can be got from Somerville, Stockbridge, Edinburgh, 10s. per 1,000, carriage free), charge them about an inch, then well exhaust the air and well seal, when the lymph will recede about an inch, according to its viscidity; exhaust and seal very carefully the other end. A little sealing-wax will be of use to complete the sealing, and also to mark the quality of the lymph, using much or little wax accordingly. Tubes will be much better charged this way, and, what is of still more consequence, much more readily emptied when required, namely, by breaking off the short end close to the lymph, touching it with the point of the needle, if necessary, and blowing from the long end.

Dr. Woodward will be glad to know results from any who will try this method.

DIRECT REPRESENTATION AND THE TITLE OF DOCTOR.

BETA writes: As a member of the "Committee of Selection," I, in common with many other members, have been wishful to learn how many votes were given for each candidate at the test election. The secretaries refuse to give any particulars, and we can only draw the conclusion that the decision was not nearly so unanimous as could be wished. Surely this is not an open way to work any election, and should be made known to the electors.

WINE-DINNERS.

M. F. B. writes to say that he has never attended the old students' dinner of his Alma Mater, his opinion being that £1 1s. is too high a charge. He states that members of the Association in Bristol only pay 6s. 6d. or 7s. 6d., exclusive of wine.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. H. Hadock, Wivenhoe, Essex; Mr. C. J. B. Johnson, Kirkby, Overblow; Dr. Mercier, Verrier; Dr. Eyton-Jones, Wrexham; Dr. Railton, Manchester; Mr. F. Kerslake, London; Dr. Uhthoff, Brighton; A Policy Holder; Dr. R. Main, East Ilsley, Newbury; Dr. T. Lauder Brunton, London; Mr. Edgar M. Crookshank, London; Mr. J. H. Easterbrook, London; Dr. J. C. Ogilvie Will, Aberdeen; Dr. A. Robertson, Glasgow; Dr. R. Saundby, Birmingham; Dr. M. Charteris, Glasgow; M.B., London; Mr. Vesey Fitzgerald, Birmingham; Dr. Eyerett Bournemouth; Mr. Charles Oldham, Brighton; Dr. S. West, London; Mrs. T. F. Spencer, Exeter; Dr. E. Cresswell Baber, Brighton; Mr. W. H. Twort, Camberley; Dr. Styrap, Shrewsbury; Professor Buchanan, Glasgow; Dr. C. Chaple, London; Dr. Corner, London; Mr. Major Greenwood, Jun., London; Mr. C. E. Addison, Colchester; Mr. T. Jenner Verrall, Brighton; Miss J. Lyne, London; Dr. Young, Bootle, Liverpool; Dr. R. Whittington Lowe, Brighton; Dr. Makuna, Treherbert; Mr. S. Burwell, Dronfield; Mr. Arthur Pring, Clifton; Mr. Shirley Murphy, London; Mr. G. F. Masterman, Stourport; Dr. R. Park, Glasgow; Mr. Stewart, London; Mr. Eassie, London; Mr. F. H. Floyer, London; Mr. J. W. Hunt, Dalston; Mr. B. Brooks, Hull; Mr. J. S. Wood, London; Mr. William Habgood, London; Mr. Alex Foulerton, Ryde; Professor Stirling, Manchester; Mr. H. B. Pope, Eardesley; University of Cambridge; Mr. J. R. Upton, London; Mr. J. M. Ackland, Exeter; Mr. R. M. Craven, Southport; Dr. Dolan, Halifax; Messrs. Gilson and Co., London; Dr. Rayner, Hanwell; Mr. J. Buckenham, Cambridge; Messrs. Rendall and Parker, London; Dr. D. B. Smith, Woolston, Southampton; Mr. R. Gardiner, Brighton; Editor *Amateur Photographer*; Mr. R. E. Power, Portsea; Mr. C. H. Phillips, Hanley; Dr. F. Hewitt, London; Dr. W. Herbert Smart, Shadwell; Mr. R. H. A. Winter, Battersea Park; Mr. G. Ashmead, Brierley Hill; Mr. Henry Strachan, Kingston, Jamaica; Mr. O. J. Kauffmann, Victoria University, Manchester; Dr. McDermott, Ennistimon, co. Clare; Dr. W. A. Elliston, Ipswich; Sir B. W. Foster, Birmingham; Dr. John Eaton, Cleator Moor; Dr. Vallin, Paris; Dr. G. M. Reddie, Glasgow; Dr. Mackey, Brighton; Dr. Dempsey, Belfast; Dr. T. J. Walker, Peterborough; Mr. Clement Palmer, Barton-under-Needwood, Burton-on-Trent; Dr. C. A. McLean, Monte Video; Dr. Joseph Rogers, London; Dr. J. R. Wolfe, Glasgow; Professor Macleod, Glasgow; Dr. J. K. Spender, Bath; Mr. W. Ashton Ellis, London; Mr. F. P. Maynard, Newcastle-on-Tyne; Dr. Wyle, Skipton, Yorks; Mr. Arthur Jackson, Sheffield; Dr. Geo. Granville Bantock, London; Mr. G. H. Elliot, Chichester; Mr. Alexander Duke, Dublin; Mr. A. Quarry Silcock, London; Mr. W. L. Winterbotham, Bridgwater; Mr. J. S. E. Cotman, London; Mr. J. May, Devonport; Mr. H. W. Freeman, Bath; Dr. Withers Moore, Brighton; Mr. H. Percy Dunn, London; Dr. W. Moore, Dublin; Mr. W. J. Mason, Carlisle; Mr. R. S. Walton, Grimsby; Mr. W. F. Phillips, Southampton; Dr. T. More Madden, Dublin; Mr. A. L. Scott, Dunmow; Mr. S. S. Redmond, Gateshead; Mr. G. Sturge, London; Mr. R. Wade Savage, London; Mr. W. Armstrong, Harpurhey; Mr. Medland, London; Dr. E. Andrew, Shrewsbury; Mr. C. Harper, Bath; Mr. W. Vallance, London; Dr. Maxwell, Woolwich; Dr. W. Hunter, Edinburgh; Dr. Elliott, Liverpool; Mr. M. Maitland, London; Mr. W. S. A. Griffith, London; Mr. J. S. Gettings, Walsall; Dr. G. Henty, London; Dr. E. Haughton, Upper Norwood; Mr. M. Wardle, Bishop Auckland; Dr. Tatham, Salford; A Looker-on in Civil Practice, London; Our Paris Correspondent; Dr. J. G. Glover, London; Dr. Willcocks, London; Dr. C. R. Illingworth, Clayton-le-Moors; Mr. G. M. Sharpe, Leeds; Mr. T. F. Eminson, Scotter, near Lincolnshire; Mr. J. Brewis, Sunderland; Dr. H. Bennett, London; Mr. J. Edwards, Barmouth; Honorary Secreaary of the Harveian Society of London; Dr. Lomas, London; Dr. Carline, Lincoln; Mr. W. Haslam, Birmingham; Mr. H. D. Foote, Rotherham; Mr. E. W. Orton, Nuneaton; Mr. E. Jessel, Retford; Dr. Willoughby, London; Mr. J. A. Francis, Portsmouth; Mr. A. Kinsey-Morgan, Bournemouth; Mr. C. Randolph, Milverton; Sanitas, etc.

BOOKS, ETC., RECEIVED.

Our Temperaments: their Study and their Teaching, a Popular Outline. By Alex. Stewart, F.R.C.S.Edin. Illustrated. London: Crosby, Lockwood and Co. 1886.

Diseases of Tropical Climates. Lectures delivered at the Army Medical School. By William C. Maclean, M.D., C.B. London: Macmillan and Co. 1886.

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A LECTURE

ENTITLED

A THERAPEUTIC RETROSPECT.

Delivered at the Opening of the Winter Course on Therapeutics at Glasgow University.

By M. CHARTERIS, M.D.,
Professor of Therapeutics and Materia Medica, Glasgow University.

In the opening lecture to his class, Dr. Charteris, after a few introductory remarks, directed the attention of the students to a "Therapeutic Retrospect" extending over nearly twenty-five years. He stated that, like most graduates who had attended the instruction of Professor Hughes Bennett, he left the University of Edinburgh, believing little in the medicinal treatment of disease. Referring to the influence of Dr. Bennett, he stated that: "He was a man gifted with a rare fluency of diction, with a strong controversial spirit, and with a great hatred of shams. He loved to pulverise the old tenets of therapeutics. He lashed with ridicule the blood-letting and mercurial treatment of inflammation, and stood in triumphant scorn on the ruins he had made. He was by every one recognised as an excellent clinical teacher, a wonderful bedside instructor, and students trusted him as men only do once in their lifetime. And yet he was wrong in many of his arguments, wrong in much of his practice; and the principles he implanted were proved false by the experience of the present day." "The prospect was dreary then, but things have now greatly changed for the better," he continued; "as I shall attempt to show you by examples of present treatment in

"1. General diseases.

"2. Diseases connected with different systems of the body."

I. General Diseases.

Rheumatism is a general disease. It cannot be referred to any one part. It invades all tissues. It encroaches on every system. It is a plain disease. Its features do not change, and it is indicated by signs certain, typical and characteristic. The chill, the fever, the swollen joints, the excessive pain, the sour-smelling perspiration, have been ever recognised by observers; and, though seldom fatal, it has been acknowledged in all medical treatises, as a malady which, by its sequelæ, often shattered the active and useful life of peasant and artisan.

Its treatment has been shifting, marked by a succession of vaunted cures, which time showed to be vain and futile. By happy chance, at first, in interpreting nature, and by careful observation afterwards, Dr. Maclagan, a few years ago, intimated to the profession the antidote for rheumatism.

He saw where ague develops, in primeval forests, there also the stately cinchona grows. Rheumatism, as a rule, attacks those who live where the soil is wet, where the damp is great; and in such positions, also in wayside places, in marshy ground, and by sluggish streams, the graceful willow bends.

So salicin, obtained from the willow, Dr. Maclagan imagined, might cure rheumatism; and he was right, for all experience shows its action is as certain in that fever as quinine is in ague.

Let us turn now from this typical general disease, to look at some of those ailments which attack the system, into which the body has for convenience been divided.

II. Diseases connected with Different Systems of the Body.

A. *Disease of the Respiratory System.*—A man is exposed to cold. A stitch settles in the side. The temperature rises. The hurried breathing, the rusty expectoration, the marked crepitation, betoken inflammation of the lung, and we know by these and other signs that the patient has pneumonia. Disease here marches rapidly. What is to be done? Twenty-five years ago the answer by some was, "Bleed, and the patient will recover." By others, "No. Bleed, and the patient will die." These views were pronounced, and they were antagonistic. They emanated from high authorities, and, in reflecting on them, it is little to be wondered that the medical student of that time was bewildered and confused, and, in very helplessness, slid into an expectant treatment, waiting for something to turn up.

Now, the line of therapeutics seems clearly marked out, varying only with the varying condition of the patient. This being rightly apprehended, it is distinctly shown that in some cases of pneumonia a depressant antimonial treatment is advisable, while in others a stimulant method is necessary. Thus, by a careful selection of medicines and of diet, a successful issue may be predicated in the great majority of cases of lobar pneumonia.

B. *Diseases of the Circulatory System.*—The man who is ill with heart-disease has symptoms very painful and very typical to indicate its seat. He lies propped up in bed; his face is anxious, his countenance pale; sleep cannot be won, for the labouring heart affords no anæmia to the wearied brain. "I am tired and worn," says such an one; "may the end come, and that speedily." But yet grave though the surroundings are, our efforts are not unavailing. We may relieve, though we cannot cure. We can give little resting-places from suffering to him who is staggering under life's burden by the aid of digitalis and other cardiac tonics. We thus do good, and, from fitful spurts of activity, we bring the organ to a similitude of the steady beat of health.

C. *Diseases of the Digestive System.*—Dyspepsia is the quack's emporium; advertisements of stomach- and liver-pills evince this. With ingenious force and reiteration they excite alarm and proclaim a remedy. Fortunes have thus been made from a credulous public. Strong assertions, backed by active medicines of an unknown yet powerful cathartic character, will always find people ready to pay for the vendor's wares. While this is the case, I believe the patent medicines bearing on digestive derangement have had their day. We, in this country at least, are becoming more temperate. We live more on recognised and health-producing rules. We know that a careful dietary, abundant exercise, regular hours for sleep and work, will tide a man onwards to a green old age. The recent researches as to our various beverages—tea, coffee, cocoa, and alcohol, have been of infinite value, and solved many vexed questions. Yet, at times, medicines are necessary, more especially those which have a cholagogue action, and of these mercury has regained the reputation it for some time had lost. In the crusade against antiphlogistics, mercury fell maimed and crippled; men asserted that it was the direst curse of humanity. Some said, "Banish it from every pharmacopœia"; others, "place it in the museum of therapeutics." In common, every-day life, a good name may be smirched by abuse; but yet, if the accusation is untrue, the man or woman will rise, even in their lifetime, pure and clean in the noonday heat of public opinion. So also has it been in therapeutics with mercury. It is now recognised to have a decided action in eliminating bile. The jaundiced eye becomes clear, the peevish temper and the splitting headache disappear under its judicious use; further, we know, externally, it stands now, in corrosive sublimate, as the first favourite in antiseptic dressings.

Moreover, we were trained to believe that all the horrors of syphilis in the middle ages, the necrosed jaws, the toothless gums, the cachexia and anæmia of a sapped constitution, were due more to mercury than the disease for which it was given. We were instructed to lean on iodide of potassium, fresh air, and tonics, and this opinion of physicians was fortified by the high authority of Syme, with whose name the greatness of the Edinburgh Medical School will ever be entwined. It was a sore wrench to find that the means indicated were simply pottering with the disease mentioned, and, if success was to be gained, we had to resort to the much-abused drug in which our forefathers trusted.

D. *Diseases of the Nervous System.*—We can percuss, listen to and understand by care and attention, the diseases of other systems, but the brain, with its convolutions, we cannot in life see or handle. Hence it is that the nervous system has to some extent been a *terra incognita*, and many theories, fluctuating and crude, have swept across the field of cerebral pathology. Yet, rays of light are now shining on the darkness. Ferrier's able researches have been utilized, and a bright page is opening up at the present moment in surgical operations on the seat of Reason and Will. It is refreshing to read how, in some cases, the nidus of epileptic attacks has been carefully diagnosed and relief given to sufferers from a distressing and enfeebling malady. If we consider hydrophobia a disease of the nervous centres, we must admit Pasteur's discovery, now, I think, fully proved as the most important epoch in the therapeutics of this century. He has succeeded when all other means had failed. He has rescued a dreadful and awful malady from the pale of incurable disease. These results are the best criticism to those who sentimentally urge the present continuance of the abolition of all original research in this country.

Electricity has spanned continents and bridged oceans, and by it we are in familiar momentary intercourse with all the centres of the world's activity. Its utility in grave affections of the nervous system is very doubtful, but it has a prophylactic influence, which cannot be gainsaid. Thus, early symptoms of failing physical powers due to nervous derangement, may be arrested, and average health retained.

Judiciously used, also, this influence gives refreshing intervals of repose to those who are stricken with paralysis, or are afflicted with a disease which can only terminate in death.

Pharmacopœia of 1885.

We have welcomed into the new *Pharmacopœia*, after their worth had been verified, some important remedies; and by doing this, official sanction has been given to new modes of treatment. By the discovery of the anæsthetic local properties of cucaine, the surgeon can, in delicate operations on the eye and on the throat, use the knife with painless certainty. The kidney burdened with congestion can be relieved by the vicarious perspiration resulting from pilocarpine; alarming hæmorrhage can be arrested by the injection of ergotine; and habitual constipation in many cases cured by cascara sagrada. A direct and sure method of attacking psoriasis is ensured by the ointment of chrysarobin, and the same drug given in small doses internally checks, according to some late researches, the acute stage of eczema.

The Committee of the *Pharmacopœia* have also acted well in expunging several obsolete medicines, and have exercised a wise discretion in not admitting into the official rank substances which, though loudly advocated, had no genuine title for admission.

Health-Resorts and Climate.

When the *Pharmacopœia* fails, we can supplement it by other means, for the resources of the physician are not exhausted. Nature is a wonderful restorer of lost health. From great depths, in some cases dependent on volcanic forces, there springs up in favoured places earth's remedy for some human ailments. Pure and sparkling with surcharged gas, this pleasant beverage can be retained by the stomach without heaviness or nausea. The salts contained are thus easily assimilated by the system, and the glow of health in time mantles on the countenance of the invalid.

These places were at one time scoffed at by those who had never seen them, but a better appreciation of their worth has dismissed this feeling. Facts are things that "winna ding," and these evince that when the wisdom of Cavendish Square and Harley Street fails to relieve gout, sufferers can be successfully ordered to drink the famed Elizabethen of Homburg, the effects of which are aided by climatic influences and by the cool breezes of the Taunus Mountains. So also the crippled joints become supple under the warm waters of Wiesbaden and Bath, and rheumatic pains disappear with the tepid neutral springs of Wildbad and Buxton. When the syphilitic poison has lurked long in the system, there is no agent so potent for eleminating it as the sulphur contained in the spas of Aix-la-Chapelle or Neuenahr.

And for the man tired with business or wearied with the toil of literary work you can recommend with confidence the breezes of the Atlantic. There, on a well-appointed and efficiently-manned steamer, every comfort is secured and a tonic is imbibed, freed from land surroundings and cares. No letter has to be answered, no proof-sheet has to be corrected, no telegrams arrive, and no duns harrass. There is rest, complete rest, and a man becomes, as it were, a child in his hopes, amusements, and his pursuits. A sea voyage is charming when the barometer is high, and when the waves, glistening in the sun's rays, or silvered with the sheen of the moon, lap the vessel with the kiss of friendship. And when the scene is changed, when the storm arises, the winds roar, and the sky is black and leaden, yet, even then, the immensities of the ocean teach us lessons of our littleness and feebleness, and reveal the greatness of Almighty power.

Dr. Charteris concluded by saying—I have shown you progress, be it yours to advance this; be enthusiastic; believe in the tools of your life's work; assume not the sceptic's mantle; a sceptical young physician requires to alter his ways before he can be a trusted senior. You have enlisted in the ranks of a noble profession, guard its honour as you would guard the repute of your mother's name. Remember the words of Thomas Carlyle: "Often I have said, what profession is there equal in true nobleness to medicine? He that can abolish pain, relieve his fellow mortal from sickness, he is the indisputably usefullest of all men. Him savage and civilised will honour. He is in the right, he in the wrong who may. As a Lord Chancellor, under one's horsehair wig there might be misgivings; still more as a Lord Primate under one's cauliflower; but if I could heal disease, I would say to all men and angels without fear—*En, ecce!*"

A cremation was performed at the Cremation Society's Crematorium, St. John's, Woking, on Wednesday. The remains were those of an elderly lady, who expressed a wish that her body should be disposed of in this way after death.

ABSTRACT OF A PAPER ON THE GENERAL PRINCIPLES INVOLVED IN THE OPERATION OF REMOVAL OF THE UTERINE APPENDAGES.

Read before the Medical Society of London, November 1st, 1886.

By LAWSON TAIT, F.R.C.S.,
President of the British Gynæcological Society.

[The author was chiefly desirous of raising a discussion on this question on account of a paper which had appeared from the pen of Sir Spencer Wells in the *International Journal of the Medical Sciences*, which indicated a much nearer approach to a common understanding upon it than has yet appeared possible between the two schools of gynæcology, the old and the new. The only parts of that paper with which he was inclined to take any exception were its peroration, and one or two other passages where Sir Spencer seemed inclined to find fault with others in a new line of surgical enterprise, just as he himself and his own work had been condemned about twenty-five years ago. Also upon one or two points where Sir Spencer Wells had misunderstood the writer and the views which he had expressed.]

Concerning the numbers of such operations performed, or the numbers which ought to be performed, no conclusion can be arrived at until the general principles upon which the operations are to be admitted are settled; and therefore these numbers, whilst relatively great, or absolutely so, may safely be left for future consideration.

The first of the general principles was that of nomenclature, and the author was glad to find that the word "spaying" had been discontinued, because, on precisely the same grounds, obstetric physicians, who perform the operation for the induction of premature labour, would come to be called "abortion-mongers." The offensive incorrectness of the word was, in this way, easily settled, and probably the last of it had been heard. A new word—"castration"—had been introduced, copied from the German and French, and this was equally open to objection, because, so far, it was a word which had been confined exclusively to operation performed upon the male. To confuse so simple and easy an operation as that with operations so difficult and so much more risky, for the removal of uterine appendages in women, was a serious surgical blunder; for the word castration, if it referred at all to the female organs, must refer to the ovaries, and must necessarily mean a double operation. Many of the operations, on the contrary, for the removal of the uterine appendages, were single, and in some there was no reason for the removal of the ovary at all, as when only one tube was of necessity removed. Such operations, therefore, could not by any possibility be brought under the word "castration;" whilst, on the contrary, the term "removal of the uterine appendages" included all such operations permitting of easy classification into different kinds. The use of the word "castration," or such words as "öophorectomy" and "normal ovariotomy" were fertile sources of confusion, as was abundantly evident in the article by Sir Spencer Wells, now under consideration.

It must be perfectly evident that such an operation as for the removal of both sets of uterine appendages for bleeding myoma was an altogether different thing from the removal of one set of them for chronic inflammatory disease. The two operations, therefore, if they had attached to them the word castration, would inevitably involve us in confusion. The confusion is evident in Sir Spencer Wells's article, because he seems to assume that the removal of the uterine appendages has an argument against it, in that it involves the non-production of the whole series of beings that might result from the subjects of the operation. This would, of course, be an argument if the operation were really castration; but as it is only, in the great bulk of cases, removal of organs already rendered perfectly useless by disease—permanently and irreparably so,—the word castration inevitably leads us into error. Sir Spencer Wells admits in this paper that "the operation may be performed in certain cases of bleeding myoma;" but, as he puts the mortality of it at 14.6 per cent., it is natural enough to find that he is inclined to restrict it. As the mortality in the writer's practice is less than 2 per cent., the operation may be considerably extended for the relief of suffering, and the prevention of, or relief of, impoverished health.

Again, Sir Spencer admits that "it is to be resorted to in certain malformations of the genital organs, deformities of the pelvis, and accidental obstructions of the vagina,"—conditions in which sterility puts the argument against it out of court altogether; and here again the diminished mortality raises the question of how far it may be extended in the relief of the great suffering involved in the insufficient development of the uterus. A similar conclusion can be established,

as admitted in Sir Spencer Wells's paper, with regard to "cases of ovarian dysmenorrhœa or neuralgia which have resisted all treatment, and in which life or reason is endangered." In such a class of cases the extension or limitation of the question is to be largely governed by the social position of the patients. When dealing with women who have to work for a living, it is impossible not to see the necessity of extending it to a much larger proportion of cases than in the upper ranks of life.

With Sir Spencer Wells's fourth conclusion, that "in cases of nervous excitement and madness it is inadmissible," the writer is really much disposed to agree. Certainly he has in his own practice refrained, save in a few cases of well-marked menstrual epilepsy, from extending it in this direction, largely for the reason that a discussion of such a group of cases would necessarily, and by reason of the confusion existing upon the whole question, hamper its discussion in regions where its application is much more easily defended.

Sir Spencer Wells's fifth conclusion, that "it should never be done without the consent of a sane patient, to whom its consequences have been explained," must be admitted by all; indeed, this conclusion ought to be much more widely accepted concerning other methods of surgical proceedings. The writer went on to explain that Sir Spencer Wells had completely misunderstood and confused the facts of his (Mr. Tait's) own work. His earliest cases were for the purpose of relieving pain which was caused by diseased ovaries of small size, and was a departure from the principle, which had been maintained up to that time, that ovarian tumours ought not to be removed until they threatened life, a conclusion which could not be resisted with the high mortality which occurred in the practices of nearly all operators until 1878. After that, the diminution in the mortality permitted the extension of old principles and the intervention of new ones. Such cases should not be called "oöphorectomy," or "castration," or "normal ovariotomy," or "Battey's operation," or any other name which does not mean that they were cases of removal of ovaries just as diseased as if they were the biggest cystomata which could be found in our lists.

In this article, Sir Spencer asks the extraordinary question, "Who can diagnosticate with certainty the presence of irreparable disease in these out-of-the-way organs?" The writer answers that he did it for the first time in the year 1871, and has done it in hundreds of cases since, and has taught large numbers of practitioners how to make these diagnoses. Further, he finds that all over the world such diagnoses are being made, and the results of accurate and successful treatment placed on record.

In a recent paper in the *New York Medical Record*, Dr. Mary Dixon Jones, of the Brooklyn Hospital for Women, concludes some most remarkable testimony, and some extremely brilliant cases, with this sentence: "There is no advance made in modern surgery that will do more good, save more lives, or relieve more suffering, or add more to the sum of human life or human happiness than this one operation, known as 'Tait's operation.' It will save more lives than ovariotomy, because more need it."

In conclusion, the writer protests against the performance of unnecessary and improper operations, and points out that the performance of such are largely aided by the confusion of terms which had been brought about by the improper nomenclature, and therefore until those unaccustomed to this kind of work are enabled to make proper diagnosis, it was an easy matter to refer any kind of pelvic ache or ail to the uterine appendages, and the words "spaying" or "castration" seemed to have been designed as an absolute snare, by which such men were led astray to any extent to feel themselves justified in removing appendages when there was nothing the matter with them. Therefore, those who used these words were largely responsible for the harm that was accruing. On the other hand, of operations that were justifiable and proper, it was inevitable that a relatively and an absolutely large number would fall into the hands of the men who were successful in reducing the mortality to an almost vanishing point. But these cases would not be those of an improper kind, the fact that they would be gathered from far and wide, and placed in the hands of men who were responsible, by their position in the profession, for the proper treatment of such cases, would be the best guarantee for their proper selection. In fact, the present phase of the discussion was precisely that which was raised by Lawrence, Tyler Smith, Syme, and Miller, in the early stages of Sir Spencer Wells's own career concerning ovariotomy. That such operations should be performed with the utmost care, and precautions in the matter of consultations, was of course just as true as the necessity for similar precautions in all surgical proceedings. But consultations for such cases must be like consultations for other things, it is perfectly useless for them to take place with men who are wholly prejudiced against the proceedings. Such consultations must be mere matters of farce.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

SOME OBSERVATIONS CONCERNING WHAT IS CALLED NEURASTHENIA.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Brighton.

By W. S. PLAYFAIR, M.D., LL.D., F.R.C.P.,
Professor of Obstetric Medicine in King's College, and Physician for the Diseases of Women and Children to King's College Hospital.

I HAVE ventured to take, as the title of this note, that given to a paper written by Sir Andrew Clark, which I have read with great interest and satisfaction, since it will certainly lead to the further study of an obscure and little understood form of disease, that it should be made the subject of a paper by a physician of his eminence. This topic was originally almost accidentally forced upon my attention from the very frequent association of this type of disease within the gynæcological work which is my special province. General physicians are constantly preaching of the evil which, in their judgment, comes of over much local treatment in women; and it was the taking to heart of these sermons which led me to a closer study of the neurotic complications of uterine disease. Having drawn the attention of the profession to the remarkable success which followed the treatment of certain cases on the principles first systematised by Dr. Weir Mitchell, of Philadelphia, it was only natural that numerous examples of this type should come under my observation, many of them entirely unconnected with gynæcology. I saw many cases in which the originating local ailment, when it existed, had become entirely overshadowed by a neurotic condition engrafted upon it, which had in time become the dominant factor of the case, and, too often, I had the humiliation of observing that this neurotic state had been cultivated and fostered by injudicious medication, as surely as mushrooms are forced in a hotbed. I soon became convinced of the great importance of some of the varieties of functional neurosis to which the term "neurasthenia" has been applied; and I also learnt how completely ignorant I had myself previously been of this class of disease, and how very little it had been studied by the profession at large. If it be the case, as Sir Andrew Clark tells us, that this subject is being at last recognised in all our modern systematic and clinical works, still more if it attracts the attention and is deemed worthy of being written on by a physician of his position, all is being done that can be desired. No one can wish for more than that a subject should be thoroughly threshed out, and discussed from every point of view, favourable and unfavourable. *Magna est veritas et prevalebit*, and the proper estimate of any form of disease can only be arrived at by an open discussion of this kind.

I have done my best to bring this matter publicly before the profession by papers in the medical periodicals, by a discussion in the Medical Section of the British Medical Association at Worcester, and by an unsuccessful attempt to induce the Collective Investigation Committee to embrace it in the field of their inquiries. With regard to the latter point, I must observe, *en passant*, that their reason for not doing so was to my mind a strange one, namely, "that the topic was not ripe for investigation." I fancied that the very *raison d'être* of this Committee is to facilitate the study of little understood and "unripe" forms of disease; and I venture to think that conditions shattering the life and happiness of thousands of chronic invalids all over the country, are quite as legitimate subjects for scientific study as such topics, for example, as the "value of pure terebene." I am happy to say that the endeavours I have made have not been altogether unsuccessful, for the matter has attracted a good deal of professional notice, and the main fear now is that certain cases will be classed and treated as "neurasthenic," if I may be pardoned the provisional use of the word, which certainly have no right to the term. Before saying more on this, let me point out that the reason why this type of general neurosis has been so little studied as not to find even

a casual mention in most of our systematic treatises on medicine is to a great extent, I think, because it is chiefly a disease of the cultured classes, gradually increasing as the so-called "culture," or "overpressure," or analogous causes of nervous strain are brought into operation, and not found, or to a very partial degree, in the patients of our large hospitals, I, at least, have no recollection of having seen a well marked case except in private practice; and as most of our systematic writers have drawn their experience from their clinical wards, it is not surprising that it should have been only partially recognised. Another explanation is to be found in the fact that neurology—whether the term be applied to functional or organic disease—is a comparatively modern study, and that many advanced cases have been wrongly diagnosed, and attributed to some obscure organic cause, instead of to a pure neurosis.

As it was the perusal of Sir Andrew Clark's paper which induced me to write this note, I may venture to allude to some of the views he maintains, to which I feel bound to take exception. In the first place, he objects to the term "neurasthenia," and says that the condition to which the name has been applied has been already more or less fully described under such names "nervous erethism," or "mimosa inquieta," etc. It may be so, but certainly such terms have not attracted much professional attention, as neither of them is mentioned in the four medical dictionaries I have consulted, namely, Quain, Dunglison, Littré, and Robin. I hold no brief to defend the word "neurasthenia." I have never used it myself, preferring English expressions to Greek, and it must be admitted that it has sometimes been employed in a way that is reprehensible. Still, a disease, or assemblage of symptoms, or morbid state, must have a name of some sort. The theory involved in the term "neurasthenia" is, perhaps, as near the truth as any other that we are likely to reach for some time, and it is practically more euphonic to talk of a "neurasthenic" patient, than of one who is a "nervous erethistic," or an "inquiet mimotic." The mere nomenclature is really of little moment; the thing of importance is that the morbid state, disease, or assemblage of symptoms, should be fully realised and carefully studied.

Sir Andrew next proceeds to give a graphic and very accurate description of what he properly terms "mere nervousness;" and then satisfactorily proves that anyone treating such a condition on lines other than the very common sense ones he lays down, would be committing a grievous fault. For my part, I believe that no one short of a lunatic could possibly be guilty of such an error. What Sir Andrew so well describes is, doubtless, the raw material from which "neurasthenics" are made (I find I am obliged to use the forbidden word, after all, for want of another); but such a person is no more to be described as suffering from "neurasthenia," than a person who has an inherited tendency to tuberculosis can justifiably be called "phthisical" in the absence of all lung-symptoms. A "neurasthenic" is not a person with a nervous system prone to break down, but one whose nervous system, from some cause or other, shock, overwork, mental strain, and so on, actually has broken down, and who has thus become a complete invalid, and is incapable of fulfilling the ordinary duties of life. Under such circumstances, the patient is as much a fit and proper subject for treatment as one who has broken a leg, or has typhoid fever. It is by no means easy to define the symptoms of what I should understand as "neurasthenia." They are far too multiform, and the stress of the break-down may be thrown on very different organs in different cases, so that any concise definition suited to a brief paper such as this is an impossibility. One thing I am certain of is, that there exists a distinct functional neurosis, completely shattering the life of the patient, well worthy of being called a disease, quite capable of cure in certain ways, which ways are certainly not those generally adopted, and quite distinct from what is generally known as "hysteria," although sometimes associated with it.

Perhaps I may best illustrate what I mean by a very brief reference to three of my old cases, whose welfare I have chanced to have heard of within the past few weeks.

1. In May, 1883, I was asked to see a lady, 46 years of age, who had come home from one of our distant colonies in a state of complete collapse. She was a woman of very energetic temperament, and the mother of a large family. Her state of exhaustion and cachexia was so great that she could not walk across the room. She had been carried on to the ship and off it on a litter, and a consultation of the best colonial medical men had resulted in the opinion, which her wasted and cachectic condition easily accounted for, that she was the subject of malignant visceral disease. This state had existed for three years, and was progressively increasing. The patient came under my care not with any idea that she was suffering from a neurosis, but as one dying from cancer. Not finding any evidence of this, I treated her as suffering from neurasthenia, and in two months she was a strong healthy woman, up to any exertion, and she soon returned home. Some months ago, I gave some friends who were travelling round the world a letter of introduction to her husband, and last week I had a letter from them, telling me of the hospitable reception they had met with, of my patient's continued good health, and of the amount of work she was able to do in the supervision of a large family and establishment.

No. 2 may be taken as one of the most common, and most readily curable, of all types of neurotic disease. A young lady, aged 17, broke down from overwork at school, then came complete anorexia, failing sight, arrested menstruation, excessive emaciation, cold and livid extremities, progressively increasing muscular debility, and inability to take any active part in the work of life. This girl was under my care three years ago, and has since remained as strong and well as any girl of her age need be.

3. I mention, as a curious example of one of the very few I have seen, of an intense neurosis in a man. This patient was first brought to me by my friend, Dr. Lauder Brunton, under whose care he was, and who correctly believed him to be suffering from a pure neurosis. This view, however, was not shared by all, since more than one of the many consultants who had seen him believed him to be the subject of "tubercular peritonitis." I thoroughly agreed with Dr. Brunton's view, but I declined to take charge of the case, as I had no proper machinery for undertaking the treatment of a male patient, and did not particularly care to do so. Later, Dr. Brunton again spoke to me on the matter, and I agreed to see if anything could be done, especially as the case interested me much.

This patient's illness had commenced five or six years previously, when much exposed, ranching in America. He was now 33 years of age, a very tall man, and once very strong and muscular. This is his own account of his illness, written in September, 1883. "About five or six years ago, I began to suffer greatly from indigestion, which reduced my strength very much, and brought on a very severe pain in the right side of the stomach from back to front, which all the doctors seem to agree to be neuralgia. I have the pain daily, almost hourly, and at times it amounts to intolerable agony. I suddenly collapsed about a year ago, and was in bed most of last year. I have now got into a regular weak state, get very bad nights' rest, can take next to no food, and very often bring up what I do take. I am simply devoid of muscle, and am nothing but skin and bone. I weighed the other day 8 stone 5 lbs. (he was considerably over 6 feet in height); I consider my proper weight to be 12 stone 10 lbs."

It will suffice to say that, after a fortnight's treatment, this patient was eating an amount of food that was astounding, and ere long he sailed for a sea-voyage, with his proper weight regained. On December 13th, 1885, he wrote to me: "Since my return, I have been in perfect health, which continues up to the present date. In fact, I believe I am in better health than I have ever been in my life."

Note.—Since the above was written, I observe that Dr. Lauder Brunton has given an account of this case in his recently published work on *Disorders of the Digestive System*. Had I been aware of his intention, I should have selected another case, but I allow it to stand because it enables me to publish, through Dr. Brunton's kindness, the accompanying woodcuts, which he had prepared for his work. These, I think, will illustrate the nature of the case, and the results of systematic treatment, better than any amount of verbal description. They are taken from photographs supplied to Dr. Brunton by the patient.

Now, these are examples of some of the cases, although many other varieties exist, such as the spinal neurasthenia of Erb, simulating sclerosis, which are called, rightly or wrongly, "neurasthenia," and they are very different indeed from the picture of a merely nervous person, which Sir Andrew draws. That they have been, as he maintains, "more or less fully recognised and described by every competent observer and writer from the time of Cheyne and Whyle until now," is a statement, I say it with all respect, which will not bear investigation. More or less vague descriptions which can be twisted into a recognition of "neurasthenia," may doubtless be found in various little known books or monographs, but no clear or intelligent description of the disease. It is admirably and fully described in such special works as Ross's *Diseases of the Nervous System*; but that, and others, have been written since Weir Mitchell, Erb, and others have drawn attention to the subject. Even our most recent books, such as Quain's *Dictionary of Medicine*, and the very elaborate systematic treatise of my late lamented friend, Dr. Hilton Fagge, contain no description of disease of this class, except a short paragraph in the latter, devoted to the spinal neurasthenia of Erb. Had it been well known, Dr. Clifford Allbutt's excellent lectures on visceral neu-

roses would not have come as a revelation to so many; had it been fully known to the profession, it would not have been possible for two out of the three cases I have mentioned to have been wrongly diagnosed as tubercular peritonitis and malignant disease; above all, it is fair to ask the pertinent question: if cases of this kind are already sufficiently understood, how does it happen that all these cases, like almost every one of the same type, were able to point to a whole phalanx of doctors, under whose care they had been, without any material benefit, the cases immediately recovering, and since remaining in perfect health, as soon as the theory that they were "neurasthenic" was fully recognised and acted on? The truth is that it is only of late years that cases of this type are being estimated at their proper value, and that it is beginning to be understood that these helpless cases of chronic invalidism need not be given up in despair, and consigned to life-long illness. No doubt much has yet to be learnt about them, many errors will be committed in their treatment, possibly many failures will occur; but if they only secure the earnest and patient study of the profession, time and experience will surely overcome the difficulties that have to be faced. If we remember the history of ovariotomy, and many analogous instances with regard to comparatively new things in medicine, we need not be surprised even at opposition, or at some misrepresentation and prejudice. Time, which tests the value of all things, may safely be left to deal with obstacles such as these.



Fig. 1.—Patient at commencement of treatment.



Fig. 2. Patient after six weeks' treatment.

I purposely refrain from entering on the question of the treatment of such cases, of which I have elsewhere written. I need only say on this point that I know of no class of disease more certainly amenable to proper systematic efforts at cure than this. This is certainly not the view generally adopted. The tendency of the advanced medicine of the present day is, unfortunately, to overlook cure in the zeal for accurate diagnosis and correct pathology, forgetting that patients come to us, not to be "diagnosed," but to be relieved of their sufferings. The history of most of these cases is, that they have all been most correctly recognised as victims of neurosis; and then the medical man has washed his hands of the case, or, at most, contents himself with vague general advice and small doses of tincture of nux vomica. Even my friend Dr. Clifford Allbutt, in his admirable lectures on *Visceral Neuroses*, has not kept himself free from this error; for, while he gives us so much valuable information as to the cause and effects of the neuroses of which he treats, he is almost totally silent as to their cure. Doubtless, in the management of these cases, infinite tact, unwearied patience, and unruffled temper are required; but the results are so satisfactory both to the patient and practitioner, that no pains expended in this way can be deemed excessive.

TWO CASES OF NON-DIABETIC ACETONURIA.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Brighton.

By T. CHURTON, M.D.,

Physician to the Leeds Infirmary; Lecturer on Medicine in the Yorkshire College.

NOTHING seems to be known concerning the presence of (?) ethyl-diacetate (formerly supposed to be acetone) in the urine, except as occurring in the later stages of diabetes mellitus. In fact, there is no record, so far as I know, of this body having been observed to exist in non-diabetic urine.[1] Hence, the following cases, which, curiously enough, came under observation in the same month, appear to be worthy of mention.

CASE I.—On April 10th, 1886, Mr. Drake, of Leeds, kindly asked me to see a lady, aged 54, who was vomiting, almost immediately, nearly everything she ate or drank. The patient was well formed, but rather fat; she had clear brown eyes, and a pleasant expression; her face was moderately coloured, chiefly by minute veins. No signs of disease in the larger nervous centres, in the uterus, or in the ovaries, could be discovered. There was no pain, either constant or paroxysmal; but some hyperæsthesia of the skin over the upper part of the abdomen, more marked on the right of the middle line. Both skin and urine were slightly tinged with bile. The vomit deposited much dark green bile mixed with some mucus. The liver was not enlarged; the gall-bladder could not be found; a dull area of irregular shape, nearly in its position when distended, disappeared after an enema. The tongue was only slightly furred. The breath had a distinct trace of the sweetish odour which is observed in some diabetic patients; no sugar was found in the urine, but "acetone" was very readily shown to be present, both by tincture of iron, and by Nobel's sodium nitro-prusside and ammonia test. The specific gravity was 1020; the quantity was now small; it had never been abnormally large. The urine, both in this case and in those which follow, was tested upon many occasions not only by myself, but by the resident medical officer of the Leeds Infirmary, Dr. Griffith, and afterwards by my clinical clerks and others. It was examined daily during the progress of the case, and gave always the same reactions. The lungs, heart, kidneys, and skin were normal; temperature not high; pulse regular, soft. The patient's history was as follows. She had been married, and had several grown-up children, who were not very robust. Her husband died some years ago. She had never been very strong; had suffered from dyspepsia and occasional vomiting for many years. Last December, after nursing a sick daughter for some weeks, she felt generally unwell. On February 26th, at 3 P.M., very severe pain came on quite suddenly in the epigastrium and right hypochondrium; the pain was constant. The regions indicated were very sensitive; she could not bear a touch upon them. Hot fomentations relieved the pain to some extent. At 5 P.M., vomiting commenced; there was much bile in the vomit. On the next day the pain became less about 7 A.M., but she was found to be jaundiced on that day, and remained so for four or five days. The pain gradually, she said, died away. She got up after a week, and the vomiting returned. On the ninth day after this attack, the pain again came in the same position, and continued for three or four days; jaundice also followed quickly; both pain and jaundice subsided gradually as before. Since that time there had been no pain, except after the effort of vomiting, and no very marked yellowness of skin. The urine, however, had occasionally been of a deep tinge, possibly bilious. Three weeks ago the vomiting was unfrequent, not more than once daily; six weeks ago, she had days without any vomiting at all; now it occurred almost instantly after food, and frequently without taking any food. There had never been any symptoms of intestinal obstruction. The vomit now appeared to be composed of food, water, mucus, and bile; no acetone and no sarcinæ were found in it. Although the vomiting had thus been going on for six weeks, and had been constant after food for more than one week, the patient, though very willing to be quiet, could readily assume a smiling aspect, and did not seem very feeble.

The most probable diagnosis seemed to both Mr. Drake and myself

[1] Dr. Dreschfeld, in the Bradshawe Lecture (JOURNAL, August 21st, 1886, page 362), mentions cases recently observed by him, and refers to some cases published last year under the title of "Diacetonæmia," by several foreign authors, and by one English author (Dr. Windle).

to be that a gall-stone was impacted in the cystic duct, and that there was catarrh of the common duct resulting from the passage of former calculi; but neither of us had met with a case of persistent vomiting from this cause, unless either acute pain or a distension of the gall-bladder co-existed. Nevertheless, seeing that this patient had a tendency to vomit on slight causation, we should have advised an exploratory operation very speedily if we had not discovered the acetonuria. But the acetone (if I may be allowed to retain the term) seemed to indicate that there might be some affection of the nervous system resembling that of late diabetes, possibly splanchnic neuritis. Varied treatment during six days caused no improvement; an exploratory incision was, therefore, again discussed, and Mr. Mayo Robson was asked to see the patient with us. Although he shared our opinion that the signs were not such as to warrant a diagnosis of disease entirely remediable by operation, he was quite willing to explore the condition of the cystic duct, etc. The inability to promise certain relief caused some delay; next day the patient was weaker, and then it was thought she could not survive an operation; on the following day she died. It was, very unfortunately, impossible to obtain an examination.

Case II.—A few days after the termination of this case my colleague, Dr. Eddison, had under his care in the Leeds Infirmary a man, aged 52, with stricture of the œsophagus in its uppermost part. While examining the patient, at Dr. Eddison's request, as to his fitness for the operation of gastrostomy, the peculiar sweetish odour of the breath led me to test his urine for acetone (though acetonuria, I have since observed, does not always accompany this kind of breath, either in diabetic or in other patients.) The nitro-prusside and ammonia test developed within five minutes a fine red-violet colour. The urine was not otherwise remarkable, except that its colour was a rather deep red. It contained neither sugar, albumen, indican, nor bile; specific gravity, 1023. There was no history of former polyuria, thirst, or other special symptom of diabetes. Next day, the patient's urine gave a less perfect reaction with Nobel's test, a deep mahogany-red instead of the fine violet colour; with tincture of iron, blue purple streaks in a white cloudy precipitate appeared. The trachea was somewhat distorted to the left; a growth could be obscurely felt behind it; both pupils were contracted, but especially the right; the man was extremely emaciated and feeble, and had some signs of apical phthisis, and for these reasons Dr. Eddison had declined to advise an operation, which would clearly have been useless. The patient lived only a few days.

At the necropsy, a cancerous growth, two inches in length, was found in the œsophagus. The upper limit was an inch below the larynx. The growth had perforated the trachea; it had also extended laterally, and more on the right side, so as to involve the right sympathetic nerve, the lower half of the inferior cervical ganglion being lost in the cancer. The pneumogastric nerves coursed over the growth, unaffected. The left sympathetic nerve also could not be traced in the growth. Extremely complete and tough adhesions necessitated so much tearing in separating the lungs from the spinal column, that the splanchnic nerves could not be found, except near the solar ganglia. I made numerous sections of these nerves and ganglia, but discovered no distinct evidence of disease in them; nor was there any apparent change in the cervical sympathetic nerves above the cancer. But the probability of the connection between the gross condition of the nerve and the disorder of the liver, resulting in acetonuria, is obvious.

I had previously, and have since, examined very many specimens of urine from patients with various diseases, but have not found acetone in any of them, except in a case of diabetes. The tincture of iron gave, in some cases, merely a brown coloration; in others, a white cloudy precipitate, a brown precipitate, or, if bile were present, a green precipitate. In all these specimens, Nobel's test caused no striking colour-change. In the case of diabetes, which was in other respects remarkable, much sugar was also present in the urine.

The patient, admitted in February last, was a married woman, aged 24, who had probably had the disease for three years. Her husband was out of work three years ago; she was pregnant at the time, and fretted on this account much and long. Married at 18, she had had three children; two are dead—one of fits, at the age of 3 days; the other of "consumption," at the age of 15 months. In addition to abundant sugar (2000 to 5000 grains daily), urea (1000 to 2500 grains daily) and acetone, there was a variable quantity of albumen in the urine, sometimes only a trace.

She was at once put upon the strictest diet, and the urine was tested daily. The drugs employed at various times were steel, codeia, and salicylate of sodium. To our surprise, no permanent change of any kind, either for better or for worse, occurred in the urine. The quantity, 100 to 170 ounces (occasionally 200 to 250) daily; the specific gravity, 1030 to 1035; the large quantity of sugar and of urea, though varying markedly, kept within the same limits. Acetone was constantly present; nevertheless, she gained in weight during a month's treatment, and, on the whole, improved in appearance generally. It was then discovered that she had been supplied with a quantity of confectionery at frequent intervals. The supplies were stopped; she then improved in every particular, and left the hospital, promising to return if necessary. The presence of acetone (?) is, therefore, not necessarily a quickly fatal sign. (I have just heard that this woman died on August 3rd, after being confined to bed for seven weeks.)

Acetone was not found in the vomit from the first patient, though much bile was contained in it. The acetone was not formed, therefore, in the stomach or in the duodenum. The chief fact in the cases first related is the occurrence of acetone in the blood without symptoms or signs of excess of sugar in it, either then or previously. It is for the future to discover what special disturbance of the nervous relations of the liver-cell causes this alteration in its mode of life and its manufactured products. Since there are cases of diabetes in which acetonæmia never occurs, and, as it seems, acetonæmia may occur without diabetes, it may be inferred that the variety, if not the species or kind of nervous disease which produces the hurried formation and casting out of sugar by the liver-cell, differs from that which causes the cell to construct acetone, and that the two varieties of disease may exist either together or separately.

It may evidently become a practical question—does the presence of acetonuria imply that the case is not one proper for an exploratory operation (if, for instance, the impaction of a gall-stone in the cystic duct be on other grounds suspected); or may a mere reflex irritation, such as that indicated, and possibly removable by an operation, cause acetonæmia as a temporary and curable disorder? It seems to me that Dr. Ord's paper and cases permit us to infer that such an irritant may have, among others, this effect.

ŒDEMATOUS LARYNGITIS: TRACHEOTOMY; GLOSSITIS TERMINATING IN ABSCESS; SEVERE HÆMORRHAGE FROM TONGUE: RECOVERY.

Read before the October General Meeting in Belfast of the North of Ireland Branch of the British Medical Association.

By D. H. CHARLES, M.D.

Upon February 18th, 1884, I was asked by my father, Dr. D. H. Charles, to see Robert S., a farmer, aged 44, who had been suffering for two days from acute laryngitis.

The patient was a strong, healthy man, who had never had any serious illness; but whose strength was, perhaps, reduced at the time of illness from over-work.

About one month previous to his present illness, he had an attack of what he called "sore-throat," brought on from the effects of a chill. He suffered then from shivering, slight fever, cough, hoarseness, and slight difficulty in swallowing. In a few days the symptoms passed away, but returned very soon again as a result of the patient having "caught fresh cold." For three weeks, he suffered more or less with his throat, but continued to do his work as usual. On the evening before the present attack, he was out late, and sat for several hours beside a large fire doing some work; after which he walked home, the night being cold and frosty. Next morning, although it was bitterly cold, he went out early to plough in his farm; but had not been long at work, when he was suddenly seized with great difficulty of breathing, or, as he put it, "he felt as if being choked or suffocated." After much trouble, he succeeded in reaching home, and immediately sent for my father, who found him in much distress, suffering from pain in the larynx and from dyspnœa. Soothing medicated inhalations were ordered by him, diaphoretics, and a purge prescribed; and a blister, as well as a hot compress, applied over the larynx.

When I first saw the patient, his condition was the following. The respiration was laboured and difficult, inspiration being accompanied by a whistling sound; the voice was hoarse, husky, and at times lost; there was frequent rasping cough; and the face was dusky, and the lips livid. He suffered from laryngeal pain, and from occasional attacks of acute dyspnœa—the latter being always induced by attempts at deglutition. The soft palate was inflamed, and the tonsils slightly swollen. By means of the laryngoscope, which I used with difficulty, I found the epiglottis very much thickened, and of a deep red colour; the false cords were also swollen and inflamed, and quite hid the true cords from view. I at once swabbed all the affected parts with a solution of nitrate of silver (one drachm to the ounce), which gave the

patient great and almost immediate relief. In fact, he spoke fairly well a short time after.

Ten hours later, we were summoned to our patient, whose condition had suddenly become worse, the risk of suffocation being imminent. Accordingly, we went provided with a tracheotomy-case, and arrived about midnight. On our arrival, we found him almost completely asphyxiated. The epiglottis had much increased in size, and was fixed and erect; while the mucous membrane covering it and the neighbouring parts was bright red in colour, and also much swollen. The superior opening of the larynx was quite closed, there being a little frothy mucus between the false cords; there was also great retraction of the sternum, and the inspiratory murmur could not be made out; pulse 130 to 140, small and feeble. In fact, our patient was now suffering from acute œdema glottidis, and demanded immediate relief. Laryngo-tracheotomy was therefore immediately decided upon, and at once proceeded with, no chloroform being administered. The conditions were decidedly unfavourable, as the bed on which the patient was lying could not be moved into a more convenient position, and, the skin of the neck having been recently blistered, could not easily be retained in a fixed position, but slipped under the fingers. The cricoid cartilage, and, I think, probably also the first ring of the trachea, were cut through; previous to which there was some troublesome hæmorrhage. There was a good deal of difficulty in introducing the tube through the opening, as the patient was struggling and gasping violently for air, which, of course, caused free jerking of the larynx up and down. As soon, however, as the tube was introduced, immediate relief of all alarming symptoms was obtained. The tube was next covered with a layer of carbolised tow, and steam was ordered to be kept going all night. Before we left, our patient was quite easy, his respiration being almost normal; the pulse also having fallen to 80.

Next morning (February 19th), the patient respired easily; but he could not swallow nor speak, owing to great swelling of the tongue, which organ quite filled the cavity of the mouth and projected between the teeth, and was tender and purplish red. Owing to this, the patient had to be fed through a small elastic tube, that was with difficulty introduced into the pharynx. Two incisions were then made into the tongue to relieve tension.

February 20th. Pulse 92; respiration good, the patient breathing easily through the tube, as well as through the nostrils when the tube is closed. The tongue is still greatly enlarged—indeed, more so than before; and the right side of the neck from the ear to the clavicle is swollen and tender. The bowels were opened yesterday, but he has not slept for the last four days. The tongue was again incised on the right side, and about one fluid-ounce of blood removed; and half a grain of morphine was injected hypodermically. Milk-diet to be continued.

February 21st. Had a good night, and slept well. Swelling of tongue not so great. Pulse 100; respiration good. Gave another hypodermic injection of morphine.

February 22nd. Slept fairly during the night. Pulse 100; temperature 98°; respiration good; no cough; bowels confined; tongue same as yesterday. Able to take milk without the aid of the tube.

February 24th. Feeling well. Yesterday, at noon, the patient says, "his tongue burst," discharging a great quantity of stinking matter. The tongue now looks smaller, and the mouth and throat can be gargled. Bowels open yesterday. Slept badly; pulse 98. Removed the tubes from the trachea, but did not close the opening, simply covering it with a piece of cotton-wool.

February 26th. Doing well. Copious discharge of pus and grumous matter from the mouth and tracheal opening. Patient says he should have been choked, had it not been for the tracheal opening. Tongue much smaller, especially the right half. Coughs a good deal when he attempts to swallow; sleeps well. Pulse 84; bowels open this morning. Can breathe easily by the mouth when the tracheal opening is closed.

February 28th. Continues to progress favourably, but has had a slight attack of diarrhœa, and grumous matter and blood still continue to be discharged freely from the mouth. The tracheal opening is closing. The patient is very thirsty, is slightly hoarse, and has a troublesome cough. Pulse 64. Right tonsil large. Prescribed a mixture of tincture of perchloride of iron and glycerine.

February 29th. After my visit of yesterday, the patient had an attack of hæmorrhage from the mouth, which lasted for one hour; and, subsequently to this, he had five returns of the same. There has been no bleeding to-day, but much red grumous matter continues to escape. There is tenderness and swelling in the submaxillary and sublingual regions, as well as pain at the base of the tongue. He can now protrude the latter a little, as well as open his mouth slightly. The exact source of the hæmorrhage not being discoverable even after careful examination, the right side of the mouth below the tongue, and between it and the teeth, was stuffed with strips of lint soaked in solution of perchloride of iron.

March 1st. I was hurriedly summoned to my patient's side, sharp hæmorrhage having set in. I found him very weak, faint, and pale, and sitting up, as he said he could not breathe in the recumbent position. He had evidently lost a great quantity of blood, judging from the amount of it to be seen about. Pulse 46, feeble. On examination, blood could be seen welling up from a ragged-looking cavity in the right side of the root of the tongue. This cavity was accordingly swabbed out with tincture of pernitrate of iron, and stuffed with lint; and a mixture of iron, digitalis, and ergot was ordered.

March 2nd. No return of the hæmorrhage; slept well during the night; tongue smaller; no pain, and very little tenderness; tracheal opening almost closed. Renewed the plugs.

March 3rd. Had a good night; but there was a slight return of the bleeding this morning, and afterwards during the day. Pulse 104; feet and ankles swollen. Removed the plugs, which had a very fœtid odour.

March 4th. Another return of the hæmorrhage, but it did not last long.

March 5th. Much better; no hæmorrhage; found that the patient had got up and dressed himself, and gone down stairs. Pulse 84; copious discharge from the tongue.

March 6th. Had a return of the bleeding last night, and again this morning, the blood appearing to be arterial in its character. Patient complains of pain in the right ear, and of tenderness in the submaxillary region. The discharge from the tongue is very fœtid.

From this date my patient continued to improve, without any relapse, until complete convalescence was established. Up to the present he has enjoyed good health, his only complaint consisting of some difficulty in articulation, chiefly of the dentals, which, however, is growing less and less; and the right side of his tongue remains to the present date wasted and somewhat shrunken. Neither has he complete control over the organ, as he cannot hollow it out or protrude it very far, and, when protruded, it deviates towards the right side.

REMARKS.—There are many points of interest in the above case. I shall confine myself chiefly to the nature of the disease, the complications, and the present state of the patient.

First, that the case was one of contiguous œdematous laryngitis, according to Sestier's classification, seems to me most probable. An abscess at the root of the epiglottis might have given rise to many of the signs and symptoms; but a careful consideration of the progress of these tells against such an hypothesis, although Dr. Morell Mackenzie observes that it is very difficult to diagnose this affection with certainty. The patient is not very clear in giving the history of his illness; but there is no doubt as to the hoarseness and slight cough, and to the attacks of dyspnœa after swallowing. There was never any difficulty in deglutition, so that there could not have been much tonsillar or pharygeal trouble. Had he kept to his room for a few days, when he first complained, there would, in all probability, have been no further trouble; instead of this, however, he did his usual work, and, as the weather was severe, the disease progressed; the congested membrane became inflamed, and finally swollen with the inflammatory products. There was nothing to account for the dyspnœa, except obstruction at the larynx. The lungs and heart were healthy, while the laryngoscope showed a swollen glottis and epiglottis, both in a state of acute inflammation; and neither the tongue nor the tonsils were swollen; so that, beyond question, the larynx was alone at fault.

The application of the solution of nitrate of silver only gave temporary relief, and, in the end, an operation had to be done, in order to save the patient's life. That of laryngo-tracheotomy was the one chosen, both on account of its comparative ease of performance under the difficulties to be overcome in the case, and also to keep the incision as high up as possible. Some of these difficulties I have already referred to: the patient almost moribund in the convulsive stage of dyspnœa; the low-lying fixed bed, which made an assistant's help well-nigh impossible; and the feeble illumination of a small candle, unsteadily held by a little girl; and, although the hæmorrhage gave little trouble, there was considerable trouble and difficulty in introducing the tubes, partly the result of the patient's voluntary and involuntary struggles.

Secondly, the complication of inflammation of the tongue in this case is a very rare one. A point worthy of note is the acuteness of the attack. On the night of the operation, the tongue was of normal size; sixteen hours afterwards, it almost filled the mouth; and the only assignable cause of this enlargement appeared to be the extension of the disease from the epiglottis. The patient had not been taking

mercury, nor had the tongue been injured in any way. Neither Holmes, Erichsen, Bryant, Druitt, nor Keetley, makes any mention of this as a cause of glossitis; but Gross, in his *System of Surgery* (vol. ii, page 444), says: "Not unfrequently the organ (the tongue) suffers secondarily from extension of disease in the surrounding parts." The brunt of the inflammation evidently fell upon the epiglottis, in its extension inwards from the pharynx, and afterwards involved the tongue. While pure serum alone is found in the most acute cases, the effusion is most frequently semi-purulent; it may even be pure pus, or pus and blood. Although, as a sequel of this inflammation, circumscribed abscess is said never to occur (Mackenzie), yet, in the present case, the evidence is strongly in favour of the formation of such an abscess in the base of the tongue. Notwithstanding all our efforts—although I am sorry I did not make much more extensive incisions into the tongue—the inflammation of this organ soon terminated in suppuration, and an abscess formed in its base. I believe the right side alone was involved, as the pus all appeared to come from the right side, and the subsequent hæmorrhage from the same source. The right half, too, at present remains shrivelled and wasted.

As to the hæmorrhage, like all cases of severe hæmorrhage from the tongue, it was very troublesome, almost, as we have seen, bringing the case to a fatal termination. On one of my visits, indeed, I went prepared to tie the external carotid artery; but, I am glad to say, for my patient's sake, this *dernier ressort* had not to be put in practice.

Lastly, the present state of the tongue is interesting. Is the wasting and partial loss of power over the organ due to motor paralysis? or, is it simply the result of loss or degeneration of muscular tissue, and to adhesions formed at its root? I am inclined, on the whole, to regard the latter view as the more correct. There is, for example, a thick band to be felt along the right side of the root of the tongue, which is evidently caused by adhesion of the abscess walls to the surrounding connective tissue and investing mucous membrane. The improvement in articulation also is in favour of this view. At first the patient could not articulate his dentals; now he can do so quite easily.

In this disease, the prognosis must be regarded as extremely unfavourable. According to Sestier, the affection proved fatal in 158 out of 213 cases, notwithstanding the performance of tracheotomy on thirty occasions; and Bayle reports a mortality of 16 out of 17 cases. But, of the different varieties of œdematous laryngitis, that in which the disease begins in the pharynx, as it evidently did in the present one, and which I have accordingly named contiguous (after Sestier), is the least fatal, although it is said to be nearly always so if it spreads from the neck or chest.

CASE OF CEREBRAL ABSCESS WITH TYPHOID-LIKE RASH.

By WILLIAM BOULTING, L.R.C.P.L.,
Assistant-Physician to the North London Hospital for Consumption.

The following case is of interest because, in the absence of any reliable history, it at first appeared to be one of typhoid fever, and it illustrates the dangers of neglected otorrhœa.

R. B., female, 40, unmarried, was admitted to the Hampstead Home Hospital on June 6th. She was semi-conscious, and the only history obtainable was that she had for some weeks suffered from headache, which had got worse, and rendered her incapable of work. She kept calling out "Oh, my head," and localised the pains at the occiput. Her appearance was that of a typhoid patient. Temperature 102.8°, pulse 100, respiration 20. The pupils were contracted; she seemed scarcely able to open her eyelids. There were sordes on the lips and teeth; the tongue was red and tremulous; there was abdominal tenderness, most marked over the right iliac fossa. Several lenticular rose-coloured papules, fading on pressure, were seen on the abdomen. She was put on milk-diet, and an ice-bag was applied to the head; she complained of the pressure of the bag, especially on the right side.

June 7th. She was delirious during the night. There was a crop of herpes on the lips and nose. The following is a record of the temperature, pulse, and respiration during the day.

	Temperature.	Pulse.	Respiration.
4 A.M.	102.6°	104	17
8 A.M.	102.2°	103	16
12	101.8°	102	16
4 P.M.	102.5°	90	27
8 P.M.	103°	89	12
12	100.6°	86	12

June 8th. The spots had faded; there were two fresh ones. She moaned, and complained of pain in the head; she was delirious; she vomited slightly after the milk; she passed a motion after a gruel enema, partly solid, dark yellow.

	Temperature.	Pulse.	Respiration.
4 A.M.	101.2°	84	15
8 A.M.	101.1°	100	17
12	101°	103	20
4 P.M.	100.4° (after enema)	100	16
8 P.M.	101.6°	104	23
12	102 6°	110	18

June 9th. She was in the same condition; the spots were fading; there was slight external strabismus.

	Temperature.	Pulse.	Respiration.
4 A.M.	102°	104	22
8 A.M.	101.6°	100	17
12	102.2°	100	30
4 P.M.	104.6°	120	30
8 P.M.	104°	120	20
12	101.4°	98	22

June 10th. The pupils, hitherto contracted, were now dilated; there was marked external strabismus. Nothing was detected on ophthalmoscopic examination. Her face was flushed; breathing was stertorous, with working of the buccinators. She had a severe rigor at 5.30 A.M. She was occasionally slightly sick; sonorous *râles* were heard at both bases.

	Temperature.	Pulse.	Respiration.
4 A.M.	97°	96	22
8 A.M.	103°	108	44
12	102.8°	130	43
4 P.M.	102.4°	102	40
8 P.M.	100°	100	32
12	99.2°	100	32

June 11th. The patient had a rigor at 4 A.M. The left pupil was dilated at the visit. She passed urine under her. In the afternoon, the face twitched several times, and there were hiccough and much vomiting. There was another rigor at 8 P.M., lasting thirty-five minutes, during which the patient tried to rub her right ear. The pulse became very feeble, and the left pupil dilated. There was some ptosis of both eyelids, especially of the right. She seemed quite deaf, and insensitive to light. Owing to the patient's condition, it was impossible to examine the ear, but there was no discharge or odour. The brother informed me that he had heard she had suffered from discharge from the ear, and had been deaf of one ear—he could not tell which—for many years.

	Temperature.	Pulse.	Respiration.
4 A.M.	99° (rigor)	96	30
5.30 A.M.	102 8°	—	—
8 A.M.	102.6°	160	44
12	99.2° (enema)	115	35
4 P.M.	97.8°	92	32
8 P.M.	97° (severe rigor)	—	—
10 P.M.	102.6°	108	30
12	99°	100	35

June 12th. At 8 A.M., the temperature fell to 96.6°, but there was no rigor. On reapplying the ice-bag, there was a marked raising of the alæ of the nose and angles of the mouth. At 5 P.M., there was a slight rigor, with clonic convulsions of the right arm. At 6 P.M., the breathing became more laboured; there was cough, and cyanosis; the squint disappeared, and the right pupil again became contracted. The patient died at 6.45 P.M.

	Temperature.	Pulse.	Respiration.
2 A.M.	98.2°	88	26
4 A.M.	97.8°	—	—
8 A.M.	97.6°	100	32
12	98°	100	33
4 P.M.	102°	103	24
5.30 P.M.	105.4°	160	36
6 30 P.M.	101.8°	160	40

Necropsy.—The meningeal veins were very congested. There was slight bulging of the right parietal lobe. On removing the brain, about half an ounce of fœtid pus escaped from an opening corresponding to the superior surface of the petrous portion of the temporal bone. The dura mater here was softened and coated with pus. The abscess was situated in the temporo-sphenoidal lobe and partly in the parietal lobe, and contained another half-ounce of pus. It communicated with the descending cornu of the right ventricle, the choroid plexus of which was coated with lymph. The left ventricle was unusually full of fluid. The petrous portion of the temporal bone was

necrosed, and pus welled out of the section. The mischief clearly arose from the middle ear.

I am indebted to Mr. Bond, our resident physician at the North London Hospital for Consumption, for kindly offering his aid in the necropsy, of which I availed myself.

THE USE OF CUCAINE IN MAJOR OPERATIONS.

By A. W. MAYO ROBSON, F.R.C.S.Eng.,
Surgeon to the Leeds General Infirmary; Lecturer on Operative Surgery, Yorkshire College.

Although cucaine is in general use in minor surgery, its employment in major operations is still *sub judice*. I venture to think, therefore, that the following records of cases which have just occurred in my practice, may prove of interest. A middle-aged man was admitted into the Leeds General Infirmary, under my care, with an epithelioma about the size of a walnut, near the apex of the tongue on its right side. I advised removal by means of the galvano-écraseur, but as the patient objected to take ether, I decided to operate under cucaine, of which one grain, dissolved in ten drops of water, was injected deeply into the tongue beyond the tumour, the needle of the syringe being pushed up to the hilt, and the fluid expelled in several places as the point was withdrawn. After ten minutes, he assisted by projecting his tongue to its utmost, when I pushed two harelip pins through, crosswise, beyond the tumour, the loop of the écraseur being placed beyond them. The included part was removed without difficulty and absolutely without pain; in fact, he exclaimed at the end of the operation, as well as he could with the portion of tongue remaining, "That is up to the mark." He made a good recovery.

The next case is that of a gentleman, aged 26, sent to me by his physician for the purpose of having a very large varicocele excised. He being desirous to do without ether, I injected a grain of cucaine as in the last case, by one puncture just beneath the skin where the incision was to be. After ten minutes, I made the incision, applied a double ligature to the varicocele, excised an inch and an half, and inserted a single suture in the skin, the whole operation occupying above five minutes. He said he felt no pain, and only a slight sensation when the scissors divided the veins. Healing occurred by first intention, and he was out on the ninth day.

Until I used cucaine in the above cases, I had only employed it in small operations, such as amputation of digits, removal of ingrowing toenail, circumcision, removal of needles from the hand, etc., and in all such cases, I have found it to act much better if, immediately after injecting, a tourniquet was applied to prevent the circulation carrying the drug away from the part to be operated on.

As hydrochlorate of cucaine is very soluble in water, I find it most convenient to carry it in half-grain or one-grain powders, which can be dissolved immediately before use. Only twice have I seen any unpleasant effect follow its employment; once in a circumcision in an adult, when a one-grain injection was followed by faintness and dizziness, which lasted for an hour and a half. Again, in the case of a middle-aged gentleman, who became partly aphasic and unable to write, half an hour after a grain had been syringed into the roof of the nose for the purpose of anæsthetising before removing a nasal polypus. His symptoms lasted four hours, after which he was perfectly well. Query, could the anæsthetic effect have extended to Broca's convolution?

IS GOÎTRE HEREDITARY?

By ALLEN THOMSON SLOAN, M.D.Edin.

Whatever may be the primary source of goitre, there is every reason for supposing that, once established, it is often continued in families by inheritance, or, at least, in this manner a strong predisposition to the disease is acquired. The question whether the malady is hereditary or not has given rise to much discussion; and not a few writers, including St. Lager, dispute the fact (*Du Crétinisme*, p. 108). His arguments, however, are by no means convincing, and simply confirm the typically "endemic" nature of the disorder, without in the least degree proving that a disease, which is endemic, cannot at the same time be hereditary.

That heredity plays an important part in the production of goître, a study of my cases clearly shows; thus, of twelve cases collected by me, at Wishaw, Lanarkshire, eight show distinct heredity. In six, the mother and grandmother both suffered from goître; while, of the remaining two, one had a cousin affected with the disease, while the other's mother died of the exophthalmic variety. It is interesting to note this case; the mother for years subject to exophthalmic goître, and the daughter, a strong, healthy girl, now with the ordinary form of bronchocele.

Of eighteen cases collected at Penrith, Cumberland, ten are distinctly hereditary; in eight the mother being affected, in two the father suffering from goître. In one case, grandfather, mother, and aunt were afflicted with the disease; in another, it revealed itself in grandmother, mother, and aunt; while a third was congenital, the mother also being goîtrous. No less than five cases instance the occurrence of the affection in members of the same family, those affected being sisters. Some of these had lived for a long time in different parts of the country. Dr. Crawford mentions the case of a woman with goître, whose grandmother, father, paternal aunt, and cousins, also had it, although they did not all live in the same place, and no other person in their neighbourhood was affected with the disease. (*Cyclop. of Prac. Med.*, p. 335.)

The disease is not only hereditary, but may even be sometimes congenital. In one of my own cases the goître has existed from birth, and recently I had notes sent me of two cases of congenital bronchocele, where the mother also was affected. Dr. Keiller records an instance where he delivered "a Mrs. K, aged 24, of her first baby, which, with the exception of a very large goîtrous tumour, was a remarkably fine male infant. Mrs. K. was brought up in Cumberland, her mother being a native of Keswick. None of her immediate relations had goître." (*Edin. Med. Journal*, 1855.) Dr. James Reid has seen three infants who had the thyroid tumour fully developed; and Foderé thinks he observed a distinct goître in three cases of newly-born children (*Edin. Med. Journal*, 1836, p. 49.) M. Godelle, physician to the hospital at Soissons, had a preparation of the body of an infant, which lived a few hours only, and which came into the world with a goître, the mother being affected with the same disease. Mr. Bramley affirms that in India both children and animals are born with it; and cases of congenital goître have been recorded in Derbyshire. I think the facts just mentioned go to prove that goître is really a hereditary disease.

OBSTETRIC MEMORANDA.

PROTRACTED PREGNANCY.

There are two cases which have lately occurred in my practice, which are rather interesting, and which show the unusual length of time that gestation may sometimes reach.

Case I.—A married woman had her last menstruation during her late pregnancy on August 6th, 1885; the child was born on July 6th, 1886. Three or four days after the cessation of the menses, she had an idea that she was pregnant, as she was sick every evening. This symptom continued up to the third month. About September 25th, she noticed a slight discharge, which continued for three or four days, and only during the mornings. She quickened on December 8th. On May 8th, she had regular labour-pains, which at first came on about once a week or fortnight, but latterly every two or three days. In the beginning of June, she was very poorly, and after this she became rather alarmed at her confinement not having taken place; and having consulted me with regard to her state, I advised comparative quiet, and occasional doses of castor-oil. There was nothing unusual about the labour when it took place; it was of rather short duration. The child (female) was large, and I should say, about the average weight. The patient made a good recovery. This case is, I think, one of the longest on record. From August 6th, 1885, the date of the last menstrual period, to May 8th, 1886, the date of the first symptom of labour, an interval of 273 days took place. From August 6th, 1885, to July 6th, 1886, the date of confinement, an interval of 334 days took place. Of the length of the gestation there could be no doubt, and for the two following reasons: 1, the evening sickness coming on three or four days after the cessation of the last menstrual period; 2, the quickening taking place in the fourth month.

The above case will answer Mr. Woollitt's question (*vide* Journal, October 2nd, page 662) in the affirmative.

Case II.—A single girl stated that she had only had a single intercourse with a man, which took place on November 23rd, 1885. Labour commenced on September 15th, 1886. The child (male) was born on September 19th, which would be ten calendar months except four days; in other words, 42 weeks and 6 days, or 300 days, from the coitus to the birth of the child, or 296 days to the commencement of labour. This child likewise was large. This case is three days longer to the commencement of labour than that reported by Dr. Reid

after a single intercourse (*vide* Taylor's *Medical Jurisprudence*, p. 610), but one day shorter than M. Devilleire, and nine less than the case reported in the *Amer. Jour. Med. Sci.* (*vide* Taylor, p. 611).

ROBERT MCBRIDE, M.B., L.&L.M.R.C.S.Ph., Gilford.

ON A MEANS OF RECOGNISING THAT THE UMBILICAL CORD IS ROUND THE NECK OF THE CHILD.

IN nearly all the cases of this occurrence I have come across, the mother has cried out, much the same as she would in the early part of the first stage of labour, and complained of sharp acute pain, which stands out in curious contrast with the bearing-down of the latter part of the second stage of labour (when the head is on the perinæum), at which it is obscured. I have very rarely noticed this cry when the cord was not round the neck of the child.

London. F. R. HUMPHREYS, L.R.C.P., etc.

SURGICAL MEMORANDA.

DISLOCATION OF THE HUMERUS REDUCED BY RIGHT ANGLE TRACTION.

IN concluding a very practical paper on "a new, easy, rapid, and painless method of reduction of dislocations of the shoulder without an anæsthetic," which appeared in the BRITISH MEDICAL JOURNAL of January 30th, 1886, p. 194, the author, Dr. Neil Macleod, expressed a hope that surgeons who may try the method described therein will be good enough to intimate their results; acting upon his suggestion, therefore, I beg to give the following notes of a case I have recently treated in accordance with the procedure he has recommended.

The patient, a strong, able-bodied seaman, aged 24, was employed on July 7th in whitewashing the hold of H.M.S. *Vivid*. He was standing close to an open hatchway, with his elbow resting on the coaming, and in this position received a violent blow on the left shoulder from the buttocks of a falling comrade who had slipped his footing while descending a ladder above. The patient was dashed to the flooring by the shock, but his mate escaped unhurt.

Shortly after the accident, he was brought on board H.M.S. *Royal Adelaide*, when he was found to have sustained a sub-glenoid dislocation of the left humerus. The absence of swelling, the dislocation being so recent, caused the features of the accident to be well marked, and the head of the humerus was plainly felt in the axilla.

As I had determined to put Dr. Macleod's plan into operation on the first opportunity offered me, I at once laid the patient flat on the deck, with the right arm extended and the legs slightly apart, and, seating myself at his left side, placed my left foot against the chest at the base of the axilla. I then grasped the affected arm immediately above the elbow with my right hand, raised it steadily on a plane with, and at right angles to, the trunk, making very gentle traction, and, at the same time, stooping over and steadying the shoulder above with my left hand. Almost immediately, without any exertion on my part, or the infliction apparently of any pain to the patient, the head of the bone returned to its normal position, audibly certainly, but without the startling snap I have previously elicited when reducing such dislocations with the heel in the axilla and without chloroform.

Of myself, my colleague, or the patient, I can scarcely say which was most pleased or surprised at the simplicity and rapidity of the proceeding. The last-named amused us somewhat by calling out at the instant the head of the bone passed to its place, "All right, sir; please may I go back to my ship?" He had clearly felt no pain during the reduction, which as certainly had not occupied more than three seconds in its completion.

I need scarcely say that the absence of any bruising of the tissues by knee, heel, or towel is another important recommendation for Dr. Macleod's manœuvre. WILLIAM DIGBY LONGFIELD,

Fleet-Surgeon H.M.S. *Royal Adelaide*.

CLINICAL MEMORANDA.

ACUTE PNEUMONIA *IN UTERO*.

I AM not aware whether the following case is the first recorded. I have been unable to find any account of a similar one, but whether that be so or not, it seems to me of great interest, and worthy of being placed on record.

A patient, Nancy M., was admitted into the hospital under my care in December last, suffering from acute pneumonia (whole of left lung), and a history of illness covering the four days previous to admission. She was eight months pregnant.

On the evening of the day of admission, her temperature was 103.6° Fahr., and she was delivered of a female infant. The infant died in less than twenty-four hours after birth, with symptoms of acute pneumonia. A *post mortem* examination showed acute pneumonic consolidation of the whole of the left lung. The mother made a rapid and good recovery.

Whilst there is ample evidence that the other acute specific diseases (so-called "fevers") are capable of being transmitted by the pregnant woman to her offspring yet *in utero*, this is the first time I have had any evidence that the "acute pneumonic fever" could also be so transmitted. HENRY STRACHAN,

Public Hospital, Kingston, Jamaica.

REPORTS

OF

HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

BRISTOL GENERAL HOSPITAL.

NEPHROLITHOTOMY: RECOVERY IN EIGHT DAYS.

(By CHARLES F. PICKERING, F.R.C.S.)

T. B., aged 23, a railway porter, was admitted on February 3rd, 1886. He had been previously in the hospital, in 1869, under the care of Mr. Coe, who at that time diagnosed stone in the kidney. In 1885 he consulted Mr. Coë, at his house, who again told him he had stone in the kidney, and advised him to obtain admission into the hospital.

The history of his illness was, that from 1869 to 1877 he had suffered more or less pain in the right loin, and occasionally passed "sand" in his water. From 1877 to 1879 he enjoyed fairly good health. In 1879 he had an attack of rheumatic fever, and in 1880 had inflammation of the lungs, and was unable to work for nine months. After this, when he returned to work, he again began to feel the pain in his right loin. At first it was comparatively slight and unfrequent, but became gradually worse, until he was seldom free from it night or day. It was also much increased by the shaking of his cart when driving. He often suffered from sickness and vomiting.

In April, 1883, he had a very severe attack of vomiting, which compelled him to take to his bed. After this attack his urine was "very dark coloured." He returned to work in May, 1883, but still suffered continuously from pain in his loin, with occasional attacks of sickness. His general health now became much impaired. In July, 1884, he had an attack of hæmaturia, which lasted seven days; he was under medical care during this attack, and kept his bed until the end of August, as the loss of blood had weakened him. Although he was now able to do some work, pain and attacks of sickness continued as before until his admission to the hospital.

He was a weakly anæmic-looking man. He complained of constant pain in the right loin, occasionally shooting down to the testis. The right lumbar region was tender on pressure, and pain was produced when the kidney was squeezed between the two hands. Nothing abnormal could be felt in this region, except that the muscles were more rigid on this side than on the other. The patient's grandfather had suffered from gout.

The urine was examined daily for one month. It was always acid, and always contained a small quantity of pus, which could only be seen under the microscope. A small amount of albumen was constantly present. The specific gravity ranged from 1015 to 1036, but was generally about 1030. No sugar or blood was ever found; sometimes crystals of oxalate of lime, and at others, uric acid were discovered. During this month he had two attacks of severe pain and sickness, for which he remained in bed, but for the most part he was up and walking about. He took ordinary diet, although his appetite was poor.

Mr. Pickering entertained no doubt that the patient was suffering from renal calculus, but before deciding to operate, he tried the experiment of making the patient jump from a chair, thinking it might bring about some appearance of blood in his urine, and thus make the diagnosis more certain. As this exercise caused great pain and a feel-

ing of faintness, it was not continued after the third time of jumping; no blood was found in the urine afterwards.

Nephrolithotomy was performed on March 4th by the usual lumbar incision. In exploring the kidney with the finger, Mr. Pickering felt a hardened spot towards the pelvis, and with the needle the stone was soon felt. The capsule of the kidney was incised with the scalpel, and a pair of dressing-forceps having been thrust down on to the stone, the kidney-structure was torn open. The stone was now easily extracted. No other stone could be felt in the pelvis of the kidney. A drainage-tube was placed in the external wound, which was sewn up. The operation was performed under strict antiseptic precautions.

The patient suffered a good deal from shock, and slept badly on account of the pain during the night.

March 5th. The dressings were changed, the oozing of the discharge being very free. During the night twenty fluid ounces of bloody urine were passed, and at noon six ounces of urine were drawn off with the catheter, as he could not pass it spontaneously. At 8 P.M., he passed eight ounces without the use of the catheter. The temperature in the morning was 98.2°; in the evening the temperature was 101°, and the pulse 102.

March 6th. He passed urine three times, twenty-six fluid ounces in all, containing much blood.

March 7th. The dressings were changed. The wound had healed by primary union. Three stitches and the drainage-tube were removed, as there was hardly any discharge. Twenty-six fluid ounces of urine were passed containing much blood, but on the following day the urine contained less blood.

On March 9th, the dressings were changed, and all the stitches removed. There was no discharge, and the wound was firmly healed. The urine was merely smoky.

On March 10th, there was no blood in the urine, but a small quantity of albumen was present.

On March 12th, the urine was perfectly healthy. All the dressings were left off, excepting a piece of wool, and a bandage to protect the scar.

The temperature and pulse after the first day after the operation were perfectly normal. The patient was kept in bed as a precautionary measure for three weeks. At the end of this time, he was discharged cured. The quantity of urine passed in twenty-four hours was now forty ounces.

The stone weighed 40 grains, and was about the size of a plum-stone, of triangular shape, and composed of uric acid.

REMARKS BY MR. PICKERING.—The rapid recovery of this case, although the pelvis of the kidney had been opened, shows that primary union may occur even under these circumstances. To be able to make a certain diagnosis is of the utmost importance in the treatment of these cases, and here the history spoke for itself. In the operation, I think a long needle of about twelve inches makes the most convenient searcher, with a mark three inches from its sharp end, to show how deep it has entered. A shorter needle is very inconvenient to use in so deep a wound. The kidney is best opened by thrusting the dressing-forceps along the needle as a guide on to the stone, and then opening them, and tearing a wound in the kidney as they are withdrawn.

REPEATED OPERATIONS IN MAMMARY CANCER.—Dr. Deaderick reports *(New York Medical Record)* the case of a lady on whom he operated in May, 1878, for infiltrating scirrhous cancer of the breast, with great enlargement of the axillary glands. Two months later a recurrent nodule in the scar was excised; further nodules were excised three months, five months, nine months, and one year respectively after the first operation. The patient, who was in an exhausted condition at the time of the operation, improved in general health for several years. No recurrence took place locally after the last operation, and the patient lived until August 9th, 1886, the cause of death being marasmus. Unfortunately, the microscopical characters of the tumour are not mentioned, so that no certainty can be felt that it was scirrhous cancer; as no necropsy seems to have been made, it is possible that the patient died of visceral recurrence.

OPIUM-GROWING IN THE UNITED STATES.—An experiment, recently made in Minnesota by Mr. Emil Heschke, has served to prove that *papaver somniferum* can be grown there to yield opium containing as much as 15 per cent. of morphine, which is 5 per cent. more than is contained in the opium directed to be used for the manufacture of the tincture and other officinal preparations by the *British Pharmacopœia*. In spite of this favourable result, the experimenter was not encouraged to believe that the cultivation of the poppy could be made a commercial success, and the experiment is not to be repeated.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 2ND, 1886.

J. SYER BRISTOWE, M.D., F.R.S., President, in the Chair.

Tubercular Disease of Suprarenal.—Dr. HARRINGTON SAINSBURY showed a specimen of tubercular disease of a suprarenal body from a patient suffering from lumbar abscess and wide-spread tubercular disease, associated with equally wide-spread amyloid degeneration. The case was contrasted with the fibro-caseous change of the suprarenals in Addison's disease, and the question was raised whether this latter change was primary or secondary. Secondary affections in general were to be considered as chance affections. If the bilateral suprarenal lesion of Addison's disease were tubercular and secondary, there should be a relatively vast majority of cases of unilateral secondary lesion such as that shown; a routine examination of the suprarenals would determine this point, and he would probably confirm the opinion that the lesion of Addison's disease was primary, and to be regarded as a system-disease.—Dr. KINGSTON FOWLER had removed suprarenal bodies, similarly affected, from the body of a woman, the subject of general tuberculosis. He had seen a considerable number of cases in which the suprarenal bodies were more or less completely invaded by tubercular or cancerous material without signs of Addison's disease, though he had never seen the true fibro-caseous change.—Dr. SIDNEY COUPLAND showed the suprarenal bodies (of a man, the subject of wide-spread tubercular disease of the urino-genital organs) which had undergone fibro-caseous degeneration. The bacillus tuberculosis had been found in four cases of true Addison's disease. The patient from whom the specimens shown were taken was cachetic and emaciated, but did not present symptoms of Addison's disease.—Dr. G. N. PITT referred to the occurrence of localised pigmentation in relation with degenerative changes in the sympathetic system secondary to vertebral disease.—DR. SAMUEL WILKS said that the opinion that the disease was primary, whether tubercular or not, constantly received further confirmation. In the majority of the cases the capsules alone were diseased, and it therefore seemed doubtful whether the disease was truly tubercular. In a few cases the degeneration was secondary to extension from the vertebræ, but, as a rule, as was to be expected on general pathological grounds, a secondary affection of the capsules did not produce Addison's disease.—Mr. D'ARCY POWER had recently examined the suprarenal bodies from two cases with symptoms of Addison's disease, in which the suprarenal capsules alone were affected, and in both the bacillus tuberculosis was found to be abundantly present.—Dr. HADDEN recalled that he had shown to the Society a specimen, from a case of Addison's disease, of fibroid degeneration of the suprarenal bodies without any caseous changes.—Dr. SAINSBURY replied.

Ascending Tract of Spinal Cord.—Dr. SHERRINGTON showed transverse sections of the spinal cord from the fœtus at the seventh and eighth months to demonstrate the presence of ascending tracts in the antero-lateral columns. The method of staining caused the fully-developed fibres to stain deep black, while the fibres in process of development were stained yellow. The specimens showed that besides the undeveloped pyramidal tracts there were two other areas of undeveloped fibres. One occupied the periphery of the antero-lateral columns (in the dorsal region), with the exception of the portion occupied by the direct cerebellar tract. This band of ill-developed fibres finally merged with the crossed pyramidal tract. The fibres attained their full development about the eighth month. The fibres could be traced upward from the second sacral nerve into the medulla oblongata in the region of the antero-lateral nucleus. He referred to Dr. Hadden's specimen of a tract of ascending degeneration in the periphery of the antero-lateral column, and pointed out that it probably coincided with the tract he had demonstrated. In the specimens shown there was a second tract, described by Lessar to undergo degeneration in certain cases of locomotor ataxy. This tract bordered anteriorly the entrance of the anterior roots; it could be traced up to the level of the decussation of the pyramids. In the dog after division of the posterior half of the cord, and a later complete division of the cord excepting the anterior part only, it was found that stimulation of, for instance, the sciatic nerve, caused a well marked sensory re-action evidenced by a rise of blood-pressure. This experiment was in favour of the view that there was a secondary tract in the peripheral and anterior portion of the antero-lateral column.—Dr. PITT had seen this first-named tract degenerated in two cases. Obersteiner had described this tract in his lectures as having been first observed by Dr. Gowers, and had proposed

to call it "Gower's tract."—Dr. HADDEN said that Dr. Bastian had first demonstrated the existence of a tract in this situation which underwent ascending degeneration.—Dr. ORMEROD spoke of the interest attaching to Dr. Sherrington's specimen as showing from anatomy the existence of the tracts first recognised by pathologists.—Dr. SHERRINGTON replied.

Synovial Tumours.—Mr. SIDNEY JONES showed a large tumour extending from above the annular ligament to the root of the middle finger, forefinger, and thumb, removed from the palm of a woman aged 25. It had existed for eleven years. The operation presented no difficulty. In structure, the tumour was a soft encapsuled fibroma. The pedicle of the tumour, which extended beyond the annular ligament, was crossed by large strands of nerves. The only disturbance of sensation was some numbness of the middle finger; the power of flexion was completely retained, and the hand was as useful as in health.—Mr. MAKINS showed some specimens from the museum of St. Thomas's Hospital of growths arising in connection with bursal cysts. In the first case, the growths were lipomata. The second specimen illustrated the formation of fibromata in tendon-sheaths. The third set of specimens were examples of fibromata attached to the outer surface of the tendon-sheath, and containing scattered myeloid cells. He also showed a specimen of numerous small papillary growths in a bursa, and referred to the occurrence of pedunculated cartilaginous growths in connection with tendon-sheaths.—Mr. BLAND SUTTON thought that the so-called tumours described as lipomata were merely hypertrophied villi which had become enlarged and pedunculated, and had then undergone fatty degeneration.—Mr. BUTLIN observed that if the strands described by Mr. Jones were really nerves, that would place the tumour in a different category.—After some remarks from Mr. ROGER WILLIAMS, Mr. SIDNEY JONES said the tumour commenced opposite the head of the metacarpal bone. Microscopical examination showed that the strands were undoubtedly nerves.

Hyoidal Cysts.—Mr. J. BLAND SUTTON described cases of cysts in the neighbourhood of the hyoid bone. The first patient was a man who presented a tumour the size of a large walnut, occupying the floor of the mouth, bulging forward in the middle line. During the nine years he had noticed it, he had submitted to seven operations. An anæsthetic was administered, and it was ascertained that the cyst lay between the two geniohyo-glossi muscles, and was so firmly attached to the hyoid bone, as to need a raspatory to detach it. It was full of sebaceous matter, and contained a few hairs. The walls were composed of dense tissue, lined with squamous epithelium and dotted with sebaceous glands. The second patient was a woman, aged 27; the cyst in her case also was dermoid, and contained sebaceous material. Mr. Butlin, in his work on the tongue, inferred that these cysts were very rare. He spoke of about twenty recorded cases, but it was not difficult to find three times this number, for the cases described as sebaceous cysts of the tongue were really of the same nature as dermoids. Sebaceous cysts arising in the tongue, like those occurring beneath the deep cervical fascia, differed from those arising as a result of obstruction to the duct of a sebaceous gland. In bronchial fissures incompletely obliterated, and in a persistent lingual duct, cavities lined with epithelium beset with sebaceous glands, which poured their secretion into the duct or persistent branchial space, existed. That many of the so-called ranulæ arose from the lingual duct, and persistent portions of bronchial fistulæ was beyond doubt. The lingual and thyroid ducts might be detected in 10 per cent. of all bodies examined, and the thyroid duct in 15 per cent. Streickeisen found the latter duct and accessory thyroid cysts in about 25 per cent., but this might be accounted for by the facts that he obtained his material from a goitrous district. Dr. Norman Moore had stated before the Society that accessory thyroids were very rare, but many cystic tumours described as arising in the thyroid body really originated in accessory thyroid bodies, and detached portions of the thyroid duct, and every transition might be traced from cysts lined with epithelium, and filled with mucus, to others containing papillary contents, of which a very beautiful example was exhibited last session by Mr. Bilton Pollard. The most aberrant examples and at the same time the most malignant forms, were such cysts as Mr. Treves had exhibited at the last meeting. Cysts in the neighbourhood of the hyoid bone might be compared with cysts found in the ovary and its neighbourhood, and might be arranged in the four following classes: 1. Cysts lined with epithelium, and filled with clear or mucoid fluid. 2. Cysts with papillary or villous processes projecting into their interiors. 3. Cysts with malignant carcinomatous growths sprouting from the walls. 4. Dermoid tumours.—Mr. BUTLIN pointed out that Mr. Sutton's explanation could not apply to those cysts which occurred between the mylohyoid and geniohyo-glossus muscles. Indeed, such cysts might be bilateral. He thought the malignant cysts recorded by Mr. Treves were best described in Mr. Treves' phrase, "cysts in the neighbourhood of the thyroid body."

Melanosis of Hard Palate.—Mr. TREVES showed a specimen of melanotic tumour removed from the hard palate of a woman, aged 58, who had, in consequence of the loss of most of her teeth, worn a clumsy false palate, which caused much pain at the front of the palate near the alveolus. After several years, a small red tumour appeared. When she came under treatment, about four months later, the tumour was found to be flat, covered by unchanged mucous membrane, and quite black; the portion of the hard palate bearing the tumour was excised. On section, the growth was black, and microscopical examination showed that it was a large spindle-celled sarcoma growing from the periosteum. In about a year, the woman returned with a melanotic ring around the right nostril, and an enormous secondary growth in the neck.—Mr. BOWLBY showed, for Mr. STEPHEN PAGET, two palatine tumours. The first was removed from the palate of a man, aged 60. The growth was easily shelled out, and was found to be a mixed-celled sarcoma. A second tumour, removed by Mr. T. Smith from a young woman, aged 20, had a hyaline matrix, with embryonic cells, beginning to be arranged in a tubular manner.

Acute Necrosis of Cervical Vertebræ.—The whole of the fourth cervical vertebra detached by acute necrosis was exhibited by Dr. Samuel West. The patient was a man aged 48, and no cause could be found for the onset of the disease. The patient was only ill for a short time, and the most prominent symptoms were those of spinal paralysis rapidly extending and ending in total paraplegia.

Card Specimens.—Mr. FENWICK: Calculus formed around an umbrella ring.—Mr. SHATTOCK: Parts six months after removal of ovary.—Mr. TARGETT: (1) Congenital tumour between rectum and sacrum. (2) Tumour removed from loin.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 1ST, 1886.

R. BRUDENELL CARTER, F.R.C.S., President, in the Chair.

GENERAL PRINCIPLES INVOLVED IN THE OPERATION OF REMOVAL OF THE UTERINE APPENDAGES.

MR. LAWSON TAIT read a paper on the general principles involved in the operation of removal of the uterine appendages, which will be found at p. 852.

Dr. HALLIDAY CROOM, of Edinburgh, while expressing his admiration for Mr. Tait's excellent paper, said he hoped that on some future occasion the author would favour them with a paper on the cases in which the operation should not be performed. He was of opinion that in the case of a growing fibroid, no matter at what age it occurred, an operation was justifiable. If performed early in the case, hysterectomy might be avoided. The same remark applied to suppuration and gonorrhœal inflammation. The difficulty arose when it became desirable to draw a line of demarcation. Mr. Tait had laid down a rule that where there was premenstrual pain, menorrhagia, and sterility, they might reasonably diagnose disease of the uterine appendages. If the uterus and ovaries were bound down by adhesions, the result of past inflammation, an operation might be right and proper; but where this was not the case, he thought the effect of other treatment should be tried first. He said that he had asked Mr. Tait where to draw the line, and Mr. Tait had replied that he left the patient to draw the line herself; but, for his own part, he did not think this was quite fair to the patient. One reason, possibly, why the operation was sometimes performed unnecessarily was, that men made the examination with one hand, instead of carrying out the method taught at Edinburgh, of the bimanual method of examination.

Mr. KNOWSLEY THORNTON said that he was prepared to agree with a great deal that had been said by Mr. Tait, but regretted that they had not heard more of the principles which were to have formed the subject of the paper. He disagreed entirely with Mr. Tait's assertion that removal of the Fallopian tubes was invariably followed by cessation of the menstrual flow. The evidence on this point was naturally scanty, but the little there was pointed the other way. He thought that Mr. Tait's suggestion to include all the various operations under the general term "removal of the uterine appendages" would only cause confusion. In reference to the sterility alleged by Mr. Tait to exist in 90 per cent. of the cases prior to operation, he thought the question was one requiring careful examination, and, in fact, he was disposed to doubt whether such was in reality the case. In his own experience, pyosalpinx was not necessarily a fatal disease, and he thought it rather odd that Mr. Tait, who asserted that it caused

sterility, should seek to prove his case by five cases from Queen Charlotte's Hospital, an institution not generally frequented by sterile women. The same observation applied to Mr. Tait's remarks about puerperal fever; this was another disease not commonly met with at the same time as sterility. As to the mortality of the operation not exceeding 2 per cent., he thought the statement absurd; it was, he said, probably nearer 20. The complete and certain cure in cases of myoma promised by Mr. Tait, as was well known, did not always take place; a certain proportion of the cases were failures. He agreed with Mr. Tait's remarks as to the difficulties of consultation. There were men in the profession who would listen to nothing in favour of the operation, and systematically rejected it. He did not hesitate to say that these men did a vast amount of harm.

Mr. C. E. JENNINGS said that it was obviously unfair to ask a patient's permission to remove her ovaries, since she could hardly be expected to know what the question meant.

Mr. ALBAN DORAN recalled the fact that, some years since, Dr. Fowler and others had exhibited large series of diseased tubes, the existence of which had given rise to definite symptoms. At that time, tubal disease was scarcely known; but since then it had been found to be quite common. He suggested that some day it might be possible to perform the operation at a much earlier stage, or even to liberate the tubes from obstruction, so as to avoid more radical measures which incapacitated a woman for the performance of so elevated a function as that of reproduction. A short time since he had shown two cases of papilloma of the interior of the tubes, and now possibly this also would be found to be common, and diagnosed and operated upon.

Dr. IMLACH said that cases which could not be diagnosed with one hand were not cases for operation. In proper cases for surgical interference, any attempt at a bimanual examination, as suggested by Dr. Croom, would be impossible on account of the pain, to say nothing of the danger attending such manipulations with a distended Fallopian tube or tubes. He agreed with Mr. Knowsley Thornton that ovaritis did not necessarily cause sterility. In pyosalpinx, an operation should always be performed; and even in hydrosalpinx, which was not necessarily fatal, the pain was generally such as to render the operation desirable.

Dr. HEYWOOD SMITH deplored the bitterness and jealousy which had been introduced into this subject. Leading articles in certain medical journals, written by men who had given scarcely any attention to the subject, were full of words which ought not to have been used. He said it was not usual to talk about an eye being gouged out, yet such an expression was fully as appropriate as spaying. Such words conveyed a wrong impression to the public, and a medical man had no right to use them in presence of patients. He did not advocate the removal of every enlarged ovary; the patient should certainly try the other methods of treatment first. It was impossible in these cases to lay down a line of conduct which should apply equally to the rich and the poor, since the latter could not afford the rest which formed so essential a feature in the treatment. He would go on his way, not caring what others said, so long as he felt he was engaged in honestly investigating the proper treatment of disease.

Dr. BANTOCK said he had long foreseen that, sooner or later, the sentimental aspect of the question would come to the front, and this had now come to pass. He doubted if the sexual appetite was impaired by the operation, though the disease for which it was performed might do so. He declined to admit that the operation was always one of necessity; it was not enough to say that the symptoms were relieved, but it was necessary to show that the result could not have been achieved by other means. He objected to Mr. Tait's maxim that, if in doubt, we were to open the abdomen.

Mr. LAWSON TAIT, in reply, thanked the Society for the kind attention with which his paper had been listened to. He absolutely and energetically denied ever having said such a thing as that alleged by Dr. Bantock; what he did say was, that if the symptoms were such as to render life a burden, and there was a doubt as to the diagnosis, then it was advisable to open the abdomen. He said Dr. Croom had often bullied him in public and in private for having abandoned the tradition of the Edinburgh school in respect of the bimanual examination, but it was of no use. In reference to Mr. Knowsley Thornton's remarks, he observed that disease of the tubes might be unilateral, in which case sterility would not follow. He did not wish to insist that removal of the tubes involved cessation of menstruation. Mr. Thornton had fallen into the vulgar error of confounding the mortality of an operator with the mortality of the operation, two entirely different things. Tabulated in that way, the mortality following ovariotomy was about 50 per cent. or more. The relief afforded in myoma was not always immediate, and it might be a year or two before the full benefit of the operation would be noticed. In three cases only out of 171 had the operation failed in relieving the flow, and in one of them, at any rate, a subsequent operation revealed the fact that a portion of one of the tubes had been left behind.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, OCTOBER 21ST, 1886.

J. HUGHLINGS JACKSON, M.D., F.R.S., President, in the Chair.

Specimen.—A specimen of supra-vaginal amputation of the cervix uteri was exhibited by Dr. LEWERS. The operation had been performed for malignant disease in July last, by means of scissors, with satisfactory results down to the present time.

The Etiology of Hydramnios, and its Relation to certain Fœtal Deformities.—Dr. JOHN PHILLIPS read a paper on this subject, commencing with a brief sketch of the mode of development of the amnion and its structure, the variable composition of the amniotic fluid at different periods of pregnancy, and the presence in it of urea. The following three views were at present held on the etiology of the disease: 1. That the amniotic fluid is a product of fœtal origin (Sallinger); 2, that it is the product of the maternal organism (Ahlfeld, Scanzoni, and Schroeder); 3, that it is a common product of maternal and fœtal origin (Virchow). The theory that the fluid is a transudation of the liquid parts of the fœtal blood across the amniotic membrane, was dilated upon at some length. It was concluded that the cause of the secretion is probably due to resistance met with by the fœtal circulation in the placenta or cord; the greater these resistances the larger the amount of the hydramnios. The cord and amnion were given as the means of escape by exosmosis of the fluid, and their histological structure briefly described. Ahlfeld's theory that the cause is to be found in the modification of pressure which the uterus undergoes in the progress of pregnancy was upheld for the first three months of that condition. The frequent connection of hydramnios with syphilis and twinning was then discussed. The author concluded his paper by giving the various groups of fœtal malformations, calling attention to exaggerated torsion of the cord, umbilical venous thrombosis and varicosities as having a large share in the causation of the disease. Microscopic specimens were exhibited.—Dr. ALDERSON referred to the length and twisting of the cord as a cause of the hydramnios, and noted that the mother, in such cases, had generally taken but little exercise.—Dr. C. GOOD had met with cases of congenital cystic kidney, hydronephrosis, cystic liver, and even hydrocephalus, without any hydramnios. He thought that the cause of the fluid was not yet proven.—Dr. GRIFFITH remarked that the number of theories which had been propounded, in themselves showed the uncertainty which prevailed. Experimental investigations had been equally unsatisfactory. Fœtal urine was not understood, even by experienced chemists, and the existence of urea in the fluid had been denied by Odling. The quantity of amniotic fluid varied in ordinary cases with the length and number of twists of the cord; but in hydramnios the cord was generally shorter than normal.—Mr. CRIPPS LAURENCE laid stress upon the method of insertion of the cord, and called attention to intra-uterine amputation of limbs by strangulation.—Dr. MORTON mentioned cases of early rupture of membranes, the secretion of fluid continuing until delivery. These seemed to prove that the membrane must have secretive powers.—Dr. ROUTH pointed out that hydramnios usually occurred about the fifth month, and hence could not be due to renal secretions.—Dr. PHILLIPS replied.

Alpine Winter-Climate.—Dr. TUCKER WISE read a paper on this subject, in which he described the various out-door exercises and sports indulged in by patients seeking health in the High Alps. He considered that judgment was necessary in the selection of cases for the mountain-climates, but did not limit the benefit of winter-residence to cases of consumption only. In several instances, patients arrived in the Alps on their own responsibility, and even in opposition to medical counsel, with results which often led others to gross misunderstanding regarding the climate. Under the influence of the sun's rays and dry air, the sensation of cold in the Alps was out of all proportion to the pitch of the thermometer. A low temperature, that would be chilling and dangerous to delicate persons in England, was apparently borne with comfort in the Alpine snow-regions. The great importance of sanitation and uniformity in warming hotels inhabited by invalids was dwelt on, especially the supply of pure air within doors. Dr. Wise gave, as a list of diseases for which the climate was unsuitable: 1, diseases of the brain, heart, or large vessels; 2, tendency to articular rheumatism; 3, kidney-disease (during winter); 4, acute inflammations of throat or larynx; 5, some diseases of bladder or prostate; 6, nervous or vascular excitement; 7, hysteria. 8. Per-

sons somewhat advanced in years should not visit the mountains unless the circulatory system was sound, nor those suffering from extreme emphysema of the lungs. Each case, however, was to be considered on its own merits, as no hard and fast line could be laid down.—Dr. SYMES THOMPSON spoke very highly, from personal experience, of the good effects of the Alpine winter-climate. Proper selection of cases was most important, however; but he should not be inclined to include throat-cases amongst those generally unsuitable. Even laryngeal phthisis had occasionally been benefited. In most throat-conditions, the continuous inhalation of dry air was useful. The increase of smoke at most of the popular health-resorts was becoming a serious consideration, even though there were numerous currents of air in the upper strata of the atmosphere. As a general rule, patients unable to walk about should not be sent to the high altitudes.—Dr. SEDGWICK inquired as to the effects of artificial temperatures within doors and the use of ozone.—The PRESIDENT asked how the sleep of patients was affected. What results were noticed in cases of nerve-exhaustion?—Dr. EWART believed that almost all classes of cases obtained some benefit, and certainly he had seen good results in cases of nerve-exhaustion. More information was wanted with respect to the selection of climates suitable to different stages of disease. Cases of pharyngeal disease where the mucous membrane was always moist, and especially adenoid growths in the naso-pharynx usually did well in dry air. Pharyngeal deafness also was often much relieved at high altitudes.—Dr. DAWSON NESBITT thought that the use of high altitudes for the treatment of disease was still only experimental. If patients were dependent upon artificially warmed rooms, the natural warmth of southern climates ought to be still more beneficial to them.—Dr. WISE, in reply, explained that at the Maloja the smoke-nuisance would be abated in future, but there was no doubt that the cloud of smoke in the larger health-resorts was becoming serious. The rooms were generally kept at a temperature of 50° to 55°, and the corridors a little warmer. The sleep of almost all new-comers was in some way altered, but no definite rules prevailed. The climates of the different hill-stations varied enormously, from the bracing air of the Maloja to the sedative influence of Wiesen. The early cases of disease all seemed to do the best, but the selection of particular cases was too various for classification.

BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, OCTOBER 13TH, 1886.

LAWSON TAIT, F.R.C.S., President, in the Chair.

Specimens.—Dr. EDIS exhibited the cervices uteri which he had removed with Paquelin's cautery from two cases of incipient epithelioma of the cervix; also two fibroid tumours removed from the uterine cavity.

Ought Craniotomy to be abolished?—Dr. ALFRED MEADOWS read a paper on this subject, in which he brought forward certain statistics, intended to show that by a comparison of the relative mortality of craniotomy and the Sänger method of performing the Cæsarean section, this question was rapidly approaching an affirmative solution. Considering the part played by British gynæcologists in the progress of abdominal surgery, he thought that they ought to be foremost in this great reform, and not, as seemed likely, rather behind the rest of the world. He contended that by the Sänger or any similar operation, far more human life would be saved than by operations for the removal of the uterine appendages for fibro-myoma, or even, perhaps, of ovariotomy. The rule which he wished to lay down was that in no case and under no conditions should a human life ever be sacrificed by the hand of the obstetric practitioner. Some statistics were then detailed which the author had received from Dr. Harris, of Philadelphia, which showed that of 31 operations performed after the Sänger method, 23 had occurred in Germany, 4 in Austria, 2 in France, and 2 in Italy. The result to the mothers was the saving of 24, or a maternal mortality of a little over 21 per cent, while 29 of the 31 children were saved, giving a fœtal mortality of about 7 per cent. Even this mortality was being greatly reduced; for, of 20 operations performed, from July, 1885, to July, 1886, no fewer than 18 mothers were saved, thus reducing the maternal mortality from 21 to 10 per cent.; and of the 20 children 19 were saved, or a fœtal mortality of only 5 per cent. Comparing this mortality with that which obtains in the case of craniotomy, he thought that his prediction of the ultimate and speedy abolition of craniotomy was being rapidly verified. Nor was this great success due to the special aptitude of any one operator, for the 20 operations last referred to were performed by no fewer than 13 different operators, in various countries.—THE PRESIDENT said he was certain that craniotomy was practised to an unjustifiable extent. A commission of inquiry as to the performance of certain operations, with which prominent members of the Gynæcological Society had their names associated, was threatened, but he thought that many other things were much more deserving of inquiry than those. Above all others stood this very question of child murder, for he certainly could not qualify the performance of this operation as it was done by anything short of that strong term. That the operation of craniotomy should ever be completely banished from obstetric practice, he thought very unlikely, because it must be clear that in certain first cases a man must be led every now and then inevitably into its performance. But the knowledge that a pelvis was so distorted as to make it necessary to perform this operation in the first instance was sufficient guarantee against its being repeated in a second or third labour, and still more in succeeding pregnancies, when premature labour offered such an easy solution of the question. In cases where it was impossible, without great risk, to secure the birth of a child without its destruction by breaking up, if that child were alive, then its delivery by abdominal section was clearly the proper thing to do; for not only did it save the child, as illustrated in the statistics noted by Dr. Meadows, but it prevented the mother from again running such terrible risks as this horrible operation involved.—Dr. BARNES said the problem would be nearer solution could we bring the Cæsarean section, in some form, to such perfection that the mortality attending it should be reduced to that attending craniotomy. Dr. Meadows put the mortality of Cæsarean section according to Dr. Sänger's method at 20 per cent. Admitting this for the purpose of argument, and admitting, further, that the operation might be so improved as to attain an even smaller mortality, he would still most emphatically protest against the statement that the necessary mortality attending craniotomy approached 20 per cent, or even 5 per cent. Excluding the cases of extreme pelvic contraction which forbad the hope of extracting the child after craniotomy, and which all acknowledged should be treated by the Cæsarean section, craniotomy, done under fair conditions, such as postulated for the Cæsarean section—that is, done at a chosen time, with due skill—did not involve any maternal mortality. This being so, we were driven to fall back upon the long-recognised claim of the mother to be considered first. Now, assuming that 20 mothers out of 100, or even 5, were sacrificed to the Cæsarean section, in order to save, say, 90 children, might not those doomed mothers rightly plead their prior right to be saved? The circumstances hardly permitted the mother to form a just judgment. We have to act for her, and were we not bound to do our utmost to save her? Undoubtedly very much had been gained, and much more would be gained, in the direction of lessening the frequency of the resort to craniotomy. Still, he feared that the abolition of craniotomy was as yet an aspiration, and not an accomplished fact.—Dr. ROUTH said there could be no doubt that, with properly constructed forceps, many cases formerly treated by craniotomy could be delivered. When so eminent an obstetrician as Dr. Robert Lee had 137 perforations to 55 forceps cases, it was manifest that times had greatly changed now for the better. Clearly, in the case of a dead child, abdominal section could scarcely, if ever—and then only in a deformity quite out of the common—be practised. Again; was abdominal section always practicable? In a hospital the case was very different from what occurred in the slums of a town. When a man was suddenly called to an urgent case at night in a slum, surely craniotomy offered the best chance to the mother, *à fortiori* was this true, if the child were putrid as well as dead. In such cases, the abdominal section would almost be certainly fatal, even with perfect appliances.—Dr. EDIS agreed that we were hardly yet in a position to give up craniotomy entirely. Cases where the prospects of a living child being born were small would be sure to occur from time to time, and then craniotomy would have to be resorted to. The induction of premature labour was a far more scientific method than the repeated performance of craniotomy in the same patient.—Mr. PHILLIPS HILLS hoped that no leading obstetrician would lay down any such law in black and white as that proposed by Dr. Meadows. The public are often only too ready to seize an opportunity of bringing legal actions against medical men; and it might happen that a practitioner not in a position to do abdominal section in a reasonably scientific manner, but able to do craniotomy, would perform the latter operation, hoping to save one life at the sacrifice of another, rather than pretty certainly lose both through unavoidable delay, and then, if the mother should by chance die, that written law would be produced against him in a court of law.—Dr. IMLACH and Dr. HEYWOOD SMITH joined in the discussion, and Dr. MEADOWS replied.

PRESENTATION.—Dr. W. F. Grant, Senior Medical Officer to the Fisherton House Asylum, was, on September 30th, presented with a handsome travelling clock by the officials of that institution, on the occasion of his leaving.

THE BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

FRIDAY, OCTOBER 15TH, 1886.

ALFRED BAKER, F.R.C.S., in the Chair.

Interrupted Intestine.—Mr. WILLIAM THOMAS showed the small intestine of an infant which presented a complete interruption in the jejunum. The interrupted ends were quite blind.

Sarcoma of Bladder.—Mr. VINCENT JACKSON exhibited a specimen of sarcoma of the bladder removed from a gentleman aged 76. Operative interference had been declined, but had it been permitted, the degenerated state of the kidneys would have precluded a successful result. A drawing, a coloured photograph, and microscopical sections of the growth, all by Dr. Heneage Gibbes, were also shown.

Artificial Human Milk.—Dr. SAUNDBY showed Voltmer's artificial human milk, and demonstrated the small proportion of casein contained in it. The casein is got rid of by peptonisation, while by the addition of cream and sugar of milk the composition of average healthy human milk is imitated. This milk has been in use for the last three years in Germany, where it has proved a very successful infants' food.

Aneurysm of Aorta.—Dr. SAUNDBY exhibited an aneurysm of the arch of the aorta, which had caused chronic lobar pneumonia by pressure on the root of the right lung. By occluding the bronchus the breath-sounds are suppressed, and in this case, as in one shown last year, there were all the signs of pleural effusion. The former case was fully described in the *Birmingham Medical Review*, for July, 1885.

Excision of Elbow.—Mr. JORDAN LLOYD presented a patient, between 60 and 70 years of age, whose elbow he had excised with perfect success.

Ligature of the External Iliac Artery.—Mr. T. H. BARTLEET read a paper on three cases of ligature of the external iliac artery, and exhibited the three patients upon whom he had successfully performed this operation. The artery in one case was tied for recurrent hæmorrhage, after ligature of the common femoral.

MANCHESTER PATHOLOGICAL SOCIETY.

WEDNESDAY, OCTOBER 13TH, 1886.

J. DRESCHFELD, M.D., F.R.C.P., President, in the Chair.

THE reports of the Treasurer and Secretary were presented, and office-bearers for the ensuing year were elected.

Rhino-scleroma.—Dr. DRESCHFELD showed a section of tissue from rhino-scleroma, and gave a brief sketch of the more recent researches on this subject. The section (for which he was indebted to Dr. Payne, of London) showed the presence of numerous bacilli occurring in small masses in the midst of the tissue. These bacilli were smaller than the tubercle-bacilli, less slender, and the extremities slightly thickened. These micro-organisms were unlike those shown recently at the Berlin Medical Congress by Paltauf, who describes the organism as similar, if not identical with Friedlander's pneumonococcus, and who obtained pure cultivations which, as regards their form of cultivation, their microscopic appearance, and their behaviour when injected into mice, resembled the pneumonococcus.

Mycosis Fungoides.—Dr. DRESCHFELD showed a section of granuloma fungoides prepared from a small tumour removed during life by Dr. Payne. Numerous sections had been made and stained after Gram's method, but neither in the blood-vessels nor anywhere in the tissues were any organisms seen. Dr. Dreschfeld remarked that Köbner's investigations have given equally negative results; and, though the disease most probably is parasitic, it seems very doubtful whether the micrococci seen by Rindfleisch, Hochsinger, and Schiff, are the pathogenic organisms of this disease.

Multiple Papilloma of the Larynx.—Dr. HODGKINSON showed several small papillomatous growths from the larynx, coughed up at short intervals by a woman, aged 40. When first seen, fourteen months ago, she was suffering from complete dyspnœa and aphonia. Laryngoscopic examination revealed the presence of three growths. Marked improvement resulted from repeated applications of the galvano-cautery and the patient ceased to attend. After an absence of four months she was admitted into the Throat Hospital at Bowden with such urgent symptoms that tracheotomy was performed by Mr. Hardie. Dr. Hodgkinson called attention to a point of great interest, namely, the steady diminution in the size of the growths under the influence of the physiological rest since the operation. Microscopically the growths were of a simple character.

Cerebral Tumour.—Dr. ASHBY exhibited the brain of a boy aged five years, who had suffered for three months before his death with paresis of the left arm and leg and well-marked choreic movements of the arm. The contractions of the muscles of the fore-arm were rapid and irregular, closely resembling those seen in a severe case of chorea. The arm was mostly adducted and held somewhat behind the back, the forearm pronated, and the fingers working vigorously. He died of tubercular meningitis. At the *post mortem* examination a cheesy tumour about one inch in diameter was found in the right optic thalamus, compressing the internal capsule.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, OCTOBER 20TH, 1886.

Successful Removal of a Meningocele.—Dr. JOHN MARSHALL, Coatbridge, exhibited an infant, now 5 months old, from whose occiput he had removed a meningocele when it was only a few days old.

Election of Office-bearers.—After the Treasurer and Secretary had submitted their reports, which were found highly satisfactory, office-bearers for the ensuing year were elected.

Incarcerated Pessary.—Dr. SLOAN, the newly-elected President, exhibited a Hewitt's pessary, which had been incarcerated in the vagina of an aged patient. He detailed the steps taken for extraction, and remarked upon the necessity which rested upon all practitioners to warn their patients that pain, or discomfort of any kind, was a sign to them that the instrument should be removed.

"The State of Midwifery from the Dawn to the Middle of the Eighteenth Century."—Dr. GLAISTER read a paper on this subject, and invested it with an interest which absorbed the attention of the members. He mentioned a number of interesting biographical facts concerning Smellie and the Chamberlens. The reading of the second portion of the paper was adjourned till a future meeting.

WOLVERHAMPTON AND DISTRICT MEDICAL SOCIETY.

THURSDAY, OCTOBER 7TH, 1886.

S. A. SMITH, M.D., in the Chair.

Common Sense.—Mr. LAWSON TAIT gave an address on this subject. Commencing, he said that he regretted, during his struggles in early life, that there had been no teacher at Edinburgh in his time who had taught them the application of common sense in the practice of medicine. This was regarded as the most uncommon of all the senses, and that perhaps was as easy a definition and as accurate a one as any that could be formulated. A man possessed of sterling common sense seemed to him to be one who was best able to take in any matter, and particularly free from personal bias and prejudice, and as personal bias and prejudice can only be lessened by subjugation of self, it came to be really that the man who had most common sense was to the largest extent capable of subjugating his own interests to those of others. As with a man, so with a body of men; and very largely on this point humanity seemed to judge those who were banded in various subdivisions of the lines of life, as professions, corporations, or other methods by which were accomplished the multitudinous objects with which we are concerned. These bodies were frequently the subject of jests, and such jests! Whilst they were not by any possibility true of the bulk of men, constituting the particular walk of life in question, yet, even when deserved, they formed beacons and guides for action, pointing out the direction which correctness of conduct should avoid. Against our own profession, such criticisms were frequent enough, and, in some individual cases, they were unfortunately found to be deserved. As, for instance, when a member of our profession took advantage of his position of trust to destroy some fellow-being in whose removal he was interested. Then his professional brethren pursued him as relentlessly, and detected the poison with as much care, as if he were one for whom they were far less concerned. In fact, as bodies in such cases, we subjected all consideration of self to the establishment of the higher interests of others in the whole community. The result of this was that no set of men had such a complete hold on the public confidence as the medical profession. Passing from our corporative life to our individual existence, it was probably less true of us that we were able to subject our individual interests to the interests of others than it ought to be. The want of our capacity to do so involved us in the individual disputes with which nearly every individual life was chequered. In our youth, this fault was much more prominent than in our middle life or old age, for we were inclined to fall into two cardinal blunders in starting the race of life. The first of these was a tendency to look upon every patient who consults us as something in which we had a proprietary right; the second was a tendency to resent every kind of infringement of this right, specially in the matter of the patient being inclined to see someone else without our knowledge. The conclusions to be drawn from these errors are—first, that no one had any proprietary

right to any patient. Every patient had a right to consult one man or twenty if he might be so disposed, without letting the other nineteen know that he had consulted any particular one. Secondly, that no one had a right to refuse to meet in consultation any practitioner of decent life and character to see whom it might be the wish of the patient. If these two errors were well taught, we should have less squabbles between consultants and general practitioners, such as had recently been evident in the medical journals to a very large extent. —On the motion of Dr. TOTHERICK, a vote of thanks to Mr. Tait was unanimously accorded.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, OCTOBER 7TH, 1886.

E. NOBLE EDWARDS, M.R.C.S., President, in the Chair.

Circinate Eruption.—Dr. HARRIS ROSS showed the patient exhibited at the last meeting, with the remarkable circinate eruption; it had rapidly disappeared under treatment with arsenic internally, and a lotion of bicarbonate and biborate of soda, with glycerine.

House Drainage, and Illnesses arising from its Effects.—Dr. FUSSELL introduced a discussion on this subject. He first alluded to a letter to the *Times*, written by himself twenty-one years ago, in which he described some sanitary improvements carried out at the Sussex County Hospital, chiefly in the form of soil-pipe and ventilation, and the prevention of direct communications with the sewer. Local by-laws were often useless, because not rigidly and impartially carried out. Public pipe-drains were, for the most part, free from much filth, but he had found that many of the manholes acted as small cesspools, hence giving rise to a good deal of the offensiveness complained of from surface gratings. He dwelt on unventilated soil-pipes, and the D-traps, so common to the closets of nearly all old houses, and showed one of the latter, which had been of use for several years. There were several holes in it, above the so-called water-seal, so that sewer-gas must have freely entered the closet. Soil-pipes buried in the walls, and their imperfect joints, were frequently an obscure cause of disease. A sudden, severe, and very fatal outbreak of diphtheria, which occured some years ago at Hailsham, amongst the Infant School children, was commented upon. No precise cause could be made out, until, on disinfecting the school-room, a large amount of sulphurous fumes escaped beneath the roof. It was then found that three rain-water pipes, in direct communication with the sewer, opened immediately under the eaves of the building where the sulphurous fumes escaped. A case in the country was mentioned, where the drain of the house was supposed to have a free exit into a ditch some distance off, but was really buried in filth; as a result, serious illness occurred.—Mr. CLAYTON showed, in relation to the discussion, a variety of sanitary appliances; among them, examples of the three varieties of closet—the "pan," the "valve," and the "flush-out." The most cleanly and perfect example of the last was, he thought, the "Unitas." He had some difficulty in obtaining a new specimen of the pan-closet, showing how entirely they were going out of use. In the course of his remarks, he dealt with the various sanitary appliances necessary in an ordinary dwelling-house, explaining the reason for the rejection of certain fittings, such as the bell-trap, and the pan-closet and D-trap and pointing out the superiority of the "valve" and "wash-out" closets, the stoneware and drawn lead-traps, and other accessories. The essentials of good house-drainage were explained to be: perfect disconnection from the sewer or cesspool, complete and constant air-flushing of all pipes conveying sewage, and thorough but uncontaminated water-supply; in brief, that all drainage should be quickly, completely, and harmlessly carried away from the house. The discussion was adjourned until the next meeting.

MEDICAL MAGISTRATE.—Mr. A. N. Sydney Turner has been placed on the commission of the peace for the city of Gloucester.

THE result of the Hospital Sunday collection in Brighton has been very successful. The amount reported up to date is £1,150, as against £1,050, the total of last year.

CHOLERA.—Cholera having now virtually disappeared from Italy, the Alexandria Sanitary Council have abolished quarantine on arrivals in Egypt from Italian ports.

MIDLAND MEDICAL SOCIETY.—At the annual meeting held on October 6th the following officers were appointed:—President, Mr. Lloyd Owen; Ex-President, Dr. Holmes Joy; Members of the Council, Mr. Messiter, Mr. Bennett May, Mr. Jordan Lloyd, Mr. Ker, Dr. Simon, Dr. Savage, Mr. Chevasse, Mr. Ross Jordan, Mr. Priestley Smith, Mr. William Thomas, Mr. Eales, Mr. Harmar; Treasurer, Mr. Garner; Secretaries, Dr. Suckling, Mr. Haslam; Auditors, Dr. Foxwell, Mr. A. F. Clay.

REVIEWS AND NOTICES.

MEMORIALS OF THE CRAFT OF SURGERY IN ENGLAND. From materials compiled by JOHN FLINT SOUTH, twice President of the Royal College of Surgeons of England, and Surgeon to St. Thomas's Hospital. Edited by D'Arcy Power, M.A.Oxon., F.R.C.S.Eng., with Introduction by Sir James Paget, Bart., F.R.S., with coloured Plates and Engravings. London: Cassell and Co., Limited.

THE rescue of the literary labours of a lifetime from complete oblivion is always a matter for congratulation. The late Mr. South studied the history of surgery throughout his career, but he did not set to work to prepare a collected historical survey of the subject till very late in life. Even then, however, he succeeded, not only in collecting a great mass of material, but also in getting more than one chapter ready for the press.

Mr. D'Arcy Power has continued these labours, interrupted by the death of Mr. South, and has transferred all that was valuable in the material left behind to these *Memorials*, evidently at a great cost of time and trouble. The result is highly satisfactory. The work is an exhaustive record of the craft of surgery in this country, written after the plan and style adopted by experienced authorities in the literature of English institutions.

The first chapter, written it appears by Mr. South himself, might as well have been converted into a short paragraph in the preface or introduction, for it treats of those unsatisfactory "earliest times" which are apt to trouble every historian. In this case, too, there are materials for a special work on ancient British and Saxon leechcraft. Such a work would require a great knowledge of folk-lore, popular botany, and other subjects not widely studied, on the part of its author, as in the case of Cockayne's book which, to a certain extent, supplies the very want to which we now refer. The first chapter, however, is not devoid of interest. We find that, in the twelfth century, there were theoretical and practical physicians, and the writers of social articles in those days delighted, as now, to find fault with both, and to allow merit to neither. Our professional ancestors must have at least studied hard, nor could the practical physicians have gained success without much self-denial, yet John of Salisbury has nothing good to say for them.

The second chapter, largely made up of information from the works of the late Mr. Henry Riley, one of the best authorities on social life in mediæval London, commences with the first notice of the barbers as a distinct body. It is an account of the election of a barber, in the reign of Edward II. The candidate had to take an oath that he would not allow any of his future brethren to act to the scandal of the craft. From the wording of the oath, it may be seen that the London barbers of that day were sometimes guilty of allowing disorderly proceedings on their premises, as is still the case in the East. As early as in 1354 there is a mention in the City records of some depositions made by surgeons before the Mayor, relating to a question of malpraxis. There is no necessity for us to believe that, because the first official mention of English barbers bears a reference to keeping disreputable establishments, and the first mention of English surgeons refers to want of skill on the part of a certain John le Spicer, barbers and surgeons were then a dishonoured class. It rather proves, on further perusal of the *Memorials*, that they formed a large and important body, wherein must necessarily have existed some black sheep.

There was always a tendency to dissociate the surgeon from the barber; and throughout the Middle Ages, and later, down to the beginning of this century, there were constant changes in the constitution of the corporations. There were Barber-Surgeons, the Guild of Surgeons, union of that guild with the Physicians, Guilds of Barbers with or without power over Surgeons, later and complete association of Barbers with Surgeons, and the final separation in 1745. At that date, the Surgeons' Company was formed. This company acted in some respects as though ahead of its time; but its constitution was faulty, and its legal existence terminated in 1796. After four years of hard fighting between reactionary and progressist influences, the Royal College of Surgeons was established in 1800. The title of President was not substituted for that of Master till 1821. In 1843, the College received its present constitution in a charter, wherein the words "of England" were added to the name of the institution as settled in 1800.

The *Memorials* carry us through the history of all these vicissitudes of surgery in mediæval, Tudor, Stuart, and later ages. In future, it will be a most valuable guide to those who take an interest

in the history of English surgery. The work must be taken seriously; so we do not wish to quote quaint old English records for mere amusement. Our predecessors had, as we have, obstructives amongst them; but they, as a body, steadily endeavoured to progress towards perfection, and therefore deserve respect. The result is somewhat remarkable, as well as admirable. The British public now honours its surgeons, and is, as a rule, its own barber.

The *Memorials of the Craft of Surgery* is in itself a handsome book, well printed in the best style of antiquarian literature, furnished with marginal notes, and well indexed. Sir James Paget's introduction will be generally appreciated, and Mr. D'Arcy Power deserves high credit for having concluded so important a piece of literary work in so satisfactory a manner. The *Memorials* will be equally valuable to the surgeon, the antiquarian, and the student of English life during the past three centuries.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NEW BULLET-PROBE.

Surgeon-Major W. D. Wilson writes: When Mr. Manby's remarks relative to my new flexible probe appeared in the British Medical Journal, I was away on leave of absence, otherwise I would have replied to it sooner. My probe was brought out in complete ignorance of Mr. Manby's invention, and I never heard of, or saw one of, his instruments, till a few days ago, when I had an opportunity of examining some of them. They consist of a gilt coil of steel wire, closed at both ends; of course, such an instrument could not be cleaned.

The construction of mine is different, and I have made some provision at least for its cleansing, and I think it must be examined on its own merits, quite independent of Mr. Manby's failure.

It is not necessary now to contrast the two probes, except to say that both ends of mine are open to the full diameter of interior of coil; this was done for the purpose of washing out the interior. I do not think that my probe need fail because it cannot be cleansed. A sponge ought to be more difficult to purify, but we know we can do that.

Dr. G. F. Masterman writes: In the Journal of October 16th, there is a note on flexible spiral probes, and the difficulty or impossibility of cleansing them. If boiled, however, for a few minutes, in a tolerably strong solution of caustic potash, all trace of organic matter would be decomposed and dissolved without any action whatever upon the metal, and I think this agent might be advantageously used for cleansing most metallic surgical instruments, with the exception of those made of aluminium.

During the Paraguayan war in 1866-7, when I had a large number of gun-shot cases under my care, I tried a similar instrument, made, I think, by Charrière, of Paris, but found it very untrustworthy; it was apt to catch in little projections of fascia or tendon, and then go tunnelling along their plane with provoking facility; one could never be sure if a sinuous bullet-track were being followed, or a new one made. And I fancied, also, that the vibration of the spiral itself led to mixed sensations, so that bullet or bone seemed much alike when struck with it, whilst with a rigid probe in an accustomed hand the impact gives, of course, a very distinct impression.

DOUBLE CHANNEL SILK CATHETER.

Sir,—In the report of the proceedings of the South Midland Branch, published in the Journal of October 23rd, it is noted that I exhibited and described an apparatus for irrigation of the bladder. For the information of members who may wish to use the "double channel soft silk catheter," I wish to say that it may be obtained from Down Brothers, 3, St. Thomas Street, Borough, or from Stevens and Son, 78, Long Lane, E.C., both of these firms having taken considerable pains to carry out my suggestion as to this instrument.—Faithfully yours,

Thomas James Walker.

Bequests and Donations.—Sir Henry Edwards bequeathed £1,000 to the Bradford Infirmary, and Lady Edwards, his widow, has given £750 for endowing a children's cot in memory of him.—Mr. Henry Boddington, of The Cove, Silverdale, bequeathed £1,000 to the Manchester Royal Infirmary.—The Sheffield Hospital and Dispensary has received £250 under the will of Mr. Bassett, and £100 under that of Miss Charlotte Hallam.—The Gloucester Infirmary has received £100, less duty, under the will of Miss Florence Griffith.—The Hon. Mrs. Robert Bruce has given one hundred guineas to the British Home for Incurables.—Mr. W. Cuthbert Quilter, M.P., has given £50 to the East Suffolk Hospital, Ipswich.—Mr. R. W. Carey has given £200 to the Convalescent Home, Stillorgan.

It is announced that the debt of £2,000 on the establishment of the Seaside Convalescent Home for Working Men has now been reduced by £750. This amount has been raised mainly by working men in their various workshops. Up to the end of the financial year 467 patients have been received into the institution, making a total since its establishment of over 1,000 cases.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1886.

Subscriptions to the Association for 1886 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 6th, 1886.

THE MEETING OF THE COLLEGE OF SURGEONS AND ITS RESULTS.

The meeting of the Fellows and Members of the Royal College of Surgeons on Thursday, of which we give a short report elsewhere, was looked forward to as likely to be of considerable interest; it cannot fail to exercise a far-reaching influence on the future constitution of the College. The theatre was crowded, and the attendance thoroughly representative, a large proportion of those present belonging to the class of Fellows; among the Members might be recognised a considerable proportion of eminent and representative persons. The resolutions moved were carefully drawn and were characterised by the moderation which indicates thought, and which is in itself an element of strength. The main propositions were all carried with practical unanimity, and if the Council were in doubt before as to the mind of the most active and influential of the constituent Fellows and Members on the chief points of reform, that hesitation must have been ended before the meeting broke up. The whole meeting had almost necessarily its comic as well as its serious side, and it was characteristic of the present constitution of the College that the comic elements of the meeting afforded from many points of view the most serious matter for consideration, and that its serious proposals possessed an element of comedy. The meeting was indeed in its essence a condemnation of the existing constitution. A great body of the Fellows and Members of the College had assembled by invitation to debate questions of the utmost moment to the profession, to the good government of the College, to the cause of education, and to the public relations of the Fellows and Members. The Council had seriously prepared a lengthy official document for consideration by this meeting. It was, therefore, tacitly assumed and intrinsically evident, from the very existence and constitution of such a meeting, that the Council admitted that it was important to the welfare of the College, and in accordance with the rights and the best interests of its Fellows and Members, that these great questions, to which reference was made in the report, should be seriously discussed between the governing authorities and the members of the great constituent body. Nevertheless, the meeting had ludicrous elements of impotence and anomaly, which tainted all its proceedings with feebleness and contradiction; those who were responsible for the management of the College—the Council—sat facing the Fellows and Members in impotent dumbness. They were neither prepared to support their own views nor to admit the justice of the almost unanimous condemnation which the meeting pronounced on them. Mr. Disraeli once characterised the Ministry sitting on the front

benches opposite to him as "a range of extinct volcanoes." If the Council can be supposed to retain the ordinary sentiments of the common mass of mankind, it is inconceivable that they should not have listened with some sentiments of irritation or of dissent to the unbroken series of impeachments with which the minutes they had submitted to the meeting in their report were assailed. "Extinct volcanoes" they could not fairly be called, but for this occasion they were "stoppered;" no word of explanation or of argument proceeded from any of the officials, who had submitted their acts and their opinions to the judgment of their peers. On the other hand, it was plainly intimated to the Fellows and Members who were invited to pronounce judgment, that it might easily happen that no attention would be paid to any resolution which they passed, and that the meeting was a purely platonic civility implying neither surrender nor conviction on the part of those who submitted to what they might on the following day treat as a useless formality. The whole position was eminently ludicrous and, from the official and formal point of view, unreal. It is ludicrous that a body such as the Council of the College of Surgeons should convoke a meeting of its Fellows and Members unless it intends to give some effect to their resolutions and conclusions. It is unreal unless they acknowledge implicitly that such a meeting has an importance and an influence which reaches far beyond the power which they are willing to acknowledge that it will have on the ultimate decision of the questions submitted to it. The argument of Mr. Holmes was unanswered and unanswerable. We should fear to travesty the reply which Mr. Erichsen attempted to make to it by abridging here what served in his able speech for argument, and for fear of doing injustice to the elaborately negative reply which he made, we would refer to the full report which is published this week. No more respected or able speaker could have undertaken to plead the lost cause of the Council, and the unanimity with which the compliments subsequently paid to his individuality were cheered, stands in overwhelming contrast to the almost unanimous vote by which his arguments were condemned. A cause pleaded so ably, by so respected an advocate, and so unanimously condemned, may be said no longer to exist. The one argument on which he mainly rested, that there was no precedent for allowing all the graduates of a College to take part in the administration of its affairs, was summarily disposed of by reference to the case of the University of London, in which all the graduates are Members of Convocation, who elect to the Senate and who choose their representative in Parliament, while they are all of them also eligible for the Senate. The fact that, notwithstanding the opposition of all the "leaders of the profession," every successive Committee of the House of Commons, the Royal Commission, and Parliament have decided that the profession has a right to direct representation on the highest of all educational bodies—the General Medical Council—is in itself a final and decisive warning to the Council of the College of Surgeons that it is neither reasonable nor right that they should attempt to interpose further obstacles to the just claim of the immense body of Members of the College to a share in its administration, and to representation on its Council. It has long been unreasonable—and we will go further, and say it is no longer possible—for them to resist this claim. The resolution calling upon the Council to appoint a committee to confer with the Fellows and Members on the best means of carrying out the first resolution, affords a golden bridge of which the Council would do well to avail themselves. Further opposition is useless and can only encourage an agitation of which the success is no longer doubtful, but of which the continuance cannot add either to the dignity or usefulness of the College.

The resolution brought forward by Dr. Alderson in itself afforded the best possible proof of the extreme importance of such meetings as this, and of the undeniable claim of the members to be represented on the Council. That resolution was happily carried with complete unanimity. It referred to the future relations of the College of Surgeons with the Apothecaries' Society. The meeting by an unanimous vote referred it to the Council to consider the propriety of admitting the Apothecaries' Society, as well as the College of Physicians, to the conjoint examination for general practitioners in England, and to report to a subsequent meeting at an early date the conclusions at which they may arrive. We pointed out last week that the subject is one of unspeakable importance to every member of the College, to the profession, and to the public. The Medical Act of 1886 has created a new position. Under that Act it is certain that, unless the College of Surgeons admit the Apothecaries' Society to a share in the joint examination, that Society will very shortly receive, either from the General Medical Council or from the Privy Council, the right to appoint legally authorised examiners in surgery, and to give a registrable licence in medicine, midwifery, and surgery. Every one of those licentiates of the future would have the legal title of surgeon; and thus there would be created in the face of the avowed object of the profession and the Legislature in carrying that Act, a new competing and qualifying body for England and Wales, seated in London. The new licentiates (who would owe their existence solely to the blindness and obstinacy of the Council of the College of Surgeons) will not only be licensed in medicine and surgery, but they will be protected against the prescribing and visiting chemists by the special clauses of their charter; and they, and they only, will have the right to sue and to recover for medicines furnished. They will not only be legally equal in title and rights with all the Members of the College of Surgeons, but they will have rights and privileges in excess of the Members of the Royal College of Surgeons. This, then, is the question in which the whole body of the Members—and the Members especially—are concerned. It matters little, perhaps, to the consulting surgeons who constitute the Council of the College of Surgeons. They are removed far above the competition which exists in country districts and in poor neighbourhoods. Through Mr. Erichsen they expressly, at this meeting, repudiated all ethical control over their members—that, he said, was the business of the General Medical Council. This sublime abnegation is a very cheap sacrifice on the part of the Council, and it may be thought that it adds somewhat to their dignity—an opinion, however, from which we would venture to differ. But ethical and medico-political circumstances are of vital importance to the great body of the Members. It matters greatly to them whether or not a new competing corporation shall be brought into existence, which shall sow broadcast over England a new class of surgeons, more easily made, and at less cost of fees or curriculum, than the Members of the College of Surgeons generally, and who shall possess equal rights with them, and additional privileges.

At the close of the meeting, already fatigued by such prolonged elocutionary efforts as those by which Mr. Rivington detained the meeting for three-quarters of an hour, sorely against its will, it would

neither have been right or useful that an absolute decision should be taken on so vast a question, fraught with such momentous consequences, but the meeting expressed, with complete unanimity, its desire that the Council should give full consideration to all the facts, and should report to the great body of Fellows and Members its conclusions at an early date.

It is a matter of satisfaction that this reference was accepted by the Council without the slightest dissent, and it may therefore be taken for granted that this momentous question will have the full consideration of the Council, and that before taking any steps in the matter, affirmative or negative, it will carefully deliberate and fully report upon the whole subject to an early meeting of the whole College.

The subject is one of the utmost importance to the Members, and not to them alone, and the report will be awaited with great interest and widespread anxiety. Meantime, it will, of course, be understood that no steps will be taken by the Council to prejudice the ultimate decision of the question, one way or the other. To this course, after accepting this resolution, without a word of dissent, the Council is obviously pledged, and that in itself is an immense gain and a striking evidence of the usefulness of the meeting.

MEDICAL DEGREES AND DIRECT REPRESENTATION.

With reference to the coming election of members to the General Medical Council, it is remarkable that one, if not the most important subject at present connected with the interests of the profession has been but lightly touched upon—we allude to the question of the feasibility of London medical students obtaining degrees in medicine. We do not claim for the Association the initiative in this matter, but we assert that it has largely been through its exertions that the question has advanced to its present satisfactory position, aided most materially by the Royal College of Physicians, and its able President, Sir William Jenner. With the exception of a proposal made to the College of Physicians some years ago by Dr. Wilson Fox, no action had been taken in this matter until June, 1884; and, so little was the College of Physicians disposed to fall in with Dr. Wilson Fox's scheme for granting degrees to London students, that his proposal was, if we mistake not, never circulated beyond the members of the Council of the College.

At the annual dinner of the Metropolitan Counties Branch, held on June 24th, 1884, Mr. Macnamara, then President of the Branch, stated that, during his tenure of office, he would employ his best efforts in endeavouring to initiate such a condition of things as would enable our metropolitan students to obtain degrees in medicine upon similar terms to those upon which these honours might be gained in other parts of the United Kingdom. This announcement was followed on July 22nd, 1884, by the formation of a subcommittee of the Council to consider the subject, and the outcome of the deliberations of this Committee are to be found in the very admirable and exhaustive report drawn up by Dr. Gilbart Smith. This report, and the resolution it contains, were confirmed at a general meeting of the Branch held in March, 1885; and the action then taken has formed the ground-work of all that has followed; although it is true that Dr. Hickman, at the meeting referred to, was desirous of approaching the Colleges at once without sounding the London University as to whether it was disposed to meet the wishes of the profession on this point. The London University was twice interviewed by deputations of the Association, but the Senate failed to fall in with the views of the Association.

At the meeting of the Council of the Royal College of Surgeons, held on April 9th, 1885, Mr. A. E. Durham (President-elect of the Metropolitan Counties Branch of the British Medical Association) gave notice of a motion, which he moved and carried at the Council in May, to the effect that delegates of the Colleges of Physicians and Surgeons should be appointed to consider how the Colleges might best obtain powers to grant the title of "Doctor" to persons who had passed their qualifying examinations. Fortunately, Sir William Jenner and some of the leading members of the College of Physicians strongly supported Mr. Durham's proposal; but still the subject seemed to flag, and so a second public meeting of the Metropolitan Branch, under the presidency of Dr. Dickson, was convened, and resolutions proposed and seconded by Sir Andrew Clark and Mr. J. Hutchinson were passed, urging the Royal Colleges to proceed with energy in this matter. It would appear, from the report of the College of Surgeons laid before the meeting in Lincoln's Inn Fields on the 4th instant, that conjoint action on the part of the Colleges has at length been secured; but very much remains to be accomplished, and this scheme can only be brought to a successful termination b the strenuous effort of the profession.

We have given this brief sketch of the history of this movement because it shows how large a share of the proceedings has fallen to the Association, and how loyally it has worked to obtain the object in view. We cannot, therefore, too strongly urge on those who have a vote to give at the coming election to be careful to bestow it only upon candidates for the Medical Council who are prepared to support the just claims, as regards degrees, of London students. We are able to assert that Mr. Wheelhouse and Sir W. Foster have been asked and that these gentlemen are fully prepared to uphold the views of the Association on this subject in the General Medical Council, should the opportunity be offered them of doing so. On the other hand, we believe other candidates for the Council are opposed to the idea of the Colleges being permitted to grant degrees in medicine. Among these rumour ranks Dr. Glover. It would be important that he should make a definite statement of his views on this point, if he expects support from the general practitioners. It would, therefore, be well for general practitioners to obtain the views of those candidates they may think of supporting, regarding their opinion on this question, before actually voting for them. We believe we are not far wrong in stating that Sir William Jenner and those who are working with him feel that, to carry this measure, they must have the hearty support of the profession. Indeed without it, what possible object can they have in promoting such a scheme? We would, therefore, ask those who have been, or who are being educated in our London medical schools, to come forward and help these leaders of the profession in their effort to secure degrees in medicine for men brought up in London schools, upon terms similar to those on which these titles are obtainable in other parts of the United Kingdom. Medical practitioners may, at the present time, assist in forwarding this work by giving their votes to those candidates for the representation of the profession in England, on the General Medical Council, who are prepared to support the action taken by the Colleges of Physicians and Surgeons in this matter.

The animated discussion which followed the reading of Mr. Thornton's and Mr. Lawson Tait's communications at the Royal Medical and Chirurgical and the Medical Society respectively, was not only

interesting and instructive, but were far superior, in many important respects, to previous discussions at societies on abdominal surgery in the female. They were marked throughout by a freedom from personality, and a distinct intention on the part of the speakers to consider the subject entirely from a general scientific and moral aspect.

THE report, mentioned last week (p. 830), calling attention to certain much-needed alterations in the provisions of the Habitual Drunkards' Act, ought to have been attributed to Mr. R. Welsh Branthwaite, Medical Superintendent of the Dalrymple Home, Rickmansworth.

THE first meeting of the Epidemiological Society of London will be held on Wednesday, November 10th, at 8 P.M. The President, Dr. Walter Dickson, R.N., will deliver an inaugural address, entitled "A Review of the Past Year, with some Reminiscences of Cholera and Tropical Fevers."

THE Guy's Hospital Universities Club dinner will be held at the Holborn Restaurant, at 7.30 on November 22nd, Dr. Brailey in the chair. All Guy's men, being members of Oxford or Cambridge Universities, wishing to attend, are requested to forward their names, colleges, and degrees to Mr. A. S. Taylor, Guy's Hospital, S.E.

DEATH OF LADY WILSON.

LADY WILSON, widow of the late Sir Erasmus Wilson, died at Swanscombe on Wednesday last, at 3 o'clock in the afternoon. By her decease the College of Surgeons becomes entitled to the legacy of £200,000 left by Sir Erasmus.

THE HOSPITAL SATURDAY FUND.

THE collection made by the General Post Office towards the Hospital Saturday Fund is now complete. A sum of £341 19s. has been contributed, as against £326 6s. 9¾d. last year.

PROSECUTIONS UNDER THE VACCINATION ACT.

THE number of prosecutions for offences against the Vaccination Act for the year ending September 29th, 1885, is officially stated to be 2,806, of whom 49 were women and 2,757 men; 361 were discharged and 2,409 convicted, of the latter 36 were women. Of those convicted, 1,523 were fined, whilst 922 submitted to distraint or imprisonment.

REMOVAL OF A TUMOUR FROM THE CEREBELLUM.

ON October 30th, Mr. Bennett May removed a tumour from the cerebellum of a child under the care of Dr. Suckling in the Queen's Hospital, Birmingham. The child had been in a condition of stupor for some weeks, and was growing rapidly worse. The tumour, as had been diagnosed during life, was situated in the right lobe of the cerebellum. The operation was performed on the lines laid down by Mr. Victor Horsley, but the child only survived three hours. The growth, we are informed, was tubercular.

COMBE LECTURES IN OWENS COLLEGE.

PROFESSOR STIRLING gave the first of the Combe Lectures, to students of Owens College, on Tuesday evening, October 26th, in the large Chemical Theatre of the College. There was a large attendance. Dr. Stirling dealt with the exchanges of matter and energy in the organism. The meaning of the terms energy and work were illustrated by a large number of beautiful experiments, while the material exchanges, as represented by the income and expenditure of the body, were graphically presented to the audience.

SHOP-HOURS OF LABOUR.

UNDER the provisions of the Shop Hours Regulation Act, which came into operation on Monday last, young persons, under 18 years of age, must not be employed for a longer period than seventy-four hours, including meal times, in any one week, under a penalty not exceeding £1 for each offence. A notice setting forth the provisions of the Act must be conspicuously exhibited in every shop; and the term "shop" means retail and wholesale shops, markets, stalls, and warehouses, and includes licensed public houses and refreshment houses of every description. Such a measure, though insufficient, is one which, if vigorously enforced, should remove many abuses, and tend largely to the promotion of public health.

ELECTION OF DIRECT REPRESENTATIVES.

THE arrangement of the details of the mode of conducting the election of the direct representatives of the profession in the General Medical Councils, rests with the Branch Councils of the respective countries, subject to the regulations which have been issued by the Privy Council under the Act. The English Branch Council will meet for the purpose on Wednesday, November 10th. The nomination-papers, it may be remembered, must be delivered on or before November 9th. We have reason to believe that the arrangement will probably be, that the voting papers will be issued between November 10th and 15th, and that they will be required to be returned by November 22nd. The result of the election will probably be officially declared on Monday, November 29th.

THE CANDIDATURE OF SIR W. FOSTER AND MR. WHEELHOUSE.

A COMMITTEE of metropolitan practitioners is being formed to secure the return of Sir Walter Foster and Mr. Wheelhouse as representatives in the General Medical Council. Dr. Bridgwater, of Harrow, is chairman, and Sir E. H. Sieveking, Mr. Jonathan Hutchinson, Dr. Joseph Rogers, and Mr. Timothy Holmes are among the vice-chairmen. Any gentleman willing to join the committee, or wishing for any information, should communicate with Mr. Frederick Wallace, 96, Cazenove Road, London, N., Honorary Secretary. Looking to the prolonged and important services which Sir W. Foster and Mr. Wheelhouse have rendered to the British Medical Association and its members, and through that organisation to the profession at large, it is satisfactory to find that their candidature is receiving such widespread sympathy and extended support. The members of the Association generally are not likely to be insensible to their proved abilities and high claims to the position for which they have, on invitation, become candidates.

THE BOWMAN LECTURE.

THE selection of Professor Zehender, to deliver the Bowman Lecture before the Ophthalmological Society of the United Kingdom this year, is a graceful international compliment. This veteran ophthalmologist has long been widely known as the editor of the *Klinische Monatsblätter f. Augenheilkunde.* He removed from Berne, to occupy the chair of ophthalmology at Rostock, as long ago as 1865. The important practical bearings of the subject which he has chosen for his lecture on Friday evening next, "The Parasitic Diseases of the Eye," will doubtless attract a large audience, ready to give him a warm welcome.

GLASGOW UNIVERSITY CLUB, LONDON.

AT the inaugural dinner of this club, at the Holborn Restaurant, on Friday, October 22nd, the chair was taken by Professor Sir William Thomson, F.R.S. In proposing the toast of the evening, the Chairman dwelt upon the large measure of success which the club had already achieved, its list of members already numbering over 1,000, and its financial position being flourishing. The other speakers were Sir Joseph Lister, Bart., F.R.S., Professor Gairdner, Professor Hales, Surgeon-Major Muir, M.D., Drs. Guinness, Mitchell, Wilson, Chalmers, Finlay, Heron, and Corfield, and Messrs. McClymont, McIlraith, Turner, and Legge. Fifty members of the club and guests sat down to dinner, and songs and recitations were given during the evening by Drs. Guinness, Chalmers, Barrow, and Fisher.

POISONING BY MISADVENTURE.

A WOMAN at Bubwith, Selby, has met her death by taking, in mistake for a dose of cough medicine, a tablespoonful of a liniment presumed to be aconite liniment. The deceased discovered her mistake at once and took a mustard emetic, which produced slight vomiting, but she died within an hour of taking the liniment. There was no time to procure medical aid, the nearest medical man residing four miles away. The bottle containing the liniment was the usual "poison" bottle of blue-fluted glass, and quite unlike the other. The Coroner did not call for medical evidence, and it is, we are informed, rather the exception than the rule for him to do so.

DISINFECTING NURSES.

IN a report recently presented to the Local Government Board on a serious outbreak of scarlet fever at Wombwell, in Yorkshire, Dr. Franklin Parsons revives an old suggestion, made years ago by the late Dr. C. O. Baylis, but never, so far as we know, recommended in an official report before. Dr. Parsons suggests the engagement of a "disinfecting nurse" to visit the households in which infectious disease is present, to see that disinfection and other precautions are duly carried out. He points out that this expedient has been found useful in other districts, and thinks that under the special circumstances of Wombwell, the inhabitants of which are almost all manual workers, it would promise to be of use there also. It is sometimes found, as he truly enough remarks, that mothers pay more attention to advice on sanitary matters from one of their own sex than from a sanitary official.

CHILDREN GOING BAREFOOT.

MR. C. ROBERTS writes: In deciding some summonses last week for non-attendance of children at Board schools, in which the want of boots was urged as an excuse by the parents, Sir J. Ingram said: "This is no excuse. The entire Scotch nation go without boots till they are 20 years of age." As this is a subject of much wider interest than the compulsory attendance of poor children at Board schools, it would be interesting and instructive to some of us southern practitioners who attach so much importance—perhaps unnecessarily—to keeping children's feet dry and warm, if you could elicit some authoritative opinions from Scotland on the advantages or disadvantages, from a physiological and pathological point of view, of allowing children to go barefoot. The economic advantages and the sentimental objections are sufficiently obvious.

THE DANGER OF OVERHEAD WIRES.

ON the recommendation of the Works and General Purposes Committee of the Metropolitan Board of Works, it was decided "That a communication be addressed to Her Majesty's Government, calling attention to the danger likely to arise from the increasing number of overhead telegraph and telephone wires, and suggesting that such wires should be placed under proper supervision, as recommended by the Select Committee of the House of Commons in the year 1885." Mr. Edwards, who moved the resolution, briefly drew the attention of the Board to the necessity for such a supervision. It is to be hoped no time will be lost by the Government in giving effect to the above recommendation, inasmuch as it is especially in the winter time, under the combined action of frost and snow, that accidents arising from overhead wires occur, and when catastrophes from the falling and entangling of overhead wires are not uncommon.

OBSTETRICAL SOCIETY OF LONDON.

AT a meeting of this Society on Wednesday, November 3rd, Dr. Horrocks exhibited some microscopic specimens of epithelial cancer of the cervix passing into medullary carcinoma. Dr. Gervis read some interesting notes on the microscopical examination of the surface of a fibroid polypus of the uterus. In order to investigate the truth as to the character of the epithelium investing the polypus, microscopical examination was made of different parts of the tumour. The pedicle, at the point where it was constricted by the cervix, was found to be lined with columnar epithelium, bearing no cilia. Lower down, the tumour was invested with similar epithelium, surmounted by a layer of polygonal, but not ciliated cells. The surface of the main part of the tumour was, however, covered by epithelium, which was distinctly ciliated. The transitional epithelium, where the polygonal surmounted the columnar cells, resembled similar epithelium investing the boundaries where the pharyngeal and laryngeal epithelium meet. The adjourned discussion on Mr. Alban Doran's paper on Papilloma of the Fallopian Tube and the Relation of Hydroperitoneum to Tubal Disease, was resumed, and a memoir on the Obstetrics of the Kyphotic Pelvis, by Dr. Champneys, and a contribution by Dr. Herman on Lupoid Stricture and Atresia of the Urethra were read. The discussions will be published in our full report.

THE UTILISATION OF INFIRMARIES FOR TEACHING.

MR. W. VALLANCE, clerk to the Whitechapel Guardians, has drawn up a most excellent memorandum with regard to the medical staff best adapted to meet the wants of a large infirmary, such as that of the Whitechapel Union, which has 689 beds. The advantages which would be gained by appointing a consulting physician and a consulting surgeon, with two resident-assistants, are very well brought out. The gain both to medical education and to the welfare of the patients which would accrue from granting to the consulting physicians and surgeons the right to introduce pupils has often been pointed out in these columns, and is forcibly stated by Mr. Vallance. The question will probably be decided at the meeting of the guardians on November 16th. Medical opinion will be generally strongly in favour of the scheme indicated above. A few energetic medical superintendents have, in recent years, afforded by their contributions to medical literature further convincing proof of the immensely valuable field which is now almost untilled, and thus lost to science and to education. If the only objections to be brought against the scheme are on the score of economy, it ought not to be difficult to show that the increased energy, interest, and skill imported into the infirmaries would, even from a pecuniary point of view alone, more than counterbalance any increased direct primary outlay.

RESIGNATION OF MR. FURNEAUX JORDAN.

AT a special meeting of the General Committee of the Queen's Hospital, Birmingham, on Tuesday, November 2nd, the Rev. J. C. Blissard in the chair, the following resolution was passed, on the motion of the Chairman, seconded by Mr. John St. S. Wilders, supported by Mr. Jordan Lloyd: "That the Committee receive with great regret the resignation by Mr. Furneaux Jordan, on account of ill-health, of the office of honorary surgeon, which he has held for a period of twenty-three years (having previously held the office of assistant-surgeon for three years), in the course of which he has rendered very valuable services to the hospital, with equal distinction to himself, and has retained the entire confidence of the Committee; and they trust that his retirement from professional work will materially conduce to the improvement of his health, and to the prolongation of his valuable life. The Committee also hope that Mr. Furneaux Jordan will allow them to recommend him to the governors for election as consulting surgeon."

DIPHTHERIA AT HAWKSHEAD.

WE are glad to be able to state that there is little truth in the report which has been circulated rather freely in the daily press, that a serious outbreak of diphtheria has occurred at Hawkshead, a small town situated between Lake Windermere and Coniston. The facts, we understand, are as follows:—A bad case of diphtheria, of spontaneous origin, occurred on October 10th, attributed by the medical officer, not to contagion, but to the unsanitary surroundings about a mile and a half from Hawkshead; this case, which was that of a woman about 40 years of age, recovered; her youngest child, 2 years

old, was attacked with croup on September 21st, and died on September 23rd; another child, aged 5 years, was taken ill with diphtheria, contracted, probably, from the same cause as in the mother's case, or taken directly from the mother, and subsequently died. A niece of the first patient, aged 17 years, living about a mile distant, but who had visited her aunt during her illness, was attacked with diphtheria on October 5th, and died on October 16th; a sister of the last mentioned patient, aged 15, had a very slight attack, from which she recovered; there have been no fresh cases since. It will thus be seen that there have been four cases and two deaths. The closure of the National Schools for one month, which was carried out at the recommendation of Dr. Thompson, of Ulverston, has probably led to the report, which has been widely circulated, that the outbreak was of a serious nature.

"A WEST-END SURGEON."

UNDER the heading, "A Serious Charge against a 'West-end Surgeon,'" the daily papers recently gave a detailed report of certain proceedings in the Marlborough Street Police Court. As frequently happens when men, charged with some misdemeanor, are described in the charge-sheet as belonging to the medical profession, the name of this person does not appear on the *Medical Register*, nor is it contained in the *Medical Directory*. It is not inopportune, therefore, to enter a protest against the way in which unsupported claims to membership of this or that profession are admitted and made public in police reports, without apparently the slightest endeavour being made to ascertain the accuracy or otherwise of the appellation. It seems a favourite method with certain people, when they get into trouble, to describe themselves either as medical men or clergymen; and harm must result from such reports gaining publicity without anything in the context to indicate that there is any legal justification for the use of that title which involves a certain discredit to the profession to which the delinquent, as often happens, in no sense belongs. The boisterous and unruly youth who gets drunk is habitually described as a medical student. Sir Charles Warren will perhaps be enabled to find time to instruct his subordinates in the various metropolitan districts that in future they shall require some sort of evidence before accepting assertions of this nature. In the absence of such proof, the defendant should be classed as "describing himself" as this, that, or the other.

THE ADVANTAGE OF AN ASSURED DIAGNOSIS OF HYDROPHOBIA.

THE communication made by M. Pasteur to the Académie des Sciences on Wednesday last appears to be a most important contribution to the controversy which has been raging as to the value of his method of prophylaxis. He stated that 2,409 persons in all have been inoculated in Paris, but he confined his remarks chiefly to the 1,700 French persons inoculated. Out of this number the method had proved ineffectual in ten cases, six of which were children, one a woman of seventy years of age, and one a youth of eighteen. In studying the cases of those who had succumbed, M. Pasteur had come to the conclusion that for deep wounds his earlier method was insufficient; and he had, therefore, so modified it as to make it at once more rapid and more active for all cases, and still more rapid and more energetic in cases of deep bites, especially for bites on uncovered parts of the body, such as the face and hands. This new method of inoculation which had been followed for the last six months, had, he said, been productive of very favourable results. The case of a policeman at Bradford, bitten on the thumb and index finger by a dog exhibiting rabid symptoms will be an interesting test of the method. The animal died two days later, but the *post mortem* examination only afforded unsatisfactory negative evidence of hydrophobia. Dr. Hime, the Medical Officer of Health for Bradford, who had enjoyed an unusually good opportunity of studying M. Pasteur's method in Paris, inoculated a rabbit by introducing a small portion of the medulla of the dog within the cranium. The rabbit developed the symptoms which M. Pasteur considers to be characteristic of rabies in that animal, and the question whether the dog was really rabid was thus decided in the affirmative. The policeman was despatched to Paris on October 22nd to undergo treatment under M. Pasteur; the case may thus be truly described as a test case, inasmuch as an independent observer has established that the dog was rabid. It is true that the wound was promptly treated with lunar caustic within ten minutes of its infliction, but a hundred cases thus carefully observed would eliminate this source of error, if error it be, and afford conclusive evidence for or against M. Pasteur's method. In another case where a dog unexpectedly inflicted a severe bite on its master, Dr. Hime was able to prove by the same method of trephining that the dog was not rabid, and thus set its master's mind at rest. A very curious story comes from Rotherham; it is supposed to be an instance of transmission of hydrophobia from man to man, and ought to be very carefully examined either by the Local Government Board or by the Committee on Hydrophobia. A man named Arthur Wild was bitten by a patient named Oates, who, on the following day died of hydrophobia. Wild went to Paris and was treated in M. Pasteur's laboratory. The wound was inflicted about five weeks ago. Wild was taken ill a few days ago and died on Wednesday, the cause of death being, it is supposed, hydrophobia. In the interests of science and humanity, it is greatly to be hoped that steps will be taken to verify the diagnosis by the method described above.

SLEEPING IN TURKISH BATHS.

IT is important that suitable precautions should be observed by persons taking a Turkish bath, and the neglect of such may lead to fatal results. An instance of this occurred last week, when a man, aged 46, said to have enjoyed good health, who had been a regular attendant at the baths, having, it was stated, been up all night at a party, entered the bath expressing his intention of having a nap. The deceased lay down in one of the cooling-rooms, heated to 120°, and slept for two hours. His heavy breathing then attracted attention, and he shortly afterwards expired. The owner of the baths stated that it was a constant practice for people who used the baths as a place of rest to go to sleep in the heated rooms. Mr. Edward Sison, of the City Road, stated that death was due to syncope, from sudden failure of the heart's action, owing to the strain put upon it by the deceased's professional work, the fact of his being up all night, and the extra work caused it by the heat of the bath. At the conclusion of the medical evidence the Coroner (Dr. Danford Thomas) called the attention of the proprietor of the baths to the danger which attended the practice of allowing persons to sleep in a Turkish bath. It was a most dangerous proceeding, and he hoped that the proprietor would issue notices to his attendants that if they saw any one asleep they should at once wake them up, for if a person felt faint, which they frequently did, they could call the attendant, who, in many cases, could save their lives by dashing cold water in their faces. This was not the first case of the kind he had known, and he considered the proprietors should be more careful.

DIPHTHERIA AT WEST COWES.

THE controversy excited by Professor Nettleship's letter to the *Times* about his experiences at Newquay will not have raged in vain if health resorts come to see more clearly that their commercial success is dependent upon their activity in the cause of public health. West Cowes, it seems, has now found it wise to consult a Southampton civil engineer as to the improvements needed in the sewerage of the district, which is shown by Mr. John Spear, in a report recently issued, to have been closely associated with an attack of diphtheria which occurred at that place this summer. Mr. Spear, being sent down by the Local Government Board to investigate this outbreak, discovered the local authority waiting for him with a variety of ingenious explanations as to its causation. They wished him, it was explained, to

hear at the outset that many of the townspeople doubted the existence of diphtheria in the district, and many thought that, if it were present, it was an accidental importation from without—its subsequent spread being very probably attributable to the congregation of certain residents and visitors at a ball that had recently been given at one of the larger houses. The fact that certain cases which had been diagnosed as diphtheria, or had been looked upon with such suspicion that the patients were removed and isolated, had speedily recovered, was put forward as affording ground for the doubt as to the correctness of the medical diagnosis; and mention was made of exposure to night air while thinly clad, of persons who had suffered more severely, as diminishing the significance of their seizure. Mr. Spear courteously explained that in all outbreaks of diphtheria a certain proportion of mild or abortive attacks was met with; and that, as to exposure to chill and the like, medical science did not recognise such influences as an immediate cause. He was able, however, to visit for himself, with the consent of the medical attendants, the cases in the town then under treatment, and saw, besides several other cases, "seven well marked unequivocal cases of diphtheria in four different families." He brushed aside all the fanciful suggestions of extraneous origin that had been made, and proved pretty clearly that defective sewerage and drainage of houses was at the bottom of the mischief. The Local Board have been wise to recognise the truth of this, and to immediately begin to set their house in order before the opening of the next holiday season.

THE MEANS OF PREVENTING THE DETERIORATION OF RUBBER APPARATUS.

An inquiry has been carried out under the direction of the French Minister of War with the object of ascertaining the cause and the remedy for the peculiar changes which articles made of india-rubber undergo when kept in stock, the annual loss to the government from the deterioration of this class of goods being very considerable. Experience shows that india-rubber, after a time, loses the very qualities which make it useful, for it becomes dry and brittle. Articles kept in boxes, such as Higginson's syringes, Esmarch's bandages and drainage tubes, are particularly liable to deteriorate, as are also the insufflation bulbs so largely used in connection with spray-producing apparatus and thermo-cauteries. Unfortunately, the results of a long and patient investigation are not by any means satisfactory, so far as the discovery of a means of prevention is concerned. Nevertheless, certain precautions are advised, both in the quality and storage of india-rubber goods, which, it is hoped, will do something to minimise the loss. The commissioners advise, for instance, that Esmarch's bandages should be taken out of the boxes at least once a month, unrolled, and manipulated. Drainage tubes should be hung up in a cool place, or soaked in a non-putrescible fluid. Finally, all objects made of rubber should be kept in a cool, damp place, at a constant temperature, and sheltered from light, heat, and frost. Seeing that, in many cases, these conditions cannot be complied with, it is recommended that the bandages should be made of pure leaf rubber, in lieu of the elastic tissue usually employed. The purer the rubber the less readily does it undergo these structural alterations, and the lighter it weighs: its weight is therefore a sure guide to its quality. In consequence of these inquiries, the Minister has ordered that in future all rubber articles are to be made with pure rubber of the best quality, preferably with the leaf rubber. The quality of the articles will be gauged by their specific gravity in order to insure the purity of the material employed.

CANTHARIDES IN THE BITES OF RABID ANIMALS.

Dr. Karchevski mentions in the *Russkaya Meditsina* that he has successfully treated some patients who had been bitten by a rabid wolf with cantharides. The wolf attacked three men, inflicting on the first a large and deep wound in the left groin, a piece of skin several square inches in area being torn off. The other men were wounded in the face, legs and arms, but more superficially. Still the bites of a rabid wolf are well known to be peculiarly dangerous. Dr. Karchevski remembered a conversation he had had with Professor Lashkevich, in which the latter had suggested cantharides as a remedy in hydrophobia, and he therefore made up his mind to give it a trial. Cantharides plasters were applied to all the wounds, and powdered cantharides was administered to each of the three patients in doses of a grain a day. The internal administration was continued for a week, till the patients complained of some heat in the urethra. Seven months having passed, and all the patients being still perfectly healthy, the author thinks the cases worth recording, though he is quite aware that *post hoc* is not necessarily in this instance *propter oc.*

SCOTLAND.

RECTORIAL ELECTION, EDINBURGH.

The election on Saturday for the Rectorship of Edinburgh University resulted in the return of Lord Iddesleigh by a substantial majority over his opponent, Sir Lyon Playfair.

THE MEDICAL PROFESSION AND THE COMMISSION OF THE PEACE.

Two appointments to the Commission of the Peace in Scotland have been gazetted this week:—that of Professor Sir Douglas Maclagan as Justice of the Peace for the county of the city of Edinburgh, and Dr. Simpson, Inverness, as Justice of the Peace for the county of Inverness.

A JUDGMENT AND ITS SEQUEL.

When a judge takes it upon himself to run counter to skilled medical evidence, it often happens that he is quickly reminded of his folly. At the circuit court held in Dundee on September 8th, a young man, admittedly of weak mind, was tried before Lord Young on a charge of indecent assault. For the defence, evidence was given by Dr. J. W. Miller and Dr. Rorie that the prisoner was insane at the time of trial, and, in their opinion, had been insane at the time the acts for which he was tried were said to have been committed. To the surprise of many, the judge rejected the medical evidence, and directed the jury to decide whether or not the prisoner was insane. The result was that the prisoner was found guilty, and sentenced to penal servitude for five years. It is satisfactory to learn that the Prison Commissioners, by recently certifying the man to be insane, have promptly and strongly confirmed the evidence of Drs. Rorie and Miller, both of whom have had considerable experience in lunacy cases.

FEVER IN GLASGOW.

The report of the medical officer of health, presented to the Town Council on November 1st, shows a considerable increase in the number of fever cases since the date of the last report. On November 1st, there were in the hospitals 332 cases of scarlet fever, 47 of enteric fever, 23 of measles, 17 of whooping-cough, 2 of typhus, 9 of erysipelas, and 1 of chicken-pox—in all, 435 cases, as compared with 413 a fortnight ago, and 293 at the corresponding period of last year. During the fortnight 140 cases of fever were admitted, 106 were dismissed well, and 11 died. It was also reported that the death-rate last week was 23 per 1,000, against 24, 22, 24, 22 for the previous four weeks, and 27, 27, 25 in the corresponding week of the previous three years.

FOOD ADULTERATION.

The city analysts of Glasgow, Messrs. Wallace, Tatlock, and Clark, report that, during the quarter ending September 30th, they have analysed 23 samples of articles of food and drugs, namely: 11 samples of sweet milk, 6 of skim-milk, 3 of ice-cream, and 1 each of arrowroot, coffee, and cream of tartar. Of the 11 samples of sweet milk, 3 were of low quality, but not necessarily adulterated, and 8 contained added water in quantity ranging from 4¾ to 26 per cent., the average being 15½ per cent. One sample, in addition to being diluted with 22 per cent. of water, contained 147 grains per gallon of common

salt. The vendor of this milk was fined £20 for his offence. One sample of the skim-milk contained 22 per cent. of added water, and 98 grains per gallon of common salt, while the average percentage of water added to the samples of skim-milk was 17.

IRREGULAR PRACTICE.

In the Perth Sheriff Court, on October 22nd, a complaint was called at the instance of the Procurator-Fiscal against J. M'Guire, residing in King Street, Perth. The libel was laid under "The Medical Act," 21 and 22 Vic. cap. 90, and set forth that he had contravened the provisions of that statute by having, in September last, in his house and at various places throughout the town, represented himself as a doctor in medicine and surgery, implying that he was registered under that Act, and recognised by law as a surgeon and practitioner in medicine. The accused failed to appear, and a warrant was granted for his apprehension.

CHAIR OF MATERIA MEDICA IN THE UNIVERSITY OF ABERDEEN.

Several candidates have been announced for the Chair of Materia Medica in the University of Aberdeen, vacant by the lamented death of Professor Dyce Davidson. Dr. Ralph Stockman, of Edinburgh, who has for three years been Assistant in the Materia Medica Department of the University of Edinburgh, under Professor T. R. Fraser, is the author of more than one valuable contribution to the literature of pharmacology. Dr. Hall, of Aberdeen, has for several years assisted the late Professor Davidson. Dr. Napier, of Glasgow, has for a number of years been associated with Professor Charteris, in the University of Glasgow. Drs. Ogilvie Will, of Aberdeen, M'Gregor Robertson, of Glasgow, and Wilson, of New Deer, are also mentioned.

POISONING BY SHEEP-DIPPING COMPOSITION.

Poisoning due to drinking sheep-dipping composition is an uncommon cause of death. On Saturday morning, October 30th, a labourer came ashore at Glasgow, and had scarcely reached the quay, when he fell down and became unconscious. He was observed to have come from the place where the cask of sheep-dip was placed; the bung was out of the cask, and he had a tube upon him. It was at once suspected that he had been sucking up the sheep-dip, having probably mistaken it for intoxicating liquor, and medical aid was procured. The contents of the stomach, as obtained by the stomach pump, smelt strongly of the sheep-dip, and notwithstanding all that could be done for him, he died in about two hours.

THE GLASGOW HOME FOR INCURABLES.

The second annual meeting in connection with the Ladies' Auxiliary of the Association for the Relief of Incurables for Glasgow and the West of Scotland was held in Glasgow last week. The report submitted showed that the efforts of the Association to obtain an increase of subscriptions had been most successful, over £982 having been raised, an increase of £123 as compared with the previous year. The Lord Provost congratulated the meeting on this, and stated that in consequence of the ladies' efforts many people afflicted with incurable diseases were enjoying comfort and suitable aid. Miss Clugston was reappointed president.

ARGYLL AND BUTE DISTRICT LUNATIC ASYLUM.

The twenty-third annual report of the Argyll and Bute District Lunatic Asylum, recently submitted to the Lunacy Board, shows that the total number under treatment during the year was 464, and the number resident in the house at the close of the year was 393, while the average daily number was 364, equally divided between the sexes. There was only one private patient, the others being of the pauper class. The numbers in the asylum had been larger than since the opening of the asylum in 1863. The percentage of recoveries in relation to the admissions was 28.8; showing that the general character of the admissions was not favourable to recovery; this was due largely to the great number of chronic and incurable out-county patients admitted from the district. The deaths numbered 23, eight men and fifteen women, in the proportion of 6.3 to the average number resident. No accidents of a serious character were recorded during the year. The report by the Commissioner in Lunacy was highly favourable. We may notice here the untimely death of Dr. D. R. Stewart, who was for eight years resident physician; he was cut off suddenly. By his kindly disposition, unvarying courtesy and attention to the patients, he had secured the esteem and affection of all with whom he had to do, and he will long be remembered in the asylum and the district.

IRELAND.

DEATH OF DR. MILLER, OF DERRY.

At the patriarchal age of 93 years, Dr. Joseph Ewing Miller died on Sunday, October 31st. He was the oldest freeman of Derry, and one of its most respected citizens. He had been in practice for the long period of sixty-seven years. He was no fewer than seven times elected mayor of the town in which he spent his life.

THE SENATE OF THE ROYAL UNIVERSITY.

Much satisfaction is felt in medical circles in the North of Ireland at the election of Dr. Whitla to represent the graduates on the Senate of the Royal University, and at the decisive majority by which he was returned. The Belfast Medical School has always felt that its interests were little regarded by the Royal University, and it looks confidently for the relief of its grievances to the efforts of so energetic a representative as Dr. Whitla.

BELFAST ROYAL HOSPITAL: OPENING OF THE SESSION.

The medical session was opened on Tuesday morning at 10 o'clock by an address by Dr. Byers, Gynæcologist to the Hospital. There was a large attendance of students and members of the staff. After a warm tribute to Dr. Gordon (ex-Professor of Surgery in the Queen's College) and Dr. Andrews (late Professor of Chemistry), Dr. Byers proceeded to sketch the history of the hospital and its recent advances, and wound up an interesting address by recounting the modern triumphs of antiseptic surgery, especially in obstetric practice.

THE CHAIR OF SURGERY AT QUEEN'S COLLEGE, BELFAST.

On Tuesday afternoon, Dr. Thomas Sinclair, the recently appointed Professor of Surgery, opened his course by an inaugural lecture. On entering the class-room in company with Professor Redfern, the new professor was received with great enthusiasm by the students, who rose to their feet and cheered for some moments. The address was an able survey of the relations of the various sciences to modern surgery, and was listened to with deep attention. Dr. Sinclair, who is a graduate and gold medallist of the late Queen's University in Ireland, and a Fellow of the Royal College of Surgeons, England, enters upon his new duties with high expectations on the part of all those who have watched his distinguished collegiate and university career.

DIRECT REPRESENTATION OF THE PROFESSION IN IRELAND.

At a meeting of medical practitioners residing in the co. Meath and adjoining counties for the purpose of furthering Dr. Jacob's candidature as Direct Representative on the Medical Council, the following resolutions were adopted by those present. It was proposed by Dr. Canton, seconded by Dr. Phillips: "That the following be appointed to act as a committee: Drs. Samuel Caldwell, Virginia, co. Cavan; Thomas Canton, Kells; William Carleton, Delvin, Westmeath; Richard Cronin, Sloane; Patrick S. Duigenan, Athboy; George H. Dundas, Moynalty; James W. Greene, Athboy; Robert G. Loverock, Ballyjamesduff, co. Cavan; James M'Evoy, Nobber; Charles T. J. O'Rorke, Crossakiel; Edward Phillips, Castletown, Navan; John Ringwood, Kells; Thomas F. Sparrow, Kells; Francis Tuite,

Longwood, Enfield." It was proposed by Dr. Duigenan, seconded by Dr. Phillips: "That each of the members on this committee should use all their influence with their medical friends to secure the return of Dr. Jacob, who is so worthy of the support of the medical profession." It was proposed by Dr. Cronin, and seconded by Dr. Carleton. "That we, as medical officers residing in this and adjoining counties, are delighted to have this opportunity of testifying our gratitude towards Dr. Jacob, who has always—unasked, unaided, and unrequited—endeavoured, by every means in his power, to advance the interests of the medical profession." It was proposed by Dr. Caldwell, seconded by Dr. O'Rorke: "That Dr. Jacob has a special claim on our support, on account of his unceasing efforts to elevate the educational standard required of those entering the medical profession." It was proposed by Dr. Sparrow, seconded by Dr. Carleton: "That we give our undivided support to Dr. Jacob because of our earnest conviction that, notwithstanding our high appreciation of the eligibility of the other candidates, still we consider he is pre-eminently fitted, from his life-long acquaintance with every detail relating to medical affairs, to sustain the dignity and voice the interests of our profession in the General Medical Council."

ACADEMY OF MEDICINE.

THE fourth annual general meeting was held in the Royal College of Surgeons in Ireland, on October 29th, Dr. Robert Mc Donnell, F.R.S., President, in the chair. There was a large attendance of the Fellows of the Academy. Mr. Thomson, General Secretary, read the report of the Council for the past session, which showed that the numbers of Fellows, Members, and Student Associates were 212, 33, and 15 respectively, as compared with 211, 35, and 24 respectively, in 1884-5. A committee of the Council appointed to consider the desirability of publishing in the *Transactions* an abstract of the discussions on papers read in the sections, reported in favour of the principle. The General Council, however, did not deem it advisable to adopt the report. Rule 64 empowers the Council to publish "discussions of importance or interest arising out of" the communications made to the Academy; and the Council will exercise that authority when occasion arises. The proposed visit of the British Medical Association to Dublin, in August, 1887, was brought before the General Council in a letter from Dr. Neville, Honorary Secretary of the Dublin Branch, and it was unanimously resolved to send a letter of invitation to the President and Council of the Association. On the motion of Mr. Edward Hamilton, seconded by Sir William Stokes, President of the College of Surgeons, it was also agreed to submit the following recommendation to the general meeting of the Academy for approval. "The Council recommend that the honorary treasurer be authorised to contribute, out of the funds of the Academy, a sum of 100 guineas towards the expenses of the annual meeting of the British Medical Association in Dublin, in 1887." On the motion of Sir William Stokes, seconded by Dr. Banks, the report of the Council was unanimously adopted. Dr. G. F. Duffey, Treasurer, read his report, from which it appeared that the income amounted to £844 9s. 8d., and that there was a balance of £392 19s. 7d. The treasurer's report was adopted. The following officers were elected by ballot:—*General Treasurer*, George F. Duffey. *General Secretary*, William Thomson. Medical Section: *President*, Dr. James Little, President of the College of Physicians; *Council*, M. A. Boyd, J. Magee Finny, T. W. Grimshaw, Richard A. Hayes, Henry Kennedy, A. N. Montgomery, J. W. Moore, William Moore, C. J. Nixon, Conolly Norman. Surgical Section: *President*, Sir William Stokes, President of the College of Surgeons; *Council*, William Colles, C. Coppinger, Henry G. Croly, Kendal Franks, Edward Hamilton, Patrick J. Hayes, Edward Stamer O'Grady, Edward Dillon Mapother, W. Thornley Stoker, W. I. Wheeler. Obstetrical Section: *President*, Arthur V. Macan; *Council*, Lombe Atthill, John A. Byrne, J. J. Cranny, Professor Dill (Belfast), Andrew J. Horne, G. H. Kidd, J. R. Kirkpatrick, T. More Madden, R. D. Purefoy, William Roe. Pathological Section: *President*, Walter G. Smith; *Council*, C. B. Ball, J. Wallace Beatty, E. H. Bennett Arthur H. Benson, A. H. Corley, Arthur Wynne Foot, T. E. Little J. M. Purser, J. A. Scott, J. B. Story.

THE ROYAL UNIVERSITY OF IRELAND.

THE ceremony of conferring the degrees of this university took place—as was briefly intimated last week—on October 28th. Their Excellencies the Lord Lieutenant and the Marchioness of Londonderry, and a large assemblage of ladies and gentlemen were present. Lord Emly, Vice-Chancellor of the University, presided. He gave an account of the progress of the University for the past year, during which, he said, their power of usefulness had been much increased by the completion of the University buildings. He stated that in order to discourage "cramming" as much as possible, they required practical work to be done in all the examinations of the University in the sciences, and such practical examinations—for instance, in medicine and surgery—could not be thoroughly carried out until the University had the necessary laboratories, halls, and museums, fully equipped with apparatus and specimens. "The laboratories for experimental physics, chemistry, and physiology, the histological room and hall for practical anatomy and operative surgery it now possessed was not surpassed by any similar rooms in any other University." The museum to contain the zoological, mineralogical, and geological specimens, and miscellaneous collection of instruments and appliances will be in the main building. It is hoped that the laboratories and museum will be equipped during the present winter. The number of candidates who entered for examination in medicine was 749; being a few less than last year. The Vice-Chancellor then mentioned that nine ladies were to be admitted to the list of graduates. One lady, Miss Mary Story, the first lady that ever did so, had carried off a first-class exhibition at the degree examination. The Vice-Chancellor then announced that in addition to conferring honorary degrees on Mr. James Bell, the well-known chemist of Somerset House; on the Rev. Stephen J. Perry, "one of the most eminent of living astronomers"; and on Professor John Perry; the Senate had decided to confer "the Honorary Degree of Master of Obstetrics upon a distinguished graduate of the University, Dr. Henry Macnaughton Jones, one of the examiners in this department, who by his successful exertions in obtaining the right of registration for this qualification has rendered a very important service to the medical profession generally." We are glad to congratulate Dr. Macnaughton Jones on being the recipient of the honour. The Irish Medical Schools and Graduates' Association will no doubt appreciate the compliment paid to its president, for, in the exertions of the Council of that Association to obtain the registration of the midwifery diploma of this University, as well as that of other licensing bodies, Dr. Macnaughton Jones took an energetic part.

MEDICAL MEN AS MUNICIPAL COUNCILLORS.—Several medical men have been elected as municipal representatives. Mr. W. Berry, J.P., M.R.C.S.Eng., after a contest, retains his seat in the Wigan Town Council. Dr. Braidwood has also been successful at Birkenhead, whilst Dr. Cross, of Liverpool, Dr. Bark and Dr. Wills, of Bootle, head the poll in their respective wards. Dr. Cocker is mentioned as Mayor of Blackpool in the jubilee year.

MEDICAL MAGISTRATES.—Mr. Thomas Jones Dyke, F.R.C.S.Eng., has been placed on the Commission of the Peace for Merthyr-Tydfil.

BEQUESTS AND DONATIONS.—Colonel T. U. Brocklehurst, of Henbury Hall, bequeathed £1,000, and Mr. Edwin Chadwick, of Manchester, the "residue" of his estate (which is expected to realize about £200) to the endowment fund of the Macclesfield Infirmary.—Mr. Alfred Ridley Bax has given £750 to Charing Cross Hospital to endow a child's cot, to be called "The Edward Bax Bed."—Mrs. Walters, of Derby, bequeathed £500 to the Derbyshire General Infirmary, and £500 to the Derbyshire Hospital for Sick Children.—University College Hospital has received one hundred guineas from The People's Contribution Fund and fifty guineas from Mr. R. K. Gray.—Mr. G. Trentler has given fifty guineas to the British Home for Incurables.

ROYAL COLLEGE OF SURGEONS, ENGLAND.

A VERY largely-attended meeting of Fellows and Members of the Royal College of Surgeons of England was held at the College on Thursday last, the President, Mr. W. S. Savory, in the chair.

The PRESIDENT said: Gentlemen, the report that is already in your hands contains so full a record of the transactions of the Council of the College for the year ending last July, that I need not, I think, detain you by any additional remarks upon the subject. You will see that, in addition to the ordinary work of the year, in all matters relating to the general conduct of the College, the time and attention of the Council have been largely occupied by two or three very important subjects. There has been, and still exists, the great duty of making all the necessary arrangements and appointments for the efficient working of the examining Board under our conjoint scheme with the College of Physicians, and I do not doubt you have all looked with interest to the progress which the new Examination Hall is making towards completion. It seems to me that the new scheme is full of promise for the future. Then there is the exciting question whether any practicable and worthy plan can be devised by which the Colleges may be enabled to provide those who pass their examinations with degrees in medicine and surgery. And, lastly, there are the recent arrangements for widening or modifying the conditions of admission to the Fellowship. So that you see, gentlemen, there has been and still is abundant material for the work of the Council, and I am sure I may say, for the Council, that it is with pleasure that we place this report in your hands.

The report was taken as read.

THE PRESIDENT: I will now call, without further preface, upon Mr. Timothy Holmes to move the first resolution.

MR. TIMOTHY HOLMES then moved, "That, in the opinion of this meeting, it would conduce to the welfare of the Royal College of Surgeons, and would tend to promote the interests of medical polity and education (1) if Members of the College were empowered to take part, separately or conjointly, with the Fellows in the election of members of the Council; (2) if Members of the College were eligible to sit on the Council, provided (*a*) that no Member of the College shall be entitled to vote until he have been such Member for a period of ten years; (*b*) that no Member of the College shall be eligible to sit on the Council till he have been such Member for a period of twenty years; and (*c*) that not more than one-fourth of the Council shall consist of Members of the College who are not also Fellows." He said, Mr. President, in rising to move this resolution I feel that I ought to trespass upon the time of this large meeting, and of the Council, as little as possible, and yet when so extensive a subject is brought before us as this report, if I spend a few minutes in its consideration, I trust that the meeting will be indulgent to me. In the first place, Sir, it is with great pleasure that I,—and I am sure all those to whom this report is addressed—must acknowledge its courteous and conciliatory tone. It is with greater pleasure that we acknowledge the great progress which the College has made in coming forward, I hope I may say, annually, to meet the Members and Fellows in consultation. There are several matters in which the business of the College has very considerably changed in the sense in which those who are acting with me desire that it should change, and in one matter especially to which I hope I may refer without impertinence—I mean your own presence in the chair. We felt that the arrangements which used to prevail in this College on handing the presidency, as it were, round the Council-table, was one which diminished the dignity of the office, and which was not favourable to the efficiency of the College, and we are delighted to see that a change has been made in that routine, and that in the first instance the choice of re-election to the presidency has fallen upon so worthy a representative of British surgery. I trust, Sir, that this very great change and improvement is only the harbinger of changes and improvements greater still. Well, then, I turn to the report before us, and the first passage which I note, and I do so with the very greatest pleasure, is that the Council say that, with regard to those questions which concern the constitution of the College, they will always be glad to have an opportunity, as far as practicable, of consulting the Fellows and Members. You have alluded, Sir, to two matters on which we certainly must soon be consulted; I mean with regard to the idea of giving medical and surgical degrees by the diplomas of the united Colleges. This is a matter which touches the medical profession so very nearly that I feel we have the strongest reason for thanking the Council for their implied promise that we shall be consulted upon this subject before any definite action is taken. And I say this still more strongly with reference to another matter, which is almost of more importance to the general body of the profession, and which is coming before the College. I mean with reference to including the Society of Apothecaries in the conjoint scheme which is now being worked by the Colleges of Surgeons and Physicians. These are matters, Sir, on which the Council have by implication promised to consult what I was going to call their constituency—what I hope will be their constituency. On these matters we have nothing but thanks to give, and nothing to do but to say how ardently we hope that the Council will persevere in a course of reform which for a long time appeared to be impossible. Then turning again to the report, I find that the Council very justly say that they are "not only the representatives of the Fellows, and have not only responsibilities to the Fellows and Members, but the College holds an important relation, and its Council have grave responsibilities, to the whole profession, the general public, and the State," words, Sir, which, in my opinion, cannot by any possibility be improved upon. They describe a condition of affairs for which this College is eminently fitted. If we refer to the balance-sheet presented to us to-day, we shall see with what admirable efficiency the Council of the College has managed the affairs of this great Institution: we shall see there the statement of the enormous property which has been accumulated by this College during the course of vigorous and energetic management by yourselves and by your predecessors. We see by the account that the College has an income of over £21,000, derived from its examinations; while from house-property investments it receives an income of £1,520; and from dividends of stock £1,154. With regard to the receipts from examinations, it would appear that, deducting expenditure, just one-half of the £21,000 is clear profit. Besides all that, we have this splendid institution in which we are now assembled; the great museum, which is the admiration of the whole world; the library; and, far more than all that, the services of the eminent men who sit at this Council. Besides this, as I am reminded even at this present moment, the College has entered upon an enormous amount of property, and has become one of the richest and most powerful institutions in this country. As far as I have seen, the Council of the College have been anxious to do their duty, and have been vigorous in their attention to it; and, with respect to the examinations especially, their attention has never flagged. They have always been anxious to enlarge the scope of the examinations, to make them, if possible, more practical, more thorough in every way; at the same time I am quite certain that every person who has sons in the study and practice of the profession will feel with me that it cannot be denied that the system of examinations which these Colleges have instituted, and are now administering, is one which presses hardly indeed upon the student and upon the medical practitioner. On the student, because much of his time is, I will not say wasted, but at any rate absorbed in learning what afterwards he is compelled to forget. A great part of the period of his study is not given up to the practical study of disease; and his toil is very frequently rewarded, however industrious he may have been, by rejection and mortification, at the last. On the parents, because they are mortified by the ill-success of their sons, and damnified in pocket considerably by the amount of time which very frequently all this involves. Now, that is a matter which requires the attention of the College, and which, I have no doubt, will have it. I do not think the Council of the College, when they seriously reflect upon it, can be altogether satisfied with the position of the examination for diplomas; but, at the same time, Sir, I do allow they have worked hard at this matter, and they have done what they consider to be their best. I only regret that the examinations appear to have a tendency to become more and more complicated, and less and less practical. But when we turn to other matters connected with the profession, I cannot congratulate the College at all, either on their success or on their endeavours. When we see that honest medical men who try to earn their livelihood by honest practice, and to whom quackery and cheating are odious, receive from great institutions like this College and the College of Physicians no amount of protection of any kind, we cannot help saying that a little more knowledge of, or at any rate a little more sympathy with, the circumstances of the ordinary members of the profession, would do a very great deal of good to the Council and this College, and it is for the purpose of establishing such a sympathy, and of giving such information, that it is proposed that a certain proportion of the Council shall be elected by the Members, in order that the College Council may be, as the phrase of the day is, a little more in touch with the general body of the medical profession. The way in which the regulations of the Medical Act are evaded by persons who conduct their practice by untrained assistants; the way in which persons are permitted to practise open forms of quackery without even any censure from this College; the way in which persons are permitted to sign themselves Provident Dispensers or something of that kind; all these

things are a perfect scandal, and one of our reasons for asking the Council to move the Crown for permission to admit into the Council some of the general practitioners of the country, or, rather, to elect some of the Members on the Council as distinguished from the Fellows, is that the Council may be more in sympathy with the general body of the profession on matters of this kind. As to the duties of the College to the public, there is one matter on which the Council of the College, and the College generally, may justly pride itself. I say that in no part of the world, as far as I have ever seen or heard, have there been found such splendid monuments of liberality of private individuals to the State and to the world as exist within the walls of this College. There are plenty of duties that the College might discharge. For instance, most of the members of the Council are hospital-surgeons, yet is there any public scandal or public abuse more gross than that of the hospitals of this country? Beside the great hospitals, which in themselves are not entirely free from abuses, are there not a crowd of minor institutions which are really in no sense of the word public charities? I believe this matter is a stranger to the deliberations of the Council, but I say it ought not to be. I say, if the Council of the College had an administration and officers who knew more about these quacks, and suffered more by them, that their action on the question would be very considerably stimulated. Then there is the duty which the College owes to the State. I never observed, while I was on the Council, that the College was consulted on the subject of legislation, or that its opinion exercised more influence on the progress of legislation than did the opinion of far inferior bodies or even private individuals, who, so far as I know, have no influence at all. The great Colleges of Physicians and Surgeons exercise very little influence upon matters of State, because they do not represent a large constituency. We are drifting in other matters more and more towards what is called democracy. The Council of the College has always stood very much upon its dignity, and has always chosen to represent the few rather than the many. However philosophically admirable that may be, at the present day it involves the loss of power and dignity; and if this College were strengthened by having the great constituencies which are anxious to connect themselves with it, I am quite sure that their influence upon the progress of legislation and of State questions would be infinitely extended. It is with a view to remedy these evils that we are anxious that you should take into mature consideration the admission of Members of this College to vote and sit on the Council as we previously recommended you to do without a satisfactory result; but, since then, other things have occurred, and I think now that it is time to reconsider this matter in the light of subsequent events. I do not say for a moment that the admission of Members to the Council or to voting will be a panacea for these evils. We are not foolish enough to suppose that any violent change will take place or ought to take place; but we are quite certain that it will enlarge the basis of this College, and that it will give it immensely increased force with all the bodies to whom the report has referred—that is to say, with the profession, the public, and the State. In answer to our last representation on this subject, the Council say that they are quite aware that the new proposals for widening the basis of the Fellowship,— one being by election and the other by examination, or, I would rather say, by the excuse of examination— do not constitute a complete response to the desire of the Members to a share of representation in or upon the Council. In one sense they do; they constitute a complete response in the negative, because that is exactly what we do not ask for. They say that they will "point out that no detailed plan formulated by the two bodies mutually interested in the question, that is the Fellows and the Members, by means of which a share of representation might be assigned to the latter, has yet been presented to the Council." That is rather a strange answer. If the principle is accepted, we will then supply you with a detailed plan. We certainly are not prepared to supply the details of the plan to persons who altogether repudiate the principle of it, and would only use the details for the purpose of obstructive criticism. At the same time we are anxious to argue this matter as friends. All that we want is to increase the dignity and the utility of the Council. We want, as far as we can, to promote practical improvements in the College; and, therefore, in our anxiety we have, in this resolution, gone a little further than we need have done, that is to say, we have provided you with the heads of a scheme. In doing that we do not profess, for a moment, that these are the unanimous opinions of our two associations. I believe that the Members are unanimous to a certain extent, that is to say, they wish for more, but they are prepared to accept a representation on the Council in the proportion of one to four. In respect to the admission of Members into the Council, I am perfectly frank in saying the Association of Fellows is not unanimous. The resolution was identical with one that was passed by the Association of Fellows some time since, and it was passed unanimously at the meeting of the Council of the Association the other day, but that unanimity was only due to the fact that one or two gentlemen who think otherwise were absent. There are members of the Association of Fellows who, I believe, are in a minority; who, though they would be perfectly willing to give the vote to Members, would not at present desire to see Members on the Council. So far are we from contending that the Fellows are unanimous on this matter, that, a short time ago, we made arrangements for ascertaining the individual opinions not only of the Fellows of our Association, but of all the Fellows of the College that we could approach on this matter, and we only deferred doing it because we hoped that the Council would do it for us. I am pleased to hear that a motion was made with the object of ascertaining the opinions of the Fellows on this matter by the Council, which has a much better mechanism for doing it than a private association, but the Council at that time declined. We still hope that the Council will do it; but, at the same time, you must allow me to say that the opinion of the Fellows, whether it be definitive or not, would not settle the question. The Fellows are, in number, a very small minority of the College, although, in attainments and station, they occupy a very respectable position, and their opinion ought to, and I hope will have much weight on the subject; at the same time they are in a small minority as compared with the Members, and you must not forget that within a very short time the Members of this College have been entitled to vote, and to sit upon the General Medical Council. That is a matter which seems to me to have entirely changed the situation. The Council (as you know) is pledged, and cannot help going on for a new Charter. The Council has promised to obtain for the Fellows the privilege of voting by papers, which they cannot have without a modification of the Charter. Now, when you go to any public officer, whether the Lord President or the Home Secretary, if there is a strenuous opposition on the part of your Members, who say they ought to have privileges in their own College which have been conceded by the legislature in the chief public body connected with the medical profession, how is it to be met? We are most anxious, indeed, that these questions should not come before the public or before public officials as matters of controversy; we are most anxious that, when the new charter is applied for, the whole body shall say that they are satisfied with it. But that will not be if there be really, as we believe there is, a very serious feeling on the part of the Members that they are determined to have some voice in their own College; and if, in spite of such an expression of determination, the Council should still determine to try and exclude them from it, I have nothing further to say upon this subject. I am exceedingly indebted to you for the patience with which you have listened to my remarks, which I am afraid have been too lengthy. The subject is a very important one, and it is one upon which I feel very deeply, and if I have detained you too long, I beg pardon.

Dr. DANFORD THOMAS seconded the resolution. He said the resolution, modified from that of last year, was in accord with the feelings of the Fellows who in sub-Committee and in the General Committee of their Association had agreed to support them in their just and natural aspirations to become more closely affiliated to the College of which they claimed to consider themselves an integral part. They were Members of the College because they had become legally entitled to claim that position; was it then to be wondered at that they should expect to take some part in its government? The great bulk of the College income had been derived from the contributions of the Members. They asked nothing more than that which Parliament had, in its wisdom, recently accorded to the profession at large, in two words, direct representation.

Mr. ERICHSEN said he had failed to be convinced by the arguments either of Mr. Holmes or Dr. Danford Thomas that it would be advisable for the Council to adopt the resolution. Mr. Holmes's arguments appeared to be two—that by admission of Members into the Council, there would be a better guarantee that the Council would exercise more influence than it had hitherto done in the suppression of quackery, and that by the introduction of Members into the Council, and giving the Members the franchise, the weight of the College in all affairs of state would be increased; but, so far as he knew, there was not a single collegiate or academic body in this country in which men, who had merely passed the minimum qualifying examination, had the franchise or a seat upon the governing body. But this was not a question of custom, but a matter of argument. He would ask, in the first place, did the Members of the College demand this as a right or as a matter of grace? ["As a right."] What right had the Members to ask it? A right must originate either in the redress of a

wrong, the restitution of a privilege withdrawn or unfairly withheld, or it must be in virtue of their most inherent property in the Membership that gave that right. The Members had never possessed the franchise. Before the institution of the Fellowship, the Council was self-elected—it was practically elected by the Court of Examiners. In order to do away with that abuse, the Fellowship was instituted, mainly by Sir Benjamin Brodie, with the view of widening the electoral basis, and giving the electorate into the hands of men who were surgeons of repute and position. As to the Membership implying any inherent power, no ground existed for maintaining this. If, however, any Member desired that franchise, he had a ready means of obtaining it. The Fellowship of the College was not a close institution nor a limited body. A man who had any desire for the franchise or to take a high position in the surgical world had only to present himself for examination for the Fellowship, and the door could never be shut in his face, provided he could only show himself competent in the three subjects on which he would be examined. Although there were only 1,200 or 1,300 Fellows, there was no reason why there should not be 12,000 or 13,000. But if they admitted the Members on the same footing as Fellows to the franchise, and seats on the Council, that would eventually lead to the extinction of the Fellowship. If this was not demanded as a right, but was accorded as an act of grace, would it strengthen the Council or the College in any way? The business of the College was not political; they left that to the British Medical Association. It was not ethical; they left that to the Medical Council. It was not commercial; they left that to any one who chose to take it up. The business of the Council was educational and scientific; and he contended that the men who could most efficiently control education and examination were those who had been teachers in the various medical schools, and who were almost exclusively Fellows. He did not see how it was possible to suppose that the Council would be strengthened by the infusion of 25 per cent. of Members into that body. If there was justice to be done to the Members in this matter, there was also some justice due to the Fellows. With regard to the Association of Fellows, he would like to know of how many it was composed, and what was its proportion to the great body of Fellows. The Fellowship was not a mere empty honour, but it implied the possession of a very considerable amount of knowledge of surgery and the allied sciences, and it also conferred the right to vote and to sit on the Council. If, therefore, the number of Fellows upon the Council was diminished, he contended that an injustice would be done to them.

Mr. MARSHALL, of Dover, hoped that the meeting would not be influenced by the conservative speech which had just been delivered by a gentleman who not long ago was a Liberal candidate for the University of Edinburgh.

Mr. RIVINGTON said the report was bland and courteous, and it was also in the highest degree encouraging, inasmuch as it contained in itself strong evidence of actual conversion; but, unfortunately, conversion or conviction was not always accompanied by a frank acknowledgment. This was the case with the Council. They invited the submission of a plan of representation of the members, and they promised to give it their most careful consideration, but if they were not prepared to accept any plan, it stood to reason that such an offer would be throwing dust in the eyes of the Members, in order to obtain a charter. He did not believe that the Council would stoop to such an unworthy artifice. The alternative proposition was that the Council were in reality convinced of the necessity of granting the representation, but, being convinced against their will, they affirm in the very forefront of the report, that they were not convinced. It was chimerical to hope to maintain special privileges which were in antagonism to the tendency of the nineteenth century. The least satisfactory feature of the reply was the contrast presented between the jealous guardianship of every atom of political privilege, and the laxity in lowering, or proposing to lower, the academical status of the Fellowship by admitting members at a comparatively early age, either with a modified examination or without any examination at all. There were only 1,124 Fellows, while there were 17,040 Members. If the propositions of the Council were adopted, the number of Fellows would be doubled or trebled, but the Fellowship was really little or no advantage to the general practitioner as a means of gaining practice or the confidence of the public. It was simple a surgical distinction, and if it were conferred with maimed rites, it would be deprived of the whole of its value. But if the Fellows were increased to 3,000, there would still be 15,000 Members who would continue to demand enfranchisement. Did not the Council make the concession frankly? The number of Members' representatives to be placed on the Council was not a very great object, and four might be added without taking away a single representative of the Fellows. If the Council merely offered to give consideration to some plan of representation, and at the same time reserved to themselves the right not only to modify the details, but to reject its principle, the Members of the College would really be wanting in ordinary acumen and in business capacity if they receded one inch from the position they had already taken up. He strongly objected to the Associations of Fellows and Members. At the present time, they were necessary evils; but they were opposing the Council, and it was not desirable that they should exist as outside bodies. They ought to be brought within the pale of the constitution. At the Universitity of London, every graduate was eligible to vote after two years. No useful purpose could be served by the restriction that members should be of twenty years' standing before being eligible for the Council. The exclusion of the members from all control over the affairs of the College, from all voice in the framing of educational regulations and regulations for examination, and all control over the expenditure of money which they had themselves contributed towards the funds of the College, was essentially unjust. It was unjust by reason of the number of the members, by reason of their position in the College, as being actual members of the corporation. It was unjust on account of their social standing, and it was unjust on account of their liberal education. The admission of Members on the Council would give a needed variety to the Council. Surely, when the right of direct representation had been given to the general practitioners with regard to the Medical Council, it was anomalous that it should not be accorded to the Members of the Royal College of Surgeons. Direct representation on the General Medical Council was opposed by the recognised leaders of the profession, but that opposition had been overborne, and exactly the same thing would happen in the College. The Council were blind, and could not read the signs of the times. The spirit of the age also loudly called for facilities for granting degrees to London students. The schools of London were languishing, almost decaying; and the tide of students was flowing rapidly northwards, where the schools of the Universities were crowded on account of the passive attitude of the University of London, which sat with folded arms, and would not apply any effectual remedy. The same influence appeared to predominate at the Council of the University as in that College, only there was a very remarkable difference. At the University it was considered absolutely necessary to maintain the standard of education at the highest position, whilst in the College it was proposed to confer the Fellowship without any examination in Anatomy and Physiology. He believed that the representatives of Members would have the courage of their opinions when they were placed on the Council. A great question had sprung up in connection with the Medical Act of 1886, in which the Members of the College were especially interested. He alluded to the future position of the Society of Apothecaries in the examination system. The refusal to admit that Society to a conjoint scheme in London would only result in the establishment of a second examining board in the metropolis; and if there were representatives of Members on the Council, they might be trusted to take just views of this and other important questions. The representative Members would also exercise a vigilant supervision over the expenditure. They would pay attention to the large expenditure in connection with the Court of Examiners. He believed that the only just principle to be applied in the appointment of examiners was that every medical school should be represented.

The resolution was carried, with very few dissentients.

Dr. RALPH GOODING proposed: "That, with a view to give effect to the recommendation in the foregoing resolution, the Council is hereby respectfully requested to empower certain members of its body to meet and confer with representatives of the Association of Fellows and of the Association of Members, together with, if necessary, an equal number of Fellows and Members who may not belong to either of the Associations, to be selected in any manner satisfactory to the Council." He considered that the University of London afforded a distinct precedent for granting those privileges which had so long been denied. At the University, all graduates of a certain standing were endowed with the highest privileges and powers. They were eligible as members of Convocation, and also as members of the Senate. If the governing powers of the College would comply with the spirit of the resolution, and carry out its principle, results would be produced conducive to the present prosperity and future progress of the College. The Members did not wish to diminish the privileges of the Fellows, or in any way to impair their status; on the contrary, they pledged themselves to resist any proposal which might in any degree detract from the value of that academical distinction.

Mr. JOHN TWEEDY seconded the resolution. In doing so, he said that members of the Council were seriously and earnestly anxious to

do what they considered to be the best for the College, but they thought rather too much of the purely exclusive interests of the College, and not quite enough of the interests of the Fellows and Members. He thought that if the proposed conference were carried out, an amicable understanding would be soon arrived at; there would be a ready adjustment of all their differences, and, from that time, the College would go on with increasing prosperity. It was very important that these controversial questions should be settled, in order that other matters might be grappled with, such as the question of making the College a great academy for the advancement of surgical science.

The resolution was carried *nem. con.*

Dr. F. H. ALDERSON moved, "That with reference to the report from Mr. John Marshall, on page 15 of the Council's report, this meeting requests the Council of the College to consider the advisability of accepting an arrangement for combination with the Apothecaries' Society as well as the College of Physicians, for the purposes of conjoint examinations for medical diplomas in England and Wales, under the Medical Act of 1886, and to report thereon at a future meeting of Fellows and Members to be summoned for the purpose at an early date." The resolution, he said, was of great importance, affecting every Member of the College, and perhaps, also, the dignity of the College itself. When the matter was dealt with by the College in July last, Mr. Marshall said it was not considered desirable to admit the Apothecaries' Hall to the conjoint scheme. The Hall then had an examination in medicine, but no right to give any degree in Surgery. Since that time the position of the Apothecaries' Society had improved. The Apothecaries' Society had wisely gone to the Privy Council and stated that their very existence was threatened. The Privy Council advised them to apply for admission to the conjoint scheme, and said that if they were refused, they could come again to the Privy Council, who were determined that the Society's existence should not be imperilled. The result, therefore, might be that the Apothecaries' Hall might have an independent examination, and confer a diploma entitling the holders to call themselves surgeons. That, certainly, would be detrimental to the interests of the College and to the public, because it would lower the class of practitioners who would compete with them, and perhaps on superior terms, for it was mooted that if they were refused entrance into the combination between the Colleges of Surgeons and Physicians, they would make such arrangements, with the University of Durham for instance, as would enable their licentiates to obtain a degree and call themselves doctors. The Government had decided that the Apothecaries' Hall should not be crushed out. If the Apothecaries' Hall were admitted to the conjoint scheme, there would then be one examining board in London, giving a thorough and full diploma, which would be an honour to the profession, and of very great use to the public. No other opportunity might occur for fifty years. The public were tired of Medical Acts. It was, therefore, most important that the Council of the College should yield to the wishes of the Members, and give them an opportunity of considering this question together.

Dr. BURGESS seconded the motion, which was supported by Mr. BARNES, and agreed to unanimously.

Mr. WILLETT (in the absence of Mr. Paul Swain) moved—

"That in the opinion of this meeting, the method recommended by the Council for widening the basis upon which the Fellowship is obtained tends to lower the academic status of that diploma, and in the interest of surgical education is not advisable."

The resolution was seconded by Mr. RICHARD DAVY, but an amendment, moved by Mr. W. STEEL, and seconded by Mr. ASHTON ELLIS, was carried, to insert the word "first" before "method."

On the motion of Dr. JOSEPH SMITH, a vote of thanks was passed to the President for his impartial conduct in the chair, and the proceedings terminated.

THE OPENING OF THE MEDICAL SCHOOLS.

MEATH HOSPITAL, DUBLIN.

ON November 1st, the Medical School of the Meath Hospital was opened for the session by an address by Mr. L. Hepenstal Ormsby, F.R.C.S.I., who took for his subject, "The Social, Scientific, and Political Position and Influence of the Medical Profession in the year 1886." After pointing out the eminent position held by the best representatives of the profession in Ireland, he dwelt on the impediments to the advance of the profession as a body; he instanced especially the absence of any uniform State-qualifying examinations, the small incomes to be gained in sparsely populated parts of the country, the prevalent public belief in quackery, and the absence of suitable State recognition for the leaders of medicine and surgery. A Minister of Health or Sanitary Science, with a seat in the Cabinet, to be filled only by a physician or surgeon of eminence and ability, was imperatively needed. Scientific medicine must and would take an exalted position in the world when the component parts of the great ship of State were properly arranged and reformed. Among the many subjects about to be brought before Parliament at no distant date, and which emphatically demand the best attention of a sound medical opinion, he mentioned the health and management of prisoners, the treatment of habitual drunkards, the proper housing of the working classes, further restrictions as to the pollution of rivers, opposition to compulsory vaccination, the improvement of the Lunacy Laws, improvement in the Sanitary Laws, the Contagious Diseases Act, and last, but not least, the vivisection question. The late Lord Beaconsfield had said "that a policy that diminishes the death-rate of a great nation is a feat as considerable as any of the decisive battles of the world." Mr. Gladstone also had frequently spoken in strong terms of admiration of the increasing importance of medicine and the medical and surgical professions. "That profession," he said, "presented a future of the highest interest. There was in that future the probability that it would gain increased influence, greater as compared with other professions." He expressed the opinion that the recognition accorded to the medical officers of the public services by the State was inadequate, and urged that the corporations and licensing bodies from whom the medical officers derived their diplomas should, from time to time, confer honorary high degrees on such as had proved themselves deserving of the distinction. He claimed for the Army Medical Service the prefix "Royal," like the "Royal Artillery," or "Royal Engineers," and suggested the Queen's Jubilee as a fitting occasion upon which to confer this title, which had been recommended by Lord Morley's Committee in 1883. He then pointed out how the Privy Council of England and Ireland had been apparently reserved from time immemorial for lawyers, judges, military men, some divines, and peers of the realm, but that medical men had been excluded by class prejudice. Ireland, indeed, was in advance of England in some degree; for a Fellow of the Irish College of Surgeons had recently been advanced to the position of a Privy Councillor in the person of Sir John Lentaigne, C.B. and F.R.C.S.I. He was the first medical man who had taken his seat at that board. In conclusion, Mr. Ormsby expressed the hope that honours of this kind would in future be more freely conferred.

ARMY MEDICAL DEPARTMENT REPORT FOR THE YEAR 1884.

SECOND NOTICE.

THE principal foreign stations at which British troops were employed during the year 1884 were 11 in number—namely, the Mediterranean, North America, Bermuda, West Indies, Western Africa, South Africa, Mauritius, Ceylon, China, India, and Egypt, and a corresponding number of sections of the recently issued volume of *Army Medical Reports* are devoted to affording information on the state of health of the men and officers who were serving in them. In another section, information is given regarding the health of the troops on board ship, whether proceeding to foreign stations, or returning from them to England, or on voyage from one station to another. The points of chief interest in the first nine of these sections are given in the present notice.

The average strength of the troops serving in the Mediterranean was 9,844, and, of this number, 4,712 were quartered in Gibraltar, 4,637 in Malta, and 495 in Cyprus. At Gibraltar the admissions into hospital numbered 4,556, the deaths 19; and the average number constantly sick was 262.25. The ratio of hospital admissions was, therefore, 967, of mortality, 4.03, and of constant inefficiency through sickness, 55.65 per 1,000 of the strength. The ratio of mortality shows a decrease of 1.67 per 1,000 by comparison with the death-rate of the previous year, and of 2.90 by comparison with the average of the preceding ten years. Brigade-Surgeon Fuller, in charge of the Station Hospital at Gibraltar, remarks that the death-rate of 1884 is the lowest on record. There was a large number of admissions of simple continued fever—namely, 830—and among these there were 5 deaths; there were also 3 cases of enteric fever treated, and among these 1 death occurred. Small-pox, at one time, was very prevalent among the civil population, but only one soldier caught the disease. Primary and secondary syphilis caused 699 admissions into hospital, and gonorrhœa and its sequelæ 630 admissions. Among the commissioned officers, whose average annual strength was 153, there were 86 attacks of illness and 3 deaths. One death was the result of sunstroke, 1 of paralysis, and the third was caused by enteric fever. The chief causes of sickness among the officers were fevers, for the most

part uncomplicated, except with rheumatic affection in the stage of convalescence. Gibraltar does not appear to be a favourable station for children. The average strength of the children connected with the military is returned as 575, and among them 30 deaths occurred, giving a mortality rate of 52.17 per 1,000.

At Malta, although the number of admissions into hospital was less in proportion than they were in Gibraltar, as was the experience of the previous year, 1883, the mortality among the cases was considerably higher. There were 3,897 patients admitted into hospital, giving an annual ratio of 840 per 1,000 of the strength, and among them 43 deaths occurred, a mortality of 9.27 per 1,000. The average duration of each case of sickness was 24.31 days, and the average number of men constantly sick in hospital was nearly 56 per 1,000 of the strength. Enteric fever caused 94 hospital admissions, and led to rather more than half the number of deaths that occurred during the year, namely, 22. The proportion of deaths to attacks of the disease was greater than it was in 1883.

Of the 94 cases of enteric fever, 46, with 11 deaths, occurred at Cottonera; 36 cases, with 9 deaths, at Valletta; 6 cases, with 2 deaths, at Forrest; and 6 cases at Civita Vecchia, all of which recovered. The medical officer in charge at Cottonera remarks, "The disease was of a severe type, occurring in young soldiers; the average age in the fatal cases was 22 years 5 months, and service 2 years. The greatest number of cases were admitted in May, June, and July, with almost a total cessation of the disease in August, September, and October, the months when it is usually most prevalent. It is difficult to account for this, as all the usual conditions remain the same. Every barrack in the district contributed to the disease. It is remarkable that only two cases occurred among the women and children, occupying the same quarters, and with the same water-supply. I am of opinion that this disease is seldom contracted in barracks, but in the very unsanitary houses of the natives which the soldiers frequent."

Alcoholic poisoning and delirium tremens caused 31 admissions to hospital, and among these 2 deaths occurred. The men invalided to England during the year were 141 in number, and, of these, 83 were discharged from the army. The average strength of the officers was 161, and among them were 87 cases of illness and 5 deaths, while 10 were invalided to England. Among the women (281 in number) there were 251 cases of sickness and 8 deaths. The average number of the children was 451, and among them were 306 cases of sickness and 37 deaths, giving a mortality rate of 77 per 1,000. The proportion of deaths among the children was, therefore, considerably higher in Malta than it was even in Gibraltar during 1884.

No death occurred during the year among the non-commissioned officers and men of the Royal Malta Fencible Artillery, who averaged 347 in number, but one death occurred among the officers, 19 in number, from valvular disease of the heart. No admission for syphilis, enteric fever, or alcoholic poisoning occurred from this corps during the year. The chief hospital admissions were for disorders of the respiratory or digestive systems.

The troops quartered in Cyprus, averaging 495 in number, led to 373 admissions into hospital, and 18 deaths, being in the ratios of 753.5 and 16.16 per 1,000 respectively. The hospital admission rate, as well as the death-rate, were much higher in one regiment, the King's Royal Rifles, than among the other troops, owing to the fact of it having come to the island toward the latter part of the year in a sickly condition. Three cases of enteric fever from this regiment were treated, while none occurred elsewhere in Cyprus. One of these cases proved fatal. The disease was believed to have been contracted at Ramleh, in Egypt. No death occurred among the officers, women, or children, in Cyprus. The Senior Medical Officer reports that three drafts of 50 men each were sent from the military hospitals in Egypt as convalescents. They were encamped in an elevated position on Mount Troodos, and most of the men derived considerable benefit from the change, particularly those who had suffered from enteric or malarious fevers, or were debilitated from other causes.

The average number of troops in Halifax, the only station in North America occupied by Imperial troops, was 1,265, and the admissions into hospital were 985, or 779 per 1,000 of the strength. There were 8 deaths, giving a ratio of 6.32 per 1,000 of the strength, but 4 of these were due to violence or accident, so that, as regards the results of sickness, the rate of mortality was only 3.16 per 1,000 of the strength, and in one of the instances included in this ratio, the death was due to arsenical poisoning by a suicide. The 4 deaths resulting from accident or violence were in two instances due to drowning, in one to a fall from a height, and the fourth was a suicidal gunshot wound. Two admissions for enteric fever occurred. The patients were both men who had recently come from Bermuda, and who were ailing when they arrived at Halifax. No other case of the disease occurred among the troops in the Dominion of Canada.

In Bermuda, the average strength of the troops was 1,551; and this force gave rise to 958 admissions into hospital, or 618 per 1,000; and to 17 deaths, a ratio of 10.96 per 1,000. The death-rate was more than double the rate of the preceding year, owing to an outbreak of enteric fever. The average duration of each case of sickness treated was nearly twenty days.

The outbreak of enteric fever occurred at Prospect Camp, where the disease prevailed from the middle of August to the end of the year. The medical officer in charge at the camp states that, although men from other places in the district were treated in hospital for the disease, he is of opinion that in all instances it was contracted at Prospect. The fever, of which there were 62 cases, 10 of them ending fatally, is described as having been of a very marked type, and in some instances complicated with pneumonia. With regard to its origin, the Principal Medical Officer observes: "The appearance of this disease, which was almost entirely confined to Prospect, would seem to have been connected with an excessive rainfall, following on an unusually dry summer, and the coincident impervious condition and resulting accumulations in and around certain drains and catchpits used to carry off the surface, washhouse, and urinal drainage. On these conditions being rectified, and the old disused cesspits being emptied, deodorised, and filled in, the disease gradually declined." It naturally occurs to the mind of a reader to inquire how it happened that the rainy season was permitted to find the drains and cesspits in the condition described, but on this point no information is given. The largest number of hospital admissions were for diseases of the digestive system, under which heading 188 patients were treated during the year. Half of this number were suffering from diarrhœa; and, with regard to this ailment, the medical officer of Prospect remarks that, although diarrhœa always prevails to a certain extent in Bermuda, the large increase in admissions on this occasion was due, in his opinion, to the unsanitary condition of the station. He thinks that some of the cases may have been mild forms of enteric fever. Some of the patients were in hospital a considerable number of days, and the disease did not readily prove amenable to any treatment.

Besides the deaths consequent on enteric fever, three lives were lost by accidental drowning, and one by animal poisoning. In the last instance, the soldier ate a large quantity of preserved lobster at supper. During the night he was attacked by vomiting and violent abdominal pain, and he died a few hours after admission into hospital.

In the West Indies, the average number of troops during the year under notice was 2,120, of whom 970 were white troops, and 1,150 black troops. Of the white troops, 727 were admitted into hospital, 11 died, and the average number constantly sick was 38.65. The ratio of admissions per 1,000 of the total strength was, therefore, 749, of deaths 11.33, and of constantly sick 39.84. These ratios show a very marked improvement in the state of health of the troops in the West Indies, as compared with their condition during the previous year, 1883, when the sick rates were over the average, chiefly owing to the prevalence of febrile disorders among the newly arrived troops at Barbadoes and Trinidad. The 11 deaths resulted from various diseases: 2 being due to tubercular disease, 2 to heart-disease, 2 to pneumonia, 1 to bronchitis, 1 to hepatitis, 1 to albuminuria, and 2 to injuries. No case of yellow fever occurred during the year. There were 5 cases of enteric fever at Barbadoes, but none proved fatal. The two deaths from violence were, in one instance, due to an accidental fall, in the other to a self-inflicted gunshot-wound by a gunner "while suffering from the effects of drink." Two deaths occurred among the officers, one from apoplexy, the other from gastric ulcer. The children connected with the troops appear to have been particularly healthy. Their average number was 140, and there were only 15 attacks of illness among them, with two deaths, one from teething, and the other from bronchitis.

Of the black troops, 1,065 were treated in hospital, and among them were 18 deaths, while the number constantly sick was 70; giving respectively ratios of 9.26, 11.30, and 60.49 per 1,000 of the strength. There were 37 cases of remittent fever, 11 of which occurred at Jamaica, and 26 at Honduras, 2 cases proving fatal at each of these stations. There were 194 admissions for syphilis, and 176 for gonorrhœa and its sequelæ.

The strength of the black troops on the West Coast of Africa, consisting of the 2nd West India regiment, was 539. The admissions into hospital numbered 688, the deaths 9, and the average constantly sick 36.39. These numbers give an admission-rate of 1,276, a death-rate of 16.69, and a constantly sick-rate of 67.51 per 1,000 of strength; and, compared with the preceding year, show a decrease of 488.7 in

the admission-rate, and one of 9.73 in the death-rate. It is stated that yellow fever and a severe type of remittent fever prevailed among the inhabitants of the town of Sierra Leone during the year, but did not spread to any extent in the garrison. One of the deaths among the troops at the station was caused by yellow fever. There was also one fatal case from enteric fever. There were no deaths among the 41 women at the station; among 22 children there were 3 deaths, 2 from convulsions and 1 from tabes mesenterica. The average strength of the European non-commissioned officers was 12, and of the European officers was 22. There was a considerable number of attacks of remittent fever among them, but no death occurred. Three officers and 2 non-commissioned officers were invalided to England.

The average annual strength of the troops at the Cape of Good Hope and St. Helena, which are both in the same command, was 3,157. The monthly average strength varied, however, from 2,522 in June to 4,715 in December. The increase at the close of the year was due to the reinforcements which were sent for the Bechuanaland expedition. The number of hospital admissions in the whole command was 2,145, the deaths 25, and the average constantly sick was 139.24. The admission-rate was, therefore, 679 per 1,000, the death-rate 7.91, and the rate of constantly sick 44.10 per 1,000. In the island of St. Helena alone there were 75 admissions and 1 death, out of an average strength of 173. The general health of the troops in the command is reported as having been, on the whole, very good, but in respect to enteric fever, the number of cases was greater than in 1883, chiefly owing to a severe outbreak of the disease at Rorke's Drift, where a new post was established in July. Towards the end of October, 3 cases of enteric fever occurred, and, during the following month, there were 30 cases, and also 1 in December, making a total of 34 cases, out of which there were 7 deaths. The outbreak was chiefly confined to young soldiers of the 2nd South Lancashire regiment, which arrived in Natal from England in August. The principal medical officer remarks that "it had been an extremely wet season, and the floods, charged with the drainage of a large extent of country, had caused an exceptional pollution of the water from which these young soldiers drank; while the hard fatigue duties, together with the fact of their being unseasoned to the climate, predisposed them to attack." In another outbreak of enteric fever at Pinetown, in May, the disease was attributed to "drinking impure water while on fatigue duty." Among the officers, whose average number was 151, there were 61 cases of sickness, principally febrile and rheumatic affections. Three deaths occurred among them, 1 from pneumonia, 1 from enteritis, and 1 from cirrhosis of the liver. The average strength of the women in the command was 187, and among them were 99 attacks of sickness, and 1 death due to peritonitis. There were 77 cases of sickness and 8 deaths among the children, the average number of whom was 308. One of the fatal results was due to enteric fever; the others were due in 3 instances to convulsions, in 2 to meningitis, and in 2 to enteritis. The ratio of sickness, as well as that of mortality, among the children was considerably less than the corresponding ratios had been in 1883.

The number of troops in the Island of Mauritius averaged 363, and the admissions into hospital from among them during the year amounted to 833, with 8 fatal results. The ratio of admissions was, therefore, 2,295, and that of mortality 22 per 1,000 of the strength. These figures show an increase of 266 per 1,000 in the rate of prevalence of sickness, and of 6.57 per 1,000, over the corresponding rates of the previous year. Paroxysmal fevers caused 493 admissions, and 4 deaths. Of these cases, 448 are shown in the statistical returns as ague, and 45 as remittent fever, the 4 deaths resulting from the latter. The senior medical officer remarks that, "as usual of late years, in this colony, malarial fever of varied type, generally intermittent, is the chief cause of disability," and in another place he states that "the evil influences which have of late years so seriously affected the health of the troops stationed in the Line Barracks at Port Louis are unabated, and the only prospect of substantial amelioration is in the transfer of the infantry to Curepipe." It appears that in the case of a detachment of 55 men who were not permitted to stay at Port Louis, but were sent direct to the station of Curepipe, "there was an almost complete immunity from ague and the ordinary remittent fever among them." A new station hospital has been erected at this latter place, and the sick have been since sent daily from Port Louis to it by railway.

The force serving in Ceylon consisted of two batteries of Royal Artillery, one battalion of the Royal Dublin Fusiliers, with detachments of Royal Engineers and Departmental Corps, and the average strength was 985 non-commissioned officers and men. The average strength of officers was 49. There were also native troops, consisting of a company of Gun Lascars, whose average strength was 85.

The admissions into hospital of white troops numbered 1,180, the deaths 11, while the average daily sick was 66.48. The ratios per 1,000 of the strength were therefore 1,198 as to admissions into hospital, 11.17 as to deaths, and 67.49 as to the average daily sick. The proportion of deaths was less than it was in 1883, and less than the average of the preceding ten years. There were two cases of enteric fever at Colombo, and both proved fatal. The particular source of the disease was not traced in either case, but the senior medical officer mentions that enteric fever is of frequent occurrence among the civil population of Colombo, both white and coloured, owing to the defective water-supply. New waterworks are being constructed by the municipal authorities. The admission-rate in the group of constitutional diseases was more than twice as great as it was in the preceding year, and was largely in excess of the average rate for the previous quinquennial period. This increase was due to the greater prevalence of syphilis. The admission-rate for primary syphilis in 1884 was 198, and for the secondary form 30.5 per 1000; in 1883 it was 72.2 and 15.5 per 1,000 respectively. Including all forms of venereal disease, the admission-rate was 374.7 per 1,000, being higher by 169.4 per 1,000 than it was in 1883, and by 99.8 per 1,000 than the average rate of the preceding five years. The senior medical officer attributes the increase to the number of unlicensed prostitutes, and the inefficient working of the Contagious Diseases Act. There was a considerable decline in the prevalence of diseases of the digestive system, cardiac affections, and various other disorders. Fifteen admissions into hospital are shown under the head of Poisons; they were all due to the abuse of alcohol. Among the 49 officers, there were 28 attacks of illness and 2 deaths. The deaths were the result, in one instance, of meningitis, and in the other of accidental drowning while bathing. No death occurred among the women, and only one among the children, due to diarrhœa. The average strength of the women was 43, of the children 68. The children as well as the women were very healthy; among the children only 14 cases of sickness were recorded. The general health of the black troops is also reported to have been good. Two deaths occurred among them, one from pharyngitis, and one ascribed to general debility.

In China and the Straits Settlements the average strength of the white troops was 1,988, and of the Asiatic troops 180. There were 1,948 admissions into hospital, with 14 deaths, that of an invalid who died after leaving the command being included in this number; and the average number constantly sick was 93.21. The admission-rate was, therefore, 979.8, the death-rate 7.04, and the constantly-sick rate 46.89 per 1,000. In comparison with the corresponding average rates for the preceding ten years, a decline is noticeable in all the rates in 1884, being 69.6 less per 1,000 in the admission rate, 3.78 in the mortality rate, and 2.34 less per 1,000 in that of constant inefficiency through sickness. Of the 13 deaths that occurred within the command, 8 occurred in the China division, at Hong-Kong, and 5 in the Straits Settlements; but though the deaths were more numerous, and the death-rate higher at Hong-Kong than in the other division, the admission-rate was much higher in the Straits Settlements than it was at Hong-Kong. While at Hong-Kong the admissions to hospital occurred in a ratio of 859.7 per 1,000 of the strength; the hospital admissions at the Straits Settlements had a ratio of 1117.7 per 1,000. The average sick time of each soldier was also higher in the latter division of the command than it was at Hong-Kong. At Hong-Kong it was 16.41 days, in the Straits Settlements 18 days. No case of enteric fever occurred during the year, and only one admission, and that for chicken-pox, was recorded under eruptive fevers. At the same time there was a great diminution in the prevalence of fevers of all descriptions, the admission-rate for this group of diseases being less than half of what it was in the preceding year, and this important change is attributed mainly to better drainage and other sanitary improvements. The water-supply at Singapore and Penang is said to be excellent and abundant, and at Hong-Kong, also, the water is described as of very good quality, with a sufficient supply for ordinary occasions, though in the dry weather it is not so large as desirable; but the principal medical officer adds that new water-works are in course of construction, which will afford a practically unlimited supply, as soon as they are completed. The rate of admissions into hospital for sickness, and the death-rate, were higher among the Asiatic troops than they were among the Europeans, the admission-rate being 1,050, and the death-rate 33.33 per 1,000 of strength among them.

The fact seems worthy of notice that, in the whole of the twelve separate military stations which have just been remarked on, only one case of small-pox occurred among the troops and their families, namely, the case contracted at Gibraltar, which was referred to in the remarks on that garrison.

There still remains for observation the portion of the volume which

comprises the state of health of the troops serving in Egypt, and in the three great provinces of India, and as the statistics furnished in this portion embrace the health-history of a body of 61,720 European soldiers, we must postpone our notice of this part of the Army Medical Report under review to a future occasion.

INDIA AND THE COLONIES.

INDIA.

GOÎTRE IN THE HIMALAYAS.—Dr. Giles, of the Indian Medical Service, who is the medical officer to Colonel Lockhart's expedition, has contributed a short paper to the *Indian Medical Journal* on Goître in the Himalayan regions. He states that the disease is endemic throughout a large portion of the north-west Himalayas and the Hindu-Kush ranges, and that in the endemic areas about 5 per cent. of the population are affected. As a general rule the disease first showed itself about puberty, but cases beginning in childhood, in early adult life, or even in middle age, were not uncommon. The most interesting point in the paper is an investigation of the question how short a residence in a goîtrous district might be followed by goître. The garrison of Gilghit afforded an opportunity of obtaining data, for the men were partly recruited from districts where goître is endemic and partly from districts where it is not. Ganesha Singh, the medical officer of the Maharajah of Kashmir's "Ruddur" regiment, furnished Dr. Giles with statistics, which showed that 61 men out of a total of 800 were affected with goître. This is equivalent to a little over 7.5 per cent. Twenty of these men came from districts where goître was not endemic, and the condition had developed subsequently to their arrival in the Gilghit-Astor command. The average period of residence previous to the appearance of the goître was 12.7 months, the shortest period being 5, and the longest about 19. Comparing these figures with those for recruits from goîtrous districts, Dr. Giles comes to the conclusion that previous residence in such districts had no predisposing influence, for the average duration of residence in 37 men in whom the disease had appeared after their arrival in Gilghit was 12.32 months. In discussing the etiology of the disease, Dr. Giles states that the most characteristic geological features of the district are ranges of granite and gneiss. The disease is most prevalent where timber is most scarce, and where the natives live in dark unventilated mud huts. Two apparent exceptions are explained by the fact that the houses are large, with good chimneys, and built of stone. No cases occurred among the members of Colonel Lockhart's expedition, who were well lodged, and lived under good sanitary conditions. Want of ventilation and, in general, unsanitary conditions are necessary antecedents, without which, Dr. Giles concluded, the specific cause of the disease is inoperative, and by attention to the former, the latter may be defied.

THE EUROPEAN GENERAL HOSPITAL, BOMBAY.—A Committee has been appointed to draw up a scheme for replacing the existing European Hospital in Bombay, which is a converted barrack, by a suitable building. Dr. Moore stated in his report to the Surgeon-General that "the position alone is sufficient to condemn it, for on the one side is Mody Bay, the night-soil depôt, and localities from which the nuisances arise, and on the other are the railway premises from which the noise of train-shunting goes on most of the night. The female wards are the worst part of this hospital, and the place below, where the probationer-nurses have rooms, is unfit for the habitation of European ladies. The old wood-work of the barracks also swarms with bugs. A new European Hospital worthy of Bombay is certainly a desideratum, and I would deprecate further expenditure of money on these old buildings, for they can never be made into the requirements of a modern hospital."

MEDICAL STORES IN BURMAH.—It is proposed to establish a medical store depôt at Mandalay, the depôt at Rangoon being found inconvenient for the supply of medical stores to the troops in Upper Burmah. The cost of the new establishment is estimated at nearly 500 rupees a month, inclusive of the staff-salary of the storekeeper, who will probably be Surgeon D. Elcum. There will then be three depôts under the orders of the Surgeon-General with the Government of Madras—one at Madras, one at Rangoon, and the third at Mandalay.

MORTALITY FROM CHOLERA IN BENGAL.—The recently published report of the Sanitary Commissioner of Bengal, states that during the past year cholera visited, with more or less severity, close upon thirty thousand villages, causing 173,767 deaths. The mortality from fever was 1,042,142, an increase of nearly three hundred thousand, as compared with the previous year. In all, one and a half millions of deaths were registered in the province, exclusive of the 15,000 who are estimated to have perished, through the effects of the cyclone and storm wave of 1885, in Orissa, of which no record was kept, as there was no one left to tell the tale. Against this stands a record of more than 1,600,000 births. In Bengal one man dies every 20 seconds throughout the year, and his place is taken by a baby and a fraction, which amounts roughly to one quarter of a baby.

MEDICAL EDUCATION OF WOMEN IN INDIA.—The Maharajah of Cooch-Behar has become a life member of the Committee of the Countess of Dufferin's Fund. The Rajah of Rutlam has sent to the fund a second donation of Rs.1,000.

THE CHOLERA.

CHOLERA ON BOARD THE "EUPHRATES."

ON October 23rd, Her Majesty's Indian Troopship *Euphrates* passed the island of Perim, at the entrance to the Red Sea, homeward bound; and it was reported that, since leaving Bombay, four deaths from cholera had occurred on board. At first, it was feared that the Egyptian authorities might impose quarantine at Tor, before allowing the vessel to pass through the Suez Canal; but it is satisfactory to learn that the negotiations which ensued have secured the passage of the vessel through the Canal "in quarantine." The 2,000 persons—soldiers, women, and children—who have thus so narrowly escaped the miseries and dangers of quarantine at Tor, are sincerely to be congratulated; for Tor appears to be little else than a malarious swamp, whilst its sanitary arrangements are bad in the extreme. So long as quarantine restrictions are professedly in operation in the Red Sea, it is but reasonable to require that there should be proper arrangements for carrying them out. No such arrangements have, however, been made. In the recent Blue-book on cholera, it is related that the Egyptian Delegate at the Roman Conference last year submitted a "mémoire," in which he pointed out that, so far as measures of isolation and disinfection in the Red Sea were concerned, they were applied in a manner which was altogether insufficient and untrustworthy ("tout à fait insuffisante et illusoire"), and this because the means for their proper application did not exist. He went on to express the view that, under these circumstances, the passage of the Suez Canal in quarantine appeared to be the only possible and practical solution of the question. The same Blue-book also gives an actual illustration of the impracticability of carrying out the existing quarantine restrictions in the Red Sea. Two French transports, the *Chateau Yquem* and the *Nive*, from Tonquin, were ordered into quarantine at Tor under the Cholera Regulations in the autumn of last year. The *Chateau Yquem* reached that place on October 29th; the passengers and ninety men of the crew were landed, about a dozen being accommodated in a hut, and the remainder under canvas. The *Nive* arrived there on November 3rd; and, on her arrival, the Director of Encampment pointed out that, if all were compelled to land under the existing climatic conditions, and in view of the character of the accommodation available, the result would be to aggravate the then prevailing sickness, and to lead to an increased mortality. In the end, some of the more healthy amongst the passengers were sent ashore; but those who were really ill (the cases are described as dysentery, fever, etc.) were left on board, the adoption of sanitary measures being in the main relied on. As regards the *Euphrates*, therefore, it is not surprising if, as a Reuter's telegram from Suez states, the English Government actually announced its intention to send the vessel home round the Cape, rather than submit to quarantine at Tor.

THE cholera having almost disappeared from Trieste and Fiume, the quarantine for ships arriving from those ports on the coasts of Dalmatia has been reduced to three days. Since the cholera broke out at Trieste on June 7th, there have been 882 cases in that city, and 544 deaths. In the province of Istria there have been, since July 13th, 671 cases and 374 deaths. The wintry weather of the last few days has considerably checked the epidemic in Hungary and in Galicia. A Vienna correspondent telegraphs that sixteen persons, who had been driven from their homes by the cholera, were discovered by the police at Buda-Pesth, sheltering themselves under canvas near the Danube. In the course of their further research, they found thirty persons of both sexes lying undressed in a dirty but warm stream of water that flowed out of a mill. The water was shallow, and the poor creatures had got into it for warmth. They had taken stones for pillows, and had prepared themselves to spend the night comfortably in this strange bed. A *post mortem* examination of a patient, who succumbed at Vienna on Sunday to an illness bearing symptoms of cholera, has shown that the case was one of Asiatic cholera.

THE LATE DR. CHADWICK.

At the meeting of the Council of the British Medical Association, held on the 20th ultimo, the President of the Council said: I think, before we proceed with the ordinary business of the Council as on the Agenda, it is only fitting that we should take notice of a fact which, I am sure, every member of this Council must most sincerely and grievously deplore, that is that we have lost from among our members, since the Brighton Meeting, one who might well be called the Nestor of the British Medical Association. I allude to the sad death of Dr. Chadwick. You know for many years —for some twenty years—he has been foremost in our Councils. He has been able to give us wise advice in all difficult matters: he has always been at the right hand of any official whom you have chosen to honour by placing in this chair, to give him the ripe experience of a long acquaintance with the affairs of the Association, and he has been most unremitting in his devotion to the interests of the Association from the time he took up its work till the time of his death. It is a remarkable fact that, in the printed minutes you have just confirmed, Dr. Chadwick was summoned during the year to twenty-five meetings of the Council and Committees of the Association, and was only absent once. That is a splendid record at the end of a long life, and I think that, in the future, we cannot but feel the loss of the gentleman who has made it. I therefore have great sorrow, and, at the same time, sincere sympathy with his relatives, when I move the resolution of condolence, which I will read: "The Council of the British Medical Association desire to record their sense of the great loss they have sustained in the death of their esteemed colleague, Dr. Charles Chadwick, and their sympathy with the members of his family. For twenty years Dr. Chadwick gave to the work of the Association a devoted and untiring service, and endeared himself to his colleagues and to the members of the Association at large by his unfailing wisdom in Council, and the singularly able manner and the high tone with which he approached all questions affecting the welfare of the British Medical Association." I beg to move that resolution.

Mr. HUSBAND: I may claim, I think, to be the oldest friend of Dr. Chadwick here present. It is now nearly fifty years ago since we assisted together to form the Yorkshire Branch, and from that time to this, he and I, perhaps more than any two members of this Association, have been thrown together to do our best, often amidst very arduous circumstances, when no sunshine shone upon us as it does now, to promote the interests and welfare of the Association at large. You have well expressed, I am sure, what will be the feeling of every one here present, and no one can deplore his loss—knowing his value to the Association—more than I do. I have the mournful pleasure of seconding the resolution.

Mr. VINCENT JACKSON: As one of the younger members of this Council, I feel I am not entitled to speak of our late colleague as a friend, but I may presume to do so as an acquaintance. Since becoming a member of this Council I have often admired and appreciated Dr. Chadwick, and his common sense remarks have often indicated the course I should pursue. One of the pleasantnesses of attending this Council-chamber has been frequently to receive from him one of the most cheery recognitions that I have ever had from anybody. No man, in my opinion, was a better representative man, for in his person he was dignified, and in his speech he was calm. One of the finest epitaphs I ever remember reading of any man was the closing sentence in one of the obituary notices of his life: it ended by saying that the wise would do well to follow the example of Dr. Chadwick.

Dr. WITHERS MOORE: As another member of the Council, it would look rather singular in my position, if I did not add my humble tribute to the memory of our departed friend. We all feel that this Association has lost a most valuable friend. His memory will long live amongst us, and it will be for us to strive to follow his bright example. It would be well for us, in our own loss, to think also of that of his daughters, who must miss an affectionate father; and I have therefore much pleasure in supporting the motion.

The resolution was agreed to.

Mr. VINCENT JACKSON: Would it be possible for us to have some likeness of our late friend in the new building? Could anybody enable us to have it?

The PRESIDENT: I will enquire if there is any possibility of that, in conveying the resolution to the friends of Dr. Chadwick.

Dr. E. WATERS: As a mark of the high regard in which our late friend Dr. Chadwick was held, I may mention, in connection with this remark of Mr. Jackson's, that a portrait of him was painted when he left Leeds, and that that portrait is considered one of the ornaments of the Leeds Infirmary. He had so much to do, not only with that Infirmary, but with numerous charitable institutions through Yorkshire, and particularly with one that was started with the view of assisting distressed relations of members of the medical profession, that we feel that not only Yorkshire, but the profession generally, is indebted to him for the halo which he has thrown around us. He has been a credit to the profession as a body, and he has been one of the great pillars of this Association. For myself particularly, I was in the habit of meeting him, with Mr. Husband, and a few friends at Dr. Stewart's. All our friends have departed, and we seem to be the last representatives of that chosen body who were in the habit of welcoming the members of this Association, and forming a centre for us when we met in London. I feel that I could not allow this vote to pass without saying how cordially I support it, for, in my own person, I feel peculiarly indebted to Dr. Chadwick for the unflagging assistance and help he has afforded me in labours in connection with this Association. To return to Mr. Jackson's inquiry, I think there might be a possibility of getting a likeness of Dr. Chadwick, either from that picture which is in Leeds Infirmary, or from a very admirable likeness which his own family possess.

ASSOCIATION INTELLIGENCE.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held at the London Hospital, on Thursday, November 18th, at 8.30 P.M., when Dr. Ord will show a number of cases of myxœdema, illustrating its various forms and stages. The chair will be taken by Sir Andrew Clark, Bart., F.R.S.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—The opening meeting of the session will be held at the Athenæum, Camden Road, N., on Friday, November 12th, 1886, when an address will be delivered by J. Syer Bristowe, Esq., M.D., F.R.S. (President of the Branch). The chair will be taken at 8.30 P.M.; after which, a discussion will be invited by the chairman. All members of the profession are invited to attend. Members desirous of exhibiting cases or reading notes are requested to communicate with Dr. G. HENTY, Honorary Secretary, 302, Camden Road, N.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of the above district will be held at the Queen's Hotel, Hastings, on Tuesday, November 16th. Dr. Humphreys will preside. Meeting at 3.30 P.M. Dinner at 5.30 P.M.; charge, 6s., exclusive of wine. The following communications are promised: 1. The Chairman: Notes of a case of Abdominal Tumour formed by a Scrofulous Kidney. 2. Dr. Penhall: Cancer of the Sigmoid Flexure, with repeated attacks of Intestinal Obstruction. 3. Dr. Allen: Intestinal Obstruction from Gall-stone: Operation. Gentlemen desirous of reading short papers or notes of cases, or of showing microscopical or other specimens, should communicate with the Honorary Secretary, F. JENNER VERRALL, 95, Western Road, Brighton.

SOUTH EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above district will be held at the Kent and Canterbury Hospital, on Thursday, November 11th, at 3 P.M.; Mr. James Reid in the chair. Agenda. Mr. W. Pugin Thornton: On some of the Practical Applications of Electrolysis, Faradism, and Galvano Cautery. Mr. J. E. Schon: A case of Tubal Foetation, with Specimen. Dr. T. Eastes: Short Notes of Two Cases of Laryngeal Obstruction. The dinner will take place at 5 P.M., at the Royal Fountain Hotel. All members of the South-Eastern Branch are entitled to attend these meetings, and

to introduce professional friends. N.B.—All gentlemen purposing to dine are particularly requested to inform the Secretary by Tuesday, November 9th, that proper arrangements may be made.—W. J. Tyson, Honorary District Secretary, 10, Langhorne Gardens, Folkestone.

Staffordshire Branch.—The first general meeting of the present session will be held at the Railway Hotel, Stoke-upon-Trent, on Thursday, November 25th. The President, Dr. W. G. Lowe, will take the chair at 3.30 P.M.—Vincent Jackson, General Secretary, Wolverhampton.

Thames Valley Branch.—The next meeting will be held at the Station Hotel, Richmond, on Wednesday, November 10th, at 6.15 P.M. A paper will be read by Frederick Treves, Esq., F.R.C.S., on The Treatment of Wounds. Dinner at 7.30 P.M.—Charles C. Scott, M.B., Honorary Secretary.

Yorkshire Branch.—The autumnal meeting of this Branch will be held at the Royal Hotel, Scarborough, on Wednesday, November 10th, at 4 P.M., when the following papers will be read:—1. Any papers which were not read at the last meeting. No notice has been given of any. 2. Mr. H. B. Hewetson: The Localisation of Pains in the Head as Diagnostic of their Ophthalmic or Dental Origin, illustrated by Diagrams. 3. Mr. J. W. Teale: A Clinical Case. 4. Mr. A. W. Mayo Robson: Two Cases of Suprapubic Lithotomy; one in a Child, aged 2 years, with Suture of the Bladder, and primary Union; the other in an Adult for Encysted Calculus. 5. Dr. Churton: On the Treatment of Perityphlitis, with Cases. The members will dine together at 7.30 P.M. Dinner (exclusive of wine), bed, breakfast, and attendance, 11s. Members intending to attend are requested to forward their names to the Manager.—Arthur Jackson, Sheffield.

BATH AND BRISTOL BRANCH.

The first ordinary meeting of the session was held at the Museum and Library, Bristol, on Wednesday evening, October 27th, C. Gaine, Esq., President, in the chair. There were also present fifty-five members and two visitors.

New Member.—W. Watson, M.D., Bath, was elected a member.

Communications.—1. Mr. Greig Smith read a paper on "The Removal of a Cancerous (and Pregnant) Uterus *per Vaginam*," and exhibited the specimen. Mr. Scott and Dr. Steele made some observations on this paper.

2. Mr. Harsant read a paper on "Cases Illustrating the Use of Inflation of the Tympanum," which gave rise to a discussion in which Mr. Lowe, Mr. Pickering, Dr. Steele, Dr. Cunningham, Mr. Metford, and Dr. Roxburgh took part.

3. Dr. Shingleton Smith related a "Case of Thoracic Aneurism Treated by Galvo-puncture," and exhibited the specimen. Dr. Spencer, Dr. Waldo, and Dr. Markham Skerritt took part in the discussion which followed.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT.

A meeting of the above district was held at the West Kent General Hospital, Maidstone, on October 29th, John Knowles, Esq., in the chair.

Next Meeting.—It was decided unanimously that the next meeting be held at Rochester in February, 1887, and that Mr. Walter Buchanan, of Chatham, be requested to preside on the occasion.

Circular from East York and North Lincoln Branch.—It was resolved to refer this question to the Council of the Branch.

Papers.—The following communications were read and discussed:—

1. Mr. M. A. Adams, "Remarks on Simplified Linear Extraction of Cataract."

2. Mr. F. Penfold: "A Case of Intussusception, with Specimen."

Dinner.—The dinner took place at the Star Hotel.

PROCEEDINGS OF COUNCIL.

At a meeting of the Council, held in the Council Room, Exeter Hall, on Wednesday, October 20th, 1886, Present,—

Sir B. Walter Foster, President of the Council, in the chair

Dr. W. Withers Moore, President, Brighton
Mr. C. Macnamara, Treasurer, London
Mr. J. W. Baker, Derby
Dr. Henry Barnes, Carlisle
Dr. G. B. Barron, Southport
Dr. T. Bridgwater, Harrow-on-the-Hill
Mr. H. T. Butlin, London
Dr. A. Carpenter, Croydon
Surgeon-General W. R. Cornish, London
Dr. J. Ward Cousins, Portsmouth
Professor G. M. Humphry, F.R.S., Cambridge
Mr. W. T. Husband, Bournemouth
Mr. T. Vincent Jackson, Wolverhampton
Mr. T. R. Jessop, Leeds
Mr. H. R. Ker, Halesowen
Dr. W. G. V. Lush, Weymouth
Mr. F. Mason, Bath
Mr. W. Jones-Morris, Portmadoc
Dr. C. Parsons, Dover
Dr. R. Saundby, Birmingham
Dr. A. Sheen, Cardiff
Mr. T. W. Crosse, Norwich
Dr. G. W. Crowe, Worcester
Dr. P. M. Deas, Exeter
Mr. John Dix, Hull
Dr. D. Drummond, Newcastle-on-Tyne
Dr. G. F. Duffey, Dublin
Dr. W. A. Elliston, Ipswich
Dr. C. E. Glascott, Manchester
Dr. Bruce Goff, Bothwell
Dr. W. Chapman Grigg, London
Dr. James Hardie, Manchester
Dr. C. Holman, Reigate
Mr. S. W. Sibley, London
Dr. E. M. Skerritt, Clifton
Dr. W. Strange, Worcester
Mr. T. Sympson, Lincoln
Mr. J. Taylor, Chester
Dr. T. W. Trend, Southampton
Mr. F. Wallace, London
Dr. A. T. H. Waters, Liverpool
Dr. E. Waters, Chester
Mr. C. G. Wheelhouse, Leeds
Dr. G. E. Williamson, Newcastle-on-Tyne
Mr. A. Winkfield, Oxford

The minutes of the last meeting having been printed and circulated amongst the members of the Council, were amended and signed as correct.

Read letters of apology for non-attendance from Mr. Alfred Baker, Dr. Bartolomé, Dr. Davidson, Dr. Langdon Down, and Dr. Ogilvie Grant.

Resolved: That the Council of the British Medical Association desire to record their sense of the great loss that they have sustained in the death of their esteemed colleague, Dr. Charles Chadwick, and their sympathy with the members of his family. For twenty years Dr. Chadwick gave to the work of the Association a devoted and untiring service, and endeared himself to his colleagues and to the members of the Association at large by his unfailing wisdom in Council, and the singularly able manner and high tone with which he approached all questions affecting the welfare of the British Medical Association.

Read letter from the Guiana Branch reporting the reorganisation of the British Guiana Branch.

Read letter from Dr. Ward Cousins, offering a prize of £20 for the best essay on the Pathology and Treatment of Abortion.

Resolved: That Dr. Ward Cousins's generous offer of £20 for the best essay on the Pathology and Treatment of Abortion be gratefully accepted by the Council, and that Dr. Grigg, Dr. Godson, and Mr. Lawson Tait be requested to act as adjudicators.

Resolved: That this Council sees with great satisfaction that its President, Sir Walter Foster, and its ex-President, Mr. Wheelhouse, have been nominated by a large number of the practitioners of England and Wales for the representation of the profession in the General Medical Council, and begs to express its hearty wishes for their success.

Resolved: That the fifty-six candidates for election, whose names appear on the circular convening the meeting, be and they are hereby elected members of the British Medical Association.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be approved, and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain reports on the examination of the quarter's accounts, amounting to £5,071 4s. 7d., auditors' report, and resolution for the sale of £5,132 consols for the payment of balance of lease of 429, Strand.

Resolved: That the minutes of the Premises Committee of the 19th instant be approved and adopted, and the recommendations contained therein carried into effect.

The minutes of the Premises Committee contain the report of architect, and a request that the Journal and Finance Committee should provide £2,000 for alterations and repairs, and furnishing.

Resolved: That the minutes of the Scientific Grants Committee of the 19th instant be approved, and the recommendations contained therein be carried into effect.

The minutes of the Scientific Grants Committee contain the division of remainder of £300, and a recommendation for a special grant of £50.

Resolved: That Dr. Grigg and Dr. Ward Cousins be added to the Premises Committee.

Resolved: That Dr. Holman be also added to the Premises Committee.

Resolved: That Messrs. Price, Waterhouse, and Co., be appointed public auditors for the ensuing year, in accordance with By-law 26.

Read resolution passed at the Annual Meeting, held at Brighton, of which the following is a copy:

Resolved: That it be referred to the Council to arrange for the place of meeting of 1887; and, further, that the Council be empowered to appoint a President-elect.

The President of the Council stated that he had had communications from Exeter, Hull, Bristol, and Dublin; and read a resolution passed at a meeting of the Dublin Branch, of which the following is a copy, namely:

It was moved by the Rev. Dr. Haughton, seconded by Sir William Stokes, President of the Royal College of Surgeons, and

Carried unanimously: That the British Medical Association should be cordially invited to hold its next annual meeting in Dublin.

Dr. Banks, Regius Professor of Physic in the University of Dublin, was suggested as the President. The invitation was supported by the College of Physicians, Ireland, the University of Dublin, the Royal University of Ireland, the King and Queen's College of Physicians, the Royal College of Surgeons, the Academy of Medicine of Ireland, and the Apothecaries' Hall.

The President of the Council then introduced a deputation from Dublin, consisting of Dr. Duffey, F.K.Q.C.P., and Professor Bennett, President of the Dublin Branch, who, representing the medical profession, presented a cordial invitation to the Association to hold the meeting of 1887 in Dublin.

Resolved: That the generous and cordial invitation of the Dublin Branch, backed by the University of Dublin, the College of Physicians and Surgeons, and other Medical Institutions in the City of Dublin, to the British Medical Association to hold its Annual Meeting in that city, be heartily accepted, and that Dr. J. T. Banks, Regius Professor of Physic in the University of Dublin, be appointed President-elect.

Resolved: That the President, the President-Elect, the President of the Council, the Treasurer, Mr. Wheelhouse, Dr. Bridgwater, Dr. Parsons, Mr. Vincent Jackson, Mr. Hodgson, Dr. Sheen, Dr. Banks, Dr. Athill, Dr. Bennett, Dr. Duffey, Dr. Grimshaw, Sir William Stokes, Dr. Mapother, Dr. Neville, be appointed a Committee for making arrangements for the annual meeting to be held at Dublin.

Resolution of last Council Meeting, No. 1194, was then considered, namely:—

That it be an instruction to the Council to take means to ascertain the feelings of the Branches in regard to the payment of the travelling expenses by representatives on the Council only to the four London Meetings of the Council.

Resolved: That the resolution be referred to the Journal and Finance Committee with the instruction that they ascertain the feelings of the Branches, and report at an early meeting.

The question of the free insertion of notices of Births, Deaths, and Marriages in the JOURNAL, having been reported upon by the Journal and Finance Committee, was discharged.

Continued Minute of Council, No. 1182, namely:—

A deputation from a meeting held on Wednesday, August 11th, attended the Council, and urged the desirability of forming a Medical Defence Association in connection with the British Medical Association.

The President of the Council stated to the deputation that the matter should, at an early date, have the careful consideration of the Council.

Report of Committee (a copy of which had been sent to each member of the Council) on the subject was then laid on the table.

Resolved: That a Subcommittee, to consider the proposal for the formation of a Medical Defence Society, be appointed to obtain further information with reference to the constitution and prospects of such a society, the nature of the work it will be capable of doing, to consult with high legal authority on any scheme which may be finally approved of by the Committee, and to report to the Council at the next meeting.

Resolved: That the Committee consist of the following gentlemen: Dr. Holman, Dr. Elliston, Dr. Barron, Dr. Grigg, and Dr. Glascott, with the President and Treasurer, *ex officio*.

It was moved: "That the reports of the Committees shall be brought up at as early a period of the Annual Meeting as can be conveniently arranged, so as to allow time for their consideration and discussion, and that notice be given in the Daily Journal that the various reports will be brought forward."

Whereupon it was also moved: "That a Committee be appointed to consider what alterations are desirable in the proceedings of the annual meetings of the Association, with a view both to the better conduct of the business submitted to the general meetings, and also to the more efficient working of the various meetings."

After some discussion it was resolved: "That the motions be referred to a Committee."

Resolved: That the gentlemen whose names are as follows be appointed the Committee, namely, Mr. Sibley, Mr. Wheelhouse, Mr. Ker, Dr. Strange, Dr. Parsons, Dr. Holman, Dr. Carpenter, Dr. Ward Cousins, Mr. Sympson, Dr. Sheen, Dr. Duffey, and Dr. Grimshaw; and the officers *ex officio*.

A MEETING was recently held at Caen Wood Towers, Highgate, for the purpose of forming a local committee to raise funds towards the cost of the new buildings of the Great Northern Hospital in the Holloway-road. It was considered by those present that there was a great want of a hospital in the centre of North London, and about twenty gentlemen of influence in the neighbourhood joined the committee. Officers were appointed, and steps taken to aid the movement.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

The Pathogeny of Bright's Disease.—Partial Responsibility of the Insane.—Researches concerning the Axial Nervous Current.—New Instruments.—Larvæ in the Digestive Tract.—Nerve-Influence on Lymphatic Secretion.

A PAPER by Professor Semmola, of Naples, on the pathogeny and treatment of Bright's disease, was read at a recent meeting of the Académie des Sciences. It contained a description of his researches on the dyscrasic or hæmatogenic origin of Bright's disease. He held that a pathological diffusibility of albuminoids led to their elimination from the human organism, but that there was no difference in the elementary constituents of albuminoids fit and those which were unfit for assimilation. Albuminuria appeared at the same time as albuminocholia. Whenever albuminoids became capable of dialysis, they were eliminated by the liver as well as the kidneys. In such cases albuminuria was unaccompanied by histological alteration either of the epithelium of the tubuli or of the glomeruli. Before making an injection of serum, he ascertained the proportion of its dialytic albuminoids, and could then foretell whether albuminuria would result from the injection. Professor Semmola described Bright's disease as a morbid condition caused by the slow effects of cold and damp on the skin; imperfect action of the skin eventually led to complete suppression of its functions, due to progressive ischæmia of the malpighian layer and proliferation of the connective tissue of the derma. There was a chemico-molecular change in the albuminoids due to the nature of food absorbed. The pathological feature of the change in the albuminoids being their increased diffusibility which rendered them unfit for assimilation, their elimination by the emunctories, especially the kidneys, became a necessity. The combustion of the albuminoids thus grew gradually less and less, as was indicated by a decrease in the quantity of urea. There was, he believed, no relation between the œdema and hydræmia; the cachexia was independent of the waste of albuminoids, and resulted from the serious faulty assimilation. Both kidneys became inflamed, but the inflammatory process was slow. Microscopical examination revealed the histological characteristics of interstitial nephritis, of which the large, smooth, white kidney represented the typical lesion. Professor Semmola thought that in treating this disease favourable results could not be obtained in a short time; the treatment he recommended was that the food should be easily assimilable, and that the action of the skin should be stimulated to facilitate the assimilation and combustion of albuminoids. A milk diet should be adopted for some length of time; a little meat or the yolk of an egg might sometimes be allowed, but should be given with great judgment. Massage, Scotch douche and vapour baths might be used, but the cold water treatment should not be attempted. It was very important that the patient should live in a dry climate with equable temperature. Progressive doses of iodide and chloride of sodium should be administered every twenty-four hours. At the end of two or three weeks, when the albumen had not entirely disappeared, but the anasarca had gone, either phosphate of sodium or hypophosphite of soda or lime might be substituted for iodide of sodium, and might be given in doses of from three to four grammes in twenty-four hours. Inhalations of oxygen regularly administered sometimes caused albumen to disappear in a few days, but casts were observed in the urine for some length of time, and this fact demonstrated the hæmatogenic, or dyscrasic, origin of Bright's disease. Astringents should never be used in treating this complaint.

At a meeting of the Academy of Medicine M. Ball made some observations on the partial responsibility of persons mentally affected. A recent trial in France had again, he said, drawn the attention of lawyers and judges to a question which had always opened up much controversy, namely, the moral responsibility of the insane. A great number of persons mentally affected retained a certain degree of intelligence, and to a certain extent were guided in their actions by the same instincts and motives as persons in full possession of their reason; thus, the same principles of common law might reasonably and in all justice be applied to them. How, then, was partial or limited responsibility to be defined? Apart from criminality, the moral responsibility of the insane would not be contested, and the converse was even more obviously true. Men of the greatest genius and celebrity had shown indubitable signs of mental alienation, but this fact had never been used to diminish their merit, or to deny them due gratitude. Newton

propounded his system notwithstanding his having passed through a phase of insanity. Auguste Comte was none the less a great philosopher for having been temporarily confined in a madhouse. If lunatics were open to approval or praise, were they not equally open to censure, and should neither condemnation nor punishment be ever allotted to them? There is therefore nothing absurd, as had been affirmed, in the assertion that criminal lunatics exist. Without wishing to shake the foundations of law, it might be said that the ancient idea of responsibility had been replaced by the more modern and more physiological notion of individual predisposition. Without asserting, with a celebrated alienist, that all criminals were lunatics, there was yet an increasing tendency to consider them a race apart. Great saints, great heroes, and great criminals, said Professor Benedict, in London, were beings outside the ordinary run; they constituted a complete anomaly in human nature. From the point of view of public utility, Dr. Ball remarked that, if the doctrine of the irresponsibility of the insane, upheld by a considerable number of men in authority, and taken up by modern observers, were to have the support of the law, singular privileges would be suddenly conferred upon a whole class of individuals, more numerous and more dangerous than was generally believed. The outcast, the vicious, and the eccentric would never want alienists ready to raise them to the dignity of lunatics. The justification of punishment was its deterrent power. It was justified by the feeling of fear it inspired in ill-constituted organisations; it was a barrier of defence raised for the protection of honest individuals, who had also some claim to the sympathy of the legislator. No *phrenometer* (according to the ingenious expression of M. J. Fabret) existed for measuring the degree of responsibility that each individual of this category might lay claim to. Moreover, was it not apparent that the same reasoning might be applied to ordinary criminals; and that, in order to satisfy logic, all punishment must be suppressed? Lunatics undoubtedly existed, who, without possessing a complete notion of good and evil, yet had a very clear perception of the danger of being subjected to punishment. Dr. Ball, in conclusion, expressed himself in favour of the doctrine of moral responsibility.

At a recent meeting of the Académie des Sciences, M. Marey read a communication from M. Mendelssohn, who had found that the electromotor power of the axial current of a nerve fragment increased with the length of that fragment, but not proportionately to it. If the length of the nerve was gradually shortened, it was seen that the direction of the axial current ceased after a certain limit to be conformable to the law that the direction of the axial nervous current was always in opposition to the direction or course of the physiological function of the nerve. The electro-motor power of the axial current increased with the surface of the transverse section of the nerve. This correlation disappeared when two different nerves were compared in the same animal, or analogous nerves belonging to animals of different species. The electro-motor force of the axial current decreased with the exhaustion of the nerve which was induced by prolonged tetanization: this exhaustion might even completely destroy the axial current. Desiccation of the nerve, and especially of its sectional surface, rapidly lowered the electro-motor force of the axial current. All these facts showed that the current possessed the same physical and physiological properties as had been stated by Dubois-Reymond to exist in other nervous currents.

M. Ruault, of Paris, presented two instruments at one of the meetings of the Congress at Nancy. One apparatus, termed an "aspirating injector," allowed the aspiration of any morbid liquid to be immediately followed by a medicinal or antiseptic injection into the cavity. A second apparatus, called a stomach douche, could be adapted to the first-named instrument, and the stomach washed out with the smallest possible quantity of liquid. The advantages that these instruments offered was the facility with which the stomach could be cleansed without being dilated, a result never previously attained.

At a meeting of the Académie de Médecine, M. Joannès Chatin showed larvæ of Techomyza fus, which had been found in the vomit and excreta of a patient suffering from gastric and intestinal symtoms. He explained how larvæ could resist the action of digestive liquids, remaining in the intestinal canal, finding nourishment there, and in what way respiration was carried on. These facts bore out the opinion held by M. Laboulbène as to the possibility of larvæ existing in the digestive organs.

In a paper communicated to the Académie des Sciences, M. Serge Lewachew stated that by means of an aspirator which ensured a constant secretion of lymph from the lymphatic vessels of the external saphena, he could prove that if under any nervous influence a certain modification in the circulation of the blood occurred, it always determined variations in the flow of lymph; on stimulating the vaso-motor nerves (constrictor and dilator), modifications in the lymph followed. These modifications were always identical whatever nerves were stimulated. M. Lewachew considered these changes to be in direct connection with the circulation in the corresponding limb. In a further note which M. Vulpian read before the Academy, M. Lewachew stated that he had sought to ascertain if similar modifications in the circulatory system, occurring under the influence of the vaso-constrictor and vaso-dilator nerves, determined variations of the same intensity or a different intensity. He made experiments on the tongue. It was known that vaso-constrictor fibres from the hypoglossal and vaso-dilator fibres from the lingual nerve were sent to the tongue. On stimulating the lingual nerves, separate action of each variety of the vaso-motor fibres could be produced. M. Lewachew cut the collateral connections and ligatured the lymphatic vessels separately on the corresponding sides of the tongue. He found that section of the hypoglossal induced considerable increase, and irritation of the peripheral extremity a decrease of lymph. Section of the lingual nerve had no constant effect, but stimulation produced a marked acceleration in the flow of lymph, which persisted after section of the hypoglossal. If the intensity of an electrical stimulus was progressively increased until the lymphatic secretion was at its maximum, the section of the hypoglossal nerve was not followed by any results. The vaso-dilator nerves had a more intense influence on the lymphatic secretion, owing to the fact that they exercised a greater influence on the circulation of the blood than the constrictor, and had a direct influence on the walls of the blood-vessels.

GLASGOW.

[FROM OUR OWN CORRESPONDENT.]

University General Council.—Direct Representation.—Glasgow University.—Queen Margaret College, Glasgow.—Glasgow Western Medical School.

THE half-yearly meeting of the Council was held in the Bute Hall of the University on October 27th, Principal Caird presiding. There was a large attendance at the opening of the meeting, though, at the close of the sederunt, which lasted four hours, the numbers were considerably reduced. A report was submitted from the Business Committee, approving of the proposal to extend University teaching to the people by way of evening classes, under the recognition of the University, and suggesting that the classes should be open to both sexes, that the lecturers should be chosen from fellows, scholars, and graduates of the University, and that the results of the teaching should be tested by a University examination, and recognised by a University certificate. It was also suggested that a board should be constituted by the University authorities to take the management of the extension scheme, recommend lecturers, and generally to carry out all the arrangements, but that the University Court should approve the lecturers and appoint the examiners. Mr. William Smart moved that the report be approved and sent to the University Court, and was seconded by the Rev. Dr. Fergus Ferguson. The only objection raised to the report was that it did not go far enough, and that, following on the lines of the English universities' extension scheme, it ought to have proposed that a certain amount of certified attendance on such evening classes should be recognised as qualifying for the degree-course. The motion was, however, passed without amendment. The other business of interest was the discussion of a motion brought forward by Dr. McVail, "That, in the interests of the University, the Royal Infirmary Medical School should be erected into a college of the University, and that this be a representation to the University Court." In support of his motion, Dr. McVail spoke for fully an hour, and his speech was one of the ablest he has yet made in the University, almost entirely free, as it was, from the bitter sarcasm he not uncommonly introduces at the expense of the senate circle, and devoted to a very careful and connected, if also very ingenious, argument. He maintained that this was not a question of extra-mural teaching, and fortified that view by instancing the colleges of Oxford and Cambridge Universities. He lightened himself of several awkward subsidiary questions, by leaving every detail to the commissioners, resting upon a report adopted at the previous meeting of Council, relating to intra-university extension, in which it was stated to be no part of the duty of the Committee of Council to consider fully the method in which the vested interests of the present professors should be provided for, that being a question for the future commissioners. Dr. McVail, however, suggested that as the admission to the senate of all the lecturers of the Royal Infirmary would overburden the senate with a medical element, he would propose, at first, only a representation of the new college, and that, as vacancies occurred in the Medical

Faculty at the University, the representation of the Infirmary should be increased till the Infirmary and the Medical Faculty in the University were equally represented in the senate. He then went on to argue that his motion simply proposed to re-unite two parts of the Medical School of Glasgow, which had once formed one whole, and had been disunited by the removal westwards of the University buildings. He pointed out that for eighty years a union of the most intimate nature had existed between the University and the Royal Infirmary, and that for that long term of years the students had obtained all their clinical teaching in the Infirmary. As a result of the rupture, the medical and surgical importance of the Infirmary had declined immensely. Instead of having many hundreds of students, it now never had one hundred. The result was most prejudicial to the highest interests of the hospital, for the physicians and surgeons were deprived of the great advantage of having the aid of the students and of doing their work under the eyes of the students whom they had to train and send out to practise. The Western Infirmary, on the other hand, was overcrowded with students. The men were not uniformly distributed among the four physicians and surgeons, and as many as a hundred would be in attendance on one clinical class. He did not consider proper clinical training possible under these circumstances. Dr. McVail, therefore, argued that the erection of the Infirmary into a College of the University was the only method for rendering available to the students the large and valuable amount of clinical material afforded by the Infirmary; and that this would be in the best interests of the University itself. Dr. McVail's motion was seconded by Dr. Ebenezer Duncan. Professor Leishman proposed a direct negative. He characterised the motion as an audacious proposal—as simply a demand on the part of a section of the extra-mural school to be taken bodily into the University. He believed the reason of the non-success of the Infirmary School was due to the fact that the supply was exceeding the demand; that there were no longer the large numbers of Welsh and English students coming to Glasgow, as formerly. Dr. Leishman would welcome any reasonable scheme which would render the material of the Royal Infirmary more available for clinical purposes; but he denied that it was necessary or desirable to secure that end by incorporating the whole school with the University. Sheriff Spence seconded Professor Leishman's motion. Professor Buchanan pointed out that in addition to the Royal Infirmary, as it existed in 1874, there was a medical school of twelve lecturers; and that the institution of that school by the Infirmary managers had ruined the Andersonian School, which, up till then, had been exceedingly prosperous. If the Royal Infirmary School had not been founded, and thus split up extra-mural teaching in Glasgow, the Andersonian would yet have been prosperous, and the majority of its students would have attended the Infirmary for their clinical work. Professor MacLeod laid stress on the circumstance that, while Dr. McVail's argument was only for making use of the clinical staff and clinical material of the Infirmary, he was using that argument to cover the admission into the University of a number of lecturers who had nothing to do with clinical instruction whatever. On a division, twenty-two voted for Dr. McVail's motion, and fifty-four for Professor Leishman's amendment.

On October 30th, Dr. James Morton addressed a meeting in Glasgow in support of his candidature. Dr. James Dunlop presided. Dr. Morton, in the address which he read, replied to the objection raised to his candidature on the ground of his being President of the Faculty of Physicians and Surgeons. He urged that the objection, if carried to its logical conclusion, would disfranchise Professors in the Universities, the Fellows of the Royal Colleges in Edinburgh, and the Fellows of the Faculty in Glasgow—that is, about nine hundred of the practitioners of Scotland, more than one-third of those on the *Register*. "To those who can read the signs of the times," he went on to say, "or I might put it thus, to those who can decipher the indications of the leanings of the candidates, it is plain that the present struggle is a continuation (shall I call it a revival?) of the old strife between universities and corporations; and we find in Dr. Bruce the favourite candidate of the universities, who doubtless believe that, if elected, he will admirable serve their purposes." Dr. Morton advocated the formation of one examining board, whose diploma would be the only registrable qualification. He indicated his approval of the suggestion to increase the power of the Medical Council, of legislation against irregular practice, and of reviving to some extent the system of apprenticeship. At the close of his address, the meeting—one dissentient excepted—on the motion of Dr. Glaister, seconded by Dr. Pollok, accorded him a vote of thanks, and pledged itself to do all to further his return.

The number of students entering the medical classes at the University promises to be as large as it was last session. Already about 280 have joined the anatomy classes, and 140 the physiology class. At the recent examinations for the degree of M.B., the percentage of failures was large. In the first examinations the percentage of failures, in which unavoidably are included those who fail to appear, was nearer 45 than 40, and, in the second, the percentage was nearly 25. It is usually the first examination, which is the specially scientific examination, in which so many are tripped up.

On October 30th the Local Examination Board of the University held a meeting in the Bute Hall for the distribution of certificates to successful candidates. Professor McKendrick presided, and there was a large attendance, chiefly of ladies. Dr. McKendrick, in his address, referred to the attention recently directed to the effects of the higher education of girls. He considered the evil lay not in the education itself, but in the system of competitive examinations, and he thought an effort should be made to adapt examinations so as to discourage cram. He also advocated less home work for children, and advocated preparatory work being done rather at school, so that children might have some freedom in the evening, for under the present system a man who had four or five children at school had not much domestic peace and quietness. He concluding by indicating the opinion that encouragment ought to be given to induce many more to come up for the Board's certificates by making them count for as many purposes as possible.

The winter session of Queen Margaret College was opened on November 1st by an introductory lecture by Professor McKendrick. Physiology appears to be the most popular subject with the ladies attending the college. Last year between sixty and seventy ladies were in attendance at the lectures on this subject, and judging from the large numbers that crowded the hall at the opening of this session's course, the class will be still larger. In connection with the college, there is also a tutorial class of biology, taught by Mr. J. H. Fullarton, B.Sc., assistant in the Natural History Department at the University.

The session of the Western Medical School was opened on October 28th with an introductory lecture by Mr. J. T. Carter, F.R.C.S.E., on Medicine as practised by the Ancients. Dr. Finlayson presided.

CORRESPONDENCE.

DIRECT REPRESENTATION OF THE PROFESSION ON THE GENERAL MEDICAL COUNCIL.

SIR,—Several correspondents, in various journals, have been pleased to criticise my conduct in connection with the selection of candidates as direct representatives; and, however unwilling to obtrude my own opinions, I feel compelled, without reference to the statements made, to give an account of my conduct.

For twenty years I have fought the battle for direct representation under misrepresentation and obloquy, and, indeed, under every kind of discouragement. More than one of my active supporters on the Medical Reform Committee advised me from time to time to abandon the struggle as hopeless. The Select Committee, and subsequently the Royal Commission, of which Earl Spencer, after receiving a deputation from the Medical Reform Committee in 1881, obtained the appointment, added immensely to the influence and power of the Association. The principle of direct representation was fully approved, and has never since been called in question.

In November, 1882, the Medical Reform Committee arranged another deputation to the Government, and, in consequence, Lord Carlingford, in 1883, brought in a Government Bill, which, for the first time, embodied provisions for direct representation. His lordship, in 1883, carried this Bill through the House of Lords, but it failed in the Commons. In 1884 Lord Carlingford again succeeded in carrying the Bill through the Lords, but notwithstanding every effort on the part of a strong Government, and although the leaders of the opposition and the great mass of the members on both sides had declared in its favour, the multitude of amendments again compelled its withdrawal in the Commons.

In spite of these defeats, one great triumph was achieved, the principle of direct representation was, on all hands, conceded, and legislation that did not provide it became impossible.

After the final withdrawal of the Bill, strong pressure was put on me, in which the representative of the *Lancet* joined, to abandon the struggle, to which I replied that as long as the Association supported me, so long would I persevere in the attempt to amend the Medical Act of 1858. The Association determined on maintaining the contest, and, in 1885, a less ambitious Bill was drafted for Lord Carlingford, which, owing to a change of Government, was not proceeded with. On the advent of the last Government, pressure was once more

brought to bear on Earl Spencer, the Lord President of the Privy Council, and Sir Lyon Playfair, to renew the attempt at medical legislation, and the Medical Act of 1886 has been the result.

This Act, whatever may be its merits—and I esteem them highly—or its demerits, as Mr. R. H. S. Carpenter believes, would never have been passed but for the action of the Medical Reform Committee of the Association; and, connected as I have been with that Committee as its permanent Chairman, I, perhaps, beyond anyone else, must be interested in the character and reputation of the direct representatives which the profession is about to send to the Medical Council. It has been long known to my intimates, it is now publicly known, that I would not accept the post of direct representative. I would not have my reputation as an officer of the Association tarnished by the supposition that my work had been influenced by personal motives, and I trust I have now effectually falsified the unworthy imputation.

Such has been my conduct until the Act of 1886 became law; it now remains for me to say something as to my subsequent conduct.

In my capacity of Chairman, it devolved on me to move the adoption of the last report of the Medical Reform Committee at the Brighton meeting. My presence there was unavoidable, but I did not join in any attempt at the selection of candidates. I did not attend or take part in any meeting or Committee held even for the selection of candidates. I have since learned that a Committee was formed with that object. This Committee, to which others than members of the Association were invited, subsequently convened a meeting at Birmingham. I received several circulars from the secretaries, to which I regret to say I did not reply, but, wishing to know the result of the meeting, I felt it right to attend. Before doing so, I had a meeting of the profession in Chester, which was also not confined to members of the Association, in order to ascertain their views. They selected Mr. Wheelhouse, Sir Andrew Clark, and Mr. Ernest Hart. At the Birmingham meeting, I, in consequence, nominated Sir Andrew Clark and Mr. Hart, both intimately acquainted with the working of the Medical Act, both staunch friends of the profession, who would have made their power felt in the Medical Council, and would, in my opinion, have reflected honour on the body which sent them there.

Mr. Hart, like Dr. Haughton, another valued member of the Medical Reform Committee, has discountenanced the payment of fees to the members of the Medical Council (*vide* evidence Select Committee) and would thereby set free large funds for the encouragement of science.

I will not dwell further on their merits than to say that, though they have declined to serve, I am proud of having nominated them, and I hope that the direct representatives will act on the suggestion of Mr. Hart, and evince their dislike of pecuniary representation by following the example of the officers of the British Medical Association, and declining to receive payment for the discharge of duties involving the interests of our noble and self-sacrificing profession.

The meeting at Birmingham was too small to give weight to any selection made by it, and it was therefore resolved, on the motion of Mr. Nicholson, seconded by myself, that the names of those nominated should be sent to the 350 medical men who had approved of the formation of the Committee of Selection, in order that all might be voted on. Each voter in such a number, acting without solicitation, without pressure of any kind and independently with every opportunity for deliberation, is fairly entitled to consideration, and a decided majority having pronounced in favour of Mr. Wheelhouse and Sir Walter Foster, they could not well decline the invitation to stand, they could not urge the plea of Mr. Ernest Hart that he must keep a free hand, and that he could not forego his freedom of criticism as a journalist representing 12,000 members of the profession. Responding to this decisive appeal, Sir W. Foster and Mr. Wheelhouse have consented to be nominated, and it is no small honour to be at once spontaneously solicited to stand by a body of 350 men residing in upwards of 160 different localities. I take this as an indication of the voice of the profession, and to that voice I willingly yield myself. No man can know them better than I do. They have to my knowledge for years done earnest and good work in the Council of the Association, and have shown conspicuous administrative ability in the discharge of it. They have both been for several years members of the Medical Reform Committee, and in the deliberations preceding the passing of the Act of 1886, Sir W. Foster acted most loyally to me. By service on the Committee, he had learned how desirous the Government really was to make the Bill a more complete measure, and also how powerless to concede all that was desired. Shoals and quicksands had to be avoided, or, like its predecessors, the Bill of 1886 would equally have been wrecked. Sir W. Foster helped to conciliate dangerous opposition: in fact, any opposition would have been fatal, and to his initiative the concession of the third direct representative to England is due.

This fact alone, independent of his other valuable work, cannot be lost on the profession. I distinctly disclaim being the opponent of the general practitioner, for my one great object in promoting legislation has been to raise him in the social scale to the position I have ever considered him entitled to hold; and knowing that the direct representatives must be mainly elected by them, the result of the selection must rest entirely with themselves. No man will be allowed to prove false to the trust reposed in him.

In the competition for seats much has been written about consultants and general practitioners, though all are far from being agreed as to what constitutes a consultant, what a general practitioner, some maintaining that no man is a general practitioner who does not dispense medicine. I sincerely hope that all this is written without any interested motive. For my part, during a long and active professional career, I have never known a single general practitioner who was other than delighted to be sought for and called in consultation, and it appears to me that the men who emerge from general practice and attain the position of consultants, while not unmindful of their early struggles, are especially calculated to command attention and respect in the Medical Council, and best able by their experience and judgment to advocate the interests of those amongst whom they once laboured.

I could almost pity the general practitioner who may become a direct representative, for what more likely to bring a man consulting practice than enrolment in the ranks of the Medical Council?

The whole profession knows that Mr. Wheelhouse was for thirty-five years in active general practice, and is proud of it. I know that Sir W. Foster once conducted in my neighbourhood a general practice, including clubs. I believe both these men will reflect credit on the profession as direct representatives. With the firm conviction that I am acting in the interest of the general practitioner, I shall unhesitatingly vote for both of them.

As regards my third vote, the plebiscite of the 350 leaves me, in my opinion, free, and I shall act accordingly.

I am sorry to have troubled you at such length, but I have ventured to do so in the hope that I may be spared further misconception.—I remain, faithfully yours,

EDWARD WATERS.

Chester, November 3rd.

SIR,—As you have, up to the present date, inserted in the JOURNAL several lengthy letters *pro* and *con* some of the candidates, perhaps you will allow me, an independent candidate, to inform the general practitioners of England and Wales that, in their defence, I drew up between sixty and seventy amendments to the Medical Act Amendment Bill, which was introduced by Mr. Mundella in 1884, and they appeared on the amendment paper when the Bill got into Committee. Among them were the following:—

Clause 4 (p. 4, line 21), omit the words "any person of full age," and substitute the words "any male registered medical practitioner." As the clause stood, not only laymen, but even women—native and foreign—would be allowed to take part in the regulation of medical studies and examinations. This is not the arrangement with respect to legal studies. Indeed, there was nothing in that Bill to prevent the suggested medical boards, or even the Medical Council itself, being composed exclusively of foreign, non-medical women; nor is there in the recent (1886) Act any provision against such an occurrence with respect to the non-elected portion of the General Council.

Clause 21 dealt with the recognition, upon certain specified conditions, of colonial and foreign diplomas. "Provided that he proves," etc.....(1);.....or (2); that his diploma or diplomas was or were granted to him at a time when he was not domiciled in the United Kingdom; or in the course of a period of not less than five years during the whole of which he resided out of the United Kingdom."

Amendment.—Before the word "That," insert the words "Not only," and after the last word ("kingdom") add the words "but also that, at the very time at which the diploma or diplomas was or were granted to him, he was actually domiciled at the place in which the diploma or diplomas was or were obtained." This was for the purpose of preventing diplomas being obtained *in absentiâ*, for it does not necessarily follow that because a man was residing out of the United Kingdom during the whole of a period of five years that, therefore, he ever was in the place whence he obtained his diploma. I proposed a similar amendment (Clause 22, line 22) respecting foreign diplomas; and yet we find that, in the present Act (1886) this useful provision is conspicuous by its absence.

Clause 22 (recognition of a foreign medical diploma) "..... granted in a foreign country to which this Act applies,.....and that he is by law entitled to practise.....in such foreign country,....." How could the Medical Council know all the details of foreign degrees—for example, those of Russia? If satisfactory one year, they might not be so the next year. Again, "by law entitled;" it should be borne in mind that, in America, every American medical diploma carries with it leave to practise: this is a case different from that of the Colonies. And yet we find in Clause 12 of the recent Act (1886) a similar recognition of foreign diplomas.

Clause 27 (3) dealt with unregistered persons who represented themselves as being registered, but it did not (any more than Clause 27 (5) touch those who, though not claiming registration, do represent themselves as holding diplomas which they do not hold. It so happens that the offence of falsely representing oneself as being registered, is already provided for by the 1858 Act, but this provision is useless because quacks and impostors rarely, if ever, care to claim registration, their only object being to induce the public to credit them with the possession of diplomas. This is one of the many ways in which the 1858 Act has proved such a failure.

Clause 27 (1) "... if any person, whether a registered practitioner or not, takes or uses any title which he is not entitled to take or use, he shall, on summary conviction, be liable to a penalty not exceeding twenty pounds."

Amendment.—After the word "pounds," add the words "and shall pay the costs of the prosecution, and, on a third conviction under this section, shall, in addition to the penalty and the payment of the costs of the prosecution, be liable to be imprisoned, with or without hard labour, for a period not exceeding three months."

Clause 27 (page 14, line 25), leave out from "who" to end of line 30, because the Clause, as it stood, did not provide for the assumption of unrecognised titles by those who do not practise, and, at the end of line 34, add the same words as were to be added after the word "pounds" (Clause 27, (1), line 26).

Clause 27 (page 14, line 35 to line 2, page 15). "Provided that a person shall not be liable to such penalty if he shows that he is not ordinarily resident in the United Kingdom, and that he holds a medical diploma, which authorises him to use the medical title complained of, and that he is by law entitled to practise in the country in which the diploma was granted."

Amendment.—After the words "shows that," insert "either," and between the words "kingdom" and "and," insert "or, if resident temporarily in the United Kingdom, he neither practises nor professes to practise any branch of medicine or surgery in the United Kingdom."

Clause 27, after (2), insert, as a new section: "On and after the said appointed day, any person who, not being a registered medical practitioner, practises or professes to practise, or publishes his name as practising, any branch of medicine or surgery, shall, on summary conviction, be liable to a penalty of forty pounds," and end with the same words as were to be added after the word "pounds." (Clause 27, (1), line 26).

Clause 27, (3), page 15, provides for a penalty of £20 in the case of an unregistered person representing himself to be registered; after the word "pounds," add the same words as were to be added after that word (Clause 27, (1), line 26).

In Clause 27, between (4) and (5), insert two new sections; one for the purpose of controlling the reckless practice of midwifery by ignorant women, thus: "On and after the said appointed day, any person, not being a registered medical practitioner, who assumes the designation of midwife, or any title or description which implies that such person is in possession of a licence in midwifery, or of a certificate of fitness to practise midwifery, obtained from some obstetric society or similar body, or from some institution where instruction in midwifery is given, or who practises midwifery, shall, unless able to afford proof of a right to such designation, title, or description, on summary conviction, be liable to a penalty not exceeding five pounds, and shall pay all the costs of the prosecution;" and a second one, for the purpose of preventing practitioners in future employing unqualified (and often ignorant and incompetent) men as assistants, and placing them in sole charge of "dispensaries," or so-called "branch-practices," often at great distances (sometimes many miles away) from the place at which the employer is to be found, thus: "On and after the said appointed day, if any person, whether a registered medical practitioner or not, employs an unregistered person to take charge of, or to conduct, any practice, branch-practice, or dispensary, carried on apart from the residence of the employer of such unregistered person, such employing person shall, on summary conviction, be liable to a penalty not exceeding twenty pounds, and shall pay the expenses of the prosecution."

Clause 27 (5) (1, 2, 3, and 4).—By this section, the Public Prosecutor, Attorney General, Procurator Fiscal, and certain persons "authorised" by the Medical Council, or by the Medical Boards (in their respective divisions), or by the medical authorities, etc., etc., etc., but no other persons, might undertake prosecutions for offences against this clause, etc. But suppose the Medical Council, etc., would not "authorise?" The present Medical Council have always been slow to act. They retained certain names on the *Register* for some time, and they have frequently stated that it is no part of their business to prevent unlicensed practice. This part of the clause put no compulsion on the Public Prosecutor or on anyone else. Again, the permission of the Public Prosecutor is not obtained gratis. This clause prevented a private person undertaking a prosecution against a medical quack; but Clause 70 actually repealed—and so does Clause 23 of the Act (1886) repeal—part of the Dentists' Act (1878) for the sole purpose of enabling a private person to prosecute a dental quack!

To Clause 9, dealing with the formation of the suggested Medical Boards, I proposed an addition, so that the Medical Schools should be represented thus (on the English Board), for example:—"Four by the London Medical Schools, to be elected in the manner prescribed by the Privy Council; three by the provincial Medical Schools, to be elected in the manner prescribed by the Privy Council."

Clause 26 dealt with the insertion on the *Register* of a medical diploma, granted by an "authorised" authority, to a person who, after passing the proposed ("State" Medical Board) examination, shall have registered himself. But for the purposes of ensuring some regularity in the mode of obtaining such diploma, I proposed that each student (particularly if the licensing authorities were, unfortunately, to be allowed to continue to exist as such) should be required to have attached himself to one or more of these "authorities" at the commencement of the period of studentship, and to have remained attached to the same "authorities," or to one of them, during the whole of such period. But, in reality, I was in favour of disestablishing the licensing authorities altogether, and of enforcing a certain minimum education and State-examination.

In reply to a series of questions submitted, some years ago, by the Metropolitan Branch of the British Medical Association, I, at some length, advocated compulsory apprenticeship. The other day a house-physician told me that he could not, even if he wished, compound a prescription; he has been a "resident" at three London hospitals! I also, in the same reply, expressed myself as being strongly in favour of all the scientific subjects being got over prior to the commencement of the study of the more strictly professional subjects.

Of course the General Council have nothing to do with legislation, but the above observations will serve to show the degree of interest which I have taken in medical affairs. I presume that this fact was the cause of my being asked to serve on, and being added to, the Reform Bill Committee of the British Medical Association in 1884.—Yours, etc.,

BERNARD O'CONNOR.

SIR,—Allow me to state, in your next issue, that, if elected to the Council, the Irish apothecaries will find in me a friend. I will take advantage of this letter to state that Irish provincials have to thank two of my rivals for being deprived of all share in the clinical instruction of students. Dr. Kidd declared that he drew up the new scheme for the Irish College of Surgeons, and under it our ancient privileges were abolished. Dr. Jacob bitterly opposed my application for hospital recognition, and declared, in the columns of the Dublin *Freeman*, that not one workhouse man in all Ireland was capable of teaching a student. Neither of these gentlemen proposed any vote of censure on Mr. Macnamara for his resolution at the last Medical Council, which gave us our final *quietus*. The cost of medical education has doubled, and parents are plundered for lectures unsanctioned by the Medical Council.

In 1884, a conjoint scheme for Ireland was opposed by Dr. Jacob, because the Irish College would lose, and parents would gain. Surely this is significant enough.—Yours, THOMAS LAFFAN.

Cashel, October 30th.

SIR,—Dr. Eyton-Jones justly complains in the JOURNAL of October 23rd, that Welsh national feeling has not been courteously treated in there not being a direct representative for Wales.

Under these circumstances, may I be allowed, as a long resident in the Principality, to suggest to all Welshmen to gratify their enthusiasm for their nationality by voting for Dr. Prosser James, the only Welsh candidate in the field.—Faithfully yours, ALFRED TILLY.

Brondesbury, N.W., October 27th, 1886.

SIR,—When I wrote to you on October 30th, recommending Sir W. Foster and Dr. Glover as gentlemen who, in my judgment, were best fitted to protect the interests of the profession on the General Medical Council, I was wholly unaware that my old friend Mr. Wheelhouse, of Leeds, was in the field; that the three had united in a general appeal, and that they were so well supported by the medical public. That letter was the first I had written for several weeks, all other letters having been dictated from a sick bed. I feel I am now slowly recovering, and have therefore felt justified in joining the London Committee as one of the Vice-Chairmen. I sincerely hope that all my friends who may have made up their minds to support Sir W. Foster and Dr. Glover, will decide to vote for Mr. Wheelhouse also, a course I shall most certainly follow, as it is all important that our candidates should be really representative men.—I am, Sir, yours obediently, JOSEPH ROGERS, Chairman of the Poor-law Medical Officers Association.

November 1st, 1886.

SIR,—I wish to draw the attention of all Poor-law medical officers to the fact that one of their own number, Mr. D. B. Balding, is now a candidate for the direct representation at the General Medical Council. This gentleman is one of the vice-presidents of their own special corporation, and for many years has worked hard for their cause; therefore, I hope that they will now acknowledge his past services by giving him their best support.—Your obedient servant,

FRANCIS A. DAVEY, M.R.C.S.E., L.S.A.

Barkway, Herts, October 30th.

SIR,—I hesitate before answering Mr. R. H. S. Carpenter's letter, in the JOURNAL of October 30th, because I think no one can agree with him, but, on further reflection, I do so in order to remove the incorrect impressions which it suggests.

I write not only as one of the honorary secretaries of Dr. Richardson's Committee, but as a general practitioner who has the interests of his class certainly as much at heart as Mr. Carpenter, and, as such, I contend that a physician who has been in general practice, who knows the wants of the general practitioner thoroughly, and who has the independence to express what he knows, is likely to be a better representative than if he still belonged to us.

Dr. Richardson's evidence before the Royal Commission, when candidly considered, admits but of one construction—the very opposite of that which Mr. Carpenter has attached to it—namely, that he was desirous of putting the only available check which has yet been suggested to unlimited counter practice.

If the paragraph in Dr. Richardson's address dealing with this subject is not sufficiently explicit, I may add that I have Dr. Richardson's personal authority for saying that the above correctly conveys the intention which was in his mind when he gave his evidence, and that he is as much opposed as Mr. Carpenter can be to unlimited counter-practice by unauthorised persons, and to any lowering of medical qualifications.

Dr. Richardson is truly the champion of the general practitioner against the encroachments of Corporations on the one hand, and of trading committees on the other.—I am, Sir, yours obediently,

CHARLES WELLS, M.D.

SIR,—I shall feel obliged by your publishing the following correspondence. My only desire is that electors should know the politics of our candidates.—I am, Sir, your obedient servant,

R. H. S. CARPENTER.

DEAR MR. CARPENTER,—Will you kindly produce proof of your statement that I advocated the punishment of medical men for dispensing medicines, or oblige me by withdrawing it publicly.—Yours very truly, J. G. GLOVER.

25, Highbury Place, November 2nd, 1886.

DEAR MR. GLOVER,—Dr. E. Waters being in the chair, you proposed to the Conference that a clause should be introduced into the Bill prohibiting ("to prevent" were your words) the supply of medicines to their patients by general practitioners. In objecting to this, Dr. Waters mentioned to you that he had talked the point over with a general practitioner who was doing a practice of £2,000 a year, and that he had stated to Dr. Waters that were he to give up supplying his patients with medicines he would lose half his income.—I am, faithfully yours, R. H. S. CARPENTER.

130, Stockwell Road, S.W., November 3rd, 1886.

THE APOTHECARIES' SOCIETY AND ITS PROFESSIONAL USEFULNESS.

SIR,—Your powerful leader upon the above, in the JOURNAL of October 23rd, is most opportune. I can fully endorse the whole, and at the same time add a little, with a view to furthering its application and effects. This, with your permission, I will endeavour to do now.

1. Those who have not read your leader, as above, should not omit do so carefully; and afterwards I would advise them to deliberate as to how best to act at the present crisis of professional interests.

2. Seeing the result of nearly thirty years' attempt to correct even a few of the defects of the Medical Act of 1858 has been nothing directly to amend its penal clauses, it now behoves the profession to ascertain what can be done with its existing laws to combat the various forms of illegal practice, which is alike a standing dishonour to the Government and a gross injury to the profession and public.

3. When the Government Medical Bill, 1883, was under consideration, you were good enough to publish my "Suggestions and Reasons for improving the same." [See the BRITISH MEDICAL JOURNAL for June 2nd, 1883.] Being encouraged by your (editorial) encomium upon the same, as well as by the friendly advice of an influential M.P., I afterwards issued the article in pamphlet form, and sent a copy to each member of the Houses of Lords and Commons, the General Medical Council, and the various medical examining bodies. But since then I have seen how much that is vital has been lost or deferred, and how much still remains to be desired or done.

4. I think it very probable that the various Governments who have attempted to revise and extend the Penal Clauses have found that the profession already possessed ample powers for effectually restraining and punishing illegal practitioners, hence their past reluctance and apparent indifference about trying to carry through anything better.

5. Now I perceive in the present crisis a possible, and even a highly probable, opportunity of indirectly remedying the penal defects of the Medical Act, 1886, and this lies especially within the scope of the direct representatives; to influence the General Medical Council to encourage and foster the further existence and legal functions of the Apothecaries' Society, and thereby to induce the Society to lend or use its name freely for the purposes of prosecuting illegal cases of practice in which the Medical Acts are inoperative by reason of the delinquents not assuming sufficiently definite titles; for it is simply necessary to prove that the defendant (practising unlawfully as an apothecary) had treated disease by directly prescribing or administering medicines, and making a charge for the same, in order to impose a penalty of £20, with its deterring consequences of exposure in the various papers and journals. If the Royal Colleges of Physicians and Surgeons are truly alive to their future interests, they will not exclude the Apothecaries' Society from participating in the conjoint scheme, and that for the reason I have just pointed out, namely, of being enabled to better protect the pecuniary and professional interests of their own *alumni*, through the medium of the moral influence and prosecuting powers indicated. But if the Royal Colleges—one or both—will not see this, and take a lesson from the past, why then it only remains for the worshipful Society to act independently, apply to the General Medical Council for examiners in surgery, confer a qualifying title, give a complete examination, secure a representative in the Medical Council, extend its licensing functions, and thereby increase its influence by more adequately meeting certain professional and public wants, long felt by those whose lot it is to toil hard and suffer much.

6. Latterly, we have seen and read many complaints in the medical journals about the profession being overcrowded, of too keen, and sometimes dishonourable, professional competition, of the increased expense of living, and of the decreased incomes, and these circumstances affecting all grades of the profession. Then why so much apathy and dissension about conserving our own interests? Why cannot we perceive and stop at least one of the chief causes of such complaints? We have stood aloof long enough—in fact, too long to fully retrieve the loss of the past. The remedy is simple, and the opportunity for action apparent. Then arise, ye that have slumbered in the past; begin to clamour for your rights, and resolve to make the best of what remains! Let me earnestly entreat you to wisely use the new privileges; be not over-hasty in committing yourselves to support this or that candidate; yield not too readily to the persuasive influences of electioneering tactics; reserve your judgment to the last; value your mode of voting as equivalent to ballot, and vote only for those candidates for direct representation who are practically acquainted with the interests and grievances of the general practitioners; who are, or have long been, themselves general practitioners, who are medical politicians of known repute, and who will now pledge themselves especially to guard and further the best interests of the general practitioners, and at all times use every available means for protecting the profession against loss of honour and pecuniary reward, due to quackery ever rampant in its many, varied, and increasing forms.—Yours truly, JOHN BROOM, M.D., etc.

Clifton, October 26th, 1886.

SIR,—The admirable leader upon the Apothecaries' Society and its great powers—for they are really great—reminds me of a case in which, as an old L.S.A., I was consulted by a friend of mine. He was an M.D. Edin. and M.R.C.S. Engl., and practicising generally. A family got into his debt, about £30. He delivered and re-delivered the account, but could get no attention. At last he employed his solicitor to sue, but then he was met by a sharp practitioner on the other side, who put the charges to proof, and every item that was a *legal* charge and recoverable by an apothecary, he got struck off. I tried in vain to help; got a young M.D. of London, a Scotchman, to prove that his father was a general practitioner in Scotland, charging for medical attendance and medicines, in fact a practicing apothecary, but it was all in vain. Every bottle of medicine, etc., that the dishonest family sent for without giving the doctor the trouble to call was disallowed by the Court. Now, Sir, I, as an old practitioner, send out perhaps twenty parcels a day, by post and otherwise; and were I not a Licentiate of the Apothecaries' Society, I could not possibly recover my charges for medicines when repeated, but not accompanied by a visit. I am quite aware that the rising generation are getting above the ways of their fathers; all well, provided the general public had progressed equally in honesty, but when we know and feel that sixpenny doctors and hybrid physicians are unsettling the old landmarks, surely the powers of the Apothecaries' Act ought to be combined with their brethren of the new college, so that a tri-joint board would enable the hardworking race of the coming ones to recover their costs and charges; otherwise, it will come to this: the visit may be paid for, perhaps, but anything else, not; for the Act of 1858 does not supersede that of 1815. The pharmaceutical chemist can recover, but his superior *confrère* is prevented, because he does not hold the true legal qualification. To conclude, who would not rather be a moderately successful solicitor than a briefless barrister?—Yours, W. T.

SIR,—I have been very much interested by the communication of Mr. Pridham, in the JOURNAL of Oct. 30th, and should like to add my testimony to the efficacy of the powers of the Apothecaries' Society. He mentioned the case of the Society *v.* Aspinall. I will give another quite as important. My unqualified assistant served me exactly the same way as Mr. Aspinall did his master, but tried to cover himself by engaging a qualified man to help him until he could get a qualification for himself. To my astonishment, I found that he had somehow entered as a student, without passing a preliminary examination, the College of Surgeons having, for some private reason which it would never divulge, granted him a dispensation. He next found a Medical School willing to take him as a student, although informed of all the circumstances; and he would have continued his career triumphantly, but that the Apothecaries' Society cut it short by

sanctioning a prosecution against him, and obtaining a verdict which prohibited him from practising while unqualified—his plea that he carried on the practice for the benefit of a brother who lived over one hundred miles away being, of course, disregarded.—I am, yours faithfully, THOMAS PERCIVAL, M.R.C.S.E., L.S.A.

Knottingley, November 2nd, 1886.

THE TITLE OF "DOCTOR" FOR LONDON STUDENTS.

SIR,—When Professor George Buchanan wrote to me before his recent visit to London, expressing his desire to be present at some of our clinical lectures and teaching, I had no idea that he intended to make a semi-official visit to London, and to publish in a leading medical journal his experience. I replied to the effect that I did not know whether we had at St. Bartholomew's Hospital any lectures of the kind he was accustomed to at Glasgow, but that I should be glad to show him what we did do; and I furnished him with a statement of the hours and days on which practical surgery was taught, and begged him to see our surgical out-patient teaching, which offers a good notion of clinical teaching. When I afterwards met Professor Buchanan in London, I again asked him to come to the out-patient department, but he did not avail himself of the invitation; yet he still writes of the clinical teaching in the London schools as if there were no method in it, and as if no pains were taken to arrange for the systematic instruction of our students.

So far as the surgical teaching at my own hospital is concerned, there is little to complain of. With dressers' classes, systematic teaching in practical surgery, systematic teaching in the out-patient department, dressing in the out- and in-patient departments, attendance on consultations and operations, in addition to lectures on clinical and general surgery, if the students are not sufficiently instructed in surgery, it is not for the want of the machinery and material for instruction. I have no reason to believe that matters are worse managed at other hospitals in London. With teachers of such known repute as Bryant, Hutchinson, Lister—to name no more—it is not likely that clinical teaching is allowed to lie neglected.

I confess I object to the tone of Professor Buchanan's letter. It would seem at first sight to be written in a friendly spirit towards the London schools; but it is none the less an attempt to give them one more push-down, and the Scottish schools one more thrust-up. Professor Buchanan's "London friends" are not continually complaining in the public prints of the decadence of their schools. The article to which he refers, at page 774 of the BRITISH MEDICAL JOURNAL, is an unsigned article. The JOURNAL is not the property or the organ of the London schools, but represents all parts of the United Kingdom; and the article in question may, for lack of evidence to the contrary, have been written by a friend to the Scottish schools.

It is very interesting, and at the same time very amusing, to observe the strength with which certain impressions and ideas become engrafted in the minds of men as enlightened and liberal as Professor Buchanan. With the impression that there is still no systematic clinical teaching in London, other curious ideas may be discovered in his letter. One of them is that the M.B., C.M., and M.D. of the Scottish Universities imply a "university" education.

Of course I do not know exactly what meaning Professor Buchanan attaches to the term "university education," but I cannot but conclude that he understands by it an education which differs in some essential features from that which our London students obtain on their way to the diplomas of the Colleges of Physicians and Surgeons. I have sought in vain to discover what the distinctive features are between the education for the M.B., M.D., C.M., of the Scottish Universities and that which is given at our medical schools. The medical students at the Scottish Universities are not compelled to graduate in arts, and I understand that they herd together in the same manner as medical students in London, and mix but little with the students of the other faculties. I have heard from more than one man who has resided and taken his degree at a Scottish University, that the only thing he ever knew of the University was that, when he took his degree, he was introduced to the Vice-Chancellor. Sir Andrew Clark, speaking from a practical experience of the requirements of the London Colleges and the Scottish Universities last May, was quite clear and decided on this matter. (B.M.J., 1886, I., 1188.)

With regard to the title of "Doctor," I quite agree with Dr. Buchanan that there is a wide-spread ignorance on the legal authority to use it; but I have not yet found the least reason to believe that the "public have come to the opinion . . . that a man who has obtained an university education and degree is likely to be a more reliable practitioner than a non-graduate." In the mind of the public, the practice of medicine and doctoring are synonymous terms, and he who practises the art of healing is a doctor. If he does not call himself a "Doctor," or is not called "Doctor" on his door-plate, or attempts to explain that he has good diplomas which enable him to practise, but do not enable him to prefix the title "Doctor" to his name, the public wonder. Here is an anomaly: a doctor who is not a doctor, then what on earth is he? Such a man is a mystery, and is therefore regarded with suspicion. And this it is which places him at a disadvantage, not with the men who have a legal right to the title of "Doctor" (for they are comparatively few in number), but with the men who have assumed the title. These men are the M.Bs. of every university, the L.R.C.Ps. of Edinburgh, and others with like qualifications; and to their assumption of the title is due the desire which now exists for what is termed a legal authority to the title for London students.

So many men are now called "Doctor" who have no other right to it than that they have derived from custom and courtesy, that the term could not conveniently be restricted to its "legal use;" and I feel quite sure that the simplest and fairest way out of the difficulty for our London students is for every one of them who has passed the licentiate's examination at the College of Physicians to adopt the title of "Doctor," and to use it on his door-plate and visiting cards; and if the members of the College of Surgeons chose to do the same, I can see no objection to their doing so. They will have no legal authority for the title, in so far as they cannot compel any person to address them as "Doctor;" but, on the other hand, they need not fear that any legal authority will attack them for using it, or that the title will be withheld from them by the public. When this course has been adopted, the various degrees and diplomas will have a much better chance than now of receiving their relative value.

I never think of the College of Physicians of Edinburgh and the the title of "Doctor" without being moved to laughter. Professor Buchanan refers to a letter written by "Dr. George Balfour, when President of the Royal College of Physicians of Edinburgh." I do not know what Dr. Balfour wrote when he was President of the College, but I do know what he wrote when Vice-President of the College. Is not his letter published in the BRITISH MEDICAL JOURNAL for 1885 (I, 49), and are there not many letters on the subject written in the same volume of the JOURNAL by Dr. Keir, and Dr. Grace, and Dr. Donovan, and others, and one more by Dr. Balfour? And is not the action of the Edinburgh College of Physicians in this matter quite clear, so that he who runs may read? The College did not give its licentiates the legal right to use the title "Doctor," for it could not do so; but it encouraged them to use it, knowing full well that their adoption of the title could not legally be prevented. A very amusing occurrence in connection with this subject took place at a meeting at which I was present a few months ago. We were discussing the action of the College of Physicians, when a Scottish graduate and physician of distinction stated that the College had never advised its licentiates to adopt the title of "Doctor." One of my colleagues rose up and said that quite recently one of his pupils had obtained the diploma, and, after the examination, had been addressed by the President of the College, and advised to adopt the title of "Doctor." Now, thought we, what will our Scotch friend say? Surely he must admit that he is wrong. But we soon found that we were wrong, for his face lighted up with a bland and pleasant smile, as sits on the face of one to whom victory is assured, and he answered, "Ah, that's the President; you can't control the President; he can say what he pleases. The President's not the College."

When one considers how many times it has been said that Scotchmen cannot understand a joke, I do think it must be admitted that they understand well how to play a practical joke. The action of the Edinburgh College in relation to the title of "Doctor" is certainly an admirable joke of its kind, and has, I understand, been the means of bringing in much gold to the coffers of the College.—I remain, Sir, yours truly, HENRY T. BUTLIN.

London, November 1st.

SIR,—Having written to the secretaries of Messrs. Wheelhouse, Foster and Glover's Committee, I am sure it will be of the greatest interest to all London qualified men, to know that this morning I received a most satisfactory reply from Mr. Wheelhouse.

He heartily sympathises with our unjust treatment, and writes as follows: "I regard the present disability on the part of London students with regard to the M.D. degree to be so unjust, that I will gladly entertain the consideration of any scheme which has for its object the placing of London on a just equality with other universities, and other capitals of the United Kingdom."

This reply will, I am sure, satisfy us all, and I trust such an opportune statement will lead to their hearty support by all of us.—I am, Sir, yours faithfully,

Hesham. COTTENHAM FARMER, M.R.C.S.Eng.

WASHING OUT THE PERITONEUM IN OVARIOTOMY.

SIR,—In the discussion on Mr. Thornton's paper, read before the Royal Medical and Chirurgical Society, on October 26th, Dr. Gervis is reported by you to have said that "in the practice of thoroughly washing out the peritoneum the Germans had been anticipated by the Americans." This, I must say, is news to me, for I have been under the impression (confirmed by a reference to Peaslee's work) that we owe to the genius of Mr. Lawson Tait the practice of washing out the peritoneum at the time of operation—a practice which I agree with Dr. Playfair in regarding as the "real advance" of recent times in this operation. It is true that washing out the peritoneum was attempted by Peaslee and others, but for the purpose of removing active, septic material. That, however, is a very different proceeding.

For some time I have followed Mr. Tait's practice of washing out the peritoneum with warm water, from which no pains have been taken to exclude bacteria and the whole host of microscopic "water-population," and the results have been of the most satisfactory description. Whenever I meet with bad adhesions, or a ruptured cyst, or whenever I consider it necessary to use a drainage-tube, I now always freely wash out the peritoneal cavity, and so frequently have I done it lately that out of my last forty-three cases,—all of which have recovered—I have employed it more than twenty times. This I owe to the teaching of Mr. Tait, to whom alone the credit is due.

It is true that the peritoneum has been washed out with a solution of carbolic acid, or, perhaps, some other deleterious agent, by a few operators in times gone by, but I do not know of anyone who has repeated the process a second time, or would venture to employ it now.—I am, Sir, yours faithfully,

October 30th, 1886. GEO. GRANVILLE BANTOCK.

M. PASTEUR'S PROPHYLACTIC.

SIR,—In my second letter in reply to Dr. Dolan, I said that I did not intend to take up your space further in discussing M. Pasteur's method. Dr. Spitzka's letter on this subject, however, so perverts my published remarks with regard to Fritsch's experiment, that it is impossible for me to pass it over without protest. The following is the statement made by Dr. Spitzka, to which I refer.

"He" (that is myself) "intimates that his opponent's" (that is Dr. Dolan's) "citation of Fritsch's experiments involves a *non sequitur*, as Fritsch applied Pasteur's protective virus by trephining, whereas Pasteur applied it hypodermically."

The obvious grotesqueness of the notion of Fritsch's trephining his animals every day for ten days, to protectively inoculate them, shows I think quite clearly, a complete want of acquaintance with and understanding of the whole matter in question on the part of Dr. Spitzka. Ignorance, however, can scarcely be admitted as a justification of absolute perversion of a writer's printed statement, and if those who have read Dr. Spitzka's letter will be good enough to turn to mine, published in the JOURNAL, October 2nd, 1886, p. 654, they will find that he, by omitting the words "by protective inoculation," has given to my words the false and ridiculous meaning I have quoted above.

The other points in his letter I may pass unnoticed, save that I would advise Dr. Spitzka to address his questions to M. Pasteur himself, as that gentleman's readiness to supply information and assistance to all who display genuine interest in the progress of science, completely disposes of the charge of mystery brought against him by Dr. Spitzka, and renders ignorance of his method impossible in those who sincerely endeavour to make themselves acquainted with it.

No one can be more anxious than myself that freedom of speech and critical discussion should prevail, but, Sir, freedom ought not to be allowed to degenerate into license, and it seems to me that the publication by way of criticism of utterly unsupported statements such as those which I have been compelled to refute within the last six weeks, does a great injury to the progress of medical science.—Believe me, yours very sincerely. VICTOR HORSLEY.

80, Park Street, W.

BEQUESTS AND DONATIONS.—Mr. Richard Howard, of Croydon, has bequeathed £250 each to the Hospital for Sick Children, the Earlswood Asylum for Idiots, the Royal Hospital for Incurables, the British Home for Incurables, and the Croydon General Hospital.—Mr. C. H. James, M.P.; Mr. Thomas Williams, J.P.; Mr. D. Evans; Mr. E. B. Evans; and Mr. T. Evans, have each subscribed £100 to the new Infirmary at Merthyr-Tydfil.—Mr. Guthrie Lornie, of Birnam, winner of the phaeton, value £50, at the Perth Bazaar, has given £100 to the Infirmary there.

NAVAL AND MILITARY MEDICAL SERVICES.

ELECTION OF DIRECT REPRESENTATIVES ON THE MEDICAL COUNCIL.

THE attention of medical officers should be especially directed to the advertisement on another page calling attention to the fact that the addresses of surgeons in the Army, Navy, and Indian Medical Services are, by arrangement with the public offices, entered only as "Army Medical Staff," "Naval Medical Service," "Indian Medical Department." These postal addresses being insufficient to ensure the delivery of the voting papers, all medical officers in the above services, who are resident in the United Kingdom—the only persons in such services who are entitled to vote—should, in case they desire to vote, be careful to apply by post, enclosing their postal addresses, to the Registrars, namely, those resident in England, to W. J. C. Miller (Medical Council Office, 299, Oxford Street, London, W.); those resident in Scotland, to James Robertson (4, Lindsay Place, George IV Bridge, Edinburgh); and those resident in Ireland, to R. L. Heard (35, Dawson Street, Dublin). The application must be made on or before November 10th.

HONOURS TO MEDICAL OFFICERS WHO HAVE DIED IN TONQUIN.

A REMARKABLE tribute of respect was paid in Paris on Thursday last, October 28th, to the memory of the officers of the hospital staff who have lost their lives during the recent military operations in Tonquin. A funeral service was held in their honour at the chapel of the Val de Grâce, and was attended by the Military Governor, General Saussier, and General Thomas, the Commandant of Paris, with their respective staffs, as well as by a large number of the officers of all arms belonging to the garrison of Paris. The Ministers of War and of the Marine were both represented on the occasion. Médecin-Inspecteur-Général Didiot, the Director-General of the military medical service, and all the medical and administrative officers of the military hospitals of Paris, attended the service; as also did the professors and assistant-professors and pupils of the military medical school.

No pains had been spared in order to produce an imposing effect in the interior of the chapel. The walls were completely covered by black drapery, fringed with silver edgings, and ornamented by green palm leaves and groups of flags; while, at intervals, escutcheons were suspended, bearing the initials of the six army medical officers and five officers of the hospital commissariat in honour of whose memory the service took place. Another escutcheon bore the initials of a chaplain attached to the hospital service, who had lost his life in Tonquin. A sarcophagus, supported by four figures bearing crowns and palms, and having trophies of military flags, knotted with crape pendants, disposed at its four corners, stood in the choir of the chapel. A special place in the chapel was allotted to the families of the deceased officers.

After the service in the chapel was concluded, General Saussier, standing in front of the porch of the church, caused the officers of the medical staff to be assembled around him; he then addressed them in sympathetic terms on the losses they had sustained among their ranks in the East, praised warmly the spirit of devotion and self-denial that had characterised their comrades whose memories they had just been honouring; and, through those officers who happened to be present, conveyed his thanks to the whole medical corps for the signal services they had rendered to the army and to their country.

All the principal journals of Paris have referred to the ceremony just mentioned in terms of approval, and with expressions of satisfaction at the manner in which the duties of the medical department have been discharged during the military operations in Tonquin.

VOLUNTEER AMBULANCES.

IT is satisfactory to learn that the Ambulance Department of the Volunteer Force has been so far developed that every corps has now its own stretcher-parties; while the Volunteer Medical Staff Corps of men wholly devoted to hospital work, which twelve months ago was only a very small affair, is now expanding in all the great Volunteer centres, and in some of the agricultural counties.

MEDICO-LEGAL AND MEDICO-ETHICAL.

TAKING CHARGE OF A HOMŒOPATHIC PRACTICE

FAIR PLAY writes: A. B. and C. D. are neighbouring practitioners in a fashionable seaside health-resort. A. B. is an avowed homœopath, and C. D. ranks as an allopath. A. B., on going from home, leaves his patients in charge of C. D. C. D., on going from home, leaves his patients in charge of A. B. Is this regular—does it not mean consultation? Tommy Hand, and many others, C. D. should rank as a homœopath.

*** As the most authoritative dictum on the point submitted by our correspondent, we quote, as an expression of our own views on the subject, the following latest extract from the *Code of Medical Ethics*, second edition, page 52, rule 5: "It is degrading to the true science of medicine to practise homœopathy, etc., such practice being incompatible with the honour and dignity of the profession. We would, at the same time, refer him to a foot-note on page 57, and 58, in which the important question of consultations with irregular practitioners is briefly discussed.

PROFESSIONAL CHARGES.

A MEMBER. On referring to the *Medical Directory* for 1886 issued by the late Shropshire Ethical Branch, as a guide to the young and more or less inexperienced general practitioner so called—we find that the suggested fee for persons in the position of life of our correspondent's lady-patient, varies for "Advice at the Practitioner's House," from 5s. to 10s. 6d.; "Letters of Advice," 10s. 6d. to 21s.; "Detention, per half-hour," 5s. to 10s. 6d.; "Digital Examination *per Vaginam*, 10s. 6d. to 21s.; "Examination with Speculum, 10s. 6d. to 42s.; to the above fees may be added a moderate (inclusive) fee for the anodyne vaginal injection, and scarification of the os uteri, medicines, etc. With such detailed information for "A Member's" guidance, we would hope that he will experience little difficulty in satisfying his patient of the reasonableness of his charges. In refusing to discharge her pecuniary obligation to him for breaking his journey in order to visit her professionally by request, she unfairly ignores the fact that such an interruption, when travelling by rail, is at times especially inconvenient to the busy practitioner, and not unfrequently entails a great loss of time. The tendered fee of £2 2s. is utterly inadequate.

DEATH CERTIFICATES SIGNED BY UNREGISTERED PRACTITIONERS.

A CORRESPONDENT writes: "A Provincial Member" in Yorkshire would do well to inquire of the Registrar-General how his unqualified opponent has become possessed of the book of death certificates. "A Provincial Member" can inspect the register-book of deaths on payment of one shilling, and thus satisfy himself whether the deaths are certified or uncertified entries. If the former, he would have a good case against both registrar and practitioner; if the latter, the entries are of course legal, and he can only stop the use of the certificate-book.

G. T. (Frome).—The *Code of Medical Ethics* referred to by our correspondent is published by Messrs. Churchill, New Burlington Street, and may be procured through any respectable bookseller, price 3s.

OBITUARY.

ALFRED CHARLTON, M.R.C.S., L.S.A.

WE regret to record the death of Mr. Alfred Charlton, which occurred under distressing circumstances at his residence at Brabourne, near Ashford, Kent, on October 12th. Not long before that date Mr. Charlton slightly burnt his left hand, causing a small wound. Before the wound had healed he was called upon to amputate the finger of a lad which was in a gangrenous state. He probably on that occasion inoculated the wound on his own finger with some septic material, as, shortly afterwards, acute inflammation of his own hand and arm ensued; and, although his colleagues from neighbouring towns gave him their best attention, his illness proved fatal. He was born at Tonbridge in 1843, and was consequently 43 years old at his death. He was the fourth son of his father, and brother to Dr. Egbert Charlton, also deceased, who formerly practised in Paddington. He was educated at Tonbridge Grammar School, and received his medical training at Guy's Hospital. After obtaining his diplomas, he first practised at South Lambeth, whence he removed to Southborough, near Tonbridge Wells, where he resided some years. Since 1879 he had been in practice, first at Sellinge and subsequently in the neighbouring village of Brabourne. He was District Medical Officer and Public Vaccinator to the East Ashford Union, and held the same post in the Sellinge District of the Elham Union, and was an occasional contributor to the medical journals. He was a skilful practitioner and an amusing companion, and will be especially missed by his poorer patients, for whom he showed much kindly consideration. He leaves a widow and small family to mourn his loss.

PRESENTATION.—Mr. T. W. Walsh has been presented with an address, and some handsome pieces of Worcester china, consisting of a pair of candelabra and a centre figure, on resigning the post of surgeon to Worcester General Infirmary, by the officers, nurses, and pupils.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

METROPOLITAN SEWERS AND SEWAGE.

IN accordance with the resolution passed at the last meeting of the Metropolitan Board of Works a return is to be made showing the number of stations used in the Metropolis during the last summer for the purpose of pouring disinfectants into sewers, classified north and south of the Thames, together with an account of the quantities of chemicals used at each station on each day, and showing the daily rainfall and temperature, and the quantity of sewage delivered at Barking and Crossness respectively; and giving the daily quantity of chemicals mixed with the sewage at these outfalls.

OVERCROWDING AT BELPER.

AT a recent meeting of the Belper Local Board, attention was called by Dr. Allen to two shocking cases of overcrowding. In one instance, a father, mother, and six children, and a family lodger used one bedroom, which was in a filthy and most unhealthy condition. In the other case, nine persons occupied one bedroom. Notices were ordered to be served on the owners to remedy this disgraceful breach of sanitary conditions.

PENALTY FOR REFUSING VACCINE LYMPH

PERCY S. WESLEY.—By Section 17 of 30 and 31 Vict., c. 84, it is provided that upon the same day in the following week when the operation shall have been performed by the public vaccinator, such parent or other person, as the case may be, shall take the child, or cause it to be taken to him or to his deputy, that he may inspect it and ascertain the result of the operation, and, if he see fit, take from such child lymph for the performance of other vaccinations. By Section 10 of 34 and 35 Vict., c. 98, every person who prevents any public vaccinator from taking from any child lymph as provided by Section 17 of the principal Act, shall be liable, on summary conviction, to pay a penalty not exceeding twenty shillings.

MEDICAL OFFICERS OF HEALTH AND INCORRECT CERTIFICATES.

MEDICUS.—We fail to see how a medical officer of health could form an opinion as to the cause of death different from that of the medical attendant, unless he had discussed the matter with him; and if there were reasonable grounds for doubting the correctness of the diagnosis, he would be able, with the assent of the attendant, to refer to this doubt in any report presented to his authority. This is the course usually adopted.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—Admitted Licentiates, October 28th, 1886.

W. L. Abbott, Guy's Hospital, S.E.; G. S. Armstrong, 48, Burton Crescent, W.C.; C. J. Ayres, 15, Grosvenor Road, S.W.; W. H. Baker, 5, Offerton Road, S.W.; E. Barrett, St. Bartholomew's Hospital, E.C.; G. C. Bell, Eden Villa, Leytonstone, E.; E. H. Biddlecombe, North Allington, Bridport; A. W. Bigelow, 34, Burton Crescent, W.C.; H. J. Blackler, 2, Knight's Hill, West Norwood, S.E.; J. H. Blakeney, Jaffray Hospital, Gravelly Hill, Birmingham; R. D. Boase, 40, Headland Park, Plymouth; M. C. R. Böhrsmann, Sydney, New South Wales; W. Bowden, 45, Hilldrop Crescent, Camden Town, N.W.; C. Brown, 9, Baskerville Road, S.W.; J. Caven, 34, Burton Crescent, W.C.; J. H. Chaldecott, 17, St. Paul's Road, Camden Square, N.W.; C. Christopherson, North-West Hospital, Kentish Town Road, N.W.; W. J. Clarke, 27, Bryanston Street, W.; W. J. Colborne, 23, Birdhurst Road, New Wandsworth, N.W.; G. R. J. Crawford, New Brunswick, Canada; H. W. Darrell, 48, Burton Crescent, W.C.; W. Davis, 97, Evelyn Street, Deptford, S.E.; P. J. De Nyssen, 131, Portsdown Road, Maida Vale, W.; F. J. Dewes, 60, South Lambeth Road, S.E.; W. G. Dreaper, 12, Richmond Hill, Old Trafford, Manchester; H. De Burgh Dwyer, 11, Argyll Road, W.; G. A. Edsell, Beulah Hill, S.E.; P. Edwards, Western General Dispensary, Marylebone Road, N.W.; G. G. Gidley, Honiton; A. M. Gledden, Helenslea, Hornsey Lane, N.; E. Goodall, Guy's Hospital, S.E.; W. Goose, 1, Oakley Square, N.W.; T. Halliwell, 160, Malpas Road, Brockley, S.E.; G. E. Halstead, 3, Water Lane, Brixton, S.W.; H. C. Halsted, 56, Gore Road, E.; H. J. Hamilton, 34, Burton Crescent, W.C.; C. C. Harris, 21, Craven Road, Paddington, W.; C. S. Haultain, 21, Endsleigh Street, Tavistock Square, W.C.; C. M. Hill, 17, Granville Square, W.C.; T. E. Honey, 41, Westbourne Park Crescent, Harrow Road, W.; J. Honsberger, 50, Burton Crescent, W.C.; F. C. Hood, 34, Gloster Place, Portman Square, W.; C. J. Horner, Fern Hill, Walthamstow; K. W. Ingleby-Mackenzie, 107, Guilford Street, W.C.; D. O. Jones, 54, Gloster Place, Portman Square, W.; C. J. S. Kelsall, 80, Talbot Road, Bayswater, W.; F. S. Lambert, 29, Station Road, Redhill; J. Leeming, 34, Burton Crescent, W.C.; I. H. Lipscomb, 17, Trinity Square, S.E.; H. J. Macevoy, 404, Camden Road, Holloway, N.; G. McNair, Thurlow Hill, Dulwich, S.E.; M. O. Manson, 66, Romola Road, S.E.; J. A. Manton, South Parade, Wakefield; L. F. Millar, Ontario, Canada; C. Mottlock, 9, Ladbroke Gardens, Notting Hill, W.; W. H. Moyle, Helston; S. A. Mugford, 3, Sisters Avenue, Wandsworth, S.W.; B. Nowell, Halliford House, Sunbury; W. Parker, 64, Dempsey Street, Stepney, E.; W. T. Parry, 50, Burton Crescent, W.C.; H. A. Pearson, Sale, Manchester; R.

Pearson, 18, Durham Terrace, Westbourne Park, W.; L. W. Pockett, 17, Gibson Square, Islington, N.; A. W. Popert, 16, Beverley Road, Anerley, S.E.; F. H. Powell, 54, Bernard Street, W.C.; S. E. Prall, 78, Fortess Road, Kentish Town, N.W.; G. H. Raymond, New Brunswick, Canada; L. Remfry, Nightingale Lane, Clapham, S.W.; J. W. Rigby, Kelsall, Chester; W. N. Risdon, Balfour Road, Norwood, S.E.; G. W. Roll, St. Thomas's Hospital, S.E.; R. H. Russell, Salop Infirmary, Shrewsbury; J. I. Sankey, 105, Portland Road, Notting Hill, W.; H. F. Semple, 3, Fairview, Fernbank Road, Redland, Bristol; C. S. Sherrington, Caius College, Cambridge; N. Smith, 17, Welbeck Street, W.; H. J. Smyth, 111, Iverson Road, West Hampstead, N.W.; C. H. Tattersall, 221, Monton Road, Eccles, Manchester; W. S. Tebb, 134, York Road, Lambeth, S.E.; F. Thomas, 88, Sewardstone Road, Hackney, E.; J. T. Thomas, 4, Chelsham Road, S.W.; C. G. Wallis, Ripley, Derby; H. J. Manning Watts, 35, Belsize Park, N.W.; L. Way, 127, Belsize Road, Hampstead, N.W.; C. F. Williamson, 44, Mildmay Park, N.; G. E. C. Wood, Baileyfield, Portobello; F. D. Woodhouse, 4, King Street, Kensington Square, W.; F. Woods, 28, Fairholme Road, S.W.; W. L. Woollcombe, Plympton.

Admitted Members.

J. S. Bury, M.D.Lond., Manchester; E. Hogben, M.B.Dub., Birmingham; H. W. G. Mackenzie, M.B.Camb., St. Thomas's Hospital, S.E.; F. W. Mott, M.B.Lond., Harrow; J. H. Philpot, M.D.Lond., 13, South Eaton Place, S.W.; F. J. Wethered, M.B.Lond., Chest Hospital, City Road, E.C.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the Diploma, were admitted Members of the College at a meeting of the Court of Examiners on October 27th.

W. H. Moyle, L.R.C.P.Lond., Helston, Cornwall, A. J. Gedge, L.S.A., Methwold, students of London Hospital; M. O. Manson, L.R.C.P.Lond., Cape Colony, of St. Bartholomew's Hospital; W. Aston, L.S.A., Codsall, Wolverhampton, of Birmingham; W. N. Risdon, L.R.C.P.Lond., South Norwood, of Guy's Hospital; T. E. Honey, L.R.C.P.Lond., Stoke Devonport, of St. Mary's Hospital.

Three candidates were referred for three months, 7 for six months, and 1 for nine months.

Admitted on October 28th.

H. J. Smyth, L.R.C.P.Lond., West Hampstead, of St. Thomas's Hospital; W. Goose, L.R.C.P.Lond., Oakley Square, of Charing Cross Hospital; E. H. Lipscombe, of Cambridge and Guy's Hospital; F. W. Nielsen, L.S.A., Durham County Asylum, of St. Bartholomew's Hospital.

Two candidates were referred for three months, and 3 for six months.

The following gentlemen, having undergone the necessary Examinations, were admitted Licentiates of the College in Dental Surgery at a meeting of the Board of Examiners on November 3rd.

J. S. Acton, Barnes Common; J. P. Smith, Chelsea; H. Williams, West Kensington, and J. A. S. Tibbs, Brighton, of Middlesex Hospital; A. E. Baker, Oakley Square; A. T. Croucher, Clapham Road; A. Kendrick, St. John's Wood; F. M. Ludbrook, West Brompton; H. J. Moore; and J. Woodhouse, Oakley Square, of Charing Cross Hospital; C. A. Pattinson, Highgate, of Westminster Hospital.

Four candidates were referred.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The examinations for the triple qualification were held in Edinburgh in October, with the following results. Passed First Examination.

R. M'Cahan, Co. Antrim; B. Boake, Dublin; J. P. Walsh, Cork; M. Williamson, Co. Cork; M. Crannitch, Co. Limerick; T. Hamilton, Co. Tyrone; C. Wilson, Co. Fermanagh; J. L. Smith, Co. Limerick; E. R. Carroll, Co. Cork; T. Underwood, Lancashire; J. T. Roberts, Hanley; F. G. Heard, Cork; R. L. Caunter, Cornwall; A. Morton, Banbridge; H. H. Atter, Stamford; G. O. Moorhead, India; F. W. Mais, Yorkshire; J. E. Brogden, Essex; S. De Kock, Cape Colony; C. H. Macdonald, Inverness; T. N. Hugall, Oxfordshire; J. Kelly, London; J. Mackenzie, Lochinver; R. J. Stirling, Peebles; S. T. Beckitt, Liverpool.

Passed Second Examination.

W. Williams, Anglesea; J. W. Kelly, Queenstown; J. P. R. Jamison, Co. Antrim; H. M. Eames, Leeds; J. T. Roberts, Hanley; C. B. Mather, Tonbridge; R. G. Naylor, Calcutta; H. H. Atter, Stamford; J. H. Wilson, Co. Cork; L. V. Parry, Co. Merioneth; S. Mellor, Huddersfield; R. J. Pirrie, Dundee; S. T. Browne, Madras; C. W. J. Chepmell, Paris; J. R. H. Dyson, Yorkshire; F. W. Mais, Yorkshire; D. Wardleworth, Lancashire; J. E. Brogden, Essex; B. A. Simmatambou, Mauritius; W. S. Armitage, Co. Tipperary; F. S. Fairbridge, South Africa; P. Campbell, Balgulidder; J. A. Nolan, Kilkenny; M. M. Hannon, Co. Clare; J. Darbishire, Denbighshire; A. M. Weir, Worcestershire; J. Duncan, Fyvie; V. E. Nazareth, East Indies; A. Macdonald, Edinburgh; A. Bronte, Dromore; P. Callaghan, Co. Donegal; F. W. Kane, Mallow; F. T. Anderson, India; J. M. Whiteford, Co. Antrim; L. S. Holmes, Australia; F. E. Hodder, Cork; H. B. Mansell, Co. Galway; W. C. Carnegie, Dublin.

Passed Third Examination, and admitted L.R.C.P.Edinburgh, L.R.C.S Edinburgh, and L.F.P. and S.Glasgow.

W. W. White, Canada; T. J. Haythorne, Canada; I. Mead, Gloucestershire; E. Littlewood Wakefield; E. H. Fitzpatrick, India; B. MacDonogh, Surrey; J. Morton, India; J. S. Bryars, Co. Armagh; J. F. Davidson, Glasgow; A. E. Mifford, Malta; E. T. Hawkesworth, Cork; J. Moir, Maybole; J. P. R. Jamison, Co. Antrim; R. T. Wheeler, India; T. J. Henry, Australia; G. J. Scantlebury, Australia; D. M. Campbell, Canada; A. H. H. Watson, Edinburgh; J. T. Chamberlain, Leicester; J. F. Challinor, Bolton; H. Gurney, Hounslow; I. A. Gramany, Mauritius; A. Joseph, Ceylon; L. F. Shewmate, Australia; J. W. Parry, North Wales; J. O. Jones, Denbighshire; L. Mitchell Dudley, Argyleshire; P. J. O'Leary, Co. Cork; E. H. Cordes, Warwickshire; E. Harkness, Australia; S. J. R. Greville, Australia; F. J. Seery, New Brunswick; V. F. Lennane, Co. Kerry; J. W. Alexander, Glasgow; A. C. Mackenzie, Birmingham; D. A. Smith, Canada; W. A. K. Hanna, Bombay; D. M. Wilson, Ayr; P. Sturrock, Pitlochrie; H. W. W. Richardson, Poonah; L. P. Jackson, Plymouth; K. Prasad, Meerut; M. C. Wright, Calcutta; C. Malcolm, Leeds; J. Iredale, Huddersfield; G. S. Armstrong, Canada; J. Metcalfe, Tongue; W. L. Byham, Ealing.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—At the October sittings of the Examiners, the following gentleman passed the First Professional Examination for the licence in Dental Surgery.

A. Stevens, London.

The following gentlemen passed the Final Examination, and were admitted L.D.S. Edin.

W. J. Fisk, Brixton; A. F. Benson, Yeovil; A. Cocker, Yorkshire; C. M. Cunningham, Leith.

UNIVERSITY OF GLASGOW.—At the professional examinations for the degrees of M.B. and C.M., October, 1886, the following candidates have passed.

First Professional Examination.—P. H. Abercrombie, R. H. Adam, J. G. Andrew, A. A. Beale, T. D. Bertram, H. M'D. Borland, J. C. Bowie, J. A. Boyd, R. Broom, D. Brown, J. Brown, J. R. Bryce, L. Buchanan, W. Cairns, J. Caskie, J. Clarke, W. Colvin, J. Cook, T. C. Craig, J. Cross, N. Downie, A. Fairlie, M.A., A. C. Farquharson, I. Fletcher, T. Forrest, R. Forsyth, A. R. Fraser, M.A., J. Galloway, W. Gemmell, J. A. Gentle, R. Girdwood, J. N. Glaister, C. H. Hall, J. Hardie, F. Hare, A. B. Houston, J. Hudson, W. K. Hunter, W. Hutchinson, A. J. Hutchison, M.A., R. R. Kilpatrick, J. T. B. Laverick, T. B. Law, H. E. H. Lewis, J. Lindsay, J. Lloyd, C. B. Lucas, A. Merrilees, A. W. Millar, A. R. Mitchell, T. D. Moffatt, A. Morton, A. Moyes, D. Muir, W. R. Muir, W. Murray, A. M'Call, R. C. Macdiarmid, J. Macdonald, D. Macdougall, P. F. Macgregor, D. Mackenzie, J. M'Kie, R. A. M'Lay, J. B. M'Lean, W. A. Parker, A. Patterson, J. Pollock, P. Rankin, F. Rees, O. Rees, J. Richardson, T. B. Riddall, A. Robertson, J. Robertson, M.A., W. J. Robertson, M.A., A. M. Roy, D. W. Russell, J. A. N. Scott, A. Shiels, W. J. M. Slowan, J. P. Small, J. Swanson, M.A., J. C. Syson, G. M. E. Thorp, A. S. Tindal, W. R. K. Watson, A. Watt, A. C. White, J. Wotherspoon, W. M'G. Young, M.A.

Second Professional Examination.—J. Adam, J. Adams, J. Aitken, W. E. L. Allen, J. B. M. Anderson, M.A., G. A. Bannatyne, T. C. Barras, J. Bauchop, J. T. Biernacki, H. N. Bird, T. L. Blackburn, A. Blair, M. H. Bland, J. F. Boa, J. P. Boyd, W. M. Boyd, R. C. Brodie, J. Brown, A. Buchanan, R. M. Buchanan, R. Calderwood, F. S. Campbell, J. Charles, A. Copland, H. O. Cowen, J. Culross, M.A., J. David, A. Davidson, M.A., D. Davie, W. Diamond, W. C. Downs, J. P. Dunn, D. Ferguson, H. Findlay, T. Fleming, C. J. Fyfe, E. H. Fyffe, P. Gardiner, D. C. Gray, J. G. Gray, A. Halliday, W. C. Hamilton, E. O. Harrison, H. Highet, J. C. Howie, M.A., A. M. Hutton, R. G. Inglis, R. Jamieson, J. McC. Johnston, M.A., H. Jones, A. B. Kelly, J. G. Kerr, H. L. G. Leask, J. L. Loudon, G. Lowson, T. K. Monro, M.A., J. B. Morton, W. Muir, J. S. M'Conville, M.A., G. C. Macdonald, D. M'Dougall, J. M'Glashan, K. C. Mackenzie, J. T. M'Lachlan, T. M'Murray, J. M. Macphail, M.A., J. W. Nicol, C. R. Niven, F. L. Norris, W. R. Paton, R. L. Pinkerton, M.A., W. Primrose, D. Pryde, D. Ramsay, W. Robb, C. E. Robertson, J. Rowan, W. Roxburgh, J. Sandilands, M.A., R. P. Shearer, J. Smith, J. Smith, M.A., J. D. Smith, J. T. Smith, J. Somerville, G. Steele, J. Stevenson, H. G. Stewart, J. A. Stewart, J. A. Thoms, A. F. Walker, J. Wallace, J. Wright, H. J. Younger, M.A.

Third Professional Examination.—W. G. Barras, D. R. Barrie, A. Campbell, H. R. V. Crossfield, T. J. Davies, J. Dobbin, R. J. Freebairn, C. C. Grant, T. Kirkland, D. Laird, G. Lapraik, J. Mechan, J. Macarthur, J. McI. M'Call, W. M'Millan, T. L. Paterson, D. J. Penney, J. W. W. Penney, J. Porter, J. Reid, A. Shanks, R. D. Walker, W. Wallace, M.A.

The following have also passed in Pathology.

J. A. Anderson, R. Anderson, A. Auld, T. M. Bonar, R. Clarke, Hugh Dickie, M.A., J. Dickinson, J. E. Duncan, A. W. Dunlop, M.A., J. McI. Eadie, W. D. Erskine, F. Fedarb, J. F. Fergus, M.A., J. A. Goodfellow, J. F. Hughes, H. W. Kilpatrick, J. F. D. Macara, J. Mackinnon, W. H. M'Kinstry, D. Maclean, A. L. M'Millan, J. C. G. Macnab, L. M'Whannell, R. B. Ness, M.A., A. G. Park, R. Robertson, W. Robertson, J. S. Rosser, A. Sprott, G. Thomson, J. B. Wallace, R. Wilson, R. Zuill.

The following gentlemen have now passed in all the subjects of the Final Professional Examination.

A. Dewar, H. Gray, S. C. Harris, W. Millar, J. Rowatt.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the October sittings of the Examiners, the following candidate passed the First Examination for the Fellowship.

A. Duncan, University of Glasgow.

The following passed the examination for the Licence, and were admitted Licentiates.

W. Gibbon, L.K.Q.C.P.I., The Asylum, Carmarthen; C. Madden, L.K.Q.C.P.I., Rathmines, Dublin.

VICTORIA UNIVERSITY.—Approved for the Degree of Doctor of Medicine.

Edward Gordon, M.B., Owens College. (Thesis on "The State of the Pupil as a Sign and an Aid to the Diagnosis of Disease.")

The following has satisfied the Examiners for the Final M.B. Examination (Part II).

For Distinction. O. J. Kauffman, Owens College.

Distinguished in Obstetrics and Diseases of Women.

O. J. Kauffmann.

ROYAL UNIVERSITY OF IRELAND.—The Examiners have agreed to recommend that the following candidates be adjudged to have passed the examination for the degree of Master in Surgery (M.Ch.).

A. Atock, M.D.; J. J. Attridge, M.D.; J. St. Clair Boyd, Queen's College, Belfast; R. J. Boyd, Queen's College, Galway, and Royal College of Surgeons, Dublin; G. Browne, M.D., Queen's College, Belfast; A. Buchanan, M.D., Queen's College, Belfast; P. J. Burke, Queen's College, Cork; S. R. Collier, Queen's College, Belfast; J. R. T. Conner, Queen's College, Cork; T. Corkery, Queen's College, Cork; F. J. Crawford, Queen's College, Cork; D. J. Flynn, Queen's College, Cork; G. Fuller, Queen's College, Cork; E. Griffin, Queen's College, Cork; W. B. Hayes, Queen's College, Cork, and Catholic University School of Medicine; J. A. Keogh, Queen's College, Cork; D. T. Lane, M.D., Queen's College, Cork; C. R. Leader, Queen's College, Cork; L. Lyttle, M.D., Queen's College, Belfast; M. McAulay, Queen's College, Belfast; E. H. McSherry, Queen's College, Galway, and Belfast; W. Milligan, M.D., Carmichael College of Medicine; A. P. Mooney, Ledwich School of Medicine; M. J. Murphy, Queen's College, Cork; F. E. Murray, Queen's College, Belfast; W. G. Niall, Ledwich School of Medicine; T. O'Riordan, Queen's College, Cork, and Carmichael College, Dublin; E. F. O'Sullivan, Queen's College, Cork; W. S. Patterson, Queen's College, Belfast; H. Pillow, Queen's College, Galway, Ledwich School of Medicine, and London Hospital; E. Robinson, Catholic University School of Medicine, and Anderson's College, Glasgow; M. J. Robinson, M.D., Queen's College, Belfast; R. H. Spencer, Queen's College, Cork; W. C. Steen, Queen's College, Belfast; G. A. Thomson, Queen's College, Belfast; J. J. Tobin, M.B., Royal Infirmary, Manchester; G. Vance, Queen's College, Galway, and Belfast; E. W. Waters, Queen's College, Galway; M. P. Williams, Queen's College, Cork; J. D. Williamson, Queen's College, Belfast; A. W. Wolfe, Queen's College, Cork; E. McN. Woods, Queen's College, Belfast.

The following candidates have passed the examination for the degree of Master of Obstetrics (M.A.O.).

P. J. Burke, Queen's College, Cork; S. R. Collier, Queen's College, Belfast; J. R. T. Conner, Queen's College, Cork; F. J. Crawford, Queen's College, Cork; C. F. Daly, Queen's College, Cork, and Edinburgh University; H. J. Gahagan, Ledwich School of Medicine; D. Junk, Queen's College, Belfast; J. A. Keogh, Queen's College, Cork; C. F. Knight, M.D., Queen's College, Cork; D. T. Lane, M.D., Queen's College, Cork; T. Lusk, Queen's College, Belfast; E. H. McSherry, Queen's College, Galway, and Belfast; A. P. Mooney, Ledwich School of Medicine; M. J. Murphy, Queen's College, Cork; J. O'Connor, M.D., Queen's College, Cork, Carmichael School of Medicine, and Royal College of Surgeons; R. H. Spencer, Queen's College, Cork; A. K. Stevenson, Queen's College, Belfast; J. C. Thomas, Queen's College, Belfast; G. S. Thomson, Queen's College, Belfast; J. D. Williamson, Queen's College, Belfast; E. McN. Woods, Queen's College, Belfast.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery and Midwifery, and received certificates to practise, on Thursday, October 21st, 1886.

Jones, John, Kilsane, Stanhope Road, Streatham.

On Thursday, October 28th.

Darlow, Alfred, Plasket, Essex.
Gibbard, Thomas Wykes, Strixton, near Wellingborough.
Oliver, Francis George, M.R.C.S., L.R.C.P., Sunningside, Tunbridge.
O'Reilly, George Hartley, Wyndham House, Crescent Road, Reading.
Pedley, George Aston, 9, The Terrace, Camberwell.
Redman, William Edward, 15, Vicarage Terrace, Neasden.
Williamson, Charles Frederick, M.R.C.S., L.R.C.P., 44, Mildmay Park, N.
Young, Richard Weekes, 5, St. John's Villas, St. John's Road, Penge.

MEDICAL VACANCIES.

The following vacancies are announced.

ABBEYLEIX UNION.—Medical Officer. Salary, £100 per annum, with £15 as Medical Officer of Health, and fees. Applications by November 6th to the Clerk.

CHELTENHAM GENERAL HOSPITAL, BRANCH DISPENSARY.—Resident Surgeon. Salary, £180 per annum. Applications by November 27th to the Honorary Treasurer.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Assistant Physician. Applications by November 11th to the Secretary, 24, Finsbury Circus, E.C.

DUNGANNON UNION.—Medical Officer. Whitechurch Dispensary. Salary, £120 per annum, with fees. Applications to Mr. J. O'Brien, Honorary Secretary, Aglish House, Cappoquin. Election on November 8th.

HALIFAX INFIRMARY AND DISPENSARY.—Senior House-Surgeon. Salary £80 per annum. Applications by November 10th to J. Hodgson Wright, Esq., Halifax.

HANTS COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, residence, etc. Applications by November 15th to the Committee of Visitors, Knowle, Fareham.

LEICESTER INFIRMARY AND FEVER HOUSE.—Assistant House-Surgeon. Salary, £50 per annum, with board, etc. Applications by November 20th to the Secretary.

MANCHESTER ROYAL INFIRMARY.—Administrator of Anæsthetics. Salary, £75 per annum. Applications by November 6th to the Chairman of the Board.

MORPETH DISPENSARY.—Resident Medical Officer. Salary £120 per annum, with apartments. Applications by November 30th to G. O. Wright, Esq.

NOTTINGHAM DISPENSARY.—Assistant Resident Surgeon. Salary, £150 per annum, with apartments. Applications by November 24th to C. H. Preston, Esq., The Dispensary, Broad Street, Nottingham.

ROSCREA UNION.—Medical Officer. Borris-in-Ossory Dispensary. Salary, £115 per annum, with fees. Applications to Mr. M. Farrell, Borris-in-Ossory. Election on November 10th.

STOCKTON-UPON-TEES HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £200 per annum. Applications by November 24th to J. Settle, Esq., Secretary.

SUNDERLAND CHILDREN'S HOSPITAL.—Two Honorary Medical Officers. Applications by November 20th to the Secretary.

SUSSEX COUNTY ASYLUM, Haywards Heath.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications by November 18th to the Superintendent.

WORSHIPFUL COMPANY OF IRONMONGERS.—Medical Officer. Salary, £52 10s. per annum. Applications by November 15th to the Clerk, Ironmongers' Hall, Fenchurch Street, E.C.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon. Salary, £100 per annum, with apartments. Applications by November 9th to J. Oswell Bury, Esq., 9, Temple Row, Wrexham.

MEDICAL APPOINTMENTS.

BEATLEY, Wm. Crump, M.D.Durham, M.R.C.S.Eng., appointed Honorary Physician to the Sick Children's Hospital, Newcastle-on-Tyne, *vice* Dr. J. G. Houseman, resigned.

COTMAN, John, appointed Medical Officer to the C Division of the Metropolitan Fire Brigade, *vice* Dr. Fowler, deceased.

COTTAM, F. H. W., M.R.C.S., appointed Resident Medical Officer to the Hospital for Consumption and Diseases of the Throat, Manchester, *vice* Alex. Milne, M.B., resigned.

SHERIDAN, P. J., M.D., appointed Medical Officer to the Wexford Union, *vice* Dr. Duff, resigned.

SMART, W. H., M.A., M.B.Cantab, M.R.C.S., appointed Resident Clinical Assistant to the East London Hospital for Children, Shadwell.

SMITH, F., M.D., appointed Medical Registrar to the London Hospital, *vice* James Anderson, M.D.

STEVENSON, G., M.A., M.R.C.S., appointed Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, *vice* W. Wills, M.R.C.S., resigned.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. Lewers: Rupture of the Uterus during Pregnancy, with Notes of a Case. Dr. de Havilland Hall: Hepatic Bronchial Fistula.

TUESDAY. Medico-Psychological Association, 4 P.M. Dr. Hayes Newington: What are the Tests of Fitness for Discharge?—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Barlow: On a Case of Early Disseminated Myelitis occurring in the Exanthem Stage of Measles, and fatal on the eleventh day of that disease. Dr. Abercrombie and Dr. Gay: On Three Cases of Acute Tubercular Ulceration of the Fauces. Dr. Dixson: Ricinus Communis.

WEDNESDAY.—British Gynæcological Society, 8.30 P.M. Specimens will be shown by Dr. Edis and others. Dr. Bantock: On Vaginismus.—Royal Microscopical Society, 8 P.M. Papers by Mr. S. O. Ridley and Mr. A. Dendy: On the Monoxonid Sponges of the *Challenger*. Dr. Crookshank: On the Surra Parasite.—Hunterian Society. Mr. Stevens will open a discussion on Whooping-cough, in which Dr. Gilbert, Dr. Goodhart, and others will take part.

THURSDAY.—Ophthalmological Society of the United Kingdom, 8.30 P.M. Living and Card Specimens at 8 P.M. I. Dr. C. E. Beevor: Case of Ophthalmoplegia Externa without any other symptoms. Mr. G. Walker: Sequel to a Case of Glaucoma treated by Convex Lenses. Dr. W. A. Brailey: Tumour of Optic Nerve-Sheath. Mr. St. Clair Buxton (introduced): A Pocket-Refraction Case. II. Papers.—Dr. W. A. Brailey: Hydatid Cyst of Orbit. Mr. G. Walker: Acute Glaucoma treated by Cyclotomy. Dr. W. A. Brailey (and Mr. Hartley): Tubercle of Choroid. Mr. W. T. Jackman: Results of an Examination of the Eyes of School-children. Dr. J. A. Ormerod: On Ecchymosis and Œdema of the Eyelids without obvious Cause.

FRIDAY.—Ophthalmological Society of the United Kingdom, 9 P.M. The Bowman Lecture, by Professor Zehender (Rostock): The Parasitic Diseases of the Eye.—Clinical Society, 8.30 P.M. Mr. Henry Morris: A Case of Excision of the Larynx for Epithelioma; Death from exhaustion on the eighth day after operation. Dr. Felix Semon: A Case of Partial Extirpation of the Larynx for Epithelioma of the Left Ventricle of Morgagni: Recovery. Mr. Butlin: On a Case of Epithelioma of the Vocal Cords, for which Partial Excision of the Larynx was performed. Sir Henry Thompson: Six Cases of Tumour removed from the Bladder during the last twelve months; with a brief *résumé* of their histories and results. Mr. B. Pitts: Suprapubic Cystotomy for Tumour, two years after removal of growth by the perineal operation. Living Specimens: Mr. R. W. Parker: 1. A girl, aged 13, from whom the Patella has been removed for Primary Sarcoma; 2. Infant, aged 4 weeks, with Double Congenital Talipes Calcaneo-Valgus and Genu Recurvatum.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGE.

SPENCE—SHALDERS.—At St. Paul's, Manningham, on October 28th, by the Rev. F. O. Chambers, vicar of Brompton, York, assisted by the Rev. T. Kirkham, vicar of the parish, William James Spence, L.R.C.P., L.R.C.S., of Syston, Leicester, to Catharine Mary Norton, elder daughter of A. O. Shalders, of Oaklands, Bradford.

DEATH.

EVANS.—On October 30th, suddenly, at Southsea, Samuel Harrison Evans, M.R.C.S., of Darlaston, the Shrubbery, Weston-super-Mare, and late of Derby, aged 74.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

MECHANICS AT THE PRELIMINARY EXAMINATION.

"HARD LINES" writes: My son having passed the preliminary examination of the College of Preceptors in March, 1886 (on his certificate it stated that that would free him from any entrance examination) enters at Queen's College, Birmingham, this October; he was then informed he could not register until he had passed in mechanics, in addition to subjects already passed in, which rule was made in October, 1885. He cannot pass in mechanics till December next; will he, therefore, lose a whole year? If so, it is very hard lines that a rule passed in October, 1885, should be retrospective. If he attends lectures now in anatomy and physiology, and passes in mechanics in December, those lectures ought to count. I should like to know if others have suffered in the same way, and, if so, is there no remedy?

*** Our correspondent's wisest course will be to send a statement of the case (which involves a real hardship to the General Medical Council, asking that the registration may be eventually allowed to be antedated. Our correspondent is mistaken when he writes that the rule was made in October, 1885. It was made in October, 1884, and came into force on October 1st, 1885. Although the regulation was freely discussed in these columns a year ago, we understand that a good many students are in like case with our correspondent's son. The rule is clearly stated in the educational number of the BRITISH MEDICAL JOURNAL, September 11th, p. 485, under the head "Preliminary Examination," par. 6.

PECULIAR FORM OF SCIATICA.

SURGEON asks for advice in treatment of the following case.

The case, a lady, aged 28, married eight years, without children, has suffered for about five years from what she terms sciatica, and which, to some extent, resembles it. The commencement of the illness was due to taking cold at one of the menstrual periods, which, at the best, were never profuse. After this cold there was only a slight appearance of the menses about every second or third month. She was treated by another medical man for sciatica with all known remedies, but no relief. She then came under my care after two years' treatment. I could find no means of relieving her, and suggested a consultation, as I was sure nothing short of an operation would relieve. Three different consulting surgeons have seen her, and diagnosed the case as occlusion of the os uteri. She has been twice operated upon, and had temporary relief whilst wearing a split stem pessary, but now this has failed to give relief. She is assured by all three consultants (all eminent men) that there is no ovarian disease, and the uterus is healthy. The suffering of the patient is intense. Only when kept under the influence of morphine, hypodermically, can she move about. The pain is over the sacrum, and extending down the sciatic nerves on both sides, causing numbness of the parts. Blisters, leeches, iodine, all kinds of liniments have been tried, and all measures known to give relief, either in neuralgia, rheumatism, gout, or sciatica have been tried and failed.

SMOKE ABATEMENT.

DR. WOODWARD asks for the results of practical experience as to the most healthy and economical grate, whether the under-fed, or one fed from the back (Smith's patent) is best; or the Nautilus, Norfolk or County Prisons, or Cox's patent (with air confined to middle of fire). The old fashioned grate, raised from the floor with hobs on each side, has been recommended as the best radiator of heat over the floor. Mr. Teale's improvement he thinks a very good one.

SUMMER MOUNTAIN RESORTS.

COUCH asks for information as to the European mountain summer resorts most suitable for a case of slight debility, with congested liver and "clergyman's throat," the result of tropical residence and worry.

ANSWERS.

SPASMODIC AFFECTION OF NECK.

MR. MARK WARDLE has at present under treatment a case very similar to the one described by "Spes," BRITISH MEDICAL JOURNAL, October 23rd, p. 800. Looking upon the condition as the result of some obscure central affection, he blistered the back of the neck, and gave iodide of potassium. After the second blister and a week's administration of the iodide, there was some improvement in the muscular contraction, but pains of a neuralgic character were pronounced. In addition to the iodide, a dram of pure phosphorus with iron and quinine was given once a day. Since then the patient has improved steadily.

DR. C. R. ILLINGWORTH, who regards the case as one of congestion of the deep nerves and muscles of the neck, advises acupuncture with two or three fine needles, to the left of the mesial line posteriorly, directing them towards the place most complained of on firm pressure, and avoiding, of course, the lines of danger in the neck.

Six months ago, he treated a case of spasmodic contraction of the radial extensor muscles, in which the patient, a woman, was quite unfitted for household work on account of impaired power of flexion, and the sudden dropping of things held in the hand. The affection had existed about a year. There was tenderness over the course of the musculo-spiral nerve in the region of the external condyloid ridge. Six acupuncture needles were pushed down to the bone as near the nerve as possible. The needles were left in for fifteen minutes, and, on withdrawal, the punctures bled freely; the affection, however, had disappeared the following day, and has not returned. He also advises the administration of the following mixture for the absorption of probable effusion from long standing congestion:—Sol. hydrarg. bichloid., ℥i; sodii iodidi, ʒ ss.; spirit. ammon. aromat., ʒiii; ferri am. citrat., ʒiss; ether chlor., ʒii; aq. ad ʒviij—one tablespoonful four times a day.

DR. REDDIE recommends Weir Mitchell's treatment as a last resort. The procedure is massage, rest, feeding, and electricity. Details of treatment will be found in the following works: Weir Mitchell's *Diseases of the Nervous System* (J. and A. Churchill, 1885). Weir Mitchell's *Fat and Blood* (J. P. Lippincott and Co., Philadelphia; and London). Dr. W. S. Playfair's *Nerve Prostration and Hysteria* (Smith, Elder and Co., 1883). A "masseuse" could be trained, if an intelligent woman, by instructions from Mitchell's or Playfair's books.

Cocaine in Dental Surgery.

Mr. Wm. J. Mason, L.D.S.Edin., has used cocaine in extraction of teeth in about one hundred cases with most satisfactory results, using a solution of one grain of the hydrochlorate in ten minims of water, and injecting five minims on the buccal surface and five on the lingual, with an ordinary hypodermic syringe with a very fine needle, passing the needle well up under the gum and next the alveolus. Patients often complain of having passed a restless night afterwards, and in two cases nausea was noted.

NOTES, LETTERS, ETC.

Charge of Manslaughter against a Medical Assistant.

Dr. C. R. Illingworth writes: Permit me to forward the list of signatures to the petition in favour of Mr. John W. Irvine, and, at the same time, to thank those who have thus promptly responded to the appeal made in your columns. The petition was forwarded to the Home Secretary on October 27th.

The List of Signatures.

D. Argyll Robertson, M.D., F.R.C.S. Edin.	Thomas Milne, M.A., M.D., Accrington
Henry D. Littlejohn, M.D., Edinburgh	Jno. Forrest, M.R.C.S., L.S.A., Blackburn
J. Smith, M.D., Edinburgh	Robert P. Dunbar, M.D., L.R.C.S.Ed., Blackburn
John Batty Tuke, M.D., Edinburgh	G. A. Wilson, L.R.C.P.Ed., Blackburn
Joseph Bell, F.R.C.S.Ed., Edinburgh	John B. S. Bastable, L.R.C.P. & S.Ed., Blackburn
William Craig, M.D., F.R.C.S.Ed., Edinburgh	John M. H. Martin, M.D., Blackburn
Henry E. Clark, F.F.P.S., M.R.C.S., Glasgow	Robert Wilson, L.F.P.S.G., Blackburn
Johnson Symington, M.D., F.R.C.S. Ed., Edinburgh	Richard C. Daly, L.R.C.P.Ed., ,,
Patrick Heron Watson, M.D., F.R.C.S. Ed., Edinburgh	Geo. F. Sinclair, M.B., Devon
Francis Brodie Imlach, F.R.C.S.Ed., Edinburgh	C. T. Champneys, L.R.C.S.E., Devon
John Duncan, F.R.C.S.Ed., Edinburgh	James Cran, M.D., Great Harwood
R. J. Blair Cunynghame, F.R.C.S.Ed., Edinburgh	Alexander Cran, M.B., ,, ,,
Alexander Keiller, M.D., F.R.C.P., Edinburgh	Henry Caudwell, L.R.C.P. & S.E., Aylesbury
John Wyllie, M.D., F.R.C.P., Edinburgh.	Samuel Mackay, L.R.C.P. & S.E., Wem, Salop
Francis Cadell, M.B., F.R.C.S.E., Edinburgh	Leslie Phillips, M.R.C.S., Birmingham
William L. Reid, M.D., F.F.P.S., Glasgow	D. Mackenzie, L.R.C.P.E., West Hartlepool
A. G. Miller, F.R.C.S., Edinburgh	Robert W. Felkin, M.D., L.R.C.P. & S.Ed., Aberdeen
Wm. H. Stephenson, M.D., Blackburn	A. Crosbee Dix, M.R.C.P.Ed., Dover
G. H. Davies, L.R.C.P. & S. ,,	Hugh Davies Jones, L.R.C.P. & S.Ed., Aberdeen
Edmund Vaudrey, M.B., C.M., M.R.C.S., Blackburn	Alfred Godrich, M.A.Cantab., M.R.C.S., L.R.C.P., L.S.A.
Edmund Mitchell, L.R.C.P.Ed., L.F.P.S.(G.) Accrington	John Barr, M.B., Rishton
C. R. Illingworth, M.D., M.R.C.S., Clayton-le-Moors	Charles Aldridge, M.D., Plympton
W. B. Livermore, M.B., C.M., Accrington	Thomas Fiddes, M.B., C.M., Urmston, Manchester
	Arthur P. Hopper, L.R.C.P.Lond., Liverpool

Treatment of Asphyxia of the New-Born.

Mr. John A. Fraser, M.R.C.S., L.S.A. (Southam) writes: I noticed a paragraph under the above heading in the British Medical Journal for October 23rd, which states that "several physicians in the United States have recently recommended the treatment of asphyxia in the new-born child by holding it up by the heels." Further, it appears that "there has been some discussion as to priority of publication; but Dr. E. Reynolds, of Boston, suggests a modification which seems to combine the advantages of this so-called gravitation method with those of artificial respiration."

Dr. Reynolds's plan appears to me an inferior modification of a method to which I drew attention in this Journal as long ago as June 28th, 1884, *plus* Howard's mode of making sudden pressure on the front of the chest. On March 20th of this year, I, also in this Journal, advocated the extension of my plan to cases of drowning, and of poisoning by inhalation of chloroform. In a case of the latter, in a girl, aged 8, and in several cases of asphyxia of new-born children, I have been successful, and a medical friend, who has tried it in several cases, is delighted with my method.

I will not take up your valuable space by repeating a description of my method, but will ask anyone interested in the subject (and I think it is a subject of public importance) to read my remarks in the Journal of the above dates, and to compare them with the paragraph of October 23rd. The spine of an asphyxiated new-born child is so lax, that when held as I recommend, the vertex will point to the ground, thus getting any advantage which may accrue from the excitation of the respiratory centre by moving venous blood.

Alcohol in Hospitals.

Mr. George Sturge writes: Two leaflets circulated in Cambridge have been sent to me anonymously; as they have an important bearing on the hospitals, I will venture to make extracts and a few remarks.

It is mentioned that "a few senior students" thought it needful to bring the matter before the Cambridge public. In the first, they state that a "quarterly meeting of the governors of Addenbrooke's Hospital held June 28th, 1886, we find that a brewer and wine merchant were recommended to supply goods to the hospital .... We, among others in the town, wish to know what proportion of the sum passed for payment, £1,245 ss. 9d. for the past quarter, was paid to the said brewer and wine merchant, as it is now pretty generally agreed by conscientious medical scientific men that the use of alcoholic liquors is quite unnecessary for the cure of disease of any nature, and we consider that those who contribute to the Saturday or Sunday Hospital Fund have every right to know how much of this money goes to the brewer and wine merchant." Does not this show one of the causes why the funds of our hospitals are falling off?

In another part of the leaflet is the following:—"The medical officer of Bromley, Kent, Union, stated, some short time since, that he had for years made it a practice of ordering milk where previously he used to order porter, but that he having heard that in a large poor-law infirmary non-alcoholic stimulants had been insisted on being used for six months, even to those dying of old age and exhausting diseases, and that, as a result, the medical officer found the patients took a longer time in dying, and this he considered a cruel experiment, had, therefore, returned to the moderate use of alcoholic stimulants. We trust, therefore, the subscribers of the town will give this their most earnest attention ..., and do their utmost to extirpate the drink demon that shortens life."

In the second leaflet (Alcohol in Cambridge Hospital) is the following: "Sir Andrew Clark says, 'In going through the London Hospital, he found that seven out of every ten patients were there in consequence of taking alcoholic drinks.' And does it not follow that, but for alcoholic drinks, £7,000 out of every £10,000 spent on hospitals would not only not be required, but much of the pain and suffering .... be avoided? Is it not a waste of hospital funds, and a startling reflection on the common-sense of hospital committees to supply alcoholic drinks to officers and nurses as food?"

I hope the time is near when the use of charity money to supply alcohol to the medical staff will be regarded as disgraceful, and that the medical profession will have the wisdom, for their own sakes, to pay regard to the medical opinion recently given, "That, with few exceptions, men and women are healthier and stronger .... without alcoholic drinks than with them."

Post-Graduate Course in Edinburgh.

M.D. writes: I have enjoyed the privilege of attending the above. I believe we were about seventy in number, and from all quarters of the globe. I myself fell in with those who had come from Canada, India, the Cape, Seychelles, and Hong Kong. We were cordially welcomed by those who had invited us, and most marked was their anxiety to give us, as one put it, what we had come there for, and what we wanted most. As no programme has appeared, to my knowledge, it may interest many of your readers to learn something of what the course consisted. We had lectures or demonstrations, or "went round" with thirty-five of the distinguished professors and teachers of the fine university and of its various schools. We were engaged during the three weeks or eighteen days in the following manner.

9—10. 6 demonstrations on dental diseases, etc.
10—11. 6 attendances on each of the following subjects: diseases of children, gynæcology, and diseases of the ear and throat.
11—12. 6 on diseases of the eye.
4 ,, ,, ,, skin.
3 ,, syphilis.
12—1.30. 9 on general medical disease.
9 ,, ,, surgical ,,
2.30—3.30. 12 on pathology.
4—5. 6 on mental diseases at Morningside Asylum.
,, 6 demonstrations on regional anatomy of viscera and organs.
,, 3 on medical police.

There was also a daily attendance upon the out-door medical practice. The arrangements made for us were so good that the only clashing that occurred was brought about by the reluctance many felt to leave the professor or teacher they might happen to be with, and thus some of the first part of the next lecture or demonstration might be missed. Where all was so good and so much appreciated, I am happily spared the task of mentioning by name any of those who instructed us. I may say that again and again (I might say almost always), when we left the theatre, etc., we expressed satisfaction at what had been brought before us. Everything seemed to impress one with the idea of work, and I am certain I am only expressing the general opinion of the post-graduates in saying that kindness, courtesy, and manly thoughtfulness are only a few of the attributes belonging to our instructors. There was no frivolity for a moment observable, but, in its place, every evidence of cheerful work. We as a class were made to feel that the young men of the present day had many advantages. It took away any feelings of false pride we might have possessed when we saw that some of the classes were attended by three at least of the very professors themselves. Should such an opportunity again offer itself, I would recommend an attendance thereon as a valuable mental tonic to my overworked brethren.

Iodoform Ointment in Tubercular Meningitis.

Dr. Martin Oxley, Physician to the Infirmary for Children, Liverpool, writes: In the Journal of October 16th, I notice a paragraph under the heading "Iodoform Ointment in Tubercular Meningitis," giving an abstract from the *Revue des Sciences Médicales*, in which iodoform ointment (1 to 5) is said, in the hands of Dr. Warfwinge, to have cured a number of cases of tubercular meningitis. If this statement were correct, we should have made a very important advance in the treatment of disease, as tubercular meningitis, being only one expression of tuberculosis, any remedy which will prove serviceable in tubercular meningitis will be equally efficacious in the general disease.

The following will, I think, shortly describe what tubercular meningitis is.

"An affection depending upon miliary tuberculosis, nearly always accompanied by a deposit of nodules in and upon the lungs, pleura, liver, spleen, and kidney." "This deposit takes place in the walls of the vessels, and causes, in the case of the brain, rapid exudation of lymph and serum into the subarachnoid space, with effusion into the ventricles. Thus symptoms (high temperature and quick pulse) which ordinarily accompany acute tuberculosis are masked, and life is extinguished before the deposit in the other organs produces any great change in their structure or office." This condition of general tubercular disease, in tubercular meningitis, I have verified in more than fifty cases by *post mortem* examination, and I know I am at one with most others who have large experience of this very fatal disease.

When we know how difficult it is at times to differentiate between tubercular meningitis and typhoid fever, or suppurative pericarditis, we need not be surprised that cases of supposed meningitis have been cured by iodoform or any other remedy. So very much harm is done to the profession by the spread of false treatment (instance the chian turpentine in cancer), that I consider it is a duty to call attention to the pathology of tubercular meningitis when I see a new remedy for local use in this complaint, so highly recommended by a prominent paragraph in an important paper like our Journal.

No possible harm can come of using iodoform as recommended by Dr. Warfwinge; but, until we have very much more satisfactory evidence than is now before us, let us not neglect other more scientific methods based upon the knowledge which we have of the causes which give rise to tubercular disease of the vessels of the brain. In an article by me in the *Liverpool Medico-Chirurgical Journal*, July, 1886, there are some beautiful lithographs, from drawings by Dr. Hyla Greves, from a microscopic specimen prepared by Mr. Frank Paul, showing the way in which the tubercular deposit takes place in the vessels of the

brain; also there is an appendix of cases giving (shortly) particulars of clinical and *post mortem* observations in over forty cases. I have a few reprints of this article, and will be happy to forward a copy to any of your readers who are interested in the subject.

MISTAKES IN DISPENSING.

MR. J. EDWARDS (unqualified assistant) North Wales, writes: There have appeared in the BRITISH MEDICAL JOURNAL communications concerning the errors made in dispensing, and attributing the same to us unqualified assistants. As I cannot find any reason why one class of men should have to suffer for the wrongs of another, I beg leave to say a few words on the subject.

The errors in dispensing have, as a rule, been made by young qualified assistants, who, by the aid of their money, have gone straight from a grammar-school to college, and have obtained a qualification, whilst their profession is only known unto them as words are to a parrot. When such men come to the surgeries (which, I am sorry to say, is far too often) they are only a disgrace to themselves and their employers, their M.B. and C.M. meaning no more than care missing, and blunders made. The way they substitute one drug for another is this. Breaking the neck of the liquor strychnine bottle, they pour the drug into another, in which had previously been kept chloroform water, and finding it too much trouble to scrape off that label, they stick the liquor strychnine label on the chloroform water label, which, being naturally dry, absorbs the liquid gum from the other, causing it in a few days to drop off, leaving the liquor strychnine labelled chloroform water, which will now be used as such. That the art of dispensing is not acquired by reading books, and that a qualification is, are two undeniable facts. Therefore, how can a qualification be the point of distinction by which we are to find out a good and accurate dispenser?

Again, if qualified assistants know all they ought to know about surgery duties, why should they advertise for situations with "salary no object?" Is it because they dislike money? No; it is because they want to become the possessors of what is already possessed by the experienced unqualified assistants. What is a qualification then? From what has been said in the JOURNAL, it is a tail in which you are able to hide your head from every law. Act as you will, all the law can do to you is to nip off the tip of your tail, which, in a few weeks, is to grow much longer than ever. But the poor unqualified assistant, owing to the want of money to buy a tail, must sacrifice his head; he must be sent to prison.

If there is one man to be more responsible for his acts than another, it is the qualified assistant; for he, when making a mistake, not only does harm to his patient, but also throws a cloud of shame over the names of those who were at one time his examiners.

To stop the errors in dispensing does not mean to do away with the unqualified assistants, but to compel those sons of gentlemen to serve their time as apprentices before they enter upon their professional studies, so that they may know in the meantime the meaning of what they do read. Unqualified assistants, I greatly hope that, at the sound of my trumpet, you will all come into the field and fight for your rights as heroes. Let us remind those medical men of now-a-days that are forgetting the head whilst admiring the tail of their professional brothers "that truth is straight, and judges crooked."

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BOOKS, ETC., RECEIVED.

Practical Pathology: an Introduction to the Practical Study of Morbid Anatomy and Histology. By J. L. Steven, M.D. Glasgow: James Maclehose and Sons. 1887.

Diseases of the Digestive Organs in Infancy and Childhood. By Louis Starr, M.D. Edinburgh: Young J. Pentland. 1886.

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BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

REMARKS ON "HEPATIC PHLEBOTOMY."

Introduction to a Discussion on the Surgery of the Liver in the Section of Surgery at the Annual Meeting of the British Medical Association held in Brighton.

By GEORGE HARLEY, M.D., F.R.S.
Late Physician to University College Hospital.

Case of Hepatitis with Dropsy, in which Hepatic Phlebotomy was performed.

Every reflecting practitioner is aware that neither cupping nor leeching the abdominal parieties can have any direct effect on the amount of blood present in an inflamed liver, from the simple fact that there exists no direct communication whatever between the blood-vessels in the abdominal walls and those of the hepatic organ. For while the blood entering the liver comes direct from the cœliac axis on the one hand, and from the union of the veins of the chylo-poietic viscera into the vena portæ on the other, that issuing from the liver flows directly along the hepatic veins into the vena cava. It is patently evident, then, that the only way in which either cupping or leeching the hypochondriac region can diminish the amount of blood present in an engorged liver, must be simply from the indirect effect the cupping or leeching has upon the hepatic circulation by its reducing the total amount of blood circulating in the patient's body. Precisely in the self-same way as a brachial venesection does; though probably the cupping or leeching does so much less effectually than a general depletion from an opened blood-vessel. Such being the case, I have little doubt that not merely one, but many of my reflecting *confrères*, have thought over the curative paradox of applying leeches or cupping glasses to the abdominal walls, with the view of directly relieving an engorged condition of the liver. And seeing that many of the patients attacked with hepatitis in this temperate climate are more or less of intemperate habits, though they may be by no means drunkards, and have usually too little blood in their systems to admit either of leeching or cupping being carried sufficiently far to abstract such an amount of blood from the general circulation as would suffice to make an appreciable impression on the quantity present in an engorged liver, I deem it not improbable that the idea of abstracting blood directly from the liver itself, as a remedial measure, in bad cases of acute hepatitis may have suggested itself to the minds of some of them. Indeed, I cannot refrain from thinking that it is impossible that such an idea can have failed to cross the minds of all who, like myself, have had occasion to withdraw blood by a trocar from the livers of healthy living animals. For the result of their experiments would make them aware that the livers of dogs, rabbits, and other animals can be tapped for blood with perfect impunity, in so far as any actual danger to life is concerned. This fact I first became conscious of while working in Paris in 1853 at the artificial production of diabetes in animals, by the direct introduction of stimulants into the portal veins. ("Recherches sur la Physiologie du Diabète Sucre," *Compt. Ren. Soc. Biol.* Paris. B. v. p. 59.) While, years afterwards, when preparing a paper on "The Saccharine Function of the Liver" (*Proceedings of the Royal Society*, vol. x, p. 289) for the Royal Society, I had frequent occasion to withdraw small quantities of blood from the livers of living animals by a trocar, without, on any single occasion, as far as I can now remember, observing any bad consequences follow upon the procedure. So far, indeed, from this being the case, I on more than one occasion noticed that when the animals, in the course of the research, had to be sacrificed within a few days afterwards, no blood had apparently escaped from the wound in the liver, for none was found extravasated into the abdominal cavity, and even the wound made in the liver's capsule by the trocar was, in many cases, only detectable as a small circular ecchymosed spot, without even so much as an inflamed area surrounding it. The idea then of withdrawing blood directly from the tissues of an inflamed human liver is neither so Utopian, nor so heroic a curative procedure as the uninitiated might at first sight imagine. And I think my *confrères* can scarcely feel surprised that, when I had made liver diseases a speciality, and began to be called to the bedsides of patients in cases of severe hepatitis who seemed to me to be dying from nothing else than the intensity of the engorgement of the liver's blood-vessels—(where it appeared to my mind that relief given to the engorgement by the direct abstraction of a few ounces of blood from the hepatic vessels might possibly arrest the progress of the case, and, at the same time, not improbably suffice to save the life of the sufferer)—I ventured to suggest to my brother consultants the advisability of trying the curative effects of hepatic phlebotomy. Nor will my hearers probably be astonished to learn that the proposition usually met with scant courtesy when I made them aware that the operation was one that had never been performed on the human subject, and that all the experience I had of it was from experiments on dogs. Sometimes, however, the objection came solely from the patient, or the patient's friends. At length, I was fortunate enough to meet, in a hopeless case of hepatitis, with ascites and anasarca, a medical brother sufficiently freed from the trammels of erroneous clinical teaching, and a patient and husband brave enough to let me try the effects of hepatic phlebotomy as a forlorn hope, when the case had already reached the very gates of death. And I shall now relate the result, as well as exhibit the instrument with which the operation was performed.

Before doing so, however, as recent experience has taught me that it is a great mistake in bringing anything new before the profession, to take it for granted that all medical men are equally learned, and consequently equally able to grasp the value of new ideas based upon scientific facts, it may be as well for me to emphatically premise—for the sake of those who may chance to doubt it—that there is but little risk of air entering a vein during the operation, if it be performed in the way I am about to describe. This arises from the simple fact that the trocar is to be inserted into the upper and convex part of the liver, where no large veins whatever exist; and even should there chance to be, on account of some abnormality in the distribution of the vessels, one or two in this portion of the organ, it is a most unlikely thing that a cannula of the size of between a No. 2 and No. 3 English catheter would encounter one of sufficient calibre to admit of the accidental lodgment of its free extremity within the interior of the vessel, so as to admit the entrance into it of air.

No doubt the vessels of an inflamed liver become greatly enlarged. For we know that while but little blood flows from a healthy liver, when its tissues are cut into in the *post mortem* room, it occasionally happens that an enormous escape of blood follows upon the section of an engorged organ. Even then, however, it is difficult to imagine it to be at all likely that a hepatic vein, large enough to admit either a No. 2 or 3 sized English catheter into its interior, would be accidentally stumbled upon in the upper and convex portion of the liver, seeing that no large hepatic blood-vessels, either veins or arteries, are normally to be encountered except in the neighbourhood of the portal fissure. Be it remembered, too, that the entrance of air as a source of danger only exists in the case of the hepatic vein. For it alone could by any possibility allow of a sufficiency of air arriving at the heart in an undivided state to cause death. Air in some quantity might enter either the arterial or portal venous systems with comparative impunity, on account of its requiring, in that case, to traverse the minute hepatic capillaries—where it would of necessity become so diffused as to be rendered harmless—before it could reach the heart.

Having now, I think, cited a sufficiency of facts to satisfy the doubting minds of those who, from having no personal experience of hepatic operations, are still unemancipated from the erroneous theoretical teachings of our schools, regarding the extreme danger of operations on the liver, I shall proceed to relate, in as few words as possible, the case in which hepatic phlebotomy was had recourse to as a remedial measure in a hopeless case of inflammation of the liver.

In September, 1884, Dr. Dunbar Walker asked me to see a married lady, aged 38, who a month before had been attacked with hepatitis. When he first saw her, he found the liver greatly enlarged and indurated (she was a woman of intemperate habits). The lower part of the body anasarcous, and the abdomen filled with fluid. Dr. Walker tapped the abdomen, and gave aperients without any material advantage. After a fortnight's treatment, the liver was not only undiminished in size, but the dropsical symptoms as bad as ever. At the time I was called in, the patient appeared to be in a perfectly hopeless state, and knowing from experience that the ordinary routine of orthodox practice would be of no avail in arresting the downward progress of the case, I proposed trying the effect of hepatic phlebotomy as the only likely means of saving the patient's life.

Dr. Walker agreed with me, that although the withdrawal of blood directly from the engorged liver appeared to be but a forlorn hope

of saving the life of the sufferer, as it might possibly mitigate some of the most distressing symptoms arising from the virulence of the inflammation of the organ, it would be well to try it. On our proposing the operation to the husband and patient, it was declined. A day or two afterwards, however, when the symptoms had assumed a still more aggravated form, and the hopelessness of the case had become apparent even to their inexperienced eyes, they assented to make a trial of the operation, and it was accordingly had recourse to in the following wise.

Dr. Walker having rendered the lady insensible with the A.C.E. mixture, I pierced the upper part of the liver from right to left with an eight inch long trocar of the diameter of between a No. 2 and No. 3 sized English catheter. The normal liver being at least ten inches broad, in an averaged sized woman, and this liver being greatly enlarged—several inches, both laterally and perpendicularly—I felt perfectly safe in running the eight inch long trocar up to its very hilt. This was done in the hope that during its transverse penetration of the organ it might wound one or more vessels—veins or arteries, it did not matter which—of sufficient calibre to yield a free stream of blood. In this hope we were in no wise disappointed; for on gradually withdrawing the end of the cannula, about an inch or two, so as to allow of the blood oozing from the wounded vessels, to enter the cannula from the canal left in the liver-tissue by the receding instrument, a stream of blood immediately issued from its free orifice. The stream in this case was far larger than I had ever witnessed flow from the healthy liver of any dog or other animal I had operated upon in a similar way. This I of course attribute to the engorged state of the liver's vessels on account of the hepatitis.

Twenty ounces of hepatic blood were abstracted without the slightest deleterious result. Quite the contrary, indeed. For, as may be gathered by the following words in Dr. Walker's report, the operation had a salutary effect, far beyond our expectations.

Dr. Walker's own words are: "From the day of the operation, the liver became gradually reduced in size. With the aid of tapping and the administration of the resin of copaiba, the ascites and general anasarca disappeared, and by the beginning of December (that is to say, in two months) the patient was already able to walk out." As a supplement to this, I may add that, exactly eleven weeks after the blood had been abstracted from her liver, the patient walked from her own house at Notting Hill to mine in Harley Street, which is a distance of nearly three miles, and expressed herself as feeling "perfectly well, only a little weak and stiff from the walk." All the dropsy had by this time disappeared. I could detect no fluid in the abdomen; while, from the hepatic dulness in the right nipple perpendicular, being just above four and a half inches, the liver might, I think, be said to have regained its normal dimensions.

P.S.—I ought to have mentioned that, after the operation was finished and the cannula withdrawn, a two-inch square piece of sticking-plaister was put over the seat of the abdominal puncture, and the abdomen tightly bandaged (with a four-inch-deep cotton roller), in order to bring the abdominal parietes into close contact with the wound in the liver's capsule, so to avoid all possibility of hæmorrhage into the peritoneal cavity, should the natural resilience of the hepatic tissue not suffice to close the opening; a thing very unlikely to occur, unless the operation were bunglingly performed, and some large blood-vessel wounded, on account of the trocar not having been properly inserted.

Puncturing the Liver's Capsule, as a Remedial Measure, in Cases of Chronic Congestive Hypertrophy.

All familiar with the course of liver inflammations, are aware that the first stage in the sequelæ to a severe attack of hepatitis—no matter whether it be the direct result of intemperance, malaria, or chill—is a chronic, enlarged, hardened condition of the liver. While in different cases the extent of the enlargement varies considerably, the amount of induration, as calculated by palpation, differs but little. The general symptoms arising from this condition of liver are more or less marked in direct proportion to the extent of the enlargement. When the increase in the size of the liver is slight, even although the induration be marked, the discomfort it occasions is, comparatively speaking, trifling. Whereas, when the organ is considerably enlarged—say, more than eight inches—in the right nipple perpendicular line, the general symptoms become as well marked as the physical signs. The chief thing the patient complains of is, however, the local discomfort, proceeding from the enlarged liver. Its pressure on the neighbouring organs producing feelings of heavy weight, and a dull pain all over the hypochondriac region, specially complained of when lying on the side—sometimes most when on the right, sometimes most when on the left side. The weight of the organ, too, when the patient is in an upright position, is frequently spoken of as being a great burden. Acute pain is rarely complained of; but even the bodily distress the mere feelings of discomfort just alluded to occasion, are, in general, sufficient to make the sufferer seek medical advice. The action of the bowels is usually irregular (most often constipation is troublesome), and the kidneys act capriciously. The urine is usually of high specific gravity, and frequently deposits, after standing for twelve hours or more, both oxalates and urates. The complexion assumes a dingy hue, and the whites of the eyes become yellow. Although it is seldom that the discoloration either of skin or eyes is sufficient for the patient to be called jaundiced.

Unfortunately for the credit of our craft, we can do but little for such cases. The symptoms not being acute, cupping or leeching is out of the question, while blistering, in the majority of instances, does more harm than good. The application of hot fomentations and the administration of saline purgatives are usually about the only things that afford relief. Even their action has the disadvantage of being slow, as well as but little effective. Not a pleasing matter for the specialist, who is, in general, expected to be able to suggest both a rapid and effective remedy for every case he is consulted about. The impotency of the usual routine-forms of treatment in these cases, led me to reflect on their pathology, in the hope that probably some more efficient form of treatment might suggest itself. The result of the reflexion was that I came to the conclusion that, first, nearly all the pain, and a great deal of the discomfort, in cases of hepatic congestive hypertrophy is directly due to the pressure to which the but recently inflamed and still congested hepatic tissues are subjected, from their being confined within a strong inelastic fibrous capsule; and, secondly, from knowing that immediate relief often follows upon the puncturing of other equally unyielding fibrous coverings (when their contents are in a state of acute or subacute inflammation), it occurred to me that it was not improbable that cases of congestive hepatic hypertrophy might be equally advantageously treated by puncturing the capsule of Glisson. As cases of orchitis are treated, by puncturing the tunica albuginea: or acute sciatica, by puncturing the distended sheath of the nerve: or a painful whitlow, by puncturing the tense unyielding fascia over the inflamed part of the finger. This view of the matter obtained, to my mind, additional support from the fact that not only I, but many others, have met with cases where patients have expressed themselves as feeling more comfortable after an unsuccessful exploration of the liver for an abscess, than they did before the operation. While, in some cases, even although the operation had to be regarded as unsuccessful, in so far as the discovery of pus was concerned, it might, nevertheless, occasionally be looked upon with satisfaction, from its being followed by a marked diminution in the physical signs, as well as by an amelioration of the constitutional symptoms. It was only last Sunday week that a lady, aged 45, suffering from an hepatic abscess, into which I thrust three differently sized exploring trocars (along with Dr. Thompson, of Addiscombe, whose case it was), immediately said that she felt relieved by the operation, notwithstanding that only a few drops of pus had come away, in consequence of the purulent matter being too thick and tenacious to flow through the exploring instruments. It is these and such like facts that led me to think of trying the effects of hepatic capsule-puncture, as a remedial measure, in severe cases of congestive hypertrophy. And I may add that, although I have as yet only ventured to perform it in exceptionally bad cases (where one could not possibly expect more than a temporary advantage to arise from it), the results, as will be shown in the cases I am about to relate, are sufficiently favourable to lead to the hope that when the benefits arising from the operations have been further tested, it is not unlikely that they may be found to be sufficiently satisfactory to ensure the operation attaining to the position of an ordinary remedial measure in suitable cases of hepatic congestive hypertrophy.

As regards the mode of procedure, it is as follows: With ordinary trocars, varying from the calibre of a No. 2 to a No. 6 sized English catheter, I make, according to the strength of the patient and the gravity of the symptoms, from three to six punctures into different parts of the anterior of the liver. The punctures being distributed proportionally in the right or left lobe of the liver, according to which is the most gravely affected. I withdraw the trocars, and leave their cannulæ in the wounds for a minute or two, to admit of the oozing away of any liquid that may chance to be present at the seats of puncture. No anæsthetic is necessary, nor any other precaution beyond the employing clean instruments lubricated with carbolised oil. When the operation is completed, all I do is to cover over each seat of puncture with a separate two inch square sized piece of diachylon plaster, and secure them from being rubbed off, as well as keep the abdominal wall close against the liver, by putting a few turns of a

four-inch broad cotton roller round the abdomen. The patient is told or remain in bed for twelve hours, and to take no stimulants for twenty-four hours.

I will now relate a couple of very bad cases in which the operation was attended with marked temporary advantage. The first is the case of a lady, aged 57, who suffered from a prolonged attack of hepatitis, with a great enlargement of the liver, whom I repeatedly saw in conjunction with Dr. Buck, of Primrose Hill. When I first made a physical examination of her abdomen, I found that the lower margin of the liver extended to within a couple of inches of the pubis. Two months later, although many of the acute symptoms had subsided, the liver was still so greatly enlarged and hardened that we determined to try the effects of puncturing its capsule. This was accordingly done in six different places; and so hard was the liver that the penetration of the trocars at two points in the right lobe communicated to the hand the feeling as if a dense fibrous tumour was being penetrated. A rapid diminution of the size of the organ, nevertheless, speedily followed upon the operation; and it was even thought, not only by Dr. Buck and me, but by the nurse and patient herself, to have become softer. The gravity of this case may possibly be gleaned from the fact that at the necropsy, made six weeks later, not only was a small abscess found towards the convex surface of the right lobe (near its union with the left), which was the most indurated, but the left lobe of the liver was at the same time in an advanced state of fatty degeneration. Such a condition of matters would but a very few years ago have been looked upon as most anomalous; but, in the present advanced stage of pathology, there appears nothing extraordinary about it, seeing that we now know that, while fatty degeneration may occur in a solid bone as well as in a fibrous tumour, suppuration may take place in any form of degenerated tissue.

I will now give the result of puncturing the capsule in a less serious though still unfavourable case for the success of the operation, in which a yet more rapid as well as more extended amelioration, both in the state of the liver and feelings of the patient, was the direct issue of the operation.

The case was that of a gentleman, aged 52, who had for many years resided in the tropics, where he admitted that he had not only lived well, but more than well, having indulged freely in *tres sec* (sour) champagne, the result of which was that he had not alone been attacked with hepatitis, but jaundice as well. On his first arrival from the tropics, I found the liver very much enlarged in all directions. The right lobe's lower margin reached below the umbilicus. Under the action of mercurials and salines he greatly improved, and the improvement further continued during a six weeks' residence at Carlsbad. Notwithstanding this improvement, however, when he came back from Carlsbad the liver was still greatly hardened, and so enlarged, especially transversely, as to reach two inches beyond the left margin of the xiphoid cartilage, and measure six inches perpendicularly. Being anxious to return to his business in South America, he consented to allow me to try the effect of puncturing the capsule. The operation was accordingly done; and while I punctured the greatly enlarged left lobe in two places with a No. 2 sized trocar, I punctured the right lobe in one place with an instrument of the size of a No. 5 English catheter, in each instance retaining the cannula for a few minutes in the wound. The immediate result surprised me, for when I saw him on the following day, exactly eighteen hours after the operation, I found him not only out of bed, but busy writing letters, without a single bad symptom, all he complained of being a feeling of tenderness at the seats of the punctures. This was not the most remarkable feature of the operation, for the patient actually walked to my house, a distance of a quarter of a mile, three days after its performance, and stated that he felt perfectly well, and ready to start for South America. To this of course I could not consent, notwithstanding that the hepatic dulness was much diminished, and all the tenderness on pressure which he had previously complained of had disappeared. He consented to delay his departure for a couple of weeks, and on the twenty-second day after the operation he sailed for the tropics, considering himself cured.

I saw no more of the patient for seven months, when he again returned to England. The account he gave of himself was that he had remained perfectly well in the tropics so long as he was prudent; but at the end of four months, from thinking himself quite safe, he recommenced indulging in champagne, occasionally drinking as much as a bottle and a half at a sitting. The result, as might be expected, has been a complete breakdown, and he is now labouring under hepatic ascites, and has returned to Carlsbad in the hope of being cured. But that is unfortunately very unlikely, as we all know that a severe relapse in cases of liver-disease is in general far more difficult to cure than the original attack.

THE SURGICAL TREATMENT OF DISEASES OF THE LIVER.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

By J. KNOWSLEY THORNTON, M.B., C.M.,
Surgeon to the Samaritan Free Hospital.

In considering how I could best contribute to the discussion on the Surgical Treatment of Diseases of the Liver in the short time allowed for the reading of a paper of this kind, I came to the conclusion that, as it would be quite impossible to deal thoroughly with the whole subject, it would be best to confine myself to the record of some selected cases of my own, which might serve to stimulate the recollection of others who had met with similar cases, which had been allowed to run their course without surgical aid.

When I was house-surgeon under Professor Lister in the University wards of the Edinburgh Royal Infirmary, I was asked by a gentleman in general practice in the city to see with him at Leith a little girl about six years of age with a swelling in her upper abdomen. I found a poor emaciated atom, covered with petechiæ, and to all appearances very near death, with a large abscess bulging from the right lobe of the liver. I tapped it antiseptically, and drew off a large pudding-basinful of thick odourless purple pus. The child at once began to mend, and in a few weeks was running about quite well, the abscess-cavity never having refilled. I did not think much of the case at the time; but, after I had seen a good deal of ovariotomy, and of the recovery of patients when their livers had been more or less damaged in separating adhesions, I began to speculate whether surgeons did all that was possible for the relief of diseases of the liver which were beyond the aid of medicine. At that time (1873-75), owing to the prevalence of the abominable practice of tapping ovarian cysts, serious adhesions to such organs as the liver were much more common than they are now; and one case of my own (my twenty-sixth ovariotomy), in which a large deep tear was made in the right lobe of the liver, made a strong impression upon me. The bleeding was very alarming, but stopped immediately on the edges of the tear being brought together and maintained in position by a pair of broad-ended polypus-forceps. The patient eventually died; and I had an opportunity of examining the liver, and found that no oozing had taken place after the abdomen was closed, and that the rent was entirely closed by recently deposited lymph. I concluded that, if a large abscess-cavity in a poor feeble little child would close up after one antiseptic tapping, and the child recover its health, and if a deep rent in the substance of the liver would heal, as described above, in a patient dying during its healing, then we had not much to fear from wounding the liver-substance, and might deal with it on ordinary surgical principles, so long as we avoided the large vessels. The peritoneal cavity, thanks chiefly to the work of Sir Spencer Wells, has long ceased to be a forbidden ground for the surgeon, and one after another the organs it contains have been found amenable to ordinary surgical treatment; and certainly we may to-day include the liver in the domain of surgery—always, be it understood, when the physician says, "I can do nothing more here."

In 1878 Dr. Marion Sims published his case of Cholecystotomy, in the British Medical Journal, and the gall-bladder was added to the organs in the legitimate domain of surgery. Dr. Marion Sims settled the method of performing this operation, others have copied his suggestions with a more successful result, but no one has improved upon the details of the operation, as he recommended it should be performed, after carefully thinking over his own failure.

On the present occasion Mr. Willett and Mr. Meredith are to introduce the subject of cholecystotomy to our notice, but they will have to forgive me if I trespass a little on their ground, because, as one of my cases shows, the gall-bladder and the liver cannot always be separated for surgical purposes. In December, 1880, Mr. Tait read, before the Medical Chirurgical Society, notes of a case of hydatids of the liver, which he had treated successfully by free incision and drainage. I had at that time, at the Samaritan Hospital, a patient who had been placed under my care by Dr. Warner, suffering from suppurating hydatids of the liver. The patient was in a very desperate condition, with marked septicæmia, the cysts had been aspirated five times, and the fourth and fifth aspirations had been followed by serious symptoms, evidently due to the sac contents having putrefied. I operated, and cleared out an immense mass of stinking hydatids and pus, but the septic condition was only increased, and the patient died. I was

not discouraged, because I felt sure that the result would be different if I could get a case which had not been tampered with.

In a little more than a year I operated upon a single woman, aged 41, believing that I was going to remove a large ovarian cyst.

When I opened the peritoneum, I found adhesions everywhere; after feeling my way carefully for some time for a landmark, I grasped a small cystic body in the right iliac fossa, and believed it to be the right ovary adherent to the tumour, as I could trace a close connection between it, both with the tumour and with the uterus and right Fallopian tube. I then tapped the cyst, and found that it was hydatid, and as it emptied, to my astonishment small islands of liver tissue began to show on its surface. I was dealing with a large single hydatid cyst of the liver, of such size that the gall-bladder was displaced into the right iliac fossa, where it had become adherent to the uterus and its appendages. A striking case as demonstrating the unwisdom of separating adhesions in abdominal work, until you are quite certain as to the relations of the tumour. Having enlarged the incision into the cyst, and thoroughly cleared it out, it occurred to me that as it was not suppurating, there was no necessity to subject the patient to the tedious process of cure by suppuration and drainage, but that if I killed all the hydatids, and left the sac clean, there was no reason why it should not shrink and disappear. I accordingly sponged its interior very carefully all over freely with pure tincture of iodine, dried it thoroughly, and closed it by sewing the opening in the sac up with the same sutures which closed my abdominal incision. The patient made a good recovery, the sac never refilled, and she has been able to continue in her situation as cook in a country house. This case, taken with that of the little child, shows that very large cavities in the liver will close without drainage, if they are thoroughly clean and aseptic; the blood and serum which must be poured into them at first being gradually organised and absorbed. In the following year I operated upon a similar case for Dr. Ballard, of Huntingdon. In this case the hydatids had not been content with filling the abdomen, but had found their way under Poupart's ligament into Scarpa's triangle. At the operation I emptied and cleared out the liver sac, and then found that the contents of the large sac in the thigh could be pressed up into the main sac. Finding it impossible to thoroughly clean the whole sac, I determined to drain it, applying elastic pressure on the sac in the thigh after it was emptied. The patient made a good recovery, and I saw her last year in good health. After she left town, the thigh-sac slowly filled again, became larger than before, and burst, discharging fully a gallon of hydatids, then it also granulated up.

These last two cases illustrate how great may be the interference with the liver—its substance even being separated, as in the first case, into little islands on the cyst wall; and in the second, for anything we know to the contrary, portions of it being dragged down into the thigh, and in the first case the gall-bladder dislocated and adherent to the pelvic organs—and yet the patients not only recovered well from the operation, but remain healthy women now.

The mention of this adhesion to the gall-bladder leads me to speak, out of its proper place, of a very remarkable case, upon which I operated in Dublin early in this year. The lady had been seen by several of the leading physicians and surgeons in Dublin, and also by Dr. Habershon, and the diagnosis was gall-stone colic, with greatly congested liver. She was in a very exhausted condition, and suffering very severely from recurrent attacks of the colic, and I was requested to see her with a view to operation. I found a rounded body in the situation of the gall-bladder, which appeared to be that organ greatly distended, and also a very large liver reaching on the right side almost to the pelvic brim. It was decided that I should make an exploratory incision and see what I could do. On entering the peritoneum, over what was supposed to be the gall-bladder, I found a great mass of adhesion, formed of the omentum and the suspensory ligament of the liver, adherent to the surface of the liver, and to the parietal peritoneum; the mass was not the gall-bladder, but the rounded edge of the enlarged right lobe with this matted mass of adhesions. At about an inch from the middle line of the abdomen, the liver surface was firmly adherent to the parietal peritoneum, and deep down towards the right iliac fossa I found the gall-bladder with its wall evidently much thickened, its posterior surface adherent to the posterior parietal peritoneum, and its lower end united to the right broad ligament by a very dense band of cellular tissue, as thick as my thumb. I could not, by the most careful examination, detect any stone in the gall-bladder or in its ducts, and had one been present, it would have been quite impossible to bring the gall-bladder up so as to fix the opening made in it into the parietal wound, and very difficult to suture any opening made in it (the gall-bladder) as it lay in the abdominal cavity behind the enlarged liver. The question arose as to whether the strong band at the end of the gall-bladder might be the cause of the colic, by preventing proper contraction, and whether it should be divided. The risk of doing more harm than good with structures of this kind deep in the cavity, and only to be dealt with by touch, decided me to leave it alone, and with the full concurrence of Drs. Little, Gordon and Athill, and of Professor Bennett, who were present, the latter two gentlemen kindly assisting me with the operation. I therefore determined to content myself with the free division of the suspensory ligament, and the separation of the adherent omentum from the ligament, liver and parietes. The lady made an excellent recovery, has had no return of her colic, and called upon me the other day in the most perfect health, having walked from the West end to the City, and back to my house, and proposing to walk home to the hotel, another mile and a half or two miles to dinner. The liver had returned to its natural size. It is difficult to credit the operation with the cure, but it is equally difficult to believe that the diet and treatment adopted after the operation could alone have brought about such a marvellous resurrection, for the patient had been under the best of medical treatment before I operated, and yet was getting steadily worse. So far as I could make out from the history, the peritonitis which had ended in these extensive adhesions had taken place after a confinement many years ago, and it is an interesting fact to bear in mind, that one may have as the result of a puerperal peritonitis, adhesions involving such distant organs as the gall-bladder and liver, and leaving them permanently attached to the pelvic organs. The illness which culminated in my operation was started, I think, by the revascularization of the adhesions during a recent pregnancy and abortion.

If I ever have to deal with a similar case, I think I shall be a little bolder in the separation of adhesions, as I cannot but think that what I did in this direction was an important element, if not the important, element in the cure. I should have mentioned that one of the alarming features in the case before operation had been rapid and considerable elevation of temperature. The immediate result of the operation was a rapid rise to 103.8°, but without any corresponding increase of pulse-rate, and a rapid fall with heavy perspiration.

On the fourth day, when the bowels were cleared, there was again a sharp rise to 103.0°, with another rapid fall, and, by the eighth day, it was normal, and so continued.

The next case I have to mention treads very closely upon Mr. Willett's domain; but inasmuch as it is a hepatotomy for gall-stones rather than a cholecystotomy, I think I may record it.

In November, 1885, I saw, with my friend Mr. Besley Thorne, and also at the suggestion of my friend, Mr. Hardiman, of Cardiff, a lady, aged 57, with an obscure abdominal tumour, which had been considered by a great authority to be very probably malignant disease of the liver. I found a delicate woman, looking fully her age, and with a small feeble pulse. In the situation of the gall-bladder, a swelling as large as a good sized pear, very tender, and very mobile; I could push it well over to the left side of the abdomen, there were evidences of adhesion of omentum or intestine along its left border, and, in my opinion, these were the chief cause of the tenderness. I could feel very distinctly at its lower border some hard square bodies, and with a very distinct history of gall-stone colic extending over many years. I had no difficulty in arriving at a diagnosis. Hearing, both from her husband and her medical attendants, that she was steadily failing in health, I advised operation.

On November 9, 1885, assisted by Mr. Malcolm, Mr. Mills, and afterwards Mr. Thorne giving ether, I made an incision over the tumour, and found that it was liver-tissue, through which I could distinctly feel stones moving on one another; behind the mass I could feel a small atrophied gall-bladder, and, in the common duct, a large stone. Having carefully packed the swelling round with carbolised sponges, I aspirated, but only got a few drops of bloody serum; I therefore made an incision into the most prominent part of the liver about an inch long, and cutting through about half an inch in depth of liver-tissue, came upon the stones very tightly packed. The hæmorrhage was very free, but soon ceased with sponge pressure. The upper layer of stones were very small, and, as I cleared these away, I came upon larger stones with facets. I had to use various instruments to remove them—directors, lithotomy scoop, and various forceps, until at last the cavity was clear; and then, passing my finger in, I found the large stone, which I had felt in the common duct, firmly wedged, and had to break it up with Lion forceps, and remove it in pieces. There was a long chain of single bigger stones leading down to this impacted one. The bile must have constantly filtered past this stone, as she never had any jaundice; and, in support of this view, it was noticeable that while the stones in the cavity were, as you see from these specimens, almost like mother-of-pearl, the large one, and those immediately

above it were deeply bile-stained. In all, I removed 412 stones. Having carefully sponged out the cavity, I sutured the opening in the liver to the opening in the parietes, leaving a small rubber tube in the sac. There was remarkably little disturbance after the operation, the highest temperature being 100.6°, and the quickest pulse 104. The wound healed quickly, with hardly any discharge, and never the least trace of bile, and the patient was up on the fourteenth day after the operation, and I have recently seen her in capital health.

It is worthy of note that when the wound was nearly closed, the liver being still seen exposed where the tube had been, it was found to be exceedingly sensitive, much more so than the skin edges close by, which were a little red and sore.

I must confess that the pathology of this case puzzles me. It is possible that the stones originally formed in the gall-bladder, and that its posterior surface becoming thinned and atrophied by pressure, they gradually made their way into the substance of the liver, destroying the wall of the gall-bladder at the point of junction. There was, however, nothing in the history of the case to mark a severe lesion of this kind; and, so far as I could make out at the operation, the gall-bladder was perfect, but atrophic and empty. I am inclined to think that the large stone was originally in the gall-bladder, and then became impacted in the common duct, so as to abrogate the function of the gall-bladder, and that the other stones were formed in the hepatic duct, and above it, in the substance of the liver, where they gradually hollowed out the cavity from which I removed them.

Having commenced my notes, with a brief record of the successful treatment of a case of abscess of the liver by a single antiseptic tapping, I will conclude them by the record of a case in which tapping, or rather aspiration, having failed, a more serious and radical operation became necessary.

On November 30th, 1885, I saw, with my friend Dr. Lorimer, of Farnham, an officer in the army, aged 43, suffering from large hepatic abscess. He was first taken ill in July, 1884, while in India, and in the following year Dr. Eastes, of Folkestone, opened and drained a large abscess in the left lobe of the liver, which was pointing through the abdominal parietes. He was six weeks ill, and was then well for about two months; then pain in the liver returned, and he became very ill with fever, emaciation, etc. Shortly before I saw him, Dr. Lorimer and Dr. Morton, of Guildford, had aspirated the right side of the liver between the ribs, and removed a quantity of sweet pus, but without relief to his symptoms. Hoping that the liver would be adherent at the point of puncture, I determined to use the mark of the needle as my guide, and make a free opening into the abscess, and insert a drainage-tube. Dr. Morton kindly assisted me, Dr. Lorimer giving the anæsthetic.

I commenced by cutting out a small lozenge-shaped piece of skin, a method which I would strongly recommend in cases in which it is advisable to keep an opening for drainage. Carefully dissecting my way, I soon found myself in a perfectly healthy pleura, with no sign of adhesions. What was to be done? Obviously one could not open a liver abscess into a healthy pleura, and yet there was no safe road to the abscess, which was evidently deeply seated, and, in this situation, one knew that the pus had been reached. I determined to attempt to sew the two layers of the pleura together, and thus obtain a funnel through the pleura, through which I could proceed without fear of letting pus escape into the pleural cavity. I first raised the parietal pleura all round so as to get a little free edge, and then made a very careful longitudinal incision through the visceral pleura, raised it all round with a blunt director, and then, with a fine curved needle, united the two layers of the pleura firmly together with a continuous fine silk suture. Having got my channel, I dissected down to the liver substance, and plunged in one of Fayrer's grooved hepatic trocars, reaching the pus through a considerable depth of liver tissue, and using the groove in the trocar as a guide for a probe-pointed bistoury. I enlarged the incision, and introduced a large red rubber drainage-tube. The pulse and temperature at once fell. Drs. Lorimer and Morton kindly carried out the after-treatment with perfect antiseptic care, and the result was a rapid cure, and I had the satisfaction of seeing my patient walk into my consulting-room, a few weeks back, a healthy man.

I am not going to advocate the universal opening of liver abscesses through the pleura, but my case shows that, with proper management, one need not be deterred from opening an abscess because it only seems possible to reach it through the pleura. Just as one need not be prevented from removing a diseased kidney, because it may be necessary to pass twice through the peritoneum to get at the diseased organ.

What we have to remember in all these operations is to be scrupulously cleanly in all we do, using for each individual case such antiseptic measures for obtaining asepticity as appear best suited for our end; and when we have to deal with putrid material, attacking it directly it is reached with some powerful antiseptic (corrosive sublimate seems to me undoubtedly the best for this purpose), and washing away every particle with large quantities of antiseptic lotion if the situation render its use safe, and with large quantities of boiled water, in situations where we cannot use poisonous antiseptics. When you cannot destroy a virus, then attenuate it as much as possible, and you lessen its power for evil. Such at least to me is the teaching of our scientists by experimentation, and such is the clinical observation daily forced upon my mind in the practice of surgery.

In conclusion, I will only say that I believe that all diseases of the liver which are within the surgeon's reach may be, and should be, treated on the same lines that would guide us in the treatment of similar diseases in other situations, and with every prospect of equally satisfactory results.

COMPLETE OBSTRUCTION OF COMMON BILE-DUCT: CHOLECYSTOTOMY: BILIARY FISTULA: MARKED IMPROVEMENT.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association held in Brighton.

By ALFRED WILLETT, F.R.C.S.,

Surgeon to St. Bartholomew's Hospital, and Lecturer on Clinical Surgery at the Medical School.

In March, 1885, at St. Bartholomew's Hospital, I was asked by my colleague, Dr. Gee, to consult with him over a case of abdominal swelling in a female patient under his care at St. Bartholomew's Hospital.

The full notes of this case have been kindly placed at my disposal by Dr. Oswald Brown, at the time house-physician to Dr. Gee. It should be stated, however, that the description of the operation, and the notes, whilst the patient remained under my supervision, were written by Mr. Spicer, my then senior house-surgeon.

Frances H., 52, was admitted March 2nd, 1885, into Mary Ward, St. Bartholomew's Hospital, under Dr. Gee. History: Fifteen years ago had "inflammation of bowels;" fourteen months ago, violent purging, lasting three months; nine months ago, jaundice, gradually deepening. For first four of these months, much general itching and much purging. No paroxysms of pain, no sickness. Never jaundiced previously, never hæmatemesis. Drinks but little. Present condition: Very deeply jaundiced (indeed, deep bronzing), jaundice general; no xanthelasma. There has been some wasting, but patient is still in a state of fair general nutrition.

Liver dulness commences above (in the axillary line), at the upper border of the fourth rib, whilst this organ can be felt slightly below the ribs.

Approximately in the position of the gall-bladder is felt a tense spherical tumour, of the size of a large orange, of smooth surface, and of defined limits in all directions except upwards, easily movable in the lateral directions, and moving with the movements of respiration. This appears to be certainly the gall-bladder. The spleen is not palpable. There is some lax œdema of the legs. The urine is deeply coloured, and contains a trace of albumen, but chemical examination shows very little bile-pigment to be present. The motions are clayey and colourless.

March 14th. Patient had sudden severe pain in right hypochondrium this morning; no sickness.

March 16th. There is a point, an inch and a half below the ribs, and two inches to the right of the umbilicus, where a distinct nodular induration can be felt (? a gall-stone).

March 17th. Motions quite colourless; urine 1025; traces of albumen. Dr. Gee considered that the obstruction was of the common duct, and complete; its probable nature either a gall-stone there impacted, or some growth in the head of the pancreas pressing upon the duct, regarding the latter hypothesis, perhaps, the more probable.

In consultation (with Mr. Willett), it was determined to advise operation, with a view to ascertaining the nature of the obstruction, and, if possible, of removing it, or, if a tumour were found situated in the head of the pancreas or in some part external to the duct, of forming a biliary fistula, and so allowing the bile to escape externally. Patient consenting, operation at 1.30 on March 17th.

Notes by Mr. T. W. H. Spicer, House-Surgeon.—The patient being under the influence of an anæsthetic, Mr. Willett made an incision in the right linea semilunaris about three inches long, dissecting through the tissues till the peritoneum was reached. This being

opened on a director brought the omentum into view. On turning this aside, the distended gall-bladder appeared, nearly filling the opening. Sponges having been passed into the abdominal cavity, to guard against any escape of fluid, the gall-bladder was aspirated, and sixteen ounces of pale, viscid, straw-coloured fluid drawn off. After a clamp had been placed over the opening, a finger was introduced. The head of the pancreas and region of the duct were found to be apparently free from the growth, and the duct itself was somewhat thickened. Next, sutures were passed through the peritoneal edges of the wound, and through the outer coats of the now collapsed gall-bladder; and after these had been tightened, closing the peritoneal cavity, the gall-bladder was opened. Nothing abnormal was found in it, except that the common duct was completely occluded; not even the finest probe could be made to pass along it. The free margin of the skin was next sutured to the opening made in the gall-bladder. Carbolised oil dressings applied; operation under spray. Patient bore the operation well. After recovering from the effects of the anæsthetic, she complained of pain in the region of the wound. Ext. opii liq. ♏x statim et 2ndis horis. She slept at intervals during the night. No pain after 11 P.M.

March 18th. Slept a good deal during the night; is very comfortable and in no pain. Pulse, 88; tongue, dry. Has had nothing but ice to suck; ordered barley water and two pints of milk. Ext. opii. ♏x 4tis. ; 20 ounces of urine passed contains a large amount of bile-pigment. The fluid drawn off yesterday from the gall-bladder was of neutral reaction, specific gravity 1014, faintly albuminous, no bile-pigment, abundant cholesterine chrystals. Dr. Oliver, of Harrogate, reported that the fluid was colourless bile, with biliary salts in large quantity, a little mucus, a trace of albumen, no pigment, slightly alkaline; specific gravity, 1007. 2 P.M. Wound dressed; abundant watery discharge, tinged with blood; bile on dressings and flowing from the wound.

March 19th. Very good night; milk 26 ounces since 2 P.M. yesterday. Dressings soaked with discharge of same nature; much less oozing from wound; abdomen somewhat distended and tympanitic; urine deeply bile-stained, much sediment (? leucorrhœa).

March 20th. Wound dressed. Dressings soaked with greenish blood-stained discharge; abdomen tympanitic and slightly distended; urine contains same amount of bile-pigment. Beef-tea, 1 pint; ext. opii. ♏x 8tis.

March 21st. Dressed; a continuous flow of almost colourless fluid goes on from the opening; abdomen still a good deal distended. Patient continues quite free from pain; sleeps well, takes milk and beef-tea well.

March 22nd. Solid motion, clayey, colourless. To have fish.

March 25th. Dressings soaked with pale green discharge.

March 26th. Colour certainly slightly improved, conjunctivæ clearer. Dressings still soaked with a greenish-yellow discharge; stitches all removed, parts quite securely united.

March 30th. Distinct improvement in colour of skin and conjunctivæ; no change in character of urine; bowels open, regular motions, large-formed and colourless; wound dressed daily. Doing in every way well.

April 4. Change in colour continuing. Chicken, pudding.

April 15. Colour still improving; is gaining flesh. Discharge the same.

April 22nd. Most marked improvement in colour, the conjunctivæ being now bright and not far from clear. Patient in excellent spirits and gaining flesh. Urine much as before; motion still colourless. Convalescent.

P.S.—Patient soon after left the hospital; no further notes were obtainable.

December, 1885. She has since died, it is said, exhausted by sores produced from the discharge.

REMARKS.—Complete relief to the patient's sufferings, very marked diminution of her jaundice, and great improvement in general health, sum up the results obtained by the operation. As to what I might find, there were good grounds for suspecting either of the more frequent causes of obstruction of the common bile-duct—an impacted calculus, or a growth external to, but in some way implicating it—as being present in this case; but the entire obliteration of the duct was due, I suspect, to chronic inflammatory changes leading to a gradual but complete stenosis. The hard, pipe-like cord that I felt, offers strong confirmation of this view; but, as the patient died away from the hospital, and no record of any *post mortem* examination has come to light, this surmise is all that I can offer as to the pathological changes in the parts. If one could have foretold, obliteration of the duct, aspiration of the gall-bladder, and an occasional repetition of it, would probably have given the same relief to the patient which the operation afforded, without its risks, and without the association of a continuous irritating discharge; and, although by careful nursing this annoyance was minimised so long as the patient remained in the hospital, yet it seems at once to have become serious on her return to her home, and her death from exhaustion seems certainly to have been hastened, even if it was not directly due to it. Hence it occurs to me that one point for discussion is, whether cutting into and draining the gall-bladder should be undertaken before aspiration has been fairly tried, having also in view the additional information when the obstruction was due to gall-stones, which the point of the needle might procure. In the next place, assuming that cholecystotomy is decided upon, and, when performed, complete obliteration of the common duct—as in my case—is found, I ask, and invite criticism, as to whether external drainage is the best procedure that can be devised; whether, in truth, it is the utmost within the bounds of prudence one can do for the patient. When consulting with Dr. Gee upon the operation he wished me to undertake, I submitted to him the alternative, in the event which actually occurred, of our finding the duct obliterated, of establishing an entero-biliary fistula, but desirous of exposing the woman to as little risk as possible, it was decided to restrict the scope of the operation to external drainage. Nevertheless, reflection has convinced me of the advisability of rendering cholecystotomy, in cases similar to this, a complete operation—complete in the sense of forming an artifical channel between the gall-bladder and the intestine, at a part where they lie in close proximity, in order that the biliary secretion should be discharged after the more normal arrangement into the bowel, rather than drain away externally. There are, it appears to me, but two points, from one of which an election must be made: one at or about the junction of the first and second parts of the duodenum; the other where the ascending colon curves, and becomes the transverse. It is at one of these two sites that naturally-produced entero-biliary fistulæ are almost invariably found to have occurred. In the group of these cases, nearly thirty in number, collected by the late Dr. Murchison, in about two-thirds the fistulous communication was located in the duodenum, and one-third in the colon.

There are reasons both for and against either of those sites for the operation, so that it would seem difficult to give an absolute preference to either: for a selection of the duodenum would rest upon its appropriateness on physiological grounds, whilst a choice of the colon would be rather upon surgical, from its close relation here to the gall-bladder. Certainly if it fell to my lot to make a choice, I should unhesitatingly select the colon, and for these two reasons chiefly. In the first place, I think the operation of forming a communication between the gall-bladder and the duodenum would be much more difficult in all cases, perhaps impracticable in some on account of the restricted space at command, the depth at which this part of the duodenum lies, and from the nature of the structures—I allude to the liver in particular—which cover or surround it. In the second place, I submit that the presumed physiological claims for the duodenal site are much less valid than appear at first sight, for microscopic examination of the liver in cases of long-standing obstruction, show advanced atrophy of the bile secreting cells; moreover, the fluid found in the dropsical gall-bladder is some evidence of this change; it is of very low grade, scarcely more than a limpid mucus, and I doubt if any analyst could even call it a "coloured imitation" of bile. It may be argued that were the flow of bile into the intestine re-established, functional activity would again take place in the liver cells, and a fairly normal bile be secreted, but of this proof is wanting. An objection that may be raised against the duodenal site is that the bile may regurgitate into the stomach and produce troublesome vomiting; but surely bilious vomiting is too common a complaint for its occurrence to be attributable to this altered relation, and I fail to see that with it why vomiting should be especially liable to happen. An equally pointless objection may be raised against establishing a direct channel from the gall-bladder to the colon, the change being that the fæces now contain putrefactive germs, and hence the probability they would find their way into the gall-bladder and along the hepatic duct, and excite suppuration in the liver. That this is not necessarily the case, even when the communicating channel is large, is proved by a case recorded in the Pathological Society's *Transactions*, where in the case of a woman who died of cancer of the uterus, and in whom no suspicion during life existed of there being anything wrong with the liver or gall-bladder, there was found a large patulous aperture between the colon and a completely shrunken gall-bladder; this last mentioned circumstance clearly proving its long duration. Undoubtedly it is to the comparative facility as well as safety of the operation for making an artificial fistula between the gall-bladder and the colon, where they lie side by side, and almost in the line of incision, that I give the preference to this site over that in the duodenum; but as to the steps of the

operation, I regard it as unnecessary to go into details, as the principles guiding the operator in uniting peritoneal surfaces by suture are thoroughly well-established. I would only add that I think the artificial aperture between them should be rather of a slit-like nature than a round patulous hole, and again I would place the incision of the gall-bladder at its lower part rather than at the upper, in the expectation that with shrinking of this viscus a tube-like track would be formed with a valvular termination.

A CASE IN WHICH AN ABSCESS OF THE LIVER WAS OPENED AND DRAINED, THE EDGES OF THE WOUND BEING STITCHED TO THE ABDOMINAL WALL.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

By HOWARD MARSH,

Senior Assistant-Surgeon to St. Bartholomew's Hospital Senior Surgeon to the Hospital for Sick Children.

The following notes are a brief, and I fear insignificant, contribution to the surgery of the liver. I shall merely relate the facts of a single case, believing that what are at present wanted are not general observations, but data derived from practice, upon which conclusions may be hereafter based.

The patient was a boy, aged 11½, who was admitted last November into the Hospital for Sick Children, under the care of Dr. Cheadle. He had enlarged liver, and abdominal pains of about six weeks' duration. Dr. Cheadle found the whole of the upper part of the right side of the abdomen, and the left hypochondrium, occupied by a firm resisting swelling. The left hypochondrium was very prominent. After admission the swelling increased, the prominence on the left side became more marked, the surface was tender, and fluctuation was distinct. It was believed that the liver was the seat of hydatids, and, on puncture with the aspirator, 15½ ounces of hydatid fluid were drawn off. Though much reduced for a time, the swelling soon returned, and, on February 5th, and again on February 8th, the aspirator needle was introduced; but it was evident that the fluid had become too thick and flaky to pass through even a large-sized cannula. At this date the boy was wasting and growing weak, and the temperature reached 102°. On February 14th, at Dr. Cheadle's request, I saw the case, and, as there was evidently a large collection of fluid, I made an incision through the abdominal wall, and exposed the liver where the prominence was most marked in the left hypochondrium. The liver was not, I found, adherent to the abdominal wall. However, I made an incision into the cyst, and endeavoured, by hooking up the wall of the cavity and turning the child over, to prevent the entrance of the fluid into the sac of the peritoneum. Thirty-six ounces of flaky, blood-stained, sero-purulent material escaped. The cyst was then washed out, a drainage-tube inserted, and the edges of the opening in the liver fastened by closely-placed interrupted sutures of Chinese silk, to the incision on the abdominal wall. There was no hæmorrhage of any importance when the liver was opened. After the operation, the boy had no bad symptoms. On the contrary, his general health improved, and his temperature returned to the normal in the course of about a fortnight. The swelling, also, underwent steady and considerable diminution. The note of April 20th states that the liver was much smaller, and there was only slight discharge of bile-stained serum from the fistula. By June 8th, the fistula had completely closed, and the boy had regained good general health. In the course of the case, hydatid swellings, detected in different parts of the abdomen, were aspirated. These disappeared. After the boy left the hospital he was allowed, contrary to directions, to be on his feet all day; and shortly afterwards the fistula reopened. He has now been readmitted. He is very well in himself, but the fistula still discharges clear, bile-stained fluid, the quantity of which, however, is diminishing.

The formidable condition to which this boy, aged 11½, was reduced will be indicated by the fact that the abscess in his liver contained thirty-six ounces, that is, nearly two pints of fluid. Yet he not only bore the operations safely, but immediately began to improve. All are at the present day familiar with the safety of incisions into the peritoneal cavity, nor did the fact that the liver itself was opened, so that it formed part of one large wound, appear to add in any way to the gravity of the case. Athough there were no adhesions between the liver and the abdominal wall, no intra-peritoneal extravasation occurred either at the time of the operation or subsequently. The case, so far as it went, confirmed my previous belief that it is needless to wait for the formation of adhesions before the liver is made the subject of surgical interference, still less is it necessary, as was formerly the practice, to endeavour to produce adhesions by the application of caustics. It seems worthy of note that although the liver-substance was incised, and although tension on the interior of the abscess cavity was suddenly removed by the evacuation of nearly two pints of fluid, no hæmorrhage or oozing occurred. A further point of interest, I think, is that the patient was a child. The case thus serves to remind us of the clinical fact that abdominal surgery may be applied in the instance of children quite as confidently as in adults. I have myself performed ovariotomy on a girl aged 11, and others have reported cases in very much younger subjects; the kidney has been removed in a boy aged only 6, by Mr. Croft. Mr. Hutchinson and myself have each reported a successful laparatomy for intussusception; Mr. Morgan, a case of successful gastrostomy in a child aged 7; while many operators have met with excellent success in suprapubic lithotomy in young children. Abdominal surgery is undergoing rapid development in the adult, the pancreas is the only organ which remains outside the range of active treatment, and the success attained is steadily increasing. The same means also are applicable to children, a class of patients in whom grave abdominal affections, calling for surgical interference, are of frequent occurrence. The conditions of success in children are, mainly, (1) that interference should not be too long delayed; (2) that the loss of blood should be kept within the narrowest possible limits, and that the operation, whatever it is, should be completed with the least possible delay.

ON THE SURGICAL TREATMENT OF DISEASES OF THE LIVER.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association held in Brighton.

By LAWSON TAIT, F.R.C.S.,

President of the British Gynæcological Society; President-elect of the Birmingham and Midland Counties Branch.

Case I.—In June, 1883, Dr. Bradshaw Smith, of Burbage, sent me this patient with the following history. "The bearer, Mrs. H., is suffering from some obscure disease situated in the region of the liver. I think there must be a deposit of matter. The beginning of last year she was confined, and had puerperal mania and several abscesses, being ill for several months. To all appearance, she made a good recovery, and again became pregnant. Some three or four months after, she was taken with very violent pain, like biliary colic. She became jaundiced after it, and had other symptoms resembling those of gall-stones. These symptoms continued more or less severe until she was confined nine months ago, recurring at intervals of a day or two. Since then the pain has continued, and she only gets relief from large doses of morphine. If you can throw any light upon the case, I shall be much obliged." I admitted her to my private hospital, and on July 2nd, 1883, I opened the abdomen and found the liver covered with small seed-like bodies which I regarded as miliary abscesses. I closed it without doing anything. She made an easy recovery and went home. Her symptoms were at once mitigated, and in a few weeks she sent me a letter to say how extremely grateful she felt for the wonderful cure she had received, and to tell me that she enjoyed the best of health. I had a letter from Dr. Bradshaw Smith on April 15th last, that is three years after the operation, in which he says, "The woman H., whose liver you explored and found covered with small seed-like bodies about three years ago, has been in good health ever since, and she has just engaged me to attend her next May. Surely, 'Truth is stranger than fiction.'"

Case II.—This patient was sent to me by Dr. Coghill, of Ventnor, suffering from a series of acute symptoms, the chief of which was intense hepatic pain. I made an exploratory incision, but could not find anything except adhesions between the edge of the liver and the wall of the peritoneum. These I separated, and closed the abdomen. The patient was relieved for a time, but all his old symptoms have returned.

The following paper is chiefly a summary of forty-nine operations performed on the liver, the great majority of which have already been published in detail. This list includes every operation of the kind which I have performed, and all but two have been successful. I have divided them into three classes: first, mere exploratory incisions, those in which the operation has been performed upon the gall-bladder and gall-ducts, and those in which the substance of the liver has been attacked for various conditions, such as hydatid tumours, abscess, and solid tumours. In the former, there are

twenty-nine, and of these twenty-two have already been published in detail. The remaining seven have been performed since my last publication. They are as follows:

CASE XXIII.—R. O., married, aged 45, sent to me by Dr. Swift, of London. He had made the diagnosis of gall-stones, and sent her for the purpose of operation. The symptoms were very characteristic, consisting of violent paroxysms of pain radiating from the position of the umbilicus, through to the back and into both shoulders, chiefly the right. She had never suffered from jaundice; she passed a great many stones, numbering more than 200. The gall-bladder could be felt as a distended tumour.

On May 8th, I performed cholecystotomy, and removed 339 gall-stones. She made a perfectly easy and uncomplicated recovery, bile passing through the fistula on the third day, and she went home on May 22nd. The fistula is not yet quite healed, but all the symptoms are relieved.

CASE XXIV.—F. W., married, aged 49. On May 25th, I saw this patient in consultation with Mr. J. J. Nason, of Stratford-on-Avon. For five years she had suffered characteristic symptoms of gall-stone. The gall-bladder could not be made out, but I had no hesitation whatever, from the symptoms of the case, in recommending operative interference. This was done on May 6th. I found the gall-bladder extremely contracted upon four gall-stones of large size which I removed with great difficulty. She made an easy and uninterrupted recovery, and the nurse left her on June 15th. The greater part of the bile, if not the whole of it, is still passing by the wound. The explanation of this is that there may be a small calculus present in the common duct which escaped my search at the time of the operation, though it is quite as likely to be due to the abnormally diminished size of the gall bladder and ducts. If it is the former, it will be removed either by the pressure of the bile when the fistula is healed, or it may be easily crushed by a secondary operation. In any case, it will be overcome by-and-bye; meanwhile, all the old symptoms are relieved.

CASE XXV.—R. B., aged 53, married, was sent to me by Dr. Lycett, who in his letter said that she had been for years passing biliary calculi with much suffering. She had just had another attack; and, on mentioning the possibility of a cure by an operation, she willingly consented. Dr. Lycett promised to write and see if I could admit her into hospital. On June 4th, I performed cholecystotomy, and removed sixty-three stones. The patient made a perfectly easy and uninterrupted recovery, and left my private hospital on June 23rd, with the wound perfectly healed, and the bile passing the right way.

CASE XXVI.—Mrs. H., aged 60, widow, had for more than five years been suffering from extremely characteristic symptoms of gall-stones. The colic came on at irregular times, lasting twenty-four to thirty-six hours, and giving rise to excruciating agony. No diagnosis of gall-stones had been made till I saw her on June 22nd. In the position of the gall-bladder, a hard and excessively tender tumour was to be felt, from which she described all her pain as arising. She was suffering the most intense agony, and was feverishly ill at my first visit. Next day, I opened the abdomen in the usual line, and found the gall-bladder adherent to intestine and omentum, which I had to detach from it. Then I entered it by my means of an aspirator-needle, and removed about half a pint of intensely fœtid pus. I then opened the gall-bladder, and extracted twenty-four gall-stones. On the third day, the bile began to come through the fistula, and the greater part of it was discharged in that direction for about eight days; it then went back to its original channel. The wound is healed, and the patient is perfectly well. In this case, the gall-bladder was extremely rotten from inflammatory change, and very great difficulty was encountered in stitching it to the abdominal wound. I do not think there can be the shadow of a doubt that in a very few days the gall-bladder would have burst into the peritoneal cavity, because, where it was thinnest, it was not protected by any kind of adhesion.

The list that I am now able to present to you consists of twenty-nine consecutive cases of cholecystotomy, of which twenty-eight have been successful, and it includes every operation of the kind I have done. They establish beyond dispute that the operation, when properly performed, is as devoid of risk as any surgical proceeding possibly can be. In this particular it has the advantage over all the other proceedings advanced for the treatment of gall-stones, because in none of them has anything but a heavy mortality been obtained. The diagnosis of gall-stones is also, in my hands at least, approaching a greater degree of certainty than I ever thought it would do; indeed, in these twenty-nine cases there are only three (V., VIII., and XVII.) in which a mistaken diagnosis was made, when I opened the gall-bladder for gall-stones and found none. In one the mistake was excusable, in the other the mistake was that a piece of cancer had obstructed the passage of the bile through the common duct, and Dr. Foster, who had the case originally under his care and who recommended the operation, proved to be perfectly correct in the belief which he expressed that it was cancer, and that the operation should be performed not for the removal of gall-stones, but for the relief of the cholæmia. The mistake was mine in supposing that I had a gall-stone case to deal with. In Case XXI., I operated for Professor Grainger Stewart in his ward at the Edinburgh Infirmary, and this case is noteworthy, as showing how the operation may be primarily successful for the relief of the patient in whom at the time no proofs of cancer were suspected. Yet the secondary results of the operation were not satisfactory, for the patient died of cancer of the liver.

CASE XXVII was one in which the patient was threatened death from cholæmia. No gall-stone was found, but the operation has cured the patient. He is a physician, and is now in perfect health, and able to take free mountain exercise.

Concerning these thirteen cases of hepatotomy, the greater number have been published in detail; and, concerning the remainder, there are no details of sufficient value to make it necessary for me to take up your time in narrating them. The operations were alike in all of them, and consisted simply of opening the abdomen, emptying the cyst, opening it, cleaning it out, and stitching the two wounds,—that is, the wound in the liver and the wound in the parieties—together, so as to form a fistula. A drainage-tube was kept in this for a few days, until union between the two peritoneal surfaces had taken place, or until the discharge indicated by its diminished quantity the possibility of removing the tube.

In the *Lancet* for June 8th, 1885, Professor Gairdner published a clinical lecture, at the conclusion of which he says: "These citations will serve to show that the case now brought before you is not, perhaps, altogether unexampled, although I confess that I had never before either heard or seen of one in which such a succession of attacks, extending over so long a time, and involving in all probability the passage of quite a multitude of gall-stones, had occurred without either yellowness of the skin or the conjunctivæ, or detection of bile pigment in excess in the urine." In the *Lancet* of July 4th, of the same year, I made this sentence the subject of a letter, in which I drew attention to the fact that in the history of the cases where I have been called upon to perform cholecystotomy for the relief of suffering due to the impaction or repeated passage of gall-stones, the occurrence of jaundice has been conspicuous by its absence as a symptom. At that time I had operated only on sixteen cases; I have now twelve more to add to the record, and when looking back on the facts brought to my knowledge in dealing with those twenty-eight cases, and also with others, eight in number, where I have performed an exploratory incision, and hoped to find gall-stones, but where I had made an alternative diagnosis of cancer, and where the second alternative was established, the facts marshal themselves in such a way that I cannot but come to the conclusion that my original view is the correct one. We all know perfectly well that the presence of gall-stones in the gall-bladder is not at all unfrequently associated with cancer. I do not assume for a moment that one or the other may stand in relation as cause or effect, but this stands out in my experience with perfect certainty, that in not one of the uncomplicated cases of gall-stone upon which I have operated, and where the secondary result has been as successful as the primary, has jaundice been at all a symptom noted in the case. On the other hand, in the one fatal case on my list, and in the three others in which the secondary results have been unsatisfactory, jaundice has not only been a marked, but it has been the principal, symptom. In the first of these cases (VIII) Dr. Foster was thoroughly cognisant of the nature of the case before the operation was performed, and he recommended that cholecystotomy should be carried out in order to relieve the patient of the cholæmia which threatened to kill him. The result to that extent was extremely satisfactory, because the patient was very much relieved. In the second case (XXII) the jaundice was an extremely marked symptom, though the pain due to the repeated passage of gall-stones was the immediate cause for the operation. This pain was entirely relieved by the operation, and for about four months the patient's relief was very great, but the jaundice was not in any way improved, and the patient ultimately died of cancer of the liver. The third case in this group (XXVIII) came to me in the last stage of cholæmia—dilated pupils, defective memory, eccentric somnolence, and a condition of itching of the skin so intense that the poor old lady's body was covered with scratches on every available square inch. The jaundice in her case had lasted nearly six months. I found the gall-bladder enormously distended, and I removed seven very large calculi, but the removal of the stone did not relieve her symptoms

TABLE I.—*Seven Cases of Exploratory Incision.*

No.	Initials.	Residence.	Medical Attendant.	Age.	Married or Single.	Disease.	Date.	Recovered.	Died.
1	L. H.	Hinckley	Dr. Bradshaw Smith	27	M	Miliary abscess of liver	July 2nd, 1883	R	
2	S. S.	Sandowne	Dr. Coghill	21	S	Hepatic colic	April 24th, 1884	R	
3	— G.	Ontario	Dr. Griffin	63	M	Tumour of gall bladder		R	
4	P. W.	Leamington	Dr. Douglas	45	M	Tumour of liver	April 1st, 1885	R	
5	M. W.	Droitwich	Dr. Fayrer	24	M	Cancer of liver	August 24th, 1885	R	
6	S. K.	Leamington	Drs. Thursfield & Haynes	53	M	Cancer of gall bladder	September 21st, 1885	R	
7	J. W.	Wakefield	Dr. Horsfall	45	M	Tumour of liver	February 6th, 1886		D.

TABLE II.—*Thirteen Cases of Hepatotomy.*

No.		Residence.	Medical Attendant.	Age.	Married or Single.	Disease.	Date.	Recovered.	Died.
8	E. G.	Malvern	Dr. Thelwell Pike	57	S	Hydatids of liver	July 16th, 1880	R	
9	J. D.	Birmingham	Dr. J. P. Hadley	56	M	Cyst of liver	February 6th, 1881	R	
10	L. B.	Leamington	Dr. Thompson	28	M	Hydatids of liver	February 9th, 1881	R	
11	G. P.	Leamington	Dr. Tomkins	21	S	,, ,,	February 15th, 1881	R	
12	A. S.	Birmingham	Dr. Welch	7	S	,, ,,	May 20th, 1881	R	
13	G. B.	Maertiniog	Dr. Roberts	63	M	,, ,,	August 15th, 1881	R	
14	M. R.	Barmouth	Dr. Williams	25	M	,, ,,	November 4th, 1881	R	
15	B. M.	Birmingham	Mr. Jenner Hogg	22	M	,, ,,	October 7th, 1882	R	
16	H. B.	Smethwick	Dr. Pitt	38	M	Tumour of liver	January 5th, 1883	R	
17	L. Y.	Coventry	Dr. Brown	59	M	Gall stones	February 14th, 1883	R	
18	P. B.	Nice	Dr. Tarnier	38	S	Hydatids of liver	May 7th, 1885	R	
19	S. J.	Pershore	Dr. Grewcock	49	M	Cyst of the liver	August 18th, 1885	R	
20	L. E.	Birmingham	Dr. Suckling	18	S	Hydatids of liver	December 5th, 1885	R	

TABLE III.—*Thirty Cases of Cholecystotomy.*

No.		Residence.	Medical Attendant.	Age.	Married or Single.	Disease.	Date.	Recovered.	Died.
21	E. M.	Bridgnorth	Dr. Collis	40	M	Gall stones	August 23rd, 1879	R	
22	L. T.	West Bromwich	Dr. Browne	55	S	Suppurating gall bladder	October 10th, 1881	R	
23	E. S.	Wolverhampton	Dr. Lycett	24	M	Gall stones	November 15th, 1882	R	
24	J. B.	Birmingham	Dr. Hickinbotham	39	M	Gall stones	October 13th, 1882	R	
25	N. W.	Oxford	Dr. Smith	28	S	Distended gall bladder	January 5th, 1883	R	
26	H. N.	Birmingham	Mr. Leech	35	M	Gall stones	May 6th, 1883	R	
27	E. H.	Birmingham	Dr. Drury	42	M	,, ,,	May 10th, 1883	R	
28	S. S.	Birmingham	Dr. Foster	66	M	Distended gall bladder	May 28th, 1883	R	
29	F. T.	Wotton-under-Edge	Dr. Forty	44	M	Gall stones	November 14th, 1883	R	
30	E. W.	Birmingham	Mr. Hugh Thomas	44	M	,, ,,	December 20th, 1883	R	
31	E. M.	West Bromwich	L. T.	62	M	,, ,,	May 8th, 1884	R	
32	M. C.	Winchcombe	Dr. Cox	36	M	,, ,,	June 5th, 1884	R	
33	F. T.	Wotton-under-Edge	Dr. Forty	44	M	Gall stone crushed	June 26th, 1884	R	
34	T. S.	Kettering	Dr. Thomas	63	M	Gall stones	August 7th, 1884	R	
35	E. W.	Walsall	Mr. Littlewood	50	M	,, ,,	January 13th, 1885	R	
36	E. D.	Birmingham	Dr. Drury	47	M	,, ,,	March 26th, 1885	R	
37	E. H.	Bristol	Dr. Aust Lawrence	31	M	,, ,,	June 11th, 1885	R	
38	G. H.	London	Drs. Hoggan and Fyfe	48	M	Cholæmia	October 3rd, 1885	R	
39	R. J.	Birmingham	Drs. Drury and Rogers	48	M	Gall Stones	October 14th, 1885	R	
40	E. S.	Birmingham	Dr. Hoare	32	M	,, ,,	November 11th, 1885	R	
41	N. B.	Birmingham	Dr. Quirke	57	M	,, ,,	December 10th, 1885	R	
42	— R.	Edinburgh	Professor Grainger Stewart	43	M	,, ,,	December 21st, 1885	R	
43	F. T.	Wotton-under-Edge	Dr. Forty	47	M	Gall stone crushed	January 28th, 1886	R	
44	R. O.	London	Dr. Swift	45	M	Gall stones	May 8th, 1886	R	
45	F. W.	Stratford-on-Avon	Mr. J. J. Nason	49	M	,, ,,	May 26th, 1886	R	
46	R. B.	Wolverhampton	Dr. Lycett	53	M	,, ,,	June 4th, 1886	R	
47	— H.	Birmingham	L. T.	60	M	,, ,,	June 23rd, 1886	R	
48	M. H.	Rhyl	Dr. Carstairs	56	M	,, ,,	July 12th, 1886		D
49	E. R.	Cardiff	Dr. Vachell	24	M	,, ,,	July 17th, 1886	R	
50	E. C	Stonehouse	Dr. Watters	37	M	,, ,,	August 3rd, 1886	R	

NOTE.—These cases include all the operations on the liver which have been performed by Mr. Lawson Tait. The following cases of cholecystotomy have died since the operation of the progress of cancer of the liver:—28 on July 23rd, 1883, and 42 on April 19, 1886.

one bit, and she died of the bile poisoning. I could not obtain a *post mortem* examination, but I have not the slightest doubt that cancer was the chief disease in this instance. In the fourth case of the group (XXIX) the patient has had a most remarkable history in connection with a peculiar ulcer of her foot, which Sir James Paget and Mr. Bryant both regarded as of malignant type, even when she was about eight years of age. She came to me suffering from intense cholæmia; Dr. Long Fox of Bristol, and Dr. Vachell of Cardiff, having come to the conclusion that the sufferings and symptoms were due to impacted gall-stones. With this I agreed, and on operating, removed three large gall-stones, but the symptoms, so far, have been only slightly mitigated, although she has completely recovered from the operation. Her jaundice has not yet disappeared, and her pain seems to be almost as great. There is very little bile coming from the wound, and very little passing in the stools, and I therefore assume that the story in her case will be that of the first two—that she will die of the progress of cancer of the liver.

We have here, then, a remarkable fact, interesting alike for pur-

poses of diagnosis and for those of surgical treatment: that persistent intense jaundice is not only not a symptom of gall-stones, but is a symptom which seems to make us hesitate to advise operation, even in cases where we feel pretty sure that gall-stones enter into the case. We cannot, of course, make absolute conclusions from so short a list as twenty-eight, but it must be admitted as extremely singular that the cases divide themselves sharply into two groups: one in which the operation is primarily successful, and equally successful in its secondary results; the other in which the operation has a mere primary success: that is to say, the patient gets over the risks of the operation, but that no satisfactory result in the way of cure is effected, and that these two groups are just as sharply characterised by the complete absence of jaundice in the first, and its persistent presence in the second.

On December 21st, 1885, in the clinical wards of the Royal Infirmary of Edinburgh, I performed cholecystotomy on a man, at the request of Professor Grainger Stewart. The symptoms were those of suppuration, not very clearly those of gall-stones. After a consultation with Professors Chiene and Annandale, and others of the staff, I opened the abdomen, rather with the belief that I should meet with an abscess of the liver, than what turned out to be the case—a suppurating gall-bladder, full of gall-stones. When I saw him in February, some seven weeks after the operation, he expressed himself as quite easy and relieved. I was asked by Dr. Grainger Stewart to give some clinical remarks on his case to the class, and I expressed myself in doubt as to the likelihood of permanent relief, seeing that although the acute symptoms had been relieved, his jaundice did not in any way improve. My anticipations were realised, for he became very ill about April 14th, and died on the 17th. At the *post mortem* examination, the liver was found to be in a condition of cancerous degeneration, and a large abscess was found behind it.

In this case, the primary results of the operation were satisfactory enough, but the secondary result amounted to a failure.

This brings me to speak of a point which I have repeatedly urged, and which all the lessons of abdominal surgery tend to confirm, not only with that department of surgery, but with every other. We must be much more careful in describing what we mean by success, and in operations we must clearly divide our definition of success into primary and secondary.

Let me give briefly illustrations of what I mean. A case has just been brought under my notice of an ovariotomy which has been placed on record as successful, and of which this was the subsequent history. The ligature was used for the treatment of the pedicle of a tumour on the left side. About four years after the operation, an abscess formed in the pelvis, and communicated with the rectum; from that abscess was ultimately discharged a large slough, in the centre of which was found the old ligature of the ovarian pedicle, and from the result of this abscess the patient died. No one will deny to this operation a primary success, but the secondary results were fatal, and therefore in the complete record the results of the operation must be qualified. In more than one case in my own practice, a patient, after having recovered primarily from an ovariotomy, has died of a cancerous growth in connection with the stump. Although the conditions here are less precise, it is to my mind only right that such results should be reckoned against the ultimate success of the operation.

In a case of excision of the knee-joint, where primary success was obtained, and where the patient went about on a stiff limb for about eighteen months, an abscess in the head of the tibia formed, the union between the two ends of the bones became undone, the limb had to be amputated, and the patient died. Here again the secondary results of the operation were not successful.

In these operations upon the liver, therefore, in accordance with this proposal, primary success (that is to say, recovery from the operation) must be regarded as altogether independent of the ultimate or secondary results which are obtained. In the list which I have submitted, so far as I yet know them, the primary results of the exploratory incisions in the eight cases are that seven recovered and one died, though as I passed a trocar into the substance of the liver in this eighth case, I am not quite clear that it ought to be regarded as an uncomplicated exploratory incision. I do not, however, think that, in this case, either the puncture of the liver or the exploratory incision influenced the case in any way, for the patient was clearly in a moribund condition when the operation was performed, and it was undertaken only in the hope and with the belief, which was shared by Dr. Clifford Allbutt and myself, that the alternative choice between gall-stones and cancer of the liver might rest in favour of the former.

Of the secondary results in the seven cases who recovered from the operation, a complete cure has to be recorded in Case I. How this was arrived at it was impossible to imagine; but it is paralleled by many other instances of complete cure following exploratory incisions of tumours of the spleen, pancreas, and uterus. In the second case, the patient is now as bad as ever. Cases IV, V, VI, and VII, have all died from the progress of the cancer.

In the second group of thirteen cases of hepatotomy, the secondary results have been in every case secured by a satisfactory issue.

In the third group, that of cholecystotomies, in Case XXVIII, the primary result was a failure, though I am of opinion that, in this case, the operation did not in any way affect, or even hasten, the result. Successful secondary results in two of the cases have not been achieved, for they have, as I have narrated, died of the progress of cancer, and a satisfactory secondary result is still in doubt for Case XXIX.

Dr. ROYLE (Manchester) said that according to the statements made by Dr. Harley, there could be no doubt that the liver might be punctured for the relief of congestion with some amount of safety. It was, however, worthy of consideration whether the same effect might not be attained by the application of leeches to the perinæum, a procedure now fallen very much into disuse. But there might be much mischief in the liver without any outward sign whatever. In 1884 he was called to a very old patient of his, between 50 and 60 years of age, who had never been ill. He had always been steady, and there was no suspicion of syphilis. About Christmas-time he lost his appetite, and became low spirited, with symptoms of confirmed indigestion. He got gradually worse, and became persistently jaundiced. He had no enlargement of the liver and no piles; no indication, in fact, of cirrhosis. There was a history of a railway accident, where he was very much shaken. He died in about a month, and at the necropsy the whole body was healthy, with the exception of the hepatic duct, which was quite obliterated, together with the common and cystic duct. There was an epitheliomatous condition of the mucous membrane of the ducts, and the gall-bladder contained about sixty gall-stones. This man never passed gall-stones, nor had any symptom, except just prior to his death.

Dr. D. BOYES SMITH (Netley) observed that Dr. Harley's paper had a very important bearing on the treatment of congestive conditions of the liver. Dr. Harley spoke of the erroneous teachings of the schools, and as he had the honour of teaching the subject of topical medicine at Netley, he thought that it was his duty to express his opinion on the points at issue. About one point he felt doubtful, and sought for enlightenment since Dr. Harley was rather indefinite, and that point was the exact object of his paper. Did Dr. Harley read it with the object of proving that the erroneous teachings of our schools were to be set aside, and that the practice which he had advocated to-day was to be adopted as a general rule in this class of cases? Now his experience appeared to be based on one case, in which he perforated the liver and removed twenty ounces of blood. Dr. Boyes Smith asked then whether this practice was either legitimate or desirable in all cases. If not, in what exceptional cases was it to be done? Dr. Harley had spoken of the operation as new, but this was perhaps the most ancient of all operations in the world. It was performed by the Chinese many centuries ago. Dr. Boyes Smith once operated on a man's liver, as he had done in hundreds of cases, where the patient was hectic and exhausted, in search of a supposed abscess, which, however, could not be found. A trocar was pushed in different directions, but in vain. The next morning the patient was much better, and said that Dr. Smith had been "trying on that Chinese dodge on him." It was done systematically and methodically in China and in India, and had been done at Netley in a vast number of cases. In conclusion, Dr. Smith thought that if this expression was to be used of "erroneous teachings of our schools," the new position must be clearly defined. Was the new operation to take the place of the present treatment? He might mention a case in which a similar proceeding was adopted, and about five ounces of blood came away, the patient dying within a few hours, so that the operation was by no means devoid of danger.

Dr. CULLIMORE (London) said that, notwithstanding the remarks of Dr. Boyes Smith as to the antiquity of the practice in China, he thought that whatever had been done in China, the credit of the operation as at present advocated was due to Dr. Harley. If it had been practised in India to the extent alleged by Dr. Smith, where had the cases been published? With regard to Dr. Harley's case, however, Dr. Cullimore confessed that he would like some information as to the exact nature of the case. We could quite understand that in cases of acute inflammation it might be desirable to abstract blood, either by general bleeding, or by the application of leeches. He would like to know if Dr. Harley would recommend it in cases of acute hepatitis followed by abscess. He himself had suffered from it on two occasions, and he well remembered the relief which he experienced from the use of leeches.

He would like to ask whether, in Dr. Harley's cases, any other form of blood-letting had been tried before using the trocar.

Mr. WILLETT noted that, some eight or ten years ago, he had to aspirate a doubtful swelling of the liver. He used an ordinary sized needle, and within two minutes the patient was dead. It turned out to be a case of malignant disease. At the *post mortem* it was made clear that no large vein had been pricked, and there was no hæmorrhage. The fatal sudden syncope seemed due to the impression made on the nervous system through the solar plexus.

Mr. HUMPHREYS had himself been subject to a tumour of the liver of a doubtful nature, and Dr. Harley suggested tapping it. He acquiesced; and Dr. Harley plunged two trocars into his liver about seven inches, and through the last trocar-wound a little pus escaped. He was very much better soon afterwards, and was now in good health.

Dr. J. EWART (Brighton) said that there was no doubt that the liver might be submitted with impunity to a great deal of surgical interference. He knew a gentleman who had a bullet-wound right through his liver, losing a large quantity of blood; but he recovered, and was now in good health. There was a preparation in the Medical Hospital of Calcutta of a piece of liver of the size of the hand, which had protruded through a gunshot-wound, and been sliced off. The patient ultimately got quite well. The question, however, was whether, in such a case as that described by Dr. Harley, the same result might not have been obtained in other ways, by leeching the perinæum and light diet. Was this case hypertrophic cirrhosis? In some of the cases where he had punctured the liver for abscess without finding one, an abscess had formed subsequently, and was attributed to the puncture.

Dr. JOHNSON had seen a great many cases of abscess of the liver treated by operative measures; during his first ten years abroad a great number of the cases of abscess ended fatally when the treatment was simply expectant, but during the last ten years, since surgical means had been resorted to, the results had been very much more favourable. He was certain that many of his earlier cases would have recovered under free incision. He thought that early diagnosis was of great importance, and in this we have been assisted by the aspirating needle, followed, if necessary, by incisions under antiseptic precautions. The majority of the cases so treated have recovered. With reference to the treatment of inflammatory attacks of the liver, congestion, hepatitis, etc., he had not treated such cases by puncture; he never found it necessary, the ordinary saline treatment and the use of ipecacuanha was generally sufficient. He did not believe that suppuration of the liver was to be prevented by surgical interference.

Dr. HARLEY stated, in reply, that he did not wish to maintain that puncture of the liver had been practised before now, but proper hepatic phlebotomy had never been done, or, at any rate, had never been published. Dr. Maclean only incidentally withdrew blood from the liver, and did not do so on purpose. Dr. Boyes Smith was indignant because he said that the present teaching on the subject of the liver was wrong, but he said that we were taught that operations on the liver were not advisable. He was taunted, he said, with only having one case, but these cases were not easy to get, and it was only at the last gasp that he could get permission to perform the operation. Every other mode of treatment had been tried before, and had been found to be of no use.

A CASE OF RETENTION OF THE URINE FROM ENLARGED PROSTATE AND OCCLUSION OF THE URETHRA FROM PRESSURE AND STRICTURES: OPERATION: RECOVERY.

Presented to the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

By W. C. WILE, M.D., Connecticut, U.S.A.

THE successful treatment of an enlarged prostate in advanced age has been a fruitful theme for discussion among surgeons from time immemorial. The literature upon the subject is simply enormous, and the proposed surgical procedures are numerous, and the remedies employed or recommended are equally numerous, and yet to-day we are really as far off from the desired end as we were fifty years ago. The medical journals, a few years ago, announced that Professor Agnew, of Philadelphia, had obtained signal success by the use of the fluid extract of ergot in this trouble, and that the drug exercised a powerful influence in diminishing the size of an enlarged prostate gland by capillary and fibre-contraction, and the bladder would be more thoroughly evacuated through its influence upon the muscular fibres of that organ, causing contraction of that viscus more completely than could be possible under the use of any other known remedy. Quite naturally, the treatment was received with great enthusiasm, and the world-wide reputation of the medical man was sufficient to have the remedy most thoroughly tried. At this time, I had several cases on hand, and I gave the new treatment a most thorough trial, and with the most indifferent results; and, if the medical journal reports are any index, they would indicate that my experience was almost identical with that of other observers. Since that time, I have had my quota of this class of cases as usually fall to the lot of the busy practitioner; and beyond the point of educating my patients in the proper manner of using the catheter, and advising its steady and persistent use, insisting upon a thorough evacuation of the contents of the bladder at each operation as the best means at my disposal for their relief, I have had to be content with such palliative measures as would diminish irritability, and keep the general health in as good condition as possible. The German surgeons have been operating upon a considerable number of cases in the past two years for the radical cure of this malady, by removing a part or the whole of the gland by an incision through the perinæum, but statistics show that no very favourable results have been obtained, and I am satisfied that it will have to be considerably modified, and a less dangerous operation substituted before it becomes popular with any considerable number of conservative surgeons. My distinguished friend, Dr. Robert Newman, of New York City, has recently devised a very ingenious instrument for the relief of this condition. It consists of an insulated sound, carrying, at its distal extremity, a concealed platinum cautery, which, when introduced into the urethra, and pressed against the enlarged gland, can be brought in contact with the hypertrophied tissues, and, when attached to an electro-cautery battery, will burn its way through into the bladder. This instrument, as I said before, is new, and the experience with its use is limited, but Dr. Newman reports excellent success in the cases on which he has used it. A larger number of cases must, however, be reported before a just estimate of its value can be made, though I do think that the *rationale* of the operation is a good one: and I cannot see why, if skilfully performed, it should not prove invaluable in many, if not the majority of cases. I intend to make the effort on the first case which, I think, is adapted to this mode of treatment.

The following case is so unique in so many particulars, that I am constrained to present it to you for your careful consideration, not that it brings forth any new or startling forms of treatment, or devises any new surgical procedure which will apply to every case of enlarged prostate gland; but it may illustrate the fact that, by a new procedure, complete immunity may be enjoyed from pain, and the remaining days of a well spent life may be passed in comfort and ease. Death, surely as fate, stared this man in the face, and his agony was simply terrible to witness at the time when I operated on him. I never performed an operation in my life where the results were more gratifying than those in this case.

Mr. J., married, American, aged 77, had been afflicted for twelve years previously to my seeing him first, with what he termed a bladder and kidney trouble. He had been for the most of this time under the care of an ignorant practitioner, who had dosed and dosed him until all of the indigenous materia medica, as well as all of the remedies he could hear of having a bearing on the case, had been used. From the simple irritability of the bladder, and the supposed disease of the kidneys, with which his attack commenced, he gradually grew worse, until occasional retention would take place, and the services of the medical man would be required to relieve the bladder of its contents, which was accomplished, through the ignorance of the operator, after painful and prolonged effort. These attacks of retention became more and more frequent, accompanied finally by hæmaturia, until about three years previous to the operation, when I was called at midnight to see him.

On arriving at the house, I found that, for twenty-four hours, his physician had made many and vain attempts to introduce the catheter and relieve the distension of the bladder. The man was walking the floor in great agony, moaning with pain. He held in his hand a small tin-cup, into which every few minutes he would introduce his penis, and make strenuous efforts to relieve himself by passing the urine; but all were unsuccessful, and every effort he made only tended to increase his sufferings. The perspiration was streaming down his face, and every movement indicated severe pain. His pulse was rapid; the bladder enormously distended (retention having been complete for forty hours), reaching nearly, if not quite, to the umbilicus. The front of his shirt was covered with blood, and everywhere he had laid down was in the same condition, as well as numerous cloths which were shown us. The meatus was closed with clotted blood, all of which had

been caused by the cruel and unscientific efforts of the operator to get into the bladder. The urethra was capacious, and there was no reason for this condition, save ignorance of the proper mode of treating and manipulating such cases.

Placing him upon his back, I quickly oiled a soft catheter, No. 5 (French scale), and commenced the task of trying to dodge the numerous false passages, pockets, and holes, made in the mucous membrane lining the urethra. I counted no fewer than five on my trip to the bladder, many of which I got into and backed out of as skilfully as possible.

I do not think that, in a somewhat extended experience as a general practitioner of medicine, I have ever seen a case where there were so many false pockets, though I have had my experience with other cases of a similar character. The urethra was exceedingly sensitive, tender, and difficult to manipulate. On entering the bladder, which I soon succeeded in doing, I slowly drew off nearly four quarts of urine, which made the patient feel quite comfortable. The next day, I was called to permanently take charge of the case, which I retained to the end. On examining him at this visit, *per rectum*, I found an enormously enlarged prostate, which was evidently the factor in the case. A careful examination of the urine failing to show any symptoms of a character which would lead us to suspect any organic disease of the kidneys, a conclusion which was verified as long as he lived, I at once commenced to teach the patient that he must pass the catheter himself, and that it must be done systematically. To teach him the procedure was not so easy a matter; but, with a little patience and perseverance, this was accomplished, and he became quite expert. Still I would be compelled to pass it myself at varying intervals during the year which followed, and this would be especially so at the times when the hæmaturia would be present. As for the pockets, some of them healed with firm cicatrices, which formed into strictures; and these, gradually contracting, made matters more and more complicated, so that, it spite of repeated dilatations by sounds at varying intervals, and energetic treatment for the purpose of dilating the urethra, it grew smaller and smaller, and we had to use instruments of a less size, until the canal got so small that we had to use a No. 1 as his daily instrument. Once in about three months he would have an attack of hæmaturia, at which times he would lose considerable blood. This condition of affairs continued, with a fair general health, until April 21st, 1885, when I was called suddenly at midnight to see him. I found him suffering from his usual retention. A No. 1 catheter I finally, after a good deal of hard work, succeeded in introducing; but, to my surprise, I found that the bladder was entirely filled with what seemed to me to be a single clot of blood. Palpation of the outside confirmed the diagnosis, and, aside from getting out one or two stringy clots, I was unable to remove any of the contents of the bladder. After long and continued attempts to break down this clot by manipulation with a small sound, and the injection and washing out the bladder with hot water, I finally injected, with the aid of the aspirator, one drachm of Jensen's pepsin made into a solution with hot water. After this had been in the viscus for one hour, I found the clot dissolved; and, with a little vigorous washing, got the bladder completely emptied. The great difficulty which I experienced in these manipulations was that I had to use such small instruments, as the passage was so nearly occluded. This was the last time I was able to get any kind of an instrument into the bladder, and, by ten o'clock that evening, it was entirely closed from within two inches of the meatus to that viscus. From this time, the interesting question was presenting itself, again and again: What shall I do for the best interests of my patient, and to relieve his sufferings most permanently? In this connection, it must be borne in mind that, from the time of relieving the bladder of the clot up to the present, his sufferings had steadily increased, and by noon the following day the bladder was fully distended, though vain and repeated efforts to get it through the urethra had been made. Every means in my power were resorted to. Careful prolonged attempts at catheterisation with hot and cold sounds, with every instrument of every size from a horse-hair up, but with no avail. Hot water in the rectum, ice to the perinæum—in fact, every resource at my disposal was successively tried with no result. I then aspirated over the pubes. This state of affairs continued for four days, aspirating twice a day, and making many efforts to get into the bladder, with the patient suffering more and more all of the time—such suffering as morphine seemed to be powerless to allay; daily, hourly getting weaker, and wishing and longing for death. I suggested perinæal section as the only resource left to me. The patient eagerly grasped at the idea, declaring that he would rather die than live another hour in the condition he then was in.

On April 28th, with the assistance of my friend, Dr. J. J. Berry, of Portsmouth, N.H., he was placed under ether, and, without a guide, perineal section was made. On reaching the vesical sphincter, I introduced the dilator I am in the habit of using, which, though made for the uterus, is a most valuable distender anywhere, (the name of the inventor I do not know), and commenced to stretch that muscle. This was most thoroughly dilated to its fullest extent. This was performed so that the urine would flow away for a time, and give all of the parts a rest, and particularly let the bladder recover its tone. It also was intended to exert a considerable pressure upon the hypertrophied prostate.

At this stage of the operation, I made a transverse incision through the urethra, one inch above the superior angle of the wound, and dissecting it up, stitched it to the lips of the wound, virtually transforming the patient from a man into a woman, as far as his urinary apparatus was concerned.

Though the operation lasted nearly one hour, the patient bore it remarkably well, and rallied from the shock in a very short time. From that period out, the change in the patient's condition was remarkable. Improved appetite, regular bowels, entire cessation of pain, entire withdrawal of the morphine, which had to be administered to allay suffering; in short, general improvement of the health. He rallied at once, and from the date of the operation till the complete healing of the wound, which took about three weeks and one-half, he steadily improved. When he desired to pass urine, he would take a full-size female catheter, put it into the artificial meatus, and pass it directly into the bladder without the slightest difficulty; and though he died some time after from pneumonia, up to that time he had no trouble whatever with either his bladder or urine in any way.

This case fully illustrates the supporting value of the raw foods. For two weeks this man took no other nourishment than this class of alimentation, and, in fact, he could retain no other on his stomach.

ON CERTAIN MOOTED POINTS IN GYNÆCOLOGY.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Brighton.

BY THOMAS ADDIS EMMET, M.D.,
Surgeon to the Woman's Hospital of the State of New York.

I HAVE for many years held the conviction, and have taught, that the key to the diseases of women is to be found outside of the uterus, and that this organ is not prone to take on disease except in connection with new growths, or as the result of some injury received during childbirth. I have, therefore, attributed a far greater degree of importance than have most of my *confrères* to the existence of pelvic inflammations, and to their bearing on the pathology of these diseases. This teaching has been the means of pointing out how common has been the confusion of cause and effect, and of treating symptoms for the disease. It can thus be shown that a displacement of the uterus is not always the primary difficulty; that a version is often but a symptom, and a flexure but an exaggeration of a version.

Mechanical dysmenorrhœa must, therefore, be considered a myth; and a supposed stenosis of the uterine canal is to be regarded, therefore, as of little importance in connection with menstruation.

Vaginal and cervical discharges, in the absence of gonorrhœa, are held to be due, as a rule, to an effort of nature to relieve an obstructed or impaired circulation in the pelvic, cardiac, or portal system.

We are able to recognise, from this view, that the uterus must become retroverted and prolapsed with any inflammatory change in one or both broad ligaments; and, as a rule, the uterus becomes extremely anteverted when the utero-sacral ligaments have been involved; but where an unusual degree of prolapse had existed previously, the version then becomes a backward one. The inflammation extends to the peritoneal surfaces in Douglas's *cul-de-sac;* and, as adhesions form, the uterus becomes drawn over backward and fixed in this position. No one holding these views will attempt to replace a retroverted uterus before the inflammation has been removed; and it will prove a revelation to many, when the fact is realised, that there is a limited field for the use of a pessary and a defined period for its employment.

With an apology for this digression—and yet it has a bearing—I beg to state briefly my conviction that a pessary can accomplish little by bringing about a simple change of version; for I hold that, in a state of health, the mere backward or forward turn of the uterus is often immaterial. The purpose to be attained by an instrument is to relieve the prolapse—a change which cannot be made to any advantage if the inflamed peritoneal surfaces above are to be put on the stretch when the uterus is lifted.

When a pessary is properly used, it will correct a prolapse, but give relief only indirectly by "taking in the slack," as it were, of the re-

lared or overstretched fascia and connective tissue of the pelvis. With the adhesions accompanying a local peritonitis, undue traction is exerted on one part or direction, with the effect of relaxing the tissues in another. The benefit, then, to be derived from the use of a properly-fitting pessary is, that the fascia and connective tissue are thereby enabled to give the proper support to the blood-vessels, thus diminishing their calibre, and, as a consequence, the congestion is lessened throughout the pelvis. Diminishing the quantity of blood, therefore, gives the relief, and not the change of version.

When an enlarged uterus is anteverted, and the displacement is accompanied by irritability of the bladder, this and other kindred symptoms are not due to the version, but to the degree of prolapse; any means fitted to correct this prolapse of the cervix, and to lift it to the proper plane in the pelvis, where the circulation could go on unobstructed, will relieve all the symptoms, notwithstanding that the degree of version may be thereby greatly increased. This is clearly shown in the relief afforded from the symptoms attributed to anteversion when, by the use of a long lever-pessary, with a sufficient curve behind to lift the cervix well up in the pelvis, the result is obtained, notwithstanding the position of the fundus may remain unchanged.

In corroboration, I shall also state that we have the same train of symptoms as those accompanying prolapse, when the uterus is lifted proportionately high in the pelvis. In both instances, the symptoms are due to the fact that the neck of the bladder, being bound down by the subpubic ligament, and being the only real fixed point in the pelvis, traction in a special line will excite a desire to empty the bladder, without reference to the version of the uterus.

A retroversion is often a congenital condition, and the female will be unconscious of the malposition so long as she remains free from any pelvic inflammation. In the congenital absence of the posterior *cul-de-sac* of the vagina, an inflammation is frequently established as a consequence of the futile efforts to correct a supposed deformity when the backward version of the uterus is the natural one for that individual.

A flexure of the body of the uterus is closely connected with an obstructed circulation, and has its cause in pelvic peritonitis, which at the same time intensifies the version.

It has certainly come within the observation of many here present to have seen instances of exaggerated dysmenorrhœa, where the largest-sized sound could be passed to the fundus without difficulty.

Twenty years ago, and more, when it was the practice to apply the nitrate of silver or caustics to an erosion, with the object of healing a supposed ulceration, it was then not rare to meet with instances where the os became eventually reduced in size to a minute opening. I have placed such a woman in Sims's position while she was menstruating, and after introduction of the speculum I have watched the escape of blood, drop by drop, from an opening too minute in size to be readily found at any other time; and yet, if there existed no pelvic inflammation, or impaired nutrition, the process was one free from pain.

Dysmenorrhœa is certainly not due to flexure of the uterine body, for it is a matter of common occurrence to observe all degrees of deviation in women where the menstrual flow takes place without pain. Dysmenorrhœa and flexure frequently exist together, but their association is an accidental one, though both may be due to a common cause.

We are to regard a dysmenorrhœa as a symptom merely, and one generally of perverted or impaired nutrition, where the fault will be found to lie in the nerve-centres, and not in the uterus or its appendages. An anæmic girl, whose nervous system has been unduly taxed by over-study, or from any other cause, will often suffer from dysmenorrhœa, whether her uterus be straight or flexed. Why should we, then, in treating this symptom retrograde for nearly a generation, and again practice division and dilatation of the cervix?

Under favourable circumstances, and with care, gradual dilatation may be carried out my means of graduated steel sounds, and the use may do as little harm as permanent good. But why employ forcible dilatation, and even with the object of lacerating the tissues of the cervix, as has been recently advocated and practised? If no other evil consequences followed this practice, and they are many, I should still enter my protest; but a new danger is to be anticipated. During the past spring, I was consulted by a woman whose cervix had been forcibly dilated two years before and purposely lacerated, as stated at the time, with the object of keeping the canal open. This operation was done for the purpose of curing an existing dysmenorrhœa and sterility, due, it was thought, to some degree of stenosis, but an examination satisfied me that the two conditions had resulted rom an old pelvic peritonitis. She stated that she was very ill from an attack of inflammation after the operation, and never regained her health. I found in the cleft of a triple laceration of the cervix an epithelioma which was there springing up, and so rapidly did it develop within a few days, that I fear the operative procedure proposed to her physician will prove of little benefit.

If there is a point in gynæcology clearly defined from my experience during the past fifteen years, when my attention was first given to the subject, and from the observation of others placed apparently beyond dispute, it is the close relation, as by cause and effect, between the injury resulting from laceration or division of the cervix uteri and the development of epithelioma.

This is the first instance I have known that disease to follow divulsion or forcible dilatation, and in placing it on record, in this connection, I offer it for the consideration of those who advocate the practice.

I admit that there seems to be, occasionally, a temporary improvement in the dysmenorrhœa after the cervix has been incised, or after the canal has been gradually dilated; but this apparent benefit is due, I believe, solely to the revulsive effect of the operation, and no especial harm is done unless septic poisoning takes place. If this does occur, the pelvic inflammation existing previously becomes intensified as a consequence, and the patient's life is then placed directly in jeopardy, or is, at least, rendered more miserable than before.

I have met also with a few instances where the Fallopian tubes happened not to have been involved in the neighbouring inflammation, and pregnancy has followed careful dilatation of the cervix, without lighting up the old pelvic trouble. The effect has been that the pelvic inflammation of long standing has been removed gradually through the new action, or revulsive effect, established in consequence of the advancing pregnancy. But this result is, unfortunately, not the rule, and is a very rare solution of the difficulty.

During my early connection with the Woman's Hospital, I was an advocate for division of the cervix, and I practised dilatation for the relief of dysmenorrhœa. But, in time, I became convinced that the practice was an irrational one; that it did a great deal of harm as a rule; and, unless an accidental pregnancy supervened, no one was ever cured permanently by it. I was then in a position which will scarcely be presented again, in being at the head of the only hospital of the kind, and practising at a time when the gynæcologists of the country could be counted on the fingers of a single hand. I was then so situated that I could watch clearly the effect of my practice, and held this supervision over a period of years, so that I feel confident the views I have expressed will stand the test of trial, and be confirmed eventually by the experience of everyone.

How few in practice realise that an overlooked pelvic inflammation is one of the frequent causes of irregular loss of blood from the uterine canal, and that sometimes the entire absence of the menstrual flow is due to the same cause. It calls, then, for some appreciation of the responsibility assumed, when the canal is dilated under such circumstances, and, as is often done, without the slightest knowledge as to the existing condition. Often, no less empirical, to say the least of the practice, in this condition, is the use of the curette, in blindly scraping away tissues from the uterine canal which have become only soddened from a hyper-secretion, due to the obstructed pelvic circulation; and the difficulty is often increased by the ignorant use of ergot, when given in large doses. The effect is but to increase the pelvic congestion, and though the loss of blood may sometimes be temporarily checked, it is only done by kindling afresh the existing pelvic inflammation.

Many a pelvic peritonitis has been set up, and complicated adhesions have been formed, through the injudicious use of ergot. With the general practitioner, it is common to mistake a small ovarian tumour for a fibroid, as, at that stage of its growth, a loss of blood is a frequent symptom of the former disease. In this condition, and without a knowledge of the consequences, ergot is often administered as well as where a fibroid is so situated that no expulsive power of the uterus could act upon it. In point of fact, ergot, in large or ordinary doses, does not act in any way upon a uterus which is not enlarged, or whose canal is not dilated, and its only action, where these conditions are not present, is to increase the pelvic congestion. Unless the os is dilated, and a fibroid is so situated that, with the aid of gravity, it can be expelled, it is bad practice to administer ergot, except in minute doses. In such doses, and by long-continued use, its action, through the ganglionic system, is as a tonic on the muscular coats of the blood-vessels situated in erectile tissue, and is thus most useful in the treatment of old pelvic inflammations.

Here exists a condition which beautifully illustrates the action of hot water when administered by vaginal injection. If the injection be given in the recumbent position, while the pelvis is elevated, very

hot water used, and the injection prolonged for a sufficient time, the loss of blood will be arrested by the reflex action thus exerted upon the capillaries. On the other hand, if the menstrual flow be arrested or absent from over-congestion, a flow will again take place as soon as the hot water shall have excited contraction enough to bring the circulation within the proper limits, and this can be aided by other efforts to increase the action of the skin.

We possess no more efficient means for relieving dysmenorrhœa than in the proper administration of these hot water injections, if they be continued at short intervals from the first pain, and until relief is obtained. But this agent could have no effect in relieving dysmenorrhœa if the latter were due to any mechanical cause, such as a flexure, or to the existence of a partial stenosis.

In the absence of malignant or specific disease, and of new growths, we may feel satisfied that an existing discharge from the uterine canal is not due to a diseased condition of its lining surface. And these conditions excepted, we hold that inflammation of the uterine tissue itself does not occur except during the puerperal state, when we have metritis, and it is easy to demonstrate, by its products, that it is then one of active inflammation. No such condition, however, can exist in the non-puerperal state, and after death we may look in vain for any evidence of so-called chronic metritis, endo-metritis, or endo-cervicitis. These conditions, therefore, I believe, do not exist, except in theory.

The discharges from the uterine canal, under ordinary circumstances, are due to extraneous causes, and the most common is some obstruction in the venous circulation attending an old pelvic inflammation. There is a constant tendency to resolution, from the great reparative changes in tissue attending each menstrual period. Granting, as recently claimed, that at this time the whole of the epithelial surface lining the uterine canal is not removed and replaced, yet certainly a large portion is thrown off, and under such circumstances the condition termed "endo-metritis" could not exist but for a limited period. The most extensive erosion recognised during life cannot be found after death, as there is no loss of tissue, and the tissues involved therein then become blanched, owing to the emptying of the capillaries. It is thus shown that the leakage, or over-secretion, is due to an obstructed circulation outside of the uterus. And even when the discharges seem to be due directly to an injury, as from the surfaces of a lacerated cervix, the rule still holds good. But for the septic inflammation set up at childbirth, and the continued obstruction afterwards to the circulation, as a consequence, the lacerated surfaces would promptly heal soon after the reception of the injury, and no ill effects would arise. Therefore, the cervical discharges are kept up afterwards by the existing pelvic inflammation; but, as soon as the circulation can become restored to a normal state, by the disappearance of the inflammation, and by the rupture or puncture of the distended mucous follicles, all excessive secretion will cease, and the raw surfaces will rapidly heal.

Holding the views I have so long maintained in relation to the cause of the discharges from the uterine canal, it followed that I abandoned early the practice of internal applications, and I believe that I was the first to do so. During the past seven years I have not made, in ordinary practice, an application of iodine within the uterine canal, and had, to a great extent, abandoned the practice some time before. While writing the first edition of my book on *The Principles and Practice of Gynæcology*, I advocated the giving up of this mode of treatment; but, by the advice of a friend, I re-wrote that portion, and expressed less decided views; being convinced that the profession was not then prepared to receive such radical teaching. Within the period specified, I have only resorted to the practice, in a few instances, for the introduction of Churchill's iodine to arrest a loss of blood, and only when, after an examination, I felt satisfied that the hæmorrhage was due to granulations, or to some growth within the canal.

I may now state that I have long reached a point in practice where I avoid, if possible, the introduction of any instrument or remedy within the uterus. I have not owned a sound for years, and my uterine probe has been broken for fully eighteen months—both instruments having become useless to me since I first acquired any knowledge of bi-manual palpation.

Last year, in my private hospital, I obtained the average time under treatment of all the non-surgical patients admitted previous to 1879, in whom any pelvic inflammation has been detected. Then I took the average on all those treated under like circumstances, and who had been admitted since that time. I must confess that I was not prepared for the showing. It was found that the patients who had been admitted since I had abandoned the use of internal applications to the uterine canal had averaged forty-eight days, or nearly seven weeks, less time under treatment than those treated in the usual manner. Accepting the facts, the deductions to be drawn from them are significant.

I can now recall clearly the condition of a number of patients who were under my care years ago, where I considered the existing pelvic inflammation as insignificant in importance as the recognised extent of the disease seemed to be. Yet these women were often under treatment year after year, and each relapse, with a fresh increase of inflammation, was then attributed to exposure to cold, or to some imprudence on the part of the patient herself, but never to the mode of treatment.

The service of the uterine canal is, beyond question, a most ready absorber of any remedy, however applicable; but its connection, or contiguity, or sympathy with the peritoneum, is too close to make the practice safe. To abandon the intra-uterine method of treatment, and to substitute for the uterine surface, the more extended vaginal one, for the application of any agent which would be suitable for introduction within the uterus, is a positive gain.

The better results obtained by me during the past six or seven years, referred to above, can only be attributed to a greater appreciation of the different shades of pelvic inflammation, and to a knowledge of their relative importance.

So far as the general principles of treatment are concerned, I know no other special change, unless it be that I now pay a closer attention to the details of general treatment, where formerly I relied much more upon local means.

The chief change in local treatment has consisted in giving up, as already stated, internal medication to the uterine canal. But an advance, no less important, has been made in the more judicious and more limited use of pessaries. Consequently, there have been but few instances of lighting up again the old pelvic trouble, since the displacement of the uterus, as regards the version, has been allowed to remain unchanged until the inflammatory cause has been so far removed that the uterus has gradually returned to its natural position, or the use of a pessary has been rendered both safe and of advantage. But, while the version is thus to remain unreduced for a time, it is necessary, throughout the course of the treatment, to correct the prolapse, as far as possible, by the use of cotton-wool pledgets, saturated in glycerine. This will fully test the skill of the operator, as to the proper position of the pledgets, and as to the plane in the pelvis to which it would be safe to lift the uterus, without exciting fresh inflammation, and where the circulation would be the least obstructed.

I have made, purposely, no reference as to the especial form of pelvic inflammation which is supposed to exist. We have phlebitis and cellulitis, lymphangitis and peritonitis, existing alone or together. But the limit and purpose of this paper will not admit of going into details. I may, however, state that, in my observation, cellulitis seems to be the most common form of inflammation met with, and one tending to rapid recovery, if septic poisoning do not occur. But the space in the pelvis is a very limited one where a cellulitis could exist to any extent without involving, by contact, more or less of the peritoneum. In time, the inflamed connective tissue seems to disappear, as if by absorption; and, when a pelvic inflammation has been of long standing, the condition then found must necessarily be more characteristic of an old peritonitis.

The chief purpose of this paper has been to show the necessity for abandoning the use of internal medication to the uterine canal, except under the conditions already specified. But to do so, it was necessary to enter somewhat into details, with the object of pointing out the pathological condition which, if admitted, renders it necessary to change a mode of practice which has consisted in treating the symptoms instead of the disease.

I have presented, perhaps, views familiar to many of you; but, as Herbert Spencer somewhere says: "Only by varied iteration can alien conceptions be forced upon reluctant minds;" and this is especially true of the general medical mind, which is so conservative, and so opposed to change, that, only by many iterations, can any advance be made.

FEVER IN INDIA.—Fever was very prevalent in the Central Provinces last year, causing no fewer than 17,634 out of the total number of deaths (301,684), or a ratio of 197.35 per mille. The officiating Chief Commissioner has requested the Sanitary Commissioner and the Civil Surgeons to direct renewed attention to the distribution of fever, whether it prevails most in jungly or in cultivated tracts, on highlands or lowlands, on black cotton soil or elsewhere. The effect of a break in the rains is also a point which will be carefully observed. It is further suggested that good might be effected by distributing medicines, as is now done where cholera prevails.

THE EARLY HISTORY AND ETIOLOGY OF FLEXIONS OF THE UTERUS.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association, in Brighton.

By GRAILY HEWITT, M.D.,
Professor of Midwifery and Diseases of Women, University College.

I do not propose, in this place, to enter on a discussion as to the importance or non-importance of uterine flexions and displacements, but I wish to be permitted, on this occasion, to offer a few remarks on a subject which has as yet been little considered; namely, the early history and etiology of uterine flexions.

In endeavouring to elucidate the early history of uterine flexions, we have to consider and account for both anteflexion and retroflexion. The most common condition in young women arrived at puberty is undoubtedly a slight degree of anteflexion; the most marked degree of anteflexion is merely an extreme degree of what must be regarded, numerically speaking, as the most normal condition of the uterus. But then we have the cases of retroflexion, concerning which the same kind of explanation is obviously impossible, unless we are to admit that retroflexion is also congenital; and this involves, therefore, the idea that in some women the uterus at the period of puberty is anteflexed, and in some retroflexed.

The congenital origin of anteflexion is admitted by most authorities, and it is, of course, a very natural kind of argument, although it may be carried too far, that a severe anteflexion is only an increase of the natural flexion forwards. Of late, a tendency has been evinced to place retroflexions in the category of congenital also. This question, therefore, as to the congenital origin of retroflexions, is one which must be discussed in the first place.

Ruge has placed on record two cases in which retroflexion was observed in the fœtus (*Zt. f. Geb. und Gyn.*, 1878, Bd. ii, p. 24) So far as I am aware, these are the only cases of the kind recorded. Fritsch, alluding to these cases of Ruge's, does not consider that they support the view that retroflexion is generally congenital; for, as he states, the uterus in the fœtus is high in the pelvis, and at that time there might easily be a slight retroversion.

Küstner, who has written an elaborate paper on Retroversio-flexio, argues for the congenital origin of retroflexion, although he does not adduce any new cases. He appears to arrive at the conclusion that retroflexion is congenital, because he is unable to explain its occurrence otherwise, and because he finds retroflexion present in a rather large proportion of virgins (*Zt. f. Geb. und Gyn.*, Bd. xi, 1885).

Vedeler, in a still more recent paper, advocates the congenital origin of retroflexion. He adduces no fresh cases, however, but argues from the presence of retroflexion in virgins. He states that when retroflexion is congenital, the uterus has a hard firm texture, and the flexion is irreducible, in contrast with those in which it is otherwise. Thus, it would appear that he admits this occurrence of retroflexion of an acquired character (*Arch. f. Gynæcol.*, Bd. xxviii, Heft. 2).

It seems probable, from the evidence adduced, that, in some instances, which are, according to my belief, few in number, retroflexion is congenital, or, to speak more correctly perhaps, pre-pubertal in origin. It is probable that, in a rather larger number of cases, there is a condition present in the fœtus and child, which may be designated slight retroversion; and that, as puberty approaches, the retroversion becomes converted into a retroflexion.

It is undoubtedly the fact that, in a certain number of cases of virgins, retroflexion of the uterus is met with, and has to be accounted for. In a period of about thirteen years, I find recorded in my private case-books 259 cases of marked retroflexion; and, of these, about 60 were virgins, or 23 per cent. of the whole. Küstner states that, in hospital practice, the proportion was 13 per cent.; and of 33 cases of retroflexion in private practice during two years, there were 7 virgins, making 21 per cent., which is very near my own figures, 23 per cent.

Küstner believes that undue laxity of the structures known as the utero-sacral ligaments is very frequently met with in association with retroflexion. Fritsch speaks of this condition of laxity of the structures in question as being congenital. Undoubtedly these structures are of importance in the prevention of retroflexion, and undue laxity of their muscular constituents may be of great consequence in the explanation of the production of retroflexion in virgins.

But in reference to the determination of the question as to the etiology of retroflexion, and, indeed, as to the etiology of flexions generally, we have to consider the condition of the tissues of the uterus as a whole. This is a point which has occupied much of my attention; the conclusion arrived at being that, in the early history of flexions, a peculiarly soft lax condition of the whole organ is liable to be met with, whereby, in fact, the uterus loses its normal firmness and resistance, and acquires a great degree of flexibility. Undue flexibility of the uterus is one of the factors with which we have to deal in accounting for flexions. How often, and in what degree, is undue flexibility of the uterus found to be present? It is probable—nay, certain—that it is very common. Some years ago, I had become familiar with a condition of the uterus which I described as undue softness. I associated it, later on, with imperfect nutrition of the tissues of the uterus. Undue softness implies undue flexibility, and the degree of softness is sometimes very marked. The softness may be associated with abnormal thinness of the parietes of the uterus, and it is often so associated. It is obvious that an unusually thin-walled uterus or an unusually soft-walled uterus may equally occasion undue flexibility of the organ. It is further obvious that, when these two conditions happen to coexist, and the uterus is both thin-walled and its tissues unduly soft, there will arise a degree of flexibility which may be carried to its extreme limit.

Softness to the abnormal degree above described has been recognised by other observers. Fritsch speaks of what he terms an infantile condition of the uterus, with undue laxity of the tissues of the uterus, combined with thin condition of the walls, as a strong predisposition to the occurrence of flexion. This softness, or looseness, or laxity of the tissues of the uterus appears, to me at least, to be the factor of the greatest consequence in the etiology of flexions. I have so frequently encountered it in young women suffering from general weakness, and imperfectly fed and nourished, that it appears to me quite certain that its presence betokens an essential nutrition-defect in the muscular elements of the uterus. This abnormally soft condition of the uterus may persist for a considerable time, certainly for two or three years, or longer, during the whole of which period the uterus is abnormally flexible and wanting in resistance.

At the period of puberty, as is well known, the uterus undergoes in health peculiar changes, and grows in size and in thickness. The walls become thicker, and the shape is a little altered. The greater thickness of the walls imparts a greater resistance, and the organ becomes less flexible, supposing the normal pubertal changes to occur. It is generally admitted that in many cases there are variations from the healthy standard, the uterus in some cases retaining for a longer time than usual some of its pre-pubertal characteristics. It is customary to describe this aberration from the standard as an imperfect development of the uterus, but it may be questioned whether this term adequately or accurately describes the nature of the aberration present under such circumstances. It is necessary to admit that in some cases the condition is the outcome of a truly defective congenital development, the uterus having been constructed on a smaller scale than usual from the first. In such cases puberty does not effect, and cannot effect, all that may be desired, and the uterus never attains its proper size or thickness. There are other cases, however, which I believe are far more common, where the uterus before puberty possesses its proper size, but when puberty arrives, the organ fails to increase sufficiently in thickness and size; the nutrition of the body generally being at a low ebb, and material in sufficient abundance for the requirements of the economy not being forthcoming, the uterus does not increase in thickness and firmness. These latter cases seem to be instances of defective growth rather than cases of retarded development. It is possible that there may be a third or intermediate class of cases in which the pubertal development is deferred or delayed, and in practice it may be held to be difficult to distinguish such cases from those in which the defect is nutritional rather than developmental. There is another alternative opinion which might be given of some such cases, namely, that the nutritional defect is the cause of the developmental retardation in the pubertal changes in the uterus.

The large majority of cases which present themselves in actual practice in which the tissues of the uterus are found in an abnormally soft relaxed state between the ages of 15 and 18 are, I believe, instances of nutritional deficiency; and in these cases, the uterus being fairly large, but wanting in resistance, while the walls are frequently also defective in thickness to a certain extent. Fritsch, as already stated, looks on this condition as congenital, but when it is found present in adults, he follows Hildebrandt in attributing it to onanism. This idea is entirely unsupported by any facts which have come under my own observation, and I do not think there is any foundation for such an opinion. I mention this opinion, however, for the evidence the statement affords that other observers besides myself have noticed the existence of abnormal softness of the uterus.

Undue softness of the uterus is in many cases associated with congestion of the organ. And congestion is no doubt in this way one of

the causes of flexion of the uterus. It has been well pointed out by Dr. Mary Putnam Jacobi, in her recent papers on Endometritis, that, when the arterial tension is below the normal, the menstrual congestion of the uterus is liable to be extended over too long a period, and that the condition of the uterus under such circumstances is one of what may be termed menstrual subinvolution. One effect of such menstrual subinvolution may be therefore to bring about a continuously soft and therefore unduly flexible condition of the uterus.

In women who have had children, the condition known as subinvolution is well recognised. Under these circumstances, also, the uterus is larger, more vascular, softer, and therefore more flexible, than it should be. The fact that flexions are very liable to be originated soon after parturition is well known, and there can be little doubt that the excessive softness of the tissues which is associated with defective *post partum* involution is largely responsible for the flexions originated at this period. No doubt something must be allowed for the loosening and relaxation of the circum-uterine tissues and connections of the uterus, which are liable to be strained and lengthened, and otherwise altered, during the parturient process, in such a way as to favour the occurrence of flexions and displacements of the uterus. I would here remark that the low condition of the nutrition-process which I have pointed out as being almost invariably met with when the uterus is unduly soft, is probably the principal factor in these cases of submenstrual and subpuerperal involution. The blood-current is slow because the heart is weak; and the heart is weak because it, in common with the other organs of the body, is imperfectly nourished. The stagnation is recognised in the uterus as submenstrual or subpuerperal congestion. Clinical evidence could be abundantly brought forward to prove the remedial effects of good food in removing the difficulties liable to present themselves under these circumstances; and this is alone sufficient to demonstrate the truth of this important generalisation.

Undue flexibility of the uterus is sometimes present to such a degree that the fundus falls alternately forwards and backwards with the greatest readiness, and the uterus is alternately anteflexed and retroflexed. This oscillation is noted particularly in those cases where the walls of the cervix are thin as well as unduly soft. This is not a condition of health, and it is highly important that its nature should be well understood.

In connection with the question of softness and undue flexibility of the uterus, it must be pointed out that a very important part of the history of flexions is the fact of the occurrence of consolidation and hardening of the tissues, which almost always occurs sooner or later. An illustration will best explain my meaning. A young woman, between the ages of 15 and 18, is the subject of an acute anteflexion; the tissues of the uterus are soft, the flexion is easily reducible; marked symptoms may not be present. The nutrition improves, the uterus becomes less soft and less pliable, the anteflexion persists, and consolidation occurs. The uterus having become hardened in the course of a year or two, say, at the age of 21, it is found that the patient is affected with an anteflexion which is not so easily reducible. Three or four years later the consolidation increases in intensity, and straightening of the uterus is attended with still greater difficulty. I have had opportunities for following the course of events in several such cases as that just described. The behaviour of the uterus, under these circumstances, resembles the setting of plaster-of-Paris, only that, in the case of the uterus, the setting process occupies some years in place of a few seconds. If the patient be continuously underfed, the uterus will remain permanently small and thin-walled, and various other effects will follow which cannot here be considered in detail. After the uterus has finally set and hardened, the flexion is necessarily a confirmed one, and its curability will be difficult in proportion to its duration. In the soft uterus, the flexion present may be evanescent, and, therefore, not productive of disturbance or suffering; in the hardened uterus, the flexion is certainly, in many cases, productive of pain, suffering, or interference with function. I refrain from considering the nature of the changes in the uterine tissues which give rise to the hardening and consolidation above alluded to, owing to want of time.

Traumatism.—Undue flexibility of the uterus is one of the chief factors in the origination and perpetuation of flexions. The other important factor is forcible downward pressure on the uterus, as a whole. Over-exertion, special occupations, chronic constipation necessitating straining efforts at stool—these are some of the more common methods by which the downward abdominal pressure is increased. This pressure acts slowly, as a general rule, but in many cases very surely, and suffices, in the course of a year or two, to convert a slight flexion into a severe one, always provided that during this period the uterus remains abnormally flexible. When the uterine fundus has descended a certain distance, the early operation of undue pressure from above renders restitution of the flexion impossible, and, in course of two or three years, an extreme degree of flexion may be produced. This is, I believe, the early history of very many severe cases. There is in these cases a slow traumatic action in operation, resulting in the conversion of a slight into a severe distortion of the uterus. These are cases which are necessarily somewhat obscure and difficult to explain, unless the operation of the two factors—the abnormal softness and the excessive pressure from above—be duly appreciated and estimated. But there are many cases in which the influence of traumatic causes is more acute, and the results of the same more directly obvious and recognisable. And one principal object I have had in bringing this subject before this meeting is to emphasise and demonstrate the accuracy of this statement.

The influence of traumatic causes in the production of uterine displacements early attracted my attention, and I have for some years past carefully investigated the facts of cases coming under my notice, with a view of throwing light on this subject. The evidence obtained from cases observed during a period of thirteen years I now adduce. Of course the mere fact of the patient having had an accident, or over-exertion at some time previous, is no proof of its having caused the displacement. But when the history shows that the accident in question was followed by a train of symptoms which did not exist previously, when the symptoms are such as are commonly connected with such displacement, when, moreover, these symptoms are relieved or removed by treating the displacement, the traumatic etiology of the displacement becomes in a manner proved. In the cases to be alluded to, cross-examination of the patients elicited facts in the highest degree confirmatory of this view of the matter.

I shall mention here only the evidence collected in regard to the etiology of cases of retroflexion, as observed in virgins; other cases are excluded. In the first series of seventy-nine cases of retroflexion of the uterus, sixteen were observed in single women. In eight out of the sixteen cases there was a marked history of illness and incapacity coming on after a severe fall, or accident, or strain of some sort and the clinical facts in these cases favoured the conclusion as to the important influence of the fall or strain in deranging the position of the uterus.

In a second series of 180 cases of retroflexion of the uterus, 42 were observed in single women. In 20 out of the 42 cases, the effects were traceable to the effects of accidents, etc. Thus there were 8 (5, 9, 28) in which horseback exercise appeared to have been prejudicial, the malady dating from the time of its occurrence. In 5 (4, 7, 20, 21, 27) a severe fall was the probable cause; in one, the patient turned a somersault downstairs; in one, the fall took place at the age of 9, the injury to the sacrum being, however, the only one noted at the time. In the other 4, the fall occurred just before the symptoms developed themselves, and the falls were very severe. In one, it may be said to have proved ultimately fatal, the general incapacity for movement leading to general malnutrition, and, finally, mesenteric disease. In 4 cases (6, 19, 24, 31) lifting and straining were distinctly responsible for the displacement. In 4 cases (7, 22, 26, 27) overwalking was the probable cause. In one (29) a very rapid exhausting walk to catch a train was the cause of the retroflexion. In one very interesting case (16), retention of urine, during a long railway journey, caused the displacement. In 2 cases (12, 13) measles and scarlet fever preceded the occurrence of symptoms; the pelvic organs being left probably too weak to resist gravitation and straining efforts. It thus appears that, taking 58 cases of retroflexion of a marked character observed in virgins, in quite one half of the whole number, the facts relating to the history of the illness for which the patients sought relief, showed that a traumatic cause for the displacement was highly probable, there having been a suddenly acting straining or compression of the pelvic organs, followed quickly by occurrence of symptoms indicative of traumatic laceration or contusion of parts within the pelvis. It is, of course, quite impossible to say what was the condition of the pelvic organs prior to the recorded accident; and it is difficult to say whether the uterus was in a fairly normal position and shape prior to such accident, or whether it was slightly displaced, and the accident brought about a considerable intensification of displacement; for instance, converting a slight retroversion at once into an acute retroflexion. And it might, of course, also be argued that the acute retroflexion found to be present was congenital, though it would seem difficult on that view to account for the sudden onset of symptoms, and the general course of the incidents related.

It has been stated that in half the whole number of cases, a traumatic cause was traceable. In the other half, the retroflexion prob-

ably arose more gradually, becoming slowly intensified, and various symptoms added one to the other as the displacement increased in degree, until relief was at last sought in consequence of the increasing incapacity for locomotion, pain on defæcation, increasing menstrual troubles, or supervention of other inconvenient and distressing symptoms.

There do not appear to me to be any essential difference between retroflexion and anteflexion in reference to the manner in which the flexion becomes aggravated, though there is, of course, a difference in regard to its initiation, the normal uterus being in a state of slight anteflexion to begin with. And there is the fact to be borne in mind that there is a possibility of greater bending backwards than forwards, so that, in one sense of the word, a retroflexion may be worse than an anteflexion.

There seems to be no doubt that the position the uterus occupies in the pelvis determines, in a given case, whether the fundus shall be driven backwards or forwards. For example, when a comparatively short distance only separates the middle part of the uterus (its axis of rotation) from the pubic symphysis, there will be a greater liability to retroversion and flexion; and conversely, when the uterus is too near the sacrum, the tendency will be to anteflexion. This latter condition of undue posterior fixation has been pointed out by Schultze as having the effect noted. Vedeler ascribes the initiation of retroflexion in some cases to a too short condition of the anterior attachments of the uterus.

There is a not uncommon form of uterine flexion which Emmet describes as flexion of the cervix. The uterus is anteflexed, the cervix is long, acutely bent upon itself, and the os looks either somewhat upwards or directly upwards. Its origin is possibly, in some cases, a defect of development at puberty, but in many cases it arises, I believe, in another way. The cervix is long, and its tissues soft; the uterus is subjected to forcible pressure from above, and, in consequence of this pressure, the cervix is doubled on itself by being squeezed against the floor of the vagina. This could not happen if the cervical tissues possessed their normal thickness and firmness. An anteflexion is sometimes converted under these circumstances into anteflexion with retroversion, and this complication constitutes one of the most unmanageable of the uterine distortions likely to be met with.

The corollary from the foregoing generalisation is that, in the medical treatment of young women, great care should be taken to preserve a general high standard of nutrition, and that over-exertions are dangerous, more particularly in cases where the general health is impaired and weakened, and the nutritive process sluggish and defective.

Dr. BANTOCK disagreed, on essential points, with Dr. Emmet. He spoke highly of the value of a well-fitting, properly applied pessary, and had seen instantaneous relief following its introduction. Dr. Bantock observed that Dr. Emmet spoke as though there was but one form of dysmenorrhœa. There were many, and each form required different modes of treatment. With regard to intra-uterine treatment, he believed that many cases could be treated successfully by Dr. Emmet's method of many months' rest, but if he had to give up this mode of treatment, he would find that great part of his occupation was gone.

Dr. GORDON (Portland, Maine):—Mr. Chairman, while I have the most profound respect for Dr. Emmet's opinions as enunciated in his public teachings, and in many kind personal interviews, I must take exception to a few points in his paper. 1. I believe that the wholesale condemnation of forcible dilatation of the cervical canal is rather too sweeping—while I am in full accord with him on the general question of introducing foreign bodies, like the sound, etc., into the uterine cavity, believing it has done much harm; I am quite sure that by forcible dilation we often cure some forms of dysmenorrhœa by this means. We stretch the sciatic and other nerves for painful affections, and I believe that we accomplish similar results in cases of a sensitive cervical canal, as we cure vaginismus by forcible stretching. 2. I think Dr. Emmet puts too much stress upon what he calls inflammation of the pelvis of long continued duration. He thinks, so long as this inflammatory condition exists, no manipulations should be made upon the uterus, not even to apply a pessary; now, I believe I am right when I say that Dr. Emmet says distinctly that he considers the term "chronic inflammation a myth," "that the process of inflammation is a short one." I think, beyond this short process, we have only results of inflammation; namely, exudate and chronic passive congestion, the treatment of which is better secured by any means that relieves the engorgement, such as leeching, or bleeding locally in any other way, or by any means that restores the normal circulation; now, in many of these cases, displacements of the uterus prevent free circulation, and, with care, I am sure the displacement can be permanently relieved by a proper adjustment of a well-fitting pessary. I feel quite sure, from my own experience (the only guide from which I can speak), that the long preparatory treatment recommended by Dr. Emmet, before the operation for lacerated cervix, is many times unnecessary, for the reason that the operation itself relieves the congestion by the hæmorrhage, and takes away the pain and local symptoms, as well as the reflex disturbances; all these symptoms are as much a part of passive congestion as inflammation, and while they exist it simply shows a condition in which inflammation may be readily excited, unless much care is exercised in manipulating the pelvic organs. I believe, however, that the term inflammation a wrong one, inasmuch as it proves a bug-bear, and prevents the best method of relief.

Dr. EMMET briefly replied, maintaining the opinions already expressed in his paper.

CHRONIC RHEUMATIC ARTHRITIS, ESPECIALLY AS AFFECTING THE HIP-JOINT.

BY WILLIAM ADAMS, F.R.C.S.,

Surgeon to the Great Northern Hospital, and to the National Hospital for the Paralysed and Epileptic, etc.

ALTHOUGH the affection generally described as "chronic rheumatic arthritis," or, as it is sometimes called, "rheumatoid arthritis," or "rheumatic gout," is known to invade every articulation in the body, still it has always been considered that the hip-joint is one of its favourite seats; so much so, indeed, and so frequently is it met with amongst the changes of advancing years, that the term "morbus coxæ senilis" has been frequently applied to it.

A good deal of surgical interest attaches to this affection, as it occurs in the hip-joint, in consequence of its supposed connection, in many cases, with an accident, generally a fall on the hip; and by the late Mr. Canton, these cases were fully described in a chapter "On Shortening of the Leg from Bruise of the Hip," in his *Surgical and Pathological Observations*, published in 1855.

I would, therefore, on the present occasion, confine my observations essentially to the occurrence of this affection of the hip-joint, although the opinions expressed, with regard both to its pathology and treatment, will admit of a more general application to the other articulations of the body.

The attention of the profession seems first to have been directed to this affection by Dr. Haygarth, of Bath, in the year 1805[1]; and, observing that it did not answer to the description of either gout or rheumatism, Dr. Haygarth suggested the name of "nodosity of the joints," to distinguish it from other affections. To this designation Dr. Robert Adams[2], of Dublin, very properly objects that it would apply chiefly to the smaller articulations of the hand and foot, and only to the late stages, as the articular swellings in the earlier stages are by no means hard. Dr. R. Adams observes, "as, in its early stages, the swellings are principally constituted by the effusion of much synovial fluid into the interior of the joint, they are soft and fluctuating." Other designations have been given to this affection, such as that by Cruveilhier, who has designated the disease, "usure des cartilages articulaires," to which Dr. R. Adams also objects that it "would localise the disease too much, confining it merely to one of the articular textures." The term "chronic rheumatic arthritis, or rheumatic gout," was first given to this affection by Dr. R. Adams, who directed attention to it as early as 1836, at the meeting of the British Association at Bristol in that year.[3]

In 1857, Dr. R. Adams published the first edition of his large work on this subject, with the atlas of beautiful drawings taken from *post mortem* examinations; and, in 1873, he issued the second edition of this work, which is likely to remain the standard work of reference, not only for a knowledge of the anatomical changes accurately delineated, but also in reference to the symptoms, pathology, and treatment of this affection, which is, no doubt, of much more frequent occurrence in Ireland, from exposure to cold and moisture, than in other countries.

I may here incidentally remark, that Dr. Robert Adams was lame for many years previous to his death in 1875, and suffered from

[1] *Clinical History of Diseases.* Part i, Acute Rheumatism and Nodosity of the Joints. 1805.

[2] *A Treatise on Rheumatic Gout, or Chronic Rheumatic Arthritis of all the Joints.* By Robert Adams, M.D. Dublin. Second edition. 1873.

[3] See *Athenæum*, September 10th, 1836: Report of the Proceedings of the British Association.

chronic rheumatic arthritis of the right hip-joint. He also suffered from Dupuytren's finger-contraction in the left hand, the ring-finger being very much drawn down. When I visited the museums of Dublin with Dr. Adams, on the occasion of the British Medical Association meeting in that city, in the year 1867, and was driving with him to the Richmond Hospital, etc., he remarked that he found this contracted finger very useful in holding the reins. He regarded this as an incurable affection; but, in his own case, its association with chronic rheumatic arthritis was to me a point of interest, as pointing to a similar constitutional origin of both affections. Valuable contributions, also, by Dr. R. W. Smith, of Dublin,[4] and Drs. Colles and Wilmot, of the same city, have added to our knowledge of this affection. The late Mr. Edwin Canton, of London, included, in his *Surgical and Pathological Observations*,[5] an ably written chapter on "Chronic Rheumatic Arthritis," and dwelt a good deal upon this affection in its surgical aspects, chiefly in reference to the supposed union of intracapsular fracture of the neck of the femur, partial dislocation of the head of the humerus, and other surgical injuries, such as the displacement of tendons, etc., the diagnosis of which had been obscured by our imperfect knowledge of the effects of chronic rheumatic arthritis.

Mr. Canton, also, in another chapter of great practical value "On Shortening of the Leg from Bruise of the Hip," describes cases in which arthritic changes, similar to those of rheumatic arthritis, are developed after an accident, usually a fall on the great trochanter. Mr. Canton first published his observations on this subject as early as 1848.[6]

In the modern nomenclature of diseases, the term osteo-arthritis is considered to be the term best applicable to this affection; but I consider that no advantage is gained by altering the old and well known title of chronic rheumatic arthritis, which, in its name, certainly implies some clinical and pathological ideas of the nature of this affection, and this I shall therefore continue to use.

Morbid Anatomy.—In the present paper, it is not my intention to do more than lightly touch upon the morbid anatomy of this affection, which has been very ably described by Dr. Robert Adams, and all the structural changes occurring in the later stages accurately delineated in the atlas accompanying his work.

For an account of the changes occurring *in the early stages*, we can hardly expect to be able to refer to *post mortem* examinations; but, from the clinical history, there can be no doubt that these depend upon subacute or chronic synovitis, and chronic inflammation of a rheumatic character affecting the articular ligaments and fibrous structures, including the fascia and aponeurosis in the neighbourhood of the joint. We know how prone the fibrous structures are to rheumatic inflammation, and how often such symptoms as lumbago precede the rheumatic arthritic affection of the hip-joint.

The structural changes occurring *in the later stages* are well illustrated by the specimens in all our large museums; and when I was engaged in revising the description of the preparations in St. Thomas's Hospital Museum many years ago, for the publication of the new catalogue, it seemed to me that the specimens of the so-called chronic rheumatic arthritis, especially of the hip-joint, might be arranged in two classes: in the first class, those in which hypertrophic changes predominate; and in the second class, those in which atrophic changes predominate. There are also intermediate specimens, in which the hypertrophic and the atrophic changes are more equally blended; and these might be grouped in a third class. But the broad lines of distinction between the first and second classes should, it seems to me, be preserved; and with these distinctions in their anatomical characters, corresponding differences in the clinical history of the cases may doubtless be traced, although, from the absence of clinical records referring to the older specimens, this could not then be done.

Class I.—In this class, in which hypertrophic changes predominate, and nodulated growths of bone occur in connection with the articular extremities of the bones, both within and external to the joint, the bones entering into the composition of the joint are generally increased in density and weight. When the hip-joint is affected, the head of the femur is not depressed, nor is there any absorption or alteration in the angle of the neck of the femur, their structures being increased in density and weight. The head of the femur is enlarged by the addition of ring-like masses of bone, on and surrounding its articular surface, and overhanging the margins, so as to produce a mushroom-shaped appearance of the head of the femur. The articular cartilage on the head of the femur is generally eroded at the upper part, with very slight, if any, absorption of the exposed bone; but the exposed osseous surface is increased in density, and eburnated with a thick layer of ivory-like polished bone. This is found to occur only in the situations in which motion has been preserved. Now, in the hip-joint, the movements of flexion and extension are always preserved to a limited extent long after those of rotation and circumduction have been lost. In consequence of the osseous growths within and external to the capsular ligament, the upper part of the head of the femur becomes in this way polished, and a corresponding patch of eburnation will be found on the acetabulum.

Nodulated masses of bone also spring from the periosteum on the neck of the femur, and pedunculated osseous growths, from the size of a hemp-seed to that of a small nut, often in considerable numbers, are attached to the synovial membrane on the neck of the bone, and other situations. These pedunculated osseous growths, consisting of fibro-cartilage undergoing ossification, are, no doubt, developed on the hypertrophied synovial fringes or glands, first described by Mr. George Rainey in a communication to the Royal Society, presented by Mr. J. Simon, and published in the *Proceedings of the Royal Society*, May 7th, 1846. This subject is also referred to by Mr. Rainey in the second volume of the *Transactions of the Pathological Society*, December 4th, 1848, p. 109, in connection with the formation of loose cartilages removed from the elbow-joint, which he believed to have been developed in the synovial fringes.

In a paper which I read at the Pathological Society on February 6th, 1866, and which was afterwards published in the *Transactions* of that Society, vol. xvii, 1866, p. 232, accompanied with a plate (Plate 9) showing the microscopic characters of a pedunculated loose cartilage, which I removed from a young man aged 19, at the Great Northern Hospital, on November 27th, 1865, I referred to the beautifully injected specimens of the synovial fringes, now in the microscopic collection at St. Thomas's Hospital. I also remarked that the bodies which Mr. Rainey considered, "by their structural arrangement of epithelium, basement-membrane, and peculiar convoluted arrangement of vessels, to be adapted to the special purpose of secreting the synovia"..... "appear to be sometimes the seat of various morbid changes, such as deposits of fat, fibroid, and fibro-cartilaginous tissue; and in one specimen in St. Thomas's Hospital Museum, pedunculated cartilaginous bodies in the knee-joint appeared to have originated in these structures." These pedunculated bodies are met with in greater abundance and of larger size in the knee-joint, when affected with this form of rheumatic arthritis, than in any other articulation, doubtless from the large size of the capsule, and the extent of surface removed from articular pressure favouring their development.

External to the capsular ligament, and near to its attachment at the base of the neck of the femur, nodulated growths of bone, and stalactitic osteophytes spring from the periosteum in the neighbourhood of the trochanters.

The different sources from which the osseous growths, internal and external to the joint, are derived, is a subject of some interest; and, whilst engaged in describing the specimens in St. Thomas's Hospital Museum, I made some observations in explanation of the enlargement of the head of the femur, which I proved, by making sections through several enlarged heads, to be due to the development of bone in the articular cartilage. In these sections, I could distinctly trace the newly formed masses of bone becoming gradually fused with the original bone, after the ossification of the intermediate layer of cartilage, and interstitial absorption of the layer of compact bone naturally existing under the cartilage, and forming the outline of the head of the femur.

The process of osseous enlargement I have, therefore, shown to be one proceeding from without inwards, the newly formed and superadded bone being applied to, and gradually fused with, the original bone; instead of a process proceeding from within outwards, as described by Rokitansky under the term osteoporosis, and generally believed by English pathologists. Rokitansky[7] speaks of the enlargement of the head of the femur in rheumatic arthritis, as due to "*expansion, softening of the tissue of bones, and the consequent induration.* Osteoporosis consists in an enlargement of the Haversian canals, and cells of bone," ..... and he observes, "I hold it to be an inflammatory process of a gouty character, which gives rise to rarefaction, swelling, and a peculiar deformity of the head of the femur and acetabulum, an osteoporosis succeeded by induration."[8]

The minute structural changes occurring in articular cartilage, resulting in the development of the ring-like masses of bone, applied to

[4] *Dublin Medical Journal*, vol. vi.

[5] *Surgical and Pathological Observations.* By Edwin Canton, F.R.C.S. London: John Churchill. 1855.

[6] See *Medical Gazette*, 1848.

[7] Rokitansky's *Pathological Anatomy*, Sydenham Society's Translation, vol. , p. 171.

[8] *Ibid.*, p. 173.

and surrounding the head of the femur, were described by me in a paper read at the Pathological Society on February 4th, 1851, and published in the third volume of the *Transactions* of that Society (p. 156) in 1851, together with a plate showing the microscopical appearances of the articular cartilage during the process of ossification (see plate 4).

These observations equally apply to the changes occurring at the margins of the condyles of the femur, when the knee-joint is affected; and in all the other articulations of the body, producing the so-called "lipping character" caused by the overhanging of the masses of new bone formed in the articular cartilage. They also equally apply in explanation of the thickened nodulated appearance sometimes seen in the central parts of the articular cartilages on the condyles of the femur, and other articular surfaces.

In describing the formation of these nodules in one of the specimens —a knee-joint, which I exhibited to the Pathological Society—I stated, "sections through the prominent nodules in the central portions of the cartilage on the condyles of the femur, showed these prominencies to depend upon irregular hypertrophy of the cartilage, the hypertrophied portions generally containing a central point of ossification. The process here could be traced from its commencement. As ossification of these nodules advances, a junction with the articular surface of the condyle is soon effected, and, the thin limiting layer of compact bone becoming absorbed, the appearance on section is that of a continuous mass of cancellated structure, as seen in the head of the femur exhibited (Fig. A)." ..... "In consequence of this junction, which seems invariably to occur, though at different periods, these growths have uniformity, so far as Mr. Adams's observations have extended, a broad base, and, therefore, never become pedunculated, or form loose cartilages." Thus, it would appear that *within the capsular ligament*, the excess of bone which characterises this form of disease is developed.

1. In the articular cartilage, producing enlargement of the head of the femur in the hip-joint, the lipping of the condyles in the knee-joint, and the other articulations of the body, and the nodular enlargements on the articular cartilages of the joint, frequently seen on the condyles of the femur in the knee-joint.

2. In the synovial fringes, or glands, first described by Mr. Rainey and corresponding, when hypertrophied, to the so-called villous outgrowths on the synovial membrane, producing the pedunculated osseous growths, and loose cartilages frequently met with in this class of cases.

3. Nodulated growths of bone also spring from the periosteum of the neck of the femur in the hip-joint.

Then in the hip-joint bone is also developed in the fibro-cartilaginous structure of the cotyloid ligament, adding to the enlargement of the acetabulum, in adaptation to the enlarged head of the femur.

External to the capsular ligament, osseous outgrowths are produced from the periosteum, forming at the hip-joint large osteophytes, springing from the neighbourhood of the trochanters, on the femur, and around the acetabulum on the pelvic bones. In the knee-joint, and other articulations, these osteophytic growths, external to the capsular ligament, are less abundant.

Thus, internal and external to the capsular ligament, hypertrophic changes occur, consisting in the development of new bone in various tissues; but in the typical specimens of chronic rheumatic arthritis, in which the hypertrophic changes predominate, I have never seen ossification occurring in the substance of the capsular ligament itself. It is, however, remarkable that, in the cases properly called osteo-arthritis, in which the atrophic changes occur in an extreme degree, such as described in Charcot's disease, small plates of bone are found in the substance of the capsular ligament, and also in some of the adjacent fibrous tissues.

The acetabulum presents a variety of structural changes, essentially similar to those already described; but it gradually becomes enlarged and expanded in adaptation to the enlarged head of the femur, and altered in shape by the ossification of the cotyloid ligament, the growth of nodular masses of bone, and periosteal osteophytes at its margins. The articular cartilage, after becoming fibroid in character, disappears, to a variable extent, and eburnation of exposed bone, with ivory-like, or, as it is called, porcelanious deposit, takes place in parts corresponding to similar patches on the head of the femur, where motion has been preserved.

The osseous changes, which I have described as occurring in the head of the femur, and in the acetabulum, are admirably illustrated in the dried specimens which I exhibit to the Society.

The fibrous structures within the joints, such as the ligamentum teres in the hip-joints, the crucial ligaments in the knee-joints, and the intracapsular portion of the tendon of the long head of the biceps in the shoulder-joint, all undergo fibrous degeneration, and gradually disappear, allowing more or less complete dislocation of the articular extremities to occur; and this has sometimes led, especially in the shoulder-joint, to the erroneous diagnosis as to the partial luxation being the result of an accident.

The synovial membrane presents only such appearances as are commonly met with as the result of chronic inflammation—especially thickening—but with the addition of hypertrophied synovial fringes, fibrillated outgrowths, and pedunculated osseous bodies.

Class II.—In this class, I propose to arrange the specimens described as chronic rheumatic arthritis, met with in our museums, in which atrophic changes predominate. The general characters and structural changes presented by the specimens are very different from those just described in the first class, in which the hypertrophic changes predominate. In the second, or atrophic class, the bones, entering into the composition of the joint, are much lighter than natural, and a light, porous, or spongy condition of the osseous tissue prevails.

When occurring in the hip-joint, interstitial absorption of bone steadily progresses, resulting in diminution in the size, and alteration in shape of the head of the femur; also absorption, and shortening of the neck of the femur, so as to allow the head of the bone to become depressed, and sink below the level of the top of the great trochanter, producing considerable shortening of the limb. Only small osseous enlargements, and nodulated outgrowths of bone, are found in this class, and these more in the neighbourhood of the acetabulum, which otherwise exhibits the atrophic characters; though some are met with on the femur, in the neighbourhood of the trochanters, the *atrophic* changes predominating as much as the *hypertrophic* changes predominate in the first class.

Class III.—There are, in our museums, many specimens which, as far as structural changes are concerned, appear to hold an intermediate position between the first and second classes already described. In these specimens, the atrophic and hypertrophic changes are combined in more or less equal proportions. The bones entering into the composition of the joint are generally rather lighter than natural. In the hip-joint, the head of the femur is a little depressed, but, at the same time, also enlarged by the development of new bone, and the neck of the bone is a little shortened by interstitial absorption. Osseous nodules, and osteophytic outgrowths, occur both on the femur and in the neighbourhood of the acetabulum, so that the characters are thus mixed in different degrees, and in all the three classes described, corresponding differences in their clinical history may probably be traced.

Pathology.—The pathology of this affection has, of late, attracted more than usual attention, since its alliance with Charcot's disease, and possible dependence upon a neurotic origin, was brought prominently before the profession in November, 1884, by Mr. Morrant Baker.[9] In the discussion, which was continued through three or four evenings, the experience of many of the leading members of the profession was elicited, though considerable difference of opinion was expressed as to its general pathology and causative influence. It would be far beyond the limits of the present paper to enter upon this subject at any length; but, in seeking for a causative influence to explain the production of this peculiar form of joint-disease—generally known as chronic rheumatic arthritis or rheumatic gout—it seems to me that we have, from a clinical point of view, to consider: 1, the influence of rheumatism and gout as constitutional causes; 2, the influence of locomotor ataxy as an induced disease of the spinal cord; 3, the influence of a form of reflex neurosis, as suggested by Dr. Ord; and, 4, the effects of injury in producing structural changes, closely allied to those which occur from the above-named causes.

1. With regard to the first two constitutional causes, there can be no doubt of the intimate association of the joint-disease both with rheumatism and with gout; in some individuals, the rheumatic element prevailing, more especially, I believe, in the cases grouped in the first class, in which the hypertrophic changes predominate, mostly occurring in patients about or a little beyond the middle period of life—say, from 40 to 50 years of age—and, in other individuals, the gouty element prevailing, more especially, it seems to me, in cases grouped in the second and third classes, in which the atrophic changes predominate, mostly occurring in patients older than those in the rheumatic class—from 55 to 65 years of age.

We find this disease generally occurring in members of a decidedly gouty or rheumatic family; and it is often hereditary. The joint-affection is often preceded, for some years, by wandering rheumatic affections of the joints, lumbago, etc. The character of the dull

[9] *Trans. Clin. Soc.*, vol. xviii, 1885, p. 62.

wearying pain in the joints, aggravated at night, and in cold damp weather, inclination to stiffness, pain increased by certain movements—that is, the movements not generally used—seems clearly to indicate its rheumatic character. The clinical history, as described by Dr. Robert Adams, and confirmed by our own experience, can leave no doubt as to the causative influence of rheumatic gout.

2. With regard to the theory of a neurotic cause, and especially of locomotor ataxy, as a direct causative influence of chronic rheumatic arthritis, this theory is held by those who consider that Charcot's disease and chronic rheumatic arthritis are one and the same affection; but this is a conclusion to which I cannot assent. There is no doubt that the structural changes in Charcot's disease are very similar to, and, indeed, may be said to be identical with some forms of joint-disease, which have been hitherto included amongst the specimens of chronic rheumatic arthritis in our museums, more especially those in which the atrophic changes predominate, and which I have placed in the second class; and if the clinical history of these specimens were known, I believe many of them would be recognised as examples of Charcot's disease, the clinical features of which were not known at the time when these specimens were preserved. It is true that specimens exhibiting the most advanced stages of Charcot's disease have not been preserved in the old collections; but when we consider how little surgical attention would be attracted to a painless joint-affection, in a hopeless paralytic cripple, the absence of specimens seems to me to be explained.

When we remember that the morbid structural changes in both these affections are of the simplest possible character, namely, those only of atrophy and hypertrophy, associated in some cases with chronic inflammatory changes, but without any new morbid growth or deposit, such as we see in cancer or tubercle, then we must readily admit that such simple changes may result from very different causes affecting the nutrition of the joints involved; and, before assuming the diseases to be similar or identical, in consequence of the similarity of the structural changes, we must study the diseases in their clinical aspects.

If, then, a typical case of each of these two diseases be taken for demonstration, we shall readily be able to appreciate the wide differences, both as to the structural changes and their clinical history, of which the following is a summary.

1. *In chronic rheumatic arthritis*, the structural changes are essentially those of hypertrophy. *In Charcot's disease*, the structural changes are essentially those of atrophy.

2. *In chronic rheumatic arthritis*, the affection commences in subacute or chronic inflammation of the synovial membrane, and fibrous tissues in the neighbourhood of the joint, gradually extending to the articular ligaments, the periosteum, and the bone. *In Charcot's disease*, the affection commences in the bones, the osseous structure being the seat of the primary and essential changes all through. This affection may, therefore, properly be called osteo-arthritis.

3. With regard to the clinical history, *chronic rheumatic arthritis* is a painful affection, all through its course, from its commencement to its termination. *Charcot's disease* is a painless affection throughout its course.

4. *In chronic rheumatic arthritis*, the pain complained of is always limited to the joint or joints involved, or to their immediate neighbourhood. *In Charcot's disease*, shooting-pains are complained of throughout the limb, and also in the opposite limb.

5. *In chronic rheumatic arthritis*, there are no symptoms of febrile-disturbance, or any gastric symptoms; nor are there any pupillary symptoms, known by the name of their first observer, Argyll-Robertson. *In Charcot's disease*, all these symptoms are present, and diagnostic.

6. *In chronic rheumatic arthritis*, the reflex phenomena are present; and, when the knee-joint is affected in one limb, the patellar reflex is always present in the opposite limb. *In Charcot's disease*, the absence of the patellar reflex is one of its earliest and diagnostic symptoms.

7. *Chronic rheumatic arthritis* is characterised by very limited mobility of the joint affected, any attempt to increase motion being painful. *Charcot's disease* is characterised by increased mobility, and a flail-like condition of the knee, hip, and other joints affected.

8. *In chronic rheumatic arthritis*, the progress of the affection is remarkably slow, and chronic in its character, the articular changes being slowly developed in the course of some years. *In Charcot's disease*, the progress of the joint-affection is remarkable for its rapidity, extensive destruction frequently occurring within a few months.

9. *In chronic rheumatic arthritis*, the sufferers from this affection frequently live to an advanced period of life, not uncommonly reaching 80 years of age, or more. In Charcot's disease, as far as I can learn, old age is seldom reached, the patients either dying as paralytic cripples, from some disease connected with nerve-lesions, or from some intercurrent disease, the progress of which they are unable to resist.

With such broad lines of distinction between typical cases, the two diseases in question would seem to have but little in common, as far as their clinical history is concerned, and, in practice, we must regard them as separate and distinct forms of disease, though the structural changes may so nearly approximate, that, in Charcot's disease, we can only say that the difference exists as one of degree and not of kind, the atrophic changes being carried further than in any case of chronic rheumatic arthritis.

As far as I have been able to ascertain from physicians of special experience, it does not appear that Charcot's joint-disease occurs in more than a small percentage of cases of locomotor ataxy, probably about three or four per cent. Dr. Buzzard stated, in the discussion at the Clinical Society, that "he had probably seen two or three hundred cases of tabes, yet he could count upon the fingers of his two hands the number of patients with joint-disease."

In these exceptional cases, therefore, some constitutional condition or diathesis may be supposed to exist, and that may be a tendency to rheumatic gout. Charcot has stated[10] "that, in cases of locomotor ataxy, chronic rheumatic arthritis may supervene, and present none but its ordinary characters." Hence, no doubt, specimens are sometimes met with presenting more osseous outgrowths and hypertrophic changes than occur in typical cases of Charcot's disease, which appears to be a special form of joint-disease, properly termed osteo-arthritis, from its chief seat being in the osseous tissue, determined in its course, by this peculiar paralytic affection, locomotor ataxy, with which the genius of Professor Charcot, one of the greatest clinical observers of the age, has traced its direct connection; and it is especially worthy of remark that it does not occur in connection with any other form of paralysis.

With regard to any other neurotic influence, such as a reflex neurosis described by Dr. Ord[11] as contributing to the production of the joint disease we generally recognise as rheumatoid arthritis, some atrophic muscular conditions, and some other affections enumerated in a very able address in medicine, delivered at the meeting of the British Medical Association in Belfast in 1884, I am unable to express any positive opinion.

The direct influence of the spinal cord on the nutrition of the limbs is well established, and Charcot's joint-disease is doubtless one of its results, when some degenerative changes happen to be set up, perhaps in the ganglionic cells in some yet undiscovered nerve-centre regulating the nutrition of the osseous system, supposed to be located in the medulla oblongata according to Dr. Buzzard. But, whether there is any reflex neurotic influence propagated from the internal organs,—say, the ovaries and uterus,—such as to modify the nutritive changes in the joints, and produce structural alterations, such as we see in chronic rheumatic arthritis, as suggested by Dr. Ord, may yet be considered as requiring further confirmation. The suggestive inquiries of Dr. Ord will doubtless lead to further observations in this direction.

Want of time obliges me to pass over a class of cases of great surgical interest, in which structural changes similar to those which I have described as resulting from chronic rheumatic arthritis directly follow an injury to the hip-joint in elderly people, generally over 50 years of age. Interstitial absorption of the head and neck of the femur occurs, associated with some osseous enlargement of the head of the bone, and nodular outgrowths of bone in the neighbourhood of the trochanter to a limited extent. Corresponding changes in the acetabulum also occur, but the atrophic changes predominate. Shortening of the leg and eversion of the foot and limb result, and some injury to the joint, such as some displacement—we might call it a bone-setter's dislocation—or even an intra-capsular fracture of the neck of the femur, has sometimes been supposed to have occurred, and to have been overlooked by the surgeon who first saw the case.

This class of cases was, I believe, first described by Dr. R. Adams; and one of the earliest recorded cases was that of the celebrated comedian, Charles Matthews, the elder, who died on June 28th, 1835, aged 50. About ten years before his death, he "was thrown from his gig while he was descending Ludgate Hill. He got up and walked immediately after the accident, but continued lame from that period up to the time of his death. He had been attended by some of the most eminent surgeons in London, but they had not been able to determine whether there was a fracture of the bone or not, but kept

[10] *Op. cit.*, Discussion, p. 60.

[11] "On some Disorders of Nutrition related with Affections of the Nervous System, Neurotic Dystrophia," by W. M. Ord, M.B.Lond., 1885.

him lying on a sofa for nearly twelve months. The injured limb was shortened, the foot everted, the thigh wasted; and, owing to the constant inclination of the body forward, on one side a lateral curvature of the spine took place. He died of disease of the heart, and Mr. (afterwards Sir) William Snow Harris, of Plymouth, removed the acetabulum and part of the thigh-bone, which he exhibited to the meeting of the British Association held in Dublin in the year 1835.

Casts from these specimens were given me by Dr. Robert Adams, and are now exhibited. It will be seen that atrophic changes predominated in this case, though associated with hypertrophic changes to a limited extent, as shown by the addition of new bone to the circumferential margin of the head of the femur, and nodular outgrowths of bone in the neighbourhood of the trochanter. The head of the femur was much altered in shape, and depressed to the level of the top of the great trochanter. The neck of the femur was much shortened, and its axis at right angles to the shaft of the bone, with an inclination backwards. Eburnation to a limited extent had taken place at the upper part of the head of the femur, and at a corresponding part of the acetabulum, showing that motion to a limited extent had been preserved. The acetabulum was expanded, and presented some small nodular outgrowths of bone at its margin.[12]

The specimen excited much interest. Dr. Adams observes,[13] "as in the announcement of the history of the case it was asserted that it settled in the affirmative the much agitated question whether the intracapsular fracture of the cervix femoris was or was not susceptible of osseous union.....A section of the bone had been made, and the line of union, in Mr. Harris's opinion, was clearly manifest." Dr. R. Adams was present at the meeting; and, both from the history and the *post mortem* appearances, "maintained the opinion that it was a specimen of this chronic rheumatic affection, well known in Dublin at that time, under the name of morbus coxæ senilis."..... "In this view, Mr. Smith, the late Dr. McDowell, and other surgeons around, concurred. Even Mr. Snow Harris himself seemed quickly to become a convert to our views."[14]

This subject has been ably discussed in its surgical and pathological aspects by the late Mr. Edwin Canton, in a chapter "On Shortening of the Leg from Bruise of the Hip," illustrated by some admirable drawings from specimens in the Charing Cross Hospital Museum, which I have examined with Mr. Morgan. These specimens came mostly from the collection of the late Mr. Howship, and have carefully noted clinical histories connected with them.

TREATMENT.—The treatment of rheumatic arthritis, or rheumatic gout, which we have been considering as a chronic affection, is not generally considered to be hopeful or satisfactory. When once established, this affection seems to pursue its course persistently, and in spite of any such treatment as can be adopted under the circumstances in which we live as to climate, warm baths, shampooing, etc.

We must, however, remember that there is an *early stage* in which, probably only an experienced practitioner would be able to say, in any given case, that this may be the early stage of chronic rheumatic arthritis. He would doubtless form this opinion from the symptoms presented at the time, together with a knowledge of the family history as to rheumatic or gouty tendencies, and other circumstances. What, then, it may be asked, are the indications for treatment in *the early stage?* We know that we have to contend with rheumatic inflammation of the fibrous structures in the neighbourhood of the joint, sometimes extending to the articular ligaments and the synovial membrane, accompanied with effusion in the joint—in general terms, rheumatic synovitis. The indications, therefore, are to arrest the local inflammatory changes, and, at the same time, to remove the cause by treatment calculated to check the outbreak of any rheumatic or gouty tendencies. Counter-irritation, by means of blisters, iodine, etc., is frequently recommended, but I prefer to rely as much as possible upon the principle of rest and sweating. The Turkish bath was strongly recommended by Dr. Robert Adams; but the vapour-bath, in which the body is included without the head, can be obtained in a convenient form, and given in the bedroom without risk of exposure to cold.

When the knee, or any other of the joints of the upper or lower extremity, is affected, a local vapour-bath, in which only a portion of the limb is included, can be employed; and I frequently recommend it to be used two or three times a day, for about twenty minutes each time. This bath was constructed for me in the year 1861 by the late Mr. Blaise (Savigny and Co.), in St. James's Street. The steam is generated by a spirit-lamp heating a tin saucer full of water; a wire framework forms the bath when covered by a thick flannel and waterproof sheeting.

In addition to the bath, in this stage, I apply warmth and moisture perpetually to the joint affected, by means of lint soaked in hot water, wrung out in a towel, and covered with oiled silk, or waterproof sheeting; or a piece of spongio-piline steeped in hot water, and wrung out, will keep the joint perpetually steamed. A little tincture of iodine may be painted over the skin before the hot lint is applied; and in this way the vapour of iodine seems to be more useful than when the tincture is applied, and allowed to dry.

When the joints of the fingers are affected, I recommend linen rag steeped in hot water, to which a little carbonate of soda or lithia should be added, and covered by an India-rubber finger-stall, the top of which should be cut off, to avoid the nail being included. If the pain should be severe, tincture of opium may be sprinkled over the hot lint or rag.

Internally, iodide of potassium still remains one of the most generally useful remedies; but other preparations of potash, soda, lithia, salicine, etc., are given with great advantage, according to the condition of the patient, and the predominance either of rheumatic or of gouty symptoms.

In the chronic stage, when the joint-affection has not been subdued before arriving at this stage, there can be no doubt that it becomes an incurable affection; and the only object of treatment is to arrest the further progress of mischief. The principle of treatment is not rest and sweating, except when some aggravation of the symptoms occur. The principle is rather *to preserve motion*, without producing pain, by shampooing and passive movements; also, by *constitutional treatment*, to endeavour to subdue or restrain the rheumatic or gouty tendencies.

Locally, I have great confidence in the application of turpentine liniment. Turpentine in any form, internally and externally, seems to be useful generally in rheumatic affections; and, when the turpentine liniment has been rubbed on the joint with a piece of flannel, the latter may be applied to the joint, and bandaged on with a light woollen bandage—a material, known as *domet flannel* at the linen-drapers', is the right material to use in all rheumatic cases. Compound camphor liniment, and other local applications, may be used from time to time, and warm dry-dressing and bandages are always useful. I recommend cotton-wool, or pine-wool; and also the use of the pine-wool oil I have found beneficial, always employing a flannel bandage to the joint.

Then, with regard to the use of warm baths in the chronic stage, the mild alkaline baths of Bath and Buxton are useful in many cases; but I have seen a larger number of cases benefitted either by the sulphur baths at Harrogate, or the hot sulphur baths of Luchon, in the Pyrenees, or those of Aix-les-Bains, in Savoy. At these Continental hot-springs of Europe, not only are all the advantages of the sulphur treatment obtained, but the shampooing and passive motion, so essential to the recovery of motion and muscular power in cases of rheumatic arthritis, are carried out by the massage-treatment, adopted under the direction of experienced surgeons. We have no such system at the bath establishments in England. There can be no doubt, however, that the change of climate, diet, etc., also benefits our English patients.

When these advantages cannot be obtained, the ordinary sulphur-vapour bath, now procurable in all bath establishments, will be found useful; and shampooing, with passive movements, can be employed by the attendants engaged at these establishments.

Internally, the medical treatment must be directed by the indications either of a rheumatic or gouty tendency; and, by careful diet and strict observance of rules laid down by the medical attendant, these rheumatic or gouty tendencies may be held in check.

[12] These appearances are represented in plate 7, fig. 1, in the Atlas accompanying Dr. Robert Adams's work, in which the case is described at page 51.

[13] *Op. cit.*, p. 53.

[14] *Surgical and Pathological Observations* p. 83.

BATH.—Dr. A. B. Brabazon reports that the general mortality from all causes, in 1885, equalled 21.4 per 1,000. Corrected by deducting the deaths not belonging to the city, the rate was 20.3. Dr. Brabazon affirms that not only was the infantile mortality increased by the atmospheric conditions of the last quarter of the year, but the mortality amongst old people over 60, and more particularly over 80, was also increased. Judging from the number of deaths (129) of those who arrive at that patriarchal age, they must form a not inconsiderable part of the population. The principal factors of the mortality are to be found among diseases of the respiratory organs, notably bronchitis and pneumonia. The death-rate from infectious diseases, 0.5 per 1,000, is the lowest Dr. Brabazon has yet experienced, and he states that almost all cases of serious zymotic disease had their origin elsewhere. The Statutory Hospital received forty-three cases, including thirty-seven of scarlet fever; and it is gratifying to find that the working-classes now fully recognise the benefits conferred by that institution.

PREGNANCY COMPLICATED BY PURPURA HÆMORRHAGICA.

By JOHN PHILLIPS, B.A., M.B.Cantab., M.R.C.P.,
Physician to the British Lying-in Hospital.

This disease was first accurately described by Werlhof,[1] more than a century ago, and is still called "maladie tachetée de Werlhof" by the French physicians. Rogert and Adam, in 1789, were evidently acquainted with the disorder, and the former describes a case at some length under his care ;[2] while Gräfe had previously written a thesis on the subject.[3] Cockcroft gives an historical account of it up till 1827, and quotes Duncan's opinion as to its probable pathology.[4]

Very little real advance in our knowledge has been made since Willan wrote his work on *Cutaneous Diseases*, in 1808, until quite recently ; while the connection between this disorder, and the changes going on during the pregnant condition, seem to have received but scanty notice. Scattered, however, through the literature on this subject, cases are found which show that, should it occur during pregnancy, the character of the prognosis will be materially altered.

The complication of pregnancy by purpura hæmorrhagica is extremely rare, but, unfortunately, of very serious moment. Puech[5] mentions two cases, the second occurring seventeen years after the first, in both of whom death took place ; another has recently been under my own care, and, fortunately, has made a good recovery.

Case I.—The patient, aged 21, was six months' pregnant. The onset of the symptoms began with a sudden attack of colic, followed by general petechial rash and epistaxis. On the fifth day, labour-pains began, and terminated with the birth of a male child ; there was no trace of purpura on its body. No external hæmorrhage followed, but the uterus became much distended with blood-clot. The patient, becoming delirious, died on the eighth day. No *post mortem* examination was allowed.

Case II.—The patient, aged 30, was eight months gone in her fifth pregnancy. The rash appeared suddenly during the day, and labour set in the same night. The expulsion of the fœtus was followed by severe *post partum* hæmorrhage, which proved fatal.

Case III.—The patient, aged 32, with six children, was within a fortnight of her seventh confinement. All her labours had been quite natural, and there was no history of bleeding in her family. She had lived very badly for six months previously. The first thing noticed by her was that the motions were black. Three days afterwards, she found, on undressing herself, that her legs were covered with irregular bluish-black blotches ; no pain or irritation accompanied their appearance. The next morning she awoke with blood pouring out of her nose and mouth, and found that the skin-eruption had increased. Bleeding from the mouth and nose continued during the sixth day of the illness, and in the evening she passed urine of a dull red colour ; slight pains came on, as of commencing labour. Her complexion was sallow ; her hair black ; the tongue and lips were dry, brown, and cracked. The gums were of a purplish colour, bleeding on the slightest touch ; and the breath was very offensive. The pupils were widely dilated, but she made no complaint of dimness of vision. By the ophthalmoscope, both optic discs were seen to be normal. Temperature, 98.4° Fahr. ; pulse, 124 per minute, small and thready, but quite regular. On both legs and arms, there was a generally distributed hæmorrhagic rash, of a purplish colour, neither tender to the touch, elevated above the surface, nor disappearing on pressure. Amidst this, at intervals, were numerous irregular blotches, with fairly defined margins, but of no recognised form. On the adductor surface of the right thigh, just above the knee-joint, and on the flexor surface of the right wrist, there were two hæmorrhages, deeply seated, tender on pressure, and of the size of an almond. The urine was thick, of dark tea-colour, containing one-third of albumen ; no sugar. The fœtal heart-sounds were distinctly audible through the abdominal walls, beating 144 per minute. *Per vaginam*, the os uteri was dilated to the size of a shilling, and with each pain the membranes became tense. Strong beef-tea was administered freely, and twelve drops of the tincture of the perchloride of iron every four hours. Tincture of krameria was applied to the gums.

The next day, February 17th, 1885, she seemed somewhat improved. A few more spots had come out on the legs, but they were preceded by no hyperæmic redness of the skin ; the gums were still bleeding. She had uterine pains every half hour ; the os uteri was more dilated.

February 18th. Pains were still going on ; the os was dilated to the size of a half-crown ; the breech was presenting. Pulse 120 ; temperature normal. At the apex the systolic sound was "murmurish" in character ; there was a soft systolic anæmic murmur at the second left costal cartilage. The gums were improving ; the fæces were still black.

February 19th. The patient was delivered of a female child, without any rash ; the placenta presented three patches of hæmorrhage, the clots being apparently two or three days old.

The next day the heart-sounds became distinctly altered. The first sound at the apex was replaced by a distinct murmur, blowing in character, rather low pitched, heard most distinctly in the fourth interspace to the left of the sternum. It was not conducted into the axilla, nor heard at the angle of the scapula. There was still the systolic murmur at the second left costal cartilage ; and the second pulmonary sound was found accentuated. The patient made a quick recovery ; the apical *bruit* entirely disappeared in ten days' time, and should therefore be classed in the first group mentioned by Dr. Angel Money[6]. The rash slowly disappeared, in the usual way.

Morbus maculosus Werlhofii is an acquired and transitory hæmorrhagic condition, occurring sporadically and of brief duration, obscure in etiology and spontaneous in development (Wetherill)[7]. According to Russell,[8] the blood is the site of the disorder. Immermann[9] thinks that it arises either from disease of the blood, or the vascular walls, or of both combined. No actual disease of the blood-vessels has at present been discovered, and, so far as we know, the blood may be normal, or its coagulability may be somewhat impaired from scarcity of fibrin.

Henoch's theory that it is a form of vaso-motor paralysis seems more tenable ; and it is quite possible that a disturbed condition of the vaso-motor nerves might so alter local blood-pressure as to cause rupture of the capillaries or, at least, allow of diapedesis through the broadened interstices of the capillary wall. Dr. Stephen Mackenzie,[10] who appears to be the most modern writer on this disease, slightly modifies Du Castel's classification, and divides cases of purpura into four varieties ; the vascular, toxic, mechanical and neurotic. Weir Mitchell[11] and Milner Fothergill[12] give very strong reasons for the neurotic origin of some forms of this disease ; while Leloir[13] recognises three groups : (1) Purpura from modification of the vessels ; (2) Purpura from modification of the blood ; and (3) purpura nervosa.

In pregnancy, we have present a combination of the characteristics of the vascular and neurotic groups. In the later months there is a remarkable diminution in the number of the red blood-corpuscles, and a considerable increase in fibrin ; moreover, the nervous condition is one of very high tension, and with the almost invariable left ventricular hypertrophy, there is increased arterial tension. In addition, the general depreciation of health occurring during the process must not be overlooked. The only reason which suggests itself to me for the extreme rarity of purpura hæmorrhagica during pregnancy is the highly fibrogenous state of the blood found in this latter condition. When it does occur, hæmorrhages would almost necessarily take place at the placental site, as in my own case, and labour thereby be induced, as in the three cases detailed.

As is usual, the symptoms came on suddenly ; no pain seemed to accompany the appearance of the rash, and at no time was there a rise in temperature, although the pulse was very high.

Treatment seems to be unsatisfactory ; indeed, Wunderlich is sceptical of the value of any method. Turpentine is recommended by many, but Dr. Duncan Bulkley[14] strongly advocates ergot. He administers it either as the liquid extract, by the mouth, or injects it subcutaneously, as ergotin. He considers the disease due to paralysis of the vessels, which ergot overcomes, but whether it does so by causing a contraction of the vasa nervorum, he is unable to decide. Cianciosi,[15] King,[16] Minich,[17] and others, have recorded cases where from a grain to a grain and a half of ergotin was injected every two or

[1] P. G. Werlhofii *Opera Omnia*, coll. et aux. J. E. Wichmann (1775).
[2] *De Morbo Maculoso Haemorrhagico* (Thesis, 1789).
[3] *De Petechiis sine Febre* (Thesis).
[4] *Purpura* (Thesis, 1827).
[5] Du Purpura Hæmorrhagica (*Annales de Gyn.*, Tome xvi, 181, p. 2873).
[6] Frequency of Cardiac Murmurs in the Puerperal State (*Med. Chir. Trans.*, 1882, p. 87).
[7] *Philadelphia Med. Times*, 1884-5, p. 427.
[8] British Medical Journal, 1883, vol. ii, p. 115.
[9] Ziemssen's *Cyclop. of the Pract. of Med.*, vol. xvii, p. 243.
[10] British Medical Journal, 1883, vol. ii, p. 409.
[11] *Amer. Journal of Med. Sc.*, vol. lviii, p. 120.
[12] The Systemic Relations of the Menstrual Week (*Amer. Journ. Obst.*, 1881, p. 38).
[13] *Annales de Dermatologie et de Syphiligraphie*, 1884.
[14] *Practitioner*, 1876, vol. xvii, p. 321.
[15] *Gaz. Medicale de Paris*, No. 19, 1875.
[16] *Amer. Journ. of Med. Sc.*, 1876, vol. i, p. 598.
[17] *Phil. Med Times*, 1874-5, vol. v, p. 502.

three hours with a successful result, and where other remedies, such as gallic acid, and the like, had been tried in vain.

The objection to the liquid extract, when administered by the mouth, or, indeed, when any drug is given in this way, is that the stomach may be already more or less distended with blood-clot, and any desired therapeutic effect would be necessarily neutralised. An objection to subcutaneous injection may appear at first sight somewhat fanciful, but it is nevertheless real. Puech relates a case where the orifices made by the needle oozed to such an extent that the actual cautery was requisite to stay the flow. Dr. Shand[18] describes a case where a child was reduced to a moribund condition from this disease; after exhausting all the usual remedies, he applied the interrupted current all over the body by means of sponges, and repeated the process every two hours. In twelve hours' time the hæmorrhage had practically ceased. Waugh[19] states that he has had great success with the local application of a 4 per cent. solution of hydrochlorate of cucaine to the bleeding gums. I administered no ergot in my own case, because the hæmorrhages seemed to cease with good nourishment; had I done so, the cessation might have been attributed to that drug.

The conclusions to be drawn appear to be as follows.

1. The purpura hæmorrhagica occurring during pregnancy partakes partly of the vascular and partly of the neurotic type.

2. The disease has a decided action on the gravid uterus, being almost certainly productive of abortion, and hence the question of induction of labour in these cases need hardly be entertained.

3. The prognosis is extremely grave in this condition, death taking place in consequence of intra-uterine or *post partum* hæmorrhage.

4. After the seventh month, the risk to the child's life is not necessarily greater than in artificial induction, nor does the mother's disorder descend to her offspring.

5. Treatment is unsatisfactory, but at the same time ergot and the faradic current appear to be of some value as curative agents.

LARGE AND SMALL DOSES OF IRON IN ANÆMIA

By FREDERICK WILLCOCKS, M.D., M.R.C.P.,
Assistant-Physician to the Charing Cross Hospital.

In a series of observations on clinical hæmometry, carried out in conjunction with my late friend Professor E. Buchanan Baxter, published in 1880, we pointed out the discrepancy which existed between some of our own results in chlorosis, when treated by iron, and those which had been previously recorded by Hayem and Malassez. These authorities laid it down as a general principle that iron always augmented the richness of the corpuscles in hæmoglobin, but that their number did not follow a parallel course; it might vary but little, and not unfrequently underwent actual diminution. We found, however, that the numerical increase might proceed very rapidly at first, and then more slowly, and that at this stage the corpuscles began to grow richer in hæmoglobin. This subject has been brought into some prominence in the British Medical Journal by Dr. Strahan's paper on an Unrecorded Danger from continued Large Doses of Iron, read in the section of Pharmacology and Therapeutics, at the Brighton meeting, and published on September 18th. The paper of Dr. Laache's, from which Dr. Strahan quoted, was originally read in the section of medicine at the International Congress at Copenhagen (1884), and was a review of recent observations on blood corpuscles in anæmia and leukæmia, including references to Dr. Laache's own work and that of others..

In a subsequent series of cases of chlorosis, in a paper on anæmia to the *Practitioner* in 1883, I endeavoured to prove, among other points, that these apparently conflicting results depended mainly on the different dosage of iron employed. Under the section Large and Small Doses of Iron in Chlorosis (*Practitioner*, Vol. xxxi, p. 95, etc.), it was shown that large doses of iron, as Bland's pills, ferrum redactum, and the like, simultaneously increased both the number and the hæmoglobin value of the red globules in the blood; the influence of small doses, on the other hand, was directed mainly to the increase in the number, the average hæmoglobin value of the individual corpuscle remaining constant, or even undergoing diminution at first. On the smaller dose of iron the process of repair more nearly resembled the natural mode of blood-regeneration, as after hæmorrhage when the increase in the number of the corpuscles precedes their rise in physiological value. Young and feebly coloured elements first appear in the blood, and these subsequently assume hæmoglobin. The sequence of events is, in a sense, analogous to the formation of etiolated chlorophyll bodies, within the protoplasmic utricle of the plant cell, in the absence of light, or in the absence of iron from the soil. These corpuscles are at first almost colourless, and can only attain their true functional distinction later, under appropriate conditions.

It is to the latter of these observations of mine, on the influence of small doses of iron, in increasing primarily the number of the red corpuscles in the blood, that Dr. Laache refers in his *résumé* in the *Deutsche Med. Woch*, October 23rd, 1884. The difference of action between large and small doses of iron, shown in my numerations and estimation of the hæmoglobin in chlorotic blood during recovery, seemed to me, as was mentioned at the time, to satisfactorily explain the well-recognised clinical fact of the value of giving large doses of iron, from the outset, in all cases of chlorosis, and of continuing them for some time to avert relapse (*Practitioner*, 1883. Vol. ii, p. 98). On the smaller or less easily absorbed dose, the two phenomena—of rise in number and of rise in the functional value of the corpuscles—occur more or less in succession, and hence the relative hæmoglobin value of the individual corpuscle does not reach its average normal standard until some time after the number has attained its highest limit. A rapid hæmatinic effect is therefore best brought about in chlorosis, by giving a large dose of iron from the beginning of treatment.

It is possible that this peculiar hæmatinic influence of small or less easily absorbed doses of iron had been previously overlooked, from chlorosis being almost invariably treated on the continent with the large doses of Bland's pills recommended by Niemeyer. The rise in the number was, in consequence, not distinguished from the coincident rise in the hæmoglobin value of the red corpuscles.

[18] *Lancet*, 1879, vol. ii, p. 79.
[19] *Phil. Med. Times*, 1884-5, p. 380

OBSTETRIC MEMORANDA.

PUERPERAL ECLAMPSIA AT THE EIGHTH MONTH OF PREGNANCY: OS DILATED WITH BARNES'S DILATORS: CHILD TURNED AND DELIVERED: RECOVERY.

On September 18th, 1886, I was called to visit Mrs. D., the wife of a chief officer of Coastguards. I had a distance of seven miles to travel; on my arrival, I found her lying on the sofa in a semi-comatose condition, and learned the following history from her husband. She was pregnant with her eighth child, and was within about five weeks of the completion of the usual period of utero-gestation. For the last few weeks her face, hands, and feet were œdematous. She suffered also from great pain in her head, giddiness, and occasionally obscured vision. On that morning she had come down to breakfast at nine o'clock, when she complained of great pain in her forehead, and loss of vision. While speaking to her husband she became convulsed, and had had four fits up to the time of my arrival, at 1 P.M. She had then partially recovered consciousness. She soon had another fit, and I immediately administered chloroform, which had the intended effect of cutting short the attack, and as soon as she was able to swallow, I gave her 10 grains of calomel. At 5 P.M. she was sleeping calmly, and I left, returning again at 12 30 A.M. Having learned from the attendant that the convulsions had returned at 10 o'clock, recurring continuously for over an hour, and that she had since been comatose, with stertorous breathing and very restless, I considered that the only chance of saving her life was to empty the uterus; I therefore drew off half a pint of densely albuminous urine, and put her completely under the influence of chloroform. I then inserted Barnes's No. 1 dilator inside the os, and filled it with water, keeping up gentle traction on the tube until the dilator was expelled; I next applied the No. 3 dilator, and after the latter had come away, I was able to comple the dilatation of the os with my hand. I then turned, and delivered her of a male child. Twenty minutes elapsed from the time when I inserted a No. 1 dilator to the termination of the second stage of labour. The child was very weakly, and nearly half an hour passed before I succeeded in getting it to breathe. The mother became slightly maniacal next day, but after a dose of chloral she fell into a quiet sleep, and from that date her convalescence was uninterrupted. Both mother and child are now well.

The treatment usually recommended in text-books for puerperal eclampsia, is bleeding, purgatives, tartar-emetic, calomel and opium, etc. Denman took 50 ounces of blood from one patient, and Blundell 70 ounces from another. Churchill states that the pulse must be reduced to a state of mellowness and softness, before the arm is tied up. I believe, however, that with Barnes's dilators the latter treatment may be dispensed with. I have used them in placenta prævia with

a favourable result, and in ordinary skilled hands they can be introduced through the os, and labour terminated quickly, without danger to either the mother or child.

In this case I have no doubt the convulsions were caused by the pressure of the gravid uterus on the renal blood-vessels, as the mother's progress towards recovery was uninterrupted from the moment the uterus was emptied, and on the third day after delivery the anasarca had completely disappeared.

J. F. M. Miles, L.R.C.S. and P.Edin., Medical Officer to the Union Hospital and Dispensary, Dingle.

CLINICAL MEMORANDA.

MICROSPORON FURFUR IN PITYRIASIS OF THE SCALP.

On examining recently the scurf from a case of long-standing pityriasis of the scalp (sometimes called "seborrhœa"), I was surprised to find the fungus of tinea or pityriasis versicolor (microsporon furfur) present in abundance. Its circular groups of spores and broken mycelium were unmistakable. There was, however, also present in still greater abundance the torula or saccharomyces, a yeast-like fungus, often found in pityriasis of the scalp and in scaly conditions of the skin in other parts of the body, which has received several names, among the most recent being saccharomyces ovalis and S. capillitii. Numerous micrococci were also to be seen. I obtained some scurf from the patient's beard, which showed the same forms of fungi.

My patient was a gentleman of middle-age, who had suffered for some years from a scurfy condition of the scalp, accompanied by troublesome itching, and was in the habit of washing his head rather frequently. He was also affected with pityriasis versicolor of the chest, and this also had lasted for several years, so that he could not clearly remember the beginning of either affection.

I cannot find that microsporon furfur has been before recorded as occurring in pityriasis of the scalp, though it is stated in the article on Alopecia areata in Ziemmsen's *Cyclopœdia* that Eichhorst found in cases of that disease a fungus thought to be indistinguishable from M. furfur.

That, in the present case, the microsporon was the original cause of the desquamation of the scalp is hardly likely; but it seems probable that it may have aggravated the condition. Treatment with a borax lotion has already alleviated the itching and desquamation, and, at the same time, much diminished the numbers of the microsporon. The torula seems less affected by this treatment.

In obstinate cases of pityriasis of the scalp, the possible presence of fungi may be worth attention; and this case is also suggestive as indicating a possible cause for the frequent relapses of tinea versicolor after treatment, the fungus, if present in the hair or beard, being easily brushed on to the skin.

J. F. Payne, M.D., Wimpole Street, London.

TREATMENT OF INGROWING TOE-NAIL.

A communication from Switzerland in the British Medical Journal for October 23rd recommends the local application of perchloride of iron, with rest. I have for many years used tannin for the same purpose, and do not find rest necessary. A concentrated solution (an ounce of perfectly fresh tannic acid dissolved in six drachms of pure water, with a gentle heat) must be painted on the soft parts twice a day. Two cases recently had no pain or lameness after the first application, and went about their work immediately, which they could not before. After about three weeks of this treatment, the nail had grown to its proper length and breadth, and the cure was complete. No other treatment of any kind was used, though formerly I introduced lint under the ingrowing edge in such cases. One of the patients was a mill-girl and the other a housemaid, and both were on their feet many hours a day.

Philip Miall,
Consulting Surgeon to the Bradford Infirmary.

SURGICAL MEMORANDA.

RADICAL CURE OF HYDROCELE BY PURE CARBOLIC ACID INJECTIONS.

J. J., aged 70, had a hydrocele which had been tapped repeatedly during the last five years. On the last occasion, iodine had been injected, but the fluid began to reaccumulate in less than a month. In July, 1886, two drachms of pure carbolic acid were injected after tapping. There has been no reaccumulation yet, though four months have elapsed.

J. K. Murray, M.B., Kendal.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

CHILDREN'S HOSPITAL, NOTTINGHAM.

DIPHTHERIA: TRACHEOTOMY: RECOVERY.

(Under the care of Dr. Lewis W. Marshall, Honorary Surgeon.)

Fred. M., aged 4 years, was sent at 3.30 P.M. on June 30th, 1886, by his medical attendant, Mr. Williams, who advised tracheotomy. The boy, who had been ill for three days, was breathing with great difficulty, but his colour was good. He had a true "croupy" inspiration, with considerable sucking in of the ribs, and air entered the chest very imperfectly. The throat was red and inflamed, but no membrane was to be seen. The temperature was 100°. At 6.30 P.M., all the symptoms having become worse, tracheotomy was performed above the isthmus, and a silver tube put in, with immediate relief. Membrane was spat out when the trachea was opened.

The air of the room was charged with eucalyptol vapour from a steam-kettle. Every two hours the throat was sprayed with boracic acid and glycerine, and swabbed with the same lotion. Every six hours, quinine (one-sixth of a grain) was given.

Albumen was found in the urine on July 1st, and in much larger quantity on the evening of the following day, when the quantity of urine passed had greatly diminished.

On July 3rd, at 2.45 A.M., he had a slight epileptiform convulsion. Bromide and iodide of potassium were ordered every second hour with fomentations to the loins, and diluents were freely given. During the following six hours, thirty ounces of urine were passed, and towards mid-day a slight trace only of albumen could be found on the addition of cold nitric acid.

Quinine was again given, but stopped on the following day, as the quantity of urine again diminished.

On July 5th, as the tube was blocked frequently during the night, and he could not breathe yet through the larynx, a brush was passed into the larynx after the removal of the tube, and this part swabbed with the boracic lotion. This application was repeated twice daily for several days. The throat-spray was also constantly used night and day, and the pharynx and tonsils were swabbed. Membrane was spat up several times, and also through the tube.

On July 6th, he could breathe through the larynx feebly. Pain and swelling were complained of in the right parotid region; and on July 7th, a large patch of membrane was seen on the right tonsil. This was freely swabbed with lotion, and had diminished by the evening.

On July 9th, the tube was removed several times, and allowed to remain out for brief periods. The tube was continued in an intermittent manner up to July 15th, namely, fifteen days after the operation. Though some food came through the wound occasionally for a day or two, it was healed on July 23rd. Albumen was found in the urine up to July 28th.

On August 15th, the boy was still in hospital, but was to leave for a convalescent home in a few days. He had had a tottering gait, but no well-marked paralysis.

The sister of this boy was attended on July 1st by Mr. Williams, who writes of her that "her throat was covered with the dirtiest and foullest-smelling membrane possible." She had albumen (one-third) in her urine, and glandular swellings.

She died on July 8th.

Remarks by Dr. Lewis Marshall.—The question of tracheotomy in diphtheria is one about which such very diverse opinions are held, that it seems necessary to avail ourselves of every opportunity for enlarging our ideas as to the value of the operation in this disease. The case detailed above was assuredly doomed, if relief had not been given by opening the trachea; and in addition to this relief—not only of distress to the patient, but tension to the larynx—applications through the mouth and from below upwards were readily applied. Dr. Goodhart, in his work on children, reviews the whole subject in a thoroughly practical way, and points out this latter advantage gained by operation. The value of the application of boracic acid is also insisted on by him, but I am disposed to attach more importance to the eucalyptol vapours recommended by Gibbes (*Lancet*, September 1st, 1882). In other cases, also, I have seen improvements result which

may be fairly attributed to its use. The boy's life was also clearly in danger on the night of July 3rd, when his kidneys struck work, and he had a slight uræmic convulsion.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 9TH, 1886.

G. D. POLLOCK, F.R.C.S., President, in the Chair.

On a Case of Early Disseminated Myelitis occurring in the Exanthem Stage of Measles, and Fatal on the Eleventh Day of that Disease. By THOMAS BARLOW, M.D., F.R.C.P.—The patient, a policeman, aged 23, was admitted at the London Fever Hospital, on June 11th, 1885, suffering from measles—the second day of the rash. There was nothing special about his case, except that he complained of soreness down the breast-bone and at the epigastrium. At midnight on the 13th there was retention of urine. On the 14th he was drowsy, but intelligent when roused. There was paralysis of the lower limbs, with loss of knee-jerk and of plantar reflex; but the patient was able to localise a pinch on either leg. The grasp of both hands was weak. There was still retention of urine. On the 15th the patient's mental state was quite clear, but in every other respect he was worse. He could only speak in a whisper; his cough was ineffectual. He complained, as on admission, of fixed pain down the breast-bone and at the epigastrium. The paralysis of the lower limbs, absence of knee-jerk and retention of urine continued; the weakness of grasp in the hands was more marked, and the intercostals were paralysed. There was slight deviation of the tongue to the left. The patient gradually became cyanosed, and died on the evening of the 15th, which was the eleventh day from the onset of measles. The *post mortem* examination, beyond consolidation of the lower lobe of the left lung and intense congestion, with ecchymoses of the tracheal and bronchial mucous membranes, showed no important visceral changes. In the brain the grey matter of the convolutions was darker than natural, and the brain-substance unduly soft. The ependyma of the lateral ventricles was easily detached. The spinal cord showed extensive softening in the upper dorsal region. Opposite the fifth dorsal vertebra the cord was quite diffluent. There was also red softening in the lumbar region, most marked in the grey cornua, which at some spots were quite tunnelled. Microscopic examination of the cord, made by Dr. Penrose, showed that the changes were mostly vascular, consisting of great engorgement of vessels, infiltration of surrounding tissues with leucocytes, and slight interstitial extravasation of blood. No changes were found in the nerve-cells, fibres, or supporting tissues of the cord. In the medulla oblongata very similar changes to those present in the cord were found, with the exception that no hæmorrhages had occurred. The stress seemed to have fallen chiefly on the hypoglossal and vagus nuclei. The case was recorded because (1) accounts of the *post mortem* appearances in fatal measles with nervous complication are very rare; (2) because it has considerable resemblance to a fatal case of disseminated myelitis after small-pox recorded by Westphal; (3) because it possibly throws some light on the changes which give rise to certain groups of cerebro-spinal symptoms left after some of the fevers, especially those allied to multiple sclerosis to which Westphal first drew attention.—The PRESIDENT invited a full discussion of what he could not help thinking an important paper.—Dr. CHEADLE had followed Dr. Barlow's paper with much interest, as he had himself at present, in the Children's Hospital, Great Ormond Street, a case of cerebro-spinal meningitis which followed closely upon measles. The child had begun to feel ill on October 14th, the rash had become distinct by October 18th, and the symptoms of cerebro-spinal meningitis began to show themselves by October 24th. There was violent opisthotonos, and some extraordinary vaso-motor phenomena, including an extreme unilateral hyperæmia. He did not feel any doubt as to these nervous symptoms being due to the poison of measles, which showed its virulence sometimes in the condition of the pharynx that it produced on the accompanying cancrum oris. He should be curious to know if any of these nervous sequelæ were to be found more abundantly where the virus of measles was most intense, as, for instance, among the inhabitants of Fiji.—Dr. WILKS wished to express his interest in the general subject-matter of the paper, the various nervous secondaries that were to be found following the exanthemata and continued fevers. They were admitted by most text-books to exist, but very little that was definite was said about their symptoms or nature. He had himself been taught by his masters that there were many sequelæ to fevers, such as typhoid; but he had learnt for himself to gradually disbelieve his teachers, and to consider these sequelæ as parts of the primary fever. As to nervous sequelæ of typhoid, he had himself known three cases of paraplegia which so originated; but, in that matter, it was important to keep clear of any hypothesis of "reflex paraplegia"—a phrase that embodied a notion that only found favour in Germany. He had seen a case of meningitis following measles; but that was not a direct nervous sequela. The bronchitis of the measles had led to tuberculosis, and the tuberculosis to a tubercular meningitis. Further, he had seen one case of paraplegia which was a true sequela of scarlet fever; he took Dr. Barlow's cases to be cases of measles.—Dr. J. A. ORMEROD remarked that Dr. Barlow had alluded to cases of infantile paralysis which followed upon measles; and he had had himself also similar cases, beginning at a clear interval after the measles. There were three cases in one family, which had occurred in different epidemics of measles, and the family tendency he could not help thinking noteworthy. At first, one foot turned in; then the other; then the muscular wasting began in the legs, after the fashion of infantile paralysis. Dr. H. H. Tooth had classed them under a type of infantile paralysis in which the first symptoms appear in the legs—a type which Professor Charcot and Dr. P. Marie had carefully described. He had no doubt that measles had been the original cause of these cases. Other cases of Friedrich's disease, which he had closely observed, had been preceded by some acute disease, and were very possibly dependent upon it.—Dr. G. V. POORE had been struck with the initial symptom of breast pain which Dr. Barlow had described. The position suggested some connection with the region of the fifth dorsal vertebra, which was found especially diseased. The symptoms were not subsequent to the measles, but at least concurrent, and just possibly anterior. He should be glad to know whether Dr. Barlow had been able to exclude any previous history of a blow, or other spinal injury.—Dr. BEEVOR commented on the rapidity of the progress of the disease. It reminded him of a case of ascending myelitis which he had lately had, which ended in death in five days.—Dr. BARLOW thanked Dr. Cheadle for calling attention to a case in which the nervous symptoms had began in the exanthem stage of a fever. Dr. Poore was perfectly justified in the importance he attached to the time of commencement of nervous symptoms; he considered that, in his case, they had began at the very beginning of the measles, and were, in fact, an integral part of the disease. He should be only too glad if he were able to follow Dr. Cheadle's hint, and investigate the nervous symptoms of the exanthemata on a virgin soil, as among the natives of Fiji, but they were at present beyond his knowledge. He admitted with Dr. Ormerod that family tendency was an important factor in these nervous states, and could himself recall a family in whom there were always nervous complications with disease. He had done his best to cut short the records of analogous cases that might be quoted, and he felt it very unsatisfactory that the investigation of them led to so few conclusions, and to so little knowledge of their pathology. The number of cases of Landry's paralysis, for example, in which no pathological abnormality was found, was a great discredit to our present state of knowledge.

On Three Cases of Acute Tubercular Ulceration of the Fauces. By JOHN ABERCROMBIE, M.D.Cantab., F.R.C.P., and W. GAY, M.D.Edin., M.R.C.P.—The authors related three cases of acute tuberculosis in children, in which ulceration of the fauces occurred within a few days or weeks of death. In one of these cases, the ulceration was shown by microscopical examination to be tubercular. In the other two, there was no reason to doubt that it was of the same nature. Pain in the throat and dysphagia were the only premonitory symptoms of this affection, soon followed by the development of whitish punctiform spots, about the size of a pin's head, on the soft palate, uvula, or tonsils. In the course of a very few days, these spots enlarged and coalesced, subsequently breaking down, and leaving variously shaped irregular superficial ulcers. The ulceration might spread until the whole of the fauces was involved. The death of the patient usually occurred before the ulceration was far advanced. Generally, the fauces were more or less constantly covered with a viscid secretion which greatly added to the difficulty of diagnosis. The usual symptoms of acute tuberculosis would be present, especially the fever and emaciation; but the other signs of the disease were often masked. There was usually, but not always, considerable enlargement of the glands of the neck, and these might suppurate. The differential diagnosis of this affection from diphtheria, tonsillitis, and syphilitic affections of the throat, was briefly discussed. The authors regarded this form of angina as only a part of general tuberculosis, in which respect it differed entirely from the chronic tubercular ulceration of the fauces, which was either primary in the pharynx or had spread there from the larynx. The disease always proved fatal, though the

patients did not usually or necessarily die from the throat-affection.—Dr. PERCY KIDD was hardly inclined to separate these cases of pharyngeal tubercle from chronic tubercular laryngitis. The tuberculosis of the larynx, in the great majority of cases, was secondary to that of the lungs, for the passage of infective sputa over the larynx was the commonest origin of tubercle there, and, as a rule, he thought it probable that the pharynx received the infection in the same way, either from the larynx or the lung. There were some cases, it might be objected, in which there were no sputa to carry the infection, or tubercular cavities from which it would come; but, in these, he thought it was always possible, by careful examination, to show that the lung had lost tissue, and that the tissue had come up by the throat. He had seen, in the last 500 necropsies he had made, four cases of tubercle of of the soft palate, and some six or seven cases of tubercle of the pharynx; in these there was distinct pulmonary phthisis, and the pharyngeal symptoms had only come on one or two months before death. There was another class of pharyngeal tuberculosis, in which there were large ulcers up to the size of a shilling, with thick edges on the back of the pharynx; these naturally were only found in chronic cases. He had seen a case lately in which there had been small yellowish patches about the pharynx and palate, whose nature he could not at first determine, which turned out finally to be herpes of the palate, for the patches became vesicular, and disappeared in a week or so. This condition was seldom noticed, and said to be liable to confusion with diphtheria only; but he thought it was certainly more liable to be confused with tubercle.—Dr. ABERCROMBIE said that he imagined the method of inoculation in pharyngeal tubercle, as assumed by Dr. Kidd, implied previous ulceration, which was not present in his cases. He had intentionally omitted any discussion of herpes of the palate in diagnosis, as he thought it was always accompanied by herpes round the mouth.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 8TH, 1886.

Mr. R. BRUDENELL CARTER, F.R.C.S., President, in the Chair.

Rupture of the Uterus during Pregnancy.—Dr. LEWERS said that rupture of the uterus during pregnancy differed in its mode of production from rupture during labour or abortion. He restricted his remarks to those cases in which the rupture occurred at or before the middle period of pregnancy. In Gräfe's monograph on the subject, three hundred cases of rupture of the uterus had been collected, but only thirty-eight of these occurred during pregnancy, and even this number had to be considerably reduced by taking away cases where the diagnosis had not been verified, and others where it had taken place during premature labour. There remained fourteen cases of the so-called "spontaneous rupture," and two due to violence. Two cases had come under his own notice—(1) an unmarried farm-servant, aged 37, was healthy and strong, and, on the day preceding the accident, had walked four miles. Late at night she was attacked with severe abdominal pain and vomiting, followed by a speedily fatal result. The abdomen was found full of blood, and a fœtus of four months was lying loose in the abdomen. In the second case, a multiparous woman, aged 33, said to be five months pregnant, when bending over a tub, was seized with pain in the abdomen, followed by collapse and vomiting. The abdomen was opened, when a good deal of clotted blood was found, with a fœtus and placenta lying among the intestines. The membranes led down to a rent in the left side of the fundus of the uterus. This was sutured, but the patient died seven hours after the operation. It was evident that the fœtus had never been in the uterus, but had developed in that part of the Fallopian tube which passes through the uterine walls. On the whole, Dr. Lewers thought that these so-called spontaneous ruptures were, when not simply rupture of an ordinary extra-fœtal sac, the result of the rupture of an interstitial fœtation.—Dr. BRAXTON HICKS suggested that accidental hæmorrhage, when bound down by the placenta, might cause distension of a portion of the uterine walls, and tear the peritoneal investment. He quoted one or two cases in which he considered this to have taken place.—Dr. ROUTH alluded to a case in which laceration of the cervix had taken place during his examination, and, although no collapse followed, the patient died.—Dr. LEWERS, in reply, said that the term "spontaneous rupture" must be restricted to the middle period of pregnancy. He had some difficulty in believing that the mere pressure of the blood could cause the effects narrated by Dr. Braxton Hicks.

Hepatic Bronchial Fistula.—Dr. DE HAVILLAND HALL related the case of a patient who, in 1876, complained of anginal symptoms. He came under observation again in 1881, having in the meantime enjoyed good health, but having lately suffered from pain in the region of the liver, followed by jaundice. Other attacks followed, with increase in the jaundice. Ultimately, he vomited bright bile, and large quantities of bile-stained fluid, subsequently ascertained to come from the lungs. The patient made a good recovery, so that the anatomical lesion remained obscure. Dr. Hall reviewed the literature on the subject, in which the fistula was attributed most often to hepatic abscess and hydatids.—Dr. LOWE had had a similar case, due to hydatids, the patient recovering; and Dr. S. WEST another.

Case of Iodide of Potassium Eruption.—Dr. S. WEST showed a drawing of a man in whom the administration of five-grain doses of iodide of potassium had provoked a copious and severe eruption, which ceased on the discontinuance of the remedy, and returned on its resumption.—Dr. ROUTH asked if the drug was ascertained to be pure, and Dr. HALL asked whether the condition of the kidneys had been ascertained.—Mr. MORGAN said he had met with two very similar cases, both caused by small doses.—Mr. BRUDENELL CARTER mentioned that he had learned from Mr. Hutchinson that persons so susceptible to the toxic effects of the drug were equally so to its therapeutical effect.—Dr. WEST, in reply, said that there was no reason to suppose the iodide to be impure. The man's urine was examined without the discovery of anything abnormal.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 3RD, 1886.

J. B. POTTER, M.D., President, in the Chair.

Specimens.—The following specimens were shown:

1. Dr. HORROCKS: A microscopic section, from a case of Cancer of the Cervix Uteri, showing Epithelioma passing into Medullary Carcinoma.

2. Dr. GERVIS: Drawings from microscopical sections of the Surface of a Fibroid Polypus. These drawings showed that the epithelium was ciliated in positions where there was neither friction nor pressure.

Papilloma of the Fallopian Tube, and the Relation of Hydroperitoneum to Tubal Disease.—The discussion on Mr. DORAN'S paper, read at the previous meeting, was opened by Dr. ROUTH, who referred to Mr. Doran's observations, in a former paper, demonstrating the extension of inflammatory disease from the vagina to the Fallopian tube. Papilloma of the tube appeared to be due to extension of papillomatous disease from the same direction; the secretion discharged from a wart could produce warts. The secretion from tubal papillomata, provided that the ostium was not closed by inflammatory products, might produce hydroperitoneum, or rather sero-peritoneum, or even papilloma of the peritoneum. The occasional, but not invariable, malignancy of papilloma probably depended upon diathesis.—Dr. HORROCKS believed that tubal disease was rare, because the tubes had not very heavy functions to perform. In a careful investigation made at Guy's Hospital, in the *post mortem* room, during the last three years, not one case of papilloma of the tube was found. Diagnosis must be very difficult; even metrostaxis was absent in both Mr. Doran's cases. He doubted that the origin of the disease could be syphilitic.—Drs. GERVIS and CHAMPNEYS referred to cases in their own experience, where papillomata of the peritoneum did not pursue a malignant course, after having been discovered during abdominal section and left alone.—Mr. BLAND SUTTON traced the growth of papillomata of the tube, from their origin as a hypertrophy of the folds of the mucous membrane. The disease might, in some cases, be due to gonorrhœa.—Mr. DORAN, in reply, denied that there was any evidence of venereal origin in one at least of his cases. Possibly, a mild catarrh of the tube, due to gleet, might fail to seal up the ostium, and by discharging into the peritoneum, might cause hydroperitoneum. The evidence from Guy's Hospital was valuable; yet hydrosalpinx and pyosalpinx had been overlooked for years at great hospitals, whilst Dr. Kingston Fowler and Mr. Tait had proved that these conditions were very common. He (Mr. Doran) could not see how papilloma of the tube could, on present experience, be diagnosed. It was possible that discharge from a non-papillomatous tube might cause papillomata to grow on the peritoneum.

On the Obstetrics of the Kyphotic Pelvis (second communication by Dr. CHAMPNEYS).—The author referred to his first paper on this subject in vol. xxv (for 1883) of the Society's *Transactions*, in which he arrived at the following conclusions. *a.* The head was usually more or less transverse at the beginning of labour, and not antero-posterior, as usually described. *b.* During labour, the occiput rarely turned forward; deep transverse position was common, and posterior rotation not uncommon. *c.* Th head sometimes passed out of the pelvis, practically between the tubera ischii in front and the sacrum and coccyx behind, entirely neglecting the anterior part of the pelvis. These

conclusions were directly contradictory of the received accounts. The author referred to the criticisms on his description of the mechanism, and attempted to show that they were self-contradictory. He then recorded an additional case which supported his conclusions. He analysed two other cases recorded since his paper, making a total of thirty-five labours in twenty-two women. These cases entirely confirmed the above opinions expressed in the former paper, and given above. The cases on which the usual statements were based could not be found, if they ever existed.—Dr. GALABIN had said elsewhere that the head was often found to enter the brim obliquely or transversely. He was prepared to accept the mechanism described by Dr. Champneys as true for the majority of cases. Dr. Champneys implied that, in kyphosis, a case of extreme distortion was identical with a case in which the head would be likely to fit tightly in the brim, but this was hardly correct. Kyphosis did not contract the brim, but enlarged it. Dr. Galabin explained the characteristics of kyphotic distortion, and pointed out that there was a plane of the pelvis somewhat above its centre, the size of which was unaltered; all above this plane was enlarged, all below this plane, and especially the outlet, contracted. The only cases of kyphosis in which the head was likely to fit tightly in the brim represented kyphosis combined with some cause of general contraction. The position of the head would adapt itself to the brim. In Dr. Herman's case, the sagittal suture was more antero-posterior than usual, if not in some of the other cases collected by Dr. Champneys. He had met with two cases of severe transverse contraction, in which the sagittal suture had been nearly antero-posterior. They were not instances of kyphosis, but more nearly allied to the Robert pelvis. He did not think the sacro-iliac joint was ankylosed, but the sacrum was not fully developed. In both cases, after cephalotripsy, the longest diameter of the crushed head rotated into a transverse position, and the fœtus was delivered entirely behind the ischial spines, the distance between which was less than two inches. This agreed with the mechanism described by Dr. Champneys, as common in the kyphotic pelvis.—Dr. HERMAN said that he accepted Dr. Champneys's main conclusions, that, in labour with kyphotic pelvis, the head did not, as a rule, enter the brim except in the usual manner. He had published another case of labour with kyphotic pelvis, besides that quoted by Dr. Champneys from the BRITISH MEDICAL JOURNAL, vol. i., 1886, p. 294. In this the head entered the brim in the ordinary first position, but with its long axis nearer the antero-posterior diameter than usual. He still believed that, as Dr. Galabin had pointed out, in cases where there was such a relation between the size of the head and that of the pelvis, as to make it necessary for the head to enter in the most favourable position, the long diameter of the head would generally turn into the long diameter of the pelvis, which in the kyphotic pelvis was the antero-posterior diameter. If the head were small enough with relation to the pelvis, it might pass in any position.—Dr. CHAMPNEYS briefly replied.

A Case of Lupous Stricture and Atresia of the Female Urethra.—Dr. HERMAN read notes of this case; the patient was 48 years of age. Retention of urine occurred, and the meatus was found to be blocked with fibrous out-growths; one labium minus was hypertophied, the other perforated, but there was no visible ulceration. The channel was opened with a trocar, and kept patent by bougies. Only two cases appear to have been recorded.—Dr. HORROCKS spoke of the special character of the lupus of the vulva, distinct from common or syphilistic lupus.—Dr. GODSON had seen a case like Dr. Herman's.—Dr. HERMAN briefly replied.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, OCTOBER 28TH, 1886.

DR. CLEAVER, President, in the Chair.

Ophthalmic Cases.—Mr. SNELL showed a patient from whom a splinter of steel was removed from the lens-capsule by electro-magnet. The man had been struck at his work five or six months ago, but only recently sought advice on account of increasing impairment of vision, occasioned by opacity of lens. A coloured spot in the centre of the anterior capsule was presumed to be the splinter. Ten days since, on holding the electro-magnet in contact with the cornea for a little time, the fragment sprang forwards to the posterior corneal surface. On his lying on the couch for removal, the splinter was no longer visible: but, on again applying the electro-magnet, it once more came forward, and was guided on to a convenient spot on the iris, whence it was readily removed through a small corneal incision with the magnet. The incomplete cataract was left for subsequent treatment. The fragment weighed .0001 gramme, and Mr. Snell stated that he had now removed about sixty pieces of steel or iron from various parts of the eye with his electro-magnet. Mr. Snell also showed a case of paralysis of internal rectus from blow over eye with fist.

Enlarged Spleen.—Dr. PORTER showed a specimen from a case of splenic leukæmia. The patient had been under observation for nearly two years, and had presented the usual symptoms of progressive anæmia, etc., with great enlargement of spleen, and latterly of the liver, ascites, and some enlargement of the inguinal glands. The patient died of asthenia, hastened by hæmorrhages into the tissue of the mesentery and omentum, and excessive ascitic effusion, for which he had been twice aspirated, with only temporary relief. At the *post mortem* examination, besides the enlarged spleen, which consisted mostly of pulp, and a fatty liver, enlargement of the mesenteric and lumbar glands was found, and abundant lymphoid deposits in both mesentery and omentum.—Dr. GWYNNE and Mr. JEFFREYS made remarks.

Mediastinal Tumour.—Mr. PRIESTLEY exhibited a specimen from a patient lately under Dr. Dyson's care, suffering from acute pneumonia. The growth consisted of a mass of caseating glands.

Hydrophobia.—Dr. SIDNEY ROBERTS related a case of this disease occurring in a boy aged 5, under his care at the Public Hospital. The child was bitten on the thumb, which was at the time (half an hour after the bite) cauterised with nitrate of silver. Symptoms began on the forty-second day after the bite, with restlessness and pain in the bitten part. On the forty-fifth he refused food and drink. He died on the forty-eighth day after the bite. Salivation was conspicuous by its absence throughout the disease. There were no lyssi. Various remedies were administered, but chloroform-inhalation was the only remedy that afforded temporary relief. An interesting point was, that two other children were bitten by the same dog—one an hour, and the other only five minutes, previously. Both were sent to Pasteur fifty days after the bite, and are now, eighty-three days after the bite, in robust health.

Dr. SINCLAIR WHITE read a paper on Pasteur's treatment of hydrophobia, and describing a visit. Among Pasteur's patients bitten by undoubtedly rabid dogs, the mortality had been little over ½ per cent.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, OCTOBER 20TH, 1886.

LLOYD OWEN, F.R.C.S.I., President, in the Chair.

Sarcoma of Tibia.—Mr. CHAVASSE exhibited a specimen of a mixed form of central sarcoma originating in the shaft of the tibia of a miner, aged 67. The signs of the tumour appeared six weeks after the limb was injured by falling coal. Amputation of the thigh was successfully performed.

Unilateral Progressive Facial Atrophy.—Dr. SUCKLING showed a woman, aged 42, suffering from unilateral progressive facial atrophy. The affection commenced gradually when she was about 18 years of age; the left side of the face was at that time noticed to be different to the right. The bones were atrophied on the left side, the horizontal ramus of the inferior maxilla was an inch shorter on the left than on the right side, the fat had almost completely disappeared, the eyeball being retracted, and there were deep fossæ above and below the zygoma. The hair had disappeared over the left half of the front of the skull. There were two well marked grooves on the left side of the forehead, in the situation of the supra-orbital and supra-trochlear nerves. The temperature of the left side of the face was a degree higher than the right. Sensation was unaffected, and the general health unimpaired.

Cholecystotomy.—Mr. HASLAM showed some gall-stones that he had removed by cholecystotomy from a patient, aged 36. She had been suffering from jaundice from obstruction to the bile-ducts, and pain in the hepatic region, with emaciation, for nearly four months; the gall-bladder was much distended, and, on opening this, 223 stones were removed, several of the largest being nearly an inch in diameter. The incision into the gall-bladder was stitched to the margin of the wound. The operation gave great relief from the pain, but the obstruction was entirely unrelieved, no bile whatever being discharged from the fistula. She lived only two months, and, on *post mortem* examination, the liver was found to be studded with malignant deposit, and the ducts in the transverse fissure completely blocked by the new growth.

Malformation of Intestine.—Mr. WILLIAM THOMAS exhibited the stomach and intestines of an infant, five days old, that had been operated on for obstruction. The stomach was of normal size; the duodenum became gradually enlarged as it reached its termination; the jejunum was very large, and formed dilated coils, which had distended the abdomen. It had been opened twenty-two inches from the pylorus, for the relief of the obstruction, and, ten inches further, it terminated in a blind extremity. The small intestine recommenced

almost immediately between the layers of the mesentery, being about the size of an ordinary pencil; it formed several coils, and, extending for thirty-six inches, terminated in a well formed cæcum, from which a perfect, though contracted, colon, could be traced to the anus. The various parts of the intestine were so firmly matted together by well organised bands of lymph, the result of previous intra-uterine peritonitis, that the relation of parts could not be made out until the intestine was removed from the abdomen. The child was somewhat relieved by the operation, and lived for about eighteen hours after it.

Excision of Superior Maxilla.—Mr. BENNETT MAY showed specimens from recent cases of excision of the upper jaw, and a patient, a young woman, on whom he had recently performed the same operation for an osseous tumour.

Mr. LAWSON TAIT read a paper on the Operative Treatment of Peritonitis.

REVIEWS AND NOTICES.

BEOBACHTUNGEN ÜBER DIE BEIM K. K. QUECK-SILBERWERKE IDRIA VORKOMMENDEN ERKRANKUNGEN AN MERKURIALISMUS VON Dr. JOHANN BAAZ.

[OBSERVATIONS ON THE DISEASES RESULTING FROM MERCURIALISM MET WITH IN THE QUICKSILVER MINES OF IDRIA.]

THIS is a reprint from a series of articles in the *Wiener Mediscinische Presse*, 1886. Dr. BAAZ was for five years medical officer to the great quicksilver mine of Idria, which, next to Almaden, is the largest in Europe. In this situation, he had full opportunities of observing the injuries to the health resulting from the entrance of mercury into the system. Medical men are no longer familiar with the effects of overdoses of mercury, but the descriptions we have in books do not much differ from the symptoms observed by Dr. Baaz among the miners. While giving due praise to the work of Kussmaul on Mercurialism and its connection with constitutional syphilis, published in 1861, Dr. Baaz thinks that a fresh study of the subject will be useful, as there are still many erroneous assertions on this subject in the text-books.

Mercury is obtained in Idria by roasting cinnibar, mercuric sulphide, when the sulphur passes off in the form of dioxide, and the mercury in the form of vapour, which is condensed in a series of U-shaped chambers. The condensation of the vapour is never complete. In twenty-four hours a hundred and sixty-one million litres of gas escape, bearing 573.16 grammes of mercury, and 277 kilogrammes of sulphurous acid. This loss of mercury, very trifling commercially, is the cause of serious mischief to the workmen who breathe the vapours that escape from the chimneys and furnaces. Dr. Baaz classifies the diseases observed amongst the workmen in the following list, which also gives the order of frequency.

1. Stomatitis mercurialis.
2. Ulcera mercurialia oris et pharyngis, angina mercurialis.
3. Gastro et enteropathia mercurialis.
4. Erethismus mercurialis.
5. Tremor mercurialis.
6. Cachexia mercurialis.

The fifth form is rare, and the mercurial cachexy was only observed in one case. The stomatitis is accompanied with sloughing of the gums and falling out of the teeth, but is rarely followed by necrosis of the jaws. In bad cases the tonsils are also ulcerated. If the patient keeps away from breathing the mercurial vapour recovery generally takes place in ten days. When the system is more deeply affected constitutional disturbance, sometimes called erethismus, appears. The complexion becomes pale; the lips lose their red colour; the body is emaciated; there are great disorders of the digestive and intestinal system, dyspepsia, constipation, sometimes diarrhœa and tenesmus. The patient suffers from weakness, giddiness, hemicrania, and pains in the back, with unpleasant sensations in the arms and legs and pricking pains in the breast. He is unusually irritable, and sleeps ill. If the patient be not withdrawn from the influence of the metallic poison, the erethismus passes into mercurial tremor, that is, the affections of the nervous system become more prominent. The tremor closely resembles paralysis agitans. The trembling of the muscles involves those of the head, face, and tongue, and does not cease even during sleep. In bad cases there is paralysis of groups of muscles, and general convulsions. The mind becomes weakened, the power of attention and of memory being specially impaired. When the effects of mercurial poisoning have gone thus far, the patient rarely makes a complete recovery, though a fatal issue is not common. This hydrargosis, as Dr. Baaz styles it, awakes the slumbering tendency to tuberculosis. Catarrh and pneumonia are also common results of the inhalation of the mercurial vapour. Dr. Baaz did not find that the hydrargosis favours skin eruptions or gangrenous ulcers or alopecia, or that it brings on any special tendency to diseases of the liver or kidneys. Wounds heal well, and fractures unite as well as usual amongst those affected by the mercurial poison. Though mental depression and dulness are common, there is no special form of insanity connected with it, nor is idiocy frequent amongst the mining population. Dr. Baaz finds that mercurialismus and syphilis are diseases with quite different symptoms, and scouts the idea that mercury can in any way be the cause of secondary or tertiary symptoms following syphilis.

The mercurial vapour in the air taking the form of bichloride acts directly on the mucous membrane of the nostrils and mouth, uniting with the albumen of the organism, to form an albuminate of mercury soluble in excess of albumen. In this form mercury enters the circulation and exerts its constitutional effects. The metal has been found in the liver and fæces. Dr. Baaz cites two cases of mercurial poisoning, in which its presence was detected in the brain. It had given a dull colour to the white substance. Dr. Baaz simply gives a tonic treatment to his patients suffering from mercurialism. He lays much stress upon prevention, recommending reliefs to succeed one another. In those cases where the workmen are exposed to mercurial vapour, washing of the mouth, the use of hot baths, larger rooms and other improved hygienic arrangements. In this way he hopes very much to diminish the mischief which as yet is serious enough, for the mortality of the miners in Idria (= 14 in the 1,000) is considerably higher than the rates Dr. Baaz found in Silesia: 11 in the 1,000 amongst those who work at the mines of zinc, iron and coal. The disease rate is also high. Out of every 1,000 miners in Idria, there were 1,100 cases of illness to 339 cases during the same period of time in the Silesian works; and of these 1,100 cases of illness, one-tenth were clearly due to mercury. But in some Austrian iron mines disease was found to be as common as at Idria.

TONSILLITIS IN ADOLESCENTS. By C. HAIG BROWN, M.D., C.M. London: Baillière, Tindall and Cox. 1886.

IN this work, the author, who is Medical Officer at Charterhouse School, gives the results of his observations in numerous cases of tonsillitis. The almost complete absence of reference to authorities is, according to the author, accounted for by the fact of the essay having been written as a graduation thesis at Aberdeen. This circumstance must be considered as detracting from the value of the work, which, however, contains much to interest the general physician as well as the laryngologist.

We would especially refer to the author's studies of the cardiac complications of tonsillitis. These, after the careful exclusion of cases of scarlatina, and of patients who had previously suffered from rheumatic fever, were made on 345 previously healthy boys. It appears that in 33, or 9.4 per cent., of these cases, a cardiac murmur was developed. Of these murmurs, eight were systolic basic, and were first heard about ten or fifteen days after the onset, and all disappeared in four weeks under treatment. Eighteen were systolic-apex, developed within three days of the commencement. Two were pericardial friction sounds, developed on the second day, and not lasting beyond the seventh. One was a combination of pericardial friction, systolic apex, and diastolic basic murmurs, and four were combined systolic and presystolic murmurs. The author's results show that of the three hundred and forty-five cases, eight presented undoubted lesion of the endocardium, which terminated in chronic valvular disease; three gave evidences of pericarditis; ten had physical signs of mitral regurgitation, which terminated favourably, and eight showed functional disturbance of the heart, probably due to anæmia.

These few details indicate the importance of the author's observations. We notice as a point of interest that, on page 10, the author speaks of the occasional occurrence of atrophy of one testicle after removal of the corresponding tonsil; but it does not appear from the context whether the author has himself observed this untoward result. If such be the case, it is to be regretted that he has not adduced any facts, for the connection between these two organs is not generally accepted. Compare also the recent discussion on this subject at the Clinical Society (JOURNAL, October 16th, 1886, p. 720).

The author's treatment of 360 cases of tonsillitis shows the powerlessness of ordinary remedies to cut short the disease. Want of appreciation of the essentially short term of fever in tonsillitis, and the idea that suppuration is the rule, often lead, he considers, to erroneous conclusions. On the whole, this work is well worthy of perusal by all interested in the subject.

THE LIFE OF SIR ROBERT CHRISTISON, Bart. Edited by his SONS. In two volumes. Vol. II., Memoirs. Edinburgh and London: William Blackwood and Sons. 1886.

THE second volume, which has recently been issued, completes the work on the life of Sir Robert Christison. A notice of Vol. I appeared in this JOURNAL in January of the present year, in which it was stated that it consisted of an autobiography of the first thirty-three years of Sir Robert's life. It was then pointed out that the account of his career between the years 1797 and 1830, written by himself late in life, is not only interesting and instructive, but highly entertaining reading, both for the friends of the late professor and for the general public, who have much to gain from the study of the sayings and doings of a man who died in the fulness of years and good works.

The second volume takes up the story of the life of Christison where he himself left it in the year 1830, and is compiled by his sons chiefly from letters and other documents, found amongst their father's effects after death. Of the first twenty-five years immediately subsequent to the conclusion of the autobiography, that is between 1830 and 1858, no actual records of events were left by Christison himself. It is probable that during this period, which must have been the most busy and laborious of his entire career as a scientist and physician, he had little time for correspondence on other than strictly professional business. From external evidence, however, the editors are enabled shortly to sketch in the main events which took place during these years.

It is shown that, in addition to his professorial work to which at all times he devoted his first and most earnest attention, he was carrying on a large practice as a consulting physician, and was medical officer to the infirmary, assurance offices, and other institutions. He was twice elected President of the Royal College of Physicians, was editor of the *Medical and Surgical Journal*, was engaged in original scientific researches, which were constantly being published in the form of works or papers, and he was chief medical adviser to the Crown on medico-legal questions, besides being largely employed to give evidence in important criminal cases. These and numerous other public and private duties show that, during this quarter of a century, the life of Sir Robert Christison was a singularly busy one, and occupied with a wide range of active interests. Nor did he during this period at any time neglect the recreations and pleasures of life; his interest in music, pedestrianism, and many other accomplishments unconnected with his profession, show him to have been a many-sided man, who possessed the taste and capacity to cultivate a varied field of pursuits.

The latter portion of Sir Robert Christison's biography occupies the greater part of the volume before us, and deals with a period from about 1858 till his death in 1882. Although not exactly autobiographical, it is for the main part compiled from numerous notes and papers found in his possession, and from a voluminous correspondence with his family and friends. It has been found convenient to arrange the chief events of his life according to the different divisions of his work, rather than in strict chronological order. Each of these in turn is treated in separate chapters, and include University Work; Minor Scientific Observations; Speeches, Addresses, Lectures, etc.; Contemporaries and Friends; Personal Anecdotes, Characteristics, etc.; and Honors. In order to gain an estimate of Sir Robert Christison's life, as suggested to others, the editors have enlisted the services of some of his distinguished colleagues, who have supplied special articles on different branches of his career. Thus Sir Henry Acland contributes a chapter on his social character, Professor Gairdner another on his capacities as a physician, and Professor Fraser a third on his scientific work. Each of these is in itself praiseworthy, and all together show the many-sided qualifications of the man to whom they apply. With all his varied pursuits and accomplishments, it is evident that throughout Christison's chief affections were centred in his University chair, and in the affairs of his Alma Mater. That seat of learning owes largely to his exertions its emancipation from municipal rule, and the part he took in connection with the Scottish Universities Bill in the struggle to remove Town Council patronage from the government of the University is in great part the cause of its present comparative freedom and independence, and may indirectly account for its recent unparalleled prosperity.

A work of this kind cannot be reviewed, analysed, or criticised in the ordinary sense of the term. All we can hope to do is, by giving a brief summary of its contents, to indicate to our readers the general plan of the book, and the purposes at which it aims. We can assure them that it is richly stored with interesting and instructive facts, which are gracefully and modestly recorded, and will well repay careful perusal. The pupils and personal admirers of Sir Robert Christison will welcome these memoirs as a fitting remembrance of their late mentor and friend. Even the general public will profit by the life-study of a man who was praiseworthy as a citizen, admirable as a worker, and unblemished as a man.

NOTES ON BOOKS.

Bericht ueber der 18te Versammlung der Ophthalmologischen Gesellschaft, Heidelberg, 1886.—The meeting of the Heidelberg Ophthalmological Society, held on August 9th and 10th, appears, to judge from the volume of *Transactions* before us, to have been of unusual interest. The first sitting was special, and was occupied entirely with the presentation of the Gräfe medal to Professor Helmholtz (a notice of the meeting was published in the BRITISH MEDICAL JOURNAL, page 425.) The second day was devoted to the reading of papers; most of these were of a high order, and upon subjects of great interest, it seems a pity, therefore, that more time could not have been devoted to their discussion, especially as some of them open up very wide subjects—for instance, the discussion on the papers of Stilling and Knies, on Myopia, was quite inadequate to the importance of the subject. Unless, however, the Society can see its way to meeting oftener than once a year, it is difficult to see how this is to be remedied. A mere enumeration of some of the other papers read show that the material brought forward was superabundant, while the names of the authors are a guarantee of their value. Javal, on Glaucoma; Van Genderen Stort, on the Changes in the Retinal Elements under the Influence of Light; Von Hippel, on Transplantation of the Cornea; Samelson, on Antiseptics. When it is added that these, as well as papers by Cohn, Exner, Weiss, Donders, and Urlich, besides other matters, are reported in the space of 106 pages, it is evident that the Heidelberg Ophthalmological Society does not make the best use of the material at its disposal. The value of the report would have been much enhanced had the diagrams referred to in some of the papers been reproduced.

Bourne's Handy Assurance Directory. First Year of Publication. By WILLIAM BOURNE, Associate of the Institute of Actuaries. (London: F. W. Bourne. Liverpool: W. Bourne and J. P. Bourne.)—This work, which is the outgrowth of a small handy guide, published monthly, is a comprehensive and useful book, and should be of service alike to the large class who are interested in making prudent provisions for themselves and families, and the more limited circle who are technically and professionally interested in insurance matters. A table is given, extending over nearly sixty pages, from which may be learned almost at a glance what has been the progress, cost of management, etc., of every office during the past five years. To professional men, life-assurance contracts are almost a necessity, and, to be adequate, involve the investment of large sums. It is, therefore, an advantage to them to be able to form a fairly sound opinion on the merits and stability of the various offices, and this the table in question certainly enables anyone to do with but little trouble. There are, besides, interesting summaries of the last valuation-returns of a number of offices, a comprehensive directory, a list of insurance-publications, and other items of information of a similar character. Tables of the probable duration of life, and of the comparative cost of life and endowment assurances in the various offices, are also given. Some of these are more or less familiar, but a new feature is the publication of a group of compound interest tables, giving the more difficult results which, as a rule, are only to be obtained after much calculation or by reference to larger and more expensive works. Altogether, this work contains a large amount of useful information on an important subject, stated in a commendably clear manner.

IN a little work entitled *The Equine Hospital Prescriber*, by J. B. and A. CRESSWELL (London, Ballière, Tindall, and Cox, 1886), we have an attempt to supply a want believed to exist in the veterinary profession. Books of formulæ for hospital use contribute in a large degree to uniformity and simplicity in dispensing, so needful to the smoothness and efficiency of hospital work. The formulæ are arranged in accordance with the principal or active ingredient. In departing from this method, we are not sure that the authors of *The Equine Hospital Prescriber* are advancing veterinary science. Their new arrangement will tend to the mechanical prescribing for diseases—a failing in which the veterinary profession was ever weak. We notice one or two prescriptions in which incompatibles occur, while some of the simpler ones might have been omitted, and the work amplified with more valuable additions. We are surprised to find "Farcy," which is one form of Glanders, prescribed for in a modern work. As it stands, however, we regard with satisfaction this little book, as an example of the increasing readiness of the veterinary profession to

enter the arena of literature; and we may safely infer that the dangers to which it might lead are modified by the greater intelligence of the modern veterinary surgeon.

REPORTS AND ANALYSES

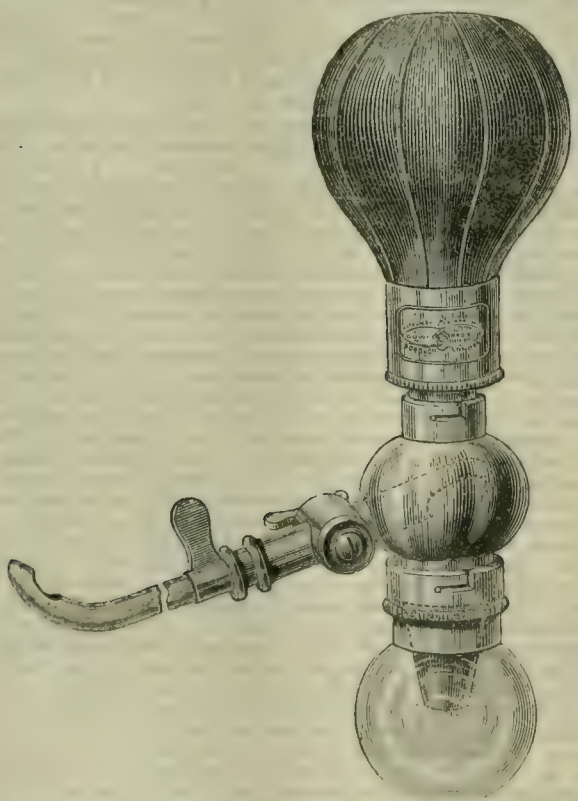
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DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

EVACUATING ASPIRATOR.

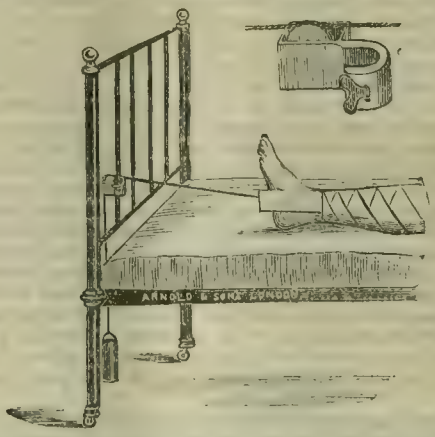
Messrs. Down Brothers, 3, St. Thomas's Street, London, S.E., are the makers of an evacuating aspirator made under the instructions of Mr. Golding Bird, to the efficiency of which reference has already been made by Mr. Cadge, in his lectures "On the Surgical Treatment of Stone in the Bladder" (see British Medical Journal, July 3rd, 1886). The essential features of the instrument are that the fragments of stone are brought (by the shortest possible route) from the bladder to the aspirator; that having reached the aspirator they are whirled round in the brass sphere, and fall into the glass receiver as the current subsides; there is no valve or perforated metal plate to become clogged with mucus or fragments; there is plenty of room for the water to circulate round the end of the tube, but from the form of the opening in the tube, the direction of the current in the brass sphere, and the fact of the rubber-ball being above the point of



entry, there is no possibility of fragments being taken up into the ball and reinjected into the bladder. When the fragments and *débris* once reach the receiver, they remain undisturbed while the instrument is worked. It has been designed without any tap at the top, in order that the ball may be grasped "overhand," this allowing of a firm and quick compression, and easy relaxation of the hand with quick rebound. It is filled by simple displacement of the contained air. The tap suggested by Mr. Cadge can be easily added for those who prefer it. The sphere in the centre can be conveniently grasped by the left hand, and renders the balance of the instrument complete.

EXTENSION-PULLEY.

The accompanying illustration depicts an extension-pulley which I have had made, and which is used at the Cork Children's Hospital, to the exclusion of nearly all the old extension-arrangements. By means of the side-screw, it is easily attachable to any ordinary bedstead, and can be raised or lowered at pleasure, so that a pull can be had from

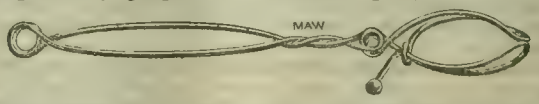


any direction. I have also used it attached to the head of the bedstead, in conjunction with a neck-piece, in a case of cervical caries, with much benefit to the little sufferer. Messrs. Arnold and Sons, West Smithfield, have arranged to manufacture these pulleys.

Nicholas Grattan, F.R.C.S.E.,
Senior Surgeon, County and City of Cork Hospital for Women and Children.

NEW SPONGE-HOLDER AND DRESSING-FORCEPS.

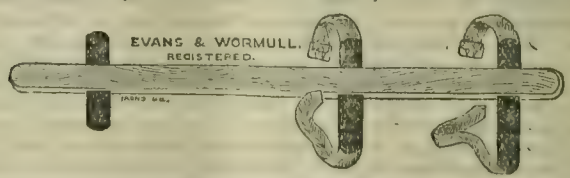
This cheap and simple contrivance, designed by Dr. Ward Cousins, will be found a very useful sponge-holder in many surgical operations. It is made of twisted wire, and the grip of the blades is sufficient for holding securely sponges of various sizes, or pledgets of cotton-wool.



By pressing the thumb on the spring, the points are relaxed, so that the material can be changed with great facility. The holder is manufactured in several convenient sizes by Messrs. Maw, Son, and Thompson.

SPLINT FOR HIP-JOINT DISEASE.

Messrs. Evans and Wormull, of 31, Stamford Street, have, at the instance of Dr. G. Day, Assistant-Surgeon to the Royal Hospital for Children, produced an inexpensive splint for hip-joint disease. This splint (the cost of which is but 5s. 6d., and which Dr. Day says he has tried and found successful) consists of a straight piece of wood, extending from the middle of the scapula to below the knee-joint of the affected limb, with three transverse bars, one for the chest to rest



upon, one for the pelvis, and one for the thigh to be fixed to. These bars prevent rotation of the splint, and also act as points for the bandage to be placed on either side (after the form of a figure 8), so that they cannot ride up or down. The measurements are (1) nipple to knee, three inches below knee-joint, (2) nipple to anterior superior spine of pelvis.

Mr. J. S. Gettings, medical officer and public vaccinator, Ogley Hay District, has received, for the second time, the Government grant, amounting to £19 3s. for successful vaccination.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 13th, 1886.

THE PENDING ELECTION OF DIRECT REPRESENTATIVES.

DURING the next week, every member of the profession in Great Britain will have received a voting paper from the office of the General Medical Council. This will summon him to the exercise of a newly acquired privilege, and to the performance of a newly imposed duty. We do not attach any exaggerated importance to the performance of this function if we say the summons should be received with a sense of grave responsibility. The duty should be fulfilled by every man without exception, and its fulfilment should be preceded by careful and anxious weighing to all that it implies. Our columns have been thrown very freely open to the mass of correspondents who have desired to express their views on one side or the other, and we have endeavoured to allow every shade of opinion to be fairly and fully expressed, while avoiding as much as possible the introduction of collateral personal questions, and declining to be the channel of personal animosities, or of individual recriminations.

As the time has approached for the selection now to be made, the number of candidates has increased, and the bases of selection have been more clearly defined. In the first instance, the addresses of most of the candidates have been, for the most part, somewhat too vague and declamatory, and they have insisted (as was, perhaps, natural) on individual claims and capacities, but have left in shadowy outline the views entertained by the candidates on large questions which they will be called upon to assist in solving. There has been a great deal of talk about modes of candidature, and the classes from which the candidates spring, but too little attention has been given to the opinions which the candidates hold, and to the policy which they will pursue, if elected. What really concerns the profession most is not whether candidates have been most effectually nominated by themselves, or by a small knot of friends summoned at their instance to form a Committee, or by a larger committee which has resorted to ballot. These are really quite secondary questions. The candidate has a full right to come spontaneously before a constituency of this sort, and solicit its suffrage, although of course some weight is likely to be attached to the number and position of those who take part in the first steps towards candidature, and to the methods adopted to make a preliminary test, more or less imperfect, of the views likely to be taken of his candidature. Thus, although a great deal of erroneous statement has been made and repeated, as to the circumstances under which so large and influential an invitation was tendered to Sir Walter Foster and to Mr. Wheelhouse, the attempt to raise an extended controversy around this quite secondary point is rather misleading. It has been repeatedly stated that the annual meeting of the British Medical Association decided that the Association should take no part in the selection—this is quite contrary to the fact, as everyone must know who was present at the meeting, or as anyone may see by turning to the recorded minutes. What actually took place was, that at the first meeting of the Association, which was a very large and crowded meeting, an independent and unofficial member of the Association, Dr. Carter, of Liverpool, proposed, of his own motion and from the body of the hall, without the knowledge of, or any communication with the Council or any officers of the Association, that the Council should be requested to prepare in some way a list of candidates, or to make some suggestion to the members generally on the subject of the choice of candidates. This was not unnatural, seeing how active a part the Association has taken through its committees and its general meetings in securing direct representation, and the proposition was received with great applause, and appeared to be entirely in accordance with the sense of the meeting. Since, however, it formed no part of the programme, and was altogether a new proposition, it was suggested that Dr. Carter should give notice of a separate motion on the subject, and that it should be discussed on a subsequent day. When the time came for discussing it, it happened—as not unfrequently happens at the later business discussions of the general meeting—that the attendance was ridiculously scanty. It appeared to be chiefly made up of various candidates, and of small knots of friends whom they had avowedly whipped up for the occasion. The result was that in this small assemblage a number of propositions were brought forward, and after a short time had elapsed, it became evident that no proceeding of such a meeting would have any weight or value, and the meeting closed without any final resolution having been come to, all resolutions being withdrawn. To say, therefore, that the Association came to a decision of any sort on that occasion, is incorrect, both in essence and in form. The Association came to no resolution of any sort on the subject, and it was left quite open, therefore, for any branches or for the Council of its own motion, or for any independent body of persons, to take whatever steps they chose in their own name and on their own responsibility. What subsequently happened is well known. A number of well-known and leading practitioners took steps which resulted in a ballot, and as a result of that ballot, an invitation was addressed to Sir Walter Foster and Mr. Wheelhouse, which they accepted, and they have become candidates, having at their back an immense mass of the leading members of the British Medical Association, who feel that the evidence they have given in the past of capacity and power of dealing with public affairs, the services which they have rendered to the Association, and their known liberality of views, afford the highest pledges of their fitness to represent the profession in the General Medical Council. They are not the official candidates of the Association; and if now we express our heartiest wishes for their success, we do so in no official capacity, and not as representing any official vote of the Association, or any official mandate, but because, having watched the career of both Sir Walter Foster and Mr. Wheelhouse, and knowing well their readiness in the past to make sacrifices in the service of the profession, knowing their high standard of public duty, and their sympathy with all that can tend to educational progress, to scientific advancement, and the promotion of a high profes-

sional standard in all the affairs of the Association and the profession, we consider them eminently fitted for this post; and we think also that their great services to the Association in the past give them an evident claim to the sympathy and support of their fellow-members on this occasion. The resolution passed at the General Council was a resolution of sympathy and support, based evidently on the same grounds, with the like limitations. With those congratulations on their selection, and with those good wishes for their election, we unofficially heartily associate ourselves, and look forward with every hope to seeing the anticipations of their success fulfilled. We express these views the more readily on account of the manner in which they have replied to the queries addressed to them by Drs. Bott and Verdon; their response to the circular letter addressed to them, in common with a number of other candidates we publish together with the other replies elsewhere. We recommend our readers carefully to scan those questions, and the replies given. It will be seen that, in more than one instance, the candidates fence with the questions, rather than directly answer them, and in more than one of these replies there is much to be read between the lines which does not appear in the text of the answer.

The first duties of the representatives of the profession, in our opinion, will be to see, first, that the General Medical Council takes up that duty, which it has so long neglected, of protecting professionally the public against unqualified practitioners in so far as the Medical Act allows them to do so. Their second duty will be to see that the exorbitant expenses of their meetings are reduced, and that the funds are made available for more important purposes than the payment of heavy fees to the members for their daily attendance. The third, and a most pressing, duty, in our opinion, will be to exercise pressure on the College of Physicians and College of Surgeons of England to prevent them from excluding the Apothecaries' Society from the Conjoint Board, and thus prevent, also, that which is now imminently threatening—the creation of a new class of general practitioners throughout the country by a cheap license, who will belong to neither of the Colleges, but who will be entitled to call themselves both "doctors" and "surgeons," and who will form a new class of competitors, on the downward grade, to the existing general practitioners. The fourth duty will be to assist in procuring for the future general practitioners of England and Wales the same right to the degree of Doctor on passing a joint examining board seated in London, as is now possessed by graduates of universities in other parts of the kingdom who go through the same curriculum, and pass no more difficult examinations. Guided by these principles, our readers will be able critically to scan the replies of the various candidates to the very pertinent questions addressed to them by Drs. Bott and Verdon, and to judge for themselves how their votes shall be distributed.

We have spoken thus far only of the candidates for England and Wales. The number of candidates in Scotland and Ireland is much less. The issues have been put clearly by the respective candidates before the electors. The respective claims of the candidates are probably far better known across the Channel and on the other side of the Border than they are here, and we shall abstain from offering any detailed advice to the Scotch and Irish electors. It is sufficiently obvious that the main object of direct representation is to secure for the profession a representation of its interests, as distinguished from those of the public, which are represented by the Crown nominees, and from those of the universities and corporations which are represented by the nominees of those bodies. It is of course quite possible that the highest officials of a corporation receiving a mandate not from that corporation, but from the profession at large, may be able, if elected, to separate themselves from corporate interests in the capacity of elected representatives on the Council. More than one of the Scotch and Irish candidates claim that that is their position, and that, however closely identified with the official life of their respective corporations, they will, if elected, act upon the general mandate of the profession, and free themselves from corporate influence and trammels. That is a question of temperament and of mental agility on which every elector is as well able to form his own opinion as the most experienced of advisers could be.

In respect to Ireland, however, we should not do justice to our own impression if we did not say that Dr. Jacob has long been known as a most active and efficient representative of the interests of the general practitioners of Ireland, in all political and Parliamentary questions, that he has a most extended knowledge and experience in all such questions, and has rendered considerable and undoubted services to the Poor Law medical officers of Ireland, and to the cause of direct representation of the profession on the Medical Council.

We conclude as we began, by urging the electors to consider general principles; to put aside all fringes of the controversy, and to address their minds to the great questions involved. Who have by their past history given the best pledges of their fitness for the post? Who have given the most satisfactory statements of the principles on which they propose to act? Having answered these questions in his own mind, we trust that every elector will act independently on his own separate judgment, and will not fail to fulfil his duty to the profession by filling up the voting-paper which he will receive in the course of the next week, with the names of those men whom he thinks best fitted to represent the interests of the profession at large.

THE GENERAL PRACTITIONERS AND THE COLLEGES: A VITAL QUESTION FOR THE PROFESSION.

THE importance of the issue now before the Colleges of Physicians and Surgeons as to the admission of the Apothecaries' Hall becomes more evidently momentous and far-reaching the more the matter is considered. An essential and instructive difficulty meets the profession at the very threshold of the debate. The interests involved are mainly—perhaps almost wholly—the interests of the Members of the College of Surgeons and the Licentiates of the College of Physicians. It is they—not the consulting physicians and surgeons who constitute the Councils—who suffer by the encroachments of unqualified quacks; they who are injured by the malpractices incidental to the misconduct of men who appoint unqualified "assistants" to conduct sham dispensaries; they who suffer from the illegal practices of prescribing and visiting chemists. Their main defence lies in the provisions of the Apothecaries' Act. It is the Apothecaries' Society, and it alone amongst the English corporations, which has set a limit to these malpractices, and, by the salutary prosecutions which it has authorised, has prevented the breaking down of the dams which still restrain the flood of quacks, pharmaceutical and other, who are ever seeking for openings to deluge the country with unqualified practitioners. The great question which, under the Act of 1886, has become more than ever urgent, is: What shall be the future function of the Apothecaries' Society, and how shall its powers be preserved?

On this head the Colleges have hitherto preserved an attitude of

sovereign indifference. The Apothecaries' Society may live or it may die, so that it does not come between the air and their nobility. On the whole, it is understood that they would prefer that it should die, and are not a little annoyed that it does not see the necessity of dying; but, on the contrary, shows such persistent and vigorous vitality. In this matter they have acted, without a doubt, from the highest motive, as they have interpreted their duty to the profession and to the Colleges. The Apothecaries' Company savours of the shop, and from that taint they wish to preserve their respective corporations; and so, after having advanced very deeply into the details of a negotiation for forming a conjoint examination board with the aid of the Apothecaries' Society, after the Society had, with their approval, obtained an enabling Act of Parliament for the purpose of combination, previously agreed upon in principle and in its main details, the Colleges withdrew and formed their own combination without the Apothecaries' Society.

This, no doubt, was an unfortunate and inequitable proceeding. It is admitted, on all hands, that no examining body has for the last half century rendered such important services to the education and qualification of the profession, and none has rendered such services in protecting it and the public against unqualified pretenders as the corporation in Blackfriars. Until the profession itself demanded a reform, the College of Surgeons continued for a long series of years to give its diplomas on a ludicrously incomplete examination, in which pharmacy, medicine, and midwifery had no part. Until a much later date, it continued to put on the register practitioners enabled to practise in every department, but qualified and examined only in part. This was mainly because the Council consisted then, as now, of hospital surgeons, who were out of touch with the general body of practitioners, and who had no daily cognizance in their lives and practice of the needs of the profession or of the poorer population. The College of Physicians, until a still later date, cared nothing at all for the general practitioner, and had nothing to do with him. Later, it created its new licence for general practitioners, and has acquired a great constituency of general practitioners, but without admitting them to any franchise and without giving them any voice in the affairs of the College, or any share in its management. The consequences of a position so anomalous, and a constitution so unjustifiable, are now being seen.

Under the Act of 1886 a new situation has been created, and a most critical decision is pending, which will affect for years to come the whole constitution of the profession, and especially the status and privileges, the mutual connections, and the public relation, of the general practitioners. The Act requires that every qualifying corporation shall henceforth fully examine and legally licence its diplomates in medicine, surgery, and midwifery. The Colleges of Physicians and Surgeons—or the Councils who at present represent and legally are the Colleges—were not taken by surprise. They had their private interviews with the Privy Council (which were not publicly reported), and may be assumed to have studied the Act, and to have made their own representations, and to have insisted on their own conditions. The Apothecaries' Society, wise in its generation, and faithful, we must say, to its duties and to the interests of the profession, had also its interview. It may or may not have been hoped by some that a collateral and unstated result of the Act would be to wipe out the Apothecaries' Society, inasmuch as they had not then, and have not at this moment, any legally authorised examination in surgery—although they had fully equipped examiners—and could give no surgical qualification. They were, however, amply assured by the Government of the day that no such underhand mode of extinguishing an historic body, already amply fulfilling its duty, and prepared to fulfil all the requirements of the Act, could be contemplated or would be permitted. The Act, it was explained, was an enabling and not a disqualifying measure. It was intended to provide that every examining and licensing body should henceforth fully examine and license, and that no one should be put on the *Register* with an incomplete examination and qualification. But it would be contrary to public feeling and to public equity that any chartered body, willing and prepared to comply with the requirements of the Act, should be prevented from doing so by an act of exclusion by competing corporations; and should the other corporations refuse to join the Apothecaries' Society in their combination, then the Medical Council, or the Privy Council itself, in case of final appeal, would feel bound to enable the Apothecaries' Society to fulfil the requirements of its duty, as defined by the Act, and to appoint legally authorised examiners in surgery.

It requires little knowledge of the principles of public policy and government to recognise that this was the only possible course. It excludes all question of the extinction of the Apothecaries' Society from the region of practical politics. Happily so for the profession, for with it would die those powers which it is most important that the profession should continue to possess, and which more than ever need to be enforced. Under these circumstances, the Colleges of Physicians and Surgeons have received a renewed application from the Apothecaries' Society to take part in the Conjoint Examining Board.

We are told openly that the Councils of the respective Colleges have referred this application to a small committee of their respective bodies to consider jointly; and it is plainly announced that the College of Physicians, at least, may be expected to decide the matter without reference to the great body of Licentiates, whom, above all, it concerns; and that it proposes to reply in the negative. The general practitioners have had a great deal to bear from the masterful ways of their self-appointed rulers in the College, but they can hardly be expected to bear this patiently or in silence. The question is, Shall a new class of practitioners be created at a stroke throughout England and Wales, licensed in medicine, surgery, and midwifery, with all the powers and more than all the privileges of the Members of the College of Surgeons and the Licentiates of the College of Physicians; and this by decision of the Fellows of the College of Physicians, without a word of consultation with those Members and Licentiates, or open debate between them and their existing masters in the Colleges. We find it impossible to put the question in any other way; and we shall be very glad if any Member of the Council of the College of Physicians, or of the Comitia, will come forward either to show that it is here incorrectly stated, or to affirm that so vastly important a question should be so decided without consultation with the vast body of Licentiates whom it intimately concerns now, and whose successors it will still more deeply affect. If not, how can the Licentiates make their voice heard at this critical moment? Heard it must be, and should be very quickly; for the case is even now in an advanced stage of decision, without the Licentiates, who are, above all, concerned in the matter, even knowing that any such application has been received, or on what grounds and by whom it is being decided. It is understood that it has come be-

ore a recent meeting of the Comitia, and that a report—negative it is believed—has been prepared. The reports which are allowed to be published of the proceedings of the Fellows are not to be read as disclosing all even of the most important matters discussed. The Members and Licentiates must not, therefore, be surprised if they learn that this most momentous report, affecting the Licentiates and the profession most deeply and vitally, has been discussed under the oath of secresy, and that even the very fact that such a report exists, and has been laid before the College, is, at present, carefully concealed from them. We do not vouch for this, but it is freely reported in the College that this is so, and that the absence of any public reference to this report is studiously deliberate, and part of the approved policy of the rulers of the College. It is in such a manner that it is proposed to treat issues of enduring and vital importance to the whole body of licentiates, who are kept absolutely in the dark as to the whole proceeding, and are expected calmly to hand over their life-long interests, and those of their sons and successors, to the secret management of a small body of eminent gentlemen, who are altogether out of communication with them; who have taken no means to consult them; who neither state their ground of action, nor allow opportunities for its being discussed. Such a course, at such a crisis, is, we should imagine, likely to induce even so apathetic and submissive a body as the Licentiates of the College of Physicians to protest, if not to revolt. They may surely expect to be convened and consulted at this great crisis. They, and they especially, are convened to consider whether, by a simple monosyllable, that a handful of hospital physicians who constitute the Council, shall hand over the general practice of the country to anew set of competing practitioners, licensed cheaply in Blackfriars, to practise throughout the country with equal qualifications in medicine and surgery, and higher privileges than the Licentiates of the College now enjoy. It may be right and necessary; but at least the licentiates may claim to have the sad necessity explained to them; and it is at least possible that they, who are so deeply and sorrowfully concerned in such a sacrifice, may be able to suggest a way out of the difficulty, which their now despotic masters, who are about to produce a *non possumus*, profess to be unable to discover. But the Licentiates of the College of Physicians should take action quickly, and should voice their opinions and wishes without delay; for the matter is now pending, and there is no reason to think that the authorities of the College of Physicians purpose holding their hand.

At the College of Surgeons, the matter stands happily somewhat differently. It chanced, by one of those fortunate accidents which often sway the destinies of professions as of states, that something which is euphemistically called the annual meeting of the Fellows and Members of the College was held on Thursday of last week, just at the moment that we had opened this question to the profession, previously studiously shrouded in the silent veil of the proceedings of the Council Chamber. Hence it was no longer one of the "Secreta Collegii" in Lincoln's Inn Fields, although it still remains one in Pall Mall. Parenthetically we may ask, Is it not astounding that proceedings of such vast professional importance should be decided by a small knot of gentlemen in secret, and only announced accidentally or when all is decided, to the multitude whom they concern? Is this not a more than Venetian oligarchy? and does it not more than justify the demand of the Members to have a share in the administration of affairs in their College? But happily, and by this chance coincidence in time, an opportunity arose of stating the question at that meeting, as we had put it to the profession in the previous week, and a resolution was passed, unanimously referring to the Council to consider this great question, and to report on it to an early meeting of Fellows and Members. That reference was accepted without dissent, and it follows that the Fellows and Members of the College of Surgeons will have an opportunity of hearing the opinions of the Council of the College of Surgeons, and of debating their report before it is acted upon.

This is a great gain for all parties. It will save the Council of the College of Surgeons from the tremendous responsibility of deciding without reference to the Members, one of the greatest professional issues, affecting the interests of the Members and of the profession at large, which has arisen for many years. It may protect them from much reproach and from hasty action which they and the whole of the Members would have had long years of leisure to repent. It affords also a pause by which the licentiates of the College of Physicians can profit. They will have the time to organise a debate on their own behalf, and to make their voices and their influence felt in their own College, although they are still excluded from its theatre, and their voice can only be heard from without the sacred walls.

We do not assume that there is necessarily only one solution of the question at issue, or that there is no answer to the weighty considerations which suggest themselves to us in favour of admitting the Apothecaries' Society to the Conjoint Board; but we do assert that the question is one of unspeakable importance to the profession, and especially to the Members of the College of Surgeons, and to the Licentiates of the College of Physicians; that the question ought and cannot with common fairness and propriety be settled without their voices being heard, and that it is urgent that steps should be taken for debating the question fairly in open meeting of both Colleges, and throughout the whole profession, before any answer is given to the Society of Apothecaries. This, at least, is due to the great mass of the profession in England and Wales. Before the final step is taken, and before a new grade of surgeons and general practitioners of medicine is raised up by the mere "No" of a handful of hospital physicians and surgeons—however eminent, however able, or however experienced—to compete with the Members and Licentiates of the Colleges; and even to compete on equal terms with the graduates of the universities. We have neither time nor space here to explain what we mean by this last clause. But it is not difficult to foresee more ways than one by which the diplomates of the future revivified and extended Apothecaries' Society would acquire the degree of doctor—possibly before, and at least as soon, as that degree might be acquired (as it is hoped it will be) by the diplomates of the two London Colleges.

A MEDICAL DEGREE FOR LONDON STUDENTS. BY WHOM AND TO WHOM SHALL IT BE GRANTED?

A CONSIDERABLE time has now elapsed since the resolution, in favour of obtaining a degree in medicine for London students, was affirmed by the College of Surgeons, on a resolution moved by Dr. Hickman, and since the action of the Metropolitan Counties Branch, led by Mr. Macnamara, induced both of the London Colleges to declare their joint opinion that it was necessary and desirable that the practitioners of England and Wales, licensed to practise medicine and surgery in London, should be able to attain the title of "Dr." and the degree of

"M.D." on equitable terms. The arguments on which this claim is based have been many times repeated in these columns. At every public meeting at which the subject has been discussed, the answer to the claim has been affirmative. There is an overwhelming consensus of opinion in favour of it throughout all ranks of the profession in England and Wales. The masses claim it, the Colleges approve it, and common sense and equity demand that such a degree shall be obtainable; and we continue to receive letters, asking whence and where is the delay. Public affairs, however, especially when of a somewhat complicated character, are apt to move slowly; and it would be by no means correct to infer that there is any lack of interest or energy on the part of the governing bodies of the College of Physicians or College of Surgeons in this matter. The intervening attempt to procure from the University of London an undertaking that it would take steps to supply this need had to be allowed to develop itself. It has been very fully made, and has totally failed. The University of London moves in higher spheres, and will not contaminate itself by contact with the general practitioner. It remains with the Colleges to carry out a practical scheme, for which they can ask the assent of the Government, to constitute a Medical Faculty in London, of which they shall form an integral part, and which shall have the power of conferring such degrees.

One of the misfortunes of the existing constitution of the Colleges and of their perverted traditions is that they move towards such ends in secret conference, in closed chambers, and without seeking the counsel of the profession at large. They are thus deprived of much of the strength which they would derive from open counsel and enthusiastic popular support. For some purposes this kind of secret administration and government behind the veil has advantages. It increases the power of the few for internal government, it greatly weakens it for all larger and more public purposes. Thus, at the present moment, we have reason to believe that in this matter the governing body of the two Colleges are much more in earnest, and are acting with more energy, than is known or believed out-of-doors. It is much more doubtful whether they are acting in a generous and statesmanlike way, or a way which will carry the profession and the public with them, or on lines which will lead to a successful issue. The matter, in our opinion, is not so difficult or complicated as it appears. There is more than one precedent for a University of one faculty, and there is no reason why the licensing corporations of England and Wales, seated in London, should not constitute such a faculty. The students of medicine and surgery educated in London are taught in the greatest hospitals of the kingdom, with the richest clinical material, and by teachers of high eminence; they are required to pass a literary examination before being admitted to the register of students; they have to go through a curriculum of education, lasting for four years; they are examined in all the subjects of the theory and practice of medicine, surgery, and midwifery. Moreover, the examinations are supervised by the General Medical Council, and henceforth the qualification must be complete. Here, then, are all the requisites for the degree of "M.D.," and the claim properly put forward would be irresistible. As to the title of the University, that is a mere matter of nomenclature: whether it be a University of Westminster or the Metropolitan University of Medicine, or any other title which is selected, is a baptismal question which may be left to the privileged sponsors.

We cannot conceal from ourselves, however, that the members of the Councils of the College of Physicians and the College of Surgeons will do well not to overlook the new difficulties which are likely to arise in this matter if they should persist in excluding the Apothecaries Society from the Conjoint Board, or from the new faculty, in view of the provisions of the Medical Act of 1886. We have stated the claims which can reasonably be put forward for the medical students educated in the great metropolitan centre, who will be the licensees and diplomates of the new faculty; but we fail to find one iota of substantial claim in that statement, which cannot as fairly be put forward for the licentiates of the revivified and enlarged Society of Apothecaries which would be created if the Colleges persist in the proposed exclusion. Their students, their candidates, and their diplomates will have studied in the same schools; they will have passed the same preliminary examination; they will be on the same register as students; they will have gone through the same curriculum; they will have been educated in the same hospitals, under the same teachers. Their examination also will extend over the whole range of medical study and practice. The examinations will *ex hypothesi* be of the same standard, supervised by the same General Medical Council, and conducted by examiners, part of whom at least will be appointed by the General Medical Council.

What substantial plea then can be put forward for granting a degree in medicine to the future diplomates of the Conjoint Examining Board of the College of Surgeons and College of Physicians, which cannot evidently be urged with the same force for the diplomates of the reconstituted Society of Apothecaries? Of course some form of words can be devised, some argument based on the alleged dignity of the College of Physicians and the College of Surgeons, as compared with the Society of Apothecaries. But that is a flimsy and sorry plea, which could have no weight whatever in a popular House of Commons, and could not make any real distinction between the respective claims. The claim must be based on substantial and real grounds, or not put forward at all. To assume that an exclusive degree-granting power would be given to the corporations in Lincoln's Inn Fields and Pall Mall and refused to that in Blackfriars on the plea of the more dignified character of the two Colleges, is a palpable absurdity. We feel well assured that no statesman, no lawyer, no person cognisant of public affairs, will advise the College of Physicians or the College of Surgeons that they will have any chance of substantiating an exclusive claim for a degree-giving power for themselves as against the Society, under the enlarged powers and duties which they would thrust upon it if they were to exclude it from combination.

Corporations cannot be extinguished by side thrusts, and neither Parliament nor Government would recognise a claim to great exclusive privileges based essentially upon pride of caste. If the Apothecaries can show—as they will be able to show in the future, if they should now be excluded from the Conjoint Board—that their students have been educated in the same places, passed through the same curriculum, and subjected to identical tests, their claim to identical privileges cannot be denied; and when it comes to be a question of obtaining new privileges or new degrees for the general practitioners of England and Wales, they will have as strong a Parliamentary claim as the two rival corporations, and the case of the one will succeed or fail with that of the other. Heartily desiring, therefore, that a degree in medicine may be obtained for the practitioners in England and Wales studying in London, and licensed in London, on terms as fair and

reasonable as those on which such degrees are granted to their fellow-students in Ireland and Scotland, we counsel the College of Physicians and the College of Surgeons not to raise up a new obstacle by excluding the Society of Apothecaries. If they do so, they will go far to wreck a project the success of which is of vast importance to metropolitan schools, and to the practitioners of England and Wales, of which the carriage is for the moment entrusted to the keeping of the Colleges, but which is by no means their exclusive concern.

SIR ERASMUS WILSON'S LEGACY TO THE COLLEGE OF SURGEONS.

The munificence of the late Sir Erasmus Wilson will long be remembered, and a recent occurrence has served to refresh the memory of the public on that not uncongenial subject. During his lifetime, he expended £5,000 in the endowment of a Chair of Dermatology, and presented the Museum with the well-known collection of models and drawings of skin-diseases. With his sanction, the Chair of Dermatology was converted into a Chair of Pathology, and accordingly three lectures on pathology are annually delivered at the College. He built a new wing and a chapel to the Sea Bathing Infirmary at Margate at a cost of more than £30,000, and also displayed great liberality towards the Royal Medical Benevolent College. He likewise founded a Chair of Pathology in the University of Aberdeen at a cost of £10,000. All this munificence was entirely independent of his donations to Masonic charities and to other charitable and educational institutions, and his public-spirited act by which Cleopatra's Needle was transported from Egypt to the Thames Embankment.

It is, however, with Sir Erasmus Wilson's legacy to the College of Surgeons that we have now to deal. He died on August 4th, 1884, and his will was proved on October 17th of that year. The value of the personal estate amounted to upwards of £264,000. A few relatively small sums fell at once to various persons and institutions, the residue of his personal estate was left, on trust, to pay the income to Lady Wilson for life, and, at her death, four sums of £5,000 each were to be bestowed respectively, free of legacy duty, on the Margate Sea-Bathing Infirmary, the Medical Benevolent College, the Medical Benevolent Fund, and the Society for the Relief of the Widows and Children of Medical Men. The whole of the ultimate residue of his personal estate was to be bestowed upon the Royal College of Surgeons on the death of Lady Wilson.

That event has occurred, and the College will soon come into possession of an enormous sum of money. Directly the terms of the will became known, two years ago, the manner in which the legacy was to be utilised was discussed, unofficially, both within and without the walls of the College, and Sir Spencer Wells proposed that a large part of these funds should be devoted to the provision of a place and means of pathological and scientific research for practitioners and advanced students, more or less on the principle of the Physiological Institution at Cambridge, the Collège de France, and many German Universities. The first official recognition on the part of the Council of the munificence of the deceased, and of his other services to the College, was a resolution, based upon a proposition made by Sir James Paget, that a bust of Sir Erasmus Wilson, executed in marble by Mr. Brock, A.R.A., should be set up in the College as a memorial.

At the meeting of the Council on Thursday, the President simply announced the decease of Lady Wilson. It will be the duty of the Council to consider, seriously and deliberately, in what manner the legacy can be most advantageously utilised. The Council will naturally be reserved even in the preliminary discussion of any resolution on the subject which may shortly be proposed at one of their meetings, and still more must it exercise caution as to what motions or resolutions are agreed to, adopted and confirmed. The Fellows and Members will most assuredly watch the proceedings of the Council with great interest, with more interest perhaps than security. Already the diploma-holders of the College are discussing the important question. We understand that the utilisation of the money for a pathological laboratory, as proposed by Sir Spencer Wells, is likely to meet with much approval, while some, it is said, are in favour of applying the legacy to the foundation of a surgical teaching institution for London.

The situation in which the College is placed through this legacy, and through the recent alterations in the system of examination must be remembered. Hitherto, out of the sum of about £6,000, which the College annually gains in fees, a little more than half (last year, £3,254) has been expended on the museum and library. The interest on the legacy will bring in an annual income of between £6,000 and £8,000, to be devoted entirely to the museum. The College foresees that over £3,000 will annually be set free for examination purposes; or, otherwise expressing the situation, the fee money will be entirely at the service of the examinations, and will no longer be more than half lost to that service. We trust that neither "examinations," nor "examiners," will be considered. The increase of funds will allow of more examiners, the number of examiners being already no longer limited, as in the old charter. The time for examinations will, it is suggested, be extended, and more examinations will be held in the course of the year. This may overcome certain well-known evils in the present system, but very great abuses may creep in, and the £8,000 may prove of no benefit to anybody but the examiners. With regard to the teaching university scheme, however feasible it may be, it is doubtful whether the terms of the Wilson legacy will allow of any of the money being applied to the furtherance of that measure.

What will be set free by the legacy is, then, evident and positive. How the legacy itself will be applied to museum purposes is less clear. One member of the Council, at least, is in favour of the erection of a new wing to the museum buildings, to contain a collection of casts and drawings; but there appears to be an objection to sinking any of the legacy in bricks and mortar. The museum may best be improved by other means than mere physical enlargement, and these means are being considered. The disposal of so great a sum in the interests of surgery and its ancillary sciences is of vast public and professional importance. Not one, but every, suggestion should be invited, and Fellows and Members alike should be asked to assist the Council by proposal and criticism. For once, let the Council take the whole constituency into their confidence. None but small and selfish interests could suffer from such a course.

EPSOM COLLEGE.

It cannot be too widely known that Exhibitions, reducing the charge for board and education to £31 10s. a year, are to be competed for in December by sons of medical men. The successful candidates will enter the College in January. Applications should be made before the end of November, to the Secretary of the College, at the office, 37, Soho Square.

At the meeting of Fellows and Members of the College of Surgeons on November 4th, the total number present was estimated at 296. All the Members of the Council were at the meeting, with the exception of Sir James Paget, Mr. Harrison, and Mr. Sydney Jones.

Under the auspices of the East London and South Essex District of the Metropolitan Counties Branch, a demonstration of cases of myxœdema will be given at the London Hospital on Thursday, November 18th, at 8.30 P.M. Sir Andrew Clark will preside, and Dr. Ord will give the demonstration. Mr. Victor Horsley and Dr. Routh will also show cases. A large gathering is expected, as all medical men who take an interest in the subject, whether members of the Association or not, are invited to attend.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The quarterly meeting of the Association was held at Bethlem Hospital on Tuesday, November 9th, under the presidency of Dr. Savage. Mr. Hayes Newington read a paper on the tests which should be made use of in deciding as to the fitness of patients for discharge, especially dealing with the subject in its relation to cases of suicidal tendency. Dr. Savage followed with a paper on the question from the homicidal point of view; and a discussion ensued, in which Drs. Blandford, Rayner, Hack Tuke, and C. M. Tuke took part.

DR. HINGSTON, OF QUEBEC.

At the semi-annual meeting of the College of Physicians and Surgeons of the Province of Quebec (Provincial Medical Board) held in the city of Quebec on September 29th, 1886, the following resolution was proposed by Dr. H. A. Mignault, seconded by Dr. J. B. Gibson, and carried unanimously:—"That the Governors of this College have heard, with pleasure, of the honour conferred by the British Medical Association on their President, Dr. Hingston, whose honourable bearing towards his professional brethren, not less than his eminence as a surgeon, and his labours in the interests of public health, had already secured to him every distinction the medical profession of this Dominion could confer.

THE POLICE ORDER AND RABID DOGS.

The statistics published by Sir Charles Warren show that 2,157 dog were seized in October. During the month, twenty-two were killed in the streets as rabid—nineteen by the police and three by private persons. Of these, the veterinary surgeon reports that three were affected with rabies, thirteen with epilepsy, two with brain fever, one with convulsions, one with peritonitis, and one had been poisoned; one was not examined. Seventy-seven persons were known to have been bitten during the month, twelve policemen and sixty-five private persons, by dogs not known to have been rabid. The number of dogs found in the streets rabid and savage is rapidly declining. In July last, the number was sixteen; in August, thirteen; September, nine; and October, four.

LUNACY CERTIFICATES.

An action is now in progress by Madame Tinfani against two well known physicians, who, eight years since, certified that the plaintiff was of unsound mind. In the course of the inquiry, the Lunacy Commissioners (Dr. Williams and Mr. Phillips) were called, and gave evidence that they had seen the patient after admission, and signed an entry in the book to the effect that they considered the plaintiff insane. At this point the judge intervened, and asked the counsel for the plaintiff whether, after this evidence, he proposed to go on. The case was continued, but the jury were unable to agree. The judge thereupon said he would discharge them; but he would adjourn the case until Saturday morning, in order to consider whether he should not give judgment upon the evidence for the defendant, and expressed some doubt whether he ought to have left the case to the jury at all. Pending judgment, we make no comment on the case; but it is, of course, only an additional warning to medical men of the inevitable dangers which they run, in the present state of the law, in signing lunacy certificates, and will probably act potently to deter medical men from accepting that responsibility. It is much to be lamented that no time was found to enable the Lord Chancellor's Bill for the amendment of the lunacy law to be discussed in the House of Commons. The law urgently requires amendment, and, until the new Lunacy Act is passed, it will become more and more difficult to obtain the necessary certificates even in the most urgent cases.

COFFINS IN THE CHURCH PORCH.

A correspondent calls attention to the practice, sanctioned by the clergy, of allowing the coffin to be brought into the church during the early part of the funeral service which takes place inside the church. In some parts of the year, this is not only offensive but even dangerous to those who sit by the decaying human tabernacle, and no possible good can result from it. The idea of bringing the corpse inside the church is, our correspondent points out, a superstition which came in about the fourth century, when the apostacy from the early faith began. The coffin, as is pointed out, might as easily be left in the porch. This is a matter to which attention may well be directed, and members of the profession would do well to endeavour to influence the clergy in favour of some change in respect to this ancient but unsanitary custom.

SALT FISH AS A MILITARY RATION.

Salt cod-fish has been introduced among the articles of diet of the French soldier. The Minister of War, after having consulted the Sanitary Council of the army on the subject, has ordered salted fish to form part of the ordinary military rations. It must be of good quality, and captains commanding regimental companies and squadrons or batteries of artillery, with a view to avoid any possible accidents, are ordered to watch that no fish is used which presents traces of alteration, as is frequently indicated by a rose-tint of the muscular tissue, or which is deteriorated in any other respect. One of the chief purposes aimed at in the introduction of salted fish as a part of the rations of the French troops is announced to be the help the consumption of it will afford to the crews of the fishing vessels, from which the most valuable recruits of the Military Marine, or Government Naval Service, are obtained. Salt cod may be acceptable to the troops as a variation in diet, but can hardly be regarded as an economical description of food, so far as its nutritive qualities are concerned.

CHILD-MURDER OR WHAT?

At the recent Devon and Exeter Assizes, a trial for child-murder took place, at which the behaviour of the presiding judge (Mr. Baron Huddleston) was so remarkable that it is worth while to draw attention to it. A young woman was indicted for the murder of her female infant child. Till after her delivery, the fact of her condition was unknown to those about her, and the first intimation of it was the discovery of the body of the child, wrapped in a dress and an apron, and doubled up in a utensil under the bed. Blood was oozing from its mouth and nose; it seemed very feeble, and died in the course of five or six hours. On *post mortem* examination, six fractures of the skull were found—five on the right side, and one on the left; one of the former was one and one-eighth inches in length; the others were round punctured fractures going through the skull. The skin was not broken. Any one of the fractures would have been sufficient to account for death. A nail was found in some blood on the floor at the spot where the child had lain; and it was suggested by a medical witness that the fractures might have been caused by this nail; and, when pressed by the judge as to how this would have been possible without a handle, he suggested that a towel might have been tied round it. Both medical witnesses admitted that it was possible that a skull should be fractured by a fall; but such an occurrence, even if it had taken place, would not have accounted for more than one of the frac-

tures. The counsel for the prisoner contented himself with framing hypotheses to account for the presence of the nail, and urging that the case against the prisoner had not been proved. The judge, instead of reviewing the various theories that had been put forward in regard to the fractures, devoted his attention almost exclusively to a violent attack on one of the medical witnesses, which it would seem so impressed the jury that they immediately acquitted the prisoner. That this medical witness' evidence was perfectly satisfactory, we have no wish to assert; but the facts of the case were in no way discredited thereby, and we venture to think that no other judge would have so far forgotten himself and his duty to the public. A trial so conducted almost affords an incentive to child-murder.

"ST. GOVOR'S WELL," HYDE PARK.

NEAR the bottom of the Broad Walk in Kensington Gardens, and about a hundred yards below the Round Pond, is situated a sunken well bearing the inscription "St. Govor's Well, 1856." A few years ago, the water, which issued in a considerable stream from a leaden spout, was credited with medicinal virtues, and was distributed to children and curious people in many coloured glasses by an old woman who attended daily. We have heard of the beneficial action of the waters on crippled joints. Since the woman disappeared (from over-indulgence in the waters?) a metal cup has been attached to the spout, and the well has been the constant resort of thirsty children and nursery-maids. During the past summer, while the Round Pond has been drained St. Govor's Well has run dry, and it is said that some pipes were discovered under the two or three feet of stinking mud at the bottom of the pond which had the appearance of communicating directly with the well, so that it seems probable that the water has been filtered through the mud, and not through the intervening bed of gravel. Can its reputed medicinal virtues be due to the organic impurities of stagnant water? It is to be hoped that the source of the water will be fully investigated, and, if it is found to be the mere drainage of the pond, that the well will be closed, or else that a supply of pure water will be laid on from a known source. The well would be very much missed by the children, as there is no other drinking-fountain in the gardens.

PASTEUR AND FRISCH.

AMONG the vast number of criticisms to which M. Pasteur's prophylactic treatment of rabies has been subjected, none has been more often repeated than the contention that in attempting to treat human beings after the infliction of the bite, he was going beyond the warrant afforded by his experiments on dogs. M. Pasteur had indeed said that even when he inoculated the first human being, on July 6th, 1885, he was not performing an experiment entirely new to him, but there was a great deal of obscurity on this point, and when Frisch, of Vienna, published certain experiments tending to show that dogs could not be protected by inoculations made after infection by trephining, many writers were ready at once to draw the conclusion that M. Pasteur's method was not applicable to human beings, who, of course, would never be inoculated except after a bite. In his paper at the Académie der Sciences on November 2nd, M. Pasteur admits that Frisch's results are correct, but does not accept the conclusion that his method in its application to man is thereby put out of court. With, perhaps, a truer scientific instinct than has been shown by his critics, he at once proceeded to vary one of the terms of his experiment; he altered the method of inoculation so that the protective influence, if such existed, might be earlier exerted. With this object he began the preventive inoculations on the day following infection, and repeated them rapidly, so that the whole series of cords was used in one day, instead of during a week or ten days as previously; then on the next day the treatment was recommenced, and inoculations made every two hours; the course might even be repeated a third time. In this way M. Pasteur has succeeded in preventing the development of rabies in dogs inoculated with virulent material by trephining. "The success of the preventive inoculation of animals after infection by trephining, depends," he says, "on the rapidity and the intensity of the vaccination."

THE RECENT DEATH AFTER INOCULATION BY PASTEUR.

WITH reference to the case mentioned last week of a man named Wild, who, it was said, had died after being bitten by another man named Oates, who died of hydrophobia at Rotherham, Dr. Hime writes to us that the serious character of the possible and probable charge against Pasteur's method, that it had failed in this instance, if, indeed, it had not caused the death, induced him to go at once to Rotherham, with a view to obtaining some material from the deceased for the purpose of making test-inoculations, so as to ascertain whether any and what kind of rabic virus was present; for, under such circumstances, it is possible to ascertain by experiment whether canine virus (even after passing through a human subject) or rabbit virus (which is employed by Pasteur for protective inoculations) is present. The man, however, died from pneumonia. Dr. Foote furnishes us with the following account of the case. The deceased experienced a chill, and on the following day bilious vomiting came on, and continued through the next day, accompanied by constipation. On the evening of the fourth day, the pulse rapidly rose, congestion of the lungs was found to be present, and he died on the fifth day about 1 P.M. There was nothing to connect the illness in any way with hydrophobia or Pasteur's treatment. He had nineteen inoculations whilst in Paris, and returned quite cheerful. The *post mortem* examination showed that there was congestion of the lungs, and revealed old adhesions to the diaphragm. The kidneys were congested and soft, and the posterior portion of the liver was also congested. The bladder was distended, and in the stomach a patch of mucous membrane was thickened and congested. The other organs appeared normal. It may be added that the unfortunate man Oates did not really bite Wild, but accidentally wounded him slightly in a struggle when Wilde was trying to get him into bed during one of the convulsive attacks. The wound, however, was quite sufficient justification for Wild going to Paris for treatment.

THE SUPPLY OF SURGICAL INSTRUMENTS TO THE POOR.

ATTENTION is called by Dr. G. B. Longstaff, the Chairman of the Medical Subcommittee of the Charity Organisation Society, to the useful work which this Society is effecting on behalf of the crippled poor of London. There will always necessarily be a large number of cases in which surgical appliances, of various kinds, have been prescribed to patients whose means do not admit of their purchase. The cheaper articles, such as trusses and elastic stockings, are easily obtained, but in so vast a population there is a great demand for expensive appliances, such as invalid chairs, artificial limbs, spinal jackets and supports, and boots with irons. It is often exceedingly difficult for a labouring man to procure a possession which would enable him to resume work, or which is essential to his recovery, or even to his existence; while it is usually of great importance that he should have it at once. To meet this need, the Charity Organisation Society formed a special department two years ago, for the supply of these instruments. If a patient, though poor, is able to find the cost of what he needs, we make no inquiry into his circumstances, and obtain it for him at the cheapest rate. If he needs help in the purchase, his earnings and liabilities are ascertained, and he receives the appliance forthwith, either as a free gift, or by an arrangement to pay a certain sum, which is fixed in accordance with his means. The applications are received by the district committees, and, as most of them are pressed for funds, the central office provides them with every appliance for half its actual cost. The loss thus incurred has to be made up by the contributions of those who feel a practical sympathy with affliction. About 1,100 instruments have been supplied during the past year.

ELECTION OF DIRECT REPRESENTATIVES.

THE following is a full list, arranged in alphabetical order, of the persons duly nominated for election to the General Council of Medical Education and Registration of the United Kingdon, by registered medical practitioners resident in England, Scotland and Ireland. Practitioners resident in the Channel Islands and in the Isle of Man are, it appears, not entitled to vote.

England.

BALDING, Daniel Barley, L.S.A., F.R.C.S.Eng., Royston, Herts.
BROWN, George, L.S.A., M.R.C.S.Eng., 7, King William Street, London, E.C.
BULLOCK, Henry, L.S.A., F.R.C.S.Eng., Spring Grove, Isleworth.
CARPENTER, Robert Henry Spencer, L.S.A., L.R.C.P.Lond., 130, Stockwell Road, London, S.W.
DOLAN, Thomas Michael, F.R.C.S.Ed., L.R.C.P.Ed., L.S.A., M.D.Durh., Horton House, Halifax.
FOSTER, Sir Balthazar Walter, L.R.C.S.I., L.K.Q.C.P.I., F.R.C.P.Lond., 14, Temple Row, Birmingham.
GLOVER, James Grey, M.D.Ed., L.S.A., L.R.C.S.Ed., 25, Highbury Place, London, N.
JAMES, Moses Prosser, M. and L.M.R.C.S.Eng., M.D.St.And., L.S.A., M.R.C.P.Lond., 3, Dean Street, Park Lane, London, W.
MORRIS, Edwin, F.R.C.S.Eng., L.S.A., M.D.St. And., Spalding, Lincolnshire.
O'CONNOR, Bernard, M.D., and M.S.Q.U.I., M.R.C.P.Lond., 17, St. James's Place, London, S.W.
RICHARDSON, Benjamin Ward, F.F.P.S.G., M.D.St. And., F.R.C.P.Lond. 25, Manchester Square, London, W.
TAAFFE, Rickard Patrick Burke, F.R.C.S.Eng., L.S.A., M.D. and M.S.Lond., 45, Old Steine, Brighton.
WATTS, Algernon Newbegin, M.R.C.S.Eng., L.S.A., L.R.C.P.Ed., Sharnbrook, Bedfordshire.
WHEELHOUSE, Claudius Galen, F.R.C.S.Eng., L.S.A., Hillary Place, Leeds.

The voting papers which are, we understand, ready for issue, will contain the above names. The voter is entitled to vote for three candidates and no more, and he must sign his name appending his address and his registered qualification or qualifications only. The voting paper must be received by Mr. W. J. C. Miller, [at] the Medical Council Office, on or before November 22nd.

Scotland.

BRUCE, William, M.D.K.Coll. Aberd., L.R.C.S.Ed., Dingwall, Ross-shire.
MORTON, James, L.R.C.S.Ed., M.D.St. And., F.F.P.S.G., 199, Bath Street, Glasgow.
SINCLAIR, Robert, M.D., M.S.Glasg., 8, Airlie Place, Dundee.

Ireland.

JACOB, Archibald Hamilton, F.R.C.S.I., M.D.Dub., 23, Ely Place, Dublin.
KIDD, George Hugh, F.R.C.S.I., M.D.Ed., 58, Merrion Square South, Dublin.
LAFFAN, Thomas, M.R.C.S.Eng., L. and L.M.K.Q.C.P.I., Cashel.
McMORDIE, William Kirkpatrick, M.D. and M.S.Q.U.I., 17, College Square East, Belfast.

In Scotland and Ireland the voter is entitled to vote for one candidate.

THE ARRANGEMENTS FOR THE ELECTION OF DIRECT REPRESENTATIVES.

WE understand that the result of the election of direct representatives of the profession on the General Medical Council, which takes place next week, will not be officially declared until after the meetings of the Branch Councils. In England, the meeting has been fixed for November 26th. We understand that the persons present at the counting of the votes in England will be the Registrar (Mr. W. J. C. Miller), the Solicitor (Mr. Farrer), and the requisite number of assistants to count the papers. No representatives of the candidates will be allowed to be present. It is sincerely to be hoped that no charges of unfairness or of mistakes may be made by defeated candidates, as such a course would involve a scrutiny, and probably a recount of the votes. There can be no doubt that the utmost confidence may be felt in the care and integrity of the officers of the Council. A curious point brought out by the working of the provisions of the Medical Act (1886), with regard to election of direct representatives, is, that medical practitioners residing in the Isle of Man and in the Channel Islands have no right to vote. By the defining Clause 27 of the Act, it is expressly provided that these islands are not included in the terms United Kingdom, or England. The position appears to be very illogical, inasmuch as names of the medical practitioners of these islands appear in the *Medical Register*, with their addresses appended, and the islands themselves unquestionably form a part of the United Kingdom in the ordinary acceptation of the term.

THE LATE FRED. ARCHER.

THE development of suicidal tendencies during the mania which sometimes accompanies the early stage of typhoid fever, is a sufficiently rare event to invest the sad death of the celebrated jockey, Mr. Frederick Archer, with a special medical interest. We learn from his medical attendant, Mr. J. R. Wright, that Archer returned from Lewes on November 4th, because he felt too ill to remain for the second day of the meeting; on the following day he was very feverish and ill, and, on November 6th, his medical attendants, who had up to that time hoped against hope that the illness might be only a temporary disturbance, due to a chill at Brighton on November 2nd, were forced to recognise that he was suffering from typhoid fever, and that, looking to the severe privations and exposures to which he had subjected himself during the previous five or six weeks, there was every prospect that the attack would be a severe one. There was at first great mental depression and very high fever, but, under the careful treatment and watching he received, material improvement took place, and the case seemed to be going on better than could have been hoped, when, on November 8th, he was seized with one of those suicidal influences, which are occasionally noted during the first week or ten days of typhoid fever. This disease is so associated in the minds, not only of the public but of the medical profession, with prostration and low muttering delirium, that the fact that acute delirium with delusions, generally of a suicidal character, sometimes comes on during the early stage, will be new to many. The delirium, indeed, may be so violent as to be mistaken for acute mania, and consultations have even been held, in some cases, to decide whether the patient should be committed to a lunatic asylum. M. Mottet has related a case where this mistake was actually made, and the patient admitted to the lunatic asylum before the true nature of his malady was recognised. Only one consolation can be offered to Mr. Archer's many friends and admirers, and this is, that these maniacal symptoms are of extremely grave moment, and that the majority of patients who present these symptoms succumb to the disease. It is improbable that, under the circumstances, the termination of the case could have been favourable.

DENTAL SURGERY AT GUY'S HOSPITAL.

IN a leading article published on October 2nd, attention was drawn to the growing importance of the art of dentistry, and the increasingly intimate relations it was establishing with various departments of medicine and surgery, and to its importance to the State. It is thus most gratifying to note that the dental surgery department at Guy's Hospital has recently been much enlarged through the energy of the dental surgeons, Mr. Moon and Mr. Newland Pedley, coupled with generous aid from the authorities in providing a new set of rooms and appliances. A large room, now devoted exclusively to dental surgery, has been chosen, so that an excellent light is obtained, and has been fitted up with hot and cold washing appliances, gas lamps, reflectors, dental engines, water motors, saliva ejectors, new dental chairs, and a complete set of instruments and appliances. Out-patients are seen daily, and Thursday afternoons are specially set aside for cases requiring surgical treatment and the administration of nitrous oxide gas. On Friday afternoons, demonstrations on the stopping of teeth and the minor operations of conservative dentistry are given, and the method of fitting artificial plates, which are supplied to those patients from whose mouths portions of the jaw have been removed as the result of accident, disease, or surgical operations, is shown. Many opportunities are afforded for seeing cleft palates, and other oral deformities under mechanical treatment. It is hoped that

these advantages will enable not only those students of Guy's who wish to become dentists, but others who desire some knowledge of the details of dental work, to acquire the necessary acquaintance with the possibilities of conservative dentistry.

CLINICAL CLERKS AT FEVER HOSPITALS.

THE question of admitting students to the clinical study of fever and small-pox cases in the Metropolitan Asylums came before the Board at its last fortnightly meeting, held on Saturday last. This matter, which has been before the managers for some time, and the necessity for which the late Dr. Fowler pressed upon the members, on the ground that, as nearly all the cases of these diseases occurring in London were being treated at the Metropolitan Asylums, the members of the medical profession had little opportunity of making themselves acquainted with the characteristics and treatment of the diseases. Proof of this was stated to have been given in the sending of patients with other diseases than fever and small-pox to the special hospitals. The Local Government Board had been asked to give its consent to the reception of medical men other than the medical officers of the asylums into the wards for clinical study, and the central authority had given its consent on condition that the gentlemen so admitted "shall be registered medical men, shall have specific duties, and shall be in all respects subject to the regulations in force at the hospitals." The committee recommended the acceptance of the suggestions of the Local Government Board, and also that the remuneration of such assistants should be limited to the allowance of residence and rations, or partial rations. The motion was carried.

MEDICAL DEGREES FOR LONDON STUDENTS.

WITH reference to our leader of last week, entitled "Medical Degrees and Direct Representation," our attention has been called to the fact that a statement that, with the exception of a proposal made to the College of Physicians, some years ago, by Dr. Wilson Fox, no action had been taken in this matter until June, 1884, when Mr. Macnamara introduced the subject at the annual dinner of the Metropolitan Counties Branch, is incorrect. Dr. Hickman has forwarded us a reprint of his pamphlet on the establishment of a Royal College of Medicine, by the amalgamation of the Royal Colleges of Physicians and Surgeons of England, in which the fact is stated that on March 24th, 1884, Dr. Hickman proposed, at a meeting of the Fellows and Members of the Royal College of Surgeons of England, "That this meeting of Fellows and Members of the Royal College of Surgeons of England begs most respectfully to recommend that the Council of the College do obtain a charter enabling them to combine with the Royal College of Physicians of London, with a view to the amalgamation of the two Colleges into one great College of Medicine, to be endowed with authority to examine and grant licenses to practice in all branches of medicine and surgery, and to confer on its licentiates the degrees and titles of Doctor of Medicine and Master of Surgery." He subsequently continued to agitate this question by letters in the medical journals, and issued upwards of a thousand copies of his speeches and letters on the subject, at the same time obtaining numerous signatures to a memorial addressed to the Presidents of the Royal Colleges of Physicians and Surgeons. We are satisfied that it was not the intention of the writer of this article to detract from the undoubted fact that energetic public steps had been taken on an extensive scale in this matter by Dr. Hickman, prior to June, 1884. The resolution to which we referred was supported by a long speech, and was carried at the meeting of the College.

THE LEGAL ASPECT OF ANTISEPSIS.

ACTIONS for malpraxis, although of comparatively rare occurrence, are still sufficiently common to make a want of care in diagnosis and treatment as undesirable from a pecuniary point of view as it is from a professional standpoint. Such proceedings, when they are taken, generally rest on alleged gross and apparent want of skill or attention; but an article recently contributed to the *Vierteljahr. f. Gerichtl. Med.*, by Dr. Carl Deneke, of Flensburg, again discusses the question whether it be not criminal neglect on the part of a surgeon to abandon the principles of the antiseptic method in the treatment of injuries or of operative wounds, unless the fulfilment of some vital indication renders adherence to these principles impossible. A surgeon who had carried out antiseptic precautions in their integrity, would not be held responsible, in a court of law, for any unfavourable course the wound might take, and in cases where complaints are lodged against surgeons on account of alleged want of skill in the treatment of wounds, the legal authorities ought, in the course of their preliminary investigation, to submit the case to a medical faculty for its opinion. The value of the antiseptic method of surgical treatment is so widely recognised, though in its modern form it is of quite recent origin, that the administrators of the law are now forced to consider seriously whether the neglect of antiseptic precautions, in the treatment of injuries, is not to be regarded as criminal, if the injured person died apparently from such neglect. There is however a sufficient range of method and practice in the system called antiseptic to make it a somewhat difficult task to say what is and what is not antiseptic treatment. Many surgeons who openly repudiate the antiseptic method as commonly practised, nevertheless contrive to obtain results up to the average; and this, no doubt, is due to the fact that the essential feature of antisepsis is perfect cleanliness. No one detail of the treatment can in itself be held to constitute antisepsis; we may drop the spray, as indeed the founder of the system has done; we may dispense with the use of carbolic acid, and still the treatment may be antiseptic, both in name and effect. The question would be, therefore, whether or not the surgeon carried out the operation in a proper and cleanly manner. But even with the most elaborate and pains-taking precautions for maintaining the aseptic condition, suppuration may, and in a certain number of cases does actually occur, without, on that account, any except a theoretical blame attaching to the operator. It is not easy to see, therefore, how a legal liability could ever be established unless particular details of procedure are raised to the dignity of a dogma, to modify or omit which would constitute liability. The discussion, therefore, is entirely unprofitable, for any attempt to found an infallible dogma on a method of practice is not only certain to break down, but has an injurious influence on the free development of scientific thought.

DISSEMINATED MYELITIS ACCOMPANYING MEASLES.

THE intricate intermixture of disturbances of the nervous system in fevers is receiving wider recognition, and last Tuesday Dr. Barlow brought forward at the Royal Medical and Chirurgical Society a case in which acute myelitis had come on during an attack of measles, and proved fatal on the eleventh day. The very scanty record of cases with similar symptoms dates back to James Lucas in 1790, but the pathology has hitherto been an absolute blank. Bergeron, who had one of the very few fatal cases in 1868, could find nothing abnormal after death. The pathological changes in Dr. Barlow's case were excellently illustrated by microscopical specimens and photographs, showing the intense vascular congestion of acute myelitis. Scattered spots were to be seen in the medulla affecting the hypoglossal and vagus nuclei which had shown their presence in life by the patient's inability to control the tongue, to speak distinctly or swallow easily. That the nervous symptoms were a part of the measles, and not a chance coincidence, cannot be doubted, when any careful survey is made of the concurrence of similar symptoms with the exanthemata and acute fevers. The striking and classical essay of Gubler, in 1860, first made that plain, and the subsequent collections of Landouzy and Arenfeld have reinforced it. Westphal's critical genius for a time illumined the subject and drew fresh attention to it, showing in 1872 the special tendency of small-pox towards nervous complications; in England, except after diphtheria, the point has been little noticed. Dr. Wilks's wide experience supplied only one case of nervous lesion (paraplegia)

following upon small-pox. Dr. Barlow referred also to two cases of nerve-lesion in small-pox affecting speech, published in the last volume of the Clinical Society's Transactions by Drs. Whipham and Myers. They were not fatal, but it seemed likely enough, from the symptoms in life, that there was in them affection of the hypoglossal nuclei among others, as there was in Dr. Barlow's case. The nervous symptoms appeared in one of them at least as soon as the eruption, and so made the term sequela a little inexact, as perhaps it would have been if Dr. Barlow had used it, for Dr. Poore was careful to point out that the pain over the breastbone, which might be considered perhaps as a symptom of dorsal myelitis, appeared at least as early as the preliminary *malaise* of measles, and that the myelitis was at least concurrent and not consequent. Similarly in a case of Dr. Whipham's, a muscular ataxy, which was mistaken for drunkenness, was noticeable just before the eruption of variola was plain. A case which Dr. Cheadle mentioned (at present in the Great Ormond Street Hospital) of Cerebro-spinal Meningitis, immediately consequent on measles, was very much to the point, though perhaps it may be as well to remember Dr. Wilks' warning that some meningitis, even under such conditions, may be tubercular. Dr. Ormerod showed the variety of forms which the nervous symptoms take by relating three cases in the same family in which measles had been followed, after a clear interval, by a form of infantile paralysis with some points of resemblance to what Prof. Charcot and Dr. P. Miear have described in the *Revue de Médicine*, Feb. 1886, under the title of "A Special Form of Progressive Muscular Atrophy." In the French essay the tendency of the disease to run in a family is especially enforced, and Dr. Barlow was able to call to mind a similar condition. The discussion on the whole showed a widefelt interest in the subject, and a disposition to fill up some of the large gaps that are still left in our knowledge.

SCOTLAND.

OUTBREAK OF DIPHTHERIA IN ANNANDALE.

An outbreak of diphtheria has occurred in Annandale, and a number of very bad cases have been recorded. In one family, four members have succumbed to the disease, and in all ten cases have already proved fatal.

THE NEW COMBINATION HOSPITAL AT JOHNSTONE.

The committee charged to select a plan for the New Combination Hospital, to be erected at Johnstone, has received over seventy drawings. The new hospital is to supply accommodation for the requirements of Johnstone, Houston, Erskine, Inchinnan, and Kilbarchan.

GLASGOW ROYAL INFIRMARY DORCAS SOCIETY.

The directors of the Glasgow Royal Infirmary Dorcas Society held their annual meeting last Monday. The report submitted showed that 1,121 persons had been assisted by the Society during the year, being an increase of over 100 compared with the previous year. Articles of clothing to the number of 2,375 had been distributed amongst them.

INSTITUTION FOR IMBECILE CHILDREN, LARBERT.

The annual meeting of the Edinburgh Ladies' Auxiliary for the Institution for Imbecile Children, Larbert, was held in Edinburgh last week. The Rev. Dr. Andrew Thomson presided. It is satisfactory to know that, notwithstanding the depression of trade, the finances of the Institution are in a good state, and the Asylum is specially indebted to the Edinburgh Ladies' Auxiliary for its enviable position.

MEDICO-CHIRURGICAL SOCIETY, EDINBURGH.

The annual meeting for the election of office-bearers was held on Wednesday evening, November 3rd, when the following gentlemen were elected for the year:—*President:* Professor Grainger Stewart. *Vice-Presidents:* Dr. John Duncan, Dr. Peel Ritchie, Professor Chiene. *Councillors:* Dr. John Smith, Dr. Littlejohn, Dr. Troup, Dr. Allan Gray, Dr. James, Dr. Leith Napier (Dunbar), Dr. T. Duddingston Wilson, Dr. G. A. Gibson. *Treasurer:* Mr. A. G. Miller. *Secretaries:* Dr. Cathcart, Dr. James Ritchie. *Editor of Transactions:* Dr. William Craig.

THE DIRECT REPRESENTATION OF THE MEDICAL PROFESSION IN SCOTLAND.

We have received the report of an address by Dr. Sinclair, of Dundee, to a meeting of the profession in Edinburgh, in pursuance of his candidature for the representation of the medical profession of Scotland on the General Medical Council. Referring to a proposal from the chairman of Dr. Morton's committee, asking for support, he read a reply, indicating the opinion that Dr. Morton, as President of the governing body of the Faculty of Surgeons and Physicians of Glasgow, must be considered to be so much identified with the interests of that body, that his election could only increase unduly the representation of that one corporation at the expense of others, and could not be acceptable to the profession. Dr. Bruce, of Dingwall, is also pursuing his candidature with energy.

VISIT OF THE QUEEN TO THE LONGMORE HOSPITAL FOR INCURABLES, EDINBURGH.

During her short stay at Edinburgh, Her Majesty the Queen paid a visit to the Longmore Hospital for Incurables. Her Majesty was received by Sir Douglas Maclagan, Dr. Affleck, and Dr. Joseph Bell, together with the Committee of Management and various officials. The Secretary of the institution placed in Sir Henry Ponsonby's hands a memorandum stating the chief points in connection with the hospital, from which it appeared that there is accommodation for seventy patients, and that there are now in it thirty-one males and thirty-three females. Her Majesty inspected the various wards. Every patient was brought under her notice by Drs. Affleck and Bell. One female patient had composed a poem in celebration of Her Majesty's visit; and this was presented to the Queen, and graciously accepted. At the request of the poetess, the Queen entered her signature in the birthday-book. Her Majesty expressed herself as highly pleased with all that she saw of the arrangements made for the comfort of the inmates, and has intimated that she will send for each of the wards prints of her portrait, as a memento of her visit.

IRELAND.

Dr. James Chambers, formerly a student of the Queen's College, where he obtained various honours, has been appointed Demonstrator of Anatomy in Queen's College, Belfast, in the room of Dr. Sinclair, recently elected Professor of Surgery.

SIR PATRICK DUN'S HOSPITAL.

The clinical medals and certificates of this hospital were conferred on the students who had obtained them for the past year, on Tuesday last, by the President of the King and Queen's College of Physicians.

THE LATE DR. MILLER, OF DERRY.

At a meeting of the Corporation of Derry last week, the following resolution was unanimously adopted: "That we have heard with deep regret of the decease of our late venerable colleague, Joseph Ewing Miller, Esq., M.D., J.P., and that, in common with our fellow-citizens, we deplore the removal from us, by death, of one who, for more than half a century, gave his great intellect, and a large portion of his valuable time, towards furthering the advancement and prosperity of this city, he having been twice chief magistrate under the old corporation, and having been no fewer than five times elected to that important

position under the reformed corporation, and having, on all these occasions, filled the chair with great dignity to himself and distinction and benefit to this city. That the town clerk be directed to convey this expression of our regret and sympathy to Sir William and Lady Miller, and that this resolution be inscribed on the minutes of the Council."

THE ROYAL IRISH ACADEMY.

AT a general meeting of the Academy, held on Monday, November 8th, the Rev. Dr. Haughton, F.R.S., Senior Fellow of Trinity College, Dublin, was elected President of the Academy, in the room of the late Sir Samuel Ferguson. We congratulate our distinguished associate on this high recognition of his eminent scientific attainments.

THE LATE DR. P. T. BODKIN, OF TUAM.

A MEMORIAL to the memory of the late Dr. Bodkin has been erected in the new cemetery at Tuam. It consists of a Celtic cross cut in limestone, the base being formed of black polished stone, bearing an inscription. The deceased died in December, 1885, aged 37. The cross, which is very handsome, is about fourteen feet high.

AHOGNILL DISPENSARY.

A SHORT time since, an election for a medical officer to this dispensary, which is situated in the Ballymena Union, took place. It appears, however, that the Committee of Management not having been properly constituted at the time of the appointment, it has been declared invalid by the Local Government Board, and a fresh election has been fixed for December 6th.

VACCINATION IN LONDONDERRY UNION.

AT a meeting of the guardians last week, it was stated that there were a number of defaulters under the Vaccination Act, in Londonderry. In the two divisions of the city they number 84, and the relieving officer was directed by the Board to serve notices, in accordance with the provisions of the Act, on the defaulters.

HOSPITAL FOOTBALL MATCH.

THE ninth annual match for the benefit of the Dublin Hospital Sunday Fund was played last Saturday. The opposing teams were those of the United Hospitals and the County Dublin. The latter won by two goals and a try to nothing. Since the match was first played, in 1879, it has been instrumental in contributing some £300 to the Fund. It is anticipated that the amount realised last Saturday will exceed that obtained at any former match.

THE BELFAST HOSPITAL FOR SICK CHILDREN, QUEEN STREET.

THE half-yearly report of the Ladies' Committee, for the period ending July 31st, states that the hospital continues to maintain its position as a popular charity and a successful clinical school. During the months of February, March, and April, the calendar was exceptionally heavy, and the number of patients higher than at any previous period. The severe spring brought a large number of serious bronchial affections. The system of sending patients to convalescent homes in the country, and at the seaside, has been carried out with gratifying results.

THE RED CROSS SOCIETY.—The National Society for Aid to the Sick and Wounded in War (British Red Cross Society) has received decorations of the Red Cross from Prince Alexander, of the Bulgarian Red Cross Society, for presentation to Dr. Fetherstonhaugh and Dr. Lake and Sister Henrietta Stewart, in recognition of their services to the sick and wounded in Bulgaria. A notification has also been received from the Foreign Office by each recipient that Her Majesty has been graciously pleased to grant them permission to accept and wear the decoration.

THE COUNCIL OF THE COLLEGE OF SURGEONS AS A NON-ETHICAL, NON-POLITICAL, AND A NON-COMMERCIAL BODY.

A CORRESPONDENT writes: In common with many thousand others, I have read the report in the BRITISH MEDICAL JOURNAL of the proceedings of the meeting at the College on Thursday last with great and growing interest. I take shame to myself for having to confess that I had hitherto regarded these meetings with little interest and less hope. A meeting of the Fellows and Members of a chartered body invited by the executive authorities to assemble within the walls of the College to pronounce opinions which have no legal authority, and to pass resolutions which have no legislative, administrative, or executive force, is in itself an anomaly. The decision on the part of the Council calmly and humbly to listen to the criticisms which they thus invite, is counterbalanced by their sovereign assumption of inexorable authority, by their conspiracy of muteness and unbroken silence. Surely such a mode of conference was never before devised; and a form of conference so contemptuous, not to say insulting, may at least claim the merit of being unique.

The proceedings seem to have been devised by the Council with the object of letting the great mass of Fellows and Members make an exhibition of themselves for the amusement of the Olympian gods of the Council Chamber, who, from the depths of the arena, look on with bland amusement, secure in their power of annihilating any anticipated results by a silent Jovian nod. The hope that their opponents—for so they seemed to regard the twelve or thirteen thousand members of the corporation outside of the Council chamber—would make themselves ridiculous, and would play out a farce marked by discord and confusion, could alone adequately explain the scheme on which these proceedings have been framed and carried out by the Council. That hope, however, has clearly been frustrated, and it is impossible not to perceive from the reports in last week's JOURNAL that the Fellows and Members have shown themselves to entertain a much more comprehensive, logical, and well informed view of the dignity and the duties of the College than exists in the Council room.

The Council appear to have met the claim of the Members to take part in the administration of the College by a proposition to largely increase the number of Fellows by making the examinations of candidates easier after a certain period of practice, and by the sale of a considerable number of diplomas of honorary Fellowship under certain conditions. This is a device which might easily be stigmatised by very hard names. It is the old trick of privilege, which seeks to answer all claims for reform by endeavouring to enlist a much larger body in its own interests, and to buy off opposition by profitable concessions to the vulgar—a device which the purely commercial mind might applaud, though proceeding fom a "non-commercial Council." It speaks well for the character, dignity, and good sense of the great body of Fellows and Members, that they summarily rejected this kind of overture; that they showed themselves more jealous of the real academic and educational value of the Fellowship than did the Council. They desire that the scientific standard of the Fellowship should be maintained, and that it should not be sacrificed as a sop or bribe to a part of those who claimed larger administrative powers. The two things are distinct. The Fellows and Members did well to insist on maintaining the distinction, and the Council did ill to attempt to confound it.

There is, however, one very noteworthy feature of the meeting which it seems to me desirable should be emphasised. While maintaining the contemptuous official silence which seems to be one of the self-imposed Council rites of these curious meetings, a most distinguished spokesman was allowed to appear on behalf of the Council. Mr. Erichsen is a past President of the College, and has filled all the highest offices in the gift of the Council. He is a surgeon of international repute, much beloved and respected, and he was lately the Liberal candidate for the representation in Parliament of the University of Edinburgh. In speaking therefore on this occasion, he may be supposed to have represented, as well as any one could do, the accumulated wisdom and the deliberate thought of the Council, and possibly in passing through his mind it may have acquired a somewhat more liberal tincture than in that of the more conservative members. Let us note, therefore, the case for the Council as it was stated by Mr. Erichsen.

In brief, it was, 1st, that the Members had never possessed the franchise—which is rather a way of stating a grievance than of answering it; 2nd, that they had no claim to the franchise, because if they desired to take part in the administration of the College, all they had to do was to cease to be Members, and become

Fellows by examination; and 3rd, that the only persons to decide whether the Members should be admitted to the franchise are the Fellows, who now exclusively possess it. Surely this could never be put forward as an argument, except in the kingdom of Lilliput. In the same way, when the first Reform Bill was brought forward, it might have been argued that none but liverymen of the City of London had ever possessed the franchise, therefore none others had any right to it; and that any one who desired the franchise might become a liveryman. In other words, it is the old argument of the Noodle's oration, that the wisdom of our forefathers is a final answer to any proposal of progress, and that nothing ought to be which has not always been. He certainly would never have ventured to enunciate these principles to a Scotch constituency, and as a political Liberal such an answer comes strangely from his mouth. No stronger evidence could be given of the character of the atmosphere of the Council Chamber, than that it should have exercised so stupefying an influence over the political logic of a man of Mr. Erichsen's capacity. When, however, he ventured into the region of general statement and logical deduction, the nature of the case which he stood up to defend, became still more palpable. He said that the Members had no claim to be admitted to a share in the administration of the College, because the Council had no functions which would make their presence desirable, or which they were qualified to fulfil. The business of the College, he said, was not political, it was not ethical, it was not commercial. Sad and sorry is the confession that the College has, for a long series of years, painfully neglected the ethical side of the relations of its members. The first duty imposed on the Members and on the Fellows, is to maintain the dignity of the College and of their grade; but the College has done nothing to see that that duty is fulfilled. The grossest forms of quackery by its members, unprofessional advertisements, the public misuse of testimonials—all these ethical matters it has chosen to disregard or neglect. Not so wholly as Mr. Erichsen would have us believe; for, unless I have misread certain announcements, few and far between, in the BRITISH MEDICAL JOURNAL, it has called upon certain of its members for explanation of gross professional offences in the way of advertising and quack pamphlets, and has exercised some ethical discipline. We must understand Mr. Erichsen to say, however, on the part of the Council, that in doing so it has transgressed its duty.

The real facts are, that it is quite aware of its duty; that of late it has attempted to fulfil its ethical duty, but that such transgressions are so unimportant to consulting surgeons generally, who monopolise the seats on the Council, that they have only rarely, tardily, reluctantly, and under the compulsion of public opinion, been forced occasionally to do a duty which is distasteful to them, and from the neglect of which they themselves do not suffer, however the great mass of the Fellows and the dignity of the College have grievously suffered, and do still suffer. Then it seems that the College, in the opinion of the Council, is not political. How, then, does it regard the vital question which Dr. Alderson raised, as to its relation to the Society of Apothecaries, and the constitution, now threatened by its exclusive relations with the College of Physicians, of a new order of surgeons and general practitioners under the Medical Act of 1886? Has the College had no deputations to the Privy Council on the questions raised by the Medical Act? Is it not, at this moment, assuming with the aid of the College of Physicians to create a class monopoly, which shall compel the great mass of general practitioners of England to pass through its doors? Is it not the fact that the decision which is now impending as to the acceptance or refusal of combination with the Apothecaries' Society will have the most momentous influence on the political situation of its members? I use the word political here, of course, in the only sense in which it can have any meaning in connection with the doings of a medical corporation, that is to say, the status of the general practitioner before the law, and the commission to him or to others of legal rights and privileges. It is not a question of general politics, but of the status of the general practitioner. It was evident, from the resolution moved by Dr. Alderson, that there is now before the College a matter as to which, but for that resolution, the Council would probably have taken no counsel with their Members, which will affect the politics of the profession in England and Wales more deeply, perhaps, than any other question which has come before the profession for the last twenty years. Shall there or shall there not be a new class of general practitioners created, surgical and medical, who shall be the rivals and the competitors of the Members of the College of Surgeons? Is not that a political question? If not, it is obvious that Mr. Erischen was using the word in some esoteric sense, which may have been induced by recollections of his Edinburgh contest, but which had no relation to the affairs of the College.

Finally, he said it was not "commercial." Here, again, is a word which may be used in many senses. The only commerce with which the College of Surgeons can have any relation is its own finance. I have never heard that the College of Surgeons professed any indifference to the state of its finance; that the members of the Council refused their fees; that the members of the Court of Examiners worked for less than a handsome remuneration, or that they had any other source of payment than the fees of the Members and Fellows. They publish a balance-sheet, like other public institutions, showing their receipts and expenditure; and a large part of that expenditure goes into the pockets of the Council, the Boards of Examiners, and of various officers whom they maintain. It is even rumoured that the first use to which the Erasmus Wilson bequest will be put will be to set free some thousands a year of the receipts from examination now applied to the maintenance of the museum, and to apply it to the multiplication and increase of the fees payable to Councillors in their other capacity as Examiners. In that sense, and in that sense only, can any question be raised as to their commercial duties. If the word has not that meaning in Mr. Erichsen's mouth, it had no meaning. In that sense, and in that sense only, is the College commercial, and to that extent the claim of the Members to be admitted to a share in the administration of the funds which they chiefly supply is unanswerable. The answer which the Council gave, that the payment of its members is a payment for examination, and that they get *quid pro quo*, is only a repetition of the argument by which many of the same gentlemen opposed the admission of the profession to the right of direct representation on the General Medical Council. We were told, then, that their payments were payments for registration, and that they had no further claim arising out of such payments. That empty sophism was brushed away once and for ever by the Royal Commission, by Government, and by Parliament, which decided that they had a claim, and has enforced that claim by Act of Parliament. So will the present claim be enforced by legal authority, if the Council perversely and unwisely persists in rejecting it. Of course, there is good reason to hope, as Mr. Rivington pointed out, that they will not so persist, inasmuch as, while with one breath denying the claim, with the other the Council has officially asked the Fellows to propose a plan by which it may be carried into effect. The two things are, no doubt, contradictory; and the one may merely express what they wish, and the other give effect to the new order of things which they know cannot long be delayed. It is the old story and the old scheme: on the one hand, to deny a right; and, on the other, to say, "Show us how it can be carried into effect, in order that we may minimise and cripple it as much as possible." The Council will do well, however, to act generously and promptly in the matter. Their present position is neither dignified nor effectual. They have admitted the external forces to parley within the fortress; and the sooner the conditions of surrender are equitably and honourably arranged, the sooner they will be able to close a campaign with some of the honours of war.

THE MEMBERS OF THE COLLEGE OF SURGEONS AND APOTHECARIES' SOCIETY.

A SURGEON, Physician, and Apothecary writes:—After the meeting at the College of Surgeons, I was one of a knot of humble members who discussed the meaning of Mr. Erichsen's statement that the Members of the College had no claim to be represented on its managing body, the Council, because the College was not an ethical, a political, or a commercial body. We agreed that he meant that it was not ethical, because it allowed its Members to transgress professional ethics by public advertisements, and in all sorts of other ways as much as they pleased and cared nothing for the dignity of the Membership, but confined their paternal protection to the Fellowship, *i.e.*, themselves. Although, as a non-commercial body, they are now guilelessly willing to sell a large and increasing number of Fellowships to promising bidders in the future.

As to their non-political character, that was pretty well defined by the fact that they are pledged by the unanimous acceptance of Dr. Alderson's resolution to the public discussion of a great medico-political question, the creation or non-creation of a new order in the profession of surgeons and medical practitioners outside of the College, which they were previously about to dispose of with closed doors in the Council.

As to their non-commercial character, we arrived, by a process of exclusion, at the conclusion that Mr. Erichsen meant this as a genteel reproach to the Society of Apothecaries that they kept a shop at Blackfriars for the sale of something else than diplomas, namely, drugs.

It might have been better to have said so openly, for then we should

all have understood the enigma. But assuming this to be the meaning of the phrase, is it not germane to the subject to remind the Council that a very large number of their members and of the licentiates of the College of Physicians, with whom they desire to consort, also keep open surgeries for the sale of medicines to their own patients, and very commonly also to others. If he is not aware of this, he will do well to take a walk in the East, or South, or North of London, or in any village or provincial suburb in England.

What is more, they derive a large part of their incomes from the surgery or shop, and from the sale of its contents; and they propose to continue to do so. It is quite true that they labour under great disadvantages, and that they are practically cheating the apothecaries by doing so, and imposing on the public: for only licentiates of the Apothecaries' Society have a direct authorisation to compound and sell drugs. If the Colleges of Surgeons and Physicians propose henceforth to prohibit their diplomates from supplying and charging for medicine, let it be openly stated. It is quite certain that they would have only a very small receipt henceforth for fees for examining general practitioners. Meantime, it is surely neither wise nor just to sneer at the commercial tendencies of a Society which has tolerated the infringement of its monopoly for years in the interest of the profession and for the benefit of the Colleges.

It would be wiser and more dignified to use the extensive and useful powers of the Apothecaries' Society, to strengthen and to legalise the position of the whole body of general practitioners of the future, and to unify the minimum examination of the Conjoint Examining Board of the future for England and Wales. To exclude the apothecaries now, is to give them a new lease of life, and to create everywhere a new class of "surgeons," etc., who will compete with the licentiates of the Colleges, with open shops and surgeries, and in club-practice over all the country, with higher privileges and at lower fees. It will be sacrificing the members and licentiates to the "dignity" of the respective Councils.

An exclusive and selfish policy is always a weak policy. In this particular case it is likely to be disastrous.

PROJECTED PUBLIC MEETINGS.

We understand that the Association of General Practitioners (of which Dr. Verdon, 410, Brixton Road, S.W., and Mr. Bott, L.R.C.P., 414, Clapham Road, S.W., are the Hon. Secs.) is taking steps to convoke a meeting of the general practitioners of England and Wales, to consider the question of the relative positions of the Royal College of Physicians, Royal College of Surgeons, and the Apothecaries' Society, under the Medical Act of 1886, in reference to the formation of a Conjoint Board for the licensing of general practitioners and the threatened creation of a new and competing class of general practitioners, licensed in medicine, surgery, and midwifery, by the exclusion of the Apothecaries' Society from the Conjoint Board.

A requisition is in course of signature for an early meeting of the Metropolitan Counties Branch to consider this important subject.

We understand that a committee is being formed to arrange for a General Meeting of the Profession (to be held at an early date), to obtain a further proof of the feelings of Medical men generally, in regard to the relations of the Society of Apothecaries and the Conjoint Board, and that the following gentlemen have consented to act as Hon. Secretaries:—J. Wickham Barnes, Hon. Sec. Poor-law Medical Officers' Association; W. C. Steele, Hon. Sec. Members' Association; W. G. Bott, Hon. Sec. Association of General Practitioners.

POOR-LAW MEDICAL OFFICERS AND THE COLLEGES.

We have received the following communication from the Honorary Secretary of the Poor-law Medical Officers' Association.

At a meeting of the Council of the Poor-law Medical Officers' Association, held on November 4th, the resolution adopted at the conjoint meeting of Fellows and Members of the Royal College of Surgeons, in relation to the Society of Apothecaries and the "Conjoint Examination," was submitted for consideration, when it was unanimously resolved that this Council, heartily concurring in the said resolution, advises all Poor-law medical officers to use their efforts to obtain for the Society of Apothecaries its proper position in relation to the Conjoint Board. J. Wickham Barnes, Honorary Secretary.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

At the meeting of the West London Medico-Chirurgical Society on Nov. 5th, the President, in a few remarks, referred to the question of the position of the Apothecaries' Hall, in regard to the conjoint examinations for medical diplomas in England and Wales, and stated that the subject would be brought forward at the next Council meeting, in order to determine whether a topic of this nature could be submitted to the members at one of the ordinary meetings of the Society, with a view of eliciting from them some expression of opinion in connection therewith.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The autumn meeting of the above Association (which now includes 423 members) was held at 49, Berners Street, London, on Thursday, November 4th. The President, Dr. H. Macnaughton Jones, F.R.C.S.I., in the chair. There was a large attendance of members. A new rule was adopted providing for the appointment of honorary auditors. The exclusion of Fellows of the Royal College of Surgeons of Ireland and Fellows and Members of the King and Queen's College of Physicians from higher appointments on the staff of several English hospitals, was discussed at considerable length, and the Council was empowered to take any steps they might think advisable in the matter in the name of the Association. The members and their friends, to the number of forty-five, dined together the same evening at the Café Royal, the President in the chair. Among the guests present were W. H. Russell, Esq., LL.D., Dr. Withers Moore (President of the British Medical Association), Professor Michael Foster, M.D. (Cambridge), and several colonial physicians, including Drs. J. F. Chapman and G. A. Lyme. Among the members present were Sir Thomas Crawford, K.C.B. (President-elect of the Association); Professor G. F. Yeo, M.D. (Chairman of the Council); Professor Alex. Macalister, F.R.S. (Cambridge); Inspector-General J. N. Dick, R.N.; Deputy Inspector-General W. H. Lloyd, R.N.; Deputy Surgeon-General N. Ffolliott; Brigade-Surgeon G. S. Gribbon; Surgeon-Major E. A. H. Roe, and Dr. J. Stewart (Honorary Secretary).

After the usual loyal toasts had been heartily responded to, the President proposed "Our Guests," in replying to which Dr. W. H. Russell said that, whether it was in the Crimea or in India, whether in England or on the Continent, he had always found a hearty welcome amongst his Irish fellow-countrymen.

Professor Michael Foster also replied in a humorous speech.

Professor Gerald Yeo proposed the "Navy, Army, and Reserved Forces," to which Sir Thomas Crawford and Inspector-General Dick replied.

The toast of the evening was proposed by Dr. Withers Moore.

The President, in reply, said that the Association was fulfilling a double purpose; it was not only affording opportunities for the *alumni* of the Irish medical schools to renew old friendships, but it was using its influence to promote whatever contributed to their advantage. The success which lately attended their effort to get official recognition of degrees and diplomas granted in Ireland, which previously could not be registered, was a subject of congratulation. The interests of the members, whether in the public services or in civil practice, would be jealously guarded, and every opportunity taken to remedy any grievance such as they had had under discussion at their meeting that day.

"Prosperity to the Irish Medical Schools" was proposed by Professor Macalister, and responded to by Dr. T. Michael Dolan.

Several Irish melodies were sung in the course of the evening.

OPENING OF THE MEDICAL SCHOOLS.

THE RICHMOND, HARDWICKE, AND WHITWORTH HOSPITALS, DUBLIN.

The introductory lecture opening the medical session in these hospitals for 1886-87 was delivered in the theatre of the Richmond Hospital by Dr. Guy Nugent, who took for his subject "Fever and Fever Hospitals." After giving a sketch of successive outbreaks of fever in Ireland since the year 1731, Dr. Nugent went on to recount the great good done by the Hardwicke Hospital. Striking an average for the last forty years, it had annually admitted 1,367 patients, and recently, when no special epidemic was supposed to exist, there had been seventy in it at one time. In such an hospital students had facilities for studying fever unparalleled by any other clinical hospital in Ireland. While advising the students to give close attendance at the fever hospital, he did not by any means say they should do so to the neglect of the surgical and medical departments, far from it. Special regulations had been laid down with regard to attendance on fever cases, which, however well meant, might possibly act in an injurious direction. Fever cases were admitted into all the chief clinical hospitals in Dublin, and might be supposed to be studied with equal

diligence with the other acute or chronic cases met with in the wards. The universities and other licensing bodies, however, appeared to think otherwise, and required special certificates of attendance on a certain number of cases, five or ten, to be produced before the student can be admitted to examination. A rule of that sort, he feared, involved a strong temptation to students to attend the exact number of cases stated and no more. If that was so, the result would be most disastrous when the student would be launched into the world, and found himself confronted with cases similar to those which he could easily have studied by hundreds in the hospital which he attended, but which were not included in the necessary 5 or 10. They must sincerely hope that this rule was not adopted owing to any representation that without some regulation of the sort, fever cases were liable to be neglected altogether in the course of study. That some students were nervous in the presence of fever he was aware, but he believed them to be an exception, and in a very small minority.

THE ADELAIDE HOSPITAL, DUBLIN.

AT this hospital, the address was delivered by Dr. Heuston, who gave an interesting and admirable summary of the history and varieties of micro-organisms. He pointed out that allusions had been made to their existence by Lucretius (95 B.C.), and by Terentius Varo (110 to 27 B.C.); but that, owing to the want of proper methods of observing their characteristics, and following out their life-history, the subject lay in abeyance until a recent date, when the perfection to which the microscope had been brought enabled them to be studied with accuracy. That this was the great hindrance to the development of this theory, until so recent a period, was shown by the following extract from the writings of Dr. Goiffon, of Lyons, who, in a work written on the origin of the plague in 1721, said: "Minute insects or worms can alone explain these diseases. It is true they are not visible; but it does not, therefore, follow they are non-existent. It is only that our microscopes are not at present powerful enough to show them. We can easily imagine insects which bear the same proportion to mites that mites bear to elephants. No other hypothesis can explain the facts, neither the malign influence of the stars, not terrestrial exhalations, nor miasmata, nor atoms, whether biting or burning, acid or bitter, could regain their vitality once they had lost it. If, on the other hand, we admit the existence of minute living creatures, we understand how infection can be conveyed in a latent condition from one place to break out afresh in another." Amongst the first who revived this theory in recent times was Ehrenberg, who, in 1828, showed those organisms to exist; while Schwann, in 1837, stated that the atmosphere was always laden with fermentative and putrefactive germs; and Henle, writing in 1840, stated that the contagiousness of infective diseases was due to the presence of living germs in the body. But these isolated statements received little attention until Pasteur, in 1857, was enabled to show, by his cultivations of micro-organisms in fluid media, that certain micro-organisms, after having passed through many generations in suitable cultivation-grounds, were still capable of propagating an identical disease to that from which they were originally obtained, thus showing that there existed micro-organisms which were capable of transmitting distinct and separate diseases, and that definite results were to be obtained by definite propagations. Dr. Heuston then adduced experimental proofs, made by himself, of the existence of micro-organisms in the atmosphere of the room they were in. He gave Nageli's division of the fungi producing decomposition, and Cohn's classification of the various forms of schizomycetes. The investigations of Gaffky and Hauser as to the specificity of pathogenic bacteria were next noticed, as were also those of Kamperer and Krantzfeld: The latter has shown that it was always possible to detect micro-organisms in the pus of acute suppurations, both by means of cultivations and direct observation; and the culture of those in the tissues he considered to be the most important factor in the etiology of acute suppuration. The attention of the audience was then directed to diagrams of the micro-organisms which have received most acceptation. In this way attention was drawn to the bacillus anthracis, the bacillus tuberculosis, the micrococcus of erysipelas, and that described in connection with osteo-myelitis by Becker. In conclusion, the lecturer said: "The study of these minute organisms opens a new page in scientific surgery, the importance of which we are only commencing to appreciate; and it is probable that you and succeeding generations of our profession will find ample occupation in their investigation, and practicable application of the knowledge thus obtained to the alleviation and treatment of diseased conditions."

ST. VINCENT'S HOSPITAL.

THE winter session in this hospital was opened by Mr. McArdle. He discussed some points in reference to the use of electricity in medicine and in surgery, and its influence upon micro-organisms. Mr. McArdle then referred to the question of admitting women to the medical profession, and said that he disagreed with Dr. Withers Moore when he said that women would be unsexed by medical studies. He held that, as their engaging in such studies did not infringe any of Nature's laws, a carefully conducted course of medical training would in nowise influence the female characteristics, unless for good. In conclusion, Mr. McArdle enjoined the students to pursue their studies zealously, that they might in the future adorn the profession of their choice.

BELFAST ROYAL HOSPITAL.

THE introductory address was given by Dr. Byers, who said no doubt some of them had selected a medical career after very thoughtful consideration. They were actuated by the worthiest ambition to benefit their fellow-men; and, if some had come from school or college with no higher idea than to fit themselves to maintain a respectable position in life, that was not a despicable aim, but one in which they wished them the fullest success. Among students, as in every other class, there was always a multitude that follow, aimless and without purpose, lounging about the camp of progress, but never marching in time, nor keeping in step with the trained and self-disciplined men. He reminded them that they would find their college course far too short, work as they would, to acquire all that information and experience that are expected by the public from a well-qualified medical man. They would need to be careful, from the very beginning of their medical studies, to do their daily class and hospital work with thoroughness. They had formed a Students' Association, which would, he trusted, grow stronger as it grew older. He hoped this Association would not only be a means of guarding their interests as students, but that their meeting together from time to time, and their mutual interchange of opinion, would tend to elevate each of them, and so raise the Belfast Medical School generally. He trusted this new Association would make them all feel they belonged to a body that could only progress as each individual member rises to a higher sense of duty in his own particular work, whether as teacher or student. The lecturer next referred to the resignation of Dr. Gordon and the death of Dr. Andrews. By the resignation of Dr. Gordon, the Belfast Medical School lost the services of one who was connected with it for forty-four years, during thirty-seven of which he was Professor of Surgery in Queen's College, and for a lengthened period surgeon to that hospital. Dr. Gordon's great originality as a surgeon, his extraordinary powers of diagnosis, based, as they were, upon his thorough knowledge of anatomy, his enthusiasm and thoroughness, taking nothing for granted on mere hearsay, but investigating everything for himself, and, above all, his simplicity of character as a man; these were qualities which, while they distinguished him as a professor, are worthy of the imitation of every follower of the healing art. Dr. Andrews was an able lecturer, but his great success as a teacher was due to the extraordinary manipulative skill with which he was able to demonstrate his experiments in his crowded class. Having glanced at the history of the Belfast Medical School, he said that, during the last winter and summer session, 252 students had received clinical instruction at that hospital; and it was most gratifying to those under whom they studied to know that the only students who obtained honours at the recent examinations for the M.A.O. of the Royal University received their education in Belfast. Dr. Byers then proceeded to give a special address to the students on antiseptic midwifery, a subject which he said Dr. Mathews Duncan, one of the most eminent obstetricians, had declared to be the greatest in midwifery or gynæcology. He showed how, in the pre-antiseptic age, the great mortality of lying-in hospitals had arisen from puerperal fever; and that, to obviate this, everything had been tried and had failed, until the German obstetricians, having observed the great change brought about in the wards of their surgical colleagues on the introduction of the principles and practice of Lister, adopted this antiseptic method in their maternities, when, to their surprise and gratification, the previous high mortality fell. Statistics were given from the maternity hospitals of Vienna, St. Petersburg, Copenhagen, and Paris, showing the extraordinary change that had been brought about by rigid antiseptic treatment, as well as from two of the lying-in hospitals in London. Having dwelt fully on the great change that had thus been effected in these hospitals, he pointed out the immense importance of antiseptic midwifery in private practice. The majority of the students present would in time be engaged in general practice, where they would be called upon to attend cases of every description; and nurses and medical men who followed rigidly the antiseptic methods could honestly say they had done everything in their power to prevent the occurrence of puerperal fever.

DR. EDWARD WATERS.

THE *Chester Chronicle* of November 6th contains the report of a public meeting at the Town Hall, convened by the mayor, in the following terms:—

"It is represented to me that a very general feeling prevails that the lengthened period during which Dr. Waters has devoted his eminent professional qualifications to the service of the community as physician to the Chester Infirmary; his high rank in his profession; the estimation in which he is so widely and deservedly held, and his long and laborious efforts and self-sacrifice in the cause of medical reform, ultimately crowned with success by the passing of the Act of last session, call for public recognition."

Dr. Water's many friends and admirers in the profession will learn with the greatest pleasure that the meeting thus called to pay him so high an honour in his own city was attended not only by the most influential persons in the city, including the Bishop of Chester, Lord Crewe, the Recorder, the Sheriff, Colonel Scotland (the Duke of Westminster's agent), a large number of aldermen, the City Treasurer, Town Clerk, and a number of other leading representatives of the city and county, but also by a large contingent of medical men of the most influential position.

The MAYOR, in opening the proceedings, expressed the great gratification he felt in presiding at this meeting at the request of an influential deputation, and his peculiar pleasure that the movement sprang from the medical profession. They had met to do honour to an eminent townsmen and a great physician.

Dr. TAYLOR, speaking as a physician to the Chester Infirmary, in moving the first resolution, paid a warm tribute to the esteem and affection with which Dr. Waters was regarded by the staff of the infirmary, and by the medical profession generally of the county, as a professional brother and leader. He referred to the great services which Dr. Waters had rendered to his own profession, his devotion to the cause of medical reform, and to the high honour which the British Medical Association conferred upon him in presenting him with its gold medal.

His Honour Judge HORATIO LLOYD said that among many pleasant duties which had fallen to his lot, none had given him greater gratification than to assist that day in doing honour to one who was not only an ornament to his great profession, but a valued and respected citizen.

The BISHOP OF CHESTER expressed in warm terms his pleasure in associating himself with this movement. The number of subscribers to the testimonial looked very promising, including, as it did, the Duke of Westminster, Lord Crewe, the Dean, the Mayor, Mr. Raikes, and a great many other good friends in Chester, which showed how great Dr. Waters's influence was among his immediate neighbours, while a large number of subscriptions came from that distinguished class which had so much in common with him, and whose interests were so frequently in competition. He moved that a subscription be opened for presenting Dr. Waters with his portrait, and that Chester banks be requested to receive subscriptions.

Dr. DOBIE seconded the resolution; and a third resolution was moved by the Rev. C. H. STEWART, appointing an influential committee to carry out the resolution. Dr. W. H. Dobie, the secretary of the Chester Medical Society, was appointed honorary secretary to the fund; and Dr. Roberts, the treasurer of the Society, treasurer to the fund. The meeting terminated with the usual vote of thanks.

It is unnecessary for us to add anything to this gratifying record. Testimonials from local friends, to recognise the services of medical men, are not unfrequent, but it is rare that a movement of this kind should originate and be so unanimously and heartily supported by the whole body of the profession as in this instance, that it should enlist the warm sympathies of the leading residents throughout the county of every class, and that it should be inaugurated by a meeting in the Town Hall, under the presidency of the Mayor, and in the presence of so numerous and brilliant an assembly. All this only testifies to those stirling good qualities—that energy, kindness of heart, high character, and self-sacrificing devotion which have distinguished Dr. Waters in all his professional relations, and which have stimulnted him to render during a long course of years those important services to the profession, which the British Medical Association this year recognised by bestowing on him the rare honour of its gold medal. No doubt many other friends of Dr. Waters will desire to add their names to the list now open in Chester.

REPORT OF THE SANITARY COMMISSIONER (BOMBAY, 1885.)

MR. HEWLETT'S official reports are always interesting and instructive, and the one under notice is prepared with his usual care, and merits the praise it has obtained from his Government. Mr. Hewlett has been particularly active in the year under notice, and has visited Karnchi, Jacobabad, and Quetta, as well as the cities of Surat, Broach, and Ahmedabad. It does not surprise us that he has had to invite the attention of Government to the difficulty he experienced in arousing the attention of some of the recently formed municipalities to the necessity of sanitary reform. Sanitarians at home have had the same battles to fight, but, acting on the homely advice of Abraham Lincoln, they kept "pegging away," and, year by year, they see in the reduced death-rate all round the fruit of their labours. Ahmedabad is contented under a death-rate of 53.15 per 1,000 of population, but we hope the Sanitary Commissioner, like his brethren at home, will live to see this horrible, because preventible, mortality reduced by at least a half. Edinburgh at one time was, to all appearance, satisfied with a death-rate from typhus fever alone that was shocking; it now, not without reason, boasts itself as one of the healthiest, if not the healthiest, city in the realm. So let Mr. Hewlett and his sanitary brethren take courage; they have an up-hill battle to fight, but victory awaits them or their successors. Some of our would-be philanthropists, who lend their ears to Calcutta baboos, who come to this country to ventilate their grievances, and proclaim how much better they could govern India than the governing race that has generously educated them, should derive comfort from the reflection that, although India may not be ripe for representative Government, a work of reform is going on there at the hands of the medical profession, which, as years roll on, will carry health and happiness into communities now suffering from diseases which embitter and shorten their lives by thousands. We think the Sanitary Commissioner has good reason to complain that the Municipality of the Presidency town has to be continually reminded of its carelessness in the matter of registration. It should be told that accuracy in this important particular lies at the very root of progress.

The number of births registered in the whole Presidency, including Sind, during the year under review, was 572,431, and the number of deaths 473,541, the former being at the rate of 34.79 and the latter at the rate of 28.78 per 1,000 of the population.

Fevers carried off the great number of 314,237 (19.1 per 1,000). The mortality from small-pox was 2,646 (0.16 per 1,000). No district in the Presidency was exempt from cholera, which was particularly severe in Sind. The deaths from this disease amounted to 37,287 (2.27 per 1,000).

Vaccination is making satisfactory progress in the Presidency; 907,790 operations were performed, and 77.05 per cent. of the infants under one year of age are supposed to be available for vaccination.

The Sanitary Commissioner praises Dr. MacCartie, the health-officer of the port, for his labours in improving the sanitary condition of the port, and the suggestions made for the better regulation of the pilgrim traffic. The activity of the Deputy Sanitary Commissioners has been very great—one of them, Surgeon Parker, having reported on no fewer than 176 villages. The Government also thanks the medical officer, Surgeon-Major MacRury, who acted for Surgeon Parker during his absence.

THE WORK OF THE ST. JOHN AMBULANCE ASSOCIATION.

THE annual report of the St. John Ambulance Association states that, during the last twelve months, 11,703 "first aid" certificates and 1,635 "nursing" certificates have been awarded, while a total of 5,130 medallions have now been granted, these figures showing a substantial increase.

Several members of the Royal Family, including T.R.H. the Princess of Wales, Princess Louise, and Princess Beatrice, have presented certificates and medallions to classes at various meetings held during the year. In March, at the Dublin Centre, this duty was performed by the Countess of Aberdeen before an audience of 2,500 persons.

The list of new centres at home and abroad includes Jerusalem, whore the Turkish Governor, Raouf Pacha, is President. The first classes consisted of British, Americans, Austrians, Germans, Hungarians, Swiss, and Arabs, six of the last named obtaining certificates; a further idea of the cosmopolitan nature of the Association's work may be gathered from the fact that the Singapore Centre has enrolled many Chinese as life and annual members.

The Board of Directors of the East and West India Dock Company have issued an order that forty badges, with an honorarium attached, shall be granted to members of the docks' police force holding the St. John Ambulance certificate, under certain conditions.

The report contains lengthy statistics and record of numerous cases, supported by the highest medical and other testimony, where good service has been rendered, and even life saved, by certificated pupils, especially on railways, and in the colliery, mining and manufacturing districts, while the necessity for "first aid," even in the haunts of pleasure, is proved by the fact that, at the ambulance station established by the committee in "Old London," in the Indian and Colonial Exhibition, and at the Liverpool Exhibition, upwards of 600 and 200 "cases" respectively have been treated by the attendants. Details are also given of an admirable system established in the Kilburn district, which might well be copied in other parts of London, by which stretchers and other appliances are deposited at suitable places for instant use in case of accident; the report concludes with a synopsis of the efficient and daily increasing work carried on by the Metropolitan Ambulance Corps for the transport of sick and injured patients.

ROYAL COLLEGE OF SURGEONS.

An ordinary meeting of the Council was held on Thursday, November 11th.

The death of Lady Wilson, widow of Sir Erasmus Wilson, F.R.S., late President of the College, was announced.

A resolution was agreed to, on the recommendation of the Dental Board, that candidates for the Diploma in Dental Surgery be permitted to take eighteen months out of the three years' instruction in Mechanical Dentistry before the date of their registration as Medical Students by the Medical Council.

The resolutions carried at the meeting of Fellows and Members were submitted to the Council. The following motion was made by Mr. Macnamara and seconded by Mr. Lund:—

"That means be taken to ascertain the opinion of Fellows of the Royal College of Surgeons (*a*) as to Members being allowed to vote for Fellows as Members of Council; (*b*) as to the admission of Members of the College to seats on the Council."

This was carried, and it was referred to the President and Vice-Presidents to draw up a circular address to the Fellows with a view to ascertain their opinion on the subject, and that the same circular be submitted to the Council at the next meeting.

FUNERAL OF LADY WILSON.

In brilliant sunshine, the remains of Lady Wilson, widow of Sir Erasmus Wilson, were laid beside those of her husband in the vault at Swanscombe, on Monday last. The ceremony was attended, on behalf of the Royal College of Surgeons, by Mr. Savory, President, Sir James Paget, Mr. Jonathan Hutchinson, and the Secretary, Mr. Trimmer; on behalf of the Epsom College, by the Secretary, Mr. Freeman; and by Mr. Edward East on the part of the British Medical Benevolent Fund.

PROPOSED HOSPITAL FOR BOURNEMOUTH.

A committee was appointed at a meeting of the Commissioners at Bournemouth on Tuesday last to consider a proposal to commemorate the Jubilee year by the erection of a hospital to be called the Victoria Hospital in the centre of the town.

LANOLIN AS AN OINTMENT-BASIS.

The following statement by Professor Widerhofer is reprinted by the *Fortsh. d. Med.* from the *Allgem. Wiener Med. Zeitung*:—"The eczema which you see about the elbow-joint of this child will be thus treated: it will be rubbed with soap and wet flannel till a lather is produced, then wiped dry; and then will be wrapped round night and morning with linen thickly smeared with lanolin having five per cent. of bismuth subnitrate added. Lanolin salve is a most excellent remedy for eczema in children; for it is readily tolerated by the skin (in the case of little children especially), on account of its forming very heavy fatty acids; whilst other fats (and vaselin) form very light fatty acids on coming in contact with the skin, and in children the skin is very sensitive to fatty acids."

ASSOCIATION INTELLIGENCE.

COLLECTIVE INVESTIGATION OF DISEASE.

Inquiries are in progress on the subjects of

Diphtheria, Cancer of the Breast,
Old Age, The Value of Hamamelis,
The Value of Pure Terebene.

Memoranda on the above, and forms for recording individual cases, may be had on application.

The Etiology of Phthisis.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into The Therapeutic Value of Hamamelis and Pure Terebene will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on The Connection of Disease with Habits of Intemperance, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting will be held at the London Hospital, on Thursday, November 18th, at 8.30 P.M., when Dr. Old will show a number of cases of myxœdema, illustrating its various forms and stages. The chair will be taken by Sir Andrew Clark, Bart., F.R.S.

South-Eastern Branch: East Sussex District.—The next meeting of the above district will be held at the Queen's Hotel, Hastings, on Tuesday, November 16th. Dr. Humphreys will preside. Meeting at 3.30 P.M. Dinner at 5.30 P.M.; charge, 6s., exclusive of wine. The following communications are promised: 1. The Chairman: Notes of a case of Abdominal Tumour formed by a Scrofulous Kidney. 2. Dr. Penhall: Cancer of the Sigmoid Flexure, with repeated attacks of Intestinal Obstruction. 3. Dr. Allen: Intestinal Obstruction from Gall-stone: Operation. Gentlemen desirous of reading short papers or notes of cases, or of showing microscopical or other specimens, should communicate with the Honorary Secretary, T. Jenner Verrall, 95, Western Road, Brighton.

Staffordshire Branch.—The first general meeting of the present session will be held at the Railway Hotel, Stoke-upon-Trent, on Thursday, November 25th. The President, Dr. W. G. Lowe, will take the chair at 3.30 P.M.—Vincent Jackson, General Secretary, Wolverhampton.

The Gloucestershire Branch.—The annual meeting will be held under the presidency of Dr. Gooding, in the Board-room of the General Hospital, Cheltenham, on Tuesday, November 16th, 1886, at 6.30 P.M. The supper will be at the Queen's Hotel, at 8.30 P.M.; tickets 3s. 6d. each, exclusive of wine. Agenda: 1. Scrutiny of the Voting Papers, and Declaration of the Result. 2. Election of Two Scrutineers. 3. Presentation of Balance Sheet. 4. Notes of a Case of Acute Osteitis of First Metatarsal Bone. Exhibition of Two Living Cases: 1. Congenital Hydrocele, cured by injection of Iodine. 2. Angioma of Orbit. By G. Arthur Cardew, Esq., Cheltenham. 5. Cases of interest in the Cheltenham General Hospital.

Aberdeen, Banff, and Kincardine Branch.—The November meeting of this Branch will be held at 198, Union Street, Aberdeen, on November 17th, at 8 P.M., Dr. Urquhart in the chair. Business: 1. Minutes and Nomination of Members. 2. Obituary Notices of Prof. Dyce Davidson and Dr. Mackie Insch, by the President. 3. Organisms in Pig-Fever, etc., by Dr. Angus Fraser. 4. Communication by Professor Ogston. 5. Case of Atropine Poisoning, by Dr. Gordon. 6. Exhibition of Specimens: (1) The Cambridge Rocking Microtome; (2) Reichert's Microtome, by Dr. Angus Fraser; (3) Case of Goitre, by Dr. Edmond. Robert John Garden, J. Mackenzie Booth, Joint Secretaries.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH:

Pathological and Clinical Section.

The first meeting was held in the Library at the Medical Institute, on Friday, October 29th, at 8 P.M.; Dr. E. Rickards in the chair. Twenty-six members present.

President's Address.—Dr. Rickards, after assuring the meeting how fully he appreciated the position in which the Section had placed him, claimed the privilege, as Chairman, of making a few remarks, by way of opening the session. He said:—This Section was instituted to give the members of the Branch increased facilities for showing patho-

logical specimens and living cases. A law was adopted which aimed at preventing discussion on abstract points. Now, it seems to me that the requirements of the times have somewhat altered. Morbid anatomy is now far in advance of general pathology. I would not have it thought that I wish to depreciate the importance of morbid anatomy; by no means. It is a safe stepping-stone to general pathology, but it is only a stepping-stone. To general pathology, we look to put us in the way of preventing and arresting disease. General pathology does not, to my mind, receive its fair share of consideration and discussion. Of recent times, it has received an impetus by the labours of the bacteriologist, including Professor Pasteur, who, whatever be the verdict on his theory and experiments in regard to hydrophobia, has, with other bacteriologists, done good work in turning our minds into a groove, and probably a fertile one. There are some problems in general pathology which I think this Section ought in some way to have constantly before it, so that when cases bearing on such problems come before us, we may see how they affect prevailing opinions. For instance, the relation of phthisis to tubercle, or perhaps I ought to say, of tubercle to phthisis. What is the common cause of phthisis? Does it start as a pneumonia, or as tubercle? When bacteriologists can satisfy us that the micro-organism known as the tubercle-bacillus is only found in connection with tubercle, the solution of this problem will be easy. Cancer! how the profession is divided as to its local or constitutional origin. Early in my professional career, I was an ardent localist, but cases came under my observation which led me to go over to the constitutionalists. Again there are, the processes which ultimate in puerperal fever, the *de novo* origin and infectiveness of enteric fever, the relation of chorea to rheumatism. My idea is that this Section, in addition to affording to its members an opportunity of showing specimens and cases, ought to take upon itself the function of collective investigation. I should like to see an increase of activity in the members generally: the work is left too much in the hands of a few. There are among us those who have devoted much attention to particular diseases, and it is much to be desired that we should have the result of their special study; but, at the same time, I think all ought to give a helping hand; every case has its interest, if it be but for statistical purposes. Some, I know, think that the hospital staffs have time and material which they have not; the hospital staffs have done much, especially in the way of morbid anatomy; they have had material not usually in reach of the family surgeon, and they have used it; but the family surgeon has opportunities of observing and discovering many points all-important to the right reading of pathology which we at the hospitals have not—he can verify the history of a case, observe its development, watch its course, and see its issue. Now I wish to make two suggestive observations: first, I think that, as a great educational power in this district, this Section does not receive the support to which it is entitled; many members of the Branch do not belong to the Section, and, some of the meetings being small, valuable material and labour is lost; secondly, I think the proceedings of this scientific society should be put on public record in a collected form, if not annually, biennially or triennially: the publication of the *Transactions* might necessitate the appointment of a Reference Committee, and a slight increase of labour to the Executive; but it would be a valuable contribution to our literature, and add considerably to the value and prosperity of our Section.

Cases and Specimens.—Mr. Lawson Tait: Accidental Amputation of Inverted Uterus.—Mr. J. Taylor: Cyst of Broad Ligament removed by Enucleation.—Dr. Saundby: (1) Aneurysm of Aorta giving rise to Chronic Lobar Pneumonia; (2) Fungating Cancer of Stomach; (3) Sclerosis of Cord, Drawings of Laryngoscopic appearance from a case of Locomotor Ataxy, with paralysis of the Abductors of the Vocal Cords.—Dr. Suckling: Case of Locomotor Ataxy with presence of Knee-jerk.—Mr. Jordan Lloyd: Excision of Tongue (2 cases).—Dr. Foxwell: (1) Multiple Pontine Hæmorrhage; (2) Lupus Erythematosus.—Dr. Crooke: Microscopic Sections illustrating the Interstitial Hepatitis of Scarlet Fever.

The lunacy returns of the county of Kent, which have been presented by the Medical Superintendent of the Barming and Chatham Asylums, show a large increase in female insanity. At the present time there are in the two asylums as many as 1,225 females to 882 males.

Small-pox Epidemic at Jamaica.—An epidemic of small-pox has been raging at Kingston, Jamaica. On October 13th, when the *Don* sailed, there were no fewer than 362 cases under treatment, and the deaths are reported to have been exceptionally numerous. The inhabitants were leaving the town in very large numbers, as the disease was rapidly increasing.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

M. Pasteur on Hydrophobia.—Asphalgesia in Hysterical Patients.—Erysipelas treated by Carbolic Acid Pulverisations.

At the recent meeting of the Académie des Sciences, on November 3rd, M. Pasteur read a further paper on the preventive treatment of rabies. He stated that 2,490 persons have been treated by his method for rabies. Formerly the treatment lasted ten days. Each patient received a daily injection of a fragment of medulla removed from a rabbit. The first injection was made with a fragment of medulla fourteen days old, and the last with one five days old. The 2,490 persons thus treated represented different nationalities in the following proportions: England, 80; Austro-Hungary, 52; Germany, 9; Belgium, 57; Spain, 107; Greece, 10; Holland, 14; Italy, 165; Portugal, 25; Russia, 191; British India, 2; Roumania, 22; Turkey, 7; Switzerland, 2; United States, 18; Brazil, 3; France and Algeria, 1,726. M. Pasteur's statistics showed that for France and Algeria, among seventeen hundred odd patients inoculated by his method, ten deaths resulted; thus the proportion of deaths was 1 in 170. Two failures were attributed to tardy arrival; in one instance, thirty-six days, and, in the other, forty-three days had elapsed since the bites were inflicted. Every case of rabies received in the Paris hospitals is immediately communicated to Dr. Dujardin-Beaumetz, member of the Conseil d'Hygiène et de Salubrité de la Seine, who investigates and reports all such cases to the Conseil. In the last five years, sixty persons died of rabies in the Paris hospitals, which gives an average of twelve a year. Last year there were twenty-one deaths. Since November 1st, 1885, when M. Pasteur's treatment was regularly commenced, up to the present time, there have been three deaths from rabies in the Paris hospitals, two of these were of persons not inoculated; the third death was of a person inoculated, but not according to the more energetic method described below. The cases of failure M. Pasteur had to record were principally in his treatment of children. These were bitten in the face, and were treated according to his early method. M. Pasteur had since arrived at the conviction that this treatment was inefficacious in bites of this description. When three of the nineteen Russians from Smolensk, who had been bitten by a mad wolf, succumbed—the first during treatment, the two others after—he feared that the treatment might prove ineffectual as a prophylaxis for rabies contracted from the bite of a mad wolf. It then occurred to him that all the dogs successfully vaccinated had received, as a last preventive inoculation, an injection with a portion of virulent medulla extracted the same day. The last injection practised on Joseph Meister was made with a medulla extracted on the previous day. M. Pasteur accordingly subjected the remaining sixteen Russians to a second and third treatment, in which injections were made with portions of spinal marrow four, three, and two days old. M. Pasteur was led to believe that the recovery of the sixteen Russians was to be attributed to the repetition of the treatment. Encouraged by these results, M. Pasteur made his treatment more speedy and active in all cases, and still more so in cases of bites on the face, or for deep and numerous bites in exposed parts. The inoculations succeed each other more rapidly, in order that the inoculation with fresh medulla may be made early. On the first day, an injection with medulla twelve and eight days old is made at 11, 4, and 9 o'clock; on the second day, at the same hours, with medulla six, four, and two days old; on the third day, one injection is made with a marrow one day old. The treatment is then recommenced on the fourth day with medulla of eight, six, and four days; the fifth day, with medulla of three and two days; the sixth day, with medulla of one day; the seventh day, with medulla of four days; the eighth day, with medulla of three days; the ninth day, with medulla of two days; the tenth day, with medulla of one day. Three courses in ten days are thus given, and in each series the most recent medulla is finally employed. If the bites are not cicatrised, or the person bitten has delayed being treated, these series of inoculations are given after an interval of two or three days has elapsed between each. The fourth or fifth week—the dangerous period for children bitten in the face—is thus reached. This method of vaccination, he said, had been in operation for the last two months, and the results up to the present time were very satisfactory. The following facts afforded sufficient proof of this. The six children subjected to the simple treatment succumbed, whilst ten children, bitten in the same manner last August, and subjected to the intensified treatment (*traitement intense*), recovered;

and, as the dangerous period rarely exceeded, in the case of children, from four to six weeks, the patients in question were out of danger. M. Pasteur observed that his prophylactic treatment of human beings for rabies, founded on the results from inoculating dogs which had not been bitten, might be objected to on the grounds that the immunity conferred on these animals after injection had not been sufficiently demonstrated. Immunity conferred on dogs, after trephining and intra-cranial inoculation, was sufficient answer to this objection. Trephining was the most certain method of communicating infection, and its effects were unvarying. M. Pasteur's first experiments of this kind were made in August, 1885, and were followed by partial success. The conditions that ensured success were :—Vaccination must be begun the day following trephining, and be rapidly effected, the whole series of preventive medullary injections being administered in twenty-four hours or less; this treatment must be repeated once or twice. The failure of Dr. Frisch, of Vienna, in experiments of this description, was due, he said, to the slow method of preventive inoculation he pursued. The success or failure of the vaccination of animals, after their infection, was dependent on the rapidity and intensity of the preventive inoculations. The immunity conferred, under these conditions, was the best proof of the excellence of the method.

Dr. A. Pitres has been carefully watching the case of an hysterical patient affected with hemi-anæsthesia of the left side. Pinching, burning, or pricking her on the left side does not produce pain; but, if she touches any copper article, her hand contracts, and intense pain is felt, which, if prolonged by contact with that metal, produces a convulsive attack. In two other cases, during wakefulness, the patients were unable to touch either silver or copper without experiencing the sensation of being burned. Dr. Pitres speaks of this curious phenomena under the title of Asphalgesia. It is rare to meet with these symptoms in hysterical patients during the period of wakefulness, but they are very general during hypnotic sleep. In the greater number of patients with whom it was possible to induce hypnotic sleep, it has generally been found that, on their touching any metal, a painful sensation, as of burning or of a violent electric shock, was felt. Some patients only experience these sensations on touching certain metals; others are affected in the same manner on touching any glass object. Generally, asphalgesia is present on both sides of the body, whether the patient be affected with only hemi-anæsthesia or hemi-analgesia; but no rule can be given for these symptoms, as, in some cases, painful sensations produced by the contact of any metal may likewise be felt on the side of the body where the sensibility is normal.

The employment of carbolic acid in the treatment of erysipelas has been recommended for some time. At a recent meeting of the Société Médico-Pratique, Dr. Ory communicated the two following cases, which serve to demonstrate the efficacy of carbolic acid pulverisations, which was the only treatment used. The first case was that of an infant of three months old, suffering from erysipelas following vaccination. A fortnight had elapsed since vaccination, when Dr. Ory was summoned. The little patient was feverish, depressed, and convulsed. The right arm was swollen, with a red patch about the size of the palm of the hand, in the centre of which was a vaccine pustule, covered by a scab in process of desiccation. Collodion, mixed with castor-oil, was applied to and around the red patch, in order to check the spread of the erysipelas, and an anti-spasmodic treatment was followed during the night. Finding the collodion applications ineffective in preventing the spreading of the redness, Dr. Ory had recourse to the treatment indicated by Professor Verneuil. The child was wrapped in cotton wool. Carbolic acid pulverisations were then used in every hour for five minutes; a two per cent. solution was used; considerable improvement occurred. The convulsive movements ceased, diarrhœa disappeared, and the temperature fell from 40° to 38°. On the following day, only those parts where the collodion still remained were red; it was removed, and, by the evening, all traces of erysipelas had vanished. Rapid recovery, without any relapse, ensued. The number of pulverisations was gradually reduced (four in twenty-four hours on the fourth day), and all treatment was discontinued on the fifth. The second case was that of an old man, aged 89. The patient was ataxic and subject to obstinate constipation. The perinæum and gluteal regions were attacked by erysipelas. The carbolic acid pulverisations, applied in the manner above mentioned, had a satisfactory result. From the first evening the pain diminished after each pulverisation, and on the third the tissues had almost recovered their normal colouring, and there was less fever. Dr. Ory concluded by stating his opinion that carbolic acid pulverisations might be used to the exclusion of all other internal treatment for combating erysipelas.

CORRESPONDENCE.

DIRECT REPRESENTATION ON THE GENERAL MEDICAL COUNCIL.

SIR,—Having received circulars from Sir B. W. Foster, Messrs. Wheelhouse, Glover, Richardson, Dolan, Brown, and Carpenter, who are candidates for election by the profession on the General Medical Council, we deemed it advisable, "on behalf of the Association of General Practitioners," to obtain categorical answers to the following questions, which are of vital importance to the general practitioner; and we now ask your readers to give them careful study and consideration before recording their votes.

Question 1. Are you in favour of penal legislation directed against unqualified practitioners?

Question 2. Are you in favour of the protection of the profession by the Council against unqualified practice?

Question 3. Are you in favour of the abolition of the Apothecaries' Society?

Question 4. Are you in favour of the scheme for granting a Doctorate in Medicine which is before the board of the Conjoint Colleges?

Trusting you will favour us by inserting this correspondence, we remain, Sir, yours sincerely,

H. W. VERDON, M.D., F.R.C.S.
W. GIBSON BOTT, L.R.C.P. and M.R.C.S.

61, Kennington Park Road, S.E., November 9th, 1886.

14, Temple Row, Birmingham, November 4th, 1886.

Dear Sirs,—I am very glad to answer the questions you send me on behalf of the Association of General Practitioners.

1. I am in favour of penal legislation directed against unqualified practitioners both in the interest of the profession and in the interests of the public at large.

2. I am in favour of the Council using all the power they have, and also in favour of extending their powers against unqualified practice.

3. No, certainly not.

4. Yes. I have for years advocated some scheme for granting the Doctorate in Medicine to all practitioners able to pass the necessary examinations. I have myself felt the injury inflicted by our present system on men who may have chosen a medical school for their education unconnected with a university. I am, therefore, most strongly in favour of any scheme that will give the Doctorate to men who can pass the examinations, irrespective of the school at which they have been educated.

I hope these answers are explicit enough for your purpose.—Yours very truly,

(Signed) B. WALTER FOSTER.

Hillary Place, Leeds, November 2nd, 1886.

Gentlemen,—I am very glad, and thank you, that you give me an opportunity to lay before the Association of General Practitioners my views upon the four questions submitted to me in your letter of this morning, and I shall be glad if when the opportunity comes, you will make my replies known to the Association.

1. Are you in favour of penal legislation directed against unqualified practitioners?

Yes, I am. During the whole time I have acted as a member of the Medical Reform Committee of the British Medical Association, and, whenever any question of medical reform has been before Parliament, I, in combination with others, have striven to the utmost of our power and ability to secure adequate penal clauses under this head.

2. Are you in favour of the protection of the medical profession by the Council against unqualified practice?

I am. I am in favour of the exercise by the Council of any power or authority of this kind that it possesses; but, seeing that the Council is only the exponent—not the maker—of the Acts of Parliament it is set to administer, and that it does not possess any such power, except in an indirect manner against such qualified practitioners as depute to unqualified assistants the responsible duties which they have no license to practice (and against whom I would use every available power), I do not see how much, in this direction, can be expected of any representatives.

As I have said in paragraph 12 of my address, "I hold that the regulation of the organisation of the profession is the true work of the Council, whilst its protection against unqualified assailants is the duty of Parliament; but I none the less hold that the Council should, at all times, be the chief adviser of the Government; and I would lose no opportunity that might ever arise to induce any Government to put a stop to illegal practice."

Should it ever be in my power, as a member of the Council, to urge the necessity of protection of the qualified, as against unqualified practitioners, in any way, upon Parliament, I would spare no effort either to do so, or to make my voice heard.

3. Are you in favour of the abolition of the Apothecaries' Society?

No, I am not. I hold the license of the Society myself, and for 37 years have practised medicine on the strength of it; and to repudiate it now would be both mean and dishonest.

I consider that the Society has been of great use and value in its day, and that it has done great things, both for the cause of medical education and for the profession.

I should be sorry to see the Society driven into existence as a separate and second portal of entrance into the profession, and I do not consider such course a necessity.

My desire would be to see a righteous consolidation of the three now existing authorities—namely, the College of Physicians, the College of Surgeons, and the Apothecaries Society—into one examining body; whose examinations, after proving a candidate to be satisfactorily qualified to practice medicine, surgery, midwifery, and pharmacy, should admit him to the *Register* as a "Qualified General Practitioner."

By a second examination, before the same body, but on higher lines, I would enable him to obtain a higher degree, say his F.R.C.S., or, if he preferred a medical distinction, an M.D., and then I am of opinion that foreign degrees would become so rare that, in union with a British qualification—and under proper guarantees—it might, in generosity, be admitted to simultaneous registration.

4. Are you in favour of the scheme for granting a doctorate in medicine, which is before the Board of the Conjoint Colleges?

My last answer in a great measure covers this question. Rather than drive Englishmen to seek either foreign, or Scotch, or Irish M.D. degrees, I am—but I should much prefer the mode of granting such degree sketched above; that is, as a higher qualification for an already registered General Practitioner.

I am sorry my replies have run to so great a length, but I consider this letter a very serious one, and I prefer their doing even that, to leaving them in ambiguity.—I am, Gentlemen, yours very truly, (Signed) C. G. WHEELHOUSE.

25, Highbury Place, N., November 8th, 1886.

Dear Sirs,—I am sorry that your letter had got mislaid, and that I could not find it till now (midnight). My answer to the questions you propose is as follows:—

1. I am in favour of severe penal measures against all unqualified practitioners that pretend to be qualified, or in any way defraud the public.

2. I think the Council should be made responsible for prosecuting such cases, and would, in doing so, make a good use of its accumulating funds.

3. I recognise in the new Act a new lease for the Apothecaries' Society, unless the other Corporations incorporate it in their scheme, or by their action make it superfluous.

4. I am deeply alive to the necessity of creating facilities in London for medical graduation, such as exist in Scotland. There should be established for this end a teaching University in London, such as exists in every other metropolis in Europe. To give examining corporations a degree-granting power may become necessary, but this is not the scheme that would meet the competition of regular Universities in other parts, nor one that seems to me the best.

Again apologising for my delay, I am, Gentlemen, your obedient servant,
(Signed) JAMES GREY GLOVER.

25, Manchester Square, W., November 3rd, 1886.

Dear Sirs,—I have pleasure in answering your questions in the order in which they come:—

1. Yes.
2. Yes.
3. I do not think it would be just to the many holders of its license to abolish the Apothecaries' Company. But I think that the Company requires to be reformed, and that it may then play as important a part in the future of medicine as it has done in the past.
4. Yes.—I am, dear Sirs, faithfully yours,
(Signed) B. W. RICHARDSON.

Horton House, Halifax, November 2nd, 1886.

Dear Sirs,—I enclose you copy of my address at Manchester. You will see my views clearly expressed.

1. I am in favour of penal legislation, and actions against unqualified practitioners.
2. I should, if returned, bring the subject before the Council.
3. If the Apothecaries' Society were suppressed, our sole chance of prosecution would be taken away. I should regard this as a calamity; as a Licentiate of this Society I should resist such a proposal.
4. As regards qualifications, I have always advocated the "one portal system;" and now, with the absolute necessity of English students having a degree of M.D., support this conjoint scheme as far as it goes.
5. I should like to see some retrospective legislation for the men now qualified to obtain the degree of M.D., by examination or otherwise.—Yours very truly,
(Signed) T. M. DOLAN.

7, King William Street, E.C., November 2nd, 1886.

Dear Sirs,—In reply to your letter to hand this morning, I beg to say:

1. That I am in favour of penal legislation directed against unqualified practitioners.
2. That I am strongly in favour of the General Medical Council protecting the profession against unqualified practice.
3. I am not in favour of the abolition of the Apothecaries' Society, unless under some comprehensive scheme amalgamating the various medical corporations, and then only if the penal clauses of the Apothecaries' Act of 1815 are vested in some other body representing the profession.
4. I am in favour of granting a medical degree to all who pass a complete examination in medicine, surgery, and obstetrics.—I am, dear Sir, yours obediently,
(Signed) GEORGE BROWN.

130, Stockwell Road, S.W., November 2nd, 1886.

Dear Sirs,—In reply to your questions just now received:

1. I am in favour of such legislation as you name, but you will not now get it.
2. I am in favour of the protection you suggest, upon principle, but practically it could not be carried out.
3. I am not in favour of the abolition of the Apothecaries' Society, nor is there the least fear that they will be abolished; on the contrary, they will, under the new Act, become a more powerful corporation than they now are.
4. I am not in favour of the present scheme of the Conjoint Colleges for granting a Doctorate in Medicine.—I am, faithfully yours, R. H. S. CARPENTER.

SIR,—An inquiry addressed to me from a distant part of England, as to whether what was stated of Sir B. W. Foster and Mr. Wheelhouse, in Mr. R. H. S. Carpenter's letter to the JOURNAL was correct, compels me very reluctantly to ask for space for a few words of explanation. Until I received the inquiry in question it did not occur to me that any comment on what Mr. Carpenter had written was necessary, as I thought that the letter of a gentleman who could so far forget the amenities of honourable conflict as to speak of one of the most distinguished and universally-respected of the candidates for seats in the General Medical Council, Mr. Wheelhouse, as "the man who advocates the division of the profession into many grades;" who could charge him, and others well known like him for long and honourable careers of unselfish devotion to the best interests of the profession which they adorn, with publicly promising what they well knew they would never be able to perform; who could sneer at those who considered the long record of good work done by those gentlemen to be the best guarantee that they could be trusted to do good work in the future, as men tinctured with credulity; and who, without a blush, could repay that Bayard of Medicine, Dr. Edward Waters, for his arduous struggle of twenty years in the cause of direct representation, by accusing him of considering the interests of a small and exclusive class, rather than that of the great body, to the advancement of whose welfare the best years of his life had been devoted—was a letter which neither deserved nor needed a reply. Now, however, that it is obvious that even a single practitioner has been momentarily disturbed by it, the duty of answering the question put to me becomes plain.

Referring, then, as my correspondent asks me to do, to what Mr. Carpenter has stated concerning Sir B. W. Foster and Mr. Wheelhouse, I find that it amounts to this: that they are chiefs of the Medical Reform and Journal and Finance Committees of the British Medical Association; that they supported the Act of 1886; that they are not, at the present moment, engaged in general practice; and that, had they "been loyal to their promises and to their professions to their medical brethren," Mr. Carpenter has "good and certain grounds for saying that an acceptable Act could easily have been obtained instead of the Act we now have—an Act which is all in favour of universities, of herbalists, of quacks, and of bone-setters."

That Mr. Wheelhouse and Sir B. W. Foster have for years freely given their time and talents to the furtherance of the work of the Medical Reform and Journal and Finance Committees of the British Medical Association, and have thus helped materially to raise that body to its present position of unexampled prosperity and influence, is certainly a fact, and it is a fact which every well-wisher of the Association, and nearly every member, except Mr. Carpenter, will acknowledge with gratitude. That both gentlemen earnestly struggled to obtain the best legislation that could be wrung from Parliament; and that to the latter alone it is due that we practitioners of England and Wales are to have three instead of two representatives, are also circumstances that, in most men's minds, will redound to their honour. That they have been able, by their talents and industry as general practitioners, to command of late years the comparative leisure afforded by consulting practice, which allows them to devote their energies to the promotion of the highest professional interests, is also a fact upon which many members of the profession, and especially those of them who belong to the British Medical Association, will congratulate themselves. The only statement that remains to be noticed, and the one probably which my correspondent had especially in his mind, is that Mr. Carpenter has good and certain grounds for saying that, if they had been loyal to their promises to their medical brethren, a more acceptable Act than the one granted to us could easily have been obtained. That this statement is not merely incorrect, but is ridiculously incorrect, is plain upon the face of it; for a gentleman who indulges in Mr. Carpenter's style of language, and who is actuated by his spirit, would have been only too glad to use the sharper weapon which such evidence would have placed in his hands, if he had but possessed it, rather than the clumsier one of indiscriminate abuse which he has employed. There can be no better proof, then, that he has no such evidence than the fact that the whole profession, to whom he would have been delighted to impart it, if he could, has not got it also. In this, the only debateable statement, Mr. Carpenter is hopelessly wrong.—I am, Sir, yours faithfully, WILLIAM CARTER.

Liverpool, November 8th.

SIR,—I have not thought it necessary to take a serious view of the caricature of my opinions and those of other candidates, to which my somewhat cantankerous friend, Mr. Carpenter, treats your readers—with much indulgence, I must say, on your part. Perhaps you think that plenty of rope is the best principle with such a witness. I should scarcely now notice his "Daniel-come-to-judgment" statements, but that he has eagerly published an incomplete correspondence, in which I was trying gradually to impress him with a little sense of care in making statements against those he has no right to misrepresent. It seems fit that I should make the correspondence complete.

Nobody who gives me credit for any common sense will think that I seriously proposed in any conference to punish medical men for sending out their own medicines. At the time referred to, I was sending medicines to many of my own patients, and even now have not entirely relinquished the practice. This fact alone seems a suffi-

cient answer to a charge so absurd. But Mr. Carpenter appeals to a witness Dr. Waters of Chester. Dr. Waters writes me: "I am unable to say that you said what Mr. R. H. S. Carpenter asserts. Dr. Danford Thomas and others were there, whose memory may be clearer than mine." I thereupon referred to Dr. Thomas, who says: "I have no recollection of your proposing to prosecute medical men for dispensing their own medicines, or that you suggested any clause in a Bill to that effect. Our friend Mr. Carpenter's statements are not always marked by accuracy."

I have no doubt that Mr. Carpenter will think his own testimony worth more than any that can be adduced to the contrary; but I am not likely to trouble your readers with any further contradiction of his statements, which he has a habit of repeating against all men that are likely to know better.—I am, Sir, your obedient servant,

JAMES GREY GLOVER.

25, Highbury Place, N., November 10th, 1886.

SIR,—In a few days our profession will be passing through a great crisis, and before another number of this JOURNAL is issued, an opportunity will have been afforded to every member enrolled upon the *Register*, to show how far he values a privilege which, for a quarter of a century, the most earnest and foremost thinkers among his professional brethren, and, with them, the medical press of the country, and especially the BRITISH MEDICAL JOURNAL, have been working to win for him, namely, the right to take part in the management of his own affairs—the affairs of the profession, by the practice of which he wins his daily bread.

Ever since the passing of the Medical Act of 1858, and the establishment, by that Act, of a General Medical Council, it has been patent to everyone who has thought earnestly on the subject, that the only element which has never been included in that Council, and by which, in honour and in right, it should have been pervaded, has been conspicuous by its absence.

The Crown has had a voice in its counsels; the interests of every Medical Corporation in the realm have been safe-guarded and tenderly protected; but the rank-and-file of the profession, whilst called upon to provide the funds by which a most costly organisation was established, and has, ever since, been supported, has been scrupulously excluded from the power to take any part in its proceedings, or, in any direct manner, to make itself heard in the Council Chamber.

Unqualified practice is still rampant all over the country; the community at large still consider the prescribing chemist the person to whom they should naturally apply for what they are pleased to consider minor ailments; abuses of the most glaring kind continue unabated; appeals for their rectification have been courteously received, in some instances have been discussed, but have rarely been remedied; and things continue, in the main, almost exactly as they were.

We have been presented with a *Pharmacopœia*, the chief aim of which seems to have been to mystify us by changing the names and the strengths of its most potent compounds, and for which we are expected to be profoundly grateful, but of which we fail to entertain any very exalted notions.

Medical education—whilst on the whole, and in face of all obstacles, it has gone on improving in so steady a ratio that the advanced student of to day stands where the professor of forty years ago stood in lofty pre-eminence, has been so split up, under the very eyes of this all-powerful Council, into fragmentary sections—has become so hampered with unnecessary, harassing, and vexatious examinations, and has been so perpetually subjected to changes of its curriculum, that neither schools, nor teachers, nor pupils, have been able to foresee from year to year what would be expected of them in the year that is to come. Examinations, besides being harassing and vexatious, have been made unnecessarily costly; have been unnecessarily multiplied; have been weighted with unnecessary temptations, both moral and educational; and have, after all, remained open to the oft repeated accusation that, as tests of industry and knowledge, they remain untrustworthy still.

It is still as impossible as it has ever been for a London student to obtain an M.D. degree. Whilst to the Scotchman and the Irishman this degree has been made attainable by industry and intelligence, the Englishman has, by its requirements, been debarred from its attainment, and the London student has been driven over the border, or across the silver streak, or even further afield, for that which in London, of all places in the world, he ought to have been able to obtain with no other difficulty than such an amount of work and study as would render him worthy to obtain, and with dignity to hold it; and yet the profession—patient, plodding creature that it has ever been—has only been permitted to look on, to bear its burdens as best it could, and to pay their cost; but never to lift a finger towards their alleviation, nor to utter a word to alter the direction of their current.

But at length the time has come when this evil is to be removed. After years of patient and enduring struggles and work on the part, to a great extent, of the Medical Reform Committee of our Association, of its indomitable chairman, Dr. Waters, of Chester, and of the BRITISH MEDICAL JOURNAL, the boon of "direct representation on the General Medical Council" has been won for the profession, and it is offered the opportunity, between the 15th and the 22nd of this month, to select five members of its own body to represent and to maintain its views and its wishes in the Council. Let the choice be well and wisely made; let the profession entrust its interests to those who in the eyes of each elector appear most worthy to be so entrusted with a sacred responsibility; and November, 1886, will mark an era in the history of the medical profession.

There is no lack of candidates from whom to choose; the list contains men of all professional complexions, and of all ways of thinking on almost all important subjects; the opportunity is one which will not probably recur for a lengthened period; and now is the time for the profession to show its appreciation of the privilege which has been so laboriously won for it, and to place its interests in reliable and trustworthy hands.

Whoever is sent to the Council will find his task to be far from an enviable one. Much, no doubt, which is wholly unattainable at present, will be expected; but of this the profession may be assured, that, be they who they may, the elected representatives must feel the charge entrusted to them to be of so sacred and responsible a character that they will leave no stone unturned to render the fulfilment of their duty as perfect as is humanly possible.

Let every registered practitioner, therefore, ponder carefully over his choice, and act entirely in accordance with his individual and personal convictions; but let everyone remember that he who fails to record his vote is leaving unfulfilled a most onerous and responsible call to duty, and that every voting-paper lying unreturned to the Registrar on Monday, November 22nd, will be a standing reproach to him whose name it bears.—I am, Sir, yours, etc.,

F.R.C.S. AND A GENERAL PRACTITIONER.

SIR,—Dr. Charles Wells thinks a physician of eminence can represent general practitioners "better" than one of themselves, and all those who delight to hang on to the coat-tails of our great consulting physicians may think so too, but I do not; moreover, I think that Dr. Wells casts a slur upon the intelligence of general practitioners when he says so, and especially when he tells them that the evidence I quoted admits "of a construction the very opposite" of what it states. It admits of but one construction by those who can understand the plainest words used in the plainest way. Surely Dr. Richardson can explain his opinions sufficiently well as to be accurately understood? But Dr. Wells tells us that he blundered, and that he did not mean what he so clearly stated, but the very opposite to it. Dr. Richardson was deputed by the Medical Defence Association to give evidence on their behalf to the Royal Commission. It was his duty, as the representative of the Association, to uphold all the privileges the profession then had, and to urge the necessity of fresh restrictions being placed upon all forms of illegal practice.

As to how he acquitted himself upon this important occasion the following single question put to him by the Commissioners, with his reply to it, will adequately show. "Is your Association desirous of seeing everything that is now known as counter-practice, stopped?" "That is a matter which is before us very frequently, and we differ in opinion upon it. I differ from the rest of my colleagues very much upon that point. I am inclined to think that the Apothecaries' Company should take up the whole of that part of medicine, and that as a certain portion of counter-practice is absolutely necessary in the State, therefore there should be a certain recognition of it. That is my view, but my colleagues are not at one with me." Now, I ask Dr. Wells to show me where I am wrong, when I say that this evidence advocates (1) the creation of an inferior grade of medical practitioners; (2) the legalising of counter-practice; (3) and the amalgamation of chemists and druggists with the medical profession? Surely to pursue this point further would be a waste of time and an insult to the understanding of your readers. Dr. Richardson not being a general practitioner was ignorant of the points affecting the interests and wants of general practitioners, and so all he could do was to ride before the Commissioners on his own hobby as best he could, and a very sorry spectacle of his horsemanship he made. It is this want of knowledge which constitutes much of my objection to him, and it constitutes much of one objection, amongst others, of a graver nature, that I raise against Mr. Wheelhouse, Sir D. W. Foster, and Dr. Glover, all of whom are aliens

in their sympathies, in their interests, and in every other way to the general practitioners.

Dr. Wells states that "Dr. Richardson is truly the champion of the general practitioners against the encroachments of corporations on the one hand, and of trading committees on the other." What this means is best known to Dr. Wells himself; I fail to see in it anything beyond electioneering clap-trap nonsense.

The general practitioners have had a right conferred upon them which consulting men are doing their best to rob them of, and they are aided and abetted in their ungenerous and ignoble efforts by a certain class of general practitioners who are ready to sell their newly-acquired right for a smile from a consultant. Of these gentlemen, their more independent and intellectual brethren might well say with scorn upon their lips, that "a nod from a lord makes a breakfast for a fool."

A few words for myself; they shall be but few. Without committees, without advertising, without addressing or importuning the profession, I have nevertheless been nominated by seventy *bonâ fide* general practitioners as a candidate for a seat on the Medical Council. A portion of my eleven years' solid work, in various forms, for the profession, is known to the profession. If elected in consequence of that work, increased power would be given me for continuing my efforts. I would take good care to avail myself of it, and, thus strengthened, to work on to the best of my ability for the benefit of those electing me.—I am, Sir, your obedient servant,

November 8th, 1886. R. H. S. CARPENTER.

THE MEETING OF THE COLLEGE OF SURGEONS.

SIR,—I see by the report of my speech at the College of Surgeons on the 4th that, in my effort to condense my remarks as much as possible, I omitted to say that the Associations of Fellows and Members still adhere to their opinion (expressed in Clause 2 of the resolution carried at the meeting on December 17th, 1885, and cited on page 23 of the last Report of the Council) that "any alterations proposed to be made in the constitution or relations of the College, or in any of its by-laws, ought first to be submitted for approval to a meeting of the Fellows and Members."

I am the more sorry that I made this omission, as I had promised my colleagues that I would dwell on the point, although, in order to shorten the proceedings, we decided not to submit any formal resolution to the meeting. If, however, we obtain the joint committee we have asked for, we shall no doubt be allowed to discuss this matter also. The question has really now been narrowed to that of the acceptance by the Council of the two words "for approval." We have their promise to consult the Fellows and Members on all such matters; but they will not as yet promise not to proceed with any proposal in the face of an adverse opinion, however preponderating. The idea that a consultation of the kind would lead to any delay, or business-difficulty, seems to have been abandoned, and is obviously absurd, since the Council themselves have given us the numerous stages which a by-law must pass through before it can be submitted for confirmation; and it is obvious that, between any of these stages, the opinion of a general meeting could be taken without involving any delay. It is true that, if the Council were to make up their mind to one course (say, for instance, in the question of admitting the Apothecaries' Company to a share in the conjoint scheme), and that course were repudiated by a large majority of their constituency, they would have to desist; but this is exactly what we say they ought to do in such circumstances.

My object in writing to you to-day is to apologise to those on whose behalf I was speaking on the 4th for passing over this point.—I am, Sir, your obedient servant, T. HOLMES.

18, Great Cumberland Place, November 9th, 1886.

SIR,—The nature of your reference to the length of my speech at the recent meeting at the College, renders it necessary for me to ask you kindly to allow me a few words by way of personal explanation. The length of my speech was quite accidental. Although ready to speak if necessary, I should have allowed the case of the Members to rest upon the admirable speech of Mr. Holmes, but for the intervention of Mr. Erichsen. Knowing his liberal views, I was mentally congratulating the Members on having found an influential advocate in Mr. Erichsen, when, to the general surprise, he took the opposite side of the question. Whilst he was speaking, a request to follow him was put into my hand, and I was called for at the conclusion of his remarks, which were not listened to with the forbearance to which they were entitled. Unfortunately, I did not look at the clock at the moment of rising, and owing to the interpolation of passages in reply to Mr. Erichsen, who appeared to be the mouthpiece of a Council bound to silence, to presidential interposition, and to manifestations favourable or otherwise, the length of which I did not allow for sufficiently, a speech neither calculated nor intended to last twenty minutes became lengthened to more than double that time, without my recognition of the fact. I trust that I may be forgiven for a trespass originating from an excess of zeal in the cause of the representation of the profession, in which I have taken a deep interest for more than twenty years. On the representation of the profession in the Council, I wrote in the BRITISH MEDICAL JOURNAL in 1868. Seven years ago, both in the annual Oration at the Hunterian Society and in my Carmichael Essay, I advocated the same measure, as well as the representation of Members of the College of Surgeons in the Council, and of the Licentiates at the other Corporations. I also advocated the formation of a body in connection with the College, like Convocation at the University of London, stating my belief that with so enormous a constituency the United Colleges of Physicians and Surgeons might ultimately obtain Parliamentary representation. Through such a channel, a man like Paget, or Holmes, or Marshall, or Erichsen, who are much needed in the legislative assemblies, might appropriately enter Parliament, and possibly Mr. Erichsen, now that he has become Conservative, has been opposing his own election. Since 1879 the Faculty of Physicians and Surgeons of Glasgow has conceded to Licentiates two representative Fellows in a Council of ten. It passes my comprehension why the Council of the College of Surgeons should so strongly resist a concession which seems absolutely necessary for the development of the profession, and it has been entirely owing to long standing conviction, and to my strong sense of what is due to the Members of the College and to the profession at large, that probably, in opposition to my personal interests at the present time, I have been led to take part in the discussions at the College.—I am, Sir, yours, etc., WALTER RIVINGTON.

SIR,—May we crave a fraction of space in your JOURNAL for a brief explanation of the amendment proposed and seconded by us at the general meeting of the College of Surgeons on November 4th. That meeting had already so far exceeded in its duration those of last year, that members of the College, drawn by the calls of busy practice, had, for the most part, left the theatre, and we therefore could not try the patience of those remaining by a lengthy exposition. The amendment suggested by us was that, in Mr. Paul Swain's resolution bearing upon the widening of the basis of the Fellowship, the word "first" be inserted before the word "method." This, the fourth resolution thus amended, was subsequently carried as a substantive motion.

Now for its effect. It is that the Council is apprised of the views of the Members: to wit, that they do not wish to obtain a Fellowship granted by election to ten Members of twenty years' standing every year; while they acknowledge with gratitude the concession made by the Council in exempting members of fifteen years' standing from the ordeal of the primary examination in anatomy and physiology. The Members of the College of Surgeons are not hankering after a tinsel decoration, as they do not desire the empty glory of a Fellowship acquired by an act of grace, or by nomination—an evil that originated, though in enormously greater proportion, at the time of the first creation of the Fellowship, and which they had hoped would die out with the natural term of life of the Fellows then fathered upon the College. The Members do not call for any change derogatory to the academic status of a distinction now most honourable in that it is acquired by examination.

On the other hand, in the second of the two methods adopted by the Council they perceive a wise attempt to meet the wants of a few members who have acquired superior skill in surgery and pathology, and who, while not sufficiently numerous to cause any anxiety as to the exclusive character of the Fellowship, would yet be no mean compeers of men whose circumstances in early life have permitted them to enter, at the usual epoch in their professional career, the list of candidates for that honour. The members recognise, with thankfulness, the consideration of the Council herein shown for those whose practical skill, as evinced by their passing the severe tests of the second examination for the Fellowship, should excuse them from the technical drudgery of undergoing a fresh training in the latest edition of the alphabet of their art. We consider the first proposal of the Council, together with its late position in relation to the Apothecaries' Society, as fresh proof, if proof were needed, that without a few members of the College of Surgeons sitting upon the College Council, that body, with howsoever good-will, can never effectually keep touch with the majority of its diplomates; at present, though the members would gladly work with the Council, they are forced by that body to act outside it, and the petition, a copy of which appeared on page 8 (adver-

tisement) of the JOURNAL of October 16th, will show in what direction their efforts must tend. At the risk of monotony, we still ask for further signatures, in order that our hands may be strengthened to the utmost in an undertaking the success of which appears to be almost within our grasp.—We are, Sir, your obedient servants,

WARWICK C. STEELE,
WM. ASHTON ELLIS,
Honorary Secretaries Association of Members of Royal College of Surgeons.

SIR,—Mr. Erichsen's bold declaration that the Royal College of Surgeons has no concern with ethical matters, must have taken a good many of his hearers by surprise. Everybody knew that the College was very slow to move in such matters, but his candid avowal goes a little beyond the fact. Not far from where I write there is, in a side-street, a small shop kept by a "herbalist," who treats secret maladies, obstructions incidental to the female sex, and nervous debility, by certain infallible methods. His advertisements recommending his herbs, and offering to send certain other commodities in which he deals to any address free from observation, are to be seen plastered on the walls of many urinals. In his shop-window is displayed a placard stating that a certain medical practitioner, whose name appears on the roll of the Members of the College of Surgeons of England, may be seen at certain hours; and on or over an inner door within the private door of the house the Member's name appears in full; that is to say, the Member practises in the same house and shop as the herbalist who treats the complaints above mentioned, and sells the articles of commerce which are recommended as a sure protection from all danger. These facts were brought to the notice of the Council of the College, which did not take up the position assigned to it by its former President. On the contrary, the ethical duty was admitted by implication; but it was cannily suggested that private individuals should be at the trouble and expense of collecting the evidence which would prove some business connection between the herbalist and the Member. There the matter sleeps. The College knows the wrong, but will not take the pains to obtain the technical evidence which would provide the remedy. In this we have a standard of its idea of ethical duty—very low, indeed, but, Mr. Erichsen will be glad to learn, not quite so low as when he knew it intimately. There is progress everywhere—even in Lincoln's Inn Fields. A BROTHER MEMBER.

THE RECOGNISED PROVINCIAL HOSPITALS AS AFFECTED BY THE RULES OF THE EXAMINING BOARD OF THE COLLEGES OF PHYSICIANS AND SURGEONS OF LONDON.

SIR,—On behalf of myself and colleagues, I beg to call your attention to the effect of the new regulations of the Examining Board in England on the recognised provincial hospitals.

By the present arrangement of the two Colleges, neither will give its qualification separately, and therefore the regulations issued by them conjointly must be obeyed by all those wishing to obtain the diploma of L.R.C.P. or M.R.C.S.

Prior to this combination, a student commencing his studies at one of the recognised provincial hospitals was allowed to count a year's hospital practice as one of the four years of study required to obtain his diploma; that is, a student having spent his first year at a recognised provincial hospital, entered a medical school; and at the end of his second winter's session at such school, could present himself for his "Primary College" (now called the Second Examination). A year subsequently, he was allowed to present himself for the "Final," in virtue of having spent a year at a recognised provincial hospital.

By the present arrangement, he is not permitted to present himself for the "Final" until two years after passing the "Second;" and thus the student who did a year's practical work before entering a medical school is, as far as time goes, no better off than his fellow who came straight to such medical school without any previous training—in fact, the provincial hospital student has lost a year.

It may be suggested that men can come into the country after their second year in London, but this would not take place for the following reason:—By going into the country at that time they would lose all position at their school as Third Year's Students, and consequently all chance of obtaining valuable appointments for which otherwise they would be eligible.

Thus the large amount of valuable experience and practice obtainable at the provincial hospitals is lost to future students; whilst the loss of a working staff of students to such hospital itself is a very serious one. We would suggest that all candidates for election to the Medical Council be asked to give us their support in order to get the state of things complained of altered.—I am, Sir, yours truly,

JAMES BANKART,
Senior Surgeon to the Devon and Exeter Hospital, Exeter.
Devon and Exeter Hospital, Nov. 9th, 1886.

DEGREES FOR LONDON STUDENTS.

SIR,—In case there should be any misunderstanding as to the terms of my letter in the BRITISH MEDICAL JOURNAL of October 30th, I distinctly disavow any intention of expressing any opinion, for or against, any registered practitioner assuming, on his own responsibility, the title of "Doctor."

What I did mean to convey was my doubt whether any Parliamentary enactment being passed which would authorise any one to assume the title of "Doctor," who had not obtained a doctor's degree from a University.—Faithfully yours,

Glasgow. GEORGE BUCHANAN.

SIR,—Professor Buchanan's letter calls for a reply from an English point of view.

An Englishman's idea of an university education applies only to Oxford and Cambridge, and is altogether foreign to anything in Scotland, or other schools in England. Take the condition of Scotch students. There education is, as a rule, obtained in the large grammar schools common to the country. They then enter Glasgow or elsewhere, after passing a very moderate preliminary examination, certainly not superior to that required in England. Then the medical curriculum is almost identical, whether the student attends Glasgow University or St. Bartholomew's, under its less grandiose title, hospital. Of course the expense is less in the former case. At the end of his fourth year the former obtains the degrees M.B., C.M., and the latter usually the M.R.C.S., L.R.C.P.Lond. Thus they are upon an equal footing, and now the injustice commences. The Scotch practitioner, after two years' experience and writing a thesis (no difficult matter), obtains the right to the title M.D., to the great prejudice of his English neighbour, and it is upon this monopoly that the Scotch schools are at present trading at the expense of London. It is unnecessary to say more than that this anomaly should at once end.—I remain, etc., COTTENHAM FARMER.

Hexham.

SIR,—What is the Joint Committee of the London Colleges doing that so much time is being lost in bringing forward their scheme for granting degrees? I have three sons entering the profession. The eldest is at Cambridge, but as I cannot afford that University for the other two, they must obtain a degree upon cheaper terms. Being an old Guy's man and a thorough believer in the teaching of the London schools, I should infinitely prefer their going to the old Alma Mater, but before all I regard the possession of a degree as vital to a young man beginning practice. If the London Colleges, therefore, during the ensuing twelve months do not decide to act, I shall send the boys over the border, where they can, by a fair amount of work, obtain that which will enable them to hold their own against the swarms of graduates from Scotland and Ireland.

For myself, as a practitioner of twenty-two years' standing, a degree is of little importance now, my seat in the saddle being firm, but I have had some disagreeable experience of newly-fledged M.B.'s and M.C.'s from Scotland who acted as my assistants. Two of these gentlemen used to boast to my patients that they were "Doctors," and I was not one, and if I said to my friends, in answer to enquiries, that I was a physician but could not call myself a doctor, they put on a puzzled look, and evidently thought there was a screw loose, and probably that I held a screw qualification. The only remedy is for the Colleges without delay to grant degrees to all men who pass the joint examination, as well as to all the present holders of the double qualification now on the register. In this way you will ensure more entries at the London medical schools, and prevent a number of men who are at present attending lectures in town from going to Scotland, Durham and Ireland to obtain the coveted M.D.—I am, yours truly,

L.R.C.P.Lond., M.R.C.S.Eng.

SIR,—I have read with much interest your leader of October 23 on "The present position of the Medical Schools in London," and I sincerely trust you will continue to use your powerful influence to get justice done to London students, and so save our colleges from a suicide's grave.

It is only when in actual practice that the glaring injustice and constant regret is felt that our colleges give a stamp to their *alumni*, which, in the eyes of the public, ranks far below an M.D., no matter

where or how obtained. Hardly a day passes but, directly or indirectly, I am made to feel this supposed inferiority, owing to public ignorance and our Colleges' want of energy to rectify this abominable and serious injustice.

I am frequently consulted by parents with respect to the best course for their sons entering medicine to pursue; my answer is always as strongly in favour of the north as I can make it, notwithstanding I hold London and her schools far superior in advantages for study.

I am only one of many hundreds of medical men, who, I feel sure, having been taught by experience, try to warn others from the mistake they made.

When will the Colleges wake up in real earnest, if not to our interest, at least to their own? It does not require a prophet to predict their not very gradual decline if they refuse to comply with the voice of common sense and justice. Statistics, as you point out, most surely indicate the way the wind has set.—Yours truly,

AN INFERIOR BEING.

SIR,—I am glad to see fresh interest shown in this question—a difficult one, and not to be easily settled; but, while I feel sure that few would wish to see reduced the standard of the higher qualifications to be obtained in London, it is evident that those who hold the *diplomata* of the Royal Colleges of Physicians and Surgeons of London should awake to their own interests, and give their support to that candidate in the coming election who seems most inclined to actively promote the endeavour of the conjoint Colleges to put within reach of students of our grand metropolitan schools a *degree* such as is at present obtainable at the smaller Scotch, Irish, and provincial schools fortunate enough to be attached to a university, and such as undoubtedly gives a professional status not granted by the public to the present *diplomata* and *licences to practise*.

Nor is the question one of professional status only, but, what is perhaps, in these days of keen competition, more important, it frequently influences the public in their judgment of a medical man's scale of fees, and of his eligibility for a public appointment.—I am, etc., M.R.C.S.ENG., L.R.C.P.LOND.

MEDICAL ANNUITY ASSURANCE SOCIETY.

SIR,—Whether or no the age of 60 or 65 is to be the one adopted for annuitants appears to have been overlooked by the committee at its last meeting, as no mention is made of it in the report; and, as the decision is one which will, no doubt, greatly influence both present and intending subscribers, it should at once be settled. There can be but little doubt, looking at the mortality in the profession, that the age of 60, as proposed by Dr. de Havilland Hall, is the one that should, and would, be adopted, if the voice of the subscribers were listened to.—I am, Sir, your obedient servant,

Herne Hill, October 29th. C. S. SMITH.

[We have reason to believe that there has, so far, been no definite proposal before the Society in question to adopt 60 as the annuity age, in place of 65. Such a step cannot be taken by the committee, but would have to be the work of a general meeting. When the Society was first put before the profession, simplicity was one of the objects sought to be attained, and it was thought well to have as few tables as possible. This being so, the age 65 was adopted as, under all circumstances, the one most likely to be preferred. Now the Society has been successfully established, there would be no difficulty, should the members desire it, in having a table for annuities commencing at age 60 for those who desire it. Obviously, however, such a system would add very materially to the premiums of those who adopted it. With regard to the probabilities of life, these are more favourable than is, perhaps, generally supposed until the tables are examined. For example, of one hundred members in fair health at age 32, one-half (or fifty) will live to 65, while the average expectation of life of the fifty so living at age 65 will be eight years each. In other words, for every hundred annuity members alive at age 32, the Society will have, probably, to pay fifty annuities of eight years' duration, or their equivalents.]

HOSPITAL AND DISPENSARY MANAGEMENT.

NEWCASTLE-UPON-TYNE CITY LUNATIC ASYLUM.

IN consequence of the continued increase in the number of patients in this institution, it was, in 1885, seen to be necessary to make very extensive additions to the existing building. Plans were prepared for the accommodation of 170 additional patients, and for the enlargement of kitchen, laundry, and chapel; at the end of 1885, considerable progress had been made in the erection of the new female block. Thirty-five acres of land adjoining the institution were bought, in order to obviate the impending danger that the asylum would shortly be surrounded by houses.

The average number of patients resident in 1885 was 276. The admissions were 73 in number; Dr. Wickham draws attention to the large and increasing number of cases suffering from cardiac disorder, which was present in 46 out of the 78. The recovery-rate during the year was good, being 38.46 per cent. of the admissions; the death-rate was 8.7 per cent. of the average number resident. *Post mortem* examination was made in every case in which permission could be obtained, that is, in about two-thirds of the whole number of deaths. We notice, with some regret, that in the report of this asylum, as is the case in too many others, the superintendent makes no reference to the use of either restraint or seclusion; it may be gathered from the Commissioners' report that, while there had been no necessity for mechanical restraint, seclusion was made use of not unfrequently among the male patients. It would be well for every superintendent to make some allusion to the subject in his own report, and not leave an inference, which is very likely erroneous, to be drawn from that of the Commissioners. On an average, more than 70 per cent. of the patients were usefully employed during the year. The dietary appears to be adequate; instead of beer, the patients have "a mixture of citric acid, lemon-juice, sugar, and cream of tartar," which is, doubtless, appreciated, especially in summer.

Respecting the statistical tables, we cannot speak very highly; many of the forms used are meagre and obsolete, and might, with advantage, be replaced in the next report by the revised tables of the Medico-Psychological Association. Tables III, V, and VI may be instanced as being especially in need of amplification, or rather of complete re-casting. Tables IA and IIA do not appear at all.

GLAMORGAN COUNTY LUNATIC ASYLUM.

AT the end of 1885 there were 661 patients in this asylum, of whom only 18, that is, less than 3 per cent., were deemed recoverable. The admissions during the year were 175 in number, the majority of the cases being "of a very hopeless nature as regards chance of recovery. No fewer than 41 had been insane more than a year before admission, and many of them were poor broken-down creatures who came just to die." Out of the 75 deaths, 8 occurred within a month of admission, and 16 more within six months. During the past two years there have been admitted an unusually large number of married as compared with single women; Dr. Pringle regards this as due, at least in part, "to the depression of trade, and inability to obtain sufficient nourishment, the greatest privations usually falling to the wife and mother, when the husband is idle." Intemperance, as a direct cause of brain-disease, he believes to be lessening, "probably by reason of the better habits of the working-classes, and the greater amount of intelligence they now possess." It is interesting to note that, of the 17 cases of general paralysis admitted in 1885, 6 were women, all coming from the same town. The recovery-rate for the year was low, namely, 25 per cent. of the admissions (transfers excluded). The mortality was 11.5 per cent. of the average number resident. *Post mortem* examinations were made in 65 out of the 75 deaths. Thirteen deaths were attributed to the somewhat vague cause, "Atrophy of the brain." Seclusion appears to have been very seldom resorted to; one woman was restrained, for persistent attempts at suicide, both by the canvas jacket, and at times by being strapped to her bed.

In addition to the 661 patients in the asylum, about 160 patients chargeable to the county were boarded out at Carmarthen and Abergavenny Asylums, and Briton Ferry House. New buildings for the accommodation of these were in course of erection, and at the end of 1885 were rapidly approaching completion. Several external iron staircases were provided at the old asylum, to facilitate the escape of patients in the event of fire. The nursing staff seems to be adequate; it is satisfactory to find that only 19 of the 65 attendants and nurses had served less than two years, while 22 counted more than five years of service.

Coming to the statistical tables, we hope Table IIA will be accorded a place in the Report for 1886, and that Tables VIII and IX will be completed by the inclusion of "patients remaining in the asylum." There is a considerable discrepancy between the average recovery-rate (for the 21 years) given in Table III, and that in Table IV; the officer who prepared these tables, evidently had the common but mistaken idea that, to get an average percentage for a term of years, one has only to add together the annual percentages, and divide by the number of years

NAVAL AND MILITARY MEDICAL SERVICES.

THE LATE SURGEON-MAJOR T. R. LEWIS.

THE friends and colleagues of the late Surgeon-Major T. R. Lewis, Assistant-Professor of Pathology in the Army Medical School, being anxious to commemorate the life and work of one who contributed so largely to scientific medicine, have prepared a circular for distribution (of which we have received a copy from the secretary), inviting subscriptions for this purpose. They suggest as the most fitting memorial a reprint of his numerous scientific reports and papers, with his portrait as a frontispiece, and prefaced by a biographical notice. It is proposed to issue a copy of the reprint to each of the subscribers, a list of whom will appear in the preface to the volume. A committee has been formed under the presidency of Sir Thomas Crawford, K.C.B., M.D., Director-General Army Medical Department, for the purpose of carrying these proposals into effect, the secretaries being Surgeon-Major G. E. Dobson, F.R.S., and Surgeon H. S. McGill, M.S.; and the treasurers Messrs. Holt, Lawrie, and Co., of Whitehall Place, S.W.

HEALTH OF THE TROOPS IN QUETTA.

THE hot weather which has has lately been prevailing at Quetta has resulted in a corresponding increase in the sick list. In nine companies of European infantry in Quetta, some 200 men are reported to be in hospital, mostly with fever, not of a serious character. The proportion of native soldiers sick is as high, or nearly so; but the civil population has not suffered in the same degree.

EXAMINATION OF VOLUNTEER MEDICAL OFFICERS.

M.B. (Howden) states that the principal medical officer, Northern District, considers bearer-company drill one of the most important subjects to be prepared by volunteer-surgeons for examination.

*** Assistant-Surgeon Pearce, with whom we have communicated, writes as follows: The regulations state that the candidate should be "well acquainted with the nature and intended application of the various articles composing the equipment of army-hospitals in the field, and with the authorised means for the transport of the sick and wounded soldiers, and the proper modes of employing them." This would not seem to require "bearer company drill," with a knowledge of the drills and exercises with stretchers, ambulances, litters, etc. I have never before heard that questions on bearer-company drill have been asked, but it is well known that the principal medical officers give varying interpretations to the requirements of the regulations. It would be perhaps better to include Part III of the Manual of the Medical Staff Corps as essential in the examination.

M. O. H. (Northumberland).—Hart's *Manual of Public Health* is out of print. Wilson's *Handbook of Hygiene* will give the information required.

THE NAVY.

SURGEON JOHN O'CALLAGAN, who entered the Royal Navy September 30th, 1874, has been placed on the retired list of his rank. He served during the Egyptian War of 1882 as Surgeon of the *Thalia*, and has the medal and the Egyptian bronze star for the campaign.

The following appointments have been made at the Admiralty during the past week: T. H. ATKINSON, Fleet-Surgeon, to the *Brilliant*, temporarily; FREDERICK M'CLEMENT, Staff-surgeon, to the *Active*; JOHN TYNDALL, Staff-Surgeon, to the *Revenge*; C. B. d'E. CHAMBERLAIN, Surgeon, to the *Asia*, additional; ROBERT HICKSON and JOHN LOWNEY, Surgeons, to Plymouth Hospital; G. D. TREVOR-BOPER, and O. S. FISHER, Surgeons, to the *Impregnable*; J. S. FOGHERTY, Surgeon, to the *Excellent*, additional.

MEDICAL STAFF.

SURGEONS H. L. DONOVAN, M.B., E. R. CREE, J. OSBURNE, C. R. BARTLETT, E. H. L. BELL, M.B., S. F. FREYER, M.D., J. MAHER, H. J. FLETCHER, M.B., J. W. F. F. LONG, W. H. BELL, J. F. MCMILLAN, C. A. LANE, M.B., C. G. WOODS, M.D., and T. DALY, all of whom are serving in the Bengal Command, have passed the examination for the lower standard in Hindustani.

Surgeon F. J. LAMBKIN, serving in Bengal, is appointed to the civil medical charge of Chunar, *vice* Surgeon W. A. Morris.

Brigade-Surgeon J. JAMESON, M.D., Surgeon-Major P. L. KILROY, and Surgeon H. J. R. MOBERLY, having completed a tour of foreign service in the Madras Command, are directed to proceed to England on or about November 13th, and report their arrival to the Director-General of the Medical Staff. Brigade-Surgeon J. MACKENZIE, M.D., is to leave for England on November 26th.

Surgeon W. M. JAMES, serving in the Bombay Command, has leave of absence to England for six months, on medical certificate.

Surgeon-Major A. ANDERSON, in charge of the Station Hospital at Muttra, Bengal, has been appointed to the civil medical charge of that station during the absence of Surgeon C. R. Tyrrell.

Surgeon JAMES ROSE, on arrival from England, is directed to do duty at the Station Hospital at Secunderabad, in the Madras Command.

Surgeon-Major W. J. CAMPBELL and Surgeons R. J. GEDDES, M.B., and S. A. CRICK, M.B., on field service, Upper Burmah, are directed to do duty at the Mandalay Field Hospital.

Surgeons W. B. DAY, M.B., doing duty, Station Hospital, Madras; T. A. P. MABSH, doing duty, Station Hospital, Tounghoo; and A. L. H. DIXON, general duty, Burmah division, are ordered to report themselves to the Deputy Surgeon-General, Her Majesty's Forces, Burmah Division, Rangoon, for duty with the General Hospital, Rangoon.

Surgeons R. KIRKPATRICK, M.B., and A. E. TAIT, on arrival with the 2nd Battalion Royal Munster Fusiliers, and 1st Battalion Rifle Brigade, are to report themselves to the Principal Medical Officer, Burmah Field Force, for duty with outposts.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR J. YOUNG, M.B., Bengal Establishment, is appointed to the permanent medical charge of the 2nd Bengal Cavalry, *vice* Surgeon-Major A. S. Reid, M.B.

Surgeon D. B. SPENCER, Bengal Establishment, is appointed to the permanent medical charge of the 12th Kelat-i-Ghilzie Regiment, *vice* Surgeon-Major J. Young, M.B.

Surgeon-Major A. S. REID, M.B., Bengal Establishment, is appointed to the officiating medical charge of the 2nd Battalion of the 5th Goorkhas, *vice* Brigade-Surgeon J. C. Morice.

Surgeon J. F. MACLAREN, M.B., Bengal Establishment, whose services have been placed at the disposal of the Bengal Government, is appointed Civil Surgeon of the Second Class, and posted to Sultanpore.

Deputy Surgeon-General G. BIDIE, M.B., C.I.E., of the Madras Establishment, who entered the service as Assistant Surgeon, February 20th, 1856, is promoted to be Surgeon-General, and is confirmed in the appointment of Surgeon-General with the Government of Madras, *vice* Surgeon-General M. C. Furnell, M.D., C.I.E., vacated.

Surgeon-Major T. C. H. SPENCER, Madras Establishment, is appointed to the medical charge of the subdistrict of Saidapet, from the date of assuming charge from Surgeon J. A. Burton.

Surgeons-Major A. PORTER, M.D., and S. B. HUNT, of the Madras Establishment, have been promoted to be Brigade-Surgeons.

Surgeons H. R. WOOLBERT, G. H. BAKER, T. GRAINGER, M.D.; J. R. ADIE, A. C. YOUNAN, M.B.; A. W. ALCOCK, and J. M. CADELL, all of the Bengal Establishment, have passed the examination in Hindustani by the lower standard.

Surgeon A. R. EDWARDS, of the Bengal Establishment, is appointed to the officiating medical charge of the 2nd Punjab Infantry, *vice* Surgeon G. Jameson, proceeding on leave.

Surgeon G. M. NIXON, Bengal Establishment, whose services have been placed at the disposal of the Bengal Government, is appointed Second Class Civil Surgeon, and is posted to Morad-Abad.

Surgeons D. C. DAVIDSON and J. W. T. ANDERSON, of the Bombay Establishment, have been ordered to proceed on service to Burmah.

The services of Surgeon A. W. F. STREET, Bombay Establishment, are replaced at the disposal of the Commander-in-Chief, and he has been ordered on field service to Burmah.

The services of Surgeon-Major J. P. STRATTON, M.D., Bombay Establishment, are temporarily placed at the disposal of the Governor-General's agent in Rajpootana, for special duty.

The undermentioned officers have been granted leave of absence for the periods specified:—Surgeon-Major G. A. MACONACHIE, M.D., Bombay Establishment, for six months on medical certificate; Surgeon-Major R. BOUSTEAD, M.D., Bombay Establishment, till February 18th, on private affairs; Surgeon-Major R. REID, Bengal Establishment, for six months in extension on medical certificate.

ACTING-SURGEON H. R. H. BIGG, of the 22nd Middlesex (Central London Rangers) Volunteers, is appointed Surgeon to the 16th Middlesex (London Irish).

OBITUARY.

JOHN GRIGOR, M.D., F.R.C.S.E., Nairn, N.B., and Rome.

DR. GRIGOR'S death took place on October 18th, at his own beautiful residence of Larkfield, near Nairn. For some time back he had not been in robust health, but it was only during the previous fortnight that he was confined to bed, and no fatal issue was generally apprehended until within a few days of his death.

Dr. Grigor was born at Elgin, his father having been a solicitor in that town. He studied at Edinburgh University, taking his degree there, and immediately after went as surgeon on board a merchant vessel, trading to India and China. In 1837 he returned home, and commenced practice in Nairn, when he very soon acquired the entire practice over a wide district of country. Possessed of a fine physique, a splendid constitution, great buoyancy of spirits, and extraordinary vigour and energy, he went through an amount of work such as few could accomplish, and laid the foundation of a reputation as a skilful physician which extended far beyond the district in which he practised, and led to his being consulted in after years by his professional brethren all over the North.

About twenty years ago Dr. Grigor paid a visit to Rome, at first with the intention of merely spending a holiday, but finally he resolved to give up regular practice in Nairn, and he took up his residence every winter in Rome as a physician. In this new sphere Dr. Grigor was equally successful, and it opened up for him new sources of pleasure and enjoyment. In the society in which he moved in Rome, coming into contact with many artists, sculptors, statesmen, and savants of distinction, and with the whole world of artistic and historic associations connected with the Italian capital, Dr. Grigor found a congenial and fitting sphere, and year after year he returned to Rome until failing strength made him averse from undertaking so long a journey.

Though leading a very busy life, and much engaged with profes-

sional duties, Dr. Grigor kept himself thoroughly abreast of the culture of the time, and took a deep interest in all antiquarian and archæological questions under discussion. He had many friends among men of arts and letters, and had a large correspondence with men of science on the continent and throughout the United Kingdom. He was also a member and associate of many scientific societies.

While so cosmopolitan in his taste, Dr. Grigor did not forget the interests of the town in which his early professional life was passed. He was a most public-spirited citizen, and the heart and soul of every public improvement connected with Nairn. Most of the institutions there owe their existence to him. The hospital, museum, Masonic hotel, swimming baths, and public hall—all had in him their most active promoter, and, in short, every object for the social, moral, or intellectual improvement of the community was energetically and substantially supported by him. He was a most regular attendant at the meetings of the Northern Counties Branch of the British Medical Association, having been one of the starters of the Branch, and one of its first Presidents; his welcome presence at their gatherings will be sorely missed.

He was always a warm and kind friend to the poor, and he has left a considerable sum for charitable purposes in the town and county of Nairn.

His death causes a great blank in the community. He was pre-eminently the leading and representative public man of the place, and the great esteem in which he was held was demonstrated in a very marked manner on October 23rd, when his remains were borne to their last resting-place, overlooking the town for which he had done so much, amidst the sorrowing of fully 2,000 people, among whom were many medical friends and others, who had come great distances to pay their last tribute to his memory.

CHARLES ROBERT BREE, M.D.Edin., M.R.C.S.Eng., L.S.A., &c.

THE death of Dr. Bree, which occurred on October 17th, will be a source of great regret to a circle of friends, not only in his own district, but throughout the country. Dr. Bree was the eldest son of the late Mr. John Bree, of Keswick, Cumberland, by Elizabeth, daughter of Mr. J. Bearcroft, and was born at Ambleside on February 4th, 1811. He was, therefore, seventy-five years of age at his death. He married in 1845, Frances Elizabeth, eldest daughter of the late Sir Augustus Henniker, Bart., who survives him. Dr. Bree received his medical education in York, from whence he proceeded to London, and was a pupil at University College during 1829 and 1830. At the end of his second year he joined a party of fellow-students and entered the Polish service, where he remained till Warsaw was taken by the Russians in 1831. After spending a short time in Berlin, he returned to England to commence practice at Bildeston, in Suffolk. In 1834 he removed to the neighbouring town of Stowmarket, where he remained until 1858, in which year he gave up practice and went to Edinburgh, where he studied for one year and took his M.D. degree at the University. In the autumn of 1859 he was elected physician to the Essex and Colchester Hospital, and continued for twenty-two years physician to that institution. Dr. Bree was also a naturalist of no mean order. Among his well-known books on natural history are "The History of Birds of Europe, not observed in the British Isles," and "Popular Illustrations of the Lower Forms of Life." Dr. Bree was also joint-editor with the Rev. F. O. Morris of the *Naturalist*. He was a Fellow of the Linnæan and Zoological Societies, and a J.P. for Essex and Suffolk. Dr. Bree was a staunch Whig and an ardent politician.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE RIGHTS OF EMPLOYERS OF LABOUR.

E., a qualified practitioner, is attending J., a clerk in a city office, whose employer, B., sends Dr. R. to see E.'s patient. Naturally E. resents such interference, and, writing to B., expresses fully his opinion of B.'s conduct. The following is an extract from the employer's letter in reply:—

"My object was, for my own satisfaction, to have an opinion upon the case, and I contend that I have a perfect right to ask anyone I think fit to give me the same."

E. next inquires from Dr. R. if, when he was requested by B. to visit J., he was "aware another medical man was in attendance?" To this Dr. R. replies by referring E. to J., with whom a message has been left. E., wishing to have an explanation without filtration through J., again writes to Dr. R., asking in no uncourteous terms the same question as in a previous letter, and stating that E. still waits for, and expects, a direct reply to a plain question. Upon receipt of this note, Dr. R declines further correspondence with E.

*** In response to E.'s request for our opinion on the lay and professional point of etiquette in question, we think it well to observe that, although Mr. B. may, as he contends, have acted within his perfect right in seeking, for his own satisfaction, an opinion upon the case of his clerk J., other than that of E., the practitioner in attendance, we are of opinion that Dr. R., as his, Mr. B.'s, selected medical representative, had no right whatever, ethically speaking, to visit the patient, except in an emergency, without having previously sought and obtained the sanction of J.'s ordinary professional attendant. In omitting to do this, and declining, moreover, to give any personal explanation to E., he, so far, failed in his duty to do unto others as he would doubtless wish to be done by.

ATTENDANCE OF LADY NURSES.

M.D.—A "lady-nurse," simply as such, residing in her own private home, has not, in our opinion, any just claim to the gratuitous services of the profession, as alleged to be the custom by "M.D.'s" lady-nurse patient. Such assumed custom is not within our knowledge, and moreover is one that we cannot conscientiously advise the Faculty to add to their existing eleemosynary responsibilities; for even to the *de facto* "poor clergy" (as defined in the *Code of Medical Ethics*, page 79), gratuitous professional attendance is not accorded; why, therefore, it may we think very justly be asked, should it be conceded to the well-to-do, and not unfrequently wealthy lady-nurse?

There is no profession, it may be truly affirmed, by the members of which eleemosynary services are more liberally dispensed than by the medical. Duty to self, however, renders it necessary, in our opinion, to impose a limit to such devotion. At the same time, we fully admit that poverty in any form, and professional brother and sisterhood, should always be recognised as presenting claims for gratuitous services; and that to individuals in indigent circumstances our professional advice should, as a rule, be freely and cheerfully given.

DR. M. and Mr. Y., etc.—Before proceeding to express our opinion on the subject of dispute between Dr. M. and Mr. Y., we would earnestly impress upon our medico-ethical correspondents, present and future, the great desirability of strictly confining their statements to a simple and concise narration of facts; to eschew ill-natured, embittered remarks, and personal imputation of motive, and it may be well to add, to abstain also from suggestive hints in relation to our duties of ethical impartiality and conscientious decision. *Verbum sapienti!*

In reference to the special case in question (from all unethical complicity with which—as indirectly imputed, however unwittingly, in more than one of Dr. M.'s letters—we entirely exonerate Dr. X.), it is clear to our mind—after a careful consideration of the various ethical points contained in the voluminous written statements submitted to us by the respective disputants—that Mr. Y., as the admitted ordinary medical attendant (a fact unknown to and unsuspected by Dr. M. at the time) on the family in question, should, when sent for by the father of the injured youth, at 8.30 on the second morning after the accident, and requested to take charge of the case (Dr. M. being, as was well known to Mr. Y., in attendance on the patient at the time), have at once taken due care, as the superseding practitioner, that a courteous communication to that effect was made to Dr. M. on behalf of the family, prior to his (Mr. Y.'s) dispatch of the telegram to Dr. X.; in omitting to do this, in accordance with medico-ethical rule, he (Mr. Y.) committed, in our opinion, a breach of professional etiquette, and gave Dr. M. just cause to complain, and to "feel aggrieved." Such is our deliberate, unbiassed opinion; and if dissatisfied therewith, Mr. Y. can, if he thinks well, appeal to the Council of the local "Medical Institution," referred to in the correspondence.

At the same time, in thus setting forth our views on the question involved, we would cordially endorse the wish expressed by Mr. Y., "that now the safety-valve has been opened, that Dr. M. will return to the old feeling of considering him a friendly practitioner, and accept his most hearty assurance that he would sooner lose many patients than one friend."

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE WESTMINSTER BOARD OF GUARDIANS AND DR. JOSEPH ROGERS.

AT the meeting of the Board of Guardians of the Westminster Union held on Friday, November 5th, the proposition of Mr. [S. Bonser, of Oxford Street (who for nearly sixty years has represented the parish of St. Anne's, Soho, as one of the guardians), to grant superannuation allowance to Dr. Joseph Rogers, notice of which had been given on the evening that gentleman tendered his resignation, came on for consideration. There was a very full attendance. The Board was unanimous in deciding that superannuation allowance should be accorded. It was pointed out by the Chairman, Mr. W. J. Fraser, and others, how great had been the services rendered by Dr. Rogers in initiating reforms in the administration of the poor-laws, and the practical benefits that had accrued therefrom. Attention was also drawn to his introduction of an economic system of dietary for the sick and infirm, whereby much saving had been effected; to his services in putting the dispensary in working order, and to the fact that he had introduced a Pharmacopœia there, whereby the labour of dispensing and the charges for drugs had been placed on a satisfactory footing. Much sympathy was also expressed for Dr. Rogers in the severe affliction which had overtaken him, and there was a general hope expressed that he might recover his health, the failure in which had been the sole cause of his resignation.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, October 23rd, 5,947 births and 3,371 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had declined from 22.6 to 18.9 per 1,000 in the five preceding weeks, rose again during the week under notice to 19.3. The rates in the several towns, ranged in order from the lowest, were as follow: Nottingham, 12.7; Brighton, 15.9; Huddersfield, 14.1; Birkenhead, 14.8; Derby, 17.0; Bradford, 17.1; Cardiff, 17.1; London, 17.7; Birmingham, 17.8; Portsmouth, 18.0; Leicester, 18.3; Salford, 19.8; Hull, 20.2; Sheffield, 20.6; Bolton, 21.1; Sunderland, 21.3; Leeds, 21.5; Plymouth, 21.8; Newcastle-upon-Tyne, 22.2; Bristol, 22.4; Blackburn, 23.2; Oldham, 23.6; Liverpool, 24.0; Norwich, 24.4; Manchester, 24.5; Halifax, 25.3; Wolverhampton, 27.4; and the highest rate during the week, 33.5, in Preston. The death-rate in the twenty-seven provincial towns averaged 20.7 per 1,000, and exceeded by as much as 3.0 the rate recorded in London, which, as before stated, was only 17.7 per 1,000. The 3,371 deaths registered in the twenty-eight towns during the week under notice included 438 which were referred to the principal zymotic diseases, against 578 and 540 in the two preceding weeks; of these, 183 resulted from diarrhœa, 83 from scarlet fever, 56 from measles, 49 from "fever" (principally enteric), 35 from whooping-cough, 32 from diphtheria, and not one from small-pox. These 438 deaths were equal to an annual rate of 2.5 per 1,000. The zymotic death-rate in London during the week under notice was equal to 1.9 per 1,000, while in the twenty-seven provincial towns it averaged 3.0, and ranged from 1.0 in Newcastle-upon-Tyne and Cardiff, to 5.7 in Preston, 7.2 in Wolverhampton, and 8.0 in Halifax. The deaths referred to diarrhœa, which had declined from 998 to 271 in the six preceding weeks, further fell during the week under notice to 183; they were proportionally most numerous in Norwich, Preston, Bolton, and Wolverhampton. The fatal cases of scarlet fever, which had steadily increased in the five previous weeks from 43 to 75, further rose during the week to 83, and exceeded the number recorded in any week since July, 1884; they caused the highest death-rates in Huddersfield, Salford, and Bristol. The 56 deaths from measles showed a further increase upon recent weekly numbers, and were proportionally most numerous in Wolverhampton and Halifax. The fatal cases of "fever," which had risen from 59 to 79 in the three preceding weeks, declined during the week under notice to 49, and caused the highest rates in Sunderland and Plymouth. The 35 deaths referred to whooping-cough exceeded by 5 the number in the preceding week; this disease was fatally prevalent in Sunderland and Oldham. The 32 fatal cases of diphtheria showed a further decline from recent weekly numbers, and included 25 in London, 2 in Liverpool, and 2 in Sheffield. No death from small-pox was registered during the week under notice, either in London, or in any of the twenty-seven provincial towns, and only three small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday, October 23rd. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 3.7 per 1,000, and was considerably below the average. The causes of 69, or 2.0 per cent. of the 3,371 deaths recorded during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns having an estimated population of 1,283,977 persons, 878 births and 450 deaths were registered during the week ending Saturday, October 23rd. The annual rate of mortality, which had been 19.8 and 19.5 per 1,000 in the two preceding weeks, further declined during the week under notice to 18.2, and was 1.1 per 1,000 below the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 9.7 in Greenock, 11.5 in Perth, 14.1 in Dundee, 15.5 in Leith, 15.6 in Paisley, 18.0 in Edinburgh, 19.4 in Aberdeen, and 21.6 in Glasgow. The 450 deaths registered during the week in these Scotch towns included 25 which were referred to diarrhœa, 17 to scarlet fever, 17 to whooping-cough, 6 to "fever," 5 to diphtheria, 2 to measles, and not one to small-pox; in all, 72 deaths resulted from these principal zymotic diseases, against 82 and 88 in the two preceding weeks. These 72 deaths were equal to an annual rate of 2.9 per 1,000, which slightly exceeded the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic death-rates in the Scotch towns during the week under notice were recorded in Glasgow and Paisley. The fatal cases of diarrhœa, which had been 22 and 46 in the two preceding weeks, declined to 25, but considerably exceeded the number returned in the corresponding week of last year; 11 occurred in Glasgow, 4 in Edinburgh, and 4 in Dundee. The 17 deaths referred to scarlet fever exceeded by 5 the number recorded in the preceding week, and included 9 in Glasgow and 6 in Dundee. The fatal cases of whooping-cough, which had been 25 and 21 in the two previous weeks, further declined during the week under notice to 17, of which 12 occurred in Glasgow. The 6 deaths referred to the different forms of fever corresponded with the number in the previous week, and included 3 in Glasgow and 2 in Edinburgh. The 5 fatal cases of diphtheria showed an increase upon recent weekly numbers, and included 3 in Edinburgh. The 2 deaths from measles occurred in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 3.6 per 1,000, against 3.7 in London. The causes of 53, or 11.8 per cent. of the 450 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS

In the week ending October 16th, the total number of deaths registered in the sixteen principal town districts of Ireland was 295. The average annual death-rate represented by the deaths registered was 17.8 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 10.3; Belfast, 15.0; Cork, 18.2; Drogheda, 8.5; Dublin, 21.4; Dundalk, 17.5; Galway, 30.3; Kilkenny, 16.9; Limerick, 14.8; Lisburn, 0.0; Londonderry, 10.7; Lurgan, 5.1; Newry, 17.6; Sligo, 5.6; Waterford, 16.2; Wexford, 21.4. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 1.9 per 1,000, the rates varying from 0.0 in ten of the districts to 10.1 in Galway; the 9 deaths from all causes registered in that district comprising 2 from simple continued fever and 1 from diarrhœa. Among the 61 deaths from all causes in Belfast were 1 from scarlatina, 1 from typhus, 1 from ill-defined fever, and 7 from diarrhœa; and the 28 deaths in Cork comprised 1 from each of the following diseases, namely, whooping-cough, ill-defined fever, and enteric fever. In the Dublin Registration District the births registered during the week amounted to 161—76 males and 85 females, and the deaths to 152—73 males and 79 females. Eighteen deaths from zymotic diseases were registered, being 13 under the number for the preceding week, and 9 below the average for the forty-first week of the last ten years: they comprise 2 from scarlet fever (scarlatina), 1 from whooping-cough, 2 from enteric fever, 9 from diarrhœa, 2 from dysentery, etc. During the week there were 22 cases of scarlatina. Sixteen deaths from diseases of the respiratory system were registered during the week, being equal to the number for the preceding week, but 14 under the average for the forty-first week of the last ten years; they comprised 11 from bronchitis, and 2 from pneumonia or inflammation of the lungs. The deaths of 13 children under 5 years of age (including 11 infants under one year old) were ascribed to convulsions. Two deaths were caused by apoplexy, 8 by other diseases of the brain and nervous system (exclusive of convulsions), and 14 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 16 deaths, mesenteric disease 4, and cancer 6.

One accidental death and 1 case of suicide were registered. In 22 instances the cause of death was uncertified, there having been no medical attendant during the last illness.

In the week ending Saturday, October 23rd, 315 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 19.0 per 1,000. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 36.1; Belfast, 20.7; Cork, 9.7; Drogheda, 25.4; Dublin, 19.5; Dundalk, 17.5; Galway, 20.2; Kilkenny, 21.1; Limerick, 12.1; Lisburn, 9.7; Londonderry, 8.9; Lurgan, 10.3; Newry, 24.6; Sligo, 38.5; Waterford, 25.5; Wexford, 34.2. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 3.1 per 1,000, the rates varying from 0.0 in six of the districts to 9.6 in Sligo; the 8 deaths from all causes registered in the last-named district comprising 2 from diphtheria. Among the 88 deaths from all causes registered in Belfast were 1 from scarlatina, 2 from simple continued fever, 7 from enteric fever, and 10 from diarrhœa. One of the 2 deaths in Lurgan was caused by typhus. In the Dublin Registration District, the births registered during the week amounted to 149, and the deaths to 139. The deaths represent an annual rate of mortality of 20.5 in every 1,000 of the estimated population. Twenty-five deaths from zymotic diseases were registered during the week; they consist of 7 from scarlet fever (scarlatina), 1 from diphtheria, 1 from cerebro-spinal fever, 5 from enteric fever, 9 from diarrhœa, 1 from dysentry, and 1 from erysipelas. Twenty-two deaths from diseases of the respiratory system were registered; they comprised 12 from bronchitis, 5 from pneumonia or inflammation of the lungs, and 3 from croup. The deaths of 8 children (including 6 infants under 1 year old) were ascribed to convulsions. Eight deaths were caused by diseases of the brain and nervous system (exclusive of convulsions), and 10 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 18 deaths, mesenteric disease 7, and cancer 9. One accidental death and 1 case of suicide were registered. In 16 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

It appears, from statistics published in the Registrar-General's return for the week ending October 16th, that the annual death-rate recently averaged 30.4 per 1,000 in the three principal Indian cities; it was 25.4 in Calcutta, 25.6 in Bombay, and 39.2 in Madras. Cholera caused 13 deaths in Calcutta, and diarrhœal diseases 55 in Madras and 30 in Bombay; "fever" mortality showed the largest excess in Madras. According to the most recently received weekly returns, the annual death-rate averaged 24.8 per 1,000 persons estimated to be living in twenty of the largest European cities, and exceeded by 5.9 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was equal to 22.5, and showed a further decline from the rates in previous weeks; the 400 deaths included 65 from diarrhœal diseases, 12 from "fever," and 3 from small-pox. In three other northern cities Copenhagen, Stockholm and Christiania—the death-rate averaged 20.8, and ranged from 18.8 in Stockholm to 23.8 in Christiania; in Christiania, the 60 deaths included 6 from diphtheria and croup, and 5 from scarlet fever, while in Copenhagen and Stockholm an excessive mortality resulted from diarrhœa. In Paris, the death-rate was equal to 20.9, and exceeded the rate that prevailed in London by 2.0; the deaths included 28 from typhoid fever, and 19 from diphtheria and croup. The 178 deaths in Brussels, of which 47 resulted from diarrhœa and 5 from "fever," were equal to a rate of 21.3. The rate in Geneva was 20.9, and 2 of the 29 deaths were referred to "fever." In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 21.4, the several rates being 18.8 in Amsterdam, 21.1 in Rotterdam, and 28.5 in the Hague; in Amsterdam, 4 fatal cases of diphtheria and 3 of typhoid fever were registered, and 8 of the 76 deaths in the Hague resulted from measles. The Registrar-General's table includes eight German and Austrian cities, in which the death-rate averaged 29.7, and ranged from 19.6 in Vienna and 24.8 in Prague, to 32.0 in Berlin and 55.9 in Trieste. Diarrhœa mortality again showed a marked excess in most of these German cities, especially in Berlin and Dresden, and cholera caused 47 deaths in Trieste; the death-rate from diphtheria showed the largest excess in Dresden and Breslau; measles caused 10 deaths in Trieste. The death-rate was equal to 23.4 in Rome, and to 17.5 in Venice; small-pox caused 2 deaths both in Rome and in Venice, and 5 of the deaths in Rome resulted from typhoid fever, and 6 from cholera in Venice. The death-rate was 45.1 in Cairo and 40.1 in Alexandria; typhoid fever caused 22 deaths in Cairo and 9 in Alexandria, and diarrhœal diseases 111 in Cairo and 44 in Alexandria. In four of the largest American cities, the recorded death-rate averaged 21.2, and ranged from 18.3 in Baltimore and 23.6 in New York. Diphtheria and croup caused considerable mortality in New York, Brooklyn, and Philadelphia; and typhoid fever caused 13 deaths in Philadelphia and 10 in Baltimore.

It appears, from statistics published in the Registrar-General's return for the week ending October 23rd, that the annual death-rate recently averaged 25.7 per 1,000 in the three largest Indian cities; and ranged from 21.3 in Bombay, to 35.7 in Madras. Cholera caused 13 deaths in Calcutta, and 1 in Bombay, and diarrhœal diseases 47 in Madras; the mortality from "fever" showed the largest excess in Madras. According to the most recently received weekly returns, the annual death-rate averaged 24.8 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded by 5.5 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 23.3, and slightly exceeded the rates in recent weeks; the 414 deaths included 58 from diarrhœal diseases, 13 from typhoid fever, and 3 from small-pox. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 25.2, and ranged from 13.8 in Stockholm to 27.1 in Copenhagen; diphtheria and croup caused 12 deaths in Christiania, 6 in Stockholm, and 5 in Copenhagen. In Paris, the death-rate was equal to 21.7, exceeding the rates in recent weeks, and the rate during the same week in London

by 4.0; the deaths included 29 from typhoid fever, 18 from diphtheria and croup, and 1 from small-pox. The 155 deaths in Brussels, of which 4 resulted from "fever," gave a rate of 18.5. The rate in Geneva did not exceed 17.3, but 2 of the 24 deaths were referred to typhoid fever. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 19.2, the several rates being 15.6 in Rotterdam, 18.0 in Amsterdam, and 26.6 in the Hague. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 28.7, and ranged from 19.5 in Vienna, and 20.9 in Prague, to 47.3 in Trieste, and 48.0 in Buda-Pesth. Small-pox caused 68 deaths in Buda-Pesth, 2 in Vienna, and 1 in Prague; cholera 46 in Buda-Pesth and 27 in Trieste; diphtheria and croup the greatest mortality in Hamburg, Dresden, and Berlin; and diarrhœa showed fatal prevalence in Berlin, Hamburg, Dresden and Munich. The death-rate was equal to 23.5 in Rome and to 18.2 in Venice; in Rome 9 deaths resulted from small-pox and 8 from malarial fever; diarrhœal diseases caused 8 of the 51 deaths in Venice. The death-rate was 44.5 in Cairo and 39.9 in Alexandria; in Cairo 116 deaths resulted from diarrhœal diseases, 17 from typhoid fever, and 15 from diphtheria and croup; in Alexandria the 177 deaths included 39 from diarrhœal diseases, 12 from whooping cough, and 5 from small-pox. In four of the largest American cities, the recorded death-rate averaged 22.0, and ranging from 16.8 in Baltimore, to 26.0 in New York. Diphtheria mortality showed a marked excess in New York, Brooklyn, and Philadelphia, and typhoid fever caused 20 deaths in New York and Brooklyn, 22 in Philadelphia, and 4 in Baltimore.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Guisborough (Combined).—The vital statistics of this district, as presented by Dr. Stainthorpe, are very interesting. The deaths of 686 persons were registered, giving a death-rate of 17.74 per 1,000. Of these, 50 per cent. occurred in children under five years of age. Dr. Stainthorpe attributes this high mortality to indifference and ignorance on the part of parents in the feeding and clothing of infants, etc. As a result of inquiries made as to what extent milk was used as an article of diet, it was found that 9 quarts was the daily allowance of 175 persons—78 adults and 97 children—residing in thirty cottages in one village. The price of new milk, 4d. a quart, seems somewhat prohibitive. An outbreak of small-pox in Guisborough assumed epidemic form, owing to the lack of efficient means for isolating the sick. Forty-two houses were infected, and about 130 persons were attacked. The marked benefit of the provision of a building for the reception of infected persons was well exemplified at Loftus. Three distinct importations from Guisborough, at intervals of about six weeks, were promptly dealt with, revaccination and disinfection carried out, and there was no spread of the disease. Sporadic cases of enteric fever occurred throughout the district, and there was a remarkable decrease in the number of deaths from diarrhœa. An epidemic of measles prevailed in New Marske in March, and all the fatal cases of this disease occurred in that village. There was a slight increase in the deaths from pulmonary diseases.

Frome Rural.—The returns for this district, though less favourable than those of last year, still show the public health to be generally good. Slight epidemics of measles and whooping-cough prevailed in the town-district during the spring months, and scarlatina appeared at intervals in the Kilmersdon district, though there was no fatality from this disease. Mr. Parsons draws attention to the fact that half the deaths in this portion of his district are those of children under five. He gives prominence to the excess from premature birth and debility, and hopes by strict personal investigation to be able to throw light upon the causes of such exceptional mortality. There were four deaths from diphtheria in the Nunney district all in the same family, the disease appearing again and again, in spite of every preventive measure. Mr. Parsons attributes the origin of the mischief to "*unventilated drainage*, for though the water was impure, yet it had been used in common with other dwellings in which no disease appeared, whereas the *sewage* of the farm-premises had been recently rearranged." We know, of course, what Mr. Parsons means; but a more accurate use of the words which we have italicised would have been an advantage.

Preston Urban District.—The reports issued by Mr. H. O. Pilkington, as Medical Officer of Health for this large manufacturing centre, are always excellent of their kind, and clearly set out the various matters affecting the health of the town. Preston, whose population has increased from 15,540 in 1803, to 100,000 in 1885, has, during those forty-seven years, maintained an exceptionally high death-rate, the highest being 40.53 per 1,000 in 1840, and the lowest 21.17 in 1881. In 1884, the rate from all causes was 25.53, and in 1885 25.53 per 1,000, including a zymotic death-rate of 5.15, and of 4.18 per 1,000, respectively. Preston is also remarkable for its exceptionally high infantile death-rate. In 1885, it headed the list of large English towns in this respect, with a mortality, under 1 year, of 218 out of every 1,000 births; and, in 1884, when the mortality under 1 year was 222 per 1,000 births, Leicester was the only large town in a worse position. Infantile harshness is conspicuous in the death returns, and Dr. Ballard should be able to gain much valuable help in his inquiry, from the experience of Mr. Pilkington. The latter records at some length his opinions as to the causes of diarrhœa, for the most part associating it, as usual, with climatic influences, combined with injudicious feeding, uncleanliness, over-crowding, and unsanitary surroundings. He also states that he noticed the small proportion of diarrhœa deaths amongst children of the Irish population, which he thinks is, probably, due to the fact that more of the infants are suckled, and fewer are fed upon milk from feeding-bottles. Unless very great care and attention are bestowed upon them, these feeding-bottles become prolific sources of mischief. Mr. Pilkington does not overlook the effect on the infant mortality, which is exercised by the employment of young mothers in factory work, and he points out that great benefit would result to the offspring if women were prevented from following their employment for some time before, and for at least three months after, their confinement. Scarlatina claimed a large number of victims, both in 1884 and in 1885; and measles, which caused 57 deaths in 1884, was succeeded in 1885 by an epidemic of whooping-cough, which caused 91 deaths. A vast amount of sanitary work seems to be carried on in the town. As an example, it may be noted that in 1885, 18,236 ashpits were emptied, 3,851 dwelling-houses were inspected, etc.

Newton Abbot Rural District, Wolborough and Dawlish.—Mr. W. Harvey's statistics of deaths for 1885 are somewhat below the average, especially in Wolborough, where the death-rate was 11.84 per 1,000, as against 16.6 and 17.5 per 1,000 for Newton Abbot and Dawlish respectively. This parish was singularly free from zymotic diseases, and Mr. Harvey notes in connection with two cases of fever in the town, that often in such instances the friends of the patients speak of cold as the starting point of the fever. He questions whether this may not be due to something more than habit. "May it not be that an intestinal catarrh prepares the soil for the reception of the septic typhoid material, by providing an albumenoid exudation." The only zymotic fatality was due to whooping-cough, which caused two deaths. Dawlish was almost equally favoured, the returns showing the same number of deaths from the same cause, with one death from typhoid fever. This disease, with its allies, was much less prevalent than in 1884, when there was but one death from diarrhœa. No visitor was affected. Newton Abbot returns a slightly increased mortality; the last three months of the year being characterised by epidemics of measles and whooping-cough. A number of cases of enteric fever, probably due to polluted water-supply, were investigated by Mr. Harvey, who also reports two outbreaks of diarrhœa. In the first of these, the disease was of the choleraic rather than of the enteric type, and was confined to adults. It could not have been due to water-supply, which was the same as that on the other side of the river, and milk was excluded, as no child suffered. It was, therefore, attributed to defective drainage, while the other was certainly due to the water-supply. Diphtheria was responsible for two deaths, both in damp houses. There had been a similar outbreak in one of the houses, twelve years before (seven cases with one death). A small stream was found running underneath the premises, which were quite detached and on a hill-side. Mr. Harvey makes himself thoroughly acquainted with the surroundings of all the cases of preventable disease, and evidently he spares no pains to extirpate any unsanitary conditions likely to favour its spread.

Aston Rural District.—The year 1885 was marked in this district by an almost complete immunity from epidemic sickness, and the zymotic death-rate was consequently very low. Scarlatina was the only disease that in any way assumed epidemic proportions, and the type of cases was so mild that only one death resulted. Dr. A. Bostock Hill believes that the first cases arose in a family of young children at Sutton, who were not attended by a qualified medical man, but were only prescribed for by a local druggist, most probably without his ever having seen them. The mother, not knowing what had been the matter (as the case was slight) allowed them to run with other children before desquamation had ceased, the inevitable consequence being a spread of the disease in the immediate neighbourhood. Dr. Hill lays stress on this matter, as another instance, if one were wanting, of the danger that may arise to the community, let alone the patients, by the indiscriminate and illegal prescribing by druggists, which is nowadays so common. He also dwells on the large amount of aid it is in the power of masters and mistresses of schools to render to the cause of public health. A medical certificate should be demanded from any child who has been absent on account of sickness, and no child allowed to returned to school unless certified free from infection. Only one death from diphtheria was registered, and this was in a house where the sanitary condition was very bad. Defective trapping was responsible for one of three deaths from typhoid fever. Everything was believed to be satisfactory as regards sanitary arrangements, and the case is instructive, as showing the ease with

which sewer-gas can be laid on to a large house. It was also discovered that the drains finally ran into a brook, which is utilised by the Birmingham Corporation for its water supply. Dr. Hill reports that these evils have been corrected, and a plan is given showing the state of affairs existing in the house at the time of the outbreak, and also the method adopted for remedying the defects. The death-rate from all causes, in 1885, was 14.45, as against 14.54 in the previous year.

MEDICAL NEWS.

ROYAL UNIVERSITY OF IRELAND.—A meeting of the Senate was held in the large Examination Hall of the University Buildings, Earlsfort Terrace, Dublin, on Thursday, October 28th, 1886, for the purpose of conferring Degrees. Lord Emly, Vice-Chancellor of the University, presided. The Honorary Degree of Master in Obstetrics was conferred on Dr. Henry Macnaughton Jones. The following Degrees in the Faculty of Medicine were conferred :—

M.B. Degree: Exhibitions: First Class.—None. *Second Class* (£25 each): G. S. Thomson, Queen's College, Belfast: J. R. T. Conner, Queen's College, Cork; John A. Keogh, Queen's College, Cork.

Honours. First Class.—None. *Second Class:* G. S. Thomson, Queen's College, Belfast; J. R. T. Conner, Queen's College, Cork; J. A. Keogh, Queen's College, Cork.

Upper Pass.—S. R. Collier, Queen's College, Belfast; F. J. Crawford, Queen's College, Cork; T. Lusk, Queen's College, Belfast; F. L. Sealy, Queen's College, Cork and London Hospital; E. M'N. Woods, Queen's College, Belfast.

Pass.—J. St. C. Boyd, Queen's College, Belfast; R. J. Boyd, Queen's College, Galway, and Royal College of Surgeons, Dublin; P. J. Burke, Queen's College, Cork; T. Corkery, Queen's College, Cork; C. F. Daly, Queen's College, Cork, and Edinburgh University; D. J. Flynn, Queen's College, Cork; G. Fuller, Queen's College, Cork; H. J. Gahagan, Ledwich School of Medicine; J. F. Gordon, Queen's College, Belfast; E. Griffin, Queen's College, Cork; W. B. Hayes, Queen's College, Cork, and Catholic University School of Medicine; J. W. Irwin, Queen's College, Belfast, and Carmichael College, Dublin; J. Johnston, Queen's College, Belfast; D. Junk, Queen's College, Belfast; C. R. Leader, Queen's College, Cork; W. M. Lewis, Queen's College, Belfast; M. M'Aulay, Queen's College, Belfast; J. M'Master, Queen's College, Belfast; E. H. Sherry, Queen's College, Galway and Belfast; J. R. Mangan, Queen's College, Cork; A. P. Mooney, Ledwich School of Medicine; C. W. Morgan, Queen's College, Belfast; M. J. Murphy, Queen's College, Cork; F. E. Murray, Queen's College, Belfast; W. G. Niall, Ledwich School of Medicine; D. J. O'Mahony, Queen's College, Cork; T. O'Riordan, Queen's College, Cork, and Carmichael College, Dublin; E. F. O'Sullivan, Queen's College, Cork; W. S. P. Patterson, Queen's College, Belfast; H. Pillow, Queen's College, Galway, Ledwich School of Medicine, and London Hospital; E. Robinson, Catholic University Medical School, and Anderson's College, Glasgow; R. H. Spencer, Queen's College, Cork; W. C. Steen, Queen's College, Belfast; A. K. Stevenson, Queen's College, Belfast; J. C. Thomas, Queen's College, Belfast; G. Vance, Queen's College, Galway and Belfast; E. W. Waters, Queen's College, Galway; M. P. Williams, Queen's Cork; J. D. Williamson, Queen's College, Belfast; A. W. Wolfe, Queen's College, Cork.

M.Ch. Degree: Honours: First Class.—G. S. Thompson, Queen's College, Belfast; A. Buchanan, M.D., Queen's College, Belfast. *Second Class:* J. D. Williamson, Queen's College, Belfast; F. J. Crawford, Queen's College, Cork; A. W. Wolfe, Queen's College, Cork. *Pass:* A. Atcock, M.D.; J. J. Attridge, M.D.; J. St. C. Boyd, Queen's College, Belfast; R. J. Boyd, Queen's College, Galway, and Royal College of Surgeons, Dublin; G. Browne, M.D., Queen's College, Belfast; P. J. Burke, Queen's College, Cork; S. R. Collier, Queen's College, Belfast; J. R. T. Conner, Queen's College, Cork; T. Corkery, Queen's College, Cork; D. J. Flynn, Queen's College, Cork; G. Fuller, Queen's College, Cork; E. Griffin, Queen's College, Cork; W. B. Hayes, Queen's College, Cork, and Catholic University School of Medicine; J. A. Keogh, Queen's College, Cork; D. T. Lane, M.D., Queen's College, Cork; C. R. Leader, Queen's College, Cork; L. Lyttle, M.D., Queen's College, Belfast; M. M'Aulay, Queen's College, Belfast; E. H. M. Sherry, Queen's College, Galway, and Belfast; W. Milligan, M.D., Carmichael College of Medicine; A. P. Mooney, Ledwich School of Medicine; M. J. Murphy, Queen's College, Cork; F. E. Murray, Queen's College, Belfast; W. G. Niall, Ledwich School of Medicine; T. O. Riordan, Queen's College, Cork, and Carmichael College, Dublin; E. F. O'Sullivan, Queen's College, Cork; W. S. P. Patterson, Queen's College, Belfast; H. Pillow, Queen's College, Galway, Ledwich School of Medicine and London Hospital; E. Robinson, Catholic University School of Medicine, and Anderson's College, Glasgow; M. J. Robinson, M.D., Queen's College, Belfast; R. H Spencer, Queen's College, Cork; W. C. Steen, Queen's College, Belfast; J. J. Tobin, M.B., Royal Infirmary, Manchester; G. Vance, Queen's College, Galway and Belfast; E. W. Waters, Queen's College, Galway; M. P. Williams, Queen's College, Cork; E. M'N. Woods, Queen's College, Belfast.

M.A.O. Degree: Honours: First Class.—G. S. Thompson, Queen's College, Belfast. *Second Class:* S. R. Collier, Queen's College, Belfast. *Pass:* P. J. Burke, Queen's College, Cork; J. R. T. Conner, Queen's College, Cork; F. J. Crawford, Queen's College, Cork; C. F. Daly, Queen's College, Cork, and Edinburgh University; H. J. Gahagan, Ledwich School of Medicine; D. Junk, Queen's College, Belfast; J. A. Keogh, Queen's College, Cork; C. F. Knight, M.D.; D. T. Lane, M.D., Queen's College, Cork; T. Lusk, Queen's College, Belfast; E. H. M'Sherry, Queen's College Galway and Belfast; A. P. Mooney, Ledwich School of Medicine; M. J. Murphy, Queen's College, Cork; J. O'Connor, M.D., Queen's College, Cork, Carmichael School of Medicine, and Royal College of Surgeons; R. H. Spencer, Queen's College, Cork; A. K. Stevenson, Queen's College, Belfast; J. C. Thomas, Queen's College, Belfast; J. D. Williamson, Queen's College, Belfast; E. M'N. Woods, Queen's College, Belfast.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery and Midwifery, and received certificates to practise, on Thursday, November 4th, 1886.

Bridgman, Herbert Arthur, L.F.P.S.G., 4, Belgrave Terrace, Willesden Green, N.W.

Conolly, Charles Hamilton, M.R.C.S., 3, Church Hill Villas, Wood Green.

The following gentleman also on the same day passed the Primary Professional Examination.

Evans, Evan, St. Bartholomew's Hospital.

MEDICAL VACANCIES.

The following vacancies are announced.

BALLYMENA UNION.—Medical Officer, Ahogill Dispensary. Salary, £75 per annum, and fees. Applications to Mr. William Miller, Honorary Secretary Election on December 6th.

BOOTLE BOROUGH HOSPITAL, Liverpool.—House-Surgeon. Salary, £80 per annum, with board, etc. Applications by November 24th to the Honorary Secretary.

BOROUGH HOSPITAL, Birkenhead.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by November 23rd to the Chairman of the Weekly Board.

CAMBERWELL PROVIDENT DISPENSARY, S.E.—Medical Officer. Applications by November 17th to the Secretary.

CHELTENHAM GENERAL HOSPITAL, BRANCH DISPENSARY.—Resident Surgeon. Salary, £180 per annum. Applications by November 27th to the Honorary Treasurer.

DUNDEE ROYAL ASYLUM.—Medical Assistant. Salary, £80 per annum, with board, etc. Applications to Dr. Rorie.

GREAT NORTHERN CENTRAL HOSPITAL, Caledonian Road, N.—Chloroformist. Applications by November 22nd to the Secretary.

HANTS COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, residence, etc. Applications by November 13th to the Committee of Visitors, Knowle, Fareham.

LEICESTER INFIRMARY AND FEVER HOUSE.—Assistant House-Surgeon. Salary, £50 per annum, with board, etc. Applications by November 20th to the Secretary.

MORPETH DISPENSARY.—Resident Medical Officer. Salary £120 per annum, with apartments. Applications by November 30th to G. O. Wright, Esq.

MOULSFORD LUNATIC ASYLUM, Berks.—Medical Superintendent. Salary, £500 per annum. Applications by December 3rd to J. T. Morland, Esq. Clerk to the Visitors, Abingdon.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Two Physicians.—Applications by December 4th to the Secretary, 216, Tottenham Court Road, W.C.

NOTTINGHAM DISPENSARY.—Assistant Resident Surgeon. Salary, £150 per annum, with apartments. Applications by November 24th to C. H. Preston, Esq., The Dispensary, Broad Street, Nottingham.

ROSCREA UNION.—Medical Officer. Borris-in-Ossory Dispensary. Salary, £115 per annum, with fees. Applications to Mr. M. Farrell, Borris-in-Ossory. Election on November 16th.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon. Applications to W. A Garrard, Esq., 6, Wellgate, Rotherham.

SALOP INFIRMARY, Shrewsbury.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by December 4th to the Board of Directors.

STOCKTON-UPON-TEES HOSPITAL AND DISPENSARY. — House-Surgeon. Salary, £200 per annum. Applications by November 24th to J. Settle Esq., Secretary.

SUNDERLAND CHILDREN'S HOSPITAL.—Two Honorary Medical Officers Applications by November 20th to the Secretary.

SUSSEX COUNTY ASYLUM, Haywards Heath.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications by November 18th to the Superintendent.

WORSHIPFUL COMPANY OF IRONMONGERS. — Medical Officer. Salary £52 10s. per annum. Applications by November 15th to the Clerk, Ironmongers' Hall, Fenchurch Street, E.C.

MEDICAL APPOINTMENTS.

CROSSLEY, H., M.R.C.S., appointed Resident House-Surgeon to the Rotherham Hospital, *vice* C. Waller, M.R.C.S., resigned.

GARSON, P. C., M.B., C.M.Edin., appointed Medical Officer to the Medical Aid Association of Birsay, Harry, and Sandwick, *vice* T. C. Devlin, L.R.C.P.Edin., resigned.

GREENE, George E. T., L.R.C.S., L.&L.M.K.Q.C.P., appointed Medical Attendant to the Constabulary of Bridgetown.

GRIFFITHS, P. Rhys, M.B., B.S.Lond., appointed Medical Officer to Out-Patients at the Glamorganshire and Monmouthshire Infirmary, Cardiff.

GRIFFITH, Walter S. A., M.B.Cantab., F.R.C.S., appointed Physician to the Out-Patient Maternity, Queen Charlotte's Hospital.

HARGOOD, William, appointed Assistant Medical Officer to the Middlesex County Asylum, Banstead Downs.

HUGHES, John, M.B., C.M., appointed Resident House-Surgeon to the Charlton-on-Medlock Dispensary, *vice* G. F. S. Arthy, M.R.C.S., L.R.C.P., resigned.

JEFFREE, Frank, M.B., M.R.C.S., L.S.A., appointed House-Surgeon to the Brighton and Hove Lying-in Institution, *vice* P. Watson Williams, M.B., resigned.

JOHNSTON, Alexander, M.B., C.M.Glas., appointed Resident Medical Officer to the new Victoria Hospital for Burnley and district.

LYNHAM, J. I., M.D., appointed Medical Fellow of the Royal University of Ireland, *vice* B. G. McDowell, M.D., deceased.

MALE, Herbert C., M.B.Edin., M.R.C.S.Eng., appointed Medical Officer to the training-ship *Shaftesbury*, Grays, Essex.

MANIFOLD, C. C., M.B., C.M., appointed Clinical Assistant to the Chelsea Hospital for Women.

MILLER, Andrew, M.D., M.R.C.S.Eng., appointed Assistant-Physician to the Chelsea Hospital for Women, *vice* Dr. Phillips, resigned.

MILLERICK, T. G., L.R.C.S.I., L.K., Q.C.P.I., L.M., appointed Medical Officer to the Caherciveen Union, *vice* D. Hanifin, L.R.C.P.Edin., L.R.C.S.Edin., resigned.

NIELSEN, F. W., M.R.C.S., L.S.A., appointed Junior Assistant Medical Officer to the Durham County Asylum, *vice* J. T. Callcott, M.D., resigned.

NUNN, Richard, M.B., B.Ch., B.A., appointed Assistant-Surgeon to the Western Ophthalmic Hospital, Marylebone Road, *vice* M. B. Barrett, F.R.C.S., resigned.

OWEN, Herbert, B.A., M.B., M.R.C.S., appointed Visiting Medical Officer to the Royal Pimlico Dispensary, *vice* F. M. Evans, M.R.C.S., resigned.

PAIGE, Horace B. W., M.B., appointed House-Surgeon and Secretary to the Hartlepool Hospital and Dispensary, *vice* F. Proud, M.B., M.R.C.S., resigned.

SPURGIN, H. B., M.R.C.S., L.S.A., appointed Medical Officer to the Royal Victoria Dispensary, Northampton, *vice* W. A. Barr, M.D., M.R.C.S., resigned.

SQUIRE, J. E., M.D., M.R.C.P., appointed Physician to the North-West London Hospital for Consumption and Diseases of the Chest, *vice* John Shaw, M.D., M.R.C.P., resigned.

STEWART, Rothsay C., M.R.C.S., L.S.A., appointed Assistant Medical Officer to the County Lunatic Asylum, Leicester.

TAYLOR, A. H., M.B., C.M.Edin., appointed Clinical Assistant to the Great Northern Central Hospital, *vice* Mr. J. H. Chaldecote, resigned.

TRAVIS, G. L., M.R.C.S.Eng., appointed Assistant-Surgeon to the Liverpool Dispensaries, *vice* John Stevenson, M.R.C.S.Eng., L.R.C.P.Lond., resigned.

WATTS, A. T. G., B.A., M.R.C.S., L.S.A., appointed Resident Medical Officer to the Royal Pimlico Dispensary, *vice* Herbert Owen, B.A., M.B., M.R.C.S., resigned.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London. Dr. J. Hughlings Jackson: A Rare Case of Epilepsy. Mr. Victor Horsley: Note on the Artificial Production of Epilepsy in Guinea-Pigs, illustrated by photographs on the screen with limelight.

TUESDAY.—Pathological Society, 8.30 P.M. Mr. W. R. Williams: Vegetable Tumours in Relation to Bud Formation. Dr. Hale White: Cerebro-Spinal Meningitis leading to Œsophageal Abscess. Mr. C. W. Hudson: Congenital Contraction of Stomach. Dr. N. Moore: Aneurysm of Coronary Artery. Mr. E. H. Fenwick: Carcinoma of Vesicula Seminalis. Mr. D'Arcy Power: Two Cases of Imperforate Anus. Dr. H. Sainsbury: Cystic Tumour of Ileo-Cæcal Valve. Card Specimens: Dr. Savill: Meningeal Hæmorrhage. Mr. Shattock, Choudrifying Sarcoma of Bladder. Dr. Pasteur: Lung in Chronic Pleurisy.

THURSDAY.—Harveian Society of London, 8.30 P.M. First Harveian Lecture by Dr. John Williams: Cancer of the Uterus.

FRIDAY.—Medical Officers of Health Society, 7.30 P.M. Discussion on Reports of Council on Contract between Metropolitan Sanitary Authorities and Metropolitan Asylums Board; Disinfection of Cabs in Metropolis. Members are invited to communicate other subjects for discussion.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

PRATT—BEAKLEY.—On November 9th, at Thorney, Dr. Reginald Pratt, of London Road, Leicester, to Frances E. Beakley, daughter of Christopher Beakley, Esq., of Thorney, near Peterborough.

STARLING—HOWSE.—On November 5th, at Onslow Chapel, Kensington, by the Rev. J. M. Bergin, Edwin Alfred Starling, M.B., M.Ch., Tunbridge Wells, to Helena Sarah, eldest daughter of the late Nathaniel Howse, of Witney, Oxon., and Grahamstown, South Africa.

WILSON—GUTHRIE.—On November 10th, at Marylebone Presbyterian Church, London, by the father of the bride, Claud Wilson, M.B., C.M., Bath, to Annette, eldest daughter of the Rev. D. K. Guthrie, Liberton, Midlothian.

DEATHS.

HICKSON.—On October 30th, 1886, at Thomastown, County Kilkenny, Ireland, Sarah Eleanor (Elena), wife of Surgeon-Major Richard C. C. Hickson, M.D., Medical Staff, and youngest daughter of the late Richard Williams, Esq., formerly of 33, Waterloo Road, Dublin.

STEWART.—On October 11th, at Venezuela, South America, of fever, Eliza Jane, wife of William Stewart, M.D., late of London, and third daughter of Hilton and Alice Hallhead, late of Liverpool.

WRIGHT.—On November 1st, Morden Wright, M.R.C.S.Eng., L.S.A.Lond., late of 125, Walworth Road, London, suddenly, of heart-disease, aged 50

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's(Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M. Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 8. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

QUERIES.

MR. WILLIAM SQUARE, F.R.C.S., asks whether there is any firm of glove-makers that make for two or three-fingered patients.

ABSORPTION BY THE SKIN.

DR. BRINSLEY NICHOLSON writes: In the leading article on this subject for October 16th, it is stated to be an error to conclude that absorption takes place when poppyhead fomentations are used. And speaking also, I presume, of medicaments of the like kind, such as "digitalis, aconite, etc.," it is added: "More probably the effect is exercised on the nerve-terminations of the skin." Might I adduce the following when venturing to differ from this opinion. Frequently my first local application in acute or subacute orchitis has been a diluted extract of belladonna gently spread over the scrotum of that side. Now without entering into the question whether this were the best application or not, I affirm that the pain and tenderness were greatly relieved by it, nor could this have occurred otherwise than by absorption through the scrotum, and, as is thence most probable, through the surface of the testis.

Perhaps as all are agreed on the subject, it may hardly be worth mentioning that a rheumatic affection of the great toe, when the first agonising pain on motion had subsided, was much relieved by a warm solution of the bicarbonate of soda. Lint was dipped in the solution, and applied to the forepart of the foot. This was then enclosed in gutta-percha tissue, and the whole encased in a woollen stocking, an excellent wrapper when lotions or poultices are applied to the foot.

As making up for the commonplaceness of the last paragraph, I would in conclusion ask a question. Electricity has successfully extracted lead, mercury, and other matters from the body; how is it then that no one, so far as I am aware, has, by a reversal of the poles, increased the absorption by the skin of medicinal bodies? Such a treatment would, it seems to me, give the advantages both of a local treatment, and of a general one to the whole or part of the body. Thus iodide of potassium might be administered through the skin generally, while it might more especially be forced to be absorbed over periostific nodes, a chronic bubo, or a skin eruption. I, though retired from practice, would long ago have experimented on the subject, but that half-pay prevents me, and more especially the purchase of an electric bath and its apparatus.

*** The extraction of metals in electric baths, though often taken as granted, has never been satisfactorily demonstrated. The experiments made to prove it are very unsatisfactory, and full of fallacies. With reference to the introduction of substances by electricity into the organism, innumerable attempts have been made since the discovery of the cataphoric properties of the current to turn it to account. One of the last publications relating to this topic will be found abstracted in the *Year Book for Treatment* for 1885, page 40.

ANSWERS.

H.D.—The respirator-inhalers designed by Dr. J. Sinclair Coghill are manufactured by Messrs. Maw, Son, and Thompson, Aldersgate Street.

A MEANS OF LOCOMOTION.

MR. GEORGE GUNN writes: On page 613 of your JOURNAL of September 25th, 1886, I see a question respecting a hand-tricycle for an invalid lady. There are several sorts. I use one made by Starley Brothers, St. John's Works, Fleet Street, Coventry, though I fear the work might be harder than in the case mentioned could be managed. There is another made by H. Whitehouse, Short Street, Reading, Berks. I have seen one of these; its fault is that getting in and out is not quite so convenient as in the first mentioned, but I believe the work is less.

I am told that Singer makes one, also Charsley, bicycle maker, Oxford; of these two I know nothing. Carter, of Holborn Viaduct, has a bath-chair, very light, and worked by a single lever for both hands. This works fairly well. It is difficult to advise, so very much depends on the state of the patient who is to use the machine.

A MEMBER. The description suggests a syphilitic taint.

GOVERNMENT MEDICAL SERVICE IN BRITISH GUIANA.

J. H. HARRIS: Any information beyond what we have already published (see BRITISH MEDICAL JOURNAL, pages 694 and 844) can be obtained of Charles Piercy Austin, Esq., Acting Secretary, Combined Court, Government Medical Service, British Guiana.

TREATMENT OF CHRONIC GLANDULAR ENLARGEMENT.

MR. KENNETH MILLICAN, in the case described by "U." advises:

1. *Flitwick Water*, a mineral water containing a certain proportion of iron and silica. It may be obtained from Messrs. Armbrecht, Nelsón, and Co., foreign chemists, Duke Street, Grosvenor Square. It should be taken once or at most twice daily after meals, in gradually increased doses of from thirty drops to two teaspoonfuls for a child, or up to a tablespoonful for an adult.

2. *Hydrastis Canadensis.*—Either as the glucoside hydrastin, the fluid extract of the *United States Pharmacopœia*, or a 10 per cent. tincture, as described in the extra-official pharmacopœia. For alterative purposes, much smaller doses than are usually recommended (say one-tenth of a grain of hydrastin, or five minims of the fluid extract or tincture), should be given four or five times daily.

3. *Phytolacca Decandra*, either as the glucoside phytolaccin, or as the fluid extract. The remarks as to dose apply here also.

4. *Electrolysis.*—Both needles should be inserted into the glands, and a continuous current not exceeding ten cells passed. A few minutes will probably suffice, but judgment is required to know when to stop. This proceeding is much less painful than might be supposed.

M.B. LOND. EXAMINATION.

INQUIRER: It is impossible to express an authoritative opinion as to the most suitable books to be read by a student preparing for the M.B. London Examination, but the following are extensively used.

Medicine: Dr. Bristowe's *Treatise on the Theory and Practice of Medicine* (Smith, Elder and Co.) To a student who has read Dr. Fagge's work, Dr. Roberts's *Handbook of the Theory and Practice of Medicine* would be very useful in the final preparation.

Surgery: Mr. Bryant's *Surgery*; or Mr. Erichsen's *Surgery* with Billroth's *Surgical Pathology*; or the work by Messrs. Holmes and Hulke.

Forensic Medicine and Toxicology: The last edition of Dr. Guy's book.

Therapeutics: Dr. Lauder Brunton's *Handbook of Pharmacology, Materia Medica, and Therapeutics*—large, but complete.

Pathology: Dr. Green's *Introduction to Pathology*, with those mentioned under *Medicine and Surgery*, will probably suffice.

Hygiene: Dr. Wilson's *Handbook of Hygiene.*

Midwifery: Dr. Playfair's *Treatise on the Science and Practice.*

Diseases of Women: Dr. Galabin's *Student's Guide.*

B.—The question is one which we have no data for answering.

TREATMENT OF STUTTERING.

DR. STANLEY HAYNES (Malvern) states that "Hesitation" might obtain some valuable hints in reading *How to develop General Vocal Power*, by the Rev. Mr Sandlands, published by Sampson Low and Co.

ONE WHO HAS HAD EXPERIENCE considers it essential that the sentence be recommenced, and the word repeated many times very slowly. It requires much care and patience to correct the habit, but usually by such means the hesitation ceases, and the words flow freely.

NOTES, LETTERS, ETC.

PREVENTION OF ACCIDENTS TO PLATELAYERS.

AT an inquest recently held at Guy's Hospital on the body of a platelayer, who was knocked down and killed while at work on the East London Railway, the jury added to their verdict a rider containing a recommendation that look-out men should be specially employed to warn men working on the line of the approach of trains. The number of accidents from the neglect of this precaution being so large, it may be hoped that it will receive the attention it deserves.

DR. BOOBBYER ON SCARLET FEVER

IN the report of Dr. Boobbyer's paper in the JOURNAL of October 30th, in the first column, page 811, twelve lines from bottom, "though the latter is *most* often seen in the case of scarlatina," should have been "though the latter is *not* often seen in the case of scarlatina."

LOCAL MEDICAL DEFENCE FUND: SPURGIN *v.* NICHOLSON.

MR. CHARLES HARRIS (Whitehaven Infirmary) writes: The following further contributions have been made towards this fund.

	£	s.	d.		£	s.	d.
Dr. Calderwood	1	1	0	Dr. Eaton	1	1	0
Dr. Barnes	2	2	0	Dr. Hair	1	1	0
Dr. Tace	1	1	0	Dr. Highet	1	1	0
Dr. C. Tiffen	1	1	0	Dr. Macdougal	1	1	0
Dr. R. Tiffen	0	10	6	Charles J. Rideal, Esq.	0	10	6

Dr. Maclaren, announced in the JOURNAL of November 6th, ought to have been Dr. Maclachlan, £1. Total amount subscribed, £29.

PHOTOGRAPHS FOR HOSPITALS.

THE editor of the *Amateur Photographer* desires it to be known that a large number of photographs are sent to him for criticism, and that many are left in his hands after having been sent for competition for the various prizes and exhibitions. For the future, he proposes to mount these in albums, and distribute them among the poor or to charitable institutions. A distribution of this sort could be much extended by the co-operation of those who have photographs or albums of no further use to them.

BERMUDA AS A HEALTH-RESORT.

A. OUTERBRIDGE, M.D., Flatts Village, Bermuda, writes: This "title" to an American would seem a somewhat hackneyed one, but not to an Englishman, judging from the silence respecting us in the article on "Colonial Sanatoria." When invalids leave their old home (England) for so far-off a country as Australia, it is time for some of your readers to remember that Great Britain has a little insular colonial possession not far from the United States, but yet well known to the War Department. Although so small and out of the way, "Bermuda is one of the best health-resorts" of any known, and is second not even to Madeira or Italy. Our American cousins have for a number of years past made our islands a winter-resort for health and pleasure, and we feel a little put out at our being apparently neglected by our English brethren, although favoured by Royalty, for Her Royal Highness Princess Louise spent several weeks in Bermuda during the spring of 1883. Surely after such illustrious patronage, someone from the old country will seek us out; for we are not so far off as Australia or new Zealand, and with a climate "where none sickly live nor dies before his time."

We have two first-class hotels in the town of Hamilton, besides several boarding-houses in the town and vicinity. Terms are moderate, from two guineas upward per week. The climate is mild during winter. The thermometer never falls below 50°, nor rises over 85° in summer. A Branch of the British Medical Association was established this year. There are twelve civilian practitioners, but they are not very actively engaged, disease not being rife. To avoid prolixity, "come and see." For further information and particulars as to residence, see address.

I believe there is direct steam communication from London to Bermuda; also by sailing-vessels; refer to G. Lee and Co., 18, Leadenhall Street, London.

THE LAURVIG BATHS.

MR. JOHN HOLDEN writes: This summer I was called to Laurvig, a pretty little seaport on the south-east coast of Norway, and I have been so struck with the advantages it offers to the rheumatic, scrofulous and anæmic, and those suffering from cutaneous diseases, who may wish to have greater variety of scenery than is generally found at most sulphur wells, that I venture to send you a short account of the place. Laurvig is situated in the Laurvik's Fjord, about five hours by rail from Christiania (fare about five shillings). It is open to the south, and is protected from the north, east, and westerly winds by well and beautifully wooded hills, being itself situated on the side of a hill, and possessing a bath establishment with sulphurous and ferruginous springs (under the

care of Dr. J. C. Holm, who will furnish every information on inquiry), completely fitted up with all the most modern appliances of the hydro-therapeutic art, including saline, sea-weed, mother-lye baths, sulphur baths direct from the spring, fir-leaf and mud baths, analyses of which I append. The great advantage it appears to me the sulphurous and ferruginous springs of Laurvig possess is that, being situated near the sea on the one side, and within a mile on the other of a beautiful lake (the Fairsvand, about twelve miles in length, running up into the mountains), with safe boating and sailing upon each, the invalid and the members of his family are relieved from the weariness so often felt at inland spas, from want of the bracing effect of mountain and sea-air. The Thelen.arken lakes and mountains are near, and coasting steamers call frequently at Laurvig. The most direct communication with Laurvig from England is by Newcastle, the *Odin* and *Prospero* leaving Laurvig for England direct, every Friday night; return fare, available for the season, including provisions, five guineas. On the outward journey the steamer does not call at Laurvig, but proceeds to Christiania after calling at Arundel, a port south of Laurvig, with which it has daily communication by coasting steamers. The cost of living in Laurvig is reasonable, prices being rather less than in English country towns, whilst English is very generally spoken by the shop and hotel-keepers. The charges at the bath establishment are, for board, 18 krs.; for physician, baths, etc., 20 krs. weekly; apartments, 25 to 50 krs. a month. Johanssen's hotel near the baths is very clean, comfortable, English-like, and situated in its own grounds, and the charge is 6 krs. a day—a krona equalling 1s. 1½d. B. S.

Analyses of Mother-Lye and Sea-Mud from Laurvig.

The lye from sea-weed is clear, brownish, with alkaline reaction, and contains in 1,000 grammes about 300 grammes solid matter, namely:

Chloride of sodium	222.0
Sulphate of potassium	46.5
Iodide of potassium	13.0
Sulphate of sodium	6.3
,, magnesia	2.5
,, lime	0.2

The remainder being principally carbonate and hyposulphite of soda.

The well-known "Kreuznacher Mutterlange" contains at the same concentration 6.50 bromide of sodium and 0.008 iodide of potassium.

An analysis of the sea-mud gave the following result: dried at 100° Cent., it contained in 1,000 parts:

Silicic acid	64.8	Soluble in water and decomposed chloric acid, 219.1.
Chloride of sodium	43.5	
Aluminium oxide	36.0	
Ferric oxide	30.0	
Magnesia	17.2	
Lime	15.1	
Chloride of magnesium	5.8	
Sulphate of magnesia	3.4	
,, lime	2.2	
Chloride of potassium	1.1	
Matter insoluble in water and chloric acid	63.55	
Organic matter and water	14.43	
	1,000.00	

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. G. Burnett Currie, Aberdeen; L.K.Q.C.P.I.; Mr. G. C. Helps, Bath; Mr. D. S. G. Scanlan, London; Mr. David Berry, London; Dr. George Saunders, Bournemouth; Dr. Napier, Aberdeen; Mr. C. B. Keetley, London; Mr. Challoner Clay, Fovant, Salisbury; Dr. S. Theobald, London; Mr. H. Gervis, London; Mr. Alexander Johnston, Wrexham; Dr. James Rorie, Liff; Dr. Hack Tuke, London; Mr. Walter Pearce, London; Messrs. Street Brothers, London; Dr. Purcell, London; Dr. Starling, Sutton; Dr. E. Cresswell Baber, Brighton; Dr. Byers, Belfast; Dr. Rentoul, Liverpool; Dr. T. Buzzard, London; Dr. de Watteville, London; Dr. Lindsay, Belfast; Dr. Sutherland, London; Mr. E. D. Darbishire, Oxford; Mr. R. V. Fletcher, Ballinasloe; Mr. W. J. C. Miller, London; Dr. Ransome, Altrincham; Mr. R. Matheson, Dublin; Mr. C. S. Loch, London; Mr. W. L. Godfrey, Northampton; Mr. C. A. Buehl, London; Mr. T. J. Vallance, London; Messrs. Burroughs, Wellcome and Co., London; Mr. E. G. Dalton, Elmleigh, Plymstock; Mr. James Moir, Devonport; Dr. Edis, London; Dr. T. Laffan, Cashel; Dr. F. H. Parsons, West Worthing; Mr. J. I. Hamilton, Hawick; Sir Edmund Lechmere, London; Mr. E. Williams, Aberayron; Mr. Michael J. Ryan, Rochdale; Dr. Maxwell, Woolwich; Mr. D. B. Smith, Woolston, near Southampton; Dr. H. Snow, London; Mr. W. Johnson, Jabalpur, C. India; Mr. J. W. Davies, Ebbw Vale; Mr. Marriott, London; Mr. W. Brydon, Hawick; Mr. P. H. Kidd, York; Dr. A. Mantle, Stanley, Durham; Mr. Vincent Jackson, Wolverhampton; Mr. H. Sell, London; Dr. Brinsley Nicholson, South Norwood; Dr. Outerbridge, Bermuda; Dr. John Broom, Clifton; M.D.; Mr. George Meadows, Hastings; Mr. G. Greene, Kilmore, Wexford; Mr. Robertson, Torquay; Dr. C. F. Knight, Dublin; Dr. Carter, Liverpool; Dr. J. Dundas Grant, London; Dr. Hingston Fox, London; Mr. J. Grierson Brown, Liverpool; Mr. J. T. Macnamara, Shifnal; Mr. J. Webster, Bootle; Dr. J. Gordon, Aberdeen; The Honorary Secretaries of the Hospitals Association; Our Liverpool Correspondent; Mr. E. P. Hardey, Hull; Dr. Joseph Rogers, London; *Journal of Commerce*, Liverpool; Dr. E. West Symes, Halifax; Mr. J. G. Macaskie, Bamburgh; Dr. R. W. Burnet, London; Mr. E. W. D. Kite, Newcastle-on-Tyne; Dr. H. Foote, Rotherham; Dr. J. Haig Ferguson, Edinburgh; Dr. Thomas Donnelly, Liverpool; Mr. P. Barrett Bentliff, Jersey; Dr. Keen, London; Dr. J. H. Hunt, Dalston; Dr. James Bankart, Exeter; Dr. James Stewart, Clifton; Mr. F. Kerslake, London; Mr. C. Harris, Whitehaven; Dr. T. W. Hime, Bradford; Mr. James Cornwall, Fairford; Dr. Tatham, Salford; Mr. Melville Churchill, Bishops Waltham; Dr. J. Chalmers, London; Dr. J. Holman, Reigate; Dr. G. Harrison Younge, Mecan Meer, Punjab; Mr. W. R. Nasmyth, Taunton; Mr. J. Wickham Barnes, London; Professor George Buchanan, London; Mr. Thomson, South Norwood; Mr. J. B. Fairman, Sheffield; Messrs. P. Harris and Co., Birmingham; Dr. Michael C. Grabham, London; Mr. A. H. Butcher, Birkenhead; Dr. Muggeridge, Ashford; Mr. Upton, London; Dr. E. Slade-King, Ilfracombe; Dr. J. T. Dyke, Merthyr Tydfil; Mr. John Marshall, Dover Mr. Walter Rivington, London; Mr. W. Sykes, Rotherham; Mr. R. C. Stewart, Leicester; Dr. J. Ward Cousins, Southsea; Mr. C. Farmer, Hexham; Dr. Leonard Williams, Oxon.; Miss M. Stailburn, Fulham; Mr. R. Maclaren, Carlisle; Dr. Suckling, Birmingham; Mr. D. Thomas, Cwmamman; Dr. W. L. Purves, London; Dr. R. Saundby, Birmingham; Mr. P. Miall, Bradford; Mr. A. Duke, Dublin; Mr. J. Jenkyns, Belize, British Honduras; Dr. F. H S. Murphy, Tipperary; Mr. G. Gonelin, Hertford; Mr. C. G. Wheelhouse, Leeds; Mr. C. Roberts, London; Dr. A. T. Wise, Upper Engadine; Mr. D. D. Hovell, Elstree; Mr. W. Roberts, Bangor; Mr. E. Jepson, Durham; Mr. L. L. O'Neill, London; Mr. A. E. Livsey, Walton, Liverpool; The Secretary of the Brighton and Sussex Medico-Chirurgical Society; Dr. M. Thomson, Boxmoor; Dr. Rayner, London; Dr. R. B. Bradshaw-Smith, Burbage; Mr. M. D. Shirley, Batley; Dr. J. Mackenzie Booth, Aberdeen; Mr. P. Dunn, London; Dr. P. B. Griffiths, Cardiff; Mr. J. P. Jones, Treherbert; Dr. Janson, London; Mr. F. Simmons, Liverpool; Dr. E. H. Jacob, Leeds; The Secretary of the Devonshire Hospital, Buxton; Mr. R. S. Wright, Newmarket; Dr. Gaskoin Wright, Manchester; Mr. C. Nash, Greenwich; Rev. J. Newton Henle, Orpington; Dr. Glover, London; Mr. P. Mitchell Penman, Hawick; Dr. W. H. Walter, South Petherton; Mr. R. J. Massich, Manchester; Mr. George Pearson, Halifax; Mr. W. Armstrong Willis, Monmouth; Messrs. Brunner, Mond and Co., Northwich; Dr. John Phillips, London; F. V.; Mr. F. S. Barnett, London; Dr. A. Thorn, Stanby; Mr. G. O. Willis, Henley-on-Thames; Mr. Joseph Groves, Isle of Wight; Mr. J. F. Dell, London; F.R.C.S.; Mr. Ralph Stockman, Edinburgh; Mr. J. Vesey Fitzgerald, Birmingham; Dr. G. E. Herman, London; Dr. Rich, Liverpool; Our Paris Correspondent; Dr. H. G. Lee, Thame; Mr. Lionel Hill, London; Dr. Isambard Owen, London; Mr. W. E. Bradley, Farnworth; Mr. Edward East, London; Dr. Banks, East Bank; Dr. R. W. Philip, Edinburgh; Mr. J. Bunting, Torquay, etc.

BOOKS, ETC., RECEIVED.

The Parasites of Man, and the Diseases which proceed from them. By Rudolf Leuckart. Translated from the German, with the co-operation of the Author, by W. E. Hoyle, M.A., M.R.C.S. Edinburgh: Young J. Pentland. 1886.

Manual of Dietetics. By J. Milner Fothergill, M.D. London: H. K. Lewis. 1886.

How we treat Wounds to-day. By Robert T. Morris, M.D. Second Edition London and New York: G. P. Putnam's Sons and Co. 1886.

Transactions of the Clinical Society of London. Vol. xix. London: Longmans, Green and Co. 1886.

Hygiene of the Eye in Schools. By Hermann Cohn, M.D., Ph.D. An English Translation. Edited by W. P. Turnbull. London: Simpkin, Marshall, and Co. Birmingham and Leicester: Midland Educational Company (Limited). 1886.

Index Catalogue of the Library of the Surgeon-General United States Army. Vol. VII. Washington: Government Printing Office. 1886.

Manual of Veterinary Medicine and Surgery. By E. Courtney. London: Baillière, Tindall and Cox. 1886.

Veterinary Pharmacopœia. By Messrs. G. C. and Albert Gresswell. London: Baillière, Tindall and Cox. 1886.

Transactions of the Medico-Chirurgical Society of Edinburgh. Vol. V. New Series, 1885 and 1886. Edinburgh: Oliver and Boyd. 1886.

A Manual of the Diseases of India. By W. J. Moore, C.I.E. Second Edition. London: J. and A. Churchill. 1886.

Contributions to Practical Medicine. By Sir James Sawyer, Knt. Birmingham Cornish Brothers. 1886.

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ABSTRACT OF AN ADDRESS
ON
FINALITY IN SURGERY.

Delivered before the Surgical Section of the Academy of Medicine in Ireland, at the Opening Meeting of the Session.

By SIR WILLIAM STOKES, M.D.Dubl., F.R.C.S.I.,
President of the Royal College of Surgeons in Ireland; and of the Surgical Section of the Academy of Medicine in Ireland.

It has always been a source of regret to me since the formation of this Academy that so many members of our profession, here as well as in the provinces—men of large and varied experience and unquestioned ability—have played so secondary a part in its practical working. At present, there is all the greater necessity for co-operation in scientific research from the existence of many difficulties and chilling influences that in our profession beset us and that we have to contend against, among which may be mentioned the disturbed political condition that now unhappily exists in these countries; for assuredly the scientific advancement of a nation is always greatest when, instead of dissatisfaction and agitation, it has contentment and rest. This chilling influence is accentuated from the existence of a system of rule that, like all popular governments that exist or have ever existed, is not only careless and indifferent, but often distinctly antagonistic to scientists and their work.

A different condition of things is observed among several of our continental neighbours, notably Germany and Austria, and the result is seen in the fact that of late years we look, to a very large extent, for light and leading to the great scientific centres in these countries, the governments of which do so much to aid and foster original scientific research. Again, there is the present epidemic of that combined hysteria, sentimentalism and folly, which has done so much to mar the intelligence and sap the judgment of so many men as well as women, and which has resulted in the State placing cruel and senseless fetters on those whose aim and life-work have no objects but the advancement of our science and the welfare of mankind. It has been well said "there are many years, but one sentiment between the persecution of Galileo and the onslaught on vivisection." It is held by some that, in certain of the principal supports on which surgery rests, the condition of finality has been reached. I recently listened with deep interest to a surgical address by Mr. Erichsen, whose utterances must ever be regarded with the respect due to one who has aided so signally in raising the standard of British surgery to the high level it now occupies. In dealing with the lines of surgical advance made in our own time, he specified operative surgery, surgical precision, and the development of those methods of scientific research which are carried on in the laboratories of the chemist and experimental physiologist.

It was to me a matter of some surprise to hear, on the occasion I have referred to, the opinion expressed that the two former of these methods, which may be described under the title of the art of surgery, have, it was held, like other arts (such as painting, sculpture, and architecture), reached a condition of finality, and that no further progress need be looked for in any of these directions. In discussing this somewhat dismal view of the present as well as the future of these arts, we should consider the question in a two-fold point of view; first, if any analogy exists between them and that which lies more particularly in our own province; and, secondly, if there be any finality in the other arts Mr. Erichsen mentioned. The aims and objects of those he drew attention to appear to me to be, without doubt, as widely different from surgical art as things can possibly be, the first two being essentially imitative, and the third constructive; and though it is hard to conceive a higher degree of perfection being ever reached in painting than the "Sistine Madonna" of Raphael, or in landscape than "Crossing the Brook," by Turner, or in sculpture than the "Dying Gladiator," or Thorwaldsen's "Hebe," or in architecture than the Parthenon, or the Saracenic palace of the Alhambra, or the Gothic cathedral at Seville, who can say with reason that finality has been reached in any of the arts of which the works I have mentioned are such splendid monuments? Nature is like an illimitable ocean which changes with every breath of wind and every passing cloud; and from the true artist who makes it in its ever-varying aspects his study and his guide, who is animated by the spirit that actuated the great workers of antiquity, may we not reasonably hope that in time, in other of her countless moods and aspects as yet unrepresented and untouched, we may look for works equal, if not better even than those bequeathed to us, and which, so long as they exist, must be regarded by those who contemplate and study them with heartfelt gratitude? Mr. Erichsen illustrates his theory as to the final limit being now reached in surgery by examples drawn from the history of the imitative and the plastic arts, asserting that no art can be carried beyond a certain degree of excellence, which limit once reached, no further development need be looked for. But the theory of evolution and development in the history of man, and of the processes of the mind of man, must more or less apply to those arts in which that mind finds utterance, and will be evident in the symbols of successive ages in their infinite variety. No possible advance, he seems to think, can be made, or has been made, in sculpture since the execution of the frieze of the Parthenon, or the Venus de Medici, the Apollo Belvidere; yet when we look clear in the history of this one art, we find new varieties of beauty evolving with human perception of spiritual and moral beauty. Even from the Parthenon and Pheidias to that of the younger Attic school—in Scopas and Praxiteles—there is a manifest development, a great step from the period of purely religious art to more human art, which two periods were united by the sepulchral monuments (such as those found in the streets of tombs at Athens), of which Dr. Waldstein says: "There can be no doubt that these works of sculpture bridged over the step from the art of Pheidias to the art of Praxiteles—that they were a stepping-stone from the religious sculpture to that which partook of a more human character." If we look closely into the history of the other arts, I believe we will find clear evidence of analogous processes of progressive development.

The doctrine of finality, for instance, might equally well have been promulgated in the time of Homer, and the view held then that poetry had reached its goal; but the production of the great epic of Greece, well termed "the sun of all ancient literature," did not prevent or interfere with the subsequent appearance of the imperishable works of Shakespeare, Dante, or Goethe; and true as this is of poetry, is it not equally so of all other arts? But assuming, for the sake of argument, the existence of finality in these arts, and more particularly those indicated by Mr. Erichsen, is there any analogy whatever between them and surgery? I have already indicated some leading differences, but there are others, and chief among them is the fact that the aim and object of surgery is physical repair and restoration of disturbed or lost function to living tissue—tissue, the complex nature of which cannot be regarded without awe. Therefore, even if the questionable doctrine of finality having been reached in the arts of painting, sculpture, architecture, or in any other of the arts, was well founded, is there ground for supposing from any *à priori* reason that this view would hold good of surgery? If proof were required of the want of finality in operative surgery, as well as surgical precision, I would recall the fact of the unsettled condition of opinion which exists in relation to the treatment of many forms of surgical injury and disease, a condition of unrest which is observable in very many instances that doubtless occur to you; for example, in the treatment of various forms of bone-lesion, such as fractures of the lower end of the radius, shaft of the femur, and patella; also in the operative treatment of tuberculous disease of bone and malignant new growths. Why does this surgical unrest continue? Is it not in consequence of our observing that operative efforts are at times attended with disappointing and disheartening results—even when made apparently in the most suitable cases, and with all the available care and skill of men in whom natural surgical proclivities and manipulative dexterity are combined with the confidence derived from long, varied, and well-utilised experience? What has been the history of the three lines of surgical advance as indicated by Mr. Erichsen? Have we observed in their development that advancement or activity in the growth of any one of them has ever been attended with a corresponding stagnation or lagging behind of the others? There have been times in which the powers and resources of medical science have remained temporarily dormant, and empiricism has in consequence raised its head and reigned supreme, diffusing its blighting influence far and wide—a time when the battle of the orthodoxies and heterodoxies in medicine was as fierce, as irrational, as full of bigotry and dishonesty as it ever was in the analogous mischievous controversies of religion. This pernicious war, with all its senseless din, raged in the school until crushed and finally silenced by the unerring artillery of physiological experiment, as elaborated by the ceaseless toil and untiring genius of John Hunter.

Everyone—even superficially acquainted with the history of our art—is aware that the advancement, development, or strengthening of any one of its three great motive forces, already indicated, has been attended simultaneously with a corresponding advance in the others

and if, as is only too true, biological science has so materially strengthened operative surgery, has this result never been reciprocated, and has not precision in its fullest sense been found to be indispensable to advancement in both? It is, I think, contrary to all probability and experience that, in future, progress is only to be looked for in one of these three directions. Is it unreasonable to hope that, with further developments in antiseptic practice—that boon to surgery for which mankind in all ages to come must ever be grateful to Lister—and which, in our time, has played by far the greatest part in widening the sphere of operative surgery, that regions hitherto barely touched by the operator may eventually become familiar ground for the exercise of his art? From what has already been done by experiment on the lower animals, and in thoracic disease in man—for example, in empyema, pulmonary abscess, pericarditis with effusion, and in vertebral and costal caries—it is no wild flight of fancy to anticipate a time when a diseased lung may be found amenable to operative treatment. Although brain-surgery is still, so to say, in its infancy, we may, having regard to the results already obtained by Professor Victor Horsley, Mr. Alexander, Dr. M'Ewen, Mr. Godlee, and Dr. Roberts, of Philadelphia, and when a wider and more accurate knowledge of the localisation of brain-injury and disease is obtained, not unreasonably anticipate an era when operations in many such cases may be regarded as well within the region of legitimate operative surgery; and these remarks apply with equal justice to renal, hepatic, and splenic disease. Again, is the doctrine of change of type in disease one wholly to be rejected? It finds, doubtless, but a limited acceptance among modern pathologists, but, notwithstanding, it is one firmly believed in by many of our more thoughtful physicians, distinguished alike on account of their great experience and exceptional powers of accurate observation. Some forms of so-called surgical disease, formerly familiar to me in my student days, have disappeared, or are observed but rarely, and in a mitigated form. I have endeavoured to point out that progressiveness in all the arts, including our own, has ever been synchronous with the development and advance of human knowledge in all other directions, and that this development manifests itself, and will continue to manifest itself, in an infinite variety of ways. Having regard to the fact that the human family may be said to be still young on the earth, the future progress of all arts and sciences is as certain as that "we live, and move, and have our being." We may then feel assured that surgical art will, in all its branches and lines of advance, continue to progress, preventing us ever saying with Alexander, "Our fathers have left us nothing to do." In bequeathing to us so noble an inheritance of knowledge as they have done, the result of their untiring toil and genius, they have left us much to do. It is an inheritance carrying with it, not alone a deep responsibility, but one which should make us determine not to let the wheels of progress, which they set in motion, end in a hopeless deadlock of finality, and also to stimulate an aspiration—one which should be common to us all—to accomplish "something ere the end," something not unworthy the heirs of those who had

> ....That strength which in old days
> Moved earth and heaven.

ON A CASE OF FITS RESEMBLING THOSE ARTIFICIALLY PRODUCED IN GUINEA-PIGS.

Read before the Medical Society of London.

By J. HUGHLINGS-JACKSON, M.D., F.R.S.,
Physician to the London Hospital and to the National Hospital for the Epileptic and Paralysed.

This is the case of a boy who has fits when his head is touched. The case is in many respects very like that of a guinea-pig rendered "epileptic" by some operation on its spinal cord or sciatic nerve (Brown-Séquard). The patient has an epileptogenous zone, as the guinea-pig comes to have some time after the operation.[1]

Before going further, I would remark that, using the term epilepsy generically, there are, I think, three classes of epileptic fits: (1) epilepsy proper; (2) epileptiform seizures; (3) fits depending on discharges beginning in parts of the pons Varolii and medulla oblongata.[2] The fits my patient have belong, I think, to the third class. In there being persistent local disease (as evidenced particularly by the hemiplegia), the case very much resembles the cases of Brown-Séquard's guinea-pigs, and closely in that there is an epileptogenous zone. I say little of Brown-Séquard's researches on epilepsy, because Mr. Victor Horsley has recently repeated this distinguished physician's experiments, and can speak more definitely of them than I can. That the fits in the case of the guinea-pigs depend on discharges beginning in some part of the pons Varolii or medulla oblongata, or both these divisions of the nervous system, is clear, if they are producible when the parts higher have been taken away (Brown-Séquard). Convulsions are producible in rabbits by rapidly bleeding them. When the higher parts are removed, these are similar to asphyxia-fits, and depend, like them, on discharges beginning in the respiratory centre. I submit that laryngismus stridulus and spasmodic asthma are owing to discharges beginning in the same centres started by super-venosity.

I do not wish to make too much of one case, the only one of the kind I have seen. I particularly draw attention to the fact that the attacks are not opisthotonic, as malingering boys' fits commonly are. In this patient's case, pretence is out of the question. The fits date from the tender age of two and a half years; they occur during sleep.[3] When awake the fit is not producible if the boy knows he is going to be touched. There is in the hemiplegia clear evidence of local disease of some part of the nervous system. The fits have been witnessed by Sir James Paget, Dr. Bristowe, Mr. Hutchinson, Mr. Savory, Dr. Hughes Bennett, Dr. James Anderson, and Mr. Victor Horsley.

A boy, first seen in consultation with Mr. R. W. Dunn, of Surrey Street, on January 19th, 1886. The patient's age was 7 on February 2nd of this year. When about 3 years old, the patient had a convulsion, about which I obtained no information, except that he "turned up his eyes." His mother attributed this fit to exposure to cold, by the carelessness of his nurse. After this he was "delicate;" he walked at the age of 2 years and three months, and did not talk till between 5 and 6.

At the age of two and a half years he had a fit, called by his medical man "an ordinary epileptic fit;" it is said to have lasted an hour, but there may have been a succession of fits. There was foaming of the mouth and heavy breathing, and he was convulsed. He had since had four attacks of this kind, or, perhaps we should say, of this degree; the last of them was three months ago. Ever since the first "ordinary epileptic fit," he has had imperfect use of the left arm and leg *(vide infra)*.

The most noteworthy thing in this case is that he "began to fall down" occasionally about a month or six weeks before the first fit—that is, before the first so-called "ordinary epileptic fit," which occurred at the age of two and a half years. Ever since he has been subject to these "fallings," which are really fits also. But so far as his father knows the boy never has these seizures unless his head or face be touched; it is to be particularly mentioned that a fit would not occur if he knew he was going to be touched. His mother, to show me what happened, flicked his face with her handkerchief; the boy suddenly collapsed, and would have gone down to the ground had he not at the time been held by his father. He turned red, looked vacant, his respiration stopped, and his eyes were turned to one side. The affair was rapid and soon over—perhaps fifteen seconds or less—so that I did not then accurately note details. Stoppage of respiration was very evident; it had been noticed by other (non-medical) people, besides his father and mother. Later, when percussing his head to see if there was a tender spot, he fell down suddenly, having the same symptoms as before. His father said that the boy would have some days fifty "falls" of this sort, and did not believe that ever a day passed without a fit, for fits, no doubt, these "falls" are. Accidentally brushing his head against a curtain would send him down. Touching any part of either side of his head or face would bring on the attacks; according to his father's account, it made no difference what part of his head or face was touched. The boy could tell me nothing whatever about the attacks. I think he was unconscious in them, but cannot be certain.[4] The fits would occur in sleep, as his father supposes, from the boy's head being inadvertently touched by movements of his hands. He carried about with him clear evidences of sudden inopportune falls occurring during his play. When I saw him first there was a sore on one side of his head, the left frontal eminence was much hypertrophied (his father not inaptly, for a layman, said of this swelling that from repeated falls it had become "a

[1] I think it very likely that every patient subject to fits of any class has an epileptogenous zone—that disturbance of the part of the periphery (ento- or epi-periphery) most especially represented in the "discharging lesion" may provoke a fit.

[2] I refer to a paper in *Brain*, April, 1886, for details of this classification—A Contribution to the Comparative Study of Convulsions.

[3] I have known epileptiform seizures, beginning in one thumb and affecting one arm, and turning the head to the same side, to occur during sleep.

[4] In the case of the patient who had some of his fits during sleep (see a previous footnote), there was no negative affection of consciousness at the climax of those fits, which began when he was awake. He spoke when his head was much turned to the left. Until on one occasion he made at that stage of the fit a remark relevant to what I was saying, I had supposed him to be then unconscious.

permanent ossification"), the right frontal eminence was not so large, and yet it was not abnormally large. Continuing this part of the subject, I pass on to the next visit, when I had the advantage of the help of Dr. James Anderson and Mr. Victor Horsley in investigating the case more fully.

January 25th, 1886.—There is a bruise of the right cheek. His mother told him to shut his mouth before she touched his head; she explained that he had bitten his tongue in a recent "fall." He had a habit of running with his tongue protruded; shutting his mouth and bringing his teeth together prevented tongue-biting when he "fell." However, he had only once bitten his tongue; he never bit it in the "severe epileptic attacks."

In the fits we saw he fell down, and seemed to be unconscious; the two eyes turned to the right and upwards in parallelism; his respiration stopped for a few seconds. His father had noticed that in every attack observed since the last visit the eyes turned to the right. When lying down, the fits on touching his head seemed to be slighter. When his head was touched, whilst he was recumbent, his limbs moved; there was but one movement, a sudden jerk, which was soon over. In some the left leg mov d alone, or it moved more than the other; possibly the right arm moved more than the left.

Permanent Condition of the Left Limbs.—The face and tongue were moved normally, and so it is believed were the right limbs. The left arm was slightly less than the right in circumference; his father reported that he moved it clumsily, but his grasps were about equal. His father said that when the boy was using the right hand in such an operation as drawing, the left hand was always "going," showing us in imitation movements of his own hand somewhat like those of athetosis. The boy limped slightly with the left leg; it was decidedly less in circumference than the right. There was no foot clonus on either side, and his knee-jerks were supposed to be normal. The patient's chest was well shaped. There was no evidence of rickets.

At my request, his father made particular observations on the fits in sleep. He had frequently seen attacks brought on in sleep, when the boy was accidentally touched either by himself or by others. On purposely touching him in sleep, his father observed that (letter, January 27th, 1886) "the movements of the body were exactly the same as when awake; the duration of the apparent unconsciousness the same, and, unless my observations deceived me, the eyes were turned upwards and to the right." It will be seen that his father, in the part of the letter quoted, does not speak confidently as to the position of the eyes in the fits during sleep. In a further letter, dated February 2nd, he writes. "I have touched him twenty or thirty times during sleep the past two nights, with the result simply of waking him. Three or four times, however, the touch has given him a momentary shock, and his eyes turned up, but I believe not to the right side. The shocks are of such short duration it is difficult to open the lid in time and watch result. If I open the eye preparatory to giving the touch, he awakes." "His aunt, who generally bathes and dresses him, maintains that he is more sensitive on the left side of the head than the right." ("Sensitive" here refers to degree of excitability, of what we may call the epileptogenous zone.) "I have often tried to discover a place on his head more sensitive than another, but have failed to do so; he may be more sensitive on the left side an inch to two inches above the ear, but I must not, for fear of misleading you, say that he is; his aunt thinks so, and she has opportunities of observation."

"The last four days he has stated that sometimes he feels his left arm heavy, as though a weight were pulling it down. This may be fatigue from using it. He has been very sensitive the past four days, and has had some severe falls, one on his forehead, and to-day on his chin, which is cut, bruised, and swelled."

February 6th.—I saw the patient again. He bore marks of sudden "falls;" there was a cut near the right angle of the mouth; in this "fall" his teeth made a mark on the floor. There was a bruise on his forehead; this was owing to his head coming in contact with the window-sill; this "fall" was consequent on the curtain being blown by the wind against his head. He had had many attacks, and looked dull and apathetic; his father attributed the increased frequency of the attacks to dyspepsia.

The following extract from a letter written by his father (dated March 4th) is important: "At the last interview with you, one of the gentlemen present made the remark that when the boy fell he appeared to be violently drawn down by a muscular contraction. This, I think, is a true remark, for the boy says that he feels pulled down. I had rather a forcible illustration of this recently. He was sitting on my knee whilst I adjusted the band over his eye; in untying the knot, my finger slipped, the vibration caused him a shock, and his eyebrow struck me on the upper lip. Though the fall was only a few inches—say three or four—the blow was so heavy that my lip was cut, and, at first, I thought my tooth was broken; the blow of his head, by simple gravitation, could not, at the distance of three or four inches, have struck so heavy a blow. There evidently was a power imparted by muscular contraction. He tells me that he sometimes feels a weight in the left arm. After a shock this morning, he had convulsive movements for a minute in his left arm; the middle finger especially was moved."

I saw the boy again March 10th. He had cut his upper lip and bruised his nose; one of his recent falls was consequent on his head being brushed by the window curtain. I saw him once more on April 18th. His father said there was a change in the fits. Thus, in one, the night before (his brother had put his arm round the patient's neck) he raised his arms above his head, and shrieked and fell; he continued to shriek during less than a minute, and was much exhausted after the fit. The boy could tell nothing about the attack. He had twenty attacks one day; they still never occur unless he be touched. The eyes turn to the right, but sometimes go straight up.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

MENTAL SYMPTOMS WITH LOCOMOTOR ATAXY.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Brighton.

By G. H. SAVAGE, M.D., F.R.C.P.

To begin with, I feel some diffidence in speaking before so many distinguished physicians upon a subject so well studied and described; but I have long felt that there ought to be no bar preventing the interchange of ideas between the general physician and the physician specially occupied with insanity. The one sees the less pronounced cases, and may be able to link together symptoms which, without comparing with his fellow, may appear to be distinct.

To begin, then, I would say that I have seen a good many cases in asylums suffering from ataxic symptoms; and I think it well to group these together for special remark.

The fact that ataxic cases are already beginning to be subdivided into other sub-classes only represents, to my mind, the fact that, in this case again, there is no finality in our definitions. Nature rarely makes a definite group of symptoms into a true separate disease.

There are modes of growth which are fairly uniform, and there are modes of decay which are fairly uniform, too, but that is all. I may be speaking ignorantly; but my impression has been, for many years, that terms such as epilepsy and locomotor ataxy are only terms of convenience, allowing us to look at groups of symptoms which generally, but not necessarily, occur together.

In epilepsy, we have every possible variety of grouping, and, I believe, the same holds good with ataxy.

Most men connected with asylums look upon ataxy as a common symptom of general paralysis, and there leave it; but I would wish to go further, and consider cases of insanity in which ataxy has been present without any general paralysis. In this paper, I propose to begin with the better recognised cases—those of general paralysis of the insane, in which ataxic symptoms are present.

1. There are cases in which ataxic symptoms have been present for a year or more before any suspicion arose as to the mental state. I have met with cases in which the symptoms were looked upon as typically those of locomotor ataxy, and, within a very uncertain time, the whole of the symptoms of general paralysis have developed. I would make two groups of these cases; one in the younger men who have had syphilis, and recover from it by careful, often prolonged, treatment; and a second, those cases in which the whole of the ataxic symptoms have arisen, in steady, hard-working anxious men, who have had no special cause for nervous break-down other than straining, worrying work.

These cases have, in my experience, little or nothing to take them out of the ordinary class of general paralysis. The course is about the average. The symptoms may be those of exaltation, or of simple weak-mindedness. In fact, they belong to the group of spinal general paralysis, so-called—cases in which the progressive degeneration of the nervous system, which we are pleased to call general paralysis, has shown itself, for some reason or other, not yet understood, first, in the

power of co-ordination. It is well to remember that, in nearly all cases of general paralysis, there are warning symptoms, or there are symptoms which precede the general downfall of the nervous system, by a sufficiently long period to attract special attention. In recent investigations, I have found that in some cases mental, and in other motor or sensory, symptoms appear long before the patient has been suspected of any serious nervous disease; and, among these early symptoms, ataxic weakness may appear. It is noteworthy here that these ataxic warnings are specially rare in women with general paralysis.

2. Next, with general paralysis, we may have both the mental and the bodily symptoms appear at the same time.

A very instructive case was admitted into Bethlem in 1883. When admitted, he was suffering from the most marked ataxy I have ever seen, so that, on closing his eyes, he fell as if he had been shot. His pupils were very small; they reacted feebly to light and accommodation. The patient, I may say, had been intemperate till within two years of his admission into Bethlem. He had had one attack of melancholia three years before. On admission, he was suffering from exaltation of the most extravagant nature. He was restless and emotional, given to quarrel. He sang and painted; he ate ravenously. He had no patellar reflex, and had had pains in limbs, but no gastric or other crises. The ataxic symptoms slowly diminished, and the patient became also very much more quiet and easily managed. He grew rather stout and sleepy. There was at this time some ptosis, which was found to be due to double vision, produced by a slight developing squint. He had cerebral giddiness on closing the healthy eye. The whole of the mental and bodily symptoms, without passing off, were reduced; and in this state he was allowed to go home. He kept at home, and did a little light work till early in 1886, when I again saw him. This time I was told that his mind was weaker, but his bodily health stronger, and that the two varied always; and that, when his mind was better, his walking was worse; and that, when he became excited, his walking was better. I admitted him as a voluntary boarder, and he is now under observation.

In this case the two symptoms came on together, the mind and body both suffering apparently from a common cause. I feel sure some will say that alcohol was this common cause, but I am hardly prepared to admit this. The patient did not develop ataxic symptoms till some time after he had given up all excess, and there has been no distinct relation between the temperance and the symptoms.

I have had one case under my charge in which alcoholic excess was associated with suspicion, jealousy, hallucination of sight and hearing, and in the earlier state of this disease the patient had complete loss of patellar reflex, and also had a very suspicious perforating ulcer of the foot. He was admitted as a case of locomotor ataxy, but with abstinence from alcohol the reflexes returned, the ulcer healed, and for the time at least all suspicion of ataxy has passed. So far, then, I have referred to case of general paralysis of the insane, in which ataxic symptoms have been present, and to this group I would only add one other variety. That is the cases in which with general paralysis there is a difference between the two halves of the body; so that I have now seen several cases—mostly syphilitic, by the way—in which there has been marked loss of reflexes on one side, and exaggerated, or normal, reflexes on the other. It is very difficult to explain these, and I have not yet had chances to thoroughly overhaul the nervous systems of such cases *post mortem*. I must say such cases as those referred to have led me to think a certain number of the patients with ataxic symptoms have the cause of their instability in the brain rather than in the cord alone, and the time may come when we shall be able, among the general paralytics, to say that certain motor areas are affected in a certain way, and therefore we have excessive reflexes associated with the corresponding changes in the cord as secondary processes, and, on the other hand, there are certain ataxic cases with secondary changes in the cord of a certain other type.

The next group of cases is very important from several points of view. First, they are cases which live for many years in contrast with those of general paralysis, which have but a short time at the longest. Next, I am inclined to think they belong to the truly neurotic group, that, in fact, such cases occur more commonly in patients belonging to nervous families. In this, again, they contrast with the general paralytic who has a non-neurotic history. I have come across two distinct groups of such cases, some of which have already been described. Cases of locomotor ataxy which, during the progress of the disease, develop attacks of maniacal insanity; such cases generally become suspicious, and fancy that some one or other is poisoning or injuring them. One such said he was being galvanised, while another said that hot wires were passed up his legs. These cases may have several outbreaks of excitement, but these attacks generally pass off, leaving little trace behind.

Besides these cases, I have met with some in which the earlier symptoms of ataxy have been suspicious of interference. I had one foreman of works who came into my consulting room, and in a very graphic way described the practical jokes which he believed his workmen played on him. He had pains in his legs, and he attributed these to the acts of jealous fellow-workmen. In this case there was some history of drink to complicate matters, but the case was not an alcoholic one, but proved to be one of locomotor ataxy.

The interest to me of such cases is that the insane mind is so prone to *explain* everything, not content with saying they have a pain. The insane give the pain a history, and it is thus with these patients with neurotic histories; they have uneasy feelings and they explain them.

One cannot go very far with these cases and say they are proof that locomotor ataxy may itself be a brain disease, though it is interesting to me to find that some French observers think it occurs unduly frequently among the neurotic by inheritance.

The last cases I would refer to are those in which with the steady development of locomotor ataxy there is also a steady development of insane interpretations of the painful symptoms, and I can hardly do better than report the case of C.

J. G. C., married, aged 42, was admitted in March, 1884. There was some neurotic history on the father's side; one brother had had mental affection after sunstroke. The supposed cause of the insanity was loss of fortune, but in reality the loss of fortune was due to his insane acts. This was his first attack, and was said to have begun at the end of 1883. The truth being that for some time before that he had been leading a very irregular life, and had very strong sexual passion. He made some reckless speculations, and then developed fears and dreads, at one time fancying he had leprosy. He then believed he was being followed, and that his wife was being poisoned. He was sure that this murder of his wife would be laid to him, and that he would be executed.

The patient, who had been an intelligent, jovial man, passed into a state of wretched self-contemplative melancholy. He was readily moved to tears. He was well nourished, and of a florid complexion; knee-reflexes totally absent; feels as if a board were tied under his feet when he walks; he staggers when his eyes are closed. Pupils react well to accommodation, but not at all to light; right optic disc with indistinct outline and looking opaque. Media clean, and no other marked change in the eyes. Pupils both small.

During the following months the patient had several bullæ form on his feet, and these, he said, as they were dark and yet harmless, were the marks of the Devil's grip. He felt the Devil tugging his legs, and he said for seven years he had been possessed, and that accounted for his general wickedness. He had some swelling of the bones in front of both ankle joints, and this too he thought was the work of the Devil.

He complained of marked cutis anserina, and the excessive growth of hair on his limbs. All these were to his mind super-human. He would discuss and describe his state for hours. He complained of a black veil which fell over his sight. Month after month passed, and the ataxic symptoms made slight but steady progress, and he became more quiet in his deluded state.

I have recently seen him, and he is now trying to pursuade others that he has lost his delusions, but this is done with the object of getting out of an asylum. He is more ataxic, and more emotional. I think his mind is steadily losing power.

SCARLET FEVER: ITS CAUSATION, AND THE BEST SANITARY MEASURES FOR DEALING WITH THE DISEASE AS IT EXISTS AMONG URBAN POPULATIONS.

Introduction to a Discussion in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Brighton.

By JOSEPH EWART, M.D., F.R.C.P.Lond.,
Deputy Surgeon-General.

Of all the acute infectious diseases which affect children, scarlet fever—owing to its wide diffusion and persisting prevalence—is the most fatal; it accounts for a twentieth or twenty-fifth of the general death-rate; and from 20,000 to 22,000 young persons perish from it annually in England (Farr). It occurs among all classes; but is mainly a disease of early life. Thus 63.87, 89.8, and 95.63 per cent. of the deaths take place under 5, 10 and 15 years of age respectively

whilst only 1.75 per cent. are observed in people above the age of 25. There is considerable diversity in the character the exanthem may assume. It may (1) be so latent as not materially to interfere with the ordinary habits and movements of the individual (*Scarlatina latens*); (2) it may be so mild as to be accompanied by very moderate fever and rash, and without much, if any, throat affection (*Scarlatina simplex*); (3) it may occur with the usual fever and rash, and with the throat-affection greatly exaggerated (*Scarlatina anginosa*); (4) it may be so severe and aggravated as to prove fatal in a few hours (*Scarlatina maligna*).

Essentially an Infectious Disease.—Although the nature of its cause has never been clearly defined, its effects and the mode of its dissemination are well understood. Its infectious character is based on irrefragable evidence. The fairly exact period of its importation from Europe into North America (1737), South America (1829), Iceland (1827), Greenland (1847), Australia (1849), and recently into India and many other parts of the world have been fixed. If we except some tropical regions there are few countries where it does not break out from time to time either in its sporadic or epidemic forms. Though it is often difficult to trace out the origin of the first case, there is seldom any doubt as to the manner of its spread afterwards. The certainty of its diffusion among the predisposed when no preventive measures are adopted, and the almost equal certainty of its extinction when these have been vigorously carried out, point to its propagation by means of infection. The retention of a single case during a small portion of the infective period, in a children's hospital, exposes some of its inmates to attack; whilst its prompt removal, prior to the development of its infective property, is sure to prevent its communication to others. Immunity is also obtained by the thorough disinfection of tainted articles. It has been caused by inoculation with the serum of the small vesicles liable to form in the course of the eruptive stage; and, in such cases, there is conferred the usual exemption from recurrent seizures, in the manner common to other contagious diseases. Stoll succeeded in reproducing the disease by inoculation of the contagium derived from the scales during the peeling process, though most attempts of this kind have failed in the hands of others.

Where the Poison Exists.—The causative principle, or *materies morbi*, is reproduced in the system, and appears in the juices of the skin, in the exfoliated cuticle, nasal and pharyngeal exudation, the breath, probably, at a certain stage, in the renal secretion, and, possibly, in the alvine excreta. That it is contained in the blood is shown by the fact that infants have been born with the disease, and by the extreme fatality attending the inoculation of rabbits with the blood of scarlatinal subjects. It has been said that infected blood contains an unusual quantity of micrococci spores, bacteria, and bacteridia; but whether these are causes or consequences has not, to my mind, been conclusively demonstrated.

Transmitting Media.—Air fouled with the poison is the most common medium of transmission. It has been known to be charged with the poison from a letter received by post or otherwise, a shawl, piano, toilet linen, bedding, mattresses, clothing, a rocking chair, box of toys, lock of hair, bed-pan, fomites, midwives or other attendants on the sick, horses, swine, cats, dogs, and the cow. It has been communicated directly from the cow, and from the milk of the infected animal. The receptivity of lying-in women, and of patients who have undergone capital operations, have been noted. It may be derived from water polluted with the poison. It is often conveyed to the susceptible in families, schools, churches, parties, all sorts of private and public assemblies, by those who have been in contact with, or in the atmosphere immediately surrounding, cases of scarlatina, but who may be free from the disease themselves. It is often spread far and wide by children or youths, passing through the latent form of the disease, and mixing with their friends and comrades. The contagium may hang for a long time about rooms which have been imperfectly purified, showing that it is, probably, particulate or solid, and not very volatile.

Period of Incubation.—The time which elapses between the reception of the poison into the blood, and the supervention of the disease in its active form, or the period of incubation, usually varies from two to five days. Occasionally it last only twenty-four hours—sometimes it has been known to cover from twelve to fourteen days. In inoculated cases, it has been observed to extend to seven days. This variation is probably dependent upon constitutional peculiarity, or upon degrees of predisposition and susceptibility.

Period when most Communicable.—It is rarely communicable during incubation, and up to the commencement of the eruption. After this, and up to the commencement of the peeling process, it is decidedly infectious. At no stage is it so rapidly diffusible as measles, whooping cough, or dengue. In these, the specific cause is probably much more volatile. Second attacks sometimes happen; third attacks are very infrequent, and fourth still more so. These are always mild, and scarcely ever fatal. It is believed that relapses and second peelings have sometimes been counted as second occurrences of the disease.

The Effects of Bad Sanitation.—All unsanitary conditions, particularly overcrowding and imperfect ventilation, by lowering the general health and the power of resistance, increase susceptibility, favour its propagation and intensify its severity, so that it is fully twice as fatal among the children of the labouring poor as among those of the higher and middle classes of the community.

Slow Course of the Disease in its Epidemic Form.—Owing to the comparatively low diffusibility of its *materies morbi*, an epidemic of scarlatina reaches its climax slowly, and does not decline and disappear until many of the susceptible brought within its range are invaded. This gradual spread, variable and protracted course, and tardy disappearance contrast conspicuously with the rapid onset, short and sharp culmination, speedy decline and extinction of an epidemic of measles. The sluggish progress of the rise and fall of a scarlatinal epidemic almost gives it the character of an endemic.

Prevention of its Spread.—In all cases, whether in rural or urban populations, the first essential condition of prophylaxis is segregation of the affected from the unaffected; and secondly, continued isolation of the sick until all risk of communicability has been overcome. These desiderata are generally practicable among the wealthier classes with signal success. The quarantine room selected for the patient should be at the top of the house, or, if this be impossible, its situation should be such as to command independent ventilation through windows, fire-place, and chimney. It should be divested of curtains, carpets, and all superfluous furniture, kept thoroughly ventilated, and draughts mitigated by the judicious use of screens. As contributory to the isolation of the room, patient and nurse, a sheet should be suspended on the outer aspect of the doorway, and kept constantly moistened with a solution of green copperas, chloride of lime, carbolic acid, Condy's fluid, chloralum, terebene, or other disinfectant, care being taken that such parasiticide solutions as Condy's fluid and carbolic acid, which neutralise each other, are not used together. A small basin, charged with terebene, should be employed for the reception of expectoration, and clean rags used instead of handkerchiefs, to be burnt as they become soiled. A large vessel containing a strong solution, say of carbolic acid, in the proportion of a quarter of a pint to a gallon of water, should always be in readiness for the immediate changes of body linen, sheets, towels, etc. After being soaked therein for an hour these articles should be boiled, and, if practicable, subjected to the disinfecting influence of dry heat. The receptacles used for liquid and solid excreta should be charged with disinfectants, and at once, "on their very issue from the body," emptied into the closet, which, with the sinks, should be thoroughly purified by the liberal use of antiseptics. All cups, glasses, spoons, etc., should be first washed in carbolic acid solution, and afterwards in hot water, before being used by other persons, whilst all kinds of food unconsumed should be disinfected or destroyed by fire. When the peeling process begins, or even a little in anticipation of it, the body should be anointed twice a day, from head to foot, with camphorated olive oil for the purpose of fixing the contagium, and preventing its escape into the surrounding air, until the patient is well enough to take a warm bath, when he should be well scrubbed with carbolic or terebene soap. The bath and scrubbing should be repeated every other day, until four or five have been taken. Then, provided the throat, kidneys, and skin, are free from every vestige of disease, he may be supplied with new or old clothes, previously disinfected, and returned with safety to his family in from three to five or six weeks—in some cases more. Skilled nursing is very important, inasmuch as it is very difficult to ensure the execution of the necessary precautions by untrained attendants. The nurse should not at any time wear outer woollen garments, which are liable to harbour the infection. Linen or cotton is least open to this objection. She should be provided with an adjoining room, admitting of isolation, and being maintained in an antiseptic condition. In the patient's room, she should be furnished with a good supply of towels and carbolic or terebene soap, with which to wash her hands when they become soiled. The physician, on leaving, should also disinfect his hands in a similar manner. Attached to every public institution there should be a separate infectious hospital. When convalescence has been confirmed, the room should be thoroughly fumigated, and all drapery, bedding, mattresses, etc., submitted to dry heat raised to 240° or 250°. In cases where unaffected children have not been removed, care must be taken not to allow them to attend school or mix with others, until they, as

well as the convalescent, can be certified to be free from contagion. In the event of death occurring, the body should not be taken out of the room, except for burial or to a mortuary. It should be put into the coffin without avoidable delay, with a pound or two of carbolic acid, fastened down and buried or cremated. Such is the method—somewhat added to and amplified—of localised or household prophylaxis, adopted with so much success by the late Dr. Budd, of Bristol, that in his own extensive practice and experience of twenty years, he had never known the disease to spread beyond the sick room.—BRITISH MEDICAL JOURNAL, Vol. i, 1869, p. 23.

Great Difficulty of Securing Domestic Quarantine in the Homes of the Artisan and the Poorer Classes.—In the overcrowded homes of the poorer inhabitants of the alleys, courts, and narrow streets of towns, and in many of the badly built cottages of our rural districts, accommodation is not available to enable the medical attendant to carry into practice the domestic system of prevention first promulgated by Dr. Budd. It is in such apologies for homes, and in such localities, that, owing to the utter impossibility of commanding sufficient segregation, good nursing, and unremitting disinfection of the patient and all his surroundings, the most malignant and fatal forms of scarlet fever abound, and cling to them with all the tenacity of endemicity. Here, imperfect sanitation and hygiene, overcrowding and defective ventilation, coupled with an imperfect dietary, play their part in reducing the stamina of the young, impairing their power of vital resistance, augmenting their natural proclivity to, and intensifying the severity of, the exanthem. A great deal has been done of late years, much still remains to be done, to obviate these disadvantages by alterations in old buildings and better arrangements in new ones, reforms in drainage, sanitation and hygiene, greater care in obtaining wholesome water and vigilant supervision of food-supply, etc., but until the humbler classes as a whole, in town and country, possess ample breathing-space, and efficient contrivances for the constant renewal of fresh air in their dwellings, and the other advantages briefly summarised, we may rest assured that a disproportionate liability to, and mortality from, infectious diseases will continue to prevail among them and their offspring.

The Difficulty partly Supplemented by Infectious Hospitals.—*Pari passu* with reforms introduced by the sanitary authority, more attention has been devoted to fever hospitals for the treatment of those who cannot be properly looked after in their own homes, and for the protection of the public in general. In the selection of sites for these buildings, a cardinal principle is that they should be so far removed from habitations as to ensure as complete a system of quarantine as can be obtained. Confidence in these institutions would be materially increased were more regard paid to another principle of supreme importance, namely, to the construction of separate small buildings for the separation of the various forms of infectious disease. Thus, there ought to be distinct buildings, sufficiently separated from each other, for scarlet fever, small-pox, typhoid fever, etc. Large wards should be avoided. The principle of having as many rooms as possible should be fully recognised and acted upon, and all should admit of ready fumigation from time to time. In short, each of these pavilions would form a unit or small hospital, as perfect as it could be made, for the treatment and isolation of the special set of cases for which it would be appropriated. Within its walls, the prophylactic system inculcated by Budd, and any advance upon it justified by the progress of science and the results of experience, might be put in force with exactitude. Each block would have its own nursing executive, and over all there would be one administration. No amount of possible segregation under one roof can meet all the requirements of the scheme herein briefly sketched. A modification of this plan might be devised, as a self-supporting institution, on a site of its own, for the reception and management of infectious disease occurring among the richer classes and in schools.

Infectious Hospitals are not to be regarded as Substitutes for Sanitation and Hygiene.—Excellent as these hospitals are, both as refuges for treatment and prevention, it should be borne in mind that they are not in any sense substitutes for sanitation and hygiene. Until these are so developed, extended, and perfected that cases can be dealt with on the plan recommended by Budd, these hospitals will be in more or less constant requisition. It is not, however, to these that the physician and health-officer look forward to the final extinction of infectious disease, but to the further evolution and expansion of sanitary science. They help us to scotch rather than to kill the evil—to mitigate, but not to cure it permanently. Still, as things are, and are likely to be for a long time to come, they must be viewed as essential adjuncts to our methods of dealing with infectious disorders.

Objects Effected by Infectious Hospitals.—In removing children suffering from scarlatina two leading objects are accomplished. The patients are placed under the most favourable circumstances for the promotion of recovery, whilst the family and the public are protected in the event of the transfer having been made early enough. Under the existing state of the law, removal, as a general rule, is voluntary, only affects small portions of the community, and is very partial in its operation—leaving the greater number of cases to be treated in their "cabin'd, cribbed, and confined" homes, under conditions alike disadvantageous to the sick, the other members of his family, and susceptible or predisposed neighbours. The facts are indisputable.

Compulsory Notification of Infectious Disease.—To meet this state of affairs as far as it can be met, a scheme for the compulsory notification of infectious disease was suggested some years ago, and has been adopted in several important towns. Its objects are to afford the health-officer the earliest information as to the whereabouts of communicable disease within his jurisdiction, in order that he may examine into and correct errors of sanitation—if any—and use such legitimate influence as he can with the family medical attendant, with a view to persuade all who cannot secure for their children at home adequate care and attention, to allow them to enter a public institution specially adapted and equipped for the purpose of giving them at once medical management and isolation. The knowledge thus obtained, it is said, would involve greater regularity in cleansing and purifying the rooms from which cases have been transferred. Notification is either made (1) by the family medical attendant, (2) conjointly by him and the householder, which is most preferred, or (3) the householder or other responsible person. So far as experience has been gathered, the results have not been so encouraging as was anticipated. The reason is probably to be discovered in the limited application of the scheme. It might have been otherwise had the system been made general throughout the rural and urban populations of the country. To obtain the cheerful co-operation of the medical profession, the duty of notifying ought to be imposed on the natural guardian of the patient, or the householder alone. The partial or local plan of notification has been successfully opposed, with a few exceptions, by the profession at health-resorts, and on good grounds, particularly as regards marine sanitaria. It stands to reason that, unless the whole country is subjected to the scheme of compulsory notification, it cannot be so successful as it otherwise might be. What is the use of having it, for example, at these health-giving places, so long as the populations from which they derive their visitors—their stock-in-trade—remain altogether unprotected? And until these are equally guarded, the benefit to be promised or expected in sanitaria from notification is problematical. Seeing that, in all our watering-places, the medical practitioners are keenly alive to the necessity of affording every assistance in their power, with a view to stamp out infectious disease, the game would scarcely be worth the candle. Moreover, they are sanitarians in their respective circles of practice, and may be trusted to do all they possibly can for the public weal. Surely it is equally their interest and duty to do so. Failure in the performance of duty means loss of that repute, upon the maintenance of which the members of a self-sustaining and laborious profession like ours are dependent for their social position and livelihood.

First Question that Confronts the Physician called to an Infectious Case.—What is the first question which confronts the physician after he has diagnosed a case to which he has been called to be one of an infectious character? Is it not the problem as to how isolation and antisepticism are to be enforced with unremitting vigilance during the whole course of the disorder for the good of the patient, and the protection of the community? If these objects cannot be accomplished at home, then his next step is to obtain the consent of the responsible person to have the patient transferred, under the necessary precautions, to a well-appointed hospital, where they can be attained; and, failing this, to do the best he can under the circumstances. Does partial, local, and incomplete notification do more?

General Notification, with Full Powers of Removal, might.—General compulsory notification might do more, if it could be made to carry with it the power to place all cases where, owing to restricted accommodation, the needful amount of isolation cannot be procured at home, in the quarantine of a public institution. To be effective, the law would have to be enforced under penalties. It is, however, doubtful whether such a measure would, at the present time, receive the cordial assent of the public. With the painful experience of the defunct Contagious Diseases Acts before us, which only coerced a few thousands of people for the extermination of a disease which is undermining the constitutions of large numbers of the rising generation of men and women, it is improbable that the Legislature would grant such an extensive curtailment of private rights, involving arbitrary interference, under most distressing surroundings, with parental authority, individual liberty, and responsibility. It is rendered still

more unlikely when we see, going on in almost every town in the kingdom, a steadily progressive reduction in the frequency of, and mortality from, zymotic or infectious disease, without notification, other than that which prevails wherever the practitioners and the health officer work well together—a result which is mainly due to the increased development of sanitation and hygiene, etc. What the upshot of such a law would be, we have now an example in the practical abrogation of the Contagious Diseases Acts, and the unpopularity and danger to which universal vaccination has been exposed by cumulative punishments. The time may come when the people, being better educated, may sanction, as they have done with respect to other enactments for the preservation of health, life, and property, a general law for the compulsory notification of infectious disease carrying power to place those labouring under any of its various forms, who cannot receive proper treatment in their own homes, in the quarantine of a hospital specially set apart for the purpose. For an adequate amplication of the power of the present law of removal under a magisterial order, the time is certainly not yet. Seeing, moreover, that, as regards scarlet fever, which chiefly prevails in early childhood, under existing circumstances of ignorance and prejudice, this extension of the power of the law would not fail to touch maternal and paternal instincts and affections almost as strongly and deeply implanted in the human breast as religion itself, it would, indeed, be matter for surprise if it did not meet with insurmountable opposition. And unless compulsory notification involved compulsory removal in certain cases—and these would be very numerous in every town—such a form of notification would be shorn of one of its greatest advantages.

Time is on Our Side.—In this matter, time is on our side. We must trust, for further advance and reform, to the aid of education and the experience to be gained from the beneficent action of those sanitary laws now in force. We must push forward in concord with an enlightened public opinion, not so much, if at all, in advance of it, sanitation and hygiene, and not halt until the homes of the wage-earning and poorer classes are made as healthy as those of the wealthy and leisured sections of society; and if, after having gone bravely to the root of the mischief in this direction, dug it out, and eradicated it rather than waste time, money, and energy in simply dealing with its symptoms, we still find that general compulsory notification, with extensive powers of transfer, is necessary, a well-informed public, instead of being opposed to it, would, probably, be the first to ask for, welcome, and sanction its general adoption.

Dr. SQUIRE: The paper, as far as read, was of such interest as to make us regret that the whole of it could not be brought before us for discussion. How much could be done by applying Dr. Budd's rules for checking the spread of infection, was shown in this neighbourhood by a lady, Mrs. Russell, of Hastings, and latterly of Tunbridge Wells. Where good means of isolation are not at hand, it is worth bearing in mind that intelligent aid in sickness can reduce the risk of the spread or continuance of scarlet fever to a very considerable extent. Now, early notification is of the very essence of our efforts in this direction. It is eleven years since I had occasion, under this roof, to advocate the necessity of this, and that we should depend on the members of our own profession for hearty co-operation. If we have no hospital to receive the patient, have a nurse to go to the house and superintend. Nor should a reception place for scarlet fever be too far removed, either for convenience of the patients or safety of the neighbour. Did I misunderstand the author of the paper here as to its being at a distance? Perhaps he will explain what distance he would ask, and why? The experience of all is against this fever extending from house to house, unless by personal communication; no one has seen it go from window to window, across a street, nor even next door. With good management within, our hospital for infectious cases need not be far removed; a convalescent place may be rather farther off.

Dr. GRIMSHAW, Registrar-General for Ireland, said he had been physician to a large fever-hospital for thirteen years, and was still consulting physician to that hospital. He pointed out that the principles for the prevention of the spread of scarlatina may be taken as a text for the discussion of the means for the prevention of the spread of all forms of acute infective diseases of a similar nature. He considered that the fundamental principle for the prevention of the spread of scarlatina and other similar forms of infective disease was compulsory notification, and removal, if necessary. He disagreed with the author of the paper that the opposition to the Contagious Diseases Act and the Vaccination Act were parallel cases, as this opposition was raised on high moral grounds; whereas, in the case of notification, it was on the grounds of interference with the liberty of the subject and with the privileges of the medical profession. He compared a case of infectious disease to a barrel of gunpowder stored in a dangerous position, as such private rights had no claim to consideration.

Mr. BUTTERFIELD (Sevenoaks) remarked that notification of infectious diseases in Bradford resulted in 75 per cent. of cases being isolated in hospital. He also mentioned the good effect of trained nurses in rural districts in limiting infection, and also the good effect of their example and teaching in improving the habits of the people.

Mr. VACHER (Birkenhead): I apprehend that the facts as regards the spread of scarlatina are hardly in dispute. It is admitted the contagion is carried by the breath, as long as there is any sore-throat; by the perspiration, until desquamation is completed; and by the dejections, as long as the mucous membrane of the alimentary canal is congested. Isolation is therefore necessary, that nothing contaminated by the breath, perspiration, or alvine discharges, leaves the room in which the patient is lodged without efficient disinfection; and it is certain that isolation is often impracticable in the homes of the poor: hence the urgency of infectious hospital provision and compulsory notification. Both these are absolutely needed by every sanitary authority desiring to perform the ordinary duties required of it; and it is certainly a great help to the authority if it has also the power of compulsory removal, as in Warrington. However, without this exceptional power, cases most demanding removal to hospital may generally be removed.

Mr. WILLIAM BROWN, F.R.C.S., Honorary Secretary, said, as one of the honorary secretaries to the Public Medicine Section, he had had the privilege of suggesting the subject of scarlet fever for discussion at this meeting; and it had given him much pleasure in listening to the able and comprehensive introduction of the subject by Dr. Ewart, and to the speakers who had followed him. The subject of scarlet fever derives importance from the fact of the extreme fatality of the disease. It was, as they knew, the most fatal of all the exanthemata peculiar to this country; and there was, perhaps, no epidemic disease prevalent in this country which gave the practitioner and his clients so much anxiety and trouble, and none, perhaps, which involved so many vital points in its diagnosis and general treatment. The plan which had been recommended hitherto, by medical officers of health, for the prevention and suppression of the disease, was isolation of the sick and disinfection of infected localities; but every health-officer who had experienced the disease, as it existed in urban populations, knew too well that such measures of prevention were not attended with that degree of success which our theories on the subject would lead us to expect. Hence the importance of finding out something about the causation of the disease, and the laws which govern its spread, so that we might be in a better position to suggest some real practical remedy for the prevention of scarlet fever. It was well known that scarlet fever was much more fatal in some localities than in others, and so marked was the mortality in certain districts in England and Wales, that these localities had received the name of the "scarlet fever fields" of the kingdom. The question, why scarlet fever was so fatal in some localities, and so little fatal in others, had not received that attention which it deserved. A more intimate knowledge of the conditions which governed these high death-rates would lead to important results as to preventive treatment. In connection with these high mortality districts, several questions presented themselves. Were the increased mortalities in these districts due to some endemic influence, whereby a more virulent poison was produced? were they due to some condition of the human soil in which the disease flourished? or, were they simply the result of an increased prevalence of the disease? The inquiries made by Mr. Power and Dr. Klein opened out a new departure with regard to the causation of scarlet fever, and would, no doubt, lead to important results. Now that a bovine form of the disease had been discovered, would it not be possible to manufacture a virus which would afford protection against the human form? He believed the true solution of the difficult problem of prevention would be found in some form of inoculation for scarlet fever. The late Dr. Hilton Fagge fully recognised the difficulties which attend the ordinary methods of preventive treatment, when he said that, whoever finds out a method of inoculation for scarlet fever would confer a boon upon humanity.

Dr. GROVES (Carisbrooke, Isle of Wight) said that, to prevent the spread of scarlatina, they must have notification and isolation. The law did not give them notification and isolation. It was the duty of the medical officer of health to prevent disease. If the law did not give him compulsory powers, he must do what he could to obtain notification and isolation by such methods as were legitimate, and which occurred to him. He might often obtain notification from schoolmasters, the

clergy, district visitors, and others who got about among the people. Having the disease notified, he might obtain isolation, by announcing to the neighbours the existence of the disease, and by cautioning them not to come into contact with the persons or houses affected.

Dr. NORMAN KERR (London) thought it would be most unfortunate if no voice of protest should arise from the body of general practitioners against many of the sweeping statements made that afternoon in support of a rigid and bold scheme of compulsory notification, and removal to a hospital. While he was in favour of a wise and practical measure of notification, he could not approve of such outrages on the common rights of Englishmen as had just been mentioned; for example, as the medical officer of health going round villages, ringing a bell to make known the names of persons suffering from scarlet fever, and warning all persons to avoid such. Dr. Kerr had treated cases, both among rich and poor, at their own homes, where simple means of cleanliness and disinfection had prevented the spread of the disease. In his opinion there should be an agreement between the public health officers, the general practitioners, and the people themselves, and he had no doubt but that a happy medium of practical usefulness could be devised which would secure the maximum of good with the minimum of evil, satisfactory to all. In the interests of all, such a practical system was urgently called for.

Dr. SYKES said that compulsory notification of infectious disease would be useless unless accompanied by the power of compulsory removal. It was not necessary to exercise this power in all cases. Isolation was the object arrived at, whether obtained by removal to a distance or close at hand, and the power to effect this must be complete.

Dr. DUNCAN (Glasgow) advocated the establishment of small isolated hospitals, scattered over urban areas, as a great improvement over the present system of large single infectious hospitals at a distance from the people. The mothers would not consent to allow their children to be removed from their care; they should be allowed to accompany them. If the precaution of using a glazed waterproof overall on entering the infected apartment, and carefully disinfecting the hands and face on leaving were adopted, there would be no danger. He did not believe that there would be any danger to the neighbourhood from aerial dissemination, where proper isolation of the affected persons was enforced. No act for the notification of scarlet fever would ever, in his opinion, be successful until the prejudice against hospital treatment could be overcome; concealment would be the result of its inforcement. The small hospitals advocated should have space provided on the roof, in crowded localities, where space could not be obtained, for a playground for the convalescents, and so prevent the children from mixing with the healthy in the streets and alleys of their crowded cities.

In reply, Dr. EWART pointed out, in reference to the two points specially dwelt upon by Dr. Squire, (1) that he had not disputed the prevalence of scarlatina in the homes of the rich and the poor with considerable approach to uniformity; but what he contended for was this, that, owing to defective hygiene and sanitation in the dwellings of the artisan and humbler classes, the fatality of the disease was increased two-fold. (2) As regards isolation, it was quite true that distance was not a matter of much import; but when a large town had to provide a sanitarium or infectious hospital, not only to receive scarlet fever cases, but for small-pox, typhus, and typhoid cases, the question of distance, as well as economy and efficiency, had all to be carefully considered, and could not be ignored. Dr. Grimshaw had remarked that the grand object of notification was to get hold of the first case. But who could be certain of this? It was not the fully developed and easily recognised cases which, thanks to Dr. Budd, now did so much mischief in spreading the disease, as the mild, latent, and, undetected cases, from which the disease might be spread far and wide. The former were isolated and treated with view to prevention; the latter would also be so managed if they were diagnosed, which they could not be, seeing that the little people went about as if there was nothing the matter with them. Dr. Grimshaw's idea, that it was the public safety that we had to look after, would meet with general agreement; but he treated what he called sentimentalism too lightly. It was the disregard of that which led to the abrogation of the Contagious Diseases Act, and which was now, in some places, unpopularising vaccination. Sentiment was a great power; it lay at the foundation of family affection. In one of its varied phases, it formed the instinct of patriotism, or the love of the soil from which they sprang; it floored or defeated many legislative Acts good enough in themselves, but premature in their attempted application. It would probably enfeeble general notification with powers of compulsory removal, or lead to its abrogation, if it were attempted before the people most concerned were prepared by education and training to realise its value and importance. One of the speakers said that perfect isolation could not be obtained in a private residence. Neither could it be secured in a public institution, which must have communication of some sort with the outer world. But experience showed that, in both, sufficient isolation could be obtained to prevent the spread of infectious disease. It was doubtful, indeed, whether mere notification, without extensive powers of removal, could do much more than was now done wherever the medical practitioners worked harmoniously with the health-officer. Dr. Ewart spoke warmly in favour of Surgeon-Major Evatt's proposal to associate with the meetings of the British Medical Association a system of popular lectures, with a view to educate the working classes on questions of public health.

THE DURATION OF INFECTIOUSNESS IN THE FOLLOWING DISEASES: SCARLATINA, SMALL-POX, MEASLES, MUMPS, AND DIPHTHERIA.

Read before the Section of Public Medicine at the Annual Meeting of the British Medical Association held at Brighton.

BY FREDERICK PEARSE, M.D.

MR. CHAIRMAN AND GENTLEMEN,—There is one point I wish to raise in this discussion. We must distinguish infection from the person and that from clothes. We must know for how long infection is exhaled from the patient as well as the potency and duration of infection attaching to the cast-off *débris* of pathological processes induced by the disease. A case may be said to be first infectious and later contagious.

Infection is exhaled for a much shorter time probably than we have generally imagined. The question to determine is, for how long the pathological processes induced by the different diseases—for example, the desquamation of scarlet fever and the catarrh of measles—continue the carriers of the contagion. How long will the discharge from skin and mucous membrane bear infective properties?

I have reason to believe that personal infection, or exhaled infection, in contradistinction to infection by contact or inoculation of the disease products, has a definite duration, and that a special period of duration of this exhaled infection characterises each disease. On the other hand, many things are explained to hasten or hinder the elimination of infection with the characteristic discharges of the disease.

The rules given, that scarlet fever is infectious as long as desquamation lasts, small-pox as long as every scab or scale remains on the skin, diphtheria while sore-throat, or albuminuria, or discharges from mucous surface continues, are all open to question. Upon this hypothesis, we could never say when a person ceases to be infectious.

I would suggest that infection only attaches to those cast-off products of the disease when they were formed during its strictly infectious period; that, for example, the early desquamation of scarlet fever, and not the second or third peeling, is infectious; the primary albuminuria of diphtheria as well as scarlet fever, but not that which may remain for weeks or months or years afterwards. I hold that these pathological conditions and their products, induced in a characteristic way for each disease, are not any guides as to the continued infectiousness of a patient, and on this basis I would urge that a mild case is as long infectious as a severe one.

My observations make the duration of infection in the several diseases as follows: Measles, from the second day, for exactly three weeks. Small-pox, from the first day, under one month, probably three weeks. Scarlet fever, at about the fourth day, for six or seven weeks. Mumps, under three weeks. Diphtheria, under three weeks.

TODMORDEN.—The returns of vital statistics in this district compare favourably with those of previous years, excepting a fractional decrease in the birth-rate. The death-rate in 1885 was 17.29 per 1,000, the lowest Mr. Thorp has ever recorded. The deaths from zymotic diseases numbered only 19 for the whole year, or a rate of 0.78 per 1,000, as compared with 2.10 per 1,000 for England and Wales. This was not so much due to the absence of epidemic diseases, as to the mild form in which they affected children. Whooping-cough was most fatal. Mr. Thorp had one of his own children removed to the hospital when attacked with scarlatina, and urges on all parents similar precautionary action. Diarrhœa prevailed to an unusual extent in the month of December, and Mr. Thorp believes it was due to the want of rainfall, whereby the drains became choked, and caused the access of sewer-gas to houses where there were not efficient safeguards. The defective drainage in one part of the district was also the exciting cause of an outbreak of typhoid fever during the latter part of the year; but plans are prepared to remedy the evil, and will soon be put into effect.

TEN CONSECUTIVE HOSPITAL CASES OF EMPYEMA, WITH REMARKS.

Read before the Birmingham and Midland Counties Branch.

By EDWIN RICKARDS, M.B., F.R.C.P.,
Physician to the General Hospital, Birmingham.

It seems to me that certain subjects have a claim to be considered at intervals of time, such subjects as the treatment of a disease, which becomes modified in detail as we gather experience.

I propose, therefore, to give an account of ten consecutive cases of empyema which have been under my care at the hospital, in view of inviting discussion on the treatment of that disease.

Given a case of empyema, there are many points which present themselves for decision, and points on which anyone who has the responsibility of the case would be glad to have the authority of such a meeting as this.

When it is known that there is pus in the pleural cavity, and it is determined to evacuate it, the questions when, where, and how have to be decided. Again, there is a difference of opinion as to the administration of anæsthetics, the use of antiseptics, the syringing out of the cavity, the excision of ribs.

Case I. *Post-scarlatinal Nephritis; Left Empyema; Chest opened; Recovery.*—Arthur W., aged 7 years, had scarlet fever, and as soon as the rash had disappeared, under the advice of kind non-medical friends, he went out one cold morning to breathe off his scarlet fever poison; consequently, in two days' time he was brought to the hospital, March 19th, 1879, anasarcous, and not having passed any urine for twenty-four hours. He was drowsy, irritable, and vomiting; pulse 90; temperature 99; respirations 24. For twenty-four hours, diaphoretics, including the hot-air bath, dry cupping to the loins, and purgatives, were tried without any good effect, then digitalis-poultices were applied to the loins, and in twelve hours two ounces of urine, mostly blood and blood-casts, were passed. Thenceforward, the kidney condition, the uræmia, and anasarca gradually subsided.

March 20th. The chest, carefully examined, was found normal.

March 21st. He had pain in the left side. Pleuritic friction was heard. Pulse 100; temperature 104°; respirations 26.

March 23rd. The left chest was full of fluid; there was dyspnœa and restlessness. Pulse 120; temperature 100; respirations 36. Thirty-four ounces of pus were drawn off by the aspirator, to the relief of the dyspnœa.

March 28th. The left chest was full again; the dyspnœa had returned. The temperature since the aspiration had varied from 100 to 101. Thirty-six ounces of pus were drawn off by the aspirator.

April 3rd. The left chest was full again. Temperature 103°; pulse 120; respirations 36. Under chloroform, a single opening was made in the chest in the seventh interspace behind antiseptically, and the pus escaped; an India-rubber drainage-tube was inserted. The dressings were changed three times that day. After the operation, the temperature fell to 98° and remained so for six days, the general condition improving proportionately.

The interval between the dressings was increased from once a day after the first day, to every four days, and the dressing was discontinued May 14th. The drainage-tube was gradually shortened and left out April 20th. During the progress of the case, there were intermittent attacks of pyrexia, such as would be produced by reparative inflammation. June 10th, he left hospital well. Heard of two years after, he was robust.

Here was clearly a case of pleurisy from blood-poisoning; the effusion effected in three days was, no doubt, pus from the first. In empyema, I am inclined to think that this is the rule, namely, that pus is secreted as such, and that it is not transformed serous effusion. I do not mean to say that serous effusion may not become sero-purulent, especially after repeated tapping. The fluid here was diagnosed pus before aspiration, not so much by the condition of the patient, as by the cause of the pleurisy, and also by Bachelli's sign, namely, the greater diminution of the breath and voice sounds in purulent than in serous effusion.

In this case aspiration was resorted to, to relieve dyspnœa; it was a question, in my mind, whether, by opening the chest at once, and relieving the pressure on the pleura, increased secretion of pus would not be promoted, to the weakening of the patient; I therefore put off the operation for a fortnight, until I thought that the activity of the pus-secreting pleura had diminished. I think, however, I should now, under similar circumstances, act differently, and open the chest as early as possible, however acute the empyema.

Case II. *Left Empyema bursting into Lung; Chest opened; Opening closed; Second Opening; Recovery.*—C. M., aged 24, was admitted into the hospital, October 25th, 1879. The history he gave of himself was that, after having had pain in the back for a week, he took to his bed. After he had been in bed eight weeks, he suddenly coughed up large quantities of pus; he said that if he lay on one side, the pus would run out of his mouth. After this had been going on for five days, a surgeon was sent for, who opened his chest at the back; the pus-spitting then ceased. The opening was two inches below the angle of the scapula; the discharge went on for three months; the opening then closed. Three weeks from the closure he began to spit up large quantities of pus; in four days from this time he was brought to the hospital (October 25th, 1879). He was emaciated to an extreme degree; cough, dyspnœa, and night-sweats were very severe; there was catarrh of both lungs; the urine was albuminous, with exudation cast; temperature 101°.

The old opening was re-opened, fœtid pus escaped, a drainage-tube was inserted.

December 25th. Pus persistently accumulated at the base of the pleural cavity. A second opening was made, six inches below the first, at the lowest point of the pleural cavity. A drainage-tube inserted rode upon the diaphragm, rising and falling with respiration. The cavity was kept sweet by carbolic lotion syringed into the upper tube, and coming out by lower one.

October, 1880. Getting well; still discharge from opening; made out-patient.

May, 1881. Opening quite closed; break-sounds not quite so loud over left as right back; chest but little deformed; patient robust; going to Australia.

This patient was in the hospital more than twelve months, and was not sound for some months after he left. The case was an exceptionally severe one in many respects: namely, the bursting of the empyema into the lung; the closure of the artificial opening prematurely, before the pleural cavity was abolished by granulations; the bursting of the empyema a second time into the lung; the extreme exhaustion and lowered vitality from long-continued discharge. I think it quite likely that the low point of the second opening, which was close to the diaphragm, may have delayed the granulating up of the pleural cavity, but I have no doubt that to it must be attributed the complete recovery of the patient.

Case III. *Perforating Ulcer of Stomach; Adhesion of Stomach to Diaphragm; Left Empyema, which opens into Stomach; Chest Opened; Death.*—E. L., a delicate, apathetic woman, aged 23, was admitted into the hospital on October 25th, 1880. No definite history could be extracted from her. She said she had never been strong, but had been able to act as general servant, until a few days of her admission, when she felt a pain in her back. At the base of the left lung, behind, pleuritic friction was heard. There was slight dyspnœa and cough. Pulse 120; temperature 101°.

November 2nd. There was evidence of fluid in the left pleura at the back, extending upwards 3 inches, and above the fluid, pleuritic friction was heard. Pulse 120; temperature 102°; respiration 28.

November 4th. She had what appeared to be an attack of acute rheumatism; there was pain and swelling of many joints, profuse acid perspiration, no rigors; the fluid in the left pleura had increased in amount.

November 7th. She expressed herself as feeling much better, the joints were well, the perspiration had ceased; the left chest was two-thirds full of fluid. Temperature 102°; respiration 30.

November 8th. She had frequent and copious vomitings of fœtid pus. The quantity could not be estimated, as it was mixed with food. In the evening there was pneumothorax on the left side, the left chest was opened; fœtid gas only escaped. She was fed by the rectum.

November 9th. Vomiting ceased, fœtid pus escaped from the opening in the chest. She seemed better.

November 12th. She became septicæmic.

November 14th. She died.

Post mortem.—The left pleural cavity was empty, and the lung collapsed; besides the artificial opening, there was a circular, smooth-edged aperture in the diaphragm, large enough to admit the tip of the little finger. The upper surface of the stomach, the left lobe of the liver, and the diaphragm were adherent, and in the adhesions was diffused pus, and between the liver and the diaphragm was a collection of pus. In the stomach there were three circular ulcers, varying in size from a sixpenny piece to a florin, with raised edges, situated on the anterior surface, near the small curvature, and nearer the pyloric than the cardiac end; one had perforated into the suppurating adhesions, and into these adhesions was traced a sinus, the other opening of which was the aperture seen in the base of the left pleural cavity; the other viscera and canals were normal.

The sequence of events here were, to my mind, ulcer of the stomach, inflammation causing adhesion of the stomach to the liver and diaphragm, extension of the inflammation to the pleura, empyema, the discharge of the empyema through the adhesions into the stomach, through the perforating ulcer. We have all seen cases of ulcer of the stomach where there were no definite characteristic symptoms, or rather where no symptoms were complained of such as to leave one to suspect that disease. We know, too, how differently persons estimate and describe their symptoms. This patient told of no pain or tenderness of the stomach, no sickness or vomiting. She said she had been suffering from debility for years, and for a few days from pain in the back; the diagnosis of pleurisy seemed to cover all her symptoms. In the face of friction, and but a small amount of fluid, aspiration was not resorted to at first, and when what appeared to be an attack of acute rheumatism came on, it seemed to me desirable to defer tapping the chest until the acute symptoms had subsided. Could one have foreknown the cause of the empyema, and opened the chest early, the prospect of a favourable issue, though bad, would perhaps have been better.

Dr. Habershon, in his work on *Disease of the Abdomen*, has recorded a case where, from a perforating ulcer of the stomach, a fistula existed between the stomach and the left lung, there was pus in the left pleural cavity, but the adhesion of the base of the lung to the perforated diaphragm prevented any communication between the pleural cavity and the stomach. He also gives another case where from an ulcer of the stomach an abscess formed between the liver and diaphragm, which perforated the diaphragm and caused an empyema, with which the abscess communicated; but there was no direct communication between the abscess and the stomach.

Habershon, commenting on such cases, writes: "We have known the earlier symptoms so insidious that the pleurisy was almost the first indication of any abnormal change."

Case iv. *Left Empyema; Chest Opened; Left the Hospital.*—E. H., aged 60, was admitted into the hospital on October 17th, 1883. There was an abscess, the size of a goose's egg, in the left mammary region, and fluid in the left pleural cavity; the two communicated. He gave the following history of his illness. After some three weeks' indisposition, during which time he was at work, he suddenly spat up a large quantity of pus. After a week's expectoration, the swelling in the mammary region appeared. For seven weeks, up to the time of admission, cough, expectoration, and dyspnœa were severe; he was emaciated, but had no night-sweats. Pulse, 120; temperature, 101°; respirations, 30. The abscess and left pleural cavity were opened antiseptically (the skin having been frozen); two pints of pus were evacuated from the latter, a quarter of a pint from the former. The lung expanded, the cough and expectoration ceased; the abscess healed; the chest, although it became septic, discharged less and less pus, which was not fœtid, and he was nearly well, when, on January 10th, 1884, the left leg became swollen from phlebitis; this condition subsided in a few days, but he became dissatisfied, and insisted on leaving the hospital, and I heard no more of him.

Case v. *Right Empyema; Chronic Consolidation of Right Apex; Chest Opened; Recovery.*—J. C., aged 28, was admitted into the hospital on February 23rd, 1884. He said he had had a cough and had lost flesh for some months, and had been laid up with his chest eight weeks. His right chest was one-third full of fluid, and the upper part of the right lung gave signs of solidification and breaking down. In front, between the dulness from the fluid and that of the solid lung, there was a resonant area. There was coarse crepitation over the apex and base of the left lung. There were strong grounds for believing that the case was one of rapidly advancing phthisis complicated with pleurisy. Before surgical interference, he was a fortnight under observation. He was extremely emaciated, had great dyspnœa, heavy night-sweats, severe cough, with profuse expectoration of nummular sputa. The temperature was high, running up to 102° and 103° at night; pulse varying from 100 to 120.

February 26th. Six ounces of pus were drawn off by the aspirator, with some relief to the chest-symptoms.

March 2nd and 3rd. My surgical colleague, Mr. Chavasse, and I, twice consulted together as to whether, in the face of such extensive lung-disease, and his grave and apparently sinking condition, it would be right to drain the pleura. After the administration of a small quantity of chloroform, which he took badly, Mr. Chavasse, under carbolic spray, opened the pleura in the seventh interspace in the axillary line. Thirty-six ounces of pus escaped. A drainage-tube was inserted; antiseptic dressing applied; there was free discharge, requiring a change of dressing twice daily.

After the operation, the physical signs at the right apex were as they were before, namely, dulness, bronchial breathing, bronchophony, metallic and bubbling *râles*. For two days the pyrexia diminished, the cough and expectoration persisted.

March 6th. The chest was septic; the discharge very fœtid; pyrexia increased; the patient seemed septicæmic; the antiseptic dressing was discontinued; the cavity washed out with warm carbolic lotion, 1 in 40; and nutriment and stimulants given freely.

In the course of three weeks, the discharge became sweet, the lung had expanded, the lung and the general condition of the patient had improved. The drainage-tube was in for seven weeks. He left the hospital well on May 19th, 1884. The only morbid physical sign over the right apex being flattening, some want of resonance, and harsh breathing, the difference in the respiratory murmur of the two sides at the back was very small, and the deformity of the chest very slight. When heard of twelve months later, he was robust, and at work.

The lesson I learnt from this case was, however grave the state of a patient may be, however serious may appear to be the condition of the lungs, given pus in the pleural cavity, open and drain. There is little doubt in my mind that catarrhal pneumonia was the cause of the empyema, and that, when the empyema was cured, the pneumonia resolved, leaving only a condition of fibroid thickening of the right apex.

Case vi. *Right Empyema; Catarrhal Pneumonia of Right Side; Chest Opened; Recovery.*—M. P., aged 4, was admitted August 13th, 1884. The initial fever was six weeks before admission. She was emaciated; had severe night-sweats. Temperature, 101°. The right chest was resonant in front and in the axilla, but dull at the back from base to apex; over the dull area was heard coarse crepitation; she could not lie on left side.

August 16th. Mr. Chavasse opened the right chest in the eighth interspace behind, under chloroform and the carbolic spray. Nine ounces of sweet pus escaped; a drainage-tube was inserted, and antiseptic dressings applied.

August 23rd. The chest was antiseptic. The temperature since the operation was normal; the carbolic spray was discontinued; the crepitation over right back gone.

September 14th. About two drachms of sweet pus were discharged daily from chest; there was crepitation over the left back; temperature sometimes went up to 102° in the evening; no cough; getting fat.

September 20th. Tube left out.

October 14th. Discharge ceased; crepitation over left back gone.

November 4th. Child fat; no chest-deformity; no evidence of any lung-mischief.

I look upon this case as one of catarrhal pneumonia: first of right lung, subsequently of the left, complicated with, or, rather, I should say, causing, empyema. When the pleurisy was cured, the lungs recovered.

Case vii. *Left Empyema; Catarrhal Pneumonia of Left Lung; Chest Opened; Recovery.*—F. J., aged 12, was admitted August 23rd, 1884. The left chest was full of fluid; there was crepitation, with bronchial breathing and bronchophony over the upper part of the left lung in front. She was emaciated; the whole of the back was œdematous; cough and night-sweats were severe; temperature, 103°. She had had a cough four months. Ten weeks prior to admission, she had been laid up in bed with pain in the left side, and feverishness. She then got about, but was short of breath, and wasting.

August 27th. The temperature was normal. Mr. Chavasse, by single incision in the eighth interspace of the left back, under chloroform and the carbolic spray, let out forty ounces of inodorous pus, inserted a drainage-tube, and applied antiseptic dressings. For a week, the chest was dressed under the spray, which was then discontinued, the discharge being very little; the drainage-tube was gradually shortened.

September 14th. It was noted that the temperature in the evening had several times been up to 102°. The crepitation over the left lung continued; the discharge was slight and sweet.

October 14th. Crepitation continues; discharge slight.

November 14th. Discharge ceased; crepitation remains.

February 14th, 1885. Sound and fat. Slight deformity of chest.

November 8th, 1885. Chest quite sound; no deformity; child well.

The long duration of the convalescence in this case I attribute to the catarrhal condition of the lung, which was probably the cause of the empyema.

Case viii. *Right Empyema; Chest Opened; Recovery.*—C. T., aged 15, was admitted February 7th, 1885. His right chest was full of fluid; there was great lividity and dyspnœa; no pyrexia; the initial fever and pain in the right side came on five weeks before his

admission; he had kept his bed continuously since; the skin having been frozen by ice and salt by Dr. Wilson, Mr. Morison, by a single incision, opened the right chest, behind, in the eighth interspace, antiseptically, and let out forty ounces of sweet pus, and inserted a drainage-tube. The temperature was normal for four days, when it ran up to 103, pneumonia having developed at the left base.

After a few days the pneumonia subsided; the temperature fell to normal, and remained so thenceforward.

March 20th. He got up.

April 4th. Tube left out.

April 14th. The wound was healed, the boy robust, with no deformity of chest.

CASE IX. *Left Empyema; Chest Opened; Recovery.*—G. B., aged 4, was admitted July 21st, 1885. He had the initial fever seven weeks previously, when he was in bed a week. For six weeks prior to his admission, his mother had noticed that he was wasting, and was short of breath, though he played out-of-doors. There was copious effusion into the left chest, which the hypodermic syringe showed to be pus. Mr. Haslam made a single opening into the left chest behind, in the eighth interspace, the skin having been previously frozen by ice and salt. Fifty ounces of sweet pus escaped. A tube was inserted, the wound protected by lint, and oakum applied to catch the discharge.

August 20th. The tube was left out; the temperature had not been above normal since admission; the discharge was never fœtid.

September 26th. Well.

October 16th. Sound and fat; no deformity of chest.

Here was a case of empyema where the chest was opened without antiseptic precautions, and yet the patient did well. If it could be shown that where antiseptic precautions are not taken in opening the chest for empyema, the mortality is not higher than where antiseptics are used, patients who now, from the surroundings in the homes of the poor, have to be removed to hospitals, might be treated satisfactorily at their own homes.

CASE X. *Left Empyema; Pneumothorax a Year and a Half previously, without obvious Cause; Chest opened; Now in Hospital.*—G. L., aged 47, was admitted October 11th, 1885. His left chest was full of fluid; he was pale, emaciated, apyrexial. There was dyspnœa on walking, slight cough, scanty mucous expectoration. He was in the hospital in May, 1884, with pneumothorax, for which there was no apparent cause. It appeared, however, on inquiry, that in November, 1882, he was laid up for a month with hæmoptysis.

October 14th. After the skin had been frozen with ice and salt, Mr. Jolly opened, antiseptically, the left chest behind, in the eighth interspace, and let out about a pint and a half of inodorous pus. A tube was inserted. The lung was adherent to the chest-wall in front of the incision. After the operation, the breath-sounds were louder, but there was a considerable amount of air in the pleural cavity. Four days after the operation, it was noticed that, though there had been no pyrexia, the discharge inodorous, and the patient doing well, the chest was septic. The strictly antiseptic precautions were discontinued.

November 4th. The cavity not emptying itself thoroughly, Mr. Jolly made an opening below the previous one, in the tenth interspace. A tube was inserted; the drainage was then complete, and the patient is doing well.

The sequence of events in this case was, I should imagine, hæmoptysis, a vomica, the rupture of the vomica into pleural cavity, pneumothorax, empyema, pyo-pneumothorax, and, I am inclined to think, that the most promising result will be a collapsed lung, except where it is adherent to the chest-wall; pneumothorax and a permanent fistula.

The cases I have just given I do not propose to use on the present occasion as statistics from which conclusions can be drawn as to any points in connection with the treatment of empyema. They are too few.

For statistics to be of use for such a purpose, the cases must be numerous and arranged in many classes. For instance, in estimating the value of any method of treatment pursued in any particular case, it must be compared with different methods used in precisely similar cases, and under precisely similar conditions; there must be the same age and constitution, the same cause and complications, the same surroundings.

Life is not long enough, cases of empyema are not numerous enough for an individual to collect a series of cases, which have been under his own care, large enough for statistical purposes; but if individuals will collect their cases and record them, there will, as times goes on, be material at hand for framing useful statistics.

The value of a series of cases is, in my opinion, much enhanced by its being composed of cases occurring consecutively in the practice of the recordor.

At the Liverpool meeting of the Association, in 1883, Dr. Eddison brought forward a collection of forty cases of empyema, which had been under his and his colleagues' care, and they are recorded in the JOURNAL for that year.

Mr. Norman Porritt has also given eleven cases in his work on the surgical treatment of intrathoracic effusion, but one cannot even observe ten cases of empyema without arriving at an opinion as to the various accepted views as to the treatment of the disease, and I now humbly give the views I at present hold on the subject. Given a case of empyema, I think we ought, at the earliest possible opportunity, to incise the chest and let out the pus.

As regards anæsthetics, I think their administration requires greater care than in other cases, and need not be pushed so far. I prefer chloroform to ether. For uncomplicated cases, especially in children, I think it may be safely used, but if there is any dread of an anæsthetic on the part of the patient, or any fear on the part of the surgeon, I think that freezing the skin with ice and salt, or by ether, suffices for the single incision. As to opening the chest, I think a single incision answers every purpose in most cases. As to the place of incision, I think it is best made at the back of the chest, below the angle of his scapula. In many cases the eighth interspace answers well, especially in children, but often the tenth interspace is necessary, and very often in long standing cases, where doubtless the base of the pleural cavity becomes lowered. In case No. 5 the dulness was most marked in the axilla, and Mr. Chavasse and I thought it best to make the incision there, thinking that the pus might be encapsuled.

I think it a wise precaution in all cases to use the aspirator first, to ensure the presence of pus at the spot to be incised, and to use its needle as a guide. As to antiseptics, I think, with our present knowledge, it is advisable to use them strictly for the first few days, and then, except in grave cases, to abandon the spray, and to continue the antiseptic applications. As to the drainage-tube, I advocate that the India-rubber tube be used, and that it be passed as far as it will go without force, and that it should be shortened as the cavity gets obliterated. If the cavity becomes septic and very fœtid, a second tube may be inserted by the side of the first, and carbolic lotion syringed in by one tube will come out by the other. I never syringe out the cavity unless, though septic, the discharge is very fœtid.

How long should a patient remain in bed? I think that if the incision is made in the back, the drainage is most complete when the patient is in bed. Hence, I think the patient should stay in bed until the discharge is very slight. As to excision of ribs, I may say that I have not yet found such a procedure necessary.

SURGICAL MEMORANDA.

RETENTION OF URINE: ASPIRATION WITH THE GUARDED NEEDLE.

SERGEANT W. came under notice at about 5.30 P.M. on the evening of October 7th, with complete retention of urine since 8 P.M. the previous evening. He had suffered from symptoms of stricture for some years, but never put himself under treatment. During a service of seventeen years, he had four or five attacks of gonorrhœa, none apparently severe. On examination, his bladder was much distended, and he was a good deal distressed from straining and anxiety. Full doses of opium, hot hip-baths, and catheters were patiently used by Dr. Crossle, of Newry, and myself. A very tight stricture, in the membranous portion of the urethra, was found, into which catheters would easily pass about one inch; they were firmly grasped, and, beyond a certain point, could not be got to move. The stricture was irritable and inflamed. It became clear that urine would have to be drawn off either through the rectum or above the pubes. In consultation with Dr. Crossle, the latter was selected, on account of the elements of spasm and inflammation in the case. I passed the aspirating needle, which I recently devised, and which has been several times noticed in the JOURNAL, with much ease, into the bladder; and then, guarding the point with the inside tube, which covers it, drew off over forty ounces of urine, and, owing to the safety ensured by the probe-pointed inner tube, was able to move the end about, and completely empty the bladder. The needle being the size of a No. 4 catheter, allowed the urine to trickle through with tolerable rapidity; but, to hasten the flow, I occasionally applied an aspirating syringe to the needle, for which it is adapted. As was hoped, the relief of the

distended bladder appeared to influence, favourably and almost at once, the spasm and inflammation of the stricture; for, during the night, he passed, by the urethra, over nine ounces of urine, and, day by day, urine passed more freely till, in four or five days, he was passing a good stream at regular intervals, without trouble. His health, which was bad, rapidly improved under dilute nitric acid and belladonna. On several occasions, catheters have been tried, but they never got beyond a certain point, where the point tended to pass, or rather turned, to the right, indicating probably an old false passage; there being a history of a stoppage some years ago, which passed off after a short time without aid. The points in the case appear to be the immediate relief of spasm and inflammation, by removing the distension of bladder; the great ease of affording relief and safety afforded by the use of the "guarded needle;" the total absence of any local symptoms at the seat of puncture; and the rapid improvement in the man's health.

J. W. L. HODDER, Surgeon-Major M.S., Bath.

FRACTURE OF THE STERNUM.

[Communicated by the Director-General of the Medical Department of the Navy.]

J. M., labourer at H.M. Dockyard, Chatham, aged 28, sustained a fracture of the sternum on August 24th, caused by falling from the staging on which he was working on to the sharp edge of a piece of angle iron which was lying on the ground. He struck the iron with the front of his chest, the height of the fall being twelve feet.

On his being brought to the surgery, there was found to be a complete transvere fracture of the sternum on a level with the fourth costo-sternal articulation, and apparently through the point of cartilaginous union of the second and third pieces of the sternum. The upper and lower fragments were freely movable; but there was little or no displacement, the seat of fracture being visible in the form of a slight angular protrusion, the ends of the fragments being tilted slightly forwards. The soft parts over the seat of fracture were much contused, and there was slight emphysema. The crepitus elicited by motion of the fragments was of a soft cartilaginous character, pointing to the evident position of the fracture. The fourth rib on the right side was also found fractured a small distance from its costo-sternal articulation. No other injuries could be detected. There was great dyspnœa, the fragments moving slightly during respiration. The heart's apex-beat could not be detected by digital examination.

WILLIAM EAMES, Surgeon R.N.

CONTUSION OVER THE SACRUM: SUSPECTED INJURY TO THE VESICULÆ SEMINALES.

G. H. came under my care August 28th, 1886. The previous day, while out riding, he had been thrown from his horse on to some hard ground. When I saw him, I found a severe contusion over the sacrum. There was great swelling and ecchymosis, but no signs of any deeper injury. Under rest and warm fomentations these disappeared in about a week; but, for some time afterwards, soreness and stiffness of the adductor muscles of both thighs remained. About ten days after the accident, he began to suffer from priapism, with nocturnal emissions. On the first occasion on which the latter occurred, he was greatly alarmed to find, on getting up in the morning, that his night-clothes were deeply stained with blood. On the second occasion I was able to examine the semen. It was of a deep reddish-brown colour, and appeared to consist of small semi-isolated masses. These showed little tendency to coalesce. Under the microscope, the colour was seen to be due to broken-down blood corpuscles. The emissions continued for about a fortnight, till the semen gradually became normal in colour and appearance; then they ceased. There can be little doubt that these symptoms were due to contusion of, and perhaps to rupture of a small blood-vessel within, the vesiculæ seminales. I believe they were quite independent of any injury to the spinal cord. The only treatment adopted was rest.

G. HARRISON YOUNGE, Surgeon M.S.,
Mecan Meer, Punjab.

TREATMENT OF HOUSEMAID'S KNEE.

WITH regard to the treatment of housemaid's knee, in the first two stages of the disease, surgical writers usually advise, after tapping by means of a small trocar or aspirator, the employment of pressure by means of strapping. It has been my practice not to use strapping, but a piece of lead about the size and thickness of a crown piece, wrapt in lint, and placed over the patella, and then firmly and equally to bandage the knee, which should be continued for about a month. Previous to tapping, the part should be painted with iodine, and also occasionally afterwards. I have not considered it necessary to confine the patient to bed longer than two days. I have treated bursæ on the back of the wrist on the same plan with satisfactory results.

GEO. SAUNDERS, M.D., Christchurch, Hants.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

BOROUGH HOSPITAL, BIRKENHEAD.

CASE OF POISONING BY PHOSPHORUS PASTE: DEATH ON THE FIFTEENTH DAY: NECROPSY.

(Under the care of Dr. HARRIS.)

[Reported by Dr. H. E. RICHARDSON.]

W. S., aged 32, ship's steward, a well-built, muscular man, about 5 feet 10 inches in height, was admitted on June 12th, 1886, about half an hour after swallowing the greater part of half an ounce of phosphorus paste (Roth and Ringeisen's).

The stomach was at once washed out with five or six basinfuls of warm water; three grains of sulphate of copper were mixed in a pint of warm water, and given to him to drink. It was immediately vomited. The fluid with which the stomach had been washed out had a strong smell of phosphorous, and was luminous in the dark. In the subsequent course of the case the most prominent symptoms were vomiting and depression, with for a short time a very slow pulse, 46.

Jaundice was first noticed, on June 16th, in conjunctiva, and the urine was of a dark red-brown colour, due to bile-pigment. It was acid, of specific gravity 1020, and contained no albumen. On the following day the jaundice was more marked, especially on the face and chest; the tongue was furred; there was some tenderness over the liver, but the area of dulness was not diminished. The vomiting continued: he passed 40 ounces of urine, of a brownish-black hue, in the twenty-four hours, and the motion passed, on June 18th, was very foul, and like chalk-and-water. The motions retained this character; the intensity of the jaundice increased, and there was tenderness over the liver. Nocturnal delirium subsequently became marked.

On June 22nd, the respirations had the so-called Cheyne-Stokes characters, and were only eight per minute. The pulse was 50. A round worm (Ascaris Lumbricoides), six inches long, was found in the vomited matter.

On June 24th, the temperature rose to 100.6°; the pulse was 120, and the respiration had risen to 26.

On June 25th, the temperature was 102.2°; the pulse 124, full, bounding; and the respiration 28 per minute, stertorous. The stupor in which the patient had previously remained was passing into coma. The motions and urine were passed involuntarily, and the perspiration was profuse. At noon, the temperature was 102° F.; at 3 P.M., 102.4° F.; at 8 P.M., 102.6° F.; at 11 P.M., 103.8° F. The pulse was then 162, and the respiration 44, stertorous. He was in a state of profound coma. At 1.30 A.M. on June 26th, the temperature was 105° F.; the pulse was 150, and the respirations 54. At 2 A.M., the temperature was 105.2° F.; and the pulse could not be counted. The coma continued until death. The temperature at 3 A.M. was 106° F.; at 3.30 A.M., 106.4° F.; at 4 A.M., 107° F.; at 4.30 A.M., 107.4° F.; at 5 A.M., 107.8° F.; at 6 A.M., 108.2° F.; at 6.30 A.M., five minutes after death, 108.6° F.

The necropsy was performed thirty hours after death. The skin, deeply jaundiced, was of a brownish yellow colour. The lungs, on section, had a black tarry appearance; and, on pressure, thick dark, frothy blood, mixed with minute oil globules, oozed out. The heart weighed 13½ ounces, and was very soft and flabby; its outer surface had a pale reddish yellow appearance. The endocardium, and the inner coats of the large arteries were of a mahogany colour, deeper staining being noticed here and there. The liver was much diminished in size, weighing only 42¾ ounces, of a drab mottled appearance, very soft and flabby, with thin edges, so that it could almost be rolled up; it was greasy looking. On section, it was found to be of a uniform brownish-yellow colour, bloodless, with abundance of free oil globules. The gall-bladder contained a little thin greenish fluid. The kidneys (weight—right, 8 ounces; left, 7¾ ounces) were very soft,

and their capsules loosely attached, so that they were easily peeled off. On section, the organs had a pale and oily appearance. The spleen weighed 5½ ounces: its substance was soft, and of a tarry and oily appearance as the lung. The stomach contained some fluid nourishment mixed with mucus; its coats had the general yellowish altered appearance, but no erosion or congestion could be observed. The brain was not examined.

On microscopical examination, the organs were all found to have undergone fatty degeneration. This was most marked in the liver; its cells had disappeared more or less completely, and in their places separate globules of oil were seen to be studded all over. The muscular fibres of the heart had lost the striated appearance, and were covered with minute molecules of oil. Extensive fatty change was noticed in the granular epithelium of the kidneys. All these sections for the microscope showed the deep brownish-yellow bile staining markedly.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 16TH, 1886.

J. SYER BRISTOWE, M.D., F.R.S., President, in the Chair.

Vegetable Tumours in Relation to Bud-formation.—A lengthy paper, written from the evolutional point of view, on vegetable tumours in relation to bud-formation, was read by Mr. ROGER WILLIAMS. Bud-formation in its simplest form, he said, was cell-multiplication by fission or gemmation. In the Thallophytes buds were represented by simple proliferous outgrowths of the fronds. The simplest buds consisted either of single lowly organised protoplasmic cells, or of groups of such cells derived from simple cells. In the higher plants a bud normally developed into a branch, but other formations might be due to disturbances of nutrition; adventitious buds had in fact been found upon almost every part of plants; they might arise wherever undifferentiated cells were present. Vegetable tumours were essentially abnormal bud evolutions. The tumours might be classified in three groups, of which specimens were shown. (1) Discontinuous or circumscribed, which first appeared as small globular bodies in the cellular tissue of the bark; (2) Continuous tumours (of hard wood) due to excessive local cell proliferation in the cambian layer; (3) Excrescences thickly studded with shoots and stunted branches, due to a combination of the influences leading to the formation of the two previous classes. The production of these growths of lowly organised proliferating cellular tissue, which subsequently underwent imperfect evolution, constituted the nearest approach in vegetable pathology to the sarcomata and carcinomata of animal pathology. The absence of infectivity was to be attributed to the want of a highly organised lymph-vascular system.—Mr. SHATTOCK thought the theory that these tumours were really abortive buds was generally accepted. The specimens presented by Mr. Stephen Paget to the Museum of the College of Surgeons were of interest because they bore out Cohnheim's view, with regard to the origin of the so-called congenital tumours. These vegetable tumours really arose from embryonic cells at the border of the buds.—Mr. STEPHEN PAGET referred to Mr. Jacobson's paper in the *Guy's Hospital Reports* on certain tumours in the parotid region, in which it was pointed out that they afforded a good example of Cohnheim's theory.

Cerebro-spinal Meningitis causing Œsophageal Abscess.—Dr. HALE WHITE showed this specimen, which was taken from the body of a girl, who was in Guy's Hospital for a month with retracted head, arching of the spine, cephalic and spinal pain, and other symptoms showing the existence of cerebro-spinal meningitis. About eighteen hours before death, a quantity of pus began to pour from the mouth, but no cause for this could be discovered; the pus trickled down into the lungs, and the patient died. At the *post mortem* examination, it was found that the spinal and cranial bones, dura mater, and cerebral vessels were all normal, without any trace of tubercle; there was abundant purulent meningitis of the base of the brain and the posterior surface of the spinal cord. Opposite the cricoid cartilage on its posterior surface was an oval ulcer, with its long vertical diameter measuring 1¼ inch. At the bottom of it, the cricoid cartilage was exposed, but was not necrosed. Opposite this ulcer was another on the posterior wall of the pharynx. There was some bronchitis, and the mitral valve was thickened. The rest of the body was healthy. The œsophageal ulcers were probably due to an abscess which had existed at the upper part of the œsophagus at its junction with the pharynx, and this bursting had caused the discharge of pus noticed during life. It appeared that the cause of the abscess was the extreme retraction of the head throwing the larynx backwards and the spine forwards, so that the friction of the cricoid cartilage against the spine during respiration set up the abscess. The case was also of interest because it was possibly an example of a rheumatic meningitis, for the patient had had rheumatic fever twice, and there was no cause obvious at the *post mortem* examination to account for the inflammation of the meninges.—The PRESIDENT asked whether the amount of pus in the spinal cord was large, for he recalled that he had published a case of suppurative meningitis of the spinal cord in which the pus found its way through the intervertebral foramina, and formed a chain of abscesses in front.—Dr. HALE WHITE said that the chief abscess in his case was on the front of the œsophagus at the cricoid cartilage; the posterior wall of the œsophagus was not perforated, and the spine had been carefully examined without any evidence being found that the pus could have come from the vertebral canal—a suggestion which was further negatived by the large quantity of pus which flowed from the mouth during life.

Hour-glass Contraction of Stomach.—Mr. LEOPOLD HUDSON showed a specimen of hour-glass contraction of the stomach from a woman, aged 59, who had been under Mr. Pearce Gould's care for scirrhous tumour of the breast. The constriction in the centre of the stomach was large enough to admit the thumb; on the distal side of the stricture there was a callous ulcer, and on the proximal side a small cicatrix, both on the smaller curvature. The cardiac sac was dilated. Twenty cases of hour-glass contraction were referred to; in nine, the mucous membrane showed no signs of present or previous ulceration. Mr. Hudson considered that the condition was congenital, due to arrest of development at a point where temporary physiological constriction was common, the ulceration being secondary, and caused perhaps by the irritation of the gastric contents when churned about by disordered peristalsis.—Dr. NORMAN MOORE thought that there was so little thickening about the stricture that it could not be due to a fœtal band, but was an example of a tendency towards the subdivision of the stomach, seen in some mammals. In one case he had seen a dilatation at the cardia which closely resembled that seen in the ruminants.—Mr. ROGER WILLIAMS observed that the constriction always occurred in one position, where a temporary contraction was seen when a necropsy was made soon after a meal had been taken. There were two other seats—one near the pylorus, and the other separating the great *cul-de-sac* from the rest of the stomach. The first three stomachs of the ruminants were, in fact, œsophageal dilatations, and, therefore, could not be used to explain the occurrence of constriction.—Mr. EVE pointed out, as militating against the theory advanced by Dr. Norman Moore, that congenital strictures occurred in other parts of the intestinal canal.—Mr. HUDSON said, in reply, that he had not meant to assume that there was any lymph-band, but that there was an arrest of development.

Aneurysm of the Undefended Space.—Dr. NORMAN MOORE showed a specimen of aneurysm of the undefended space. The aneurysm projected as a three-lobed tumour into the right auricle just above the attachment of the tricuspid valve. Its external opening was into the sinus of Valsalva, and not into the heart. The specimen was obtained from the body of a man, who died at the age of 21 years after six attacks of rheumatic fever. There was well marked stenosis of the mitral valve, some stenosis of the tricuspid valve, and the aortic valves were partly destroyed and fringed with numerous growths. The aneurysm was clearly an acute one; signs of endocarditis were present: it was partly filled with fibrin, and had a roughened sac.—Dr. SIDNEY COUPLAND thought that the specimen was more properly described as an example of aneurysm of the sinus of Valsalva.—Dr. ANGEL MONEY did not think it necessary that the aneurysm of the undefended space should open directly into the ventricle. There was a specimen of aneurysm of this space in the museum of the Hospital for Sick Children in which the walls of the aneurysm were composed of the opened out laminæ of the septal cusp of the tricuspid valve.

Carcinoma of Vesicula Seminalis.—Mr. HURRY FENWICK showed a case of carcinoma of the left vesicula seminalis, which had probably originated in the posterior part of the left lobe of the prostate, and had involved the bladder and the vesicles secondarily. The chief symptoms, which were of nine months duration, were great frequency of micturiton, and finally incontinence. Death was due to frequent and profuse attacks of vesical hæmorrhage; no growth was observed in the urine. No secondary deposits were found on *post mortem* examination.

Imperforate Anus.—Two specimens of imperforate anus were shown by Mr. D'ARCY POWER. In the first case, a male infant, who survived twenty-three days, the rectum opened by a small aperture into the prostatic portion of the urethra. In the second case, a newly-born female child, the rectum opened into the posterior wall of the vagina.

—Mr. SUTTON asked whether a prolongation of the rectum—the representive of the post-anal gut leading towards the coccyx—had been searched for.—Mr. STEPHEN PAGET referred to Mr. Horsley's case, in which a minute congenital canal led up from the central point of the perinæum towards the intestinal sac.—Mr. POWER, in reply, said that he had made a careful examination without discovering any trace of a post-anal gut.

Cystic Tumour of the Cæcum.—Dr. HARRINGTON SAINSBURY showed a specimen of cystic tumour of the cæcum from a patient who died of typhoid fever. The tumour contained a thick, viscid (mucoid) fluid. Externally, it was covered with mucous membrane; internally, it was lined with a serous layer. It occupied and distended the first portion of the ascending colon, and appeared to spring from the anterior wall of the colon, just at the level of the upper lip of the ileo-cæcal valve. The microscope showed the mucous membrane covering the cyst to be similar to that lining the large intestine. He thought that the probable interpretation was that suggested by Mr. Sutton, namely, cystic dilatation of one of the lips of the ileo-cæcal valve. The tumour was not to be classed as an enterò-cystoma.

Card-Specimens.—Dr. T. D. SAVILL: Meningeal (Arachnoid) Hæmorrhage from a woman, aged 69.—Dr. HENRY MAUDSLEY: Embolism of Basilar Artery, with Rupture of Left Posterior Cerebral Artery.—Mr. SHATTOCK: Chondrifying Sarcoma of Bladder.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, NOVEMBER 11TH, 1886.

J. W. HULKE, F.R.S., President, in the Chair.

President's Address.—Mr. HULKE, on taking the presidential chair for the first time, expressed his regret at not having been able to be present at the first meeting of the Society. He hoped that a brief sketch of the changes which had occurred in ophthalmic practice within his own recollection would be of interest. In the days of his pupilage, the opportunities of studying eye diseases were but few; of the general hospitals, Guy's alone had a special department. The Royal London, the Westminster, and the recently instituted Central London, were the special hospitals. The ophthalmoscope was then unknown, and its discovery a little later caused a revolution in the treatment of diseases of the eye, and he well remembered the pleasure with which he first saw the fundus through Helmholtz's original ophthalmoscope. Later on, there appeared the instrument of Anagnostaki, and subsequently Zehender's combination of a convex mirror and collecting lenses. Guthrie was the leading surgeon at the Westminster Ophthalmic when he began his studies in 1848; he was a strict disciplinarian, a clear-headed man, and an energetic, prompt, and dexterous operator. His method of treating severe trachoma by nitrate of silver and lard was widely known, the preparation being called Guthrie's black ointment. For entropion he used to make a scar parallel to the diseased lid with fuming nitric or sulphuric acid. In those days, amaurosis, or one form of it, was supposed to be due to constriction of the optic nerve by the muscle at the apex of the orbit, and accordingly tenotomy of all the recti was performed for its relief. The old operation for squint was very different from the subcutaneous method of modern days. Cataracts were then always treated by discission—an operation that was modified by Dr. Jacob, of Dublin. Keratonysis had from very early days been the recognised operation for the soft cataract of early life, and still held its grounds. He inclined to the belief that these cataracts were congenital rather than infantile. Extraction was regarded as the test of dexterity in an operator; and, as then performed, required far more dexterity than in the operation of their own days, the linear extraction of von Gräfe. Amongst other operations, he mentioned iridesis and iridodesis, which, as performed by its inventor, the late Mr. Critchett, was a beautiful operation, but in other hands had not proved a great success, and had fallen into disrepute on account of the danger of iridocyclitis. A. von Gräfe's great discovery of iridectomy as a means of permanently reducing the tension in glaucoma was referred to as the greatest advance of modern times, which would make Gräfe's name famous for ages to come. A brief account of the old method of excising the eyeball, and of the changes which have followed the introduction of anæsthetics, brought this interesting address to a close.

Sarcoma Growing in the Dural Sheath of the Optic Nerve.—Dr. BRAILEY showed a microscopical preparation and drawing of this specimen. The patient was a woman, aged 42, whose left eye protruded for ¾ inch directly forwards. Both lids were large, flaccid and doughy, apparently from enlargement of the subcutaneous veins. The conjunctival vessels on the outer side were also enlarged. The eye-movements were much limited to the inner side, and still more so in other directions. The pupil was without direct reflex or associated action, but the indirect reflex action was present. P. L. was wanting. The optic disc was rather raised, slightly ill-defined and whitish. Its vessels were enormously tortuous, lying in loops on its upper portion. Some small white striated inflammatory patches were found just beneath the disc margin. The other eye and the rest of the body showed no evidence of any morbid condition. The mass was excised together with the eyeball. It was found to surround the optic nerve, and to be much thicker on its outer side. Posteriorly the nerve tapered off to a fibrous tract in the substance of the tumour. The growth measured about 1¼ inches in each diameter, and occupied the space within the recti muscles, from the apex of the orbit close up to the eyeball. It was firm and pretty smooth, and but scantily provided with blood-vessels. Microscopically, it was connected in its origin with the extreme peripheral part of the dural sheath. Fibrous trabeculæ started from the latter, and formed by their anastosmosis loculi, in each of which was imbedded a rounded abundantly-nucleated mass. The nuclei were large and oval, and were imbedded in a scanty finely-fibrillated basis substance. They had a whorled arrangement, as if they had been originally deposited round the sheath, or in the place of a blood-vessel. Two similar rounded, nucleated, whorled masses had extended into the optic nerve in the place of the central artery and vein respectively. Passing further from the dural sheath, the trabeculæ generally became slighter, and the nucleated masses larger and more rounded. The author thought that any tumour of the optic nerve-sheath was a rarity, and he never remembered to have seen one presenting this character. It must be described as a fibro-sarcoma. Its history, commencing eight years previously, with very gradual proptosis and early loss of sight, and afterwards marked by gradual painless increase, appeared to him remarkable in connection with the abundantly nucleated character of the mass, and the absence of deposits in other parts.—The PRESIDENT commented on the long time which these tumours took to grow. In the museum of the Moorfields Eye Hospital there was, he said, a very similar tumour; it was removed from a young woman, aged 22, who came with extreme proptosis, and was quite blind. The mass was found to be adherent to the dural sheath of the optic nerve, and was a sarcoma fibrous rather than cellular. It had been growing for twelve or fourteen years.—Dr. SHARKEY said that such tumours were certainly very rare. Billroth had pictured one in his surgical pathology. He remembered to have seen one case in which, in the frontal lobe of the brain, there was a similar spindle-celled growth with concentric arrangement of cells.

Cases illustrative of the Treatment of Glaucoma—Mr. G. E. WALKER (Liverpool) showed some patients. The first was a man, aged 43, who was seized with acute glaucoma in August, 1885. His illness commenced with chill, pain in the left side of the head and in the left eye. He was treated for two months with drops, during which time his sight deteriorated, but pain became less. A second attack was also similarly treated for other two months, after which sight was completely lost. In April, he came under Mr. Walker's care, when his sight had been extinct for a fortnight, and the eye stony hard; eserine was dropped into the eye, and cyclotomy done with the narrowest possible knife; the pain was stopped at once and finally. On the third day after the operation, and subsequently, eserine drops were used. There had been no pain since, and the tension of the eye was almost normal. Mr. Walker then proceeded to refer to two cases of glaucoma treated by him by convex lenses that he had brought under the notice of the Society in April, 1886. One of them was seen in Dublin on August 30th, and was found to be quite well, and had remained so since. The other who was shown was the same patient who had been brought to London at the time of the former meeting, but who had an attack of glaucoma on the evening of the meeting, and could not be shown. His symptoms had been relieved by his wearing a convex glass of 2 D.—Dr. BRAILEY said that he had seen the last mentioned case in April last, and that he could confirm the statement that the patient was then recovering from an attack of acute glaucoma; he was a very intelligent man, and was wearing glasses of + 2D. This treatment was, however, by no means original; and, up to a certain point, it was no doubt an effective means of prevention. He agreed to some extent with what Mr. Walker said about iridectomy, which he held to be harmful in certain cases of chronic, not severe, glaucoma.—Mr. NETTLESHIP asked Mr. Walker whether he considered the right eye free from glaucomatous symptoms. The tension was increased, the disc was cupped, and the retinal veins were distended. To his thinking, the case was not cured or free from risk.—Mr. MCHARDY thought

the patient presented all the ordinary symptoms of chronic glaucoma; there was increased tension and cupping, which certainly was not physiological. He wanted to know what proof there was that the left eye had failed three or four days after the iridectomy; it had, perhaps, got into a bad state before the operation. It was quite common in these cases for the first eye to fail and the second to do well. He hoped that they would hear more of the case subsequently, and see some charts of the field of vision.—Mr. HUTCHINSON said that, in regard to the last case, he was afraid the news was too good to be true. Cases would be oftener cured if it were not so, for it was the almost constant practice of patients to use convex glasses in an early stage of the disease.—Mr. WALKER, in reply, said he held that these cases proved the correctness of his view that excessive action of the circular ciliary fibres was really the cause of glaucoma. He agreed with almost all that Mr. Nettleship had said, and did not deny that the attacks had left something, but that something was already there when he first saw the patient, and it had not increased. As to the iridectomy in the other eye, he had acknowledged that it was very well done, but he held that a well performed iridectomy caused increased likelihood of glaucoma. He would report the case again. As to the question of originality raised by Dr. Brailey, he had conceived the idea more than ten years ago, and had spoken of it at Moorfields again and again, and it was in print eight years ago. If anyone could show a claim prior to this he would abandon his.

A Boy with Unilateral Proptosis.—Mr. G. E. WALKER also showed a boy, aged 16, with a certain degree of proptosis of the right eye. His history was that he had slipped down some stairs, and had hit his head so as to render himself unconscious for three days. There had been no bleeding from the ears or nose, or other proof of fracture. On recovery, he noticed a swishing noise in his head, and, five months later, his right eye became engorged and protruded; the left also was for a little while unduly engorged. The disease had been slowly progressing since it was first noticed. The diagnosis lay between a communication between the artery and the cavernous sinus and a true aneurysm. He had been in favour of tying the common carotid artery, but Mr. Hutchinson and Mr. Holmes had advised delay, and he was anxious to hear the opinion of the members of the Society.—Mr. HUTCHINSON thought that Mr. Walker deserved the very highest praise for his zeal in bringing from so great a distance on this and on many previous occasions cases to illustrate points in his practice. He was very much interested in the case of proptosis, having seen the boy two months previously. The diagnosis lay between an aneurysm of the carotid artery and a communication between the artery and vein; the turgescence of the retinal veins was very marked, and from this and other facts he believed there was a communication between the artery and the cavernous sinus. It was a question what would be the advantage and what the degree of success from ligature of the common carotid; his own opinion was that ligature would not succeed. It was to be remembered, also, that cases sometimes lasted a great many years without serious inconvenience, and the boy was in good general health, and did not really suffer from more than the discomfort occasioned by his appearance and the noise in his head.—Dr. BRAILEY had seen a very similar case in which double proptosis had come on after an injury.—Mr. EALES mentioned a case in which an orbital aneurysm developed after an injury to the head in a coal-mine, and a large visible pulsating tumour, with a murmur and thrill in it, rapidly appeared. Iodide of potassium having failed, the question of operation was raised, but it was decided to wait, and, before the next consultation, the noise in the head suddenly ceased, and the pulsation, murmur, thrill, and proptosis disappeared. It was evident, therefore, that spontaneous cure might take place. He asked whether, in this case, digital pressure had been tried.—Mr. FROST referred to the case he had shown some years previously, in which the symptoms had existed for over thirty years.—The PRESIDENT said that, five years previously, he had tied the common carotid artery in a case of this kind, but the symptoms had reappeared within the last year, and he had seen that happen before. The diagnosis, he thought, depended upon the character of the murmur heard; if continuous, it indicated arterio-venous communication; if intermittent, an aneurysm. He agreed with Mr. Hutchinson as to the chronic nature of the disease. A case of Mr. Bowman's showed the difficulties of diagnosis. A woman who had all the symptoms of orbital aneurysm had her common carotid artery tied, and died a few days later from secondary hæmorrhage. On examination, it was found that the symptoms had been due, not to aneurysm, but to thrombosis of the cavernous sinus.—Mr. WALKER briefly replied.

Mr. LANG showed three patients: 1. A man, aged 60, with Rodent Ulcer; 2. A girl, aged 10, with Sarcoma of the Orbit; 3. A girl, aged 16, with Lupus of the Conjunctiva.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 12TH, 1886.

THOMAS BRYANT, F.R.C.S., President, in the Chair.

A Case of Excision of the Larynx for Epithelioma, with Death from Exhaustion on the Eighth Day after Operation.—Mr. HENRY MORRIS described the case of a man, aged 59, who for over three years had suffered from laryngeal obstruction, gradually increasing. Tracheotomy had been performed five months previously to the laryngectomy, but, owing to the downward extension of the growth, the tracheotomy tube became a source of continual irritation and distress, though absolutely necessary for respiration. It proved necessary, for his relief from constantly impending death from dyspnœa, to excise the whole larynx. The patient did well for a few days, but sank on the eighth day from exhaustion. The whole of the growth had been removed, and there were no secondary deposits in any part or organ. He thought that the total extirpation of the larynx ought to be done very seldom; and not until all less severe measures had been tried and failed. There were, however, two conditions which indicated and justified the operation:—(1) Where the disease was entirely confined within the precincts of the larynx, and could, therefore, be completely removed; and (2) where, after tracheotomy, the sufferings of the patient were persistent, and suffocative cough and dyspnœa could not be relieved by other means. Both these conditions existed in the above case, and, though death was the final result, the relief of urgent symptoms which was afforded by the operation was very great.

Partial Extirpation of the Larynx for Epithelioma of the Left Ventricle of Morgagni: Recovery.—Dr. FELIX SEMON described the case. The patient was a barrister, aged 52, whose only complaint was loss of voice, which had gradually developed within the course of a year from an originally slight hoarseness. On laryngoscopic examination nearly the whole of the left vocal cord appeared to be embedded in an irregularly longitudinal greyish white, warty tumour of about the size and form of a small bean. Microscopic examination of a small fragment of the tumour, removed by intra-laryngeal operation, showed it to be a cornifying epithelioma. Extirpation of the left half of the larynx, with the exception of the cricoid cartilage, was successfully performed by Dr. Eugen Hahn. The tumour was found to spring with a broad pedicle from the left ventricle of Morgagni. The patient made a good recovery, which was only retarded by an extensive bronchial catarrh and slight pleuritic symptoms. These were probably due to the escape of some blood into the lower air-passages during the operation. At present, *i.e.*, five months after the operation, the patient is quite well, swallows with ease, does not wear a tracheal cannula, is free from any trace of recurrence, and his voice has so surprisingly recovered, though he possesses but one vocal cord, that he wishes to resume his practice at the bar. Dr. Semon dwelt especially on the necessity of a thorough occlusion of the lower air-passages before the latter stages of the operation were proceeded with, and corrected a misapprehension of some observations he had made in the discussion on extirpation of the larnyx during the Seventh International Congress. He was, he said, by no means an opponent *à principio* to extirpation of the larynx in really suitable cases of laryngeal carcinoma, but he opposed the formulation of the indication that "extirpation of the larynx was required as soon as the diagnosis was clearly made," because in a large proportion of cases the diagnosis could only be established with certainty at a time when, in his opinion, the operation no longer offered any reasonable chances of success. This question was discussed at some length, and Dr. Semon finished by saying that he entirely agreed with Mr. Butlin's dictum, that in the immediate future extirpation of the larynx for carcinoma should be practised only for intrinsic carcinoma, which was still limited to the interior of the larynx. Hence early diagnosis, if possible, by means of intra-laryngeal removal and microscopic examination of a small fragment of the new growth was of the highest importance.

A Case of Epithelioma of the Vocal Cord for which Partial Excision of the Larynx was Performed.—Mr. BUTLIN brought forward this case. It was that of a gentleman, aged 50, who suffered from hoarseness of two years' duration. He had a warty growth on the left vocal cord, which appeared to be non-malignant, although it presented some suspicious characters. At different times, during a period of six months, portions of the growth were removed with forceps. Recurrence took place, and the cord exhibited impaired mobility. After a consultation with Dr. F. Semon, it was decided to excise a portion of the larynx. The operation was performed by Mr. Butlin on June 26th. The left half of the larynx was removed, together with the true and false cords of the right side; for the disease had extended on the true cord, and along its under aspect, so that it could not be perceived with the laryngoscope. Hahn's tracheotomy-tube was used during the

operation, and was left in for two days. At the end of two days, it was replaced by a smaller tube. During the first few days after the operation, the patient was fed through a tube by means of a syringe. The temperature never rose over 100°; and the pulse was, almost from the first, from 80 to 84. On the fifth day, the patient began to swallow. On the seventh day, the tracheotomy-tube was permanently removed. Three weeks after the operation, he drove to Wimbledon; and, after a week at Wimbledon, returned to his home in the country. The chief, and, indeed, only trouble from which he suffered, was cough, which commenced as soon as the large tube was replaced by a smaller tube, but which gradually became less distressing, and finally ceased within a few days after the permanent removal of the tube. He was last seen by Mr. Butlin on September 28th, when the wound was healed, with the exception of a little sinus at the lower part. There was no sign of recurrent disease, or of affection of the glands of the neck. His general health was excellent; and he was able to speak in a gruff whisper, very loud and distinct. The points to which the author drew attention were the rarity of the operation in England; also, the reasons which had led him to perform the operation—namely, the intrinsic origin and limited extent of the growth, the absence of lymphatic affection, the good health of the patient, and the belief that the excision might be limited to half the larynx. Particular attention was directed to the fact that the soft parts were raised off the cartilage on the right side without removing the framework of the larynx. The cough which troubled the patient was attributed to the fact that the second tube was too small, and it was suggested that a larger tube would prevent the occurrence of such a cough in other cases. The manner of feeding the patient during the first few days was alluded to; and, last, the power of producing a hoarse whisper after removal of the true and false cords from both sides was mentioned.—The PRESIDENT, on behalf of the Society, thanked the authors for their interesting papers. He thought the recital of operations such as these would rather have startled the founders of the Society, could they have been present. Though the cases were not all successful, they yet held out a hope that such operations might in the future be resorted to with much success.—Mr. LENNOX BROWNE inquired of Mr. Morris at what part of the trachea in his case tracheotomy was performed; he thought it should be done as low down as possible, and at the commencement of the other operation—not a long time beforehand, as had been suggested. This made one operation in the case instead of two. He also thought it wise to make a careful microscopical examination of neoplasms of the larynx, but he deprecated entirely frequent examinations of such cases, as the character of the case was liable to be changed—possibly rendered malignant—by constant interference. The opposition to the operation which he had formally expressed he was ready now in some measure to withdraw. These papers showed the great advance recently achieved in this branch of surgery. He thought it rare that intra-laryngeal cancer was confined to the interior of the larynx. As to the final results in the cases described in the two last papers, sufficient time had probably not yet elapsed to show that the cases had been completely cured.—Mr. FENWICK said that he had seen Professor Thiersch, of Leipsic, perform the operation in two cases. In each, tracheotomy was done three days beforehand. In the first case, there was extirpation of the larynx and pharynx; and the patient subsequently lay with two tubes projecting from the side of his neck, one fixed into the trachea, the other into the œsophagus for feeding purposes.—Mr. PICK had once done a total extirpation of the larynx, and regarded it as a terrible proceeding. The growth was first thought to be a papilloma, but eventually turned out to be an epithelioma. The patient would not at first consent to an operation, which would then have been a partial extirpation of the larynx. But, months afterwards, he consented, and then a total extirpation was necessary. He shortly afterwards died. In another case he had stripped off the internal soft parts, and left the cartilaginous walls of the larynx. Although the whole of the disease was thereby removed, it recurred in two months' time, and, in four months after the original operation, the patient died. As to the feeding of the cases after operation, he thought the patient's comfort was increased if a soft tube were introduced through the nostril down the pharynx to the stomach, and the patient fed through the tube, which might be retained *in situ*. In a case of cut-throat in St. George's Hospital, in which this was done, the tube remained in position for twelve or fourteen days; and the patient was fed by means of a syringe, that pumped the food into the stomach through the tube. This gave rise to no irritation.—Mr. H. MORRIS said that the tracheal rings divided in the tracheotomy performed upon his case were the first and second; that point was quite far enough away from the new growth to warrant the opinion that the disease would not reach it. He had used one of the soft tubes known as "Durham's tube," for the feeding, as recommended by Mr. Pick, but the patient could not bear it left *in situ*. He had originally looked to carry on the feeding by the rectum, but it had, unfortunately, failed. A suggestion had been made, that only those cases should be operated upon in which a successful result could reasonably be expected. But the suffering experienced by his patient was so great, that he was desirous of undergoing almost any operation that any one could suggest as offering any chance of relief. In the future, such a case would probably be cured, as the disease was entirely in the larynx. He thought at present all cases of this operation, whether successful or unsuccessful, should be recorded. In many countries, it was said, the operation had not yet been done; but could one be quite sure of this? If any successes could have been recorded, they would, doubtless, have heard of them.—Dr. FELIX SEMON thought that if every case of the disease were operated upon without a selection being made, the mortality would, in all likelihood, be as high as 80 or 90 per cent. No surgeon could then conscientiously recommend the operation to his patient in the face of such statistics. Even now most patients refused the operation, if the possible and probable results were plainly laid before them. Only the most favourable cases should be selected for operation.—Mr. BUTLIN had suspected from the first that his own case was one of malignant disease. He would not restrict himself to merely scraping away the disease, but would cut away the affected tissues with knife and scissors, and scrape the cartilage, if necessary. With regard to the general statistics of complete excision of the larynx for carcinoma, Hahn's tables only mentioned one case in which the patient was alive and well more than two years after the operation; and there were only six cases in which the patient was alive and well more than a year after the operation. Thirty of the sixty-five patients had died of results of the operation. In one case, the later result was not known; two died of pneumonia at the end of a few months; twenty died within six months, of recurrence of the disease. The remainder were alive at the end of from six months to two years. Complete excision for carcinoma should only be practised in very rare instances. The mortality due to the operation was large, the prospect of complete cure very small, and the patient might be less comfortable after the operation than before it.

Living specimens.—The following were shown:—By Mr. R. W. PARKER: (1) Congenital double talipes calcaneo-valgus, and genu recurvatum. (2) A girl, aged 13, whose patella had been removed for primary sarcoma. (3) A girl showing the result of arthrectomy for tubercular disease of the synovial membrane.—By Mr. A. PEARCE GOULD: A case of congenital fusion of the fourth and fifth metacarpal bones with deficiency of the right fibula.—By Sir HENRY THOMPSON: A man from whom a vesical tumour had been removed.—By Mr. G. H. MAKINS: A case of traumatic cephal-hydrocele.—By Mr. PERCY KIDD: A tubercular tumour of the larynx.—By Dr. SAMUEL WEST: An epitheliomatous tumour of the larynx.

Several papers were postponed until the next meeting.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 15TH, 1886.

Mr. R. BRUDENELL CARTER, F.R.C.S., President, in the Chair.

Rare Case of Epilepsy.—Dr. HUGHLINGS JACKSON's paper is published at page 962.

Production of Epilepsy in Guinea-Pigs.—Mr. VICTOR HORSLEY said that the epilepsy induced by Dr. Brown-Séquard in guinea-pigs was essentially of momentary duration, lasting, as a rule, only a few seconds, just as Dr. Jackson had described as occurring in the boy. These fits were first produced by performing semi-section of the spinal cord. Later on, it was found that they could also be produced by pinching the sciatic nerve, and this method was even more effectual than the other. The fits had a definite course; immediately after pinching the skin, there was a momentary interval during which the animal appeared dazed or squeaked, the strength of the squeak bearing some proportion to the fit which was to follow; then came a period of tonic spasm, affecting various parts of the body according to the mode of production; finally, a period of clonic contractions. A series of instantaneous photographs were projected on to a screen, showing the different stages of fits in guinea-pigs, and Mr. Horsley called attention to the nature and succession of the contractions. He asked whether these fits were to be considered neuroses, or whether the condition was secondary to some vaso-motor change due to irritation of the vaso-motor centre? Dr. Brown-Séquard had shown, he said, that irritation of the vaso-motor centre made no difference in the occurrence of the fits, nor could any change be detected, even with a magnifying glass, in the vessels of the pia mater during a fit. Further, the time

which elapsed between the touch and the fit was much too short to permit of its being dependent on vaso-motor changes. He thought it was a neurosis. It was clear that, consequent on stimulation, the right hemisphere was thrown into activity, and the left hemisphere became involved. If a slight fit were provoked in a guinea-pig, only the limb pinched was convulsed, and this pointed to one hemisphere only being involved.—Dr. HADDEN mentioned the case of a man, aged 34, who had received a shot in the calf of the left leg in Zululand. Four months later, the man became subject to severe epileptic attacks, provoked by pressure on the cicatrix. On his return to England, his sciatic nerve was cut down upon and stretched, and the operation was followed by cessation of the fits. Seventeen years later, the fits again showed themselves, but were relieved by a repetition of the treatment. The fits began with pain in the cicatrix, passing upwards, and followed by convulsions of the left leg, arm, and face.—Dr. HUGHES BENNETT alluded to the case of a man who had received a blow on the side of the head, followed by epileptic fits and acute mania. These fits were invariably preceded by visual aura, and could be produced by pressure over the site of injury, which corresponded to the angular gyrus. Six years after the onset of the fits, three of which had been spent in an asylum, on account of the mania which followed the attacks, Mr. A. Pearce Gould, at his request, trephined over the spot; nothing abnormal was found either in the brain or membranes, and a blunt probe was passed in different directions into the brain-substance without affording any clue to the cause of the fits. The man made a good recovery, and, what was perhaps more remarkable, the fits did not return.—Dr. EWART mentioned a case in a young girl, who, after a series of severe convulsions, was found to be partially paralysed on the left side. The fits did not recur for some time, and then it was noticed that they generally came on when the child's attention was not engaged. In the hospital they practically disappeared. These fits were momentary, and, from their not being preceded by any aura, led to serious bruises and cuts from falls.—Mr. R. W. PARKER alluded to a man who suffered from fits consequent on a wound in the thigh, which disappeared after amputation had been performed.—The PRESIDENT said that he remembered a case in which a woman suffered from convulsive attacks, which she attributed to a damaged and useless eye. On the removal of the eye, the fits ceased.—Dr. JACKSON, in reply, said that the localisation of the diseased area in these cases was purely a matter of speculation. He thought it was probably in the medulla, seeing that the fits could be produced when the higher centres had been cut away.—Mr. VICTOR HORSLEY said his efforts were directed to the localisation of the lesion, and the evidence seemed to point to implication of some portion of the cortex as well as the medulla.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, NOVEMBER 4TH, 1886.

J. HUGHLINGS JACKSON, M.D., F.R.S., President, in the Chair.

CLINICAL EVENING.

Peripheral Neuritis.—Dr. BUZZARD exhibited a patient, a carpenter, who had been affected with paraplegia, of neuritic origin. He had been exposed to wet and cold in September, 1885. This was followed by pain and weakness in the right, and then in the left thigh, with some tenderness on pressure. In three months he had lost power so that he could not walk; he complained of numbness and tingling, and the soles of the feet were tender; sometimes he also had tingling in the hands. In March, 1886, he was able to get about on crutches, but did not raise the toes in walking. The knee-jerk was absent. The muscles in the front of the legs did not respond to a very strong induced current, its application not being even felt. The peronei acted slightly, the calf-muscles still better, those of the thigh reacting normally. Slight reaction returned in the anterior tibial muscles, a stronger current being required when the negative pole was placed on the muscle. Steady improvement took place. There was slight plantar-reflex, but all the superficial reflexes were normal, and the vesical functions were not in any way affected. All portions of the cord, therefore, were probably intact. A large quantity of urine was passed, which contained sugar. Treatment had consisted mainly in the application of the constant current. The patient could now walk a mile, and was still improving. Dr. Buzzard pointed out that the local pain and tenderness, the loss of electrical reaction and of pain in the affected muscles, all combined to indicate peripheral neuritis, while the presence of the superficial reflexes was inconsistent with a lesion of the cord sufficiently grave to produce the other symptoms.—Dr. D. B. LEES exhibited a case for diagnosis between peripheral neuritis and tabes dorsalis.—The PRESIDENT thought that, in future cases, the possibility of peripheral neuritis should be born in mind. The new name, neuritic paraplegia, was quite justified as descriptive of a fairly common class of cases.

Paraplegia in Pott's Disease.—Dr. HUGHLINGS JACKSON showed a boy, aged 12, recovering from a second attack of paraplegia associated with Pott's disease of the spine. The prognosis in such cases was good when rest was enforced. He also exhibited a boy, aged 11, who had become paraplegic in September, 1884, in consequence, it was supposed, of a transverse myelitis. There was no discoverable disease of the vertebræ. He was admitted into the London Hospital in January, 1885, without a trace of movement in the legs, and extreme rigidity. Not until October, 1885, was the slightest movement observed, and then only in the toes. From that time improvement had been steady, but the boy could only just walk now. Dr. Hughlings Jackson remarked on the great length of time during which a patient might remain paraplegic and yet recover, sometimes as long as twelve months. He trusted to rest in bed, not thinking that any drugs or local applications to the spine had any beneficial effect upon the spinal cord disease. He hoped, at a subsequent meeting, to exhibit the patients, both walking well.

Pityriasis Versicolor.—Dr. SIDNEY PHILLIPS showed a case of pityriasis versicolor in a child. The boy, aged 7 years 9 months, exhibited symmetrical patches of a fawn colour on the chest and back. Scrapings from the patches were found to consist of mycelium and spores. There was no ringworm of the scalp, nor any history of its existence. Dr. Phillips believed it to be a genuine case, notwithstanding the rarity of the affection in children.—Dr. THIN threw some doubt upon the diagnosis, and pointed out that the disease was equally uncommon in very old as in very young people.

Dyspnœa and Stridulous Inspiration.—Dr. W. EWART exhibited a case of dyspnœa with metallic cough and stridulous inspiration. The patient, a woman, aged 36, had suffered from cough for ten months, at first uncomplicated with dyspnœa. As the cough became more paroxysmal, the difficulty in regaining breath was proportionately increased. Inspiratory dyspnœa also followed upon any severe exertion. The physical signs were dulness in the upper sternal and parasternal regions, especially on the right side, and dulness in the right interscapular region. In all these places, there was tracheal breathing, and also in the left upper interscapular region. The patient had had syphilis, and might, therefore, be the subject of cicatricial bronchial stenosis. This alone, however, would not explain the presence of dulness, which was more probably due to enlargement of bronchial glands, from syphilitic or other cause, which were exerting pressure upon the bronchi with the above results.

Chylous Ascites.—Dr. ROBERT MAGUIRE showed a case of chylous ascites in a man, aged 42, who had suffered from œdema of the feet twelve months before admission into hospital, but this had subsided with rest in bed. Nine months later, he was seized with sudden pain in the epigastrium, which, in less intensity, lasted for five weeks. Two months later, the abdomen began to enlarge. There was history of alcoholism, but not of syphilis, and the patient had never lived out of England. On admission, there was general distension of the abdomen with fluid, enlargement of superficial veins and of spleen, but not of the liver; 220 ounces of milky fluid were removed by tapping. The fluid was slightly albuminous, contained a large amount of fat and peptones, and did not coagulate on standing. Fat-globules, granular matter, and leucocytes appeared under the microscope. In three weeks' time, 218 ounces of similar fluid were removed; the fluid did not return, and there was then discovered prominence in the epigastrium, with some increase in the liver-dulness. Œdema of the legs still remained. Dr. Maguire diagnosed cirrhosis of the liver, with some inflammatory material behind it, pressing upon the vena cava and the receptaculum chyli, causing rupture of the latter. It seemed very anomalous, however, that lymph, which ordinarily flows under such very slight pressure, should in these cases accumulate to such an extent as to burst both the thoracic duct and the peritoneum.—Dr. EWART believed that the collective force exercised by the muscular coats of the villi might be sufficient to cause the rupture, although that exercised in each individual villus was very small.

BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, OCTOBER 27TH, 1886.

Mr. LAWSON TAIT, F.R.C.S., President, in the Chair.

Specimens.—A female urethral speculum, and a new clamp for rectal surgery, were shown by Dr. FANCOURT BARNES for Dr. ROBERT T. WILSON, of Baltimore.—A clamp for hysterectomy was exhibited by Dr. AVELING, in which he had substituted a clamp-screw in the place of the button around which it had been the custom to twist the ends of the constricting wire. The arrangement now proposed enabled the

operator to draw both ends of the wire at the same time, thus avoiding the rotating and sawing action unavoidable when only one end was drawn upon. By means of the clamp-screw, a new hold of the wire could be taken, and the removal of the instrument was much facilitated. —Dr. FENTON JONES showed a modification of the serre-nœud in general use. The improvement consisted in carrying the return wire through the right arm of the instrument, where it could be firmly clamped with a binding screw.

Uterine Fibroid.—Dr. BANTOCK exhibited a specimen of fibroid, removed by enucleation, *per vaginam*, on October 21st, from a single lady, aged 48. Symptoms had existed for six years in the form of increase of the menstrual flow, gradually progressing to great excess. For several months she had suffered much pain, and, for several weeks, had more or less retention of urine. When first seen, about three weeks ago, a large tumour was found projecting into the vagina. On the operating table, it was found to have descended in the vagina until it appeared at the orifice. There was retention of urine, so that the first step was to empty the bladder of over a quart of urine. The tumour was then cut into, and found to have no capsule, as in the other cases he had done. Pieces were cut away as the tumour could be brought within reach. When the last portion was extracted, it brought with it a mass as large as a goose's egg, which was found to be the uterus, evidently with a small fibroid in the walls. The last connections between the tumour and the uterus were divided, the uterus was then returned, and the cavity stuffed with plugs of cotton-wool, the first four or five saturated with the strongest possible solution of iodine, and the others charged with iodoform. The part which had descended into the vagina was so large as to completely obliterate all trace of the os and cervix uteri. The perinæum was torn, and was repaired with three deep and one superficial sutures. The tumour weighed 3 lbs. 6 oz. He was glad to say the patient was going on most satifactorily.

Uterine Fibroid.—Dr. HEYWOOD SMITH exhibited a fibrous tumour weighing 4½ lbs., which he had removed on the previous day from a patient aged 37, single. He had seen the case a year before, and the operation was undertaken because the tumour was growing, and because of severe menorrhagia. Sir Spencer Wells saw the case three weeks before in consultation. There was some difficulty in the diagnosis, as the uterus was drawn up above the pubes, so that the sound could not be introduced. When the abdomen was opened, it was seen that the mere removal of the uterine appendages would not have given much promise of a cure, as the tumour consisted of three large masses, of which one was firmly jammed down into the pelvic cavity. The left oviduct was greatly elongated, and swept over a sulcus in the tumour, and the ovary was enlarged and flat. The right ovary was inclined to be cystic. The whole tumour was, therefore, removed, and the stump secured in the wound. The posterior mass of the tumour seemed to be the retroflexed fundus. The patient was so far doing well.

Twelve Cases of Extraperitoneal Cysts.—Notes of these cases were read by the PRESIDENT. Case I was in an extremely exhausted condition when seen; but as it was perfectly clear that, if left alone, nothing but death could result, an operation was proposed and accepted. She had been tapped some time previously, and ten pints of thick brown fluid, containing flocculi, withdrawn. Mr. Tait opened the abdomen at the usual site, and, after cutting through all the layers except the peritoneum, came upon the cyst-wall. He opened the cyst, and removed about thirty pints of fluid, exactly the same as that which had been removed at the tapping. He then proceeded to remove the enormous cyst, which was uniformly attached to the parietal wall on its outer aspect, and to the outer surface of the thickened peritoneum on its posterior aspect. The cyst did not dip into the pelvis at all, and the anterior parietal peritoneum did not reach the wall lower than the ensiform cartilage. The intestines and the pelvic organs could be felt through the anterior peritoneal fold, non-adherent, and, as far as could be determined, perfectly healthy. The cyst lay, therefore, entirely between the transversalis fascia on the outer side, and the parietal peritoneum on the inner, the peritoneal cavity having been nowhere opened during the severe and protracted operation. The cyst was removed in its entirety, and its inner surface consisted of broken down mucoid epithelium, infiltrated everywhere with pus, lying upon the basement membrane, which consisted almost entirely of muscular fibres. He had come to the conclusion that the cyst was developed from the urachus, a part of which had been occluded at both ends, but, during the developmental changes of embryonic and infantile existence, had not become obliterated. If correct, it was marvellous that this structure should have remained quiescent for fifty-six years, and then should suddenly undergo an inflammatory change which developed it into this enormous cyst. The patient went on very well for three days, and then rapidly sank from exhaustion. No *post mortem* examination was allowed. Case IV presented the signs of an ordinary parovarian cyst. Mr. Tait operated on June 2nd, 1883, and found that the cyst was extraperitoneal, with the peritoneum leaving the abdominal wall about two inches above the umbilicus, and presenting a curvilinear fold running down outwards and backwards symmetrically on each side, to about the middle of the great crest of the ilium, and this was reflected at once on to the promontory of the sacrum. Behind this apron, consisting of the cyst-wall and the peritoneum united, the intestines and other organs could be felt. The whole of the pelvis was entirely destitute of peritoneum, and was occupied instead by a cyst-wall, and, standing up in the middle of the cavity, bounded on both sides by the cyst-wall, was the uterus, and what ought to have been the broad ligaments. The bladder had a similar relation to the cyst-wall that it ought to have had to the peritoneum, and then from the base of the bladder, running up and lining the posterior surface of the transversalis fascia, was the continuation of the cyst-wall. The fluid of the cyst was clear, and floating in it were shreds of delicate membrane, with lumps of fat in it, presenting precisely the appearance of the omentum of the fœtus. Mr. Tait emptied the cyst, sponged it out, and put a drainage-tube in. Suppuration immediately began, and continued most profusely, until it exhausted the patient, who died on July 10th, six weeks after the operation. No *post mortem* examination was permitted.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

ORDINARY MEETING, FRIDAY, NOVEMBER 5TH, 1886.

Mr. EDWARD ATKINSON, Vice-President, in the Chair.

Hydrosalpinx.—Mr. MAYO ROBSON showed a specimen of Hydrosalpinx, which he had removed from a patient ten days previously. She had had pelvic pains, and had been unable to work in consequence for several years. The patient was recovering.

Ruptured Jejunum.—Mr. MAYO ROBSON also showed a specimen of ruptured jejunum, caused by a fall from a scaffold. The man presented no external signs of injury, but had symptoms of intestinal strangulation and peritonitis, for which laparotomy was performed.

Ruptured Bladder.—Mr. W. H. BROWN showed a specimen of ruptured bladder, apparently spontaneous, for there was no history of accident. The man survived four days.

Excision of Clavicle.—Mr. EDWARD ATKINSON showed a patient from whom he had excised the sternal end of the clavicle for dislocation upwards; the man had a very useful arm, but before the operation was unable to use it.

Suprapubic Lithotomy.—Mr. MAYO ROBSON showed a patient aged 4, in good health, on whom he had performed lithotomy three weeks before, the interesting feature of the case being suture of the bladder and primary union of the wound.

Oöphorectomy.—Mr. W. H. BROWN read notes of a case of oöphorectomy, undertaken for indefinite nervous symptoms which had existed for ten years, and which were chiefly referred to the pelvis. She had been attending at one or other charitable institution during the long period of her illness, and although various operations, such as stretching the sphincter ani, and scraping out the uterus, had been performed, she had received no benefit, and the last operation in which normal ovaries and tubes were removed, had left her in no better condition.—Dr. BRAITHWAITE thought the case was too imperfectly recorded to form an estimate of what really ailed the patient, and considered that it was not a proper case for oöphorectomy. —Mr. WHEELHOUSE considered it unjustifiable to perform operations for such indefinite symptoms.—Mr. MAYO ROBSON thought it was very seldom justifiable to remove healthy ovaries as in the operation known as Battey's, but he was quite sure that a great advance in surgery had been made by the removal of diseased uterine appendages known as Tait's operation. He had operated on a number of cases of pyo-salpinx and hydro-salpinx with great benefit, and so far with no mortality; he always had a full consultation on the case previously, and explained the nature of the operation fully to the patient.

Electrolytic Removal of Eyelashes.—Mr. BENDELACK HEWETSON read a paper on the treatment of ingrowing eyelashes; and, after describing the older methods, he said that they had been entirely replaced by the operation of electrolysis. He showed the battery he employed and the needle, which, he said, he allowed to remain in the hair follicle about twenty seconds.—Mr. SNELL described the history of this operation, and said that he had read a paper on the subject three years previously. He had used it for supernumerary hairs on the face in females, and in one case had removed a moustache in a young lady.

Treatment after Operations on the Eye.—Mr. S. Snell (Sheffield) read a paper on the rational treatment of cataract and other eye operations to the exclusion of dark rooms, bandages, etc. He referred to an article published elsewhere, and said that experience had taught him the value of plaster as a means of closing the eyes over the stereotyped bandages, etc. He had adopted the plan in fifty-five cases, thirty-two being operations on the lens, the remainder being iridectomies, iridotomies, sclerotomies, and operations for anterior synechiæ. Reference was made to its utility in injuries of the eyeball, and in other cases where it was desirable to keep the eye at rest.

Stretching Sphincter Ani.—Mr. J. W. Teale read notes of a case of a lady, aged 64, who, after prolonged and obstinate constipation, with albuminuria, was seized with left hemiplegia, accompanied by much convulsive movement of the affected side. In the prolonged unconsciousness which ensued, her sphincter ani was stretched, which was followed by copious action of the bowels. The patient made a fair recovery, and the albumen was reduced to a trace only.—Mr. T. P. Teale described cases of rigid sphincter ani without spasm, giving the sensation of a cartilaginous ring to the touch, and relieved by stretching.—Mr. Fletcher Little remarked on the less frequent occurrence of obstinate constipation among elderly women in France, where enemata were more largely used.

Papilloma of Larynx.—Dr. Ernest Jacob showed a papillomatous tumour which he had removed from the larynx of a young man where it greatly interfered with the voice. It was a return growth, the first having been removed by him eight months before. He showed the instruments used in such operations, and remarked on the advantage of endo-laryngeal operation over thyrotomy.

MANCHESTER PATHOLOGICAL SOCIETY.

Wednesday, November 10th, 1886.

J. Dreschfeld, M.D., F.R.C.P., President, in the Chair.

Traumatism and Tuberculosis.—Dr. S. H. Owen mentioned a case of tuberculosis preceded by severe injury in a boy aged 11, and showed sections of the liver, pancreas, and right adrenal body, all of which were involved in the disease. Eight years before death, the child fell from a building a distance of twenty feet. No serious injury was apparent at the time; but shortly afterwards symptoms of abdominal disease occurred, and they remained, with intervals of improvement, until death. Previous to the accident, the boy was in good health, and there was no history of phthisis in the family.

The German Method of Examining the Brain in the Post Mortem Room.—Dr. Thomas Harris gave a demonstration of this method, and commented upon its advantages, due to the systematic manner in which the several parts were examined, and the ease with which, after the dissection, any lesion in the hemispheres could be compared with the areas on the cortex. The dissection required no instrument larger than a Virchow's *post mortem* knife.

Sarcomatous Kidney.—Dr. Hutton showed a preparation and sections of a sarcoma of the right kidney from a boy aged 3. The tumour, which weighed nine pounds, had been growing rapidly for twelve months, causing enormous distension of the abdomen, with displacement of all the organs. The growth sprang from the hilum within the capsule, and was of a mixed nature, partly a lympho-sarcoma, and partly a lymphangeioma. It contained innumerable tiny cysts, and some larger ones, from one of which, the size of an orange, a few ounces of grumous fluid had been withdrawn during life. The child's total weight was thirty-one pounds.

Hæmorrhoids.—Mr. A. H. Young showed preparations of hæmorrhoids, and related a case in which death had occurred from hæmorrhage.

Oleomargarine in America.—Not only are the shopkeepers in America, who retail oleomargarine as butter, to be liable to prosecution, but by a new Bill introduced in New Hampshire, it is proposed to extend the liability to the hotel and refreshment-house keepers who fail to display, in a conspicuous place, a placard bearing the words, "Oleomargarine sold here." The spurious use of the compound will entail a fine of 500 dollars.

University of Edinburgh.—We understand that Dr. Gunning, of Edinburgh and Rio de Janeiro, has intimated his intention of instituting in the Royal College of Surgeons of Edinburgh a Triennial Victoria Jubilee prize to be associated with the name of Liston for the greatest benefit done to practical surgery by any member of the College during the triennial period. The prize will be of the amount of £100, to be awarded every third year.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SESSION 1886.

Tuesday, November 16th.

The General Medical Council met on Tuesday the 16th, the President, Sir Henry Acland, in the chair.

New Member.—Dr. W. M. Banks took his seat as representative for Victoria University, Manchester.

President's Address.—The President, in his address, said the attention of the Council would be directed to Criminal Cases, University Examinations, Visitation and Teachings at Schools, the Pharmacopœia, Registration of Sanitary Diplomas, Combination of Examining Bodies, and some particulars of the Medical Act, 1886. With regard to the visitation and teaching, he said "all persons who are interested in the progress of education will look with extreme interest on a full account of the appliances and methods of teaching the sciences at the foundation of medicine, and the means of acquiring knowledge in the practice of its several parts, as they prevail in the medical teaching institutions in the Kingdom. These are known to vary much in their scope as well as in their power and opportunities. It is possible that the less thoughtful portion of the public might wonder that labour should be expended at the end of the nineteenth century on a matter which would be supposed to be already well understood. No Member of this Council, however, but feels the difficulty of blending into practical medical education the sciences, of which the mass increases daily, the votary of each science having a tendency to claim the attention of students, if not exclusively, yet absorbingly, to the special work of his own life." Referring to the recent Medical Act, he said: "The most important change in relation to education wrought by the Medical Act of 1886, with respect to the duties and powers of the Council, is the giving to it the power and duty to require that every person admitted to the Register should have passed an examination qualifying in every subject. The Licensing Bodies all retain their respective and separate powers. The addition to the Executive Board once made, it is to be hoped that the Council may be able to pursue the even tenor of its way, with whatever force it may acquire by addition to its numbers."

Army and Navy Returns.—The Army and Navy returns were received, and a vote of thanks was passed the Director-General of each Department.

Removal of Name.—A communication was read from the Royal College of Surgeons stating that the Council had removed the name of Mr. Edwin William Alabone from membership of the College.

On the motion of Mr. Marshall, seconded by Dr. Quain, the Registrar was directed to remove Mr. Alabone's qualification from the register, and by a subsequent resolution, the name also was ordered to be erased.

New Standing Orders.—The Council proceeded to consider additions to the standing orders, suggested by the Executive Committee, providing for the procedure of the Council in dealing with questions of the removal of qualifications from the Register.

The following resolution was passed on the motion of Mr. Marshall, seconded by Mr. Simon:

"That the following be added to the Standing Orders:

"(*a*) That when the General Council has received notice from a licensing body that any qualification or qualifications have been duly and legally withdrawn from a registered dental practitioner by such body, provided that such qualification was not withdrawn on account of any of the causes mentioned in the eighteenth section of the Dentist's Act, as insufficient to disqualify a person from practising dentistry, then the Council shall, if it think fit, by formal resolution proposed from the chair, direct the Registrar to remove such qualification or qualifications from the *Dentists' Register*.

"(*b*) If, under the direction of the General Medical Council, all the qualifications of any registered dental practitioner have been erased from the *Dentists' Register*, then the Council shall, if it think fit, by formal resolution proposed from the chair, direct the Registrar to remove the name of such practitioner from the *Register*."

Communication from Home Office.—The Registrar read the following letter from the Secretary of State for the Home Department:—

"Whitehall, October 23rd, 1886.

"Sir,—I am directed by the Secretary of State to transmit to you herewith a copy of a letter, which has been received from the Deputy

Coroner of Westminster, together with the depositions taken at an inquest held on the body of a man named George Wadley.

"The Coroner drew attention to the conduct of Dr. Day and Mr. Davenport in connection with the case, and, in view of the statements made, the Secretary of State has consulted the Registrar-General, who is of opinion that, as Dr. Day did attend the deceased during his last illness, namely, on September 27th, he was therefore qualified to grant a certificate, and that there appears to be no case against him.

"He considers, however, that the case against Mr. Davenport should be dealt with by the Medical Council, as the practice of employing unqualified practitioners as assistants by medical men is very common, especially by medical men presiding over dispensaries.—I am, Sir, your obedient servant, GODFREY LUSHINGTON.

"The President of the Medical Council,
"299, Oxford Street."

The Coroner's letter, and the depositions of the witnesses at the inquest were also read. The Executive Committee had recommended that the whole subject should be referred to them, with authority to communicate with the Home Secretary.

Mr. SIMON moved the adoption of the recommendation of the Executive Committee, and "That it be an instruction to the Committe to bring under the notice of the Home Secretary the resolutions passed by the Council in its session in 1883 on the subject of the employment of unqualified assistants, and especially the first of those resolutions." The Council in 1883 proposed "that any registered practitioner practising for gain, who knowingly and wilfully deputes a person not registered or qualified to be registered under the Medical Act to professionally treat on his behalf, in any matter requiring professional discretion or skill, any sick or injured person, shall be subject to the same legal liabilities as a person who falsely represents himself to be a legally qualified medical practitioner; but with special proviso that such enactment shall not hinder any duly regulated training of pupils by qualified teachers, nor any legitimate action of nurses, midwives, or dispensers."

The motion was seconded by Mr. MARSHALL.

Dr. DUNCAN expressed the opinion that it would be cruelty to the poor to be very strict about unqualified assistants. In many cases, poor women would get no attendance at all if it were not for an unqualified assistant; and to say that a medical man must never send his son or pupil to see cases would be to inflict a very great grievance both upon the profession and the public. The whole subject was beset with difficulties. He did not see that Dr. Day had done anything wrong, except inadvertently sign the "29th" when it should have been the "27th," and Davenport seemed to have been very acceptable to the people.

Dr. CHAMBERS considered that the case was a very bad one. A registered practitioner employed an unqualified assistant to do his work, and he was inclined to say that it would be better for the poor to have no medical attendance at all.

Dr. QUAIN said the Home Secretary, not having the necessary courage or confidence in himself, transferred the case to the Registrar-General, who had made admissions which showed that his registration was worth nothing, and then sent it on to the Medical Council. The duty of the Council was to superintend medical education—they were not criminal prosecutors. They ought to go to the Home Secretary, and say that cases occurred which were very little short of murder, and leave it to him to find the means of suppressing them.

Mr. MACNAMARA thought that the Council should point out to the Home Secretary that the prime offender in the case was the man who employed the unqualified assistant.

The motion was agreed to, and it was also decided: "That the question of Dr. Day's professional conduct be referred for consideration to the English Branch Council."

Statistical Committee.—Mr. MARSHALL moved that the report of the Statistical Committee be received and entered on the minutes. The investigation, he said, had included the tracing of the destinies of 6,403 registered students. It was to be hoped that, in future, a quinquennial analysis of a similar kind would be published.

Dr. A. SMITH seconded the motion, which, after a brief discussion, was agreed to, and the Council then adjourned.

Wednesday, November 17th.

SIR HENRY ACLAND, President, in the chair.

Army and Navy Returns.—On the motion of Dr. HERON WATSON, seconded by Sir DYCE DUCKWORTH, it was resolved to request the Director-General of the medical departments of the Army and of the Navy to afford the Council information as to whether a candidate holding several qualifications on the Medical Register, was, in the Army and Navy returns, entered again and again according to the number of qualifications which he held, or only under one qualification.

Report of the Pharmacopœia Committee.—Dr. QUAIN presented the following report of the Pharmacopœia Committee, which was adopted;

"The Pharmacopœia Committee have to report to the Council that the first issue of 20,000 copies of the work have been disposed of, and that a reprint has been issued consisting of 3,000 copies, from the stereotyped plates, of which 730 have been already sold. The opportunity has been taken during reprinting of introducing into the body of the work such corrections as were found to be necessary. It may be noted that a list of these corrections can be had, without charge, from the Registrar, or from the publishers, by those who have purchased copies of the original issue.

"The Committee further report that they have arranged with Professor Attfield to prepare an annual report on the revision hereafter of the *Pharmacopœia*. The following is the plan submitted by Professor Attfield for carrying out this intention, and approved by the Committee:—

"Broadly, a reporter should present (annually) to the Pharmacopœia Committee of the Council an abstract of the published researches and opinions which are or may become of importance in connection with any future revision or edition of the *Pharmacopœia*—researches, opinions, &c., published by therapeutists, pharmacologists, pharmaceutical chemists and chemists and druggists, scientific and analytical chemists, and botanists.

"Secondly, while leaving purely original experimental researches to the workers in the various public and private laboratories where such researches are conducted, a reporter should perform such experiments as may be necessary for the application of those original researches to the exact purposes of the *Pharmacopœia*.

"Thirdly, as regards suggested improvements of official processes, whether synthetical or analytical, a reporter should, when necessary, obtain experimental confirmation, or otherwise, of the suggestions, before reporting them to the committee.

"All this work, both literary and experimental, should be done regularly year by year; for the large and numerous areas of knowledge laid under contribution in revising a *Pharmacopœia* are fast getting too extensive to be properly investigated in any short period preceding the issue of a new *Pharmacopœia*.

"As for the classification of the annual reports, I think it should pretty much follow the division of matter in the *Pharmacopœia* itself. That is to say, questions of general construction and literary arrangement, and questions relating to weights and measures, to chemical and general nomenclature and notation, to the uniform disintegration of drugs, to temperature, etc., may be treated first. Then would follow the consideration of new remedies and compounds proposed for addition to the *Pharmacopœia*, and of old remedies and compounds proposed for omission from the *Pharmacopœia*. Any suggested alterations in the names of official articles and preparations would next be discussed. Suggested alterations respecting any of the alphabetically arranged articles or monographs in the text and appendix of the *Pharmacopœia*—nearly 1,000 in number—would form the concluding portion, and, indeed, the bulk, of the annual reports—alterations relating to (*a*) leading names and associated synonyms, (*b*) definitions of articles of the Materia Medica, (*c*) descriptive characters of those articles, (*d*) mode of preparation of compounds, (*e*) characters and qualitative and quantitative tests of those compounds, (*f*) doses, and (*g*) additions to, omissions from, and alterations in, the cross-references.

"There may also be some matters of importance to be considered which do not fall within either of the foregoing classes of subjects, as, for one example, the question as to whether or not any changes—and, if any, what changes—can be effected in a future *British Pharmacopœia* to better adapt it to Indian and Colonial requirements.

"The annual reports should, of course, contain clear references to all sources of information; so that the Committee, future editors, and all persons interested in the subject, could readily refer to all data.

"Finally, the hands of the reporter or reporters would be strengthened, and the reports would come before the Committee with greater weight, if draft reports, before presentation, were carefully considered by the three editors of the *British Pharmacopœia*, 1885, who, for this purpose, should be regarded as 'consultants.' The designation of a reporter would be, probably, 'Reporter on the *British Pharmacopœia* to the Medical Council;' the instructions to any such officer being, I presume, to report annually, on some such lines as the foregoing, to the Pharmacopœia Committee of the Council."

Clinical Examination in Gynæcology.—Strangers were then directed to withdraw, while the Council considered a notice of motion by Dr. Lyons, "in reference to certain matters of im-

portance in regard to the mode of conducting clinical examinations of women."

Registration of Sanitary Diplomas.—Mr. MARSHALL moved:

"That the Executive Committee be requested and empowered to take such steps as may be required in order that the provisions of the Medical Act, 1886, concerning the registration of diplomas or certificates in sanitary science, may forthwith be carried out."

He said the work would not involve any inquiry except in reference to the question whether the particular diploma deserved recognition in the *Medical Register*. All other points were purely administrative. It would have to be decided at what particular office the registration of the sanitary diplomas should primarily be made. Next would come the question of what name should be used on the *Register*, quite irrespective of the titles determined on by the different bodies. The best thing would be to get all the bodies to adopt a uniform title; but, if that were impossible, the question would arise whether the Council could not decide upon a common form for themselves. The regulation of the fees might well be delegated to the Executive Committee.

Mr. SIMON seconded the motion.

Dr. QUAIN, as a member of the Executive Committee, wished to have some expression from the Council as to what the fee should be.

Dr. A. SMITH said he had reason to know that some persons holding such qualifications would be greatly disappointed if they did not appear in the *Register* next year. He considered that the fee should be five shillings.

Mr. MACNAMARA said that a great deal of money had accrued to one of the Branch Councils by registering qualifications given in other divisions of the kingdom; and so long as the different Branch Councils had separate funds and different sources of income, he considered that it was of the greatest importance that, no matter how trifling the fees, they should be paid to the fund of the Branch Council for the division of the kingdom whence the qualification was obtained. It should be laid down as a principle that, where a man received his qualification, there he should register. He agreed that it would be most desirable to have one common title, but the source whence it was derived should be added. The qualification should be included in the category of additional qualifications; but, if a man came for registration in medicine, surgery, midwifery, and sanitary science, the one fee of £5 should cover the whole group.

Sir D. DUCKWORTH said that this subject was attracting considerable attention outside the Council, and it had been suggested to him that the title might be Diploma in Public Health.

Dr. BANKS was of opinion that the subject might safely be confided to the Executive Committee, and that was the course which held out the prospect of an early settlement of the question.

Dr. MCVAIL said the University of Edinburgh granted a Bachelorship in connection with public health, and therefore it would not be correct to enter it as a diploma.

Mr. TEALE doubted if the Council had power to register any other titles than those which were brought to them. They could not invent new titles.

Dr. HERON WATSON said there was a legal point to be settled as to the meaning and force of the word "diploma" in the new Act. It was, therefore, a safe and prudent proceeding to refer the subject, in the first instance, to the Executive Committee, who could obtain counsel's opinion as to whether the Council had a right to register any other title than that which was sent by the bodies.

The resolution was agreed to.

A subsequent proposal, "That, in regard to the various diplomas or certificates in sanitary science, capable of being registered under the Medical Act, 1886, the Council would view with great satisfaction the adoption of a common form of title by the several medical authorities which confer them," was withdrawn.

Mr. MACNAMARA asked the President what steps had been taken by the Privy Council or the General Medical Council to decide whether certain diplomas "deserve recognition in the Medical Register."

The PRESIDENT said the General Medical Council had certainly taken no such steps, and, to the best of his belief, the same might be said of the Privy Council.

The Five-Years' Curriculum.—Dr. MCVAIL moved, "That the resolution passed by the General Medical Council on May 22nd, 1885, as follows: 'That the course of medical study after registration should occupy at least five years, if the subjects of Elementary Physics, Chemistry, and Biology are included in that period, or at least four years, if a satisfactory examination in these subjects has been passed previous to registration,' be made compulsory in the case of all students who shall be registered on and after the 1st January, 1887; and that the word biology in the resolution shall be held to include zoology or natural history and botany."

He said that, when the resolution was passed, last May, he felt that a very great step in advance had been taken, and he hoped to see the Universities in Scotland adopt it, and carry it out to the full extent. The minimum period in those universities was four winters and three summers, yet the curriculum was still loaded with chemistry, zoology, and botany. The custom was for a student to begin his study in May, taking botany and zoology; in the following winter, he took chemistry and junior anatomy; so that, for the first summer and winter, his attention was given almost exclusively to subjects that bore only in a somewhat indirect manner on his medical course. Besides this, a considerable number of students did not at first pass their examination on those subjects; something like 40 per cent. failed, and had to carry on their studies in them into the second summer, and probably the second winter, session. It was, therefore, obvious that the object of the General Medical Council had not been attained.

Dr. W. M. BANKS seconded the motion. He said everyone must admit that the supply of medical men was quite equal to the demand, so that the examining bodies had not now to offer special inducements to candidates. It was, therefore, their business to raise, and not to lower, the standard of medical education. He regarded it as a fallacy to suppose that there was any necessity, for the sake of the poorest classes, to have a certain stratum of medical men who had taken the most easily obtained qualifications, with the least amount of medical education. In the interest of the students themselves, it might be said that there were some acute men who would do all that was required in the four years, and that many excellent but poor men would be prevented from entering the profession if five years were made compulsory; but the great question was, were the interests of a comparatively small number to be put against those of the great mass of medical students? He agreed with Dr. McVail that, if the first year were devoted to science, it would be impossible to acquire a thorough knowledge of the purely medical subjects in the remaining three years.

Dr. BANKS said that the University which he represented did carry out the recommendation requiring four years of exclusively medical study.

Dr. DUNCAN said that Dr. McVail seemed entirely to forget that the Scotch Universities could not do what he required of them. They were very anxious to carry out the recommendation of the Council, but there must be a long and tedious process before it was in their power to make the changes.

Dr. HUMPHRY said the Council had no power to make the five years compulsory. If the proposal were modified in such a way as to call the attention of the bodies to the resolution, or to inquire to what extent it had been carried out, perhaps some good result might be produced, but it must be borne in mind that the Council could only recommend, and not compel.

Mr. SIMON advised that the motion should be altered so as to read:

"That it be a recommendation to the licensing bodies to give effect as soon as possible to the resolution of May 22nd, 1885, as follows: 'That the course of medical study after registration should occupy at least five years, if the subjects of Elementary Physics, Chemistry, and Biology are included in that period, or at least four years if a satisfactory examination in these subjects has been passed previous to registration.'"

Dr. MCVAIL was quite willing to accept the alteration.

Sir WM. GULL considered that it would be better for the Council to wait a little, as it was only eighteen months ago that their resolution was passed.

Dr. STRUTHERS moved the previous question, which was seconded by Dr. PETTIGREW.

Dr. FERGUS said a University Bill for Scotland would be introduced into Parliament next year, and therefore it might be desirable for the Council to again express an opinion on the subject of the five years.

Dr. CHAMBERS was opposed to the motion. It was not wise for the Council to make their recommendations too strict.

After considerable discussion as to the form of procedure and the exact meaning of "the previous question," Dr. McVail's motion was carried by ten to three, a great many members abstaining from voting.

The Council then adjourned.

Thursday, November 18th.

SIR HENRY ACLAND (President) in the chair.

Removal of Name from Dental Register.—A report was received from the Dental Committee in reference to the case of a dental practitioner, Thomas Maden, the registration of whose name, it was alleged, had been fraudulently and incorrectly obtained. It was stated that the request for registration was accompanied by a copy of articles by which

Mr. Maden was stated to have been articled to Mr. Haworth, a dental practitioner. At the date of those articles it appeared that Mr. Maden was only eleven years and four months old, and at the expiration of the articles he was thirteen years and four months old. He subsequently attended school, and was in the employment of a cotton manufacturer.

Mr. FARRER (Solicitor to the Council) explained that under the Dental Act the Council had power, on the report of the facts above stated by the Dental Committee, to erase Mr. Maden's name from the *Register*. He suggested that that course should be adopted.

Strangers were requested to withdraw, and the Council deliberated on the case in private.

On the admission of the public, the PRESIDENT announced that the Council had resolved:

"That the registration of Mr. Maden's name had been incorrectly and fraudulently obtained, and that his name and qualification be removed from the *Register*."

Registration of Sanitary Diplomas.—Dr. BANKS moved:

"That, subject to legal opinion, the title of Diplomate in Sanitary Science be adopted as the heading in the *Medical Register*, under which all practitioners, duly certified in sanitary science, may be placed, the sources of their titles being designated in each case."

Sir DYCE DUCKWORTH, in seconding the motion, said that a great desire had been expressed by holders of the diplomas that a uniform title should be adopted. It might be difficult to get all the different bodies to adopt a similar title; but the object might be attained by the general heading proposed by Dr. Banks.

Mr. TEALE spoke in support of the motion.

Mr. SIMON, while agreeing with the principle of the motion, objected to the word "diplomate," which, he said, was not English, and suggested in its stead the words "holders of diplomas." The Executive Committee, he thought, was the proper body to decide the question of nomenclature. The choice seemed to lie between diplomas in "State Medicine," "Public Health," and "Sanitary Science." There was the further question as to whether a diploma was worthy to be registered.

Sir DYCE DUCKWORTH said he had a letter from the Secretary of the Society of Medical Men qualified in Sanitary Science, stating that it was their opinion that "diploma in health" would be the most suitable title.

Dr. BANKS said he was willing to accept the term "holder of diploma in public health."

Dr. HUMPHRY urged that the Council had no right to enter any titles except those given by the different bodies.

Sir W. GULL contended that the Council was bound to follow the Act, and designate the diplomas only by the titles originally given to them.

Dr. HERON WATSON said that the language of the section of the new Act was somewhat ambiguous, and it might be a question whether the Council ought not to go to the Privy Council to ascertain its opinion with reference to the diploma. At any rate, a legal opinion ought to be taken on the subject. He would move, as an amendment:

"That this matter be referred to the Executive Committee, with the whole question emerging out of the interpretation clause (21) of the Medical Act, 1886; and that, with the sanction of the Council, they take legal opinion upon any matter connected with it."

Mr. MARSHALL, in seconding the amendment, said it was evident that there was a good deal of uncertainty in the matter. There was a great desire on the part of medical practitioners qualified in sanitary science to have a uniform title; but it was doubtful whether the Council could register titles under any other name than those given by the bodies conferring them. Most of the bodies used the term "certificate," and not diploma, and the term "sanitary science" was used much more largely than "public health" or "state medicine."

After some further discussion,

Dr. BANKS said he would withdraw his resolution.

The resolution was then withdrawn.

Mr. MARSHALL brought up a provisional report from the Visitation of Examinations Committee embodying certain conclusions, and referred to a "draft report," which, he said, had been sent confidentially to the members. These reports, he said, were at present imperfect, and he was not prepared to propose their adoption. He moved that a provisional report be received, and that its further consideration be deferred.

Sir W. GULL said he was not present at the last session of the Council when the reports of the visitors were presented, otherwise he should have found fault with the visitors for the ignorance they had displayed in regard to the University of London. The great point to ascertain was what knowlege a man possessed, not how many lectures he attended.

Dr. BANKS said that there were some very unfair (not intentionally) and incorrect statements in the report of visitors in regard to the University of Dublin.

Dr. HERON WATSON expressed a hope that the report just presented would not be allowed to go upon the minutes and thus be made public before the whole subject was ripe for discussion by the Council.

Mr. MACNAMARA, as one of the visitors, was unwilling to submit to the imputation of "ignorance" coming from the lips of Sir William Gull. The visitors, however, were quite ready to stand by every statement in their report.

The motion for the reception of the report was, after a brief discussion, withdrawn, and the consideration of the subject was deferred to a future session.

Visitation of Medical Schools.—Dr. HERON WATSON brought up the following report from the Visitations of Schools Committee:

"The Committee on Visitation of Schools appointed on June 4th, 1886, are enabled again provisionally to report that in conformity with their former report of June 7th, 1886, adopted by the Council on June 10th, the proposed letters to (1) each of the licensing bodies, and (2) to the several medical schools and to individual teachers not connected with schools whose courses qualify for the curricula of the various licensing bodies in the United Kingdom, were dispatched to each of these bodies and individually on the 28th of June; that replies have been received in answer to these circular letters from all the licensing bodies, from medical schools willing to receive visitors, from hospitals stating that no medical school exists in connection with them, from private and extra-mural schools willing to receive visitors, and from the school of St. Bartholomew's Hospital respectfully declining to receive an official visitation from the Medical Council.

"Your Committee further beg to report that having considered the means of arranging for the proposed visitation, they are of opinion that before developing a scheme of visitation it may be well to place the matter before the Branch Councils with the request that they will take the method of conducting these visitations into their consideration and furnish reports thereon to the General Medical Council.

"Your Committee further beg to suggest that counsel's opinion be obtained upon the legality of an expenditure of any part of the funds of the General Medical Council on the Visitation of Schools.

"P. HERON WATSON, Chairman."

It would be observed, he said, that there was but one body that had thrown any obstacle in the way of the proposed visitation. He begged to propose:

"That the report from the Visitation of Schools Committee be received and entered on the minutes, and that the suggestions therein contained be approved; that the reports from the Branch Councils on a scheme or schemes of visitation, as well as the opinion of counsel on the question of the application of funds to the expenses of the visitation of schools, be remitted again to the Committee, with instructions to bring up a further report at the next meeting of the Council."

Sir WILLIAM GULL seconded the motion. He said he had hoped that so great an institution as St. Bartholomew's Hospital would have set a good example to the medical world by opening its doors to a full inquiry into all matters of education. At present their doors were shut. If he were asked to give a reason, he might say something very severe. He was challenged to say it; and he would therefore remark that, in the year 1856, when he was one of the Senate of the London University, he proposed that no degrees should be given in England to any man who was not examined by the bedside. He canvassed all the hospitals personally, and St. Bartholomew's stood out against him for some time.

Sir DYCE DUCKWORTH asked that the letter sent from St. Bartholomew's might be read.

The letter was then read. It stated that the medical officers and lecturers of the school were not satisfied as to the public utility of the visitation of schools by the General Medical Council, and they therefore respectfully declined to receive an official visitation from the Council. The letter added that the school might be seen by any members of the Council who wished to inform themselves about it.

The discussion on the subject had not concluded when the Council adjourned.

THE newly erected Mayor of Brecon, Mr. James Williams, F.R.C.S. Eng., held the same office in 1859, when the Brecknockshire Rifle Volunteer Corps was first raised. Mr. Williams joined the Corps (to which he is now Surgeon-Major) at that time, and has maintained his connection with it ever since; it is believed that in him the medical profession may claim not only the oldest Volunteer medical officer, but the oldest Volunteer now serving.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The Issue of the BRITISH MEDICAL JOURNAL now amounts to

13,300 COPIES WEEKLY

which will be found, if tested, to show AN EXCESS of considerably more than a QUARTER OF A MILLION Copies annually over that of any other Medical Journal in Great Britain.

The British Medical Journal.

SATURDAY, NOVEMBER 20th, 1886.

THE STATE OF THE POLL.

THE result of the voting for direct representatives on the General Medical Council will not be made known officially until the end of next week. Meantime, we hear with regret rumours, which we fear are well founded, that the poll in England and Wales is so far very light and much below what might have been anticipated in view of the importance of the occasion, and the great professional interests involved. We once more impress upon our readers the individual duty of every practitioner to record a vote for the three representatives whom he desires to see elected to take part in the deliberations of the General Medical Council. This apparent apathy is no doubt due to the general sentiment that the Medical Council hitherto has represented chiefly the interests of corporations, and that its proceedings have been of little interest or advantage to the profession or the public. It should, however, be remembered that in the efficient representation of the profession in the Council will be found the best hope of vivifying its proceedings. We trust that to-day those of our readers who have not yet filled up their papers will do so, and record their vote by posting the balloting papers in time to be delivered at the General Medical Council Office *on Monday next, November 22nd, when the poll closes.*

THE MEMBERS, FELLOWS, AND COUNCIL OF THE COLLEGE OF SURGEONS: A CONSTITUTIONAL AND HISTORICAL STUDY.

IT is one of the many anomalous and inconvenient results of the present management of the College of Surgeons that no firm ground is presented for discussion or action. The Council meets the Fellows and Members, but all the councillors sit in solemn silence, and even the President does not venture on any statement of the views of the Council on the matters under discussion. At the last meeting, however, the only speaker who opposed the resolution in favour of the Members' franchise was Mr. Erichsen, an ex-President; and we can hardly go far wrong in taking him as the exponent of the views of the Council, or rather of those members of Council who are opposed to the change contemplated by the resolution. We propose, therefore, to discuss Mr. Erichsen's speech in its constitutional and historical aspects. Here Mr. Erichsen commences with a proposition so startling that it is hard to believe it could have been laid down by one who has held the office of President, and sat for many years on the Council, and who must, one would think, have read the Charters. "The Members," says he, "never possessed the franchise;" then who in fact did possess it before the Fellowship was founded, an event which took place since Mr. Erichsen was himself a Member? Can he seriously argue that the abuse which he mentions (and which he can only mention with reprobation) of the self-election of the Council could deprive the Members of the right given them in express terms by the Letters Patent of Charles I, and confirmed by the Charter of George III? The latter Charter, it is true, does not prescribe the precise mode in which the "Court of Assistants" was to be appointed; and advantage was taken of this omission to introduce the abuse which Mr. Erichsen now strangely invokes as a law. But Charles the First's Letters Patent are quoted in the Charter of 1800 as giving power to "the said corporation" to "make annual elections of Masters or Governors," and also "to elect and constitute ten of the freemen of the said Society to be examiners of surgeons." Who can be meant by "the said corporation" except the Members who formed it?

The Charter of 1800 expressly confirms the privileges of the late "Master, Governors, and Commonalty" (mark the latter word) of the defunct company, incorporates them into a "College of Surgeons," and directs that it "shall be lawful for the said College, hereby established and incorporated.....to elect, choose, and appoint twenty-one persons to be the Court of Assistants of the said College."

In the face of these plain words, it would take a greater lawyer than Mr. Erichsen to convince the members of the College that they had no legal right to the franchise previous to 1843. Nor do we believe that this right was ever given up, or the abuses which prevailed in the election of the Court of Assistants, or Council (as it was styled after the Charter of 1822) ever condoned. The public has been recently instructed on this head by a well-informed writer, and can judge for itself of the motives and objects of the authors of the Charter of 1843, in founding the Fellowship. One of those objects was, no doubt, to put an end to the abusive method of self-election of the Council. That was a worthy object, and the reform was a real one. But to use it as an argument against all further reform is absurd. Another, and a less worthy object was, as we believe, to divest the Members of the right of voting for the Council, which, as we have shown, they previously possessed; and it is this mistake which it is now proposed to remedy. The mistake has led to the vesting of all power in the hands of a small body, consisting almost exclusively of hospital surgeons, and the effect has been, as Mr. Erichsen frankly says, to render the College inert, or nearly so, in all matters of politics and ethics—in fact, to render it as nearly as possible useless to the great bulk of its Members. The remedy appears to consist in admitting the Members to a share in the government of the College; nor is that remedy either violent or unconstitutional. It will not damage the higher order in any degree. Mr. Erichsen chose to assume that the representation given to Members must be taken away from the Fellows, ignoring the obvious fact that they might be simply added to the present Council. How could their presence in any way injure the present electorate?

The interests of Fellows (at least of those of them who are Consulting Surgeons) are no doubt somewhat different from those of general practitioners, and it is on this account that it is desirable that the latter should be represented on the Council. But they are in no sense opposite interests. The general practitioner has a keener interest than the consultant in seeing that the Colleges should punish those of their Members who practice quackery, or who advertise, or who carry on illegal practice by sham dispensaries and by unpaid assistants; but are such objects in any way inimical to the interests of the Fellows? The abuses which go on under the name of public charity ought to be exposed and remedied, and of all who are interested in this reform those who practice amongst the poor are the most so. But who is not interested in his degree? And similarly for all questions of the same nature. Some may touch one order more nearly than the other, but both orders have only one common interest—the dignity and welfare of their common profession. The attempt to raise a pitiful jealousy between Fellows and Members is quite unworthy of a man in Mr. Erichsen's high position, and it will, we are convinced, prove abortive. Equally infelicitous was Mr. Erichsen's appeal to the practice of other societies. He enquired whether any other bodies gave the franchise to their members on obtaining the minimum qualification, forgetful of the practice of the University of London, with which he has himself been connected, and ignorant apparently that at the older universities the franchise is given to a man on emerging from the *status pupillaris* by taking a M.A. degree at a much earlier period in life than that at which it is now proposed to confer the right of voting on a M.R.C.S.

It is difficult to treat seriously Mr. Erichsen's argument that the diminution in number of the Councillors nominated by the Fellows (even if such diminution were any necessary consequence of the resolution) would impair the attraction of the Fellowship and diminish the supply of candidates. The Fellowship, as all the world knows, is sought for three main reasons: chiefly because it is in London a necessary condition, and in the provinces a great advantage, in the struggle for high surgical office; or from a genuine love of surgery; or for the advantage which it is supposed to afford in private practice; or, as we believe is usually the case, from a mixture of all these three motives. But surely no one ever met with a candidate who was going up for the Fellowship in the hope of obtaining a vote for the Council, or on the calculation that he would get a vote for 24 councillors, and not 18.

If, therefore, as we have reason to assume, Mr. Erichsen was stating the case of the obstructive section of the Council, that case is so obviously weak that we cannot believe that it will be adopted by the majority of the Fellows. Yet, with what other view does the Council now proceed to do what they refused when it was asked last year by the Association of Fellows, and proposed in the Council by Mr. Macnamara, namely, endeavour to ascertain the individual opinion of all Fellows of the College on the two questions—that of the right of Members to vote and to sit in the Council?

It seems evident from this change of course that the party in the Council which is in favour of the rights of Members must have so far increased in the interval, that the Council desire to transfer the responsibility for the decision from themselves to their constituency; and they regard themselves, with some technical justice, at present as representing, not the whole College, but the Fellows only. As Mr. Holmes said at the meeting, it is impossible to believe that the answer of one side only, and that the side which is in possession, can be accepted as final, if the matter is brought to the arbitration of a public struggle. Still, the decision of the Fellows, if it be that of a large majority of them, will, no doubt, furnish a technical justification for the action of the Council; and, therefore, a decision adverse to the Members' claims may plunge the College into a prolonged period of contention. We hope better things, however, from a body so enlightened. The Members are now asking for the restoration of a right which no one who peruses the old Charters can deny that they once possessed; they do not demand any preponderance in the College over the Fellows, but, on the contrary, would concede to the latter a numerical majority in the representation so preponderating, that all questions raised must be settled by the votes of the Fellows in the Council; and they demand no more than has just been conceded to them, as representing the general body of practitioners, in the Medical Council by Parliament, and which would inevitably be conceded to them in their own College, also, if the matter were to be decided by Parliament. Can the Fellows for a moment hesitate to concede a claim based so undeniably on justice, and so certain to lend strength and dignity to the College? We cannot believe it.

The result of an opposite course might, indeed, be to adjourn the question for a time, but only for a time. No one can doubt that, as the College grows in riches and power, the Members will grow stronger in protest against the utterly irrational system which excludes them from all voice in the management of an institution which was, after all, built up and has hitherto been supported by the money which they have contributed in fees, and which is so well qualified to perform all those political and ethical duties now so shamefully neglected, and which their own advocate confesses to be deliberately abandoned under the present management. It would have been wiser, we think, if the Council had at once conceded what is evidently the wish of the great majority of those who up to 1843 formed its sole constituency; but, as they have chosen to refer the question to the Fellows, we can only hope that the reference will be put in fair terms, and answered in accordance with justice and wisdom. Meantime, it becomes the duty of all Members who feel strongly on this point to send to Mr. Ellis, at the Western Dispensary, Westminster, an authorisation to append their signatures to the petition which the Association of Members has drawn up. If the great body of the Members are determined to have the franchise, there is no doubt that they can obtain it, and there is very little doubt in our minds that they need not fear any personal antagonism from the Fellows.

A NEW ORDER OF GENERAL PRACTITIONERS.

It will be seen from the curt communication addressed by Sir H. Pitman and Mr. Trimmer on behalf of their respective corporations to the Society of Apothecaries, that the two Colleges have made haste to cut the Gordian knot, lest the profession, taking the matter into its own hands, should unravel it, in a manner which would be disagreeable to the ruling powers of the Colleges. It is no secret that the Council of the College of Surgeons were seriously divided on the question, and that the new circumstances of the case created by the Medical Act of 1886, which ensures to the Apothecaries' Society a new lease of professional vigour and activity, had not presented itself to their minds, and had not been fully discussed; they were, however, overawed by menace, and have been hurried into a course fatal alike to their own dignity, the welfare of the profession, and to that promise of professional unity the fulfilment of which lay in their hands. Terrified by the spirit exhibited at the

meeting of the College of Surgeons, and, by the indications that the whole profession would interfere to alter the nature of the family compact between the two Colleges, and to prevent the creation of a new order of general practitioners, the Council of the College of Surgeons has followed the unfortunate precedent of secrecy set at the College of Physicians, and has, without affording any indication to the Members of its intention to carry out a settled purpose, forwarded a communication to the Apothecaries' Society, declining to admit them to the Conjoint Board. The fear that the College of Physicians would carry out a rumoured threat of breaking up the alliance with the College of Surgeons, and would proceed alone, and the intimation that matters had gone so far that no reconsideration could be permitted, have availed to silence the timid but well-meaning members of the Council in Lincoln's Inn Fields, and to hurry them into taking a step of which it is difficult to forecast the evil and wide-spreading consequences. The *non possumus* which we foreshadowed has been pronounced with sinister promptitude; but we have an enduring faith in right and justice, and in the ultimate prevalence of great principles over acts of high-handed violence."

In such words, and in no others, can we characterise the course which they have pursued in this instance. The governing body of the College of Physicians has had the courage of its despotism. It has a constitution and practice which treat its licentiates as persons in no way to be consulted, and having no right to a voice in the affairs of a College which, apparently, considers that it does them sufficient honour in licensing them, and which has a right to rule them as it pleases. While the Licentiates of the College of Physicians choose to remain without organisation, they will remain without power. It will be singular indeed if, in the present crisis, and after this lesson, they continue to be content to remain an unrecognised and scattered flock, without cohesion, without a voice, and without a combined social existence. We are convinced that it is not too late, even now, for the Licentiates to raise their voice in this matter. At any rate, they have here a very good evidence of how little account they are at present in their own College, except as contributors to its exchequer, and vassals of its power.

The College of Surgeons is in a different case. The injury and the insult which they have put upon the Fellows and Members are gross; but they are hardly so irremediable, and they will possibly be met and resented by some articulate protest and organised action. The Council had formal public and official warning of the opinions of a representative body of the Members and Fellows in the resolution unanimously passed at the meeting of the 4th November, which the Council had convened to consider its report. The resolution then unanimously passed, in the presence of the Council and without a word of protest or dissent from the President or any member of the Council, was as follows:

"That with reference to the report from Mr. John Marshall, on page 15 of the Council's report, this meeting requests the Council of the College to consider the advisability of accepting an arrangement for combination with the Apothecaries' Society as well as the College of Physicians, for the purposes of conjoint examinations for medical diplomas in England and Wales, under the Medical Act of 1886, and to report thereon at a future meeting of Fellows and Members to be summoned for the purpose at an early date."

The words "too late," always fatal in the conduct of public affairs, have been allowed to prevail. The Council of the College of Surgeons have made haste to do evil, and they can only expect the whirlwind which comes of sowing the wind. That resolution they have silently, instantly, and contemptuously trampled in the dirt. Every rule of public propriety, every precedent of official practice, every sentiment of courtesy and of justice to their Members and Fellows, called upon them when they came to a decision on the question to have communicated it to the Fellows and Members. They had waited for three months, and another week's delay would have hurt nothing and no one. But they have evidently adopted an astute stratagem. They feared to face their constituents, and they have run inside and shut the door. They have counted on a year of grace before they come again into the theatre to face their Fellows and Members. In a year, they have thought, how much will have happened, and how impossible to undo the work of the past. Have they counted wisely or well? With what feelings will those outside the Council learn that they have been secretly outmanœuvred; that the passive acquiescence of the Council in the proceedings of the meeting was only a speechless contempt; and that the only answer to the resolution referring to the Council the consideration of the great question of the future unity or disunion of the great body of general practitioners has been a secret resolution of the Council, of which the effect is to inaugurate a hopeless division, and a new and degrading competition. The Councils of the Colleges may think that they have thereby secured the interests of their own bodies at whatever cost to others. The profession will probably be of a quite opposite opinion, and, in the future solution of the question, professional opinion will possibly count for a great deal.

For one thing, it greatly darkens the prospect of a degree for the students educated in London, and thus deals a deadly blow at the interests of the metropolitan schools, and of the present and future practitioners of England and Wales. The Apothecaries' Society will become a new power in the metropolis and the State. Excluded under circumstances of great hardship, and by a curt resolution which they regard as contumelious, from a share in the Joint Examining Board of Surgeons, their interests are henceforth divided from and opposed to those of the corporations in Pall Mall and Lincoln's Inn Fields They will be bound, in justice to their own licentiates, to oppose with all the weight of the Parliamentary influence which their 9,000 licentiates can command, the granting of any new Parliamentary powers or of any new titular distinctions to the Licentiates qualified at the new Examination Hall on the Thames Embankment, over those qualified in Blackfriars. In that view, so far as we can see, they will have justice on their side, and the sentiment of the profession at large.

It would be hard enough for the London Colleges to compass their ends in the face of the opposition sure to be offered by the Scotch and Irish Universities, not to say the Universities of London, Oxford and Cambridge, and Durham, whose acquiescence can by no means be securely counted on. It would be so, even with the fullest professional support from the great mass of the rank and file, whose voice in such matters is potent in Parliament, however it may be scorned in the Council chambers of the Colleges. The Colleges will find before long that they have mistaken the shadow for the substance. We regret that the warning which we gave on this head has been disregarded; mature reflection only assures us that it may be expected to have a sad verification in the future.

But in this painful reflection lies some hope. The voice of the profession has still to be heard in an organised form on this matter. Only two weeks have elapsed since we made known the impending stroke which then threatened the unity of the profession, and exposed

the general practitioner to a new danger from the hands of his rulers. The response has been rapid enough to inspire confidence that the profession will not be silent or inactive. The resolution of the meeting hurriedly called at the Apothecaries' Society; the proposed meeting of the Metropolitan Counties Branch of the British Medical Association; the action of the Association of General Practitioners; that of the Secrearies of the Association of Members of the College of Surgeons, and of the Council of the Poor-Law Medical Officers Association—all show that even while under the paralysing influence of surprise, and within the little time which appeared to be left, various representative bodies of the profession are preparing at once to move. They may have been outwitted and vanquished, but that is a sort of victory which is often worse than a defeat. We shall be much surprised if an indignant, but serious, professional conviction that a public principle has been trampled under foot, which is more important than any sanctity of corporate compacts, does not assert itself in a way not easily to be ignored. The proceeding of the Joint Committee has been summary and smart, but over-haste to snatch a victory has before now proved the prelude to disaster. The Colleges have dealt their blow at the unity of the general practitioners, and they will stagger heavily under it. But it may not be so deadly as it seems; great principles have a vitality which is not easily crushed, and great masses have a habit of advancing steadily, even in the face of the most serious discouragement.

THE GENERAL MEDICAL COUNCIL.

The last session of the General Medical Council, as at present constituted, began on November 16th. From the address delivered by the President at the opening of the meeting, it would appear that the subjects of greatest general interest which the Council will be called upon to consider will be in connection with the combination of the examining bodies, the visitation of Universities and Medical Schools, and the operation of the Medical Act (1886).

On the first day, Standing Orders were adopted providing for the procedure of the Council in dealing with the removal of the names of dentists, whose qualifications had been withdrawn by the licensing bodies, from the *Register*. Two questions of discipline occupied attention, the one involving the removal of the name of a Member of the Royal College of Surgeons from the *Register*, and the other raising the question of the right to employ unqualified assistants. The latter case was that referred to in the British Medical Journal, on October 9th, and concerning which some correspondence subsequently appeared. The Home Secretary invited the Council to deal with the case against Mr. Davenport, at the same time expressing the opinion that there was no case against Dr. Day. The matter was referred to the Executive Committee, with the instruction that the attention of the Home Secretary should be called to the resolution of the Council passed in 1883, proposing that any practitioner employing an unqualified assistant "in any matter requiring professional discretion or skill" should be subject to the same legal liabilities as a person who falsely represents himself to be a legally qualified medical practitioner. Some difference of opinion became apparent as to the proper course to be eventually taken, Dr. Matthews Duncan believing that too great strictness would involve cruelty to the poor, while Dr. Quain broadly hinted that the Home Secretary had endeavoured to throw a disagreeable duty, which properly devolved on him, on the shoulders of the General Medical Council. The duty of undertaking criminal prosecutions, he contended, did not rest with the Council, but with the Home Secretary, who ought to be politely informed that this was the case. Meanwhile, the Home Secretary's letter, and the question of Dr. Day's professional conduct, are shelved for the present by the reference to the Executive Committee.

At the second day's sitting, Dr. Quain brought up the report of the Pharmacopœia Committee, which stated that the first issue of 20,000 copies had been sold, and that the sale of the reprint, with the corrections embodied in the text, was steadily going on. An important recommendation to employ a competent pharmacist, not only to make annual reports to the Committee on the progress of pharmacy, but also to test the value of the results of private experimenters, by making experiments for himself was adopted. It was, perhaps, a little anomalous that, on the first occasion on which the General Medical Council undertakes an expenditure with a scientific object, that this should be in favour of pharmacy, and not of medicine; but the precedent is good and perhaps in time some more of the large income of the Council may be diverted from its present course, to the encouragement of investigations of some use to the profession. At any rate, there is room for improvement in the present *Pharmacopœia*, much as it is in advance of previous issues; and the system now adopted by which an annual report will be made, will very much facilitate the preparation of new editions in the probably distant future.

When the question of the registration, sanctioned by the Act of 1886, of sanitary diplomas came up for discussion, an attempt was made to induce the Council to enact that all diplomas, from whatever source, should be registered under a common title. The obvious advantages of such a course were well summarised by Mr. Marshall, but its adoption would undoubtedly lead to certain inconveniences which it may or may not be worth while to encounter. The whole subject, which involves the decision of the question whether all the diplomas deserve recognition, was referred to the Executive Committee.

The possibility of enforcing the recommendation of the Council, made eighteen months ago, that the curriculum should extend over at least five years was discussed at some length, first by Dr. McVail, who moved a strongly-worded resolution, and then by Dr. Mitchell Banks, the first representative of the Victoria University, who made a very able maiden speech, in which he forcibly pointed to the necessity for some such regulation; it was urged, on the other hand, that the Council had no power to compel the corporations to require the curriculum to extend over five years. Dr. McVail's motion was in the end carried by ten to three, the greater number of the members present abstaining from voting. As will be seen from the report which we publish elsewhere, the Council did not get through much work at its third sitting. The registration of sanitary diplomas again came up, and Dr. Banks proposed that all should be entered under the title "Diplomates in State Medicine." But the matter again dropped, before any fresh decision was reached; a similar fate awaited a provisional report sent up by the Committee charged with the duty of studying the results of the Visitation of Examinations. After Sir William Gull had defended the University of London, the motion to receive the report was withdrawn. The report of the Committee on the proposed Visitation of Medical Schools was brought up by Dr. Heron Watson; some discussion took place as to the probable cost of the visitation, and with regard to the refusal of St. Bartholomew's Hospital to admit the Visitors, but no decision had been arrived at when the Council adjourned.

THE SOCIETY OF 'APOTHECARIES AND ITS LICENTIATES.

THE meeting, held at very short notice, of the members of the Society of Apothecaries and others at the Hall on Tuesday last is reported in another column. It will be seen that the Society has acted with a vigour, dignity, and promptitude which are of excellent augury, and which will do much to enhance its professional estimation. By a singular coincidence—if coincidence it was—the somewhat arrogantly worded refusal of the two Colleges to accept the Apothecaries' Society in combination on the Conjoint Board was delivered by hand an hour before the meeting. This is not a little singular, as the letter from the Society had been put aside without answer since July. The meeting, although summoned, we believe, at only forty-eight hours' notice, was numerous, and included many representative names. The resolutions were passed unanimously. They are weighty and dignified, and arrange for an appeal to the 9,000 Licentiates of the Society, who will, we doubt not, loyally respond.

It is gratifying to note that the Apothecaries' Society recognise the rights and general interests of the profession, which make for unity. If they considered only their immediate prospects, they might hail with confident anticipation the enlarged rights which they will possess. As an isolated body licensing, under the Medical Act of 1886 practitioners in surgery, medicine, and midwifery, there is little doubt that they would be able to compete on favourable terms with the Conjoint Board of the two Colleges. But that way lies disunion and downward competition. They are well advised—and will have, we anticipate, the sympathy and support of the great body of the profession in the course they are now pursuing; and the appeal to their Licentiates is a movement in the right direction. It recognises the right of the general practitioner to a voice in the advancement of his own interests, the maintenance of his rights, and the government of the affairs of the profession.

DR. TINDAL ROBERTSON has formally announced his intention to contest Brighton in the Conservative interest.

DR. P. D. ANTHONISZ, of Galle, Ceylon, has been appointed Representative of the Burgher Community in the Legislative Council of that colony. Dr. Anthonisz has visited Europe four times, and has been through most of the hospitals in London and the Continent.

AT the recent examination for the degrees of M.B., at the London University, only thirty-six candidates were successful. Seven of the London medical schools, and one provincial medical school, were represented among the successful candidates.

AT an investiture held by the Queen at Windsor Castle, on Tuesday last, Dr. Orange, late of Broadmoor Asylum, and Dr. Arthur Mitchell, of Edinburgh, received the decoration of the Third Class of the Most Honorable Order of the Bath (C.B.), and Surgeon-General Dr. Michael Cudmore Furnell received the badge of a Companion of the Order of the Indian Empire.

DR. A. J. WALL, late of the Bengal Army, whose name is well known in association with work done in connection with the snake-poison, has recently spent many months in the active study of Cholera in Italy. He has been closely associated with the Italian officers of health wherever the disease was most virulent. On leaving Stradella, Dr. Wall was met at the station by a deputation from the Town Council, who presented him with the freedom of the city, together with a document setting forth their high appreciation of his zealous and successful labours.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE library of this institution will be closed on Thursday and Friday, November 25th and 26th, for the purposes of the final examination for the Fellowship, for which twenty-eight candidates have entered their names.

TRAINING OF INSPECTORS OF NUISANCES.

THE second course of lectures to sanitary inspectors, as inspectors of nuisances are commonly called, was largely attended, and their beneficial effect may undoubtedly be traced, not only in the large number of persons who presented themselves at the examination held by the Sanitary Institute this month, but in the excellence of the candidates, of whom forty-one out of fifty-five were successful.

MR. SHIRLEY MURPHY.

MR. SHIRLEY MURPHY has been appointed Lecturer on Hygiene and Public Health at the St. Mary's Hospital Medical School. We congratulate the Board of this energetic school on so excellent an appointment. Mr. Shirley Murphy has proved himself as accomplished a sanitarian as he is an able administrator, and will undoubtedly prove himself a teacher of the first order.

FALSE CHARGE AGAINST A SURGEON.

MR. JOSEPH GUEST BOUGHTON, a surgeon, of Cheltenham, who was indicted at Gloucester, on Tuesday last, for having on October 2nd indecently assaulted a married woman residing at Cheltenham, on an occasion when she called at his house to request his attendance on her husband, was found by the jury "not guilty." A complete denial was given to the charge; it was proved that no noise was heard by persons who were in the house at the time, and witnesses were called to show that the prosecutrix had offered to accept money to withdraw the charge.

DIABETES IN CHILDHOOD.

AN interesting case of diabetes in a child of 4 years old has been reported by Dr. A. Winckler (*Münch. Med. Woch.*). The rarity of the disease in a child, and its rapid development, rendered the case one of peculiar interest. There was an hereditary predisposition, as a member of the family had been affected with diabetes, but the great quantity of sugar which had been given to the child certainly hastened the development of the disease in this case. Cantani has stated that 90 cases out of 218 of diabetes are due to sweets and farinaceous food.

CHANGES AT GUY'S HOSPITAL.

BY the appointment of Dr. Goodhart as physician to Guy's Hospital, the vacancy created by the death of Dr. Moxon has been filled up, while Dr. Taylor occupies that lamented physician's place in the Medical School as lecturer on medicine in association with Dr. Pye-Smith. Dr. G. N. Pitt has been appointed Demonstrator of Morbid Anatomy; he becomes therefore the colleague, in the *post mortem* room, of Dr. Carrington, now Senior Demonstrator of Morbid Anatomy and Curator of the Museum, in place of Dr. Goodhart, who retains his lectureship in Pathology. Dr. Hale White will lecture on Materia Medica and Therapeutics, in place of Dr. Frederick Taylor.

EDUCATION OF PLUMBERS.

IN the interests of public health, it is a matter of great congratulation that the education and registration of plumbers go on apace. At a meeting of the Plumbers' Company, held on Wednesday, for the further issue of certificates to plumbers passed by the Committee of Registration, upwards of 200 master and journeymen plumbers from various parts of the kingdom were present. All the plumbers who

presented themselves had complied with Clause 6 of the company's regulations, which is as follows: "All applicants who cannot satisfy the Registering Committee of their experience, are required to pass an examination by a Board of Examiners, composed largely of practical plumbers."

A JAPANESE MINISTER AT ST. THOMAS'S HOSPITAL.

ST. THOMAS'S HOSPITAL was visited on November 5th by Count Saigo, the Japanese Minister of Marine, and M. Kawasé, Japanese Minister to the Court of St. James's. Their Excellencies were accompanied around the various departments of the hospital and medical school by Dr. Bristowe, Mr. Anderson, and Messrs. Totsuka and Suzuki, and manifested keen interest in the arrangements and management of the institution. It will be remembered that two of the most distinguished surgeons in Japan, Messrs. Takaki and Saneyoshi now Directors of the Naval Medical Service of their country, are both Fellows of the Royal College of Surgeons, and completed their professional education at St. Thomas's Hospital.

THE GROWTH OF THE CAMBRIDGE SCHOOL OF MEDICINE.

ATTENTION is called by Professor Michael Foster, in a letter to the Museums and Lecture-rooms Syndicate, to the insufficiency of the present accommodation for practical instruction in physiology. This term, the number of students attending lectures and desiring to take part in the practical instruction is 156, and it is impossible to teach all the classes at the same time in the rooms allotted. The Syndicate recommended that a new building be constructed, abutting on the Museum of Zoology and Comparative Anatomy, to provide accommodation for fifty-six students.

THE RECENT DEATH AFTER INOCULATION BY PASTEUR.

IN the notice under this heading, published on November 13th, of the death of a man named Wilde, it ought to have been made clear that the deceased was really bitten by the man Oates, though not apparently with any malicious intent. Dr. Foote informs us that Wilde was savagely bitten, and that Oates had remarked that he would bite someone before long. Dr. Foote had several opportunities of questioning Wilde, and if the information and observations had not been fairly borne out by the lacerated teeth-marks in a situation where an abrasion or scratch is rare, and if Dr. Foote had not had reason thoroughly to believe the honesty of the man as to the attack, he would never have gone to Paris.

CREMATION.

ON November 11th, the tenth cremation took place at the crematorium, belonging to the Cremation Society of England, at St. John's Woking. The remains were those of a lady, aged 41, and they were brought from the residence of the deceased in Leicestershire. The ashes weighed 3 lbs. 15½ ozs. It has been stated that the crematory is offensive during incineration of a body, but this is utterly untrue. Even to anyone standing on the crematory platform there is an entire absence of smell from even the burning wood, and no one could tell whether a cremation was taking place or not, as far as the sense of smell goes. This statement is but due to the founders of the Society, who chose the best system extant, a system which has been approved by the Paris authorities for erection at Père la Chaise.

POLYMORPHISM OF THE COMMA-BACILLUS.

AT the Congress at Strasbourg, Herr von Sehlen (Hanover) spoke at length on the polymorphism of the comma-bacillus of Koch. Koch had already asserted that the cholera-bacillus might, in the course of its evolution, pass through different forms—the comma form, that of the letter S, the spiral, and certain coiled filamentous forms. Cultivations made with cholera-dejecta, obtained at Naples, contained, besides the comma-bacillus, a large number of small, very short rectilinear rods, as well as spherical corpuscles, resembling micrococci. At first it was supposed that bacteria foreign to cholera were accidentally present in the cultivations, but these rods and micrococci cultivated on gelatine produced pure comma-bacilli, presenting the same characteristics as those observed in the cultivations of the adult comma-bacillus. Herr von Sehlen agrees with most other competent students that the morphology of bacteria is not sufficient to determine the species.

OUR MEAT SUPPLY.

THE magistrates at Portsmouth recently fined a man £62 15s. for exposing for sale seven pieces of meat weighing 80lbs., which were in a very decomposed state, and totally unfit for food, and further with having in his possession eight pieces of beef, also decomposed, weighing about 185lbs. The magistrates stated that "they did not like to send a man of the defendant's position to prison," and so long as magistrates allow themselves to be influenced more by a regard for the personal position of the offender than by a consideration of the enormity of the offence, so long will it be futile to look for a diminution in these cases. It should not be forgotten, in dealing with cases of this kind, that the offender has in many instances been allowed to pursue his nefarious traffic for a long time unchecked.

THE HOSPITALS ASSOCIATION.

ON Wednesday evening, a large number of guests were present at a *conversazione* given in the rooms of the Medical Society of London by the Hospitals Association. Sir Andrew Clark, president of the association, received the guests on their arrival. Among those present were Sir S. Waterlow, treasurer of St. Bartholomew's Hospital, the treasurer of Guy's Hospital, Dr. Bristowe, Sir H. Verney, president of the Nightingale Fund, Dr. Steele, Sir A. Watson, Sir H. Knight. Among the ladies, of whom a large number were present, the matrons of the metropolitan hospitals formed, as was fitting, a considerable proportion. Sir Andrew Clark gave an address, in which he said that there were several kinds of work performed in every great hospital: the treatment of the sick, the training of physicians, surgeons, and nurses, and administrative work. This work, he maintained, was on the whole efficiently done in all the great hospitals of London; the imperfections which remained were, in great measure, due to the want of connection and communication between hospitals, which were too often jealous and distrustful of one another. It was the great object of the association to create close and friendly relations between them, in the belief that their power for good would thus be increased. Sir S. Waterlow quoted figures to show how satisfactory had been the increase in late years in the number of trained nurses employed in hospitals.

CAFFEINE IN HEART DISEASE.

DR. OTTO SEIFERT (Würzburg) undertook, in the course of last year, a series of researches on Citrate of Caffeine. All the patients to whom he administered it were suffering from organic affections of the heart with imperfect compensation. In one case there was chronic nephritis, with generalised œdema. The caffeine was given in seven cases, sometimes in repeated doses, at others all in one dose. According to Lepine, the daily quantity should be from one to two grammes. The principal advantage which has been claimed for it is that it quickly improves the action of the heart and regulates the cardiac beats. It is also a diuretic, and has no cumulative action. One to two grammes of caffeine should be given in twenty-four hours. Opinions as to the value of the drug are conflicting; the principal drawback to its use seems to be that, owing to its speedy elimination, its action only lasts for a short time. In those cases where compensation has been re-established, the action of caffeine may be as prolonged as that of digitalis. The general condition is influenced in a striking manner; the palpitations, the dyspnœa, and, as a rule, the insomnia also rapidly disappear.

MICROBES IN THE BILE-DUCT.

Before the Anatomical Society of Paris, Dr. Netter read a paper on the presence, normally, of micro-organisms during life in the last part of the bile-duct. By tying this duct, these organisms passed into the liver, and eventually into the blood. They were of two different species: the staphylococcus aureus, readily recognised by its orange-yellow colour, and a bacillus growing in opaque white colonies; injected into the liver or gall-bladder, the bacillus is alleged to produce a peculiar degeneration of the hepatic cells; it is also affirmed to be capable of inducing a vegetative endocarditis. In infection by the staphylococcus, the rectal temperature was markedly elevated. The mucous lining of the gall-bladder and large ducts became ulcerated, whilst abscesses were found in the liver itself and other organs of the body. After infection by the other microbe, the temperature was notably lowered, and the liver afterwards presented marked evidence of cell-change. Brieger has cultivated the staphylococcus from a case of purulent infection after calculus obliterating the bile-duct. In a case of grave icterus associated with a generalised acute miliary tuberculosis, the cultivations from the blood and the spleen showed the existence of the staphylococcus aureus. In a case of icterus secondary to alcoholic cirrhosis during the early stage, when the liver was enlarged, both organisms (staphylococcus and bacillus) were found in the blood. In primary icterus, too, it was stated that the staphylococcus had been detected, by cultivation, in the blood.

CHOLERA "PRECAUTIONS" IN ROUMANIA.

A traveller to Bucharest gives, in a private letter, the following account of the "precautions" adopted on the Roumanian frontier to prevent the importation of cholera into that country from Austria:—"We arrived at Verschova about half-past twelve at night, and were all turned out of the train. Each of our boxes and parcels had to be opened, and left so while the doctor sprayed all the contents with a disinfectant. We were told that this ridiculous proceeding was on account of our having been to Pesth. But either the spray broke down, or the doctor got tired before he got through the forty-six boxes that claimed his attentions, for the last of ours was spared the infliction, though even now those that did get sprayed make our room at the hotel smell most unpleasantly. We were then all marched together into the waiting-room to pass under review by the authorities. Finally we got back into the train about two in the morning, and reached here at ten." After this story, who will venture any longer to jeer at the Cumberland villagers who set up a ring of hurdles to keep out the cholera?

LEAD-POISONING THROUGH HOME-MADE WINES.

The fact that an article is "home-made" is usually a sufficient guarantee of its purity and wholesomeness, whatever other qualities it may lack; but an exception to this general rule has just been discovered by Dr. D. Campbell, the medical officer of health to the Calne Local Board. It appears that, for many years past, Dr. Campbell has had occasion, about the months of August, September, and October, to attend many severe cases of acute and subacute lead-poisoning, the source of which he could not ascertain. The drinking-water, the beer, the tea, the coffee, and bread, as well as the various cooking utensils, all fell under suspicion and analysis, but with only negative results. A few weeks ago, however, seven severe cases—two almost fatal—occurred simultaneously in Calne and the neighbourhood, and careful inquiries by Dr. Campbell elicited at last from one of the patients the fact "that her husband had drunk some home-made rhubarb-wine, which she herself had made, and which she was sure could not contain any poison of any sort, as she was very careful in selecting and cleaning her rhubarb; and, as for the sugar and barm, they were all right; besides, the vessel was a beautifully clean, glazed, earthenware pan, in which she steeped it for a fortnight or three weeks to ferment." Here Dr. Campbell at once saw the solution of the problem that had so long been puzzling him. The glaze on these earthenware vessels contains at times as much as 60 per cent. of white or red lead, and, during the process of fermentation, the acids of the rhubarb, or of any other fruits used, with the acetic acid generated, act on the glaze, dissolve the lead, and form acetate, or sugar of lead, which is a powerful irritant poison when taken even in small doses for any length of time. Analysis of ten samples of various home-made wines collected by Dr. Campbell, showed the presence of lead in large quantity in eight; one (parsnip), which was made in a galvanised iron tub, contained iron; and one, which had been made in an ordinary boiler, was free from lead and iron. One sample, which was five years old, and two samples, which were two years old, contained lead. Various chemical tests applied to the earthenware vessels that had been used showed whence the lead had been obtained. As high as the liquor had reached in the vessel, the glaze was more or less dissolved off. On acetic acid and iodide of potassium being applied, a clear yellow spot of iodide of lead was produced; and, on ammonium-sulphide being applied to the denuded part of the pan, a distinct black line was immediately formed, clearly showing the presence of lead in the glaze. It is not an uncommon custom in country districts for persons who have large gardens and much fruit to make considerable quantities of these wines, from rhubarb, parsnips, red and black currants, sloes, damsons, elderberries, etc., for use by the men in harvest-time. It is, therefore, important that they should have this timely warning of the danger that lurks in those "beautifully glazed earthenware pans." Doubtless, wooden vessels would be quite as convenient for these domestic brewings, whilst they would be free from the risk of lead-poisoning.

THE POTATO.

It is to be hoped that the Conference to be held next month in celebration of the Tercentenary of the potato will not devote itself entirely to historical questions. The cultivation of the root, its protection from disease, and its preparation for the table, are subjects of far greater importance than the date of its introduction or the identity of its first importer. The dietetic value of the potato depends so much upon the thoroughness of its cooking, that a little attention may well be directed to this branch of the subject. The average English cook, whose chief idea in preparing meals seems to be to accomplish the matter with as little thought and labour as possible, has but one method of treating potatoes—the simplest. They are too often considered fit for the food of man so soon as they are sufficiently sodden to permit of penetration by a fork—a test which is employed, presumably, as representing the power of the human tooth. If boiled, or, better, steamed thoroughly and with care, potatoes may be rendered as digestible as bread. But there are a hundred ways in which they may be cooked, of which the English method is perhaps the least appetising and economical.

M. PAUL BERT AS A PHYSIOLOGIST.

M. Paul Bert, whose death the French press is just now lamenting, was, before he seriously turned his attention to politics, won over to physiology by Pierre Gratiolet, the head of the Anatomical Laboratory at the Jardin des Plantes, and was for five or six years Claude Bernard's assistant. At the sitting of the Academy of Sciences on Monday, the President, M. Jurien de la Gravière, expressed regret that politics had diverted M. Paul Bert from physiology, and M. Vulpian remarked that his death, though glorious for the country, was a calamity for science, his numerous memoirs having placed him among the first physiologists of the age. It is told of the late M. Paul Bert, as an instance of his scientific enthusiasm and fearlessness, that at one time, when he was impressed with the prevalence of small-pox, from which those vaccinated in youth and not revaccinated had suffered largely, he decided to test for himself the value of revaccination; and he did so in a manner which might possibly have cost him his life, had his doubts been justified. He was vaccinated, and afterwards had himself inoculated at Havre with virus from a man who was dying of small-pox. He escaped the disease.

NINTH INTERNATIONAL MEDICAL CONGRESS FOR 1887.

FROM the proceedings of the last meeting of the Executive Committee, and other sources, we learn that the American part of the preliminary organisation of the Congress, to be held in Washington, commencing September 15th, 1887, is substantially completed. There will be eighteen sections, in which are now enrolled as officers and members of Council more than 370 representative members of the profession in America. Additions to the list from among eminent members of the profession in most of the countries of Europe, are still being made. It is understood that the general programme will provide for one general session of the Congress each day, limited to two or two and a half hours, and the remaining working time will be occupied by the sections. It is the intention of the Executive Committee to have one address in each of the general sessions. The Committee of Arrangements at Washington is well organised, and is negotiating with the steamship and railway companies for commutation of fares, and with good prospects of every success. The same committee also has charge of the programme for receptions, entertainments, and excursions.

BOWMAN LECTURE AT THE OPHTHALMOLOGICAL SOCIETY.

ON Friday last the second Bowman Lecture was delivered before the Ophthalmological Society by Professor Zehender. The subject, which was that of Parasitic Diseases of the Eye, was treated in a masterly manner, which gave evidence of much careful and original thought. After a graceful tribute to the labours of Professor Lister, the lecturer proceeded to speak of the ecchinococcus, its treatment, and the degree with which its frequency varies in different countries. Passing on to the smaller parasites, Professor Zehender reviewed the evidence in favour of many affections of the conjunctiva, cornea, and lacrymal sac being due to the presence of the gonococcus. In speaking of the experiments made to settle this question, he pointed out the fallacy that may arise from forgetting that both the rabbit and the human subject have microphytes which are peculiar to each; indeed, the number of these bodies which existed in the human subject renders it a matter of difficulty to determine which are innocuous, as many certainly are, and which deleterious. The important question as to sympathetic inflammations being due to th transmission of microphytes from one eye to the other was then discussed, though not very fully. The lecture, a full report of which we shall publish shortly, will form a most valuable contribution to ophthalmic literature, and serve as a landmark, showing the present state of our knowledge in a branch of science which, with a few notable exceptions, has only existed a few years. Professor Zehender is to be congratulated upon the excellent English in which his lecture was written, and the mastery of the language which he showed in its delivery. At the conclusion of the lecture, a vote of thanks was most cordially awarded to the lecturer, on the proposition of Sir Joseph Lister, supported by Mr. Jonathan Hutchinson. The attendance, which was fair, would have been much larger had it not been for the exceptional badness of the weather, and the fact that there was a meeting of the Clinical Society on the same evening.

A JUDGE'S OPINION OF MEDICAL MEN.

AT the trial of what was known as the Bere Regis murder case at Winchester, Baron Huddleston is reported to have made once more some very outrageous remarks on medical men in general, and on the medical witnesses in the case in particular. We may mention that the prisoner, a young fellow, twenty-one years of age, was charged with murdering his grandmother. He is stated never to have been a person of strong intellect, and was on the point of leaving this country for Australia. His departure seems to have determined a fit of mental depression, during which he deliberately shot his grandmother, who had brought him up from a lad, through the head. He gave himself up to the police shortly afterwards. No motive could be assigned for the crime, as no dispute appears to have preceded the crime, and on attempt was made to take any money or valuables. The medical evidence was to the effect that the prisoner lacked apprehension, and could not realise his position or offence. This is indeed what one would have gathered from the evidence. We are ignorant of the exact nature of the circumstances which roused the presiding judge to anger, but he thought fit to pass some severe strictures on medical men, who, he said, "gloated over their scientific knowledge, and aired it in the witness box, where they would usurp the functions of the jury without taking a juryman's oath, and they excused themselves by saying they came to get a prisoner off." These are most extraordinary statements to fall from the lips of a judge, and we should be glad to be placed in possession of the exact details of the evidence and attitude of the medical man which gave rise to them. No doubt the situation of the medical adviser in cases like this is a difficult one, and requires no small amount of tact to place the facts in their proper light, and to avoid, at the same time, an appearance of dictating to the Court the conclusions they ought to arrive at. The inconvenience, however, is less the fault of the medical man than that of a vicious system. If any doubt exist as to the mental condition of a prisoner, the condition should be made the subject of enquiry by the order of the Court, which should delegate one or more experts to decide the question. To put a man on his trial before this all-important question has been settled is both barbarous and useless, since everything turns on the prisoner's sanity and consequent responsibility. Such a problem is not one which can be solved by a jury or even a judge, who are only called upon to offer an opinion on the credibility or otherwise of the medical man, a position obviously absurd and irrational, since it should be the duty of the Court to see that none but responsible opinions were admitted in evidence. It is absurd also to take the opinion of a jury, from which professional men are by law excluded, on the merits of a civil action for wrongful detention as a lunatic. It is high time these anomalies were put an end to by the establishment of an official board of referees, or other means by which the same end could be attained. What his lordship meant by medical men "gloating" over their knowledge, we are at a loss to imagine—they could hardly be expected or permitted to "gloat" over their ignorance. As to their "airing their knowledge in the witness-box," one might have been excused the impression that they were called upon to appear for that express purpose. If a medical opinion is not to command respect, it had better be dispensed with; but, inasmuch as we are by no means prepared to maintain that the opinion of every medical man is possessed of the same value, on so technical a subject, we would like to see provision made to obtain an opinion or opinions, in such cases, which could not be open to question. The prisoner was sentenced to death; but, as the jury appended a recommendation to mercy, it is sincerely to be hoped that the attention of the Home Secretary will be called to the desirability of investigating his mental condition, the inquiry on the next occasion to be conducted without incurring the risk of irrelevant, and even impertinent, remarks from anybody, even a judge.

PRESENTATION OF THE GRAEFE MEDAL TO PROFESSOR HELMHOLTZ.

THE medal founded in honour of Albrecht von Graefe by the Ophthalmological Society of Heidelberg, is to be awarded every ten years, irrespective of nationality, to the person who shall be considered to have done most to promote the progress of ophthalmology. The choice may sometimes prove no easy task, but there can be no question as to the right of Helmholtz to the first award. Professor Donders, in presenting the medal, gave a graphic sketch of Graefe's life and character. He was only 19 when, studying under von Arlt, he determined to devote himself to ophthalmology. In the following winter (1848-49) he studied in the then brilliant school of Paris, under Sichel, Desmarres, Claude-Bernard, and others. The next winter he worked in Vienna under Jaeger, and also worked hard at physiology in the same school. The year 1851 was famous as that in which Helmholtz invented the ophthalmoscope. The instrument which

was to revolutionise ophthalmic medicine and surgery was not, strange as it now seems, fully appreciated at first by all; its full value flashed upon Graefe however, at once, and it is related how that on seeing the fundus he exclaimed: "Helmholtz has disclosed a new world to us," and then added, thoughtfully, "What is to be discovered in it?" At this time the Great Exhibition was attracting foreigners from all countries to London, and we find Graefe, Donders, and Jaeger, at "Guthrie's Eye-Hospital," the present Westminster Ophthalmic. The two former remained in London several weeks, "inseparable from early morning, when we partook of a frugal breakfast in Oxford Street on our way to Moorfields, to late evening, when we were the guests of our friend William Bowman." From London, Graefe went to Scotland and Ireland, and thence back to Germany. He immediately opened a *clinique* on the Paris model, and his success was immediate and uninterrupted. In the first month he entered 230 patients; in ten months, 1,900, and in a year and a half he had a *clinique* of 4,000 patients, with 36 beds. Graefe at this time was but 25 years old, and had reached a position attained by few in a long lifetime. In 1857, however, he made his greatest triumph, at the Ophthalmological Congress in Brussels; his paper on the treatment of Glaucoma was received with acclamation, and his reputation became world-wide. For the next four years surgeons flocked to his *clinique* from all quarters. In 1861 the first symptoms of the pulmonary affection, which eventually ended fatally, interrupted Graefe's work for many months. On his return he worked with redoubled energy at clinical and literary work. In 1867, however, he had another illness, and his health did not appear to have been fully restored subsequently in May, 1870, he had a severe attack of pneumonia, which ended fatally on July 19th. Professor Donders ended by addressing Professor Helmholtz, enumerating the advances in ophthalmology which were directly due to him, and, in the name of the Society, presented him with the medal.

SOUTH AUSTRALIAN MEDICAL CONGRESS.

DR. B. POULTON, Honorary Secretary of the Congress Committee of the South Australian Branch of the British Medical Association, announces that this Branch proposes to inaugurate during the month of September, 1887, a short series of special meetings for the discussion of subjects relating to Public Medicine, Hygiene, Medicine, and Surgery. The congress will not extend over more than one week. In the month of September, the International Jubilee Exhibition to be held in Adelaide will be fully established, and the season is perhaps the most favourable for visiting South Australia. The sittings will be open to all accredited members of the profession throughou the world, and it is considered especially desirable that gentlemen resident in or visiting the neighbouring colonies should be largely represented. The committee cordially invite the contribution of papers to initiate discussion, and will be much obliged if intending contributors will indicate the particular subjects they propose to treat. As the extent and importance of the Congress will depend largely on the assistance and co-operation offered by the sister colonies, the committee hope they will receive early intimations from gentlemen proposing to attend the meetings. In connection with the Congress and the Exhibition, it is intended to hold a *conversazione* and other entertainments, and conjoint trips to objects of interest in the neighbourhood of Adelaide will be arranged.

ANTAGONISM BETWEEN ATROPINE AND MORPHINE.

AT a recent scientific meeting in Berlin, Herr Lenharz, of Leipsig, read a paper (*Prager Med. Wochenschr.*, No. 42) on the alleged antagonism between atropine and morphine, considered both clinically and experimentally. He had come to the conclusion that no such antagonism existed, for the following reasons:—Firstly, the antidotal doses of atropine have far too wide a range. As a rule, enormous doses are given, often without success, while, at the same time, recoveries from morphine-poisoning are recorded after merely nominal doses of atropine (.015 grammes, and even less than this); secondly, the uncertainty of the indications. Johnston (of Shanghai) would resort to atropine in all cases, in spite of a weak irregular pulse, whilst Wood makes the condition of the respiration the criterion, and Binz discards the use of atropine if the pulse be rapid and small; finally, atropine does direct harm. Binz had recommended atropine on experimental grounds, but Binz's experiments had not been sufficiently complete, that is, only enough morphine had been given to make the animals sleep, but not enough to give them convulsions. Animals killed by large doses of morphine did not die from lowered blood-pressure, nor from embarrassed breathing, but from the exhausting convulsions. Of 132 cases of morphine-poisoning, collected by the author, 59 were treated with atropine, with a mortality of 28 per cent.; of the other 73 only 15 per cent. died. In eight experiments with morphine on animals, atropine made no difference—the animals died just as soon as without it.

SCOTLAND.

ROYAL HOSPITAL FOR SICK CHILDREN, EDINBURGH.

THE number of patients treated in the Royal Hospital for Sick Children, Edinburgh, during the month of October, was 100. Of these, 52 new cases were admitted during the month, and 48 were in the hospital on September 30th. There were 23 patients discharged cured, and 3 relieved. The average daily number of sick in the hospital during the month was 53. At the dispensary, 553 patients were treated and 14 were vaccinated, making in all 567; thus the total number of patients treated at the hospital during the month was 667.

ODONTO-CHIRURGICAL SOCIETY.

THE first ordinary meeting of the Odonto-Chirurgical Society was held in Edinburgh last week. Mr. W. Bowman Macleod, L.D.S., F.R.S.E., Edinburgh, the President of the Society, occupied the chair. The principal paper, read by Dr. J. Symington, F.R.S.E., on "The Position and Relations of Teeth in Children," was of a technical nature.

FURTHER MUNIFICENCE OF DR. GUNNING.

IN a recent number of the JOURNAL, there was a notice of the munificent endowment by Dr. Gunning, of Rio Janeiro, of every branch of medical science in Edinburgh University, by a triennial prize; he has not been content only to benefit and encourage University graduates, but has intimated to the Royal College of Physicians of Edinburgh his intention of founding a scholarship or prize there, and also to the Royal College of Surgeons, Edinburgh, his intention of giving a triennial Victoria Jubilee Prize, of the value of £100, to be associated with the name of Liston.

EDINBURGH ROYAL INFIRMARY.

THE managers of Edinburgh Royal Infirmary have resolved to appoint another assistant-surgeon, and will do so within the next fortnight. The candidates are in alphabetical order: J. Macdonald Brown, M.B. and C.M. Edin., F.R.C.S., F.R.C.S.E., F.R.S.Ed., Lecturer in Anatomy, Surgeons' Hall, Edinburgh; A. W. Hare, M.B. and C.M.Edin., F.R.C.S.Ed., F.R.S.E., Assistant to the Professor of Surgery, Edinburgh University; and J. W. B. Hodsdon, M.D. and M.Ch., Queen's University, Ireland, M.R.C.P.Edin., and F.R.C.S.Ed., Clinical Surgery Tutor, Extra-Mural School, Edinburgh, Extern Physician Edinburgh Royal Hospital for Sick Children.

EDINBURGH HEALTH SOCIETY.

THE Seventh Session of the Edinburgh Health Society was opened last Saturday by a lecture by Professor Cossar Ewart, who chose as his subject, "The Rôle of Bacteria in Health and Disease." The lecturer, whose remarks were illustrated by diagrams and by views shown on the screen, stated what enormous strides had been made during the last twenty years, and perhaps the greatest advance of all had been in

the study of bacteria and other minute organisms. Professor Ewart said had they been asked some years ago what bacteria were (whether plants or animals), the answer would have been they were the lowest forms of the animal kingdom. Now everyone admitted that they belonged to the lowest, or to one of the lowest, divisions of the vegetable kingdom. Bacteria were exceedingly small organisms, and it was understood that they, or other minute organisms, were in all probability associated with the existence of epidemic and contagious diseases, and that it was by modified forms of bacteria that men would be able to protect themselves in the future against many of the worst diseases they were acquainted with. The lecturer then went on to describe the different forms of bacteria and their action on the different things they are brought in contact with, and briefly referred to the nature of organisms associated with special diseases. Professor Ewart's lecture was listened to attentively, and frequently applauded by a large audience. Mr. Robert Cox, of Gorgie (in the absence of the Lord Provost), presided. Among other subjects to be treated during the winter session by different lecturers are Soap, Soda, and other Cleansing Materials; Headaches; Healthy Lungs; The Teeth; The Children of the City, What Can We Do for Them? and Tear and Wear.

COMBE LECTURES IN SCOTLAND.

THE present session of these lectures in Scotland, conducted, as heretofore, by Dr. Andrew Wilson, is being successfully carried on at Kirkcaldy, Penicuik, Airdrie, and Carluke. After Christmas, courses are to be delivered at Coatbridge, Grangemouth, Bonnyrigg, and Dumbarton, by Dr. Wilson. The Combe Lectures to the teachers of Edinburgh and Glasgow will be given in the summer of 1887, Dr. Wilson's subject being "Health, as related to the School and the Home." Since the inauguration of the work of the Combe Trust, six or seven years ago, lectures have been delivered by him on physiology and health in nearly every great centre of Scotland. The original idea was to improve on the ordinary popular lectures, by giving courses of eight lectures in each town, one being delivered weekly. A connected view of general physiology, as related to the build of the body, and to questions of nutrition, is thus afforded; and it has been found by experience that the large audiences attending these lectures relish the regular and systematic instruction thus provided. In the second, or "health" course, of eight lectures, given as a sequel to the course on physiology, questions of public health are dealt with. The important topics of infectious diseases and disinfection, for example, are duly explained, and much good must be effected by the popular instruction conveyed regarding the care of fever cases, and the precautions to be taken against their spread. A necessary feature of all such public instruction is the full illustration of the lectures by the aid of diagrams, models, and occasional lime-light illustrations. The work of the Combe Trust is thus seen to be of a most useful character. We understand that, under the provisions of George Combe's disposition, the trustees enjoy a singularly wide range of power, which they have well and wisely used. The instruction of the people in the laws of health-science lies at the foundation of much of our happiness, national and individual alike; while it is a no less creditable part of such educational work that it tends to dispel much of the ignorance and quackery that commonly beset the questions which arise in the minds of the people connected with public health, and with the cure, or rather the prevention, of disease.

IRELAND.

DR. GORDON, physician to the Richmond, Whitworth, and Hardwicke Hospitals, and Ex-President of the King and Queen's College of Physicians in Ireland, has been appointed a Vice-President of the Section of Medicine of the International Medical Congress of 1887.

ACADEMY OF MEDICINE IN IRELAND.

THE opening meeting of the Surgical Section of the Academy took place on Friday evening, November 12th. There was an unusually large attendance. Sir William Stokes, President of the Royal College of Surgeons in Ireland, and *ex officio* of the Section, delivered an admirable and eloquent address on "Finality in Surgery," an abstract of which is published at page 961. Subsequently papers were read by Dr. McDowell, of Carlow, on a successful case of ovariotomy, and by Dr. Kendal Franks on a successful case of nephro-lithotomy. This is the first case in which the operation has been done in Ireland.

ACTION AGAINST A DENTIST.

An action was brought last week against a Wexford dentist, at the New Ross quarter sessions, for negligent, improper, and unskilful treatment in an operation which he performed upon Mrs. Cobbe, a schoolmistress in New Ross. The plaintiff swore positively that the defendant, having advised her to get her teeth extracted and replaced by a new set, proceeded to perform the operation. He drew four teeth without using, as he had undertaken, an anodyne, and left her bleeding profusely. Mrs. Cobbe continued to bleed all the evening, and it was found necessary to call in two medical practitioners, who succeeded in arresting the hæmorrhage. The dentist's defence was that the woman's gums were spongy, that he used the utmost skill and care in his treatment, and that no one could have foreseen the hæmorrhage. The judge found for the dentist.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.

WE have previously announced that Mr. L. Hepenstal Ormsby is about to publish a medical history of the Meath Hospital, and intends to insert therein the names of all former students who favour him with the following information—viz., full name, address, date of study, past and present medical appointment; former students who are serving in the Army, Navy, Civil and Colonial services, are earnestly requested to attend to this notice, if they have not done so before. As the work will soon be published, former students omitting to send the information required may be annoyed by finding their names left out.

THE RIGHT HON. SIR JOHN LENTAIGNE, C.B., D.L., M.B., F.R.C.S.I.

WE have to record with regret the death, on November 12th, of the above gentleman, at the ripe age of 84. Sir John graduated in Medicine in the University of Dublin in 1828, and took the Fellowship of the Royal College of Surgeons in Ireland in 1844. It was, however, as an able official, and as the head of important departments, more than as a medical man, that he was best known to the public and honoured by the State. He filled the office of Inspector-General of Prisons in Ireland, and, subsequently, was the inspector of Reformatory and Industrial Schools in Ireland—a post which he but very recently resigned. He was also a Commissioner of National Education, and was this year made a member of Her Majesty's Privy Council in Ireland. He was the first member of the profession, we believe, who has received this honour.

POLLUTION OF THE RIVER LAGAN.

A LARGELY attended public meeting was recently held in Belfast to consider the above question. Dr. Parker, Head Master of the Methodist College, presided, and the attendance included a good representation of the medical profession. The object of the meeting was to urge upon the Town Council the necessity of taking steps to purify that portion of the river Lagan which lies between the first lock and the Albert Bridge. The river is here tidal, the channel is broad and shallow, and at low water, especially in warm weather, the emanations are intolerably fœtid. This is the more to be regretted as the river here skirts the beautiful Ormean Park, an admirable recreation-ground provided for the free use of the inhabitants. It was alleged by various speakers that the main drainage scheme at present being promoted by the Corporation would fail to effect the purification of

the river, and in any case this scheme will require possibly six years for its completion—a much longer period than the present unsatisfactory condition of things could be permitted to continue. An engineer, who was present, submitted to the meeting a scheme by which the sewers at present discharging into this portion of the Lagan could be intercepted, and a lock formed at the Albert Bridge, so that the portions of the river above this point would be constantly flushed with pure water. The scheme was estimated to cost £20,000. A deputation was appointed to lay the views and suggestions of the meeting before the Town Improvement Committee. The Belfast Corporation have lately shown such commendable energy and enterprise in opening up new streets and clearing away old rookeries, thereby rendering Belfast one of the cleanest and handsomest manufacturing towns in the kingdom, that it is to be hoped that they will lend a favourable ear to those who wish to transform the river Lagan from a pestilential sewer into a beautiful stream of pure water. In the not impossible event of cholera reaching Belfast, the river in its present state would constitute a grave public danger.

THE DANGER OF WAKES.

An instance of the reckless practice of holding wakes was recently reported to the coroner by a medical man. He stated that he found a number of men, women, and children assembled at a wake in Blackhall Street, Dublin, where two children had died of malignant scarlet fever. The coroner made an order for immediate burial, and dispensed with the holding of an inquest.

THE EXCLUSION OF THE APOTHECARIES' SOCIETY FROM THE CONJOINT EXAMINING BOARD.

MEETING AT APOTHECARIES' HALL.

A meeting was held at the Apothecaries' Hall on Tuesday, November 16th, at 3 p.m., summoned at short notice to consider the above subject, Mr. W. Shillito, London, Master of the Company, in the chair. Among the persons present were Messrs. G. J. Amsden, Brentwood; Warwick Steele, London; E. Bradford, Harrow; W. Clark, London; T. G. Slaughter, Farningham; T. S. Byass, Cuckfield; H. W. Statham, London; J. Saner, London; T. Wakefield, London; E. Furley, St. Leonard's-on-Sea; J. W. Ilott, Bromley; G. H. Makins, St. Alban's; E. Chabot, London; R. H. Semple, M.D., London; J. W. Robinson, Boxmoor; C. Taylor, London; Henry Pilleau, London; J. R. Whitecombe, London; F. R. Spackman, Harpenden; J. L. Lowdell, Brighton; G. Buchanan, M.D., F.R.S., London; J. R. Groves, T. Dickinson, Charles Brown, E. Parker Young, T. H. Waterworth, M.D.; J. S. Stocker, M.D.; T. Peregrine, M.D.; R. J. Lee, M.D.; A. T. Norton, J. Wickham Barnes, Shirley F. Murphy, James Hockie, Arthur H. W. Ayling, W. F. R. Burgess, M.D.; J. C. Thorowgood, M.D.; Walter Smith, J. J. Merriman, Edward East, George Danford Thomas, M.D.; H. M. C. Champneys, Charles Langster, John Randall, M.D.; A. E. Barrett, H. J. W. Martin, H. T. Butlin, W. H. Holman, M.B.; Henry Bullock, F. J. Hensley, M.D.; Walter Dickson, M.D.; R. Brudenell Carter, F. de H. Hall, M.D.; G. Brown, M. T. Masters, M.D.; W. J. Walsham, A. Hepburn, S. C. Griffith, M.D.; Arthur Lewers, M.D.; W. G. Bott, H. W. Verdon, M.D.; R. H. S. Carpenter, W. A. Marsh, C. A. Semple, M.B.; Ernest Hart, W. Barnes, Alfred Carpenter, M.D.; Mr. Pridham, W. Brown, and Mr. Upton (Solicitor).

The Master, in opening the business of the meeting, explained the reason of his inviting, at very short notice, members of the Society to meet a few other gentlemen, representing various professional bodies, to confer on the subject of the amalgamation of the Examining Board of the Apothecaries' Society with that of some other medical institution having the power of granting diplomas in accordance with the new Act of 1886. He gave a short historical account of the steps which had been taken by the Society for this purpose; and, at his request, the Clerk, Mr. Upton, read a copy of a letter which the Society had addressed to the Presidents of the Royal Colleges of Physicians and Surgeons in July last, expressing the willingness of the Society to amalgamate their Examining Board with that of these bodies.

To the President of the Royal College of Surgeons; and, to the President of the College of Physicians.

"Society of Apothecaries, Blackfriars, E.C., July 21st, 1886.

"Sir,—The Medical Act of 1886 gives an opportunity for me, on behalf of the Society of Apothecaries of London, to address the following communication to you. In making it, the Society are perfectly aware of difficulties which may be suggested, but they believe that these difficulties are capable of being removed, and that the Royal Colleges, as well as the Society, would greatly benefit by their removal.

"It is unnecessary to do more than refer briefly to the fact that, a few years ago, a combination was practically arranged under the provisions of the Medical Act, 1858, between the Colleges and the Society, and it will be admitted that its abandonment (from whatever cause) was not due to any action on the part of the Society.

"In the autumn of 1884, the Colleges formed, under the Act of 1858, the combination under which they are now conducting a conjoint examination. Such a combination neither could nor did prevent competition. It neither could nor did profess to give an exclusive or special right of being placed on the *Medical Register*, and, in fact, it only produced a result (at increased cost) which it was possible to attain by other means.

"But, under the Medical Act of 1886, the Colleges will have to encounter a competition of a still more formidable character. Assume, for instance, that the Society is unable to combine, it will be in a position to ask for the appointment of assistant-examiners. With that assistance, it will be able alone to grant a statutory diploma in medicine, surgery, and midwifery; and the result will be that, within the distance of less than a mile, two distinct authorities will, upon different terms, be granting the same statutory diploma. Such a competition should, in the interests of the public, be, if possible, avoided.

"Nor should it be forgotten that, if the Colleges be unwilling to combine with the Society, there is still open and possible to the latter a very formidable combination, which, in this alternative, would equally cause a very serious competition to arise, to the prejudice of the Colleges.

"The Society are not shutting their eyes to the difficulty arising from the fact of the Royal Colleges being already in combination, but they insist that the advantages which would accrue to the Colleges and to the public by excluding unnecessary competition are such as ought to outweigh and overcome any such difficulty; in fact, that it is perfectly possible for the existing combination between the Colleges to be modified so as to bring the Society into it.

"Until the principle of combination with the Society is favourably accepted, it is premature to go into details; but it may be assumed that the Society will not ask for any terms which are not reasonable, and will give every facility on their part.

"The Society would, therefore, urge on the Royal Colleges their careful and serious consideration of what has been placed before them.—I have the honour to be your most obedient servant,

"(Signed) Edward Furley, F.R.C.S., Master."

Strangely enough, beyond the mere acknowledgment of the receipt of these letters in July last, no other reply was sent until an hour before the meeting, when a letter was received, which he would read to the meeting.

"November 15th, 1886.

"Sir,—We have the honour to inform you that your letter of July 21st last, addressed to the President of the Royal College of Physicians of London, and also to the President of the Royal College of Surgeons of England, was submitted by them to the governing bodies of the two Colleges, and we are directed by the governing bodies of the two Colleges to inform you that the following resolution has been adopted by them:

"'Inasmuch as the examination, conducted by the Examining Board in England, constituted by the Royal College of Physicians of London and the Royal College of Surgeons of England, is a complete qualifying examination in medicine, surgery, and midwifery, conferring the right of registration under the Medical Act, a combination of the two Colleges with the Society of Apothecaries is, for examination purposes, unnecessary, and, in the unanimous opinion of the Committee, is also undesirable.'

"We have the honour to be, Sir, your obedient servants,

"Henry A. Pitman,
Registrar of the Royal College of Physicians.
"Edward Trimmer,
Secretary of the Royal College of Surgeons.

"To the Master of the Society of Apothecaries of London."

The discussion was opened by Mr. George Brown, who inquired if any scheme had been formulated by the Society as to the course which should be adopted.

Mr. Wickham Barnes, Honorary Secretary of the Poor-law Medical Officers' Association, stated that, as a Fellow of the College of Sur

geons, it was a source of regret to him that he felt obliged to adopt a course which expressed disapproval of the action of the Council of that body; but he felt that they had committed a grave mistake. He would not express himself at this moment further on the subject, but would at once propose a resolution which he desired to submit to the meeting for discussion:

"That this meeting, having heard the letter addressed by the Society of Apothecaries of London to the Presidents of the two Royal Colleges, and the reply thereto signed by the Registrars of the two Colleges on their behalf, regret to hear that such reply is so unsatisfactory, and to find that the Colleges have not duly considered the interests of the public in this matter."

Mr. STEELE, Honorary Secretary of the Association of Members of the College of Surgeons, seconded the resolution. He pointed out that, at the recent annual meeting of the Royal College of Surgeons, a resolution had been adopted, which was directly opposed to that just received from the governing bodies of the Colleges. The governing bodies were, therefore, in direct antagonism to the medical profession, whose undoubted will it was that there should not be two combating examining boards for general practitioners in London. He commended the resolution to the consideration of the meeting.

Mr. PARKER YOUNG regretted that so little time was available for the consideration of a matter of so much importance. It was not clear to him that, so far as the interests of the Society were concerned, there was any matter to regret. Their position was absolutely secure. The loss was, indeed, to the Colleges, who had unwisely declined to enhance the value of the licence they were empowered to give by associating with themselves the Apothecaries' Society, which could confer far greater privileges on its licentiates than could the Colleges. Regret, therefore, should not be expressed by the Society on its own behalf. Such regret as was felt at the action of the Colleges should come, and would come, from without, from the profession and the public, who were the real sufferers by this decision. He reminded the meeting that the Society had no reason to be ashamed of its past. It had always taken the lead in the improvement of medical education and of examination. In many respects, its examinations were superior to those of the Colleges; of this he gave examples; and the privileges it could confer were greater. Other courses were open, under law, to the Society; and he was inclined to think that the most dignified course might be to receive in silence the letter which had been read to them.

Mr. GEORGE BROWN felt, too, that the Colleges had made a serious mistake. The Apothecaries' Society stood on safe ground, and the benefits they could confer on the profession would not, in any case, be lost. The real loss was in the fact that two competing examining bodies would now exist in London for licensing general practitioners throughout England and Wales, when it was hoped and intended that these should be united. He did not, therefore, desire to see the Society going, hat in hand, to these corporations. Its course, in accordance with law, was very clear, and it had an excellent future of greatly enlarged usefulness before it. If the amalgamation had taken place, it is probable that the fat kine of the Colleges would have swallowed up the lean kine of the Society; but that fear was now allayed. Probably, the best course would be for the Society to combine with a provincial University; that was a matter for further consideration.

Mr. CHABOT said it was a matter requiring much consideration. The letter to which the resolution was a reply had been received but an hour before. This letter he regarded as discourteous, to say the least. The meeting might, he thought, reasonably express regret at the long interval of time which had elapsed between the dispatch of the communication of the Society and the receipt of the letter of the Colleges. How much further they could go with dignity was a question worth considering.

Mr. ERNEST HART expressed his cordial approval of the course proposed in the resolution. The Apothecaries had other duties than to consider only their own dignity, and other interests to protect than those of a purely selfish nature. The interests of the profession and of the public were involved in maintaining the principle of unity in the examination and the licensing of general practitioners. No effort should be spared to secure that end; and a general expression of opinion from the Licentiates of this Society and from the profession at large would not in any case be without good effect with the Government, with Parliament, and with the General Medical Council. Possibly it might yet influence the Colleges to reconsider the action of the respective Councils. The Apothecaries' Society was no doubt secure in its rights; it would do well, however, to show an example of public spirit, and a take large view of its duties to the whole profession. He approved the resolution warmly.

Dr. W. F. R. BURGESS agreed with the spirit of the resolution. The amalgamation of the three examining bodies would have been an undoubted gain to the profession and to the public, even though the Society should gain nothing by it. Their course, he thought, was obvious enough in the future. If the amalgamation were refused, the Society would receive, under the Medical Act of 1886, from the General Medical Council or from the Privy Council, larger powers and increased prosperity.

Mr. YOUNG suggested the adoption of a resolution calling upon the Society to take steps to amalgamate with the universities, and, failing, to apply to the Medical Council; but the proposal was not seconded; and it was explained that that course could be pursued without any resolution on the subject.

Finally the wording of the resolution was amended, at the suggestion of Dr. BUCHANAN, and unanimously adopted by the meeting in the form above given.

It was then proposed by Mr. GIBBES, and seconded by Dr. TAYLOR, and unanimously resolved:

"That a copy of the above resolution, together with a copy of the correspondence and a statement of the facts, be published and also circulated among the Licentiates of the Society, and a memorial forwarded for their signature expressive of their views on this important subject."

A vote of thanks to the Master brought the proceedings to a close.

SPECIAL MEETING OF THE METROPOLITAN COUNTIES BRANCH.

THE COLLEGES OF PHYSICIANS AND SURGEONS AND THE MEDICAL ACT OF 1886.

THE following requisition, duly signed by twenty members, has been addressed to the President of the Metropolitan Counties Branch:—

We, the undersigned members of the Metropolitan Counties Branch of the British Medical Association, hereby request you to call at the earliest possible date a meeting of the branch to consider the following resolutions and any other business cognate thereto:

Resolution 1.—"That this meeting is of opinion that the exclusion of the Apothecaries' Society from participation in the Conjoint Examining Board of England and Wales will, under the provisions of the recent Medical Act, 1886, lead to one or other of the following consequences, either of which are equally to be deplored in the interests of the public and of the profession, and especially of the general practitioners of England and Wales,

(*a*) Extinction of the Apothecaries' Society in the highly improbable, if not impossible, case of their not receiving the legal powers which the Act contemplates, to appoint surgical examiners recognised by law, a result which would be disastrous to the whole profession and to the public, seeing that the powers of the Apothecaries' Act alone avail to protect the profession against the practice of a large body of unqualified practitioners, and especially of visiting and prescribing chemists; or

(*b*) In case the Apothecaries' Society receive such powers of giving a surgical examination and surgical licence, legally registrable, the creation of a new class of surgical and medical practitioners throughout England and Wales, contrary to the intention of the legislature and the wishes of the profession, legally entitled to medical and surgical titles, who would compete on a lower grade with the existing members of the College of Surgeons and the licentiates of the College of Physicians."

Resolution 2.—"That, seeing that the Royal College of Physicians and the Royal College of Surgeons of England are entrusted with the regulation of the examinations and status and with the protection of the interests of the general practitioners throughout England and Wales, and that, under the Medical Act of 1886, their powers and monopoly in this respect are greatly strengthened, it is just and important that the Members of the College of Surgeons and the Licentiates of the College of Physicians respectively should be duly represented in the Councils of these Colleges, and should be admitted to a rightful share in the administration of their own affairs in relation to the government of these Colleges."

Resolution 3.—"That a petition setting out the above resolutions be prepared, and that the respective Colleges be requested to receive deputations from this meeting to explain the grounds on which the foregoing resolutions are based, and to urge their acceptance."

Resolution 4.—"That copies of these resolutions be forwarded at once to all the Branches of the British Medical Association, and for publication in the medical papers, and that the Branches of the Association be requested to hold meetings, with the least possible delay, to consider the above resolutions, with a view to communicating any de-

cision at which they may arrive to this Branch, and to the respective Colleges."

Resolution 5.—"That a Committee be now appointed of the following gentlemen to carry out the above resolutions, and to take such action as may seem best calculated to give them effect."

This requisition was considered at the Council Meeting on Wednesday, November 17th; and it was agreed to summon a Special Meeting of the Branch in pursuance thereof, for this and other special business; such meeting to be held at the Royal School of Mines, Jermyn Street, on the evening of Friday, December 3rd, at 8 P.M. It is, of course, understood that this meeting is summoned in compliance with the above requisition, and does not commit the Council to an opinion on one side or the other.

ASSOCIATION OF GENERAL PRACTITIONERS.

SIR,—We ask leave to inform your readers that active steps have been taken by this Association to assist general practitioners of this country to give combined and united force to their wishes and interests, especially in relation to the actions of the various corporations and to the representation of the general practitioner thereon. We desire, especially at this moment, to assist the Licentiates of the College of Physicians to give organised expression to their claim to a voice in the administration of the affairs of their College. We believe that claim to be so strong, that adequate representations made by a strong body of Licentiates duly organised could not fail ultimately to secure for the Licentiates of the College of Physicians a just voice in the management of their own affairs and in the general government of the profession of which they constitute so large a proportion.

We should be glad to hear from Licentiates of the College of Physicians on this subject, and receive the names of those willing to take part in securing for themselves and fellows a less contemptuous and more honourable treatment than that which they now receive at the hands of the self-elected Council of that body. May we be allowed to add that we forwarded yesterday a requisition signed by twenty members of the Metropolitan Counties Branch to the secretaries of the branch, calling for a meeting of the Metropolitan Branch to consider the action of the College of Physicians and College of Surgeons, in respect to the Apothecaries' Society, which threatens to create a new and competing class of general practitioners throughout the kingdom. We have every reason to believe that that requisition will be favourably considered, and we trust that general practitioners will largely attend the meeting when summoned. Hoping to hear from all who sympathise with our efforts in the objects we have stated.

Yours very truly,

H. W. VERDON, M.D. and F.R.C.S.,
410, Brixton Road.
W. GIBSON BOTT, F.R.C.P. and M.R.C.S.,
414, Clapham Road, S.W.
Hon. Secretaries Association of General Practitioners.

A REQUEST TO POOR-LAW MEDICAL OFFICERS.

SIR,—I should feel much obliged and indebted to every Poor-law Medical Officer (whether belonging to our Association or not) if he would send me a post-card, directed to 3, Bolt Court, Fleet Street, London, with "Yes" or "No" upon it, after the name and address of the sender; "Yes" meaning the writer's approval of the Society of Apothecaries being admitted to the Conjoint Board.—I am, yours truly,

J. WICKHAM BARNES.

THE COLLEGE OF SURGEONS AND THE APOTHECARIES' HALL.

SIR,—It is with both surprise and indignation that we hear that the Council of the College of Surgeons sent, last Tuesday, a letter to the Society of Apothecaries, expressing its adherence to the policy of excluding the latter body from the conjoint scheme. Previous to the memorable general meeting of the College of Surgeons, on November 4th, a report was in circulation to the effect that the Council of the College would not view unfavourably such a resolution as that bearing upon the question of union with the Apothecaries' Society; and most decidedly that general meeting gave clear expression, by a vote carried *nem. con.*, to the views of the diploma-holders of the College, that it would be most detrimental to the interests of their Alma Mater, should the Council still maintain its policy of exclusion. In the short interval of twelve days, between the general meeting of the College and the transmission of its letter to the Apothecaries' Hall, the Council can neither have had the opportunity nor the time to collect evidence sufficient to justify it in its latest decision.

Whose interests are the most vitally concerned in this question, those of the select body of pure surgeons who sit on the inner sanctuaries of Lincoln's-Inn-Fields or the general body of the profession which has been relegated to the outer courts? A clear and sharp issue was raised, and an emphatic decision arrived at, on November 4th; yet the Council persists in its suicidal resolve to lift no finger to avert an impending catastrophe. When a second corporation has been permitted to grant complete and competing licences in Medicine, Midwifery, and Surgery within a stone's throw of the College walls, the medical profession will not forget on whom to lay the blame. At the general meeting, the Council was requested to report upon this matter "at a future meeting of Fellows and Members, to be summoned for the purpose at an early date." That date should be at once.—We are, Sir, your obedient servants,

WARWICK C. STEELE,
W. ASHTON ELLIS,
Honorary Secretaries Association of Members of the Royal College of Surgeons.

P.S.—With reference to our letter appearing in the JOURNAL o November 13th, we have been asked where communications and signatures to the petition of the Members of the Royal College of Surgeons should be sent. We take this opportunity of stating that al correspondence should be addressed to us at the Western Dispensary, Westminster, S.W.

ASSOCIATION INTELLIGENCE.

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—A Special General Meeting of the Branch will be held at the School of Mines, on Friday, December 3rd, at 8 P.M., when certain resolutions, relating to the increase of Members of the Council of the Branch, and to the work of the District Branches, will be submitted by the Council for approval. This special general meeting is also summoned in compliance with the terms of requisition to the President of the Branch, signed by twenty Members, to consider (1) the relation of the Apothecaries' Society to the Conjoint Examining Board of England and Wales; (2) the proposed representation of Licentiates of the Royal College of Physicians, and of Members of the Royal College of Surgeons, upon the Councils of their respective Colleges; (3) the preparation of a petition to the Colleges, requesting them to receive deputations from the meeting; (4) the publication of the resolutions that may be passed at the meeting, and requests to other Branches for their co-operation in these various matters; (5) the appointment of a special committee to carry out the above resolutions. The Council of the Branch, while complying with the by-law which enjoins the holding of a general meeting of the Branch, if a requisition to that effect, from twenty Members of the Branch, is laid before it, desires it to be understood that the Council, in thus obeying the by-laws, does not express any opinion upon the objects for which the meeting is hereby summoned.—W. CHAPMAN GRIGG, M.D., and GEORGE EASTES, M.B., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will, by the kind invitation of Dr. Adams, take place at Brooke House, Upper Clapton, on Thursday, December 16th, at 8.30 P.M. The chair will be taken by C. T. Aveling, Esq., M.D. A Demonstration of interesting cases of Nervous Diseases will be given by W. B. Hadden, Esq., M.D.—JOSEPH W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

METROPOLITAN COUNTIES BRANCH: HERTFORDSHIRE DISTRICT.—A meeting of this District will be held at the Infirmary, Hemel Hempstead, on Wednesday, November 24th. The chair will be taken at 5.15 P.M. by J. S. Bristowe, Esq., M.D., F.R.C.P.Lond., President of the Branch. The following papers will be read: 1. J. S. Bristowe, M.D., F.R.C.P.Lond.: Cases of Gall-Stones, with remarks. 2. Sidney Phillips, M.D.: On some points in the Treatment of Fever. 3. F. C. Fisher, F.R.C.S.: Two cases of Foreign Bodies in upper part of Air-Passages.—H. LESLIE BATES, Honorary Secretary, St. Albans.

STAFFORDSHIRE BRANCH.—The first general meeting of the present session will be held at the Railway Hotel, Stoke-upon-Trent, on Thursday, November 25th. The President, Dr. W. G. Lowe, will take the chair at 3.30 P.M.—VINCENT JACKSON, General Secretary, Wolverhampton.

OXFORD AND DISTRICT BRANCH: GENERAL MEETING.

THIS Meeting was held at the Radcliffe Infirmary, Oxford, on November 3rd. Dr. W. B. GRAY, President, took the chair, and thirty other members were present.

New Members.—Professor Burdon Sanderson, Waynflete Professor of Physiology, and Mr. J. N. Moore were elected as joining members. Messrs. W. J. Wood and F. W. Pilkington were elected members of the Association and Branch.

Candidates for Election.—Messrs. E. Cotterell, of Bicester, V. Hemingway, of Steeple Aston, A. Thomson, Anatomical Lecturer in the University of Oxford, and F. Gotch, were proposed as members for election at the next meeting.

Cerebro-Spinal Neuralgia.—Dr. GRAY, after a few encouraging remarks concerning the prosperity of the Branch, read a paper on Cerebro-Spinal Neuralgia. He gave some very interesting particulars of cases which had come under his own observation, including cases, which he described as epileptic neuralgia, not connected with any structural or tissue lesion, but dependent on a neurotic constitution, acquired or inherited.

Talipes.—Mr. SYMONDS showed a boy on whom he had performed an operation with a chain-saw for Talipes Varus.

Some Points in the Treatment of Typhoid Fever.—Dr. COLLIER, who read this paper, laid stress on the use of calomel during the first stages, and especially on the antipyretic treatment, by quinine, salicylate of soda and digitalis, and finally by abstraction of heat by cold baths or packing, with the object of never allowing the temperature to be higher than 102°.

Contraction of Palmar Fascia.—Mr. MORGAN showed a case of Dupuytren's contraction of the palmar fascia in a girl, undergoing successful treatment by mechanical straightening.

Choroido-retinitis.—Mr. DOYNE showed a case of syphilitic choroido-retinitis.

Dr. Collier asked a question about the order in which the papers were read.

BORDER COUNTIES BRANCH: AUTUMN MEETING.

THE Autumn Meeting of this Branch was held at the Keswick Hotel, Keswick, on Friday, October 22nd, 1886. The chair was taken by Dr. EATON, President. There were fourteen other members present, and one visitor.

Papers.—A paper by Dr. SPEIRS, of Cleator, entitled, Notes of a Case of Poisoning by Spirits of Salt, was read by Dr. Black.

The PRESIDENT read a paper on An Obscure Medico-Legal Case involving the consideration of Deaths from Alcoholic Poisoning, Suffocation, and Epilepsy.

Notes of a Case of Hydatids of the Liver implicating the Biliary Passages.—Dr. BLACK read this paper. The case was one of a young man who was seized suddenly, after eating, with severe pain at the pit of the stomach, followed by vomiting; the pain and sickness continuing more or less; the former at times being extreme, and resembling in character that experienced during the passing of a gall-stone, till the hydatids escaped into the intestines, and were expelled *per rectum*.

Note in Connection with Injuries of the Epiphyses.—Dr. MACDOUGALL read this paper. The object of the paper, which had, as its foundation, two recent cases of injury to the lower femoral epiphyses, necessitating amputation, was to draw attention to the fact that it was not in very early life alone such lesions occurred, but that, up to the completion of the 20th year, and even later, it was necessary, in treating injuries in the neighbourhood of joints, to consider the possibility of diastasis having occurred. Attention was directed to the tendency, in such injuries, to more than usual damage to the periosteum, which is apt to accompany them, and to the possible dangers pertaining to this, and also the greater probability of serious hæmorrhage taking place from the fractured surface when the separation passed, as it so frequently does, more or less, into the shaft of the bone. This hæmorrhage might, as happened in one of the cases narrated, nullify attempts at saving the limb; and it might, by the wide separation it produced between the points of disjunction, seriously interfere with the occurrence of satisfactory union. The necessity was urged of ever remembering the anatomy of the epiphyses, of the relation their line bears to the articular ends of the bones, and the ages at which, by natural process, they become welded to the shaft. Only by such remembrance could satisfactory provision be made against the occurrence of that annoyance which was but too apt to arise when a joint which, at the time of an accident, was said to have received a perfectly recoverable injury, gave, as not unfrequently happens, an unsatisfactory ultimate result.

Specimens.—Dr. LEDIARD showed a patient whose elbow had been excised for old standing dislocation, also the portions of bone removed.—Dr. LEDIARD showed an ovarian tumour, the result of successful operation.—Dr. I'ANSON initiated a discussion on the recent bone-setting case; and, at the conclusion of his speech, moved the following resolution, which was seconded by the President, and carried unanimously:—"This meeting, representing 120 members of the medical profession residing in seven Border Counties, having carefully considered the evidence given at the trial Spurgin *v.* Nicholson, heard at Cockermouth on July 29th, is of opinion that the judgment then pronounced was not only in opposition to the facts of the case, but was also unnecessarily slighting to Mr. Spurgin and to our whole profession; the meeting therefore offers its sympathy with Mr. Spurgin on the injustice which it considers he has received, and encourages him to endeavour to obtain a new trial." The resolution was supported by Mr. Hall, Dr. Tiffen, Mr. Crerar, Dr. Maclaren, and Dr. Highet. A committee was formed to watch the case on behalf of the Branch.

The members dined together in the hotel at the conclusion of the business.

The next meeting of the Branch will be held at Carlisle, in the spring.

ISLE OF WIGHT DISTRICT: SOUTHERN BRANCH.

THE ordinary quarterly meeting was held at Daish's Hotel, Shanklin, on Thursday, October 28th, 1886. Owing to the absence of the President through ill-health, the chair was taken by Dr. ALAN WATERWORTH, Vice-President. There were present thirteen members and one visitor. The minutes were read and duly confirmed.

New Members.—Surgeon-Major W. C. Grant and D. Lloyd, Junr., were admitted members of the Association.

Place of Next Meeting.—Resolved that the next quarterly meeting be at Ryde.

Papers.—Dr. BUCK then read a paper on a case of Suppuration of both Ovaries, causing Volvulus of the Sigmoid Flexure, Laparotomy, and Death. A discussion followed.

Fracture of the Vault and Base of the Skull, ending in Recovery.—Dr. WILLIAMSON read short notes of this case. The patient, a boy, aged 8, fell backwards over a cliff on July 16th, striking the vertex on a projecting rock twenty-five feet below, and afterwards rolling a distance of eight feet to the road beneath. A few minutes after the accident, he was found to be unconscious and collapsed, with slow pulse and slow moaning respiration. The limbs and trunk were unhurt. Over the right parietal eminence were two scalp wounds, two inches long and an inch apart, both penetrating to the bone. A fissured fracture was felt at the bottom of the anterior wound, but there was no depression. Blood flowed copiously from the right ear, mixed with profuse discharge of clear watery fluid. Slight but defined facial paralysis was present, and both eyes were drawn to the right, the pupils being widely dilated. There was no bleeding from the nose. Free vomiting took place, but the unconsciousness persisted. The bleeding from the ear went on for three days, but the watery discharge remained some days longer. During the first three days, the temperature reached 101°, but had fallen to normal by the sixth. No attempts at swallowing were made for four days. Unconsciousness persisted till July 24th, but at no time since has there been any recollection of the accident. The facial paralysis disappeared by the fourth day, but on the fifth and sixth there was much facial twitching. The boy was able to be up on August 3rd, and to be out for the first time on August 13th, four weeks after his accident. The treatment consisted of ice to the head, the use of an antiseptic wash to the ear, nutrient enemata during the first four days, and aperients, subsequent careful dieting, with quiet, and a slow return to normal

habits. The diagnosis of fracture of the base was founded on the co-existence of bleeding and the free escape of cerebro-spinal fluid from the ear, along with facial paralysis. Dr. Williamson was inclined to trace the favourable result, in part, to the freedom with which blood effected its escape from the ear, thereby saving the patient from one grave source of intracranial trouble.—Mr. GREEN mentioned two cases in adults where complete recovery followed.—Dr. COGHILL also mentioned the case of an adult who recovered.—A general discussion on ordinary fracture of the skull ensued, eliciting many interesting cases and remarks thereon.

Pulse-Tracings in Consumption.—Dr. ROBERTSON read this paper and drew attention to the alterations in the pulse-record incident to the mechanical changes in the pulmonary circulation in consumption, and showed how a study of tracings threw light on the significance of pulse-characters in phthisical persons, on the influence of cough, effort, etc., in the production of hæmoptysis, and on the position assumed in orthopnœa, common in the latest stages of the disease.—The President (Dr. Waterworth) and Drs. Coghill and Williamson commented on the paper.

Vote of Thanks.—A vote of thanks was accorded to those gentlemen who had prepared papers for the meeting.

Vote of Condolence.—Dr. J. GROVES then moved a vote of condolence with the family of the late Mr. Henry Waterworth of Newport, seconded by Mr. C. MEERS.—Dr. COGHILL bore testimony to the great worth of the deceased, and the affection with which his old pupils regarded him.—Dr. ALAN WATERWORTH replied, thanking the members for their sympathy.

The members afterwards dined together.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

A MEETING of this District was held at Canterbury on Thursday, November 11th, 1886, Mr. JAMES REID in the chair.

Chairman of next Meeting.—Mr. RAVEN was elected Chairman for the next meeting, to be held at Broadstairs in March, 1887.

Papers and Specimens.—Mr. HAYWARD, of Whitstable, showed a specimen of hydatiform degeneration of the chorion.—Mr. BRIAN RIGDEN, of Canterbury, showed a child, aged 4½ years, in which the sex was doubtful.—Mr. PUGIN THORNTON, illustrated some of the surgical uses of the various forms of electricity, employing a separate battery for each process. The demonstration was rendered clearer by each process being carried out, as if in reality, in one of his old patients, for whom he had destroyed a web in the larynx by galvano-cautery, and had closed a tracheal fistula left after tracheotomy by electrolysis. He mentioned the value of electrolysis in the cure of nævi, and of the cure of urethral strictures. Mr. Thornton also showed on the same patient how a faradic shock was made direct to the vocal cords in cases of functional aphonia.—Mr J. E. SCHÖN, of Littlebourne, read an interesting paper on A Case of Tubal Fœtation, with specimen. Mr. Whitehead Reid, Mr. Thornton, Dr. Gogarty, and the Chairman took part in the debate.—Dr. THOMAS EASTES read a short but very practical paper on Two Cases of Laryngeal Obstruction. In concluding his paper, he said that the lessons taught by the cases were, first, to perform tracheotomy in acute œdema glottidis (when, as in the first case, the opening was no larger than a quill), in spite of apparent comfort of the patient; secondly, never to despair in diphtheritic laryngitis until after tracheotomy had been performed. A good discussio followed.

Dinner.—The members afterwards dined together at the Royal Fountain Hotel.

STAFFORDSHIRE BRANCH: ANNUAL MEETING.

THE thirteenth annual meeting of this Branch was held on Thursday, October 28th, at the Masonic Hall, Burton-on-Trent.

President-elect.—Mr. J. T. Harthill introduced the President-elect, Dr. W. G. LOWE, who took the chair. Twenty-six members were present, as well as many of the medical men of Burton and the surrounding district, who attended as guests.

Vote of Thanks.—Dr. E. T. TYLECOTE proposed: "That the best thanks be given to the retiring President, Mr. J. T. Harthill, for his services during the past year." This was seconded by Mr. FALKER, and carried unanimously.

Report of Council.—Mr VINCENT JACKSON read the annual report, as follows.

"Your Committee have to report that during the past year, in addition to the annual general meeting, three ordinary general meetings have been held. There has been no special general meeting. The average attendance of members at the four meetings has been twenty-one.

"At the general meeting at Stoke, a donation of five guineas, subsequently increased to ten guineas, was voted to the funds of the Royal Medical Benevolent College at Epsom, for which contribution the privilege of voting has been conferred upon the President for the time being for the next twenty years. By a further minute, the President is instructed that the privilege of voting is always to be exercised preferentially for the benefit of members of the Staffordshire Branch who may at any time require assistance from the College, either for themselves, their sons, or their relatives.

"At the general meeting at Stafford, a communication was read from the East Anglian Branch, requesting the opinion of the Staffordshire Branch 'as to the desirability of a Medical Defence Fund being formed and administered in connection with the British Medical Association.' This proposal was well debated, and finally a resolution was drafted and unanimously passed in support of it.

"The following members have, by their contributions at the ordinary general meetings, earned the thanks of your Council: Mr. J. G. U. West, Dr. Hind, Dr. McAldowie, Mr. Spanton, Mr. Vincent Jackson, Dr. Warrington, Dr. E. T. Tylecote, Mr. J. T. Harthill, Mr. Gibson, Dr. Andrew, Dr. Evans, Dr. W. G. Lowe. Your Council have to regret the loss, by death, of Mr. Boothroyd, Hanley; Mr. J. C. Garman, Brewood; and Mr. S. F. Gasling, Biddulph.

"The number of members is 127, thirteen having joined during the past year."

The adoption of the report was proposed by Mr. G. LOWE, and seconded by Mr. PAUL BELCHER.

Financial Statement.—Mr. J. G. U. WEST read the statement of accounts for the past year, which showed a favourable balance of £29 2s. 1d.

Next Annual Meeting.—Mr. WOLFENDEN proposed, and Mr. PHILLIPS seconded, that the next annual meeting be held at Stoke-upon-Trent.

Officers and Council for 1886-87.—The following were elected:—*President-Elect:* Mr. W. D. Spanton, Hanley. *Vice-Presidents:* Dr. E. T. Tylecote; Mr. J. T. Harthill. *General Secretary:* Mr. Vincent Jackson. *Financial Secretary:* Mr. J. G. U. West. *Auditor:* Mr. Folker. *Council:* Dr. Arlidge, Stoke; Mr. Boldero, Penkridge; Mr. Badderley, Newport; Mr. F. J. Gray, Old Park Hall, Walsall; Dr. Lycett, Wolverhampton; Dr. McAldowie, Stoke; Mr. H. M. Morgan, Lichfield; Dr. Reid, Stafford; Dr. C. R. Smith, Wolverhampton; Dr. Somerville, Leek; Mr. Wolfenden, Tutbury; Dr. J. H. Wynne, Eccleshall. *Representative in the Council of the Association:* Mr. Vincent Jackson, Wolverhampton. *Representatives upon the Parliamentary Bills Committee of the Association:* Dr. C. Orton; Dr. W. D. Spanton. *Collective Investigation Committee of the Association: Officers and Members of the Local Committee: Chairman:* Mr. J. T. Arlidge. *Committee:* Mr. F. Boldero, Mr. J. G. Clendinnen, Mr. J. Cooke, M.B.; Mr. F. J. Gray, Mr. G. A. Phillips, Mr. G. G. Sharp, and Dr. J. H. Tylecote. *Hon. Gen. Sec.:* Mr. Vincent Jackson. *Hon. District Secs.:* North Staffs.: Dr. A. McAldowie, Stoke; Mid. Staffs.: Dr. G. Reid, Stafford; East Staffs.: Dr. G. H. Lowe, Burton; West Staffs.: Dr. H. Malet, Wolverhampton.

New Members.—The following were elected members: Mr. Dawes, Longton, and Mr. Hindle, Fenton.

President's Address.—The PRESIDENT gave an address on certain topographical and other subjects in connection with the trade of Burton-on-Trent. After thanking the Branch for the honour they had conferred on him in electing him President, and bidding the members present a hearty welcome to Burton, Dr. Lowe referred, in the first place, to the early history of the town; allusion was then made to the geological formation of the surrounding country, and to the characteristics of the water which was used in the brewing of beer. This water, he pointed out, was derived from gypseous marl, and its being impregnated with sulphate of lime rendered it very suitable for brewing purposes. The sanitary state of the town was next dealt with, which, with a death-rate of only 15.27, could not be said to be unsatisfactory. The influence which the notification of infectious diseases by the medical men of the town, and the establishment of a special hospital for infectious cases, had had in preventing the spread of infection, and in diminishing the death-rate from the zymotic diseases, was referred to at some length. The effect of a dry subsoil, due to the enormous quantity of water abstracted by the brewers, in conducing to the health of the town, was next discussed. After considering the question as to how far the drinking of beer affected the health of the population, or led to the occurrence of diseases of the uric acid type, Dr. Lowe at some length referred to the subject of education, dealing more especially with the spread of infectious diseases in schools, and with overpressure. As a preventive of the latter, he advocated the active co-operation of the profession in the management

of schools. After alluding to the Medical Act Amendment Bill, Pasteur's method for preventing the occurrence of hydrophobia, and to recent advances in brain surgery, he concluded by hoping the discussions and papers read at the Branch meetings would add to the knowledge and usefulness of the profession.—Mr. VOSE SOLOMON, in a speech conceived in a happy vein, moved a vote of thanks to the President for his admirable, interesting, and instructive address. This was seconded by Dr. TOTHERICK, and carried with acclamation.

Dinner.—As guests, the Mayor of Burton, Mr. S. O. Sullivan, F.R.S., and Captain Salt were invited. The pleasure of the evening was much enhanced by an instrumental band which played at intervals. Sir B. W. Foster replied to the toast of the British Medical Association.

SPECIAL CORRESPONDENCE.

NEWCASTLE-UPON-TYNE.

[FROM OUR OWN CORRESPONDENT.]

Newcastle Infirmary.—The Eye Infirmary Surgeoncy.—North of England Medical Society.

A QUARTERLY court of the governors of the Infirmary was held under the presidency of Earl Ravensworth on November 4th, 1886, to take into consideration the financial position of the institution, and the best means to be adopted to equalise expenditure and income. The House-Committee recommended to the court, first, that the number of occupied beds for the present be limited to 200, second, that the officials of the establishment should be correspondingly reduced. The expenses of the Infirmary have been much increased of late years, largely because many more patients have been benefited (the surgical operations in 1879 numbered 309, in 1885, 1,129), and by the consequent increase of cost in drugs and dressings. Mr. Stephens, a governor, who moved that the above recommendations be adopted, drew a comparison between the hospitals of Newcastle, Leeds, and Sunderland. The figures he quoted are given in the order of the towns named: death-rate per 1,000, 6.0, 4.93, 4.2; average stay in hospital, in days, 30.1, 21.0, 32.0; cost per patient, £4 7s. 11d., under £3; under £3; cost per bed per annum, £50 16s. 6d., £56 7s. 8d., £37 12s.; in-patients numbered 2,846, 4,154, 1,444; average number in beds, 234.6, 250, 127.9; casuals, 27,811, 19,106, 1,486; total number of patients treated per annum, 39,360, 29,001, 2,932. It will be seen from the above that on the whole Newcastle bears a very favourable contrast with Leeds in the amount of work done, and cost per bed. The number of casuals might no doubt be considerably reduced; many of the patients being well able to pay for medical attendance at home. A small capitation charge is now being made in the casual department, but it is not at all improbable that the really deserving poor are kept away by this charge, while it does not affect those in a better position. Mr. Stephens proposed to economise in the following way: first, to reduce the number of beds by seventy, a saving of £50 per bed, or £3,500; a reduction by one-half of the number of emergency cases admitted without letters, a saving of £1,500; complete closure of the female lock ward, a saving of £500; a diminution in the amount of stimulants used, and a reduction in the diets. There is no doubt that something will have to be done, but it would appear that to limit the usefulness of the institution would be a grave mistake. If the hospital were made free, and the workmen in the district induced to give a weekly subscription, according to the amount of their wages, the difficulty might be surmounted. Already many of the factory hands have held meeting at their works, with the object of adopting such a procedure. To close the lock ward would be a great mistake, there being no similar institution in the town; these cases do not cost the Infirmary very much, for the girls do a considerable amount of work in the way of cleaning, rolling bandages, and so on, which would have to be paid for. The meeting finally decided to appoint an independent body to inquire into the subject before anything further was done.

The vacant surgeoncy to the Eye Infirmary has been filled by the appointment of Mr. W. H. Davis, M.R.C.S.Eng., the other candidates being Mr. G. E. Williamson, F.R.C.S.Eng., and Dr. Chas. Lightfoot. Considerable comment has been made in professional circles upon the appointment, many considering that the office should have been given to Mr. Williamson, who has the highest qualifications and has during the past few years devoted himself especially to ophthalmic work, and held the office of ophthalmic surgeon to the infirmary. Mr. Davis has been in general practice at Jarrow, and held the office of surgeon to the accident hospital there. The appointment was in the hands of a lay committee.

The second meeting of the Pathological Society was held last week, Dr. Hume occupying the chair. The President showed a man upon whom he had performed suprapubic lithotomy, also a second stone removed by the same operation. He drew a contrast between the high operation and lateral lithotomy.—Mr. Black showed a case of locomotor ataxy and two cases of excision of the hip with subperiosteal resection of portions of the femur.—Dr. Anderson showed a case of pericæcal abcess caused by a fish-bone.—Dr. Morrison showed a plumstone removed by tracheotomy from the wind-pipe of a child. Dr. Limont showed a series of ovarian tumours which had been successfully removed by abdominal section.—There was a large attendance, and several new members were elected.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Hospital Sunday Annual Meeting.—Medical Men and the Municipal Elections.—The Town Hall Question at Birkenhead.—The Women's Hospital Enquiry.—Resignation of Dr. Waters.

THE report read at the recent annual meeting of the Hospital Sunday Committee of Management proved to be particularly interesting. After mentioning the fact that the Sunday collections for this year were less by £179 8s. 10d. than those of 1885, the gratifying statement was made that there was an increase of £546 3s. 6d. in the Saturday collections, the total sum raised by the latter being £3,149 7s. against £2,603 3s. 6d. last year. This is very satisfactory, as showing that the adoption of the all-year, or of the systematic periodical collections in the workshops and warehouses is a success. The list of contributions clearly shows that the handsome increase in the total fund this year is due mainly to the efforts of working men, and to the admirable work done by their own committee. The report concluded with stating that the committee were unanimously of opinion that the sum allotted to the Hospital for Women in Shaw-street should be withheld, pending the investigations now in progress. It was added that the expenses of management had been lessened during the past year, and that they were now a trifle under three per cent on the amount raised. At the meeting a motion, proposed by Sir W. B. Forwood, "That the Committee take into consideration the advisability of changing the day for the collections on Hospital Sunday, and they are requested to consult with the clergy on the subject," was carried. As the bad weather on the past two or three Hospital Sundays has been thought to be one cause of the poor collections made, it is proposed to change the day to the second Sunday in May, instead of the second Sunday in January as heretofore. A second proposition to the effect that the various trades should be represented on the Working Men's Committee was also carried.

The late municipal elections in Liverpool have not altered the position of affairs, from a medical point of view, in the City Council to any appreciable extent. Dr. Hamilton, at the meeting for arranging the different committees, expressed a desire to retire from the Health Committee, in order to devote all his attention at present to the special hospitals' question. His retirement was agreed to; and he was subsequently re-elected Chairman of the Special Hospitals Committee. Dr. Cross, who has been a member of the Council for many years, has been made an alderman. In regard to the Bootle elections, much regret has been expressed at the defeat of the late mayor of that borough, Dr. Hill. At Birkenhead, Dr. Braidwood may be expected to do good work in the Council, especially as health questions are being keenly discussed there at the present time.

The sanitary condition of the new Town Hall at Birkenhead has been a leading topic of conversation of late among the residents of the "city of the future." A few weeks ago, Dr. Harris, a member of the Council, spoke very strongly on the subject when addressing his constituents; and it appears that, long before this, the borough surveyor, and the energetic medical officer of health, Mr. Vacher, most strongly condemned the faulty construction of the building. In spite of all the representations that were made to the architects, it is stated that the hall has been completed in a manner that is dangerous to health, and that will sooner or later result in evil consequences. The main points objected to, and complained of, are: the fixing of soil-pipes inside the building; the fact that these pipes are seamed, instead of being seamless; and that it is not accurately known whether the rain-spouts, many of which pass down inside the building, are efficiently disconnected from the drains.

The report of the Inquiry Committee in the matter of the Women's Hospital question is expected to be brought forward very shortly now.

The general view of the profession here, and, indeed, of the general public, in regard to the recent acrimonious controversy in the newspapers as to abdominal section, is, so far as one can judge, that the writers of the letters would have done well to reserve their effusions, or that, at least, they might have refrained from enlarging upon such a subject in a non-medical newspaper. The plaintiff in the trial of Casey *v.* Imlach is in the Bankruptcy Court. His liabilities are stated to be £445, the principal creditors being Dr. Imlach and the debtor's solicitor.

Not very long since, Dr. Waters gave up the professorship of Medicine here. Now it is announced that he has resigned his post of Physician (Senior) to the Royal Infirmary. His connection with both hospital and medical school has been a long one; and he will be greatly missed. It is, of course, presumed that the trustees will appoint him Consulting Physician. Dr. Caton is an applicant for the vacancy at the Infirmary. Should he be elected, a vacancy will thereby be caused in the medical staff of the Northern Hospital, to which institution Dr. Caton has been attached as Honorary Physician for the past ten years.

CORRESPONDENCE.

A DEGREE FOR LONDON MEDICAL STUDENTS.

SIR,—Now that the atmosphere of medical politics is a little clearer, might I express a hope that vigorous and prompt attention will be directed to the obtaining of a M.D. degree for London students. Recent events have shown that the medical profession, as a body, is not so listless and inert as it has been reported to be. That dim influence, "the support of the profession," is changing from a shadow to a substance. Certain associations that have been started within the last few years have proved that to attain a common object, hearty combination and business-like methods of procedure are possible even among medical men.

The present question is one of urgent importance. In spite of the fact that the gross number of medical students in the United Kingdom is increasing, the entries at the London schools have shown during late years a steady decrease. This decrease is even more marked than published statistics show. Those figures do not represent the proportion of "composition students," that is, of men who have entered for a part of the curriculum elsewhere than in London, who help to swell the returns. Could these be differentiated, it would be evident that the decrease in the numbers of students who enter for the full curriculum in the metropolis is painfully marked. This decrease is obviously damaging to the schools; but, on higher grounds, it is also injurious to the medical student. It represents a neglect of the greatest field for clinical instruction that this country provides, and no clamour for pure and "high" scientific instruction can obscure the importance of ample bedside teaching in the education of a medical man. The condition is due to the increasing importance that the student attaches to the possession of a M.D. degree.

It is needless to discuss the origin or value of this influence—it exists. The intending student turns his face towards the universities of Scotland or Ireland, or to such universities in England as can offer the degree of doctor of medicine after what may be termed a reasonable examination. London students are seeking in increasing numbers the M.D. of Brussels. It is a remarkable phenomenon that well qualified men should have to turn to Belgium for an educational distinction that London alone, of all great intellectual centres, cannot provide. The doctorate of the University of London is a distinction that appeals to the minority. It justly ranks as the highest medical degree granted in this country, and it is to be hoped that its present well merited value will not be depreciated. What is wanted is a M.D. degree that is within the reach of the average student. Such a degree is provided for students of medicine in Scotland and Ireland, and in certain great provincial centres, while it is alone denied to the large body of students in the London schools.

Of the various schemes that have been proposed to supply this want, none appears to offer a better prospect of success than the scheme of the two Royal Colleges. It is within the power of these two great bodies to form a perfect teaching university, and that too without great radical alterations in the present arrangements for medical teaching in London.

The profession must be greatly indebted to the BRITISH MEDICAL JOURNAL for its able advocacy of this measure. It would be well, however, if the committee who are engaged upon this scheme could know that they have the support of a large section of the profession. This support should be given in a coherent form, and be advanced upon definite lines. First and foremost should be some united action on the part of the metropolitan schools. The matter concerns them vitally, and if all minor considerations could be put aside in view of one absorbing prospect, there is little doubt about the character of the result.—Yours faithfully,

FREDERICK TREVES.

SIR,—I read in your JOURNAL every week several letters from qualified men on the subject of a degree for London medical students. I am one of those whom the proposed legislation would benefit, and who covet the magic letters M.D.

Three times I have essayed the London University matriculation, and passed in every subject, yet not at "one and the same time." Tired of a struggle with the stringent regulations of the only portal in London through which I must pass to obtain a degree, I left for a Scotch university, where I find myself, both in climate and companions (for the most part), in what must be to the majority of Londoners and Englishmen most uncongenial surroundings.

Were a degree established for London medical students, many would flock thither, and many more be prevented from leaving. The late Dr. Moxon told me a few years ago that, in his own personal experience, I was only one of many who every year left London for the same reasons as I was then about to do.—I remain, Sir, yours faithfully,

"AN EXILED STUDENT."

SIR,—As you are receiving so many letters on one side of the question, will you permit me to say a word in defence of the much maligned Irish universities, if such defence be needed. As I have the advantage of an acquaintance with the principal continental universities, I hope that my opinion will be taken as unbiassed.

In Ireland we have two universities which grant medical degrees.

1. The Dublin University, which requires the student first to graduate in arts. Its regulations are similar to those of Cambridge.

2. The Royal University, which resembles the London in being merely an examining body, but any student who imagines that by merely paying his fee and submitting to examination he will receive a degree, finds out that he has made a mistake. It is not an uncommon thing for men to spend seven, eight, or nine years in qualifying. When men like Professor Redfern and Dr. Macnaughton Jones are examiners, there is little fear of idle men being passed.

It is a great mistake to imagine that nearly all Irish students become graduates. The fact is that, as in London, those who have time and ability take a university course, whilst those who wish to get qualified quickly go in for the diplomas of the Colleges of Physicians and Surgeons.

I think it would be a great injustice to those who have worked so hard to obtain something more than a mere licence to practise if others who had not done so received the same: the granting of degrees to doubly qualified men seems to me somewhat arbitrary; in fact, the graduates of the universities would feel very much like the labourers in the parable, who had been engaged early in the morning when those who had been hired at the eleventh hour received also every man a penny.

I am, Sir, your obedient servant,

M.D. (R.U.I.), L.K.Q.C.P.I.

THE MEETING OF THE ROYAL COLLEGE OF SURGEONS; FELLOWS, MEMBERS, AND LICENTIATES.

SIR,—Messrs. Steele and Ellis, by their letter in the JOURNAL of November 13th greatly strengthen the position of the Members of the College in their struggle for representation on the Council.

When the Members began their agitation for their rights, the Council tried to quiet them by promising to grant ten Fellowships a year to Members of twenty years' standing, but they reject this offered empty dignity; and rightly, for they do not want a "tinsel decoration acquired by an act of grace, or by nomination," and they will gain the support of nearly all the Fellows by making it known that they "do not call for any change derogatory to the academic status of a distinction now most honourable in that it is acquired by examination." By far too many changes have been made lately, all tending to lower this status; and now the Members have refused this decoration, it is to be hoped the Council will reconsider the matter and withdraw this shadowy academic bribe, and grant, instead, the fair administrative demands of the Members.

But if the Members of the College of Surgeons have right on their side, so will also the Members and Licentiates of the College of Physicians equally have it, when they think the time has come for them. Could they find a better time than the present?

I am, Sir, your obedient servant,

Sunderland. J. WHITEHOUSE.

A BLOW AT CIVIL PRACTITIONERS IN THEIR OWN COLLEGES.

SIR,—The Government certainly did not contemplate the extinction of apothecaries, or the exclusion of apothecaries from the conjoint licence for general practitioners, if we may judge from the present instructions as to claims to be made by civil medical practitioners for medical attendance and medicine furnished to soldiers. These instructions imply that the practitioner is in every case to furnish the medicine, and a scale is laid down at which he is to charge for them: four-ounce mixtures at 1s. 9d., six-ounce at 2s. 3d., and so on, including prices for powders, pills, and ointment. It is further stated that, when the practitioner charges the full rate for medicines, charges for visiting under the distance of a mile are inadmissible. Under other circumstances, he would be allowed 1s. 6d. for a visit under a mile, and 2s. over a mile and under two miles. He is particularly required to state the quantities and descriptions of all the items charged, and no collective charge, whether as to medicines or attendance, or of surgical appliances, will be allowed on any pretence whatever. Thus, whatever may be the object of the College of Physicians in endeavouring to exclude the Apothecaries' Society from a share in the conjoint examination, and from thus giving its full licence and powers to all the general practitioners of the future, they would only succeed in dealing a serious blow in the future to all their Licentiates, past and to come; for it is obvious that, if they should exclude the Apothecaries' Society, and refuse to avail themselves of the powers which that Society possesses, by joining it with their organisation, the general practitioners whom they would create in the future would be under the greatest disadvantage compared with the general practitioners to whom the Apothecaries will in the future give a medical and surgical licence. They will then be the persons armed with all the privileges and all the powers of the law, to give medical and surgical attendance, and to supply medicine and to charge separately for them, and to recover at law for them; and the Colleges will only have succeeded in raising up, to the great detriment of their existing Licentiates, a new class of general practitioners, who will compete with them on cheaper terms, and probably under far more favourable conditions. I earnestly hope that practitioners of the country will be aroused by your call, and will not tamely submit to see a new sectarianism and a new division created in general practitioners throughout England and Wales, and I trust that the Members and Licentiates of the two Colleges will take early and immediate steps energetically to protest against the suicidal policy which a false sentiment of dignity seems to have inspired in the breasts of a few consulting practitioners, who at present arrogate to themselves the conduct of the Colleges, and dictate a policy to the whole profession, without consulting the great mass of Members and Licentiates with whose interests they assume to deal. This is our matter, and we have a claim to speak and a right to be heard.—I am, yours faithfully,

A CIVIL PRACTITIONER.

ONLY A PRACTITIONER.

SIR,—I am afraid the revolutionary suggestions which you are making to Members and Licentiates of the College of Physicians will produce a very painful effect on the nerves of the governing bodies of those august assemblies unless they are delivered in a somewhat more guarded manner. I do not think you adequately consider the shock which it must be to the feelings of the august body of hospital physicians who at present hold the reins and drive the coach to suggest that members of the profession of any other caste should be admitted to those sacred precincts, or be allowed a word even in consultation, far less in the control of their own affairs. The Licentiates of the College of Physicians quite understand that they are helots, though I think the more modern expression is "pariahs," and that some dreadful consequences would happen if they were to contaminate the Council Chamber by their vulgar voice. I believe, in India, no native is allowed to enter at the front door of any of the clubs, not even if he held such a distinguished position as that of a judge in the Supreme Court. The fanaticism of caste does not extend quite so far in Pall Mall as in Calcutta, and, under different circumstances, we are allowed to enter the building by the same door. But you seem to forget that it are "holy of holies," within which we must not penetrate, and it is a very shocking proposal indeed that Members and Licentiates of the College are reasonable or responsible persons, or that they are sufficiently well educated or sufficiently cognisant of their own interests and duties to have any share in such questions as the decision whether the Apothecaries' Society should be admitted to conjunction with the College of Physicians, or whether a new order of competing Licentiates should be created, to the detriment of the Licentiates of the College of Physicians.

The shade of Halford has more than once been invoked in your columns by an accomplished and witty correspondent. I should like to hear from your correspondent, who is so intimately acquainted with the present opinions of the great physicians of the past, what he supposes they would think of the sacrilegious proposal that into the chamber once dignified by their presence, should enter men such as Carpenter of Croydon, Brodie Sewell, Fuller, Vining, or Sims of London, Holman of Reigate, Oldham of Brighton, Freeman, or Sibley? It is quite true that the great Jenner was himself a country practitioner, and so was Ceely of Aylesbury and Badcock of Brighton, who together, did the greatest scientific work of which the College of Physicians can boast; and I believe the present Sir William Jenner is a Licentiate of the Apothecaries' Society. But when you suggest that general practitioners have any right in the management of their own affairs in connection with the Colleges which license them, you are making a proposal so bold that it even takes the breath away from one who, like myself, has long been accustomed to consider himself only

A GENERAL PRACTITIONER.

COLLECTIVE INVESTIGATION OF NEURASTHENIA.

SIR,—Dr. Playfair, in his paper on the conditions called neurasthenia, published in last week's issue, says, "I have done my best to bring this matter publicly before the profession . . . by an unsuccessful attempt to induce the Collective Investigation Committee to embrace it in the field of their inquiries. With regard to the latter point, I must observe, *en passant*, that their reason for not doing so was to my mind a strange one, namely, 'that the topic was not ripe for investigation.'" The full wording of the resolution referred to, as it appears in our minutes, is as follows:—"That the subject is not yet in a condition ripe for inquiry *by our method*." This conclusion might, I think, find ample justification in Dr. Playfair's own words, a few lines lower down—"the main fear now is that certain cases will be classed and treated as 'neurasthenic' . . . which certainly have no right to the term." That is precisely what the Collective Investigation Committee apprehended.

I am, Sir, yours faithfully,

ISAMBARD OWEN.

PROPOSED ASSOCIATION OF SHIP-SURGEONS.

SIR,—During a conversation with Dr. Irwin, of New York, the other day, he said that all attempts to improve the position of the ship-surgeons would be useless until they formed themselves into a Mutual Protection Association. I shall be very glad to subscribe my guinea, or two if necessary. "God helps them that help themselves."—Yours truly,

M. A. P.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL MEN AND CERTIFICATES OF LUNACY.

TINFANI *v.* SPURGIN.

IT will be remembered that in this action, which was brought against the defendant for falsely and maliciously certifying plaintiff to be of unsound mind, the jury, being unable to agree, were discharged without giving a verdict, and Mr. Justice Denman reserved the case for further arguments to consider whether he ought not to give judgment for the defendant, on the ground that there was no evidence of negligence or malice on defendant's part to be put before the jury.

After Mr. Crispe had been heard for the defendant and Mr. Yelverton for the plaintiff,

Mr. Justice DENMAN gave judgment. He said that, on the question of the plea of the Statute of Limitations, he was bound by the cases of "Weldon *v.* Neal" 15. Q.B.D., 471), and "Lowe *v.* Fox" (15 Q.B.D., 667). On the point whether the defendant had given his certificate without due and reasonable care, the plaintiff must show that there had been want of it. The certificate had been made out in due form. The defendant had given his opinion, and the only evidence to counteract it in any way was that of plaintiff herself, given some eight years after the acts complained of. The defendant had a perfect right to rely on the statements made by plaintiff's sister, and his lordship said he did not think that there was evidence of reasonable want of proper care to make the defendant responsible. Further, he considered defendant amply protected by Section 105 of the Act of 1845 (8 and 9 Vict., c. 100), which provides that any action against any person for anything done in pursuance of the Act should be brought within twelve months of the act complained of, unless a want of *bona fides* could be shown, which it could not in this case. As to

the action for libel, he had already ruled, and it was admitted, that the occasion was privileged, and, therefore, to have a cause for action, the plaintiff must show there had been express malice. His lordship said he did not think there was evidence of it. He was bound by the law laid down in "Clark *v.* Molyneux" (3, Q.B.D. C.A., 237), which had been cited in the arguments, that a mere blunder, slip, or inaccuracy in a statement was not sufficient to establish express malice. He thought, on the whole, that there had been no evidence produced upon which the jury could find either negligence or malice; and there was no excuse for saying that the defendant had not acted in a straightforward manner, and *bonâ fide*. He, therefore, gave judgment for the defendant, with costs; but consented to stay execution until Tuesday week. He also directed that the next case of "Tinfani *v.* Edis" should not be in the list for hearing before that date.

SIR,—Will you permit me, through the medium of your JOURNAL, to express my thanks to the very many professional brethren who have written to evince their sympathy, and to congratulate me on the successful termination of this case. I find it impossible to answer individually, as I would wish. I need hardly say how thoroughly I appreciate the sympathy of the profession.—I am, Sir, yours very truly,

F. SPURGIN.

ADVERTISING THE NAMES, ETC., OF A HOSPITAL STAFF.

T. C. H.—Although there is not, to our knowledge, any direct ethical rule relating to the publication of the names of the respective medical and surgical staffs of hospitals, as in the irregular advertisement submitted to us, we are clearly of opinion that the same principle which governs those of the larger institutions should alike influence and guide the medical officers of the minor "cottage hospitals," namely, to object to such public notification as unfair to their unattached professional brethren, and not conducive to the dignity and repute of the faculty. In the case of the "T. C. H." the subscribers are, we take it, more especially to blame, for not insisting on their privilege to vote in the election of the staff, in place of the existing arbitary system of selection by a self-elected Committee, a singular and exceptional arrangement, which, in our opinion, cannot be too strongly protested against, subjecting, as it necessarily does, the committee to severe criticism, and the medical officers to invidious remarks.

PUBLIC ADVERTISEMENT OF PARTNERSHIP.

DELTA.—In regard to the advertisement, which appeared in the three papers published in the town and district alluded to, and on which our correspondent urgently solicits our opinion and advice as to the line of conduct that should be pursued by the local faculty towards the advertiser, we need scarcely remark, inasmuch as it conveys its own condemnation, that so professionally derogatory and tradelike an announcement is, from our point of view, much to be regretted, and more especially as it would appear to have emanated from no *tyro*, but from one of mature age, and, presumably, of like professional status. With every disposition to regard charitably so grave a deviation from the well known path of legitimate practice, we feel that such a public notification is altogether incompatible with the honour and dignity of the profession, and justly subjects the ethical wrong-doer to unfriendly criticism and reproof; and, moreover, if renewed, either in practice or in principle, it may be that professional ostracism will not be too severe a rebuke.

A QUESTION IN MEDICAL JURISPRUDENCE.

MR. E. JEPSON (Durham).—It is not quite clear of what offence the coroner could convict. The only charge, so far as we know, that could be made would be that of concealment of birth. The statute (24 and 25 Vict., c. 100) runs as follows: "If any woman shall be delivered of a child, every person who shall by any secret disposition of the dead body of the said child, whether such child died before, at, or after its birth, endeavour to conceal the birth thereof, shall be guilty of a misdemeanour, and, being convicted thereof, shall be liable, at the discretion of the court, to be imprisoned for any term not exceeding two years, with or without hard labour."

The statute, it will be noticed, says nothing about the period of gestation reached. The only cases bearing on this point we know of are the following. A surgeon gave evidence that the remains were those of a child between the seventh and eighth month of gestation. Erle J. told the jury "this offence cannot be committed unless the child had arrived at that stage of maturity at the time of birth that it might have been a living child. It is not necessary that it should have been born alive, but it must have reached a period when, but for some accidental circumstances, such as disease on the part of itself or its mother, it might have been born alive."

According to Martin B., a fœtus not bigger than a man's finger, but having the shape of a child, is a child within the statute. In Reg. *v.* Hewitt, it was left to the jury to say whether what the prisoner had concealed was a child or only a fœtus.

It would seem, therefore, that a prosecution might be initiated under this statute. In reply to the other part of the letter, our correspondent cannot give a certificate of death in the case of a stillborn child.

RIGHTS OF LICENTIATES OF THE ROYAL COLLEGE OF SURGEONS OF IRELAND.

E. W. O. asks: 1. Can a Licentiate of the Royal College of Surgeons of Ireland, and possessing no other qualification, legally give a medical certificate of death? 2. Can he legally be appointed a medical attendant to a registered sick benefit society?

* We suppose that a medical certificate of death means a death from medical as distinguished from surgical causes; and, if this be so, the line in any case may be so fine that we should be reluctant to say that, in no medical case, the person in question can sign a certificate; at any rate, a prosecution would have very little chance of success. The privileges of a registered practitioner, whether he be singly or doubly qualified, are not lightly to be interfered with. In future, under the Medical Act of 1886, none but fully qualified practitioners will be placed on the *Register*.

As regards the second question, it would turn on the rules of the registered sick benefit club; if those rules did not require the medical attendant to have a medical qualification, there would be no reason against the appointment of a surgeon.

ALLEGED FRAUD.

A VICTIM. This seems to be a deliberate fraud; and shows its perpetrator to be unfit to remain a member of any honourable profession. On the facts stated, a conviction on the charge of obtaining money by false pretences ought to be certain. The prosecutor must necessarily be put to a considerable amount of trouble in proving the case; but he need not incur any expense, as that would be borne by the county. If criminal proceedings are not taken, the facts—with name and proofs—should be laid before the General Medical Council, who, if satisfied that the case is made out, ought, under Section 29 of the Medical Act, 1858, to strike the offender's name off the *Register*.

THE CHARGE OF MANSLAUGHTER AGAINST A MEDICAL ASSISTANT.

SIR,—I am sorry to have to inform those gentlemen who signed the petition to the Home Secretary in Mr. Irvine's favour, that his reply to Dr. Littlejohn is to the effect "that, in the facts of the case, he does not find sufficient ground to justify his interference."

It would be interesting to learn what opinion is generally held by the profession of this action of the Home Secretary. To me it is inexplicable, except on the ground of pure ignorance of medical matters. If the prosecution was radically incomplete (and this fact has not and cannot be denied), and if the defence was entered upon, after only a few minutes' study, by a barrister who had no previous knowledge of the very rudiments of physic, the trial, from a medical point of view, was nothing less than a despicable farce.

In my opinion, it remains for the Royal Colleges of Edinburgh and the Medical Council to pronounce a verdict of their own, in their own way, upon the evidence already published in the daily press, and in your columns.

I have only to make two statements concerning the case, which I have learnt from Mr. Irvine himself since his release.

1. Mr. Pitman requested Irvine to change the laudanum bottle after Mrs. Darling's death, alleging, as his reason, that it was cracked (although it did not leak).

2. The man Darling married again a few weeks after his wife's death, and a child was born a few weeks after the marriage. This man was asked if he had any other bottle of medicine in his house besides the one supplied to his wife by Mr. Irvine; but his house was not searched for evidence in that direction.—I am, Sir, your obedient servant,

C. R. ILLINGWORTH.

MR. F. KEMP asks: When a practice is purchased upon the average cash returns of three years—for instance, 1885, 1884, 1883, completed years—is it correct to deduct cash booked belonging to previous years, and taken during the following periods?

*** We are informed that the usual proceedings in purchasing a practice are that if a debt be contracted in any year and paid in some future one, the year the debt is paid is the one that receives the credit, and not the year the debt was contracted.

OBITUARY.

FREDERICK JOHN FARRE, M.D.Cantab., F.R.C.P., Consulting Physician to St. Bartholomew's Hospital.

DR. FARRE died at his residence in Kensington on Wednesday, November 10th, aged 82. He was the grandson of a West Indian landed proprietor, whose son, Dr. Farre, practised for many years in Charterhouse Square, and used to be a familiar object, at the close of the last century, as he walked home every evening, with his footman behind him, to his country house in Islington. His two sons, Frederick and Arthur, entered the medical profession as students at St. Bartholomew's Hospital. Frederick studied at Cambridge, and took the degree of M.B. in 1827, two years after he had commenced his studies at St. Bartholomew's. Very shortly after qualification he was made Lecturer on Botany at St. Bartholomew's Hospital, and later on became Lecturer on Materia Medica, holding the chair till 1876. In 1837 he took the degree of M.D.; in 1841-2, and 1854 he was Censor of the Royal College of Physicians. In 1842 he became Assistant-Physician to St. Bartholomew's Hospital, and was one of the first to hold that appointment, Sir George Burrows being the very first. By 1843 he had become the Senior Assistant-Physician, Drs. Hue, Roupell, and Burrows being full Physicians. Dr. Farre was the first full Physician appointed (May 10th, 1854), when the hospital determined to have four instead of three physicians on the staff, and he held that appointment for sixteen years.

Dr. Farre was a member of the Council of the College of Physicians in 1846-48, Treasurer to the College for fifteen years, and Examiner in 1861-62, 1866-67, and became Vice-President of the College. He was also, for a time, Examiner in Materia Medica at the University of Lon-

don. He practised for some years in Montague Place, and afterwards in Pimlico. Dr. Farre was, however, chiefly known as an authority on materia medica and therapeutics, subjects with which he was deeply conversant.

He was one of the editors of the first *British Pharmacopœia*, and was better known to students and teachers as the editor of Pereira's once widely-studied work on materia medica. Several generations of students of St. Bartholomew's Hospital attended his lectures in the summer session. His delivery was slow and clear, his style free from all rhetorical ornament, and his manner agreeable, so that he was popular with his audience, who treated him with respect. He laboured for years at the public teaching of a very dry subject, particularly unsuited for lecture purposes, yet his lectures were by no means unpopular. He admitted the difficulty of teaching the uses of drugs from the lecture chair, and encouraged his students to ask questions after each lecture was over. His colloquial manner of teaching was excellent, so that the arena of the theatre remained full for some time after the close of the lecture. On his retirement from the physiciancy, he continued to lecture on materia medica and therapeutics. Dr. Lauder Brunton was made, on Dr. Farre's recommendation, joint lecturer in 1871, and Dr. Farre gave up the whole lectureship in 1876. When still comparatively young, he was a good clinical teacher, and was always liked by his clinical clerks. Towards the close of his tenure of office some infirmities of age, especially deafness, prevented him from doing justice to himself. After his retirement his health continued strong till just before his decease; a few months ago he was able to walk up Beachy Head.

Dr. Farre had a grave and reverend aspect, calculated to inspire confidence in a patient. To students he was always kindly and considerate. He held several other appointments besides those already noted, being Physician to Charterhouse, Consulting Physician to the Royal London Ophthalmic Hospital, and Physician to the Rock Assurance Office. He married comparatively late in life, and has left two daughters, one of whom is married to the Rev. H. Spencer, of Oxford. His brother, the distinguished obstetrician, Dr. Arthur Farre, survives him.

ARTHUR WYNN WILLIAMS, M.D.St. Andrews, M.R.C.S.Eng., Consulting Physician to the Samaritan Free Hospital.

Dr. Wynn Williams died on Monday, November 15th, at Brooklyn, West Drayton, at the age of 67. He was born at Bangor in 1819, and was descended from an ancient Welsh family. He was also great grandson to John Freke, surgeon to Queen Anne. Dr. Williams received his education at Shrewsbury School, and was articled to the late Dr. Clements, of Shrewsbury. He commenced his professional career at St. Bartholomew's Hospital, and graduated as Doctor of Medicine at the University of St. Andrews. He started in life as a general practitioner at Carnarvon, where he soon obtained an extensive practice, was appointed physician to the Carnarvon and Anglesea Infirmary, and was beloved by all around him, especially the poor, to whom he was ever kind. He left there owing to his health, and came to London in the year 1859, starting as a physician in the West End. He soon gained distinction, and was appointed physician to the St. George's and St. James' Dispensary, after retiring from which, he became Physician Accoucheur to the Western General Dispensary. Dr. Williams was ultimately appointed Physician to the Samaritan Free Hospital, and, on his retirement a few years since, was appointed Consulting Physician. As he found his duties were becoming too heavy for him, he decided to leave London and reside in the country, where he might enjoy a few hours' recreation, as he was a passionate lover of horticultural pursuits, and come up to London for consultation only. This he did for exactly one year, but at length, owing to having sustained severe bereavements in the loss of his son and daughter, both within a few months of each other, his constitution began to give way, and in spite of the skilful attention of several of his professional brethren, he died of a somewhat obscure disease.

He was the author of many treatises, the most important of which related to the use of iodine as an antiseptic and bromine as a cure for cancer. Dr. Williams's advocacy of these remedies led to their being much used by the profession. He also introduced a modification of the operation for the repair of ruptured perinæum, and devised a special form of uterine stem.

His friends are scattered all over the world, and we are sure there is not one of them who will hear of the death of "poor Dr. Wynn" (as they used to call him in Wales) without deep regret. Dr. Wynn Williams was deeply versed in Welsh literature, and an authority on Celtic archæology. He was a medical man of great ability and a skilful physician and operator, especially in diseases of women; and being the possessor of a distinguished and commanding presence, was all the more successful; by his tact and powers, in recognising disease, and his great success in treatment and his kindliness of manner, he gained the full confidence of his patients, rich and poor. He married in 1849 Elizabeth Anne, daughter of the late Mr. Linnell, of Dublin, by whom he had nine children. His son, Mr. T. Wynn Williams, and his son-in-law, Mr. Stormont Murray, are members of the profession.

THOMAS MIDDLETON, F.R.C.S.

Mr. Thomas Middleton, of Didsbury, died lately in his seventh-fourth year from an attack of angina pectoris. Mr. Middleton bore an old and respected name; he was a descendant of Hugh Oldham, Bishop of Exeter, the founder of the Oldham Blue-Coat School. He commenced the study of medicine some fifty-six years ago, and was apprenticed for five years to Mr. John Boutflower, of Greengate, Salford, who yet survives him. He for some time attended the practice of the Manchester Infirmary, and afterwards studied in London and Paris. Returning to England, he settled in Salford, where he practised for a quarter of a century, until failing health caused him to retire to the quieter and purer atmosphere of Didsbury. Here he lived for the last twenty years, his unostentatious benevolence and his other estimable qualities winning for him the affectionate regards of his neighbours and friends.

NAVAL AND MILITARY MEDICAL SERVICES.

CHANGES OF STATION.

The following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:—

	From	To
Brigade-Surgeon R. Waters, M.D.	Belfast	Bengal.
,, W. C. Robinson	Barbadoes	Portsmouth.
Surgeon-Major R. W. Davies	Gosport	Bengal.
,, H. T. Brown, M.D.	Cork	Buttevant.
,, W. F. Burnett	Dover	Bombay.
,, E. H. Joynt, M.D.	Egypt	Cork.
Surgeon A. C. J. R. Lundy, M.B.	Chester	Salford.
,, J. G. S. Lewis	—	Woolwich.
,, E. F. Smith	Worcester	Hortield.
,, D. L. Irvine	Wrexham	Newcastle.
,, A. T. Sloggett	Devonport	Bull Point.
,, T. A. Dixon	Burnley	Beverley.
,, H. P. Birch	Dover	Canterbury.
,, C. S. Robinson	Dover	Shorncliffe.
,, J. R. Barefoot	York	Hulme.
,, R. E. Genge	Colchester	Bengal.
,, G. S. Cardew, M.B.	Aldershot	Bengal.
,, H. Cocks, M.B.	Ashton-u.-Lyne	Bermuda.
,, A. Kennedy	Curragh	Bengal.
,, H. H. Brown, M.B.	Cork	Madras.
,, J. R. Burrows, M.D.	Cork	Queenstown.
,, G. F. H. Marks, M.D.	York	Bradford.
,, R. N. Buist, M.B.	Ashbyde-la-Zouch	Liverpool.
Quartermaster G. W. M. Johnston	Chatham	West Indies.

THE NAVY.

The following appointments have been made at the Admiralty during the past week: H. A. Close, Fleet-Surgeon, to the *Invincible*; A. Cropley, Surgeon, to the *Invincible*; J. Moore, Surgeon, to the *Goshawk*.

Surgeon J. M. Phillips, M.D., of H.M.S. *Goshawk*, died at Jamaica recently at the early age of 26. He entered the Royal Navy, August 28th, 1882, and was appointed to the *Goshawk*, December 19th, 1883.

THE MEDICAL STAFF.

Brigade-Surgeon Robert Lewer is promoted to be Deputy Surgeon-General *vice* R. Webb, who has been placed on temporary half-pay. Deputy Surgeon-General Lewer entered the army as Assistant-Surgeon August 1st, 1857; became Surgeon, September 9th, 1871; Surgeon-Major, March 1st, 1873; and Brigade-Surgeon, April 1st, 1882. He served in the Royal Navy during the operations in the Baltic, and was present at the bombardment and destruction of the Tmaumace town of Massougha on the Sierra Leone river on December 10th, was at the attack on Madoukia December 27th, and at the storm and capture of the stockaded Fetish town of Rohea on December 28th, 1861 (mentioned in general orders for services and conspicuous bravery, and specially recommended for promotion in 1868). He also served in the Ashanti war in 1873 as Sanitary Officer, and was severely wounded in the action of November 3rd near Dunquah, and was also wounded at Quarman on November 17th (medal). He is now in Egypt, whither he went at the beginning of 1885.

Surgeons-Major C. H. Y. Godwin and T. Maunsell are also promoted to be

Brigade-Surgeons, *vice* J. Davidge and R. Lewer respectively. Brigade-Surgeon Godwin's commissions bear date: Assistant-Surgeon, October 1st, 1860; Surgeon, March 1st, 1873; and Surgeon-Major, May 14th, 1875. Those of Brigade-Surgeon Maunsell: Assistant-Surgeon, October 1st, 1860; Surgeon, March 1st, 1873; and Surgeon-Major, June 17th, 1875. The former is at Netley, the latter in Bengal.

Surgeon-Major R. Vicy Ash, M.D., has been ordered to Mandalay for service in Upper Burmah. He is appointed Assistant Medical Officer and Sanitary Officer to the Burmah Field Force, and will also take medical charge of the Headquarters Staff.

Captains of Orderlies F. Philpot, W. A. Moss, and H. J. Sylvester, all from the late Army Hospital Corps, are appointed Quartermasters.

The undermentioned officers will, on completion of a tour of foreign service, proceed to England during the trooping season of 1886-87, and will be detailed by the Surgeon-General of Her Majesty's Forces, Bengal, for duty with troops embarking in the several troopships of the season: Brigade-Surgeon J. Jameson, M.D.; Brigade-Surgeon J. Mackenzie, M.D.; Surgeon-Major P. Furr, Surgeon-Major J. E. Fannin, Surgeon-Major P. L. Kilroy, Surgeon C. Williamson, Surgeon M. W. Keeis, Surgeon H. J. R. Moberly, and Surgeon G. Coates, M.B.

Surgeon W. B. Day, M.B., serving in the Madras command, has passed the examination for the lower standard in Hindustani.

Surgeon-Major W. T. Martin, M.D., Senior Medical Officer of the station hospital, St. Thomas's Mount, Madras, is appointed Senior Medical Officer of the station hospital at Bellary.

Surgeon-Major H. W. A. Mackinnon, on general duty in the Eastern District, Madras, is appointed Senior Medical Officer of the station hospital at Madras.

Surgeon-Major J. Martin, Senior Medical Officer of the station hospital at Madras, is appointed Senior Medical Officer of the station hospital at St. Thomas's Mount.

Surgeon-General Edward Gilborne died on September 19th last. He entered the service as an Assistant-Surgeon, May 1st, 1845; became Surgeon, November 5th, 1855; Surgeon-Major, August 28th, 1864; Deputy Surgeon-General, October 19th, 1872; and Surgeon-General, November 2nd, 1879; retiring June 23rd, 1880. Surgeon-General Gilborne served in the Eastern campaign of 1854 with the Royal Artillery, including the affairs of Bulganac and M'Kenzie's Farm, the battles of Alma and Balaclava, the capture of Balaclava, the siege of Sebastopol, and the repulse of the sortie on October 26th, 1854 (medal with three clasps, Turkish medal, Knight of the Legion of Honour, and 5th Class of the Medjidie).

Deputy Surgeon-General Samuel Fuller is granted retired pay, with the honorary rank of Surgeon-General. He entered the service as Assistant-Surgeon, July 23rd, 1855; became Surgeon, November 12th, 1870; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, October 1st, 1881; and Deputy Surgeon-General, April 1st, 1886. Surgeon-General Fuller served with the 9th Lancers in the suppression of the Indian Mutiny in 1858-59, and was present at the capture of Meeangunge, the siege and capture of Lucknow, the summer campaign in Oude and Rohilcund, with actions at Rhodamow and Allygunge, the capture of Bareilly, the action near Shahjehanpore and pursuit to Mahomdee, and the passage of the Gogra at Fyzabad (medal with clasp). He was also in the Egyptian campaign in 1882, and was at the battle of Tel-el-Kebir (medal with clasp, and Egyptian bronze star).

Surgeon-Major E. C. R. Ward has likewise retired, we regret to add on account of ill-health. His commission as Assistant-Surgeon dates from April 1st, 1871; as Surgeon from March 1st, 1873; and as Surgeon-Major from April 1st, 1883. He was in the Zula war in 1879, and in the subsequent operations against Sekukuni, including the storming of his stronghold (medal with clasp). He was also engaged against the Boers in 1881, and was wounded in the action at Madder Spruit, and was mentioned in despatches for his services.

Surgeon C. E. Swayne, who entered the service as Assistant-Surgeon, March 30th, 1872, is promoted to be Surgeon-Major. During the recent expedition up the Nile, he had charge of a field hospital at Dongola (medal with clasp).

THE INDIAN MEDICAL SERVICE.

Surgeon C. W. Owen, C.I.E., Bengal Establishment, in medical charge of the Afghan Boundary Commission, is granted three months' privilege leave from such date, subsequent to the return of the Commission to India, as he may avail himself of it.

Surgeon-Major G. C. Chesnaye, in medical charge of the 1st Battalion of the 1st Goorkhas, is promoted to be Brigade-Surgeon from August 18th, *vice* Brigade-Surgeon J. Browne, retired.

Brigade-Surgeon J. Fairweather, M.D., Bengal Establishment, has retired from the service, which he entered August 4th, 1855, having attained his present rank November 27th, 1879. Dr. Fairweather served in the campaign on the North-West Frontier of India in 1857 (medal with clasp). He was also in the Indian Mutiny campaign in 1858, and was present at the siege and capture of Delhi, the relief of Lucknow, the defeat of the Gwalior Contingent at Cawnpore, at the siege and capture of Lucknow, the action at Aligunge, and the capture of Bareilly (medal with three clasps).

Surgeon J. J. Pratt, Bengal Establishment, is appointed to the officiating medical charge of the 5th Punjab Cavalry, *vice* Surgeon J. G. Hancock, proceeded on sick leave.

Surgeon B. Doyle, Bengal Establishment, is appointed to the officiating medical charge of the 6th Punjab Infantry, *vice* Surgeon-Major J. T. B. Bookey, ordered on field-service.

Surgeon T. R. MacDonald, M.D., Bengal Establishment, is appointed to the officiating medical charge of the 38th Native Infantry, *vice* Surgeon-Major W. M. Courtney, ordered on field-service.

Surgeon W. Owen, M.B., Bengal Establishment, officiating Civil Surgeon of Pubna, is appointed to act as Civil Surgeon of Midnapore, during the absence, on furlough, of Surgeon A. Tomes.

Surgeon J. Clarke, M.D., Bengal Establishment, second Resident Surgeon Presidency General Hospital, is appointed to be first Resident Surgeon during the absence, on deputation, of Surgeon R. D. Murray, M.D.

Surgeon-Major P. Murphy, M.D., Bombay Establishment, is confirmed in his appointment of Superintendent of Mahableshwur from October 1st.

Surgeon-General J. M. Joseph, M.D., of the Bombay Establishment, died at Madras on October 17th, at the age of 60. He entered the service November 20th, 1852, and attained the rank of Deputy Surgeon-General May 16th, 1880. He retired with the rank of Surgeon-General July 1st, 1885.

The services of Surgeon-Major E. G. Russell, M.D., and Surgeon G. W. P Dennys, both of the Bengal Establishment, have been temporarily placed at the disposal of the Military Department.

Surgeon W. G. P. Alpin, Bengal Establishment, in officiating medical charge of the 19th Native Infantry, is appointed to officiate as Medical Officer of the Meywar Bheel Corps.

Surgeon-Major J. Duncan, M.D., Bengal Establishment, is promoted to be Brigade-Surgeon, *vice* R. S. Bateson, retired. Dr. Duncan's first commission dates from February 10th, 1859.

Surgeon-Major E. O. Tandy, of the Bengal Establishment, is also promoted to be Brigade-Surgeon, *vice* G. Farrell, promoted. Brigade-Surgeon Tandy entered the Army Medical Service on the same day as Dr. Duncan. He was engaged in the campaign on the North-West Frontier of India in 1863, and was at the capture of Umbeyla (medal with clasp). He was also in the recent war in Afghanistan, for which he has the medal.

Surgeon-Major G. A. Dundas, Bengal Establishment, is appointed to the medical charge of the 16th Native Infantry, *vice* Surgeon-Major A. G. Grant, M.B., who has retired from the service.

Surgeon F. J. Drury, Bengal Establishment, is appointed to the officiating medical charge of the 18th Native Infantry, *vice* Surgeon-Major G. A. Dundas.

Surgeon G. F. A. Harris, in joint medical charge of Simla, is appointed to the medical charge of the Army Head-Quarters Staff and Establishment remaining at the station.

Surgeon-Major O. Baker, Bengal Establishment, has resigned his appointment as Honorary Surgeon of the Moulmein Volunteers; and Surgeon G. T. Thomas, of the Madras Establishment, has been appointed in his stead.

The under-mentioned gentlemen have been appointed Acting-Surgeons in the volunteer corps specified: R. L. Jones, to the 1st Cheshire Artillery; A. H. Robinson, M.D., to the 2nd Middlesex Artillery; and R. H. Hodgson, to the 2nd Tower Hamlets Rifles.

Acting-Surgeon J. H. Ross, M.B., is transferred from the 1st Gloucester (the Western Counties) Engineer Volunteers to the Severn Division of the Volunteer Submarine Miners.

Mr. A. K. Wylie has been appointed Quartermaster to the Woolwich Division of the Volunteer Medical Staff Corps.

Mr. Alexander Nicol, M.D., is appointed Acting Surgeon to the 4th Volunteer Battalion of the Gordon Highlanders (late the 4th Aberdeen Volunteers).

Honorary Assistant-Surgeon J. T. Barrie, M.D., has resigned his commission in the 7th Lanarkshire Volunteers, which he joined June 25th, 1866.

Surgeon and Honorary Surgeon-Major H. W. Livett, of the 3rd Volunteer Battalion of the Somerset Light Infantry (formerly the 3rd Somerset Volunteers), has resigned his commission, which dates from September 21st, 1872. He is permitted to retain his rank and uniform.

BRIGADE-SURGEONS IN INDIA.

M. S. writes with reference to the comments, and the letter signed "X," in the issue of the Journal of October 16th: The false position held by brigade-surgeons in India is principally due to the fact that these officers are placed on the same roster for foreign service as surgeons-major—brigade-surgeons and surgeons-major being sent to India indiscriminately, the former officers finding themselves, on arrival there, in the unenviable position alluded to, where their services are neither appreciated nor valued.

To alleviate this, brigade-surgeons should be placed on a roster by themselves, and only a limited number detailed for Indian service, say two or more for each Presidency, available to act for the administrative officers absent on leave, or otherwise. If this course was adopted, and the number of brigade-surgeons reduced to a limited number, the Indian authorities, I have no doubt, would much more readily concede the allowance sought for, than under the present unlimited arrangements.

The reduction of brigade-surgeons in India, and the placing them on a roster by themselves, would have also the desired effect of giving officers of this rank somewhat longer home service than they at present enjoy, namely, about two years, a matter quite as much requiring redress as the absence of staff-pay in India.

Brigade-surgeons are officers advanced in years, having spent the greater part of their services abroad, and, as a rule, having families growing up, and children to be educated, and anything that would tend to lengthen their home service would be accepted as a boon.

The *Army List* for October shows 15 brigade-surgeons in India, and 10 in the the colonies, etc., 25 abroad out of a total of 50, whereas, if the number for India was reduced to six or seven, with ten for the colonies, etc., and a separate roster instituted for these officers, their home services would be considerably increased without detriment to the army.

FEES FOR EXAMINING RECRUITS.

M.R.C.S.England.—The following is the scale of fees to civilian medical practitioners for the medical examination of recruits and men of the reserve forces:—

	s.	d.
For each recruit rejected by him as medically unfit..	2	6
For each recruit who, on being subjected to approval, shall be rejected for other than medical disabilities	2	6
For each recruit approved and passed into the service	4	0
For each recruit passed by the civilian medical practitioner, but afterwards rejected on medical grounds	nil.	
For each man of the army or militia reserve examined by him, but not exceeding a total of 10s. 6d. a day	2	6

As regards the inspection of recruits, one of the instructions for their medical examination is the following: Paragraph 971: "Great care is to be taken in ascertaining the mental capacity of a recruit."

THE ARMY MEDICAL STAFF AND THE QUEEN'S JUBILEE.

Medical Staff writes to suggest that the Queen's jubilee would be a suitable occasion for acting upon the recommendation of Lord Morley's Committee to grant to the (Army) Medical Staff the title "Royal Medical Staff."

EXAMINATION OF ARMY MEDICAL OFFICERS.

Sir,—There being a widespread belief that the examination of volunteer medical officers is of a trifling nature, it will not, I think, be out of place to give my recent experience.

The examining board consisted of the principal medical officer of the district (northern), a surgeon-major, and a surgeon. The questions—which were pre-

pared by the principal medical officer—were about thirty in number. My answers were taken down by one of the examiners. The examination was a very searching one, certainly much more so than I expected. Amongst others, questions on the following subjects were asked: The sanitary arrangements of camps, the care of the soldier on march, the treatment of the wounded in engagements, the details of collecting, and dressing stations; the position, site, and composition of the field-hospitals; the transport of the wounded at all stages. Questions were also asked as to the contents, weight, etc., of the medical field-companion, the number of men in each tent, etc. A knowledge of bearer-company drill I found to be imperative. Although I was not asked to drill a bearer-company, I know that men going up for this examination lately have been asked to do so. In conclusion, I recommend no man to go up for this examination without first studying the Army Medical Regulations, 1885, and the Manual for the Medical Staff Corps, 1885. Rejections have taken place lately.—I am, yours,

R. J. COLLIE, M.D.

DATE OF COMMISSIONS.

BONA-FIDE writes: In his inaugural address at the Meath Hospital, Dublin, Dr. Ormsby made some remarks on the status of the army medical officer, and referred to the fact that, since 1877, a surgeon's commission dated from his leaving Netley, whereas a surgeon's commission in the Indian Medical Service dates from the day he enters Netley.

The army medical officer is thus deprived of four months' service, time actually spent in the service. This plan was introduced at the time of the ten years' system, in order to give a surgeon the full ten years; but now that the ten years' system has been abolished, it seems only right to give back the four months to all who have been deprived of it; this would be an act of fairness, and place those entering since 1876 on the same footing as those who entered before them.

ARMY SURGEONS AND PRIVATE PRACTICE.

SIR,—Having observed a letter in the JOURNAL of September 25th last, signed by Fred. Gahne—a name which I am unable to find in the British *Medical Register* for 1883, the latest edition I happen to have beside me—in which it is stated that "the serious charges made against the army surgeon are substantially unfounded," I beg leave to state that the reverse is the case, and that the grievances touched on by you in your leading article in the JOURNAL of July 3rd last, and dealt with *seriatim* by your correspondent, who evidently, judging from the close intimacy that exists between him and the army surgeon, writes with his knowledge and at his instigation, are in every way correct, as the facts are within my own personal knowledge, several of them having occurred amongst my own patients.

I am prepared to give in detail the facts of the army surgeon's non-ethical and unprofessional conduct towards my patients and myself, on more than one occasion, which facts I defy him to refute or explain away.—I remain, Sir, your obedient servant,

J. JENKYNS, M.B., C.M.(Univ. Aberd.).

Belize, Honduras.

HOSPITAL AND DISPENSARY MANAGEMENT.

BELFAST ROYAL HOSPITAL: ANNUAL MEETING: ANNUAL REPORT.

THE annual meeting of the subscribers to the Belfast Royal Hospital was held on Monday, November 15th, under the presidency of Sir E. P. Cowan. The Honorary Secretary, Mr. R. W. Murray, J.P., read the annual report, which states that the past year has been a remarkable one in the history of the Hospital. The demands made upon its resources during a portion of the year were of the most severe and exhausting character. A great railway accident was followed by the late disastrous and protracted riots, and the pressure upon the space and resources of the Hospital was unexampled. The strain was long-continued and exacting, and the Board of Management bear willing testimony to the splendid services rendered by the surgeons and other officers throughout the whole period of these extraordinary demands.

It is with great regret that the Board record the death of the President of the institution, the Earl of Shaftesbury. They have conveyed to the Countess of Shaftesbury their deep sympathy and condolence in the great affliction which has visited her and her family.

Several valuable improvements in the Hospital have been effected during the past year. The wards have been admirably fitted up by the munificence of various kind friends of the institution, and are now in a most satisfactory state. The fever-wards have been rebuilt, and now afford excellent and much-needed accommodation for the treatment of infectious disease. The laundry has been remodelled, and the sanitation of the Hospital has undergone important improvements.

Another pleasing incident of the year was the gift by Dr. Whitla of a beautiful stained glass window, which now lights the main staircase of the Hospital.

One of the greatest events of the year in connection with the hospital was the completion and opening of the Consumptive Hospital at Thronemount. Through the generosity of Mr. Forster Green, and the kindly co-operation of other friends, the requisite funds were provided. The Hospital was formally opened by Mr. Green on December 1st, 1885, and since that date it has been in full operation, under the medical superintendence of Dr. Lindsay. Mr. Green has generously promised to build a new wing to the Hospital, so soon as the sum necessary for its endowment can be raised.

The Medical and Surgical Staff Report shows that during the year 2,134 intern patients were treated in the wards of the hospital. Of these 897 were medical and 1,237 were surgical. 108 patients died during the year, of whom 18 were moribund on admission. 226 surgical operations were performed with a mortality of 7, or a death-rate after operation of 3.09 per cent. Chloroform was administered 101 times, methylene 46 times, and the A C E mixture 58 times. In the medical wards (excluding cases moribund on admission) the mortality was 4.79 per cent., and in the surgical wards 3.71 per cent., the average mortality for the entire hospital being 4.2. In the extern department 14,750 new cases have been treated, of which 2,125 were medical and 11,339 surgical. The average daily attendance was about 106, and the total attendances for the year about 38,690. 665 minor operations were performed and 1,420 teeth extracted. Clinical instruction has been given in the wards to 159 students during the winter, and to 83 during the summer session.

While the Hospital was never in so efficient a state, and never discharged more onerous work, it is much to be regretted that the funds still languish. The Board began the year with a balance in favour of the Hospital of £706 11s. 5d., and they conclude the year with a deficiency of £1,048 8s. 2d., showing an excess of expenditure over receipts of £1,754 19s. 7d. These startling figures admit of some explanation. From the amount of the actual deficiency must be deducted the sums devoted to the rebuilding of the fever wards and the renovation of the laundry. When these deductions are made the actual excess of expenditure for the year is only £797 12s. 10d., a sufficiently serious amount. There has been a slight falling off in the general subscriptions, and in the subscriptions received from the working classes. The other sources of income remain almost *in statu quo*. The Board express their regret at the small amount (only £377 5s. 5d.) received from the Hospital Sunday collections. The receipts from the Hospital Saturday collections (viz., £334 7s.) also exhibit a falling off compared with former years, and might be largely increased.

On the motion of Sir E. P. Cowan, seconded by the Rev. John Fordyce, M.A., Mr. W. T. B. Lyons, D.L., one of the oldest and most esteemed friends of the Hospital, was unanimously and cordially elected President of the Institution, in room of the late Earl of Shaftesbury.

Various re-elections followed, and the usual routine resolutions, including one of thanks to the Medical and Surgical Staff.

METROPOLITAN FEVER AND SMALL-POX RETURNS.

THE fever and small-pox returns of the Metropolitan Asylums for the past fortnight show that at the Eastern Hospital 72 fresh cases had been admitted; at the Western, 38; and at the South-Eastern, 46; in all, 156. Seventeen patients had died, and 81 had been discharged, leaving 676 under treatment—an advance of 58 over the numbers of the previous fortnight. Of the whole, 561 were cases of scarlet fever and 114 were cases of enteric fever. There was no case of typhus, and only one classed as "other disease." Of all the cases, 312 were in the Eastern Asylum, 145 in the Western Asylum, and 219 in the South-Eastern Asylum. During the fortnight, no small-pox cases had been received, and there were only three under treatment in the hospital-ships.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.

THE Devonshire Hospital, Buxton, has received £136 under the will of John Slack, Esq., J.P., late of Bowden Hall, Chapel-en-le-Frith, Derbyshire; and £100 under the will of Richard Wheatley, Esq., late of Rhoyds House, Mirfield, Yorkshire.

INDIA AND THE COLONIES.

INDIA.

THE unequal distribution of paid appointments between officers of the Medical Staff, and of the Indian Medical Service, says the *Times of India*, having been brought to the notice of the Government of India, the Viceroy has desired Local Governments to consider the fair claim of the two services in making appointments to lock hospitals, and suggests that at the stations, where the staff surgeoncy is held by an officer of the Medical Staff, the medical charge of the lock hospital be given to an officer of the Indian Medical Service, and *vice versâ*, and considers that in this way a more equitable allotment of these appointments than exists at present may be secured.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE THIRD QUARTER OF 1886.

THE vital and mortal statistics of the twenty-eight towns dealt with by the Registrar-General in his weekly return are summarised in the accompanying table. During the three months ending September last 74,253 births were registered in the twenty-eight large English towns, equal to an annual rate of 32.8 per 1,000 of their aggregate population, estimated at upwards of nine millions of persons. In the corresponding periods of the two preceding years, 1884-85, the birth-rate in these towns was 33.9 and 32.4 per 1,000 respectively. The birth-rate last quarter in London did not exceed 31.7 per 1,000, while it averaged 33.7 in the twenty-seven provincial towns, among which the birth-rate ranged from 26.3 in Brighton, 27.2 in Huddersfield, and 28.9 in Halifax, to 39.7 in Newcastle-upon-Tyne, 40.9 in Preston, and 42.4 in Cardiff.

The 46,180 deaths registered in the twenty-eight towns during the third quarter of this year were equal to an annual rate of 20.4 per 1,000, against 19.9, 22.8, and 18.8 in the corresponding quarters of the three preceding years. In London the rate of mortality did not exceed 18.7 per 1,000, while in the twenty-seven provincial towns it averaged 21.8 per 1,000. The lowest rates in these towns were 16.7 in Derby, 17.0 in Bristol and in Brighton, and 17.4 in Huddersfield; in the other towns they ranged upwards to 24.7 in Salford and in Portsmouth, 25.0 in Manchester, 28.0 in Norwich, and 28.8 in Preston.

During the quarter under notice, 10,880 deaths were referred to the principal zymotic diseases in the twenty-eight large towns, equal to an annual rate of 4.80 per 1,000. The lowest zymotic death-rates in these towns were 2.17 in Huddersfield, 2.60 in Bristol, and 2.80 in Halifax; in the other towns they ranged upwards to 7.41 in Salford, 8.13 in Portsmouth, 9.54 in Preston, and 9.59 in Norwich. The 10,880 deaths from the principal zymotic diseases included 8,044 which resulted from diarrhœa, 1776 from measles, 631 from whooping-cough, 584 from "fever" (including typhus, enteric fever, simple and ill-defined forms of continued fever), 543 from scarlet fever, 299 from diphtheria, and 3 from small-pox.

The 8,044 deaths from diarrhœa registered last quarter in the twenty-eight towns were equal to an annual rate of 3.55 per 1,000, which considerably exceeded that recorded in the corresponding period of last year. The diarrhœa-rate in London was equal to 3.02 per 1,000, while it averaged 4.01 in the twenty-seven provincial towns, among which the rates of mortality from this disease ranged from 1.05 in Bristol, 1.40 in Huddersfield, and 1.54 in Halifax, to 5.36 in Salford, 5.49 in Preston, 6.23 in Leicester, and 8.24 in Norwich. The rate of mortality from measles was equal to 0.34 per 1,000, against 0.56 and 0.59 in the first two quarters of the year; this disease was somewhat more prevalent in London than in the aggregate of the twenty-seven provincial towns, among which the rates of mortality from measles were highest in Portsmouth, Blackburn, and Preston. The death-rate from whooping-cough, which had been 1.00 and 0.58 per 1,000 in the two preceding quarters, further declined during the three months under notice to 0.28, a lower rate than in the corresponding period of any year on record; in London the rate of mortality from this disease slightly exceeded the mean rate in the provincial towns, among which whooping-cough caused the highest rates in Manchester, Norwich, and Preston.

The 584 deaths referred to different forms of "fever" were equal to an annual rate of 0.26 per 1,000; in recent quarters the fever death-rate had steadily declined to 0.15 per 1,000. While the rate of mortality from fever did not exceed 0.19 per 1,000 last quarter in London, it averaged 0.31 in the twenty-seven provincial towns, and showed the highest proportional fatality in Preston, Norwich, Plymouth, Cardiff, and Portsmouth. The death-rate from scarlet fever was equal to 0.24 per 1,000, against 0.18 and 0.14 in the first two quarters of the year; in London the rate of mortality from this disease did not exceed 0.17 per 1,000, while in the twenty-seven provincial towns it averaged 0.30, and was highest in Liverpool, Sheffield, Huddersfield, Leeds, and Salford. The 229 fatal cases of diphtheria recorded last quarter in the twenty-eight towns were equal to an annual rate of 0.13 per 1,000, which corresponded with the rate in the preceding quarter; this disease was proportionally much more prevalent in London than in the aggregate of the twenty-seven provincial towns, among which, however, diphtheria was most fatal in Birmingham, Cardiff, Portsmouth, and Plymouth. Only 3 deaths were referred to small-pox in the twenty-eight towns during the three months ending September last; of these, 2 occurred in Liverpool and

Public Health Statistics relating to Twenty-eight Large English Towns, for the Third Quarter of 1886.

Towns	Estimated Population middle of 1886.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Rate per cent. of Uncertified Deaths.	Deaths of Children under one year of age to 1,000 Births.
28 Towns	2,003,817	74,253	46,180	32.8	20.4	4.8	10,880	3	776	543	299	631	584	8,044	2.2	231
27 Provincial Towns	4,944,284	41,510	26,829	33.7	21.8	5.3	6,506	2	366	369	114	336	387	4,912	3.0	240
London	4,140,533	32,743	19,351	31.7	18.7	4.2	4,374	1	390	174	185	295	197	3,132	1.1	220
Brighton	116,416	503	493	26.3	17.0	3.3	97	—	4	5	5	5	5	73	1.8	233
Portsmouth	136,278	1,303	838	38.4	24.7	8.1	276	—	28	5	9	4	69	161	0.6	238
Norwich	92,028	780	642	34.0	28.0	9.6	220	—	—	3	1	16	11	189	1.1	346
Plymouth	76,584	567	371	29.7	19.4	3.5	67	—	—	2	6	2	16	41	0.3	198
Bristol	220,915	1,717	938	31.2	17.0	2.6	143	—	23	22	2	27	11	58	2.8	147
Wolverhampton	80,012	659	399	33.1	20.0	5.6	111	—	8	1	1	6	4	91	1.8	222
Birmingham	434,381	3,534	2,154	32.7	19.9	5.6	609	—	35	8	22	6	8	530	2.3	248
Leicester	139,606	1,185	847	34.1	24.4	7.1	248	—	15	4	1	2	9	217	1.1	386
Nottingham	217,733	1,917	1,079	35.3	19.9	5.0	270	—	23	4	1	5	18	219	1.9	230
Derby	91,823	717	382	31.3	16.7	3.3	75	—	1	3	1	7	5	58	3.1	192
Birkenhead	95,370	845	523	35.6	22.0	4.6	110	—	8	7	1	3	4	87	3.3	243
Liverpool	586,220	4,831	3,532	33.1	24.2	5.5	805	2	29	61	20	17	54	616	4.8	265
Bolton	111,214	853	605	30.8	21.8	5.2	143	—	17	4	1	3	5	113	2.8	261
Manchester	376,895	3,384	2,343	36.0	25.0	4.7	441	—	6	34	6	49	21	325	2.9	224
Salford	211,241	1,857	1,300	35.3	24.7	7.4	390	—	9	62	4	17	16	282	3.8	283
Oldham	130,216	1,025	713	31.6	22.0	3.8	122	—	10	10	4	10	5	83	6.0	202
Blackburn	114,689	962	656	33.7	23.0	4.3	124	—	25	7	—	7	5	80	2.3	218
Preston	101,340	1,032	727	40.9	28.8	9.5	241	—	60	3	—	28	11	139	2.1	297
Huddersfield	88,670	600	384	27.2	17.4	2.2	48	—	2	10	—	2	3	31	6.0	178
Halifax	78,287	563	398	28.9	20.4	2.8	55	—	12	1	3	6	3	30	7.5	183
Bradford	219,411	1,593	1,014	29.1	18.5	5.8	206	—	18	10	—	6	7	163	1.9	211
Leeds	339,057	2,851	1,855	33.7	22.0	5.9	502	—	15	40	7	36	22	382	1.7	262
Sheffield	310,957	2,652	1,665	34.2	21.5	5.9	456	—	26	33	2	25	11	359	5.1	254
Hull	191,501	1,568	872	32.9	18.3	5.1	242	—	1	12	—	16	9	204	3.0	216
Sunderland	127,487	1,156	647	36.4	20.4	5.6	179	—	2	6	—	11	3	157	3.2	215
Newcastle-on-Tyne	155,117	1,533	836	39.7	21.6	3.9	150	—	7	8	4	15	8	108	2.6	194
Cardiff	100,756	1,063	616	42.4	24.5	7.0	176	—	2	4	5	5	44	116	0.6	217

1 in London (exclusive of 1 death of a London resident registered in the Metropolitan Asylum District Hospitals situated outside Registration London). Only 24 small-pox patients were under treatment in the Metropolitan Asylum Hospitals during the quarter, and only 14 new cases were admitted during the three months ending September last.

The rate of infant mortality in the twenty-eight towns last quarter, measured by the proportion of deaths of children under one year of age to registered births, was last quarter equal to 231 per 1,000, against 242 and 185 in the corresponding periods of 1884 and 1885. While the rate in London was equal to 220 per 1,000, it averaged 240 in the twenty-seven provincial towns, among which it ranged from 147 in Bristol, 178 in Huddersfield, and 183 in Halifax, to 283 in Salford, 297 in Preston, 346 in Norwich, and 386 in Leicester.

The causes of 1,010, or 2.2 per cent. of 46,180 deaths registered in the twenty-eight towns during the quarter under notice were not certified, either by registered medical practitioners or by coroners. The proportion of uncertified deaths in London did not exceed 1.1 per cent., while in the twenty-seven provincial towns it averaged 3.0, and ranged from 0.3 in Plymouth and 0.6 in Portsmouth and in Cardiff, to 5.1 in Sheffield, 6.0 in Oldham and in Huddersfield, and 7.5 in Halifax.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

A MEETING of the North-Western Association of Medical Officers of Health was held on November 11th, at Manchester, Dr. Tatham (Salford) presiding. Dr. Kenyon (Chester) read a paper entitled "Questions which arise with reference to Old Interments in Churches; illustrated by a case now pending." Dr. Kenyon dealt with the difficulty of legal action for the abatement of unsanitary conditions in an old church in which interment had taken place for a number of years. Though there was evidence that the flooring of such churches was pervious to air and water, and that there were decomposing bodies beneath, enclosed in wooden coffins, no effluvium, nuisance, or actual injury to health, could be legally proved. There were no powers to effect any alteration under the Public Health Act; and, though a faculty to remove the bodies might possibly be obtained from the Home Secretary, such an extreme course hardly seemed necessary. What it was desirable to do was to require the church authorities to refloor the building with cement asphalted over; but there was no power to insist upon this.—A discussion followed, in which the Chairman, Drs. Hope (Liverpool), Sergeant (Bolton), Vacher (Birkenhead), Welch (Blackpool), Barr (Bury), and Rhodes (Glossop), took part.

ASSOCIATION OF PUBLIC SANITARY INSPECTORS.

THE annual address of the Chairman of the Association of Public Sanitary Inspectors, Mr. George B. Jerram, A.M.I.C.E., was delivered on Saturday last, at 1, Adam Street, Adelphi, on a matter of no little practical importance, namely, the best materials and methods of construction of drain-pipes, and the most efficient means of making joints impermeable to gas and water. Having touched lightly on the history of pipe-making from 1725, the year of the first patent, to the present, during which time no fewer than 200 patents had been applied for, Mr. Jerram spoke of the beautiful soft, plastic clay found in Dorset and Devon, used for making the now well known stoneware-pipes of Messrs. Doulton and others. The characteristics of good pipes, so that they are not easily affected by acids and other chemical substances found in sewage, as also the important requirements in the jointing of pipes, and the various kinds of joints, were stated and discussed in some detail. Mr. Jerram concluded by some pertinent remarks on the subject of drainage, and the rules by which the laying of drain-pipes should be regulated. In the discussion which followed, the following points were urged: the importance of the proper supervision of sanitary work by local authorities; an increase in the number of sanitary inspectors, who should be examined, and who should form themselves into a body like the architects and engineers. A vote of thanks was passed to the Chairman, who, in acknowledging the vote, said that, though additional inspection would at first involve a greater expense, that expense would be far more than recouped by the improved sanitary condition of houses and improved health of the people.

SMALL-POX IN THE WEST INDIES.

SMALL-POX is said to be increasing at Kingston, Jamaica. During the fortnight between the sailing of the *Don* and the sailing of the *Para*, there had been 127 fresh cases and 19 deaths. The total number of cases under treatment since the outbreak had been 422, and there had been over 40 deaths. Kingston is reported to be in a very filthy, unsanitary state, and the authorities seem totally unable to carry out the duties imposed on them. The epidemic in Colon is decreasing rapidly, and at the time of the departure of the mail there were only 21 cases of small-pox in the hospital, and none in the town. Rigorous measures were taken at the outset by Dr. Lewin, the Government Medical Officer, and compulsory vaccination was enforced.

HEALTH OF ENGLISH TOWNS.

IN the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,990 births and 3,220 deaths were registered during the week ending Saturday, October 30th. The annual rate of mortality, which had been 18.9 and 19.3 per 1,000 in the two preceding weeks, declined again during the week under notice to 18.5. The rates in the several towns, ranged in order from the lowest, were as follow:—Derby, 11.9; Sunderland, 13.5; Brighton, 13.9; Salford, 14.6; Portsmouth, 15.3; Birmingham, 15.4; Birkenhead, 15.9; Sheffield, 16.1; Blackburn, 16.4; Bradford, 16.6; London, 17.4; Leicester, 17.9; Oldham, 18.8; Bolton, 18.8; Hull, 19.1; Plymouth, 19.1; Bristol, 20.1; Halifax, 20.7; Nottingham, 21.6; Huddersfield, 21.8; Leeds, 22.0; Newcastle-upon-Tyne, 22.2; Liverpool, 22.4; Preston, 23.2; Norwich, 24.4; Manchester, 24.5; Cardiff, 25.4; and the highest rate during the week, 30.0 in Wolverhampton. In the twenty-seven provincial towns the death-rate averaged 19.4 per 1,000, and exceeded by 1.5 the rate recorded in London, which, as before stated, was 17.9 per 1,000. The 3,220 deaths registered in the twenty-eight towns during the week under notice included 130 which were referred to diarrhœa, 84 to scarlet fever, 72 to measles, 63 to "fever" (principally enteric), 35 to diphtheria, 17 to whooping-cough, and not one to small-pox; in all, 401 deaths resulted from these principal zymotic diseases, against numbers steadily declining from 1,202 to 438 in the seven preceding weeks. The zymotic death-rate was equal to 2.3 per 1,000. In London the zymotic rate was 1.8, while the rate in the twenty-seven provincial towns averaged 2.7 per 1,000, and ranged from 0.0 and 0.9 in Bolton and Brighton, to 4.1 in Nottingham and in Liverpool, 6.0 in Halifax, and 8.5 in Wolverhampton. The fatal cases of diarrhœa, which had declined in the seven preceding weeks from 995 to 183, further fell during the week under notice to 130, and caused the highest death-rates in Cardiff, Nottingham, and Wolverhampton. The deaths referred to scarlet fever, which had steadily increased from 45 to 83 in the six previous weeks, further rose to 84, and were proportionally most numerous in Bristol, Huddersfield, and Liverpool. The 72 fatal cases of measles also showed a further increase upon recent weekly numbers, and caused the highest death-rates in Wolverhampton and Halifax. The deaths referred to different forms of "fever," which had been 79 and 49 in the two preceding weeks, rose again during the week under notice to 63, and were proportionally most numerous in Nottingham, Preston, and Portsmouth. The 17 fatal cases of whooping-cough showed a marked decline from recent weekly numbers, and were considerably fewer than in any week on record. The 35 deaths from diphtheria exceeded by 3 the number in the preceding week, and included 23 in London, 2 in Manchester, and 2 in Norwich. No fatal case of small-pox occurred during the week under notice, either in London or in any of the twenty-seven provincial towns; and only 3 small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday, October 30th. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 3.7 per 1,000, and was considerably below the average. The causes of 84, or 2.6 per cent. of the 3,220 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, October 30th, 803 births and 460 deaths were registered in the eight principal Scotch towns, having an estimated population of 1,283,977 persons. The annual rate of mortality, which had declined from 19.8 to 18.2 per 1,000 in the three preceding weeks, rose again during the week under notice to 18.6, and almost corresponded with the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 13.9 in Edinburgh, 15.1 in Dundee, 15.3 in Greenock, 15.8 in Aberdeen, 16.3 in Leith, 18.0 in Perth, 19.9 in Paisley, and 23.3 in Glasgow. The 460 deaths registered during the week under notice in these towns included 83 which were referred to the principal zymotic diseases, against 88 and 72 in the two preceding weeks; of these, 28 resulted from whooping-cough, 24 from scarlet fever, 22 from diarrhœa, 6 from diphtheria, 2 from measles, 1 from "fever," and not one from small-pox. These 83 deaths were equal to an annual rate of 3.4 per 1,000, which exceeded by 1.1 the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic death-rates in the Scotch towns during the week under notice were recorded in Edinburgh, Dundee, and Glasgow. The fatal cases of whooping-cough, which had declined in the three preceding weeks from 25 to 17, rose again to 28, of which 24 occurred in Glasgow and 3 in Edinburgh. The deaths referred to scarlet fever, which had been 12 and 17 in the two previous weeks, further rose during the week under notice to 24, and included 13 in Glasgow, and 8 in Dundee. The 22 fatal cases of diarrhœa showed a further decline from recent weekly numbers, but considerably exceeded those returned in the corresponding week of last year; 7 occurred in Glasgow, 5 in Edinburgh, and 4 in Dundee. The deaths referred to diphtheria, which had been 3 and 5 in the two preceding weeks, further rose to 6, and included 4 in Glasgow and 2 in Edinburgh. The 2 fatal cases of measles corresponded with the number in the previous week, and the death referred to fever occurred in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 4.1 per 1,000, against 3.7 in London. The causes of 61, or more than 13 per cent. of the 460 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF FOREIGN CITIES.

IT appears from statistics published in the Registrar-General's return for the week ending October 30th, that the annual death-rate recently averaged 26.4 per 1,000 in the three principal Indian cities; it was equal to 21.5 in Bombay, 22.8 in Calcutta, and 34.8 in Madras. Cholera caused 7 deaths in Calcutta and 2 in Madras; "fever" mortality was considerably greater both in Madras and Calcutta than in Bombay. According to the most recently received weekly returns, the annual death-rate averaged 25.5 per 1,000 persons estimated to be living

n twenty two of the largest European cities, and exceeded by no less than 7.0 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 22.0, and the 552 deaths included 56 from diarrhœal diseases, 7 from scarlet fever, and 3 from small-pox. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death rate averaged 21.7, and ranged from 17.5 in Christiania to 24.0 in Copenhagen; diphtheria and croup caused 16 deaths in Copenhagen, 7 in Stockholm, and 4 in Christiania. In Paris, the death rate was equal to 21.8, and exceeded the rate that prevailed in London by 4.4; the deaths included 25 from diphtheria and croup, and 21 from typhoid fever. The 195 deaths in Brussels, of which 21 resulted from diarrhœal diseases and 4 from "fever," gave a rate of 23.3. The rate in Geneva was 19.4, one death being referred to typhoid fever. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 21.6, the several rates being 19.4 in Rotterdam, 21.8 in Amsterdam, and 20.4 in the Hague; scarlet fever caused 5 deaths in Rotterdam and 2 in Amsterdam, and measles 6 in the Hague and 3 in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 29.7, and ranged from 21.3 in Vienna and 24.1 in Dresden, to 48.4 in Trieste, and 53.8 in Buda Pesth. The 837 deaths in Buda-Pesth included 110 deaths from cholera, 66 from small-pox, and 21 from scarlet fever; and in Trieste 16 deaths resulted from cholera and 15 from measles. Diphtheria, in these German and Austrian cities, showed the greatest mortality in Berlin, Hamburg, Dresden, and Prague; 13 deaths from typhoid fever were returned in Hamburg. The mean death-rate in three of the largest Italian cities was 21.1, the highest rate being 21.7 in Turin; typhoid fever caused 9 deaths in Turin, 3 in Rome, and 3 in Venice; 2 deaths from small-pox were also returned in Rome. The death-rate in Cairo was 41.4, and in Alexandria 39.9; diarrhœal diseases caused 114 deaths in Cairo, and 53 in Alexandria; 20 fatal cases of typhoid fever were recorded in Cairo. In four of the principal American cities, the mean recorded death-rate was 21.0, the rates ranging from 17.3 in Philadelphia to 23.1 in New York; diphtheria and croup showed considerable mortality in each of these American cities; and typhoid fever caused 14 deaths in Philadelphia and 13 in New York.

MEDICAL NEWS.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—**At the usual monthly examinations for the licences of the College, held on Monday, November 8th, 1886, and following days, the undermentioned candidates were successful.**

For the Licences to Practise Medicine and Midwifery.—L. Bagey, Kilkenny; M. J. Eustace, M.D.Univ Dub., Alresford, Hants; F. G. O'Donohoe, Castlerea, Co. Roscommon; F. J. D. Reid, Monkstown, Co. Dublin; A. Ross, Dublin.

For the Licence to Practise Medicine only.—G. O. Burkitt, Urlingford, Co. Kilkenny; J. Croker Jellett, Dublin; N. W. W. Meadows, London; S. H. Newland, Wicklow; C. E. Thompson, M.D.Univ.Trin.Coll., Toronto; F. Thorpe, Oldham; A. T. Wills, Birmingham.

For the Licence to Practise Midwifery only.—B. O'Regan, Dublin; E. J. Williams, Dalkey, Co. Dublin.

The following candidates obtained the licence to practise as Midwife and Nursetender.

Mrs. M. G. Bellamy, Richmond, Surrey; Mrs. A. Johnson, Simla, India.

At a special examination for the Licence to Practise Medicine, held on Wednesday, November 10th, 1886, the undermentioned candidate was successful.

J. H. Casson, London.

The undermentioned Licentiates in Medicine of the College, having complied with the by-laws relating to membership pursuant to the Supplemental Charter of December 12th, 1878, have been duly admitted a member.

J. Duggan, Lic. Med. 1870, Turloughmore, Co. Galway; G. O'Connell Redmond, Lic. Med. 1873, Cappoquin, Co. Waterford.

SOCIETY OF APOTHECARIES OF LONDON.—**The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery and Midwifery, and received certificates to practise, on Thursday, November 11th, 1886.**

Jarvis, William Charles, 298, Southampton Street, Camberwell.
Garrett, John Henry, Kineton, Warwick.
Graham, John, 1, Lower Place, Endsleigh Gardens, N.W.
MacCallum, James Metcalfe, 18, Carlton Street, Toronto, Canada.
Smith, Henry Sandford, 12, Leamington Road Villas, Westbourne Park.
Glanville, Mark, M.R.C.S., 317, Fulham Road, South Kensington.
Martland, Charles, M.R.C.S., Standish, Wigan.
Walker, Benjamin, Eaglescliff, Yarm, Yorkshire.
Frese, Carl, 80, Oxford Street, All Saints, Manchester.
Cory, Guy Chamberlin, 79, Disraeli Road, Putney.

MEDICAL VACANCIES.

The following vacancies are announced.

ANCOATS' HOSPITAL, Manchester.—Junior Visiting Surgeon. Salary, £60 per annum, with board, etc. Applications to the Honorary Secretary.

BALLYMENA UNION.—Medical Officer, Ahogill Dispensary. Salary, £75 per annum, and fees. Applications to Mr. William Miller, Honorary Secretary, Election on December 6th.

BOOTLE BOROUGH HOSPITAL, Liverpool.—House Surgeon. Salary, £80 per annum, with board, etc. Applications by November 24th to the Honorary Secretary.

BRADFORD INFIRMARY AND DISPENSARY.—Honorary Physician. Applications by November 23rd to the Secretary.

BOROUGH HOSPITAL, Birkenhead.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by November 23rd to the Chairman of the Weekly Board.

CHELTENHAM GENERAL HOSPITAL, BRANCH DISPENSARY.—Resident Surgeon. Salary, £180 per annum. Applications by November 25th to the Honorary Treasurer.

DUNDEE ROYAL ASYLUM.—Medical Assistant. Salary, £80 per annum, with board, etc. Applications to Dr. Rorie.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff.—Honorary Ophthalmic Surgeon. Applications by December 4th to the Secretary.

HULL ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary, £50 per annum, with board and apartments. Applications by November 30th to the Chairman of the House Committee.

KENSINGTON DISPENSARY.—Resident Medical Officer. Salary, £125 per annum, with apartments, etc. Applications by December 4th to Frederick Leach, Esq., 7, Stanford Road, Kensington Square, W.

MORPETH DISPENSARY.—Resident Medical Officer. Salary £120 per annum, with apartments. Applications by November 30th to G. O. Wright, Esq.

MOULSFORD LUNATIC ASYLUM, Berks.—Medical Superintendent. Salary, £500 per annum. Applications by December 3rd to J. T. Morland, Esq., Clerk to the Visitors, Abingdon.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Two Physicians.—Applications by December 4th to the Secretary, 216, Tottenham Court Road, W.C.

NOTTINGHAM DISPENSARY.—Assistant Resident Surgeon. Salary, £150 per annum, with apartments. Applications by November 24th to C. H. Preston, Esq., The Dispensary, Broad Street, Nottingham.

ST. MARYLEBONE GENERAL DISPENSARY.—Honorary Physician. Applications by November 22nd to the Secretary, 77, Welbeck Street, W.

SALOP INFIRMARY, Shrewsbury.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by December 4th to the Board of Directors.

STOCKTON-UPON-TEES HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £200 per annum. Applications by November 24th to J. Settle, Esq., Secretary.

UNIVERSITY COLLEGE, Bristol.—Medical Tutor. Stipend, £100 per annum. Applications by December 4th to E. Markham Skerritt, M.D.

WALLASEY DISPENSARY.—House-Surgeon. Salary, £120 per annum. Applications by November 29th to Mr. W. Heap, Elm Mount, Liscard, near Birkenhead.

WHITECHAPEL UNION.—Medical Superintendent. Salary, £250 per annum, with apartments, etc. Applications by November 29th to William Vallance, Esq.

MEDICAL APPOINTMENTS.

BAILEY, J. Johnson, M.D., F.R.C.S.E., appointed Certifying Factory Surgeon for Marple District.

BEEVOR, Sir Hugh, Bart., M.B., appointed Sambrooke Medical Registrar to King's College Hospital.

BUCK, Lewis A., M.R.C.S., L.S.A., appointed Sambrooke Surgical Registrar to King's College Hospital.

COHEN, A., M.A., M.D., appointed Honorary Physician to the Jewish Convalescent Home, Lower Norwood, *vice* A. Asher, M.D., resigned.

CURREY, R. H., F.R.C.S.Ed., L.R.C.P.Ed., L.M., M.R.C.S.Eng., appointed House-Surgeon to the Liverpool Royal Infirmary.

DAVIES, W. H., M.R.C.S., appointed Surgeon to the Newcastle-on-Tyne Eye Infirmary, *vice* G. Y. Heath, M.B., M.R.C.S., resigned.

DRINKWATER, Charles, M.R.C.S., L.S.A., appointed House-Surgeon to King's College Hospital.

DUCKWORTH, R. H. D'O., M.B., L.R.C.S.I., appointed Medical Officer to the Abbeyleix Union.

DUNCAN, Thomas, M.B., C.M.Edin., appointed Medical Officer for the parish of Udney, Aberdeenshire.

EVANS, W., M.R.C.S.Eng., L.K.Q.C.P.I., appointed House-Physician to the Liverpool Royal Infirmary.

EWENS, G. F., M.B., appointed Physician's Assistant to King's College Hospital.

GIFFORD, G. T., M.R.C.S., L.S.A., appointed House-Surgeon to King's College Hospital.

GRAY, J. P., M.R.C.S., L.S.A., appointed Senior House-Surgeon to the Halifax Infirmary and Dispensary, *vice* W. J. Thomas, M.B., resigned.

HILL, Andrew, L.R.C.P., L.R.C.S.Ed., L.F.P.S.G., appointed Junior Medical Officer to the Loughborough Medical Aid Association.

KELSALL, C. J., M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

LISTER, C. E., B.A.Cantab., L.K.Q.C.P.I., L.M., reappointed House-Surgeon to the Liverpool Royal Infirmary.

MACLEAN, J. N., M.B., C.M., appointed House-Surgeon to the Wrexham Infirmary and Dispensary, *vice* A. Johnston, M.B., resigned.

MANNING, P. P., M.B., appointed Ophthalmic Clinical Assistant to King's College Hospital.

MARIETTE, E. P. A., M.R.C.S., L.S.A., appointed Assistant House-Accoucheur to King's College Hospital.

O'MEARA, F. A., M.R.C.S., L.R.C.P., appointed Physician Accoucheur's Assistant to King's College Hospital.

PITT, G. N., M.D., M.R.C.P., appointed Assistant Demonstrator of Morbid Anatomy at Guy's Hospital.

RAE, William, L.R.C.P., M.R.C.S., appointed Medical Officer to the Royal Victoria Dispensary, Northampton, *vice* W. A. Barr, M.D., M.R.C.S., resigned.

ROWLETT, J. L., L.R.C.S.I., L.K.Q.C.P.I., appointed Medical Officer to the Lurgan Union, No. 2 District, *vice* E. J. Harman, L.R.C.S.Edin., resigned.

SAINSBURY, Harrington, M.D., M.R.C.P., M.R.C.S., appointed Assistant-Physician to the City of London Hospital for Diseases of the Chest, *vice* James Anderson, M.D., resigned.

SANDWELL, E., L.R.C.P.Ed., M.R.C.S.Eng., appointed Public Vaccinator to the Westminster Union, *vice* J. Rogers, M.D., resigned.

SHIRLEY, M. B., M.R.C.S., L.R.C.P., appointed Honorary Surgeon to the Batley and District Cottage Hospital.

THOMAS, W. Thelwall, L.R.C.P.Ed., M.R.C.S.Eng., appointed House-Surgeon to the Liverpool Royal Infirmary.

WARKE, C. L., L.K.Q.C.P.I., appointed House-Physician to the Liverpool Royal Infirmary.

WHEATLEY, L., M.R.C.S., L.S.A., appointed Assistant House-Physician to King's College Hospital.

WILSON, Thomas, F.R.C.P.Ed., F.R.C.S.Ed., appointed Senior Resident Medical Officer to the Eccles and District Medical Association, *vice* J. Hedley Crocker, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A.Lond., resigned.

THE following legacies have been bequeathed by Miss Lowe, late of Blackpool: £4,500 to the Bolton Infirmary; £1,000 to found an Infirmary for Blackpool; and £500 to the Royal Albert Asylum, Lancaster.

THE POLICE AND AMBULANCE CLASSES.—Twenty officers of the Lancashire County Police force have received certificates of proficiency, awarded to them by the St. John Ambulance Association. Of the total county force, about 300 men have joined the class.

PRESENTATION.—Dr. Kite, who has resigned the post of House-Surgeon to the West Bromwich District Hospital, has been presented by the matron, nurses, and others connected with the Institution, with a handsome marble clock and other gifts.

UNIVERSITY OF CAMBRIDGE.—Professor Foster, Sec. Royal Society, and Dr. Donald MacAlister, have been elected members of the Council of the Senate, to serve four years.

MEDICAL MAYORS.—The list of Mayors for the ensuing year includes the names of Dr. P. Roden (Droitwich), re-elected; Dr. Willis (Monmouth), who has previously twice filled the office; Dr. Alexander Mackie (Warrington), re-elected; Mr. C. E. Baker (Tenterden); Mr. J. W. Morison (Pembroke); Mr. W. H. Cocker (Blackpool), Mr. J. T. Duncan (Stamford).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

BEALE—FIELD.—On November 16th, at Lillington, Warwickshire, E. Clifford Beale, M.B.Cantab., of Upper Berkeley Street, W., to Mary Elizabeth, daughter of A. Sidney Field, Esq., Blackdown Hill, Leamington.

DAVIES—ECCLES.—At Lower Darwen, Lancashire, on October 16th, by the Rev. Thomas Davies, father of the bridegroom, assisted by the Rev. A. A. Dauncey, Sidney Davies, M.A., M.B.Oxon., M.R.C.S., of Cairo, to Lucy, daughter of Richard Eccles, Esq., J.P., of Highercroft, Lower Darwen.

DEATHS.

GRINDON.—On November 7th, suddenly, at his residence, Olney, Bucks, George Horatio Grindon, L.S.A., aged (within a few days of) 78.

SANKEY.—On November 10th, at Boreatton Park, Shrewsbury, Arthur Octavius Sankey, aged 34.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. John Lowe will read a case of Sarcoma of Stomach and Pancreas extending from the site of the Right Kidney, which had been injured eleven years previously, and which was found to be obliterated. Dr. Samuel West: On a case of Subacute Atrophy of Liver of probably Syphilitic Origin. Mr. H. Allingham: A case of Polypoid Growth in Rectum.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30. Dr. T. Dixson: Ricinus Communis (communicated by Dr. Lauder Brunton). Mr. Langton and Mr. Bowlby: A case of Multiple Embolism of the Arteries of the Extremities, followed by the formation of Aneurysms; with remarks on the relations of Embolism to Aneurysm.

WEDNESDAY.—Hunterian Society. Dr. Stephen Mackenzie: On Pemphigus. Dr. Herman: Pessary Treatment.—British Gynæcological Society, 8.30 P.M. Specimens will be shown by Dr. Bedford Fenwick and others. Dr. Francis Imlach: On the Relations of Digestive Disorders with Uterine Diseases. Council at 8 P.M.—Royal Microscopical Society, 8 P.M. Conversazione.

FRIDAY.—Clinical Society of London, 8.30 P.M. Sir Henry Thompson: Six cases of Tumour removed from the Bladder during the last twelve months, with a brief summary of their histories and results. Mr. B. Pitts: Suprapubic Cystotomy for Tumour two years after the removal of growth by the Perineal Operation. Mr. B. Wainewright: A case of Vertical Fracture of the Head of the Radius, complicated by Fracture of the Coronoid Process of the Ulna, and possibly a Split between the Condyles of the Humerus. Dr. Herringham: Two cases of Diphtheritic Paralysis. Living specimens: Dr. Hughes Bennett: A case of severe and long continued Epileptic Attacks with Mania; complete recovery after Trephining the Skull. Dr. Savill: Multiple Peripheral Neuritis. Dr. James Anderson: A case of Intracranial Murmur with history of Relapsing Optic Neuritis. Mr. Mansell Moullin: Complete Recovery from Gunshot Wound of Foot.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M. Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30; Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT, UNDER ANY CIRCUMSTANCES, BE RETURNED.

ANSWERS.

Cerebral Abscess with Typhoid-like Rash.

Dr. Hingston Fox.—Mr. W. Boulting informs us that in the case of "Cerebral Abscess with Typhoid-like Rash," which he reported in the Journal of November 6th, the only action of the bowels that occurred while the patient was under his care, was on June 8th, after an enema; and that the necropsy negatived the presence of enteric fever.

The Future of the Apothecaries' Society.

Dr. Purcell.—That the Apothecaries' Society will receive the right to confer a surgical qualification under the Medical Act of 1886, if not admitted to conjoint examination with the Colleges of Surgeons and Physicians, is practically beyond doubt, and the evils which our correspondent fears need not be regarded as hypothetical, as they are certain to ensue. The proposition, however, to buy up the Hall, which he makes, is in every way impracticable. The bargain is one which the Colleges could not entertain, and one, moreover, which there is no reason to suppose the Apothecaries' Society would for a moment listen to.

Origin of Benefit Societies.

A. B.—There is no doubt that the origin of the great benefit societies is to be traced to meetings, chiefly at taverns, for convivial good fellowship. Societies thus drawn together came to adopt a system, common at the commencement of this century, of secret brotherhood, with certain forms and ritual, which were more or less in imitation of the ancient Craft Guilds. Out of this there naturally grew a custom of clubbing together to raise a sum of money at the death or illness of a "brother," and this in turn paved the way for a weekly or monthly payment to a common fund. For a long time these funds were managed in a very elementary fashion, the money being locked in a box, and the accounts left very much to chance; when the "box" was empty, no sick-pay was forthcoming. As intelligence grew, and these societies became more important, development and orderly organisation followed, hastened, perhaps, by Government inquiry and legislation. Most of the reforms, however, have come from within, and attention to accounts and actuarial teachings have gradually grown, while ritual, regalia, and ceremonial have diminished. As to the period of formation, the majority of the societies, though claiming great antiquity, are comparatively modern. Some of the names first became known about the middle of the last century, but few of the great societies, on their present lines, can claim to be a hundred years old. Their alliance with the medical profession is more recent, and though it has done much to help the wonderful extension of the movement in the past thirty years, it is an effect rather than the cause of the existence of friendly societies. Indeed, seeing that the recently formed Medical Sickness Society is founded on the experience of the Foresters, the profession may be regarded rather as followers than pioneers in the friendly society movement.

Peculiar Form of Sciatica.

R. B. S. Burbage would suggest to "Surgeon" to try acupuncture at the most tender spots. It often acts like a charm, and the more acute the pain the more hopeful he may be of speedy relief. For further information, see "Acupuncture," Quain's *Dictionary of Medicine*.

Charles Banks, M.B., C.M., writes: While assistant to the superintendent of the Moncur Street Branch of the Glasgow Medical Mission Dispensary, I had occasion, in the outdoor practice, to treat severe cases of, undoubtedly, sciatica.

Case I.—J. C., aged 40, shoemaker, Candleriggs, was confined to bed suffering from acute pain along the course of the sciatic nerve. In fact, so great was it, he was afraid to move. I treated him in the manner suggested by Professor McCall Anderson to his class, of which I was then a member. The bowels were regulated and phosphate of soda, quinine and salicin were administered, and fly-blisters applied over the sacrum. These gave temporary relief. Daily, for a considerable time, I gave him hypodermic injections of three minims of hypodermic solution of morphine (1 to 12). This ultimately failed also. I had seen a case treated by "medical nerve-stretching," with, if not complete, at any rate, great satisfaction to both patient and medical man. I accordingly, having the knee fixed with my left hand (the pain was down the right leg), while the patient's wife held down his shoulders, caught his heel with my right hand, and flexed the leg upon the abdomen, keeping it thus for a moment or two. The effect was marvellous. The patient got out of bed, and walked up and down the floor apparently bewildered. I afterwards met the patient in Argyle Street, who tendered his hearty thanks for the cure of his ailment.

Case II.—An old woman had been suffering intense pain for several days. She could not walk about, and had to remain in bed. I tried "medical nerve-stretching" at once. The patient thought I had performed a miracle. As far as I know, she has had no attack since.

I have tried this treatment in several cases—miners, who have suffered from sciatica, caused by their occupation, which necessitates their exposure to cold and damp. In nearly every case, if pain were not entirely subdued, great good was effected. I have not been bold enough to attempt "surgical nerve-stretching," nor have I tried the actual cautery. I believe cucaine has been recommended.

NOTES, LETTERS, ETC.

Erratum.—In a notice that appeared in the Journal of November 6th, relating to the Commission of the Peace in Scotland, it was stated that Sir Douglas Maclagan had been made a J. P. It should have been that he was made a D.L., Deputy Lieutenant of the City of the County of Edinburgh.

Dr. J. B. Mattison (Brooklyn, N.Y., U.S.A., 314, State Street) asks for full details of cases of cucaine addiction. Full credit will be given in a coming paper.

The Halifax Infirmary.

Dr. E. West Symes writes: In the Journal for November 6th, page 867, it is stated that Lady Edwards has just given £750 to the Bradford Infirmary to endow a children's cot in memory of her late husband. I write to ask you to correct this. It is the Halifax Infirmary which has received this donation, an institution in which the late Sir Henry Edwards always took the warmest personal interest during his life, and which, at his death, received a legacy from him of £1,000.

Scarlet Fever in Relation to a Foul Drain.

Dr. C. M. Jessop writes: The interesting paper by Mr. Boobbyer on page 810 of the Journal, induces me to record an outbreak of scarlet fever in connection with a foul drain which came under my notice in 1854, when a medical officer in the Ringwood Union. The family of a farmer, whose house was situated in an isolated part of the forest at Burley, on elevated ground, with good drainage-fall, and free current of air, being at the head of a cross-road, was attacked with scarlet fever, accompanied by severe throat symptoms. Out of a family of six children, three or four died. There was no scarlet fever in any part of the district. The only cause to account for this outbreak was the opening up of a drain at the back of the house, which drained the farmyard down the hill. The farmer was a chemist, and particular about water and drainage. The summer was hot; the drain became blocked. It was opened, and found to be in a most offensive condition. As it was not closed when called to attend the family, I had personal acquaintance with its state. The disease did not spread.

"A West-end Surgeon."

J. D. writes: You noticed in the Journal of November 6th the careless way in which persons, who are brought before our police magistrates, are allowed to describe themselves. The man in Davies Street, who was accused of committing an indecent assault, called himself a medical man, and, accordingly, the newspapers forthwith published the account of an "Outrage by a West-end Surgeon." He has been a second time brought before the magistrates, and turns out to be a medical rubber. When a person states that he is a medical man, why does not the magistrate ask him where and when he passed his examination? And why is not each police-office furnished with a set of directories—the *Medical Register*, the *Clergy List*, the *Law List*, the *Army List*, etc.? It would cost but a few shillings to furnish these volumes for the current year to each police-office. When a prisoner describes himself as a "gentleman," he is never pressed to give any particulars as to his status, which, in too many cases, turns out to be the very reverse of gentleman, whether in its legal or its conventional sense. A few books of reference would set things in their true light.

The Epithelium of Uterine Polypi: A Correction.

In reference to this subject (see Obstetrical Society, Journal, November 6th, page 871), Dr. Gervis writes: I did not state that "the surface of the main part of the tumour was covered by epithelium, which was distinctly ciliated," as it appears in your note, but exactly the opposite, namely, that the general surface of the tumour was covered by squamous epithelium, but that the epithelium in any crypt or follicle on the surface was both columnar and ciliated.

Unqualified Assistants.

M.D. writes: A great deal has been written on the subject of the employment of an unqualified person as assistant or *locum tenens*, but the abuse still remains, and one or two instances in my experience may, perhaps, be of interest. That the system of employing unqualified assistants is extensively carried on, not alone in the Midland Counties, but throughout England, I have had ample and varied opportunities of knowing. I am at present engaged, and have been from time to time for nearly three years, in different parts of England, as *locum tenens*. I have also held two or three assistantships. I am, therefore, in a position to give some information as regards the abuse complained of. Shortly after I qualified, I sought an engagement as assistant, and was engaged by a medical man in London to take charge of a branch practice. At this branch was an unqualified person who had had the management of the practice for four or five years, with only an occasional visit from the principal. When I entered upon my engagement, it was arranged that this unqualified man and I were to live together. I was led to expect that he would attend to such duties as dispensing, etc., duties fitted for an unqualified person. I, however, soon learned that I was only nominally in charge of the practice; that this ignoramus was really the person invested with the management of it, and that I was, so to speak, his assistant. His salary was double that which I received; he was looked upon by the patients and general public as the owner of the practice, and was usually addressed "Dr." ———. On one or two occasions he consulted with a qualified practitioner, this gentleman being under the impression that he was consulting with Dr. ———. Having for a time submitted to this state of things, I had an interview with the principal, with the result that I made up my mind to leave. This unqualified man is, I understand, still employed by the same principal.

I know of many other cases in which unqualified assistants are employed in charge of branch practices, and are entrusted with the lives of hundreds of people, the principal only putting in an occasional appearance once a week, or perhaps not so often. The generality of unqualified assistants have never been inside a hospital, can scarcely tell the heart from the liver, and have not even passed a preliminary examination. On the other hand, there are a few unqualified assistants (they are, indeed, few and far between) who have taken out all their lectures and hospital practice, and have been really hard-working students, but are, through pecuniary difficulties, unable to qualify.

I regret having trespassed so much on your space, but something, you will admit, should be done to put a stop to this abuse; and too much cannot be written on the subject.

The Scotch M.D.

An English M.B.Edin. writes: It is surely high time that some attempt should be made to show the gross injustice that would be done to Scotch Universit s and their graduates by giving to students at the Colleges of London the title of "Doctor" after passing their examinations. I beg to suggest the following objections.

1. That no graduate of any University has, in the first instance, the right to the title, and, if he assumes it in any English town, he will speedily be told by one of his seniors that he is pretending to have what he has not—the honourable degree of Doctor of Medicine.

2. I ask as to the qualifications of the Scotch Colleges, which were at one time at least included in the scheme. It is tantalising now for a graduate of the University of Edinburgh, who, by dint of rising up early and taking rest late, has succeeded in taking his degrees, to see another man who has wasted his time for five or six years in the city quietly go across the street, and after six months come out a fully fledged practitioner, with six or seven letters after his name. But if that "Waster" is to have the title of Doctor, while the "swinked labourer" at the University is to be denied it, what then? Is that just or even honest?

3. I maintain that the curriculum at the University of Edinburgh is much severer than that at the London Colleges. That it contains more subjects there is no denying; that the examination in all subjects is as hard as in London, and in many much harder, is, I think, equally clear to those who have looked carefully into the matter.

AN APPEAL: THE RAWLE FUND.

MR. W. BROOK (Fareham) has received in aid of Mr. Rawle (see BRITISH MEDICAL JOURNAL of July 3rd) the following sums in addition to those previously noted:—

	£	s.	d.
Mr. C. E. Winkworth	0	10	6
A. O. A.	10	0	0
Mr. Bretherton	1	0	0

Any further sum would be highly acceptable, as the total at present received is only £24 5s. 6d.

DIRECT REPRESENTATION OF THE PROFESSION ON THE GENERAL MEDICAL COUNCIL.

"NOT A CLUB DOCTOR" writes as follows: I have been favoured with circulars expressing the views of most of the candidates in the field, but I regret to note the absence from all of them of any proposal for dealing with what appears to me to be a most vital point as regards the status of our profession at large, and of general practitioners in particular, namely, the question of fees charged for professional services, and the lamentable amount of underselling which prevails amongst a considerable section of our body, and nowhere perhaps to a greater extent than in the metropolis, where it is by no means uncommon to find men driving their brougham and pair, visiting and supplying medicine for the modest remuneration of eighteen pence. To this abuse is referable, I believe, that absence of goodfellowship which prevails to such an extent in our ranks, each man regarding his neighbour as an opponent, rather than a fellow-worker; it contributes in no small degree to lower our prestige in the eyes of the public. It prevails in no other profession; why should it in ours, the most noble of all? I would venture to suggest, therefore, that a fixed scale of minimum charges be formulated, and made compulsory on all practitioners, and that legal powers be obtained to compel their observance; thus, for example, 2s. 6d. to be the minimum fee for consultation and medicine, or visit and medicine within a definite limit, rural or urban, as the case may be. One guinea to be the minimum midwifery fee (to meet the legitimate wants of the poorer classes, I would advocate the locating of certificated midwives in all populous centres). Clubs (*a*) of men only, as Oddfellows, etc., three shillings per quarter per man; (*b*) family clubs, such as prevail in all manufacturing and colliery districts, six shillings per quarter each family.

The miserable stipend doled out at present for this class of contract work is in the main attributable to the unhealthy competition among general practitioners for all such appointments, each underselling the other, so that the successful candidate tries to do as little as he can for his money. This class of practice I regard as the *bête noire* of the profession.

The same remarks also apply to union appointments, whose niggardly salaries are also kept so low by competition—a grievance which can easily be amended by a general refusal to accept them except for adequate remuneration, and the establishment of a proper *esprit de corps* amongst us.

I would like to have answered by anticipation certain objections to which the proposal I have indicated is open; but your request for brevity is before my eyes.

THE FOOTBALL-ACCIDENT SEASON.

MR. HOWARD LOWE, Medical Officer (Trinity College, Glenalmond, N.B.), writes: Your note under the above heading, in the JOURNAL of October 30th, serves a good purpose in recalling attention to the frequency of accidents from football, but I think you would be doing a greater service to the science of hygiene if you would promote an inquiry into the causes of the accidents, with a view to procuring such alterations of the rules of the game as would prevent or minimise them, instead of advocating the suppression of what, all who have played it will tell you, is one of the most exhilarating and health-giving of our out-door sports. In schools such as this, it would be impossible to over-estimate the importance of football to the boys, both physically and morally, coming, as it does, at a time of year when so few out-door games are possible.

But also in the case of medical students, and other young men who have to live in the centre of our large towns, I submit that football supplies a much needed opportunity for vigorous exercise in the open air, and affords a powerful counter-attraction to the pleasures of town-life (which, even when harmless, have little to recommend them physically). The way in which accidents occur could, in nearly all cases, be ascertained, and such an investigation would, I think, soon lead to their almost entire prevention.

MR. W. S. GODFREY (Northampton) writes: I read with some amount of indignation your article entitled "The Football-Accident Season;" it is really and truly a misrepresentation of the facts of the game. That football is a somewhat dangerous game I do not deny; I do deny that it is more dangerous than hunting; and can say, without fear of contradiction, that there is little to choose between the dangers of football and cricket. Taking my own personal experience, I have now played each game for ten years, and, up to this moment, have received no serious injury from either game. During the whole of these football seasons I have scarcely missed playing on any one Saturday, and have often, also, played on a Thursday. I have received no injury sufficient to prevent me playing on each succeeding Saturday until this year, when, owing to a breach of the rules in being "mauled" after I had "called down," I received a trivial injury which prevented me from playing on the next Saturday; but I was again in the football field in a county match on the Thursday following. During my whole experience, I have seen but two accidents in the football field (other than the most trivial), and these were but simple fractures.

COMMUNICATIONS, LETTERS etc., have been received from:

Mr. Thorburn, Manchester; The Secretary of the Royal College of Surgeons, Edinburgh; Mr. J. Whitehouse, Sunderland; Mr. P. Miall, Bradford, Yorks.; Mr. G. Stillingfleet Johnson, London; Dr. A. Corry, Tredegar, Monmouthshire; Mr. J. Alcock, Bursiem; Mr. F. Howard Humphries, Edinburgh; Mr. A. R. Barnes, Bonchurch, Hastings; Mr. F. E. Hart, Geraldton, West Australia; Mr. Shirley Murphy, London; Dr. Andrew Wilson, Edinburgh; Our Newcastle Correspondent; Dr. Bernard O'Connor, London; Miss Chadwick, Tunbridge Wells; Mr. T. Holmes, London; Mr. N. Dobson, Clifton; Mr. Frederick Treves, London; Mr. E. Creswell Baber, Brighton; Mr. E. Davies, Vochriw; Dr. Theodore Cash, London; Mr. W. Barnes, Manchester; Dr. David B. Smith, Woolston; Mr. Mayo Robson, Leeds; Mr. W. Boulting, London; Messrs. F. King and Co., Limited, Belfast; Dr. W. J. Magee, Bolton; Dr. Stockwell, Bruton; Mr. A. Hill Griffith, Manchester; Dr. Fishbourne, London; Secretary of the State Board of Health, Albany, New York; The Honorary Secretaries, Hospitals Association; Dr. Rogers, London; Mr. J. Irving, Huddersfield; Mr. G. W. Bloxam, London; Mr. W. H. Pearce, Bromley; Mrs. Bree, Long Melford; Dr. Davies, Chicago; Mr. W. Curran, London; Dr. A. H. V. Lewers, London; Our Manchester Correspondent; Mr. J. Williams, Brecon; Dr. Edge, Manchester; The Honorary Secretary of the Harveian Society, London; Dr. Goodhart, London; Sir B. W. Foster, Birmingham; Mr. F. Horricks, St. Kilda, Melbourne; Mr. J. Dixon, Dorking; Dr. W. Murrell, London; Mr. S. V. Instone, London; Mr. W. Jago, Brighton; Dr. S. D. Darbishire, Oxford; Mr. J. V. Heale, Orpington; Mr. W. J. Gurby, Leyton; Mr. W. L. Hunter, Pudsey; Mr. B. H. Allen, Hastings; Dr. Creswell Rich, Liverpool; Mr. J. B. Mattison, Brooklyn; Mr. Ellis Lever, Manchester; Mr. Ernest E. Maddox, Over Norton, Chipping Norton; Mr. E. O. Day, London; Mr. P. W. Fraser, London; Dr. Nathan Allen, Toronto; Mr. J. Hargreave Mawson, Bradford; Dr. H. Foote, Rotherham; Mr. F. J. Grindon, Olney; Dr. J. Buxton, Blackpool; Mr. George Eastes, London; Mr. F. Keene, London; Mr. George Stoker, London; Dr. W. Hale White, London; Dr. Mosse, London; Mr. James Oliver, London; Dr. F. H. Sinclair, Belfast; Mr. A. E. Bath, Devonport; Dr. J. Hutchison, Shawlands, Glasgow; Mr. T. Duncan, Kinross, N.B.; Dr. A. Mantle, Stanley, Durham; Mr. J. Firth, Worthing; Mr. W. A. Aiken, Leamington; Mr. W. Duncan, Ridgway, Frome; Mr. C. H. Phillips, Hanley; Messrs. Burgoyne and Co., London; Mr. George E. Walker, Liverpool; Dr. W. Hepental Ormsby, Dublin; Dr. Lowe, London; Dr. R. J. Collie, Sunderland; Dr. M. R. Ryan, Chatham; Mr. C. Greville, Birmingham; Mr. F. H. Thompson, Cleobury Mortimer; Mr. E. Godwin Clayton, London; Dr. C. Roberts, London; The Honorary Secretary of the Nottingham Medico-Chirurgical Society; Dr. C. A. Morris, Liverpool; Mr. Simeon Snell, Sheffield; Mr. D. G. Thin, Kingstown; Mr. C. Harris, Whitehaven; Mr. J. G. Roberts, Amlwch, Anglesey; Dr. Mackey, Hove, Brighton; Mr. W. Eassie, London; Messrs. T. Brainsby and Sons, Peterborough; Dr. J. Hurley, Bath; Mr. H. T. Batchelor, Queenstown, Cape Colony; Dr. J. W. Hunt, London; Dr. C. R. Illingworth, Accrington; Mr. J. W. Irvine, Accrington; Mr. C. H. Wells, London; Dr. W. A. Algie, Portpatrick; Mr. Edmund Owen, London; Mr. Lawson Tait, Birmingham; Dr. W. Ireland, Prestonpans; Mr. Adams Frost, London; Mr. Reginald Harrison, Liverpool; Dr. Robert Saundby, Birmingham; Mr. Bruce Clarke, London; Dr. R. Hingston Fox, London; Dr. Steavenson, London; Mr. Robert Kirk, Glasgow; Our Belfast Correspondent; Dr. J. Hughlings Jackson, London; Dr. Thomas Oliver, Newcastle-on-Tyne; Dr. A. Cohen, London; Our Edinburgh Correspondent; Mr. J. H. Morgan, London; Mr. Mark H. Judge, London; Professor Thomas R. Fraser, Edinburgh; Mr. E. H. Andrews, Watford; Dr. J. Stuart Nairne, Glasgow; Mr. H. Hall, Birmingham; Dr. Playfair, Sunderland; The Secretary to the Sanitary Institute of Great Britain; The Secretary of the University of London; Mr. James West, London; Mr. T. Spurgin, London; Mr. J. R. Upton, London; Dr. J. R. Kealy, Gosport; Mr. H. T. Butlin, London; Mr. Meredith, London; Dr. A. P. Fiddian, Cardiff; Dr. Biss, London; Mr. Victor Horsley, London; Dr. G. V. Poore, London; Mr. J. Herbert Menzies, London; Dr. F. R. Lee Strathy, Harboane; Mr. James Fallon, Dublin; Dr. J. W. Moore, Dublin; Dr. Sheen, Cardiff; Mr. L. M. Snow, Brabourne; Dr. Maxwell, London; Sir T. Spencer Wells, London; Mr. J. B. Medland, London; The Dean of St. Mary's Hospital School; Dr. Urquhart, Perth; Mr. J. Booth Clarkson, London; Mr. E. Sandwell, London; Dr. Sturges, London; Dr. Felix Semon, London; etc.

BOOKS, ETC., RECEIVED.

Calendar of University College of South Wales and Monmouthshire: Fourth Session, 1886-87. Cardiff: D. Owen and Co. 1886.

Ambulance Lectures. By J. M. H. Martin, M.D., with illustrations. London J. and A. Churchill. 1886.

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☞ To Contributors. ☜

Our contributors are reminded that prolixity is a great bar to publication, and, in consequence of the constant pressure upon space in every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to decline or hold over indefinitely a great number of communications, chiefly by reason of their unnecessary length.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

THE ACTION OF DRUGS IN ALBUMINURIA.

Read before the Section of Therapeutics at the Annual Meeting of the British Medical Association in Brighton.

By ROBERT SAUNDBY, M.D.Edin., M.R.C.P.Lond.,
Physician to the General Hospital, Birmingham.

In no department of therapeutics is a candid and impartial discussion more needed than upon the action of drugs in albuminuria; for while the list of substances credited with some such action is very long, and the periodical medical press teems with positive assertions of the value of each novelty in turn, none of these statements have emanated from, or been supported by those physicians in this country, to whom we look for guidance in this department of disease.

In the last edition of his work on *Urinary and Renal Diseases*, Sir William Roberts repeats the question asked in former editions: "Are there any medicinal substances capable of exercising control over the quantity of albumen lost by the urine?" and he answers it as before, by saying: "Exact observations do not give an affirmative answer to this question."

Professor Rosenstein, in the edition of his *Pathology and Treatment of Renal Diseases*, published this year (3rd edition, 1886), deals with this question at length, and mentions a number of drugs tested by his assistant, Dr. Kooi and himself, without success. He expresses his opinion in the following terms: "The physician must be impressed with the idea that we possess no drug which can in any sense act upon the local disorder so as to diminish decidedly the excretion of albumen."

I presume that "albuminuria," for the purposes of this discussion, means "renal albuminuria," and further, that we may exclude all cases dependent upon recognised mechanical derangements of the circulatory system outside the kidney, as well as all temporary cases dependent upon pyrexia, drugs, poisons, articles of food, etc.

My own observations and remarks apply to cases of Bright's disease in its various forms, and to the now well known and by no means uncommon examples of what I may be allowed to call "functional albuminuria." I understand the "action of drugs" to refer solely to the effect of remedies introduced into the body by any channel.

The action of drugs on diseased processes in the human organism is always an obscure and difficult problem, on account of the large number and inconstancy of the factors that enter into it. An exact observation demands identity of all conditions except the one to be tested, namely, the drug employed; but that is impossible, for no two cases are identical, nor is the same patient this week in identically the same circumstances as he was a week ago, or will be a week hence; so we must always allow an element of uncertainty in our most carefully devised experiments with drugs in disease, and our conclusions must be based rather on wide experience than upon the minute observation of particular cases.

Nevertheless, I have endeavoured to combine these two methods, and having large opportunities for observing and treating albuminuria, I have made most careful observations upon many cases, and have sought in the practice of my colleagues to learn the results of their treatment, so that by comparison I might eliminate the "personal equation" from the conclusions which I desire to put before you. It is obviously essential to the proper treatment of this question that we should understand the natural course of the disease or symptom which we seek to influence by drugs.

It is to my mind beyond question, and, if necessary, I could quote cases to prove it, that in acute Bright's disease, and even in subacute Bright's disease, the albumen may diminish and disappear without the use of any drugs whatever. Moreover, cases of chronic Bright's disease are liable to intercurrent acute exacerbations of greater or less intensity, which may clear up just like an acute attack in healthy organs, the subsidence being accompanied by a more or less rapid and considerable reduction in the amount of albumen excreted. Finally, cases of persistent albuminuria present fluctuations in amount which depend upon causes that escape our present powers of observation.

Besides distinguishing between these forms of disease and allowing as best we can for these fluctuations, we have to bear in mind that the amount of albumen is influenced by diet, increased by exercise, and diminished by the recumbent position.

The subjects of Bright's disease are frequently also the subjects of other accidental or secondary organic diseases, such as heart, or lung, or liver diseases, which probably play some part in the production of albuminuria, and interfere with the action of the drugs we employ, or give rise to fluctuations which depend upon changes originating in altered states of those organs.

A more obvious source of fallacy, but one which is certainly apt to be overlooked in private practice, is that the amount of albumen excreted does not always hold the same relation to the quantity of water, so that diuresis, whether spontaneous or the effect of drugs, often produces an apparent improvement in the albuminuria, though, in fact, it may remain the same, or be actually increased in amount. Another and less excusable error may arise from comparing samples of urine passed at different periods of the day, as it is well known that the amount varies very much, being generally most in the forenoon, other conditions being equal. No comparison should be made for the purposes of exact observation, except between samples of the whole twenty-four hours' urine collected and mixed together.

In my observations, I have carefully endeavoured to meet all the difficulties I have enumerated, and to eliminate these sources of fallacy.

The quantity of albumen has been estimated by Esbach's tubes, generally by myself, always under my constant supervision; and I would bear testimony to the constancy of the results obtained by this method, which also gives approximately correct quantitative results. Before Esbach's tubes were introduced—that is, before I undertook the special inquiry for the purposes of this discussion, I used test-tubes marked with a scratch, and measured by means of a scale, which afforded a rough means of estimating the amount of albumen.

I have experimented with a very large number of drugs, a list of which I append to this paper; but the inconstancy of my results, and the absence of any striking effect from the use of any one of them, compels me to confess that I am unable to answer the question of Sir William Roberts with a distinct affirmative.

Perhaps no cases afford a better opportunity for testing the influence of drugs than those of "functional albuminuria," where the albumen is persistent, and is unaccompanied by any other evidence of disease. Many of my patients, otherwise apparently healthy, have been applicants for insurance, and both they and I have been anxious to remove what appeared to be the only obstacle to their acceptance. Yet I must admit that I have never been able to cure one of these insurance cases. After a few months of non-success, they have passed from under my observation, and I cannot tell what has become of them. Even those cases of "functional albuminuria" which I have seen ultimately cured by time, have not appeared to me to owe this result in any instance to the direct action of drugs.

Having made this general statement, I will submit my conclusions as to the actions of particular drugs a little more in detail.

Alkalies.—I have used alkalies in the form of diluents: for example, a quart of bitartrate of potash imperial (ʒss to Oj) daily, or a bottle of Vichy water (Célestins or Haute Rive); and in a series of chronic cases, with persistent and copious albuminuria, the results were distinctly favourable. In addition to these diluents, I have employed citrate of lithia, bicarbonate of potash, and benzoate and bicarbonate of soda, and include them in this favourable opinion. This effect was not due to the formation of alkali-albumen, as Esbach's fluid precipitates this. In the following five chronic cases, the average total amount of albumen passed on the first and last two days of the experiment are given.

Name	*First Two Days.*	*Last Two Days.*
B.	38 grs.	21 grs.
R.	38 grs.	13 grs.
J.	123 grs.	64 grs.
M. D.	52 grs.	48 grs.
S.	16 grs.	21 grs.

Tannate of Soda.—I found the drug supplied under this name so nauseous that I have used in its stead the following formula.

℞ Acidi tannici, sodæ bicarb., aa gr. x; glycerini ℥xv; aq., ʒj. M.

I can report in relatively favourable terms of it. For example :

Name.	*First Two Days.*	*Last Two Days.*
M.	198 grs.	150 grs.
J.	165 grs.	96 grs.

These were both chronic cases. In an acute case I got good results, but the influence of the drug was very doubtful here.

Name.	*First Two Days.*	*Last Two Days.*
Be.	22 grs.	11 grs.

Nitro-Glycerine.—I have seen cases do remarkably well under the use of this drug; but I am not able to confirm this by exact observation, except in acute cases.

Name.	*First Two Days.*	*Last Two Days.*
Be.	26 grs.	10 grs.

In a chronic case, I found :

Name.	*First Two Days.*	*Last Two Days.*
McD.	40 grs.	43 grs.

Fuchsin.—Under the most favourable circumstances, I have been unable to observe results which bear out the reputation this drug has acquired.

Name.	*First Two Days.*	*Last Two Days.*
McD.	34 grs.	65 grs.
St.	66 grs.	74 grs.

I have used it in a very large number of cases, and I have never seen any good effected by it.

It would weary you were I to go through all the drugs in this fashion, so I will condense what more I have to say.

Digitalis appears to increase the amount of albumen, and this holds good of other heart-tonics, for example, caffeine, strophanthus, and sulphate of sparteine. Iron, including the acetate, sulphate, and perchloride, have the same effect of increasing the albumen. Terpine, in ten-grain doses, three times daily, in one case increased, in the other did not diminish, the albumen. Apocynum increased the albumen in two cases, and diminished it in one. I was not able to observe the remarkable diuretic effect of this drug (used as the tincture in drachm doses) which is claimed for it across the Atlantic. I have used turpentine in several cases, without being convinced of any beneficial result, though hæmaturia has followed the employment of even minute doses (one minim). The bichloride of mercury, recommended by Dr. Millard, of New York, and in use by the homœopaths, has had a fair trial in the suggested doses (gr. $\frac{1}{100}$), but has entirely failed. Purgatives and diaphoretics, though of great value in its treatment, do not appear directly to influence the amount of albumen excreted in chronic Bright's disease. I have not mentioned by name all the drugs, as they can be found in the list appended to this paper.

Therapeutic success is the touchstone of our art, and confessions of failure are humiliating; I shall therefore hear with pleasure any suggestions of drugs to be tried, or of the better success in other hands of the remedies I have enumerated; but in order to distinguish between the failure of a drug and the failure of general means of treatment, I give the results of twenty-one cases recently under my care. Of five acute cases, two left the hospital much improved in health, with a good deal of albuminuria, but no dropsy; two had a faint trace of albumen, but no dropsy; one neither albumen nor dropsy. Of two subacute cases, both left with the albumen reduced to a cloud, and no dropsy. Of fourteen chronic cases, five died, four did fairly, and five did well. It would be foolish in the extreme to direct our treatment exclusively to one symptom, which certainly is of no great importance in itself, or to measure our success solely by that standard.

The injurious effects of prolonged albuminuria have been greatly exaggerated, and while improvement in the condition of the kidneys is generally accompanied by diminution in the loss of albumen, this may continue to persist for years, even in relatively large amount, without injury to health, and with fair performance of the renal functions. Two cases are known to me illustrating this. The first is an instance of albuminuria, following an attack of scarlatina, which has persisted for twenty-two years. The urine always has contained plenty of casts when I have examined it, yet this gentleman lives an active life, indulges in its pleasures and duties without restraint, and enjoys fair health. Every now and then an attack of diarrhœa appears to act as a safety-valve and means of supplementing the renal functions. The other is a case of functional albuminuria first discovered eighteen years ago when under examination for life-insurance. This gentleman is apparently in perfect health, and leads a more than usually active life. He is now 46 years of age.

Such cases illustrate most forcibly the erroneous nature of the doctrine which would make of albuminuria the measure of the extent and gravity of renal disease, or the test of our success in its treatment.

Appendix.—The following is a list of drugs whose action on albuminuria has been tested in these and former experiments. Bitartrate of potash, bicarbonate of potash, citrate of lithia, carbonate of lithia, bicarbonate of soda, benzoate of soda, tannate of soda, tannic acid, digitalis, scoparium, sulphate of sparteine, strophanthus, pilocarpine, Trousseau's diuretic wine, caffeine, apocynum cannabinon, ergot, turpentine, terpine, copaiba, oil of sandal-wood, fuchsin, anti-hydropin (pulvis blattæ orientalis), cantharides, iodide of potassium, chloral, spirits of nitrous ether, perchloride of iron, sulphate of iron, acetate of iron, acetate of lead, tartrate of antimony, sulphate of alum, bichloride of mercury, elaterium, jalap, scammony, guaiacum, and sulphur.

FUNCTIONAL ALBUMINURIA AND ITS RELATION TO HÆMOGLOBINURIA.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Brighton.

By CHARLES HENRY RALFE, M.D., F.R.C.P.,
Assistant Physician, London Hospital.

In the present paper I shall endeavour to prove that there is a relationship between these forms of albuminuria which, for conciseness, are called "functional," and "hæmoglobinuria." I also hope to go a step further, and bring forward facts which will tend not only to prove that such a relationship exists, but that in all probability many forms of "functional albuminuria" are only minor manifestations of hæmoglobinuria, and that the two conditions may become merged—the one into the other.

Writers under the terms "intermittent albuminuria," "albuminuria of digestion," "cyclical albuminuria," "the albuminuria of adolescents," etc., have described a condition, in which, without any great disturbance of the bodily health, and apart from any definite renal disease, albumen is found, more or less, continuously in the urine. Although the question, whether these forms of albuminuria, as the various terms applied to them would imply, are really in each instance distinct, or whether they are brought about by the same pathological factors, may still be considered by many an open one—yet, I think there are many considerations which would make us decide entirely in favour of the latter supposition. In the first place, taking any one of the above "forms of albuminuria," we find that, though it may be found occurring in either sex, and at any age, yet the largest proportion of recorded cases will always be among young male adults. Again, these "forms of albuminuria," are nearly always found occurring among individuals who are either suffering from some constitutional taint, inherited or acquired, such as gout, rheumatism, syphilis, or malaria; or in whom some disturbance of the vaso-motor system can be demonstrated. The intermittent character of the discharge of albumen is common to all forms, for though in some cases it may be continuous, still even then there are distinct tides observable, and the ebb and flow is distinctly regulated by some disturbing cause, which in many cases is merely the performance of some physiological act, such as the ingestion of food, the act of rising, cold bathing or exercise. The urine, too, in all cases of functional albuminuria of this kind, so far as they have come under my observation, exhibits two characteristic features: namely, increase of urea, and an abnormal amount of urinary pigment; whilst, but as a less constant phenomenon, bile pigment can also usually be detected.

My attention was first drawn to the fact that both urea and the urinary pigment are increased in the urine of functional albuminuria, in a case brought me by Dr. Sedgwick Saunders. In this case the urine was abundant, the specific gravity high (1028), the albumen pretty constant, but varying in quantity, being chiefly affected by food and exercise. With a view to watching the effect of diet and treatment, the patient was directed to send a sample of his twenty-four hours' urine to Dr. Saunders' laboratory twice a week for examination. At the end of the month Dr. Saunders sent me his report, and in it he drew my attention to the fact that on the days when the albumen was most abundant, the specific gravity was above the normal, whilst the ring of urates, which formed just above the cold nitric acid on which the urine was floated, was, when the albumen was most abundant, always intensely coloured by the oxidised pigment of the urine. In subsequent cases of functional albuminuria of the character described, I have always since looked for the phenomenon, and in no case when albumen has been present have I failed to observe an absolute increase of urea, and an increased amount of urobilin in the urine. The significance of this phenomenon I will discuss when we consider the pathological relation existing between functional albuminuria and hæmoglobinuria.

Having thus briefly considered the relationship, if not the identity, of the various forms of albuminuria which are included under the term functional, I will as briefly sum up the chief clinical points of similarity that exist between functional albuminuria and hæmoglobinuria.

In the first place, like functional albuminuria, hæmoglobinuria is essentially a disease of young adult males. Like it, it is nearly always associated with hereditary or acquired constitutional taint—malaria, rheumatism, syphilis, etc. In both, although the patients may look well, and even have a florid appearance, owing to injected capillaries, there is always a degree of anæmia, marked not only by paleness of the mucous surfaces, but by actual deficiency of red blood-corpuscles, sufficient to be determined by the hæmocytometer. Hæmoglobinuria, moreover, is accompanied with a certain degree of jaundice, and marked dyspeptic symptoms; and although the same symptoms are not so pronounced in cases of functional albuminuria, still, patients suffering from that disorder complain to us of their frequent bilious attacks, and of indigestion.

Again, although in some cases of hæmoglobinuria the urine remains free from albumen between the paroxysms, still, in the majority, the albuminuria continues, and, if this albuminuria be watched from day to day, it will be found also to vary in degree at different times, just as we should expect in cases of true functional albuminuria. Moreover, apart from the presence of hæmoglobin in the urine, the character of this secretion in the two conditions is very similar, for in hæmoglobinuria an increased excretion of urea is also observable; whilst, when the colouring matter of the blood has disappeared, the urine is nearly always found deeply coloured from excess of urobilin, whilst not unfrequently crystals of bilirubin may be observed in the urinary sediment.

These considerations, I think it will be admitted, are strongly in favour of a relationship existing between hæmoglobinuria and functional albuminuria, whilst the three cases which I now bring forward will, I think, not only prove that view, but will also tend to show that "functional albuminuria" is only a minor manifestation of hæmoglobinuria, and that the two conditions may merge one into the other.

The first case was that of a gentleman who, six years ago, found he was suffering from albuminuria. On the advice of his medical attendant, he consulted two London physicians, who told him the albuminuria was due to subacute nephritis, and that he must winter abroad. He did so, but it had no effect on the albuminuria. On returning to England, he remained under observation for three more years, the albumen continuing abundant, the general health being little, if at all, impaired. About this time, Dr. Oliver, of Harrogate, who had seen the case, began to have doubts as to the confidently expressed opinion of chronic nephritis, as there was neither loss of weight nor cardio-vascular changes, nor was there the slightest tendency to renal dropsy, whilst the secretion of urine was abundant, and the specific gravity high. Dr. Oliver then consulted with me respecting the case. I found the average daily urinary secretion about 60 ounces; the specific gravity averaged 1022, so that the solid matters daily eliminated were about 21 grammes daily, above the average of an adult of the same age and body-weight. This excess was almost entirely caused by the increased amount of urea. The urine gave a strong pigment-reaction with nitric acid, and sometimes bile pigment was present. The albumen was very constantly present, but varied greatly in amount; no casts could be observed, nor were there any symptoms of renal disease present. The patient was healthy-looking, but somewhat pallid and sallow. He made no complaints, except that at times he had a sense of general *malaise*, accompanied with attacks of indigestion, and that after these he noticed he was more sallow than usual. This was in the spring of 1883. My opinion was it was a case of functional albuminuria.

He was placed on a strict dietary, and iron and arsenic were given daily. His condition, as regards the albuminuria, varied; but at length he began to improve, and at last, one day in August, 1884, he called on me to say he had not seen any albumen for some weeks past; this statement was subsequently confirmed by Dr. Oliver, under whose observation he then was at Harrogate. In October of that year, he took his wife abroad to winter in the south of France, he himself returning about the beginning of November. On the return journey he caught a chill; the day subsequent he passed a quantity of bloody urine. This I examined, and found no red corpuscles; and a similar sample being sent to Dr. Oliver, he independently made the same observation. The patient stated he had never noticed anything at all like it before, nor had he, to his knowledge, ever noticed any blood in his urine. The patient then for five or six weeks had distinct attacks of paroxysmal hæmoglobinuria. After two or three relapses he recovered, and for a time lost his albuminuria; but by degrees this returned, and when I saw him in the spring of the present year, it was still present; his general health remains good; he has gained in weight, and has not had any recurrence of the hæmaturia.

In the second case, the albuminuria was apparently ushered in by an attack of paroxysmal hæmoglobinuria. The patient was a young man brought to me by one of my colleagues. Four years previously, when studying on the Continent, he passed bloody urine; since then, albumen has been more or less present in his urine. The urine I examined contained no casts, the specific gravity was 1028, and the quantity passed daily quite up to, if not above, normal limits. The pigment reaction was intense with nitric acid, and the urine yielded an abundance of crystals of urea-nitrate when treated with the same acid. The patient looked hearty and robust; there were no cardio-vascular changes, no evidence of dropsy; whilst, according to the patient's statement, he had recently gained in weight. From the time he first noticed the bloody urine, abroad, four years ago, none has passed since, although he has been on the look-out for it. His chief trouble is occasional attacks of indigestion.

The third case is not so well marked as the two preceding ones. A young man, aged 21, consulted me in June, 1885. He had been rejected for life-assurance, on account of the presence of albumen in his urine. He did not know there was anything amiss, as he felt perfectly strong and well, and was only occasionally troubled with indigestion. He had never noticed his urine to be even of a dark colour, though he had seen red sand from time to time. The patient in this case was passing, on an average, fifty ounces of urine, of an average specific gravity of 1030, having a considerable excess of urea, and a strongly marked pigment-reaction with nitric acid. No casts were to be found in the urine; he seemed in perfect health, had recently married, and was able to perform his marital duties in a manner quite beyond the power of a victim to Bright's disease. Under strict dietetic regulations and the use of arsenic and iron, the albumen almost entirely disappeared from the urine, and, after an absence for his holiday, entirely so. In November, however, he got a chill coming out of church, felt very sick, and passed some dark red-coloured urine; for some time after, the urine contained albumen, but no more blood has passed, although the albuminuria recurs from time to time.

In these three cases, therefore, we have instances of an albuminuria, complicated by an isolated attack of hæmoglobinuria. Of course it may be urged that the hæmoglobinuria was accidental in all three, and that it happened to occur in persons already suffering from albuminuria. That it was not merely an accidental occurrence, but a merging of the two conditions, I now propose to show.

Clinical experience, as well as experimental observation, leads us to infer that hæmoglobinuria exists in two forms: (1) in which the hæmoglobin is simply dissolved out of the blood-corpuscles; in this form the dissolution probably occurs in the course of the circulation, and is more usually local than general, that is to say, in parts exposed to cold, or subject to vaso-motor disturbance, as in the *asphyxie locale*, or Raynaud's disease; (2) a more severe form, in which dissolution is general, and is probably attended with considerable destruction of the red blood-corpuscles in the liver, and also in the spleen and kidneys. It is in these severe cases that the icteric tint is well marked, whilst, in addition to hæmoglobin, bile pigment and bilirubin crystals are found in the urine.

In health, as is now well known,[1] the red corpuscles are broken down in the liver—a great diminution occurring in the number of corpuscles found in the portal vein, a diminution which, during active digestion, is often as great as from 1,000,000 to 2,000,000. The effete hæmoglobin thus brought to the liver, is, under ordinary circumstances, converted into pigment and urea, and, as the experiments of Dr. Noel Paton[2] show, any increase of hæmolytic action results in an increased production of urea, and an increased amount of pigment in the urine. In disease, or under the influence of powerful agents, such as toluylendiamin or pyrogallic acid, the hæmolytic action is so increased that a very large quantity of the blood-colouring matter escapes conversion into bile-pigment, and so passes off by the kidneys; at the same time there is, undoubtedly, an increased formation of bile-pigment going on, which either appears unaltered in the urine, or is converted into urobilin, the ordinary urinary pigment. The albuminous element of the blood corpuscles brought to the liver undergoes transformation into urea, under ordinary circumstances, but when the destruction is considerable, and the process takes place under the influence of some sudden disturbance of the vaso-motor system, it is more than probable that, whilst there is an increased formation of urea, a large proportion of this effete albumen is at once got rid of by the kidneys.

[1] Nicolaides, *Archiv. de Physiologie*, T. x., p. 531, 1882.
[2] BRITISH MEDICAL JOURNAL, July 31st, 1886.

Again, it has been observed that, when certain hæmolytic agents are injected, a small dose in many instances will only cause albuminuria, whilst a large dose is required to produce hæmoglobinuria. The same has been noticed with regard to animals; a dose of pyrogallic acid that in a cat will produce hæmoglobinuria, will, when administered to a dog, only cause an increase of bile-pigment in the urine, together with some degree of albuminuria. It would thus seem that there are degrees of abnormal hæmolytic action. In the minor degree, there is increased conversion of the blood-colouring matter into bilirubin and urobilin; the effete albuminous constituents passing off in part unchanged by the kidneys, in part undergoing conversion into urea. In the more severe form, the number of blood-corpuscles destroyed are so great, that the conversion of all the effete hæmoglobin into bilirubin cannot be effected, though the amount is undoubtedly increased, so that the undestroyed hæmoglobin appears in the urine. In this case there is also an excess of urea and of pigment, together with the presence of albumen in the urine.

These gradations of hæmolytic action may be thus expressed:—

Ordinary hæmolysis	Urinary pigment; urea	Normal urine.
Active hæmolysis	Increase of urinary pigment; increase of urea	Urine of digestion.
Increased hæmolysis.....	Increase of urinary pigment; appearance of bile-pigment; increase of urea; albuminuria	Functional albuminuria.
Extraordinary hæmolysis..	Hæmoglobin in urine; increase of urinary and bile-pigments; increase of urea; albumen	Hæmoglobinuria.

With regard to the pathological conditions that induce this increased and extraordinary hæmolysis in functional albuminuria and hæmoglobinuria, we are still in the dark, though it is probable they are of the same character, and differ only in intensity. If asked to formulate an hypothesis, I would say that, in both, the essence of the disease consists in an increased irritability of the vaso-motor reflex centre, which causes increased hæmolysis in the liver; but in addition to this, there is the formation, probably owing to disorder of the blood-forming organs, of corpuscles unable to withstand any unusual disintegrating influences. The fact that individuals suffering from functional albuminuria or hæmoglobinuria have generally some taint, hereditary or acquired, such as gout, rheumatism, syphilis, or malaria, accounts no doubt for the primary disorder of the blood-forming organs, and also possibly for the instability of the vaso-motor reflex-centre. With regard to the treatment of the two conditions, the same plan should be pursued in both. The diet should be light and chiefly non-nitrogenous, care being taken not to prolong the intervals between the meals, or allow too much food to be taken at any one time, since, from the experiments of Nicolaides, it has been shown that the hæmolytic action of the liver is increased during active digestion, or by the ingestion of too much food; whilst the ingestion of too much nitrogenous food undoubtedly increases the metabolic activity of the liver. Quinine and iron are essential, but when given with arsenic, the best results are obtained. Arsenic seems to have the power of diminishing the hæmolytic action of the liver, as well as strengthening the resisting power of the corpuscles.

ON THE RELATIONSHIP OF UREA TO CERTAIN DISEASED PROCESSES.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Brighton.

By THOMAS OLIVER, M.D., M.R.C.P.Lond.,

Physician to the Infirmary, and Lecturer on Practical Physiology in the University of Durham College of Medicine, Newcastle-upon-Tyne.

Nearly all recent observers regard the liver as the organ chiefly concerned in the production of urea. But how the liver forms it, and what the conditions are which are antecedent to urea, are subjects still of discussion. Some have regarded it as a product arising from oxidation of the tissues of the body; but, against this, we might urge the fact that cases are met with, again and again, with persistently high temperature, in which the daily discharge of urea is much below the normal. Meissner was amongst the first to regard the liver as the seat of the formation of urea. By his experiments, he proved how very little the muscular system contributed to its formation. It was reserved for Fuhrer and Ludwig, however, to demonstrate the origin of urea from the decomposition of blood-corpuscles—a view which my own observations support, rather than the food source to which physiologists have lent, it appears to me, too much the weight of their authority. In the liver, the red blood-cells are known to undergo disintegration; the blood of the hepatic vein is much poorer in blood-cells than that of the portal vein. It is out of the destruction of these hæmocytes that we get, on the one hand, the colouring matter of the bile; on the other, urea; and later on, from the bile, the colouring matter of the urine. The increased elimination of urea after digestion is not due to the products of digestion, for example, leucin and tyrosin, being converted into urea by the liver, but depends upon the increased functional activity which digestion causes in all the organs concerned in that process; the circulation of blood through the liver being thus promoted, a larger amount of bile is secreted; in other words, at this time a larger number of blood-cells is being disintegrated.

After dealing with the chemical methods employed, certain diseased states were mentioned, in which the elimination of urea was found to be deficient, for example, acute yellow atrophy of the liver, cirrhosis of the liver, and phosphorus poisoning.

In phthisis pulmonalis, where the liver is fatty, or amyloid change has begun, the cells are no longer capable of performing their function, and so we find that the discharge of urea falls, in spite of the fact that there is a marked rise of temperature, and the patient consumes a fairly large quantity of animal food, wine, etc. The strange thing in regard to the elimination of urea in phthisis is that, in spite of high temperature and rapid emaciation, there is a very noticeable fall in the urea, and that too in the absence of diarrhœa. Were the tissues its source, then this is just the disease in which urea ought to be found in excess. During the early stages of most cases of phthisis, the amount of urea passed is subnormal; it may be only half of what it should be. At this time, the blood-corpuscles are about the normal, namely, 5,000,000 to one cubic millimètre of blood. But, as the disease progresses, you frequently find that the amount of urea rises, whilst the patient's appetite for food diminishes. You examine the blood, and you find a reduction in the number of coloured corpuscles. With the further advance of the disease, the daily elimination of urea is found to increase. Sometimes there is the sudden evolution of an excess of urea—a condition I have always found associated with very distinct indications of anæmia, as seen in the face of the patient; and, that there is something more than an apparent relationship between the anæmic look of the patient and the sudden discharge of urea in excess, is proved by an examination of the blood. Such an examination reveals the fact that the blood may have lost of its cells 500,000 in every cubic millimètre. The following case bears upon this point. J. McM., aged 24, was admitted under my care, suffering from phthisis pulmonalis, with a temperature oscillating between 103° and the normal. At this period, the urine had a specific gravity of 1013, and did not contain albumen. He was taking animal food, and was passing, on an average, 274 grains of urea daily. Six days after this, the urine showed a trace of albumen; its specific gravity had fallen to 1007; and, coincident with the appearance of albumen in the urine, the temperature fell from 103° to 98.2°. For two days the amount of urea discharged was 143 grains. On the 10th, that is, two days after this, he passed, but for one day only, 523 grains of urea. The blood, previously normal, now showed a deficiency of 100,000 cells to the cubic millimètre. For the next fortnight nothing unusual presented itself. On January 17th, that is, seventeen days after the last note, he passed 467 grains of urea; on February 1st, 598 grains; and on February 3rd, 443 grains. He now looked pale and haggard; and, on enumerating his blood-corpuscles, only 3,410,000 were found in a cubic millimètre, there having been a loss of 1,400,000 blood-cells within a fortnight. Several of my other patients who were the subjects of phthisis passed, early in the illness, not more than one-third or one-half of the normal amount of urea; and I always noticed that, when the discharge of urea increased to double or treble what it had been, such an occurrence was always followed by indications of anæmia, confirmed by the great disappearance of blood-cells, noticed on enumeration, and in every case it added gravity to the prognosis of the illness; in other words, it pointed to an approaching fatal termination of the same.

In support of the opinions that I have expressed as regards the deficient elimination of urea in the early stage of phthisis, the very slight relation, if any, to disintegration of tissue, as evidenced by high temperature, and the coincidence of increasing daily discharges of urea with the disappearance of blood-cells—so much so as to make us regard the connection as one of cause and effect—take the following case. Elizabeth M., aged 18, an unfortunate, was transferred from my colleague, Dr. Hume, and placed under my care, as she was suffering from catarrhal pneumonia. The subjoined table pretty well explains itself:

Table I.

Date.	Temperature.		Urine.			Urea in Grains.	Blood Corpuscles. Lemon.
	M.	E.	Specific Gravity.	Ozs.	Colour.		
February 21	99.8	101.2	1010	34	straw	115.5	
,, 22	99	103	1012	52	,,	158.8	
,, 23	99.2	102.2	1010	46	deep ,,	156.6	
,, 24	100.4	101	1012	42	medium amber	202.5	
,, 25	99.6	103.8	1012	40	light ,,	135.5	
,, 26	99.8	101.6	1010	41	,, ,,	155	
,, 28	100.2	103.6	1005	45	very light amber	98.5	
March 1	100.6	102.8	1010	42	,, ,,	120	
,, 3	101	103	1010	41	,, ,,	120	
,, 5	102.8	102.8	1010	41	,, ,,	132	
,, 7	102.6	100.4	1015	39	medium amber	197	
,, 9	102.2	102.6	1005	38	light straw	93	
,, 11	102.4	101.8	1011	42	medium amber	209	
,, 13	101.8	102.2	1012	46	deep straw	141.6	
,, 14	101.5	102.4	1010	46	,, ,,	169	
,, 15	101.6	100.8	1012	42	deep amber	345	
,, 16	102.6	100.4	1012	38	,, ,,	332	
,, 31	101	101.5	1009	36	,, ,,	295	
April 2	—	—	—	—	—	—	3,770,000
,, 5	100.6	102.8	1007	41	deep amber	506	
,, 7	—	—	—	—	—	—	3,585,000
,, 8	—	—	1008	45	light amber	180	

We have in the above an illustration of how very little the elimination of urea is influenced by temperature. Take, for example, February 28th, and with its evening temperature of 103.6°, only 98.5 grains of urea were discharged on that day. On March 15th, and before I had made the estimation of urea for that day, I made the following note in my journal: "Patient rapidly emaciating; has become much paler." This was the day on which the first notable rise of urea was detected. It was followed, as is so frequently the case, by a fall in the urea, which, for brevity's sake, I have not included in the table. The next rise is on March 30th and 31st, on the latter of which 295 grains were eliminated. The blood-cells were now enumerated, and were found to be deficient. On April 5th, there was discharged the greatest amount of urea, namely, 506 grains; and, two days after this, when the blood-cells were enumerated, they only numbered 3,585,000, or 185,000 less in each cubic millimètre than there were a week previously.

In lead-poisoning, I have always found the urine deficient in urea—a deficiency which, irrespective of sex, becomes marked as the anæmia has become pronounced, and still more marked when albuminuria is developed.

In malignant disease, it is said that urea is thrown out in excess. Such is not my experience. In my former paper on this subject (BRITISH MEDICAL JOURNAL, May, 1886), I stated that it was only when the cachexia of malignancy was developed that the elimination of urea became deficient. When the cachexia was forming, and blood-corpuscles were being disintegrated, then, and then only, it appears to me, is urea passed in excess.

In the following morbid conditions, in which the blood shows distinct alterations in regard to the number of its corpuscles—for example, anæmia, pernicious anæmia, chlorosis, leukæmia, and myxœdema—I have generally found the urine to be deficient in urea. This only applies to that stage of the illness which we might speak of as status; for even if the number of blood-cells is much below the normal, should further disintegration of blood-cells be taking place, as revealed by the hæmocytometer, the urine in such, instead of being limpid and wanting in colouring matter, is frequently of a rich amber hue, and contains a large percentage of urea. Here, again, the high temperature met with in many of these cases has little or no influence on the discharge of urea.

In diabetes mellitus, I have found the urea to be in excess, while in diabetes insipidus sometimes it is near the normal, but generally much below it. Examinations of the urine in Bright's disease have always yielded me a deficiency of urea.

Clinical observation, and a system which I had adopted of estimating the daily discharge of urea by patients in various illnesses, over a very lengthened period, forced me to disbelieve in the food and tissue theories of urea respectively, whilst they led me to regard the blood as its source. The experience stated above is, I think, strongly corroborative of the opinion that the blood is its source. A similar view has been arrived at, but by different means, by Dr. Ralfe; see his latest paper on the Relationship of Hæmoglobinuria and Functional Albuminuria, *Lancet*, October 23rd, 1886; and by Dr. Noel Paton, in the *Journal of Anatomy and Physiology* for this year. But if additional evidence is wanted from the clinical side, it is, I think, supplied, and that strongly, too, by the daily estimations of urea—the character of the urine, and the condition of the blood in the following case of scorbutus.

Wm. M., aged 34, was admitted under my care on August 5th, suffering from scorbutus. His legs were covered with dark purplish patches; his face was extremely pale and swollen, the appearance being not unlike that met with in Bright's disease with large white kidney; his gums were swollen, and so painful that for several days before admission he could not eat; his food had been simply small quantities of bread or biscuit soaked in tea; his pulse was small, and his heart's action so weak that he fainted on being put to bed. Subjoined is the daily record bearing upon the questions of urea such as we have already dealt with.

Table II.

——	Specific Gravity of Urine.	Naked-eye Appearance of Urine.	Number of Ounces passed Daily.	Daily Discharge of Urea in Grains.	Blood-Cells in each cmm. of Blood.
Wm. M.					
Aug. 6	1015	Deep amber	42	601	
,, 7	1011	Medium amber	78	649	
,, 8	1012	Muddy lemon	48	373.7	2,190,000
,, 10		—	39	287.9	
,, 16		—	—	—	3,650,000
,, 17	1008	Medium amber	74	259	
,, 18	1013	,, ,,	44	304.9	
,, 19	1012	Less than medium amber	56	309.5	
,, 20	1011	,, ,, ,,	94	298.7	3,630,000
,, 21	1011	,, ,, ,,	51	281.7	
,, 22	1010	,, ,, ,,	69	283.3	
,, 23	1007	,, ,, ,,	74	214.8	
,, 24	1010	,, ,, ,,	60	332.6	
,, 25	1010	,, ,, ,,	64	354	
,, 26	1012	Medium amber	60	334	
,, 27	1012	Very light ,,	52	287.9	
,, 28	1011	Medium ,,	72	381.9	
,, 29	1012	,, ,,	67	374.4	
,, 30	1010	,, ,,	69	349.5	
,, 31	1012	,, ,,	60	360	
Sept. 1	1012	Light ,,	44	304.9	4,870,000
,, 2	1011	,, ,,	69	348	
,, 3	1010	,, ,,	80	406	
,, 4	1011	Medium ,,	69	477.3	

Now, when this patient was admitted, his face was as hydræmic as it was possible to be. I have seldom seen more pronounced pallor of the countenance; and yet, though the patient was extremely anæmic, and unable to take the smallest quantity of animal food, and had a low temperature, the urine examined on the day after his admission was found to be of a deep amber colour, and was about the normal average as regards quantity; the daily discharge of urea was very much above the normal, and the blood-cells were scarcely more than two millions in a cubic millimètre of blood. There was no question here of food as a source of the urea, and no increased destruction of tissue, so far as the temperature of the body may be taken as a guide. Two things stand out prominently: an excessive elimination of urea and a deficiency of red blood-cells. This lasted until treatment was adopted; and as the anæmia, instead of progressing, as I believe up till that time it had been doing, now began to improve, so, with the lessened destruction of blood-cells, was there a coincident diminution in the urea. The man had now to make up the number of his blood-cells; and so we find that, while this is going on (there being less destruction than in health), the daily discharge of urea is small, rising slowly, however, as did correspondingly the number of blood-cells, until near the termination of his illness, when his recovery is seen in the approach of the blood-cells to near the normal, and the almost normal daily discharge of urea.

I have not included the diet of the patients in any of the tables, as experience has convinced me that the kind of diet influences but very little the daily discharge of urea. In fact, many of my patients threw off a larger amount of urea upon rice and milk than upon animal food.

From a consideration of the above, I am led to regard the liver as the organ chiefly concerned in the formation of urea. The tissues, in their oxidation or disintegration, contribute but little, if any, judged of from the absence of effect produced by high temperatures. Food is a source, but not to the extent hitherto believed. During the process of starvation, the daily discharge of urea is not much below the normal—a circumstance explained, not so much by the disintegration and disappearance of tissue, as by the fact that the tissues still form

blood-cells, from the dissolution of which comes the urea. The chief source of urea is, therefore, the red blood-cells. They are broken up in the liver; their colouring matter goes to form, first, that of the bile; and, subsequently, that of the urine; while, from the whole or part of the rest of the protoplasm of the blood-cells, comes urea. Derange the structure, or disturb the function of the liver, and you either cause an increase or a diminution in the urea—a diminution met with in cirrhosis, where that organ is the seat of amyloid degeneration, or the fatty changes met with in phthisis; or a marked increase occurs, as seen in the very early stages of fevers, where, before the temperature has risen, the urine is found to contain an excess of urea, due to the sudden engulfment and destruction of myriads of blood-corpuscles in the liver. (This is, in my opinion, amongst the earliest of the phenomena met with in fevers, and may be the cause of much of the gastro-hepatic disturbance which is characteristic of the febrile state.) Or, let the function of the liver be disturbed, as in ordinary jaundice, where, owing to obstruction, the biliary canaliculi remain over-filled, and, instead of material being removed by the liver-cells from the blood, the current is reversed, that is, passes from the biliary-vessels into the blood; here destruction of blood-cells in the liver does not occur, and the result is a deficiency of urea in the urine. As a proof that the hæmocytes are the source of urea, take any form of cachexia or anæmia, and, unless that cachexia or anæmia is in the course of formation, as in the early stages of cancer, or as in the developing cachexia of my case of scorbutus, you will find that the daily discharge of urea is diminished. Here the liver is not alone at fault. The blood cells are deficient, and so, too, as a consequence, is the urea. It seems as if it required a certain blood-corpuscular tension, on the one hand, and healthy hepatic cells, on the other, to originate urea. While arguing thus for a blood source and a hepatic origin for urea, I know there are certain cases where, though the people present all the appearances of ruddy health, their urine, passed in excess, contains regularly too little urea; but, as it is also deficient in colouring matter, I am inclined to regard the liver in such instances as not forming, rather than the kidneys as not eliminating, the urea.

ON THE READY DETERMINATION OF UREA-EXCRETION.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association, in Brighton.

By R. HINGSTON FOX, M.D., M.R.C.P.

The determination of the amount of urea excreted in disease has acquired of recent years an increasing importance, and it is not too much to hope that it will before long become a part of the routine examination of cases. For this end we must have methods which can be readily applied, and do not require the apparatus of a chemical laboratory, and yet which are fairly accurate. The object of the present brief paper is to record some experience in working with Dr. Squibb's process, and to submit some modifications and corrections which have been found needful, with a ready method of calculating the results. It is unnecessary to describe the process itself in any detail, especially as I am informed that the apparatus is exhibited by Mr. Martindale in the Museum on the present occasion (see also Brit. Med. Journ., 1884, vol. ii, p. 1080). It need only be stated that 4 cubic centimètres of the urine are placed in a small inner vial, and brought into contact with some of the solution of chlorinated soda of the *United States Pharmacopœia*. The urea present is decomposed by the hypochlorous acid, the carbonic acid gas is absorbed by the sodic carbonate of the solution, and nitrogen gas alone is given off, which is readily measured by the water displaced. The volume (in cubic centimètres) of water thus displaced, multiplied by a constant coefficient, gives the percentage of urea in the specimen of urine. The whole process takes less than half an hour, and requires the operator's attention for a small portion only of that time.

I will now mention a few modifications and corrections found necessary in working.

1. In testing concentrated urines, I found that the process gave unsatisfactory results, a large volume of gas being very rapidly disengaged. Hence it is advisable to use one-half the quantity of urine, namely, 2 cubic centimètres only, when the specific gravity is 1025, or more. The result will then, of course, require doubling. The quantity of liq. sodæ chlor. used need never exceed 10 cubic centimètres for every 5 units of the specific gravity.

2. It has been suggested that some carbonic acid gas may come over with the nitrogen, and thus vitiate the test. I have accordingly made a practice of adding some lime-water to the water in the receiver bottle, and agitating the gas with it, but not once has any cloudiness appeared. This suggestion seems, therefore, to be groundless.

3. It may seem superfluous to say that accurately graduated measures should be used, but hard experience has taught me that some measures widely sold professing to be marked in grammes or cubic centimètres are untrustworthy. They should be obtained from a maker of chemical apparatus. A narrow graduated tube, such as a burette, is convenient to measure the displaced water in.

4. It is of scarcely any value to know the percentage of urea in the urine, unless the total quantity of urine passed, and the period of time during which it was secreted, are also noted. It is often very inconvenient to obtain the total urine passed during 24 hours; indeed, outside hospitals, it is practically impossible, unless in rare instances. Even when we find patients willing to take the trouble, and intelligent enough to collect, mix and measure their urine, one cannot fully rely on the observations; much of the secretion may, for example, be lost at stool. I have therefore enquired how far the total nocturnal urine, which is easily obtained, is a fair test of the entire 24 hours. Observations of this kind have indeed already been recorded.[1] I will, however, direct attention to the series shown in my diagram. I obtained the urine passed by a healthy adult, during each day, and during each night for a period of a week, as well as for some smaller periods; and calculated, with the corrections to be presently mentioned, the quantity of urea excreted per hour. The result shows that whilst there is a large variation from day to day, there is no important difference between the quantities of urea excreted in the day and night respectively by a healthy person; a slight excess generally appears in the hourly day excretion over that of the night, but it is inconsiderable. In my limited observations, the average hourly excretion during twelve nights was 1.105 grammes, and that during ten days contiguous to the nights was 1.122 grammes. I submit, therefore, that the nightly excretion of urine is, so far as the urea is concerned, a fair sample of the total excretion. I am, therefore, in the practice of asking my patients to bring me the entire urine passed on rising in the morning, with a note of the hour of passing it, and a note also of the hour of obtaining relief the night before; any passed during the night being of course included. This gives us two data, a certain volume of urine, and a certain period of time in which it was secreted.

5. The whole of the urea is not decomposed by Squibb's process, as is the case in like manner with the hypobromite method. I am not yet able to state the proportion which is unacted upon, but the results should obviously be subjected to a correction for this undecomposed urea.

6. The temperature at which the analysis is conducted has a very appreciable effect on the volume of nitrogen. Thus a difference of 25° Fahr. would cause a variation of 5 per cent. Besides the seasonal differences, the process itself evolves some heat. I always take the temperature of the water in which the principal bottle stands at the beginning and end of the process, and record the mean of these two. I have constructed a simple table for applying the correction for temperature, and find it easy to use.

7. In the same way, it is equally necessary to note the atmospheric pressure. A drop of one inch in the barometer, if not allowed for, would quite vitiate a comparison between two analyses. I use a similar table for this correction, bringing the results to a standard pressure of 760 millimètres. These tables apply equally to any other process where the volume of a gas is measured.

8. It remains to add a few words as to the readiest method of making the calculations. The various factors would need to be subjected to a tedious multiplication and division. Logarithms are very useful to simplify the process. Anyone unacquainted with their use would be surprised at the ease with which the calculation is made. I give an example from my analysis-book in Table IV. I find that such a calculation occupies less than three minutes to work out. In practice, I neglect the indices.

I would submit, then, that a fairly accurate estimate of the hourly or daily excretion of urea is easily obtained by Squibb's method—by taking the night's secretion of urine as our basis, by applying corrections for temperature and barometric pressure, and by using logarithms to effect the calculation.

9. I append a few words in reply to the question, How far does the specific gravity of the urine indicate the amount of urea present? Taking the specific gravity, multiplied by the volume of urine per hour, to represent, for comparison merely, the total solids, I found in my limited observations that during the night the urea follows the other solids, seeming to bear a fairly constant proportion to them.

[1] See for example, Vogel (*On the Urine*, New Sydenham Society, pp. 382, 384).

But during the day the amount of other solids is considerably larger and more variable—I suppose, owing to the ingestion of food; whilst, as I have said, the urea remains much the same as in the night. It would follow, therefore, that the specific gravity (multiplied, of course, by the volume) does fairly indicate, for comparative purposes, the amount of urea excreted, if the nightly urine is taken, but not in that secreted by day.

TABLE I.—*Excretion of Urea in Grammes Hourly, by Day and Night respectively, in a Healthy Adult.*

July 14th,	night,	1.281	gramme;	day,	1.069	gramme.
,, 15th	,,	1.124	,,	,,	1.037	,,
,, 16th	,,	0.926	,,	,,	0.920	,,
,, 17th	,,	0.984	,,			
,, 23rd	,,	1.387	,,	,,	1.481	,,
,, 24th	,,	1.339	,,	,,	1.140	,,
,, 25th	,,	1.230	,,	,,	1.151	,,
,, 26th	,,	1.049	,,	,,	1.055	,,
,, 27th	,,	0.929	,,	,,	1.190	,,
,, 28th	,,	0.951	,,	,,	1.098	,,
,, 29th	,,	1.039	,,	,,	1.084	,,
,, 30th	,,	1.018	,,			
Averages	,,	1.105	,,	,,	1.122	,,

The following diagram exhibits these observations graphically, the thick lines representing the amount of urea excreted hourly in the night, the dotted lines the hourly excretion during the day.

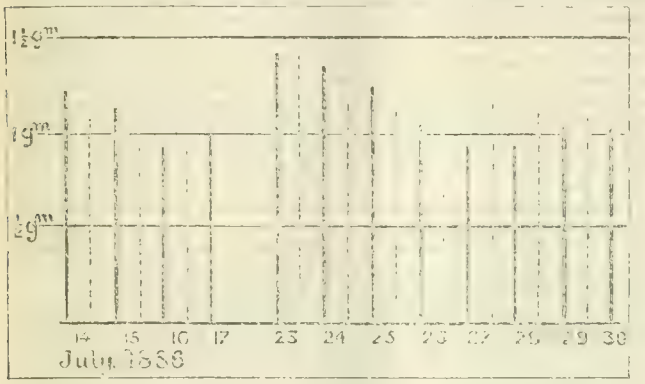


TABLE II.
Correction for Temperature.

Cent.	Fahr.	Add Logarithm.
5°	41°	1.99212
6°	42.8°	1.99077
7°	44.6°	1.98900
8°	46.4°	1.98749
9°	48.2°	1.98591
10°	50.°	1.98438
11°	51.8°	1.98284
12°	53.6°	1.98132
13°	55.4°	1.97980
14°	57.2°	1.97828
15°	59.°	1.97677
16°	60.8°	1.97526
17°	62.6°	1.97376
18°	64.4°	1.97227
19°	66.2°	1.97078
20°	68.°	1.96929
21°	69.8°	1.96782
22°	71.6°	1.96634
23°	73.4°	1.96487
24°	75.2°	1.96341
25°	77.°	1.96195
26°	78.8°	1.96049
27°	80.6°	1.95904

TABLE III.
Correction for Atmospheric Pressure.

Barometer, in.	Add Logarithm.
28.7	1.98189
28.8	1.98340
28.9	1.98491
29.0	1.98641
29.1	1.98791
29.2	1.98940
29.3	1.99088
29.4	1.99236
29.5	1.99383
29.6	1.99530
29.7	1.99677
29.8	1.99823
29.9	1.99968
30.0	0.00113
30.1	0.00258
30.2	0.00402
30.3	0.00545
30.4	0.00689
30.5	0.00831
30.6	0.00973

TABLE IV.—*Example of Calculation of Urea Excretion by Logarithms.*

323.4 cubic centimètres of urine were passed during 7.15 hours; on applying Squibb's process, 47.5 cubic centimètres of water were displaced, at temperature 20° C., the barometer standing at 29.82 in. The following calculation was made:

Log. coefficient of Squibb's process (constant)	...	4.82701
,, vol. urine	...	2.50974
,, water displaced	...	1.67669
,, correction for temperature ...	...	1.96929
,, correction for pressure ...	...	1.99852
Add	...	0.98125
Sub. log. hours in which excreted ...	...	0.85431
Log. of 1.339 gramme, hourly excretion	...	0.12694

ON A NEW ACID, FOUND IN HUMAN URINE WHICH DARKENS WITH ALKALIES.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Brighton.

BY ROBERT KIRK, M.D., F.F.P. and S. GLASG.

ABOUT two years ago I met with a family of which three members had, from their infancy, passed urine giving the reactions of Bödeker's alcapton (*Annal. der Chem. und Pharm.*, cxvii, or New Series, xli, 98), assuming a dark colour and greedily absorbing oxygen when rendered alkaline. All were boys, one of whom had died of whooping-cough, at three years of age; of the remaining two, one was a lad of 8 years, and the other an infant. The only other member of the family was a boy 10 years old, whose urine was quite free from the peculiarity which that of the others presented. Both parents were healthy, and their urine was found quite normal; but there was a history of jaundice and biliousness on both sides. The baby was large and apparently robust; the other two, however, had always been more delicate than their eldest brother, whose urine appeared to have been always normal. The most noteworthy symptom about the two who passed the peculiar urine was very frequent but painless micturition, which was also recorded of Ebstein and Müller's case (*Virch. Archiv.* lxii, 554). The majority of the cases already published have been in children; I learned from Dr. Armstrong, of Dublin, in whose practice the last of these occurred, the interesting fact that another child of the same parents, since born, voids the same kind of urine. A comparison of some points in the present cases, with those previously recorded, would be of interest, but cannot be attempted in this brief paper; neither can I do more than mention the investigations of Bödeker, Ebstein and Müller, and, lastly, of Dr. Smith, of Dublin (*Dublin Med. Journ.* Vol. ii, 1882, p. 465), the latter of whom examined the urine in Dr. Armstrong's case. In all these instances the urine was characterised by the same general reactions.

I commenced an investigation of the urine in the present cases in 1884, and had often the co-operation of the Rev. Mr. Gibson, of Partick, who is well versed in practical chemistry. The urine presented the following general characters. When rendered alkaline it assumed such a dark-red colour that it required dilution with several volumes of water before it became translucent. On one occasion 10 cubic centimètres of it, of specific gravity 1014, when alkalinised, absorbed 7.8 cubic centimètres of pure oxygen over mercury; another sample, of specific gravity 1019, absorbed 10.2 cubic centimètres of oxygen. It always reduced the copper test, its action on it corresponding to that of 8 or 10 grains of sugar to the ounce, as estimated by Dr. Pavy's ammonio-cupric method. It was either pale, almost like water, or of a peculiar brown tint, and never of the colour of normal urine. The amount of urea was never in proportion to the specific gravity. The result of one determination with the ureometer was 1.26 per cent. (specific gravity 1016); of another, 1.4 per cent. (specific gravity 1019); of a third, 1.68 per cent. (specific gravity 1028). The uric acid was estimated roughly a few times by hydrochloric acid, and seemed little more than a trace. Judging from the colour of the urine the urobilin seemed to be nearly altogether absent, and the quantity of indican was never found to be above the normal. The urine was always free from albumen and sugar, being entirely without action on Löwe's bismuth solution. In all these points our urine corresponds closely with what has been recorded of previous cases.

In our first attempts to isolate the body which communicates the characteristic reactions to this kind of urine, we repeated all the experiments of Ebstein and Müller, and found that we could obtain essentially the same results. We found further, however, that our urine, and the substance we obtained from it after their method, presented those characters which identified it, as pointed out by Professor Smith on the authority of Preusse, with protocatechuic acid, and dis-

tinguished it from pyrocatechin, and which led Professor Smith to conclude that he had found the former of these in his case. These were, that in alkaline solution it was insoluble in ether; that it did not pass over with watery vapour when distilled in an atmosphere of carbonic acid; and that it gave a green colour with ferric chloride, which turned dark red on the addition of ammonia. Nevertheless, we could not rest satisfied with the result, although convinced that we had the same body to deal with. A few points suggested doubt, and the necessity for further inquiry. Ebstein and Müller state that their pyrocatechin gave first a green, and then a brown colour with alkalies; and that, on shaking up the urine with ether, a little of the pyrocatechin passed into the latter. Now, our urine never gave a green, but on shaking up with ether we obtained a product which gave a very distinct green with alkalies before becoming brownish red. Here was a difference which called for explanation. Again, we could hardly regard the green colour with ferric chloride satisfactory proof of the presence of protocatechuic acid; it was but a pale grass-green, difficult to catch, and readily disappearing in excess or with agitation. The urine in Professor Smith's case, moreover, had been analysed by Professor Tichborne, who noted an action on the sugar test corresponding to 8 grains of sugar to the ounce, and who did not fail to remark the small amount of urea in proportion to the specific gravity, namely, 1.2 per cent. with specific gravity 1025. Protocatechuic acid has no action on Fehling's solution; and it must be pointed out, as a defect in Dr. Smith's investigation, that he did not put this to the proof with the isolated product of his analysis. Further, the same urine was subjected to a spectroscopic examination by Professor Hartley, who came to the conclusion that the amount of protocatechuic acid in it was about 1 in 10,000, and certainly not more than 1 in 5,000. Such results furnished no explanation of the chief peculiarities of the urine, and, if correct, the subject was of little interest, scarcely calculated even to excite scientific curiosity.

Accordingly, we procured a specimen of pyrocatechin from Germany, and prepared some pure protocatechuic acid from East Indian kino, according to the directions of Stenhouse in Watt's *Dictionary*. We at once felt certain that we had a different substance to deal with, in our urine at all events, from either of these. Protocatechuic acid gave only a trifling brown colour with alkalies, had no action on the copper test, and struck an intense deep green with ferric chloride in every proportion. We therefore cast about for another method of isolating the peculiar body in the urine in these cases, and at last hit upon one so simple and obvious, that the only wonder is it did not occur to previous inquirers, or earlier to ourselves.

This consisted in acidulating with hydrochloric acid, and shaking up with ether. By this process, an acid was at once set free, which proved nearly equally soluble in water and ether, and the behaviour of which clearly showed it to be the immediate object of our search. It existed in large amount in the urine, and we found it could be extracted in abundance; from less than a week's urine, we obtained from 200 to 300 grains of this acid. In doing so, we proceeded as follows. The urine was concentrated to a tenth or less, and was then washed with several volumes of ether to remove gummy and resinous bodies which interfere with crystallisation. Amongst the substances so removed was a yellow body which also appeared to be peculiar to this kind of urine. The ether and the concentrated urine were next separated from each other, and the latter acidulated with dilute hydrochloric acid (one-half per cent. of the anhydrous acid to the original amount of urine). The urine was again shaken up with ether, when the new compound passed freely into it, communicating to it, at the same time, a yellow colour, and from which it was afterwards deposited in a crystalline form.

Crystals could also be obtained without previous washing with ether but of course mixed with some impurity. It was found that, if we acidulated and set free the acid before concentration, we could not afterwards obtain it by the ether, but only a product resulting from its decomposition. In this behaviour, it resembles an acid which Schmiedeberg and Meyer obtained from the urine of dogs to which camphor had been administered, and to which they have given the name of glycuronic acid (*Zeitschr. für Physiol. Chem.*, B. iii, S. 422). If the acid were not liberated in the first instance, however, the urine might even be boiled down without producing any change in it. Another curious fact may here be noted. If the urine were acidulated and then shaken up with ether while still somewhat warm, much of the acid passed into a gelatinous state, and the whole tube might thus be filled with a jelly-like mass. This was also more readily produced by using large amounts of hydrochloric acid, and more strikingly still by the use of sulphuric acid. It was found that the acid might also be set free by acetic acid, but this required some time to act. This decomposition of the new acid during the evaporation of its watery solutions explains the failure of previous attemps to isolate it by precipitating first with neutral, and then with basic lead acetate; decomposing the second precipitate by hydrosulphuric acid, and subsequently evaporating down. If, before the latter procedure, we shook up with ether, we found that we could obtain the same crystals as by the other method, but in small amount, and not so pure.

The crystals formed on the evaporation of the ether assumed the form of large stellate groups, as represented in Fig. 1, and sometimes also of sheaf-like bundles. On another and deeper watch-glass, they took the form of long thin prisms, with oblique ends, as in Fig. 2. They possessed a strong aromatic odour, and a brown colour, although in mass they seemed almost black, with shining colourless points or needles scattered here and there. They were very soluble in water and ether, but rather more so in the former, and the solutions were of a yellow colour, becoming red, however, when sufficiently concentrated. We have not been able to identify this acid with any known to us, or of which we can find an account; and we would propose to call it, from its source and from its colour, *Urrhodonic* acid.

The crystals of urrhodinic acid thus obtained seemed tolerably pure; we could not detect any hippuric acid or other body amongst them, and a special search for the latter acid in the urine showed that it did not occur, if at all, in anything beyond mere traces. Three independent calculations proved that the urine contained one-half per cent., or a little mere, of this new acid. A solution of this strength gave a reduction of the copper-test about the same as an equal quantity of the fresh urine, and produced the same depth of colour with alkalies. In these two observations, the crystals had only been dried in the air, and still retained some moisture, so that the results must have been under and not over the mark. The amount of oxygen absorbed by 10 cubic centimètres of a half per cent. solution, in an alkaline condition, of crystals which had been dried over sulphuric acid, was found to be 8.2 cubic centimètres. Now the urine, of specific gravity 1019, han absorbed 10.2 cubic centimètres of oxygen, and therefore contained more than one-half per cent. of the urrhodinic acid. From the foregoing results, it will be seen that the acid has a reducing action on the copper-test about five times greater than an equal quantity of glucose, and this point was made the subject of a number of very careful determinations.

The crystals of urrhodinic acid were further characterised by the following properties and reactions.

1. In solution, they showed a decided acid reaction to test-paper, and gave all the reducing actions of Bödeker's alcapton and Ebstein and Müller's pyrocatechin, and which need not be here detailed.

2. When exposed to the air on watch-glasses, they absorbed moisture, and became viscid, but did not apparently undergo any further change. On recrystallising from ether, however, after some lapse of time, the crystals were found to be yellower than before, and probably some alteration had been induced by the water they had absorbed. In watery solution, they spontaneously decomposed, gradually in the cold, but more rapidly if boiled, depositing a dark powder, and leaving still something in solution, which was unaffected by further boiling, which did not crystallise, or only very imperfectly, and which still exercised a marked action on the alkaline cupric oxide solution. The dark powder was insoluble in water, alcohol, and ether, but dissolved in alkalies, and turned the copper-solution green, but without reduction.

3. An ethereal solution, so strong as to have a bright red colour, did not appear to undergo any change, though exposed to light for months; but, on evaporating the ether, crystals were not deposited as before, but an amorphous mass, apparently a mixture of a yellow and a brown substance. The latter only was now found to be affected like the original acid by alkalies; and, after being made alkaline, the yellow could be readily removed by ether. It was deposited in little yellow masses, and radiating lines with a remarkably silky appearance, and of a beautiful canary-yellow. These are represented in Fig. 3. This body, which for convenience we may call serixanthin (*σηρικός*, silken), was neutral in reaction; very soluble in ether, but more sparingly in water; was unaffected by alkalies, and had no action on Fehling's solution beyond turning it green. The brown has not yet been obtained apart from the yellow; the solution of both together was more yellow than that of the original acid, was of acid reaction, darkened as before with alkalies, and reduced cupric oxide.

4. The crystals formed somewhat pasty cakes when left on watch glasses exposed to the air; over sulphuric acid these became thin scaly plates, of a brown colour, but with glistening points scattered over the surface. When pulverised in a dry mortar a dull earthy-looking powder was formed, and this melted at 180–185° Fahr. (82° 85° cent.) to a dark viscid, treacly, almost tarry mass, evolving at the same

time a fæcal odour. The mass boiled about 260° Fahr. (126.6° cent.) and boiled steadily for some time at 264° Fahr. (128.8° cent.). It then fell gradually, still boiling, to 248° Fahr. (120° cent.), after which it rose again, and on continuing the application of heat till the temperature rose to 400° Fahr. (204.4° cent.) and upwards, carbonic acid was given off, and the fæcal odour already mentioned became very powerful. Some of the crystals were strongly heated in a crucible, and the fæcal odour thus developed was overpowering. Bodeker's alcapton, though *ohne Geruch und besonderen Geschmack*, evolved, when heated on platinum-foil, an excessively disagreeable, penetrating odour, reminding him of biliary substances. From the dark, half-charred residue, ethereal and watery extracts were obtained which we found to yield crystals on evaporation. Ether extracted a compound to which a good deal of the foul odour clung, and which crystallised in little pyramids, and small radiating or stellate forms. These were brownish, dissolved very freely in ether but sparingly in water; the watery solution was neutral, and, even when apparently very weak gave a deep green and then a brown with alkalies, and exercised a strong reducing action on Fehling's solution. We obtained a watery extract which deposited large, irregular red crystals; a deep, almost coppery red solution of these, evaporated in a steam bath, left a deposit showing all the colours of the spectrum in concentric circles.

5. The behaviour of urrhodinic acid with ferric chloride was peculiar. When to a solution sufficiently strong to have a tinge of colour a weak solution of the chloride was cautiously added without agitation, a distinct but not very deep green was perceived, apparently belonging to a precipitate and not in solution, but this almost immediately disappeared, no matter what the proportion of the constituents of the mixture. If the solution of the acid was so strong as to be reddish-brown, the precipitate was dark, as if brownish-black, and a coppery colour was developed before its disappearance.

6. The acid gave beautiful white precipitates with both neutral and basic lead acetate.

7. On platinum-foil the crystals burned with a luminous, somewhat smoky flame, leaving a small residue of charcoal, which was more slowly but completely consumed.

8. Heated with soda-lime, no ammonia was evolved. The compound was therefore free from nitrogen.

It is unnecessary to give further reactions. We have not yet made an ultimate organic analysis of this body, but have everything now in hand for doing so.

We have already stated that a peculiar yellow body may be extracted by ether from this urine without acidulation. This crystallises with some difficulty in wavy and branching forms, represented in Fig. 4. It is of neutral reaction, not affected by alkalies, and only turns Fehling's solution of a green colour. Without certain precautions, it is obtained along with a small admixture of the compound which yields the urrhodinic acid, and this mixture gives first a green and then a brown with alkalies, and is unquestionably the supposed pyrocatechin of Ebstein and Müller. This yellow body is probably itself a decomposition-product of urrhodinic acid, but the crystalline form is not the same as that of the serixanthine already mentioned.

It would appear as if all the peculiarities of this urine were not explained even by the presence in it of so remarkable a body as urrhodinic acid. The low amount of urea, and apparently of the other nitrogenous compounds of normal urine, seem to forbid such a conclusion. The further we proceed in the matter, we feel the more certainty in stating that this urine contains some nitrogenous compound peculiar to itself, and of which the urrhodinic acid is a decomposition-product. By a certain method of extraction, we have, in fact, obtained a body which yields a large amount of urrhodinic acid by acidulation, and which, when heated with soda-lime, evolves ammonia in abundance. We believe this compound was not altogether free from impurity, but feel sure that it could not contain so much of a nitrogenous nature as to yield the large amount of ammonia given off. We are repeating this process with further precautions against error from this source.

It is interesting to observe that the urine in the case published by Schmiedeberg and Meyer also contained a nitrogenous compound which they believed to be a uramido-campho-glycuronic acid. The kind of urine we have been considering must result from a profound perversion or arrest of the metabolic processes, and its further investigation may throw fresh light on some important problems, as that of the antecedents of urea and others.[1]

[1] We have examined human urine in many diseases, and the urine of the horse and cow in a few instances, but have not found any trace of urrhodinic acid.

MEDICAL MAGISTRATE.—Mr. T. J. Dyke, F.R.C.S., has been appointed a magistrate for the county of Glamorgan.

THE EMPLOYMENT OF ELECTRICITY IN THE TREATMENT OF DISEASES OF THE URINARY ORGANS.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

BY W. E. STEAVENSON, M.D.(CANTAB), M.R.C.P.,
Electrician to St. Bartholomew's Hospital.

THE results obtained by the treatment of the genito-urinary organs by electricity are among the most satisfactory. The lowest centres or points for the reflection of impulses connected with the genito-urinary apparatus are situated in the lumbar enlargement of the cord, and, by placing one electrode on the spine over the lower dorsal region, and the other to the affected organ, we are able to include the whole nervous supply of these parts within the circuit.

The nocturnal incontinence in children, when not due to any obvious cause, is a most troublesome affection to treat. I used to see many of these cases when resident at the Hospital for Sick Children, in Great Ormond Street. The most common causes, and those which we could remove, were phymosis, the reflex irritation from worms, and oxaluria. But beyond these, there were numerous cases in which, during sleep, the inhibitory influence of the higher centres appear to be in abeyance, and any accumulation of urine in the bladder excited through what is called the micturation centre in the lower part of the spinal cord a reflex expulsive action of the vesical muscles, and a consequent incontinence. These cases, I afterwards found, were most easily cured by galvanism. In children I have seldom had to introduce the electrode into the bladder. My usual plan is to place a pad connected with the negative pole of the battery over the lower dorsal region of the spinal column, and a small button electrode on the perinæum. The perinæum, especially just below the vulva in females, is a very sensitive region, and, therefore, strong currents cannot be used. You will note that in these cases I advocate a plan the direct opposite to that which I usually advise in the treatment of other affections by galvanism. In cases of atony of the bladder, I have advised that the electrode connected with the negative pole of the battery should be the fixed one. This is done because of the sensitiveness of the parts to which the current has to be applied, and the small space and difficulty experienced in moving the electrode about. As in all cases a very weak current is used, the fixed negative electrode being of wide surface does not painfully affect the back, whereas, if the current were reversed, and the button electrode in the perinæum made negative, it could not be borne unless the strength of the current was very much reduced. We, therefore, in these cases, get the greater advantage by placing the electrodes as I have mentioned. In cases of simple incontinence of urine, when the sphincter is not at fault, and when the affection is due to the loss of the power of inhibition during sleep, or to paralysis of the muscular coats of the bladder from over-distension or other causes, then one electrode may be placed over the pubes. But in cases where there is weakness of the sphincter, unless an electrode is placed in the urethra itself, no doubt the most advantageous place for the second electrode is the perinæum. The tendency of all electrical currents is to take the shortest route possible to complete the circuit, always, of course, choosing the road offering the least resistance. If one electrode be placed on the lower dorsal spine, and the other above the pubes, the sphincter visicæ is almost completely without the circuit, and then receives very little direct influence. I have known electricity so applied in the case of females, from feelings of delicacy, when the sphincter visicæ was no doubt at fault. If the current is not applied directly to the part affected, it is best to dispense with the use of electricity altogether, for it most assuredly will fail.

Many of the cases I have had have been in females where the sphincter was no doubt at fault. In one case sent to me by Dr. Matthews Duncan, the urethra had been dilated to explore the interior of the bladder. This was followed by incontinence. Another woman had, after a difficult labour, always incontinence in the erect position. This case was cured by galvanism. I have had several who have been unable to retain their urine when making the slightest extraordinary exertion, such as going upstairs, lifting weights, and even when laughing or crying. I do not remember any of these cases which have failed to be cured by electricity. I am not including cases of old women, in whom violent bronchitic cough is so often accompanied by an escape of urine, although these cases no doubt would be improved.

Undue frequency of micturition is also relieved by galvanism, possibly by strengthening the nervous supply of the bladder so that the reflex act is not so readily induced. When this undue frequency is caused by cystitis, I believe that relief is affected by a healthier

condition of the walls of the bladder being induced by the current. I have had several cases of cystitis sent to me, and they all improved; some have been cured. One or two of these cases I have treated in conjunction with Mr. Bruce Clarke. In the application of electricity to the bladder for atony, incontinence, or frequency of micturition, I have usually employed the current for about eight or ten minutes every day or every other day, the greater majority of cases only requiring it about eight times. The strength of the current used has been from two to three milliampères up to five if the patient could bear it. Another affection connected with the urinary organs which can be relieved by galvanism is neuralgia of the pudic nerve. I have had one or two cases of the kind, and one was described a short time ago in the *Lancet*. The affection is associated with severe pain in the perinæum, often periodic, and increased by walking; it is sometimes accompanied by a painful spasm of the urethra whenever an attempt is made to pass water. The pain sometimes extends beyond the perinæum into the groin. The constant current applied in the same way as for incontinence of urine will generally relieve the pain after a few applications.

But one of the most useful applications of electricity to affections of the urinary organs is the treatment of stricture of the urethra by electrolysis. Mr. Bruce Clarke read a paper with me on the subject before the Royal Medical and Chirurgical Society in May last. No doubt this procedure will become one of the recognised modes of treatment of stricture in this country, as it has been for many years on the continent and in America. Since our paper was read the plan we advocated has been adopted by several surgeons in London and in different parts of the country. Favourable corroboration of our results has come from St. Peter's Hospital for Stone, from Dublin, and from private sources. It may not be destined to become the most usual mode of treatment, although the most effectual, because of the elaborate apparatus required, the numerous details connected with its application, and the great care and patience required for its successful employment.

Electrolysis is the name given to the power which electricity possesses of splitting up substances into their chemical constituents, not necessarily into their elementary constituents, because in complex substances an element immediately on its liberation will sometimes seize upon some other elementary substance, and combine to form a new compound. Electrolysis is purely a chemical action. It does not burn like the actual cautery, but dissolves substances chemically, that is, into the chemical proportions in which their elements have combined, not into the proportions of their atomic weights. Thus, in the electrolysis of water, there will not be one atom of hydrogen liberated to every sixteen atoms of oxygen, but there will be two atoms of hydrogen to every sixteen of oxygen, that is, in proportion to their chemical quantivalency.

In the decomposition of oxide of lead there will be 207 parts of lead liberated at the negative pole to every 16 parts of oxygen at the positive; while, in the decomposition of chloride of tin there will be 118 parts of tin to (2×35.5) 71 parts of chlorine. Tin in this compound being a dyad. An electrolyte (or substance capable of being electrolysed) must be a conductor of electricity.

The theory of Grotthuss, propounded in 1805, to explain the phenomenon of electrolysis is the one still adopted by physicists. It is supposed that a series of chemical decompositions and recombinations takes place throughout the electrolyte, forming a sort of chain between the two electrodes. For instance, in the electrolysis of water, it is supposed that the molecule nearest the positive electrode is split up by the action of the electric current, the one volume of oxygen being liberated, and the two volumes of hydrogen being repelled towards the negative pole seize upon the oxygen in the next contiguous molecule of water, thereby splitting it up, and again releasing two atoms of hydrogen towards the negative electrode to split up the next molecule of water, and so on across the whole volume of water until the negative electrode is reached. The last molecule of water which impinges upon the negative electrode being split up, and its hydrogen having no further molecules to decompose, is liberated in a nascent state. No appreciable action or change can be seen or detected at any point across the fluid; the gases are liberated only at the points of contact with the electrodes.

It is hard to believe that such a series of chemical combinations and decompositions take place in the course of the current when electrolysis is applied to the living body without giving some more positive evidence of tissue-change. Decomposition is only visible at the points of the application of the positive and negative electrodes. It was shown by Dr. Stone, in his recent lectures before the Royal College of Physicians, that the human body, after the passage of a continuous current of electricity for some time, becomes to a certain extent a kind of secondary battery, and gives off a current for some hours that is capable of deflecting the needle of a galvanometer; in fact, a certain amount of electricity becomes stored up in the animal tissues by polarisation taking place in the cells of which the several structures of the body are composed, and which are traversed by the current. When electricity is applied for the electrolysis of such simple compounds as water or hydrochloric acid, it is conceivable that a chain of decompositions and recombinations might possibly take place through the whole of the substance included between the two electrodes; but the absence of all appreciable change in the course of a current when applied to animal tissues is, I think, a strong argument against the theory propounded by Grotthuss.

According to the investigations of Dr. Althaus, in the electrolysis of animal tissues, a double decomposition takes place. The salts contained in the tissues split up, the alkalies going to the kathode, and the acids to the anode. The alkaline metals, potassium and sodium, from their great affinity for oxygen, decompose the water in the neighbourhood of the kathode, liberating the hydrogen, which appears as bubbles of gas. The caustic potash or soda thus produced saponifies the animal tissues just as when applied in the ordinary way, and produces a soft deliquescent eschar, which is said to heal with less contraction than an eschar produced by either a wound, burn, or an acid, and, therefore, the most suitable to obtain when the destruction of adventitious tissue is desired in parts in which it is particulary necessary that the least possible contraction and retraction shall subsequently take place. The acids forming the salts contained in the animal tissues go towards the anode (or electrode attached to the positive pole of the battery); generally oxygen is liberated, but the reaction which takes place at the anode depends very much upon the composition of the electrode. If the electrode is made of zinc, chloride of zinc is formed, which exerts its own specific action on the tissues, in addition to the oxidising effect of the liberated oxygen. The eschar formed at the anode is hard and comparatively dry; it is more limited, and the destruction of the tissue more complete; the part decomposed is, therefore, thrown off as a dry scab, and very little or no suppuration takes place. The eschar produced by the kathode is different. In its case, the caustic effects extend to a slightly wider area, are more intense the closer to the electrode, and the outer limits of the affected area are not so thoroughly destroyed, and sometimes, when a too strong current has been used, suppuration takes place, and more or less tissue sloughs away, in addition to that destroyed by the electrolysis, necessarily leaving rather a more prominent scar than is left when the anode alone is used. For the destruction of small growths on the face, or on parts where it is an object to leave as little mark as possible, it is, therefore, safer to employ only the anode. The part required is then quite destroyed, shrivels up, and becomes a scab, and healing proceeds beneath it. At the separation of the scab, the skin is left only a little whiter than the surrounding texture, and this difference in colour soon ceases to be noticeable. In a mucous membrane like the urethra, where it is impossible for healing to proceed beneath a scab, it is found that, with the anode, a sore is produced which gives rise to a tougher and more contractile cicatrix than when the negative pole is employed. There are other objections to using the anode in the electrolysis of strictures. The decomposition which takes place at the anode is affected by the substance of which the electrode is composed. The electrode itself is partly dissolved, and enters into the new combination of elements. Some of the metal would, therefore, become oxidised, and remain in the urethra, and the electrode would become so glued to the tissues that it would not be able to be removed without some violence. In the electrolysis of aneurysms, the oxidation of the metal forming the anodal electrode is, no doubt, an advantage, as, in addition to the coagulating effect of the positive pole, if a steel needle be used, there will also be a formation of chloride of iron which possibly assists the coagulation. Neither the negative pole, or the hydrogen or alkalies liberated in its neighbourhood have any effect upon metals, so that if an electrode be kept negative, no oxidation will take place, and, when it is withdrawn from the urethra, it will be as bright as when introduced.

The caustic effect of an electrode connected with the negative pole of a battery has these advantages over the use of the ordinary caustic soda or potash. As pointed out by Dr. Poore, it can be applied to parts difficult of access, as the male urethra or uterine cervical canal. It can be applied to these regions and others, such as the larynx, pharynx, or nasal duct, where the application of other caustics is attended with a certain amount of danger. Its effects can be limited to the points touched by the electrode. The caustic effect can be arrested, or not commenced, until the applicator, in the form of the electrode, is *in situ*, and the duration and extent of the caustic action is entirely under the control of the will of the operator.

For the treatment of stricture of the urethra, the electrodes we have used are catheter-shaped gum-elastic bougies, ending in a metal nickel-plated piece which is connected by a copper wire, which traverses the whole length of the bougie, with a binding screw on the handle. The bougies were made by Messrs. Maw, Son, and Thompson. In the electrolysis of strictures, it does not matter of what metal the uninsulated part of the bougie is made, as the electrode during the passage of the current is kept negative, and therefore the metal is not affected, and the bougie is withdrawn as bright as when introduced. In one or two of our earlier cases, so little sensation was produced in the patient during the passage of the current, that it was difficult to believe, in the absence of a voltameter, that any decomposition was taking place at all. The current was therefore once or twice reversed with the commutator for a second or two, with the result of immediately oxidising the nickel plating on our electrode, which will be seen in some of the instruments I have brought with me. The shock of making and breaking the current soon satisfied us and the patient that some uncommon force was present in his urethra. The other electrode in the shape of a small flat plate of tin covered with amadou to retain moisture, is placed under the patient's back if he is in a recumbent position, or it may be placed on any other indifferent part of the body, such as the inside of the thigh. This metal and amadou plate is soaked in salt and water, and then placed in a cover made on one side of some waterproof material, so that the bedclothes or clothes of the patient may be protected from the wet. The metal plate is made positive.

An ordinary bougie is first passed down to the stricture, and by its means the distance of the stricture from the meatus is ascertained, and a mark made on the bougie. It is then found out what sized bougie will pass the stricture. Say, for instance, it is ascertained that a No. 3 bougie (Eng.) will pass; a No. 5 electrode is then taken and passed down to the stricture, where it is arrested. It can be made certain that the electrode is arrested at the stricture by previously marking it, after measurement and comparison with the bougie first passed. When the electrode is in position against the stricture, it is connected with the negative pole of the battery, and the current closed and then gradually increased without breaks until the maximum strength of current is reached that it is intended to employ, namely, about five or six milliampères. The electrode is kept gently pressed against the stricture in the direction of the ordinary course of the urethra. No force is used, but the electricity allowed to do the work. The surgeon has to keep his attention continually applied to the electrode, so as to guide it in the right direction, otherwise a false passage may be dissolved into the side of the urethra. Therefore skill in passing a catheter is a requisition. In the hands of a surgeon who knows his way into the bladder, a false passage is not more likely to be produced than is the case in passing an ordinary catheter. The electrode is to be kept gently pressed against the stricture in the normal direction of the urethra until, from the dissolution of the obstacle in front of it, it passes into the bladder. The current then should immediately be cut off, and the bougie withdrawn. The duration of the operation depends upon the density of the stricture and the strength of the current used.

Although as a guide I have mentioned that the current strength should be about six milliampères, the strength really used is regulated by the patient himself. One great object is to avoid giving pain, and by this means a too great destruction of tissue is prevented. We require our patient to be conscious; therefore no anæsthetic is used, or indeed necessary, for the only sensation produced is a slight pricking at the seat of the stricture. If anything amounting to pain should be complained of, the strength of the current has to be diminished. On removing the electrode, there is sometimes found on it some slimy matter like disintegrated tissue; and the patient is often immediately after its withdrawal enabled to pass urine with increased facility and with very little discomfort. After the operation, we have left the patient entirely free without any interference for usually the space of ten days or a fortnight, and then have tried what sized bougie would pass. If no disintegrated tissue comes out upon the electrode, some sort of slough or eschar is thrown off at a later period—the next day, or a day or two after the operation, during the passage of urine.

Going back to the example we have already taken, if, after dissolving the stricture, it has been possible to pass a No. 5 electrode into the bladder, after the rest of a fortnight it is usually found that a No. 7 bougie can be passed. Should that be the limit of the increased calibre of the passage, a No. 9 electrode is taken, and the same operation repeated as before described, and so on after the interval of another fortnight, until the stricture is cured. Before the Royal Medical and Chirurgical Society we summed up the results of our investigations as follows: In the treatment of stricture of the urethra by electrolysis:—There is usually no bleeding. If hæmorrhage does occur, it is accidental, and usually shows that a too strong current or the wrong pole of the battery has been used. No anæsthetic is required. It is an assistance to the operation that the patient should remain conscious. The pain or discomfort produced is trifling. The patient can in the case of a slight stricture pursue his ordinary occupation during the period of treatment. No antiseptics are required, as the process itself is aseptic. In the majority of cases there is no contraction or return of the stricture.

Eschars formed by caustic alkalies are said to heal with less contraction than wounds produced in any other way, and electrolysis with the negative pole is a means of applying the same destructive action as is caused by the caustic alkalies to parts difficult of access in a way which is impossible by any other method. But beyond this, the current appears to set up an absorptive action around and within the dense cicatricial tissue which forms the stricture, so that it gradually disappears. This we have seen in several ways. After electrolysis has proceeded so that the electrode will pass into the bladder, it is found a fortnight later that a bougie of two sizes larger can be passed, Additional absorption must therefore have taken place in the interval. And again in penile strictures, where we have been able to feel the hard dense tissue of which they are formed, a few days after electrolysis, we have noticed that this hardness has disappeared.

The destruction of substances by actual heat can be accomplished by the agency of electricity; but this is by using the current in an entirely different method to that employed in electrolysis, and is called galvano-cautery. This method of using electricity is most useful in surgery under some circumstances, and is applicable where Paquelin's cautery is not. It especially useful in operations about the genito-urinary organs. It can be placed against the part it is wished to destroy or remove before it is hot. This is the great advantage of galvano-cautery. When using any other form of cautery for the destruction or removal of growths within the uterus or bladder, the instrument has to be passed along the vagina or urethra, or any artificial passage made into the bladder, after it is heated, and may burn the walls of the passage, unless the greatest care is exercised; and also it cannot be so carefully adjusted to the surface or peduncle of the part to be removed as if it were cold. But the platinum wire connected with a galvano-cautery battery can be placed with the greatest precision and care around the part it is wished to remove. There need be no hurry for fear of the instrument getting cold, for the circuit is not closed, and the wire does not get hot until the instrument is in position and the operator quite ready.

I have brought this brief description of the uses of electricity in the treatment of diseases of the urinary organs thus abruptly to a close, as I do not feel justified in trespassing upon your kind attention and forbearance any longer.

THE EMPLOYMENT OF ELECTRICITY IN THE TREATMENT OF DISEASES OF THE URINARY ORGANS.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

By W. BRUCE CLARKE, M.A., M.B.Oxon., F.R.C.S.,
Assistant Surgeon to, and Senior Demonstrator of Anatomy and Operative Surgery at, St. Bartholomew's Hospital.

When the therapeutic applications of electrolysis are under consideration, it is most important to select a thoroughly effective battery. For this purpose a Stöhrer's battery, consisting of a series of zinc carbon elements, is one of the best that can be employed, and it should consist for the purpose in question of from twenty to thirty cells of ordinary size.

For the purpose of electrolysis, each carbon plate should be coupled to its zinc fellow in order that a current of high electro-motive force may be obtained; whilst if the battery is to be used for galvano-cautery purposes a few large cells are required, or, what amounts to the same thing, all the carbons must be coupled together, and all the zinc elements, thus giving rise to a current of great quantity. The strength of the current will be indicated by the galvanometer, and it is to this piece of apparatus that great care should be directed, for by it alone can the surgeon obtain any accurate register of the change that is being effected within the patient's body.

The employment of a given number of cells is rarely any indication of current strength, and therefore of the physiological effect which is produced, for that number of cells which is sufficient at the beginning of an operation to produce a given current-strength, will, by constant

use, soon diminish in power, and register a lower current-strength; and if then some cells be used at intervals of a week, there will be a greater discrepancy still, thus indicating how important and indeed absolutely essential is the use of some register, if any approach to scientific accuracy is to be obtained.

Electrolysis has been defined as the splitting up of chemical compounds into their elements. It must not, however, necessarily be inferred that the only change which is produced is the splitting up of the tissues into an acid, an alkali and water. It is more than probable that the substances thus produced, being in a nascent condition, exercise some influence on the various tissues, and so give rise to alterations in their nutrition, which are difficult exactly to estimate, except by the functional changes which are rendered evident, when a course of electrical treatment has come to an end.

The exact strength of current to be employed, and the mode in which the current should be used, and the length of time over which the treatment should extend, are all matters of experience in each case, and cannot be laid down as general principles. On the present occasion, I propose to limit myself to the application of this plan of treatment in gleet, cystitis, incontinence and stricture.

Gleet.—Where the discharge has been in existence for some time, and has not yielded to ordinary remedies, more especially when after the passage of a catheter it is evident that there is some one spot in the urethra which is more tender than it should be, the application of a bougie electrode in the following manner will often effect a complete cure. The electrode is an ordinary catheter with a metal tip, and containing a copper wire by which the metal tip is connected with the negative pole of the battery. It is passed down to the tender spot, and moved lightly for half an inch each way, so as to ensure that the current shall permeate the sore portion of the urethra thoroughly. The positive pole of the battery, after being wetted, is placed in connection with the sacrum, if the patient is in a recumbent position; if not, it may be attached to any convenient portion of the body; for example, the inner side of the thigh.

The following case illustrates the value of the treatment:—November, 1885.—J. N., aged 20, had his first attack of gonorrhea four years ago; has had in all six attacks. His present gleet has never ceased for two years, notwithstanding the application of various injections and the passage of catheters at intervals. There is a sore spot in the urethra about two inches from the orifice, which spot gives rise to pain on passing water, and more especially when a catheter is passed.

He has suffered for between two and three years with gonorrhœal rheumatism, and at one time his right knee joint was so severely inflamed that the question of amputation was considered. At the present time both knee joints are much enlarged and distended, and the patient is unable to walk more than a mile without pain. His feet have been much swollen, and the source of considerable pain from time to time. The bougie electrode, No. 9, English, was passed down the urethra and pushed backwards and forwards over the sore place for six minutes, a current strength of six milliampères being employed. No pain was complained of. On the following day, as well as on the evening of the operation, slight pain was felt in the testicles, but with this exception no inconvenience whatever was suffered. Three weeks later the gleet had all but disappeared, and about two months later, he reported himself absolutely well, and able to walk comfortably eight or ten miles. His knee joints, with the exception of some thickening of the synovial membrane, appeared to be perfectly normal. He has remained well up to the present time (Aug. 1886), now some nine months since the passage of the electrode bougie.

Cystitis and Incontinence.—The mode of applying the electrical current in both these affections is the same. The positive pole is best fixed over the lumbar spine; and the negative pole is either held in the perinæum or passed into the bladder itself, and a current of from 2½ to 5 milliampères passed through the body for a space of from five minutes to a quarter of an hour. In some cases, it seems to answer better if the two poles of the battery are placed, one over the pubes, and the other in the perinæum. The following case will illustrate the result of such a plan of treatment in cases of incontinence.

February 4th, 1886.—C. H., aged 14, came under my care at St. Bartholomew's Hospital, suffering from incontinence of urine. He had suffered all his life. At times the affection is better, but he says he rarely passes a night without some urine dribbling from him. He has been under treatment from time to time, taking medicine; but he has not in any way benefited by the treatment he has received.

A plate in connection with the positive pole was placed upon his lumbar spine, and the negative pole was held against the perinæum. Current strength, average 5 milliampères, during a period of ten minutes.

February 8th, 11th, 15th, 18th. Application repeated. He reports himself as feeling perfectly well, and has not passed any water involuntarily at night during the last week.

February 25th. Application repeated.

March 11th. He returned, complaining of not feeling quite so well. He has passed a good quantity of water during the night on two occasions. Application repeated.

March 18th. Application repeated.

April 27th. He came and reported himself quite well.

The following case of cystitis will illustrate the advantage of the electric method of treatment.

H. W., aged 52 (Vol. 1, p. 88). January 7th, 1886.—Has been in the habit of passing a catheter for himself for the last eighteen or twenty years, on account of a stricture which was then dilated. No. 10 black has been the size he has been in the habit of using. He has passed it about once a week or once a fortnight. About three months ago he found his micturition become more and more frequent, and he consulted a doctor, who told him not to use a catheter. At present he gets up in the night four or five times to pass his water, and passes it about once every hour in the day time. Urine foul, a little thick, 1014, alkaline with a trace of albumen. Passed the electrode bougie into the bladder, and connected it with the negative pole of the battery. A current strength of 5 milliampères was employed for ten minutes.

January 11th. Much the same; application repeated.

January 14th. Current similar in every respect was employed. The current was employed regularly twice a week until the 21st of January. He then expressed himself as feeling very decidedly better. He has not passed water at all during the last two nights. Urine 1016, acid. No albumen.

January 25th. Says he is quite well. The treatment was continued for another week.

April 15th. He came to see me, and told me he was perfectly well. He had not passed a catheter since.

The treatment of strictures by electrolysis has already been considered in a paper which was read by Dr. Steavenson and myself before the Medico-Chirurgical Society during the present year. The plan that was adopted is as follows:—An instrument similar to that which has already been described as applicable to a case of gleet was employed. Various sizes were made, corresponding to the sizes of the ordinary English catheters having a metal end, and containing a copper conducting wire. The stricture to be operated on was then carefully measured with soft catheters and *bougies à boule*, after which a bougie electrode was selected two or three sizes larger than the largest bougie which the stricture would admit.

This electrode bougie was passed down and held very lightly against the stricture, and the instrument was connected with the negative pole of the battery. The positive pole was brought into contact with the back by means of a pad, placed over the lumbar spine, on which pad the patient lay. A galvanometer was introduced into the circuit, in order to test the current strength, which varied from one or two milliampères up to five, or occasionally seven, according to the sensations of the patient.

After a period varying from one or two minutes, to as much as half an hour in some few cases, the bougie electrode was found to have passed through the stricture, and the treatment was for that day discontinued.

It was rarely the case that any pain was complained of afterwards, and usually the patients were able to make water with greater comfort within a few hours of the operation. In some instances a smarting sensation was experienced for several days afterwards, as if the patient were suffering from an attack of gonorrhœa; but the sensation always speedily passes off. After the lapse of a fortnight, or even longer, a catheter was again passed, and it was almost invariably the case that an instrument one or two sizes larger than the electrode bougie which had been employed could be introduced with ease.

The following case will illustrate the general mode of procedure.

D. C., aged 52 (Case I.), had had trouble with his water for twenty years. Has frequently had his stricture dilated, but it has always relapsed after a few months, obliging him to seek relief at some hospital.

August 8th, 1886. Admitted to St. Bartholomew's Hospital. The urethra was carefully examined with catheters. A No. 14 English black passes to bulb, but only a small catgut passes into the bladder.

August 13th. The patient had been in bed for five days, and no further progress could be made.

A No. 5 electrode bougie was held against the stricture for half an hour, no pressure being exercised; the patient complained of no pain or uneasiness whatever. The catheter was then withdrawn and bent slightly, after which it was again introduced, and passed with ease

into the bladder, the patient experiencing a slight sensation of pain. The instrument was at once withdrawn. For the next few days the urethra, at the site of stricture, was sore on micturation.

August 28th. He was examined with a catheter for the first time. Nos. 7, 8, and 9 passed easily into the bladder, but he experienced a slight soreness at the seat of the stricture.

September 9th. No. 10 bougie electrode passed painlessly through the stricture in four minutes and a half.

The case was last heard of in January, at which time he still experienced no difficulty whatever in the passage of his water. As to the question of the permanency of the results which are obtained by means of electrolysis, no definite answer can be given until a longer period has elapsed; to judge, however, from the reports of similar cases from America, the patency is likely to prove permanent.

Mr. ERICHSEN said that Mr. Bruce Clarke appeared to have applied his method in the treatment of cases essentially dissimilar. He could not understand how electrolysis could be of use in the case of incontinence of urine in a boy. He noticed that the electrodes were in reality graduated bougies, and possibly much of the good may have been attributable to their employment as such. With regard to the treatment of stricture by electrolysis, he remembered a M. Mallett, a French gentleman, who had treated several cases of stricture at the University College Hospital some years ago, but his results were by no means satisfactory. So far as the electrical action on a stricture was concerned, when decomposition took place, it was a different thing; and, so far as he was able to understand, the system was not altogether dissimilar to the practice of treating strictures by potassa fusa, when the immediate result was good, but the ultimate results were very bad. He questioned whether similar results might not follow this electrical action.

Mr. WHITEHEAD (Manchester) wished to be informed whether the readers of the papers had been able to demonstrate that electrolysis had the power of destroying cicatricial tissue in exposed parts of the body, and he would like to inquire from them what new tissue they supposed was substituted in the place of the stricture which they assumed to be disintegrated by the chemical decomposition induced by electric currents.

Mr. VINCENT JACKSON said he could not criticise the paper. Those who had had much practice in the treatment of stricture knew only too painfully that no stricture was ever really cured; and, following the treatment by the surgeon was a life-long treatment by the patient, if the benefit was to be permanent. Could Mr. Bruce Clarke give any results in the treatment of cicatricial tissue on the surface of the body where its action would be more easily studied?

Mr. BRUCE CLARKE, in reply, acknowledged that he was not able to explain why good results accrued in certain cases, but that they did follow he could bear witness. One of the cases had had extravasation of urine, and was incised in the usual way. A year ago he came to him, and at that time the stricture would only allow a catgut to pass. In six weeks he was discharged by him quite well. Of course he could at present only hope that the good effects were permanent. He had of late been trying it on a case of stricture of the meatus, and had also tried it on a large strumous scar of the neck, and he had been greatly surprised at the way the scar had seemed to melt away. He was sure that his results were better than those obtained by incision.

ON THE TREATMENT OF CERTAIN FORMS OF URETHRAL STRICTURE BY INTERNAL AND EXTERNAL URETHROTOMY COMBINED.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

BY REGINALD HARRISON, F.R.C.S.,

Surgeon to the Royal Infirmary, Liverpool; Lecturer on Clinical Surgery, Victoria University.

IN a paper published in the course of last year (BRITISH MEDICAL JOURNAL, July 18th, 1885), I advocated this method of treating certain strictures of the urethra, and illustrated my remarks by a number of cases where the double proceeding had been adopted. Lapse of time and a further experience induces me to take this opportunity of again referring to the subject.

In the examination of a large number of stricture cases extending over many years, and representing the practice of different surgeons, t seemed very evident that no method of treatment was free from a recurrence of the contraction, and that certain methods of operating were almost uniformly attended by the subsequent development in varying degrees of a special form of fever which was neither free from danger nor inconvenience. It further appeared that certain of the methods employed, though they afforded more or less temporary relief, they subsequently considerably increased the nature and degree of the contraction—that is to say, certain wounds of the urethra made for operative purposes and for the relief of symptoms, were followed by the development of a further quantity of scar, or contractile tissue. In analysing the pathology of wounds of the urethra, it seemed to me that they might be divided into two classes, (1) wounds which are not followed by contraction; (2) wounds which are. I think it may be shown that these two conditions have determining causes.

Amongst the former category, where wounds of the urethra are not followed by stricture or contraction, are the incised, and sometimes lacerated, wounds made by surgeons for the removal of stones, or by the withdrawal of such bodies from the bladder. I do not know of a single instance where a well performed lithotomy has been followed by stricture. On the other hand, I have known, in my own practice, of two bad stricture cases, perfectly cured by the cutting operation necessary for the removal of the stones from the bladder, which complicated them. Of wounds of the urethra which most frequently give rise to strictures of the worst kind, are those following ruptures of the urethra from injuries applied to the perinæum. I have seen a number of these cases, and I think I may say with accuracy, it by no means follows that a traumatic stricture should ensue. Where a ruptured urethra is incised, and the wound thus caused assimilated with a lithotomy-wound, perfect repair may follow without a sign of subsequent contraction. I know several instances of this. Hence I think we may arrive at a conclusion that the character of the scar-tissue which follows a wound or laceration of the urethra, much depends on the circumstances under which the repair of the lesion takes place.

Passing to the second conclusion which the examination of the treatment of urethral stricture suggests, namely, that certain methods of operating are almost invariably attended by the development of varying degrees of a distinctive kind of fever or pyrexia, it seemed that this, also, was mainly determined by the conditions under which a wound of the urethra was placed. Wounds, for instance, made for internal urethrotomy, are almost always followed by this fever; after lithotomy, it is never seen. The experience of Syme in developing and perfecting perineal section is strongly corroborative of this. This, as well as other evidence which might be adduced, favours a conclusion that the occurrence of urinary fever—urethral fever, as it is sometimes called—is determined by the relations existing between the wound and the urine. This point I have recently discussed at length in the last volume of the *Liverpool Medico-Chirurgical Journal* (July, 1886), in connection with M. Bouchard's views relative to toxic urine.

On carefully considering the whole subject of wounds of the urethra, it seemed that if it were possible to assimilate the treatment of certain forms of contractile stricture with some operations on the urinary apparatus, where there was an absence of any special form of fever or septic intoxication following them, and where the wounds inflicted did not heal with a scar-tissue, which subsequently manifested an inordinate disposition to contract, we might obtain more satisfactory and permanent results. With these objects in view I determined in suitable cases, after dividing the stricture from within by some form of internal urethrotomy, to puncture the membranous urethra, and by introducing a drainage tube into the bladder to carry off the urine directly by a new route.

I have now operated in this way during the last two and a half years twenty times, with satisfactory results. I should add that these have all been selected cases, where the degree of contraction was unusually great and resisting. From this experience I may repeat what I have said before, in reference to the double operation. We have been entirely free from rigors and fever, such as follow internal urethrotomy; all the cases have so far as I know done well; in some that have been steadily observed, no contraction has taken place even where the use of the bougie has been entirely discarded; in others, though the patients have continued to use an instrument, their strictures have shown no tendency to trouble them. Though the majority of strictures are, I believe, best and most safely treated by some form of gradual dilatation, I can commend the double proceeding for those exceptional instances to which I have briefly referred—cases which resist dilatation, and must eventually go on from bad to worse.

I am quite aware that there is no novelty in what I have been commenting upon. Professor Annandale (*Edin. Med. Journal*, June, 1875) has practised this operation, and published observations relating to it. Dr. F. N. Otis, of New York, writes to me, "I have ad-

vocated the combined method for many years of all strictures which present in the anterior urethra with close structure at or deeper than 5½ inches, and my experience gives me a growing confidence in its value."

I shall only trouble you with the details of one case, which I have selected as illustrating the various points connected with this operation.

A labourer, aged 39, was admitted in April, 1885, with a tight stricture of three years' duration, which had resisted treatment by dilatation. On his admission, a No. 3 English metallic bougie was all that could be passed. The penis was œdematous, and there were several perineal and scrotal fistulæ. As extravasation of urine was impending, I operated without delay. Dilatation with bougies having been practised so as to permit me to pass a urethrotome, the stricture was freely divided. To ensure complete divulsion of all contraction, a Gross' dilator was introduced and withdrawn with the blades partly expanded. This is an expedient often adopted to ensure a perfectly free canal. Then a grooved lithotomy staff was passed, and the patient being placed in the lithotomy position, the membranous urethra was punctured, and a tube introduced into the bladder. In addition, a piece of drainage-tube was drawn along the anterior portion of the urethra, through the meatus, and out by the perineal wound by the side of the bladder drainage-tube. This is an expedient which is to be recommended where the stricture is very long, as it allows of this portion of the canal being washed out frequently with an antiseptic fluid. The operation was not followed either by rigors or fever. The penile drainage-tube was retained for a week; the bladder drainage-tube, though changed from time to time, was not finally withdrawn until the seventeenth day after the operation. The patient was discharged cured, with his fistula healed, and a full-sized urethra on the forty-third day. He has since reported himself, and no contraction has shown itself, though he has neglected to pass a bougie for himself as directed. In this instance, by reason of the sudden withdrawal of the urine into a new channel, the fistulæ were no longer flushed by the urine, and thus suppuration was retained in them. This necessitated the subsequent opening of two or three of the sinuses, and their independent drainage until repair had time to take place in them. This is an important point to attend to in those instances where the double operation is resorted to for old strictures complicated with urinary fistulæ. In no instance has the opening, made in the perinæum for bladder-drainage in connection with these cases, proved permanent.

Dr. WARD COUSINS said that he thought the Section was indebted to Mr. Harrison for accentuating the value of an old proceeding, and exhibiting its safety-valve action in cutting operations on the urethra. He (Dr. Cousins) believed that it rendered internal urethrotomy safe, and removed practically all its danger from septic inoculation. It was the only method of ensuring success after plastic operations on the penis, and he considered that it was useless to attempt to close penile fistulæ without drainage of the bladder. He mentioned a recent case of large penile fistula, associated with traumatic stricture of great severity, in which a successful result was obtained after drainage for two months through the perinæum.

Professor W. H. PANCOAST, of Philadelphia, United States of America, agreed with Mr. Harrison that it was a good suggestion, the tapping the membranous part of the urethra, to prevent urinary infiltration of wound. He himself preferred, as a rule, internal urethrotomy of stricture, and then passed in a bougie-catheter, or a soft catheter to be retained for a few hours, to prevent the urine soaking into the incised stricture. He showed the bougie catheter, which he often used, of different sizes, made of silver, with an olive end and two curves. The handle was notched, and could be removed. The opening for the outlet of urine was covered by the handle, and was on the under-surface of the instrument, so that, by simply pulling the handle a little forward, the outlet was exposed, and the urine could flow freely. Another advantage that, in ordinary catheterisation, the urine flowed out vertically downwards into the bowl, and did not squirt on or sprinkle the operator. An opening in the end of the bougie enabled the surgeon to clean it, or to inject water. In fastening it for retention in the bladder for a necessary time, Professor Pancoast tied a bandage around the waist of the patient; then two strings or ligatures were fastened to the bandage in front and behind, and passing by the groins on each side of the scrotum. To these strings in the groins were fastened two strings attached to the handle. Two more strings attached to the handle were fastened to the waist-bandage, in front and behind, on the buttocks, thus staying the bougie catheter like a mast. Professor Pancoast stated that in operating for fistulæ of the spongy part of the urethra, he had already adopted the principle of perineal drainage, and had cured some bad urethral fistulæ by plastic operations, tapping the membranous urethra through the perinæum, so as to draw off the urine, and prevent it reaching the wound. This had been successful, and the perineal wound healed readily. Professor Pancoast did not believe in making one deep incision into the stricture, but, with his urethrotome, made several small and not deep incisions. Multiple incisions he found the most successful, as the several small incisions into the cicatricial tissue enlarges the urethra more than one single, even deep one. He then kept the urethra open by bougieing. He said that he only resorted to urethrotomy when the stricture would not give to the treatment by bougies. He showed his urethrotome—a steel instrument, the model taken from Syme's staff for perineal section, containing a small concealed knife, which projected at the shoulder of the instrument. The probe end was perforated by a grooved opening, through which a filiform bougie passed readily. His method—which he has always found successful—was to pass first the filiform bougie into the stricture, then passing the probe end by its hole over the filiform bougie, he delicately pushed down on it the instrument into the urethra. When the shoulder of the urethrotome reached the stricture, he pressed forward the blade, which, now being exposed at the shoulder, could cut the stricture in any and every way. The urethrotome then passed in upon the filiform, which was slowly withdrawn, and the instrument passed into the bladder. He occasionally, in bad cases, had left the instrument in the bladder for twenty-four hours. He usually withdrew it, and then introduced a soft catheter or his bougie catheter.

Mr. SAMUEL BENTON mentioned the case of a gentleman, aged 41, on whom he had performed the operation of internal urethrotomy twelve months ago. This patient had suffered from an intractable stricture for so many years that his health was undermined by chronic cystitis, accompanied with pus in the bladder. For ten days after the operation, the constitutional disturbance was sufficient to cause anxiety; but he was now well, and had increased a stone in weight. A bougie, No. 12 English, had passed easily into the bladder a week previously. The question which a surgeon should ask himself was: If I had a stricture of the urethra that was slowly but surely undermining my health, and would not admit of dilatation, how should I like to be treated? Having seen Mr. Bruce Clark operate, Mr. Benton had no hesitatation in saying that he would prefer the operation by electrolysis, and for the following reasons. Electrolysis was a painless operation, requiring no anæsthetic, and, as far as we knew at present, had not the same tendency to relapse. In external and internal urethrotomy, on the other hand, relapses did occur. Either operation was painful, requiring an anæsthetic, and was often followed by grave constitutional disturbance.

Mr. WHITEHEAD congratulated Mr. Harrison on having solved a surgical difficulty of no small importance if he could secure absolute drainage of urine, for even a short period, after surgical operations on the anterior urethra. Partial drainage had long been practised, and with partial success, but attempts to divert the entire stream, and prevent the smallest quantity of urine passing over recent wounds, had generally proved abortive, and it must be acknowledged that a copious and constant stream of urine over a raw surface was innocuous compared to the protracted contact of a few drops of stagnant urine. The value of Mr. Harrison's tubes evidently consisted in their elasticity, and the advantage of having a great variety available, which permitted the individual membranous urethra being accurately fitted. He was hardly, as yet, prepared to accept the suggestion conveyed by Mr. Harrison's paper, that this expedient would finally dispose of what, for a more scientific term, we called urethral fever.

Surgeon-Major O'CONNELL RAYE said that, having read Mr. Harrison's paper advising perineal opening combined with internal urethrotomy, he had adopted the procedure in three cases, with the result of avoiding all urethral fever. He was unable to speak of the permanency of the results, but the patients left hospital quite well.

MUNIFICENT CITIZENS.—Glossop is fortunate in being the recipient of several munificent gifts for the foundation and promotion of public institutions, amounting in all to £35,000. Mr. Daniel Wood, a cotton-manufacturer, has offered to build a hospital at a cost of £5,000, and to endow it with £20,000. Other sums have been given for the purpose of erecting and endowing public baths, for the establishment of a free library, and for the erection of a town-hall, by other donors.

COST OF ASYLUM PATIENTS.—At a meeting of the St. Saviour's (Southwark) Board of Guardians, it was stated, in reply to a question, that the cost of maintenance at the Caterham Asylum, including food and clothing, was 6d. a day for each inmate, being the lowest cost in any asylum.

THE MULTIPLE CAUSATION AND THE IMMEDIATE TREATMENT OF CONGENITAL CLUB-FOOT.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

By FREDERICK CHURCHILL, M.B., F.R.C.S.,
Surgeon to the Victoria Hospital for Children.

BEFORE discussing any of the detailed statements that have been lately published concerning the part played by the tarsal ligaments in maintaining and perpetuating this deformity, I desire to explain my terminology.

By multiple causation I shall endeavour to show that not one tissue more than another—that is, to the exclusion of another—is involved as the developmental cause of this deformity. Relatively, each tissue contributes its own share in the irregular growth, and consequent displacement of the tarsal bones.

"As the trunk is bent the tree inclines."

The vinedresser knows how to train and prune his vine stock to suit the capacity of his vinery; but, in so doing, he develops a knotty deformed condition of the stem, every tissue of which is involved in the outgrowth. In the same way, tendons, ligaments, fasciæ, and bones each become subject to the contractile force of the involved muscles in their relative proportions. They cannot expand with the customary freedom of an unfettered limb, and so they grow abnormally, because held down in one constrained position by the faulty tendons.

If we are at liberty to assume the accuracy of this, the first postulate—namely, multiple causation, then we may legitimately accept the second as a natural sequence thereof. By immediate treatment, I mean forcible and powerful extension, and manipulation of bones, ligaments, and fibrous tissues immediately after dividing the faulty tendons. Instead of waiting for some kind of mythical union to take place between the divided and widely separated tendons, such as would suffice for powerful stretching within a week or two after the tenotomy, I proceed at once to mould the bones into shape. I do not, of course, deny that union does take place between the separated ends of a tendon, but it must take months before the consolidation is sufficiently firm to allow this new material to be stretched to advantage. Is it possible to conclude that a new bond of union—say half an inch in length—could be firmly consolidated in the short space of time usually allowed, and then yield to the extensile force of a Scarpa's shoe without snapping asunder? Suppose we agree that it is possible, then it is obvious that the surgeon must exercise great caution, and limit his leverage operations so as to avoid such a catastrophe as the separation of this new bond of union.

Mediate treatment is that which delays all efforts at extension and manipulation, until a firm bond of union exists to fill up the gap between the divided ends.

I would limit my observations at present to the case of infants and young children, in whom efforts for repairing the breach must be far more active and efficient than is the case with adults; for in them the tendons and tissues are very rigid, and not nearly so vascular as in infants. We err largely if we suppose that the same kind of treatment will suffice for adults as for young children. A powerfully developed muscle that has been in use for years, and connected with a tendon that is very rigid, and permeated with contractile tissue, must be much more difficult to repair than the soft pulpy tendons of young children. I think there are surgeons who attach undue importance to the spasmodic contraction of the faulty muscle, and others who consider the rigidity of the ligaments as the chief, or only cause of the deformity.

I believe we shall find that intra-uterine pressure, by limiting the growth and development of the limb, constitutes the primary and provocative cause for the appearance of this deformity. I do not say, as many have, that we shall find a decrease of liquor amnii, causing the fœtus to be gripped and imprisoned by the contractile walls of the uterus, so as to limit and restrain the movement of the limbs. Nor do I attribute much blame to the pernicious habit of tight lacing, for then we should find a large percentage of club-foot births occurring among ladies of fashionable society; but this is not the fact. Is it not more likely that the movements of the fœtus have been restrained by the impaction of an abnormally long head at the brim of a pelvis that is also abnormal? The vitality of the child during its intra-uterine growth being for some reason diminished, the normal and vigorous struggles and revolutions of a healthy fœtus are relatively absent, and so the foot becomes cramped in its development. If we may consider the nervous system as primarily provoking some spasmodic contraction of the involved muscles, is there not a strong argument against any local specific cause? It would not be fair to conclude, because we have made careful dissections of talipedic limbs, and of the muscles and nerves, without finding any structural disease, or apparent source of irritation, that none exists. We may make numerous sections of the brain and spinal cord, and subject them to careful microscopic examination, without any specific lesion being found; yet the cause of it all may actually reside in the nervous system, a functional rather than a structural lesion. Is it not possible to infer that some reflex irritation of the uterine branches of the hypogastric plexus, distributed over the surface of the uterus, was sufficient to keep up a spasmodic contraction, or tension of the uterine muscle, so as to abnormally confine or limit the movements of the retained fœtus during its growth and development?

Some recent writers on the etiology of congenital club-foot appear to claim, as a new discovery, the shortened condition of the tarsal ligaments as a chief cause of this deformity; whereas many writers on the subject, especially Mr. Adams in his prize essay, have devoted considerable attention to the consideration of these structures as contributing to the perpetuation of the deformity.

Alluding to the dissections made by himself and Mr. Shattock, Mr. Parker informs us that "neither of them was prepared to find that, after all the soft parts had been entirely removed from the limb, the deformity would persist in just as marked a degree as before; yet such was the case." Nor were they "prepared to find the nerve-centres, the nerve-trunks, and the muscles of the afflicted limb in a state of absolute histological integrity." Yet this is not an original discovery. Who, that has visited our museums and studied the osteology of talipes, could arrive at any other conclusion than that obliquity of the neck of the astragalus and compression of the inner border of the internal cuneiform and scaphoid, etc., are prominent and characteristic features of this deformity at all ages?

On the other hand, is it not the experience of every surgeon who has operated upon simple cases of talipes varus, for example, in infants, to find that a very accurate rectification of the foot was obtained, in many cases, the moment the tendo Achillis was divided? A very simple retentive apparatus may suffice to counterbalance the tendency to inversion, proving thereby that the primary cause of the deformity was muscular. The subsidiary causes are arrested development of bone, ligaments, and fasciæ.

Not only does the application of some retentive apparatus serve the purpose of rectifying the malposition, but also, by elevating and everting the foot, the metatarsus and phalanges are brought under the contractile energy of the extensor muscles and tendons. By the addition of external friction and stimulation, we assist the extensor muscles to contract and retain the limb in the normal position of equilibrium.

If we assume that the majority of cases are complicated by serious deformity of bones, and a resulting contraction of the tarsal ligaments, we encourage the idea that operative measures will inevitably be required for these deeper structures; but this I do not find to be the fact. When infants are brought sufficiently early, that is, during the first twelve months, I consider that manipulation and extension are all that is necessary to rectify the deformity after tenotomy. It is only in extremely rigid cases that division of the ligaments is required.

At page 144 of my book on *Face and Foot Deformities*, I lay very particular stress upon "the importance of rectifying the osseous deformities by long continued treatment of the distorted bones and ligaments, besides the customary division of the contracted tendons, such treatment to commence at the earliest possible period of infantile life;" and at page 151, "I connect intra-uterine compression and spinal irritation with a distinct and probably subsequent distortion of the bones and articulating surfaces. Placing the causation, then, of such deformities in what would appear to be the direct order of sequence, I should say we have mechanical constraint, which may have been due to a primary reflex spasm of the developing uterine muscle. Then we have the dynamic agency of the fœtal spinal cord contributing to the distortion by reason of the incarceration of the foot in such a confined space. And, lastly, we have the growth and development of the bones in the direction which is least affected by these two causes. The deformed bones always contribute largely to the obliquity of the limb in its crippled condition. Whether the partial paralysis of the opponent muscles is due to the prolonged inactivity during incarceration, or that the paralysis was the primal cause of the distortion, and so of the incarceration, I cannot attempt to decide."

It only remains for me now to illustrate briefly the methods I have adopted for the immediate treatment of congenital club-foot in young children.

Before condemning the use of Scarpa's shoe as a powerful lever for stretching faulty ligaments, I should like to bear testimony to the

value of such an instrument in relapsed cases, and also for the rigidly misplaced bones of neglected adult cases. Doubtless an appliance of this sort, in its varied modifications, is required for the successful treatment of such complications. I refer now to club-foot deformities in young children with pliable ligaments.

After dividing the faulty tendons, I proceed to manipulate the astragalus and other misplaced bones, so as to stretch the ligaments and replace the foot in its normal position. A firm but elastic roller of Welsh flannel is applied to the foot and leg in two or three layers. Stretching the bandage slightly, I make the turns so that they may grip the soft fleshy elastic limb of the infant. Round the foot part, I place a circlet of webbing (B) to protect the sole, and to give additional leverage power to the extension apparatus, which may be fastened to the webbing.

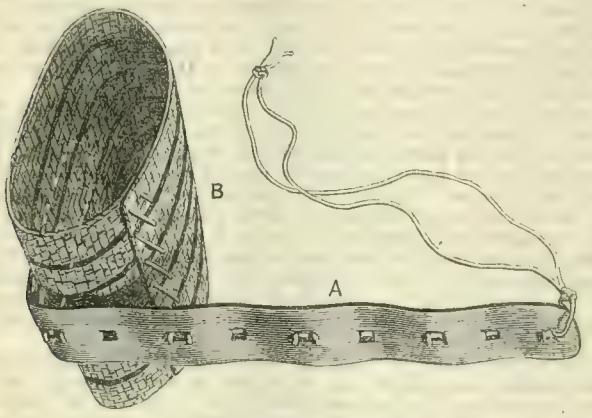


Fig. .

I then select a strip of perforated tin (A), of the proper width, that is, from half an inch to one inch, according to the age of the child, having jagged perforations alternately on the inner and the outer side. I then shape the strip of tin so as to traverse the sole of the foot level with the

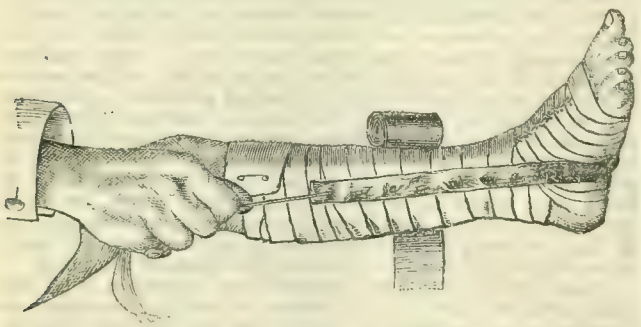


Fig. 2.

metatarso-phalangeal joints. I bend it to a sharp right angle on the edge of the table, so that the vertical portion of the tin shall pass up level with the fibula, and be pressed against the flannel covering the leg. The surgeon should place himself at the foot of the table and have two assistants, one to fix the body and pelvis, the other to fix the thigh and draw upon the string attached to the upper end of the lever. The muslin bandage, charged with plaster-of-Paris in the usual way, should then be applied as a spica from the toes upwards, each turn being made so as to raise and evert the foot, and secure a purchase over the outer side of the perforated tin. This rectangular tin lever is embedded between layers of muslin and flannel (Fig. 2).

The surgeon must watch the toes, to see that the circulation of blood is not impeded. If the muslin be properly applied, the child should be able to move the toes freely within the case, and even to walk with it on. The mother must keep the apparatus clean, and bring the child for inspection every week. The surgeon will judge for himself as regards the time for the renewal of the case.

It is worthy of remark that, by the use of this method of treatment, we save both time and money. The cost of the apparatus is measured by pence, instead of by pounds; and we may estimate the final cure by weeks, instead of months. How important to all classes of society is it to economise both time and material, when we consider the heavy outlay that some relapsed cases involve in the purchase of expensive appliances that may be of very little value after all.

I need hardly add that I have used this simple apparatus in scores of cases of talipes, and with the best possible results.

CASE OF MYOSITIS OSSIFICANS.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Brighton.

By T. SYMPSON, F.R.C.S.,
Surgeon to the Lincoln County Hospital.

From the fact of the patient being still under observation, the following instance of myositis ossificans occurring, in a boy of 7 years old, must at present be considered imperfect; but the disease under which he labours is of such rare occurrence, and presents points of such great interest, that I have thought it well to bring the case before the notice of the Section, as by so doing more evidence upon the subject is likely to be obtained than if the report appeared merely as a communication to a journal.

C. A. M., aged 6 years, first came under my care on March 27th, 1885. He is fairly well developed, is of light complexion, with light brown hair, and blue eyes.

He complained of much pain about the right shoulder, and inability to separate the arm from the side. The shoulder and region of the scapula were extremely tender to the touch, and it was difficult to insert a finger into the axilla. There was no movement in the right shoulder-joint, and the movements of the left were much restricted. The dorsum of the right scapula, below the spine, was occupied by an elastic nodulated tumour, four inches by three, and in the situation of the long head of the right triceps was a similar tumour, two inches by one. The tendons of latissimus dorsi and teres major were extremely tense and rigid. On the dorsum of the left scapula, below the spine, was another tumour, three inches by two. The gait of the boy was peculiar; he walked with his chin advanced, and his shoulders thrown forwards. The skin was cool and moist; temperature normal; pulse 84, regular; the tongue was clean; bowels open.

The history I obtained was that, with the exception of his having passed through an attack of measles favourably when 2 years of age, the boy had always enjoyed good health. During the last week of October, 1884, while running, he fell upon the pavement and hurt his right shoulder, a week after which a painful swelling formed over the scapula; this gradually shrank, and then, three months after, a similar swelling appeared over the left scapula. In March, 1885, his parents took him to a bone-setter at Grantham, who said that the shoulder was "out," and gave them some liniment to rub it with, the application of which, it is scarcely needful to say, did not effect any improvement.

The boy is the subject of a curious malformation. The head of each first metatarsal bone is large and prominent, and the great toe on either side is small, apparently consists of only one phalanx, and is directed towards the outer border of the foot.

He has two sisters alive and healthy, aged respectively 18 and 16. His father, a fitter in a foundry, is somewhat rheumatic; he presents the same congenital deformity of his great toes as his son. His mother is alive and healthy. His maternal grandfather is said to have died of cancer of the chest. His paternal grandparents both suffer much from rheumatism.

He was ordered to take two grains and a half of iodide of potassium, and five grains of citrate of iron and ammonia in two drachms each of chloroform-water and water, three times a day.

On April 20th, the note was "The tumours have become shrunken, and are firmer, and more distinctly nodulated. He can separate the arm further from the side, so as to admit of the easy insertion of a fore-finger into the axilla from behind. The growths are free from pain, and no longer tender. A growth, the size of a hazel-nut, has now formed over the posterior superior spine of the right ilium."

May 20th. The tumours continued to shrink. There was a fresh one, of the size of a walnut, over the angle of the eleventh left rib.

June 22nd. The tumours were decidedly smaller and much harder. A fresh growth, rounded, firm, and elastic, in size equal to a hazel-nut, had appeared over the angle of the twelfth right rib.

July 21st. A swelling, of the size of a walnut, was now perceptible in the margin of the trapezius a little below the occiput on the left

side, and a similar one about the middle of the neck in the margin of the muscle on the right side.

August 20th. A fresh tumour, 4½ inches by 2½ inches, had formed in the border of the latissimus dorsi in the left loin. All the other tumours were becoming less, and were firmer and more distinctly nodulated.

September 28th. No fresh growths had appeared.

November 26th. All the growths were shrinking.

December 16th. The growths continued to diminish.

January 8th, 1886. The boy was shown by Mr. Hutchinson at a meeting of the Clinical Society of London, when it was noted that a saddle of bone covered the loins, and rendered the boy incapable of stooping, and that the margin of each latissimus dorsi, the teres major on each side, and the long head of the right triceps, were occupied by a series of lumps which were apparently bony, and that similar lumps were present a little below the occiput in the trapezius on the left side, in that muscle in the middle of the neck on the right side, and in the supra-spinous fossa. The movements of the head and neck were not interfered with.

January 14th. The back of the boy and his feet were photographed by Mr. Hadley. At the suggestion of Sir James Paget, the boy was put upon three minims of arsenical solution, and half an ounce of infusion of gentian twice a day.

March 18th. There was now a soft elastic prominence, four inches by three, between the dorsal spine and the base of the left scapula, apparently implicating the rhomboid muscles, and the swelling in the latissimus dorsi between the last left rib and crest of the ilium was more pronounced. The boy was free from pain. On examination with the ophthalmoscope, the fundus of each eye was seen to be normal.

July 20th. A boss, of the size of a walnut, had formed midway between the spine of the left scapula and its inferior angle. The new formations in the rhomboid muscles and in the left loin had become flattened and smaller.

Circumference of chest at level of nipples, after expiration, 23 inches.

Circumference of chest at level of nipples, after inspiration 23½ inches.

Circumference of abdomen at level of umbilicus, after expiration, 22 inches.

Circumference of abdomen at level of umbilicus after inspiration, 23 inches.

July 20th. The urine was of specific gravity 1020, acid reaction, yellowish-red colour. It contained no albumen, nor sugar.

Dr. Charles Harrison kindly undertook to make a quantitative analysis of the urine, but from some mistake having been made respecting collection of the entire quantity passed during twenty-four hours, no conclusion could be arrived at.

REMARKS.—With regard to its diagnosis, there can be no doubt that the case is one of myositis ossificans, presenting, as it does, the characteristic features of that disease, namely, the formation of nodules in certain muscles in successive groups, the nodules being at first tense and elastic, but subsequently becoming hard and contracted, or even wholly disappearing; the occurrence of periodical pauses of various duration in the symptoms, and the slowness of the course of the disease.

The question naturally occurs to the mind of the observer whether, in such cases as this, the new formations that are present are composed of true bone, or whether the soft material first exuded has simply become calcified. The answer to this is that, in Dr. Kümmell's[1] case, a portion removed from the axillary line was undoubtedly bony, and that the results of *post mortem* examinations in von Münchmeyer's,[2], von Gerber's,[3] Testelin and Danbressi's,[4] and Rogers'[5] cases go to prove that the tumours are made up of true osseous tissue.

In a case related by Dr. Helferich,[6] as well as in one by Partsch,[7] the presence of a peculiar congenital deformity, both of the great toes and of the thumbs is noted. It is worthy of remark that a similar deformity is present in the case under my care, and also in a case shown by Mr. Godlee at a meeting of the Clinical Society on May 28th 1886, but in these it is limited to the great toes. Whether such malformations are to be regarded as mere coincidences, or whether they denote that the disease is due to some defect in development must, I think, be as yet considered uncertain, the cases hitherto reported being too few in number to allow any definite inference to be drawn from them. It is, of course, quite possible that no true relation may exist between them.

In some cases,[8] as in the one just related, it is noteworthy that there has been a distinct family-history of rheumatism; but here again the evidence is too limited to permit of any certain inference being obtained, and the same remark may, perhaps, apply to the influence of injuries which seemed to have been the exciting cause in my case, as well as in cases reported by Partsch, Munchmeyer,[9] and Testelin and Danbressi,[10] although the history of the development of the so-called "drill-bone" in soldiers of the old Prussian Army, and ossification of the origin of the adductors in hard riders, appear to point somewhat in this direction. In other instances, severe cold, or severe muscular exertion, have appeared to be exciting causes of the disease.

Mays[11] considers that "the sudden occurrence in early youth in a previously healthy person, the extraordinary symmetrical localisation of the process, and the great analogy between the several known causes, speak for the opinion that congenital predisposition has much to do with the occurrence of the disease." A recent writer, Pinter,[12] is of the same opinion, and the other conclusions he has arrived at, which I may here quote, are, "that, in the spinal cord, no pathological changes can be detected, and microscopical examination of the cord and of the peripheral nerves shows no histological changes. The hereditary theory must be dismissed." He does not think injury the cause, and points out the frequency of injuries to children, and the rarity of the disease. Of twenty-two cases he has collected, ten were in Germany, six in England, two in America, and one each in Austria, France, Russia, and Switzerland. He does not think therapeutic agents of any avail.

The *Pharmacopœia* has been drawn upon largely in the treatment of these cases. There have been applied locally blisters, iodine, mercurial ointment, induced current of electricity, ice, and local bleeding. Internally have been administered colchicum, iodide of potassium, cod-liver oil, sarsaparilla, mercury, calomel and opium, baths and mercurial treatment alternately employed, nitric acid, phosphoric acid, lactic acid, and, in one case, a state resembling scurvy was attempted to be produced by subsistence upon a salted diet.[13]

All these methods of treatment have proved futile; or, if any benefit has appeared to have resulted from them, the amendment has probably been due to a remission in the ordinary course of the disease rather than to the efficacy of the measures adopted.

With reference to the age and sex of the patients, it is stated in Seidel's treatise, in Gerhardt's *Kinderkrankheiten*, Band v, Abth 2; that, out of 22 cases where age is given, 15 were under and 7 over 15 years of age, these latter did not live beyond 20; 4 of them were soldiers. In 24 cases only 5 were females. The prognosis must be looked upon as bad, the patients usually dying from some intercurrent pulmonary affection.

It only now remains for me to acknowledge the obligation I am under to Sir James Paget, Mr. Hulke, and especially to Mr. Bailey, the courteous Resident Librarian to the Royal Medical and Chirurgical Society, for most valuable aid in working out the bibliography of myositis ossificans, for which I beg to tender them my very best thanks.

1 *Archiv für klinische Chirurgie*, Band xxix, 1883.
2 Mays in Virchow's *Archiv*, Band lxxiv, S. 145, 1878.
3 Dissertat., Wurzburg, 1875.
4 *Gazette Médicale de Paris*, 1839, p. 170.
5 *Amer. Journal of Med. Sciences*, vol. xiii, p. 386, 1843.
6 *Aerzt. Intelligenz-blatt*, 1879, No. 45.
7 *Breslauer Aerztliche Zeitsch.*, 1882, No. 6.
8 *Gazette Médicale de Paris*, 1839, p. 170.
9 *Zeitsch. rat. Med.*, Band xxxiv., 1869, p. 9.
10 *Gazette Médicale de Paris*, 1839, p. 170.
11 Virchow's Archiv, Band lxxiv, 1878, p. 145.
12 Inaug. Diss., Wurzburg, 1883.
13 Rogers in *American Journal of Medical Sciences*, vol. xlii, 1839, p. 386.

IS MERCURY AN ANTIDOTE TO SYPHILIS?

Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association in Brighton.

BY CHARLES R. DRYSDALE, M.D.,
Late Physician to the Rescue Society of London.

THERE never has been a time when there has been a more positive view as to the way in which syphilis and other virulent diseases, including even bacillary phthisis, should be treated. A great deal of this is due to the silent revolution which has of late years taken place in the domain of medicine, owing to the discoveries of M. Pasteur, as to the meaning of fermentation, and of virulent diseases in animals. Although the germ which causes syphilis has not as yet been clearly seen by the microscope, or cultivated as that of phthisis, there can yet be no reasonable doubt that it, like the germ of hydrophobia, exists; and hence there seems to be every probability that the two

remedies, mercury and iodine, which clinical experience has proved to have great power over the symptoms of the disease, will, in the near future, act in the tissues in a way similar to that in which they act externally in destroying parasites of the skin, or in rendering wounds antiseptic, by the destruction of the germs. The question may, therefore, be put: "Can mercury be called an antidote in syphilis, as sulphur ointment is in scabies; or, is it to be described by a less ambitious title?" According to Astruc, when syphilis was first treated, at the beginning of the sixteenth century, by means of mercurial inunction, this remedy was suggested because it had been found to be very efficacious in curing scabies; and, ever since that date, there has always existed a certain number of able authors who have considered that mercury can cure syphilis; or that it is, indeed, possessed of "antidotal" properties against the poison. Amongst recent authors, Mr. Solly, late Surgeon of St. Thomas's Hospital, may be cited as having believed that mercury often cures syphilis, when given during the period of the initial lesion. Mr. Erichsen has also expressed himself to be of a similar opinion. Mr. Henry Lee gave evidence before the Commission of the House of Lords in 1882, that mercury, given during the period of the chancre, sometimes entirely prevents the appearance of any further symptoms of the disease. Mr. Jonathan Hutchinson, however, of all recent authors is the most explicit in his allegation that mercury is an antidote to the poison of syphilis; for, in his Lettsomian Lectures, in 1886, he affirms that it is quite easy, by the proper administration of small doses of mercury during the period of the chancre, to put an end to the disease altogether, so that no further symptoms shall appear. He then, doubtless, is to be looked upon as the author of modern times who most distinctly puts forward the claim of mercury to be called an antidote to the germ of syphilis. Mr. Hutchinson explains much of the want of success obtained in all but the most recent practice, in the specific treatment of syphilis, by the fact that it used to be given in such large doses that it required to be laid aside from time to time, during which period the germ again reproduced itself, and the disease made way. This evidence of Mr. Lee and of Mr. Hutchinson is most weighty, coming as it does from distinguished professors of surgery, with widely divergent views as to the nature of soft sores as distinguished from true chancres.

I regret extremely to be unable, from my own clinical experience, to corroborate the views of these leaders of opinion; for, although I have tried to carry out scrupulously the treatment recommended, and have administered small doses of hydrargyrum cum cretâ in a number of cases of the initial lesion of syphilis, I have never yet been able, as far as I can remember, to prevent the occurrence of some form, more or less slight, of secondary eruption, whether I used mercury or not. Indeed, so invariable has this experience of mine been, that I have always ventured distinctly to predict to my patients the arrival of roseola in a short time, without fail. In a case like this, one is naturally not unwilling to look about for persons as unlucky as one's self; and, accordingly, I discovered, in my reading, that Dr. Lancereaux, of Paris, in his *Traité de la Syphilis*, also denies that mercury has the power, when it is administered for the chancre, of preventing the occurrence of secondary symptoms, or even of warding off the chance of tertiary disease. Dr. Diday, of Lyons, too, who has, since 1865, distinguished two varieties of syphilis—a decreasing and a progressive syphilis—tells us the history in 1882 of a comparative experiment he had made for the treatment of cases of syphilis with and without mercury. (*Ann. de Derm. et Syph.*, 1882, Nos. 10 and 11.) This concerned fifty-six cases of the disease. From the observation of these cases, Diday concludes as follows. Mercury, when given in the period of the chancre, does not prevent the appearance of secondary symptoms. Diday, and in this opinion I am inclined to agree with him, considers that modern syphilis, as the present generation sees it, is, in most cases, a mild disease, generally curable enough; and adds, that but few cases are followed by visceral disease or affections of the nerve-centres. He in no way disapproves of mercury; but recommends it only when severe outbreaks of the disease take place, in order to lessen their effects on the health. "Mild" syphilis he treats without mercury.

Another great Parisian authority, Dr. Alfred Fournier, has affirmed that mercury does not prevent the appearance of secondary eruptions, although he is thoroughly convinced that mercury greatly lessens the severity of secondary eruptions, and prevents the occurrence of tertiary lesions. He, too, is silent as to the antidotal quality of mercury; and, in all cases of the disease which he has to treat, he gives small doses of mercury for ten months, in the course of two years, in what he calls "interrupted" courses.

The most recent view of the value of mercury in the treatment of syphilis is the one held by Professor Keyes, of New York, and followed by a large number of the practitioners of the United States of America. Dr. Keyes takes the view that mercury is an antidote to the poison both internally and externally; and he, furthermore, is of the opinion that small doses of mercury are tonic, and that they tend to increase the number of blood-discs in the case of cachectic and syphilitic persons. Hence, that physician administers small doses of the green iodide of mercury, or the perchloride, continuously, for as long as three years, in all cases of syphilis indiscriminately.

All these opinions show the real difficulty of pronouncing clearly as to whether mercury is an antidote to syphilis. There are two points upon which agreement is required. The first is, that we must never treat chancroids with mercury on the supposition that they possibly may be followed by syphilis. Syphilis may, of course, appear after a chancroid, as it may after scabies, but it never is caused by the poison which gives rise to the chancroid; and hence, those who congratulate themselves and their patient when, after treating his soft sore with mercury, no eruption appears, are deceiving themselves. The second fact that recent experiments with and without mercury have proved is, that syphilitic eruptions are occasionally so mild as to be overlooked by the patient, and even by an observer who is not careful to look for them in the right place; so that, whether mercury or no mercury be given in the period of the chancre, the eruptive period may pass unnoticed, and there may even be no more of syphilis to be seen in the patient. This need not surprise those who remember how slight some cases of scarlet fever or measles are.

My own opinion is that both mercury and iodine may be styled "antidotal" to the poison of syphilis, just as they are, however, to the itch-insect or to the parasite of ringworm, favus, or other microscopic animal or vegetable. My own experience, I must say, does not permit me to say that mercury is a powerful enough antidote to meet the germ of syphilis in the blood, and there nip the disease in the bud; but I listen to the evidence of those distinguished men who say they have done so, with the utmost deference to their acknowledged powers of conscientious observation. One point, I think, has been finally settled in the modern treatment of syphilis by mercury; and that is, that very small doses, such as one grain of mercury and chalk, or one-fourth of a grain of green iodide of mercury, are all that should be given, perhaps twice or thrice daily, to attack the germs whilst not disturbing the general health of the patient. For my own part, I have of late used mercury as an antidote or germicide in all, even the mildest forms of the disease, which come before me; and am in the habit of prescribing one-sixth of a grain of the green iodide twice or thrice daily, for two years even, if the patient will take it so long. The chief value of mercury seems to me to consist in its action in syphilitic iritis, and in early affections of the brain; and I also have a hope, in administering it for a long time, that I am acting on the diseased germs in a way that will prevent them from causing tertiary ulcers or gummata in the course of two or three years. Plain confession is good for the mind, so I must say that occasionally, though rarely, I have had to deplore the occurrence of perforation of the hard or soft palate, even after the best laid schemes of preventive mercurialisation. When such occur, there comes in the great antidote of the germ of syphilis in its old age, iodine and its compounds. No one, I imagine, will refuse to iodide of potassium the epithet of antidote in tertiary syphilis.

ON CARDIAC DILATATION AT PUBERTY, AND ITS FREQUENT OCCURRENCE IN GIRLS.

By G. N. PITT, M.D.,
Demonstrator of Morbid Anatomy, Guy's Hospital.

My object in this paper is to draw attention to the frequent occurrence of a not unusual group of symptoms at puberty, and to offer a probable explanation.

As a typical but well-marked case of a common group of symptoms due, I believe, to slight cardiac failure, I would take that of a young lady aged 16, whom I saw last September, who had grown nearly three inches during the preceding year, and was above the average height. She was an enthusiastic lawn-tennis player, and fond of exercise generally. For some months previously she had noticed that she easily became short of breath, and, after playing two or three hard games of tennis, suffered from severe dyspnœa for the rest of the day, with more or less feeling of cardiac discomfort, sometimes amounting to pain. These attacks had been more frequent of late, and she for the preceding weeks had suffered from several attacks of dyspnœa at night, which were sometimes so severe that she was unable to lie down for a portion of, or even for the whole night. Latterly, she had suffered from palpitation, was languid, readily became tired, had

had a few attacks of partial syncope, and was becoming anæmic. Menstruation had occurred once, six months previously, and was then only scanty.

On examination, I found the cardiac impulse diffused over an area of an inch and a half, extending in the fifth intercostal space out to the nipple-line. There was slight epigastric pulsation. The first heart-sound at the apex was prolonged. The second sound over the pulmonary area was distinctly accentuated, and the first over the aortic area was weaker than normal.

The treatment recommended was, that regular exercise should be taken, short of fatigue; but the main point was, that she should lie down for two hours in the middle of the day, so as to give the heart an opportunity of recouping by diminishing its work. Arsenic and iron were given internally. As a result, there were no more attacks of dyspnœa; and now, after the lapse of six months, she remains without any symptoms, and does not require to lie down in the daytime.

On looking through my notes, I find that last year I saw seven other cases presenting similar symptoms, but to a slighter degree. Five of them were girls aged from 10 to 14, one aged 18; in none menstruation was completely established, or puberty complete. Most had grown rapidly. One was a boy, aged 14, who also had grown rapidly. Their symptoms were languor, lack of energy, palpitation, dyspnœa on exertion, with cardiac discomfort. The pulse was always feeble. On examining their chests, I found a diffused cardiac impulse, which was displaced slightly outwards in some, with feebler first sound and accentuated second pulmonary, and in two cases functional systolic *bruits*. The dilatation is only slight, and is usually insufficient to cause regurgitation through the mitral orifice; while the complete disappearance of the symptoms after some time is in accordance with the view that they are due to an insufficiently rapid increase in the size of the heart, which is compensated in a few months, and more rapidly still if the patient rest in the middle of the day, and take good food and hæmatinics. When such symptoms occur later in life, they are usually more serious and less temporary in character, and, not being associated with a physiological developmental process, do not naturally tend to repair. Cases, however, have been recorded by Dr. Myers and other observers, where these symptoms have occurred in adults previously healthy, who have been subjected to much greater exertion than they had previously been accustomed to.

The forced setting up of the chest in young policemen and soldiers, the autumn manœuvres and long marches, always contribute a number of such cases, which gradually completely recover with rest.

The importance of Dr. Beneké's observations[1] on the size of the heart and arteries at various ages, and the great changes which take place in them at puberty, have not hitherto been appreciated in this country.

The growth of the heart during the first year of life is very marked, being about 80 per cent. (20 cubic centimètres). In succeeding years, until puberty, it is very considerably less. Between 7 and 14 years of age, the annual increase is only 8 per cent.; while during the development of puberty the increase varies between 95 and 100 cubic centimètres—that is, an increase of 80 to 100 per cent; that is, the heart very nearly or quite doubles in size during the development of puberty. When the changes of puberty are accomplished in one year, the heart doubles in size during that year; when the changes are spread over two years, the annual growth is 50 per cent.; while when over five years, 22 per cent.; so that in each case the same change—that is, the doubling of the size—takes place. The enormous importance of the changes to the individual may be inferred from the fact that the heart may in this one year grow three times as much as it did in the preceding.

Let us consider these figures a little more closely. Just previous to puberty, the annual increase is 8 per cent.; while, when puberty is complete in one year, the additional increase in the heart beyond the increment in the preceding year is 92 per cent. When the change is prolonged over two years, the excess beyond the average annual growth is 84 per cent., and, when prolonged over five years, 70 per cent.; or, in other words, a rapid development of puberty is correlated with a greater cardiac development than is the case when puberty develops slowly.

The application of these observations to the question I have brought before you is obvious. When such an extraordinary task is demanded of an organ—that it should double in size—it is but natural that it is only in the minority that such a change can take place in one year. The diffusion of the developmental changes over a longer period takes place in those cases in which the heart is unable to grow rapidly. Clinical experience, I would contend, offers marked evidence of the great demands which are made at this period on the heart, as shown by the frequent occurrence of slight cardiac dilatation, and of the lack of reserve cardiac energy to meet emergencies, which I believe to be so common at this age, especially in those who have grown very rapidly. It is in such cases that the changes of puberty are often delayed or prolonged, and in which the associated addition of cardiac muscle at this period is below the average. The symptoms of cardiac weakness are usually not met with in those in whom puberty has developed rapidly; but in children in whom the changes are gradual, and in whom the development of puberty is retarded or is still imperfect, a direct consequence of the imperfect increase in blood-pressure.

The reason why girls are more likely to break down at this age is due to the more rapid development of puberty, and to the fact, as Bowditch[2] has shown, that, up to the age of 11 or 12 years, boys, on the average, are taller and heavier than girls; but that, for the next two or three years, the girls have the advantage; while, after 14 or 15, the boys again excel in both height and weight, as the boys continue to grow, while the girls do not nearly so much.

Approximate Normal Volume of the Heart.

No.	Age.	Body-length in centimètres.	Volume of Heart in cubic centimètres.	Volume of Heart in cubic centimètres for each 100 centimètres of Body-length.	Area of Aorta in millimètres.	Area of Pulmonary Artery in millimètres.
1	0 to 11 days	49 to 52	20 to 25	40 to 50	20	23
2	11 days to 3 months	52 ,, 59	24 ,, 30	46 ,, 54	24	28
3	At end of 1st year	68 ,, 72	40 ,, 45	57 ,, 62	32	36
4	,, 2nd ,,	80 ,, 81	48 ,, 54	60 ,, 65	35	39
5	,, 3rd ,,	88 ,, 90	56 ,, 62	63 ,, 70	36	40
6	,, 4th ,,	96	66 ,, 72	70 ,, 75	39	41
7	,, 6th ,,	103 ,, 105	78 ,, 84	75 ,, 80	40.5	42.5
8	,, 7th ,,	112	86 ,, 94	78 ,, 84	43	46
9	,, 13th to 14th year	140 ,, 150	120 ,, 140	83 ,, 100	50	52
10	When completely developed	167 ,, 175	215 ,, 290	130 ,, 168	61.5	61
11	Adult age	167 ,, 175	260 ,, 310	150 ,, 190	68	65

Rate of Growth of the Heart.

No.	Age.	Growth of the Heart in cubic centimètres.	Annual Growth in cubic centimètres.	Ratio of Growth to Volume of Heart at commencement of Corresponding Period.
1	0 to 3 months	4 to 5	16 to 20	$\frac{1}{5}$, that is, $\frac{4}{5}$ per annum, or 80 per cent.
2	3 months to 1 year	15 ,, 16	21 ,, 20	$\frac{1}{5}$ to $\frac{3}{4}$, that is, $\frac{4}{5}$ to $\frac{3}{4}$ per ann., or 66 to 88 per cent.
3	In 2nd year	8 ,, 9	9 yearly	$\frac{1}{8}$ to $\frac{1}{6}$ per annum, or 20 to 16 per cent.
4	,, 3rd ,,	8 ,, 8	,,	,, ,, ,,
5	,, 4th ,,	10 ,, 10	,,	,, ,, ,,
6	In 5th and 6th yr.	12 ,, 12	7 yearly	$\frac{1}{9}$ to $\frac{1}{7}$ per annum, or 16 to 11 per cent.
7	In 7th year	8 ,, 10	,,	,, ,, ,,
8	In 7th to 14th year	34 ,, 46	5.6 to 7.6	$\frac{1}{10}$ to $\frac{1}{12}$ per annum, or 7 to 8 per cent.
9	During the development of puberty	95 ,, 150	19 to 30 when development of puberty takes 5 years	$\frac{1}{8.5}$ to $\frac{1}{5.7}$ per annum, or 16 to 22 per cent.
	,,	,,	47.5 to 75 when it takes 2 years	$\frac{2}{3}$ to $\frac{1}{2}$ per annum, or 40 to 50 per cent.
	,,	,,	95 to 150 when it is complete in 1 year	$\frac{1}{1}$ to 1 per annum, or 80 to 100 per cent.

The volume of the heart is estimated by the number of cubic centimètres of water it displaces, a simpler and more accurate method than weighing, Dr. Beneké thinks.

[1] Beneké, *Der Ueber das Volumen des Herzens und die Weite der Arteria in den verschiedenen Hebensalter*, 1879.

[2] Professor H. P. Bowditch, *The Growth of Children*, 1877. Beneke's observations that the greatest strain is thrown on the heart at puberty, and especially in girls in whom puberty is slowly developed, offer a very complete explanation of the great frequency at this age of the symptoms to which I have alluded.

THERAPEUTIC MEMORANDA.

CUCAINE IN THE REMOVAL OF SEBACEOUS CYSTS.

HAVING read in the JOURNAL of September 25th an account of the painless removal of hæmorrhoids under cucaine by Mr. Prince Stallard, I am induced to publish the following case.

A little girl, aged 12, recently came to my surgery for the removal of a small sebaceous cyst, situated under the right eyelid. Being unwilling to put her under chloroform, as she had to walk home some distance, I determined to try the effect of cucaine. Having placed her upon the table, I injected under the skin, immediately over the tumour, five minims of a 4 per cent. solution of the hydrochlorate, which I have had by me for six months, having procured it from Gale and Co. in April last. A piece of lint, wetted with the solution, was applied to the skin, and a few drops were purposely allowed to fall into the eye.

In seven minutes I made the necessary incision, and turned out the contents of the cyst. The capsule was firmly adherent at every part, and required a great deal of pulling and dissection before it could be finally removed. The operation, including the insertion of one suture, must have taken at least ten minutes, and, under ordinary circumstances, would have been very painful. My friend, Dr. Langley Mills, who kindly assisted, will bear me out in saying that, with the exception of the prick of the hypodermic syringe, the little girl suffered not the slightest pain from first to last. She was frequently asked if it hurt her, and always replied "No." The only thing of which she complained was that once her nose was pushed a little upon one side.

There were no ill effects from the cucaine, and the wound healed by first intention.

CHARLES RANDOLPH, M.R.C.S., Milverton, Somerset.

CHLOROFORM VAPOUR IN PAINFUL EAR CASES.

I WOULD like to draw the attention of practitioners to the use of this vapour in ear cases, so that it may become better known and more frequently adopted, as at least a preliminary part of the treatment in cases in which intolerable pain is the chief complaint. I have very often used it with almost magical effects and very pleasing results in cases in which the pain in the ear was so great that the patients could not bear the part to be touched even in the gentlest possible manner. In cases of furunculosis, and in diffuse inflammation of the external meatus, as well as in acute inflammation of the tympanic membrane, I have found it relieve the pain so much that the patients considered themselves cured. In some cases, the pain was kept in abeyance so long that the necessary manipulations and treatment were carried out without the least inconvenience to the patient, and in many cases there was no return of the distressing symptoms.

Its application I have also found exceedingly useful (in fact, a complete cure) in cases of otalgia, in which, on examination of the ear by means of the speculum and mirror, no apparent cause for the pain could be ascertained. Again, in cases of neuralgia, where the pain was shooting all round the ear, and seemed to originate from it, the relief was permanent. Also, in cases of earache arising from carious teeth as well as in cases of toothache of the molars, without any pain in the ear, it has proved very beneficial.

It is a very simple matter to introduce the vapour into the ear, and the only thing to guard against is the introduction of the chloroform itself, which might irritate the part and perhaps cause unnecessary discomfort.

RICHARD A. D. ROBB, M.B., C.M., Glasgow.

HYPODERMIC INJECTION OF HYDROCHLORATE OF CUCAINE, IN THE REMOVAL OF EPITHELIOMA OF LIP.

ON August 23rd, 1886, J. S., shoemaker, aged 85 years, consulted me with reference to an epithelioma of the lip, which then caused him considerable discomfort and annoyance, but, gradually increasing in size, it so interfered with mastication that he consented to its removal. It was decided not to produce general anæsthesia: (1) because his lungs were emphysematous; (2) because of his great age.

The two lines of incision having been decided on, I injected 5 minims of a ten per cent. solution of the hydrochlorate of cucaine five minutes before commencing operation. I then removed a triangular-shaped piece, the base of which measured over an inch and a half, and completed the operation in the ordinary way, bringing the edges of the wound together with three hair-lip pins and twisted suture, and bringing the mucous surface of the lip together with a silk suture. During the operation, the patient made no complaint of pain; he said that he felt very little of it. On removing the pins, seventy-two hours later, I was pleased to see the wound united throughout by first intention. Two days later he walked to my surgery, distant a mile and a half, and, on the same day, set to work at his trade again, after five days' absence. My friend, Dr. Chute, kindly assisted me in the operation.

HENRY BROUGHAM POPE, M.B.(Univ.Dub.),
Eardisley, R.S.O.

OL. PINI. SYLVESTRIS IN THE TREATMENT OF CHRONIC BRONCHITIS.

DURING last winter I treated several cases of chronic bronchitis with Ol. pini. sylvestris *B.P.*, a drug which I believe had till then been restricted to external uses only. The results obtained have prompted me to give them publication. Judging from the action on mucous membranes of the terebinthinate drugs in general, I was induced to give Ol. pini. sylvest. a trial. The specimen used I obtained from P. Harris and Co., of Birmingham. The dose given was five minims every four hours, and in some cases where relief did not follow in forty-eight hours, it was increased to ten minims. None of the patients treated owed their bronchial affection to cardiac disease. Of forty-three cases of which I have notes before me, the cough complained of was eased in twenty-eight. The dyspnœa was relieved in twenty-eight, and the difficulty in expectoration was benefited in thirty-eight cases, this being the symptom that seemed to be most relieved. The ages of the patients varied from 50 to 70.

In one case only did the drug fail to relieve one or more symptoms. Two patients complained of a fiery taste in the mouth, the hot sensation spreading subsequently all over the body; and one woman was obliged to discontinue its use, as she found the medicine caused scalding urine and frequent micturition. In many cases where stimulating expectorants had failed, I found Ol. pin. sylv. give relief. The results I have obtained hitherto are so satisfactory to me, that I shall continue its use.

A. W. ROBSON, L.R.C.P.Edin.,
Ashted House, Birmingham.

STRYCHNINE-POISONING TREATED BY CHLORAL HYDRATE INJECTIONS.

AT 8.15 A.M. on September 23rd last, I was summoned to 48, Netherfield Road, N., to see a woman, who had been moaning and screaming for some time, but was now speechless, and seemed very bad. She was 35 years of age, married, but deserted by her husband a few days previously.

She was lying on her back in bed, dressed, with the exception of her hat; her eyes closed; apparently unconscious; she could not be roused; arms pressed against sides, and hands clasped over bosom; could not be unclasped. The skin was of reddish purple colour, and hot; tongue was dry; pulse weak, and 96.

Every few minutes she would give a groan. Her arms became more firmly pressed to her sides; her legs became rigid, and her back as stiff as a board; and, on making an attempt to raise her, she did not bend. There was an increase in her pulse-rate, and her respiration, previously shallow, seemed to stop. There was a peculiar hoarse rattling in her throat, and her face became of a bluish purple colour. On the mantlepiece I found a tea-cup coated with a dry-bluish material, which tasted purely bitter; and, in the chamber-utensil, an empty packet of Hunter's vermin-killer. An attempt to introduce an emetic failed, and the passage of a tube down her œsophagus brought on such a spasm as almost carried her off; so that, I procured a solution of one in two of chloral hydrate, and gave her three hypodermic injections, of about eight grains at a time. This speedily reduced the spasm; and, at nine o'clock, she had a fourth injection, and was made to swallow half an ounce of tannate of glycerine. She went to sleep, and was still sleeping at noon. She swallowed some tea; made a slow recovery; and is now in an asylum.

JAMES GRIERSON BROWN, M.B.Lond.,
Netherfield Road, N., Liverpool.

CLINICAL MEMORANDA.

IS GOITRE HEREDITARY?

WITH reference to the question discussed by Dr. Sloan in the BRITISH MEDICAL JOURNAL of November 6th, the following facts may be of interest.

In a hollow in a range of hills of the inferior oolite, and at an ele-

vation of about three hundred feet above the sea-level, on the eastern border of Somerset, lies the village of Corton Denham. The population, which is exclusively agricultural, numbers 380. Forty or fifty years ago, at least half the inhabitants suffered from goitre. Latterly, the disease has become far less prevalent, though many examples of it are still to be met with. The fact that it can easily be traced, in several instances, through at least three generations, seems to lend support to the hereditary theory; but the occurrence of numerous isolated cases shows that this is not the only cause. One goitrous woman, whose family has lived in the place for generations, has had no relatives (except an aunt and a son) affected by the disease; and as her husband's mother and maternal grandmother were goitrous, the son inherits the tendency from both parents. Her other children do not show any enlargement of the thyroid.

In the neighbouring villages, which have a similar geological subsoil, cases of goître are not of more common occurrence than in those villages situated on the clay, or on the blue lias. The inhabitants of Corton Denham drink the same water, and from the same wells, that their predecessors did half a century ago; they live in the same houses, which are in a fairly sanitary state; they follow the same occupation; and, with the exception of having better food and clothing, their circumstances are similar, and yet the frequency of the disease has declined. The goitrous families have a tendency to die out; and, were it not that fresh sporadic cases occur, the disease would probably disappear. As usual, the female cases are far more numerous than the male; the exophthalmic variety is unknown; and though idiocy is not more frequent than in communities similarly circumstanced, the type of intelligence is below the average.

JAMES HURLEY, M.D., Queen-Camel, Bath.

DISLOCATION OF THE HUMERUS REDUCED BY RIGHT ANGLE TRACTION.

I BEG to forward an account of the successful reduction of a subclavicular dislocation of the humerus by the process described by Dr. Neil Macleod, in the BRITISH MEDICAL JOURNAL of January 30th, 1886, p. 194, namely, by "right angle traction."

The patient, a strong, muscular woman, aged 30, fell downstairs, and dislocated her right humerus. As it was too painful to raise the arm to a right angle with the trunk without an anæsthetic, ether was administered. Grasping the arm above the elbow, I made gentle traction, the patient's body being steadied by an assistant placing his hand on the upper part of the thorax. The reduction was effected almost immediately, with but little exertion on my part, and, as Fleet-Surgeon Longfield remarked in the JOURNAL of November 6th, without any "snap."

In contrast with the mode of reduction by the heel in the axilla, the "right angle traction" method is more speedy, requires much less force, and is probably much less painful, and as it becomes better known, will undoubtedly take the place of the older methods of reduction.

CHARLES NASH, M.R.C.S., L.S.A.,
Greenwich.

SURGICAL MEMORANDA.

AMPUTATION OF FOREARM FOR EPITHELIOMA IN A WOMAN AGED EIGHTY-SIX: RECOVERY.

THE great age of certain patients lately operated on, whose cases have been chronicled in your JOURNAL, induces me to draw attention to the following.

A woman, aged 86, and well in sight of 87, was admitted under my care in 1882, when surgeon to the Monmouth Hospital. She was hearty, and looked very ancient; her lean limbs were covered with the most shrivelled loose skin I had ever seen. Extensive epithelioma of one wrist, ulcerating into the joint, and patches of a like nature upon the anterior surface of the forearm, made her seek relief. The primary exciting cause was an injury whilst picking fruit. Pain, want of rest, and great courage prompted her to demand operative relief.

I amputated her forearm just below the insertion of the biceps muscle. She took ether well, and recovered in less than three weeks, with a certain amount of primary union, whilst there was no sloughing. When discharged the stump was sound. There was no elevation of temperature, yet a rather sudden fall on the fourth day was recovered from after stimulants and hot packs. This summer I found her feeble, but wonderfully well for a woman aged 90.

Some years ago this same case interested a branch meeting of the South Wales Section, but was not published. I should like to learn if this record can be beaten.

GEORGE OWEN WILLIS, L.R.C.S. Edin.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

MILITARY HOSPITAL, RAMLEH, EGYPT.

ACUTE YELLOW ATROPHY OF LIVER.

(Reported by Surgeon C. W. JOHNSON, Medical Staff).

PRIVATE B., aged 20, was admitted on June 16th, suffering from simple continued fever. On July 1st, the temperature, which had been only slightly above normal, rose to 103°. He was ordered quinine and improved. On July 10th, his conjunctivæ were slightly jaundiced, and he vomited. On the morning of July 11th, his skin was yellow, and he complained of pain over the pit of the stomach, which was tender on pressure; there was no pain over the right lobe of the liver. The vomiting continued. At 12 p.m. he vomited a sort of coffee ground fluid, his skin and conjunctivæ were very yellow, the pupils were contracted, the pulse was slow and strong, and he was in a state of stupor; when made to speak he would answer at random. The area of hepatic dulness was very much diminished. Coma ensued, the breathing became stertorous, and he died at 5 p.m., *i.e.*, about 30 hours after the first symptoms of jaundice. No urine was passed for six or seven hours before death. The necropsy was made eleven hours after death. The skin and conjunctivæ had become intensely yellow. Lungs were found healthy. Pericardium contained 1½ ounces of serous fluid. Heart weighed 7 ounces, contained dark clotted blood, endocardium was stained yellow. Stomach was healthy, the mucous membrane of duodenum was very much thickened and congested. The remainder of the bowels were congested in patches. Mesenteric glands were congested, and somewhat enlarged. Spleen weighed 10 ounces, was soft, of a dark colour, and broke down easily under the fingers. Each kidney weighed 8½ ounces, and both were very much congested. Liver weighed 2 lbs. 6 ounces, was small, contracted and soft; on section it was anæmic, pale yellow and oily, some of the lobules were of a deeper yellow colour, but the greater number could not be made out. Under the microscope a number of oil globules and granular cells were seen in place of the liver cells, which had nearly all disappeared. The gall-bladder contained two ounces of a thick yellowish white fatty material.

REMARKS.—I believe this case is similar to other cases of acute yellow atrophy of liver, excepting that the pupils were contracted, the pulse was slow and firm till almost the very end, the tongue was not coated at all, in fact it was healthy looking, and there was no tenderness over the liver except over the epigastrium.

MIDDLESEX HOSPITAL.

TWO CASES OF METRORRHAGIA, WITH REMARKS.

(Under the care of Dr. A. W. EDIS.)

[Reported by Mr. GEORGE S. WARE.]

No. 1.—INCOMPLETE ABORTION.

ON July 3rd, 1886, Mrs. M. A. B., aged 26, a well-nourished, plethoric woman, was admitted, stating that she had an almost constant blood-stained discharge, with severe and protracted menstrual periods. The illness had commenced six months earlier with severe flooding; before that she had missed two periods, and considered herself pregnant.

She had been married six years, and had had two children, the youngest of whom was two years and eight months old. With the exception of an attack of rheumatic fever when 16, she had had no serious illness, and had lived a temperate life. She volunteered the statement that her mother and an aunt had died of cancer of the uterus.

At the time of admission, the temperature was 98.8°; the pulse was 84, full and regular. The vaginal canal was natural. The cervix uteri was not enlarged. The os externum was transverse, and rather patulous. There was considerable tenderness and slight fulness in the left fornix vaginæ. On bimanual examination, the uterus was found to be mobile, free from tenderness and from appreciable enlargement. The sound passed upwards two inches and a half. No further information was gained by the use of the speculum. The finger, on being withdrawn from examination, was covered with sanious brown discharge.

On July 6th, at 10 A.M., the vagina having been irrigated, a laminaria-tent was introduced. At 9 P.M., it was withdrawn, and the

agina irrigated. Three fresh tents were introduced. She slept well during the night.

The next morning, the os was found well dilated; the vagina was again irrigated, and the interior of the uterus explored. By means of the ovum-forceps and curette, a quantity of organised material (products of conception), sufficient to cover a florin, was removed. The uterine mucous membrane was treated with iodised phenol, on a Playfair's probe, and a glycerine-tampon left in the vagina.

The next day she was free from discharge, and had suffered no inconvenience. Her temperature was 98° Fahr. The pulse was quiet. The vagina was gently irrigated.

For the three following days she had a blood-stained discharge, which she attributed to menstruation, as her period was due.

On July 12th, the discharge had quite ceased. Her temperature had not once risen above normal, and she had suffered not the slightest inconvenience.

On July 16th, she was still free from discharge, and was getting up. The uterus was normal in size and position. She was discharged convalescent.

Remarks by Dr. Edis.—The fact of her mother and an aunt having died of cancer of the uterus led this patient to imagine that she also was afflicted with the same malady. It did not seem to have occurred to her that an incomplete abortion was quite sufficient to explain her symptoms. Unfortunately, the medical attendant accepted the patient's diagnosis of her own case, without even making a vaginal examination, although her age—26—was opposed to any such probability. Exploration of the interior of the uterus cleared up at once the diagnosis, and permitted the only rational treatment of such cases to be carried out.

Case II.—Cystic Degeneration of Chorionic Villi.

Mrs. I. W., aged 42, a thin-faced anxious-looking woman, was admitted on July 7th. Her history was that, for the last seven weeks, she had had a red discharge more or less constantly, and that, on July 4th, there was a sharp attack of bleeding, clots being seen, but this ceased temporarily under medical treatment. The morning before admission slight bleeding, with pains, like labour-pains, came on, and continued till she came to the hospital. Previously to the first onset of flooding on May 17th, she had seen nothing since a rather profuse period (lasting a week), which ended on April 9th.

Her general health had been good, with the exception of an attack of small-pox nineteen years before admission. There was no history of cancer or phthisis in her family; there was no syphilitic history.

When admitted the temperature was normal, and the pulse regular and quiet. The vagina was natural. The os uteri was very patulous, with furrowed but firm and smooth edges. Extruding from it was a soft material, which was removed, and, on examination in water, was found to consist of little pale vesicular bodies held together by membranous filaments; it was, in fact, the grape-like vesicular degeneration of the chorionic villi. The uterus was plainly felt on bimanual examination to be enlarged, but did not extend above the pubes. On vaginal examination, it gave to the finger a thick and boggy sensation. At 5 P.M., a carbolised sponge-tent was inserted into the cervical canal, the vagina having been carefully irrigated.

Next morning, the os was found sufficiently dilated to allow manipulation, and, the vagina having again been irrigated, the ovum-forceps was introduced, and a firm organised material, afterwards seen to be decidual membrane, was removed. There was sufficient to cover the bottom of a small porringer.

Iodine was applied to the uterine mucous membrane; and, after further irrigation, a glycerine-tampon was inserted. Next morning, with the exception of headache, the patient felt quite well, she was free from discharge, and the pulse and temperature were normal. These favourable symptoms persisted. Vaginal irrigation was continued for a few days, and then omitted.

On the evening of July 14th, the patient got up, and was discharged cured in a few days.

Remarks by Dr. Edis.—In this case, ergot had been prescribed, but no examination made, and no history elicited as to the probable cause of the metrorrhagia. A mere digital examination enabled one to detect some of the characteristic cystic villi, and so at once to clear up the diagnosis and proceed to treatment.

Presentation.—Mr. William Duncan, L.R.C.S. and L.R.C.P.Ed., of Ridgway, near Frome, has been presented by the ladies and gentlemen of his ambulance classes at Nunney (given under the auspices of the St. John Ambulance Association) with a handsome Hartnack's microscope. These classes, which were commenced in July last, have been highly successful, and recently a centre has been formed in Frome which promises well.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 23rd, 1886.

George Pollock, F.R.C.S., President, in the Chair.

Ricinus Communis. By Thomas Dixson. (Communicated by Dr. Lauder Brunton, F.R.S.)—The object of the paper was to throw light on the connection between the activity of the seeds and that of the oil. The published accounts of poisonings and of investigations into the nature of the seeds were recorded. The author gave the results of experiments on rabbits made with the seeds in their natural state, and with an extract prepared after Bübnow's method. It was pointed out that *post mortem* examination showed that, when the rabbit was poisoned by castor-oil, diarrhœa invariably occurred, death never took place before the second day, and the intestine did not show any trace of congestion or inflammation; but, after poisoning by the seeds, death might occur in twelve hours without positive diarrhœa, and the intestine always showed excessive vascular engorgement. A description of the castor-oil cake, as prepared by the author, was given; and it was suggested that, as this is highly albuminous, and by cooking becomes harmless, it might be useful as an article of food in India in time of famine.

A Case of Multiple Embolism of the Arteries of the Extremities, followed by the Formation of Aneurysms, with Remarks on the Relations of Embolism to Aneurysm. By John Langton, F.R.C.S., and Anthony A. Bowlby, F.R.C.S.—The authors described the case of a girl, aged 20, who was admitted into St. Bartholomew's Hospital, suffering from aneurysmal swellings at the bend of the right elbow, and in the right popliteal space, respectively, of three and four weeks' duration. The heart was diseased, and the aneurysms were considered to be of embolic origin. After a trial of treatment by rest and pressure, which at first appeared to be beneficial, the swelling in the arm rapidly increased in such a manner as to render it probable that the aneurysm was becoming diffused. On this account the brachial artery was tied above the bend of the elbow, the vessel being secured by two ligatures, and divided between them. The operation was followed by cessation of pulsation, and slight diminution in the size of the aneurysm. Within a few days the popliteal swelling also began to extend; the superficial femoral artery was therefore tied in Scarpa's triangle, in the same way as the brachial, and with similar good results. Six weeks after admission, the patient had a sudden attack of left hemiplegia, with pain in the right thigh and leg, followed by complete cessation of pulsation in all the arteries of the right lower extremity. The aneurysmal swellings gave no further trouble, and slowly decreased in size. The patient became weaker, and died eight weeks after admission. A *post mortem* examination showed that the heart was the seat of ulcerative endocarditis, and that it had been diseased for a considerable time before death. The aortic valves were covered with vegetations and calcareous matter. The sinuses of Valsalva were dilated so as to form aneurysmal pouches. The aorta at one spot was almost completely ulcerated through. The spleen and kidneys were scarred by the lodgment of emboli. Several of the cerebral vessels were plugged by recent emboli. The swelling at the right elbow was found to be an aneurysmal sac, formed by condensation of the soft tissues, and by blood-clot. It communicated with the brachial artery by an ulcerated aperture, plugged with clot, situated just above the bifurcation of the vessel. The radial and ulnar arteries immediately below the opening contained calcareous emboli. The right common iliac artery contained a calcareous embolus. At the seat of the embolism the arterial wall was ulcerated, thinned, and expanded. The posterior tibial artery of the right leg opened by a small ulcerated aperture, filled by recent clot, into the sac of a large false aneurysm in the calf, formed by condensation of the soft tissues, and by blood-clot. The left external iliac artery presented an aneurysmal dilatation, apparently of recent date. Lower down, both this vessel and the common femoral were entirely occluded by calcareous matter and old decolourised clot. The authors considered that the specimens clearly showed that the lodgment of emboli had been followed by the development of aneurysms. They pointed out that the aneurysms were not formed by dilatation of the arterial walls above the embolus, but by inflammation of the coats at the place where they were in contact with the embolus. This inflammation had in some vessels resulted in ulceration, in others in softening and dilatation. After alluding to the published cases in which aneurysms have been attributed to embolism, the authors showed that in almost all of them there had been present that form of heart-disease which is associated with development of large fungating granulations, and frequently with ulceration of the valves, and they argued that the

aneurysms in question only occurred in connection with this special form of heart-disease, and were dependent upon the specific characters of the emboli. They gave their reasons for believing that vessels never became dilated as a result of their mere mechanical obstruction by an embolus or a ligature, and, in conclusion, submitted the following propositions: 1. Embolism might undoubtedly cause the formation of an aneurysm. 2. The aneurysm is developed at the seat of obstruction, and not above it. 3. The aneurysm may be due to an inflammatory softening and consequent dilatation of the artery, or to its ulceration, and the subsequent formation of a sac by the surrounding soft tissues. 4. Aneurysms only occur when the emboli are derived from a heart the valves of which are affected by a special form of disease, resulting in the production of fungous growths, and often of ulceration and destruction of the valves themselves. The case was illustrated by four microscopial preparations, showing the various stages of the destruction of the walls of the arteries where the emboli touched them. This was especially well seen in the case of the anterior cerebral artery whose walls were very nearly perforated. The heart, with the adjacent ulceration of the aorta, the brachial aneurysm, and nearly all the course of the main arteries from the thoracic aorta to the posterior tibials were also shown, and some similar specimens for comparison from Guy's Hospital.—The PRESIDENT said he felt a particular interest in this important case, which had been excellently described to them, for it reminded him of a similar case he had been called upon to treat in St. George's Hospital some years back. It was the case of a boy, aged 14, who was admitted with acute ulcerative endocarditis, and in whom three days after admission an aneurysm appeared in the elbow space. It was considered to be probably due to embolus, but the condition of the boy was so grave as to preclude any further treatment than by gentle pressure. Death followed in a few days, and the *post mortem* examination showed a condition of the heart similar to that in Mr. Langton's case, and an embolus at the seat of aneurysm. It was further remarkable as occurring in one so young. He should like to ask Mr. Langton if his experience and collection of cases showed that such emboli occurred generally at the divisions of arteries.—Dr. PERCY KIDD valued Mr. Langton's case very highly as forming a link in the chain connecting embolus with aneurysm, which he considered a true causal connection. He had himself had experience of two similar cases in the last few years. The first was a man, aged 23, who had had rheumatism and had aortic disease. He suddenly got right hemiplegia and aphasia and died after some months. A *post mortem* examination showed warty endocarditis and rupture of some of the chordæ tendineæ, a picture altogether of acute disease in the heart, and along with this was a small sacculated aneurysm of the internal carotid just where it gives off the middle cerebral artery, most probably the result of embolism. There was also blocking in the cavernous sinus. The second case was a man of 27, with severe aortic disease, who died suddenly in an out-patient room. A *post mortem* examination showed extreme endocarditis of the aortic valves; one was completely lacerated, and a tag hung down into the ventricle; in the right frontal lobe of the brain there was a large blood-clot. Careful search did not show an aneurysm to explain this until a small one the size of a pea was found in the parietal lobe, where the arterial tissues were replaced by endothelial growth. No other emboli were found, but he did not consider that that was as a rule a sufficient reason for denying that the existing aneurysms were due to emboli; in fact, he took the evidence in Mr. Langton's case as practically complete. As to the nature of the embolus, which goes to form an aneurysm, Ponfick had, in a well-known paper, laid down three conditions:—(1) that the embolus should be sharp, which he considered not to be essential; (2) that the artery must be in the soft parts, which he considered true; and (3) that the embolus must be situated on the distal side of the bifurcation of the artery, which he also thought unessential, as Mr. Church's evidence and his own had shown. Dr. Kirkes, in a classic paper on aneurysm, had forestalled everyone in suggesting embolism, as sometimes its origin, especially in the brain. Dr. Goodhart had first drawn their attention to the point that the character of the embolism is of importance. As to their occurrence in the young, he admitted it was rare, but could cite four cases in which there was no previous arterial disease. —Dr. GILBART SMITH felt bound to enter some protest against the adequacy of the embolic theory. He saw many cases of emboli without aneurysms and septic emboli that resulted in abscess or gangrene or hæmorrhage, but not aneurysm. He suggested that in the occasional cases where embolism was combined with aneurysm, the size of the embolus was the important factor.—Mr. BARWELL admitted his substantial agreement with the authors of the paper, and asked if they had found any micrococci in the emboli, to prove their septic nature.—Dr. GOODHART could not agree with Dr. Gilbart Smith that size was any essential characteristic of an embolus which produced aneurysm, as he was thoroughly convinced was occasionally the case. Ulcerative endocarditis was a disease of every degree of intensity, and no general rule could be laid down as to what any particular case would or would not produce. Sometimes it was too rapid to leave time for the formation of any aneurysm after embolism. He had himself never found calcareous matter in the emboli, and he was much interested to hear of it in the case under discussion, which he considered a happy one in pathology, for he thought the authors could prove their conclusions. As to the calcareous condition of the valves early in life, about which the President had made inquiries, he considered it sometimes as congenital.—Mr. R. W. PARKER gladly acknowledged that the case under consideration confirmed the causal connection between aneurysm and embolism. He could not consider the septic nature of the endocarditis as necessary; he had seen it in a boy under completely aseptic conditions. He wished for some further proof that the embolus was septic; some septic organisms should be demonstrated. He was himself inclined to attribute much importance to the condition of the arterial wall in the causation of aneurysms, and pointed out that, in Mr. Langton's case, there was a small ulcer on the aorta, and possibly similar conditions elsewhere had determined the aneurysms.—Mr. LANGTON was much obliged for the courteous reception and full discussion of the paper he had prepared with Mr. Bowlby. In answer to the President, he remarked that, in this case, the aneurysm was above the division of the artery. Dr. Kidd he considered as, in the main, confirming his evidence. Ponfick's statement that it was essential that the embolus should be sharp if it was to produce an aneurysm, he thought had been disproved in the present case. The minute hæmorrhages which occurred in the septic state, which Dr. Gilbart Smith had spoken of, were too small to make aneurysms. To Dr. Goodhart he felt deeply indebted, for he had forecast many years ago what now they had sufficient evidence to prove; he considered, in fact, that they had demonstrated the natural history of the embolus step by step, from the aortic valves to the complete aneurysm.—Mr. BOWLBY pointed out that there might be septic emboli from septic valves without any constitutional symptoms, and quoted a case from his own experience in which there had been death in four days without septic symptoms. He could not agree with the value Mr. Parker attached to the condition of the arterial wall—at least, in the case brought forward, for the arterial walls were perfectly healthy, except in one patch close to the septic valves, and in the positions of emboli. He had found innumerable micrococci in the microscopic preparations, but had not considered that a point of much importance.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 22ND, 1886.

R. BRUDENELL CARTER, F.R.C.S., President, in the Chair.

Sarcoma of Stomach and Pancreas.—Dr. JOHN LOWE read the notes of a patient, a man, aged 62, in good health, prior to his last illness, and of healthy family history. He was strong and well built, but, eleven years previously, had fallen, striking himself in the lumbar region. He soon recovered from the effects of the injury, which was not accompanied nor followed by hæmaturia, but was liable to a dull aching pain over the seat of injury. In July, 1882, he was carefully examined, but nothing could be found. Some time after this he began to lose flesh, and a tumour was detected in the hypochondrium, which was found to spring from behind the stomach, was not tender, and had an elastic feel. In the course of a few weeks he became very emaciated, and the tumour markedly increased in size. He had œdema of the left leg and foot; vomiting, retching, and pain became constant, and he died on September 18th. At the *post mortem* examination, a large growth was found involving the pancreas, extending across the vertebræ by a narrow process to the right kidney, of which nothing remained but a soft pultaceous mass; the left kidney was much enlarged. Dr. Lowe was of opinion that the growth, which was a round-celled sarcoma, had commenced in the injured (right) kidney, and had spread thence to the other organs. He passed in review the history of other similar cases where injury to the kidney had not been followed by hæmaturia, and in some of which a sarcomatous growth had resulted.—Dr. PURCELL read detailed notes of two cases of malignant disease of the pylorus with ulceration of its walls, as a contrast to Dr. Lowe's cases.—Mr. F. BOWREMAN JESSETT questioned Dr. Lowe's explanation of the origin and course of the growth. He thought it had probably commenced in the cardiac end of the stomach and spread.—Dr. S. WEST quoted an undiagnosed case of cancer of the gall-bladder as another instance of the difficulty of ascertaining what the disease really was.—Dr. LOWE said, in reply,

that had the growth commenced in the stomach, the symptoms would have been different.

Subacute (probably Syphilitic) Atrophy of the Liver.—Dr. SAMUEL WEST read the notes of a case occurring in a previously healthy married woman, where jaundice had supervened a month before she was seen, followed by delirium. There was largely increased area of liver-dulness, but the urine was normal. Emaciation was rapid, and towards the end the dulness disappeared. The temperature varied from 99° to 100.4° Fahr. After death, the liver weighed fifty-three ounces; it was smooth, and there was no evidence of obstruction of the bile-duct. Under the microscope, great overgrowth of connective tissue was seen, and the liver-cells in many parts had disappeared or degenerated. He thought, under the circumstances, that the evidence was in favour of a gummatous growth.

Villous Growth in the Rectum.—Mr. H. ALLINGHAM showed a villous growth which he had removed from the rectum of a man aged 73. The removal of the tumour, which was as large as a fœtal head, was effected by means of ligatures. Recovery was rapid and complete. He pointed out the rarity of this affection, which occurred mostly in elderly people, and was characterised by a copious discharge of mucus like white of egg.—Mr. JAMES BLACK and Mr. BENTON mentioned similar cases.—Mr. PYE asked how the growth was got at, seeing that it was four inches long, and attached high up in the rectum.—Mr. ALLINGHAM replied that, in consequence of the weight of the growth, the mucous membrane was very lax, and it was easy to pull the growth out of the rectum.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 10TH, 1886.

WALTER DICKSON, M.D., R.N., President, in the Chair.

THE first meeting of the session was held at 11, Chandos Street, Cavendish Square, when the President read the inaugural address of which the following is an abstract:

Dr. DICKSON, after paying a fitting tribute to the memory and scientific labours of the distinguished members, whose loss they had to deplore during the past year, Drs. Milroy, Cobbold, and Varrentrapp, of Frankfort, proceeded to consider the epidemic of cholera, which, beginning at Brindisi and Venice in the spring of this year, inflicted serious loss in several provinces of Italy, chiefly on the Adriatic coast, and in the valley of the Po, extending also to a few places on the West Coast near Naples, and to Cagliari in the island of Sardinia. It subsequently spread to Istria and Hungary, but on the whole was much less destructive than former epidemics, the larger cities of Italy having escaped. A minor outbreak in the extreme corner of Brittany, in the winter months, showed that the disease was not always associated with high temperature; and the report to the French Minister of Commerce proved conclusively how the disease spread from individual to individual, and from village to village in a group of small fishing ports in the department of Finisterre. The highest mortality was always coincident with the most defective sanitation, and in Andieme, with 1,700 inhabitants, 400 cases occurred and 144 deaths. Drunkards, and those who, while nursing the sick, took their meals in the bed-chamber, were especially observed to suffer. Although distinctly traced from one small town to another, its first appearance was variously ascribed to importation from a distance; from Brest, or from Toulon, through sailors who had returned from Tonquin, or as suggested by the medical commission of inquiry through fishermen returning from the coast of Spain, which last year was devastated by cholera. The troops stationed in the district did not suffer, their better hygienic condition protecting them from disease. As to Italy, where cholera has always been regarded as introduced from without, and quarantine regulations more confided in than sanitary precautions, the adoption of the five days' detention of ships, and the abolition of land quarantine by the International Conference at Rome last year, must be regarded as an advance. In time, no doubt, the English idea of scrupulous universal cleanliness, as the best preventive of cholera and all other epidemic diseases, will gain acceptance among the southern nations of Europe, which have recently suffered so grievously from their neglect of it. Dr. Buchanan's admirable summary of the argument was quoted, and due praise given to the Local Government Board for its efforts to discover and correct sanitary defects, wherever they were reasonably suspected to exist. Dr. Koch's researches on cholera microbes, and M. Pasteur's prophylactic inoculation for hydrophobia, were to be regarded as valuable advances in epidemiological science, though still on their trial, and requiring corroboration from further experience. Reference was made to the Peruvian Verruga, and the recent deplorable self-sacrifice of a young physician of Lima, who inoculated himself with the blood of a patient ill with the disease. After a period of incubation of twenty-three days, the disease became developed, and death occurred on the thirty-eighth day, showing that the malady, though strictly endemic, confined to a limited tract of country, and not necessarily contagious, is zymotic and inoculable, and possibly dependent on the presence in the blood of a bacillus, reported to have been discovered by Professor Izquierdo, of Chili. In the last report of the health of the Royal Navy, there were some interesting details of the etiology of fevers which broke out among the force in the Soudan, Egypt, and Malta, in the recent war, and greatly raised the rate of sickness and mortality. On the West Cost of Africa, the cases of paroxysmal fevers of the climate appeared to have been of a mild type, although very numerous. In one vessel on the Niger, with a crew of seventy whites, all except six were affected by malarious fever, yet no death or invaliding had occurred. Only one case of yellow fever was recorded in the whole naval force at Callas, in the Pacific, the patient being a man who had slept on shore. There were only five cases of cholera in the whole force, all of which occurred at Amoy, in China, and were traced to the free use of aërated water manufactured in the town, from water polluted by sewage. The naval statistics showed a portentous increase of venereal affections, chiefly on the home stations. In the whole force, absence from duty from this cause had amounted in the year to five days per man, a loss of time equal to that caused by all the zymotic, rheumatic, respiratory, and digestive diseases put together. On some foreign stations, there had been a diminution of venereal disease in the navy, owing to the salutary regulations enforced by the local authorities; and, at the Cape of Good Hope, a frightful extension of syphilis, affecting a large portion of the population, including many infants and young children, had led to a great change in public opinion. Hence the restrictive measures, which had been repealed some years ago by the Colonial legislature, had been again introduced as absolutely necessary to avert further evil. Dr. Dickson then gave some of his own experiences in the navy in regard to cholera and kindred disorders, in two instances which, occurring in the microcosm of a ship where the persons affected were thoroughly known, afforded a good opportunity of studying etiology. In the first, a corvette with 200 men, serving on the Baltic coast in the first year of the Russian war, the sanitary conditions of the ship were very defective, and the health of the crew was much deteriorated by the arduous work of incessant cruising in cold, damp, tempestuous weather, blockading the enemy's ports, and destroying his commerce. At the end of September, 1854, she captured several prizes, which were sent in care of seventy men into Memel, which had that summer been visited by cholera. A heavy gale drove the ship off the land, and prevented communication with the prize crews for four days; when they returned on board, they were all suffering from bowel-flux, and two died of cholera; one in fifteen hours, the other with consecutive fever on the ninth day. In a third case, occurring in a man who had not been on shore, the disease was less severe, and the patient survived till the tenth day; in the final stage, he had black vomit as well as rice-water evacuations. The men who had not been on shore were affected in far less proportion than the others. This instance shows that, in the cold bleak climate of Prussia, much risk is run by communicating with cholera-stricken localities. Malarious fever was then discussed, as it appeared on board a steam-sloop with 110 men employed for three years (1850 to 1853) on the West Coast of Africa, in the suppression of the slave-trade. Minor forms of fever were not uncommon, but, on the river Congo, where the vessel lay seven months, from one to three miles from the shore, it was found that, while those who remained on board scarcely suffered, the crews of the boats which often ascended the river forty miles to search for slavers, and lay near the banks, were much affected by terrestrial miasms, and one-third of them contracted malarious fever. From the same malarious poison in the Congo arose, in a few months, the morbid processes of ague, remittent, and yellow fever, due to the modifying influences of exposure, natural proclivity, and personal habits of the individuals. Only one death and comparatively little invaliding occurred during the whole commission of the ship, which was in perfect order. The last instance adduced by the reader of the paper was that of a corvette with 200 men, which lay in the river San Juan de Nicaragua in Central America, and suffered from the malarious fever of the locality. This ship was in good sanitary condition, and the men had recently come from Europe. It was the hot, rainy season, and 16 per cent. of the crew were laid up in nine weeks by various forms of malarious fever, one-half of the number sick, showing the intermittent, the other half the remittent type. The disease here differed much from that observed on the River Congo and in Africa generally. Only one death occurred, and that was of a young officer intemperate in his habits, who had been on shore and exposed to chill

in heavy rain. Four days after he was seized with fever, but on the third day he became delirious with yellowness of the skin and black vomit and died. Bilious discoloration of the skin, of such grave import in tropical fevers, was of less moment in European epidemics. An outbreak of jaundice two winters ago at Bremen in North Germany was described as remarkable from its having prevailed exclusively among men, its limitation in locality, its being non-febrile and non-fatal, and from its alleged connection with re-vaccination, many of the patients having been re-vaccinated a few months before. Catarrhal icterus had been lately ascribed to ptomaines absorbed from the alimentary canal acting on the liver. Some remarkable epidemics of jaundice had been cited by the late Dr. Murchison, two of the last being that at Pavia, in Italy, and that at Rotherham, in Yorkshire, both of great severity. The light recently shed on several zymotic diseases affecting children by Drs. Ballard, Power, Cameron, Klein, and others, tracing such diseases to milk contaminated with morbid poison, was one of the chief medical events of the year. Those researches and the others undertaken in regard to the microbes suspected or proved to form an essential part of various morbid processes would afford interesting material for discussion in the society.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, NOVEMBER 5TH, 1886.

F. H. ALDERSON, M.D., President, in the Chair.

Epithelioma of the Œsophagus and Stomach.—Dr. OWLES read notes on a case of epithelioma of the stomach and œsophagus.

Further Remarks on the Radical Cure of Hernia by Injection.—Mr. KEETLEY showed a new syringe for the radical cure of hernia by injection, and detailed three cases, of which one had been completely and another partly successful, while one had been an absolute failure so far, though there was nothing to prevent another operation. The completely successful operation was for an oblique inguinal hernia, with a long canal. The failure was in a case of direct hernia, with a very large aperture. Strictly speaking, there was no injection of the inguinal canal in this case. An account was also given of a new method of injecting the canal subcutaneously, so as to avoid all risk of injecting the hernia itself. The hernia being reduced, and the patient in the supine position, the operator's left forefinger was passed up the inguinal canal, of course invaginating the scrotum, as high as the internal ring. The nozzle of the syringe was then thrust from without inwards through the anterior boundaries of the inguinal canal, until the point of the instrument touched the tip of the finger in the canal, and, of course, lay in the canal itself, pointing approximately in its axis—that is, downwards and inwards; the finger being then withdrawn, the injection was made.—Mr. FENWICK congratulated Mr. Keetley upon the utility of the procedure which he had introduced, and related a case in which he had followed Mr. Keetley's method with gratifying success.—Dr. GOOD had seen good results in the two cases in which he had injected the oak-bark solution. In one case, there was a bubonocele on the right side, and an inguinal hernia on the left; the injection was made on both sides, and, six months afterwards, the patient was walking about without a truss.—Dr. GLOSTER made a suggestion by which he thought an inconvenience mentioned by Mr. Keetley might be avoided.—Mr. KEETLEY, in reply, said that he would give Dr. Gloster's suggestion a trial.

Pigmentary Retinitis.—Dr. SCANES SPICER showed a case of pigmentary retinitis, cyst of the neck, and lupus.

Specimens.—Mr. R. F. BENHAM: A Calculus passed through the urethra by a child, aged 3 years.—Mr. H. PERCY DUNN: The Liver of a child showing extensive indentation upon the surface, the result of pressure of rickety ribs; the Brain from a case of Cerebral Hæmorrhage; Carcinoma of the Œsophagus, showing the effects of the extension of the disease.—Dr. OWLES: Microscopic Sections of Epithelioma from his case.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, NOVEMBER 3RD, 1886.

Professor GRAINGER STEWART, President, in the Chair.

Case of Hemiplegia due to an Injury of the Head at the time of Birth.—Dr. BYROM BRAMWELL showed a lad suffering from left-sided hemiplegia, with considerable atrophy and contracture, apparently traceable to injury of the cranium sustained at the time of birth. The patient's father, an intelligent man, gave a definite account of a depression of which he had the measurement, on the right side of the infant's head. The birth had been a tedious one, and the mother was delivered with the aid of instruments. Since infancy, the young man had been the subject of epileptoid seizures, with marked implication of the left arm. Peculiar subjective symptoms had accompanied some of the seizures. Occasionally, in connection with these, the patient was conscious of seeing a bright red light. The father thought his son slightly deficient in mental power. At the present time, no depression or other mark could be detected on the lad's head. The fits were decreasing in frequency, but the amyotrophic paralysis of the left arm continued as before. Dr. Bramwell thought the case of especial interest, as raising the question of operative interference. He did not think such interference was called for on account of the fits, as these were progressively getting fewer. But as the patient, at the close of the seizures, was sometimes able to localise a definitely painful point (to be covered by the tip of the finger) over the motor area for the left forearm and hand, one wondered whether some improvement might not be obtained by trephining, seeing that the operation was unattended with little more than ordinary surgical risks. A more serious question was, of course, involved in the case, as to the condition of the lad's brain. Was there a probability of finding a marked deficiency of development?—The PRESIDENT said he had seen more than one similar case. The question of operative interference he thought a most important one. It seemed to him that they could lay down no hard and fast line. Each case must be judged on its own merits. Before expressing an opinion, he should like to have an opportunity of studying the features in detail.—Dr. CLOUSTON had had several cases under his care at Morningside Asylum, and, as the result of *post mortem* examination, he must express the decided opinion that surgical aid would effect little. In such conditions, the brain was found to be in a low state of development, and their interference could not be expected to benefit this much.—Dr. JAMES asked if the lad's head had been measured. It appeared to him smaller than the average size. Possibly this might throw some light on the mental weakness which had been hinted at.

Recovery from Subacute Traumatic Tetanus.—Dr. COTTERILL showed a patient on whom he had successfully operated for subacute traumatic tetanus. The injury, which was followed by the tetanic seizures, was sustained by the patient's hand coming in contact with broken glass. For a time, little was thought of it; but, as the wound was healing, tetanus supervened. The tetanic symptoms, though not of the severest type, were manifested by distinct opisthotonos. After in vain trying the effect of eserine, he removed the scar on the ball of the thumb, slicing the muscles of the thenar eminence freely, with the result that the symptoms passed off completely. Dr. Cotterill thought the case of interest, as showing the value of surgical treatment, even at a late date. It was frequently taught that, when opisthotonos had occurred, little relief was to be obtained by such a method as he had adopted. This case seemed to disprove the correctness of that view.

Specimens.—Dr. BYROM BRAMWELL exhibited a number of Photographs illustrative of Nervous Cases, which had been under his care, or where the parts had been referred to him *post mortem*. The first series was of a patient who presumably had suffered from a tubercular lesion of the pons Varolii. The symptoms, which were those of ophthalmoplegia externa, had developed acutely, the patient's friends having their attention drawn to the child first of all through the sudden supervention of bilateral ptosis. Believing the affection to be probably of a tubercular character, Dr. Bramwell prescribed potassium iodide. Under this treatment, the condition gradually improved. Besides the eye-symptoms, the child had been simultaneously subject to severe screaming fits, without apparent cause. Dr. Bramwell thought these were probably to be explained in association with the other appearances, and, in support of this view, he cited the screaming fits induced by Ferrier in monkeys when the posterior corpora quadrigemina were stimulated. The seat of lesion was further localised by the non-implication of the function of accommodation. The photographs showed, in a striking way, the difference in the patient's appearance during paralysis and in the stage of recovery. Dr. Bramwell then showed preparations and photographs of sections of the brain in two cases of lesion of the pituitary body. One of these cases had, during life, presented few symptoms of note. The patient was an inmate of a county asylum, suffering from amentia, and occasionally had complained of attacks of giddiness, so that she could not take part in the asylum balls. The necropsy revealed the presence of a large aneurysm, about the size of an orange, centrally placed, apparently in connection with the posterior cerebral artery. The aneurysm was found to be completely filled with a dense clot.—Mr. A. G. MILLER exhibited a Vesical Calculus removed by a new method of suprapubic lithotomy. The calculus having been caught between the blades of the lithotrite, the point of the instrument was projected against the anterior wall and cut down on. Mr. Miller also showed parts from a case of Intussusception, operated on successfully, and parts from a case of Anchylosis of the Knee from disease.

Dislocations and Fractures of the Shoulder-Joint.—Mr. FRANCIS CAIRD read a paper on "The Shoulder Joint in relation to certain Dislocations and Fractures." By the aid of drawings and carefully dissected preparations, obtained from recent cases, he showed that much of the later teaching with regard to the mechanism of these displacements was erroneous. He indicated that the older anatomists, whose works had in some instances been forgotten, were nearer the truth, more especially as regards subcoracoid dislocations. On this point he dwelt with emphasis on the value of Malgaigne's work. Dr. JOSEPH BELL expressed his great pleasure at hearing so exhaustive a treatment of a knotty question in surgical anatomy. In earlier days he had worked a good deal at the subject, and it gratified him much to find that work, which he fancied was now little known, had been unearthed by Mr. Caird, who had corroborated some of the statements then made. Professor CHIENE spoke in complimentary terms of the thought and labour which Mr. Caird had bestowed on the paper before them. If Mr. Caird's conclusions were correct, he felt he would have to modify what he had formerly taught with regard to subcoracoid dislocations.

Sublimate Poisoning.—Dr. CHURCH described a case of poisoning by corrosive sublimate. A young child had received, in place of castor oil, a spoonful of a mixture containing glycerine and corrosive sublimate. Altogether about ten grains of the poison must have been taken, of which, however, a large portion was at once rejected by the urgent vomiting and diarrhœa. In spite of active treatment, the patient gradually sank. Previous to death, which occurred twenty-two hours after the swallowing of the dose, the temperature rose to 106.6° F. Dr. Littlejohn made a *post-mortem* examination, and found the mucous coat of the stomach and upper intestinal tract congested. Six separate portions of the viscera were submitted to careful chemical scrutiny by Mr. Falconer King, the City analyst, but not a trace of mercury could be detected. Dr. Bramwell thought the case of much importance, as illustrating the fact that, even in so recent a case, chemical examination might fail to detect the presence of the poison. Other cases, where the chemical evidence had been negative, were on record, but as a rule, death had occurred at a later date.—Dr. JAMES and Dr. CRAIG also took part in the discussion.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, NOVEMBER 10TH, 1886.

LLOYD OWEN, F.R.C.S.I., President, in the Chair.

Hysterical Borborygmus.—Mr. S. C. LAURENCE showed a girl, aged 18, who for the last fifteen months had been subject to constant borborygmi. The sounds were audible at a distance of some yards, and were synchronous with the respiratory movements; they ceased when she was asleep, lying down, or holding her breath. They had obstinately resisted all treatment, and were regarded as hysterical.

Convergent Strabismus.—Mr. EALES showed a woman, aged 22, suffering from complete paralysis of both external recti muscles. She consulted him on account of convergent strabismus, which the mother stated was noticed at birth, and had been present ever since ($V = \frac{6}{9}$, with H.50 dioptric). Accommodation was good in each eye, and there was no other symptom present. She had not binocular vision, even for near objects. Division of the left internal rectus had gratified her by curing the obvious squint, but she had neither binocular vision, nor was troubled with diplopia, though there was still some slight convergent strabismus.

Dermoid Tumour of Ovary.—Dr. MALINS showed a dermoid cyst of the ovary that he had successfully removed from a patient, aged 51. It contained a large quantity of light-brown hair, a well-formed tooth, and some bony plates, besides much thick fluid.

Myxœdema.—Dr. SUCKLING showed a man, aged 40, suffering from myxœdema. He had been ailing for two years, complaining of debility and *malaise*. He presented the usual symptoms of myxœdema in a typical manner. The urine was free from albumen, of low specific gravity, and deficient in urea. There was no reduplication of the heart-sounds, but feebleness of the circulation was a marked feature, the extremities always being cold, and the pulse small and of low tension. The temperature was 97.5 Fahr.

Dr. SAUNDBY read a paper on the Treatment of Diabetes Mellitus.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, NOVEMBER 11TH, 1886.

DR. CLEAVER, President, in the Chair.

Lead-Poisoning from Drinking Water.—Dr. GWYNNE introduced a man suffering from lead-paralysis, from drinking water from the Redmires Dam, conducted through several hundred yards of lead-piping and stored in a lead-lined tank. He was a shovel-heater, and, this being a very hot trade, he was obliged to drink much water. A year after he commenced this employment, he began to suffer from colic; in about another year, he noticed his right wrist to be weak, and soon the characteristic "wrist-drop" was developed. His left hand next became affected, the extensors of the middle and ring fingers becoming paralysed. The blue line on the gums was conspicuous. He was gradually recovering.

Erosion in Surgical Practice.—Mr. ATKIN read this paper, and drew attention to the increasing frequency of the use of the scoop and curette in the diagnosis and treatment of disease. Scraping appeared to occupy an intermediate position between caustics and the knife. Caustics were often inefficient. They formed chemical compounds with diseased tissues, which not only served to protect subjacent structures, and formed sloughs which retarded healing, but they were with difficulty localised, and were often accompanied by much pain. The knife necessarily removed sound and diseased structures together, and caused greater mutilation. The objections raised by Vincent, of Lyons, that by scraping, neighbouring tissues healthy, though softened, might also be removed, had no practical value. The use of the spoons in tuberculous affections, such as pulpy joints, lupus, cold abscesses, and subfascial glands, was alluded to. The early incision and scraping of ischio-rectal abscess, to prevent fistula, was advocated. The scraping and subsequent antiseptic treatment of chronic ulcer of the leg was also discussed, as was also the use, in combination with caustics, of the scoop in cancerous affections of the skin. It was the only available treatment in certain cases. Scraping, in naso-pharyngeal tumours, uterine affections, actinomycosis, and empyema, was also mentioned; and its use deprecated in granular ophthalmic and tympanic granulations.—Mr. GARRARD spoke of the value of scraping in lupus, and sinuses left in some cases after amputations.—Mr. SNELL alluded to the successful use of the scoop in rodent ulcer, and to its use, with care, in some cases of tympanic granulations.—Mr. PYE-SMITH thought it well to use caustics in some cases with the curette; free use of the scoop might be made in synovial disease of joints operated upon.

Specimens.—Mr. W. D. JAMES: (1) Abdominal Tumour; (2) Large White Kidney.—Dr. LAW: Tubercular Peritonitis; Small Stomach.—Mr. R. J. PYE-SMITH: (1) Calculus in Kidney; (2) Contracted and Sacculated Bladder.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, NOVEMBER 4TH, 1886.

E. NOBLE EDWARDS, M.R.C.S., President, in the Chair.

Loose Cartilage.—Mr. PALEY showed, for Mr. N. P. BLAKER, a loose cartilage, the size of a large bean, and also the patient from whose left knee-joint it had been removed. The man had a similar operation performed on the right knee six years ago.

Wasted Limb.—Mr. WILLOUGHBY FURNER showed a young man who had come to him asking to be relieved of his left upper extremity which, being wasted and completely useless, was only an encumbrance. It was decided that, as the other limbs were also partially wasted, and the vital power decidedly low, such a severe operation as amputation at the shoulder-joint could not be performed without considerable risk to life, and was not, under the circumstances, justifiable.

Ruptured Rectus Femoris.—Dr. BLACK showed a man whose rectus femoris had been ruptured at the junction of the tendinous and fleshy parts; the rupture occurred when he was running.

Erythema Nodosum (?).—Dr. UHTHOFF showed coloured drawings of a peculiar eruption allied to erythema nodosum. It occurred on the arms of a young lady, aged 16, of decidedly neurotic tendencies. While running the usual course of the above-named complaint, it differed from it in that the patches spread at their margins so as to almost completely encircle the limb. After the eruption had disappeared, a good deal of deep-seated effusion remained, causing stiffness in the movements of the wrist and fingers.

Discussion on House-drainage and Illnesses arising from its Defects.—The PRESIDENT suggested that members should specially discuss the diseases arising from the presence of sewer-gas. Could contaminated water produce the same diseases? How tell the difference? Have we any method of detecting the presence of sewer-gas in a house if accompanying smells be absent? In one case he knew, the inmates of a room were nearly poisoned by sulphurous fumes coming through the wall from an adjoining house which was being disinfected; might not other poisonous gases pass in the same way? He suggested that the drain-pipes of a house should be laid in a channel that could be easily inspected, and not buried in the usual manner.—Dr. FUSSELL thought with Dr. Playfair that architects and builders should be made

legally responsible for defective workmanship. He asked whether it was right that the drains from an infectious hospital should join the main drains of a town.—Dr. HOLLIS laid stress on the fact that a water-trap was not proof against a pressure of sewer-gas after a certain number of hours. He advocated free ventilation of drains. Our main sewer-pipes were too large; better flushing was obtained with smaller channels. He asked if typhoid fever or diphtheria could be contracted *de novo* from foul gases and foul water.—Dr. UHTHOFF considered valve-closets superior to the "flush-out," because in the former a large body of water descending the pipe in one mass created a vacuum behind it, which was almost certain to clear out of the trap anything the water left behind. There was also a double water-seal, the water in the trap and that in the pan. He asked about the value and safety of low level fresh-air inlets.—Dr. EWART said we suffered from the mismanagement of our sanitary engineers; drains should not be under a house if it could possibly be prevented. The gaseous tests usually relied on would not show defects in the under part of the drain-pipes, which allowed a percolation into the subsoil; this could only be found out by filling the pipes with water, and noticing if any escape occurred.—Dr. BLACK suggested that a test for sewer-gas would be of no value, unless we could detect the specific contagia, and that was hardly possible.—Mr. CLAYTON, in replying, gave a list of the defects in house-drainage most commonly met with; the most general was an entire absence of ventilation. He considered that low-level fresh-air inlets were not safe.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, NOVEMBER 3RD, 1886.

JAMES HARDIE, F.R.C.S., President, in the Chair.

Drainage-Tubes.—Mr. DAMBRILL-DAVIES exhibited a series of opaque white glass drainage-tubes, straight and bent, adapted for draining amputations, breast-excisions, and cases of paracentesis of the chest, as well as ovariotomy.

Syphilitic Disease of the Brain.—Dr. DRESCHFELD mentioned a case of syphilitic disease of the cortex of the brain, and showed the specimen.

Nitrometer.—Dr. DIXON MANN showed an apparatus for the estimation of urea, which possessed a modified arrangement for mixing the urine and the hypobromite solution.

Cleft Palate Knife.—Mr. HARDIE showed a new knife for division of the muscles in operating for cleft of the soft palate. He preferred Fergusson's method, but found that his lancet-shaped knife was apt to push away the tissues, instead of cutting through them. This, he thought, was obviated by the use of a sharp-pointed, sickle-shaped knife, which, by a slight rotation, embraced the tissues; being thus secured, they were divided with perfect certainty.

Intra-pulmonary Injections.—Dr. ARTHUR RANSOME gave the details of one case of gangrene of the lung, and four of phthisis, in which iodoform dissolved in ether, in olive-oil, or in oil of eucalyptus, had been employed, the later vehicle being preferred. The case of gangrene of the lungs was restored to health, the treatment having been very thoroughly carried out. In the phthisical cases, only from two to eight injections had been used in each case, and temporary benefit was obtained in two of them. In one of the others, symptoms of iodoform-poisoning had followed an injection, and, in the remaining case, temporary pneumothorax was produced. Hæmorrhage from the lung followed one of the injections, in the case of gangrene, but without any bad results.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THURSDAY, NOVEMBER 18TH, 1886.

SIR ANDREW CLARK, Bart., in the Chair.

Myxœdema.—Dr. ORD made a series of clinical remarks pointing out the typical and most prominent features of myxœdema, and demonstrating the various points in his own and other patients. He believed that sporadic cretinism was but myxœdema beginning in early life before development was complete. He was afraid that treatment was of little value, but urged the necessity of warmth, recommending that, if possible, such patients should spend the winter abroad. He had found some benefit from the use of pilocarpine and jaborandi.—Mr. VICTOR HORSLEY gave an account of the surgical history and pathology of myxœdema, especially as connected with Kocher's experiments, and the removal of the thyroid. He referred to his own experiments on monkeys, in whom removal of the thyroid, carefully performed, without injury to surrounding nerves, was followed by all the symptoms typical of myxœdema. He considered it proved that the thyroid was connected with the metamorphosis of connective tissue. He referred to the ignorance displayed on the Continent of the work done in this field of inquiry by Englishmen.—Dr. HADDEN made a few remarks, stating that he had given up the idea which he first put forth that this disease originated in the cervical sympathetic, since he had met with two cases in which, *post mortem*, the sympathetic was found to be normal and the thyroid diseased.—Dr. SANSOM proposed, and Dr. MICKLE seconded, a most hearty vote of thanks to Dr. Ord and Mr. Victor Horsley for their valuable demonstration and remarks. The vote was carried by acclamation, and Sir ANDREW CLARK, in presenting to these gentlemen the thanks of the meeting, expressed his high opinion of the work they had done in this branch of disease, adding that, for lucidity and practical value, Dr. Ord's demonstrations that evening had never been surpassed.—The crowded meeting fully endorsed Sir Andrew Clark's eulogistic remarks.

A vote of thanks to Sir Andrew Clark, proposed by Dr. DICKS, and seconded by Dr. DUNDAS GRANT, was carried by acclamation.

Specimens.—Microscopical specimens were shown by Mr. VICTOR HORSLEY.—The following living specimens were exhibited: 1. By Mr. VICTOR HORSLEY: Two well marked cases of Sporadic Cretinism, both males, aged respectively 22 and 29. 2. By Dr. AMAND ROUTH: A Woman suffering from Myxœdema, and a case of Cretinism in a female, aged 22. 3. By Mr. SAUNDERS: A case of Myxœdema in a man. 4. By Dr. SANSOM: A case of Myxœdema in a woman.

SUNDERLAND AND NORTH DURHAM MEDICAL SOCIETY.

THURSDAY, NOVEMBER 18TH, 1886.

G. B. MORGAN, Esq., President, in the Chair.

Election of Officers.—The following officers were elected for the session:—*President:* G. B. Morgan, L.R.C.S.I. *Vice-Presidents:* G. S. Brady, M.D., F.R.S.; E. A. Maling, M.R.C.S. *Committee:* G. E. Welford, M.D.; A. B. Low, M.D.; T. C. Squance, M.D.; W. H. Maling, M.R.C.S.; A. D. Maitland, M.R.C.S. *Honorary Secretaries:* T. F. Hopgood, M.R.C.S.; J. Whitehouse, F.R.C.S.

President's Address.—An interesting address was given by the PRESIDENT on the ethical and scientific duties of the Society.

Extra-uterine Fœtation.—Mr. MORGAN showed parts removed from a woman who had died from inflammation of the peritoneum following rupture of the Fallopian tube in the second month of pregnancy.

Hæmophilia.—Dr. LOW related a case of this disease. The patient was a young man, aged 27, who had had occasional epistaxis all his life. Within the last two years, the bleeding had occurred about once a fortnight, and had been very considerable. Nine relatives, seven males and two females, had suffered more or less from the same complaint. His grandfather died of apoplexy after the nose had been plugged for epistaxis, and his mother died of epistaxis.

Cyst of Cerebellum.—Dr. WELFORD showed a Cerebellar Cyst the size of a walnut. It contained a brown glairy fluid, and was thought to have originated from dilatation of a process of the fourth ventricle. The patient had suffered from severe occipital pain and want of muscular co-ordination. He was found dead one morning, lying on his face.

Specimens.—A specimen of Sarcoma of Leg was shown by Mr. HOPGOOD; also one of Sarcoma of the Neck by Dr. DRINKWATER.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, NOVEMBER 17TH, 1886.

Dr. SAMUEL SLOAN in the Chair.

A Utero-vaginal Fomentation Bag.—Dr. SLOAN exhibited a bag invented by Dr. Alexander Robertson, Physician to the Royal Infirmary, consisting of an India-rubber bag with afferent and efferent tubes to admit of the circulation of hot water. Dr. Sloan had used it with advantage in one case, and found that the patient could tolerate water as hot as 115° Fahr. Half an hour was the limit of time during which he employed it.

A Blighted Ovum.—Dr. ABRAM WALLACE exhibited a blighted ovum, which, he pointed out, corresponded very closely to the illustration on page 278 of Playfair's *Science and Practice* of a case of Oviminal apoplexy. The abortion had been preceded by intermittent brownish discharges, at intervals of about a month, for three months. The patient, who was not syphilitic, had had five living children, but had had an abortion between the third and fourth. In June she had been rowing occasionally; and in autumn she had sustained a severe nervous shock, having been present at the Crarie disaster.—Dr. SLOAN thought the presence of a slight brown discharge invariably in-

dicated the fact of a clot having formed *in utero*, and become decomposed.

Puerperal Eclampsia.—Dr. MALCOLM BLACK read a paper embodying the experience of thirty-nine cases, four of which had occurred in his private practice, and the rest either in connection with the Maternity or otherwise. He had had a mortality of 1 in 3⅓, or 12 out of the 39. He entered fully into the etiology, pathology, and treatment. A discussion subsequently took place.

REVIEWS AND NOTICES.

ON THE SUPRAPUBIC OPERATION OF OPENING THE BLADDER FOR THE STONE AND FOR TUMOURS. By Sir HENRY THOMPSON, F.R.C.S., Surgeon Extraordinary to His Majesty the King of the Belgians, Consulting Surgeon to the University College Hospital, etc. London: J. and A. Churchill.

THIS small but important work treats of a subject which was chosen for discussion in the Section of Surgery at the annual meeting of the Association in Brighton, a discussion introduced by the author. We published a full report of Sir Henry Thompson's introductory observations in the JOURNAL of October 2nd, so that this distinguished surgeon's opinions on suprapubic operations on the bladder must be well-known to our readers. A considerable number of independent communications on the same department of operative surgery have also recently appeared in our columns. This work, then, includes matter already made public elsewhere, but collected in its pages in a very convenient form. The type is good, the marginal notes useful, and, above all, there are illustrations of those special instruments which, according to the author, are needed in suprapubic cystotomy. The clinical reports are excellent. The book may be read with advantage not only by operating surgeons, but also by those who practise in other branches of the medical profession. It shows how old operations are not necessarily bad, and how that which has been discarded must not be overlooked or despised, but, on the contrary, duly considered and compared with what is actually in favour with operators of experience and authority. The reason why an operation has fallen into discredit should be especially investigated, for often that reason proves fallacious.

Without entering systematically into matters of detail, it may be said that suprapubic cystotomy lay in abeyance till recently because surgeons feared injury to the peritoneum, and were not acquainted with methods by which it might be kept out of the way during the operation. Drs. Garson and Petersen have proved themselves true benefactors of their kind. The former has discovered, or at least made clear, the effect of distension of the rectum upon the bladder, which is thereby pushed upwards well into the hypogastrium, the peritoneum being raised at the same time, so as to leave a suprapubic interval of large extent. Dr. Petersen first made use of the facts in order to introduce an improved method of performing suprapubic lithotomy, for he advocated and practised artificial distension of the rectum. Another detail, in which surgeons erred until recently, was the attempt to dissect the deep tissues freely, so as to expose a wide surface of the bladder in order to facilitate the incision through its coats. This, however, increased the risks of infiltration of urine into the pelvic connective tissue, or, indeed, made that deadly complication almost a certainty. Erroneous notions regarding the closure of the wound in the bladder after removal of the stone or tumour also prevailed.

Now that sound principles have been established, the operation of suprapubic lithotomy appears to be rapidly increasing in favour amongst surgeons, and it doubtless has a great future before it. The high authority of Sir Henry Thompson cannot fail to exert a great influence on the popularity of the operation. He agrees to all the new principles above noted, and lays special stress upon his own practice of limiting the use of the knife during the incisions, employing the finger-nail or an ivory instrument to divide some of the tissues, and to push aside the veins. In this respect, the operation bears a certain resemblance to some of the steps in tracheotomy. *On the Suprapubic Operation* will become a classical work like *The Enlarged Prostate*. The example of a distinguished surgeon of long experience in one class of operation boldly taking up another method, under favourable circumstances, after long deliberation on its principles and careful consideration of the opinions and practice of others, is highly satisfactory. Mature intelligences are too apt to keep to old grooves, but our author has avoided this error, one of the greatest obstacles to progress.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SESSION 1886.

Friday, November 19th.

Sir HENRY ACLAND, President, in the chair.

Visitation of Schools Committee.—The discussion on the Provisional Report of the Visitation of Schools Committee was resumed.

Mr. MACNAMARA thought that Counsel's opinion should first be taken with reference to the application of funds to the proposed visitation; it would then be necessary to consider the probable amount of the expenditure, which, considering the number of schools to be visited, must be very considerable. It would be necessary to visit each school both winter and summer. It was a serious question whether the funds at the disposal of the Council would be sufficient for the purpose. The great point was to ascertain whether the schools were fulfilling their duties properly, and the onus of that inquiry ought to be thrown upon the licensing bodies themselves. He was quite sure that the Royal College of Surgeons in Ireland would be willing to obtain the information sought, and the representatives of other bodies could state whether they would be equally willing.

Dr. DUNCAN hoped that no check would be placed upon the progress of the visitations. The objections to them urged by Mr. Macnamara might be raised with still more reason against the visitation of examinations. As to the expense, he did not know that the money could be better devoted than to the enquiry proposed. It was the special business of the Council which it ought not to neglect. A good education was far better than any kind of examination, and the opinion that it was a matter of indifference where or how a man obtained his education was abhorrent to his ideas on the subject.

Dr. QUAIN said it was impossible for the Council to do what was suggested, even if its present amount of funds were trebled. If the Council directed the attention of the licensing bodies to the subject, it would be doing all that could reasonably be required of it.

Mr. SIMON said it was no doubt extremely important to see that the education in the schools was efficient, but the question for consideration was how this was to be secured. The object could only be obtained indirectly through the agency of the licensing bodies.

Dr. HERON WATSON, in reply, said that the Committee had not at present developed any scheme, but only suggested that the matter be referred to the Branch Councils for consideration. The question of expense would depend largely upon the reports received from the Branch Councils.

The motion was put and carried.

New Standing Order.—Mr. MARSHALL proposed the following new standing order on the subject of "the previous question," namely: "When in reference to any motion before the Council, a member moves 'the previous question,' the form of the motion put from the chair shall be 'That the Council (instead of proceeding to vote on the question originally proposed) do pass to the next order of the day.'"

On this proposal, Dr. DUNCAN moved "the previous question," and this having been put from the chair in the usual form (namely, "that the question be now put"), it was carried, and Mr. Marshall's proposal for the new standing order was then put and agreed to.

Rejected Candidates and Attendance on Lectures.—Dr. MCVAIL moved: "That it be a recommendation to the licensing bodies that, in admitting candidates to professional examinations, care be taken that attendance on courses of study prescribed for any second professional examination shall qualify only if made after the first examination has been passed, and generally that attendances prescribed for any subsequent examination must be made after passing the immediately preceding examination." An average student, he said, would find it a great mental strain to keep up all the subjects to the end of his curriculum, and pass them all at the same time. The various bodies, therefore, divided the examinations into several parts, an arrangement that worked well for students who were able to pass the examinations at the right time, but if a student failed to pass his first examination, and then entered on the studies leading up to the second, he had at the same time to work for the first, so that his attention was distracted and divided. About 40 per cent. of the candidates failed in the first examination, many of whom went on at once to the subjects of the second examination, hoping to scramble through both together. They were no doubt inferior men, and the men who most needed to have the work divided up; but they received very little benefit from the

regulation laid down by the Council. If the resolution were passed, students would not be allowed to run into arrears, and the evil to which he had alluded would be rectified. The resolution would inflict no injury on students who did their work properly, and it would be a great benefit to the weaker students who had not given proper attention to the early subjects.

Mr. MACNAMARA seconded the motion, and stated that the principle embodied in it had been for some time in force at the Royal College of Surgeons in Ireland, where twenty-seven students had recently been sent back to the third examination, in which they had failed, before being allowed to proceed to the fourth.

Mr. TEALE objected to the proposal as retrogressive, and said that the Council had always been disinclined to pass minute regulations in reference to the course of education. The proposed motion would be a great hardship on students, who sometimes failed from no fault of their own.

Dr. BANKS objected to the proposed interference by the Council.

Dr. W. M. BANKS said that there were cases in which the students very nearly attained the amount of knowledge required to pass, and it would be a great hardship to impose the penalty of an additional year upon students in that position.

Dr. HERON WATSON also urged the hardship which the proposed regulation would inflict upon students, and moved "the previous question."

Dr. STRUTHERS said that students often attended lectures as a matter of form, while giving attention to other subjects in which they had failed. Idleness was the cause of most of the rejections, really stupid students being generally stopped at the preliminary examination; but an extra year's study was, he thought, too severe a penalty. He thought that Dr. McVail's proposal would prove unworkable, and he hoped it would be withdrawn.

Sir DYCE DUCKWORTH expressed a similar opinion.

Dr. MCVAIL said that his purpose was answered by his having introduced the subject and the discussion which followed, and he would, therefore, be willing to withdraw the motion, with the consent of the seconder, Mr. Macnamara.

Mr. MACNAMARA declined to consent to the withdrawal.

Mr. SIMON said he thought the case was one in which "the previous question" might be moved with advantage. The principle of the motion was right, but it would be inexpedient to adopt at present an additional regulation, and so unsettle the new set of regulations passed by the Council.

Dr. PETTIGREW seconded "the previous question," moved by Dr. Heron Watson.

Mr. MACNAMARA said he regretted that the members of the Council had not the courage of their opinions. If Dr. Heron Watson's amendment were passed, the subject would be simply shelved, and he protested against such a course. Whatever diversity of opinion there might be on the subject, it was the duty of the Council to express an opinion upon it.

The amendment of "the previous question" put in its new form, "That the Council do pass to the next order of the day," was agreed to.

Length of Curriculum.—Dr. STRUTHERS moved:

"That it be a recommendation to the licensing bodies to give effect as soon as possible to the General Council's resolution of May 22nd, 1885, as follows: 'that at least four winter and three summer sessions should be passed at a school or schools recognised by any of the licensing bodies mentioned in Schedule A of the Medical Act.'"

The motion, he thought, followed logically upon that passed on the previous day, at the instance of Dr. McVail. The recommendation of the Council referred to in that motion was of very great importance, but there were several bodies, including Dr. McVail's, that had not adopted it. The bodies which he (Dr. Struthers) represented had long since adopted the system of four winter and three summer sessions.

Dr. PETTIGREW seconded, and Dr. MCVAIL supported the motion, which was agreed to.

Ontario College of Physicians and Surgeons.—A communication was received from the Scotch Branch Council recommending the recognition of the Preliminary Examinations of the Ontario College of Physicians and Surgeons, which, it was stated, were recognised by the Canadian universities. According to a memorandum by the General Registrar: "The Trinity Medical School of Toronto advises its students, before entering, to become matriculated students of the Medical Council of Ontario, and, to become so matriculated, students must pass either the late High School Intermediate Examination or the third-class Non-Professional Examination with Latin. These examinations include the following compulsory subjects: English grammar, English literature, composition, dictation, history and geography, arithmetic, algebra, Euclid, Latin (which may be taken separately); and as an optional subject, elementary mechanics."

Dr. STRUTHERS proposed the acceptance of the Preliminary Examinations on the understanding that the certificates were to include all the subjects required by the Council.

Dr. HERON WATSON seconded the motion.

Mr. SIMON thought that the acceptance of the preliminary examinations of a medical body in Ontario would be instituting a new and questionable policy.

Dr. HERON WATSON said that the preliminary examinations of similar bodies had been admitted, and he saw no reason for the refusal of the present application.

The motion was adopted.

The Powers of the Executive Committee.—Dr. HERON WATSON inquired: "Whether a representation to Her Majesty in Council, with regard to Clause 21 of the Medical Act, 1886, be or be not one of those duties which it is *ultra vires* of the General Medical Council to delegate to the Executive Committee appointed out of their own body in accordance with the provisions of Section 9 of the Medical Act, 1858."

The PRESIDENT said he would take an early opportunity of obtaining counsel's opinion upon the question.

The Council then adjourned.

Saturday, November 20th.

THE President, Sir HENRY ACLAND, in the Chair.

Unqualified Assistants.—Dr. QUAIN moved:

"That the attention of the Council be directed to the resolution adopted on April 21st, 1883, as follows (Minutes, vol. xx, p. 71): 'That the Council record on its Minutes, for the information of those whom it may concern, that charges of gross misconduct in the employment of unqualified assistants, and charges of dishonest collusion with unqualified practitioners in respect of the signing of medical certificates required for the purposes of any law or lawful contract, are, if brought before the Council, regarded by the Council as charges of infamous conduct under the Medical Act.' That steps be taken with a view of making public the above resolution."

Dr. HERON WATSON seconded the motion, which was adopted.

Conjoint Examining Board in Ireland.—Mr. MARSHALL moved:

"That the scheme for constituting an Examining Board in Ireland, by the King and Queen's College of Physicians and the Royal College of Surgeons, should be received and entered on the minutes."

Mr. SIMON seconded the motion.

Dr. A. SMITH, in moving that the scheme be sanctioned by the Council, said it was on the same lines as that of the conjoint board in England, and the Irish authorities had given it their best consideration.

Mr. MACNAMARA seconded the motion.

Mr. SIMON said that the Council, being now an expiring body, was not in a position to pass a measure of such importance as the one proposed by Dr. Smith. Within six weeks, the representatives of the profession, introduced by the new Act, would be entitled to sit upon the Council, and express an opinion upon the subject. He did not wish to be regarded as an indiscriminate eulogist of the mode of election provided in the Act: but it was the law of the land, and they were bound to obey it. If the scheme were adopted, the Apothecaries' Hall of Ireland would be excluded, in which case the Medical Council would be asked to appoint assistant examiners, and then there would be a competing body with the two Irish Colleges, which, he thought, would be a great departure from what the Council desired. The question was a very grave one, and ought not to be disposed of without serious consideration. Without wishing to express any disapproval of the scheme, he would move: "That the proposal of the Irish Colleges to constitute an Examining Board in Ireland, under Section 19 of the Medical Act, 1858, be not considered by the Council until after January 1st, 1887."

Sir DYCE DUCKWORTH, in supporting the amendment, said that there was a still larger question depending upon that now discussed, and it would be much better to discuss it in the modified Council of the future. He did not, like Mr. Simon, regard the Council as an expiring body. He had never approved of the introduction of new blood, because he thought that the existing members represented the general practitioners throughout the country. There was no abuse requiring investigation which would not be thoroughly considered and dealt with; but it was their duty to bow to the law, and accept its provisions. The new members would only form part of the Council, but under the circumstances he thought it was not desirable to discuss so large a scheme in their absence.

Dr. BANKS said that the question was a most momentous one, and

he hoped that its consideration would not be pressed on the last day of the sitting of the Council.

Dr. QUAIN said that the question had been previously discussed, and there was no reason for postponing it, except that that was the last day of the sitting of the Council. Under the circumstances, he would not oppose the postponement.

Dr. HUMPHRY thought that the Council was not at present prepared to give full consideration to the scheme, and it would therefore be better to postpone it till after January 1st. After June 1st, no incomplete qualification could be accepted, and it was therefore important that the matter should be finally settled before that date—say at an early meeting next year.

Mr. MACNAMARA pressed for an immediate consideration of the question. No doubt modifications might be needed which it would be necessary to send to the Colleges for consideration; and as corporate bodies moved slowly, some time would elapse before the matter could be settled. It would be too late to take up the subject at a meeting in January. If the matter were not settled by June, the College of Physicians and the College of Surgeons would be virtually disfranchised. He hoped that the members of the Council would discuss the subject, even though it should require another day's sitting.

Dr. A. SMITH spoke in favour of the amendment. He said that, if the Council began the discussion, it could not be concluded without sitting another day; and there were urgent reasons against that course.

Mr. COLLINS said that the scheme had been agreed to with reluctance by the College of Surgeons. A communication had been received from that body expressing the regret of the Council that its efforts to secure the co-operation of the Apothecaries' Hall in the conjoint scheme had not been successful. The College believed that the union of the three corporations would be advisable, in order to reduce the number of licensing bodies in Ireland. The Apothecaries' Hall was quite ready to unite on reasonable terms, or on conditions similar to those approved by the Medical Council in 1872. It was understood that the exclusion of the Apothecaries' Hall was agreed to only by a majority of seven to five.

Dr. STRUTHERS supported the amendment, and urged that the matter should not be considered before the new members had taken their seats. A still larger question depended on the result of the present motion. He was of opinion that the English scheme ought to have included the Society of Apothecaries.

The amendment was then put, and carried by a large majority. It was also carried as a substantive motion.

This concluded the business of the session.

Dr. STRUTHERS said it would be convenient to members at a distance to know when the Council was likely to sit again.

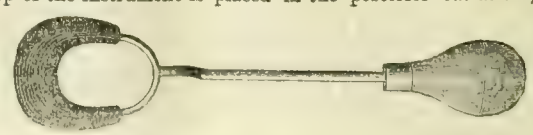
The PRESIDENT desired to say a few words before the Council separated. He wished first of all to thank them for the great forbearance and kindness they had shown to himself and to the other officers of the Council in their conduct of the business of the session, and especially for the courteous way in which the various arrrangements both for the election and the meeting had been accepted. The members were under a misapprehension if they supposed that there were no difficulties attendant upon an entirely new condition of things. When the Act of 1886 was passed, he had first to consider whether it was his duty to summon the Council for the purpose of deciding whether or not they would appoint a particular returning officer, or whether the President should take the initial responsibility, as the Act stated that, unless the Council decided otherwise, the President was to be the returning officer. His valued friend, the Chairman of the Business Committee, was not in England at the time, and the solicitor of the Council was not immediately at hand. Letters of a most varied description respecting the mode of conducting the election were sent to the Registrar and himself, which had led to repeated consultations between the solicitor and himself, and also to correspondence and interviews with the Government. They were enabled, through the kindness of the Secretary of State for War, to send voting papers to the large and valued body of professional men in the Army, Navy and Indian services. That was not a matter for the General Council, but one which had to be undertaken by the Council's representative, who had done his best in the matter. The only difficulties had been those that had arisen from irresponsible persons, who wanted to force their representative to act otherwise than according to the best of his judgment he had done. He desired next to thank the Branch Councils for their kindness in accepting the arrangements that had been made, and carrying them out with the utmost courtesy, and without cavil or question. With regard to the meeting of the Council itself, he held that it was bound to carry on its work just as if no Act had passed, until the day when the additional members were introduced; and he should have been a traitor to their cause if he had not always endeavoured to continue the proper work of the Council until that day arrived. He should not hesitate to summon the Council again before January 1st if the service of the profession and the country required it, but no such contingency was likely to arise. An objection had been taken to the meeting being held at this particular period, but legal technicalities and other difficulties might have arisen during the election, and it would have been improper on his part to endeavour to carry on the election without enabling the Council to be on the spot in the event of any such legal difficulties occurring. Voting papers had to be counted; and, if there happened to be a very close election, a scrutiny of votes might be required. It was necessary that adequate time should be allowed for the counting of the votes before declaring the poll; and the shortest time that could safely be allowed had been provided. All the votes would be counted by the end of the next week; and, on November 29th, it would be his duty to receive the reports from the Branch Councils, and declare the result. He wished further to express his thanks to Mr. Marshall, upon whose judgment he could always implicitly rely; to the Registrar, for his indefatigable exertions under trying circumstances; to the printers, Messrs. Spottiswoode; to all the officers who had been engaged during the election; and to Mr. Farrer, the solicitor. He could not at present decide when the next meeting of the Council would be held, but he would state the exact date as early as possible. At present, they were intentionally ignorant as to whom they would meet on the next occasion. If the present meeting had been delayed a little longer, they would have been sitting for the transaction of business after the election of gentlemen to the Council who could take no part in its proceedings; and that would have been an uncomfortable position for those gentlemen to be in. They had, therefore, been careful that the business of the session should terminate before they knew whom they would meet when the enlarged Council assembled.

This concluded the business of the session.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NEW UTERINE REPOSITOR.

THE plan of reducing a retroversion or retroflexion of the uterus by the rotation of the sound within that cavity, besides occasioning a good deal of pain to the patient, has also the serious disadvantage of almost certainly causing abortion (should the patient happen to be pregnant at the time); and this is by no means an easy thing to determine beforehand, should the patient have borne children previously. In cases of very recent retroflection or version, it will sometimes be sufficient to place the patient in the knee-elbow or knee-chest position, when, by raising the perineum and posterior wall of the vagina with the duckbill speculum, the atmospheric pressure alone will effect the desired result. But where the complaint is of longer duration, it will require some additional pressure to replace the organ. In these cases, I avoid having recourse to the sound, by using the instrument depicted in the accompanying woodcut, which acts on the principle of the Hodge's pessary. The patient being in the knee-elbow position, the top of the instrument is placed in the posterior *cul-de-sac*, when



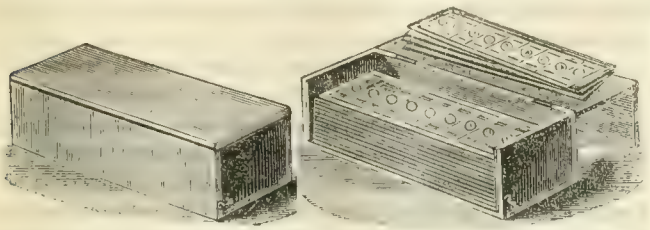
by slight but firm pressure in the downward and forward direction (using the heel of the duckbill as a fulcrum, if necessary), it will be found that reduction is easily accomplished with the minimum amount of pain to the patient. On the instrument being removed, and while the patient retains the same position, a Hodge's pessary, of suitable size, can be introduced with facility, and, on the patient resuming the erect position, the sense of relief will be at once experienced. The instrument will also be found useful for applying steady pressure to tumours occupying either *cul-de-sac*, and, with ordinary care, it will be almost impossible to do injury to the surrounding structures. Having experienced the value of the instrument in the cases I describe, I have confidence in recommending it to others. By the use of the

means described, I have reduced a retroflected uterus of eight years' duration, where the usual means, position, and use of sound had failed altogether. The makers are Fannin and Co., Dublin.

A. DUKE, Dublin.

PORTABLE CABINET FOR MICROSCOPIC OBJECTS.

Mr. J. B. MEDLAND, 12, Borough, London Bridge, will gain the thanks of microscopists for his neat, compact, and ingeniously arranged portable cabinet for microscopic objects. It consists of a well-made polished pine case, fitted with sixteen trays, to hold nine objects each. Each glass slip is held at its ends by the projecting side-flap of the tray, which is held down by the succeeding tray, and so on, the lid holding the whole firmly down. Another advantage is that, when open, the lid and front fall back, as shown in the illustration, forming a stand or table to place the trays upon, keeping them together, so that they are less liable to get displaced or upset. When closed, it is of the same height and width, and only two and a half inches longer than the ordinary case holding only half the number. To demonstrators of practical physiology, histology, microscopists, and medical students, to whom portability is a great object, this handy cabinet, which is sold at a moderate price, will strongly commend itself.



THE MENTHOL PLASTER.

THERE is probably no more valuable remedy as a local anæsthetic than menthol. It is as prompt in its action as aconitine, and is free from danger. It has already attained a high reputation in the treatment of megrim, neuralgia and allied affections. The great objection to its use in the form of a cone is that it is volatile and its effects are necessarily transitory. This difficulty has at last been overcome, and menthol can now be obtained in the form of a perforated plaster. The anæsthetic action is in this way maintained for days, giving prompt and permanent relief to pains of various kinds, such as lumbago, pleurodynia, myalgia, and intercostal neuralgia. We have tried it in several cases, and find that it answers admirably. The menthol plaster is made by the National Plaster Company, and can be obtained from Messrs. Burroughs, Wellcome and Co., Snow Hill Buildings, E.C.

CALVERT'S BORO-PHENOL.

THIS new disinfectant is a combination of borax and carbolic acid, and is intended for antiseptic and disinfecting purposes. The first thing we notice about it is that it has an odour which is really agreeable. This in itself is an immense advance on the old fashioned carbolic acid preparations. We find, too, that it is completely soluble in water, and that it forms a solution which may be used for all the purposes for which the ordinary carbolic acid disinfectants are applicable. The new combination has, however, to be used in very much smaller quantities than the carbolic acid disinfecting powder. We have no hesitation in saying that the boro-phenol will come very largely into use. It is prepared by Messrs. F. C. Calvert and Co., Manchester.

BROOKE'S SOAP.

THIS is a very coarse soap, intended for general cleaning purposes. It is well adapted for washing dishes and kitchen utensils, and for removing stains, rust, and dirt. It is not intended that the soap should be dipped in water, but it should be rubbed on a damp cloth, with which the articles to be cleaned are then rubbed. It is especially stated that it is not recommended for cleaning silver-ware, jewellery, and other delicate articles.

TRACTION RODS FOR FORCEPS.

DR. STEPHENSON has designed some traction rods, which may be applied to any forceps. His modification consists of a simple hook, which is applied in the crutch between the locked blades.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The Issue of the BRITISH MEDICAL JOURNAL now amounts to

13,300 COPIES WEEKLY

which will be found, if tested, to show AN EXCESS of considerably more than a QUARTER OF A MILLION Copies annually over that of any other Medical Journal in Great Britain.

The British Medical Journal.

SATURDAY, NOVEMBER 27th, 1886.

THE PARTY OF PRIVILEGE AT THE COLLEGE OF SURGEONS: A LEGAL STUDY.

THE dispute that has arisen as to the reform of the College of Surgeons is a matter of such paramount importance to the medical profession in itself and in its results, that it merits full consideration from every point of view. In the line taken by the apologists of the existing policy of the Council, the main points insisted on are of what may be called a legal, rather than a professional, character. The Report of the Council and the speech of Mr. Erichsen base the opposition to the proposed extension of the franchise almost exclusively on the ground that the Members of the College have no legal right to claim those privileges which were conferred upon the Fellowship at its foundation, and have been enjoyed since 1843 by the Fellows as a kind of separate caste. The Fellows, it is said, have a property in their monopoly—a vested interest which it would be spoliation to disturb. The Fellowship is alleged to have been created to provide, not merely a grade of honour, but a position of place and power. And the argument, like all such arguments since the world began, goes on to insist that this monopoly once created, became a part of the contract between the College and every person whom it admitted to a Fellowship.

Some stout maintainers of privilege, true to the logic of the position, are already proclaiming that the exclusive franchise was one of the items for which they paid in cash, when they put down their fee, and that it belongs to each of them in the same sense as his watch or his walking-stick. So broad a statement of the position as this will seem to most people a *reductio ad absurdum*, yet it is the logical outcome of the position taken by the opponents of the reform. We may be pardoned if we recall the pathetic complaint of the Duke of Newcastle, when his pocket-boroughs were threatened, that a man ought to be allowed, "to do what he liked with his own." The obstructive party will doubtless demur to the comparison. It is needful, therefore, to demonstrate to them, from a legal and political standpoint, wherein lies the fallacy of their cry of spoliation.

To this end it is interesting to remember that, according to Mr. Erichsen's own case, the Fellowship—monopolies and all—was the creation of a reform. Whether his account or that given in the BRITISH MEDICAL JOURNAL of November 20th is the more exact, need not for the moment be discussed. Before 1843, the Council of the Royal College of Surgeons was, like many another corporation, a close, self-elected body. But this, to use Mr. Erichsen's own words, was "an abuse." Most people now agree that the close corporations, whether in colleges or municipalities or anywhere else, were abuses of the gravest kind. All of them had vested interests; their privileges were their property. Many of the disestablished municipal corporations had a far stronger legal claim to their monopolies than the monopolist Fellows or the Council ever dreamt of claiming for theirs. Yet they were accounted abuses, and their place knows them no more. On Mr. Erichsen's own statement of the case, then, it appears that the monopoly of the Fellows was based on the confiscation of a prior vested interest of the Members, and that that confiscation was a just and laudable reform, whilst the present claims of resumption would be unjust and detestable.

It must not be forgotten, of course, that other authorities say the self-elected Board was not within its rights, and that no charter had really conferred on it the monopoly of the power and government of the College. Mr. Erichsen is welcome to this contention, if it commends itself to his mind. In that case, the promoters of the old charter were not "spoliators," as far as the Board of Examiners was concerned; but then it also follows that the general body of the Members were and are the victims of a worse spoliation. For as no Fellowships existed prior to that reform, the franchise must have belonged either to the governing body alone or to the whole "commonalty" of the members. We present the Council with the legal dilemma. Either the franchise monopolised by the self-elected governors was stolen from the Members, and ought, in 1843 as now, to be restored to them, or else it was the rightful property of the dispossessed Council, and in that case the Fellows cannot ask the reforming impetus, to which they owe their existence, to regard their own monopoly as sacred.

Seeing, however, that the anti-reform party has taken its stand on the claim that these privileges are the property of the Fellows, it becomes important to consider what the legal rights of any monopolist amount to. The position is capable of very simple statement. For its own ends, the sovereign power conferred on certain of its citizens an exclusive right to do something for which others were equally competent. The Crown claimed a prerogative to create such exclusive rights by charter, and no one doubts that such charters were legally valid, even if the rights they conferred were monstrous enough. If the State could create these, however, it is equally certain that it could also abolish them. If, then, upon grounds of public policy, it should think fit to do so, what rights would the monopolist have? Is the privilege once created by the State, and then presumably in the interest of good government, to stand in the way of better government now? The answer has been given a hundred times in this reforming century. As soon as the general good conflicts with the continuance of the so-called "vested interests," the general good must obviously be preferred. It is no hardship; for everyone who takes or purchases an interest in any monopoly ought to know that he holds it subject to this contingency. No statute or charter can provide against its own repeal. The ex-monopolist must be thankful for the advantage he has reaped already, instead of insisting that, because he has had so much, therefore he should have more. Still, since this would often bear hardly on those who had in fact speculated on the continuance of the grant, it has been generally held to be good policy to compensate the dispossessed. Every such compensation, legally speaking, is a matter of grace, and not of right; but it has become so customary, that, in any ordinary case, the vested interests would be justified in asserting almost a moral claim. But what is compensation? It can only mean that if, after such a reform is carried out, any person is able to prove that he is, all things considered, in a worse pecuniary position than before, he shall be paid out of the general funds a fair valuation of the difference. This is the outside limit. There may be reasons of equity why it would be unjust to the public to pay so much, but there can be no claim in any case for more.

On this basis, it would be interesting to know what it is exactly that Mr. Erichsen's followers claim. They have not even attempted to argue that the interest of the profession, or that of the College—which is, or ought to be, the same—would not be better served by a scheme which contained some modest concession to the principle of popular election, than by a system which limits the entire control to 7 per cent. of the constituent body. They do not venture to put their case on any arguments as to the general good of the College. Indeed, Mr. Erichsen's frank reference to the inactivity and unconcern of the Council with either the ethical or other interests of its commonalty, may be taken as an admission that the College might be more efficient if it government depended a little on a general vote. They put their case on a bare legal right, for which they seem to say they have paid money. This, as has been shown, is no reason against reform. If they feel aggrieved, two courses are open. A committee might be appointed to assess by how much the position of a Fellow would be pecuniarily worse after the proposed reform had been carried through; and the damages, which would probably be represented by the farthing familiar to the law courts, might be tendered to all who were minded to apply. Or we might begin in a more liberal spirit at the other end, and assess what exact proportion of his fees any gentleman may be supposed to have paid for the honour and privilege of a limited election, in order that the amount, with an equitable deduction for the length of time he has enjoyed these benefits, may be repaid to him out of the College funds.

We have no desire to make a travesty of the arguments used by the apologists of the Council; but they have invoked the law, and it is well, therefore, that the question should be looked at as it might be in a legal opinion, assuming all the while the facts of the case to be as they are stated by the opponents of the change. It is needless, after the statement contained in the leading article which appeared in this JOURNAL on November 20th, to repeat that there is a still graver legal question behind. Mr. Erichsen's letter, which we publish elsewhere, treats the questions raised as to the earlier charters jauntily; but if these charters were submitted to a counsel experienced in such matters, we do not doubt that he would say that the whole "commonalty," which included all the "freemen" of the old Society, was the original electorate, and probably that they continued to be in some sense the electorate until the charter of 1843. That charter, for whatever reason, was wrongly drawn, and it ignored the real character and inherent constitution of the body for which it was intended. Since that time, the true beneficiary owners and constituents of the Corporation have been elbowed out of their rights, until they who were once the sole ultimate authority are now begging,

cap in hand, for a very small voice in the administration of their own estate. Whatever legal forms were used, it is clear that every guild or company of this kind held, and still holds, its property and powers in trust for its own commonwealth—the "commonalty" of those who were free of its corporate rights or members of its collegiate body.

We need hardly say that Mr. Erichsen's suggestion of a friendly suit is beside the mark. It is not impossible that exclusion of the Members from electoral rights under the Charter of 1843 may be so egally complete as to leave them powerless to do anything but agitate for a new charter. Our argument is that the Members have or have not a legally enforceable right to control the College now; they certainly had it originally, and are the victims of a spoliation, equally unjust and impolitic, so long as it is withheld.

Even the lay eye can see, on a cursory reading of the charter of 1800, something of how the transfer came about. The manors, lands, etc., were "granted and confirmed" by George III to the Masters and Governors; and the Masters and Governors were pleased to treat them more or less as if they were their own. But the property and rights of any company, even though nominally vested in its rulers, was a trust estate, and the beneficiary owners of it were the whole body. With what bottomless abuses the carelessness of the public and the rapacity of powerful cliques have overlaid this manifest principle, may be read at large in the history of the City Guilds or of the luckless Inns of Chancery. But the abuses of the law do not alter the nature of a trust. Neither the Court of Assistants, nor the Fellows, nor the Council, were, or are, or could be anything but trustees for the whole body of the College. As such, they will not be maintaining a right, but committing a wrong, if they refuse to admit those whose property they administer to a reasonable voice in its control. For the moment, the Council seems to think, in spite of all its fair words about opportunities for consultation, that it can govern after the manner of the Czar; otherwise such a flat defiance of the College as appears in its action with respect to the application of the Apothecaries' Company to be admitted to the Conjoint Board would not be conceivable. It may be difficult to enforce the rights of the Members, under present circumstances, in a court of law; though it is by no means certain that even that might not be possible. But the case is now brought before the bar of public and professional opinion, and little doubt can be felt what the judgment there will be. We trust, as a first and most important step, that a large majority of the Fellows themselves will disavow the attempt to place them in a false position.

THE RECENT CASES IN LUNACY.

Two cases in lunacy, tried in London during the current month, come opportunely to illustrate the grave need for some modification of the existing laws upon the subject, in the direction of affording reasonable and adequate protection to medical men, who, acting in good faith and in compliance with statutory requirements and with the spirit and letter of the law, are in any way concerned in the certification of persons alleged to be of unsound mind, or in the reception or detention of them in a private or public lunatic asylum or hospital. Strenuous efforts have been made in this matter by committees of our Association, one which so nearly touches the legitimate interests of the general practitioners of medicine, who constitute the majority of the members of the Association, and which touches more frequently—nay, even constantly—the interests, or even imperils the professional life itself, of the numerous members of the Association who are engaged in the care and treatment of the insane in public and private asylums. On this subject, urgent representations have been made, and with some effect, by our Parliamentary Bills Committee, with regard to the Lunacy Acts Amendment Bills of 1885 and of 1886, as, also, by a Committee of the Metropolitan Counties Branch with regard to that of 1885. The character of some of the actions brought against asylum medical officers and against medical men who sign certificates of insanity, sufficiently indicates the urgent need of some adequate protective provisions in order to meet the reasonable requirements of simple justice, by affording to medical men, in the performance of what is an act chiefly legal in its bearings, protection against frivolous, or vexatious, or speculative actions-at-law, or those springing from insane feeling and idea.

In one of the following cases the plaintiff had been sent to a private, in the other to a public asylum. In the former case, that of "Tanfani *v.* Spurgin," tried before Mr. Justice Denman, the plaintiff was an English lady, married to an Italian in 1869; and we gather what follows from the reports in the *Times* and other newspapers. She had been confined in several lunatic asylums in this country during part of the time from 1860 to 1863; and, in relation to her views of her case, it is as well to quote here statements made by the plaintiff in her recent evidence. Speaking of her admission to asylums in 1860-62, she is reported to have said, on oath, that "the Lunacy Commissioners had connived at her being locked up, although they knew her father had illegally signed the order" (*Times*); "they seemed to play into the doctors' hands" (*Daily News*). When, in 1862, she was removed to another asylum, "it was the Commissioners' doing; they pretended she had been transferred from one asylum to another."

Again placed in an asylum, at Rome, in 1878, taken therefrom by her husband, and subsequently brought to England, the plaintiff was seen, examined, and certified to be of unsound mind by the defendant and another, and was detained in Brandenburgh House, a private asylum, for about four months. Four days after her admission there, she was seen and examined by two of the Commissioners in Lunacy, who then and there made an official entry to the effect that they considered her to be insane at that time.

She now brought an action against the defendant for having, in 1878, falsely and maliciously, and without due care or without making proper inquiries, signed one of the certificates on which she was sent to an asylum, and for libel in speaking of her in the certificate as being of unsound mind. "The defence was a denial of the charges made, and that the certificate was given *bonâ fide* and was privileged, and was true in substance and fact, and the defendant further pleaded the statute of limitations" (*Times*). The judge, however, would not withdraw the case from the jury.

As reported, the certificate appears to have stated of the plaintiff "that she was greatly excited, and stated that medical men and her relations in Rome had conspired to take away her liberty and poison her." In evidence, Dr. Spurgin also stated that information was given him that she "had refused food, believing it to be poisoned, and she would only take it from one person who had previously tasted it, and she would only take milk for her dogs and herself which she had seen milked from the cows, for fear of poison." The two Commissioners in Lunacy who had seen the plaintiff, and Drs. Spurgin, Edsi, and Winslow testified that in July, 1878, she was insane, or

fitly under care. A nurse from the asylum testified "that plaintiff said she would not take the food, that she was excited, and said people were trying to poison her" by putting poison in her food.

The evidence likely to cast doubt on the accuracy of the certificates that the plaintiff had been insane in July, 1878, were the facts that two other medical men had declined to certify; that a friend, who knew her at Rome, had always considered her to be sane; that a nurse at the asylum in London thought her to be rather excited but sane (although, when pressed by the judge, this witness would not swear that she had not told the defendant, at the time, that the plaintiff was then "wrong," or had "gone [queer"); and, finally, the denial by the plaintiff of most of the particulars above-mentioned.

The jury, unable to agree, were discharged, and the learned judge adjourned the case "in order to consider whether he should not give judgment, upon the evidence, for the defendant, and expressed some doubt whether he ought to have left the case to the jury at all." Eventually, his lordship found in favour of the defendant, both as regards the alleged want of due care and the alleged libel; and added that he thought it was "a cruel action to be brought against the defendant."

At this point, it is reasonable to ask with what fairness can the State require and expect any medical man to sign a certificate of insanity, when, as in the case under discussion, a certificate of unsoundness of mind is made in order, and, according to the "judgment," with care; and only four days after the certificate and the admission of the patient to an asylum, she is seen, examined, and considered to be then insane, by two Commissioners in Lunacy, who give evidence, on oath, to that effect at the trial of the suit, and still the suit is allowed to go on, and at its close the jury cannot agree, and only the interposition of the judge averts an indecisive conclusion after a costly defence. Surely such evidence by the Commissioners in Lunacy might fairly be expected (though it does not do so in fact) to bring a case to an instant conclusion in favour of the defendant. If the opinion of the independent, permanent, public officials appointed by the State to visit and examine persons detained in asylums is not accepted as conclusive by a jury, is it possible for any medical man to secure that his examination and certificate shall satisfy a jury? We are constrained to believe that it is not possible, and that, in the present state of the law, the position of the medical men in any way connected with lunacy cases is intolerable, and urgently needs to be rectified.

It will have been noticed that the plea with regard to the limitation of time, as defined by statute, within which an action of this kind may be brought, did not suffice to check the suit at its commencement. Nevertheless, the law requires that, if any action or suit of the kind be not commenced within one year next after the release of the party bringing the action, the jury shall find for the defendant, and the defendant shall recover double costs. Yet, although about eight years had elapsed since the release of the plaintiff, she was able to bring this action. The legal technicalities by which this was accomplished appear to be as follow. An old statute provided that actions of the kind may be brought within four years of the act complained of; further, "that a married woman, having a grievance for which she could not sue during coverture, should have four years, after she had become 'discovert,' in which to bring the action. It had been held, in 'Lowe *v.* Fox,' that this provision applied, under the Married Women's Property Act, to a woman whose husband was still alive, and that she would have four years from the passing" of that Act in which to bring her action. "Though he (the judge) could not follow the reasons for that decision, yet he was bound by it." It is hard that a medical man should be called on to defend and justify a certificate given, and acts done in relation thereto, more than eight years previously; and when witnesses may be dead, the recollection of events hazy, and the difficulties in obtaining corroborative evidence vastly enhanced.

In the cases to which we refer no order was made as to "double costs." In Vict. 8 and 9, c. 100, s. 105, it is enacted that if, in some lunacy cases, a verdict is found for the defendant, because the action has not been brought within the limit of time defined by statute, or if the plaintiff shall be non-suited, or discontinue his action or suit after the defendant shall have appeared; or if, upon demurrer, judgment shall be given against the plaintiff, the defendant shall recover "double costs." This provision appears to be well-nigh a dead-letter, and would be practically inefficient, because inoperative, in most cases, and would entirely fail to meet the worst kind of suits which might be brought—as, for example, those by piratical, indigent, *quondam* or present lunatics, with the aid of speculative lawyers.

The second case, "Hughes *v.* Langmore and others," tried before Mr. Justice Manisty, was one by Miss Hughes to recover damages for the alleged wrongful acts of the defendants in causing her to be assaulted, seized, and conveyed to a public asylum. The case against Dr. Langmore was that he, without reasonable and probable cause, signed a certificate, in the form prescribed by the Lunacy Acts, that the plaintiff was of unsound mind. That against her brother and Dr. Armstrong was that they conspired together to have the plaintiff confined in a lunatic asylum, and in pursuance of such conspiracy procured Dr. Langmore to certify as above mentioned, and thereby induced a magistrate to make an order for her reception as a pauper patient into a county asylum, where she was detained for seven weeks. The defendants admitted the certificate, magisterial order, and detention of the plaintiff, but traversed all other material allegations.

In 1884, the plaintiff was attended by Dr. Bridger, who last saw her on August 3rd, and who then left town; after that she was occasionally visited by Dr. Fox, until August 19th, but his evidence, taken on commission on behalf of the plaintiff, was not brought forward by the plaintiff, a fact which was strongly commented upon. Instructed, as he swore, by his and her father, the plaintiff's brother took a statement, written by Dr. Armstrong, to the relieving officer; the latter, after seeing the father, and being requested by him to proceed in the usual course for the removal of the plaintiff to an asylum, laid information on oath, upon which the magistrate signed an order directing Dr. Langmore to examine the plaintiff. In pursuance of this order, Dr. Langmore called, gathered information from the father, mother, and brother of the plaintiff, saw and examined the plaintiff herself, and signed the certificate. Next day, the plaintiff was seen and examined by the late Mr. Flowers, stipendiary magistrate, and on his order was removed to Banstead Asylum, as a person of unsound mind.

The plaintiff and her mother gave evidence denying all or most of the matters alleged as indicating the plaintiff's insanity, and as justifying the acts of the defendants. Several friends of the family testified that they believed the plaintiff to have been sane; and Dr. Bridger stated that he did so up to the last time he saw her, on August 3rd (although

this would not show that she might not have been insane on the 20th). At the close of the plaintiff's case, there being no evidence of conspiracy on the part of Dr. Armstrong, judgment was entered for him; but the suit against the other defendants proceeded. Dr. Langmore's certificate was: "1. Facts indicating insanity observed by myself: At the time of my visit (6 P.M.), patient was lying on her bed naked, except for a small flannel vest. Covering her with a light counterpane, she declared, 'sent a shock through her system to the very ends of her fingers.' She says she cannot touch anything or let anything touch her because everything is covered with slime. Cannot be persuaded to put on her clothes for this reason. Has been engaged a long time in scrubbing her hands and nails, and is much distressed (shed tears) because she cannot, according to her idea, get them clean. 2. Facts indicating insanity communicated to me by others: Her father tells me that the patient is at times very violent. A few nights ago she rushed out of her room in her night-dress, and tried to go into the street; he had a long struggle with her in the passage in order to prevent her. She has locked herself into her room or four days without food, when an entrance was forced. When not excited, she occupies herself in polishing and repolishing the furniture, her fixed idea being that everything is covered with 'slime.' Her brother (Mr. Thos. Hughes) tells me that crowds are collected round the house by her screaming, that she has a great aversion to wearing clothes, and wanders about the house in a state of nudity."

Drs. Shaw and Murchison, the medical officers of the asylum, gave evidence that, when admitted, the plaintiff was insane, and, in Dr. Shaw's opinion, her case was one of those which are much benefited by early treatment in an asylum; and evidence was given by three female attendants, corroborating that of the medical officers. The jury at once found that on August 20th and 21st, 1884, the plaintiff was of unsound mind; and judgment, with costs, was entered for the defendants. As reported in the *Times*, the learned judge, in his charge to the jury, said he made "an observation which he hoped might reach the ears of those in whose power it was to amend the laws. The observation was that, in a case of this sort, some security should be given by the party who brings the action, if the Court thought fit, for the costs of the parties brought before the Court. It was a terrible thing for a gentleman in Dr. Langmore's position to be called on to defend himself from a charge of this sort, on the chance of a party being able to get something out of him, and with the certainty that, if successful, he could only get his taxed costs, and would be still out of pocket. He therefore thought it would be well if the Court had a discretionary power to order security for costs to be given in such cases." In relation to this, we must mention that, at the annual meeting of the Association at Cardiff, in 1885, a resolution was passed in the Section of Psychology, that security for costs should be given in all actions in lunacy against medical men who sign certificates, or take charge of patients. (BRITISH MEDICAL JOURNAL, August 15th, 1885, p. 300.)

The Parliamentary Bills Committee of the Association has urged that the medical men who receive and detain patients should receive the same protection as would those who sign certificates, should the Lunacy Acts Amendment Bill of 1886, as finally modified, become law. That protection is as follows: that the signer of the medical certificate shall not be liable to any civil or criminal proceedings if he has acted in good faith, and with reasonable care; and that if proceedings *are* taken, they may, upon summary application to the court, or a judge, be stayed, if the court or judge is satisfied that there is no reasonable ground for alleging want of good faith or reasonable care; and that no prosecution for misdemeanour, in making an alleged wilful misstatement, shall take place, except by order of the Commissioners, or by the direction of the Attorney-General or the Public Prosecutor.

PROTECTIVE INOCULATION.

THE principle of all protective inoculation is the familiar but hitherto inexplicable phenomenon that some, though not all, of the diseases known as acute specific contagious diseases occur, as a rule, but once in a lifetime. Protective inoculation consists in the artificial induction of the disease in a form so far modified, that, while not severe enough to endanger life, it shall exert the same protective effect as usually follows the natural disease consequent on ordinary infection.

Protective inoculations may be grouped under at least four classes: (1) the inoculation of the actual virus of the disease; (2) that of the same virus modified by having been transmitted through the organism of an animal differing considerably from that to which it originally belonged; (3) that of the virus modified by prolonged cultivation in artificial media; and (4) the use of these media in which the bacteria have been killed, but in which certain chemical products of their growth are present.

At present, the first and second methods have found practical application only in connection with the pustular fevers or variolæ of man and of the sheep; and the laws by which they are governed have been stated as follows:

"1. One attack of variola of the kind proper to any animal protects the individual against subsequent infection by, or inoculation of, the same.

"2. Inoculation of any animal with the variola of its own species produces a milder form of the disease, but affords a protection similar to that conferred by an attack acquired by ordinary infection.

"3. Any variola inoculated in an animal other than that whose proper variola it is, gives rise (if it lead to any result) to a peculiarly modified form of the disease, attended by but little constitutional disturbance, merely local eruption, and no danger to life; such modified disease being no longer capable of communication to any other animal of the same or of a different species, except by direct inoculation; and

"4. This modified disease affords a considerable degree of immunity against infection by any means whatever with the variola whence it was derived, either to the animals of that species whose variola was the original source of it, or to others capable of being infected in any way thereby."

The first of these protective inoculations, defined in the second of the above theses, was practised in the case of human small-pox from time immemorial in China, India, and the East generally, and was introduced into Europe in the last century from Turkey, but was subsequently abandoned in favour of vaccination. According to Surgeon-Major R. Pringle, M.D., who has had unusual acquaintance with inoculation and vaccination as practised in India, when the virus, instead of being derived from cases of natural small-pox, is taken continuously from inoculated cases only, it becomes so modified by a long series of such artificial transmissions as ultimately to produce a trifling and apparently local disease scarcely distinguishable from vaccination, though he does not state whether it be still communicable to susceptible individuals by the ordinary means of infection.

Ovination, misnamed vaccination of sheep, that is, the inoculation of sheep with the virus of their own variola, was for some time practised in Germany, where sheep-pox is much more prevalent and destructive than in this country, but it has recently been prohibited by an Act of the Imperial Parliament for the very same reason that small-pox inoculation has been made illegal, namely, the obvious impossibility of stamping out a disease by a procedure which, *ipso facto*, perpetuates it, and the increased mortality which indirectly followed it. An operation strictly comparable to vaccination has not yet been found for sheep-pox.

Vaccination, properly so called, is an example of the second class of protective inoculations. The essential conditions of a vaccination are that the virus must be derived from the disease it is intended to avert, modified by having been passed through the body of an animal of a different species. Inoculation with one variola, whether in its original or in a modified form, can never protect against another variola, so that sheep-pox, which is a specific disease, cannot be substituted for cow-pox which is not, as a prophylactic against small-pox, as has been proposed in Italy; nor would cow-pox protect the sheep against its pox. Cow-pox and horse-pox do protect against small-pox, because they are modified forms of the human variola. Dr. Klein's experiments on cows, which he apparently rendered insusceptible of anthrax by inoculation with the blood of rabbits that he had inoculated with anthrax, would, if verified, fairly come under this head, as, perhaps, would some few of the observations made by M. Pasteur.

To the third class of protective inoculations belong the so-called "vaccinations" of Pasteur against anthrax, rouget of swine, and the absurdly misnamed "fowl-cholera." Cultivated in artificial media, bacteria may retain their properties unaltered, or they may undergo more or less modification, though, if they grow at all freely, the latter result is the exception. M. Pasteur's efforts are directed to the attainment of such a change (attenuation) in the character of the microbes, that inoculation with the fluid containing them shall set up a form of the disease not so severe as to endanger, but sufficiently marked to confer immunity from further infection.

There is no doubt but that he has succeeded, in a large number of instances, especially in the case of anthrax, in conferring the desired protection; but the procedure is open to the objections that may be urged against the inoculation of any virus still capable of inducing an infectious disease; while the difficulty attending the attenuation of the virus to the precise degree desired is insuperable.

The fourth method appears to promise far more satisfactory results, and is of the highest scientific interest. It has long been known that, just as the yeast-fungus, growing in a saccharine solution, breaks up the sugar into alcohol and carbonic acid, so all bacteria produce, or cause to be produced, in the fluids in which they are cultivated, certain chemical substances and ptomaines, some of which are of a toxic nature; this, which is the case with the bacteria of putrefaction, is presumed to hold good with pathogenic organisms. Some of these are killed by exposure to a degree of heat, which would not effect any material change in the chemical constituents of the fluid, and if their thermal death-point could be accurately determined, it might, perhaps, be possible, by maintaining the cultivation at that temperature in hermetically-sealed flasks, for, say, an hour, to effectually sterilise it, and to study, by inoculation with the sterilised fluid, the action of the chemical products of the bacteria, apart from those of the bacteria themselves.

In addition to the difficulty presented by the volatility of the toxic principles, there is a further difficulty in the case of those organisms, which, like the bacillus anthracis, produce spores very refractory to heat; this could be overcome by the repeated boilings suggested by Tyndall. The Pasteur-Chamberland filter might, perhaps, be employed in place of boiling, when the heat requisite to kill the organisms is such as might be supposed to dissipate or to change the chemical products; in any case, the success of the sterilising process could be determined by the failure to obtain colonies when the fluid was introduced into freshly-prepared cultivating gelatines.

Reasoning on these lines, Dr. Salmon, of the United States Department of Agriculture, found that by inoculating pigeons, on three consecutive occasions at intervals of a week, with doses of 1.5 cubic centimètres of the sterilised fluid of cultures of swine-plague, inoculations which produced but trivial and transient disturbance of their general health, he rendered them absolutely insusceptible to doses of .75 cubic centimètre of the strong virus, that is, of the same fluid which had not been subjected to the requisite temperature of 38° Cent., which proved invariably fatal to others not so protected, as it did to one that had had only a single and insufficient inoculation with .8 cubic centimètre of the sterilised fluid fifty days previously.

Experiments in this direction are important, not merely as regards the diseases of domestic animals, but in their possible application to some to which the human race is liable, and which cannot otherwise be guarded against. Yellow fever, of which the mortality is 50 per cent., and which confers on the few survivors the most complete subsequent immunity, at once suggests itself; under certain circumstances, it might be worth while to seek such protection against typhus and scarlatina.

But another and a most interesting field for speculation is opened at the same time. The nature and cause of the immunity from further infection conferred by an attack of any of these diseases, has long been a fertile source of conjecture. The arrest of fermentation so soon as the saccharine solution contains about 14 per cent. of alcohol, has indeed suggested some analogous action of the products of the bacteria on the organism, but since such products must soon be eliminated, the permanence of the effect could not be explained. Dr. Salmon's experiments have brought us one step nearer a solution of this remarkable phenomenon of acquired immunity.

We know that cells tend to produce their like, and that a character once given to them tends thus to be perpetuated, as we see in the development of carcinomatous and other morbid growths and neoplasms. May not, he asks, the power of resistance to the action of the bacteria thus imparted to the bioplasm of the tissues by the chemical products be transmitted to successive generations of cells, and thus persist for years after every trace of the original products has been eliminated? We have thus a new hypothesis to account not merely for the immunity itself, but for its occasional loss after the expiration of longer or shorter periods, and for the well-known failure of very mild attacks in all cases, and even of severe ones, in some individuals, to confer any lasting immunity; but also, though it does not seem to have occurred to Dr. Salmon, of the spontaneous extinction of the morbid process in fevers, which has been urged by some as an objection to the bacterial doctrine of their origin and causation.

HEALTH RESORTS.

We have recently had occasion to call special attention to the neglect of the local authorities, at several of our health resorts, to make proper sanitary arrangements for their districts, and now another name has to be added to the black list of such authorities. A report by Mr. W. Harvey, on the circumstances of the prevalence of enteric fever during the past autumn at Swanage, in Dorset, has just been issued by the Local Government Board, from which it would appear that the present sanitary circumstances of this quaint little town are extremely unwholesome, and just such as favour the spread, if not the production, of filth-diseases. Privy-pits that pollute the surrounding soil and ash middens are principally in vogue, and these are not emptied or cleansed except at long intervals, and by the enterprise of occupiers. Of scavenging by the sanitary authority there is none, except as regards the outward and visible sweeping and watering of the main streets. About seventy houses only have water closets, and of these very few possess proper arrangements for flushing. Swanage may be said to be without any system of sewers, except in so far as it possesses a new outfall sewer, provided last year, but which, though faulty construction, has proved a failure, and a number of old rubble drains that discharge into a sluggish brook passing through the town. The water-supply is from several sources, but wells and a pond near the church are mainly depended upon. Of the thirty private wells few are considered to give water good enough for drinking, but the two public wells, situate in rather more open spaces, yet "sunk in a permeable rock, below an ancient town, abounding with defective sewers, privies, cesspits, graveyards, and so on," are freely drawn upon. The physical conditions surrounding the wells are such that the pollution of all or many of them is inevitable. There has existed in Swanage for many years an available public supply, obtained from an artesian well, the water of which is described as being "practically inexhaustible," and of a high standard of purity, but this supply is at present laid on to only 91 of the 562 houses.

As regards the recent fever epidemic, which began in July last, and cannot yet be said to have ceased, Mr. Harvey observed, as regards the earliest cases, a special incidence of the disease on the consumers of milk from a particular small dairy. This dairy, "like all others in Swanage," has been under no sort of regulation or supervision, and, in the circumstances of its water-supply, there would appear to have been sufficient opportunity for infection of its milk. It seems probable that, in the operations at this dairy in July last, water was used from the brook already referred to, the brook having previously received, through one of the rubble drains, the bowel discharges of two fever patients. On the whole, the inspector "cannot but regard this dairy as having been a disseminator of the disease," and he is "disposed to believe that its milk acquired infective property through the medium of the brook-water." The subsequent extension of the fever is not difficult of explanation when the physical conditions of Swanage are considered. "Here," says the inspector, "was a town presenting in the circumstances of its chief water-supplies, in its methods of excrement and refuse-removal, and in its drainage arrangements, unusual facilities for the spread of excremental diseases (like cholera and enteric fever); and in this town there was set going during July, not one or two, but multiple cases of enteric fever, suddenly induced in various parts by the agency of milk. Thenceforth, water-supplies, drains, soil and refuse heaps befouled by excrements, obtain, in manifold instances, a specific character for their pollution; and in August this operates to produce a new prevalence of enteric fever among persons who have consumed air or water thus specifically polluted. The experience is a familiar one."

Like the other holiday resorts the sanitary arrangements of which have recently been condemned, Swanage has had its warnings. In 1872, Dr. (now Sir Anthony) Home made an official inspection of the town, and strongly condemned its unwholesome condition. He pointed out, at the same time, that the town possessed local advantages which should ensure its prosperity, if only attention were paid to its sanitary condition. Since then, the prevalence in the town, from time to time, of zymotic sickness of one sort and another should have sufficed to arouse the sanitary authority to a sense of its responsibility. The local authority seems, indeed, to have taken to heart the most recent lesson, and has shown signs of an intention to remedy sanitary defects. If it value a good reputation, it will certainly at once take effective action on the recommendations appended to the report to the central board.

Sanitary authorities have great obligations, but they have, at the same time, ample statutory powers to enable them to fulfil those obligations. It is, therefore, its own fault if a health-resort obtains for itself a bad reputation, and thus loses many of its visitors.

Health-resorts must be so in more than name, and as sanitary science advances, it will not be sufficient to trust merely to special natural attractions and local advantages. Those in search of health and recreation will, in rapidly increasing numbers, learn to avoid the disease-traps that may lie hidden in foul cesspools, open sewers, and doubtful wells, and will not so blindly, as hitherto, risk the lives of themselves and of their families in a so-called health-resort, however picturesque it may be, until they have assured themselves that its sanitary arrangements are reasonably good.

MINUTES OF THE GENERAL MEDICAL COUNCIL.

The minutes of the General Medical Council's fortieth session, from November 16th to November 20th, are now issued in pamphlet form, and sold for the Medical Council by Spottiswoode and Co., 54, Gracechurch Street. We have received also from the Registrar of the General Medical Council a copy of the Third Report by the Statistical Committee of the Council containing a summary of statistics regarding medical students registered as beginning the study of the profession in the quinquennium 1871-75. Mr. Marshall is the chairman of this Committee, and this third report completes that part of the design of the Committee which was to endeavour, by following the paths of the registered students of a certain number of years, to show whence and how the several ranks of the medical profession are recruited. The document is one of great detail, complexity and interest, and will well repay careful analysis. It is sold at the office of the General Medical Council.

PROLONGED FASTING.

Signor Merlatti reached, on Wednesday last, the thirtieth day of his fast. It is stated that he appears in good health, but is greatly emaciated. Reference has been made in many quarters to the folly of allowing Merlatti to continue to risk his life; but it is stated that he positively declares that if he feels himself in any danger, he will at once bring his experiment to a close; and that, at the first fainting fit, if matters take that turn, restoratives will promptly be administered to the patient. Special food for the purpose is, it is said, kept night and day in readiness for any emergency; for even if Merlatti desired it—which, it appears, he does not—he would not be permitted to continue his fast were serious symptoms to set in. It is reported

that the physicians who have studied the case, and who regard Merlatti as simply and solely a hysterical patient, are of opinion that he will be able to hold out until the end of the month, but probably no longer.

PASTEUR'S PROPHYLACTIC IN RUSSIA.

SINCE the establishment, four months ago, of the Odessa bacteriological station, 322 patients from all parts of the empire have been treated for hydrophobia by Dr. Gamalea, on the Pasteur system. Of these, seven died subsequently to their dismissal from the institute. Two of Dr. Gamalea's present patients are young lady-nurses who were recently bitten by a person suffering from hydrophobia, whom they were attending.

TRAINING OF NURSES IN JAPAN.

ARRANGEMENTS have been made to organise a school of nursing in Kyoto, Japan, under the superintendence of Dr. Berry and Miss Linda Richards, an American lady, who has had large experience, not only in New York and Boston, but in several British and Continental hospitals. The school, which is specially connected with Christian missionary effort, will give a course of training of about eighteen months' duration, including both theoretical teaching and practical work. A diploma in nursing will be awarded to those who prove themselves competent.

A NEW BACTERIOLOGICAL JOURNAL.

A new *Centralblatt*, devoted to the subject of bacteriology and animal parasites, will shortly appear in Germany, under the editorship of Dr. Oscar Uhlworm, in Cassel. The extensive and rapidly increasing literature on these subjects, and the absence of any weekly journal devoted to this particular science, will render this venture acceptable to all who interest themselves in these matters. The contents of the journal will embrace references to recent work, historical essays and original papers. Dr. Uhlworm will be assisted by a numerous staff of collaborators in the various European countries.

RENAL SURGERY.

MR. CLEMENT LUCAS performed nephroraphy, in Guy's Hospital, on September 29th. The patient was a married woman, aged 37, who had suffered from a painful movable right kidney for several years, and of late had been quite incapacitated for household duties. She was sent to London by Mr. Cockell, of West Hartlepool. The kidney was exposed through the loin, and stitched to the lumbar aponeurosis. The immediate effect of the operation was to remove the pain completely. The wound healed by primary intention, except where a drainage-tube was inserted, and one of the deep stitches was eventually discharged at this spot before the opening finally closed. She remained free from pain up to the time she left the hospital.

THE VACANT CORONERSHIP.

WE hear that the following gentlemen are candidates for the office of coroner for the Eastern Division of Middlesex, rendered vacant by the death of Sir John Humphreys:—Mr. George Collier, barrister-at-law, late Deputy Coroner for the Eastern Division of Middlesex; Mr. Wynn Baxter, Coroner for Surrey; Dr. M'Donald, M.P.; Dr. Yarrow, Medical Officer of Health for St. Luke's; and Dr. Forbes Winslow. The district is very large, and the question whether it will not be advisable to sub-divide it will require to be considered. If cut into two districts the average salary from fees for each coroner would be about £1,000 a year. A meeting has already been held, at which Dr. H. F. Barnes presided, to discuss the subject, and it was decided to make arrangements to send a deputation to wait upon the Middlesex magistrates to urge the necessity of sub-dividing the immense district of East Middlesex, and appointing additional coroners at salaries not exceeding in the aggregate the sum that is now paid annually.

LEPROSY IN THE SANDWICH ISLANDS.

THE Hawaiian Legislature has recently issued a report on leprosy. It has been said that this disease was introduced in 1848 by a Chinaman, and was hence called by the natives the Chinese disease; but it is probably much older than that. It was not until 1845 that the law was passed that all lepers should be sent to the hospital on the island of Oahu, near Honolulu. Once public attention was called to this loathsome disease, and a search instituted, it was found that there was a terrible amount of it in the islands, and every effort was made to stamp it out. The entire native population in 1882 was reckoned at about 40,000, and from 4 to 5 per cent. of this number were leprous. One great source of infection is found in the tenacity with which people cling to their leprous kin even to the last, and prefer to see them gradually drop to pieces at home rather than send them to the living death of the lepers' hospital. In the Molokai leper settlement there are about 700 patients awaiting death; and in the twenty years of its existence there have been about 3,000 miserable victims within its walls.

THE NOMENCLATURE OF NEW DRUGS.

A TENDENCY has recently become evident to name new drugs, especially those of chemical origin, rather in accordance with their supposed therapeutic effect than with their chemical constitution. The names antipyrin, antifebrin, and hypnone are examples of a practice which cannot but lead to much confusion. If a drug which lowers the temperature in fever is to be called antifever, then we shall have others known as pain-killers, or diarrhœa-producers. Further, a drug, originally introduced as a local anæsthetic—aconite, for example—may subsequently be applied to totally different uses. Such a practice, moreover, by stamping a drug with the mark of one description of physiological action would tend to divert the attention from other and possibly not less important attributes. It would be going back to the *mistura tussis* or the *bolus purgans* of our ancestors. The only rational plan to follow in such cases is to give the newly-discovered compound a name in conformity with, or bearing some relation to, its chemical constitution, as was done in the case of chloroform and chloral. The trifling discrepancies which may now and again arise in consequence of some change in our views as to a particular rational formula would not then be attended with a corresponding inconvenience from a therapeutical point of view.

FEES TO MEDICAL WITNESSES.

THE surest way to obtain the repeal of a bad law is to enforce it; and we are, therefore, not sorry to note that some Justice Shallow at Wakefield has vindicated his own dignity by inflicting a fine of £10 on Sir Charles Lowther, an old gentleman over eighty, and quite blind, and a like fine on Lady Lowther, also over eighty, and quite deaf, because they did not attend as witnesses in some unimportant case the "justice" had before him. The intemperate rebuke administered by a judicial official, known as the Under-Sheriff, to a surgeon who did not attend his court to give evidence, in a case in which a claim for damages was made by a hospital patient, may be good in law, but is very unjust. A busy surgeon is not only called upon to give his time and skill to the cure of the patient in the ward of the hospital, but the law gives to his "grateful patient" the right to summon him to attend the law courts, for as many hours or days as Justice Shallow may require, at the magnificent remuneration of one guinea a day. The absurdity of the Under-Sheriff's tirade, in the present instance, was shown by the fact that he had no difficulty in deciding the case without the presence of the surgeon; and, in ninety-nine cases out of a hundred, the house-surgeon or dresser is fully as competent a witness as the surgeon. To withdraw a house-surgeon, however, from his duties for a day, or perhaps several days, causes a serious amount of dislocation of the hospital routine; and, when the patient has been seen by a private practitioner, the latter is the witness who ought preferably to be called. The law with regard to subpœna can only be defended

on the ground that it is a duty that every citizen owes to the State to give evidence to further justice; the law, however, bears very hardly on the medical profession, whose members are, more frequently than any other section of the community, summoned to give expert evidence, usually sorely against their will.

H. N. CHILCOTE, M.R.C.S.ENG.

We have received intimation of the death of Mr. H. N. Chilcote, M.R.C.S., of Charlwood, Devon. Mr. Chilcote was an active general practitioner, who made many friends, and whose influence in the neighbourhood of St. Mary Church was very great. As a proof of his popularity, it may be stated that a public meeting, attended by a large and representative gathering, has been held since his death for the purpose of considering the best means of recording the respect with which the deceased gentleman was looked upon by his patients and neighbours. It was determined to erect a memorial, the form of which was to be decided by a representative committee.

"TAKING THE TEMPERATURE."

Professor Filatow recommends a very convenient method of taking temperature observations, which consists in first warming the thermometer (for example, by rubbing it with a pocket-handkerchief or a corner of the bed-clothes) to about 110° Fahr., and then quickly inserting it under the patient's axilla. The mercury falls rapidly to the body-temperature of the patient, and after one minute, or a little more, remains stationary, at a point only a little below the real temperature of the body. Between 100° and 104° Fahr., the difference, according to Filatow, is only 0.18° Fahr.; for temperatures nearer normal, a little more, 0.36° to 0.54° Fahr. Much time is saved by this method. Dr. Biedert, of Hagenau, has carefully examined this procedure, and finds that six minutes' time should be given, as otherwise quite misleading results may be obtained (*Berliner Klin. Wochenschr.*, No. 43). With this proviso, which goes far to neutralise the chief advantage alleged in its favour, the method is stated to be reliable.

A NOVEL TREATMENT OF PHTHISIS.

Dr. Bergeon, of Lyons, recommends a method of treating phthisis which has, at any rate, the merit of novelty. His plan is to utilise the effects of sulphuretted hydrogen, and this he proposes to do by injecting carbonic acid gas, saturated with sulphuretted hydrogen, into the intestines. If care be taken to secure the absence of atmospheric air, no inconvenience, it is said, results from the injection even of large quantities of the mixture; absorption into the venous system and elimination by the lungs taking place very rapidly. It is claimed for this procedure that, by its means, the use of sulphuretted hydrogen is unattended with any toxic effects, and exerts its influence directly on the lungs themselves. It has been employed in a number of cases at the hospitals of Lyons, Bordeaux, and Paris with great benefit to the patients, even in very advanced cases, and, latterly, similar observations have been made in the consumption hospitals of London, the results of which have not yet been made known. The method has been very much simplified by the introduction of an ingenious but simple apparatus whereby the carbonic acid gas is generated, and saturated with sulphuretted hydrogen, ready for use.

THE PROPHYLAXIS OF SYPHILIS.

In a pamphlet on "Prostitution and Venereal Diseases at Liverpool," Mr. F. W. Lowndes has drawn a vivid picture of the horrible state of things which results from the present system of utter neglect of all precautions to check the spread of syphilis. What is wanted is a removal of the traditional difficulties which, in many hospitals, are interposed to the admission of patients suffering from primary syphilis, but especially the construction and maintenance, preferably by the State, of lock hospitals wherein diseased women may be received and treated during the necessary time. The system of voluntary subscriptions as applied to these hospitals has never proved satisfactory, as it is difficult to elicit marks of sympathy with these women. It may readily be conceded that the admission of women of this class into the general wards of hospitals is to be deprecated from every point of view, but no such argument can be urged against setting aside special wards for the treatment of cases of syphilis. The general adoption of some such measures is imperatively called for in the interests of public health and public morality alike. Even under the unfavourable circumstances of forced detention in a special hospital, it was found, as every chaplain could testify, that much might be done to divert these unfortunate women from their wretched life. In most cases, a woman who discovers herself to be diseased would gladly relinquish her trade, at any rate until she were cured, if only she could be received, promptly and without unnecessary formalities, into a hospital, especially if the name and special nature of the institution were not such as to brand with the mark of infamy every patient who entered its precincts. At no other time can women of this class be approached for the purpose of reformation with the same prospect of success as during their stay in a hospital. Society at present is too much inclined to treat diseased prostitutes as creatures almost outside the pale of civilisation. By these means, if we can do nothing to mitigate the condition of our streets,—which are a scandal and an eye-sore to civilisation,—we may at any rate check the progress of the disease.

PALPATOMETRY AS A MEANS OF DIAGNOSIS.

A Russian physician, Dr. V. V. Filipopovitch, has recently published a pamphlet containing some observations on the advantage of ascertaining the degree of tenderness over particular areas by means of an instrument corresponding to Eulenberg's baræsthesiometer; it may be compared to a vertical spring letter-weight, the plate of which is replaced by an extremity having the desired form. The term used is "palpatometry;" the highest pressure, by variously shaped extremities, which could be borne without pain, was tested. This was found, by trial on a number of healthy subjects, to vary from 1,500 to 2,000 grammes, when the instrument with the knob was used. The work of M. Peter is referred to, as also Dr. Burney Yeo's lectures on Pain in the Region of the Heart and Palpitation (which have been translated into Russian), and several diagrams and charts are given of heart and other diseases, where the mapping out of the surface, according to iso-æsthesic, or, rather, iso-analgesic, areas, indicates with great exactness the course of the disease, whether favourable or otherwise. The author has observed that, in typhoid fever, the spleen undergoes a marked and sudden increase of sensitiveness within the forty-eight hours immediately preceding defervescence. This was quite appreciable to ordinary manual palpation, and, during an epidemic of typhoid, he was able to predict pretty accurately the occurrence of defervescence. He points out the value of more exact means of estimating tenderness in affections where peritonitis is feared.

AFTER THE SWALLOWS.

At this season, when the English, and especially the London, climate appears under its most unprepossessing aspect, those who, from inherited feebleness of constitution, actual disease, or mere disinclination to endure the discomfort of an English winter, find it desirable or necessary to avoid the risks and inconveniences incidental to our climate, have followed the swallows in their flight to fairer climes. There are a host of ailments and even serious maladies which depend for their existence and maintenance upon hygienic and especially climatic conditions. Attempts have been made of late years, with more or less success, to establish this system of treatment by selection of climate upon a scientific basis. Apart, however, from the physical conditions of life in these health-resorts, æsthetic details are of sufficient importance to merit particular consideration. A given situation may fulfil all the theoretical conditions of temperature and dryness, and may still be ineligible from the monotony of its landscapes or the absence of the creature comforts indispensable to the

invalid in search of health. Indeed, the number of health-resorts, originally very great, is singularly lessened when these other factors are taken into consideration. It is not many years since the Canary Islands, though offering unexampled natural advantages in the way of uniformity of temperature and purity of atmosphere, together with scenery which excited the astonishment and admiration even of that veteran wanderer, Baron Humboldt, were visited and enjoyed only by the adventurous traveller desirous of avoiding the beaten track. Within the last few years, steps have been taken by the erection of suitable hotels and residences, to turn to profit the immense advantages which Nature, singularly prodigal in that part of the world, has conferred. The town of Orotava, perched 2,000 feet high, on the top of volcanic cliffs, commanding an infinite expanse of blue sea on the one hand, and the celebrated Peak of Teneriffe on the other, has undergone changes which must astonish the native who remembers it as a charming but obscure little place, frequented only by fishermen, monks, and a sprinkling of Spaniards from the neighbouring towns. The facility of transit, more, perhaps, than any other circumstance, tends to limit the number of places available for invalids, even where the expense is not in itself a matter of primary importance. Within the recollection of men still in the prime of life, a trip to Alexandria, Algiers, or the Canary Islands, was an achievement only to be undertaken by those possessed of plenty of money and the best of health.

BARON HUDDLESTON.

TWICE recently we have had to comment upon the insulting utterances of Baron Huddleston towards medical witnesses. It used to be said of some of the unpaid justices that, while the principal business of justices was the acquittal of the innocent and the committal of the guilty, they committed themselves almost as often as the culprits before them. Baron Huddleston seems to be in some degree desirous of emulating that reputation. The last instance of judicial indiscretion and insulting conduct towards a medical witness is to be found in the trial of George Attwell at Winchester. In the charge to the grand jury, the judge took occasion to observe to them that there was on the depositions a very long and a very learned disquisition on, or picture of, all the injuries, possible or impossible, that were to be found on the body of the woman, and the doctor, after exhausting almost all the scientific knowledge of which he seemed to be possessed, failed to come to the conclusion, which was obvious to everybody, that the unhappy woman had died either by suffocation or strangulation. He was afraid that the learned doctor had failed to bring his common sense to bear on the appearances which presented themselves to him. He followed up this declaration by contemptuously declaring, when an application was made to fix another case for Tuesday, that he would not allow "that surgeon" to occupy so much time with his evidence, to which he intimated that he did not attach the slightest importance. In the end, however, the evidence and verdict showed that the whole issue depended very largely on Dr. Maybury's evidence, and that if Dr. Maybury had been less conscientious in the discharge of his duty, it is probable that a serious act of injustice might have been done to the prisoner, and facts not brought to light which materially altered the whole complexion of the case. Dr. Maybury's evidence proved to be exceedingly important, indicating that the patient had died suddenly of heart disease, from which she was suffering in a very advanced stage, and showing that the circumstances were indicative of fatal syncope occurring during an act of violence by the prisoner, rather than of strangulation, as alleged. In the end, this view prevailed, and the prisoner was convicted of manslaughter, and not of murder. Baron Huddleston subsequently, in his 'summing-up, retracted the observations which he had made use of in charging the grand jury, and "thought it right to say, and the jury would agree with him, that no medical gentleman had given his evidence more carefully, cautiously, or honestly than this medical witness." The position is a humiliating one, and one would readily have passed over an act of petulance, redeemed by subsequent apology, were it not that this is the third occasion, during the last few weeks, in which we have had occasion to call attention to similar escapades on the part of this learned judge. We think ourselves justified, therefore, in expressing the hope that his admitted error on this occasion will bring home to Baron Huddleston the conclusion, which he has hitherto apparently failed to arrive at, that the scientific evidence of a medical witness should be treated with due respect by a judge, even when, in the fulness of his wisdom, he is impatient of everything beyond what he is pleased to call "common sense." Impatience of scientific conclusions is, however, by no means limited to judges, and medical witnesses will do well always to bear in mind that the technical terms which they employ, and the doubts which their more highly skilled training suggests to their mind, do not easily recommend themselves to judges and jurors. Without abating one whit from their conscientious sense of what is due to the interests which they protect when appearing in the witness-box—the interests of truth and justice—and, while maintaining their right to give the most accurate and cautious statement, it is now, we hope, well understood that medical witnesses should, in the witness-box, be as brief, as unpretentious, as accurate, and as untechnical as the circumstances allow.

WINE AS A MEDICINE.

A CASE came before the Westminster Police Court last week when a claim for £8 from a funeral fund was disputed by a temperance lodge, and the question arose whether a member of a temperance society, who takes an intoxicating drink prescribed for him by his medical attendant, thereby forfeits his claim to the benefits of a society whose rules prescribe that its members shall abstain from all intoxicating drinks. It was stated that Dr. Gaven, the attendant of the deceased, sent to the lodge a certificate that the patient had a bad attack of dysentery, and port wine was necessary. The wine was put in a bottle, and labelled "Medicine." The magistrate thought the proposition that a man was to abstain from all intoxicants, under any circumstances, even, perhaps, at the cost of his life, a monstrous one. The medica certificate, which was produced, stated that the deceased had been ordered wine, as necessary for his medical treatment, to counteract the depression and weakness from which he suffered. The case was adjourned, to enable the parties to come to terms; but no arrange ment was come to, and the case is to be remitted to the county court.

THE JOHN LUCAS WALKER STUDENTSHIP.

THE legacy of £10,000 left by the late Mr. John Lucas Walker in the hands of the Attorney-General, to be spent "in the promotion of scientific and literary research, or of either of those objects, in Cambridge or in the metropolis, or in both places," is, after careful consultation with Professor Huxley, Sir James Paget, Professor Roy, and others, to be devoted to the establishment of a studentship in pathology. With the view of enabling the metropolis to share in the scheme, Sir Richard Webster states that he has associated the President of the College of Physicians as one of the Board of Managers, "in order that, from time to time, there may be a fair chance of ascertaining the names of suitable candidates in London." The managers by whom the income derivable from the legacy is to be received, are to consist of the Professor of Pathology, the Professor of Physiology, the Regius Professor of Medicine in the University of Cambridge, and the President of the Royal College of Physicians, London, and it is to be applied from time to time as follows:—1. To endow a studentship, to be called the John Lucas Walker Studentship, the holder of which shall devote himself to original research in pathology. 2. To further original research in pathology, by additional studentships or exhibitions, prizes or grants, at Cambridge or in London. The studentship, which will be of the annual value of £200, or not more than £300, will be tenable for three years, and may be held by, and awarded to,

persons of either sex. The studentship will not be awarded by the result of a competitive examination, and the student need not necessarily be a member of the University of Cambridge. Any student appointed a professor, or elected to a fellowship, will vacate his studentship. The student shall, during his studentship, devote himself to original pathological research, and shall not systematically follow any business or profession, or engage in any educational or other work which, in the opinion of those entrusted with the administration of the fund, would interfere with his original inquiries. In any communications or publications giving the results of his investigations, the student shall describe himself as the "John Lucas Walker Student." The place and nature of the studies of the student shall be subject to the approval of the Professor of Pathology, provided that the student shall be bound to pursue his studies within the university during at least three terms of his tenure of the studentship, unless the Professor of Pathology shall, with the approval of the managers, dispense with this requirement for special reasons. At the end of the three years for which the studentship is to be tenable, the Professor of Pathology may, if he think fit, recommend for a second period, not exceeding two years, any student whose labours during the period of his studentship shall have been of such exceptional promise as to make it clearly in the interests of pathological research that he should continue to hold the studentship for such further period.

TYPHOID FROM A SINGLE DOSE.

M. DUJARDIN-BEAUMETZ has forwarded to the Paris Academy of Sciences a communication on the Pierrefonds typhoid cases last summer. M. Fernet, who occupies a high post at the Ministry of Public Instruction, his wife and family, hired a house at Pierrefonds, a fashionable resort near Compiégne, contiguous to two others. After they had rented it for the season they were told to beware of the water in the well. On this account they drank exclusively mineral water until the last day, when the stock was out, and the servants were too busy preparing to return to Paris to go to fetch some bottles from the chemist. Madame Fernet said, "For once surely there can be no harm in drinking the well-water." They drank it. Six out of the nine persons have since died, including one of the servants. The cook, two of the four children, and Madame Fernet had had typhoid fever before, and though attacked again by it after their return from Pierrefonds, have got through the illness. The well has been examined and is reported to contain the bacilli which are believed to be associated with typhoid fever. This is a common danger to which visitors to so-called health resorts, both on the continent and at home, are frequently subjected. The facility with which well-water is infected is hidden from the population by the impunity with which filthy well-water may often be drunk by resident families who have become acclimatised, especially when that water is for the moment infected only by non-poisonous fæcal matter, and this fancied immunity often leads to habits of carelessness, for which not themselves only, but their visitors have to suffer.

MICROCOCCI IN PNEUMONIA FOLLOWING MEASLES.

DR. MANFREDI, of Naples, has examined the sputum in two cases of pneumonia after measles by Koch's methods of cultivation and separation, and has found that there was present in both instances, not only Friedlaender's pneumococcus, but also a small micrococcus which has peculiar and fatal effects on several species of animals, notably on rabbits and guinea-pigs. Subcutaneous injection of cultivations of this organism into these animals is followed by the formation of an inflammatory swelling at the seat of injection, which rapidly reaches a considerable size, and has a marked tendency to break down and suppurate. The neighbouring lymphatic vessels and glands also become similarly enlarged, and on the third or fourth day small nodules, composed of granulation-tissue, are found in various internal organs, especially in the spleen and liver, and also to a less extent in the lungs. The animals die between the seventh and twelfth days after infection, and show the presence of the nodules, which have now attained a considerable size, and are undergoing degeneration in the centre, in large numbers throughout the body. In the lungs, also, there is generally pretty extensive hepatisation in addition to small numbers of the nodules. The micrococci are present in large number in the caseous centre of the nodules, and at the margin; they are found chiefly in the interior of the cells. Dr. Manfredi was not able to obtain *post mortem* examinations in the two cases from which the sputum was obtained, and has not yet extended his observations to other cases of this disease.

THE BROWN INSTITUTION.

PROF. VICTOR HORSLEY, F.R.S., will deliver the annual course of "Brown" Lectures on December 1st, 3rd, 6th, 8th and 10th respectively in the theatre of the University of London, Burlington Gardens, commencing each day at 5 p.m. precisely. The subject of the first two lectures will be the "Pathology of the Thyroid Gland," that of the remaining three being "Epilepsy: the Theories of its Pathology," and experimental researches bearing on the same.

ROYAL COLLEGE OF SURGEONS.

THE report, which appeared early this week in an evening paper, that the Council of the Royal College of Surgeons had under consideration the desirability of allowing the Members to return representatives, is incorrect. It was evidently founded on the fact that the Council are taking steps to ascertain the opinion of the Fellows on the desirability of Members being allowed to vote for the election of Fellows as members of Council, and of Members being themselves eligible for seats on the Council.

PATHOLOGICAL SOCIETY OF LONDON.

IT is reported that Sir James Paget will be the next President of the Pathological Society. A more thoroughly suitable President could hardly be found. With regard to questions concerning the disposal of the Erasmus Wilson legacy, in which Sir James Paget will have a voice that will be heard and respected, he will, when presiding at the meetings of the Society, enjoy a favourable opportunity of ascertaining the aims, desires, and capabilities of the active school of young pathologists who bring forward their communications on these occasions.

FOG AND SMOKE.

A SUCCESSION of dense local fogs, such as those which have visited the metropolis during the early part of this week, never fail to bring with them not only a number of fatalities consequent upon the difficulties attending locomotion of all kinds, but a marked addition to our mortality returns. But although the dwellers in large cities cannot escape these unpleasant visitors, they can at least, by combining, lessen somewhat their virulence. The experiments of scientists have shown that a very large part of the deleterious composition of a fog consists of the unconsumed carbon emanating from our smoky chimneys, and this baneful combination may be very greatly obviated by the use of one or other of the smokeless grates, and smokeless anthracite fuel, which the experiments carried out by Mr. C. Kennear Clark, C.E., for the National Smoke Abatement Institution, have shown to be most effectual for this purpose. The Smoke Act, which was intended to combat this evil, is, we regret to say, not administered with the stringency which the nature of the offence, and often the persistence with which it is committed, require. In 1884, in no less than 84 per cent. of the cases considered as a serious nuisance by the Commissioner of Police, no proceedings were taken, and the average fine inflicted by the magistrates in cases of conviction was only £1 3s. 8d., while forty shillings is the minimum fine fixed by the Act for the first offence; no action has been taken in any case of smoke nuisance on the River Thames, where it is very prevalent. A representation made to the Home Secretary by the Smoke Abatement Institute, pointing

out these facts, has met with a most unsatisfactory reply. So long as the magistrates refuse to exercise adequately the powers which the law places in their hand for this purpose, so long will it, we fear, be useless to look for any very sensible diminution of this evil. Attempts have been, and are continually made, to evade the Smoke Act, which are only frustrated by the most vigorous action on the part of the officers of the Smoke Abatement Institution. As an instance of the difficulties which this Society has successfully combated, it may be mentioned that during the time of the last elections for the present Parliament, a number of bakers banded themselves together to endeavour to obtain the exemption of that trade (which is a chief source of the nuisance) from the Smoke Nuisance Act, and certain Parliamentary candidates pledged themselves to advocate this. By giving publicity to this fact, the Institution was largely instrumental in preventing the evil.

THE GENERAL MEDICAL COUNCIL.

When the General Medical Council re-assembled on November 19th, the discussion of the report of the Committee on the proposed visitation of schools, was resumed, and the subject was quickly disposed of by accepting the recommendations of the committee, that the Branch Councils should be asked to give their opinions, that counsel's opinion should be taken on the point whether the Council could use its funds for such a purpose, and that the committee be required to make another report. Dr. McVail started a question of much practical importance by moving a resolution to the effect that attendance on lectures required for a second examination should be allowed to qualify if taken after the first had been passed. Though theoretically sound, such a regulation would bear very hardly on many students who are apt to fail owing to the want of a preparation adapted to the particular examination; most teachers will probably agree with Mr. Teale that the Council should refrain from passing minute regulations in reference to the course of study. The preparation of rejected candidates for re-examination may well be regulated by the internal discipline of the teaching schools. The Council re-affirmed the resolution passed three and a-half years ago with regard to the question of employing unqualified assistants; gross misconduct in the employment of such persons, and dishonest collusion with unqualified practitioners for the signing of certificates, are regarded by the Council as "infamous conduct under the Medical Act." On the last day of the session, a highly important subject was reached, namely, the scheme promoted by the King and Queen's College of Physicians, and the Royal College of Surgeons, Ireland, for instituting a Conjoint Examining Board in Ireland. The Council, however, was in haste to adjourn; many members felt that it was a subject on which the direct representatives ought to be heard, and the amendment to postpone the discussion until after January 1st, 1887, was carried by a large majority. Sir Henry Acland brought the session to a close by a short address, in which he laid special stress on the inconvenience which would arise if the Council had continued its session until after the result of the election had become known.

M. PASTEUR.

M. Pasteur, who is exhausted by the incessant labours of the last few years, has left for Bordighera, where a villa has been placed at his disposal. He has stated that the subscriptions to the proposed Pasteur Institute now amount to nearly 1,800,000 francs, and contributions still flow in, though more slowly. This sum was inadequate, not that the buildings will cost much, but that funds were required to fit up the laboratories, and to maintain a staff of medical assistants and attendants. At least eighty or a hundred thousand francs a year will have to be guaranteed, and he calculated that a sum of between 3,000,000 and 4,000,000 francs would have to be collected. M. Pasteur felt confident that this sum would be forthcoming. English brewers who have been made acquainted with the extent of their indebtedness to M. Pasteur for his experiments on ferments have already contributed largely. In reviewing the methods he employs and the success attending them, M. Pasteur has made the following statement to a correspondent of a contemporary:—"When I first operated on a human being—namely, on the boy Meister—I employed successively virus taken ten days before from the rabid animal, then nine days before, and so on up to one day's virus. The cure was complete, and I was always convinced that this was the most efficacious treatment. But by degrees, out of consideration for patients—children, delicate girls, and so on—I did not employ the strongest virus, but stopped at virus five days old, and consequently much attenuated. When, however, the nineteen wolf-bitten Russians arrived from Smolensk, two died before beginning the treatment, and a third while undergoing it; I spoke to Dr. Grancher on the question whether all these patients were going to die, and we resolved to revert to the Meister method, using virus only a day old, and in certain cases repeating the series two or three times. The result was that not one of the remaining sixteen succumbed, though certain German newspapers, opposed to inoculation, have asserted the contrary. I have," M. Pasteur continued, "arrived at the conviction that by using first attenuated virus and then stronger and stronger virus up to virus a day old, and repeating the inoculations two or three times according to the gravity of the case, no accident is to be feared. Since September 1st, when I commenced this treatment, I have had about 600 patients and not a single accident. Out of the 1,721 patients who have been treated there have been ten deaths, six being those of children. This is a proportion infinitely smaller than that of vaccination for small-pox; but since beginning the present system, not one death has occurred. In Russia, moreover, the Smolensk cures have made such an impression that inoculation stations have been established at St. Petersburg, Moscow, Warsaw, Odessa, and Samara. The Grand Duke of Oldenburg, a warm supporter of my system, established the station at St. Petersburg, and is about to open one at Voronetz, in which district he has large estates, and where cases of rabies are numerous. He has just sent over a Russian doctor to examine the method. At one of the Russian stations there have been some cases of abscess, which caused uneasiness, but it was easy for me to show that these were due to local negligence, and not to the method, for in my 1,721 cases I have not had a single abscess." When M. Pasteur states that the mortality which has attended his treatment, viz., ten deaths out of the 1,721 patients, or one in ten, is infinitely smaller than that of vaccination for small-pox, he of course, refers to cases where vaccination has been performed during an attack of small-pox and to abort the evolution of the poison.

SCOTLAND.

The Committee of Management of the Aberdeen Hospital for Incurables has elected Dr. George Edmond to the post of Medical Officer, rendered vacant by the death of Profesor Dyce Davidson.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.

At the annual meeting of the above Society, held on November 18th the following office-bearers were elected for the ensuing year: President, Dr. J. Rodger; Vice-President, Dr. Smith-Shand; Secretary, Dr. George M. Edmond; Recording Secretary, Dr. Macgregor; Treasurer, Dr. Beveridge; Librarian, Dr. Wm. Fraser; Council, Drs. M'K. Booth, Gordon, Struthers, Garden, and Jackson; Representatives to North of Scotland Medical Association, Drs. M'William and Theodore Thomson.

CHAIR OF MATERIA MEDICA IN ABERDEEN.

We are requested to state that Dr. McGregor Robertson, of Glasgow University, is not a candidate for the chair of Materia Medica in Aberdeen University. Dr. Napier, assistant in Materia Medica at Glasgow University, and one of the editors of the *Glasgow Medical*

Journal, is, however, definitely in the field. He conducted the classes at Glasgow for two years during the absence from illness of Professor Charteris.

GLASGOW MEDICAL SOCIETIES.

An extra meeting of the Medico-Chirurgical Society was held on November 19th, when Dr. Beatson showed recent specimens of the common non-impacted intra-capsular fracture of the neck of the femur, and of fracture of the anatomical neck (intra-capsular) of the humerus from the same patient, and from the same side of the body. An interesting discussion afterwards took place on a paper on corrosive sublimate as a dressing in minor surgery, read at the previous meeting by Dr. P. C. Smith. The Clinical and Pathological Society also had a supplementary meeting on November 22nd. Dr. D. Newman showed a splinter of a rifle-ball, removed from the larynx by the endolaryngeal method. Mr. A. E. Maylard showed a scirrhous carcinoma of the prostate. The rest of the meeting was given up to a discussion on a specimen, shown by Dr. H. C. Cameron at the last meeting, illustrating an unusual form of ostitis of the lower end of the femur.

GLASGOW PHILOSOPHICAL SOCIETY.

The annual business meeting of this Society was held on November 17th; the retiring President, Dr. Henry Muirhead, in the chair. The annual report, presented by Professor McKendrick, showed that, last session, fourteen meetings had been held, at which forty-two papers were read. On the roll there were 662 members, a decrease of seven on the preceding year. Mr. J. B. Russell was elected President for the next three years. Professor McKendrick resigned the post of Secretary, held by him for six years greatly to the benefit of the Society, which he ably managed during that period. Mr. John Mayer was appointed as his successor. Mr. Adolf Schulze then read a paper on Abbe's new apochromatic lenses and compensating eye-pieces, made by Zeiss. Mr. Schulze referred to Abbe's theory that all details of the image, finer than the 1-2500th of an inch, were imaged by diffraction spectra, and therefore it was desirable that lenses should have as wide angles as possible. Believing that the theoretical limit of the aperture of lenses had been practically reached, Dr. Abbe directed his attention to the production of new optical media. Aided by a subsidy of £3,000 from the Prussian Government, Abbe, Schott, and Zeiss began, four years ago, a series of experiments, and had invented about twenty new kinds of optical glasses, with which it was possible to correct chromatic aberration for three colours of the spectrum, instead of only two as formerly. The new lenses had, as a result, superior definition, and greater light-giving and resolving power than the old ones. They were specially useful for micro-photography. For these lenses, special compensating eye-pieces were required. Dr. McKendrick showed, at the close of the meeting, the rocking microtome, and some other new physiological apparatus.

EDINBURGH ROYAL INFIRMARY.

The appointment of Assistant Surgeon will be made by the managers of the Royal Infirmary, Edinburgh, on Monday, November 29th. In addition to the three candidates who were announced in last week's Journal, there are two more in the field, viz., Mr. J. Maxwell Ross, M.A., M.B., C.M., F.R.C.S.Edin., formerly Clinical Surgery Tutor and Demonstrator of Anatomy at the Extra-Mural School, and W. Scott Lang, M.D., C.M., F.R.C.S.Ed., M.R.C.S., Demonstrator of Anatomy at Extra-Mural School of Medicine, Edinburgh.

EDINBURGH MEDICAL MISSIONARY SOCIETY.

The annual meeting of the Edinburgh Medical Missionary Society was held last week. Mr. William Brown, F.R.C.S.Ed., the President, occupied the chair. The report showed that the Society continued to prosper in all its departments, and that there was a larger number of students at the beginning of the year than had ever before been connected with the Society. The financial report also showed a very favourable state of matters. An account was given of the Livingstone Memorial Training Institution and Dispensary in the Cowgate. There had been £21,887 separate visits paid, either by medical men to patients, or by patients to the dispensary; and the patients, in addition to receiving advice and medicine free, were also assisted with food and clothing. The present accommodation was stated to be quite inadequate for the evangelistic work being carried on—an outcome of the medical practice among the poor. At the beginning of the year, nineteen students were preparing for medical missionary service; four had finished their studies and received appointments; while ten new students had been recently accepted—a grandson of the late African missionary, Dr. Robert Moffat, among the number. During the year the Society had helped other medical missions to the extent of £700. The financial income was shown by the report to be over £15,900; a balance of over £11,000 remained. The Secretary, referring to the report, said the Society had set aside £2,000 towards the building fund for the extension of their premises in the Cowgate, and they had now the plans, which provided for a hall to hold nearly four hundred people. The report was adopted. Dr. P. Anderson, one of the students of the Society, afterwards gave an account of his work in Formosa.

POISONING BY COAL-GAS.

An extremely painful case of poisoning by coal-gas has just been recorded in Cupar, and has involved the deaths of four individuals—a woman and her three children. It appears that the woman, whose husband is abroad, resided in a two-roomed house. As no one had been seen to enter or leave the house last Thursday, two constables burst in the door and entered, but could not proceed far owing to the large amount of gas. After a short time, they entered, and found the eldest boy, aged 6, in his night-shirt, lying on the floor, and breathing heavily. The mother and the other two children, aged respectively one and three years, were lying dead, two of them in bed and one on the floor at the head of the bed. Dr. Sneddon, who was immediately in attendance, was of opinion they had been dead for some hours. He did all that could be done for the surviving child, but he died in a few hours. The house is one in which gas has not been used for two years, but the gas-cock on the pipe from the main had evidently been forcibly torn off, whether by accident or design does not yet appear. The authorities are investigating the matter.

IRELAND.

Sir George H. Porter, M.D., J.P., Surgeon in Ordinary to Her Majesty the Queen in Ireland, has been appointed a Deputy Lieutenant for Wexford. His name has also been returned by the Judges of Assize to serve the office of High Sheriff for the same county during the ensuing year.

ENNIS LUNATIC ASYLUM.

The expenditure of a sum of £600, for the purpose of laying down pipes and connecting this asylum with the Ennis Waterworks, has been authorised by the Privy Council.

QUEENSTOWN HOSPITAL.

At the quarterly meeting of the committee, the question of establishing a Maternity Department in connection with this hospital, was under consideration. Those present believed it would be a most useful addition, and the matter was referred to the House Committee.

BELFAST MEDICAL STUDENTS' ASSOCIATION.

This Association held its first general meeting of the present session on October 16th, at the Queen's College. Dr. Porter, the President of the College, presided, and delivered an encouraging address. Speeches

were made by Dr. O'Neill (President of the Association), Dr. Byers, and Dr. Chambers. A resolution of condolence with the relatives of the late Mr. John Lockhart, a former medical student of the Queen's College, was passed. An interesting discussion took place regarding a proposal to use efforts to secure the opening of the Union Hospital to students, and the Committee of the Association was empowered to take action in the matter.

LADY STUDENTS IN DUBLIN.

At the recent first professional examination of the Royal College of Surgeons in Ireland, there were seventy-eight candidates. A lady student took the first place. She is now attending the wards of one of the Dublin clinical hospitals, in company with the ordinary class of students.

THE DUBLIN HOSPITALS COMMISSION.

It is stated, with we know not what authority, that the members of the commission have, at last, agreed on a report, which will shortly be presented to His Excellency the Lord Lieutenant. The Commission, it is said, have resolved to recommend that the Government grant should in future be distributed *pro ratâ* among the several hospitals in the city.

ACADEMY OF MEDICINE IN IRELAND.

The President of the King and Queen's College of Physicians, Dr. James Little, delivered an excellent and practical address at the opening meeting of the Medical Section, of which he is *ex officio* president. Subsequently, Dr. Arthur Wynne Foot contributed an interesting paper on a remarkable case of Narcolepsy, and Dr. Christopher Nixon one on Myxœdema. In our note in the JOURNAL of November 20th, referring to the opening meeting of the Surgical Section of the Academy, a mistake was made. The paper on a successful case of Ovariotomy was not by Dr. MacDowell, of Carlow, but by Mr. F. V. MacDowell, of Baltinglass, where the operation was performed by him under circumstances of special difficulty.

THE LABOURERS' ACT.

At a meeting of the Guardians of the Waterford Union recently, a communication was read from the medical officers, Drs. Cane, Jackman, and Coghlan, in reference to this Act. They stated that the object of the medical certificate, as required under two of the six sections of the Act, was to give power to the guardians to throw down the old cottages, thus providing a site for the new houses, and compelling the labourer to accept the new tenancy. The medical officers take the initiative in these cases before anything else comes in question, and the memorialists submitted that, as it was neither curative nor preventive medicine, and as their certificate was sought as a means to an end for a financial purpose (resulting in a reduced poor-rate in the future), they should be paid a proper professional fee for work so foreign to their usual duties. If they worked, they said, for the benefit of the ratepayers' pockets, they should be suitably paid. To compel them, against their will, to accept a fee they disapproved of, seemed oppressive. They asked the guardians to reconsider their case, and if they and the Local Government Board were resolved not to give them the fee of 10s. 6d., they requested that they might be allowed car-hire at the rate of 9d. per mile of distance over two miles from their residences. The guardians took no action in reference to the application.

THE BELFAST TOWN COUNCIL AND SANITARY REFORM.

At a special meeting of the Belfast Town Council held on October 17th, a scheme was adopted constituting the suburb of Ballynafeigh a separate drainage-district. This step is welcome as a further indication of the determination of the Council to deal effectively with the pressing necessity for the thorough amendment of the sewerage of the town. The proposal of the Parks Committee, which will secure twenty-four acres of ground at Woodville as a park, was adopted. The new park will meet the needs of the densely populated districts lying between the Shankhill and Crumlin Roads. The Council deserve every credit for its laudable efforts to provide "breathing-spaces" for the operative classes, but it is to be regretted that it could not see its way to adopt the proposal of one of the councillors that forty-six acres, instead of twenty-four, should be secured at the proposed site. The Council lastly considered the scheme for purifying the River Lagan, to which we referred in our last issue. A report was presented by the borough surveyor condemning the proposals of the recent meeting of ratepayers as likely to aggravate, rather than remove, existing evils; and this opinion was backed up by a letter from Sir Joseph Bazalgette, who not long ago made a survey of Belfast. It is certain that the condition of one portion of the River Lagan is a disgrace to a wealthy and progressive community, and imperatively demands a speedy remedy at the hands of the municipal authorities.

SIR PATRICK DUN'S HOSPITAL.

A charge of alleged neglect has been made against the authorities of this hospital in consequence of a child admitted for a broken leg having contracted scarlet fever there, of which it died; and there is also a further accusation that a *post mortem* examination of the body was made without the father's consent. The case came before one of the judges of the Queen's Bench in Dublin last week. The charge was brought forward by the father of the deceased child, who, on the fiatting by the judge of the schedule of the grant for the City Hospital, opposed the grant to Sir P. Dun's Hospital on the above grounds. It appears that this man stated his complaints to the governors of the hospital in May last in a letter, to which he received no reply until the middle of September, and that neither then nor subsequently were his charges or questions answered. The Rev. Dr. Haughton, one of the governors of the hospital, admitted that a want of isolation existed in the hospital, but asserted that every possible precaution was taken against the spread of infectious disease in it, and that the erection of isolated fever-wards was in contemplation. The judge stated that the hospital authorities were clearly justified to the extent of making the *post mortem* examination, as the cause of death was obscure. The objector then thanked his lordship for allowing him to make his statement, and said if the hospital authorities had only answered his complaints, there would have been no need for him to have come to the court. Further comment on the case is unnecessary. In consequence, however, of the publicity given to the charges in the daily papers, the medical staff of the hospital felt it their duty to publish the facts of the case. Their statement puts the matter in a different light, and satisfactorily disposes of all the allegations. The final paragraph is as follows: "We regret exceedingly that the board of the hospital thought fit not to answer Mr. S.'s letter. At the time when it was received, the board referred it to us, and we sent up an answer substantially the same as that which we now give, and we believed that this answer had been sent to Mr. S. Unfortunately, at Sir Patrick Dun's Hospital, the medical officers are not represented on the board of governors. If it were not for this unique arrangement, Mr. S.'s letter would not have remained unanswered." In connection with this case, it was with great satisfaction that we noticed the broad and truly liberal, scientific tone which characterised the leading article in the *Freeman's Journal* upon the unreasonable prejudice which exists, especially in the minds of the poor, against *post mortem* examinations of their deceased relatives. It is a healthy sign when we find a journal circulating so widely as does the *Freeman* expressing itself thus: "We think it behoves all those who have influence to explain that proper and reverent *post mortem* examination, conducted for necessary educational and scientific purposes, involves no disrespect, no outrage, nothing to which reasonable men ought to object. In the provincial towns especially, we are aware that anatomists find the most extreme difficulty in procuring subjects for their classes, owing to the rooted objection of relatives to permit the *post mortem* examination of bodies of deceased persons. We do not think this

feeling ought to be encouraged. It ought to be discouraged by every reasonable means, and it should be made generally known that these *post mortem* examinations are absolutely essential if our children, in their turn, are to obtain the advantages of competent medical and surgical assistance which are at our disposal owing to the medical men having had in their student days facilities for obtaining a thorough and practical knowledge of their profession."

DUBLIN UNIVERSITY BIOLOGICAL ASSOCIATION.

THIS Association, which is mainly composed of students of the University of Dublin and School of Physic, but is open to, and well worthy of the support of, all students of medicine and of biology in Dublin, held its opening meeting on November 19th. The incoming President, Dr. Cunningham, Professor of Anatomy in the University, delivered an address on Muscular Homology. In the course of his remarks, the Professor said that, in a great measure, anatomy was only looked upon by students as a means to an end; but in the mastering of difficult and weary details, the burthen was lightened and the mind invigorated by an occasional flight into the higher regions, where the subject was examined from a more scientific standpoint. It was by considerations of this kind that he was influenced when he selected this subject for his address. With the exception of blood-vessels, muscles showed more frequent variations than any other system in the body. Deviations were constantly met with, either the separation of a muscle, or the addition of a muscle, or the alteration of the attachment of muscles. In either case, there were indications either of advance or retrogression, or an attempt, on the part of organisms, to strike out an important condition, perhaps, or a backward change tending to some primitive type. They found new muscles underwent cleavage or segmentation as they mounted upwards in different groups of animals, and there were indications pointing to a tendency in man to a still further specialisation of the muscular system. According to the Heidelberg school, there was a constant relationship between the nerve-supply and muscular homology throughout the entire muscular system. There was a struggle for supremacy, as it were, in certain cases between homologous nerves. In conclusion, he said that the determination of muscular homology was encompassed by much difficulty. It constituted a field of research which required the highest degree of patience and ingenuity on the part of the investigator.

PROGRESS OF MEDICAL PROVIDENCE.

AT the monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life-Assurance Society, held at 38, Wimpole Street, on Wednesday, November 17th, Mr. ERNEST HART in the chair, it was announced that the further investment of £1,500 at 3¾ per cent. on the security of the rates of the Western Division of Suffolk had been completed, making the total invested reserve of the Society over £12,000. Ten new members were admitted, who had been duly examined and certified, and one proposal was declined; it was stated that 828 proposals had been received since the foundation of the Society less than three years ago. One hundred and fifty pounds had been paid during the month to meet the claims of members totally incapacitated from practice by sickness; among these were three cases of cancer, one of severe spinal injury, and others in which disabling illness had suddenly overtaken medical men in sound health and in the early prime of life. In one case, in which the validity of a sickness-claim did not appear to be sufficiently established by the weekly certificates (which are required in all sickness-claims), a further local inquiry was directed. Several applications were received and approved from original members desiring to avail themselves of the new rule, passed at the annual meeting at Brighton, by which a proportion of the annuity-premiums paid is returnable in the event of death before the age of 65, when the annuity would otherwise commence. Information, copies of the rules, and proposal-forms may be had of Mr. Radley, Secretary, 26, Wynne Road, Brixton, London, S.W.

ELECTION OF DIRECT REPRESENTATIVES—RESULT OF THE VOTING.

THE actual figures setting out the result of the voting for the election of direct representatives of the profession in the General Council of Medical Education and Registration will not, as we have already stated, be issued until the results have been verified by the Branch Councils, and are officially announced by the returning officer. This official announcement will be made on Monday next. Meantime, we are gratified to be able to announce that we have good reason to believe that Mr. Wheelhouse, Sir Walter Foster, and Dr. Glover, the three candidates originally nominated as the result of the preliminary poll taken by the Birmingham Committee, have been elected by substantial majorities for England. This result is that which we hoped and ventured to anticipate, and it will, we believe, be received with great satisfaction throughout the profession and the Association. We are glad to be able to add that it is understood that the poll testifies, in a very satisfactory manner, to the large interest which has been taken in the election by the members of the profession at large, and that the numbers voting are such as to indicate that the mind of the whole profession is fully represented by the result. Upwards of 18,000 voting papers were issued, and, of these, it is believed that upwards of 12,000 have been returned.

All the candidates for the representation of the Scottish practitioners went to the poll, and the results were known on Tuesday evening. Dr. Bruce, of Dingwall, was successful with 661 votes, Dr. Morton, of Glasgow, had 610 votes, and Dr. Sinclair, of Dundee, had 444 votes.

IN Ireland, we hear with satisfaction that the poll has been heavy; we understand that about 2,040 voting papers were returned, and that Dr. Kidd has been elected by a majority of 300 over Dr. Jacob. We are informed that the two other candidates withdrew on Wednesday.

THE INTERESTS AND RIGHTS OF GENERAL PRACTITIONERS.

NEXT FRIDAY'S MEETING OF THE METROPOLITAN COUNTIES BRANCH.

THE British Medical Association is never seen to greater advantage than when, as a whole, or through its branches, it avails itself of its powerful organisation to afford an opportunity to the general practitioner to put forward his opinions and to secure for them due publicity and influence in matters affecting the rights and duties of that class which constitutes the immense mass of the profession. This it has done on many memorable occasions with excellent effect. The meeting called by special requisition to decide upon the proper foundation of the Conjoint Board of England and Wales for giving licences to practise medicine, surgery, and midwifery is a meeting of this character, and promises to be of great importance. The deliberate act of the Council of the College of Surgeons in trampling under foot without any further ado the resolution of the Members and Fellows of the College assembled in public meeting, is calculated to raise a feeling of indignation which must necessarily lead to action on the part of the general practitioners who are members of the College, and who have been denied the ordinary right of speech due to those whose counsel has been demanded. The position of the Licentiates of the Colleges of Physicians is equally humiliating. The interests of the whole profession are deeply concerned in the proposal, which is in course of being carried into effect, as the result of the action of the two Colleges, to create a new class of general practitioners who will be fully licensed at a low examination fee by the Society of Apothecaries in medicine, surgery, and midwifery, and who assuredly, if the degree of

Doctor is granted at all to London licentiates, will have as full a claim as the licensees of the Colleges to that degree. To them—according to the theory of some members of the Council—should be handed over the treatment of the poor. As, however, general practitioners cannot all live in the West End of London, and live by doctoring the rich, this calm proposal to hand over the practice among the poor to the diplomates of Blackfriars, competing on advantageous terms with the diplomates of the Conjoint Board, or existing Members and Licentiates of the Colleges, is, to these latter, no small matter. Nor is it likely to be regarded with so much equanimity, whether in London or in the rural districts, as it may seem to the small knot of able and accomplished hospital physicians and surgeons, who at present rule the Colleges, and settle the affairs of the profession at large, without consulting it, or even listening to it. It is high time that the general practitioners of England and Wales took this matter seriously in hand; and we are not surprised that recent occurrences, and the present crisis in medical examination arrangements, have warned them that there should be no delay in making their protest heard. For these, among other reasons, we regard the special meeting of the Metropolitan Branch, at the School of Mines, in Jermyn Street, on Friday next, December 3rd, at 8 P.M., as one of great interest and importance. Such meetings, it may be anticipated, will not—as, indeed, they should not—be limited to the metropolis; for the interests, the rights, and the privileges of the members of all the Branches in England and Wales are equally concerned. It was natural that, in this instance, prompt action should first have been taken in the metropolis, where the separatist action of the Colleges has occurred, and which was the scene of the extraordinary conduct of the Council of the College of Surgeonswhich has produced so painful an impression. It may be anticipated that other Branches will speedily take up a matter which so deeply affects the welfare of the general practitioner, and his right to be heard on his own affairs, and to have a voice in managing them. The official circular convening the meeting does not give the words of the resolutions of which notice has been given; we therefore repeat them. Their wording is explicit, argumentative, and important; and they raise issues of the highest interest to the independence and the welfare of the general practitioner, as well as to the general interests of the medical schools of England and Wales. They may almost be said to contain in them the elements of a new Magna Charta; and the debate and decision on them may, in our opinion, have momentous effects in giving a new departure to efforts of the highest promise for securing to the great body of the profession rights of which they have too long been deprived. The following are the resolutions to be moved.

Resolution 1.—"That this meeting is of opinion that the exclusion of the Apothecaries' Society from participation in the Conjoint Examining Board of England and Wales will, under the provisions of the recent Medical Act, 1886, lead to one or other of the following consequences, either of which is equally to be deplored in the interests of the public and of the profession, and especially of the general practitioners of England and Wales,

(*a*) Extinction of the Apothecaries' Society in the highly improbable, if not impossible, case of their not receiving the legal powers which the Act contemplates, to appoint surgical examiners recognised by law, a result which would be disastrous to the whole profession and to the public, seeing that the powers of the Apothecaries' Act alone avail to protect the profession against the practice of a large body of unqualified practitioners, and especially of visiting and prescribing chemists; or

(*b*) In case the Apothecaries' Society receive such powers of giving a surgical examination and surgical licence, legally registrable, the creation of a new class of surgical and medical practitioners throughout England and Wales, contrary to the intention of the legislature and the wishes of the profession, legally entitled to medical and surgical titles, who would compete on a lower grade with the existing Members of the College of Surgeons and the Licentiates of the College of Physicians."

Resolution 2.—"That, seeing that the Royal College of Physicians and the Royal College of Surgeons of England are entrusted with the regulation of the examinations and status, and with the protection of the interests of the general practitioners throughout England and Wales, and that, under the Medical Act of 1886, their powers and monopoly in this respect are greatly strengthened, it is just and important that the Members of the College of Surgeons and the Licentiates of the College of Physicians respectively should be duly represented in the Councils of these Colleges, and should be admitted to a rightful share in the administration of their own affairs in relation to the government of these Colleges."

Resolution 3.—"That a petition setting out the above resolutions be prepared, and that the respective Colleges be requested to receive deputations from this meeting to explain the grounds on which the foregoing resolutions are based, and to urge their acceptance."

Resolution 4.—"That copies of these resolutions be forwarded at once to all the Branches of the British Medical Association, and for publication in the medical papers, and that the Branches of the Association be requested to hold meetings, with the least possible delay, to consider the above resolutions, with a view to communicating any decision at which they may arrive to this Branch, and to the respective Colleges."

Resolution 5.—"That a Committee be now appointed of the following gentlemen to carry out the above resolutions, and to take such action as may seem best calculated to give them effect."

HOSPITALS AND PROVIDENT DISPENSARIES.

THE following information regarding the various systems of hospital co-operation with provident dispensaries in force in certain large towns is taken from a statement drawn up by Dr. Robert Rentoul, of Liverpool, who has devoted considerable attention to this question. In 1876, the Manchester Provident Society invited the hospitals to appoint a subcommittee to meet them for the purpose of discussing a plan for relieving the congested state of the out-patient department of the hospitals, and also to decide who were suitable patients for medical relief. They agreed that if any person or family was in receipt of wages ranging above a certain scale, such persons would be ineligible for treatment. This scale was, man and wife 18s. a week, single man or woman 12s., each child 1s. 6d. a week. Four of the principal hospitals next agreed to furnish to the provident society a complete list containing the names and addresses of all who applied for treatment at their out-patient departments (accident cases excepted); these cases are visited by three inspectors appointed for the purpose. If, after inquiry, the inspector finds that the incomes are above "the wage limit," he stamps their hospital card, and informs them that they are ineligible for medical relief at the hospital; if the patient returns, the authorities, seeing his stamped card, refuse him further treatment. The inspector, when he stamps the card, recommends the patient to apply at the provident dispensary in his district. If the committee of the latter find him ineligible for membership, they refer him back to his usual medical adviser. The four hospitals contribute towards this investigation in the following manner: Royal Infirmary, £50; Children's Hospital, £30; Clinical Hospital, £10; and Ancoats Hospital, £5 a year. Of these, the Royal Infirmary only has an inquiry made regarding in-patients, and for this it pays £13; on this system no one is refused first treatment, while all cases of urgency, accident, and emergency are treated.

Another scheme is that known as the Leicester system. A free dispensary, founded in 1833, was in 1862 converted into the present provident dispensary; in 1862 there were 3,220 benefit members, paying £129; this year there are 32,065, paying £2,875. It is stated that the establishment of a provident dispensary in Leicester has had a most beneficial effect in the administration of the poor-law, and that notwithstanding the large increase in the population, the number of applicants for medical relief has actually decreased. In Leicester, where no public charity exists, it is necessary to have some means other than the poor-law for giving treatment to the poor. This is effected by allowing each honorary subscriber of 10s. to recommend one poor person for one month's treatment, provided the patient pays 1d. weekly.

The third system is that known as the Devonport system, where the entire out-patient department of a hospital has been converted into a provident dispensary since 1868, when it was found that the hospital was being crippled by the large amount spent on the out-patients. The scheme is reported to have worked remarkably well, there being always a surplus left after all expenses at the end of the year, which has been divided between the surgeons. The out-patient department, therefore, costs nothing. When the provident dispensary was first started, a number of people who, up to that time, had been receiving advice and medicine free as out-patients, joined the dispensary. Dr. Rentoul is of opinion that if the Manchester system be not introduced, the out-patient departments of the Liverpool hospitals should be converted into provident dispensaries, and more especially the Eye, Ear, Women's, Skin, and Children's Hospitals.

The fourth is the Western Dispensary, London system, where there is a provident department along with the free dispensary. The plan which is in force at some of the London Hospitals seems to work well, for Dr. Rentoul states that last year there were 2,433 provident and 2,738 charitable cases, while the provident members paid £365 15s. Such a system, observes Dr. Rentoul, would work well at the Liverpool institutions, where the patients last year paid £862. It is generally found, he adds, that when a hospital patient pays one penny, he can, if compelled, pay 4d.

The fifth system is that known as the St. George's Hospital system, where only fifteen new out-patients are admitted to each medical attendant. This, we are told, is the only provident dispensary in the metropolis situated close to a free hospital which is in flourishing condition. These fifteen out-patients are selected by the resident physician and surgeon, and any out-patient who fails to continue attendance for more than two weeks, unless by permission, is discharged. The custom of giving letters of recommendation has been discarded.

The sixth system to which attention is drawn is that of the London Hospital, where it is desirable to lessen the number of out-patients. A waiting-hall inspector is employed, at a salary of £145 yearly, whose duty it is to ascertain that the out-patients are fit and proper persons for receipt of medical relief. By means of this

system the number of patients is said to have been reduced in twelve months by 6,970, with a consequent saving to the hospital finances of over six thousand pounds, the average cost of each out-patient being calculated at four shillings a week. Last year the eighteen hospitals of Liverpool treated 253,059 patients, while the poor-law treated 40,701. A good system of provident dispensaries would, Dr. Rentoul believes, relieve the hospital of twenty thousand cases yearly. There are now 107 provident dispensaries in England; in the metropolis there are over 40. These 107 dispensaries have, Dr. Rentoul states, 286,162 benefit members, paying last year £50,909, of which sum £34,222 was paid to a medical staff of 370. These provident dispensaries have an invested capital of £45,567. There is no reason, he adds, why Liverpool should not have a provident dispensary system at least equal to that of Manchester.

A PATHOLOGICAL INSTITUTION FOR ENGLAND.

In speaking of the Erasmus Wilson Legacy to the Royal College of Surgeons, we noted the different non-official propositions which have been advanced in respect to its utilisation. One most promising manner of disposing of a large part of the money would be the foundation of a pathological institution for research for the use of practitioners and advanced students. The admirable model of the Collège de France, over which Professor Ranvier presides, is one that might well be followed.

In an address on the Revival of Ovariotomy and its Influence on Modern Surgery, delivered at Birmingham on November 5th, 1884 (JOURNAL, vol. ii, 1884, page 950), Sir Spencer Wells urged the necessity of encouraging investigations of the sources, causes, and means of prevention of diseases which, hitherto, have only been encountered by operative interference after they have been established, and have caused suffering or inconvenience. We ought, he said, to have the means of accomplishing this task on a scale commensurate with the importance of the subject of pathology.

"Most of the university cities on the Continent," said the lecturer, "have made provision for this necessity with a liberality and such a profusion of accommodation, that the prosecutors of these studies are there at a great advantage. I have visited some of these establishments, and have been able to make comparisons which cause me to regret that so little of the like kind has been done here, and that we have been content to leave a matter which really touches the honour of the profession, and is of national concern, to almost unaided personal zeal and efforts. In England, the jesting phrase that 'science does not pay' is so common, that we scarcely feel the reproach. The history of medical science gives us many instances of unfairly remunerated men—W. Farr, for example, and of the appropriation of the profits of their applied work; and it would be well if the authorities of our profession took the lead in forming an organisation which should aid the modest labourers of its foundations, protect their interests, and reward their industry. I have long desired to see this done by our College, and the munificent bequest of Erasmus Wilson, a man who estimated the value of money by the good that it could be made to do, now puts it in the power of the College of Surgeons to outrival all other corporations, by setting up round the nucleus which Hunter left, the most elaborate combination of all the means and appliances for physiological and pathological research, by concentrating the intellectual power which now runs to waste or is diverted to personal interests, and by guiding and directing all that can be done to the advancement of the purely scientific progress of medicine and science. Last winter I was away from London for about six weeks. While staying at Würzburg and Munich, I could note in the most recently erected pathological laboratories how far our German brethren are in advance of anything which I, at least, have seen in this country. At Rome again, and at Naples, I was both pleased and surprised to find how much our Italian brethren were doing; and, during the meeting of the Medical Congress at Copenhagen, I was shown arrangements for the study and cultivation of micro-organisms, quite as complete as those which many of you may have inspected at the temporary rooms of the Health Exhibition in London, under the able and instructive guidance of Mr. Watson Cheyne. Now one may fairly ask why provision cannot be made to insure the continuance of this work, and its extension, in a better and permanent abode? Something of the kind I hope to see in Lincoln's Inn Fields."

Sir Spencer Wells then proceeded to explain the general principles of a pathological institution. Judging from the experience to be drawn from foreign example, in order to work an institution of this kind, a well-remunerated chief officer would be needed, and one or two assistants would be exceedingly advisable. The chief superintendent should receive such a salary as would make it possible to devote his career to his duties at the institution. Those second in command would deserve a fair honorarium, and it would be necessary in every case not to force them to spend the entire day in the service of the institution, for the experience of the museum has already shown that good scientific work may be done by assistants to a conservator, without the necessity of cutting off their prospects in other directions. The institution should allow of every facility for the benefit of all persons, students or qualified men, desirous of making original researches, on the excellent principles of the Histological Laboratory of the Collège de France, under the direction of MM. Ranvier and Malassez. One or two well-trained servants would be able to do all the mechanical work, such as cutting, staining, and mounting microscopic sections, excepting where scientific intelligence is absolutely needed for the performance of such details, as in bacteriology. Much good pathological material is wasted through an inability or dislike, on the part of practitioners, to do good microscopic work; and this difficulty could be met by professional preparers of specimens. These men, being under scientific superintendence, would not be likely to repeat the well-known errors of dealers in slides, who sell sections of organs which look pretty but show and teach nothing.

The opponents of a scheme of this kind are certain to ask whence the material is to come. In the first place, plenty of material is already despatched annually to the College, and anything novel finds its way into the museum. A more probable source of obstruction to the free afflux of material to Lincoln's Inn lies in the strong local prejudices of the medical schools. The staff and the pathological demonstrators work for the benefit of their own hospitals, and aim at making their own museums as complete as possible. This truth must not, however, be allowed to obscure another. For, notwithstanding all the local zeal at the schools, we find throughout the catalogue at the College Museum a frequent repetition of the significant expression: "the other half of this specimen is in the museum of —— Hospital." Again, young registrars and pathological demonstrators are often at a loss to decide upon the nature, according to authoritative opinion, of morbid appearances, and to them the institution would be of incalculable value.

Demand would stimulate supply, although, as has just been shown, the supply is at hand already before the demand. The utilisation of material derived from general practice would be an easy matter at an institution of this kind, and its advantages are self-evident. As long as there is but a museum, the attention of curators must be mainly concentrated upon such material as is suitable for mounting in glass-bottles. With the aid of an institution, every specimen of morbid growth, and of other pathological conditions only too common, would undergo a rigid scrutiny. In fact, all fragments would be gathered up, so that nothing would be lost, and, amidst the fragments, there would be many pathological pearls.

A TEACHING UNIVERSITY FOR LONDON.

A DEPUTATION from the Association for Promoting a Teaching University in London waited upon the Special Committee of the Senate of the University of London on Wednesday last. The members of the deputation were Sir George Young, Bart.; Professor John Marshall, F.R.S.; Professor Henry Morley; and the Secretary. Sir George Young explained the proposals and wishes of the Association in a speech of considerable length, to which the Committee listened with much attention. We understand that the Committee, appointed by the Convocation of the University on the motion of Sir Philip Magnus, to report upon the proposal to alter the constitution of the University, with the view of bringing it into closer relation with teaching institutions, will have an interview with the same Committee of the Senate on Wednesday next.

THE will (dated March 7th, 1885) of Mr. William Crofton, M.D., J.P., late of Cheltenham and of Lakefield, in the county of Leitrim, who died on the 23rd of May last, at Teignmouth, Devon, shows a personal estate amounting to over £20,000.

PRESENTATION.—Mr. John Webb, upon leaving Blakeney, has been presented with a silver inkstand and two silver candlesticks, and an illuminated address, with the names of all the subscribers.

UNIVERSITY COLLEGE, LIVERPOOL (ROYAL INFIRMARY SCHOOL OF MEDICINE).—The Holt Tutorial Scholarships of £100 each, for one year, have been awarded to A. W. Collins and J. E. Gemniel, and the Roger Lyon Jones Scholarships of twenty guineas a year each, for two years, to H. A. Burrowes and A. J. Chalmers.

ASSOCIATION INTELLIGENCE.

WARD COUSINS'S PRIZE.

THE Council of the British Medical Association offer the sum of £20 as a prize for the best essay on "The Pathology and Treatment of Abortion." The competition is open to all general practitioners who are members of the British Medical Association. Each essay must be sent, under a mark or motto, with a sealed letter containing the name and address of the writer, addressed to the General Secretary, on or before June 30th, 1887. The prize will be presented at the Annual Meeting of 1887.

FRANCIS FOWKE,
November 9th, 1886. *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—A Special General Meeting of the Branch will be held at the School of Mines, on Friday, December 3rd, at 8 P.M., when certain resolutions, relating to the increase of Members of the Council of the Branch, and to the work of the District Branches, will be submitted by the Council for approval. This special general meeting is also summoned in compliance with the terms of a requisition to the President of the Branch, signed by twenty Members, to consider (1) the relation of the Apothecaries' Society to the Conjoint Examining Board of England and Wales; (2) the proposed representation of Licentiates of the Royal College of Physicians, and of Members of the Royal College of Surgeons, upon the Councils of their respective Colleges; (3) the preparation of a petition to the Colleges, requesting them to receive deputations from the Branch; (4) the publication of the resolutions that may be passed at the meeting, and requests to other Branches for their co-operation in these various matters; (5) the appointment of a special committee to carry out the above resolutions. The Council of the Branch, while complying with the by-law which enjoins the holding of a general meeting of the Branch, if a requisition to that effect, from twenty Members of the Branch, is laid before it, desires it to be understood that the Council, in thus obeying the by-laws, does not express any opinion upon the objects for which the meeting is hereby summoned.—W. CHAPMAN GRIGG, M.D., and GEORGE EASTES, M.B., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will, by the kind invitation of Dr. Adams, take place at Brooke House, Upper Clapton, on Thursday, December 16th, at 8.30 P.M. The chair will be taken by C. T. Aveling, Esq., M.D. A Demonstration of interesting cases of Nervous Diseases will be given by W. B. Hadden, Esq., M.D.—JOSEPH W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE autumn meeting of this Branch was held at Merthyr on November 11th; H. N. DAVIES, Esq. (Cymmer), occupied the chair, and thirty-five members of the Branch were present.

New Member.—Mr. David Davies, of Builth, was elected a member of the Association and Branch.

Papers, etc.—Mr. J. FARLANT FRY SWAIN read notes of an interesting case of suprapubic cystotomy. The stone was a small one; no metal bag was used; the patient recovered.—Messrs. Talfourd Jones, Edwards, the President, Evan Jones, Cresswell, S. H. Steel, Sheen, T. W. Parry, Taylor, and Devonald, joined in the discussion which followed.

Dr. S. H. STEEL (Abergavenny): Case of Strangulated Umbilical Hernia, with excision of six inches of the ileum; death four days after the operation.—The President, and Messrs. Edwards, Sheen, Parry, and Brown, joined in the discussion on this paper.

The PRESIDENT mentioned a case of Abdominal Hydatids which he had brought before the Section of Obstetric Medicine at the Cardiff meeting. Mr. Jacobson operated on the case at Guy's Hospital, making a large abdominal section. The patient survived the operation forty hours.

Dr. TAYLOR (Cardiff) showed an ingenious double truss for inguinal hernia, of American invention, made of steel and vulcanite.

Dr. TALFOURD JONES (Brecon) showed specimens of hypodermic solutions, made more than twelve months ago, which remained perfectly clear.

Dr. EDWARDS (Cardiff) urged the pre-eminent qualifications of Sir Walter Foster and Mr. Wheelhouse for seats in the Medical Council as direct representatives of the medical profession.

Dinner.—The members and visitors present afterwards dined at the Castle Hotel, Merthyr.

ABERDEEN, BANFF AND KINCARDINE BRANCH.

THE November meeting of this Branch was held at 198 Union Street, Aberdeen, on Wednesday, the 17th November; the President, Dr. URQUHART, being the chair.

Nomination of Members.—Three new members were nominated for election as ordinary members of the Branch at its next meeting.

A communication from the General Manager respecting the Transatlantic Steamships Medical Service was read, and referred to the President and Secretaries.

Obituary Notices.—Dr. URQUHART called the attention of the meeting to the great loss the Branch had sustained by the sudden death of two of its most valued members, Professor Dyce Davidson and Dr. Mackie, of Insch, one of its late presidents.

Case of Cystic Bronchocele.—Dr. EDMOND showed a woman aged 60, suffering from an enormous goître, which had lasted for thirty years, and had latterly become cystic. Apart from its weight, the tumour had not inconvenienced her in any way, and she had always refused any operative interference.

Microscopical Demonstration.—Dr. ANGUS FRASER exhibited a number of beautiful microscopical preparations, including sections of lung and liver stained by various methods, showing the organisms of pig fever; specimens of sputum with tubercle bacilli; and sections showing the micrococci in septic infection of the kidney. Dr. Fraser explained the Gibbes and Ehrlich-Weigert methods of staining, and the results got by them. He also exhibited Reichart's and the Cambridge rocking microtomes, and described their mechanism and uses.

Diagnosis of Œsophageal Stricture.—Professor OGSTON contributed a paper on the Diagnosis of Œsophageal Stricture. After remarking on the relative value of the sensations, the use of the probang, and the character of the sounds produced at the site of the stricture, Dr. Ogston related some experiments he had made on the rapidity of the passage of food down the gullet as a means of diagnosis. In the cases of stricture tested, deglutition took from 14 to 16 seconds, while in health an average of 4 seconds sufficed.

Case of Atropine Poisoning.—Dr. JOHN GORDON gave the details of a case of poisoning by atropine, which had been successfully treated. Half a grain of the alkaloid was swallowed, and the patient was seen two hours afterwards. He became quite comatose, the respirations were from eight to ten per minute, and the pulse could scarcely be counted. Apomorphine was administered hypodermically, and this was immediately followed by vomiting. The patient was then made to swallow whisky to the extent of two gills, and slowly recovered.

PRESENTATION.—Mr. Walter Berry, upon leaving Upwell, has been presented with a keyless gold watch, jewelled with rubies, and an address, signed by sixty subscribers.

DR. JOHN GRIGOR, of Nairn, bequeathed £1,000 each to the Universities of Edinburgh and Aberdeen, for the establishment of two "Grigor" Medical Bursaries.

THE Egremont Local Board recently re-appointed Dr. Calderwood, Medical Officer of Health for three years; but the Local Government Board have refused their sanction for more than one year, on account of his being a Poor-Law District Medical Officer.

THE TRAINED NURSES' ANNUITY FUND.—At a meeting of the Committee of the Trained Nurses' Annuity Fund held on November 23rd, Mrs. Bell was elected from fourteen candidates to the Albany Annuity, specially founded in memory of the late Duke of Albany, who was President of the Society.

SPECIAL CORRESPONDENCE.

BERLIN.

[FROM OUR OWN CORRESPONDENT.]

Antipyrin and Antifebrin.—Micro-organisms in Variola and Varicella.—Public Establishment for Disinfection in Berlin.

PROFESSOR A. FRAENKEL, assistant-physician in the *clinique* of Dr. Leyden, has published the results of some experiments with antipyrin in the treatment of rheumatism. This substance is a specific in acute articular rheumatism. Out of thirteen cases of slight severity, a cure was rapidly effected in nine, whilst out of twenty-one serious cases, the remedy was successful in four. Antipyrin has the great advantage over other specific remedies for rheumatism that it has no bad subsequent effects. While salicyl causes tingling in the ears and hallucinations, Professor Fraenkel only once observed sickness, and once a peculiar eruption after the use of antipyrin. In spite of its superiority in this respect, antipyrin has no effect in preventing the development of endocarditis; it cannot, therefore, take the place of salicylic acid in all cases.

A new febrifuge, called antifebrin, has lately been tried in the *clinique* of Dr. Kussmaul at Strasburg. Antifebrin is of special interest, inasmuch as its chemical composition differs entirely from that of the other antifebrile remedies, which have been in use up to the present time. It is obtained from anilin, and is a powder without smell, and not very soluble in water; it dissolves quickly, however, on the addition of a little *Spiritus vini rectificatissimus*. It never causes sickness, and has a marked effect in reducing pyrexia. Given in hourly doses of 0.1 ($\frac{1}{10}$) gramme, it has the power of lowering the temperature 3 or 4 degrees; the effect, however, lasts but a short time.

Some new discoveries in bacteriology have been made. Dr. Paul Guttmann has found in cases of variola, and also of varicella, a number of cocci, which he looks upon as the cause of these two diseases. The coccus found in variola is the *Staphylococcus pyogenes aureus*, the well-known microbe present in pus; the second organism found is a white coccus growing in colonies. It differs from the known *Staphylococcus pyogenes albus* in not having the property of liquefying gelatine. Besides these two cocci, Dr. Guttmann found cocci of another kind in other cases of variola; in spite of this, however, he looks upon those which have been described as the cause of the disease. His observations on varicella are in many respects similar. In this affection also he found three species of cocci: first, the *Staphylococcus pyogenes aureus;* secondly, a white one, which, differs however, from the *Staphylococcus pyogenes albus*, in not possessing the property of liquefying gelatine. This is probably the same organism already stated to have been found in variola. Thirdly, a coccus which grows rapidly at first, when it has a greenish appearance, becoming yellow, however, at a later period; it does not liquefy gelatine. Guttmann attributes the genesis of varicella to these three microbes; his views, however, met with strong opposition when they were discussed in the Berlin Medical Society. The fact that the *Staphylococcus pyogenes aureus* is universally present in the healthy human body, in the pharyngeal secretion and elsewhere, negatives the idea that it can be the cause of variola or varicella. On the other hand, the new coccus above described (No. 3) cannot produce the disease, as it is not always present.

The municipality of Berlin has taken a praiseworthy step in founding an establishment for disinfection. It was opened on November 1st of the present year. Here clothes, linen, bedding, mattresses, blankets, carpets, curtains, quilted furniture, etc., can be thoroughly disinfected. The process is carried out by means of hot steam, chemicals, however, being used for such things as leather and other articles, which would be injured by steam. The things to be disinfected are fetched from the owners' dwellings by the administration, and, after being disinfected, brought back again; any confusion between articles requiring disinfection and those which have already undergone the process is thus avoided. The tariff of charges for disinfection, including carriage to and from the owner's house, is for the present fixed at the following rates:—(*a*) For things disinfected by steam, 4 marks for every cubic metre of space which the article takes up in the disinfecting apparatus, the lowest charge, however, being 4 marks; (*b*) for articles disinfected by chemical process 80 pfenn. for every hour of labour including the cost of the material employed, the lowest price, however, being 80 pfenn.

The advantages offered by an institution of this kind are obvious. Hospitals and private individuals in whose houses there may have been persons suffering from infectious diseases can have all the things which have come in contact with the patients disinfected in such a way that they can be used afterwards without any danger, instead of having to be destroyed, as was formerly the case. The arrangements adopted in the new establishment offer every security for the complete disinfection of any article entrusted to it.

CORRESPONDENCE.

THE LETTERS PATENT OF CHARLES I.

SIR,—If those members of the Royal College of Surgeons of England, who believe that they have a right to the Collegiate Electoral Franchise, under the provisions of the Charter[1] granted by Charles I. in 1629 to the Company of Barbers and Surgeons, will petition the Council of the College to take counsel's opinion on this point, or better still, will institute a friendly suit against the College for the restitution of the alleged right, the question will be speedily and definitively decided.—I am, Sir, yours, etc.,

Nov. 20th. JOHN ERIC ERICHSEN.

*** This is a singular perversion of our leading article of last week. If Mr. Erichsen will do us the favour to reperuse that article, he will see that, while arguing that the Members possessed the legal right to vote for the Court of Assistants (or Council) up to the date of issue of the Charter of 1843, we stated expressly that one of the objects of that Charter was "to divest the Members of the right of voting for the Council," which we believe them to have previously possessed by law, though in practice they did not exercise it. As to the present exclusive right of the Fellows to vote for the Council, no one ever questioned it; it is expressly given to them by the fifteenth section of the Charter. To take counsel's opinion on the point is entirely superfluous, and to go to law about it would be still more absurd. The great body of the College have already commenced a "friendly suit" against the Council for the restitution of their rights; but that suit is prosecuted at the bar of public and professional opinion, not in a court of law. The question at the present time is not one of law, but of public policy and of good feeling. But, with regard to the legal point originally raised by Mr. Erichsen in his declaration that "the Members never possessed the franchise," we are so confident that our view is correct, that we will venture to refer the matter to his own judgment, and ask him once more whether the Members were not granted the franchise for the purpose of "electing, choosing, and appointing twenty-one persons to be the Court of Assistants of the said College," in the Charter of 1800, confirming the Letters Patent of Charles I.

THE PROFESSION, THE SCHOOLS, AND THE COLLEGES.

SIR,—If I may venture to express an opinion on the subject, it seems to me that the present time is one in which a most desirable and important move may be made on the chess-board of medical politics. The falling off in the numbers of students attending the London hospitals has rendered it imperative in the eyes of many—and this opinion seems to be shared by the Councils of the Conjoint Colleges—to obtain for London students a M.B. and M.D. degree, accessible to all aspirants to that honour who are possessed of average ability and average industry. If the Colleges obtain this power of granting degrees, to which it undoubtedly seems they aspire, it would vastly increase their prestige and influence. But this they can only succeed in doing if it be in accordance with the wishes of the nation, as exercised in Parliamentary enactments, and unopposed by strenuous and widespread efforts. Now is, then, the time for the profession to dictate their wishes, and to insist on any changes and concessions that they may deem just and desirable.

At the present time, the numerous and influential schools of medicine in London and the provinces send about nine-tenths of their students up for the Conjoint College examinations. Nevertheless, they have no voice whatsoever in the Councils of the Colleges. A student is trained at University College, Guy's, or St. Thomas's, which institutions perform the functions of the Medical Faculty of an university, but he is examined by the Conjoint Board. These examinations are arranged according to the views of a few distinguished gentlemen, who are not representatives of the dozen or more institutions which train the candidates who present themselves. A notice can be sent round to all the medical schools, signifying the addition of some new subject to the curriculum of studies, or the withdrawal of the old one. As a result of this notice,

[1] There is no such thing as a "Charter" of Charles I. That king issued "Letters Patent" to the Company of Barbers and Surgeons.

they are obliged to act, whether it be according to their views or not. Even the examiners appointed by the Conjoint Board have to submit their papers for approval, and it often happens that distinguished specialists have to examine in their own subject according to the ideas of men in no sense of the word qualified to give any opinion whatsoever, and whose word has weight solely from their official position on the Council. There is thus an absolute divorce between teaching and examination. It is by no means desirable that the examination of a student should be conducted solely by his teacher, but it is absurd that the London and Provincial Schools should have no voice in the arrangement of the courses of study pursued by their own students. The Colleges—mere examining bodies—have of themselves no *raison d'être;* while the same cannot be said of the schools. It is, in fact, a chartered monopoly which gives the Colleges the power annually to pocket the examination fees—growing rich thereby—of some hundreds of students whom they do nothing to train, and whose education is undertaken by other institutions. It is, then, high time that the London and Provincial Schools should combine in order to obtain such representation as will enable them to control, to some extent at least, educational questions with which they are directly concerned.

It cannot be denied that with the recent increase to their wealth the Colleges have to bear the burden of increased responsibility. It will be well that the profession should insist that this money shall be spent with a view to the greatest public good, and not solely for the aggrandisement of a private institution.

The London Hospitals, unrivalled schools of clinical surgery and medicine, are painfully weak in the departments of therapeutics, pathology, chemistry, biology, and physics. Where are the laboratories for the teaching of these subjects in an average London school? How few posts are there sufficiently well paid to enable a man to tear himself away from the money-making of practice, and to devote himself to study and research. Our foreign visitors at the International Medical Congress, held in London, were painfully struck by the want of appliances for the teaching of these important subjects; and from personal knowledge of nearly every medical department of Germany, besides a more limited experience in France, I may venture to add my own concurring testimony to the same effect. In this case it will be of inestimable value that the colleges should endeavour to strengthen the schools in this their weak part. If, as is proposed, new museums and laboratories are to be provided, they should be built near or in connection with pre-existing medical schools, with a distinct view to their requirements. The potential of London is immense, but it is diffused. A number of schools inefficiently equipped is most unsatisfactory, but a number of schools well equipped would give London an advantage over every other medical centre, for there would be the fullest scope for rivalry and individuality. It appears to me, for these and other reasons, that it will be well that some conjoint action should be taken by the teaching bodies of London and the provinces, to compel the Colleges to enter into a closer alliance with them, and to bring these institutions into more complete sympathy with the progress of medical education.—I am, etc.,

JOHN B. HAYCRAFT, M.B.

The Mason Science College, Birmingham.

*** The Medical Schools of London and the Provinces are deeply interested in protesting against the exclusion of the Apothecaries' Society from the Conjoint Board of Examination for England and Wales, and the consequent creation of a new class of fully licensed practitioners. For one thing, this will put extreme difficulty in the way of carrying out any scheme for attaining the doctorate for the students of England and Wales who study in the London schools, and pass their examinations there. Those who may elect to go to the Apothecaries' Hall in future—and under a new and enlarged constitution, which will grant full qualification, they will probably be very numerous—will not quietly submit to the increase of the monopolist advantages of the two Colleges; will resist the application for any further privilege being granted to persons examined on the Thames Embankment, which is not granted to those examined at Blackfriars. As they will be students educated by the same teachers, in the same schools, and after the same curriculum, their claim will be based upon obviously strong foundations, and will be accordant with public policy, —which is to do equal justice, to protect the public and professional rights, and not to advantage any particular corporations. Thus a reform, vitally important to the London schools, is imperilled by the present attitude of the Councils of the respective Colleges. It is indeed plain that neither the action nor the constitution of the respective Councils is just or reasonable, and both must be amended to do justice to the needs and duties and requirements of the profession and the public. It may be hoped that the Councils will voluntarily take some steps in the direction which we have recently urged. It has been complained to us that our articles are "bitter." We hope not. They are certainly earnest and resolute, but friendly. If the respective Councils maintain an attitude of passive defiance of the just claims and evident wishes of the profession, it will be proper to move Parliament and the Government to appoint a Royal Commission to inquire into their constitution and government, such as the recent University Commission. There would be little difficuly in obtaining this.

THE APOTHECARIES' SOCIETY AND THE CONJOINT BODY.

SIR,—My appeal to the poor-law medical officers is being answered from all parts of the kingdom unanimously in favour of the Apothecaries' Society forming an integral part of the Conjoint Examining Board; failing this, some of my correspondents wish the Apothecaries' Society to join with one of the universities, others wanting it to stand alone, and continue in the good work of the past. The feeling, however, seems general that the Royal Colleges are acting in a suicidal manner, as regards their own interests, in not discerning the wants, or acting up to the desires of the great body of general practitioners.—I remain, yours truly, J. WICKHAM BARNES.

3, Bolt Court, Fleet Street, E.C., November 22nd.

A DEGREE FOR LONDON MEDICAL STUDENTS.

SIR,—As an old pupil of Prof. George Buchanan, I have great respect for his professional ability; but I think, with Mr. H. T. Butlin, that he lays too much stress upon the superiority of University education, and deprecates too freely the clinical teaching of the London schools. Again, I feel sure he is wrong in supposing that the public know that a Doctor of Medicine has had his education or his degree from a University; for certainly not more than five per cent. of my own patients have any such knowledge as regards myself. Without doubt, however, the public are beginning to differentiate between Doctor and Surgeon, to the detriment of the latter as a medical adviser.

Dr. George Buchanan, also, in referring to the use of the title of "Doctor" by L.R.C.P.'s, overlooks the fact that it is not so much a question of legal right as one of permission. There are several men in my district who have gone down to Edinburgh for the L.R.C.P., because, for one reason, this College does not object to their putting Doctor on their door-plates, while the College of Physicians of London forbids such a liberty. Personally, I do not object to a L.R.C.P. calling himself, or being called, a Doctor; but I feel ashamed of my country that one of her institutions should seek an unenviable notoriety on a matter of principle, and challenge such unfavourable comparison with its rival in England. Myself a Glasgow graduate, I hope that London students may soon be placed on an equal footing with those of the sister countries in the matter of the doctorate; but I should be sorry if Mr. Butlin's suggestion of a forcible assumption of the title should be acted on, for, even to gain an equality, two wrongs do not make a right.—I am, Sir, yours respectfully,

London, November 8th. J. CHALMERS, M.D.

SIR,—Having, I think, proved the justness of our contention; having proved the equality of merit between the graduates, whether from Scotland or England, and their equal fitness at the termination of their curriculum, we must not cease to urge the just and only remedy. This will only be done by fully realising our wrongs, and, having determined these, insisting strongly and unitedly upon their redress.

First, we obviously suffer through public ignorance of the facts—a M.R.C.S., L.R.C.P.Lond., loses in the balance as against a Scotch M.D.

Then, again, a hospital appointment as physician is advertised; an English candidate is unable to compete—a M.D. is wanted; a prodigy from the north is alone considered equal to undertaking the cure and treatment of our own poor and sick patients—a highly qualified M.R.C.P.Lond., is disqualified, but a Glasgow M.D. is not. What is the consequence? I remember well one of our best men at St. Bartholomew's, an able teacher then, but compelled, before he could accept a post in his own hospital for which he was eminently qualified, to undergo the expense and degradation of a twelve months' course of teaching at Glasgow before he could obtain the necessary M.D. degree.

These cases could doubtless be amply multiplied. But what about the disappointments of scores of able Englishmen who have been obliged to stand aside and see a stranger step into their place, foreign

the district and unequal in experience and qualifications as a physician except in name. And yet this has been borne patiently for years, but now I trust will be so no longer. Surely we have weight and numbers enough. All we require is patriotism to work together, and insist as Englishmen that our worth should be recognised, and that London, the first school in the world, shall no longer live under the stigma of producing men of nondescript qualifications, though of equal merit with those of other countries. What we require is organisation to insist upon our claims, which, when known, must soon be granted to us by our countrymen in Parliament.

Hexham. COTTENHAM FARMER, M.R.C.S.Eng.

DENTAL EDUCATION.

SIR,—Will you allow me, through the medium of your pages, to call the attention of all those interested in the subject of dental education, to the recent alterations in the curriculum for the L.D.S. The students have been required to spend three years in obtaining a practical familiarity with the details of mechanical dentistry, and the whole of this apprenticeship had to be taken subsequent to registration as dental students. In future, one half of this time can be taken before registration, that is, before the preliminary examination has been passed, but it is not allowed to count as part of the four years' "professional knowledge" required by the dental schedule.

Students who have the misfortune to fail at their preliminary examination, can now proceed with their apprenticeship while they are preparing for re-examination; and gentlemen who, through mistake, took the whole three years before registration, in future will have eighteen months subsequent to it to be signed for.—Your obedient servant,

MORTON SMALE, M.D., Dean.

The Dental Hospital of London, and London School of Surgery, Leicester Square, W.C. Nov. 22nd, 1886.

BARE FEET *VERSUS* DAMP FEET.

SIR,—I observed lately in the JOURNAL a letter from my friend Mr. C. Roberts, referring to the question which has been raised as to the admission of barefooted children to public elementary schools. Mr. Roberts remarks that here in England we generally think it necessary, or at least desirable, to keep children's feet dry and warm. Good. But do shoes and stockings, or shoes alone, such as the poorest class of children can obtain, fulfil this requirement? Bare feet quickly become dry indoors, but damp shoes and stockings do not, and I doubt whether they add to warmth. The clogs of the north of England may secure dryness and warmth, but it is at the cost of the muscular development of the legs. The question is not so simple as it looks *prima facie*.—Yours truly, JOHN BEDDOE.

Clifton, November 22nd, 1886.

MEDICAL CELEBRATION OF THE QUEEN'S JUBILEE.

SIR,—It is almost time that we, of the medical profession, should be considering in what way we may best celebrate the jubilee year of the Queen's reign. Permit me to suggest that it would be a suitable opportunity for a great and united effort on our part to place the funds of our own particular Benevolent Institution in a better state, or to raise a separate fund towards providing a school for the daughters of medical men, who, I observe, are not included in the existing arrangements.

On such a memorable occasion (if the suggestion I have made should be taken up in influential and favourable quarters), I feel sure that we would all of us subscribe according to our means, and that there would be many real Jubilee subscriptions of fifty guineas each.—I am, Sir, your obedient servant, J. WILKIE BURMAN, M.D.Edin.

Ramsbury, Berks.

LEAD-POISONING FROM HOME-MADE WINES.

SIR,—I am glad to find, from your article in the JOURNAL of November 20th, that the attention of the public has been drawn to the frequency with which lead-poisoning, of a severe nature, is caused by the consumption of home-made wines, which have been allowed to ferment in red glazed pans. Ten years ago, I read a paper on the subject before the Salisbury Medical Society, and found that the source of the lead in these cases was perfectly well known to many of the members who were present. The discovery, therefore, is no new one, though, judging from your remarks, the matter is one with which the profession is not familiar. At the discussion of the paper to which I refer, a general expression of opinion was elicited as to the proper treatment of such cases, which are often so severe as to defy ordinary treatment by purgatives and opium. Much valuable time is often lost by endeavouring to ease pain and procure an evacuation by administering these remedies by the mouth, for the vomiting is so incessant that everything is rejected the moment it reaches the stomach; and any one who has witnessed the intense agony of the colic, in the more acute cases, will, I am sure, agree with me that such suffering demands the most speedy relief.

A subcutaneous injection of one-fourth of a grain of morphine will stop the spasm of the bowel in five minutes. A copious turpentine injection is then to be given, which will be immediately followed by a satisfactory evacuation; and, if this be followed by sulphate of magnesia and dilute sulphuric acid, every few hours, and persevered with, at less frequent intervals, for some days, the case will be cured.

Dr. Campbell, of Calne, seems to find some difficulty in accounting for lead-colic in total abstainers; but, if he will examine the pans in which their ginger-beer and lemonade is made, he will find the red glaze has been attacked by the acid of these beverages in precisely the same way as occurs when wine is made.

The presence of the lead in the wines can easily be roughly demonstrated by passing a stream of sulphuretted hydrogen through a few ounces, when the characteristic black precipitate will occur; and from this precipitate I have succeeded in separating a small bead of metallic lead by submitting it to the blow-pipe flame on charcoal. I have known four ounces of rhubarb wine to contain three grains of sulphide of lead; and as the country folk, in thirsty weather, drink large potations of what they believe to be a very wholesome beverage, it can easily be understood why the symptoms are so severe. Earthenware vessels, glazed with white or yellow, are harmless.

A blue line will be found on the gums of many a countryman who comes to us complaining of stomach-ache, if only it be looked for.—Truly yours,

R. LEWIS WILLCOX, M.R.C.S., L.R.C.P.Lond.

Warminster, November 23rd.

NAVAL AND MILITARY MEDICAL SERVICES.

SURGEON-GENERAL W. C. MACLEAN, M.D., C.B.

ON Saturday last, November 20th, the interesting ceremony of presenting to Mrs. Maclean the replica of the original portrait of Surgeon-General W. C. Maclean, M.D., C.B., late Professor of Medicine in the Army Medical School, took place at Dr. Maclean's residence in Southampton. A deputation, consisting of twelve subscribers to the Testimonial Fund, headed by Surgeon-General W. S. Murray, Principal Medical Officer at Netley, waited on Mrs. Maclean, and, the deputation having been introduced by the Honorary Secretary to the Testimonial Committee, the duty of presenting the replica was performed by Dr. Murray in a felicitous speech, which was responded to by Mrs. Maclean, who afterwards entertained the company, to the number of eighteen, at luncheon. On the following Monday, the original portrait of Dr. Maclean was presented to the Army Medical Staff Mess at Netley by the Honorary Secretary to the Testimonial Committee, in the name of the Committee, representing subscribers from the Army, Navy, and Indian Medical Services. A large number of ladies and gentlemen, who had assembled to witness the presentation, were, after the conclusion of the ceremony, entertained at luncheon in the Mess-Room by Surgeon-General Murray and the officers of the Medical Staff. The portrait, a three-quarter length, by Mr. W. R. Symonds, is an admirable likeness, and, in the opinion of all present, does infinite credit to the high reputation of this accomplished artist, who also painted the portrait of the late Sir William Muir, to which it forms an excellent pendant. Surgeon-General and Mrs. Maclean were present, and were warmly congratulated by the numerous friends invited to meet them.

The project of a testimonial to Professor Maclean, on his retirement after long and honourable connection with the Army Medical School, was only started about eighteen months ago, but was so heartily responded to, that within this short time it has been most happily carried out. This portrait will long adorn the walls of the Medical Staff Mess, and be handed down as an heirloom to future generations of medical officers, who, although no longer stirred by the eloquence of the first Professor of Medicine at Netley to go forth with confidence to engage in the contest with disease in tropical climes, will still have the privilege of availing themselves of the valuable results of his experience stored up in his published works.

UPPER BURMAH.

A CORRESPONDENT writes:—The fact of annexing a new province, about as large as Great Britain, with only a slight expenditure of money and blood, may pass almost unnoticed amid the startling events transpiring on the Danube that crowd into a week. But a question or two in Parliament, on even such a remote out-of-the-way place as Burmah, soon draws attention to the country, and interest is awakened.

Burmah has always had a bad name; was always looked upon as "the white man's grave." Even the very name is suggestive of heat and discomfort, and experience bears out this character.

During the old Burmese war, now about thirty years ago, Europeans died like flies, as the saying is, from fever and exposure; and the horses shared a like fate from a peculiar paralysis, which killed them as surely as sunstroke did the soldier. To a new arrival, it seems almost inexplicable that the climate can be so treacherous. Houses are built of wood, and doors and windows kept open all through the twenty-four hours. The temperature of the air rarely rises above 94° in the houses, and yet the type of fever is second only in severity to that of Peshawur, or the West Coast of Africa fever. What can it be, then, that causes this sickness? That malaria exists, and in a concentrated form, is evident from the elements for its production on every hand. The Burmese are alive to this, and build their houses on stilts, raising the floors about six feet off the ground; and this method is copied by our own countrymen. All the new barracks, and houses of habitation for soldiers or sick, are built on this principle; and yet our mortality is high, and the degree of invaliding excessive. In all campaigns, no matter if the troops be serving in Burmah, India, or the sub-tropical climate of the Cape, enteric fever is sure to appear among them, either in an epidemic form or in isolated cases, which, in the aggregate, amount to an epidemic. Whether this is true enteric, arising from the introduction into the system of the germ producing this fever; or whether the fever is due to causes and conditions found among English troops, when campaigning in a foreign country, I will not say. It is a broad question, open to argument, and one which was written about, some years ago, in the columns of this JOURNAL. The fact remains, however, that this fever prevails in this, as in all other campaigns; but it is not this disease which plays such havoc among our officers and men, but a very severe form of remittent fever, accompanied with gastric irritation, and producing extreme exhaustion, sometimes amounting to collapse or death. To go more into detail. An officer or man—and they are both equally liable—complains of a creepiness and headache; his skin is dry and tongue white. His temperature is found to be 102°, if taken at the onset, rapidly rising to 104° and 105°, and even higher. It may be said that this points to sun-fever, or what is commonly known as sunstroke, and that the preliminary fever is one of its diagnostic points; but death does not occur in the same way in this severe form of fever as in sunstroke, and this is verified here, for both diseases are prevalent. Death may be equally sudden in both; but, as a rule, the remittent fever cases recover, even when severe. After a few hours, the temperature comes steadily down, and, in a few days, a reasonable temperature of 101° or so remains, but with it gastric irritation, which, it is only fair to say, is generally relieved by bismuth and stomachic tonics.

One peculiarity in this fever is the degree of severity manifested in different patients, and generally in increasing proportion to the length of exposure to the sun. Other factors, however, than the sun have to be taken into consideration—such as the state of health, habits of the man, etc.; but, as a rule, the supposed strongest and the weak equally suffer. A man has to ride, or has some duty or other, which exposes him to the sun for, say, two or three hours. In the evening, he feels the creepy, chilly feeling, so sure an indication of approaching fever, and his temperature runs up. Quinine is useless in such cases; it is best to give the patient a cup of hot tea and put him between the blankets. Either this or the usual diaphoretic mixture, given every two hours, as a rule (unless the case is to be one of great severity), causes the skin to act freely, and, after a restless night, the temperature comes down. Then is the time to push in your quinine, guarding the depressing effects of a large dose by stimulating diet. Usually, the steady tendency to normal temperature is maintained, and the continuation of the quinine pulls the patient up a little. Still, he does not feel quite himself, and many never do completely rally—thus necessitating a change to either the hills of India, or the climate of England, before it can be said that recovery is complete.

Another peculiar symptom of this fever is the drowsiness which invariably accompanies it. Sleep, sleep, hour after hour; the pupils act freely; but the drowsiness is overwhelming, and the one desire is to be left alone and sleep. The high temperature may, and probably does, cause congestion of the cerebral capillaries and drowsiness; but, if delirium set in instead of the sleepiness, it would be more in accordance with known facts on the increase of temperature and brain excitement. I mention this as a symptom only—a symptom of a form of malaria, the severest that has come under my observation.

I had written so far, when I was seized with an attack of the fever I was attempting to describe, and it has left me too weak to add anything, or even to revise what is already written.

STUDY OF M. PASTEUR'S METHOD.

IT is officially announced that Veterinary Surgeon J. A. Nunn, having completed a course of instruction at the Pathological Laboratory of the University of Cambridge, has been ordered by the Field Marshal Commanding-in-Chief to proceed to Paris to attend the Laboratory of M. Pasteur.

THE NAVY.

THE following appointments have been made at the Admiralty during the past week:—R. HAY, Fleet-Surgeon, to the *Excellent*; W. D. WORDSWORTH, Fleet-Surgeon, to the *Minotaur*; J. P. COURTENAY, Fleet-Surgeon, to the *Devastation*; C. L. VASEY, Staff-Surgeon, to the *Sword*; A. G. DUGUID, to be Surgeon and Agent at Port Errol.

THE MEDICAL STAFF.

SURGEON-MAJOR J. FRASER, M.D., Senior Medical Officer of the North Station Hospital at Secunderabad, is directed to do general duty in the Eastern District, Madras.

The undermentioned gentlemen, on arrival from England, are directed to do duty as follows, all being in the Madras command:—Surgeon-Major G. B. MOUAT, M.D., at the South Station Hospital, Bangalore; Surgeon-Major G. B. HICKSON, at the Station Hospital at Bellary; and Surgeon T. H. CORKERY, at the Station Hospital at Secunderabad.

THE INDIAN MEDICAL SERVICE.

DEPUTY SURGEON-GENERAL CHARLES PLANCK, of the Bengal Establishment, has retired from the Service, which he entered as Assistant Surgeon, August 4th, 1855, having attained the rank of Deputy Surgeon-General August 4th, 1881. He served during the Indian mutiny in 1857, and was present at the relief of Lucknow, and at the action of Cawnpore; he received the medal for the campaign.

Deputy Surgeon-General H. W. BELLEW, C.S.I., Bengal Establishment, has also retired; he entered as Assistant Surgeon, November 14th, 1855, and rose to Deputy Surgeon-General, November 14th, 1881. He was engaged in the Afghan war in 1879-80, where (says General Roberts in his dispatch) "his great experience in political matters, and his knowledge of the Afghan character, have been of great service to me. I regret that ill-health has compelled his return to India." He was made a Companion of the Star of India in 1878.

Surgeon H. HAMILTON, M.D., Bengal Establishment, has been granted an extension of furlough for six months, on medical certificate.

Surgeon A. W. ALCOCK, Bengal Establishment, is appointed to the officiating medical charge of the 1st Sikh Infantry, *vice* Surgeon-Major A. P. HOLMES, M.D.

Surgeon-Major E. G. RUSSELL, M.B., Bengal Establishment, is appointed to the officiating medical charge of the 13th Bengal Cavalry, *vice* Surgeon W. Conry, who has gone to Upper Burmah.

Surgeon J. MULLANE, M.D., Bengal Establishment, on return from privilege leave, has resumed charge of the civil medical duties of the Kamroop District.

Surgeon-Major J. A. LAING, M.D., Madras Establishment, is directed to officiate as Sanitary Commissioner, Madras, in succession to Dr. G. Bidie, appointed Surgeon-General with the Government of Madras.

THE VOLUNTEERS.

MR. T. D. SANDERSON, M.D., has been appointed Surgeon to the Westmoreland and Cumberland Yeomanry.

Surgeon and Honorary Surgeon-Major E. G. PURCELL, M.D., of the 3rd Middlesex Artillery, has resigned his commission, which dates from October 20th, 1875; he is permitted to retain his rank and uniform.

Surgeon E. CARVELL, of the Cambridge University Rifles, has also resigned his appointment, which bears date March 3rd, 1866; he is granted the honorary rank of Surgeon-Major, and continues to wear the uniform.

MEDICO-LEGAL AND MEDICO-ETHICAL.

L.K.Q.C.P.I. The Apothecaries Act, 55 Geo. IV, c. 194, s. 14, prohibits any person from practising as an apothecary before being qualified by passing the requisite examinations; and, in the case of Lemaire *v.* Housley, the Court of Queen's Bench, in the year 1874, decided that a medical practitioner cannot recover his charges, unless qualified at the time the services were rendered and medicine supplied. The registration may be made at any time before the trial; but want of registration at the trial is fatal. The County Court judge does not appear to have exceeded his jurisdiction by reversing his judgment under the circumstances stated.

L.K.Q.C.P.I. The liability of the Company may depend on the position in their service of the employé. If he was one of the superiors, he might have authority to obtain medical assistance at their expense, but an ordinary driver or conductor would probably not have such authority. If, having no authority, he said the Company would pay, he thereby rendered himself personally liable. It seems probable that the Company paid the patient a sum which they considered sufficient to cover his medical expenses, and if so he ought to be in a position to pay.

ATTESTING WILLS.

A. B. C. The [illegible] of the correspondent's inadvertory statement of all reference to the medical [illegible] the circumstances attending the attestation by B., of the will in question; information, be it noted, most essential to

a clear understanding and right judgment of the grave question submitted for our consideration, renders us unable to do more than give this simple admonition; namely, that it seriously behoves the medical attendant, in such and like cases, not only for his own sake, but for the traditional honour of the profession at large, to take especial care not to lend himself to any clandestine transaction; and further, that, in the instance herein referred to, the practitioner in question would have acted wisely in his own behalf, and, not improbably, on that of the husband also, had he at once communicated to the latter the fact of the existence of the newly attested will.

The relation of kinship, moreover, of the son and daughter to the "second wife and her second husband" (a somewhat material factor in the case), is not clearly detailed in the letter of A. B. C. But, however, what it may, we need scarcely remark that, in the contingency of underhand, surreptitious dealing being attempted or suspected in any such matter, the duty of the trusted family attendant is clear and distinct; and should he wittingly fail therein, he might render himself amenable to the charge of collusion.

RUPTURED SPLEEN.

J. A., railway policeman, was admitted into the Newcastle-on-Tyne Infirmary, under the care of Dr. Armstrong, on March 17th, 1886, having been knocked down by a train. He had sustained severe compound fractures of the left leg and thigh, and a fracture of the skull; he died soon after admission. At the *post mortem* examination there was no bruising of the abdominal wall. The spleen, which weighed 13 ounces, was surrounded by a large quantity of effused blood. It was torn across its middle; it was densely adherent all round—probably the predisposing cause of its rupture, taken with its weight. It will be noticed that there was no bruising of the abdominal walls, and, while perfectly conscious, he never complained of pain in the abdomen, though he did of pain elsewhere. F. P. MAYNARD, M.B., House-Surgeon.

RIGHTS OF THE LICENTIATES OF THE ROYAL COLLEGE OF SURGEONS OF IRELAND.

INQUIRER writes:—I beg most respectfully to offer a word in supplement of your reply to "E. W. O.," in the JOURNAL of November 20th. Let me briefly point out. 1. The Apothecaries' Act, in England, is imperative against any one holding a Scotch or Irish qualification [illegible], they are legally [illegible] as having certain rights as apothecaries. See [illegible] *Abstract of the Laws relating to Medical Men*. This is, I believe, admitted by the Society of Apothecaries. Again, holders of Scotch surgical diplomas, according to the same authority, and the literal translation of the Latin in which they are framed, are empowered to practise surgery and pharmaceutics, or, as Celsus renders it "Pharmacy." All we want is an exact definition of that word; meanwhile it is consoling to find that our rights to compound and dispense medicines and supply them, rest on a solid legal basis, as in justice it ought.

QUERIST.—On the facts stated, the attendance was given at the solicitor's request and he is therefore liable to pay.

OBITUARY.

BISHOP McDOUGALL, F.R.C.S.

DR. MCDOUGALL, whose death occurred somewhat suddenly on November 16th, was one of the few medical men who, having entered the Church, have attained to the episcopal dignity. The deceased prelate was educated at King's College, London, where he was demonstrator of anatomy. He afterwards went to Oxford, and became a clergyman. In 1855 he was appointed Bishop of Labuan and Sarawak, where, when he landed, he found, as he afterwards stated in public in Oxford, that the report of his being to able cure the sick speedily brought numbers to him, and that by constantly ministering to their sufferings, he not only learned to speak their language, but to enter into their feelings better than he could have done by any other kind of intercourse. A successful operation in a case of total blindness from double cataract, and some other striking cases, gave him a good vantage ground and an influence which he believed no amount of mere teaching and preaching could have done. After several years spent in his colonial diocese, the deceased prelate returned to this country, when he was appointed to the living of Mottistone, Isle of Wight. He was also Canon of Winchester and Archdeacon of the Isle of Wight.

SIR JOHN HUMPHREYS, J.P., D.L.

By the death of Sir John Humphreys, which occurred on Saturday last, the coronership for the Eastern Division of Middlesex is rendered vacant, and the county has lost in him one who, for nearly twenty-eight years, conducted the duties of his responsible office with great ability, dignity, and circumspection. On the death of the late Mr. Sergeant Payne, Sir John was elected to be President of the Coroners' Society for England and Wales, and he was consulted by the late Government on the Bill dealing with the office and duties of coroners brought in by them. In our opinion, a medical man, rather than a lawyer, is better adapted for the duties of a coroner, but in Sir John Humphreys we recognise a rare exception. His eminently judicial mind, coupled with an excellent knowledge of surgery (a fact not generally known), peculiarly qualified him for the post; and to these must be added his strong practical sense, and his untiring industry. Besides the duties of his office as coroner, Sir John at one time took a great interest in Liberal politics, and many Members of Parliament owed their seat in the House to the organising powers and energy he displayed in the conduct of elections. He was more than once invited to seek Parliamentary honours himself, but he always declined. He was of a sound constitution, and enjoyed vigorous health till within the last two years of his life. In the spring of 1885, he had a severe attack of pleurisy and pneumonia, and at one time his life was despaired of, but he pulled through after a long illness, and was able to resume his duties last summer. Some weeks before his death he had a return of his complaint, and was tapped in the chest at Braemar, where he was staying for the benefit of his health. He soon after returned to 20, Devonshire Street, his town residence, and remained under the care of Dr. F. Spurgin until his decease. He was in his seventy-third year, and he leaves a widow and a son and daughter to mourn their loss. He was a J.P. and D.L. of the Tower Hamlets, and in the autumn of 1881, received from Her Majesty the honour of Knighthood.

INDIA AND THE COLONIES.

INDIA.

A FEVER-STRICKEN DISTRICT.—Reference is made in the report recently issued by Major Anderson, the Superintendent of the Revenue Survey, to the Indian fevers which, for the past three or four years, have ravaged North Canara and the adjacent districts to such an extent that it is said that every inhabitant has had, not one, but a dozen attacks during the period. The fever is not severe, but the repeated attacks wear out persons who have little stamina. Many have succumbed, and although the epidemic has somewhat abated, the general health of the inhabitants is said to have sensibly deteriorated. The causes of this outbreak in a hitherto healthy district have not been satisfactorily determined. Major Anderson points out that the moist climate and dense vegetation which are by some supposed to be the cause of the outbreak, are conditions which have always existed, and Canara has never been known to suffer from fever until within the last three or four years. He also alludes to the virtues claimed for Koomree cultivation in allaying malaria.

QUININE *v.* CINCHONA.—An attempt which was made last year by Government to promote the use of cinchona in the Central Provinces by offering it for sale in small quantities at cost price, has, says an Indian contemporary, proved a failure. People were willing to use cinchona if they could obtain it gratis, but they would not purchase it even at cost price. Quinine, on the other hand, was eagerly purchased, and the authorities have, therefore, given orders that it shall be sold in smaller quantities than hitherto.

SURGERY IN BURMAH.—The repugnance with which certain Oriental races regard surgical operations is well known; the extent to which it prevails in some parts of Burmah will be seen from the statement of a Bhamo correspondent of the *Pioneer*. From this it would appear that the majority of the natives prefer to die, or to live in a horribly maimed and disfigured condition, rather than submit to the knife; and many suffering from severe gunshot-wounds, or fractures of their limbs necessitating amputation, have told the surgeons they preferred death to mutilation. This is not from any religious scruple, but purely from distrust and aversion to the knife. At the same time, they will scar their bodies all over with the actual cautery, or wear holes into their flesh by the continual application of blistering-fluids or mineral caustics. The result of these continual cauterisations, which are much used by the Suans as preventive and not remedial agents, are the formation on numbers of them of huge sores, ulcers, and warts of perfectly phenomenal dimensions. With English medicines, the correspondent observes, they become familiarised comparatively soon, and after they have seen the beneficial effects of self-evident remedies, such as febrifuges and aperients, they run to the other extreme, and demand medicines to cure burns, scars, lame legs, and missing toes and fingers. Surgical science has not proved, from a Burman's point of view, sufficiently practical in its results to convince him of its efficacy. It is related that the first surgical case which Dr. MacGregor, then civil surgeon, had in Bhamo was one of a gunshot-wound through the knee. It being found impossible to save the leg, it was amputated, and healed most successfully. On recovery, the patient was provided with a wooden leg, and stumped about the bazaars paying visits to his friends, who, of course, had long ago given him up as a dead man. The sight, however, was not encouraging to

the Burmans, who said they had never seen a man with only one leg. They thought that, perhaps, it was better the man's life had been saved, but at the same time, unless the English medical man could make a new leg grow in place of the missing one, he was not justified in cutting it off. A short time since, the civil surgeon had some more amputation cases in four wounded elephant-drivers. They had been wounded, and were almost dead. Three of the men, the correspondent believes, died, and one made a marvellous recovery. Though snatched from the very jaws of death, all the merit of saving the man was destroyed in the eyes of the Burmans because he appeared minus a limb.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his quarterly return relating to the births and deaths registered in England and Wales during the third or summer quarter of this year, and to the marriages in the three months ending June last. The marriage-rate was considerably below the mean rate in the corresponding quarters of the ten preceding years, and, with two exceptions, was lower than the rate recorded in the corresponding quarter of any year since the establishment of civil registration in 1837. The birth-rate and the death-rate were both below their respective averages. The mean temperature during the quarter was considerably above the average, and the weather generally was favourable to the public health.

The births of 224,029 children were registered in England and Wales during the three months ending September last, equal to an annual rate of 31.9 per 1,000 of the population, estimated by the Registrar-General to be nearly twenty-eight millions of persons. This birth-rate was 1.6 per 1,000 below the mean rate in the corresponding quarters of the ten preceding years 1876-85, but slightly exceeded the exceptionally low rate that prevailed in the third quarter of last year. The birth rate in the quarter under notice ranged in the several counties from 25.8 in Rutlandshire, 26.0 in Herefordshire, and 26.9 in Sussex, to 35.7 in Essex and in Monmouthshire, 35.8 in Northumberland, and 36.0 in Durham. In the twenty-eight large towns for which the Registrar-General publishes weekly returns, the birth-rate last quarter averaged 32.8 per 1,000, ranging from 26.3 in Brighton and 27.2 in Huddersfield, to 40.9 in Preston, and 42.4 in Cardiff. The births registered in England and Wales during the quarter under notice exceeded the deaths by 98,777; this represents the natural increase of the population during that period. From the Board of Trade returns, it appears that 106,791 emigrants sailed from the various ports of the United Kingdom at which emigration officers are stationed; of these 51,405 were English, 8,507 Scotch, and 16,978 Irish. The proportion of British emigrants to a million of the respective populations of the three divisions of the United Kingdom were 1,844 from England, 2,154 from Scotland, and 3,474 from Ireland.

During the third quarter of 1886, the deaths of 125,252 persons were registered in England and Wales, equal to an annual rate of 17.8 per 1,000 of the estimated population; this death-rate was slightly below the average rate in the corresponding quarter of the preceding ten years, although it was 1.3 per 1,000 above the low rate in the corresponding quarter of 1885. Among the urban population of the country, estimated at nearly seventeen millions of persons, the rate of mortality during the quarter under notice was equal to 19.4 per 1,000; in the remaining or chiefly rural population of nearly eleven millions of persons, the rate was 15.4. These urban and rural rates were below their respective averages for the ten preceding corresponding quarters. The rate of mortality last quarter among infants under one year of age was 14.6 above the average; that among children and adults aged between one and sixty years was 9.2 per cent. below the average; and that among persons aged upwards of sixty years showed an excess of 0.9 per cent.

The 125,252 deaths registered in England and Wales during the three months ending September last, included 15,936 which were referred to diarrhœa, 1,995 to measles, 1,957 to whooping-cough, 1,480 to fever (including typhus, typhoid, and simple fever), 1,371 to scarlet fever, 775 to diphtheria, and 21 to small-pox; in all, 23,535 resulted from these principal zymotic diseases, equal to an annual rate of 3.35 per 1,000, which was slightly below the mean rate in the corresponding periods of the ten preceding years. The mortality from diarrhœa showed an excess, and that of measles and of diphtheria corresponded with the average; while that of each of the other zymotic diseases was considerably below the average. Only 21 deaths resulted from small-pox in the whole of England and Wales during the quarter under notice, a smaller number than in any quarter on record.

THE AVERAGE LONGEVITY IN SWEDEN.

PROFESSOR CURT WALLIS has collected some interesting particulars of the average longevity of the Swedes during the period 1755-1880. He finds that it has been as follows:—

	Men.	Women.
1755-1775	34 years	... 37 years
1776-1795	35 ,,	... 38 ,,
1816-1840	40 ,,	... 44 ,,
1846-1855	41 ,,	... 45 ,,
1856-1870	42 ,,	... 46 ,,
1871-1880	45 ,,	... 49 ,,

These figures show that, in 1880, men in Sweden enjoyed an average of 11 years longer life, and women of 12 years, than a century ago. The death-rate—which, in 1750, was 28 per mille, and had, in 1800, risen to 30 per mille—was, in 1880, only 18.1 per mille. Professor Wallis ascribes this wonderful improvement to the decrease of the most common epidemic diseases, as, for instance, small-pox, typhoid fever, etc., brought about by sanitary reforms introduced among all classes in Sweden, chiefly during the last quarter of a century. It is also remarkable that old people in Sweden nearly always die from some specific disease, and it is very rarely that anyone suffers a physiological death, succumbing to old age. On the other hand, it appears that two of the most common causes of death among the wealthier classes are paralysis and syncope. This is probably attributable to the excessive consumption of alcoholic liquors prevailing in Scandinavia.

In this respect there is, however, a great improvement in recent years, particularly in Norway. Formerly, it was the custom to say, as an excuse, "that the cold climate necessitated stimulants," but this is now considered an exploded theory. As an example, it may be mentioned that mail-carriers and railway servants, who move about outside the trains while in motion, scout the idea of hot spirits creating bodily warmth in cold weather; they drink hot milk or cocoa instead. Professor Wallis finds that the average longevity among the richer classes in Sweden is about 45 years, whereas among the agricultural and labouring population it is only 35. Swedish journals, in commenting upon these figures, express the opinion that the sanitary and social state of the country, though greatly improved during recent years, still leaves much to be desired.

SOCIETY FOR THE PREVENTION OF HYDROPHOBIA AND REFORM OF THE DOG LAWS.

THE general committee of this Society held its fourth meeting on Friday, November 5th, at the offices, 50, Leicester Square, London, to consider a programme which had been drafted by a subcommittee, and circulated among members and supporters. Mr. Victor Horsley, F.R.S., secretary to the commission on hydrophobia, attended this meeting by invitation, and was unanimously elected a member of the committee. Many letters were read expressing approval of the programme, and regretting that the writers were unable to attend; among them were letters from Professor Axe, Dr. Drysdale, Mr. Hugh Dalziel, Professor Fleming, Dr. Gowers, Mr. W. W. Hunting, Dr. Norman Kerr, Professor E. Ray Lankester, Mr. A. Nicols, Mr. T. S. Price, and Professor Pritchard. The honorary secretary having made a financial statement of a satisfactory nature, the chairman, Colonel R. H. Rosser, briefly explained the care and time given by the subcommittee to the programme, which was then discussed in detail, and ordered to be printed with some additions and alterations. Any persons interested in the question of hydrophobia, can obtain information by writing to Mr. Frank Kerslake, 50, Leicester Square, W.C.

THE HEALTH OF SALFORD.

DR. J. TATHAM'S last quarterly health bulletin shows that scarlet fever has been excessively prevalent in Salford during the third quarter of this year, the notified cases numbering no fewer than 550. In no quarter since the passing of the Notification Act in 1882 has the number of scarlet fever attacks in the town approached this figure. Relatively to population, this disease showed the greatest proportional prevalence last quarter in Regent Road, where the attacks were equal to an annual rate of 14.7 per 1,000 living; in Greengate the sickness rate was equal to 12.4, and in Broughton to 11.4; whilst in Pendleton the rate did not exceed 4.5 per 1,000. The 63 registered deaths from scarlet fever are equal to an annual rate of 1.28 per 1,000 of the

population ; a rate which, in recent years, has been quite exceptional in Salford, and marks the severe character of the present epidemic. It is satisfactory to note that the isolation in hospital of more than 58 per cent. of the reported cases was secured during the quarter, and, in Dr. Tatham's opinion, the prompt removal of so large a proportion of the centres of infection would have long since reduced the epidemic to trifling proportions but for the reprehensible conduct of the mothers and other female friends of the sick. The occurrence of a case of scarlet fever in any of the poorer neighbourhoods is the signal for every gossiping housewife in the street to pay the infected house a visit, probably with a child in her arms. There is little wonder, in such circumstances, that scarlet fever continues to cling so tenaciously to the Salford poor. The deaths from diarrhœa in the town last quarter numbered 292 including 281 amongst children under five years of age. This shows a rate of mortality very considerably above the average. The rate of death from diarrhœal diseases amongst children under five years was equal to 40 per 1,000 living. Diphtheria is reported to have occurred in 12 instances last quarter, typhus fever in 2, and enteric fever in 86 instances.

FEVER AND SMALL-POX IN THE METROPOLIS.

At the meeting of the Metropolitan Asylums Board held on November 20th, the fever and small-pox returns up to that day were as follows. There had been received during the fortnight in the Eastern, Western, and South-Eastern Asylums, 159 cases of fever ; 11 had died during the same period, 101 had been discharged, and there remained under treatment 722 cases—an increase of 45 on the numbers a fortnight ago. Of the whole, 588 were scarlet fever cases, 1 was a case of typhus, 130 were enteric fever cases, and 3 were "other diseases." No small-pox cases had been received. There were only two cases of small-pox in the hospital-ships.

The report of a committee with respect to the question of building a permanent small-pox hospital at Darenth, brought up by Captain Douglas Galton, went fully into the whole matter. The opinion was expressed that any provision now made for future epidemics of small-pox should be in the form of huts, rather than of permanent buildings ; and the committee observed that, if the Local Government Board would strengthen the hands of the Managers by obtaining from Parliament a measure to make compulsory the notification of epidemic diseases in the metropolis, the Managers might possibly rest content with comparatively small expenditure at Darenth. But, unless the Local Government Board took this step, the committee were of opinion that, to meet probable future epidemics, the accommodation should not fall short of 750 beds (including an infirmary) on the Darenth site, which, added to the 400 beds available on board the hospital-ships, would give a total of 1,150 beds for the treatment of small-pox patients. The committee advised the Managers to build for a smaller number of patients, to alter somewhat the character of the accommodation, and to reduce proportionately the amount of administrative accommodation. In detail, the committee recommended that permanent accommodation on the approved site be provided for 560 patients (for 200 men and 300 women and children, and two separate infirmaries for 30 patients each), with administrative offices, etc., capable of serving for 760. They would further be prepared to use the existing huts for such purposes as might be found suitable. The committee estimated that the cost of the brick hut-hospitals and their necessary administrative adjuncts would amount to about £84,000. Sir Edmund Currie opposed the adoption of the report, and urged that the Board should wait, on the ground that the whole system of dealing with epidemics was under review. The consideration of the whole matter was adjourned.

NEW PRECIPITATION METHOD FOR THE TREATMENT OF SEWAGE.

The question of sewage disposal—that constant source of difficulty to the sanitary authorities of towns—has been a source of great trouble at Southampton, where the attempts to deodorise and clarify it by the use of lime, before discharging it into Southampton Water, have, as everywhere else, failed dismally. A system, however, has been tried there for the last year and a half with the most favourable results, in which a material known as "porous carbon" plays an important part. The sewage is first treated with "porous carbon," a mineral powder obtained in Devonshire, which is found to be rich in available iron, alumina, and carbon. By a special process, the metals are rendered soluble, and, by this means, what would seem to be the most perfect chemical precipitant is produced. It possesses the property of precipitating and oxidising solids, and organic matter in solution, and of purifying and deodorising the liquids of sewage. In itself it is perfectly inodorous. A Fryer's destructor has been erected, which effectually gets rid of the house-refuse and garbage. Before reaching the outfall, the porous carbon, in the form of a black powder, is mixed with the sewage, in the average quantity of two and a half or three grains per gallon. At the outfall are two precipitating tanks, which are worked alternately, the sewage flowing into one until it is full, and then being left to rest during precipitation. The flow of sewage is then diverted to the second tank ; when the charge in the first tank has become settled, the effluent water is discharged into Southampton Water, and the precipitate, or sewage-sludge, is forced, by means of one of Shone's pneumatic ejectors, to another portion of the works at Chapel Wharf, about a mile away. The effluent water is fairly clear—that is, it is about as clear as the water into which it is discharged, and is perfectly devoid of any offensive smell, being thoroughly deodorised. These tanks receive the sewage of a district containing about 13,000 inhabitants, and the accumulation in the tanks amounts to about 500,000 gallons in the twenty-four hours. On reaching Chapel Wharf, the sludge, which is of the consistency of treacle and devoid of smell, flows into a tank, where it is mixed with road-scrapings. This mixture is then stacked in the open for the market as a manure, and finds a ready sale at 2s. 6d. per ton at the works. It is found to be an excellent manure, and, in addition to its chemical properties, it possesses the mechanical property of adding to the lightness and porosity of the soil by reason of the presence of the particles of "porous carbon."

The scheme has been carried out by Mr. W. B. G. Bennett, the borough engineer, with Dr. A. Angell as chemist. A large party of persons interested in sewage-disposal, who recently inspected the works, expressed great satisfaction with what they had seen. A strong recommendation for its adoption is, that it is economical, the stated cost for material at Southampton being only 17s. 6d. for every million gallons of sewage treated.

THE HEALTH OF HASTINGS.

The quarterly report of Mr. C. Knox Shaw on the health and sanitary condition, etc., of the borough of Hastings for the last quarter is of an exceedingly satisfactory kind. The number of births registered during the quarter was 285, equal to an annual birth-rate of 22.08 per 1,000. The increase of births over deaths was 115. The number of illegitimate births was 10, or 3.50 per cent. of the total births. One hundred and seventy-five deaths were registered during the same quarter, this number being equivalent to an annual death-rate of 13.17 per 1,000, the quarter's death-rate being 1.05 below the average. Twenty-seven, or 15.88 per cent., of the total deaths occurred among non-residents or visitors. Though the death-rate has been much smaller than usual, the infant mortality has been unusually high, deaths from diarrhœa and wasting diseases of childhood predominating ; 45 children died under one year of age, and 83 under five. The zymotic death-rate for the quarter was 2.55 per 1,000, 0.11 per 1,000 above the average of the past five years. It is satisfactory to learn that the borough during the quarter has been happily free from the other infectous diseases. No cases of any kind were admitted to the Sanatorium during August and September, and for many weeks that building was free of patients.

DUTIES OF MEDICAL OFFICERS OF HEALTH.

Sanitas.—Information with regard to the duties of a medical officer of health may be obtained from the *Handbook of Hygiene*, by Dr. G. Wilson (published by Messrs. Churchill), and the *Guide to Inspectors of Nuisances*, by Mr. F. R. Wilson (published by Messrs. Knight and Co., Fleet Street), containing numerous forms and specifications ; and Hellyer's *Lectures on the Science and Art of Plumbing* (Batsford, Holborn).

It would be useless to attempt water analysis unless familiar with chemical manipulation, without a course of instruction ; and the method of drain-testing had better be seen a few times.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, November 6th, 5,681 births and 3,172 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had been 19.3 and 18.5 per 1,000 in the two preceding weeks, further declined during the week under notice to 18.2. The rates in the several towns, ranged in order from the lowest, were as follow:—Derby, 11.9 ; Birkenhead, 14.2 ; Nottingham, 14.6 ; Birmingham, 15.0 ; Sunderland, 15.6 ; Portsmouth, 15.7 ; Newcastle-upon-Tyne, 15.8 ; Cardiff, 16.6 ; London, 16.7 ; Leicester, 16.8 ; Hull, 17.2 ; Brighton, 17.5 ; Bristol, 18.9 ; Bradford, 19.5 ; Bolton, 19.7 ; Liverpool, 19.8 ; Salford, 20.0 ; Sheffield, 20.1 ; Norwich, 21.0 ; Huddersfield, 21.2 ; Blackburn, 21.8 ; Halifax, 22.0 ; Leeds, 23.2 ; Manchester, 24.5 ; Plymouth, 24.5 ; Oldham, 25.6 ; Preston, 25.7 ; and the highest rate during the week, 28.0 in Wolverhampton. The death-rate in the twenty-seven provincial towns averaged 19.4 per 1,000, and exceeded by 2.7 the rate recorded in London, which, as before stated, did not exceed 16.7 per 1,000. The 3,172 deaths registered in the twenty-eight towns during the week under notice included 368 which were referred to the principal zymotic diseases, against 438 and 401 in the two preceding weeks ; of these, 102 resulted from diarrhœa, 74 from scarlet fever, 66 from measles, 52 from "fever" (principally enteric), 42 from whooping-cough, 32 from diphtheria, and not one from

small-pox. These 368 deaths were equal to an annual rate of 2.1 per 1,000. The zymotic rate in London during the week under notice was equal to 1.8 per 1,000, while in the twenty-seven provincial towns it averaged 2.4 per 1,000, and ranged from 0.0 in Cardiff and 0.5 in Birkenhead, to 4.6 in Preston, 5.3 in Halifax, and 11.1 in Wolverhampton. The deaths referred to diarrhœa, which had declined from 998 to 130 in the eight preceding weeks, further fell during the week under notice to 102, and caused the highest death-rates in Hull, Sunderland, and Preston. The fatal cases of scarlet fever, which in the seven preceding weeks had steadily increased from 43 to 84, declined to 74, and were proportionally most numerous in Salford, Bradford, Newcastle-upon-Tyne, and Huddersfield. The deaths referred to measles, which had risen in the six previous weeks from 29 to 72, declined during the week under notice to 66; this disease, however, showed marked prevalence in Halifax and Wolverhampton. The 52 fatal cases of fever showed a decline of 11 from the number in the preceding week, and were proportionally most numerous in Plymouth. The 42 deaths referred to whooping-cough showed an increase of 25 upon the exceptionally low number in the preceding week, and caused the highest rate in Sunderland. The 32 fatal cases of diphtheria were within 3 of the number in the preceding week, and included 18 in London, 4 in Portsmouth, 2 in Norwich, 2 in Birmingham, and 2 in Manchester. No death from small-pox was registered during the week under notice, either in London or in any of the twenty-seven provincial towns; and only 2 small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday, November 6th. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 3.7 per 1,000, and was below the average. The causes of 69, or 2.2 per cent. of the 3,172 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

In the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,854 births and 3,407 deaths were registered during the week ending Saturday, November 13th. The annual rate of mortality, which had declined in the three preceding weeks from 19·3 to 18.2 per 1,000, rose again during the week under notice to 19.5. The rates in the several towns, ranged in order from the lowest, were as follow:—Brighton, 13.9; Sunderland, 15.1; Derby, 15.9; Birkenhead, 16.4; Sheffield, 17.3; Bradford, 17.4; Leicester, 17.6; London, 17.9; Portsmouth, 18.0; Birmingham, 18.1; Nottingham, 19.2; Salford, 19.8; Bristol, 20.3; Hull, 20.7; Bolton, 21.1; Leeds, 21.7; Blackburn, 21.8; Manchester, 23.1; Plymouth, 23.2; Liverpool, 23.8; Huddersfield, 24.1; Cardiff, 24.3; Newcastle-upon-Tyne, 24.6; Norwich, 24.9; Wolverhampton, 26.1; Preston, 27.3; Halifax, 28.0; and the highest rate during the week, 30.0 in Oldham. In the twenty-seven provincial towns the death-rate averaged 21.0 per 1,000, and exceeded by 3.1 the rate recorded in London, which, as before stated, did not exceed 17.9 per 1,000. The 3,407 deaths registered in the twenty-eight towns during the week under notice included 91 which were referred to scarlet fever, 81 to measles, 80 to diarrhœa, 69 to "fever" (principally enteric), 46 to diphtheria, 44 to whooping-cough, and not one to small-pox; in all, 411 deaths resulted from these principal zymotic diseases, against 401 and 368 in the two preceding weeks. The zymotic death-rate was equal to 2.4 per 1,000. In London, the zymotic rate was 1.8, while it averaged 2.8 per 1,000 in the twenty-seven provincial towns, among which it ranged from 0.0 and 0.9 in Blackburn and Brighton, to 4.7 in Cardiff, 6.0 in Halifax, and 6.5 in Wolverhampton. The fatal cases of scarlet fever, which had been 84 and 74 in the two preceding weeks, rose again during the week under notice to 91, and exceeded the number recorded in any week since May, 1884; this disease caused the highest death-rates in Sheffield, Salford, Oldham, and Bristol. The deaths referred to measles, which had been 72 and 66 in the two previous weeks, rose again to 81, and caused the highest proportional fatality in Portsmouth, Leeds, Wolverhampton, and Halifax. The 80 fatal cases of diarrhœa showed a further decline from recent weekly numbers. The deaths referred to different forms of fever, which had been 63 and 52 in the two preceding weeks, rose again during the week under notice to 69, and were proportionally most numerous in Plymouth, Preston, Derby, and Cardiff. The 46 fatal cases of diphtheria exceeded by 14 the number in the preceding week, and included 23 in London, 6 in Liverpool, 3 in Portsmouth, and 3 in Birmingham. The deaths from whooping-cough, which had been 17 and 42 in the two previous weeks, further rose to 44, and caused the highest death-rate in Oldham. No fatal case of small-pox occurred during the week under notice, either in London or in any of the twenty-seven provincial towns, and only two small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday, November 13th. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 4.0 per 1,000, and was considerably below the corrected average. The causes of 95, or 2.8 per cent., the 3,407 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

During the week ending Saturday, November 20th, 6,098 births and 3,329 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's weekly return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had been 18.2 and and 19.5 per 1,000 in the two preceding weeks, declined during the week under notice to 19.1. The rates in the several towns, ranged in order from the lowest, were as follows:—Portsmouth, 13.8; Brighton, 14.3; Birmingham, 15.9; Nottingham, 16.8; London, 17.4; Bradford, 17.4; Salford, 17.5; Birkenhead, 18.1; Hull, 18.3; Sunderland, 19.2; Cardiff, 19.2; Leicester, 19.4; Derby, 19.9; Huddersfield, 20.0; Liverpool, 20.5; Newcastle-upon-Tyne, 20.5; Sheffield, 20.8; Oldham, 21.2; Halifax, 21.3; Wolverhampton, 22.8; Bristol, 22.9; Plymouth, 23.2; Preston, 24.2; Manchester, 24.4; Bolton, 24.9; Blackburn, 26.4; Leeds, 27.1, and the highest rate during the week, 27.8 in Norwich. The death-rate in the twenty-seven provincial towns averaged 20.5 per 1,000, and exceeded by as much as 3.1 the rate recorded in London, which, as before stated, was only 17.4 per 1,000. The 3,329 deaths registered in the twenty-eight towns during the week under notice included 402 which were referred to the principal zymotic diseases, against 368 and 411 in the two preceding weeks; of these 103 resulted from measles, 95 from scarlet fever, 62 from diarrhœa, 54 from "fever" (principally enteric), 49 from whooping-cough, 39 from diphtheria, and not one from small-pox. These 402 deaths were equal to an annual rate of 2.3 per 1,000. The zymotic death-rate in London during the week under notice was equal to 1.9 per 1,000, while, in the twenty-seven provincial towns, it averaged 2.6, and ranged from 0.2 in Nottingham, and 0.5 in Birkenhead, Bolton, and Cardiff, to 5.5 in Blackburn, 6.8 in Leeds, and 8.5 in Wolverhampton. The deaths referred to measles, which had been 66 and 81 in the two preceding weeks, further rose to 103 during the week under notice, and were proportionally most numerous in Leeds, Halifax, and Wolverhampton. The fatal cases of scarlet fever, which in the two previous weeks had been 74 and 91, further increased to 95, a higher number than in any week since February, 1884; they caused the highest death-rates in Bristol, Hull, Salford, and Blackburn. The 62 deaths from diarrhœal diseases showed a further decline from recent weekly numbers. The fatal cases of fever, which had been 52 and 69 in the two preceding weeks, declined again during the week under notice to 54, and caused the highest rate in Blackburn. The 49 deaths referred to whooping-cough showed a further increase upon the numbers recorded in the three previous weeks; this disease was proportionally most prevalent in Huddersfield and Sunderland. The fatal cases of diphtheria, which had been 32 and 46 in the two preceding weeks, declined to 39, of which 26 occurred in London, 3 in Liverpool, 3 in Manchester, and 3 in Portsmouth. No death from small-pox was registered during the week under notice, either in London or in any of the twenty-seven provincial towns, and only 2 small-pox patients were under treatment in the metropolitan asylum hospitals on Saturday, November 20th. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 4.4 per 1,000, and were considerably below the average. The causes of 75, or 2.3 per cent. of the 3,329 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns, having an estimated population of 1,283,977 persons, 797 births and 545 deaths were registered during the week ending Saturday, November 6th. The annual rate of mortality, which had been 18.2 and 18.6 per 1,000 in the two preceding weeks, further rose during the week under notice to 21.1, and exceeded by 3.9 per 1,000 the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 11.1 in Greenock, 18.1 in Dundee, 19.2 in Leith, 21.2 in Aberdeen, 22.5 in Paisley, 23.0 in Perth, 24.0 in Glasgow, and 24.7 in Edinburgh. The 545 deaths registered during the week under notice in these towns included 21 which were referred to diarrhœa, 16 to scarlet fever, 15 to whooping-cough, 10 to diphtheria, 7 to "fever," 4 to measles, and not one to small-pox; in all, 73 deaths resulted from these principal zymotic diseases, against 72 and 83 in the two preceding weeks. These 73 deaths were equal to an annual rate of 3.0 per 1,000, which almost corresponded with the average zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Edinburgh, Glasgow, and Paisley. The 21 deaths from diarrhœa showed a further decline from the numbers returned in recent weeks, and included 7 in Glasgow and 5 in Dundee. The fatal cases of scarlet fever, which had increased from 12 to 24 in the three previous weeks, declined during the week under notice to 16, of which 12 occurred in Glasgow, and 4 in Edinburgh. The 15 deaths referred to whooping-cough showed a decline of 13 from the high number in the previous week, and included 11 in Glasgow and 2 in Aberdeen. The fatal cases of diphtheria, which had been 3, 5 and 6 in the three preceding weeks, further rose to 10, of which 4 were recorded in Glasgow, 3 in Edinburgh, and 2 in Paisley. The 7 deaths referred to different forms of fever exceeded the number in any recent week, and included 4 in Glasgow and 2 in Edinburgh. Two of the 4 fatal cases of measles occurred in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.0 per 1,000, against 3.7 in London. As many as 75, or nearly 14 per cent. of the 545 deaths registered during the week in these Scotch towns were uncertified.

In the eight principal Scotch towns, having an estimated population of 1,283,977 persons, 813 births and 497 deaths were registered during the week ending Saturday, November 13th. The annual rate of mortality, which had been 18.2, 18.6, and 22.1 per 1,000 in the three preceding weeks, declined again to 20.1 during the week under notice, but exceeded by 0.6 per 1,000 the average rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 9.8 in Perth, 13.4 in Dundee, 18.9 in Greenock, 15.5 in Leith, 20.8 in Aberdeen, 21.0 in Edinburgh, 23.3 in Glasgow, and 23.4 in Paisley. The 497 deaths registered during the week under notice in these Scotch towns included 81 which were referred to the principal zymotic diseases, against 83 and 73 in the two preceding weeks; of these, 23 resulted from scarlet fever, 21 from diarrhœa, 17 from whooping-cough, 11 from diphtheria, 7 from "fever," 2 from measles, and not one from small-pox. These 81 deaths were equal to an annual rate of 3.2 per 1,000, which exceeded by 0.8 the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Paisley, Glasgow, and Aberdeen. The fatal cases of scarlet fever, which had been 24 and 16 in the two preceding weeks, rose again to 23, of which 16 occurred in Glasgow, 3 in Dundee, and 2 in Edinburgh. The 21 deaths from diarrhœa differed but slightly from recent weekly numbers, and included 7 in Glasgow and 7 in Edinburgh. The fatal cases of whooping-cough exceeded by 2 the number in the preceding week, and included 11 in Glasgow and 4 in Aberdeen. The deaths referred to diphtheria, which had been 6 and 10 in the two preceding weeks, further rose during the week under notice to 11, of which 5 occurred in Glasgow, 3 in Edinburgh, and 2 in Aberdeen. The 7 fatal cases of fever corresponded with the number in the previous week, and included 3 in Glasgow and 2 in Edinburgh. The 2 deaths from measles occurred in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 5.3 per 1,000, against 4.0 in London. The causes of 76, or 15.3 per cent. of the 497 deaths registered during the week in these Scotch towns were uncertified.

In the eight principal Scotch towns, having an estimated population of 1,283,977 persons, 757 births and 529 deaths were registered during the week ending Saturday, November 20th. The annual rate of mortality, which had been 22.1 and 20.1 per 1,000 in the two preceding weeks, rose again to 21.4 during the week under notice, and exceeded by 2.1 per 1,000 the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 13.2 in Greenock, 15.5 in Leith, 19.4 in Edinburgh, 19.7 in Dundee, 21.3 in Perth, 23.5 in Aberdeen, 23.7 in Glasgow, and 27.8 in Paisley. The 529 deaths registered during the week under notice in these towns included 24 which were referred to scarlet fever, 19 to diarrhœa, 19 to whooping-cough, 6 to "fever," 5 to diphtheria, 4 to measles, and not one to small-pox; in all, 77 deaths resulted from these principal zymotic diseases, against 73 and 81 in the two preceding weeks. These 77 deaths were equal to an annual rate of 3.1 per 1,000, which exceeded by 0.8 the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Aberdeen, Glasgow, and Paisley. The deaths referred to scarlet fever, which had been 16 and 23 in the two preceding weeks, further rose to 24 during the week under notice, of which 16 occurred in Glasgow, 2 in Edinburgh, 2 in Dundee, 2 in Aber-

deen, and 2 in Paisley. The 10 fatal cases of diarrhœa showed a slight decline from recent weekly numbers, and included 5 in Paisley. The deaths referred to whooping-cough, which had been 12 and 17 in the two previous weeks, further rose to 19 in the week under notice, 9 of which occurred in Glasgow. The 6 fatal cases of "fever" were within one of the number recorded during the preceding week, and occurred 3 in Glasgow. The deaths referred to diphtheria, which had steadily increased from 5 to 11 in the five previous weeks, declined to 5, of which 2 occurred in Edinburgh. The 4 fatal cases of measles included 3 in Aberdeen. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.9 per 1,000 against 4.4 in London. As many as 7.6, or 14.2 per cent., of the 520 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

In the week ending Saturday, October 30th, 320 deaths were registered in the sixteen principal town districts of Ireland. The average annual death-rate represented by the deaths registered was 19·3 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 25·5; Belfast, 17·4; Cork, 26·6; Drogheda, 4·2; Dublin, 21·4; Dundalk, 17·5; Galway, 13·4; Kilkenny, 0·0; Limerick, 18·9; Lisburn, 4·8; Londonderry, 14·3; Lurgan, 25·7; Newry, 14·0; Sligo, 0·0; Waterford, 27·8; Wexford, 8·6. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·2 per 1,000, the rates varying from 0·0 in eleven of the districts to 4·4 in Dundalk; the 4 deaths from all causes tabulated for that district comprising 1 from diarrhœa. Among the 74 deaths from all causes registered in Belfast are 1 from scarlatina, 1 from typhus, 1 from ill-defined fever, 1 from enteric fever, and 7 from diarrhœa. In the Dublin Registration District, the births registered during the week amounted to 183, and the deaths to 148. The deaths represent an annual rate of mortality of 21·9 in every 1,000 of the estimated population; omitting the deaths of persons admitted into public institutions from localities outside the district, the rate was 21·4 per 1,000. Twenty three deaths from zymotic diseases were registered, being 3 below the average for the corresponding week of the last ten years, and 2 under the number for the week ending September 23rd; they consist of 10 from scarlet fever, 1 from ill-defined fever, 3 from enteric fever, and 9 from diarrhœa. Twenty-four deaths from diseases of the respiratory system were registered, being 2 over the number for the preceding week, but 11 under the average for the forty-third week of the last ten years; they comprised 13 from bronchitis and 6 from pneumonia or inflammation of the lungs. The deaths of 7 children under 5 years of age (including 6 infants under 1 year old) were ascribed to convulsions. Ten deaths were caused by diseases of the brain and nervous system (exclusive of convulsions), and 8 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 17 deaths, mesenteric disease 4, and cancer 6. Three accidental deaths were registered. In 20 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending Saturday, November 6th, 353 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 21·3 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 10·3; Belfast, 29·9; Cork, 19·5; Drogheda, 21·1; Dublin, 25·4; Dundalk, 4·4; Galway, 13·3; Kilkenny, 12·7; Limerick, 18·9; Lisburn, 4·8; Londonderry, 14·3; Lurgan, 25·9; Newry, 14·0; Sligo, 14·4; Waterford, 11·6; Wexford, 21·4. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 3·4 per 1,000, the rates varying from 0·0 in Londonderry, Waterford, Galway, Kilkenny, Dundalk, Lisburn, Lurgan, and Armagh, to 9·0 in Sligo; the 3 deaths from all causes registered in the last named district, comprising 1 from whooping-cough and 1 from diphtheria. Among the 89 deaths from all causes registered in Belfast are 1 from scarlatina, 1 from typhus, 3 from enteric fever, and 6 from diarrhœa; and the 5 deaths in Drogheda comprise 1 from scarlatina, and 1 from whooping-cough. In the Dublin Registration District, the births registered during the week amounted to 184, and the deaths to 177. The deaths represent an annual rate of mortality of 26·1 in every 1,000 of the estimated population; omitting the deaths of persons admitted into public institutions from localities outside the district, the rate was 25·4 per 1,000. Thirty-four deaths from zymotic diseases were registered, being 8 over the average for the corresponding week of the last ten years, and 11 over the number for the week ending October 30th; they comprise 8 from scarlet fever (scarlatina), 1 from whooping-cough, 4 from diphtheria, 6 from enteric fever, 15 from diarrhœa, etc. Twenty-one deaths from diseases of the respiratory system were registered, being 14 below the average for the corresponding week of the last ten years, and 3 under the number for the week ending October 30th; they comprised 11 from bronchitis, and 5 from pneumonia or inflammation of the lungs. The deaths of 18 children (including 15 infants under 1 year old) were ascribed to convulsions. Three deaths were caused by apoplexy, 9 by other diseases of the brain and nervous system (exclusive of convulsions), and 9 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 22 deaths, and mesenteric disease 6. Three accidental deaths were registered. In 20 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending Saturday, November 13th, 1886, 339 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 20·4 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 5·2; Belfast, 19·7; Cork, 23·4; Drogheda, 12·7; Dublin, 22·9; Dundalk, 13·1; Galway, 6·7; Kilkenny, 4·2; Limerick, 17·5; Lisburn, 19·3; Londonderry, 30·3; Lurgan, 15·4; Newry, 21·1; Sligo, 9·0; Waterford, 11·6; Wexford, 17·1. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2·6 per 1,000, the rates varying from 0·0 in ten of the districts to 7·1 in Londonderry; the 17 deaths from all causes registered in that district comprising 1 from measles and 2 from diarrhœa. The 9 deaths from all causes, registered in Belfast, comprise 1 from scarlatina, 2 from typhus, 1 from hydrocephalus, 1 from simple continued fever, and 4 from diarrhœa; among the 36 deaths in Cork are 1 from scarlatina, and 3 from enteric fever; and 1 of the 5 deaths in Newry was caused by typhus. In the Dublin Registration District, the births registered during the week amounted to 204, and the deaths to 149. The deaths represent an annual rate of mortality of 23·6 in every 1,000 of the estimated population; omitting the deaths of persons admitted into public institutions from localities outside the district, the rate was 22·9 per 1,000. Twenty-six deaths from zymotic diseases were registered, being 8 under the number for the preceding week, and equal to the average for the forty-fifth week of the last ten years; they comprised 15 from scarlet fever (scarlatina), 2 from whooping-cough, 2 from cerebro-spinal fever, 3 from enteric fever, 1 from diarrhœa, etc. Twenty-eight deaths from diseases of the respiratory system were registered, being 7 over the number for the preceding week, but 10 under the average for the forty-fifth week of the last ten years; they comprise 22 from bronchitis, and 2 from croup. The deaths of 7 children under 5 years of age (including 4 infants under 1 year old) were ascribed to convulsions. Nine deaths were caused by diseases of the brain and nervous system (exclusive of convulsions), and 11 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 10 deaths, mesenteric disease 4, and cancer 5. One accidental death was registered. In nineteen instances, the cause of death was "uncertified," there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

It appears, from statistics published in the Registrar-General's return for the week ending November 6th, that the annual death-rate recently averaged 28·7 per 1,000 in the three principal Indian cities; the rate was equal to 20·5 in Bombay, 27·3 in Calcutta, and 41·0 in Madras. Cholera caused 11 deaths in Calcutta, and diarrhœal diseases 54 in Madras; "fever" mortality showed an increased excess in Madras. According to the most recently received weekly returns, the annual death-rate averaged 24·5 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded it by no less than 6·2 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 22·9; the 407 deaths included 11 from "fever," 7 from diphtheria, and 2 from small-pox. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 21·3, and ranged from 19·9 in Christiania to 22·2 in Copenhagen; diphtheria and croup caused 15 deaths in Copenhagen, 6 in Christiania, and 3 in Stockholm; 17 deaths from diarrhœal diseases occurred in Copenhagen, and 5 from scarlet fever in Christiania. In Paris, the death-rate was equal to 21·1, and exceeded by 4·7 the rate that prevailed in London; the deaths included 27 from diphtheria and croup, 23 from typhoid fever, and 13 from measles. The 167 deaths in Brussels, of which 5 resulted from diphtheria and croup and 25 from diarrhœal diseases, gave a rate of 23·3. The rate in Geneva was equal to 23·0, and no death from zymotic disease was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 20·3, the several rates being 16·3 in Amsterdam, 23·4 in Rotterdam, and 26·6 in the Hague; measles caused 6 deaths in the Hague, croup 5 in Amsterdam, and scarlet fever 4 in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 29·1 per 1,000, and ranged from 18·9 in Vienna and 22·8 in Berlin, to 49·7 in Trieste and 60·4 in Buda-Pesth. Cholera caused 111 deaths in Buda-Pesth, and 46 in Trieste; 65 deaths from small-pox and 25 from scarlet fever were also returned in Buda-Pesth; diphtheria showed increased mortality in most of the German cities, especially in Hamburg and Berlin. The death-rate averaged 19·6 in three of the largest Italian cities, and ranged from 18·3 in Turin to 22·9 in Venice; small-pox caused 2 deaths in each of these three cities, and 10 deaths resulted from diarrhœal diseases in Venice. The death-rate was 41·3 in Cairo and 42·6 in Alexandria; typhoid fever caused 14 and diarrhœal diseases 107 deaths in Cairo, while the deaths in Alexandria included 5 from cholera, 4 from typhoid fever, and 48 from diarrhœal diseases. In four of the principal American cities, the recorded death-rate averaged 22·9, and ranged from 17·0 in Baltimore to 26·1 in New York. Typhoid fever caused 16 deaths in Philadelphia, and considerable mortality from diphtheria and croup occurred in each of these American cities.

It appears, from statistics published in the Registrar-General's return for the week ending November 13th, that the annual death-rate was recently equal to 21·8 in Bombay, and to 35·2 in Madras; "fever" mortality showed a marked excess in Madras. According to the most recently received weekly returns, the annual death rate averaged 24·2 per 1,000 persons estimated to be living in twenty-two of the largest European cities, and exceeded by 4·7 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was equal to 23·4, and the 416 deaths included 14 from scarlet fever, and 11 from typhus and typhoid fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged 18·2, and ranged from 17·5 in Christiania, to 18·8 in Copenhagen; diphtheria and croup caused 10 deaths in Christiania, 8 in Copenhagen, and 2 in Stockholm; 3 deaths from scarlet fever occurred in Christiania, and 2 from typhoid fever in Copenhagen. In Paris, the death-rate was equal to 22·1, and exceeded the rate that prevailed in London by 1·0; the deaths included 17 from diphtheria and croup, 13 from typhoid fever, and 1 from small-pox. The 170 deaths in Brussels, of which 7 resulted from "fever," and 7 from diphtheria and croup, were equal to a rate of 20·3. The rate in Geneva was 19·4, and one fatal case of typhoid fever was reported. In the three principal Dutch cities Amsterdam, Rotterdam, and the Hague—the mean death-rate was 22·—, the several rates being 20·6 in Amsterdam, 20·9 in Rotterdam, and 30·0 in the Hague; the 80 deaths in the Hague included 10 from measles, scarlet fever caused 3 deaths in Rotterdam, and "fever" 2 in Amsterdam. The Registrar-General's table includes nine German and Austrian cities in which the death-rate averaged 27·5, and ranged from 22·5 in Vienna and 22·9 in Berlin, to 46·0 in Trieste and 47·3 in Buda-Pesth. Cholera caused 65 deaths in Buda-Pesth, and 34 in Trieste; the deaths in Buda-Pesth also included 83 from small-pox and 15 from scarlet fever; diphtheria mortality showed the largest excess in Hamburg, Berlin, Breslau, and Prague. In three of the largest Italian cities the death-rate averaged 21·5, and ranged from 19·6 in Turin to 26·4 in Venice; small-pox caused 5 deaths in Rome and 2 in Venice, and typhoid fever 8 in Turin, 3 in Venice, and 2 in Rome. The death-rate was 37·9 in Cairo and 35·6 in Alexandria; typhoid fever caused 16 deaths in Cairo and whooping-cough 12 in Alexandria; and diarrhœal diseases 97 in Cairo and 88 in Alexandria. In four of the principal American cities the recorded death-rate averaged 22·3, and ranged from 18·7 in Philadelphia to 24·7 in New York. Diphtheria and croup caused considerable mortality in each of these American cities; 16 deaths from typhoid fever were recorded in Philadelphia, and 5 both in Brooklyn and in Baltimore.

It appears, from statistics published in the Registrar-General's return for the week ending November 20th, that the annual death-rate recently averaged 29·1 per 1,000 in the three largest Indian cities; the rates were 24·2 in Bombay, 27·5 in Calcutta, and 38·5 in Madras. Cholera caused 31 deaths in Calcutta, and measles 6 in Bombay; "fever" mortality was, as usual, excessive in each of these Indian cities, but was considerably higher in Madras and Calcutta than in Bombay. According to the most recently received weekly returns, the annual death-rate averaged 24·1 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded by 5·0 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 22·2, and was lower than in preceding weeks; the 394 deaths included 15 from typhoid fever, and 11 from scarlet fever. In three other northern cities—Copenhagen,

Stockholm, and Christiania—the death-rate averaged only 19.8, and ranged from 17.5 in Stockholm to 21.5 in Copenhagen; diphtheria and croup caused 10 deaths in Christiania, 4 in Copenhagen, and 2 in Stockholm; 6 fatal cases of whooping-cough were reported in Copenhagen, and 3 of scarlet fever in Christiania. In Paris, the death-rate was equal to 22.3, showing a further slight increase upon the rates in recent weeks, and exceeding the rate during the same week in London by 4.9; the deaths included 21 from typhoid fever, 19 from diphtheria and croup, and 3 from small-pox. The 155 deaths in Brussels, of which 4 resulted from croup, and 3 from "fever," was equal to a rate of 18.5. The rate in Geneva was 20.2, and the deaths included 2 fatal cases of measles. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 22.8, the several rates being 18.9 in Amsterdam, 23.1 in Rotterdam, and 32.6 in the Hague; the 87 deaths in the last-mentioned city included 9 from measles, and 4 from croup; whooping-cough caused 4 and diphtheria 3 deaths in Amsterdam; and in Rotterdam 2 fatal cases of scarlet fever and 2 of measles were returned. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 26.9, and ranged from 21.2 in Berlin, and 23.1 in Dresden, to 39.5 in Buda-Pesth, and 40.3 in Trieste. Small-pox caused 73 deaths in Buda-Pesth, 3 in Hamburg, 1 in Vienna, and 1 in Prague; 34 deaths from cholera were reported in Trieste and 10 in Buda-Pesth; diphtheria mortality showed the largest excess in Hamburg, Dresden, Prague, and Berlin; and scarlet fever caused 13 deaths in Buda-Pesth. The death-rate was equal to 22.6 in Rome and to 22.9 in Venice; small-pox caused 8 deaths in Rome and 2 in Venice; and typhoid fever 6 in Rome and 2 in Venice. The death-rate was 45.2 in Cairo and 41.5 in Alexandria; diarrhœal diseases caused 137 deaths in Cairo and 44 in Alexandria; 15 deaths from typhoid fever occurred in Cairo, and 7 from diphtheria in Alexandria. In four of the largest American cities, the recorded death-rate averaged 22.1, and ranged from 18.5 in Baltimore, to 24.3 in New York. Diphtheria and croup caused 25 deaths in Brooklyn, 36 in Philadelphia, and 12 in Baltimore; 17 fatal cases of typhoid fever were reported in New York, 5 in Brooklyn, and 16 in Philadelphia.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

WITHINGTON.—Dr. Railton devotes a considerable portion of his excellent report to statistics. He carefully classifies the mortality according to disease, age, and locality, and, in each case, compares the returns with those of the five preceding years. The death-rate for the whole district, during 1885, was 13.9 per 1,000, a slight increase upon the average. The deaths of children under five were 67 in number, or 3.7 per 1,000 of the population. Of these, 48 were deaths of infants under one year. This being such an important factor in the general death-rate, Dr. Railton considers the causes of these deaths, with a view to determine how far they are preventible. He thinks that many of the deaths ascribed to pulmonary, infectious, and diet diseases might have been avoided. The public ignore the serious nature of these complaints when attacking the very young, and a little more care on the part of parents would considerably lessen the mortality. The total number of deaths from zymotic diseases was 18, giving a rate of 1.0 per 1,000, and, of these, 7 were from measles and 8 from whooping-cough. Neither of these diseases is required by the sanitary authority to be followed by any precautions for preventing the spread; and there is no doubt that they prevail to a great extent. The district was comparatively free from fevers. The cases of scarlet fever reported from time to time were in no way epidemic, and were of a very mild character. One case of small-pox had to be dealt with, the origin of which could not be traced. The greatest precautions were taken, and there was no spread.

BRAINTREE RURAL DISTRICT.—The number of deaths during the year 1885, including those of persons outside the district, was 365, being at the rate of 17.82 per 1,000. There were 20 deaths from zymotic diseases (as compared with 41 in the previous year), eight of which were from diphtheria. There were five outbreaks of scarlet fever, the number of fatal cases being four. The usual precautions, including isolation and disinfection, were taken. Mr. Abbott advocates isolation as the best means of limiting the spread of infectious disease; and suggests, as being less costly, the provision of one of Dæcker's portable houses, in preference to securing a cottage, which must always be kept in readiness.

SOUTH CROSLAND.—Mr. T. Smailes has to report a higher death-rate for 1885 than has been returned for several years. The total number of deaths was 69, yielding a rate of 22.62 per 1,000, against 66 births. It is noteworthy, in examining the causes of this high rate, that infant-mortality was much below the average, and there was not a single death from zymotic diseases. Comparing the returns for a series of years, Mr. Smailes is able to show that the death-rate for the five years 1881-85 was much below that for the years 1876-80. Thirty-three of the deaths occurred in adults over fifty years of age, and a large proportion was due to diseases of the heart and lungs. Of these, 10 were caused by consumption, and Mr. Smailes expresses the hope that this most insidious and fatal disease may be brought under control, so as to lessen still further the gradually reducing death-rate of the country. As a means to this end, much time and attention were devoted to the dwellings of the poorer classes, and their sanitary surroundings. The drainage of the town is being improved, and much good will result, though it may not be at once perceptible.

HOSPITAL AND DISPENSARY MANAGEMENT.

ABINGDON COTTAGE HOSPITAL.

ABINGDON, a town of 7,000 inhabitants, has at last, thanks to the energy and munificence of its late member, J. C. Clarke, Esq., supplied a long felt want, by the erection of a Cottage Hospital. The Hospital contains eight beds in two wards of three beds each, and two single-bedded wards for serious cases; two bath-rooms, convalescent, operating, and out-patient rooms. It will be worked by the four medical men of the town, and there will be a resident matron who will also act as dispenser. The land on which the building stands was generously given by the governors of Christ's Hospital, Abingdon, and the entire cost of the building has been defrayed by Mr. Clarke. A sum of £2,000 has already been collected in the town and neighbourhood, and will be invested as a nucleus of capital, the interest on which will go to meet the annual expenditure. Sums of £100 and £50 per annum have been promised by local charities. It is proposed to make a small charge, according to a scale to be fixed by the Committee of Management in the case of in-patients who can afford to pay.

EARLSWOOD IDIOT ASYLUM.

THE report read at the half-yearly meeting of the Earlswood Idiot Asylum was of a satisfactory character. It was stated that the year's receipts were £32,971, the expenditure amounting to £26,862. There were 148 candidates for the benefits of the charity, and the vacancies at the disposal of the authorities permitted of their receiving thirty-five new inmates into the asylum, of whom five would be taken from the part-payment list, composed of cases in which the friends of the applicants guaranteed from £15 to £36. They attributed their prosperous financial condition mainly to the extraordinary zeal of the friends of unsuccessful cases, which brought increased support to the charity. The institution shelters under its roof 566 inmates, of whom only 258 are able to engage in any industrial occupations.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination in Anatomy and Physiology for the Diploma of Fellow at a meeting of the Board of Examiners on November 22nd.

G. W. Ridley, student of Newcastle-on-Tyne Infirmary; T. H. R. Crowle, of St. Mary's Hospital; T. Wholey, of London and Newcastle; E. A. Sadler, of Queen's College, Birmingham; E. Evans, of Cambridge and St. Mary's Hospital; W. P. Stocks, of Owens College, Manchester; and H. E. Whitehead and A. Lucas, of St. Bartholomew's Hospital.

Passed on the 23rd.

W. H. Dolamore, of St. Mary's Hospital; G. G. Borrett, of London Hospital; E. H. Douty, of King's College and Cambridge University; F. Lace, of Bristol Medical School; F. F. Blackman and T. J. Dyall, of St. Bartholomew's Hospital; W. W. Hall, of Edinburgh and St. Mary's; and E. J. P. Olive, of Cambridge University.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent M.B. examination.

Pass-list.—First Division.—E. F. Bright, University College; F. F. Burghard, Guy's Hospital; A. Carless, King's College; L. C. T. Dobson, St. Bartholomew's Hospital; L. M. Gabriel, St. Bartholomew's Hospital; E. Goodall, Guy's Hospital; W. J. Gow, St. Bartholomew's Hospital; G. E. Halstead, B.A., B.Sc., Guy's Hospital; R. Johnson, University College; O. J. Kauffmann, Manchester, Owens College, and St. Mary's Hospital; W. Permewan, University College; W. G. Spencer, St. Bartholomew's Hospital; E. F. Trevelyan, St. Bartholomew's Hospital; A. F. Voelcker, University College; J. W. Washbourn, Guy's Hospital; R. B. Wild, Manchester and Owens College; C. W. F. Young, St. Bartholomew's Hospital.

Second Division.—S. R. Alexander, Guy's Hospital; K. N. Bahadhurji, University College; A. W. Burrell, London Hospital; G. A. Carpenter, St. Thomas's Hospital; E. R. St. C. Corbin, University College; F. A. Cox, St. Mary's Hospital; E. L. De Chazal, University College; H. W. Gardner, St. Bartholomew's Hospital; W. T. Gardner, St. Bartholomew's Hospital; F. C. Hart-Smith, University College; W. H. Horrocks, University College; J. S. Hutton, St. Thomas's Hospital; S. C. Jones, University College; C. D. Muspratt, Guy's Hospital; S. E. Prall, Guy's Hospital; W. H. R. Rivers, St. Bartholomew's Hospital; J. A. Smith, St. Bartholomew's Hospital; A. E. Taylor, Guy's Hospital; F. S. Toogood, University College.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed their Examination in the Science and Practice of Medicine, Surgery and Midwifery, and received certificates to practise, on Thursday, November 18th, 1886.

England, George Fuller Ashbridge, M.R.C.S., Winchester.
Lewis, David Thomas, Brunswick House, Stoke Newington Road, N.
Walsh, Robert William, M.R.C.S., The Priory, Lincoln.
Warlters, Walter Scott, M.R.C.S., 10, Chepstow Villas, Bayswater.

MEDICAL VACANCIES.

The following vacancies are announced.

BALLYMENA UNION.—Medical Officer, Ahogill Dispensary. Salary, £75 per annum, and fees. Applications to Mr. William Miller, Honorary Secretary, Election on December 6th.

BIRMINGHAM BORO' ASYLUM. Resident Clinical Assistant. Applications to E. B. Whitcome, Esq.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff.—Honorary Ophthalmic Surgeon. Applications by December 4th to the Secretary.

GLASGOW HOSPITAL FOR SICK CHILDREN. Resident House-Surgeon. Salary, £60 per annum, with board, etc. Applications by November 30th to the Secretary.

HOSPITAL FOR CONSUMPTION, Brompton.—Resident Clinical Assistants. Applications by December 18th to the Secretary.

HOSPITAL FOR WOMEN, Soho Square, W. Clinical Assistants. Applications to the Dean.

HULL ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary, £50 per annum, with board and apartments. Applications by November 30th to the Chairman of the House Committee.

KENSINGTON DISPENSARY.—Resident Medical Officer. Salary, £125 per annum, with apartments, etc. Applications by December 4th to Frederick Leach, Esq., 7, Stanford Road, Kensington Square, W.

METROPOLITAN LUNATIC ASYLUM. Assistant Medical Officer. Salary, £120 per annum, with board, etc. Applications to M. D. Parker Dixon, Esq., 13, Gray's Inn Square, W.C.

MORPETH DISPENSARY.—Resident Medical Officer. Salary £120 per annum, with apartments. Applications by November 30th to G. O. Wright, Esq.

MOULSFORD LUNATIC ASYLUM, Berks.—Medical Superintendent. Salary, £500 per annum. Applications by December 3rd to J. T. Morland. Esq., Clerk to the Visitors, Abingdon.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, E.—Junior House-Surgeon. Salary, £70 per annum. Applications by December 4th to A. Nixon, Esq., 27, Clement's Lane, E.C.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Two Physicians.—Applications by December 4th to the Secretary, 216, Tottenham Court Road, W.C.

ROYAL MATERNITY CHARITY.—Physician. Salary, £50 per annum. Applications by December 8th to J. W. Long, Esq., 31, Finsbury Square, E.C.

SALOP INFIRMARY, Shrewsbury.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by December 4th to the Board of Directors.

SCARBOROUGH UNION.—Medical Officer and Public Vaccinator. Salary, £80 per annum, and fees. Applications by December 1st to W. O. Woodall, Esq.

UNIVERSITY COLLEGE, Bristol.—Medical Tutor. Stipend, £100 per annum. Applications by December 4th to E. Markham Skerritt, M.D.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea, S.W.—Resident Medical Officer. Applications by December 6th to the Secretary.

WALLASEY DISPENSARY.—House-Surgeon. Salary, £120 per annum. Applications by November 29th to Mr. W. Heap, Elm Mount, Liscard, near Birkenhead.

WEST LONDON HOSPITAL.—House-Surgeon. Applications by December 9th to the Secretary.

WHITECHAPEL UNION.—Medical Superintendent. Salary, £250 per annum, with apartments, etc. Applications by November 29th to William Vallance, Esq.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Assistant.—Applications by December 13th to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

BLAKENEY, J. H. M.R.C.S.Eng., L.R.C.P., appointed Resident Medical Officer to the Ramsgate and St. Lawrence Royal Dispensary, and Seamen's Infirmary, *vice* F. R. Anness, M.R.C.S., L.R.C.P., resigned.

BURRELL, A. W., M.B.Lond., M.R.C.S., L.R.C.P., appointed House-Surgeon to the London Hospital.

CARLYON, T. B., M.R.C.S., L.S.A., appointed Medical Officer to the Redruth Union Workhouse.

EDMOND, G. M., M.D., appointed Physician to the Aberdeen Hospital for Incurables, *vice* A. Dyce Davidson, M.D., deceased.

EVANS, C. S., M.R.C.S., L.S.A., appointed Resident House-Physician to St. Thomas's Hospital.

GODFREY, A. E., L.R.C.P., M.R.C.S., appointed Resident Accoucheur to St. Thomas's Hospital.

HAILES, Clements, M.D.Edin., appointed Medical Officer to the Redland Branch of the Clifton Dispensary.

JONES, S. H., M.R.C.S., L.S.A., appointed Assistant House-Surgeon to St. Thomas's Hospital.

LICHFIELD, J. W., L.R.C.P.Lond., L.S.A., appointed Junior Assistant Medical Officer to the Hants County Asylum, *vice* G. F. Collins, M.R.C.S.Eng., resigned.

MAKINS, G. H., F.R.C.S.Eng., appointed Assistant Surgeon to St. Thomas's Hospital, *vice* A. O. MacKellar, Esq., F.R.C.S.Eng., resigned.

MITCHELL, Adam, L.R.C.S.I., L.K.Q.C.P.I., appointed Medical Officer to the Roscrea Union.

MONTAGUE, A. J. H., L.R.C.P., M.R.C.S., L.S.A., appointed non-Resident House-Physician to St. Thomas's Hospital.

MOXON, Henry J., L.D.S., appointed Dental Surgeon to the Westminster Union Schools.

NAIRN, R., L.R.C.P., M.R.C.S., appointed Ophthalmic Clinical Assistant to St. Thomas's Hospital.

NICHOL, F. E., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

PRATT, Reginald, M.D., M.R.C.S., L.S.A., appointed Assistant Surgeon to the Leicester Infirmary.

RITCHIE, E. D., M.B., C.B.Cantab., M.R.C.S., L.S.A., appointed House-Surgeon to St. Thomas's Hospital.

SMYTH, H. J., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Skin Department to St. Thomas's Hospital.

SOLLY, E., M.R.C.S., L.S.A., appointed Clinical Assistant in the Ear Department, to St. Thomas's Hospital.

STABB, E. C., L.R.C.P., M.R.C.S., L.S.A., appointed Clinical Assistant in the Throat Department, to St. Thomas's Hospital.

STAVELEY, W. H. C., L.R.C.P., M.R.C.S., appointed Assistant House-Physician to St. Thomas's Hospital.

SUMPTER, Walter John Ernely, M.R.C.S.Eng., appointed Surgeon and Agent to the Admiralty, at Sherringham, Norfolk.

TOTSUKA, K., L.R.C.P., M.R.C.S., appointed Assisant House-Surgeon to St. Thomas's Hospital.

WHEATON, S. W., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital.

PRICE OF CUCAINE—The prescribers of cucaine have noted with much satisfaction the great reduction in the price of the drug which has in recent months occurred. Whereas, two years ago, the retail price was two shillings a grain, and even more, the same quantity is now sold for twopence, or even less. The lessened price has been caused by the large production of the drug that its sudden notoriety called forth.

ILLEGAL PRACTICE IN NEW YORK.—The report of the Board of Censors of the Medical Society of New York stated that over two hundred cases of alleged illegal practice had been investigated, and that in every case where the law had been violated the offender had been convicted and punished. This vigorous action might serve as an example for certain Censors nearer home.

THE NEW YORK ACADEMY OF MEDICINE.—The New York Academy of Medicine has received the munificent gift of 25,000 dollars from Mrs. Worreishoffer, in memory of her late husband. The gift is intended to assist the Academy, which has been in existence for forty years, to erect a building better adapted to meet its extended needs than the house it at present occupies. The fund now available for this purpose amounts to 200,000 dollars.

A CHEMIST'S WIDOW.—An action was recently taken by the Pharmaceutical Society against the widow of a qualified chemist at Warwick for alleged infractions of the Act. It was stated that the defendant took no part in the business, which was conducted by a duly qualified registered person, and that she merely received the profits for the benefit of her family. The Society contended that an executrix was not entitled to continue permanently a chemist's business. The Judge gave a verdict for the defendant, but granted a case for a superior court.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London. Clinical Evening. Mr. Herbert Allingham: Lateral Displacement of Patella; Pes Gigas with congenital malformation. Mr. Edmund Owen: Children after Knee-joint Abscess. Dr. Stephen Mackenzie: Paralysis of Extensors of one Forearm. Mr. Bruce Clarke: Case of very obstinate Cystitis treated by constant current, and other cases.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Specimens will be shown by Mr. Doran and others. Papers.—Dr. Dakin: Mercurialism in Lying-in Women. Dr. Pedley: Midwifery among the Burmese. Dr. Gibbons: Case of Galactorrhœa.

THURSDAY.—Harveian Society of London, 8.30 P.M. Third Harveian Lecture by Dr. John Williams: On Cancer of the Uterus.

FRIDAY.—West London Medico-Chirurgical, 8 P.M. Pathological Specimens by Mr. H. Percy Dunn. Dr. Savill: Ichthyosis Sebacea; Melanoderma; Tubercular Syphilide. Mr. Edwards: A case of Excision of the Rectum. Papers.—Mr. Whitmore: Stricture of the Rectum, with cases. Dr. Venn: A case of Inversion of the Uterus, during parturition, treated as a polypus and ligatured. Mr. H. A. Reeves: Cases with remarks in Gynæcological and Orthopædic Surgery.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s. each, which should be forwarded in stamps with the announcements.

BIRTH.

TINKER.—On November 22nd, at Brookland House, Hyde, Cheshire, the wife of Frederick Howard Tinker, L.R.C.P., M.R.C.S., of a son.

MARRIAGE.

BOLTON—HAY.—On November 18th, at Nottingham, Joseph S. Bolton, M.D., M.R.C.S., of Nottingham, to Jeanie, daughter of the Rev. J. Hay.

DEATH.

BALDING.—On November 23rd, at St. Alban's, Mortimer Balding, B.A., M.B.Cantab., M.R.C.S.Eng., aged [illegible] eldest son of the late James Balding, M.R.C.S., of Barkway, Herts.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department): and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic: and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ...10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30; Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with [illegible] Copies.

MANUSCRIPTS [illegible] THE OFFICE OF THIS JOURNAL CANNOT, UNDER ANY [illegible]

QUERIES.

CHARLIER HORSESHOE.

DR. F. R. LEE STRATHY (Harborne, Staffs.) will be glad if a correspondent who some years ago recommended the "Charlier Tip," in the BRITISH MEDICAL JOURNAL, will kindly communicate the results of his further experience of the invention.

TEMPERANCE LECTURES.

A YOUNG MEMBER asks for information as to experiments, statistics, and other material, useful to a medical man in illustrating a temperance lecture.

HOME FOR TROUBLESOME INVALID BOY.

M.D. desires to be informed of a home where a boy, aged 13, could be admitted, who has a phthisical tendency, and is a confirmed masturbator. The expenses, which must be reasonable, would be defrayed by friends.

AMERICAN DEGREES.

J. G. R. being anxious to obtain an American degree of M.D., would be glad to learn if there is any American University that would take the diplomas of L.R.C.P. and L.R.C.S.Edin., into consideration, and exempt him from a portion of the examination; also, what subjects he would be examined in; at what periods of the year the examination usually takes place, and what are the fees for the degree.

ACTION OF REAGENTS ON SPERMATOZOA.

DUBLIN asks where he can get information as to the action of various reagents on spermatozoa.

LEONARD WILLIAMS, M.B., M.R.C.S. (Wheatley, Oxon), writes:—In Dr. Charteris's lecture the following sentence occurs: "It is distinctly known that in some cases of pneumonia a depressant antimonial treatment is advisable." If pneumonia is a general disease, allied to the specific fevers, not a local disease, the use of antimony would appear to be contraindicated. The point is a most important one. It would be of great interest if those who have had large experience in the treatment of pneumonia would give their opinion on the matter.

ANSWERS.

DR. BERNARD O'CONNOR.—The facts were as we stated them.

TREATMENT ON NEURASTHENIA.

IN answer to several correspondents who have asked where the treatment recommended by Dr. Playfair may be read, we may state that it was fully discussed in Dr. Playfair's former paper in the BRITISH MEDICAL JOURNAL, vol. ii, p. 309, 1882, and in *The Systematic Treatment of Nerve Prostration and Hysteria*, by W. S. Playfair, M.D. (London: Smith, Elder and Co.).

WORKS ON SPINAL CURVATURE.

MR. GEORGE PEARSON.—Busch on Orthopædics, Vol. v of von Ziemssen's *Handbook of General Therapeutics*, translated and edited by Mr. Noble Smith, and published this year by Smith, Elder and Co., is an excellent work. Mr. W. Adams published a Second Edition of his book in 1882. M. S. Bawdry published in Paris, in 1883, a volume giving a good epitome of various opinions, and we understand that a Second Edition of Mr. Noble Smith's work, *Curvatures of the Spine*, is now in the press.

MR. W. A. DAY.—We are unable to understand the purport of our correspondent's communication. We considered—and with the full report before us, we still consider—that the judge overstepped the limits of both propriety and common sense. Counsel found it necessary to protest openly against the "contumely and insult" with which his witnesses were treated. Our desire for further information was merely an intimation that we could find nothing in the evidence to warrant such conduct.

PARLOUR GYMNASTICS.

J. E. TILTON:—"The patent 'Excelsior' Health Exercising Apparatus," to which our correspondent probably refers, is made by the Chadborn and Coldwell Manufacturing Company, 223, Upper Thames Street, London.

SUMMER MOUNTAIN HEALTH-RESORTS.

FRANCIS PARSONS, M.D. (The Hurst, West Worthing) writes:—In reply to the query of "Couch," as to a suitable mountain resort for a case of congested liver and relaxed throat with debility, I would direct attention to Tarasp-Schuls in the Lower Engadine.

On this Alpine plateau, at an elevation of 4,000 feet, the air is rarefied, pure and invigorating, and owing to the shelter of mountains 10,000 feet high, it is not subject to the extremes of temperature experienced at many Alpine stations. I have found the saline springs at Tarasp very valuable in hepatic congestion, whilst the effervescing iron waters at Schuls are available for tonic treatment. Though no longer a frequenter of this beautiful region, I shall be pleased to give information to any of my *confrères* who may wish to send patients there.

THE M.D. BRUSSELS.

M.D., L.R.C.P., M.R.C.S, L.S.A., writes:—I should be glad if you could find space for a few lines in answer to a portion of Mr. Carpenter's letter of October 30th, wherein he refers in the most prejudicial terms to the Brussels M.D. degree.

No one who has any idea of the extent and stringency of the examinations for this degree could refer to it in the manner he does. After saying that Dr. Glover advocates the punishment of medical men assuming the title of Doctor, without an M.D. degree, which proves not to be correct, he mentions that to be consistent, he (Dr. Glover) would "ludicrously" address the holders of the M.D. Brus. degree as "Doctor." Surely, to all right-minded men it would not be in any way "ludicrous" to address any M.D., whether registrable or not, as "Doctor;" particularly when the holder of such degree must, before being admitted as a candidate, give proof of his already holding at least two British diplomas, a fact which Mr. Carpenter is evidently unaware of.

Then, again, the percentage of failures of doubly-qualified English medical men being about 55, is a considerable proof that the examinations are anything but trifling, or the doubly qualified Englishman is very much below the standard. Unfortunately for many, they have underrated the examination,

and have gone to Brussels with but little profit on hand have had to return, which is very galling for a man in practice. My own experience is, that the stringency of the examination at Brussels for the M.D. degree is far above several, and equal to any of the licensing bodies in Great Britain. "The proof of the pudding is in the eating thereof."

Dr. D. H. Gillespie (27, Welbeck Street) writes: Dr. R. H. S. Carpenter, in a letter published in the JOURNAL of October 23rd, objects, amongst other reasons, to Dr. Richardson, because he advocates "The registration of inferior foreign degrees such as Brussels," and to Dr. Glover, because he refuses to give the title of Doctor to those who possess no qualification for such an assumption. Your correspondent's words are as follows. "Because he (Dr. Glover) ludicrously addresses the holders of the unregistrable Brussels degree as 'Doctor,' while he addresses the holders of the infinitely more respectable and registerable diplomas of the College of Physicians as 'Mr.'" Now, Sir, as a holder of the Brussels degree, and a member of the Council of the Brussels Graduates Association, I feel it my duty to say a word on the subject. Who are the holders of this much envied Brussels degree? Are they not men who hold the double qualification of our Colleges, amongst whom in the greatest proportion are the licentiates of the highly respectable College of Physicians of London; while not a few of them are Fellows or Members of the same institution, or possessors of other higher qualifications in Great Britain or Ireland. Why have those men gone over to Brussels? Simply to obtain that title which their self-respect and the innate consciousness of the eternal fitness of things told them their own collegiate diplomas, however high placed and honourable, could not legitimately entitle them to. Your correspondent, and others, must see the absurdity of pretending, through envious motives, to condemn as a badge of inferiority, the possession of a degree in addition to those highly respectable British diplomas of which they are so proud, more particularly as one-third, and sometimes one-half of such gentlemen are rejected at Brussels. At a recent meeting called to consider the conferring of collegiate diplomas, Sir Andrew Clark, with the assent of most of the teachers and leaders of the profession in London, stated that, as regards both curriculum and examination, the London Colleges were superior to the Scotch, and similar universities. Remembering that those are not my views, but the views of one of the most eminent members of the profession, and a Scotch graduate to boot, and others qualified to judge, they are probably true.

Therefore, as the raw material for Brussels are the additionally educated British licentiates, and as these are superior to the holders of Scotch degrees, it naturally follows that the Brussels degree is superior to either. I wish at the same time to disclaim any personal knowledge of the relative merits of the Scotch degrees and the London lower diplomas; but what I do know is—that having undergone, amongst others, the examination for the F.R.C.S.I., the M.R.C.P.London, and that for the entrance to the Indian Army, I can say, with reference to extent, depth, and thoroughness as regards all ages, that Brussels stands *facile princeps*, while as regards the amount of knowledge demanded, the percentage of rejections will show that here also it is equally satisfactory.

Dr. Carpenter is a licentiate of the College of Physicians, and as such I give him the courtesy title of Doctor, as I invariably do to all who prefer it, whether Fellows of a College of Physicians, or members of the Apothecaries' Society. All alike are Doctors by common repute, and often by the courtesy of their professional brothers; but none are entitled to, or can well expect, that those in authority will exhibit their ignorance by formally addressing them as such, unless they are graduates in a university legally qualified to grant Doctors' degrees.

NOTES, LETTERS, ETC.

Unqualified Assistants.

M.R.C.S. writes:—I see, by the report of the Medical Council, some wish to take steps to stop the use of unqualified men as assistants. Before doing so, I would like them to consider the effect of suddenly stopping a long established custom. Many of these men have acted as assistants the best part of their lives, and by natural aptitude and study have made themselves safe and efficient advisers. They have, also, many of them married, and support themselves and families creditably on their income. What are such men to do? No doubt many unqualified men are totally unfit for their post, but can we say that all qualified men are fit to be trusted? In consequence of pupilage being abolished, it is now almost impossible to get a man who has just qualified, who is fit to turn into a private practice: he knows nothing of how to gain and retain the confidence of his patients, and his treatment is theoretical, and often impracticable. If the Council determine to abolish unqualified assistants, let them give due notice of their intention, allow all men who can produce evidence of a certain standard of experience, to be registered as unqualified assistants, register none after a certain date, and subject any one who uses a non-registered, unqualified assistant to a penalty. In this manner they would be gradually done away with, without hardship or injustice, as a man entering the study of medicine would know that he must either qualify or be unable to gain a living.

The Practice of Midwifery.

Obstet. writes, that it has occurred to him how necessary it is that the art of midwifery should be placed under restrictions, like dentistry and pharmacy. There are thousands practising this art who, though able and clever, are yet in a strictly legal sense unqualified, and this branch of practice is under no protection. He adds: I think an Obstetric Act is really wanted. I would compel all to register who can produce evidence of moral character and a certificate from either a qualified medical man or lying-in institution, that the individual has been under tuition or pupilage, and attended a specified number of cases; or compel them to undergo a practical examination for a license, which, under an Act, could be instituted for that purpose by the Colleges or lying-in hospitals. I am curious to see what effect this suggestion may have.

*** If "Obstet." will consult the indexes of former volumes of this JOURNAL, he will see how much has been already done in the direction he proposes.

Income Tax and the Medical Profession.

The Income Tax Repayment Agency inform us that surveyors of taxes frequently assess the salary derived from public medical appointments twice over; first under Schedule D, next under Schedule E. Great care should be exercised in making out returns, never to include, in the assessment, the amount of any professional salary received.

Local Medical Defence Fund: Spurgin v. Nicholson.

Mr. Charles Harris (Whitehaven Infirmary) writes: The following further contribution has been made towards this fund: Dr. Jackson, £1 1s. Total, £70 1s.

Winter Promenades at Health Resorts.

A Correspondent suggests that it would be a great boon if some enterprising company or public body (corporate or otherwise) would make it their business to cater for the sick, at some of the recognised health resorts at home. Corridors or pavilions might be attached to piers, or built on the promenades, heated to 58° or 60°, where sufferers from lung ailments could take exercise without risk of cold. It would be a means of passing pleasantly many weary hours which are now spent indoors, and would enable them also to meet friends and mingle a little with the outside world, instead of spending five or six months shut up indoors. The journey to and from such exercise grounds could be made in a closed conveyance. The corridors or pavilions could be made attractive with a few plants and music at stated intervals, would add greatly to the enjoyment. Our correspondent believes that such sufferers would rejoice to remain at home and embrace these opportunities, instead of taking long, tedious journeys to foreign health-resorts, where sanitation in most cases is neglected.

Lanolin.

Alfred Frezer writes:—Liebreich, in his paper on Lanolin published in the JOURNAL of October 23rd, says: "Lanolin can be extracted from the fat contained in the wool of sheep; this fat, when unpurified, is called wool oil. It has been known for a very long time among the agricultural populations."

When I read this, I was reminded of Sir William Wilde of Dub in, in his ear *clinique*, some thirty-seven years ago. He would often pull out a bit of dark greasy wool from a patient's ear, and say to his class surrounding:—"Gentlemen, this is a piece of wool from the left fore-foot of a two-year old black ram, is it not, Pat?" "Yes, your honour," was the invariable reply.

Poor Pat little thought, when he stuffed that morsel into his ear, that he was making use of a remedy which, in more scientific future days, should be dignified by the name of Lanolin.

Charging Vaccine-Tubes.

Mr. F. H. Thompson (Cleobury Mortimer) writes:—In the JOURNAL of October 30th, there is an article on a New Way of Charging Vaccine-Tubes, by Dr. Woodward. For about fifteen years my usual custom has been to charge them in the following way; namely, the tube is held in the centre, between the thumb and forefinger of the right hand, nearly perpendicular, and applied to the bead or beads of lymph; when it has descended to about an inch and a half, I cant the tube to the perpendicular, and give the wrist one or two slight taps, against its fellow, which causes the lymph to move to the centre, then the thumb and forefinger are placed over the end of the column of lymph, so as to protect it from the flame, the empty part of the tube is then rapidly passed through the flame of a spirit-lamp or candle, so as to exhaust the air, and end sealed in the outer part of the flame. The tube is then turned round the end of the column of lymph protected by the thumb and forefinger, and, as before, the empty part of the tube passed through the flame, and then sealed.

A Prescription for Infantile Diarrhœa.

Dr. C. R. Illingworth writes:—During the last five or six months, I have found the following medicine to answer well for almost every case of infantile diarrhœa in which I have used it. ℞. Sol. hydrarg. bichlor. 3iss—3ij; potass. iodid. gr. viiix; spirit ammon. Co. ℥ss; sol. acid. carbol. (1 in 20) ℥i—℥ij; tinct. camph. Co. ℥ss; vel. chloral gr. xv: syrupi ℥iij. Aquam ad ℥iss. M. ft. mist. One teaspoonful every three or four hours.

The value of carbolic acid as an anti-fermentative, in cases of acute diarrhœa, both in adults and children, I have referred to frequently, and I was the first to suggest its use, in your columns.

The biniodide of mercury acts as a germicide upon those forms of micro-organic life which (as I pointed out in your columns in 1885) are the result of fermentative processes, and penetrate into the mucous-membrane of the intestine, there to set up constant irritation; and its diffusion for this purpose is ensured by its solution in potassic iodide. The mixture is thus at once anti-fermentative, germicide, stimulant and sedative.

Children Going Barefoot.

Mr. Henry Taylor, F.R.C.S. (Guildford) reminds us that Dr. John Brown, in his *Horæ Subsecivæ*, devotes an essay to this subject, and expresses an opinion favourable to the practice of children not wearing shoes, and ridicules the idea of any harm arising from their "footikins" being cold. Although not a medical work, the opinion expressed in it is that of a very sensible and observant physician.

Treatment of Rupture of the Uterus.

A Country Practitioner, referring to the remarks made by Dr. Routh at the Obstetrical Society on October 6th (British Medical Journal, page 721) observes that he might have the misfortune to have a case of ruptured uterus, in a woman residing four or more miles from his house, and the same or a greater distance from any other practitioner. Her residence might be practically inaccessible to a vehicle with springs; consequently, a pair of forceps, catheter, a few drugs, and perhaps a small pocket-case, are the only instruments likely to be taken. Presuming the rupture to be of such a nature that the fœtus has partially or entirely escaped from the uterus, what course ought, under such circumstances, to be pursued? The choice, he thinks, is restricted to one of the following:

1. To immediately attempt to deliver *per vias naturales*.
2. To perform abdominal section single-handed, without an anæsthetic or antiseptics.
3. To return home for an anæsthetic, instruments, etc., at the same time to send off for the nearest practitioner, who may or may not be at home.
4. To send the woman off to the nearest hospital, several miles distant, supposing the patient and her friends consent to such a procedure.
5. To do nothing.

According to the fiat of Dr. Routh, if the first course were adopted our correspondent would be "guilty of mal-praxis and unnecessary cruelty;" if the third or fourth, a delay of some hours must ensue which Dr. Routh condemns. If the fifth is adopted, our correspondent would feel that he had not done all that might be reasonably expected. As to the second course, abdominal sections without an anæsthetic, antiseptics, and the assistance of another medical man, he would very much hesitate to advise or to perform such an operation. Wishing to do his duty, what is the course to be adopted in order that the best may be done for his patient, and the medical attendant avoid being guilty of "mal-praxis and unnecessary cruelty?"

Many Doctors: No Deaths.

In the parish of Eastwood, County of Renfrew, during two weeks of October, namely, from October 11th to October 25th, there were no deaths recorded at the registrar's office. This is noteworthy, as it is the first time it has occurred since the Registration Act came into force. The parish embraces a population of 15,000, and includes the Burgh of Pollokshaws. The usual death-rate is from 15 to 17 per 1,000. Another coincidence in connection with the above is, that for years past the medical wants of the inhabitants have been attended to by four medical men, but during the last year no fewer than three other gentlemen have started practice, thus making seven where previously there were only four. Is this a coincidence, or a cause?

Medical Titles for English Students.

M.R.C.P. writes:—Were anything wanting to emphasise the urgent need of the medical titles' question being settled once and for all, perhaps the following personal experience (I fear a very common one) may be of use.

On leaving a London hospital, to commence private practice in a town of about 60,000 inhabitants, I was given an introduction, by an eminent surgeon attached to the said hospital, to one of the leading men there. Following his example, as also the example of, I believe I am correct in saying, every other man in the place, holding the qualification of M.R.C.P. or L.R.C.P., I used the title Doctor.

Some years after, I had occasion to leave this town, and to settle in a larger and more fashionable one, where I now have a good and select practice. In this latter town I find that those who hold the M.R.C.P., use the title Doctor, and a few of those holding the L.R.C.P., but that it causes those who do so to be looked upon with a certain amount of suspicion by some of their medical brethren, and to the ill-natured it gives an opportunity of disparaging them to the public, or even to their own patients, by asserting that you are not a Doctor, but forgetting to state that you are a Physician; a distinction which the public, at any rate, might fail to understand. This is not an enviable position, or one which any but the ignorant would choose.

The title Physician, as now understood, used upon the door-plate, is impossible, as it is supposed to entail a guinea fee.

The title Surgeon is misleading, and inappropriate, for all those who, like myself, hold that it is next to impossible to carry on both branches of the profession with success, and choosing medicine, have long since ceased to take any but the most trivial surgical cases.

Errata.—Mr. H. T. Butlin's name appears in error, as having been present at the meeting at the Apothecaries' Hall, on Tuesday, November 16th.—Surgeon-Major J. W. L. Hodder requests us to state that, in his Surgical Memorandum, published in the British Medical Journal of November 20th, p. 971, under the title of "Retention of Urine: Aspiration with the Guarded Needle," the size of the needle is wrongly given as equal to a No. 4 catheter, instead of a No. 4 aspirating needle.

COMMUNICATIONS, LETTERS etc., have been received from:

Mr. Vesey Fitzgerald, Birmingham; Mr. Carlyon, Redruth; Mr. J. Hutchinson, London; Dr. Stevenson, London; Mr. Timothy Holmes, London; Mr. C. Bellamy, London; Sir Joseph Fayrer, London; Mr. James Berwick, Sunderland; Mr. Pearce Gould, London; Dr. Whipham, London; Mr. W. P. Kiall, Bristol; Dr. Danford Thomas, London; Dr. Fancourt Barnes, London; Messrs. Street and Co., London; Mr. J. E. Tilton, Stonehouse; Mr. Henry Taylor, Guildford; Dr. J. E. Fishbourne, London; Mr. Richard Bevan, Lydd, Kent; Dr. Hack Tuke, London; Mr. R. Hampden Clement, York; Mr. H. H. Chetton, London; Mr. F. T. Berryman, London; Mr. W. Adams Frost, London; Mr. W. J. Sumpter, Sherringham; Dr. Aveling, London; Messrs. Raphael Tuck and Sons, London; Mr. James Erskine, Glasgow; The Secretary of the Royal Meteorological Society; Mr. E. W. Hardwicke, Cambridge; Mr. W. E. Lambert, Liverpool; Dr. Mickle, London; Mr. W. Morrant Baker, London; Mr. J. D. Poice, Aberdeen; Dr. H. O'Niell, Belfast; Dr. Horrocks, London; Mr. A. P. Luff, London; Dr. S. Coupland, London; The Secretary of the Midland Medical Society, Birmingham; Dr. P. Snyers, Liege; Mr. C. Roberts, London; Mr. G. Black, Keswick; Dr. A. H. Carter, Birmingham; Dr. A. H. Benson, Dublin; Mr. Henry T. Butlin, London; Mr. F. Fussell, Brighton; Mr. T. Findley Richardson, Wakefield; Dr. G. Hare Philipson, Newcastle-upon-Tyne; Mr. Hugh Owen Thomas, Liverpool; Dr. Ward Cousins, Southsea; Mr. Rushton Parker, Liverpool; Dr. George Henty, London; Mr. C. E. Bell, Exeter; Mr. H. L. Hoops, Eccles; Surgeon-Major Hodder, Bath; Mr. Lawson Tait, Birmingham; Surgeon-Major R. H. Quill, Woolwich; Dr. Willoughby, London; Surgeon-Major Waghorn, H.M.S. *Crocodile*; Mr. John E. Erichsen, London; Mr. W. L. Wizen, Maidstone; Dr. J. W. Hunt, Dalston; Dr. James Anderson, London; Dr. Byrom Bramwell, Edinburgh; Mr. Cottenham Farmer, Hexham; Mr. William Kirkland, Glasgow; Mr. A. A. Bowlby, London; Dr. Thomas More Madden, Dublin; Dr. C. Orton, Newcastle-upon-Tyne; Dr. J. Maxwell Ross, Edinburgh; Mr. J. C. Mitchell, Taunton; Dr. R. Barnes, London; Dr. Clifford Allbutt, Leeds; Dr. James Ross, Manchester; Dr. C. W. Suckling, Birmingham; Mr. F. M. Corner, London; Mr. R. Clement Lucas, London; Mr. J. Knowsley Thornton, London; Mr. A. Duke, Dublin; Mr. W. A. Day, Redcar; Dr. R. E. Power, Portsea; Dr. W. Scott Lang, Edinburgh; Mr. J. Gopal, Punjab; Dr. W. J. Simpson, Calcutta; Dr. Styrap, Shrewsbury; Dr. W. Alexander, Halifax; Dr. R. Park, Glasgow; Mr. Clements Hailes, Clifton; Mr. G. Anderson Critchett, London; Dr. C. R. Illingworth, Accrington; Mr. J. Wickham Barnes, London; Mr. Edward Atkinson, Leeds; Mr. G. M. Edwards, Aberdeen; Mr. Alfred S. Gubb, London; Deputy Surgeon-General Jessop, London; Dr. John Beddoe, Clifton; A Member; Professor Wolfe, Birmingham; Dr. Wolfe, Glasgow; Dr. W. H. Barlow, Manchester; Mr. Edgar A. Browne, Liverpool; Dr. Martin Oxley, Liverpool; Mr. Morton Smale, London; Professor G. 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THE BOWMAN LECTURE

ON THE

PARASITICAL DISEASES OF THE EYE.

Delivered at the Special Meeting of the Ophthalmological Society of the United Kingdom.

By WILHELM von ZEHENDER,
Professor of Ophthalmology in the University of Rostock.

Mr. President and Gentlemen,—The invitation which I received last year from the Council of your Ophthalmological Society was—I must say—a very welcome one. I value very highly the great honour which this invitation brings with it, the more so as this lecture has been instituted with the design of gratefully commemorating the services which Sir William Bowman has rendered to science. I am fully conscious of the honour of being allowed to speak in commemoration of a man so greatly esteemed all over the Continent, and especially in my own country, because of his distinguished and pre-eminent scientific position. But, having in the first moment cheerfully and decidedly consented to accept the honour conferred upon me, I afterwards felt the whole weight of my responsibility, and began to fear that I should not be able to discharge the duties which I had undertaken. It is a well-known fact, that, in treating of difficult matters, it is not always easy to find the right words and the proper expressions, speaking even in the mother tongue; and I venture to speak before you in a language, not quite different from the German in its earliest origin, to be sure, but very different in its later development. I beg to apologise for all incorrectness of speech and deficiency of elegance. Indeed, I feel sure you will overlook them.

The aim of my lecture will be to lay before you an account of the parasitical diseases of the eye—diseases very little known in earlier times, but now more and more occupying the attention of the scientific world. The late Dr. Mackenzie, in his *Practical Treatise of the Diseases of the Eye*, had only one short chapter—the last of his book—treating of the entozoa of the organ of vision. To day, in consequence of the investigations of modern science, this chapter ought to be greatly enlarged. The entozoa of the human eye, mentioned in the fourth edition of Mackenzie's treatise, which was at that time the most valuable and the most complete work on ophthalmology, are almost all visible with the naked eye, namely: (1) filaria; (2) monostoma and distoma oculi humani; (3) echinococcus hominis; and (4) cysticercus cellulosæ. Let us see what is known at the present time of these species of entozoa. Von Nordmann may be looked upon as the first observer of the natural history of minute living creatures in the eye. He examined an immense number of eyes of fishes, amphibians, birds, and mammals, and found therein several specimens of different entozoa. Examining the human eye, he, and Gescheidt, and von Ammon found in its crystalline lens also several parasites. In the extracted lenses of an old man, von Nordmann found two specimens of a filiform worm, and a similar one in the cataractous lenses of an old woman. As it was impossible to give an accurate description, he named it filaria oculi humani. In another lens of an old woman he found eight specimens of monostoma, which showed some slight motion after being put in lukewarm water. Gescheidt and von Ammon also found in the cataractous lens of an old man three extraordinarily slender worms, which they closely described and judged to be the same filaria seen by von Nordmann. In a child of five months, which died of atrophia meseraica, they found between the opaque crystalline lens and its capsule four specimens of distoma oculi humani, of which they gave a detailed description. It is to be presumed that this distoma might have been an incompletely developed specimen of distoma hepatis (Leuckart). Von Nordmann as well as Gescheidt were, in the branch of helminthology, very eminent investigators, and strictly truthful in their accounts. There can be no doubt that what they saw in the human eye and what they described was really that which they deemed it to be. But it is most astonishing that, ever since, neither monostoma nor distoma has been found in cataractous lenses, though the microscopes of to-day are much more powerful than those of fifty years ago, and though a very great number of cataractous lenses have been very closely examined.

These observations belong, therefore, to what I may call a traditionary period of the history of parasitical diseases. Nearly the same may be said of the filaria in the human crystalline lens; whereas filaria in other parts of the eye, especially under the conjunctiva, is, according to Guyot, a very common disease among the negroes of Congo. This worm seems to live only in the West of Africa, in Guinea, on which account it has the name Guinea worm; but a certain number of zoologists do not think it to be quite the same as the filaria medinensis. It has, therefore, been called filaria loa, the word loa being the name of the worm in the language of the inhabitants of Congo. It is, as far as I know, only observed in the eyes of negroes;[1] and it is said that no case has been recorded in America since slavery has been abolished.[2]

Echinococcus in any part of the human body is, except in Iceland, a very rare disease. Mackenzie refers to two cases of echinococcus in the orbit, but there have been published about forty. Echinococcus has never been found in other parts of the eye except in the orbit. It causes, to be sure, more or less protrusion of the eyeball; but it does not impair the sight in any other way, and may easily be removed by operation.

Cysticercus.—Mackenzie quotes only the few cases of cysticercus cellulosæ, known at the time of the publication of his book. The fourth and last edition was published in the year 1854, a few years after the discovery of the ophthalmoscope in the year 1851, and I might have said "the invention of the ophthalmoscope," but Helmholtz himself has repeatedly said that it was much more a discovery than an invention, and so I cannot but use the same expression. The discovery of the ophthalmoscope signalises the beginning of quite a new period of our special science. The internal diseases of the eye were, up to that time, we may say, quite unknown. The ophthalmoscope enlightened the darkness in which internal diseases of the eye were hidden, and, respecting the entozoa of the eye, showed that the cysticercus cellulosæ does not only reside under the conjunctiva, or in the anterior chamber, or in any other part visible with the naked eye, but even in the retina and in the vitreous body, where it cannot be seen otherwise than with the aid of the ophthalmoscope; in fact, it chooses its domicile more often in these parts than anywhere else in the organ of vision. It is very remarkable that the cysticercus has been seen in Berlin, and in some other places in the North of Germany, in a much larger proportion of cases than elsewhere. Von Graefe, of Berlin, was the first to observe a cysticercus with the ophthalmoscope in the internal parts of the eye, and was the first to extract it by an operation. He had already seen a considerable number of cysticerci before the first was seen at Vienna in the autumn of 1865. This curious fact is difficult to explain. At first one could deem it probable that the use of the instrument was better understood at Berlin than at Vienna, because it was in use at Berlin almost six months or more before it was known at Vienna. But its practice was very quickly acquired, and I need not say that Eduard Jaeger, of Vienna, was one of the most accurate observers with this instrument, and was the first to publish pictures of the fundus oculi of an admirable and unsurpassed exactness. It is necessary to look for another explanation.

Since the experimental investigations of Küchenmeister and Leuckart, it has been well known that there are two different species of tapeworm residing in the digestive tube of the human body, the one with a crown of hooks round its head, the other without it. The first stage of these tapeworms, the cysticercus, exists likewise in two different forms, the one with hooks, the other without them. These crowned tapeworms in their first stage—the cysticercus—live especially in pigs, sometimes in an exceedingly great number, and in some other animals, and also in the human body. The cysticercus without hooks lives in the body of cattle, but never in the body of pigs. This fact has been sufficiently proved by feeding experiments. It is worth noting that this cysticercus without hooks, living in cattle, has never been found in the human body, neither in the eye nor elsewhere. It seems to be nearly certain that pork is consumed to a much larger extent in the northern than in the southern countries, and that the tapeworm with hooks is much more common in the north than in the south; the consequence of this will be that the cysticercus (with hooks) must also be much more frequent in northern than in southern countries. But the more one studies this question the more one finds that both tapeworms, the tænia solium, and the tænia mediocanellata, exist in a nearly equal proportion everywhere, and therefore the before mentioned question is far from being satisfactorily answered. Let me quote only a few figures to prove what I just have said.

The late A. von Graefe, of Berlin, found one cysticercus, visible with the ophthalmoscope in the internal parts of the eye among about

[1] Leuckhart, *Die Parasiten des Menschen und die von ihnen herrührenden Krankheiten*, 2 Aufe, Bd. ii, page 620. Leipzig. 1886.

[2] Blanchard, "La Filaire sous-conjunctivale." *Le Progrès Méd.*, No. 30, page 611, 1886.

one thousand patients. His cousin, Alfred Graefe, of Halle, found them in about the same proportion, whereas Dr. Berlin, of Stuttgart, found one cysticercus among 40,000 patients; Dr. Hansen-Grut, of Copenhagen, only one cysticercus among 70,000 patients; Dr. von Wecker, of Paris, only one cysticercus among 60,000 patients; and Dr. Mauthner, of Vienna, not one among 30,000 patients. The first and only intra-ocular cysticercus in Belgium was seen last year (1885). This is, indeed, a very remarkable disproportion, well worthy of being more closely investigated. Another equally remarkable fact is, that cysticercus in the internal eye is not nearly so rare as in any other part of the eye. The late A. von Graefe, of Berlin, only once saw a cysticercus in the crystalline lens (this being the only time that one has ever observed it in this structure); once in the orbit; three times in the anterior chamber; five times under the conjunctiva; in contradistinction to more than 80 times in the retina, and in the vitreous body. Similar observations have been made by Alfred Graefe, the professor at Halle, who in his large practice sees four or five cases of intra-ocular cysticercus annually, whilst he has seen only one in the anterior chamber during a period of eight years. The brief history of cysticercus in the human body is this: Eggs of the tapeworm enter in one or other way into the human stomach. The thin covering of these eggs is dissolved by digestive action, and the living little cysticercus appears. To be sure, it has not yet been really observed, but it hardly seems possible that there could be any other means for it to reach the eye, than that this minute animal passes through the wall of a blood vessel, entering thus into the circulatory system. Carried along with the blood it may be stopped somewhere—for instance, in the choroid—and then it creeps out, like a white blood corpuscle in a case of inflammation. Its behaviour in this place is different. It seems that the worm has a tendency to get into the vitreous body, and this action is performed with more or less impetuosity. If seated in the choroid, or under the retina, the moving of the worm gives rise to a large detachment of the retina and sometimes one has observed that it really creeps through the retina into the vitreous. This process cannot be performed without causing the patient great discomfort. It often excites a vehement inflammation with insupportable pain, and produces dense opacities in the vitreous, so that the minute animal can hardly be distinguished with the ophthalmoscope. If seated in the retina the little worm does not do so much harm, and generally gets more easily into the vitreous, without exciting such disagreeable sensations. Then, the vitreous remaining clear, the parasite can be perfectly well seen with the ophthalmoscope. In a few cases one could distinctly see the crown of hooks and the movements of the animal.

According to the difference in the behaviour of intra-ocular cysticerci, different modes of treatment are required. If the cysticercus is very unsteady and rambling, it will be necessary to perform enucleation of the eyeball directly; if it behaves quietly, and if the patient does not suffer much pain, it may be allowed to remain for a time. But, as far as we know this very rare disease, periods of quietness and periods of restlessness are constantly alternating; and, finally, the eyeball shrinks, and sight will almost always be entirely lost. That is the reason why some operators do not think it advisable to wait at all, but perform the operation in any case in which the presence of a cysticercus is well established. This being so, it will be the best plan to operate as early as possible, when there are no inflammatory symptoms. Instead of enucleation, one has successfully tried to extract the little animal from the eyeball. This was first performed, as I have already mentioned, by A. von Graefe. He made a large iridectomy, and afterwards extracted the worm, with cannula forceps, through a scleral wound made about two lines behind the corneo-scleral margin. Many other oculists have since that time successfully, as well as unsuccessfully, tried to do the same, by more or less similar operations. What has been done in this way by Alfred Graefe, of Halle, is of much interest. No oculist has performed an equally large number of operations for cysticercus. In his last publication (Albrecht von Graefe's *Archiv für Ophthalmologie*, Bd. xxxi, Abth. 4, p. 33, Berlin, 1885) on this subject, he refers to forty-five eyes afflicted with intra-ocular cysticercus, operated upon by him in the eight years 1877 to 1885. The immediate result of these forty-five operations was completely satisfactory. In thirty cases, the parasite was caught and extracted, in only one of which an unusually profuse loss of vitreous followed. In fifteen unsuccessful operations, the want of success in extracting the worm was due to dense opacities of the vitreous not allowing an exact determination of its seat, or to an unsteadiness of movement, the animal being in the middle of the vitreous, and floating about in all directions. The best chance for a successful extraction is when the worm is steadily seated between the retina and choroid. Twenty-four out of the successful cases the author of this publication had the opportunity of seeing again some time afterwards. In almost all these twenty-four patients, pain and other inflammatory symptoms had entirely subsided, and the eyeball had preserved its natural form, though in some cases it was weaker than normal. The sight of the patients had improved, and in one or two of them to a considerable degree. In the fifteen cases in which it was impossible to remove the animal, it afterwards appeared necessary to remove the whole eyeball or the anterior part of it, an operation which must be performed when pain and other inflammatory symptoms arise. These are the results of forty-five operations performed by Professor Alfred Graefe, of Halle. Few of our special *confrères* have had the opportunity of performing this operation, and only a very small number of these have performed it more than once. From the rarity of a cysticercus residing in the interior of the eye, this disease is, in a practical sense, of no great importance, but scientifically it is highly interesting. There is no living parasite whose course of life in the living human body can be studied with less trouble and with greater exactness than a cysticercus living in the eye.

These are almost all the parasites of the organ of vision visible with the naked eye. But, there is another series of microscopical parasites, belonging to the vegetable kingdom, practically of much greater importance. Of these we have now to treat. These micro-organisms are the lowest forms of life we know, but by no means the most indifferent for our bodily welfare. They are such small objects that it is impossible to see them unless we use the strongest magnifying power of microscopes of the very best construction, but by their enormous multitude and power of propagation they can nevertheless do us very great harm. Pasteur has demonstrated that the air owes its property of decomposing organic substances to minute particles suspended in it, which are the germs of various low forms of life, long since revealed by the microscope, but not previously shown to be the essential cause of putrescence and decomposition of organic substances. This fact was primarily only a theoretical one, but Sir Joseph Lister was the practical man who succeeded in making the knowledge of it useful for the benefit of mankind, in giving the impulse to scientific studies, which originated thoroughly new ideas of diseases and of the means of curing them. You know better than I can possibly tell you the great merits of Sir Joseph Lister with respect to his antiseptic method; I wish only to mention that he, bearing in mind that all the mischief in healing wounds arises from the vitality of these atmospheric particles, and directing his attention especially to the subject of suppuration, found carbolic acid well adapted for the treatment of open wounds. Some years passed away before the profession began to trust in these new ideas, and I remember perfectly well the first trial made with a great deal of incredulity at Rostock, and the general astonishment in observing what a remarkable retardation of suppuration was the result of this treatment. Ophthalmology, always attentively looking round for some possible advancement, did not wait very long in applying the principles of this treatment to eye diseases, especially to the after-treatment of cataract extraction. The members of this Society, who were present at the International Congress held in London in the year 1881, will well remember the communication on the antiseptic method in ocular surgery made by Professor Horner, of Zurich, in which he said that loss of eyes following a perfectly normally performed extraction of cataract had long been known, and that an exact analysis of all the cases of primary suppuration after cataract extraction left no doubt that it depends on infection. The most complete analysis of the results of cataract extraction shows a loss of 10.1 per cent. by the flap operation, and a loss of 4.8 per cent. by the linear operation, which loss has been reduced at Zurich to 1.5 per cent. by strictly observing the measures of antiseptic treatment. This is a wonderful practical result of what is rightly called Lister's antiseptic method. But Lister's antiseptic method was not only fruitful in a mere practical sense; it has greatly contributed to thorough investigation of all those living germs which occasionally invade the human body; it gave rise to the question—what are these living germs?

The profession in all parts of the world has earnestly tried, and is still trying on a large scale, to give an answer to this question. This research has originated quite a new science, called bacteriology. Bacteriology has already determined a great number of different species of these micro-organisms, and has described their forms, their food, their manner of living, etc.; but it is impossible (and, in the meantime, useless) to give here an exhaustive account of the systematical differences of these microzoa, and of the multitude of names given to them. Some of them, there is no doubt, are very dangerous to health. Some are, perhaps, innocent, and some (why should it not

be so?) may have a salutary influence. For our purpose it will be sufficient to divide them into only two classes, the pathogenic and the non-pathogenic microzoa. For this distinction we can refer to experiments made on animals. If there is an effect produced by any microzoon on the eye of an animal, then it may be argued that a similar effect may be expected upon the human eye. Rabbits are the most docile and the most patient animals, and therefore are mostly used for such experiments. Hence any microzoon will generally be called "pathogenic," which leads to infection in the rabbit's eye, and will be called "nonpathogenic," if in the rabbit's eye it does no harm, so that what results in the rabbit's eye will show us what is to be expected in the human eye under similar circumstances. But here we are on uncertain ground. These conclusions evidently are correct only on the assumption that the tissues of the rabbit's eye and the tissues of the human eye are absolutely identical. That, however, is not the case. There are some microzoa very dangerous to rabbits and relatively innocuous to the human body, whilst others are dangerous to human health and relatively innocuous to rabbits. Gonococcus and Staphylococcus aureus, for instance, the most dreaded of all microzoa, because of their great tendency to provoke suppuration, are in the rabbit's eye relatively indifferent micro-organisms. The conjunctiva of the rabbit and the conjunctiva of the human eye are therefore not equally good abodes for certain microzoa. It is the same with other animals; each one has its own idiosyncracies for nourishing and for starving micro-organisms.

But not only is the difference of the same tissue in different animals the reason of a different behaviour of the same microzoon, the tissue itself in one and the same individual may change under different conditions of life, and may consequently not be identical during the whole lifetime. It is quite possible that changes may take place during life, unknown perhaps to ourselves, but very important to the respective micro-organisms. I will only allude to vaccination, which evidently changes the nutrient soil, so that the microzoa of small-pox can no longer live in it, they no longer find nourishment, and the vaccinated body remains unaltered by an infection which would have been fatal to it if non-vaccinated. These views concerning small-pox, introduced by Dr. Jenner, are now about to be generalized for nearly all infectious diseases. It may be ascertained, as a matter of observation, that certain micro-organisms cannot live in an animal when certain others have already taken possession of its body, whereas they may be pernicious to it when certain others are not present (Emmerich, *Tageblatt d. 59 Versammlung Deutscher Naturforscher und Aerzte, 18, bis.*, 24th September, 1886, p. 145). But it has not yet been ascertained whether they change the nutrient soil into a sterile one, or whether they devour or kill each other. There is one other remark to be made; that is, that the quantity of microzoa invading the human body is also of great importance. Just as poison has its poisonous property only with respect to the quantity, and can be a wholesome remedy when taken in right proportions, although deadly when taken in too large a dose, so a small quantity of pathogenic microzoa, assaulting the human body, may be innocent, whereas the danger increases with the increasing quantity.

If it is true that not every nutrient soil is equally well adapted to every microzoon, one microzoon developing better in one soil than in another, it must consequently be true, that one or other nutrient soil is exceedingly well adapted to a certain species of micro-organism. Supposing this to be a fact, some authors have formed the idea that an exceptionally well-nourished and well-developed microzoon might show some difference from the same microzoon when badly nourished, and might, for instance, grow larger and thicker, or even change somewhat its original feature, or changes its character in so far as its pathogenic activity might be lessened as well as strengthened. This idea is, to a certain extent, analogous to what daily experience teaches with respect to plants and animals. Plants put in a convenient soil may grow extremely well, and may, to a certain extent, change their colour, smell and other qualities, but, put in a bad and inconvenient soil, they will fade and die. Concerning the microzoa this may be the same, but it has not yet been sufficiently proved by facts.

We will now briefly consider some of the microzoa which produce diseases of the eye.

The Normal Conjunctiva.—The surface of the normal conjunctiva is covered with a fluid, which is composed of pure water secreted by the lachrymal gland, and of some fat and slime secreted by the minor glands of the conjunctiva. The germs of all living microzoa floating in the air can every moment drop into the open eye, and remain on the surface of the conjunctiva. Hence, it cannot be astonishing that one finds, in every normal eye, plenty of germs of all possible kinds of micro-organisms. Of two persons, with quite normal conjunctivæ, it has been found that one eye almost always contains pathogenic germs. (Gifford, *Archiv für Augenheilk.* Bd xvi, p. 197).

Why does not then the eye become inflamed every moment? Conjuntivitis is, as you know, a very common disease: that it is not much more common than it really is, that it does not arise every moment, may be explicable partly by the passing of these germs through the lachrymal canals into the nose, where they probably may be innocuous, partly by the qualities of the conjunctival tissue itself, it being, in some people, a bad soil for nourishing and feeding germs, in others a good one.

The most common of all forms of conjunctivitis is the phlyctenular, called by the authors of a more remote period conjunctivitis scrofulosa. This is a form arising chiefly in children, and only exceptionally in adults. The search for a particular microzoon in these phlyctenules has not yet been successful; it would require very delicate manipulation; but, in the fluid which moistens the conjunctiva, there have been found seven or more different forms of microzoa, partly pathogenic, partly nonpathogenic. The authors of a more remote period, who preferred the adjective "scrofulosa," thought this disease to be a blood-disease, which occasionally comes out and subsides. There has never been the least doubt in the mind of any practitioner that this disease is nearly always combined with some other symptoms of scrofula, that it arises chiefly in scrofulous children, and that, in these children, it often becomes so dangerous that the eye is lost. We are far from exactly knowing the connection which exists between scrofula and phlyctenular conjunctivitis; but it may be that these infectious germs find an easier and better nourishment in an unhealthy conjunctiva than in that of a quite healthy child, the unhealthy one being uneven and perhaps better fitted for sheltering micro-organisms. The same argument will explain the frequent recurrences of scrofulous or strumous ophthalmia.

As to the treatment of this disease, powdering the eye with calomel is nearly universally adopted as the best remedy, and its use quite harmonises with the bacteriological theory. Calomel, not soluble in distilled water, becomes soluble by the addition of some salt. Tears, containing a small quantity of salt, the powder of calomel brought into the eye, will be, and is chemically proved to be, dissolved in small quantities, and changed into chloride of mercury; which is an excellent antiseptic solution. A weak solution of chloride of mercury was formerly a frequently used collyrium for the same eye disease. It has now been almost entirely displaced by the subchloride of mercury or calomel, perhaps because the chloride of mercury *in statu nascendi* may have a still better effect than a weak solution of it has.

Conjunctival Blennorrhœa, or Purulent Ophthalmia.—Another very dangerous parasitical disease of the conjunctiva is blennorrhœa. The micro-organisms residing in the gonorrhœal matter, first discovered by Neisier, and named by him "gonococcus," is identical with the micro-organisms found in purulent ophthalmia. The etiology of blennorrhœa in new-born children is well known, and the discovery of the gonococcus in both diseases further supports their mutual relation. Nitrate of silver is an excellent antiseptic, and it has long ago proved, in various ways, well adapted for curing blennorrhœa, or—to speak in modern terms—it is well adapted for killing the gonococcus. It is not only suitable for curing blennorrhœa, but even for preventing it, that is to say, for killing the gonococcus before it has damaged the eye. For preventing this disease, Credé, of Leipzig, gave the advice to drop one minim of a 2 per cent. solution of nitrate of silver into the eyes of every new-born child. With this preventative treatment he succeeded in reducing the high percentage of 12 per cent. and more of ophthalmia neonatorum in his Lying-in Hospital to ½ per cent., and even to less than that; I am not sure if it will be advisable to adopt this treatment as a general rule, but its adoption in lying-in hospitals will very likely save a very great number of eyes, especially in those hospitals in which cleanliness is an unknown thing. At the meeting of the Imperial Surgical Society of Paris, on February 21st, 1866, M. Giraldès (*L'Union Méd.*, No. 8, 23 et 26, 1866) reported that in the Hôpital des Enfants Trouvés, the loss of eyes (sometimes even of life) by blennorrhœa neonatorum reached the enormous number of 80 to 90 per cent.; to-day we are not very far from reducing the number of eyes of new-born children lost by this pernicious disease to zero. This, within twenty years, is really a respectable progress of science.

Trachoma.—That trachoma is caused by micro-organisms seems to be a well established fact, though all authors are not of the same opinion on this point. The microzoon, described under the name of diplococcus of trachoma, is, as regards its form and configuration, very like the aforesaid gonococcus, only it is much smaller. It represents a very small ball, cleft by a tiny line, which can only be seen

by the most powerful microscopes. This Diplococcus can very well be cultivated in different nutrient soils, whereas gonococcus can only be cultivated in serum of blood; in other nutrient soils it does not grow. The diplococcus of trachoma has its seat inside the trachoma follicles, but outside the cells; whereas gonococcus lives in the cells or at the outside of the conjunctiva—at least, does not enter deeply into this membrane. Diplococcus of trachoma cannot be successfully inoculated into the conjunctiva of rabbits; but it is said that it has more than once been successfully inoculated into the human conjunctiva. Gonococcus, one of the most dangerous microzoa of the eye, is very easily transferable to the mucous membranes of any animal. As to the treatment of trachoma, a variety of drugs has been successively recommended, but sulphate of copper is the one that is most generally in use. In comparison with nitrate of silver, it may perhaps be preferable, because it is less energetic, and does not act so superficially. Its action certainly proceeds deeper into the tissue, and may, therefore, be better adapted to reach the diplococcus, which is seated, not on the surface, but in the follicles of the conjunctiva. The method of squeezing, or cutting, or scratching out the follicles has practically proved useful, and is, bacteriologically, quite correct.

Saccus Lacrymalis.—The lacrymal sac is like a reservoir for the fluid secreted by the conjunctiva. This fluid, always more or less loaded with micro-organisms, is stopped by the least impediment on its way to the nose, the sac being thus stuffed with microzoa. Fortunately, they may not be altogether pathogenic; but some, or a great part of them, being pathogenic, it will be a very dangerous collection in the neighbourhood of the eye. When the sac is filled up, the outlet to the nose being closed, the fluid may occasionally regurgitate into the conjunctiva, and may greatly endanger its safety, being innocuous only when it contains non-pathogenic organisms alone. The presence of a stricture in the lacrymal duct, and a filling up of the lacrymal sac with matter, has long since been considered a dangerous complication. Practically, it will always be advisable to pay great attention to this complication, the relative quantity of pathogenic and non-pathogenic microzoa being variable. The least wound of the cornea, the least loss of its epithelium, as well as any operation, opens a way into the deeper layers of the cornea, and allows of the entrance of micro-organisms. The result of this, if the microzoa are pathogenic, will be a grave suppuration.

There exists a form of keratitis, called ulcus serpens and keratitis-hypopyon, the dangerous course of which, well known to the profession, can hardly be explained except by infection.

Keratitis mycotica.—The first time we met with the word keratitis mycotica, which means inflammation of the cornea, caused by micro-organism, was in the year 1875. At the ninth meeting of the Ophthalmic Society, Professor Horner, of Zürich, demonstrated the cornea of a patient, who died in consequence of facial erysipelas, having suffered in the last days of his life from a large ulceration in the lower part of the cornea. The microscopical sections of this cornea seen with the naked eye showed a great number of fine straight lines running out from the ulcer in a centrifugal direction; seen under the microscope, this network of straight lines proved to be dilated lymph canals of the cornea filled with numerous minute spherical bodies, all of about the same size. The members of the Society who were present were persuaded that this case was really of a mycotic character, and that the spherules seen in the cornea were specimens of the coccus of erysipelas.

There are still other diseases of the eye probably depending on parasitical infection. Microzoa have been found in a chalazion; they have been seen in the internal parts of the eye—in the iris, in the choroid, in the ciliary body, in the optic nerve; local and general tuberculosis has been successfully produced by inoculating the bacilli of tubercle into the anterior chamber of a rabbit's eye; it has even been attempted to prove that sympathetic inflammation is produced by the wandering of micro-organisms along the optic nerve and through the chiasma to the other eye; but all this is not yet sufficiently explained, and much laborious and long-continued work is still required. Bacteriology is at the present time a very young and incompletely developed science; it cannot yet answer all the numerous questions arising every day. The result of all this long-continued work may be that some day the etiology of human diseases and bacteriology will be found to be nearly identical sciences. Everywhere one finds micro- and macrozoa persecuting, vexing, and killing each other; everywhere one finds parasitism, and, in the material sense of the word, the human race itself is nothing less than a parasite on the surface of the earth. To save his own life, to nourish his own body, the human being destroys and kills every creature—plants as well as animals—if he deems it proper for his own welfare. And he is allowed so to do by the words of the Holy Bible. This state of things in the material world corresponds exactly to what your great philosopher Hobbes calls

"bellum omnium contra omnes."

But in a moral and intellectual sphere this sentence is out of place, and has to be altered into

"pax omnium inter omnes,"

for in the moral and intellectual sphere there exists no personal interest, no parasitism; the individual being an integral member of the great body of mankind, and having, as such, to seek for knowledge of the works of our Creator, and consequently to admire and to love Him.

THE DIAGNOSIS OF URÆMIA FROM APOPLEXY.

By C. W. SUCKLING, M.D. Lond., M.R.C.P.,
Physician to the Queen's Hospital, Birmingham.

Chauternesse and Tenneson, in the *Revue de Médecine*, November, 1885, relate cases of partial epilepsy and hemiplegia in Bright's disease which they have, by *post mortem* examination, proved to be due to local œdemas of the brain.

I believe that it is not generally known that hemiplegia occurs in uræmia, thus occasionally making the diagnosis between uræmia and apoplexy an extremely difficult one. As in uræmia the treatment must be one of active interference, while in apoplexy the opposite holds good, the diagnosis is of the utmost importance.

I have recently met with two cases similar to those reported by Chauternesse and Tenneson. A man aged 40 was recently admitted into the workhouse infirmary in a comatose condition, with right hemiplegia and without convulsions. The pulse was of high tension, the heart considerably hypertrophied, and there was a trace of albumen in the urine.

All these symptoms were compatible with the diagnosis of cerebral hæmorrhage. To my astonishment, he recovered consciousness immediately after being bled, the hemiplegia passing off in a few hours.

During his stay in the infirmary, he had five other attacks, which were always preceded by delirium and restlessness, together with violent convulsion of the right side of the face, right arm and leg, and conjugate deviation of the eyes to the right, giving place to hemiplegia, the eyes then being turned to the left. Each attack was cured by a small bleeding. The urine in this case was free for days from albumen, though it was tested at various periods of the day.

The other case was that of a woman, aged 62, brought in one evening completely comatose. There was right hemiplegia, conjugate deviation of the eyes to the left, dilatation of the right pupil, and abolition of the right conjunctival reflex.

The breathing was of the "Cheyne-Stokes" type, the heart a little enlarged, but the pulse of low tension. Clonic spasm of the facial muscles occurring at short intervals, the case was suspected to be uræmic, though the urine apparently was not albuminous, and I ordered her to be bled. One ounce and a quarter were drawn, and she became conscious almost immediately after.

The next day the hemiplegia had disappeared, but she had sensory aphasia, there being "word blindness" and "word deafness." Free purgation was kept up, and within two days she was perfectly well.

On testing the urine by daylight, I found there was a slight trace of albumen present, the quantity of urea being only 1 per cent., and the average daily quantity of urine passed being forty ounces. I could discover no casts, and there was no change in the fundus oculi.

In both the above cases, the temperature was a little below normal; and in both no history of the onset of the attack could be obtained, the patients being brought in from the street by the police. In the diagnosis of these cases, the occurrence of convulsions is of great assistance. A convulsion occasionally occurs at the onset of apoplexy, but is rarely repeated, while in uræmia convulsions are common, and usually frequently repeated; any elevation of temperature would be strongly in favour of apoplexy. In all cases, when in doubt between apoplexy and uræmia, I should bleed.

Consumption Hospital, Brompton.—At the last quarterly meeting of the governors, the following legacies were announced: Miss Sprott, £300; Miss Cayley, £50; Miss Nightingale, £1,000; Rev. W. H. Edmeades, £50; Miss Keating, £20; Mr. G. K. Smith, £100; Mr. C. G. Du Pré, £300. The number of patients admitted since August 5th was 514; discharged, many greatly benefited, 396; died, 86; new out-patient cases, 4,082.

REPORT
TO THE
SCIENTIFIC GRANTS COMMITTEE
OF THE
BRITISH MEDICAL ASSOCIATION.

THE ACTION AND THERAPEUTICAL VALUE OF VEGETABLE ASTRINGENTS.[1]

Read in the Section of Therapeutics at the Annual Meeting of the British Medical Association in Brighton.

By RALPH STOCKMAN, M.D.,
Assistant to the Professor of Materia Medica in the University of Edinburgh.
(From the Pharmacological Laboratory of the University.)

TAKING the term astringents in its widest sense as including styptics, they may be defined as substances, which, either when locally applied, or after absorption into the blood, cause contraction of tissues, diminish secretion, and arrest hæmorrhage. Those which so act after absorption into the blood are known as "remote astringents," and in text-books there is generally enumerated under this heading a large variety of substances, having widely different general actions. The list includes acids, the salts of some of the heavier metals, ergot, digitalis, gallic and tannic acids, and many vegetable substances containing them. To the last of these it is customary to apply the name of vegetable astringents, and the present investigation was undertaken with the purpose of determining the action of these bodies, after absorption into the blood, and of ascertaining to what extent the current ideas regarding their therapeutical effects are supported by experimental research.

Before detailing my own experiments, it may be of interest to give a slight sketch of their leading chemical characteristics, and of previous experimental researches regarding them. Vegetable astringents have long enjoyed a reputation as remedial agents, and at the present day our pharmacopœia contains a large number of them, including gall nuts, catechu, kino, rhatany root, and others of less importance. They all owe their value to the presence of tannic acid; but the chemical composition of the tannic acid is not identical in all, the variety being designated in each case by a prefix indicating the source as kinotannic, catechutannic, etc. They all, however, have in common, the property of precipitating albumen and gelatin from watery solution and of converting raw hides into leather. In addition, they produce an "astringent" taste in the mouth, and give colour reactions —green or blue—with persalts of iron.

Owing to the similarity of their action on albumen, a similar qualitative action has long been ascribed to all the varieties, although some are held in greater repute than others. This is partly accounted for by the fact that the preparations used in medicine, being derived from different sources, contain various other ingredients such as sugar, ethereal oils, and colloid material, and the presence of one or more of such substances influences the action of the tannic acid, more especially on the intestinal mucous membrane. But, further, the various varieties seem to have different powers of precipitating albumen.

Gallic acid, which is largely used as a remote astringent, differs from the foregoing description in several important particulars. It does not precipitate albumen or gelatin, it does not tan, and its astringent taste is hardly perceptible.

Pyrogallic acid, while also capable of precipitating albumen, differs widely in most other respects from tannin.

It was early observed that the so-called astringent substances produced in the mouth a feeling of drawing together, dryness and stiffness, and that, when locally applied, they were capable of arresting hæmorrhage from wounds, and of diminishing the amount of discharge from inflamed mucous membranes or ulcerated surfaces.

Starting from these undoubted and easily observed facts as a basis, it was assumed that when given internally they became absorbed into the blood and exerted a similar contracting action on the blood-vessels of internal organs, and on the secretions of those mucous membranes to which they could not be directly applied. They were administered, therefore, in hæmorrhage from the lungs and other viscera, in excessive sweating, bronchorrhœa, albuminuria, uterine discharges, etc. At the present time the indications for their internal use have narrowed down to such cases, although formerly they were extensively used as tonics, and have been recommended as beneficial in a great variety of diseases.

The earliest paper which we have on the value of tannic acid as a remote astringent is that of Cavarra (*Bull. gén. de Thérap.*, xii, p. 135, 1837), who found that small doses produced obstinate constipation in dogs and man, and also relates a number of cases of hæmorrhage, leucorrhœa, phthisis, etc., in which he obtained remarkably good results with very small doses (½—2 grs.). Mitscherlich experimented with tannic acid (*Med. Zeit. des Vereins f. Heilk. in Preussen*, 1843) and with catechutannin (*Lehrb. der Arzneimittel.* i, 1847), and draws special attention to the relation between the power of tannin to precipitate albumen and its action on the organism, ascribing its therapeutical value, when given internally, to this power. He also points out that even large doses are not poisonous, and that it is chiefly excreted by the bowels, but partly also by the kidneys.

As a result of these investigations, and of the warm recommendations of many clinicians, it was generally assumed as self-evident that, after absorption, an astringent, contracting action was exercised on the various glands and tissues, and more especially on the blood-vessels.

Hennig (*Archiv d. Pharmacie*, cxxiii, p. 129, 1853), using tannic acid and kino, found that they produced very slight constipation, and that they or some derivative could be detected in the urine one hour after being taken by the mouth. He also detected traces in the blood, but failed to find any in the saliva, sweat, or bile. He pointed out the disturbing action which tannic acid exercises on digestion, attributing it to the precipitation of pepsin; and also that the immersion of muscles in a solution of tannin affected their elasticity. The astringent taste he explains by an action on the lingual and buccal nerves, along with the disturbed muscular feeling due to superficial tanning.

The statements of Wöhler and Frerichs (Liebig's *Annalen*, lxv, p. 335) that tannic acid appears in the urine of dogs as gallic and pyrogallic acids, had raised doubts as to the efficacy of tannin when given internally. It was contended, on the one hand, that tannic acid being changed in the body into a substance which does not precipitate albumen, thereby loses its activity; while, on the other hand, it was asserted that gallic acid also has a powerful effect in arresting hæmorrhage.

The use of gallic acid as a remote astringent has never attained much reputation on the Continent, whereas in England, where it was warmly recommended by Sampson (*Lancet*, 1849), Waters, and others, it has made great headway, and, at the present time, is administered as routine treatment in hæmoptysis, hæmaturia, colliquative sweating (Murrell, *Practitioner*, 1879, ii, 96), and other cases where the so-called astringent action is indicated.

In addition, the results of treatment by tannic acid were not found quite satisfactory by many physicians, and a second paper by Hennig (*Archiv f. Phys. Heilk.*, 1853, p. 599), gives expression to this feeling. While admitting its astringent action, he points out that, in practice, its effects are very often disappointing. He objects greatly to the disturbance of digestion produced by it, especially in hæmoptysis, and argues that, in most cases, other methods of treatment are more successful.

Schroff (*Lehrbuch der Azneim.*, 1853) found only gallic acid in the intestine of rabbits after administering tannin; but Claus states that both tannic and gallic acids are present. Weber's and Daniel's observations on the effects of local application may be passed over as not sufficiently thorough to be of importance.

The generally accepted idea that tannic acid, when locally applied, causes contraction of blood-vessels, was disproved by Rosenstirn (*Rossbach's Pharmakolog. Untersuchung.*, ii., p. 78, 1876), who found that the direct application of solutions of tannic, gallic and pyrogallic acids to the frog's mesentery caused dilatation of all the blood-vessels. This discovery was confirmed by Fikentscher (*Inaug. Diss.*, Erlangen, 1877), on a mucous membrane—the frog's tongue. Fikentscher concludes that the astringent action which tannin exercises on mucous membranes must be simply due to its power of precipitating albumen and not to contraction of the local blood-vessels. It still remains doubtful whether the tannic acid dilatation may not simply be due to stasis of blood in the vessels.

The most recent paper on tannic acid is by Lewin (*Virchow's Archiv*, lxxxi, p. 74, 1880), who strongly advocates its therapeutical use, and maintains that tannates of the alkalies and of albumen still retain the constricting action of uncombined tannic acid, and advocates their

[1] This paper is an abstract of a Thesis presented to the Medical Faculty of Edinburgh University, in August, 1886, for graduation as Doctor of Medicine, to which was awarded a gold medal.

administration instead, as being less irritating to the stomach. He gives experiments, showing that peptic digestion goes on quite normally outside the body in the presence of tannin, and attributes the derangement of digestion to the action of the tannic acid on the gastric mucous membrane. In support of these views, he lays stress on the fact that tannate of soda produces in the mouth the same feeling of drawing together as pure tannin, and that the subcutaneous injection of it, or of tannin, alters the physical properties of the muscles in frogs, making them less extensible but more thoroughly elastic, hence producing constriction of parts. The difference between the two muscles as shown by his tracings is very slight, and the doses (0.2-0.3 gm.) relatively large. It seems very problematical, if any such action could occur with the muscles of man in ordinary doses, and the observation is probably of little or no practical importance.

He also found that in rabbits tannic acid was excreted in the urine, but to this part of his paper it will be necessary to return.

His objections to Rosenstirn's experiments, namely, that the method used stretched the tissues, so that dilatation of the vessels was caused mechanically, cannot be considered to hold good, as contraction of vessels was invariably obtained by Rosenstirn, when solutions of nitrate of silver and other substances were applied in exactly the same way. Besides this, the number of experiments made was very large, and the results have been confirmed by Fikentscher, and also in their most important details by Lewin himself (*l.c.*, p. 95).

Some experiments by Ribbert (*Centralbl. f. d. Med. Wiss.*, 1882) seem to show that tannate of soda exerts a favourable influence in diminishing traumatic albuminuria.

The clinical literature on the subject of vegetable astringents I have found so extensive and the results obtained by their use so contradictory, that it is impossible to consider them here in detail.

Although doubts have been freely expressed, both by pharmacologists and clinicians, as to their value when given internally, there can be no question that vegetable astringents still are among the most frequently used drugs, and the adverse opinions expressed in some of the more recently published German text-books have apparently done little to shake the general belief in them; in this country and in America they are still strongly recommended, more especially gallic acid, as having a remote astringent action (Brunton, Bartholow, Wood, Phillips).

Under these circumstances, it was suggested to me by Professor T. R. Fraser, that I should investigate their action somewhat more fully than has yet been done. As it was impossible to overtake them all, I selected as representative members of the group, gallotannic, catechutannic, rhatany-tannic, gallic, and pyrogallic acids. The material used for experiment was chemically pure, or nearly so. Gallotannic or ordinary tannic acid invariably contains a certain percentage of gallic acid, and to free it from this, Löwe's (*Zeitsch. f. Analyt. Chemie*, xi, p. 375) process with salt solution and acetic ether was adopted. A small portion was also purified by precipitating egg albumen with a watery solution of tannin, washing the precipitate on a filter, and then extracting the tannic acid from its albuminous combination, by boiling with rectified spirit. By this means we are certain of obtaining only the substance which precipitates albumen. The catechutannic acid was obtained from Merck, while the rhatany-tannic acid I prepared myself from rhatany root. Gallic and pyrogallic acids may be bought pure.

Attention was first directed to the form and amount in which these bodies are absorbed, circulate in the blood, and are excreted, and secondly, to their action on the blood-vessels and circulation.

Absorption and Excretion.

The experiments on this head were made with gallotannic (ordinary tannic) and gallic acids.

Tannic Acid.

Alimentary Canal.—When tannic acid is taken into the stomach, it unites with the alkalies and the albumen present, and both there, and in the intestines, becomes converted, wholly or partially, according to the dose and time allowed, into gallic acid. The amount of tannic acid which I found in the fæces of dogs, after its administration by the mouth, varied very considerably, but it was always much less than the gallic acid present, showing that the greater part, and sometimes all, of it had become decomposed into the latter.

Blood.—Absorption into the blood may take place, therefore, as tannate and gallate of alkalies, or possibly as tannate of albumen dissolved in the alkaline intestinal secretion. Cavarra, Mitscherlich, and Hennig, on examining the blood, only found a trace of substances, which give a bluish coloration with ferric chloride. None of them, except Hennig, who extracted the blood with acetic ether, state how the analyses were made. Hennig failed to find it in the saliva, sweat, bile, or pancreatic juice.

To endeavour to ascertain the form and amount in which tannin, or its derivatives, circulate in the blood, I made ten experiments on rabbits. Tannic acid, in doses varying from one to ten grammes, dissolved in water, was given by the mouth, and the animals killed by bleeding at varying periods after the administration, but never until it had been ascertained by examination of the expressed urine, that the addition of ferric chloride gave a copious blue precipitate.

In none of these animals did the blood or serum show even the faintest blue coloration when ferric chloride solution was allowed to mix with it on a white porcelain slab.

The analysis of the blood was carried out by the ordinary method of examining serous fluids. The freshly defibrinated blood was precipitated with alcohol, filtered, and the residue washed with hot alcohol-ether and water. The filtrate and washings were found to contain only the merest trace of a substance giving a greenish colour with persalts of iron. It was, in every case, in too small quantity to identify.

Lest the tannin should be in combination with albumen, the blood was, in two cases, boiled for several hours with alcohol of 85 per cent. Girgensohn (Inaug. Diss., Dorpat, 1872, *Zeitsch. f. Analyt. Chemie*, xiii, 1874), who used tannic acid to estimate the amount of albumen in urine, has shown that, by this means, all the tannin may be extracted from its albuminous combinations unchanged. The alcohol extracts a large quantity of hæmoglobin, but this may be got rid of by allowing it to evaporate slowly when the colouring matter is deposited and removed by filtration. On evaporating the alcoholic filtrate to dryness, only a faint trace of tannic acid, or its derivatives, was obtained. Attempts to obtain the tannin bodies by dialysis were also unsuccessful. In the blood of cats, also, only a trace was present.

In order to obtain more definite results, I tied the renal arteries of two rabbits, under ether, and immediately afterwards gave one gramme and two grammes respectively by the stomach-tube. One rabbit survived eighteen hours, the other twenty-six hours; but, in both cases, the blood contained only the merest trace of substances giving a reaction with iron salts.

It is evident, therefore, that tannic and gallic acids must be absorbed slowly and in small amounts from the intestine, and become so rapidly excreted from the blood, that, at any one time, only an extremely small quantity is present in the circulation.

In all the above animals, a careful examination of the various organs and secretions was made by adding ferric chloride solution, which would give a blue colour with any combination in which tannic or gallic acids could occur in the body. The urine, genito-urinary tract, and alimentary canal always gave distinct reactions, but examination of the other organs was invariably negative. Special attention was paid to the bronchial mucous membrane, as Garnier (*Archiv. Gén.*, 1859, p. 36) has stated that tannic acid is excreted in the sputum of phthisical patients about two hours after administration. Neither in animals, nor in the sputum of two patients who were taking tannic acid (one, fifteen grains uncombined; the other, thirty grains as tannate of soda three times daily) could I detect any blue colour, either when the ferric chloride was added directly to the sputum, or to an acetic-ether extract of it.

The preceding experiments seem to show conclusively that tannic and gallic acids are excreted chiefly by the bowel, to a much less extent by the kidneys, and by no other channel.

Urine.—An examination of the bodies found in the urine was the only means left of determining the forms in which tannic acid is absorbed. Wöhler and Frerich's results, that tannic acid is excreted in the urine as gallic and pyrogallic acids, have been generally accepted as correct until quite recently. They found that the urine did not precipitate gelatin, but still gave a dark-blue precipitate with ferric chloride, and a blue-black precipitate with ferrous sulphate. Even if tannic acid were present, however, it would be combined with an alkali, and therefore incapable of precipitating albuminous bodies. Nor are the reactions with iron-salts sufficient to distinguish tannic, gallic, and pyrogallic acids from each other when dissolved in the urine, and especially if more than one of these bodies be present.

Schultzen (*Archiv für Anatomie und Phys.*, 1863), working under Frerich's direction, made one analysis of his own urine to show that tannin is excreted in man as in dogs, namely, as gallic and pyrogallic acids. In the evening he took one gramme of tannin, and next morning voided 400 cubic centimètres of urine, acid, and dark-yellow in colour. On adding ferric chloride, there was no characteristic blue precipitate.

From the urine, he separated crystals of gallic acid, and a body

which precipitated gelatine. This latter body he believed to be pyrogallic acid, as tannic acid, he thought, becomes too readily decomposed in alkaline fluids to pass through the body unchanged. Lewin was the first to draw general attention to the fact that a portion of the ingested tannic acid might pass unchanged through the body. He experimented on rabbits only, and analysed the urine by two methods, which it is necessary to give in detail. In one, the urine was evaporated to a syrup *in vacuo*, shaken up with acetic ether, the ethereal solution poured off, distilled, and the residue containing the tannin dissolved in water and tested.

The other method was based on Löwe's. Sodium chloride, in crystals and in saturated solution, was added to the fresh urine to precipitate the tannin, and the whole allowed to stand for twenty-four hours. The supernatant fluid was then poured off, and the precipitated tannin lying on the salt-crystals was shaken up with acetic ether. On evaporating the ether, and dissolving the residue in water, the watery solution was found to precipitate albumen, and to give a blue-black precipitate with ferric chloride.

In these processes of Lewin's, it will be observed that there are apparently no acids used, nor any other means whereby any alkali-tannate present could be decomposed, and hence he concludes that the tannic acid exists uncombined, and simply dissolved in the urine. He says (page 106, *loc. cit.*): "A portion of the ingested tannin reaches the point of excretion as alkali-tannate, and either at the moment of elimination from the blood, or first in the urine itself, the alkali-tannate is decomposed into free tannin, perhaps by the acid phosphate of soda present." If this were really what occurred, the uncombined tannin dissolved in the urine would certainly act very powerfully on the genito-urinary mucous membrane.

At first sight his assumption seems correct, acetic ether being nominally of neutral reaction, and incapable therefore of decomposing the alkali-tannate. But on examining several samples of acetic ether, I found all of them strongly acid, even when freshly prepared, and this is invariably the case (Clark, *Pharm. Journ.*, March 24th, 1883). On evaporating acetic ether on the water-bath, as Lewin did, the acidity increases rapidly in amount, and decomposition occurs, the various ethereal products being quickly driven off, leaving behind only strong acetic acid.

In Lewin's analyses, this acetic acid undoubtedly decomposed the alkali-tannate, thereby setting free tannic acid, which was taken up by the water in an uncombined state, and therefore capable of precipitating albumen. That this is what really happens may be shown by imitating the process under well-defined conditions as follows. To a solution of tannin I added liquor sodæ, until the reaction was alkaline and the solution no longer precipitated albumen or gelatine. The alkali-tannate was then precipitated with solution of sodium-chloride, and the precipitate collected on a filter. It was strongly alkaline in reaction, had a feebly astringent taste, and was soluble in cold, much more so in boiling water, and very soluble in acetic ether. It did not precipitate gelatine. A portion of it was dissolved in acetic ether; the ethereal solution evaporated to dryness on the water-bath, and the residue dissolved in water. This watery solution precipitated albumen and gelatine very copiously, the tannate of soda having been decomposed by the acetic acid.

Tannin, therefore, is excreted in rabbit's urine in the form of alkali-tannate, as *à priori* one would expect it to be, and not, as Lewin sought to show, in the form of uncombined tannic acid. As a tannate, its action on the genito-urinary mucous membrane must be slight, or almost *nil*.

From my own experiments I can confirm Lewin's observation that the amount of tannic acid excreted in the urine of rabbits is always considerable. Gallic acid is also invariably present as well, but both are in combination with alkalies.

My further investigations were made on the urine of dogs and of man. In selecting a method of analysis, I had to reject Schultzen's (which involves prolonged heating of the urine exposed to the air) after repeated trials, as it gave very varying results. The evaporation of one day's urine on the water-bath takes many hours, and affords opportunity for oxidation changes to occur in the tannin bodies, which they very readily do. Lewin's method, on the other hand, is devised simply for the detection of tannates, leaving the other bodies quite out of account, and was therefore also unsuitable for my purpose.

I finally adopted the following plan. The urine was distilled to a syrupy consistence either *in vacuo*, at a temperature of 110° to 120° F., or in a carbonic acid atmosphere. The residue was shaken up with alcohol, the whole filtered, the filtrate evaporated to dryness, and extracted with acetic ether. The acetic ether was then driven off at a gentle temperature, and the residue (which must be quite free from water) washed several times with hot benzole. The washing with benzole was for the purpose of removing any pyrogallic acid which might be present, tannic and gallic acids being quite insoluble in it. The gallic acid was then removed by washing with anhydrous pure ether, in which tannic acid is insoluble. The residue left is dark brown in colour, syrupy in consistence, and contains the tannin mixed with various impurities. When dissolved in water, if tannin be present, it precipitates albumen and gelatine (the alkali-tannate having been decomposed by the acetic ether), the precipitate being soluble in lactic acid and alkaline carbonates. It also gives a copious blue-black precipitate with ferric salts, not clearing up on boiling.

The advantages of the above method depend on the low temperature at which it is carried out, and the avoidance of oxidation.

Experiments on Dogs.—Two dogs were used, and in all twenty-two analyses of the urine were made, eight of these being made by the method just described. The tannin was given by the mouth in solution, or more generally as a bolus (made up with mucilage and oatmeal) in doses of 1 to 3 grammes twice daily.

The results, which throw considerable light on the manner of its absorption and excretion, may be briefly stated as follows. When pure uncombined tannic acid is given, there is generally found in the urine only gallic acid, with sometimes a varying, but always small, quantity of tannic acid. If pyrogallic acid be present at all, it must be in such small amount as not to be detected by the ordinary tests for it.

On the other hand, when tannate of soda is administered, there is found in the urine a large quantity of tannic, along with a smaller quantity of gallic acid. As before, pyrogallic acid is absent.

The explanation of these facts seems to me to be the following. When uncombined tannin reaches the stomach (the contents of which are acid), it combines with the albuminous matters present to form tannate of albumen, only a minimal quantity combining with alkalies to form alkali-tannate. In the alkaline intestine, only such of it as has escaped combination with albumen is free to form alkali-tannates. The tannate of albumen thus formed is absorbed from the intestine with difficulty or not at all, and hence remains there a comparatively long time, thus affording ample opportunity for the conversion of the tannic into gallic acid, in which latter form it is absorbed; the greater part being, however, excreted by the bowel. The portion which has combined with alkalies is in a condition to be at once absorbed, and on the amount of it depends the amount of tannic acid to be found in the urine.

When, on the contrary, tannate of soda reaches the stomach, the chemical affinities of the tannic acid are already satisfied, and it is rapidly absorbed into the blood, thereby affording much less time for its sojourn in the intestine and its conversion into gallic acid. Hence the large amount of tannic acid and the relatively smaller amount of gallic acid in the urine.

The fact that alkali-tannate is present in the urine of rabbits in such a proportionately large quantity after the administration of uncombined tannin may be partly explained by the fact that, owing to their vegetable diet, the stomach of these animals contains an excess of alkalies with which the tannin can at once combine.

As there was a possibility that the prolonged heating, even at a low temperature, necessary to concentrate the urine, might have converted the tannic into gallic acid, and thus account for its complete or almost complete absence after the administration of uncombined tannin, I made fourteen control-experiments, using Lewin's method, in which heat is avoided. As before explained, his method separates out only the tannic acid, but the results fully confirmed my previous observations,—tannin being totally absent, or present only in very small quantity, in all these cases.

The observations on man were conducted in the same way, and gave exactly similar results. In man, tannic acid may be given in considerable quantities and for a long time, without obtaining any bluish coloration on the addition of ferric salts to the urine. This is probably due to the small amount excreted by the kidneys, or possibly to very complete decomposition having occurred within the body.

In no case did I obtain pyrogallic acid, and it seems probable that none is formed in the body. When a solution of tannic acid is exposed to oxidation in alkaline solution, it tends to decompose into various dark-coloured bodies, and not into pyrogallic acid. To convert tannin into the latter, a heat of 450° Fahr. is required; and it seems highly improbable that such a conversion takes place in the body.

Gallic Acid.

Wöhler (*Zeitsch. f. Phys.*, i, p. 140) found gallic acid unchanged in the urine. Judell (*Inaug. Diss.*, Gottingen, 1869) investigated the subject more fully, experimenting on himself. He took three grammes

by the mouth, and precipitated it from the urine with basic acetate of lead. Only one experiment succeeded, owing to decomposition being so apt to occur. Gallic acid was obtained in crystals, but no pyrogallic acid. He adds, however, that he is not quite positive as to his results.

It has been generally assumed, however, that gallic acid is excreted partly unchanged, partly as pyrogallic acid, and partly as humin bodies. I made three observations on dogs, the method of analysis being the same as with tannic acid. In washing with the benzole, it is necessary that the residue should be thoroughly dry, otherwise the water present dissolves a little of the gallic acid which comes off with the benzole. In each case, 1½ grammes were given twice on the preceding day. The urine when passed was quite clear, but very soon turned dark, and it was impossible to avoid a certain degree of oxidation. In all three cases, the only body present was gallic acid in considerable amount.

Effect on the Amount of Urine.

It has been frequently stated that the amount of urine is diminished very considerably by the administration of tannic acid. In the rabbits and dogs which I used, little or no change was observable in the quantity excreted, as the following figures show.

Large Rabbit. Diet was full supply of turnips.

Date.	Amount of Urine.	
March 13	198 c.c.	
,, 14	190 c.c.	
,, 15	—	
,, 16	270 c.c.	
,, 17	310 c.c.	
,, 18	334 c.c.	2 grms. tannin.
,, 19	300 c.c.	
,, 20	306 c.c.	
,, 21	270 c.c.	

Dog. On fixed diet.

Date.	Amount of Urine.	
March 14	550 c.c.	
,, 15	540 c.c.	
,, 16	750 c.c.	
,, 17	670 c.c.	1.5 grm. tannin 2cc.
,, 18	560 c.c.	
,, 19	650 c.c.	
,, 20	620 c.c.	
,, 21	650 c.c.	

In such doses as I gave, the urine was never dark-coloured when withdrawn by a catheter, or when freshly passed. A few minutes' exposure to the air (especially if urine were alkaline) often sufficed to darken it. It seems probable, therefore, that, at least with small doses, no humin bodies are formed until after the urine has been voided.

Action on the Blood-vessels and Circulation.

The method of investigation which was used, was to maintain an artificial circulation in frogs, or in the excised organs of mammalia. The frog was pithed, a cannula, communicating with reservoirs containing the circulating fluids, was inserted into the aorta, and the great veins entering the heart were cut. The different circulating fluids were in different reservoirs, and any one of them could be circulated at will. The amount of fluid which flowed out from the veins was measured, and, according as this increased or diminished, the state of dilatation or contraction of the blood-vessels may be gauged. The circulating fluid used was 0.75 per cent. salt solution, as I found this the only fluid by means of which a regular outflow could be maintained for any length of time. Mixtures of saline and defibrinated blood, solutions of dried blood or of albumen, and other fluids which were tried, made the outflow fall very rapidly, the vessels becoming gorged, and stasis ensuing. With saline, the regularity of flow continues for a varying time, usually from about forty to sixty minutes, the frog becoming œdematous, and the outflow diminishing gradually.

Using this method of investigation, Gaskell[1] has shown that weak acid solutions dilate blood-vessels, while weak alkaline solutions contract them.

For maintaining the circulation in mammalia, the now well-known method of keeping the organ and blood in chambers at the body-temperature was employed, the pressure necessary to maintain the circulation being obtained by means of a Marriotte's flask arrangement.

Experiments with Gallic Acid.

Jüdell and others have shown that very large doses of gallic acid (five grammes) may be given to rabbits without producing any very serious symptoms. As regards its action on blood-vessels, no experiments have previously been made. Brunton (*Pharmacology and Therapeutics*, 1885, p. 307) says: "Lead-acetate and gallic acid, when absorbed into the blood, not only tend to lessen secretion from the mucous membranes, but arrest hæmorrhage from internal organs. This is probably partly due to their effect in increasing the coagulability of the blood, and possibly partly also to their power of causing contraction of the arterioles." Wood, Phillips, Bartholow, and other authorities express substantially similar opinions.

I found, however, that gallic acid in widely different strengths of solution invariably dilated blood-vessels. The following experiments show:—

[1] [illegible], vol. i. p. 4, 1880 (Cf. also Ringer and Sainsbury, *Med. Chir.* [illegible]

Frog, 38 gms. Circulating fluid, 0.75 per cent. salt solution.
Ditto + gallic acid 1 : 7000.
Head of pressure, 8 inches.

Time.	Outflow in Minims.		Time.	Outflow in Minims.	
11.41	48	Salt sol.	12. 0	62	
,, 42	47		,, 1	60	
,, 43	48		,, 2	62	
,, 44	49		,, 3	60	Œdema increased
,, 45	49	Gallic acid sol.	,, 4	60	
,, 46	55		,, 5	60	
,, 47	62		,, 6	58	
,, 48	61		,, 7	59	
,, 49	63		,, 8	57	Great œdema
,, 50	62		,, 9	57	
,, 51	63		,, 10	56	
,, 52	62		,, 11	54	
,, 53	62		,, 12	54	
,, 54	64		,, 13	53	
,, 55	64		,, 14	51	
,, 56	62		,, 15	50	
,, 57	62		Experiment stopped. Frog very œdematous = 43 gms.		
,, 58	63	Œdema			
,, 59	60				

Frog, 26 gms. Gallic acid 1 : 2000. Pressure 10 inches.

Time.	Outflow in minims.		Time.	Outflow in Minims.	
12.28	34	Salt sol.	12.57	78	
,, 29	28		,, 58	78	
,, 30	33		,, 59	77	
,, 31	32		1. 0	78	
,, 32	32		,, 2	77	
,, 33	30		,, 3	78	
,, 34	32	Gallic acid	,, 4	77	
,, 35	34		,, 5	75	
,, 36	50		,, 6	75	More œdema
,, 37	57		,, 7	74	
,, 38	65		,, 8	73	
,, 39	70		,, 9	70	
,, 40	74		,, 10	70	
,, 41	76		,, 11	70	
,, 42	80		,, 12	68	
,, 43	78		,, 13	66	
,, 44	79		,, 14	64	
,, 45	78		,, 15	61	
,, 46	77		,, 16	59	
,, 47	78		,, 17	59	
,, 48	79	Œdema	,, 18	56	
,, 49	80		,, 19	55	
,, 50	80		,, 20	54	
,, 51	78		,, 21	55	
,, 52	79		The outflow was observed till 1.34, when it had gradually fallen to 44. Frog was very œdematous, and weighed 37 gms.		
,, 53	75				
,, 54	78				
,, 55	77				
,, 56	78				

Gallic acid, therefore, has a dilating action on blood-vessels. It also has the power of dilating them again, after they have been made to contract by the circulation of a weak alkaline solution through the frog.

As gallic acid dilates vessels, and alkalies contract them, it was to be expected that a neutral gallate of soda would have no effect on their calibre, and this was found to be the case. I made a large number of experiments on this point, using widely different strengths of gallic acid, and exactly neutralising the acid with liquor sodæ. If the solution be exactly neutral, the calibre of the blood-vessels remains unaltered, when it is circulated through the frog. At the end of each experiment, digitalin or barium chloride solution (both of which are well known to contract vessels) was circulated, to ascertain if the vessels were still contractile, and susceptible to the action of drugs. It seems hardly necessary to give any of these experiments in detail. It is, of course, in the form of gallate of soda and other alkalies, that gallic acid must circulate in the blood.

Mammalia.

The circulation of salt-solution containing gallic acid through mammalian blood-vessels, also causes them to dilate, as the following experiment shows.

Rabbit Killed by Bleeding.—Inflow cannula tied into aorta, outflow cannula in inf. vena cava. Pressure 40 mm. mercury. Temperature, 98° Fahr.

Time.	Outflow in Cub. Cents.		Time.	Outflow in Cub. Cents.	
4.17	56	Salt sol.	4.31	60	
,, 18	56		,, 32	58	
,, 19	54		,, 33	59	Salt sol.
,, 20	56		,, 34	55	
,, 21	55		,, 35	53	
,, 22	57		,, 36	52	
,, 23	57		,, 37	50	
,, 24	56	Gallic acid sol. 1 : 3500	,, 38	50	
			,, 39	50	
,, 25	58		,, 40	18	
,, 26	63		,, 41	47	Gallic acid sol.
,, 27	61		,, 42	48	
,, 28	60		,, 43	49	
,, 29	62		,, 44	47	
,, 30	63		,, 45	47	

Time.	Outflow in Cub. Cents.		Time.	Outflow in Cub. Cents.	
4.46	44		5 2	32	
,, 47	45	Salt sol.	,, 3	31	
,, 48	42		,, 4	33	
,, 49	42		,, 5	30	Salt sol.
,, 50	40		,, 6	30	
,, 51	37		,, 7	30	
,, 52	34		,, 8	29	
,, 53	34		,, 9	25	
,, 54	30		,, 10	24	
,, 55	28		,, 11	22	
,, 56	24		,, 12	22	Gallic acid sol.
,, 57	22		,, 13	21	
,, 58	18	Gallic acid sol.	,, 14	24	
,, 59	22		,, 15	26	
5. 0	31		,, 16	25	
,, 1	32		,, 17	25	

The experiment was continued for some time longer, with similar results. The rapid fall in outflow is due to the œdema, which comes on very quickly, owing to the watery nature of the circulating fluid, but each time the gallic acid solution was turned on, a rise in the outflow occurred, and the rapidity of fall was distinctly checked.

When gallic acid, however, is added to blood, it becomes neutralised, and if the blood be circulated through an organ, either slight dilatation or no effect whatever is produced on the calibre of the blood-vessels. The dilatation was in all cases so slight, that it may be attributed either to accident, or, more probably, to the addition of the gallic acid diminishing the alkalinity of the blood. The following experiment (which is not given at length) will show this. Organ used, sheep's kidney (fresh). Inflow cannula in renal artery; outflow cannula in renal vein.

Circulating fluid, defibrinated fresh sheep blood.

Ditto + gallic acid, 1:7000.

Pressure, 130 mm. mercury. Temperature 98° Fahr.

From 4.17 to 4.52, when normal blood was circulated, the outflow kept practically constant from 3½ to 5 c.c. per min.; from 4.52 to 5.30, the gallic acid blood was circulated, during which time a slight rise occurred (outflow = 4 — 6 c.c. per min.). From 5.30 to 5.40 normal blood was circulated (outflow = 4 c.c. per min.). On then circulating blood containing barium chloride in solution, an almost immediate fall in outflow took place; the outflow became *nil* at the end of ten minutes, thus showing that the blood-vessels of the kidney retained their vitality to the end of the experiment, and showing, also, the strong contrast between the action of the two substances on the calibre of the blood-vessels. Other experiments, in which larger quantities of gallic acid were added to the blood, gave confirmatory results.

Experiments with Tannin.

It has been generally assumed that tannic acid contracts blood-vessels. The experiments which I have made, however, show that dilute solutions act exactly like dilute acids, and cause dilatation of the vessels.

I shall begin with catechutannic acid. Solutions made with saline of the strength of 1:7500 up to 1:1500 cause very distinct dilatation of the blood-vessels in frogs. In some cases, but not in many, the dilatation was preceded by a slight fall lasting for a few minutes.

One experiment will suffice as an example.

Frog 32 gms. Circulating fluid, 0.75 per cent. salt solution.
Ditto + Catechutannic acid 1 : 3500.
Pressure, 10 inches.

Time.	Outflow in Minims.		Time.	Outflow in Minims.
1.22	28	Salt sol.	1.42	41
,, 23	28		,, 43	42
,, 24	30		,, 44	43
,, 25	31		,, 45	43
,, 26	31		,, 46	42
,, 27	31		,, 47	43
,, 28	32		,, 48	44
,, 29	32	Catechutannin sol.	,, 49	44
,, 30	36		,, 50	45
,, 31	34		,, 51	44
,, 32	36		,, 52	44
,, 33	38		,, 53	48
,, 34	36		,, 54	46
,, 35	39		,, 55	47
,, 36	38		,, 56	47
,, 37	39		,, 57	45
,, 38	40		,, 58	44
,, 39	40		,, 59	43
,, 40	40		2. 0	43
,, 41	40			

After this the outflow gradually fell (owing to the increasing œdema), until at 2.20 it had reached 28 per minute.

I frequently noticed, towards the end of these experiments (especially when using the stronger solutions), that the outflow fell rather more rapidly than was usual with simple saline, probably owing to the chemical action of the tannin on the substance of the vessels.

With such solutions I have also been able to recover, although not invariably, vessels which have been contracted by the circulation of alkaline fluids through them. As regards the action of catechutannate of soda, it was found extremely difficult to exactly neutralise the catechu tannin with alkalies, as the presence of an alkali causes oxidation changes to occur at once. I have notes of two experiments, however, in which the circulation of a fluid containing catechutannic acid, neutralised with soda, produced absolutely no change in the outflow from the vessels, and many in which the change was trifling.

When stronger solutions (or sometimes even a solution of 1:1500) were used, the power of the tannin to precipitate albumen comes into play, and causes the vessels to contract sometimes at once, sometimes after a brief dilatation. With weak solutions, however, it is evident that the acid action on the vessels is the stronger of the two.

The experiments with rhatany-tannic acid were exactly similar, and gave corroborative results; they are omitted to avoid repetition.

Gallotannic Acid.

I was unable to investigate the action of ordinary tannic acid on the blood-vessels of frogs, owing to the fact that it is not soluble in sodium chloride solution. When added to saline it is at once precipitated, and thus when circulated, solid particles of tannin are brought against the walls of the vessel, and by their action on the albumen cause contraction at once. In spite of many attempts, I was unable to find a suitable circulating fluid, but from the experiments which I made with more or less imperfect fluids, there seems no reason to doubt that its action is at all different from the other varieties of tannin.

A number of circulation experiments were performed, however, on the excised sheep-kidney, using sheep-blood as the circulating fluid, with the result of showing that tannin, once its chemical affinities are satisfied, has no action on the blood-vessels.

Eight experiments in all were made, the amount of tannin added to the sheep-blood varying from one part in 2,000, to one part in 10,000 of blood. The tannate of albumen formed on the addition of the tannic acid is at once dissolved up by the alkaline serum. In every case the outflow remained practically unaltered, or increased very slightly. At the end of each experiment, the addition of digitalin or barium chloride to the blood always caused immediate and decided contraction.

Central Action.

Fikentscher has stated that in frogs the hypodermic injection of tannic acid causes contraction of the arteries from stimulation of the vaso-motor centre in the medulla. Although the ingestion of large doses by mammalia does not cause any symptoms pointing to such a stimulation, I thought it would be more satisfactory, in view of Fikentscher's observations, to test this by blood-pressure experiments. These were carried out on rabbits in the ordinary way, gallate and tannate of soda in doses up to twelve grains being injected intravenously. The blood-pressure remained quite unaffected.

Pyrogallic Acid.

Although pyrogallic acid does not exist in the blood as a product of the decomposition of tannic acid, it was investigated in the same way as the other substances, as I find it has been used as a remote astringent with alleged satisfactory results (Vesey, *Dub. J. Med. Sc.*, vol. 66, 1878, p. 470; *Practitioner*, xxii). Like tannin, it precipitates albumen copiously. Weak solutions, however (1 in 3,000) dilate the blood-vessels very markedly, and also recover them after being contracted by alkalies, thus behaving in all respects like a dilute acid.

Therapeutical Value of Vegetable Astringents.

In glancing at the practical deductions to be drawn from the foregoing experiments, we shall consider gallic acid first. Either when locally applied, or after absorption into the blood, gallic acid evidently exercises no other action than that of a weak inorganic acid, and certainly has no claim to any special action as an astringent. The only action which it can have in this direction, is the power which it possesses, in common with all other acids, of diminishing the alkalinity of the blood, and thereby increasing its tendency to coagulate. Stronger acids, however, will act much more powerfully in this direction than it does. Any influence in lessening the calibre of the blood-vessels, either by peripheral or central action, must be denied to it. When locally applied, the fact that it does not precipitate albumen must prevent it having any influence on a catarrhal inflammation.

As regards tannic acid, the matter is somewhat more complicated. Locally applied, its action for good depends on its power of precipitating albumen, the layer of tannate of albumen which is formed acting as a protective to the underlying mucous membrane. To this action is due its value in catarrhal inflammations of the alimentary canal, and in discharging surfaces generally.

The preceding experiments show, however, that its usefulness is limited to such cases, and that as a remote astringent it is valueless. In weak solution, and uncombined, its action on contractile tissues, such as the vascular walls, is simply that of a dilute acid, while it is only when stronger solutions are used (much stronger than can ever exist in the blood, even if it were not in combination there) that its power of precipitating albumen comes into play. When its chemical affinities have been satisfied by neutralising it with a base or with albumen, it is no longer capable of precipitating albumen, and exercises, therefore, little or no influence on the parts with which it comes in contact.

Independently of these considerations, the very small quantity in which it exists at any one time in the blood, and that in combination, must also militate against its having any remote action. As we have seen, the only channels of excretion besides the bowel are the kidneys, and hence it is hardly possible that it can have an astringent action on any of the other mucous membranes, such as the bronchial. It is now almost an axiom in therapeutics, that substances which do not possess a very decided general action, can affect only those mucous membranes by which they are excreted, and it is improbable that tannin is any exception to this.

With regard to its action on the kidneys, it is conceivable that it may have a favourable influence in diminishing albuminuria, but even this is to be regarded as doubtful. Many eminent clinicians have expressed disbelief in its value, and the only cases which I have been able to find, in which the amount of albumen in the urine was carefully estimated from day to day, tend to confirm this view. They are four cases of chronic Bright's disease reported by Briese (*Deutscher Archiv. f. Klin. Med.*, xxxiii, p. 220, 1883) in which the administration of tannate of soda for long periods had no influence, either on the amount of urine or the albumen present in it.

In conclusion, I have to express my most sincere thanks to the Scientific Grants Committee of the British Medical Association for a grant of £35 towards the expenses of this research.

AN ADDRESS
ON REMOVAL OF THE UTERINE APPENDAGES.

Delivered before the North Wales Branch of the British Medical Association.

BY LAWSON TAIT, F.R.C.S.,

President of the British Gynæcological Society; and President-elect of the Birmingham and Midland Counties' Branch of the British Medical Association.

GENTLEMEN,—In response to the request of your secretary, that I should appear before you to-day and say something about abdominal surgery, I had intimated that I should speak of some cases of tumour of the kidney, and, for that purpose, I had prepared the set paper now in my hand. But since I have listened to the President's address, it seems to me it would be much more important, and that it would be of far more interest to you, if I were to take up one thread of his utterances, and confirm, so far as I could, the conclusions at which, I am delighted to find, he has arrived. I take it that the utterance of an opinion from one so well known and so eminent in his position as Dr. Eyton-Jones, is a conclusion not only of great value, but practically decisive in the direction which we desire to establish. I must at once express my profound sympathy with him in what he has said concerning my friend Dr. Imlach, of Liverpool. Until the legal proceedings in which Dr. Imlach is concerned, and in which I believe I shall be called upon to give evidence, are terminated, it is of course not proper that we should express any kind of opinion; but I cannot refrain from stating that to collect evidence against a member of our profession, as has been done by the committee appointed by the members of the Liverpool Medical Institute, by issuing a circular to anyone who might be able, for one reason or another, to take up a case and point to it as a failure, is perhaps worthy of the Divorce Court, but is not the kind of proceeding which is recognised in scientific discussions. I think it is altogether unworthy alike of the men who have sanctioned it, and of the city in which it has been practised. On this subject I shall have a good deal more to say when the trial I have spoken of has been finished.

I wish to speak on this subject this morning, because there have been submitted to me for opinion in the conjoint practices of Dr. Robert Roberts, of Festiniog, Dr. Robert Roberts, of Portmadoc, and Dr. Richard Jones, of Festiniog, seven cases which by themselves would afford me sufficient material for half-a-dozen clinical lectures. They afford, indeed, illustrations of nearly all the points which we have to discuss on this important matter, and they enable me to cover very briefly a very large amount of ground, because six of them can be divided into three groups, and each pair, singularly enough, in each group, affords an almost complete illustration of its own particular kind.

Of course, my time and opportunities for carefully investigating the histories were but limited, and I am indebted to Dr. Richard Jones for the condensed histories which I hold in my hand, and which have been gathered together during an hour or two spent this morning with these patients.

The first case that I shall mention is that of a lady, aged 60, who, having ceased to menstruate for some four or five years, has resumed it. The discharge is accompanied by a very great amount of pain. In the pelvis can be felt a small tumour behind the uterus, which is quite fixed. Now here is a case in which all operative proceedings may be at once dismissed, because her history alone tells the story that the disease is malignant, and examination of the pelvis completely substantiates that. The diagnosis in this case had been completely made by Messrs. Roberts before I saw her, and all I had to do was to confirm the fatal decision which had already been arrived at.

The two cases next in order belong to another category; in them the disease is myoma, and the first case, a lady aged 49, who suffers great distress, whose appearance is that of profound anæmia and great and protracted suffering, was submitted to me for an opinion concerning the necessity of removing the appendages. Her menstruation was extremely profuse, and occurred at irregular intervals, sometimes of six weeks, and sometimes longer. There can be no question that Dr. Roberts's opinion is the correct one, and that she has an intramural myoma; if she had been four or five years younger, I would have unhesitatingly advised removal of the uterine appendages. But, at the age of 49, I think it extremely likely that she may be tided over the climacteric within the next twelvemonths, and thereby may obviate the risks of an operation. She has already been recommended to rest perfectly quiet in bed during any appearance of catamenia; she has had bromide and chlorate of potash, together with ergot at the periods, administered, and this most effective treatment has had in Dr. Roberts's hands a very marked influence on the case. I advised that it should be continued. Should, however, hæmorrhage occur with such frequency or to such an extent as to endanger her life, I advise immediate operation. It must not be forgotten that in these cases of myoma the climacteric period is often indefinitely delayed—delayed even as far as 60 or 61 years of age, so that, although we may generally come to the conclusion that at the age of 49 it is not well to operate for myoma, yet in some cases I have been obliged to operate at a much more advanced period of life than that.

A striking contrast to this is another patient, whom I saw next, in whom Dr. Richard Jones and Dr. Roberts had diagnosed uterine myoma, at the age of 35. This patient is anæmic, and losing profusely, and she is suffering great pain. Equally exhaustive and appropriate treatment has failed to relieve her sufferings or mitigate her symptoms, and therefore I entirely concur with the gentlemen with whom I have seen the patient, that her uterine appendages should be removed. She herself is anxious for something to be done to relieve her, and the operation will therefore be performed.

The next group consists of two patients, who again form remarkable contrasts in the histories of their cases, and in the results which so far have been obtained. The first is a quarryman's wife, aged 44, who has not menstruated for twelve years. She suffers, however, a great deal of pain, and at intervals so decidedly periodic, that they amount to what is an effort at menstruation. She suffers a great deal of distress. On examination, the uterus is found to be somewhat large, to be turned backwards and fixed, and on either side an ill-defined matting clearly indicates the nature of the case. The story, which was given to me by Dr. Roberts, is very characteristic, and I could, from it, completely recognise the nature of the case before I saw her. She was menstruating during a severe attack of measles, some twelve years ago, when it suddenly ceased, and she had what probably was an attack of pelvic peritonitis, what in fact, I think, we may take for granted was exanthematic periophoritis, and she has never menstruated nor been free from pain since. But it is perfectly certain, from the patient's appearance, that her sufferings are not in any way likely to endanger her life, and she herself is of opinion that they are diminishing. She is approaching the climacteric, and in the course of a few years there can be no doubt nature will completely relieve her of her troubles. In such a case I advise that nothing should be done save to assist the patient by the relief of

general symptoms, in such a way as to tide her over what time will be occupied in the completion of nature's cure.

But the second case is altogether different. This patient is 32 years of age, and, some eight years ago, there can be no doubt she suffered from an acute attack of gonorrhœa. She has had no children. She menstruates too often, very profusely, and with intense pain. The uterus is large, retroverted, and fixed, and large appendages can be felt damaged on either side. Nothing which has been done so far has benefited this patient much, and she earnestly begs for relief. The relief which can be given to her will be prompt and decided by the removal of what is, in all probability, the presence of double hydro- or pyo-salpinx, and to this she will shortly be submitted.

The third group consists of two patients who resemble one another in many respects, and yet possess striking differences in their histories and in their present conditions, which differences give rise to completely opposite conclusions as regard their method of treatment. The first patient is 35 years of age. She commenced menstruating at 13, the periods lasting from five to eight days, and being always very profuse. She married at 22, and her periods became irregular, more profuse, and accompanied by intense suffering. Dyspareunia has always been a prominent feature in the case. She has had four children, the last in March, 1881. She has had extremely severe labours, *post partum* hæmorrhage, and after the last labour she had an attack of "pelvic cellulitis," and was laid up for three months. An abscess formed in Douglas's pouch, and burst into the vagina, and the patient has been ill ever since, suffering intensely during menstruation, and her pain is localised on the left side. She has also great pain when the bowels are moved; this pain, being so intense, has produced sickness and vomiting. The patient is very anæmic, and her face has the look of one who has gone through long and severe suffering. Examination revealed the fact that the uterus was retroverted and drawn to the left side, and the contents of the pelvis in that direction were all matted together, with a distinct mass to the left behind the uterus. I have no doubt that, in this case, there was an abscess of the left ovary or Fallopian tube in connection with labour, and that the remains of it are still there, inducing the persistent suffering, which makes this woman's life a burden to her. I therefore recommend that the abdomen should be opened, and the condition corrected by removal of the diseased structures.

The last case is an unmarried lady, about 44 years of age, in whom there is no clear history of the origin of the trouble; but the condition is almost precisely the same as that which I have just described. With her, menstruation is very profuse, too frequent, and accompanied by intense pain, this pain also preceding the period for nearly a week. The result of it all is that, for the best part of each month, she is an absolute invalid, and she and her brother, an extremely intelligent gentleman, with whom I had some conversation, are strongly of opinion that her sufferings are increasing instead of diminishing. The age here is an important factor in the case, for one would not be inclined to advise operative proceedings at 44 for a chronic inflammatory condition, were it not that the appearance of the patient and the description of her sufferings, and her assertion that they are on the increase, incline one to put it to the patient that she may herself decide. After consultation with Dr. Roberts, therefore, we decided to put it entirely to the patient and her friends, that if she was under the impression, and they shared her opinion, that her sufferings were increasing, and she was prepared to take the risk, which must inevitably be attached to the operation, even though that risk might not be great, in order to obtain relief from suffering which would last some three or four years yet, an operation should be done. She and they must decide the question, and upon their decision we are prepared to act.

This remarkable and extremely interesting group of cases is proof alone, if any proof were required, that such suffering women are by no means as rare as has been represented. Within a radius of a few miles of this little Welsh town, six cases, in all of which the propriety of operation is a perfectly legitimate discussion, have been collected in a few hours for me to see, and certainly operation is, in my opinion, demanded in four out of the six, and, probably, may be required in a fifth. The explanation, therefore, of the utterances of some who hold different views from my own in this matter, is not that cases are rare, but that it wants the skilled fingers to find them. I think it only just to my colleagues, Drs. Roberts and Dr. Richard Jones, to say that, in all these cases, they had arrived at conclusions very closely resembling my own before I saw the patients, so that I had but little to do except confirm the diagnosis previously expressed in each case.

[November 25th, 1886. Four of these cases were submitted to operation, the diagnosis in each being found substantially correct. All recovered, and are progressing towards convalescence.—L. T.]

☞ To Contributors. ☜

Our contributors are reminded that prolixity is a great bar to publication, and, in consequence of the constant pressure upon space in every department of the Journal, brevity of style and conciseness of statement greatly facilitate early publication. We are compelled to decline or hold over indefinitely a great number of communications, chiefly by reason of their unnecessary length.

BRITISH MEDICAL ASSOCIATION.

FIFTY-FOURTH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

THE DESIRABILITY OF THE EARLY PERFORMANCE OF LAPAROTOMY IN CASES OF ABDOMINAL PREGNANCY.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Brighton.

By WILLIAM THOMPSON LUSK, M.D., New York.

I shall take the liberty of prefacing the discussion of the question I have selected for consideration by the recital of the history of the case which furnished the starting-point of inquiry. For those features of the history not directly derived from personal observation, I am indebted to the very intelligent accounts furnished me by Drs. Mead and C. F. Barker, who supervised the patient when at her own home in Michigan.

Mrs. B., aged 35, married fifteen years, menstruated regularly and normally until the last of October, 1883. On October 24th, which was about the time the period was expected, Dr. Mead, the family physician, was called to see her, and found her suffering from severe abdominal pains, of a paroxysmal character. On each of the two following days, she had an attack of severe paroxysmal pain in the abdomen and in the right side, lasting nearly an hour, and succeeded by profuse perspiration and great prostration. These attacks were unattended by fever or abdominal tenderness. On October 27th, Dr. Barker, in the absence of Dr. Mead, was summoned in great haste. He found Mrs. B. sitting upright in bed, dripping with perspiration, and suffering excruciating pain, of a lancinating and cramp-like character, and seated chiefly in the right ovarian region, from whence it radiated over the entire abdomen. On examination, he found the uterus prolapsed and crowded to the left side. The paroxysms lasted two hours, growing gradually lighter, and finally disappearing, leaving the patient prostrated and nervous. Similar attacks occurred on November 6th and 7th. Mrs. B.'s condition thenceforward improved, so that, by the middle of December, she was able to ride out each day. She experienced some difficulty in locomotion, with a tendency to fall, owing to weakness in the pelvic articulations. Previous to this time, Dr. Barker had informed her husband that his wife was probably pregnant.

In February, 1884, Dr. Mead resumed the charge of the case. Mrs. B.'s health was then excellent. Her confinement was expected in the latter part of June, or early in July. At the usual time fœtal movements became perceptible, and continued till the last week in June. On July 17th, there was a bloody vaginal discharge, and a few feeble pains were experienced. There were no other signs of labour. A careful examination convinced Dr. Mead that the uterus was empty.

In doubt as to the nature of the external tumour, Dr. Mead went with his patient, in September, to a very eminent gynæcologist, in one of our large western cities, who expressed himself with great positiveness as to the absence of extra-uterine pregnancy, but stated that, without doubt, the tumour was a cysto-fibroma, situated in the posterior uterine wall.

After the death of the fœtus, the patient's condition remained unchanged, with the exception of the usual diminution in the size of the abdomen. In the latter part of March, 1885, Mrs. B. came to New York for further counsel. She called upon Dr. Fordyce Barker, who at once recognised the existence of abdominal pregnancy. Through Dr. Barker's courtesy, the case was likewise seen by Dr. Thomas and myself, who were in full agreement as to the diagnosis. As the patient's health was good, she was allowed to return home, with permission to remain until autumn, unless meantime any considerable disturbance of her health should become manifest. With

the first signs of failing health, she was advised by Dr. Barker to assent to an operation.

In a letter written to me subsequently by Mrs. B., I learn that in May she was confined two weeks in bed with diphtheria, that during convalescence she had a severe chill, followed by a "malarial fever" of a remittent type, which kept her in bed for six weeks, and that before she had fairly recovered from this second attack, she was poisoned by Rhus toxicodendron, from which her sufferings were extreme. The rash covered her whole face and ears, extended over both arms half way to the elbows, and over the lower half of the abdomen and eight inches down the anterior surface of one thigh. This poisoning Dr. Mead attributes to botanical studies, in which the patient was greatly interested.

From this time, Dr. Mead reports symptoms of blood-poisoning indicated by progressive weakness, and by disturbances both in the vascular and nervous systems. She complained, too, of weight and of neuralgic pains in the abdomen, and afterwards in the left leg and hip. Usually these pains were more or less continuous, but at times were paroxysmal. In spite of her sufferings, the patient was quite cheerful, and walked out nearly every day. She even made calls, and attended evening parties, and at times there was a seeming improvement in her condition; but, by November, the decline in her health had become so marked, that Dr. Mead urged her to delay no longer, but to go at once to New York for an operation. On December 15th she finally started from home, to get relieved from her burden.

On her way to New York, Mrs. B., upon the urgent advice of some friends, once more consulted the specialist who had previously pronounced her case one of uterine cysto-fibroma. At the second interview, he corrected his diagnosis, but portrayed the dangers of gastrotomy in vivid colours, assuring her that there was no necessity for such a procedure in her case, and advised change of air.

In accordance with this advice, Mrs. B. altered her route, and, in place of coming to New York, went to Atlanta in Georgia, where she intended to live out of doors, and thus to regain her strength. She was, however, so ill on her arrival, that she did not leave her room for three months. Then, by a great effort, being a woman of determined will, she made the long journey to New York, where I saw her again early in March. She was now extremely emaciated; the face was pinched, and she was excessively anæmic. The pulse was rapid, and there was a rise of temperature every evening. Diarrhœa was constant, or alternated with constipation. Shortly after her arrival menstruation occurred, and was attended by such marked constitutional symptoms that death seemed inevitable. The temperature ranged from 103° to 104° Fahr.; the pulse was extremely feeble and rapid, the abdomen became enormously distended, and there was at least an apparent increase in the size of the tumour itself. The husband assured me there was no ground for alarm, as for months past similar disturbances had developed at each menstrual period, and had subsided with the disappearance of the catamenia. It was decided, therefore, to remove Mrs. B. from the hotel to the St. Elizabeth Hospital, where she would be secure from noise, and where she could be placed under conditions most favourable for rallying her strength to sustain the shock of laparotomy. Unfortunately, the husband's prediction was not verified. The patient's health continued to decline; the temperature ranged between 100.5° to 102.5° Fahr., while the pulse was 120, and extremely feeble. In a consultation with Drs. Barker and Thomas, it was agreed that the stage of exhaustion reached precluded all hope of success from operative measures. This decision was accordingly communicated to the husband. When the latter ascertained, however, that his wife's tenure of life was, in any case, a matter of a few days only, he urged the removal of the fœtus, with the faint hope that unexpected circumstances might bring the case to a fortunate issue.

The operation was accordingly performed on March 19th. The incision was made in the median line below the navel. The blood that escaped from the wound was colourless, like water. No adhesions existed between the sac and the abdominal walls. As the former was opened a great volume of fœtid gas escaped. There was no fluid present, with the exception of perhaps an ounce of stinking pus. In extracting the fœtus, the parietal and the small bones of the extremities dropped away. The cutaneous structures had, for the most part, disappeared; the muscular tissues were macerated; the internal organs were shrunken; and though the child had evidently reached the end of gestation, no trace of either placenta or cord could be found. The emptied sac was carefully cleaned and stitched to the abdominal wound. The operation lasted half an hour. Repeated subcutaneous injections of whiskey and sulphuric ether were resorted to during the operation to maintain the action of the patient's heart. For a time it was questionable whether death would not take place from the primary shock. In the end, however, the patient rallied fairly well, the temperature sank to the normal point, and, at the end of twenty-four hours, slight hopes of her recovery were entertained. With the beginning of the second day, however, the pulse ran up to 150, the temperature rose to 104°, and death occurred forty hours after the operation. The fatal result was mainly due to inanition. The stomach absorbed nothing, and diarrhœa precluded rectal alimentation.

At the necropsy, the sac was found contracted to the size of the fœtal head; it was firmly attached by old adhesions to the pelvic viscera and intestines on the right side. There were no traces of recent peritonitis. The entire abdominal contents were characterised by an intense pallor. The outer portion of the Fallopian tube extended to the walls of the sac, which were composed of dense fibrous tissue. Apparently, the ovum had developed in the fimbriated extremity of the tube, the fibres of which had separated and become lost in the new growth of connective tissue.

This case possesses a special interest in the fact that, from the beginning of pregnancy to the fatal ending, the symptoms and changes in the patient's condition were watched by intelligent observers. The diagnosis was made before her health was appreciably affected. Her pecuniary circumstances enabled her to command the advice of experienced men, and everything that money could buy was freely lavished upon her by friends eager to preserve her life. The decision to try the benefits of climate before incurring the risks of an operation was made by the patient herself, after personal study of standard authorities. Whatever the practice of individuals may be, it has been thought expedient to teach that laparotomy should be postponed until noticeable evidences of health-impairment are observed as a consequence of the prolonged gestation. In this instance, the patient was assured by an eminent physician that her increasing discomfort had nothing do with her condition, but was remediable by a life in the open air. A few months later, when she came under my care, I found her wasted, intensely hydræmic, with a feeble rapid pulse, remittent fever, diarrhœa, and suspended food-assimilation. When, as death was rapidly approaching, laparotomy was finally performed, and the putrid portion was removed, the partial disappearance of the soft tissues of the fœtus, and the complete absence of the funis and placenta, evidenced no recent process of disintegration, but an absorption that must have poisoned the system with septic products for a protracted period of time.

The issue in this case prompts the inquiry as to the wisdom of the present doctrine of postponement, as to whether, indeed, the proper moment for the performance of laparotomy in abdominal gestation is not preferably at a time when the patient's health is good, that is, antecedent to the first symptoms of septic infection. The decision of the question involves the consideration of the probabilities of the fœtus becoming encysted, and its subsequent conversion into a lithopædion; of the actual results of awaiting the formation of fistulous openings; and of the risks of laparatomy, and of the extent by which they are augmented by delayed action.

As a contribution to the settlement of these points, I have the honour to present a series of tables based upon an analysis of 103 cases of abdominal gestation reported during the last ten years, those from 1875 to 1880 having been, for the most part, borrowed from the well-known collection of Deschamps. The list is, of course, not a complete one, and further contributions possibly will modify the conclusions I have drawn from it. I can, however, state that the collection was made without any intent to sustain preconceived opinions. The objections urged against conclusions drawn from mere statistics is not applicable to those derived from the study of the histories themselves, as it is only by the study of what has been done in the past, and by making ourselves acquainted with the results of treatment hitherto practised, that loose statements and vacillating conduct can be avoided.

I have purposely excluded from discussion the question of the treatment of tubal pregnancy in its early stages. The recent triumphs of Mr. Lawson Tait in this field, the results of the employment of the galvanic and faradic currents in my own country, and those obtained by the injection of morphine and atropine into the sac, as practised in Germany, furnish rival methods, each with its own eager partisans, and this consideration would almost inevitably overshadow the question upon which I desire to receive the judgment of this Society.

It has not, indeed, been possible to form anything like an accurate estimate of the relative frequency of lithopædion formation. Cases reported as such, where no serious inconvenience had been experienced a year or two after the death of the fœtus, are hardly admissible, on account of the insufficient lapse of time. The occasional discovery of

a lithopædion, presumably of long standing, at *post mortem* examination, is of no avail in fixing the proportion of such occurrences to the entire number of ectopic gestations. In old records the proportion was large, owing to the infrequency with which cases of extra-uterine pregnancy were recognised during life. Since, however, in the last few years the attention of the profession has been directed to the subject, and methods of diagnosis have improved, the supposed extreme rarity of the anomaly has been found to be erroneous. On the other hand, the number of lithopædion cases recently reported is extremely small, and few have been found where, during life, the presence of the calcified fœtus has not seriously interfered with the patient's enjoyment of health.[1]

But, it has been argued, even if the fœtus does not become encysted, and is not converted by conservative natural processes into a harmless body, of which the abdominal cavity becomes tolerant, the inflammatory processes which ensue as a consequence of the disintegration of the sac contents, are likely, in time, to be followed by the adhesions of the sac to the abdominal walls, or to adjacent hollow viscera, and to the formation of fistulous channels, through which the gradual spontaneous discharge of the fœtal skeleton may take place. Statistics have been adduced to prove that the best results are attainable, when relief is limited to enlarging these natural channels.

In the accompanying table, it will be found that, of twenty-nine cases belonging to this category, nine died; but, even this heavy mortality does not convey a true idea of the most serious objections to the policy of delay. It leaves out of account the large number of cases in which death occurs by the way-side, from other causes, before fistulæ have had time to form; and the burden thrown upon laparotomy by cases operated on at the last moment, rational measures having been postponed until the hopeless stage is reached, because of the superstition, not yet extinct, that the blind efforts of nature are superior to the resources of science directed by the intelligence of man.

Moreover, in the fortunate cases, the term "recovery" often means little more than the survival of the patient, and not a complete restoration to health. When we add to the risks incurred the months, or perhaps years, of suffering, and the disgusting concomitants of fistulous formations, there is certainly serious question as to the expediency of allowing the patient to pursue a course which ends so often in death or chronic invalidism.

In Table No. II, I have gathered a few instances where death took place before the occurrence of fistulæ, and without recourse to surgical aid. There are, indeed, but eight of these upon my list; and two of the women died too soon after the death of the child, perhaps, to have rendered the resources of surgery of any avail. But it is precisely histories belonging to this class which are most difficult to obtain, either because the cause of death has not been recognised, or because of the diminished personal interest felt by physicians in the recording of cases where no active measures have been employed.

My third table contains 52 cases of laparotomy, performed at varying periods after the death of the fœtus; 37 women recovered, and 15 died. There is matter for reflection in considering the circumstances under which, in these latter cases, the operations were performed.

No. 1. Temperature 103°; pulse 120, feeble; pain constant; nausea. Death in five days. Necropsy—left mitral stenosis, hypostasis of lungs, infarctions of spleen.

No. 2. Temperature 103°; pulse 120 to 140; constant vomiting. Died in collapse on the twelfth day.

No. 3. Operation by Porro, because of peritonitis and great loss of strength.

No. 4. Operation performed as patient was sinking. Death in five hours.

No. 5. Perforation into jejunum; enormous emaciation; feeble pulse.

No. 6. Emaciation; pleurisy; jaundice. After a quarrel with her husband on the seventh day, became suddenly cyanotic, and died.

No. 7. Septic peritonitis; uncontrollable hæmorrhage.

No. 8. Fæcal vomiting; great abdominal distension; cold extremities. Death in two days. Necropsy—constriction of intestine.

No. 9. Septic infection; peritonitis; right-sided pleurisy.

No. 10. Hæmorrhage. Death from collapse in four hours.

No. 11. Chills; fever; abdominal tenderness; vomiting; profuse fœtid diarrhœa.

No. 12. Hectic fever, and death imminent.

No. 13. Acute tuberculosis.

No. 14. Hæmorrhage.

[1] Dr. Gaillard Thomas informs me he has recently seen the wife of a physician who has carried a child outside the womb for seven years without disturbance of health.

Thus, of the fifteen cases, in three only, namely, those in which profuse hæmorrhage occurred, was the fatal issue associated with the operation. Indeed, in most of the others, a temporary amelioration followed the removal of the fœtus; but, of course, the resources of surgery are rarely successful when practised upon the dying. I use the term "rarely" because, in a few instances, recoveries have been reported under conditions of seeming desperation.

Of course, no one really advocates the reservation of laparotomy for the last resource. It is only contended that the patient should be intelligently observed, and that, with the first signs of failing health, active measures should be employed. The reasons assigned are the familiar ones once urged for a similar practice in ovariotomy, namely, the risks of the operation, and certain supposed advantages to be derived from waiting. Thus delay is supposed to diminish the chances of placental hæmorrhage, and to favour adhesions to the abdominal walls, by means of which an incision into the sac becomes practically an extra-peritoneal operation. But the risks of hæmorrhage ought not to be exaggerated. Of the thirty-seven recoveries, in two cases only, namely, those of Thomas and Rousseau, were special measures necessary to control bleeding. If we add these to the three cases reported in the death-list, hæmorrhage will be found to have occurred but five times in fifty-two operations; and yet, in many instances, laparotomy was performed a few weeks after the death of the fœtus. An examination of the histories shows that stitching the sac to the abdominal walls does not materially enhance the risks. Indeed, if performed prior to the putrefaction of the sac-contents, the contrary is probably the case.

The most serious objection, however, to the postponement of active measures until the development of early constitutional symptoms, consists in the insidiousness of the period of invasion in cases of septic infection. In my own land, it is always difficult to convince the most experienced that a remittent fever is not necessarily of malarial origin, nor is it ever easy, in a given case, to determine the border between the cachexia due to septicæmia and the ordinary derangements of health due to accidental causes. But even if we were always able to define with precision the first moment of declining health, there would *a priori* seem little sense in awaiting the occurrence of an event which is the evidence that putrefaction is already in progress. In no other operation in surgery would such a doctrine now obtain supporters.

It is not, of course, pretended to fix, either by days or weeks, the moment at which, after the advent of false labour, laparotomy should be performed. Provided only the principle be admitted that, where practicable, it should take place during the period when the patient is in the enjoyment of good health; the selection of the time would naturally be governed by the same considerations that obtain in other operations where no immediate vital indications exist.

In the case of the living fœtus, it certainly would be desirable that laparotomy should be undertaken before the end of gestation, were it not that even the latest records furnish but little encouragement to hope for a fortunate issue. In eleven cases, I have only two recoveries to report—namely, the familiar one of Jessop, and that of Martin, where, however, the operation was undertaken for the removal of a supposed ovarian or subserous fibroid tumour. As the risks accruing from false labour are slight (two deaths only in my tables are attributable to this cause), a prudent reserve is commended to practitioners called upon to decide the question at the moment of emergency. The dangers of hæmorrhage, great as they are, are not the only ones to be dreaded, death having followed from shock and depression even where the bleeding at the time of the opening of the sac was inconsiderable. With the present faulty *technique*, it is at least desirable that such cases, after the operation has been decided upon, should be committed, where it is possible, to those who have had the largest experience in abdominal surgery, and thus are not only best equipped to meet difficulties as they arise, but are able to appreciate, in fatal cases, the nature of the special dangers which have occasioned the result, and who possess the necessary discipline for devising the means by which they may be avoided in the future. The case of Martin, who controlled beginning hæmorrhage by ligaturing the vessels of the broad ligaments, and of the Fallopian tube between the sac and the uterus, is an illustration of the use of an effective resource, prompted by long training.

In spite of the success which has recently attended the performance of secondary laparotomy, the present plan of operating, which consists in opening the abdomen and sac, removing the fœtus, cleansing the sac cavity, and stitching the cut surfaces of the sac to the abdominal wall, ought to be susceptible of improvement. In my recovery list three cases are reported by Sutugin, and one each by

TABLE I.—*Cases of Abdominal Pregnancy Terminating in Fistulous Openings (1875 to 1885).*

No.	Reporter.	Age.	Number of Pregnancies	Duration.	Remarks.
1	Chabert; Lyon Med., April 23rd, 1876	—	Five	—	Coincident intra-uterine and extra-uterine pregnancy; five months after natural labour the extra-uterine sac ulcerated, through which foot protruded; this, with flesh of leg, was torn away by the husband. A horrible discharge escaped from fistula. Six months after labour the fistula was enlarged by Chabert, drained and treated antiseptically; recovery at end of two months.
2	Purefoy; Dublin Journal Med. Sciences, April, 1877, page 362	—	-	6 months	Patient seized with diarrhœa at end of six months; purulent discharge *per anum*, containing fœtal bones. Fragments of the skeleton continued to be discharged for more than a year, four years later patient enjoyed excellent health.
3	A. Simpson; Edin. Med. Journ., 1877	39		—	Patient went to term and carried child several years when normal pregnancy occurred; death from peritonitis and exhaustion following a second pregnancy, the sac communicated by three openings with intestine, cavity contained fæcal matter.
4	A. Simpson; ,, ,,	—	—	—	Discovered at necropsy, patient died of peritonitis; macerated fœtus of about three months, communication with peritoneum and intestine.
5	Martin A. Tinker; Boston Med. and Surg. Journ., May 18th, 1876	30	—	—	Patient became pregnant in December, 1869, death of fœtus at term; discharge of portions of skeleton *per anum* from nineteenth month; other portions were discharged at different times until February 1879, when death of mother took place from exhaustion; portion of fœtus, of size of fist, retained.
6	Benicke; Berlin. Klin. Woch., August, 1875	—	Three	—	Pregnancy dated from 1847, expulsion of fœtal bone, *per rectum*, in 1874; recovery.
7	Benham; BRIT. MED. JOURN., September 16th, 1876, page 361	36	One	7 years	After an injury to rectum, a few days after conception, had pelvic pain, fever and discharge of pus and blood from rectum; three and a half months after the injury, complete obstruction of rectum, formation of three perineal fistulæ and discharge of bones, apparently belonging to fœtus of three months. Lumbar colotomy was done and a recto-vaginal fistula established, discharge through anus, the fistulæ, and the orifice in the side, at time of report (1876).
8	Deschamps; Des Grossesses Extra-utérines, Paris, 1880	28	Two	10 months	Ten months after cessation of menses, entered Hôpital St. Louis with portion of fœtus protruding *per anum*; extraction, through rectal opening, by M. Pinard; left hospital at end of a month with health restored.
9	Poncaié; Arch. de Tocol., 1878, page 667	26	Two	14 ,,	Death of fœtus at term; about four months later, grave peritonitis ending in fluctuation near the median line. Spontaneous opening, with discharge of fœtid gas and liquid, enlarged by crucial incision for removal of fœtus, communication between sac and rectum; death in ten days from collapse.
10	Zeombicke; Soc. Anatomique	—	—	15 ,,	Pregnancy lasted nine months, two months later symptoms of internal perforation; at necropsy four communications found, sac contained cherry stones, fæces and fœtal bones.
11	Kjonig; Norsk. Mag. for Laguird., 1878, vol. viii, page 130	31	Three	2½ years	Death of fœtus at six months, two years later discharge of fœtus through rectum, meantime two normal pregnancies. Fourteen days after termination of second of these, no trace of extra-uterine tumour left.
12	Martin and Jacquet; Berl. Klin. Wochensch., 1875, page 434				Death, from exhaustion, after patient had passed bones *per rectum* for one and a half years.
13	Windiell; Bulletin Med. du Nord., 1878, page 129		—	—	Cæsarean operation in 1869; extra-uterine pregnancy in 1872 (?), opening of cyst below the navel to the right of the cicatrix from the old Cæsarean section, through which portions of skeleton were removed; recovery.
14	Priestley	—	—	-	Discharge of bones of fœtus through spontaneous opening in vagina, bones discharged continuously for six months.
15	Aug. Schmitt; Memorabilia, 1874	30	Twelve	Term	Violent pains with opening of sac into vagina, impaction of shoulders in pelvis, version found impossible, death in a few hours.
16	Agnello Leite and Deschamps; Grossesses Extra-uterines	22		—	Peritonitis, abscess-formation in neighbourhood of navel, enlargement of abscess and removal of bones; patient able to walk about in seventeen days.
17	McDougall; Obst. Journ. of Gt. Brit., 1876	28	None	23 months	Sac adherent, near term, false labour lasting sixteen hours; for fifteen months no discomfort, then abdominal pains, vomiting, and depression, fistulæ formed at umbilicus, incision with removal of fœtus; no trace of placenta; rapid recovery.
18	Hofmeier; Ztsch. f. Geb. u. Gyn. vol. v, page 112, 1880	29	Six	12 ,,	Fistulous opening at navel enlarged by Schröder; full term child extracted, drainage-tube passed through. Douglas's *cul de sac* into vagina, sac stitched to abdominal wall, hæmorrhage on removal of placenta. Tampon.
19	Hayem; Arch. d. Tocologie, August, 1882	25	One	Child died at 5 months	Suppuration of sac and discharge of portion of skeleton through rectum, and, later, through bladder; discharge lasted twelve months; after two years, restoration to health.
20	Jastschenkow; Protokolle der Gesellsch. f. Aerzte in Kasan, No. x, 1881.			2 years	Physician withdrew fœtus through rectum.
21	J. M. Heard; N. Y. Med. Journ. May, 1882, page 489	38	-	1 year	Abscess in flank; discharge lasted two months, when Dr. Heard was summoned, patient was apparently dying, operation performed with bistoury, bullet-forceps, an iron spoon, and a water dipper; bucketful of flesh, hair, bones, and pus, removed. Rapid recovery.
22	Freund; Klin. Med. Journ. November, 1882, page 301	42	Six	(?)	Pregnancy believed, by patient, to have been of ten years' standing, Freund removed fifteen bones through vaginal fornix, fœtus estimated at rather more than five months.
23	Lusk; Amer. Journ. Obstet., March, 1883, page 17	32	Four	5 months	Fœtus destroyed by faradic current, subsequently decomposition set in and fistulous opening formed in the posterior vaginal wall through which fœtus, seven and a half inches long, and placenta were removed. The patient had intense septic symptoms, and, for a long time, recovery was thought impossible; she sat up, however, two months later, and returned home in ten weeks.
24	Bonnet; Lyon Méd., December 31st, 1882	28	Seven	10 ,,	Ten days after death of fœtus a fistulous opening formed at the navel, from which, at first, a serous, and, later, a purulent discharge took place, then a large opening formed below and to the left, through which, in the course of two weeks, all the fœtal parts were discharged in a macerated condition; through this opening, later, a loop of intestine protruded, and, owing to its nearly gangrenous condition, was stitched to the abdominal walls. The patient recovered, and, subsequently, the artificial anus closed.
25	A. MacDonald; Edin. Med. Journ. February, 1883, page 697	28	Two	1 year	Child probably died at sixth month; this was followed by inflammation of sac, thrombosis of left iliac vein, and peritonitis with septicæmia, septic symptoms relieved by discharge of fœtid pus through the rectum. Laparotomy performed; in the cavity, containing fœtus, fæcal matter was found, MacDonald resected the portion of intestine in which fistula was situated and stitched the ends. Patient recovered in two months.
26	Mackie; Edin. Med. Journ., April, 1884, page 945	-	-	16 months	Child died about the eighth month; this was followed by fever and pain and tenesmus which, by the sixteenth month, became intolerable; then bones were discharged by rectum Mackie recovered almost entire skeleton, manually, by rectum. Recovery.
27	Wood; Brit. Med. Journ., October 16th, 1886	30	Two		Fœtus of four to five months; putrid, discharged by rectum. Recovery in ten days.
28	Jameson; Amer. Journ. Obstet., 1885, page 1		Three	15 months	At twelve months began the second discharge of fœtal bones; three months later symptoms of septicæmia, Dr. Jameson dilated sphincter ani, and removed fœtal bones within the sac which communicated with the intestine. Patient did not rally, but died in fifteen hours.
29	J. G. Orton; N. Y. Med. Journ., May, 1886	45	Two	14 years	Opening back of rectum; the bones of the fœtus were perfectly clean, and free from muscle or tendon; on different days as many as 100 bones were removed by Dr. Orton through the opening with his fingers. Patient began to improve, when diarrhœa set in which proved fatal.

TABLE II.—*Cases which terminated fatally when no Operation was performed.*

No.	Reporter.	Age.	Number of Pregnancies	Duration.	Remarks.
1	Freund; Edin. Med. Journ., November, 1883, page 402	46	Six	17 years	During last half year patient had diarrhœa, pain in the abdomen, and intermittent fever; patient died from exhaustion. Sac was found shrivelled, and containing a stinking, turbid, greyish green mass; soft parts of fœtus shrunken and partially gangrenous.
2	Monnier; Progrès Méd., 1881, No. 49	44	Six		Fœtus probably died at fourth month; this was speedily followed by peritoneal symptoms, and vesical tenesmus. Death from cachexia; spicula of bone found to have penetrated walls of bladder, producing the vesical symptoms.
3	Guichard; Annal. de Gyn., March, 1881	—	—	—	Death, near end of gestation, from rupture of sac.
4	Fulcher; Obstet. Journ. Gt. Brit. and Irel., October, 1880, p. 592	32	Two	10 months	Peritonitis supervened on death of fœtus; death five days later. Child weighed 9½ lbs.
5	Francis; Obstet. Journ. Gt. Brit. and Irel., October, 1880, p. 594	25	1 labour and 3 abortions (twins)	12 ,,	Death of mother, two months after that of child, from vomiting, diarrhœa, and inanition.
6	Gusserow; Charite Annalen Jahrg., viii, page 661			14 ,,	Died of phthisis.
7	Litzmann; Archiv. f. Gynæck., 1880, vol. xvi, page 536	35	Four	8 ,,	Death of fœtus probably took place in the sixth month, and was followed by constant vomiting, constipation, intense pain, chills, headache, emaciation, nocturnal delirium, and convulsive twitchings. After two months, death from peritonitis and necrotic changes in the bladder due to prolonged retention.
8	Sibley Campbell; Amer. Journ. Obstet., October, 1876, page 606	33	Multipara	About 15 months	Labour presumably at eight months; five months later, ascites with œdema of extremities. paracentesis, with temporary relief. Death from œdema of lungs, sac's contents were not fœtid.

TABLE III.—*Laparotomy (Secondary) Recovery (1875 to 1885).*

No.	Reporter.	Age.	Number of Pregnancies	Duration.	Condition of Sac.	Remarks.
1	Southal; Virg. Medical Monthly, September, 1877	—	—	26 months	Stitched	Death of child at ten months, fœtus adherent and removed piece-meal.
2	Eastley; Am. Practitioner, September, 1876	33	Four	9 ,,	,,	Child, large and adherent to sac, was removed piece-meal; placenta atrophied, cord reduced to a mere thread.
3	Atlee, Walter; American Journal Med. Sciences, Oct. 1878, p. 521	—	Primipara	About 13 months	-	Child at full term, recovery in one month.
4	Ribemont; Annales de Gynæcol., July, 1879	21	Two	12 months	Adherent	Death of fœtus at seventh month; during pregnancy severe abdominal pains and attacks of peritonitis; after death of fœtus, severe hectic symptoms. Immediate improvement followed removal of fœtal *débris*, which were horribly fœtid; discharged in two months.
5	Rousseau; Union Méd. du Nord-Est, September, 1877	26	-	11 ,,	—	Preliminary cauterisation in flank to determine adhesions to sac, fluid fœtid, child delivered with cephalotribe; hæmorrhage from placenta controlled by pressure of a bladder filled with warm water, placenta left. Two months after operation patient left hospital, she had a fistulous opening and the placenta could be felt through the abdominal walls; closure of fistula and disappearance of all trace of placenta at end of two years.
6	Benicke; Annales de Gyn., Vol. xii, p. 33	33	Four	12 ,,	Stitched	Fœtus died at term; laparotomy, at end of two months, as patient's strength was failing; placenta removed without hæmorrhage, no bad symptoms.
7	Messner; Annales de Gyn., 1879, p. 33	—	Two	11 ,,	Adherent	Death of child at about eighth month, operation at eleventh month, up to which time patient called constantly for morphine, sac was adherent; prolonged suppuration followed, patient discharged cured at end of nine months.
8	Gusserow; Arch. f. Gyn., Vol. xii, p. 75	—	Five	9 ,,		Death of fœtus at eighth month, symptoms of peritonitis during entire pregnancy. Laparotomy one month after death of fœtus, patient extremely exhausted, suppuration of sac, fever; discharge of patient in three months.
9	Martin; Berlin. Klin. Wochenschr., July 8th, 1878	37	Two	About 2 years		Sac size of child's head, envelopes calcified, fœtus about five months, recovery in fourteen days.
10	W. Gaillard Thomas; Gynæcol. Trans., 1882, page 225	26	,,	11 months	—	Sac aspirated and quarts of sero-purulent fluid removed; outline of child now clearly made out; laparotomy of girl weighing 7 lbs., placenta came away in five weeks.
11	*Idem*	24	,,	17 ,,		Removal of child by laparotomy, weighing 9 lbs., discharge of placenta in from two to three weeks.
12	*Idem*	—		-		No particulars, patient's condition extremely depreciated, sac contained great quantities of fœtid gas.
13	Caltoni; Annal. Universali di Med., February, 1884	30	Two	End of gestation	Adherent	Fœtus probably dead two months, recovery in eight weeks.
14	Zweifel; Berlin. Klin. Woch'sch., 1881, No. 24, page 342	31	Eight	9 months	Stitched	Child premature and decomposed, contents of sac horribly putrid, sac contained fœtid gases, immediate cessation of fever following operation, patient discharged in six weeks.
15	Freund; Edin. Med. Journal, November, 1883, page 403	24	One	13 ,,	,,	Sixteen days after operation portion of placenta was discharged, remainder on twenty-third day, patient left her bed at the end of the sixth week.
16	Negri; Annali di Obstet. March and April, 1885	28	Three	15 ,,	Adherent	Laparotomy eight months after fœtal movements ceased, fœtus was dry, hard, and adherent to sac and intestines, adhesions easily separable; patient left her bed on the thirteenth day.
17	Howitz; Gynak. og Obst. Meddel. vol. v, page 3	37	Two	2 years	Stitched	Operation in two periods, (1) opening abdomen and stitching sac to abdominal walls to secure adhesions; (2) one week later, opening sac which contained putrid pus and fully developed fœtus; in addition hair and teeth, supposed to belong to a dermoid cyst, were removed; patient was discharged in three months.
18	Braithwaite; Lancet, January 3rd, 1885	-	Three	10 months	Adherent	Child dead two weeks, patient made good but slow recovery.
19	*Idem*	35		11 ,,		Cessation of fœtal movements one month before operation, incision struck placenta, partial separation without hæmorrhage; complete separation and removal of placenta six weeks later.
20	A. Martin; Obstet. Soc. of Berlin, November, 1885	52	Multipara	13 years	-	Lithopædion, causing distressing abdominal symptoms, no trace of placenta.
21	Howitz; Centralblatt f. Gynæcol. 1880, No. 35, page 568	26	(?)	11 mths. death of fœtus not given (time of)	Stitched	Main portion of placenta removed, wound healed in a month.
22	Lawson Tait; Lancet, 1880, Sept. 18th, page 456	40	Six	8 months	,,	Placenta discharged in three weeks.
23	Herff; New Orleans Med. and Surg. Journ., August, 1880	24		12 ,,	,,	Pain, fever, pulse 110, temperature 102°; sac contained one quart of purulent fluid, placenta discharged on twelfth day.
24	Brende; Monte Video Central-blatt, No 41 1883	32	Two	,,	—	Cæsarean section proposed for supposed incarceration of gravid uterus, extra-uterine pregnancy discovered; for ten days case seemed hopeless, recovery after a year

TABLE III *(continued).—Laparotomy (Secondary), Recovery (1875 to 1885).*

No.	Reporter.	Age.	Number of Pregnancies	Duration.	Condition of Sac.	Remarks.
25	Lountzen; Hospitals Tidende, July 27th, 1881	34	Multipara	13 months	—	Operation owing to fever and emaciation, contents of sac putrid; five days after operation fever ended, drainage-tube removed in two months; later, placental portions began to discharge, continuing twenty-one days.
26	Welponer and Tillner; Archiv. f. Gyn., Band XIX, 1882, page 241, operation by Billroth	34	Two	3 yrs. 4 mnths.	—	Entire sac removed, extensive adhesion, recovery in about six weeks.
27	Lucas Championniere; Gaz. des Hop., November, 1884, page 37	—	—	15 months	—	Rapid recovery.
28	*Idem*	—	—	26 ,,	—	,, ,,
29	Thissen; Berlin. Klin. Wochenschrift, No. 8, 1884	34	Three	(?)	Membranes adherent	Death of fœtus at term, temperature 105, collapse; patient, for weeks, very feeble, œdematous with albuminuria; horrible stench on removal of fœtus, intestine perforated in two places, communication with sac.
30	Dunnett Spanton; BRIT. MED JOURN., January 12th, 1884 page 53	26	—	12 months	Stitched	Fluid putrid, fœtus macerated.
31	Litzmann; Archiv. f. Gyn., 1881, vol. xviii, page 1	35	Primipara	12 ,,	Free	Pregnancy probably tubal, entire sac removed, operation followed by extensive pelvic exudation which caused retention in hospital for nearly three months.
32	Braithwaite; BRIT. MED. JOURN. February 2, 1884, and Trans Obstet. Soc., January and February 1st, 1886	No details given				Child dead three weeks, placenta applied to fundus of uterus like a cup, placenta never came away.
33	Litzmann; Archiv. f. Gyn., vol. xvi, 1880, page 343	35	Seven	10 months	Partial adhesions	Death of child at about the eighth month, placenta removed at time of operation, immediate improvement, discharged after three months.
34	Sutugin; Centralblatt, 1884, No. 34, page 529	20	Two	12 ,,		Probably tubal; entire sac removed, drainage through Douglas's *cul de sac*; discharged in four weeks.
35	*Idem*	—	—	—	—	Two cases reported in Sutugin's paper; in both, the entire sac was removed.
36	Kasnezy	—	—	—	—	
37	Gaillard Thomas; Gynæcological Trans., 1884, page 178	23	Two	15 months	—	Patient emaciated, loss of appetite, purpuric spots on body, liquor amnii dark and fœtid, child large (9 lbs.) and commencing to decompose, placenta weighed 4 lbs., and was attached to ascending and descending colon; placenta stitched an inch and a half from the intestine, from the caput coli to the sigmoid flexure, placenta cut away a short distance from the stitch, and the remaining attachment was secured to the abdominal wall; violent septicæmia, recovery in six weeks.

TABLE IV.—*Laparotomy (Secondary), Death (1875 to 1885).*

No.	Reporter.	Age.	Number of Pregnancies	Duration.	Condition of Sac.	Remarks.
1	Maygrier; Annales de Gyn., July, 1879	33	Primipara	17 months	Adherent	After death of fœtus, at term, health of patient at first good; in five months, tender abdomen, chills, fever, emaciation; two months, later, increased fever, profuse fœtid diarrhœa, vomiting, tenderness, gas in sac; death seven days after operation, sac adherent.
2	Byford; Chicago Med. Journ., February, 1878	36	Three	3 years	—	Patient had hectic fever, and death was imminent at the time of the operation, death on the fifth day.
3	Hall Davis and Lawson; Lancet, 1877	27	Primipara	6 months	—	Fœtus dead patient had acute tuberculosis, death on second day.
4	Netzel, *vide* Deschamps; Grossesse Extra-utérine, p. 105, 1878	37	Two	10 months	Adherent	Child dead, weighed 6½ lbs; operation a few days after death of child, sac adherent, hæmorrhage estimated at from 20 to 25 ounces, arrested by sutures; death in fifty hours.
5	Eugen Fraenkel; Arch. f. Gynæk., vol. xvii, page 299, 1880	32	Three	11 ,,	Stitched	On admission to hospital, patient well nourished; one month later health began to decline; evening temperature 103°, pain constant, nausea, pulse 120 and feeble; death five days after operation. Necropsy; slight circumscribed peritonitis, left mitral stenosis, hypostasis at base of both lungs, endocarditis verrucosa, infarctions in spleen.
6	Hofmeier; Ztschr. f. Geb. u. Gynæk., vol. v, page 114, 1880	41	Four	10 months, age of child 8 mths.	Adherent	Patient's temperature, at time of operation, 103.5°; pulse 120 to 140; constant vomiting, emaciation, died of collapse on the twelfth day.
7	Nicolini; Annali Univers. di Med. e Chir., March, 1882	26	Three	14 months	—	Operation four months after death of fœtus, by Porro, owing to peritonitis and loss of strength; death, on twenty-eighth day, from peritonitis and purulent inflammation of connective tissue.
8	Homans; Boston Med. and Surg. Journ., No. 20, 1886	35	—	7 years	Complicated with ovarian cyst	Sac contained 4-5 lbs. of thick offensive matter and bones of adult fœtus, walls of ovarian cyst yellow and rotten; operation performed when patient was sinking, death in four hours.
9	Percival; Obst. Journ. Gt. Brit. and Irel., November, 1880	—	Six	16 months	—	Labour pains at term; at first, improvement; then enormous emaciation and feeble pulse; sac contained decomposed pus and gas; placenta decomposed; died on fourth day; perforation into jejunum.
10	Goodell; Amer. Journ. Obst., January, 1881, page 128	31	Primipara	2 years	—	Great emaciation; had had pleurisy and jaundice; sac contained offensive gas and several quarts of fœtid pus; fœtus much decomposed, placenta had disappeared; did well for seven days, then quarrelled with her husband, became suddenly cyanotic and died.
11	Gusserow; Charité Annalen, VII Jahrg., page 604		—	—		Placenta spread over nearly entire periphery of sac, uncontrollable hæmorrhage, sac tamponed with salicylated cotton; death, in two days, from septic peritonitis.
12	Natta; Progrès Medical; No. 19, 1884	40	—	7 years		On admission, extremities cold, fæcal vomiting, great abdominal distention; laparotomy; cyst contained oily, bloody fluid; only the skeleton of fœtus remained; death, in two days, from constriction of intestine.
13	Freund; Klin. Med. Journ., September, 1883, page 247	37	Two	—	Stitched	At time of operation patient suffered from septic infection, peritonitis, right-sided pleurisy; sac emitted gas; fœtus (5 months' long), adherent to sac, placenta easily detached, sac stitched to abdominal wall and drainage tube introduced; patient at first improved, but death took place, in ten days, from peritonitis, septicæmia and pleurisy; putrefaction of sac and margins of the abdominal wound.
14	C. A. Kerbey; Amer. Journ. Obst., January, 1884, page 1	48	Five	8 months	—	Death of fœtus at about fifth month; in performance of laparotomy, enormous placental hæmorrhage occurred; death, from collapse, in four hours.

TABLE V.—*Laparotomy (Primary Operation).*

No	Reporter.	Age.	Number of Pregnancies	Duration.	Remarks.
1	Hofmeir; Archiv. f. Geb. u. Gynaek., vol. v, 1880, page 115	33	Seven	End of gestation	Death thirty-six hours after operation; child saved.
2	L. Tait; Obstet. Journ. Gt. Brit. and Irel., October, 1880, p. 577	33	Seven	Near end of gestation	Shock, death in four days; child recovered.
3	Vedeler and Norman; Centralblatt, 1881, No. 9, page 224			At term	Child extracted alive; mother and child died day after operation.
4	Netzel; Hygeia, April 29, 1881	29	Multipara	,,	Placenta divided, sharp hæmorrhage; both mother and child died in forty-eight hours.
5	Litzmann; Archiv. f. Gynaek., vol. xvi, 1880, page 323	29	Two	,,	Child breathed a few times (pregnancy probably tubal). No hæmorrhage during operation, secondary hæmorrhage from partially detached placenta, on thirteenth day, checked by tampon. Death, on fifteenth day, from septic infection, pyelo-nephritis, and exhaustion.
6	A. Martin; Berlin. Klin. Woch., December 26th, 1881	39	Three	7 months	Operation undertaken for supposed ovarian tumour, or subserous fibroid: removal of a seven month fœtus with large encephalocele. Child died shortly after extraction; hæmorrhage from sac checked by placing thin ligatures, including base of broad ligament and Fallopian tube, between the uterus and sac; separation of placenta then accomplished without hæmorrhage, portion of cyst removed, and the remainder stitched to the abdominal wound, drainage through Douglas's *cul de sac*. Recovery.
7	Frankel; Arch. f. Gyn., vol. xiv, page 197	34	Three	8 ,,	Division of placenta, with frightful hæmorrhage, arrested by suturing sac to abdominal walls. Death, from collapse, in a few hours; infant lived one day.
8	Spiegelberg; Arch. f. Gyn., vol. xiii, page 73	36	Two	10 ,,	Patient's condition desperate at time of operation, violent hæmorrhage, placenta incised, hæmorrhage arrested by ligatures. Death during the night, infant lived three months.
9	Gervis; BRIT. MED. JOURN., December 22nd, 1877	38	Nine	Near term	Moderate hæmorrhage at time of operation; in the course of the first twenty-four hours, severe secondary hæmorrhage, followed by death on the second day. Infant lived six hours.
10	Jessop; Obstet. Trans., 1876, page 261	20	Two	End of gestation	Fœtus floated in the intestines, no sign of fœtal envelopes; placenta appeared to cover the brim of the pelvis, the fundus of the uterus, the posterior abdominal wall, and the large intestine; the patient, owing to her excessive feebleness, was left four days on the operating table, fœtid discharge from abdominal wound. Recovery in two months.
11	Heywood Smith; Obstet. Trans., 1878, page 5	42	—	—	Extraction of child, which lived forty minutes; mother died in thirty-six hours.

Elytrotomy.

Reported.	Age.	No. of Pregnancy.	Remarks.
Mathieson, Lancet, 1884, page 941	30	6	A six-pound child extracted alive in ninth month with forceps through vaginal incision; hæmorrhage slight; placenta removed; recovery in three months.
Bayeman, New York Medical Journal, December 20th, 1884	38	7	Pregnancy four and a half years' duration; fœtus probably died at sixth month, and became encysted. Three years and eight months later, patient became again pregnant. An intra-uterine fœtus was extracted with forceps, and the extra-uterine fœtus was removed through an incision made in the posterior vaginal wall. Recovery.
Grandin, American Journal of Obstetrics, March, 1886, page 252	28	1	Duration probably fourteen months; vaginal incision followed by escape of a quart of fœtid pus; fœtus could not be reached; a few fœtal bones were subsequently discharged. Patient died of sepsis a few days after the operation.

Welpener and Litzmann, where it proved practicable to remove the entire sac. By early operating, it is possible that this class may be largely extended, thus getting rid of the danger arising from the slow elimination of the placenta. The recent removal of a living child by elytrotomy, with recovery of the mother, reported by Mathieson, renders it desirable to determine the class of cases in which the vaginal incision can be made available in both primary and secondary operations. For aid in the solution of these and kindred questions, it is natural to turn to this country, which enjoys the eminence of leading the world in the successful performance of abdominal surgery.

Mr. LAWSON TAIT said that Dr. Lusk's case really admitted of but little discussion. It was an illustration of what might be indicated in every division of abdominal surgery that delays are dangerous, whilst reasonably early interference is advantageous.

Dr. ALFRED MEADOWS referred to a case which had come under his care, which illustrated an exactly opposite series of events to those occurring in the case related by Dr. Lusk. It was a case of abdominal pregnancy which showed little constitutional disturbance during the course of gestation, the full period being completed without terminating in labour. Two years after this she came into St. Mary's Hospital, and was operated on; the child was removed; the edges of the sac were stitched to the edges of the abdominal wound. The patient recovered; the cyst gradually collapsed, and, being finally absorbed, disappeared. Notwithstanding the satisfactory conclusion of this case, Dr. Meadows certainly agreed with Dr. Lusk that early operation in cases of abdominal pregnancy, as soon as the child was dead was the wisest course to adopt.

Dr. H. P. C. WILSON: I am satisfied that Dr. Lusk is correct in advising operation as soon as possible after constitutional symptoms are developed in extra-uterine pregnancy. If, when we have clearly made out a case of such pregnancy, we are not able to destroy the life of the fœtus before the third month, the sooner we perform laparotomy for its removal, the more lives we shall save. Fortunately, we have in electricity an efficient agent for destroying the life of the fœtus (with the certainty of its future absorption) if this agent is employed early after conception. I would advocate laparotomy as soon as possible after we fail to destroy the life of the fœtus by electricity. I have had three cases of extra-uterine pregnancy. Two of these were brought to a successful termination by the use of electricity before the third month. The third case was one of twins, in which I delivered one child by the natural passage from the uterus, and the other child from the abdominal cavity by laparatomy, both children being born alive—that from the uterus at eight months, the one from the abdominal cavity at nine months. The child from the uterus lived one month; the child from the abdominal cavity lived eighteen months, and died of cholera infantum.

Mr. JESSOP hoped that some experienced specialist would state reasons, if any existed, for postponing operation in cases like his own well-known example, to which Dr. Lusk had referred, in which the fœtus was still living. Why wait until the child died, and until increased danger had come upon the mother? In his own case, the child was living; the woman was in good health, and it seemed to him, as a general surgeon, that the risks would be increased and not diminished by waiting for the death of the child. Hence he operated, and with the most satisfactory result of saving both mother and child. He could understand the *rationale* of destroying the life of the child at an early stage of its existence, whilst it still formed a small substance in the abdomen, and whilst its removal would involve a proportionately small operation; but if the child had already reached the full period of its natural intra-uterine existence, and still lived, he could not understand upon what grounds its removal should be postponed. Having no special knowledge upon this subject, he asked for information.

Mr. DORAN urged early exploratory incision in all cases of suspected extra-uterine fœtation, especially after term. The surface of a large fœtal sac changes rapidly, so as to become hard to distinguish from a malignant pelvic tumour. In a patient under Mr. Doran's care, where no fœtal heart-sounds could be heard, and diagnosis was otherwise uncertain, an exploratory incision was made fifteen months after the last period, when the patient's health had become greatly impaired. The sac appeared like a large malignant ovarian tumour. No fluid escaped on tapping, and the point of the trocar touched nothing feeling like a fœtus. Several very intimate intestinal adhesions were separated from the upper part and back of the tumour. In raising

the tumour to get at its pelvic portion, its walls ruptured, and a large fœtus escaped. A Kœberle's *serre-nœud* was applied to the base of the tumour, the remainder, which was extensively ruptured, being cut away; sutures were required for three lacerations of the large intestine. The patient never rallied from the shock, and died in about fifteen hours. Had it been possible to operate earlier, it would have been easier to recognise the nature of the cyst from mere inspection and palpation, directly the abdominal cavity had been opened. A simple incision and removal of the fœtus would have probably saved the patient's life.

Dr. EDIS thought that the question of operation for extra-uterine gestation at full term could not be definitively determined from the experience thus far recorded. Each case must be treated upon its merits. Jessop and Martin were the only two operators who had recorded successful cases of removing a living child where the mother recovered—the primary operation, so called. Where the secondary operation—that is, removal of the fœtus after its death had occurred—was resorted to, certain pathological changes had already commenced which unquestionably lessened materially the risks of hæmorrhage. The placental circulation being arrested retrogade metamorphosis began, and the subsequent separation of the placenta was thus facilitated, the risks of septicæmia being thereby lessened. The recent improvements in abdominal surgery justified a more active treatment than that hitherto recommended, but operative measures should only be undertaken by those familiar with abdominal surgery.

Dr. LUSK briefly replied.

CASE OF SUCCESSFUL ABDOMINAL SECTION FOR RUPTURED FALLOPIAN-TUBE GESTATION.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Brighton.

BY D. BERRY HART, M.D., F.R.C.P.E.,

Lecturer on Midwifery and Diseases of Women, Surgeons' Hall, Edinburgh; Assistant Gynæcological Physician, Royal Infirmary, Edinburgh.

CASES of ruptured Fallopian-tube gestation, ending fatally, are comparatively frequent, so that it seems advisable to record this case as emphasising the value and safety of abdominal section in properly selected instances. The credit of strenuously practising and advocating this treatment as early as 1881 is due to Mr. Lawson Tait, but so far as I am aware, very few operators have followed his example.

My case is briefly as follows: Mrs. F., from Glasgow, was seen by me at the Buchanan Ward, Royal Infirmary, Edinburgh, on April 8th, 1886. She complained then of attacks of pain in the lower part of the abdomen, coming on every two or three days, of some slight bloody discharge, and stated that her menstruation had ceased for about three months. On abdominal palpation, a rounded tumour, the size of an egg, could be felt in the left iliac fossa. On bimanual examination, the uterus enlarged to the size of a two-months' pregnancy, and lying to the front and right, could be made out, as well as an elongated tumour on the left side, running between the uterus and the body which was felt in the left iliac region on abdominal palpation. The history and physical signs left no doubt in my mind that we had to deal with a Fallopian-tube gestation, and one suitable for abdominal section. The patient agreed to remain in hospital, but her friends refused permission to operate. A few days after admission a decidua was discharged, and on the evening of the 16th April, Dr. Helm telephoned to me that the patient had become suddenly collapsed, and almost pulseless. I saw her shortly afterwards, when she had somewhat rallied under stimulation, and I urged her friends to allow operative interference, as the sac had no doubt ruptured, and the patient's life was in great danger. They ultimately consented, and on the 19th I opened the abdomen.

The patient was chloroformed, and all antiseptic precautions, except the use of the spray, were followed.

After making an incision two inches in length, I came upon a very congested omentum, and found abundant blood welling up from beneath its lower edge whenever a sponge was pressed in. This looked alarming, but the blood was tarry-like and stained the sponges a chocolate colour; it had evidently been effused some time. I enlarged the abdominal incision with scissors to three inches, lifted up the omentum and found the pelvis filled with this blood, a small fœtus (six weeks) among the coils of intestines, the left Fallopian tube enlarged, and the rupture, about as large as the tip of the index finger, in the posterior aspect of the ampulla. I clamped the uterine end of the tube with a pair of locking forceps, and was proceeding to do the same on the other side of the rupture, but desisted, as I felt I could as quickly loop up and tie the portion of the tube with the rupture in it. I accordingly did so, using silk and tying the Staffordshire knot. This occupied only a few seconds, and I now sponged out the pelvis thoroughly, washing it out with water at 100° Fahr. The remarkable effect of water at a temperature of 110° to 120° Fahr. in causing uterine retraction, and thus checking hæmorrhage, is now well known. In a recent very able communication on the method of action of warm water, read by Dr. R. Milne Murray, before the Edinburgh Obstetrical Society, the power of the warm water in causing contraction on unstriped muscle, was well shown. It seemed to me then, that equally hot water might be of use in hæmorrhage from the pelvic peritoneum. In this case there was some oozing, and I therefore poured in water at 120° Fahr. for a few seconds and then sponged it out. It blanched the omentum markedly and seemed to check the oozing, although, of course, this may have stopped spontaneously. It certainly did no harm, and I beg to recommend further trial in suitable cases. The patient made an uninterrupted recovery, and six weeks afterwards left the hospital well, with only some thickening in the pouch of Douglas on the left side.

In regard to ruptured Fallopian-tube gestation, the question arises as to whether one should operate, or trust to rest, the use of the ice-bag, stimulants, and the hypodermic use of morphine. I have seen two cases of rupture, at the fifth or sixth week, recover perfectly under this treatment; while a third rallied, the pregnancy becoming abdominal, and ultimately discharging through the rectum. If, then, it were objected that, in this case, the same expectant treatment might have succeeded, I would urge that the condition found on abdominal section closely resemble those discovered on *post mortem* examination in fatal cases. The number of women who die from rupture of a Fallopian-tube gestation, at the second or third month, is considerable; and the question arises as to whether a false impression has not got out among the profession, and even among specialists, that such cases are beyond treatment, and, of necessity, fatal. What is urged against operative treatment is, that diagnosis in such cases is difficult, the collapse too profound to admit of section, and the operation in itself very difficult.

The diagnosis is, however, fairly easy. We have arrest of menstruation for some weeks, irregular discharges, pain, and then a sudden attack characterised by pallor, sickness, or vomiting, pain, collapse, and lateral or posterior effusions in the pelvis, with some enlargement of the uterus. The practitioner sometimes regards the condition as brought about by irritant poisoning, but will be kept right by noting the unusual pallor of the woman, indicating internal hæmorrhage. The collapse, in some cases, is very profound, but not, as a rule. The patients may live some hours, or even days, as I shall show presently, and may be operated on much oftener than is at present held. While the operation may be difficult, I am inclined to think this has been greatly exaggerated. If the operator makes his abdominal incision, and passes in his finger to touch the uterus, he can readily make out the relations, clamp the tube on either side of the rupture, and ligature the portion ruptured. Of Mr. Tait's twenty-one cases, only one, the first, died. A doubtful case has been recorded by Hunter of New York, with a fatal result, and also one, with a like ending, by Bozeman, where the operation was evidently too long delayed. This, at the worst, gives three deaths in twenty-four cases, or about 12 per cent.; while, if we exclude Hunter's and Bozeman's cases, we get a mortality of less than 4 per cent.

In order, however, to investigate these points more fully, I collected the cases of ruptured Fallopian-tube gestation shown to the Obstetrical Society of London, and described in their valuable *Transactions*. The table appended shows that there have been exhibited twenty cases, that of these only five died rapidly, that all the others lived for periods varying from eight to twenty-four hours, and some for several days.

In most of the cases there was no matting of parts, and little to render the operation very difficult. In the discussions on these specimens, abdominal section was urged as a means of treatment, by Playfair, Wells, Meadows, Wiltshire, and others. Perhaps the most striking point in the whole matter is, that there have been so few deaths in the operative cases. This shows that there is very little risk in operative treatment, and as there is really no clearer case for abdominal section than such, I hope it will become more generally employed.

Bozeman: Extra Uterine Pregnancy, with an Account of Two Cases, and their Treatment. *N. Y. Med. Journal*, 1884, p. 689.

Hunter: A specimen of Supposed Tubal Pregnancy, *Am. J. of Obst.*, March, 1886, p. 269.

Maygrier: Terminaisons et Traitement de la Grossesse Extra

Utérine. Paris, *Doin*, 1886. (Maygrier gives a full table of Tait's cases up to February 2nd, 1886.)

Murray, R. Milne: Some of the Physiological and Therapeutic Effects of Water at Different Temperatures, etc. *Ed. Med. Jour.*, August, 1886.

Maury, R. B.: Case of Tubal Pregnancy with Rupture of the Sac; Remarks upon the Propriety of Laparotomy. *Am. Gyn. Tr.*, Vol. ix p. 189.

Tait: [*v. Maygrier and* BRIT. MED. JOURN. for 1884, pp. 1250 and 317; also for April 18th and December 19th, 1885].

Name of Author.	Where Case Recorded.	How Far Advanced.	Fallopian Tube Affected.	How long Patient Lived.
Harley	*L. O. T.*, i, 101	5 months	Left tube	11 hours
Grace	,, ii, 49	6-7 weeks	,, ,,	13 days
Marshall and Hewitt	,, v, 154	8 ,,	,, ,,	12 hours
Greenhalgh	,, ,,	—	Interstitial	A few hours
Haydon	— —	3 months	Right tube	24 hours
Truman	,, vii, 164	12 weeks	,, ,,	2 ,,
Brown	,, xi, 7	16-20 weeks	,, ,,	13 ,,
Worship'	,, xi, 211	—	,, ,,	48 ,,
Meadows	,, xiii, 268	6 months	,, ,,	40 ,,
M'Callum	,, xv, 248	4 ,,	—	3-6 ,,
Turner	,, xvi, 31	2 ,,	,, ,,	15 ,,
Meadows	,, xviii, 259	4-5 ,,	—	52 ,,
Routh	,, xxi, 93	3 ,,	,, ,,	8 ,,
Doran	,, xxi, 169	4 ,,	Left ,,	10 minutes
Godson	,, xxii, 186	6 weeks (?)	Right ,,	8 hours
Burton	,, xxii, 34	6 ,,	,, ,,	9 ,,
Godson	,, xxiii, 109	6 ,,	,, ,,	Dying when admitted to workhouse
Duncan, J. M.	,, xxiii, 263	5 weeks	,, ,,	36 hours
Daly	,, xxiv, 155	2 months	,, ,,	4 days
Doran	,, xxiv, 228	2 ,,	,, tubo-interstitial	24 hours

A CASE OF EXTRA-UTERINE GESTATION ARRESTED BY ELECTRICITY.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Brighton.

BY JAMES H. AVELING, M.D.,
Senior Physician to the Chelsea Hospital for Women.

MRS. ——, aged 30, was married in January, 1881. In April, 1882, she had a daughter. In November, 1882, I found her suffering from retroversion of the uterus, menorrhagia, pelvic pains, and general ill-health. A pessary was introduced, and all these symptoms disappeared. In October, 1884, the instrument was removed, and its use discontinued, the uterus still remaining slightly retroverted, but causing no discomfort. The patient was able to lead an active life, and take long walks.

March 9th, 1886. She and her husband went to Tunbridge Wells. February 20th. She had a catamenial period, which lasted five and a half days. In March, when the period should have recurred, severe hypogastric pain was felt, but no discharge appeared. The breasts became swollen, and the patient believed herself pregnant. Five days after the period had been due, she was seized with severe colicky pain in the hypogastrium, which doubled her up, and caused faintness and collapse. This pain recurred on March 27th, and again on the 29th, when in the train on her way home. Having to pass through London, her husband urged her to see me, but she went on to her home in Derbyshire.

On April 3rd, there was a slight flow of blood from the vagina for a few minutes. This appeared again on the 9th and 10th. On the 11th, the flow lasted for three hours, and was dark and watery. On the 13th, there was an exceedingly severe attack of colicky hypogastric pain, which lasted two or three hours. On the 14th, it came on again, with such violence that Mr. Wrench, of Baslow, was sent for, who ordered fomentations, much to the patient's relief. On the 15th, the worst attack of pain occurred. Fomentations, and two doses of morphine, were required before the pain ceased. Great soreness was left, and the patient could scarcely turn in bed. The collapse was alarming, and it was feared some effusion of blood had taken place. Mr. Wrench now made a local examination, and found a swelling in Douglas's pouch, about the size of a walnut. On the 18th, I went to see the patient, and, with Mr. Wrench, examined her while under chloroform. I found the swelling described by Mr. Wrench. It was rounded, slightly movable, and of the size of a small orange, resting in Douglas's pouch, and a little to the left. The breasts were tender and swollen, a condition which had been noticed since March 21st. My diagnosis was extra-uterine gestation, and I suggested that the case should be watched for a fortnight, when I would see her again. On the 21st, the hypogastric pain recurred with great severity, and Mr. Wrench found the swelling had increased.

On the 25th, portions of decidua were expelled from the uterus, and being informed of this I visited the patient on the 27th, when it was determined to remove her to London, an anxious task which was admirably carried out by Mr. Wrench on the 29th. On the 30th she was seen by Sir Spencer Wells, with Mr. Wrench and myself. The journey had done her no harm, but had shaken the uterus out of the pelvic cavity, and it could be felt, very much enlarged, above the pubes. The swelling was gradually enlarging, and the pulsation in it becoming more distinct. The hypogastric pain was still felt at intervals, and there was continually a slight red discharge from the vagina. Sir Spencer Wells advised that the patient should be kept quiet in bed and watched. This advice was repeated on the 4th of May. The swelling was becoming larger, more tense and pulsated more markedly. On the 10th I was so certain of the existence of extra-uterine gestation—a conclusion, I may add, to which Sir Spencer Wells and Mr. Wrench had also arrived—that, I felt convinced, prompt action was demanded if the patient's life was to be saved. I therefore requested another consultation, and urged upon Sir Spencer Wells the necessity of adopting some plan for destroying the life of the fœtus. Knowing how successfully electricity had been employed for this purpose by American gynæcologists, I had a great wish to try it in this case, and Sir Spencer Wells readily agreed to my proposal.

On May 10th I began to use electricity. Gaiffe's induction apparatus was employed. It had two cells, and no more than half its power was ever exercised during the treatment. The interrupted current was used for ten minutes, gradually increasing its intensity, until, during the last half minute, the patient could not bear it any stronger. The negative pole was applied to the most prominent part of the swelling, through the vagina, by means of a metal bulb, covered with wet wash leather, on an insulated stem, the positive pole being placed on the abdominal wall on the opposite side of the tumour. No pain or inconvenience was felt after the applications. Electricity was used again on the 11th, 12th, and 13th. On the 14th I was prepared to repeat it, but on examination I found such a marked change in the tumour that I felt convinced gestation had been arrested.

The swelling was decidedly smaller. The cervix uteri, which had been pressed firmly against the pubes, had retired, and the finger could be easily passed between them. The pulsation had ceased, the attacks of pain were no longer felt, and the patient expressed herself as much relieved.

On May 15th, a little milk appeared in the breasts. The swelling was smaller and less tense, and from this time it gradually diminished in size. On the 17th, slight uterine discharge, which had never ceased, became more free, and continued until the 20th. This was a catamenial period, for these four days represented the date at which the third menstrual flow was expected.

After this, the history of the case was uneventful. The patient remained well and in good spirits, and the tumour daily decreased in size. The uterus also, which had been pressed over to the right, became involuted, and fell back into the pelvic cavity in its old slightly retroverted position. A little dark-coloured discharge continued until June 3rd. The patient was now allowed to move about and lie on a sofa. On June 10th, a catamenial period commenced, but it was scanty, and not satisfactory. The fluid was dark, and continued, on and off, for more than a fortnight. On July 13th, the patient menstruated naturally; and on the 22nd she returned home quite convalescent. A small, flat, elongated body was all that could be detected in the site of the swelling, which once reached the dimensions of a man's fist. There was no tenderness on moderate pressure, and the chances are that the little body has become encapsuled, and will give no further trouble.

REMARKS.—The history of the use of electricity as a fœticide in extra-uterine gestation commences about the middle of the present century. To France we are indebted for its suggestion. Moreau gives Voillemier the credit of having first proposed it, but I have not his essay at hand to consult as to the reasons he gives for the statement. It is certain that Cazeaux suggested it in the edition of his work on Midwifery, published in 1850, for he asks whether the death of the fœtus could not be caused by passing an electric shock through the "globe utérin." In future editions he substituted for "globe utérin," "les parois du kyste."

Italy claims the credit of having first put the suggestion into practice. On the 2nd of February, 1853, Bachetti's operation was performed. He introduced two long needles into the tumour, and connected them with the conducting wires of an electro-magnetic machine. Two shocks were given, and the gestation was arrested. Our countryman, Dr. Braxton Hicks, in 1866, was the next to use electricity as a fœticide in these cases, and he was the first to apply the poles of the battery outside the tumour. He placed one on the swelling above the brim of the pelvis and the other in the vagina, but does not seem to have had faith in the remedy, for he gave it up after two applications, and punctured the cyst from the vagina, causing the death of the patient. Dr. Allen, of Philadelphia, repeated the method of using electricity employed by Dr. Braxton Hicks in 1869, and with perfect success This was indeed the first case in which gestation had been arrested by the extra-cystic method, but Dr. T. Gaillard Thomas is in error when he writes: "The destruction of fœtal life by a strong galvanic current is a plan of treatment which we owe to our countryman, Dr. T. G. Allen, who first employed it in the year 1869." To America, however, we are indebted for having popularised the mode of treating extra-uterine gestation by electricity, and for having demonstrated its efficacy and safety. I believe I may claim to have had the good fortune to be the first in this country who has successfully treated extra-uterine gestation by electricity.

The cause of extra-uterine gestation in the case which I have related appears to have been retroversion of the uterus. Dr. Meadows and Dr. Bache Emmet have recorded cases which they believe to have been caused by this uterine displacement. There had been no previous pelvic inflammation.

The diagnosis of extra-uterine gestation is not so difficult as some writers would lead us to suppose. It has so many prominent and characteristic symptoms, that its detection is more easy than that of ordinary pregnancy in the early months. In my case, the diagnosis was made without difficulty. The patient became pregnant soon after marriage, and then remained sterile for four years. This pointed to the probability of the existence of some obstruction to impregnation. After being quite regular, she ceased to be so, and symptoms of pregnancy appeared. Then she was seized at intervals with the severe characteristic colicky pains in the hypogastrium, and a continuous sanguineous discharge from the uterus. By repeated examinations, a pulsating tumour, gradually increasing in size, was discovered behind and to the left of the uterus, and this organ became, by degrees, evoluted, until it was at least four times its natural dimensions. Lastly, decidua was expelled from the uterus, making the diagnosis of left Fallopian gestation almost a certainty.

The treatment of this case by electricity was commenced between the second and third months of gestation. The employment of the battery causes no actual pain, and it is not followed by any untoward symptoms. Its mode of destroying the life of the fœtus is probably by shock, or, rather, by the repetition of innumerable shocks; for there can be little or no chemical action in the electricity supplied by Gaiffe's induction-apparatus.

The conclusion which must be arrived at after considering this and fourteen other similar cases which have been published, is that the only safe and justifiable method of arresting fœtal life during the first four months of extra-uterine gestation is by electricity; and that, by this means, one of the most dangerous accidents which can happen to a woman (the mortality being, according to Parry, 67.20 per cent.) may be robbed of its deathful character.

EXTRA-UTERINE GESTATION, TREATED BY GALVANO-PUNCTURE.

Read before the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association held at Brighton.

By RICHARD PETCH, M.D.Lond.,
Physician to the York Infirmary.

Cases of ectopic gestation, though more frequently met with, or rather more frequently recognised than formerly, are still sufficiently uncommon to render all cases worth recording, more especially as the treatment is not yet definitively settled.

The case which forms the subject of this paper occurred several years ago, and has not hitherto been recorded, as I was desirous carefully to observe its subsequent progress. In July, 1878, I was requested to see Mrs. J., aged 27, who was supposed to be suffering from pelvic hæmatocele.

History.—Her health had been very good until two years before, when her only child was born; she continued suckling it till it was fifteen months old, and became very weak and anæmic; menstruation did not return. In February, 1878, she began to suffer from slight uterine hæmorrhage, occurring at irregular intervals; she became very constipated, and had pain in the body after having the bowels relieved. She became gradually weaker, and had occasional attacks of "obstruction of the bowels;" the pain in the body became more severe and constant; she was obliged to spend most of her time on the sofa. In April she first noticed a swelling in the lower part of her body, on the right; it was as large as an orange, and tender on pressure. About the middle of June she was aspirated by her medical attendant for the supposed hæmatocele, several ounces of blood being withdrawn, with some relief to the pain.

Condition on July 8th.—Pale and thin, with pinched features, pulse 80, weak; temperature 99.4°. Tongue, clean and pale. She suffers much from constipation, her bowels never acting without enema or aperient; she is occasionally sick. The pain in the body has returned severely.

On examining the abdomen, there was found between the umbilicus and Poupart's ligament (on the right) an oval-shaped tumour, well defined, hard and somewhat irregular on its surface, not movable, tender on pressure. No fœtal heart-sounds or movements could be detected, but at a point midway between the umbilicus and the anterior superior spinous process a *bruit* resembling the placental or uterine *souffle* was distinctly heard. On vaginal examination the uterus was found pressed to the left and forward, with the os low down, and so patent as to permit the finger for 1½ inches. A bougie passed 4½ inches; there was slight muco-sanguinolent discharge.

She was kept at perfect rest in bed, with sufficient opium to relieve the pain. Under this treatment she improved a good deal, losing much of the pain; her appetite improved and the sickness ceased. On July 12th the fœtal heart-sounds were heard very distinctly; and a few days after fœtal movements were detected, and were recognised also by the patient. About the beginning of August she began to fall off again, and became so seriously weak as to necessitate further treatment.

Treatment.—On August 20th, two needles, four inches long, and insulated up to three-quarters of an inch from the point, were inserted into the tumour, one at either end; the needles were connected with a Leclanché battery, and the current of thirty cells allowed to pass for one hour. The mother was not anæsthetised, and felt only slight pain from the needles. Neither heart-sounds nor movements were markedly affected at the time, but on the next day were found to be decidedly weaker; and, on August 24th, neither could be detected. The patient felt no movement, but a cold heavy feeling. She felt better and more cheerful. The placental *bruit* continued, getting gradually weaker for the last three days till September 7th, when it ceased. The breasts enlarged the last few days, and there was occasional flow of milk. She continued to improve very rapidly in strength, and, on September 13th, was allowed to be up on the sofa; a firm abdominal bandage being applied. She came downstairs on September 20th, and continued to gain strength and flesh, the tumour steadily lessening.

Subsequent History.—Twelve months subsequently, the tumour was of the size of a small cocoa-nut, somewhat tender on firm pressure. Menstruation regular, the uterus occupying its proper position, but perhaps a little less movable than normal. Health excellent. Three years afterwards, I saw her again, and got the following facts. She had continued in very good health, as well as ever in her life; menstruation regular and painless. On examining the abdomen, no remains of the tumour could be felt; but, on bimanual examination, a not very well-defined thickening, of the size of a chestnut, was found in the position of the right ovary. The uterus was of normal size and position, and freely movable. She has remained perfectly well since; she has never become pregnant again.

Remarks.—There are one or two points of interest in this case. With regard to the aspiration, the scar of the puncture was found to be situated immediately over the spot of greatest intensity of the placental *bruit*, the trocar having evidently, therefore, happened to enter the placenta, from which the blood was withdrawn. There had never been any symptoms to indicate that rupture of a fœtal cyst, and consequent hæmatocele, had occurred. It is interesting and instructive further to notice the time the circulation through the placenta continued. Though the fœtal heart-sounds ceased on August 24th, the placental or uterine *souffle* continued till September 7th, or fourteen days longer. That the *bruit* was not simply a sound conducted from the great vessels in the abdomen or pelvis, I thought was proved (1) by the aspiration, and (2) by the sound disappearing when it did; if it had been simply an effect of conduction, it would not have ceased

so soon, as the tumour in that time had not shrunk in size sufficiently to annul the pressure necessary to produce conduction. This persistence of the utero-placental circulation bears strongly on the danger which is considered to attach to the removal of the placenta at the time of operation of abdominal section.

With regard to the treatment pursued, I was induced to try the effect of electricity for the following reasons. The operation of abdominal section did not then hold the position as a feasible and safe operation for such cases which it does now; next, there was an insuperable objection on the part of the patient and her relatives to operation; and, thirdly, the child had not arrived at an age to be viable.

Cases of extra-uterine gestation may, as to treatment, be usefully divided into two classes: first, those in which gestation has advanced to such an age as to give a viable child—say to seven months. In these it may be considered our duty, no contra-indication being present, to attempt to save the lives of both mother and child by performing abdominal section. This operation has now been performed with success in a few cases in England, beginning, I believe, with that of Mr. Jessop of Leeds.

In the second class, where gestation has not advanced to seven months—as in my case—but where it is considered advisable, owing to the condition of the mother, to operate, we can dismiss all regard for the child's life from our minds, and consider solely the treatment best calculated to save the mother. It is very doubtful whether, having diagnosed an extra-uterine gestation, it is safe to allow it to continue. Lesouef says that every woman the subject of extra-uterine gestation is doomed to more or less speedy death. Judging from the cases narrated, and from a few cases of my own, of the daily, hourly perils of rupture, etc., under which a woman with ectopic gestation lives, I believe it our bounden duty to try to arrest or remove it as soon as discovered.

I was induced to employ electricity for this purpose for the reasons before given. This agent has often been used with success to arrest the growth of an extra-uterine gestation. Duchenne, Barnes, and others have recommended and used it in the form of a shock, as from the Leyden jar. I was induced to prefer galvanism applied for a considerable time, from consideration of its well-known chemical effects in the coagulation and decomposition of albuminous tissues, and its power of splitting up both organic and inorganic substances into various absorbable products. Instances of this power are familiar to all, but a striking illustration has lately been furnished in its successful application for the decomposition and subsequent absorption of cicatricial tissue in the urethra. I hoped, therefore, by this electrolytic action, to obtain results beyond the mere death of the fœtus (which has been effected by other means, such as aspiration) and simple arrest of growth. This view was proved correct by the result; the final practically complete disappearance of every part of a fœtus of six months, showing a power of chemical decomposition and subsequent vital absorbability no less gratifying than surprising. To obtain this result I believe it to be necessary to insert both needles into the fœtus, and not simply into the sac. A slight consideration of the laws of electricity will, I think, show us why this must be so.

As to the place electricity should hold in the treatment of extra-uterine pregnancy, I should be inclined myself to have recourse to it in all cases in which the gestation is under seven months, and in which it is thought unsafe for the mother to postpone interference, in the hope of thus being able to save the child as well as the mother. Even if it be thought advisable subsequently to have recourse to the major operation, the condition will have been in no way made worse for operation by the previous use of electricity. The arrest of the developmental stimulus leads to a diminished and constantly diminishing afflux of blood, the whole growth becoming more of an inert mass, and hence in a more suitable condition for operation. Experience has shown clearly that operation is more successful after the death of the child than during its life. In this connection it is interesting to note the length of time the placental *bruit* lasted in this case, after the death of the child.

The great and only objection to the treatment by electricity is the fact that it leaves for a variable time a growth which, in the case of a second pregnancy, may be a source of considerable danger, either by pressure on itself causing rupture or inflammation, etc., or by the obstruction it produces to the development of the uterus or to the progress of labour.

In the case narrated, I believe that at the end of the twelve months the growth had so dwindled, and was so placed, that these risks would have been absent. If other cases so treated be equally fortunate, this objection therefore will be much reduced in value.

Mr. C. J. WRIGHT (Leeds) referred to a case of Dr. Braithwaite's (Leeds) read before the Obstetrical Society of London, where abdominal section had been performed soon after the death of a full-term fœtus. The placenta never came away, showing a property of absorption, as in one of Dr. Petch's cases, where the time of pregnancy was earlier. In this and another of Dr. Braithwaite's cases where Mr. Wright assisted, and in a third, where Mr. Wright himself performed abdominal section, seven months after the death of the fœtus, all the mothers recovered.

Dr. GILL WYLIE (New York) was convinced that when the diagnosis was made before the fourth month, the fœtus should be killed by electricity. If this failed, an operation should be performed before the general health broke down. Diagnosis was, however, often very difficult. Last winter, two physicians informed him that a widow, whom they had diagnosed to be several months pregnant, had been sent to be delivered in a hospital; she returned to them a few weeks later, saying that on August 29th she had been delivered of one child, and that the doctor, a celebrated authority, had discovered that there was another child outside the womb, and had kept her in hospital in order to destroy it by electricity. A few weeks later, however, the two physicians noticed that she was enlarging, and in six or eight weeks she appeared to have reached term, and they declared that they could hear the fœtal heart. Dr. Wylie then saw the patient in October. He found the abdomen flabby, and detected a large tumour to the right of the uterus the size of a child's head. There had been syncope and free diarrhœa two days before. Dr Wylie opened the abdomen and removed a part of a large cyst, which was declared by a pathologist to be a dilated tube; the remainder was stitched to the lower angle of the wound. The patient recovered. It then transpired that she had not been delivered of a child in hospital, but had been examined under ether, and electrolysis had been employed for supposed extra-uterine fœtation, the case being recorded as successful. In the second case, a woman with septic fever and bedsores had a tumour which appeared to be a dilated suppurating tube. Dr. Wylie operated, and found that the tumour contained a dead fœtus, which was removed, the patient making a good recovery.

Dr. GARDNER (Montreal) alluded to a case of extra-uterine fœtation in his experience. All the ordinary symptoms were present, and the diagnosis was easy. As in many similar cases, the patient had borne several children, but for nine years had not been pregnant, and had suffered more or less constantly from pelvic symptoms. A single complete coitus—the first for many months—occurred. After this, all the signs and symptoms were gradually developed. Faradisation was used, one pole being placed in the rectum, and the other over the tumour in the hypogastrium. As strong a current as the patient could bear was applied. After the sixth daily application, the tumour shrank suddenly, and pulsation ceased. The patient steadily improved for a fortnight, when, on being allowed some liberty of motion, she developed pain, tenderness, and swelling in the tumour, with high fever. So severe were these symptoms, that an operation to incise and drain the sac was seriously contemplated; but, meanwhile, the symptoms suddenly improved, and the patient gradually regained health. While faradic electricity will undoubtedly kill the fœtus, it may not always prevent the necessity for subsequent abdominal section.

Dr. EDIS agreed with Dr. Berry Hart that, in those cases where rupture of the cyst occurred, at or about the third month, with manifest symptoms of internal hæmorrhage, operation should at once be performed. Expectant treatment in these cases was practically hopeless. Dr. Aveling's case illustrated the effects of electrolysis, and, in this instance, the fœtus apparently became absorbed, but there always remained the danger of septic mischief before absorption was complete. After the sixth month, electricity or puncturing and aspirating the cyst were of questionable value. In many of these cases, very little liquor amnii was secreted, and even withdrawal of any small quantity which might be present did not necessarily ensure the death of the fœtus. Parry laid it down as an axiom, that puncture of an extra-uterine cyst—except for purposes of diagnosis—was unjustifiable unless removal of the fœtus by operation was at once performed. The risk to the patient of septicæmia from absorption of the decomposing fœtus, was great in these cases. Where the fœtus lay low down in the pelvis, partly in Douglas's pouch, it was best to cut through the cyst with Paquelin's cautery, and then to remove the fœtus, leaving the placenta, and draining and irrigating with iodised water. If abdominal pregnancy caused no pain, it was probably best, after the sixth month, to wait until full term, and then treat the case upon its merits, whether by the primary or secondary operation.

Dr. ROUTH observed that these cases resolved themselves into three classes—first, those up to the third month; secondly, those between the third and the middle of the seventh month, when the fœtal heart

was audible; and, thirdly, those after that date, when the fœtus was viable. Four signs made the diagnosis easy in the first class: (1) the general signs of pregnancy, (2) the shifting of the uterus to one side by a growing tumour on the other, (3) stoppage of catamenia, and, often, subsequent delivery of either a whole or part of a decidua, and (4) detection of placental *souffle* with vaginoscope, and not through abdominal walls. In these cases, any form of electricity, properly applied, would kill the fœtus, and would prevent possible rupture. As to the second class, it was one for operation, lest rupture should occur. As the child was not viable, abdominal section should be adopted, but he did not condemn Dr. Petch, as his case, if it proved nothing else, proved that even a sixth month child can be absorbed in a year, and safely. In the third class, where the child was viable, we should operate as in Cæsarean section, and endeavour to save the child.

Mr. LAWSON TAIT offered objections of the very strongest kind against the use of the electric current in such cases, because he considered it as one of the most nonsensical proposals which had ever been submitted to a surgical audience. His objections were very simple, but he thought they were irrefutable. In the first place, out of all his experience—and he believed it to be the largest yet put upon record—he had never yet been called upon to make a diagnosis in tubal pregnancy before the rupture had taken place. In fact, there were no symptoms in tubal pregnancy until rupture was established. He did not know of anyone who had ever asserted that he had made a diagnosis of tubal pregnancy before rupture had taken place; certainly he (Mr. Tait) had never been called in to such a case. Under such circumstances he could not imagine that the application of the electric current for the purpose of destroying the child before the fatal rupture had occurred would ever be called into requisition. Again, he did not believe that the diagnosis of extra-uterine pregnancy before rupture, even if opportunities were given to any large extent for examination, could be made with anything like certainty. To apply the electric current to every kind of pelvic lump that was present, under the suspicion that it was an extra-uterine pregnancy, would be a most haphazard dangerous proceeding, worthy of the strongest condemnation. He had also heard quite enough of the stories of the subsequent histories of cases where such diagnosis had been made, and where the electric current had been used, to justify him in using the strongest kind of condemnation which he could utter. Another argument against it was, that after the rupture of the tube, the destruction and death of the child was of no consequence at all: the organ which could not be destroyed by any electric current, but which would go on growing and would go on bleeding when it was torn, was the placenta. The rupture of the tubal pregnancy might take place, and yet the development of the fœtus might go on until full time in the folds of the broad ligament. To destroy that child—when it could be removed, as he had done with successful issue both for mother and child—was a form of murder which he could not rank within the lines of professional proceedings. Finally, if it were possible to succeed in destroying the child, the fœtus and placenta were left in the pelvis as an inert mass to be absorbed, and they would always remain a focus for possible disturbance, which was too great a risk to run. He, therefore, emphatically condemned the proceeding.

Dr. H. A. KELLY (Philadelphia) remarked, in reply to a question propounded by Mr. Lawson Tait, "Who had ever diagnosed extra-uterine pregnancy before the rupture?" that he had done so, and proved the diagnosis by operation. The diagnosis rested upon the rapid enlargement of the sac, pain, expulsion of decidua, and subsequent contraction of the sac; the operation was planned to relieve the continuous pain from which the patient was suffering, and from a consideration of the after-histories of many of those cases which had been treated by electricity, as developed by Dr. R. P. Harris in a series of letters addressed to surgeons all over the country. Some of these, notably one of Dr. Allen's—who was the first to use this method of fœticide,—had suffered repeated attacks of peritonitis, and continuous ill-health for years. The dead fœtus was not an innocuous mass which would inevitably be absorbed.

Dr. HANKS (New York) said that an extra-uterine pregnancy ought to be diagnosed early. A hematocele was accompanied by excessive pain, and attended with general signs of loss of blood, but with no evidence of pregnancy. A physician, he remembered, was called to see a lady suffering from acute pain in the region of the left ovary. The matter of diagnosis was left until a microscopist had examined a substance which had been expelled from the uterus. The microscopist happened to be a student, who reported that the substance was not decidua. This physician, who firmly believed that the case was tubal pregnancy, stated at the subsequent consultation, "I promised to abide by the report of the microscopist—I will do so; but the microscopist has made a mistake." A necropsy, a little later, confirmed the physician's statement. In abdominal pregnancy, physicians were not called in early, danger was not present, and death did not often occur. Tubal pregnancy ought to be diagnosed, and could be diagnosed, and the safest and surest means of cure at our command was electricity. In abdominal pregnancy the physician must wait without fearing the result, as it was not so much a question of days as of selecting that period for performing the operation of removing the fœtus when the patient's health began to deteriorate.

Dr. STEAVENSON, speaking of electrolysis, said that it would be an advantage if any decision could be arrived at as to the form of current to be used, and the reasons for the preference of one current to another. In the two cases just related, one fœtus was destroyed by galvano-puncture, and the other by the interrupted current. He would like to know in what way the faradic current was supposed to kill the fœtus—why the negative pole was introduced into the vagina? Dr. Steavenson then referred to the case of extra-uterine fœtation recorded by Dr. Matthews Duncan in the nineteenth volume of the *St. Bartholomew's Hospital Reports*, in which he (Dr. Steavenson) had destroyed the fœtus by electrolysis. The mother survived about a fortnight, and then died from septic matter absorbed from the decomposing dead fœtus. Dr. Steavenson also referred to a recent case of extra-uterine fœtation in which he had assisted at an operation for the destruction of the fœtus at the Samaritan Free Hospital. He was not able to give the result, but a week previously the patient had had an alarming rise of temperature. The reasons that Dr. Steavenson gave for questioning the opinion that shocks from faradic currents would produce the death of the fœtus were mainly two. The inhibitory apparatus of the heart was not developed in a fœtus three or four months old; and the tenacity of life in a fœtus was comparable to that which characterised the lower animals, such as tadpoles; and any current that was capable of destroying the life of the fœtus was much more likely to destroy the life of the mother. In the case referred to as happening at St. Bartholomew's Hospital, the faradic current was tried before galvano-puncture. The success that had followed the use of the interrupted current in America, and in the case just brought before the Section, certainly warranted its more frequent trial in this country.

Dr. LUSK explained that both the galvanic and faradic currents had their partisans in America. The galvanic current usually destroyed the embryo at a single sitting, but it must be used of great strength. The faradic current might be of moderate intensity; and it should be applied for five minutes at a time twice a day, and should be continued for several days, until a distinct diminution of the tumour was experienced. The most convenient and effective method consisted in placing the negative pole over the tumour through the rectum, and the positive pole over the abdomen.

SPHYGMOGRAPHIC TRACINGS IN PREGNANCY, LABOUR, AND THE PUERPERIUM.

Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association held in Brighton.

BY J. W. BALLANTYNE, M.B.,
Assistant to the Professor of Midwifery in University of Edinburgh.

THE condition of the circulatory apparatus in pregnancy, labour, and the puerperium has been extensively investigated by many able observers, and the question of the influence of cardiac and renal lesions upon this condition has also been widely studied; but sphygmographic tracings made with a view to aid in the elucidation of certain phenomena arising from such considerations have been comparatively rare. It is extremely difficult in private obstetric practice to make frequent, regular, and accurate pulse-tracings during the progress of labour and in the puerperal period, and this fact no doubt explains to a great extent the absence of any large amount of literature bearing upon the subject. Maternity hospitals, however, afford us much better opportunities of making such sphygmographic observations; and it was during my term as house-surgeon in the Edinburgh Royal Maternity Hospital, that I was enabled to make a series of pulse-tracings in more than fifty cases of labour occurring both within the hospital and also in the out-door department. The consideration of some of the tracings thus obtained forms the subject of the present paper.

My earlier observations were made with the Dudgeon sphygmograph, my later ones with the instrument of Marey as modified by Mahomed. In several test-observations, I found that the Dudgeon

instrument gave quite as reliable results as the Mahomed, and I should most strongly recommend the former if it be wished to make sphygmographic tracings in private obstetric practice, as it is portable and very easily adjusted, whilst in a lying-in hospital the more cumbersome instrument of Mahomed may be preferred, as one can with it more accurately regulate the pressure. The amount of the arterial tension may be determined from an examination of the minimum amount of pressure required to obliterate the pulse-wave, and this pressure may be obtained either by means of the eccentric in such a sphygmograph as Mahomed's, or by means of special instruments called sphygmomanometers or sphygmomanometer sphygmoscopes, as was done by Lebedeff and Porochjakow. The blood-pressure may also, however, be estimated from a consideration of the characters of the pulse-tracing, the presence of a plateau, and a well-marked predicrotic wavelet denoting a state of high arterial tension, and this is the method by which I have arrived at certain conclusions with regard to the state of the circulation in normal and abnormal gestations. The observations made upon the pulse during the puerperium were taken as far as possible twice daily, in the morning between ten and eleven, and in the evening between seven and eight. Where any special medicines were given, any special treatment adopted, or where any marked changes occurred in the temperature-curve, such facts were carefully noted and allowed for. The sphygmograph was applied to the right radial artery, and the observations were made with the patient in the dorsal decubitus.

Sphygmographic Tracings in Pregnancy.—Let us now consider the characters of pulse-curves made during the progress of gestation.

The observations of Ducrest, Larcher, and Blot have proved the existence of cardiac hypertrophy during pregnancy; but the experiments of Löhlein and others go to show that the French authors have probably overestimated the amount of this hypertrophy. Marey, Mahomed, Macdonald, Fancourt Barnes, Louge, and others have shown, by means of sphygmographic tracings, that the pulse during pregnancy is one of high tension, and that the high tension is best seen in the later months of pregnancy and in primiparæ. In comparatively few cases have I been able to demonstrate this high tension gestation tracing; but this fact is, I think, to be explained by the circumstances in which we find maternity hospital out-patients. Of the patients entering the Edinburgh Lying-in Hospital before the commencement of labour, very few were healthy women, nearly all were in a poor state of health, and many were suffering from cardiac, pulmonary, or gastric derangements. Perfectly normal cases usually only came into hospital when seized by the pains of the first stage of labour; hence I was very seldom able to obtain tracings in thoroughly typical healthy pregnant women. In one or two hospital cases, however, and in several private patients, I have been able to demonstrate a large pulse of high tension, with a well-marked predicrotic wavelet, during pregnancy. I have also noted an increase in the rapidity of the pulse during gestation, the pulse-rate usually varying from 80 to 84 beats per minute; but I have not observed the change in the character of the sphygmographic tracing described by Louge as taking place synchronously with the sinking down of the uterine fundus during the few days preceding the commencement of labour.

In several cases of pregnancy complicated by serious heart-disease, I obtained pulse-tracings, and in all these cases there was an absence of high arterial tension, a loss of regularity, and a decided increase in the pulse-rate. In cardiac cases, especially where the lesion affected the mitral valves, there was found a small, rapid, and often irregular, dicrotous pulse-tracing.

In pregnancies complicated by pulmonary lesions, such as incipient phthisis, bronchitis, and pneumonia, very similar sphygmographic characters were noted, namely, small dicrotic rapid pulse, with, especially in bronchitis cases, a distinct undulation o the respiratory base-line.

In cases of pregnancy accompanied by albuminuria, there was ound, on the other hand, an extremely slow pulse of a very high arterial tension, as evidenced by the presence of a distinct plateau, predicrotic wavelet, and gradual line of descent in the tracing.

The causation of the high tension pulse of a normal pregnancy is, no doubt, complex, the following being the leading etiological factors: cardiac hypertrophy, increased pressure upon the kidneys, increase in the quantity of blood, and also probably, as Barnes holds, functional increase of nerve-force.

It can easily be seen how cardiac, pulmonary, and renal disorders will, by interfering with one or other of the above named factors, lead to the appearance of such tracings as have been described. The sphygmograph in pregnancy is, I believe, of greater prognostic than diagnostic value. It may be possible, in obscure cases of early pregnancy, to obtain a diagnostic hint from pulse tracings; but the sphygmograph has a great and certain value in enabling us to foresee and guard against several of the complications of labour, such as eclamptic seizures, syncope, and the like.

Sphygmographic Tracings in Labour.—Macdonald found it so difficult to apply the sphygmograph (Marey's instrument as modified by Mahomed was the one employed) in a satisfactory way during a pain, that he published in his work entitled, *Bearings of Chronic Disease of the Heart upon Pregnancy, Parturition, and the Childbed*, only four tracings made during pains, and hesitates to draw any conclusions from them. In a recent number of Volkmann's *Sammlung Klinischer Vorträge*, Vejas publishes tracings taken during uterine contractions, and Louge, in his monograph, gives tracings taken at various stages of parturition, before and after the rupture of the membranes, etc. These observations show that during parturition there is high vascular tension, most marked during the expulsive efforts of the second stage.

With the Dudgeon instrument I found that it was quite possible, with care, to obtain reliable tracings during the pains of labour; with the Mahomed sphygmograph I obtained unsatisfactory results. In the intervals between the pains in the first stage of a normal labour, the pulse was found, as a rule, to be slow (from 60 to 70 beats per minute), and of medium tension. On the supervention of a uterine contraction, the pulse became more rapid, and there was a rise in the blood-pressure. There appeared in the pulse curve a predicrotic wavelet, and the tension, as measured by Mahomed's method (drawing a line from the apex to the bottom of the aortic notch) was increased. In tracings made during the pains of the first stage of labour, especially when the labour was lingering, I have frequently noticed the occurrence of numerous secondary wavelets in the line of descent. These wavelets seemed to appear when the uterine contractions were not acting effectually in dilating the passages, and when the mother was becoming exhausted. As the first stage of labour progresses, the pulse becomes larger, and the high tension during the pains becomes more marked, whilst the decrease in the tension in the intervals is less marked. In tracings taken during very powerful uterine contractions, there was noted a distinct undulation of the respiratory base-line, due to the strong inspiratory and expiratory efforts being made by the patient.

Tracings made during the second stage of labour show similar but more marked phenomena, and this is easily understood when we remember the character of the pains of the expulsive stage. I found quickening in rate, irregularity, and high tension, with undulation of the respiratory base-line. In most of the tracings taken during the pains of the second stage, I was unable to get the pressure changed in time to get the most perfect results, for it is evident that the working pressure in the intervals is far from being the best working pressure in the pains.

The tracings which I have taken during the third stage of labour show that the pains which are effective in expelling the placenta and membranes produce similar changes in the sphygmographic curves to those produced by the dilating and expulsive efforts of the first and second stages of labour, but less marked.

In labours complicated by cardiac lesions, I found that the onset of labour caused a slowing and steadying of the pulse. In a case of aortic stenosis, for instance, in which the pulse during pregnancy had been rapid, small, dicrotous, and irregular, during labour it became larger, slower, less dicrotous, and more regular. These changes were noted in all the cases of cardiac disease complicating labour which I saw, except one very serious case of mitral stenosis and incompetence, which ultimately proved fatal, twenty-one days after labour, from pneumonia and empyema.

In cases of phthisis complicating labour, I likewise found that the pulse became larger, less dicrotous, and more regular, during the pains of parturition.

In a paper read before the Edinburgh Obstetrical Society in 1885, I pointed out some of the characteristics of pulse-tracings made during labours complicated by eclamptic seizures, and showed that an eclamptic fit had an effect upon the pulse-curve very similar to that of a uterine contraction in a normal case of labour. The pulse characteristic of a labour complicated by eclampsia is small, rapid, usually regular, and of high tension.

Sphygmographic tracings made during labour are chiefly of interest in that they demonstrate in a scientific way well-known clinical facts. They may also have some prognostic value as regards the progress and termination of the parturition.

Sphygmographic Tracings in the Puerperium.—The question of the state of the blood-pressure during the puerperium is far from being settled: some observers, as Marey, Mahomed, Blot, Macdonald, and Louge, holding that it is normally high; others, such as Meyburg,

Fancourt Barnes, and Porochjakow, stating that, in a healthy condition, it is low during this period. Everyone is agreed that the normal puerperal pulse is slow. In the Edinburgh Maternity, I found that in all cases of normal labour, in which there was no development of feverish symptoms during the puerperium, there was, during the lying-in period, a slow pulse of high tension, with a well-marked plateau and predicrotic wavelet. The pulse-rate varied from 60 to 80 beats per minute, and 65 I hold to be about the normal rapidity of the pulse in a healthy lying-in woman. Where the establishment of the lacteal secretion on the second or third day is accompanied by the development of feverish symptoms, then I admit, as Fancourt Barnes states, that we have a large excited pulse of low tension; but I have not found that this pulse thereafter retains its dicrotous character.

The pulse of the normal puerperium, then, I hold to be one of high tension, complete regularity, and considerable slowness. The high tension is marked by the presence of a well-developed plateau in the tracing and by the presence of a predicrotic or tidal wavelet. The slowness and high tension are probably due to several causes, such as the dorsal decubitus of the patient, the cardiac hypertrophy, the closure of blood-vessels at the placental site (as Hemey suggests), and the involution of the uterus with the increase of fat in the blood, as Olshausen and Russmann hold, or of peptone from the involution of the muscular substance of the uterus. It appears to me that the puerperal peptonuria of Fischel is a most important etiological factor in the production of the typical pulse of the puerperium. This puerperal peptonuria may easily be detected by the rosy red which such wines give with alkaline solutions of cupric sulphate in the cold. It is well known that the characters of the pulse in albuminuric patients are like those of the pulse in puerperal slowness and high tension, and Purdy has recently published tracings showing similar pulse characters in patients suffering from glycosuria. In all these three conditions, and also perhaps in gout, we have a substance in the blood (peptone, albumen, sugar, or uric acid), being excreted by the kidneys, and causing the high vascular tension.

In puerperæ with high temperatures, especially if accompanied by septicæmia, we find a rapid, fully dicrotous pulse, and after labours accompanied by hæmorrhage, such as cases of placenta-prævia, we find a pulse of low tension, but under suitable treatment the high tension reappears in a few days. In cases of labour accompanied by severe eclamptic seizure, there is at the beginning of the puerperal period a low tension pulse, but this tends to become replaced by a pulse of high tension, as the puerperium advances. In cases of cardiac and pulmonary disease I have found a very normal looking pulse tracing during the first two or four days of the puerperium, the pulse assuming its former abnormal appearances later on in the puerperium.

I have not found a period of depression supervening immediately after the completion of the third stage of labour, such as has been described by some authors, notwithstanding the fact that I made many sphygmographic tracings at this time.

ON INEXPLICABLE PYREXIA.

By W. HALE WHITE, M.D.,
Assistant Physician to Guy's Hospital.

It must be within the experience of every physician to have come across cases of pyrexia, the cause of which he is unable to discover. No doubt in many instances the patients have tuberculosis or typhoid fever; still there are cases in which neither typhoid nor tuberculosis will explain the rise of temperature, and which we can only call examples of perverted thermogenetic metabolism. It may be worth while to recall the facts that the muscles are the chief thermogenetic tissues in the body; that the heat-producing changes in them are quite apart from their motor functions; that this thermogenetic function is presided over by a centre which is either close to the fissure of Rolando, or else in the corpus striatum; that there are secondary centres in the cord; that these centres can probably be affected by the stimulation of an afferent nerve in any part of the body; that the cerebral centre is continually exercising an inhibitory influence on the thermogenesis: and thus, when the centre is destroyed, the temperature rises.

In addition to the above mechanism, the cutaneous vaso-motor system regulates the temperature of the body to some extent, but has no influence in producing it; and, in the group of cases we are considering, there is no evidence whatever that the vaso-motor system is affected. There is at present no decisive evidence to show which part of the thermogenetic system is perverted; it is most probably the centre. This perversion is most likely to be functional, and may be fatal, for I take it that a functional disease may kill. It is only by the functions of the various organs that we are enabled to live, and if these be perverted we die; it matters not whether in the *post mortem* room we are able to see the cause of this perversion. In the case of many poisons, for example, we cannot see it. Then also, apart from these considerations, the pyrexia renders the patient liable to bronchitis and pleurisy, either of which may cause death.

The majority of cases of perverted thermogenetic metabolism recover, but first I will give some cases which did not. Rosa B., aged 33, was admitted on August 30th, 1883, under Dr. Taylor, to whom I am indebted for permission to publish the case. Family, personal, and previous history unimportant; six weeks before admission she had a shivering fit; since then she has had great pain in the legs, loss of appetite and scanty urine. On admission, the only notable points were, that there was a transient papular rash, and the urine was high-coloured, containing much uratic deposit and one-third albumen. The report of the patient's condition during her stay in the hospital is too long to detail here. The chief symptom was a series of violent rigors, and no assignable cause for them was discoverable. During the whole of her stay in the hospital there was hardly a day during which the temperature at one period of the twenty-four hours was not normal or thereabouts, and at some other period considerably raised. These rises were curiously regular. Thus, for a week the highest point, which was about 103°, would always be reached at noon, then for a series of days at 3 P.M., then it would again vary to some other time. The patient gradually wasted and died, after she had been in the hospital eleven weeks. At the *post mortem* examination there was recent bronchitis and pleurisy, which had no doubt been the cause of death, but no reason whatever for the pyrexia could be discovered.

During the last twenty years, we have had at Guy's, in addition to the above, four cases in which nothing was found to account for the pyrexia. One of them was a man, admitted with high temperature and delirium tremens, in whom the temperature gradually ascended and reached 108° before death; another was a man who was admitted with fits, and in a condition of status epilepticus; he had pyrexia and died; another was a child who had frequently had very severe attacks of chorea; on admission she was so bad that chloroform was administered, but without any effect; the temperature began to rise, attained 108.4, and the child died; whilst another was a child who, as she was sitting before the fire, was suddenly seized with right-sided convulsions, which continued for about twenty-four hours, the temperature having risen to 109.1. She died shortly after.

Were it not for these fatal cases, I should hesitate to urge the acceptance of a distinct disease, "inexplicable pyrexia," or "perverted thermogenetic metabolism;" but with them before us, it is fair to assume that some of the cases which recover belong to the same category rather than to that of tubercle, typhoid, etc. It has just been hinted that it is probably the calorific centre which is at fault; the points which go to prove this are the following:

1. In many cases, pyrexia is undoubtedly due to a lesion of the central nervous system, as, for example, cerebral hæmorrhage, tumours, especially of the pons and medulla; also we find pyrexia sometimes in insular sclerosis and locomotor ataxy.

2. In the last four of these five fatal cases here recorded, the central nervous system was evidently at fault.

3. Hysterical pyrexia is now known to be a distinct malady. I recently brought a case before the Clinical Society, and showed the chief characteristics of the disease, and the methods by which it could be diagnosed.

For these reasons, it seems a probable hypothesis that, in the cases of "perverted thermogenetic metabolism" which recover, the central nervous system is deranged. Like most other functional diseases, as a rule, this is not fatal; but of all functional diseases, it is probably the most likely to be so, for the long-continued pyrexia is liable either to kill by itself, or to set up pleurisy and bronchitis, which will carry off the patient. This leads one to remark that many symptoms may exist which tend to obscure the diagnosis, but which are only the result of the pyrexia; thus, I have known wasting, headache, delirium, albuminuria, pleurisy, bronchitis, and enlarged spleen to be present. This renders the cases open to much criticism when published, and also makes it necessary to take the greatest possible care in the diagnosis of them.

The proposition that these cases are functional is sufficiently proved by the absence of any visible changes at the *post mortem* examination. The word functional is used with the loose meaning that is usually attached to it; by our present light, it is impossible to give it an exact definition, but members of the profession understand sufficiently what is meant by it.

In the cases which recover, it is difficult with certainty to exclude other diseases. During the year 1884, there were, in Guy's, fifteen cases in

which the only heading that could be found for the report was "pyrexia." Some were, no doubt, intestinal attacks, rheumatic attacks, and other maladies, of which the only symptom present was the pyrexia, but some must, in all probability, have been due to perversion of the calorific centre, for the cases in which *post mortem* examinations were made have shown that such a disease exists. The only cases I will mention in detail are those which have come under my notice during the last year.

One is that of a man who has much mental work, and who gets diurnal attacks of pyrexia, which are accompanied by headache, and, after they have gone on for a month, he wastes a little, has a slightly enlarged spleen, and suffers from lassitude. He has been examined by many physicians, and the cause of the pyrexia has never been detected, so that at last, by a process of exclusion, it seems necessary to come to the diagnosis of a "perverted heat-centre." If he leaves off his work and takes a holiday, he gets all right.

Another case is that of a boy who was in Guy's Hospital from August 22nd to December 5th, under the care of Dr. Pye-Smith and myself; during the greater part of his stay his temperature was raised; the only physical sign that could ever be detected was a slight questionable change at one apex; even this was not present during the whole of the time, and it was quite insufficient to account for his pyrexia. He wasted considerably, but eventually recovered, and went out of the hospital, to all appearance, quite well.

I have appended the third case, which shows many symptoms, all probably due to the pyrexia, such as slight bronchitis and slight albuminuria; the œdema of the feet was merely a result of the anæmic state of the child, as was likewise the cardiac murmur. It is to be noticed that the temperature continued high long after the pulmonary symptoms had disappeared, and that it was very regular in always attaining its maximum at the same time of day, a point I have observed in other cases; sometimes the point of maximum would be obtained at the same time of day for a week or so, then it would be at another hour of day for another week or more.

John S., aged 18, was admitted under Dr. Carrington, and, in his absence, passed under my care April 5th, 1886. One sister is said to have died of consumption, otherwise the family history is unimportant. Seven years ago the patient was in a hospital in Galway for 6 weeks with a bad cold. He has been in London three years, and thinks that during that time he has been gradually losing health.

Six weeks ago he caught a cold and cough; these passed off. Seventeen days ago his feet began to swell; he got a slight cough, but spat up nothing. He has had pains in the limbs and back, and has got very weak. He has sweated a good deal at night.

Condition on admission is thin and poorly nourished. There is a hæmic murmur. On percussion the note is a trifle better at the right apex than the left; on deep breathing there is an occasional *râle* at the left apex. Urine contains one-eighth albumen. He complains of pain in the upper part of the back and in both knees. Skin dry and hot; no œdema anywhere; temperature 103.0°; optic discs normal; no tubercles on choroid; no expectoration in which to look for bacilli.

The next day an occasional crepitation could be heard at various parts of the lungs. The urine contained less albumen. April 7th, there were rather more moist sounds, but still very few, and a trace of œdema on the right leg just above the ankle, and a faint trace of albumen.

After a few days these signs disappeared, but the temperature nevertheless remained high, the patient not having a single physical sign to account for it. During his first week in the hospital the highest temperature was 103.6°, the lowest 100°, during the second week the highest was 102.4°, the lowest 97.4°. During the third week the highest and lowest were as the week previously, the mean was 101°. During the fourth week the highest was 103.2°, lowest 98°. After this it gradually fell and became normal in a few days; it then remained slightly subnormal till he went out. The highest temperature of the day was nearly always reached between 2 and 6 P.M.

The above cases—some fatal, some not—seem to point to the desirability of recognising cases of "perverted thermogenetic metabolism" as a distinct group, probably due to a perversion of the calorific centres. I look upon them as distinct from hysterical pyrexia, the peculiarities of which are indicated in the paper brought before the Clinical Society, just as hystero-epilepsy is distinct from genuine epilepsy. The literature of the subject will be found fully given in various articles, viz., "Hysterical Pyrexia," *Transactions of the Clinical Society*, 1886; "The Theory of a Heat Centre from a Clinical Point of View," *Guy's Hospital Reports*, vol. xlii, and "Neurotic Pyrexia," *Practitioner*, Jan., 1886.

CLIMATES OF WINTER HEALTH-RESORTS.

By CHARLES ROBERTS, F.R.C.S., ETC.

As this is the time for the departure of medical men and invalids to their respective winter health-resorts, I wish to interest them—especially the medical men—in the study of the climates of their respective stations by phenological observation. Many meteorological observations have been made at the best known stations; but, apart from the errors which are inseparable from the use of meteorological instruments, and the prejudices of observers in favour of the localities in which they live, the methods of making such observations are not uniform, nor do they extend over a sufficiently long period of time to afford trustworthy results. They are not available for comparing the climates of such stations as Ventnor, Biarritz, Nice, Palermo, and Algeria, much less the more remote stations in Florida, California, Australia, the Hill-stations of India, and other tropical and sub-tropical regions; and it is only by systematic and simultaneous observations on the growth of plants and trees which are found natural and cultivated in them, that strict comparison becomes possible.

A meteorological instrument records a momentary atmospheric condition. A plant does this, and much more; it records the current conditions, and sums up or registers all the past meteorological and geological conditions to which it has been exposed. Those who are acquainted with Dr. J. H. Bennet's *Winter and Spring on the Shores of the Mediterranean* know what interesting and valuable results he obtained from observing the condition of the vegetation at the various stations he visited. But Dr. Bennet "held a brief" for Mentone, where he had lived many winters, and recovered his shattered health; and his observations on vegetation were made at Mentone during the winter months, and at the other stations in April and May, so that the conclusions he arrived at were inferences, rather than actual observations at corresponding periods; and, from my own observations, I think he has not formed a just estimate of the winter climates of such places as Palermo, Malta, Corfu, and Malaga. Phenologists cannot accept mere inferences, however probable they may appear to be, and nothing short of simultaneous records will satisfy them; and it is with a view to securing observations of this kind, that the following scheme has been drawn up.

The plants and trees included in the schedule are well known in our winter health-resorts, and require no botanical skill for their identification; but observations should not be recorded when there is any doubt on this head. The plants are arranged in three groups, to indicate roughly the chief varieties of climate of the Mediterranean basin, in which we are more immediately interested. The first group indicates a hot, arid, sandy or rocky soil, and a dry, sunny atmosphere, like those of the south-east coast of Spain, Upper Egypt, and the borders of the African Desert. The second group characterises the colder and damper climate and soil of the Riviera, Southern Italy, Sicily, Malta, Algeria, and Lower Egypt; and the third group, the still colder and damper climates of the Italian Lakes, the West Coast of France, Spain and Portugal, and the South of England. This last group brings the ordinary climate of England into relation with that of the Mediterranean, and will connect this schedule with the one which I have specially prepared for differentiating local climates in the British Isles.

It would be desirable to make concurrent observations on the maximum and minimum shade-temperature at each station (by means of verified registering thermometers, exposed in Stevenson's stands, which are to be obtained at the principal instrument-makers in London), to ascertain the extreme range of temperature, and the lowest which each plant will survive. We know, for instance, that the lemon tree is killed by a temperature of 24° Fahr., and the orange by 21° Fahr.; while the olive tree will bear 16° Fahr., although its young shoots are killed by a temperature no lower than 25° Fahr.; and we gather from these facts that, at stations where these trees flourish, the temperature never falls so low as these figures indicate, even for a night or two, during many consecutive years. As observations on the rainfall cannot be carried on all the year, the relative dampness or dryness of different stations cannot be determined by the rain-gauge; and we must rely on the known habits of plants, in their relation to moisture of air and soil, to help us in this respect. Any one who has passed quickly between Nice, Palermo, and Algiers, cannot but have noticed the difference in the general aspect of the vegetation at each place; its greater activity at the latter station indicating a greater amount of moisture in the air and soil than at Nice, while Palermo holds an intermediate position.

The following observations should be recorded of each plant in the list. Does the plant or tree grow at the station? Is it protected from

the cold, sun, or wind? Does it blossom; and at what date does the first blossom appear? Do its fruit or seeds ripen, and at what date do they arrive at maturity? With respect to the deciduous trees (pomegranate, vine, fig, almond, and horse-chestnut), at what date do the leaves open (first leaf-surface visible); the first blossoms open; and the first fruit or seeds ripen?

1. Carob or Locust-bean (Ceratonia Siliqua); Prickly-pear or Indian fig (Cactus Opuntia); American aloe (Agave Americana); Date palm (Phœnix dactylifera).

2. Pomegranate (Punica granatum); Banana (Musa sapientum); Lemon tree (Citrus Limonum); Sweet orange (C. Aurantium); Olive (Olea Europœa); Australian blue gum-tree (Eucalyptus globulus); Bamboo (Bambusa vulgaris); Dwarf European palm (Chamærops humilis); Oleander (Nerium Oleander).

3. Magnolia (M. grandiflora); Camelia (C. Japonica); Myrtle (Myrtus communis); Vine (Vitus vinifera); Common fig (Ficus carica); Adam's Needle (Yucca gloriosa); Almond (Amygdalus communis); Horse-chestnut (Æsculus Hippocastanum).

By means of simultaneous observations on these plants, or a small number of them, it will be easy to lay down on a map isophenal lines similar to, but by no means identical with, the isothermal lines laid down by meteorologists; and thus produce a diagrammatic representation of corresponding climates, and the differences of one station from another. I shall be glad to receive and work out the results of any observations which may be made by means of this scheme during the coming winter.

SURGICAL MEMORANDA.

DISLOCATIONS OF THE HUMERUS.

Mr. Longfield's case of dislocation, reported in the Journal of November 6th, p. 860, was one of the subglenoid kind. In these the abduction process, as a rule, answers admirably. About three weeks ago I was called to a subcoracoid one, in which the method as described by me in 1881, and by Dr. Macleod in 1886, failed altogether. After abduction and extension with depression of the scapula, had been employed vigorously for about an hour, the case developed into a subglenoid one, and was reduced by the House-Surgeon of the Blackburn Infirmary, the patient absolutely refusing to have his arm abducted by me any more.

C. R. Illingworth.

THERAPEUTIC MEMORANDA.

OPEN-AIR TREATMENT OF PHTHISIS.

A. B., aged 24, was first seen June 24th, 1886. He was very anæmic, and easily tired on very slight exertion. Rather free hæmorrhage had alarmed him. The fauces were red and inflamed, and showed blood oozing from one or two points. There was slight, hacking cough. Temperature raised. Physically, little or no signs in the lungs. He left a few days after for Brighton to spend his holiday, and then became rapidly worse; but, after ten weeks' careful treatment, recovered, so as to return to London, September 15th, 1886.

There was great emaciation, rapid pulse and high temperature, scanty expectoration, often highly tinged with blood. Examination revealed a distinct cavity on right side, with a fairly healthy left lung. The family had had too much experience of such cases to object to any treatment that held out better chances of cure than that ordinarily adopted, and, after careful explanation, both patient and friends agreed to adopt an open-air treatment. This commenced September 24th. His weight was then 8st. 4½lbs. The patient was carried up and down stairs in an invalid chair. His nights were restless, appetite very fairly maintained.

At the present time, November 3rd, there is but seldom a slight tinge in the expectoration, the lung showing evident signs of repair, the weight is 8st. 13lbs., and the patient takes fairly good walking exercise every day, and is starting for Australia on the 15th inst. The treatment is as follows:—A large room facing the south, and in a house situated in an elevated part of Hampstead, near the mouth of the Primrose Hill Tunnel of the London and North-Western Railway, is cleared of all furniture, except bare requisites. The bed is placed in one corner, sheltered from all draughts; the window is left wide open at the top; the bedroom door is also kept open, together with the staircase window near, and the door and corridor of an adjacent dressing-room.

Woollen clothing for the whole body is worn both day and night. Iodine is freely distributed about the apartment, and a pad soaked in terebene placed under the chin when the patient is in bed. Food is pushed, cod-liver oil, with iodoform pills and iron, completing the treatment, except an occasional aperient pill, and one with belladonna and oxide of zinc, to control night perspirations.

South Hampstead. Richd. Neale, M.D.Lond.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GUY'S HOSPITAL: CHARITY (MATERNITY) DEPARTMENT.

EXTIRPATION OF A RUPTURED UTERUS.

(Under the care of E. Collingwood Andrews, B.A., M.B., B.C.Cantab., B.Sc.Lond., Senior Obstetric Resident.)

On September 12th, about 9 P.M., Mr. E. Collingwood Andrews was summoned to the fifth labour of Mrs. S., aged 31, who was said to have had pains for twenty-four hours. The membranes had ruptured at 6.30 P.M., and the pains then increased in force and frequency, culminating in exceedingly strong and prolonged uterine contractions. The head, which was presenting, advanced but little, and very shortly collapse, intense abdominal pain, and a total cessation of all expulsive efforts ensued. It was at this stage that the extern-attendant sent for Mr. Andrews, who found the patient nearly pulseless, pale and exhausted, but quite conscious; the os was fairly dilated, and the head was on the pelvic brim. Recognising the urgent necessity for immediate delivery, Mr. Andrews introduced the long forceps, and without the least difficulty effected the birth of a still-born female infant, which was followed by a rather copious gush of blood, although the uterus appeared firmly contracted. As the placenta was not expelled, the hand was introduced; it passed through a large rent in the uterine wall into the abdominal cavity. By following up the cord with the finger, it was found that the placenta was in the peritoneal cavity, above the uterus; it was easily removed. The pulse was now imperceptible, and the patient pallid and apparently at the point of death. An injection of ergotin, gr. i, was given, and in half an hour she had slightly improved, though coils of intestine were protruding from the vulva. In the temporary absence of Dr. Galabin, Mr. Andrews consulted with his colleague Mr. A. E. Price, and it was agreed that the patient's only chance lay in the immediate performance of abdominal section. Ether was accordingly administered, and with the assistance of Mr. Price and Mr. F. R. Bisshopp, Mr. Andrews opened the abdomen by a median incision from the umbilicus to half an inch above the pubes; each layer was divided in turn on a director until the peritoneal cavity was reached. Mr. Andrews, by passing his hand downwards and to the left over the uterus, found a large ragged tear at the left border of the organ. The uterus was lifted out through the abdominal wound, and the cervix carefully clamped below the rent. The pedicle also was transfixed, and tied with a stout double silk ligature; the uterus and appendages were then removed by cutting through the stump. The abdominal cavity was next sponged out as completely as possible, and the pedicle brought forward and fixed with hare-lip pins to the lower part of the abdominal incision, the upper part of which was closed with wire sutures. During the whole operation, there was but very little hæmorrhage, and in its earlier stages the patient's condition was all that could be expected. Towards the end, however, she gradually sank, and died soon after the operation was completed.

Remarks by Mr. Collingwood Andrews.—A not unimportant feature of the case is the absence of any appreciable hæmorrhage from the vulva. I felt convinced, however, that there must be considerable loss of blood into the peritoneal cavity, and this I afterwards found to be so. The rent extended from the attachment of the left broad ligament vertically downwards to the cervix, and then transversely across the anterior cervical wall, measuring roughly six and a half inches. The extent of the extreme laceration and thinning of the edges determined me to remove the whole organ, rather than suture the tear. Had there been at hand a *serre-nœud*, I should certainly have used it in preference to the ovariotomy-clamp I actually employed. I would note, too, the singularly small amount of blood lost

during the operation, even though the pulse had improved under the ether; and I believe that, had it not been for the large hæmorrhage into the peritoneal cavity, the patient would have had a fair chance of recovery. Finally, I would urge that, though some details—such, for instance, as the treatment of the pedicle—are still under discussion, the main lines of procedure in these terrible cases are in the direction of an operation such as I performed.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 26TH, 1886.

THOMAS BRYANT, F.R.C.S., President, in the Chair.

Six Cases of Tumour of the Bladder removed during the last twelve months, with a brief sketch of their histories and the results.—Sir HENRY THOMPSON gave a brief sketch of six cases of tumour of the bladder, in which he had operated during the last twelve months, showing the parts removed in each case. In three the suprapubic operation was employed; in two the perineal incision only, and in one, that of a female, urethral dilatation was sufficient for the purpose. In two cases the result was without doubt a complete and permanent cure. In two others the disease, although known to be considerable, was more so than might have been expected from the preliminary examination, and death, in each case imminent, was in one certainly, perhaps in both, postponed for a short time. In each the operation was undertaken only with a view of palliating the patient's condition, not of saving him; removal of the growth, so far as this was possible, being the only mode of arresting severe and continuous hæmorrhage. The remaining two cases were of recent date, and it was only possible to say that the patients had thus far progressed satisfactorily.

Case of Suprapubic Lithotomy two years after the removal of Growth by Perineal Operation.—Mr. BERNARD PITTS described this case. The patient was a man, aged 45, who began to have hæmorrhage from the bladder about three years before the first operation, or five years ago. When he first came under observation, he was losing a large quantity of blood, his urine was very offensive, he was cachectic, and unable to follow his occupation. After operation and removal through the perinæum of a pedunculated papilloma, he regained his health, his urine became clear, and he saw no trace of blood in it for a year and a half. When examined in July last, he was in good general health, and actively engaged in his occupation as a watchmaker, but he had a constant deposit of blood and mucus in his urine, and was occasionally passing small clots; micturition was frequent, and attended with some pain. In spite of treatment, these symptoms continued; and on September 22nd a suprapubic exploration was made, and it was found that, at the site of the old pedicle, namely, just below the right ureter, there was a widely diffused recurrence, the growth was for the most part but slightly elevated, but there were several cone-like elevations of the size of the top of one's finger. These projecting buds were nipped off with forceps, and the broad base of the growth was scraped with a sharp spoon. A number of small sessile tufts were seen on the sides and base of the bladder, and were, so far as possible, removed with the spoon. The patient made a good recovery, and exactly one month after operation the bladder-opening had entirely closed. He had since lost all trace of blood in his urine, and all pain. The portions of growth removed were firm, and quite different in naked-eye appearance from what was removed on the first occasion. Microscopical examination showed the recurrent growth to be a papilloma, presenting, however, many of the appearances described by Sir H. Thompson as a transitional form of growth. The conclusion of the paper dealt with the probable future of the case, since it was very likely that further operative interference would in time be necessary, and it was suggested that one should not be in a hurry to interfere in such a case because of slight return of symptoms, but that it would be better to wait until the patient was rendered unfit, by hæmorrhage or exhaustion, to follow his occupation. Then again to open his bladder above the pubes, and to remove the growth as freely as possible; and if, on examination, the growth presented no further evidence of a malignant change, to be content with this. But in case there was distinct evidence of change in the character of the growth, or if the growth was so luxuriant that successive operations failed to keep it in subjection, then it would seem right to give him a chance of prolonged life by inverting the ureters, and subsequently removing such parts of the bladder as necessity compelled. It was suggested that, by an incision in the groin, as for ligature of the external iliac, the ureter might be reached, and ligated near the bladder, and the fore-end then brought to the surface. That after the wound had healed, and the kidney was accustomed to the change, the same operation should be done on the opposite side. The bladder would then be rendered a passive organ, and the growth within it could be dealt with through the suprapubic opening, either by application of caustics, or by stripping back the peritoneum as far as the attachment of the ureters, and then removing the greater part of the bladder, taking away the mucous coat from such part as, from the connections, it might be inadvisable otherwise to meddle with.—Mr. JOHN CROFT thought all must congratulate Sir H. Thompson on his results, and Mr. Pitts on the suggestion he had made for the future treatment of his case. The speaker's own experience of these cases was limited to two instances. In one case the man had a flat epithelial growth on the posterior and lower part of the bladder-wall, adjoining the trigone. The growth was so flat that Mr. Croft had to content himself with making the perineal incision, the effects of which were marvellous. Hæmorrhage and constant micturition had been the symptoms, and the man's life had been rendered unbearable. As the result of the establishment of the perineal wound, the hæmorrhage quite ceased, as long as the perineal wound had been kept open, that is, for a period of nine months. The growth then appeared through the perineal wound. The second case was that of a lady, who had been suffering for two years, and who had had hæmorrhage for months. She was incessantly passing water, intermingled with blood, and was anæmic and faint. The urethra was dilated, and a fimbriated growth was found springing from the bladder-wall. Mr. Croft then patiently scooped it off with his finger-nail, bringing the whole growth away in fragments. The growth had been sent for microscopic examination to a gentleman, but he being ill, Mr. Croft could not report upon it. The patient had since quite regained her colour, and was well, the operation having been done last July. The former case fully confirmed the wisdom of doing perineal incision for the relief of symptoms; the second, that of patiently removing all the growth possible.—The PRESIDENT thought the papers evidenced a great advance in surgery. As he had before remarked, such operations as these would have startled the founders of the Society. These were, however, as Sir H. Thompson had stated, nearly all rescue cases. The end, without operation, could be only one. He would like to ask, what was the average of life, in such cases, without operation? The choice of operation was an important one. He had himself operated on about twelve cases, and had always adopted the perineal method, though he had in some instances regretted the non-adoption of the suprapubic operation. At the same time, it was well to search the bladder first through the perinæum, as one could not absolutely diagnose a tumour of the bladder before making a perineal investigation. And if a perineal incision were made, it was of no disadvantage if the suprapubic wound were afterwards also made, as the former incision permitted drainage of the bladder, and helped manipulation for the removal of the growth. If the tumour were at the fundus and extensive, it should be removed by the suprapubic method; if small, and at the base, through the perinæum. As to the symptoms they might be due to the presence of a very small growth, to which Sir H. Thompson had drawn attention, he would like to say that in two cases of his own the growth was so small that he could hardly realise the fact that symptoms so severe could be produced by it. One case was that of a female child, which he had examined under chloroform, about twenty years ago. The child had had hæmorrhage for a month. The examination was done with a catheter with a large eyelet. In withdrawing the instrument, some resistance was felt; he gave the catheter a jerk, and at once a small villous growth came away in the eye of the instrument. The child recovered, and was alive sixteen years afterwards. The second case was that of a lady who had hæmaturia and intense vesical straining, as if the bladder were trying to get rid of something seated at its neck. Mr. Bryant, upon dilating the urethra and introducing his finger into the bladder, could not at first find anything amiss, but upon examining more carefully, he found a villous growth near the neck of the bladder, not larger than a haricot bean. He removed it, and eighteen months subsequently the patient was quite well. A year and a-half ago he had a man under his care, with vesical hæmorrhage, who was nearly at death's door, so ill, in fact, that Mr. Bryant feared he could not survive a cutting operation. But he eventually made a perineal incision, and removed thereby a large villous growth. He, however, found almost all the internal surface of the bladder covered with the growth, and had thereupon scraped out the interior with bits of sponge screwed up on forceps. These he used as a raspatory for the removal of the growth, until the sponges come away almost clean. The man steadily recovered, and did well. Six months later he was looking wonderfully well, with florid cheeks and pink lips. The blood had just reappeared slightly in the urine, but nothing was then done

for it; and a week ago he had again come back to say that the bleeding had continued for one week and then completely ceased, and that he was able to hold his water as well as ever. The value of a sponge so used as a raspatory for the bladder, he wished particularly to impress upon the notice of the meeting. Besides the complete successes surgeons could record, there were others in which only relief was afforded by operation, but even then what remained of life was made comfortable. There were also calamities which should be mentioned; he had had one, which he now regarded as his own fault. It was in the case of a man with marked bladder symptoms, in whom, after the perineal incision was made, Mr. Bryant passed his finger, and found a polypoid growth at the fundus of the bladder. He seized the polypus with forceps, and easily twisted it off. It proved to be a fibrous growth. He then felt a second one near the base of the first, but tougher and pedunculated. He pulled it down with the forceps and cut it off, and, unfortunately, made a small perforation of the bladder wall. The patient died of peritonitis in four or five days. That growth could have been readily removed by the suprapubic method, and the patient's life probably saved.—Mr. H. MORRIS had had some five or six cases; all were done by the perineal method, the section being made into the membranous part of the urethra. In only two of the five or six had he felt justified in removing the growth. One was a case of villous tumour, in which there had been a prostatic calculus, taken away about thirteen months before. At the time of the second operation, not suspecting a tumour, Mr. Morris had no proper instrument at hand for its removal, after making the perineal section. He, therefore, waited two days to complete the operation with Sir H. Thompson's forceps; he then found the tumour bulging into the incision, and pulled it down and ligatured it. This man made an excellent recovery. The second case was that of a man in whom Mr. Morris could feel increased induration of the bladder wall just above the prostate. A perineal incision was made. The growth—a large round non-ulcerated mass, the size of an orange—was distinctly nodulated, and felt somewhat like a prostate, much enlarged, over which a catheter had been often passed. The suprapubic operation was performed, and he found the advantage of having the perineal in addition to the suprapubic wound. With a finger in each, he could break down the tumour, and remove it in pieces, some of which were as large as walnuts. As soon as the perineal wound began to close, the patient began to suffer again. In the suprapubic operation, although the rectal bag was used, and distended with water, the bladder was very little forced up towards the wound. The peritoneum had to be pushed aside, and then the hard growth could be felt. Doubtless, the hardness of the growth itself made it difficult for the bladder to rise up to the suprapubic wound. It was a question which wound should be kept open. Either could be kept patulous; and upon this point he should like to hear Sir H. Thompson's opinion. It must be remembered that the growth extended from the lower to the upper part on one side of the bladder; and it was a question which wound, by being kept open, would give the man the greater comfort. Had the disease been confined to the lower part of the bladder, he would have kept open the suprapubic wound; had it been confined to the fundus, he would have kept the perineal wound patent. If both wounds should close, the subsequent contraction of the bladder would again cause suffering. As to the remarks of Mr. Pitts with respect to the best treatment for cases of tumour of the bladder that could not be removed, he thought the suggestion ought not to be summarily set aside as chimerical. It would probably be best to drain the ureters elsewhere than into the bladder for two reasons (similar to those which obtained in performing colotomy for disease of the rectum): first, because of the suffering which was caused by the passage of urine into the bladder; secondly, because the tendency to death was by disease of the organs above the tumour. The cutting across of the ureters in the manner suggested would prevent the occurrence of secondary renal affections by extension of urine changes from the diseased bladder along the ureters to the kidney. The making of urinary fistulæ in the back or groin would be the scientific treatment for such cases. There was very little discomfort from lumbar urinary fistulæ, as was evidenced in two patients upon whom he had operated for renal distension. One had a fistula open in the loin, and his health had now greatly improved after the operation had been done about eighteen months; the other was a healthy active young man, whose kidney was opened and drained now three years back. In both cases the urine (in the latter case amounting to 10 ounces daily) was collected without much inconvenience by an apparatus worn for the purpose.—Sir HENRY THOMPSON said, in reply, that one could not always verify the presence of papilloma of the bladder by an examination of the urine. Washing out of the bladder having failed, one might, however, almost always introduce a lithotrite, and catch a fragment. If the history was one that almost led to the opinion that a growth was present, the introduction of a sound gave very little extra information. He believed the light fimbriated growths moved round with the instrument, as they floated in the urine inside the bladder. In his first fifteen or twenty cases, Sir H. Thompson always made a point, when the patient was on the operating table, of testing the value of the sound by introducing one to see if he could thereby ascertain the condition of the tumour and the bladder-wall, and he had found the result, even with a finger also in the rectum, of little value. Hence came the advisability of first making a perineal incision into the urethra only to ensure a full investigation of the growth. Such a proceeding was without any risk; for, although he had now employed it about eighty times, he had never seen any disadvantage arise from it. In reference to the removal of a tumour through that opening, he had always cautioned operators not to lay hold of the mass which was presented to the forceps while the assistant was pressing downwards upon the upper part of the bladder through the abdominal wall, as it was so easy to mistake the projection inwards of the bladder, thereby caused, for a growth. In one case, he had known injury inflicted, under such circumstances, upon the peritoneum; and if operating now on some of the early cases of large tumour in his own series, he should, with his present experience of the suprapubic operation, select it in preference to the perineal route. An exploratory incision, therefore, should first be made, and, if the tumour was large, with a rather wide base, and especially if it appeared to arise chiefly from the upper part of the bladder, the surgeon should open it from above the pubes. In such a case, it had been asked, which of the two openings thus made should be left open, if it were desirable to leave either for draining the bladder? As a rule, in operating for tumour, there was no advantage in leaving the perineal wound open, and the other was to be healed as soon as possible. But in another set of cases, in which bladder-drainage was indicated—namely, those of very advanced prostatic disease, requiring almost hourly catheterism, the suprapubic opening was sometimes better than the perineal one. He might name an instance which occurred to himself a few months ago, in which a hypertrophied prostate nearly filled the pelvis. In this case, a perineal opening was valueless. Accordingly, he performed the suprapubic operation, cleared the bladder of much adhering phosphatic matter, permitted the wound to heal only so far as to enable a large flexible tube to be worn, passing through the centre of a silver plate, which fitted to the surface over the pubes. The outer end of the tube was connected with an ordinary urinal, and now the patient was restored to a comfortable degree of activity and enjoyment of life, having entirely dispensed with the catheter, which he had passed for several years, with great pain and difficulty, many times a day. Such a result was a most satisfactory one, and was by no means a solitary example of the value of the suprapubic opening for these extreme cases. In respect to Mr. Pitt's suggestion, relative to the ureters in certain vesical tumours, it was undoubtedly a matter for serious consideration. The suggestion of the President as to his mode of employing the sponge for clearing out the bladder, appeared to him highly practical, and he should be glad to test its efficiency in cases of a like character.—Mr. PITTS said that he had operated, on the first occasion, by the perinæum, in fear and trembling; at the second operation, when he had used the suprapubic plan, there was no hurry, no discomfort, and no fear; and he had made up his mind not again to attempt the perineal opening.

Vertical Fracture of the Head of the Right Radius, and Fracture of the Coronoid Process of the Ulna.—Mr. B. WAINWRIGHT read a paper on this case, which was caused by a fall on the hand, in a man, a rivetter by trade, producing great restriction of all the movements of the forearm, and inability to follow his occupation. The case was treated by excision of the head of the radius and removal of the fractured portion of the coronoid process of the ulna, resulting in greatly increased mobility of the forearm, enabling the patient to resume his former employment.

Specimens and Cases.—The following were exhibited. By Mr. BUTLIN: A Screen of Water-Colour Drawings of Diseases of the Tongue.—By Mr. JAMES ANDERSON: A Patient with Intra-Cranial Murmur with Relapsing Optic Neuritis.—By Mr. MANSELL MOULLIN: A Patient with Complete Cure of Gunshot Wound of Foot.—By Dr. BEEVOR: A Patient showing Paralysis resulting from Pressure on the Fifth and Sixth Cervical Roots.—By Dr. HALE WHITE: A Case of Addison's Disease and Leucoma of Tongue.

THE TROOPS IN BURMAH.—It is stated by a correspondent at Saigon that there are no fewer than two thousand sick among the British and Indian troops in Upper Burmah.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 29TH, 1886.

Mr. R. BRUDENELL CARTER, F.R.C.S., President, in the Chair.

CLINICAL EVENING.

A Case of Athetosis.—Dr. BEEVOR showed a lad who was the subject of athetosis. Thirteen years ago, the patient was in St. Mary's Hospital, when he had fits and loss of power in the right side. For three months he was paralysed on both sides, and the left side gradually recovered. Since then he has been subject to epileptic fits, about one a year. The movements began in the right hand last year, that is thirteen years after the hemiplegia; they were much exaggerated when the patient attempted to write. No anæsthesia and no aphasia, although the speech is thick and indistinct. The lesion was probably cerebral, but was not easy to localise; it was perhaps in the cortex.

Congenital Lateral Displacement of Patella.—Mr. HERBERT ALLINGHAM showed two cases of what he described as a rare occurrence, namely, displacement of the patella outwards. The quadriceps muscle was atrophied; on extending the leg, the vastus externus was seen to be large, but the internus was flabby and small, and did not seem to act. There were two theories put forward to account for this condition: first, that the internal ligament was lax; and secondly, that there was paralysis of the quadriceps.—Mr. MORGAN said he had brought a similar case to the notice of the Society last year. He had on that occasion said that little could be made out in regard to it. He thought it was probably due to laxity of the internal ligament of the joint.—Mr. NOBLE SMITH said he had seen two cases of the kind, one in a child and one in an adult. In both cases it had appeared to him that the chief reason of the dislocation was the deficiency of attachment between the patella and the bone, internally.—Mr. JESSETT said he was surprised to hear Mr. Allingham say that he could find no cases on record. He had had one some years ago.—Mr. W. H. BENNETT said he had seen a case in a girl of seven, who was attacked with loss of power in the right limb some years before, and recovered only up to a certain point. The deformity had existed since the condition of the child became stationary.—Mr. E. OWEN thought it might be the result of congenital malformation.—Mr. ALLINGHAM, in reply, said that the reaction of the vastus internus to electrical stimulation on the paralysed side was very feeble.

Case of Pes Gigas.—Mr. H. ALLINGHAM showed a girl, aged 21, who was the subject of a remarkable congenital deformity of the left foot, which was enormously hypertrophied. The hypertrophy involved chiefly the connective and lymphatic tissue, and did not probably affect the bones. The skin on the dorsum was not affected, but the skin on the sole shared in the growth.—Mr. DAVIES-COLLEY said that he had brought forward a similar case a short time since. In his case also, the enlargement involved the connective tissue of the sole of the foot and instep, without corresponding enlargement of the bones. He amputated the toes with the result of leaving an useful foot.—Mr. BENNETT had seen two such cases; in one he had simply trimmed the foot to a proper shape. No further growth took place.

Children after Knee-Joint Abscess.—Mr. E. OWEN said he had promised to bring forward a series of cases of operation, but at the last moment he had been unable to get the cases together. He showed, however, two children who had suffered from pulpy disease of the joint, and in whom the patella had been reflected, and the joint scraped. The children recovered without any local or constitutional disturbance, and there was no shortening. It remained of course to see whether the good result would be permanent.—Mr. JESSETT remarked the absence of shortening. He had done the same thing himself with good results.—Mr. DAVIES-COLLEY said he had tried it in three or four cases, one especially in a child five years of age, where, in consequence of the suppuration, he ultimately had to perform excision.—Mr. BRUCE CLARKE advocated earlier intervention, so as to have a movable joint.—Mr. BENTON did not think Mr. Owen's expectations of a firm ankylosis would be realised.

Curious Case of Skin Disease.—Dr. STEPHEN MACKENZIE showed a man who was the subject of a curious skin affection resembling pemphigus, but which was very obstinate to treatment and was markedly affected by cold.

Case of very Obstinate Cystitis treated by the Constant Current.—Mr. BRUCE CLARKE read the notes of a case of cystitis in a van driver, brought on by cold, which had resisted all treatment, and was only temporarily and slightly benefited by cystotomy. The employment of the constant current of a strength equal to 10 milliampères gradually improved his condition, and the patient ultimately recovered very fair health. The electrodes were applied sometimes externally, sometimes internally, by means of a bougie.

BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, NOVEMBER 10TH, 1886.

Mr. LAWSON TAIT, F.R.C.S., President, in the Chair.

Specimens.—Dr. EDIS exhibited the ovaries and tubes which he had removed from a patient, the subject of chronic ovaritis and double pyosalpinx. The patient made a good, though somewhat tedious, recovery. Also a small parovarian cyst which he had removed from a patient, upon whom he had performed oöphorectomy some months since. At the primary operation, the left ovary and tube only had been removed. Several months later the patient presented herself, stating that she still suffered considerable inconvenience on the right side, and begged something further to be done. The abdomen was re-opened and the cyst shown removed, together with the ovary and tube. The patient made a good recovery.

Vaginismus.—Dr. BANTOCK read a paper on this subject. Dr. Marion Sims a quarter of a century ago had first brought the matter before the notice of the Obstetrical Society. He defined the condition as "an involuntary spasmodic closure of the mouth of the vagina, attended with such excessive supersensitiveness as to form a complete barrier to coitus," and he compared it to the painful spasmodic closure of the eyelids when the eye is intolerant to light. He devised a method of treatment which in its principle has since become general, and is easy, safe, and certain. That principle was to overcome muscular spasm. Dr. Bantock then related several cases in which the exciting cause appeared to be, in the first, extensive excoriation of the circle of the os, with an extension forwards on the anterior aspect of the cervix as large as a shilling, and a copious glairy discharge issuing from the canal; in the second, intense congestion of the cervix and vagina, with a copious glairy discharge issuing from the os. These two cases resembled one another very much, and it was evident that in both the exciting cause was uterine congestion. In the third case, the patient was very much out of health, and the uterus was retroflexed. In the fourth, the patient suffered greatly from dysmenorrhœa. The cervical canal was much constricted. Marion Sims had performed his usual operation of division, but with only temporary benefit. Finally the uterine appendages were removed. In this case the vaginismus appeared to keep pace with the degree of uterine congestion. In the fifth case, there was considerable congestion of the vagina and cervix, with some leucorrhœa. In the sixth case, the uterus was retroverted and the rectum loaded. Dr. Bantock adds, that while a minor degree of vaginismus was very common, and passed away under the manipulations necessary for the treatment of the associated condition of the uterus, the more severe form of the disease causing special symptoms and requiring particular treatment was not common. This condition appeared to be essentially of reflex origin. In none of the cases was there any local cause, such as inflamed follicles or sensitive papillæ. With regard to treatment, no cutting operation was necessary.—Dr. BARNES said that vaginismus must be regarded, like hysteria or neurosis, as simply a convenient term for a symptom which might be due to one or more of several causes. Dr. Bantock had associated vaginismus mainly with one condition—uterine inflammation—but he believed some cases were attributable to morbid conditions of the vulva. Uterine inflammations and displacements were common, whereas true vaginismus was rare. Moreover, he had seen vaginismus without any tangible uterine complication. He had often removed an irritable or inflamed hymen with success. In some cases forcible distension under chloroform had answered. Some he had cured by making a subcutaneous and submucous incison on either side of the vulva through the muscular fibres.—Dr. CULVER JAMES thought that some cases of so-called vaginismus were really due to obstruction caused by the presence of the hymen or of growths.—Dr. ROUTH did not believe that marked and severe cases of vaginismus could be cured by simple dilatation, and he did not accept the doctrine that all such cases were due to a reflex action in consequence of disease of the uterus. His treatment was to cut away all remains of the hymen, and then to make two deep incisions on each side of the vagina; but he made the patient wear, from the very first day of the operation, a full-sized Sims' glass plug from two to six hours daily, so that in fact the cut edges, as it were, healed upon the glass.—Dr. BLAKE observed that vaginismus as a primary idiopathic disease might exist, but he had never encountered a case. The two most typical examples he had recently seen were associated with retroflexion and endometritis villosa. On the removal of those conditions, the vaginal spasm promptly and completely disappeared.—Dr. BEDFORD FENWICK considered that vaginismus was a reflex condition. He related a case in which a mass of inflamed hæmorrhoids was the exciting cause. These were removed, and the muscular spasm completely disappeared.—Dr. RUTHERFORD had met with a case in which thread worms were apparently the cause of the vagi-

nismus.—Dr. Edis said it was curious to notice that the increase of experience of female disorders closely corresponded with a diminished frequency of cases of vaginismus. If careful search, however, were made, it would generally be found that some fissure, vascularity of urethra or vulvar orifice, or some other well-marked cause existed, the removal of which relieved the symptom.—The President expressed regret that such a barbarous term as vaginismus had ever been coined. Neither did he believe for a moment that such a condition existed. After Dr. Marion Sims' original paper appeared, he undertook a special series of dissections. Out of eleven dissections, he found in only one case traces of a few pale irregularly formed bundles of fibres to represent what in the text-books of anatomy was considered as a powerful structure. The ordinary causes were fright, or disease of the vestibule. The most common disease was the serpiginous vascular degeneration of the mucous membrane, which he had first described in 1876—a peculiarly distressing and obstinate disease, ending in atrophic contraction of the vestibule. Anyone unfamiliar with this disease could easily overlook its presence.—Dr. Bantock then replied.

MANCHESTER MEDICAL SOCIETY.

Wednesday, November 17th, 1886.

James Hardie, F.R.C.S., President, in the Chair.

Resection of Ribs.—Mr. Bishop mentioned a case of resection of the ribs, and showed the patient.

Bi-temporal Hemianopsia.—Dr. Hill Griffiths read notes and made remarks on four cases of bi-temporal hemianopsia, and showed three of the patients. Case I followed a blow on the head, and went on to total blindness. Cases II and III. No known cause; vision and fields remained as on first examination. Case IV. Total blindness of left eye, followed by temporal achromatopsia of right eye, and then by temporal hemianopsia of left eye, the sight of which had been partially retained.

Case of Diabetes Insipidus: Recovery.—Mr. Coates mentioned, in connection with a case of diabetes insipidus—the notes of which had been read at a former meeting of the Society—that the blindness of the left eye had quite disappeared under the continuance of the anti-syphilitic treatment, and that the patient had now in all respects perfectly recovered.

Hæmorrhage from the Innominate after Tracheotomy.—Dr. Hutton related a case in which fatal hæmorrhage took place from the innominate twelve days after tracheotomy, and showed the specimen. The child, a boy aged 1½ years, was admitted to the Children's Hospital with bronchitis and laryngitis (diphtheritic?) of three weeks' standing. The following night, the dyspnœa becoming urgent, tracheotomy was performed by Mr. Murray. Great and unexpected improvement took place, and in twelve days the child was convalescent, and able to do without the tube for four hours and a half. The same night, violent hæmorrhage occurred, and caused immediate death. *Post mortem*, an ulcer was found in the anterior wall of the trachea, at the level of the lower end of the tracheotomy-tube, implicating the innominate.

Insufflator.—Dr. Harris showed a new form of insufflator for the throat and larynx.

Division of the Median Nerve.—Mr. Collier showed a patient suffering from the effect of division of the median nerve at the wrist, the result of injury.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.

Monday, November 1st, 1886.

Surgeon-General Lamprey, M.B., in the Chair.

Election of President.—Dr. James Watson was unanimously elected President of the District for the ensuing year.

Wound of Chest.—Dr. Axford exhibited an interesting case of wound of the chest.

Hernia and Undescended Testicle.—Dr. Ward Cousins exhibited a patient, aged 26, suffering from hernia, hydrocele of the cord, and undescended testicle on the right side. Any exertion caused him much pain, and he was quite unfit for work. Two operations had been performed, with an extremely satisfactory result.

Vesical Calculus.—Dr. Ward Cousins made some remarks upon eleven cases of stone upon which he had recently operated. The calculi were exhibited; five had been removed by lateral lithotomy, and four by litholapaxy. He considered that, in the future, all calculi occurring in very young children should be removed by the suprapubic method.

Inhalations in Chest Disease.—Surgeon-General Lamprey read a paper on the treatment of chest diseases by inhalation, and he expressed a very favourable opinion as to its value.—Dr. Groves, of Newport, Isle of Wight, did not consider the results of treatment by inhalation satisfactory, inasmuch as cough, and thereby the risk of hæmoptysis, were often greatly increased by it. He did not deny, however, that it was beneficial in certain cases.—Dr. Driver said that antiseptic inhalation often did good by relieving cough and expectoration, but that, however persistently it was applied, it could not penetrate the diseased tissues.—Drs. Guillemard and Tomlinson also took part in the discussion.

Tinnitus Aurium.—Dr. Ward Cousins then described a new method of treating tinnitus aurium by the alternate injection and evacuation of medicated air.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Surgical Section, November 5th, 1886.

Dr. Macleod, President, in the Chair.

Alteration in Constitution.—The President referred to the recent alterations in the constitution of the Society by the appointment of sectional office bearers, and expressed the opinion that these alterations would result in making the Society more representative and its meetings more interesting.

Dislocation of Wrist.—Dr. Alexander Patterson gave the particulars of a case of dislocation of the wrist. The patient, a carter, aged 24 years, was seen by him on August 2nd. He carried the left arm bent at a right angle, the right arm supporting the left; he was pale and anxious looking, and evidently suffering from the shock of a recent injury. Patient stated that a horse attached to a lorrie ran off, and that he and another man ran towards it and caught each a rein. The comrade let go, while the patient brought the horse suddenly round. Both man and horse fell, the horse's shoulder resting upon his left arm, while the hand was strongly flexed beneath. On glancing at the hand it was at once clear that it was not an ordinary wrist fracture; it presented an outline altogether new to Dr. Patterson. The carpal end of the radius could be plainly seen and felt in front of the carpus, with the styloid process almost driven through the skin, which was tensely drawn over it, white and glistening. The dislocation was easily reduced under chloroform. Splints were applied to the forearm.—In the discussion, Dr. Macewen gave particulars of a case which he saw some years ago.—The President was of opinion that a case of real dislocation of the wrist, without a wound, had never been seen, and, in support of his statement, referred to the views of Dupuytren and Malgaigne. He regarded Dr. Patterson's case as one of complicated Colles' fracture.

New Urethrotome.—Dr. Wm. J. Fleming showed his modified urethrotome, which, he thought, while not presenting many new features, embodied the best points and avoided the disadvantages of most known instruments of the kind.—Dr. Cameron referred to Berkeley Hill's modification of Otis's urethrotome, and the President to Trélat's urethrotome. These instruments were considered to be absolutely safe in operation and easily kept in good condition.

Corrosive Sublimate as a Surgical Dressing.—Dr. P. Caldwell Smith read a paper on corrosive sublimate as a dressing in minor surgery. For the last eighteen months he had used a solution of the strength of 1 in 1,000, with Gamgee tissue. With this tissue covering lint dipped in the solution, he had treated over fifty cases of burns and numerous cases of lacerated and contused wounds of scalp and fingers. In all there was freedom from suppuration, and in no case did the sublimate solution cause eczema or irritation of the skin. In the case of recent wounds, occurring at the iron-works, he usually changed the dressing at the end of twenty-four hours, in order to remove the grease and dirt which he could not clear away at the first dressing.—Dr. Knox mentioned two cases of compound fracture in which he employed the corrosive sublimate of the strength of 1 in 1,000. In one, the dressing caused eczema on two occasions; in the other, on three occasions; the eruption died away on a different dressing being applied, and reappeared when the sublimate solution was used again.—The discussion was then adjourned.

ACADEMY OF MEDICINE IN IRELAND: PATHOLOGICAL SECTION.

Opening Meeting. Friday, November 5th, 1886.

Walter G. Smith, M.D., President, in the Chair.

The President delivered an introductory address on the Modern Progress and Prospects of Pathology.

Liver with two Gall-Bladders.—Dr. Purser exhibited a liver with two gall-bladders. The specimen was of some interest from its rarity, though not exemplifying any great morphological law. It was taken

from a girl, aged 11, who had lately died of malignant scarlatina in Sir Patrick Dun's Hospital. At the *post mortem*, besides the ordinary changes caused by the disease, two separate gall-bladders were found, each of which had a distinct cystic duct; and these opened into the bile duct, the one at some distance from the other. There were no marked anomalies in the liver, except that the common hepatic duct, instead of dividing into two branches when coming into the liver, divided into three—one to the left, another to the right, and a third running into the posterior part of the liver. These ducts did not communicate with one another, but were distinct in their whole course. He had found no record of any similar case, but had been referred to an article in Todd's *Encyclopædia*, in which it was stated that the formation had been met with in lower animals—not unfrequently in cats. He had himself examined a good many cats, but had never met one with more than one duct. It was stated by Quain and other anatomists that anomalies were occasionally met with in the gall-bladder; that sometimes it was altogether absent, and that sometimes it was divided by a longitudinal septum; but in the latter case there was a single gall-bladder only. He was indebted, however, to Dr. Foot for a case recorded in the *Philosophical Transactions*, for the years 1693 4. The subject was a lady, aged 31, who for some time before her death had suffered from loss of appetite, vomiting, and pain. At the *post mortem* examination her lungs were found in a state of commencing phthisis. The spleen was smaller than usual, but the liver was so large that it occupied the left hypochondrium, as well as the right; there were strong adhesions on both sides. There were two gall-bladders, both distended with bile, one in the right, and the other in the left lobe of the liver. There was a stone in the kidney.

Perforation of the Stomach.—Dr. QUINLAN submitted a case of perforation of the stomach, which had occurred in a woman, aged 38, who had been for many years subject to chronic disease of the stomach, with dyspepsia and constipation. Some days before her death she had taken a very large dose of Epsom salts and senna. This had a very active effect, and was followed by great pain, which increased day by day until it became unendurable. She died suddenly a few days afterwards. There were signs of severe peritonitis; the intestines were greatly distended with gas; the contents of the stomach had escaped into the peritoneum. There was a perforation in the stomach at the middle of the lesser curvature. Its coats were red, and there were several patches of intense congestion, resembling the effect of an irritant poison. He examined the grumous fluid in the stomach, but found no trace of antimony, arsenic, or any other poison. There was great thickening of the stomach, with considerable evidence of chronic disease. It was clear that the perforation and subsequent peritonitis had been produced by the action of the violent purgative.—Dr. KENDAL FRANKS said he saw the woman before she was admitted into the hospital. At first he thought it was a case of volvulus or hernial protrusion through a part of the omentum. The vomiting, although frequent, never had a fæcal character. He was considerably surprised at the result of the *post mortem* examination. The distension was not extensive, but there was an enormous amount of peritonitis, the intestines being matted together with lymph, while there was a good deal of serous effusion in the peritoneal cavity. There were two openings in the stomach—one in the anterior wall, and the other opposite to it in the posterior wall. The question was when all this took place. It might have been immediately after the purging, but there was no collapse until immediately before death.—Dr. BENNETT said it was quite clear that there was an enormous chronic ulcer, in the floor of which the perforation occurred. The only peculiarity was that the perforation was unusually large.—Dr. QUINLAN, in reply, said there was no doubt that the perforation took place within the area of a large chronic ulcer, owing to which the coats of the stomach were thickened; the pulling and tearing induced by the purgative caused the perforation. What most surprised him was the absence of pain on pressure—in fact, pressure seemed to give relief. The only symptom in the case was intense pain, and at first he thought the case was one of intussusception. She had complained of chronic constipation, for which she was obliged to take purgative medicines.

Colloid Carcinoma of the Stomach.—Dr. KENDAL FRANKS exhibited the stomach, omentum, transverse colon, pancreas, and spleen of a man, aged 38, who died of colloid carcinoma of the stomach. Eight months before, he had begun to suffer from pain in the epigastrium, and a tumour was felt for the first time two months previously. Abdominal section was performed on October 1st, but as it was evident that the tumour could not be removed, the wound was closed. The patient died twelve days afterwards from exhausting diarrhœa, which set in a few days previously. The wound was firmly healed, and there was no evidence of peritonitis. The stomach walls were enormously thickened, white externally, discoloured internally, the different layers being undistinguishable. The orifices were of normal size. The transverse colon behind was also the seat of colloid degeneration, but not to the same extent. The duodenum was healthy. The pancreas and spleen were firmly adherent to the stomach, and seemed to be involved in the disease, but the liver was healthy. The great omentum presented a hard, nodulated, cancerous ridge at its junction with the stomach. Microscopical sections, showing the nature of the disease, were prepared by Dr. Bewley and exhibited to the meeting.—Dr. FOOT said this was an uncommon form of carcinoma of the stomach, and he believed it to belong to a class which would never be successfully operated on, the reason being that an extensive and widespread infiltration, beginning at the pylorus and sometimes extending as far as the œsophageal opening, preceded the formation of any tumour. In the cases represented by the three drawings which he laid before the Section, the stomach was gradually diminished in size by growths projecting on the mucous surface towards the interior of the organ; in some cases the stomach was reduced to the size of the small intestine. According to Cruveilhier, the information about this disease might be summed up under three heads, namely, first, it was the form of gastric carcinoma, in which the local symptoms were most obscure; secondly, it was that in which the cachexia was least pronounced; and, thirdly, it was that in which ulceration was rarest.—Dr. FRANKS, in reply, said there was a real tumour in the case, and the mass of the omentum below was thought to be the margin of the liver. The moment a specimen of the kind was seen, it became manifest that it was not capable of removal; but this question could not be decided without exploration.

Fibroma of the Cornea.—Dr. A. H. BENSON showed sections of a fibrous tumour which he had removed by dissection from the anterior surface of the apex of the cornea of a girl aged 19, otherwise healthy. It had commenced near the apex of the cornea about three years previously, and had slowly grown in density and extent without any past or present sign of inflammation in its neighbourhood. It was of a dense white colour, measured about 4 mm. in diameter and 1 mm. in thickness, and was raised above the surface of the surrounding cornea, with sharply defined margin. Its surface was evenly covered by the corneal epithelium. The cornea under it was found perfectly transparent and normal-looking. There was no vascularity in or about the tumour, or anywhere in the cornea; nor was there any history of this having been present at any time. The tumour commenced and grew painlessly. Microscopic examination showed it to consist of apparently normal corneal tissue, with cells and corpuscles. It seemed to be a case of true corneal tumour, though Alt, in his "Histologie des Auges," p. 40, denied the existence of such a thing. This tumour had nothing whatever to do with the limbus conjunctivæ or the episcleral tissue, the usual origin of so-called corneal tumours.—Mr. STORY asked were there any blood-vessels in connection with the tumour? It would be curious to find a tumour of such a character and in such a site without any vascular connection. He had never seen a case of corneal tumour save one of a doubtful character. As to the tumour shown by Dr. Benson, he was not able to say what it was.—Dr. PURSER remarked that Bowman, in his work on the parts concerned in operations on the eye, had figured a growth, consisting of papillæ, on the surface of the cornea. From Dr. Benson's description he would imagine that the tumour under discussion was of that character; in fact, it was like a wart on the surface of the cornea.—Dr. BENSON, in reply, said there were no blood-vessels in the tumour or cornea, nor any opacity that might be the remains of blood-vessels previously existing, nor any history of any previous condition of congestion of the eye which might have been the seat of vascular communication between the tumour and the margin of the cornea. The tumour was perfectly smooth and fine. There was no nodulation, or even bossing up of the central part of the cornea.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.—The Charlton Scholarship of £35, the Dickinson Scholarship of £15, and a gold medal, have been awarded to B. G. Sumpter; the University Scholarship of £25 per annum for four years to Raymond Henry Shaw; the Gibb Scholarship of £25 to M. M. Bowlan, and the Tulloch Scholarship of £20 to A. E. Cope.

SCHOOL OF PHYSIC IN IRELAND.—The Medical Scholarship of £20 per annum, tenable for two years, for Anatomy and the Institutes of Medicine, has been awarded to Henry C. Drury, B.A., and that of £20 per annum, tenable for two years, for Chemistry, Physics, Botany, and Comparative Anatomy, to Alfred R. Parsons.

QUEEN'S COLLEGE, BIRMINGHAM.—An Ingleby Scholarship, after examination in Obstetric Medicine and Surgery and the Diseases of Women and Children has been awarded to Mr. A. H. Nott. There were no competitors for the Sydenham or Queen's Scholarships.

REVIEWS AND NOTICES.

THE FUNCTIONS OF THE BRAIN. By DAVID FERRIER, M.D., LL.D., F.R.S. Second edition. Rewritten and enlarged. London: Smith, Elder and Co. 1886.

THIS work is one of the most important contributions to medical literature which have been presented to the profession and the cultivated public during the present year. The medical book-market is, unfortunately, annually flooded with a mass of crude productions, which, for the most part, consist of mere compilations, unacknowledged plagiarisms, or personal advertisements. To this class, Dr. FERRIER'S monograph in no way belongs. On the contrary, we have in it an original research of the utmost interest and value, the result of skilled and matured labour, and one pre-eminently practical, as the revelations of science are successfully applied to the advancement of the art of medicine. The first edition was published just ten years ago. The second, now before us, has been almost entirely rewritten and considerably enlarged; many new facts and observations have been added, and the whole subject of which it treats, mobile and progressive as it is, has been brought up to the most recent state of knowledge. The nervous system has always been a fascinating study to medical men in particular and scientists in general; its phenomena not only being of much practical interest, but attractive as subjects of inquiry and thought. Dealing, as it does, with the highest and most intricate problems of animal physiology, surrounded as the investigation of its structure and functions is with extraordinary difficulties, and demanding for its elucidation the most delicate manipulations and the highest mental attainments—it has never ceased to possess a special charm for the most learned and cultivated of all ages and countries. From the earliest times, the functions of the brain more especially have been a source of intellectual speculation to the philosopher, and to all those of a reflective temperament, who desired to see further into the mysteries of the mind than their fellows. Owing to the ignorance and prejudices of former times, and the inexact methods of inquiry then employed, any attempts to solve the obscure problem resulted only in crude hypothesis and metaphysical rhetoric. It is only in comparatively recent times that any attempt to determine the functions of the nervous system in general and the brain in particular, has been made by direct experiment and observation. The extreme delicacy and complexity of the structure of the nervous centres have made the estimation of their function in this way most difficult, and, at first, the uncertainty and contradiction of the results obtained seemed to augur ill for subsequent practical fruit.

During the last twenty years, however, owing to improved methods of research, immense strides in advance have been made, and facts of the utmost value have been arrived at. Dr. Ferrier's share in illuminating the darkness which formerly surrounded this subject is well known, and has gained for him a wide-spread and well-deserved reputation. It is only by a careful study of his work, with the mass of facts it contains, and the comments and deductions therefrom, that any idea can be formed of the vast amount of patient labour and thought which must have been expended on the inquiry. As a study of the brain and mind, the chief value of the work is that crude assertion, hypothesis, and metaphysical speculation are thrown aside; and a serious attempt is made to estimate the functional phenomena of the nervous system by direct experiment and rigidly conducted observation. Although in this way much has been effected, still much requires yet to be done. As Dr. Ferrier himself points out, we are still only on the threshold of the inquiry, and it may be questioned whether the time has even yet arrived for an attempt to explain the mechanism of the brain and its functions. In the midst of conflicting views, apparently contradictory experiences, and the almost insurmountable difficulties of investigation, the object of the author of the present work is as far as possible to unravel the threads of confusion which surrounds the subject; to probe the depths of the mystery; to analyse, confirm, or reject the various doctrines advanced by others, and by experimental methods of his own, and the strictly logical deductions therefrom, to add to our knowledge of the question. Ferrier's general system of investigation is now well known, and was fully enunciated in the first edition of his work. It need not, therefore, here be discussed in detail. In reviewing the second edition, we think that the interests of our readers will be best consulted by giving a brief general sketch of the contents of the book, shortly noting the main advances in knowledge which have been made during the past ten years.

The volume begins with a succinct statement of the structure of the cerebro-spinal centres, in which is described and illustrated the most modern anatomical information on the subject. Then follows an account of the functions of the spinal cord, as determined by the most recent researches in histology, experiment, and pathological observation. Here it may be observed that Dr. Ferrier supports the view that the tract of tactile sensation is to be found in the lateral, and not in the posterior, columns of the cord, as has for long been surmised. The so-called "muscular sense" the author does not regard as a special sense, but only as one of the functions of the afferent elements, and a modification of common sensibility. In the same way, the existence of a special trophic apparatus in the cord he considers questionable, it being probable that many processes are carried on by the same structures, and thus, for example, nutrition and the excitation to contraction may be only different aspects of the same function.

The functions of the medulla oblongata, the mesencephalon, and the cerebellum, are fully discussed; and special chapters are devoted to the influence the latter has upon the maintenance of equilibrium, locomotion, and emotional expression.

Next are considered the functions of the corpora quadrigemina, and the extraordinary difficulty of dealing with these bodies experimentally, or judging the effects of disease in them, is indicated. The result of the most recent investigations is that their destruction causes blindness, and, in addition, interference with the power of stable equilibrium. The general deduction as to their functions is, that these ganglia form an essential portion of the mechanism of the co-ordination of retinal and general sensory impressions with the mesencephalic motor apparatus concerned in the complex responsive adjustments of equilibrium, and the other adaptive reactions of which animals are capable after removal of the higher encephalic centres.

With regard to the functions of the cerebellum, the classical experiments and conclusions of Flourens regarding co-ordination still maintain their position as originally advanced. After excision of this centre, animals retain all their faculties and senses, but are unable to preserve their equilibrium or locomotor powers; and while motor strength remains intact, the capacity to utilise or co-ordinate muscular action is lost. Irritation or destruction of different localities in the cerebellum is found to permit special and definite movements in particular directions, according to the parts implicated, and appears to have some relation to the same processes carried out in special portions of the semicircular canals. Notwithstanding the large amount of research that has been expended on the cerebellum, there are many points in its anatomy and physiology on which we are yet devoid of precise information, and the problem of its functions is still far from being definitely solved. The general results as determined by the effects of injury and disease is that the cerebellum seems to be a complex arrangement of individually differentiated centres, which in associated action regulate the various muscular adjustments necessary to maintain equilibrium and steadiness of the body, each tendency to the displacement of the equilibrium round a horizontal, vertical, or intermediate axis acting as a stimulus to the special centre which calls into play the antagonistic or compensatory action.

The functions of the cerebrum are next considered, and it is with this subject that Dr. Ferrier has now particularly identified himself. In the first edition of his book, his researches on localisation of the cerebral cortex were amply delineated. In this edition these inquiries are repeated, confirmed, and augmented. What ten years ago was matter for controversy, is now almost universally admitted to be fact, and the general principle of cortical localisation is more or less accepted by all. This is the primary division into sensory and motor centres. Among the first is the visual centre, which is asserted to be situated in the occipito-angular region. Owing to the great difficulty of experimentation, an exact settlement of the cortical representation of the sense of sight has not yet been made, and the whole question is in a progressive and uncertain position. The most recent doctrine on the subject is that the movements of the eyeballs and head, caused by irritation of the angular gyrus, are reflex, and the outward manifestation of subjective impressions. Destruction of one angular gyrus causes temporary amblyopia of the opposite eye. Destruction of both cause at first complete blindness, which, however, subsequently disappears to a great extent, but not completely, the deficiency remaining most marked in the eye opposite the lesion. This indicates that each angular gyrus is associated with both eyes, but chiefly with the opposite one. When one or both occipital lobes are removed, vision is in no way affected. Removal of the angular gyrus and occipital lobe on the same side induces persistent homonymous hemiopia of that side, and temporary amblyopia of the opposite eye. Thus each hemisphere is associated with the corresponding halves of both eyes, in addition to the opposite one. To induce complete and

permanent blindness, both angular gyri and occipital lobes must be destroyed.

The exact position in the retina which corresponds to the angular gyrus has not yet been definitively ascertained, owing to the difficulties of fixing the deficient vision in animals, and to the want of limitation of the cortical disease in man; but Dr. Ferrier is inclined to think it to be the centre of the opposite eye.

No modification has lately been made as to our knowledge of the auditory centre, which is situated in the superior temporo-sphenoidal convolution. The olfactory and gustatory centres are not differentiated, but both are supposed to be located in the hippocampal lobule and the lower temporo-sphenoidal convolutions.

The estimation of the tactile centre has been a question of much difficulty and uncertainty. The sensory tract, extending upwards from the cord, probably ends in the hippocampal region; and Dr. Ferrier, in his first edition, indicated that region as the cortical centre for tactile and common sensation. Destruction of that convolution causes hemianæsthesia on the opposite side of the body, but not of a completely permanent character. The effects of complete destruction on both sides, whether permanent or not, have not been ascertained, owing to the fatality which attends the operation. A large number of experiments serve to show that the results are due to removal of the cortex itself, and not to injury of the internal capsule or other adjacent parts. Recent investigations by Horsley and Schäfer have further shown that the gyrus fornicatus forms part of the sensory centre, as its destruction causes temporary loss of sensation on the opposite side of the body. The falciform lobe, which includes the hippocampal convolution and the gyrus fornicatus, may, therefore, be looked upon as the centre of common sensation, and its complete destruction would probably cause complete and permanent hemianæsthesia of the opposite side of the body, although, from the severity of the operation, this has not yet actually been demonstrated. No positive evidence has yet been adduced to show that special forms of sensation, or special regions of the body, have different cerebral localisations, but Dr. Ferrier thinks that the entire cortical centre represents all of these equally, as experiment has shown that when a portion only is removed, common sensation, including all its forms, is only partially diminished, and universally in all parts of the body affected. At the same time, knowledge of the subject is not sufficiently complete to enable him to pronounce definitively on the question.

The motor cortical centres are next enumerated and discussed. Their locality and extent are much the same as enunciated ten years ago in the first edition. The most important addition to this department are the recent experiments of Horsley and Schäfer, who have discovered that the centres for the trunk, shoulder, and hip-muscles lie in the marginal convolution. These, like those of the face and tongue, are bilaterally associated; so that, to produce complete and permanent paralysis, the centres on both sides must be destroyed. This observation practically completes the list of motor-cortical areas presiding over all the regions of the body, and fills up the only gap which Ferrier had left unoccupied.

Concerning the functions of the frontal lobes, nothing new of importance has recently been determined. Destruction of the post-frontal convolutions causes paralysis of the eyeballs, and head and neck, as was previously known. As a result, there is found to be descending sclerosis, down through the crura, but not further than the medulla.

On the functions of the corpus striatum and optic thalamus, we are still much in the dark. Irritation of the former causes tonic spasm of the other side of the body; but, when the latter is stimulated, no motor phenomena ensue. All that can be learnt anatomically concerning the functions of the first is that it is efferent, as, when destroyed, its fibres degenerate centrifugally. This is not the case with the other, which may therefore be considered as afferent in action. Owing to the close relation with other surrounding parts, the complexity of their structure, and their inaccessibility, experimental proceedings on the corpus striatum and optic thalamus are of extreme difficulty, and the precise results of disease in them are almost impossible to estimate. Hence the imperfection of our knowledge concerning the functions of these ganglia. Clinical observation seems to prove that both may be diseased without apparent alteration of either motion or sensation. The latest idea is that the corpus striatum is itself a terminal centre, like the cortex cerebri, and not a mere appendix to the motor tract. The posterior part of the optic thalamus, on the other hand, seems to be connected with the sense of sight; but this may be only due to its association with the occipito-angular region. The functions of the corpus striatum and optic thalamus, therefore, still remain doubtful. It is probable that the one associated with the motor, and the other with the sensory tracts, represent, in a subordinate manner, all the sensory and motor centres of the cortex, and constitute together a sensori-motor mechanism, subservient to the manifestation of all those forms of activity which do not imply conscious discrimination or true volition.

The book concludes with chapters on the hemispheres considered psychologically, and on cerebral and cranio-cerebral topography.

It is impossible, in a notice such as the present, to do full justice to this work. In the space at our disposal, we have been able to give only the briefest sketch of its contents. Those who desire to obtain a complete summary of the functions of the brain will do well carefully to study this volume. It is the production of one who has spent his life in endeavouring, after the true scientific method, to solve the complicated problems involved, and who has proved himself to be a master-hand, both at practical experimentation and sound logical induction.

How we treat Wounds To-day. By Robert T. Morris, M.D. New York and London: G. P. Putnams' Sons. 1886.

This is a small book written in the form of a series of aphorisms, and giving a very excellent idea of the best method of treating wounds. Under various headings, different injuries are described, with the proper way of handling the wounds, and the directions are interspersed with quaint and sarcastic remarks which strike the reader at once, and cannot fail to enable him to remember the directions given. Dr. Morris is a strong supporter of antiseptic treatment, and anyone who carries out the details given in his work will secure aseptic results. He points out with great cogency the necessity of attending to the minutest detail in the avoidance of sepsis; as he strikingly puts it: "A chain is no stronger that its weakest link; an antiseptic system is no stronger than its weakest detail." The antiseptic which he chiefly employs is a solution of bichloride of mercury and sublimate gauze and wool; and he advocates permanent dressings. The book is well worth reading, and forms an excellent introduction to our more complete English text-books of antiseptic surgery.

NOTES ON BOOKS.

Instructions for Case-taking in the Medical Wards, Guy's Hospital.—This small manual, which has been recently received from the Dean of the Medical School at Guy's Hospital has been, we are informed, in use for the past three years. It is intended to be a guide to clinical clerks, who are reminded that the records they prepare are designed to help the physician in treating the case, to serve as a record of the case in after years, and to assist in the education of the student himself. The scheme of the manual does not differ from that of similar manuals used in other medical schools, but appears to be particularly complete and well arranged. A few notes on certain cachectic states, as for instance, struma, rickets, gout, and malarial poisoning, are a somewhat novel feature.

Chemistry of the Carbon Compounds. By Professor Victor von Richter; Authorised Translation by Edgar F. Smith. (Henry Kimpton, 82, High Holborn, W.C. 1886.)—This is a carefully written and exhaustive treatise, brought well up to date, on organic chemistry. As a book of reference for those who are engaged in research work, or seeking information concerning the most recent discoveries in this subject, it will be invaluable. Chemists will find some terms in the nomenclature of this translation from the German, which are not as yet in general use in this country; for example, the term "ester," which signifies a compound ether. In the preface to the American edition, we find this translation recommended as a text-book, but it is far too prolix for the ordinary student. Only advanced students and those engaged in original research are likely to make much use of it.

Bequests.—The British Home for Incurables has received £500, less duty, under the will of Miss Martina Ives. Mr. John Slack, of Chapel-en-le-Frith, bequeathed £136 to the Devonshire Hospital, Buxton. The Worthing Infirmary and Dispensary has received £100 under the will of Mrs. Hatherley, of the Marine Parade. The Ilkley Bath Charity Hospital has received £100 under the will of Mr. Richard Wheatley, of Mirfield.

Northampton Infirmary.—The Northampton General Infirmary has received £200 (less duty) under the will of Miss M. Ives; £100 (less duty) under that of Mrs. Maria Cecil; and £50 under that of Mrs. Mary Ann Humphrey.—"Two Sisters" have given £5 to the Northampton General Infirmary, "in grateful acknowledgment of benefit received by their mother fifty years ago."

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The Issue of the BRITISH MEDICAL JOURNAL now amounts to

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The British Medical Journal.

SATURDAY, DECEMBER 4th, 1886.

MR. ERICHSEN'S PAMPHLET ON THE MEMBERS' FRANCHISE.

MR. ERICHSEN has favoured us with a complete version of his speech at the late meeting of the Fellows and Members of the College of Surgeons, in the form of a pamphlet entitled "The Member, the Fellow, and the Franchise." We have already commented pretty freely on the speech as reported at the meeting; though, we hope, without losing sight of the genuine respect which every member of the profession must feel for Mr. Erichsen personally. But, as this pamphlet is obviously intended to influence the answer of the body of Fellows to the questions which the Council is about to propose to them, we think it right to return again to Mr. Erichsen's arguments.

With the legal rights of the Members of the College, previous to the foundation of the Fellowship in 1843, we do not propose to concern ourselves here. Whether the clause of George III's Charter, which Mr. Erichsen cites (and which, no doubt, empowered the Court of Assistants to fill up vacancies in their body, if not otherwise filled up), did or did not divest the Members of the old Corporation of the right of voting which they certainly possessed before 1800, is a question which no sane man would waste a penny to determine, since there is no doubt that any rights which the Members might have had in that respect were taken away by the Charter of 1843. That Charter, as Mr. Erichsen admits, was intended to remedy what he himself calls an "obviously corrupt state of things" (p. 8); and whether that corruption was introduced by the law, or in spite of the law, is now a matter of no moment. The important thing to recollect is that the exclusion of the Members from the management of the College was the cause of the corruption.

Mr. Erichsen's main argument, however, in support of their exclusion at present is not a dry legal one, but rests on a view of the functions of the College which is of the most momentous importance, especially at the present time, when the College has acquired such great wealth, and with it of course such greatly increased powers for good or evil. Mr. Erichsen's view is that the function of the College is educational and scientific only; and he goes on to say that the Members are unworthy to take part in the former duty, because the teachers of Anatomy, Physiology, and Surgery, "the three departments with which the College of Surgeons alone concerns itself," are mainly Fellows and not Members. This seems to us rather an argument for limiting the examinership to the Fellows. Yet the Council has thrown open the examinership in Anatomy and Physiology to the Members, and we believe that this step was taken while Mr. Erichsen was on the Council. If a Member may be sufficiently versed in the educational work of the College to be an examiner, it is hard to see why he should be debarred from a voice on the subjects of examination. That the Members are unfit to take part in the scientific part of the work of the College Mr. Erichsen infers from the fact—for which he vouches—that the surgeons who are Fellows of the Royal Society are nearly all Fellows of the College, not Members. What this (if true) has to do with the matter we fail to understand. The scientific work of the College is concerned with medical, not general, science; and in such branches of science some Members are more distinguished than most Fellows. And here, also, the Members are not excluded from the practical work of the College, so that it is difficult to see why they should be from its Councils. A distinguished example of what we mean will occur to everyone in the person of Mr. Kitchen Parker (who, by the way, has not been despised by the Royal Society on account of his not possessing the F.R.C.S.), who was for many years Hunterian Professor at the College of Surgeons.

The use of such very lame arguments by so accomplished an advocate as Mr. Erichsen is a plain proof of a weak cause. Nor does Mr. Erichsen disdain even more feeble arguments, if we may call them such. He does not think it beneath him to suggest that "the turmoil of the annual election in a constituency of 13,000 or 14,000 Members would do little to promote harmony," (p. 11)—as if the late election for the General Medical Council did not show that such elections involve neither turmoil nor any shade of bad feeling—nor to urge that, if the franchise of the College be extended to the Members, it cannot be refused to the Licentiates in Dental Surgery (p. 10), though he must know that the two stand on perfectly different ground, both in the eye of the College and in that of the law; the former being a Member—a component part—of the College, the other not; the former having a legal title to registration, the other not.

But we have not space to deal with all the side-issues which Mr. Erichsen has opened. His main contention is what is really important, and what we think all Members of the College (whether they be also Fellows or not) are equally interested in opposing—namely, that "the business of the College is not political—that is left to the British Medical Association; it is not ethical—that is left to the Medical Council; it is not commercial—that is left to any other corporation that chooses to take it up" (p. 11). How Mr. Erichsen reconciles this view with his own statement that, "under Section 15 of the bye-laws, the College engages to protect and defend a Member if he is disturbed in the exercise of his rights" (p. 9), or with the bye laws which are to be found in the College Calendar against illegal practice and disgraceful conduct, or with his own statement on page 14, that every such case brought before them is carefully investigated with a view to action by the Council, is more than we can say. What we are concerned with is that such a view should be put forward on behalf of the Council by their own advocate. This great corporation tells the profession by the mouth of an ex-President that it

does not matter to them if their Members are engaged in illegal practice, if they are "faith-curers or cancer-curers, massageurs or bone-setters" (pp. 13, 14), for the public love to have it so, and interference would be unpopular and troublesome. They also intimate (p. 14) that they are going to use the large funds, into the enjoyment of which the College is now entering, in "the establishment of physiological and pathological laboratories on the largest and most approved scale,"—an object which may or may not be the best possible, but as to which the general body of the profession ought surely to have a voice. Mr. Erichsen gives us (p. 9) arithmetical proof of the accuracy of the statement that the present property of the College, so far as it has been earned by the College itself, is built up out of the payments of the Members. "Out of each diploma fee of twenty guineas," says Mr. Erichsen, "not more than six or seven guineas goes to the coffers of the College." Out of these savings, the College has accumulated, besides its splendid premises and grand museum, a property, which one of the speakers at the late meeting valued at £100,000 (doubtless an underestimate—and now by a totally unexpected windfall, it has come into another property, estimated at about a quarter of a million. Is it credible that the general body of the profession, out of whose contributions this great property has been in a large measure created, will sit quietly by and see it expended in gratifying the "fads" of some scientific enthusiast, or in some ambitious speculation in bricks and mortar, or in some other way with which they have no sympathy, and in which they have no voice, at the discretion of a small knot of hospital-surgeons, without raising any protest? And if they do protest, is it credible that the protest will be disregarded by the public authorities? Mr. Erichsen (p. 10) professes to see some dissimilarity between the admission of all members of the profession to vote for the General Medical Council, and the admission of all Members beyond a certain standing to vote for the College Council; but what the dissimilarity is he does not say. Every member of the profession, as he justly says, is entitled to vote for the Medical Council. Every Member of the College (Fellows or otherwise) of a certain standing would be entitled to vote for the College Council. Where is the difference? Let the Members of the College approach either Parliament or any public authority with a well-grounded statement that the College disposes of enormous funds, derived in great part from their fees, without any reference whatever to their wishes or interests; that it acknowledges duties towards them of protection and defence, which it makes not even a show of discharging; that its own regulations for the good behaviour of its members remain almost a dead letter, so that its own advocates say that it is better not to enforce them, for fear of awakening the prejudice of the vulgar; that the most important questions, such as that of the admission of the Apothecaries' Company into the conjoint scheme, in which their own daily interests and daily bread are concerned, are settled behind their backs, and they are told that they have no right to be heard in their own College—and we venture to think that the precedent of the direct representation of the profession in the Medical Council will be found more in point than Mr. Erichsen supposes.

The next point which we must notice in Mr. Erichsen's pamphlet is the statement that the admission of Members to the franchise would be an encroachment on the "inherent right," as he now puts it (p. 15), of the Fellows; and the only notice we need take of it is to renew our protest against it. It is a barefaced appeal to the selfishness which is "inherent" in all men, but which it behoves those who have any tinge of public spirit to subordinate to higher considerations.

As to the Royal College of Physicians, it is sufficient to say that the question which arises there, whatever may be said of it, is not the same; because, instead of having one class of "Members" who correspond to the ancient freemen of the Company, there are two bodies—the Licentiates on the one side, and the Members on the other. In the Apothecaries' Society, the government is in the hands of the Members, and probably has been so from the first. In the University of London, the graduates do possess a limited franchise, and they sit in Convocation, where, in common with the other graduates, they exercise important powers of control upon the action of their Corporation. Besides these three, Mr. Erichsen is so unwise as to call to his aid the constitution of the Scottish Universities, and particularly that of Edinburgh. Surely, Mr. Erichsen ought to be aware that the graduates in all the Faculties, including Medicine, form in all Scottish Universities a General Council, which holds two statutory meetings in each year, and, through these meetings, exercises a very large and growing influence upon the other governing bodies—the Senate and the Court. The Senate is composed of the teaching professors, and is, of course, in no way analogous to the Council of the College of Surgeons. But the supreme control in each of the Scottish Universities is in the hands of a small University Court. In Glasgow University, for instance, the Court consists of seven members. One is elected by the students, and he nominates an assessor. A third is the Principal of the University, and two others are elected by the Professors. The remaining two are elected by the General Council, who very closely correspond to the members of the College of Surgeons. It is unnecessary to add that by this constitution the ordinary Graduates, medical and other, of a Scottish University, besides being the political constituency for elections to Parliament, possess internal rights of electoral and general control, infinitely greater than that which is now claimed by the reforming party here. But we have no desire to rest the case on analogies, which are necessarily always faulty. We take up the challenge of Mr. Erichsen's pamphlet with absolute confidence, and we are prepared to maintain that, in the sense which he himself defines, the Members of the College have a *right* to the franchise, and that in the widest sense of the terms it would promote the welfare of the institution if the very moderate concession now asked were granted without a bitter and unseemly contest.

Mr. Erichsen's speech did little to further the cause he advocated at the meeting. We shall be surprised if this republication of it will be any more successful in furthering it with the body of Fellows, to whom the Council is about to appeal.

THE ARMY MEDICAL STAFF.

A CORRESPONDENT, signing himself "A Surgeon, Medical Staff," has recently written a letter to the *Times* newspaper, in which he has advanced certain grievances of the army medical officers that can hardly be put aside by the authorities that rule in the War Office, without some attention. The writer denies—and, we are sure, with perfect truth—that there is any ground for the complaint which was made by Dr. Tanner in the House of Commons, in the course of the discussion on the Army Estimates, respecting the professional inferiority of the medical officers of the army. He equally repudiates

that gentleman's assertion that medical officers complain of their social status in the army, and of the treatment they receive at the hands of the combatant officers. But, though acknowledging that the system of army medical administration at present in force is more efficient than any other that has been tried, and is quite satisfactory to the medical officers who are serving under it, he complains deeply of the treatment which medical officers receive from the senior officers of their own branch of the service, who, he alleges, neither take the necessary steps to obtain for them the rights to which they are justly entitled, nor bring to notice any of the exceptional services which medical officers are repeatedly called on to perform.

Several instances are adduced in support of the writer's complaints. The first is, that the pay of the army surgeons, which was increased at home over six years ago, remains the same in India as it was twenty years ago; and it is added, "Why does not the Director-General insist upon this injustice being removed?" The subject of the increased pay conferred on the army medical officers by Royal Warrant remaining unrecognised during their employment in India, and the great disappointment and discontent which the difference of their treatment as regards pay in England and in India has caused among the medical officers affected by it, have been repeatedly remarked upon in the pages of the JOURNAL; but we are not aware of any power the Director-General has to insist on the injustice being removed. He can but represent the matter through the usual official channels to the Indian Government, and no proof is shown that representations of the kind have not been made. Although the interest and representations made in favour of the dismounted regimental majors—the so-called "mud-majors"—may have led the Government of India to acknowledge their title to pay in accordance with their rank and service, it by no means follows that similar representations on the part of the surgeons and surgeons-major will have a similar satisfactory effect. It is obvious that, in justice to the Director-General, it should first be ascertained that he has not urged the matter upon the attention of the Indian Government before blaming that official himself for not effecting the desired change.

The second of the writer's complaints, which refers to the habitual disregard of exceptional services performed by medical officers, is supported by statements of two occurrences, which are given with such detailed particulars, that it seems the correspondent alluded to must write with substantial knowledge of the facts described by him. If there be no misrepresentation in them, the statements exhibit a condition of medical affairs in India which ought never to have been permitted to exist, and certainly ought not to be permitted to continue. But here, again, blame is thrown on the Director-General of the Army Medical Department, which, it appears to us, ought more justly to be attached to the authorities in India, who have the medical administration of the army in their hands. It is asserted that, last year, when there was an unusual amount of sickness among the troops, including a prolonged outbreak of cholera at Quetta, there were only two medical officers attached to the station-hospital, which at one time contained 230 patients, of whom an average of twenty were dying monthly. The unceasing work, by night and day, that this would entail on the two medical officers, can be readily understood; but, it is added, that when they themselves were suffering from ague and dysentery, there was no one to relieve them, and they had to continue their services in this condition in the hospital.

The next instance given exhibits a still more lamentable state of affairs. In the same district, one medical officer was left alone, with one apothecary, for nine months in charge of the 43rd Oxford Light Infantry. The regiment, with its followers, numbered 1,000 souls. For seven consecutive weeks cholera prevailed in the regiment, and killed one officer and over fifty men. The single medical officer was not once relieved, and for the whole of the seven weeks he only got snatches of sleep of one, two, or sometimes three, hours at a stretch. He was seen to fall while attending to his patients, himself overcome by ague and want of sleep. His hospital work did not constitute his only duty; he had numerous sanitary and other matters to attend to. It is said that such a fact as one officer being left in sole medical charge of a British regiment and its followers for seven weeks, during the prevalence of an outbreak of cholera, has never been known to occur before, either in the annals of the army or in respect to a similar number of persons in civil life. Yet it is asserted that no notice was taken by their administrative seniors of the work done by the two medical officers at the station-hospital in Quetta under the trying circumstances in which they were placed, nor of the medical officer left in sole charge of the 43rd Regiment during the cholera outbreak. This medical officer had altogether ten months' unrelieved service under canvas with the regiment, and, when visited by t principal medical officer of the district, the only remark addressed to him, according to the statement, was: "It is lucky you did not get ill yourself."

It is hardly possible to comprehend such an unsympathetic want of recognition of unusually trying service as is here described, particularly by a member of the same profession although a "superior officer," and we are driven to ask: Are these statements regarding the state of medical service in India, so publicly made, accurate? If they are not, their inaccuracy ought to be exposed without delay, for the credit of the War Department and its medical administration; if they are true and correctly given, then there ought to be no rest until the army, and the nation at large, can feel assured that the medical service has been put into such a state in India that there is no likelihood of their recurrence.

THE MINOR PROPHETS OF SURGERY.

MOST practitioners of the arts of medicine and surgery are, to a greater or lesser extent, familiar with the names of eminent men whose successful and honourable careers serve to mark the laborious steps on the path of progress. But the not less praiseworthy lesser lights, whose very names in many cases have been forgotten or ignored, have often failed to receive their share of grateful attention from their successors; it is a pleasure to see this omission to some extent repaired in a paper read by Dr. Verneuil before the *Société de Chirurgie* of Paris. It may be remarked that not unfrequently the men whose works have come down to us as a standing testimony of their enlightened genius, received credit for a vast amount of original research and bold innovation, which in reality they derived from the diligence and talent of their subordinates and contemporaries. Men like Galen, Ambroise Paré, and Boyer, have quite enough material of their own to justify their reputations without rendering it necessary to clothe them in borrowed plumes. In former times, as now, the talent of the profession was not monopolised by hospital surgeons and professors, but was to be found in all its vigour in men whose social and professional status was not such as to raise them above the level of mediocrity, and so place their good

merits in relief. It is, therefore, a pious and becoming task, to use the poet's phrase, *réparer des années l'irréparable outrage*. In many instances the task is impossible; we shall probably never know what bold spirit first thought of lithotomy, ventured to trephine, or dared to extract an opaque crystalline lens. The origin of these and many other operations is buried in the oblivion of centuries, and we are unable to form even a conjecture as to their history.

The first compilers and commentators sprang up under the Roman empire, in the persons of Celsus and Galen. Without the latter, the works of Erasistratus, Herophilus, and their followers would have been lost to us. Later on, other compilers, Aetius, Oribasius, and Paulus Ægineta, all more or less plagiarists, rescued from oblivion sundry scraps of ancient surgical knowledge, due to the talent of Antyllus, Soranus, Leonides, and Archigenes. Twelve hundred years passed by without producing a single surgeon whose name has been handed down. The prevailing ignorance remained unillumined by the glories of preceding centuries until the Arabs, and especially the Moors of Spain, brought back to Europe the earlier monuments of surgical lore. Although Albucasis, Rhazes, Ali-Abbas, and Avicenna resuscitated the discoveries and methods of the older masters, they were not originators of new ideas; and the Italians did not to a very notable extent increase the legacy bequeathed to them by that school.

The art of surgery assumed a very different aspect dating from the time of Ambroise Paré. Here again many details were worked out, not by professors and men of science, but by men often scarce able to write their own names, whose character was not uncommonly more than doubtful, and who were charlatans to the very backbone. Theirs were the hands that picked up the blade which had fallen from the enfeebled grasp of the professors; and while, doubtless, they used it often enough for the most disreputable purposes, their irresponsible boldness led the way to achievements hitherto conceived to be impossible.

In the course of the fifteenth century the empirics came to the front, exempt from fear if not exempt from reproach; their casual successes were due to their ignorance and their recklessness. Surgery undoubtedly advanced in their hands, but the progress was like that of a victorious army: that is to say, it left the road stained with the blood of countless victims. This period is probably the most interesting in the history of surgery. These irregular practitioners travelled from town to town and from kingdom to kingdom, operating here and there, without hesitation or compunction, regardless (for a very good reason) of their reputation, and often obliged to take to their heels to avoid the dungeon or the stocks.

Little can be advanced in their defence. They doubtless operated blindly, cutting down on an aneurysm, extirpating a useful eye, and removing serviceable testicles. Their probity was more than questionable, and they thought a great deal more of filling their pockets than of advancing their reputations, and faithfully fulfilling the sacred duties of their profession. But, on the other hand, they did not waste their time in learned disputes over departed heroes; they operated for stone, cataract, or strangulated hernia, and reduced dislocations and set fractures at their risk and peril, while the authorised practitioners were too much given to the perusal of Avicenna, the annotation of Guy de Chauliac, or the enumeration of the interminable list of unguents formulated by Galen.

All these operators were not rogues and vagabonds such as we have described; some of them having settled in a town became the starting point of a family of specialists; some took up rhinoplasty like the Brancas of Sicily; others devoted themselves, like the Norsini, to the treatment of hernia or stone, with both honour and profit. These men did not write, but handed down the secret of their success to their children. From their ranks sprang Tagliacozzi, Franco, and Marianus Sanctus. Ambroise Paré had, properly speaking, no predecessors, but he was succeeded by Piqray, Guillemeau, and Pineau, who carried out his traditions and perpetuated his renown.

Prior to the seventeenth century, two courses only were open to the student; either he had to content himself with what his professors told him, or else he had to be possessed of genius, of immense knowledge, and of proved experience. From the moment, however, that human intelligence was allowed fair play, when it became possible to show one's self superior to one's fellows, without being constrained to be either diplomatic or hypocritical, the march of intellect acquired a fresh impetus.

The seventeenth century gave birth to several important societies, some of which still exist: in 1645, the Royal Society of London; in 1666, the French Académie des Sciences. In 1679, Nicolas de Blegny founded the first medical journal, though at first this was only a record of the transactions of his society, the "Academy of Recent Discoveries in Medicine." After an ephemeral existence of three years, these transactions were published collectively under the title of *Zodiacus Medico-Gallicus*.

From this time forward, the names of eminent observers are more frequently met with. Christopher Wren, of Oxford, introduced intravenous medication soon after the publication of Harvey's immortal discovery; and he was followed by Timothy Clark, Dr. Henshaw, and Richard Lower in England; and in France by Gayant, Denis of Montpellier, and Emmeret. In 1667, the transfusion of blood had become a recognised operation, the introduction of which has been traced to Andreas Libavius, a German chemist who died in 1616. In 1710, Littre proposed the operation for artificial anus, but it was not until 1776 that it was actually brought into practice by Pillore, of Rouen, and, subsequently, in 1783, by Antoine Dubois and Duret, of Brest. The first really able treatise on the subject is due to the pen of Pierre Fine, a surgeon of Geneva. The operation known as trachelorraphy was proposed by Roonhuysen, and performed in 1679 and 1752 by Wœlter and Fatio. The list of eminent men of the second class, after this time, is far too extensive to allow even of recapitulation, but the more the subject is studied, the more evident does it appear that the advances have been made little by little by obscure men, and collected from time to time by exceptionally illustrious men, who were credited with the discovery of all that they published and practised.

PRACTICAL SANITATION.

THE progress which is being made in the education and registration of plumbers was signalised and recorded at an official dinner of the Plumbers' Guild given on Monday last, when the following, among a numerous company of guests, were present: The Lord Mayor; Alderman Stuart Knill, Master of the Company; Mr. G. Sclater-Booth, M.P., F.R.S.; Sir F. Pollock; Sir Andrew Clark, M.D., F.R.S.; Sir Gabriel Goldney; Sir A. Rollit, M.P.; Mr. Alderman Lawrence; Mr. C. T. Ritchie, M.P., President of the Local Government Board; Captain Douglas Galton, C.B.; Mr. Ernest Hart; Professor Meymott Tidy,

M.B.; Professor Corfield, M.D.; Mr. G. Shaw, C.C., Past Master of the Plumbers' Company; the Mayors of Windsor, Scarborough, Leeds, Southport, and Rochdale; Dr. Dupré F.R.S.; Mr. Vacher; and Mr. W. R. E. Coles. As our readers are already aware, the Plumbers' Company has, with great public spirit, under the guidance of Mr. George Shaw, undertaken to carry out in this country a scheme for the registration of plumbers, which was laid before the British Medical Association at its Liverpool meeting by Mr. Ernest Hart, in a paper read in the Public Health Section, and subsequently at the Conference of Plumbers held in the Conference Hall of the International Health Exhibition, 1884. Before that congress Mr. Hart laid the following propositions, which are identical with those in his previous scheme. First, as regards drainage:

"1. Rural authorities should have the same powers as are now possessed by urban authorities. In the suburbs of towns, just outside the municipal boundaries, thousands of houses are springing up without any sanitary supervision whatever. The rural authority is, perhaps, unaware of the evil, or is, at any rate, careless about it, until the houses are erected; and their opportunity of making bye-laws which can control such houses is then lost. 2. It would be well that the requirements of the Model Bye-Laws for New Buildings issued by the Local Government Board should be incorporated in a Building Act, which should be forthwith passed, and be of general application throughout the country. 3. The plumbing and drainage of all buildings, public and private, should be executed in accordance with plans and specifications previously approved in writing by the local authority. 4. No drainage work should be allowed to be covered or concealed in any way until it had been examined and passed by the surveyor. 4A. The efficiency of all drains should be tested by the peppermint or some other test before they are passed; and it should be a rule that, wherever possible, drain-pipes should be kept from view only by boarding which can be readily removed. 5. No new house should be allowed to be inhabited until it had been passed and certified by the surveyor, and a plan of the system of drainage should be appended in every case to the lease or other document for the letting of the house. As regards the plumbers, I suggest that—6. The names and addresses of all plumbers should be registered by the local authority, and no plumber should be able to carry on his trade until he had been so registered, and had received a licence from the local authority. 7. Before the licence is granted to him the plumber should attend personally at the office of the local authority for examination as to his qualification as a plumber. 8. Such licences should be renewed from year to year, and their continuance should depend upon the good behaviour of, and the return of the work done by, the licensee. 9. The names of all licensed plumbers should be publicly advertised once a year by the local authority."

The Plumbers' Company has, under the able guidance of Mr. Shaw, taken the first step towards carrying these proposals into effect by creating a register, to which admission is given after due inquiry and technical examination, and classes have been instituted to meet the requirements of the examination at the Technical College at Finsbury, under the control of the Technical Institute of the City Guilds; and a similar course of instruction is in progress at Newcastle, where the University of Durham has recently instituted a chair of Plumbing.

The Right Hon. C. J. Ritchie, M.P., the President of the Local Government Board, took occasion at this dinner to express his entire approval of the course which the Plumbers' Company is pursuing, which, he said, was regarded at the Local Government Board with great interest and satisfaction, and every desire to assist it. Sir Andrew Clark, in proposing the toast of "Sanitary Science and its allies," expressed his strong sense of the vast importance to health of the sanitation of the home—a duty with which the plumber was closely connected. He pointed out, however, that the scheme carried out at present by the Plumbers' Company did not provide for inspection of the work when done—a provision which he considered essential for the purpose of security. Mr. Ernest Hart, in replying to the toast, heartily congratulated the Plumbers' Guild upon the services which they were rendering to the cause of public health, and on the vigorous action by which they were fulfilling their civic and national duties. Referring to what had fallen from Mr. Ritchie and Sir Andrew Clark, he pointed out that the action of the Plumbers' Company was but the foundation on which should be built a larger superstructure, which he had ventured to design, when first laying the scheme before the scientific and technical bodies of the country. He hoped they might now claim from the Government some further much needed additions. The first step would be to invest rural authorities with powers now given to urban authorities. Next, not less important, to include by-laws such as those of the Metropolitan Board of Works in the Building Act, and then to make provision for a deposit of plans and specifications of all new plumbing work with the local authority, and for due inspection of drains and plumbing details before they were allowed to be closed or the house occupied. He had already pointed out that these were not new and untried schemes, but were already in successful operation elsewhere; and he trusted that, before long, this country would have the benefit of a similar code of legislation.

There is reason to believe that these anticipations are not without foundation, and that some considerable legislative amendments may be expected which will partly carry into effect the proposals of which the necessity is very generally admitted by those who have considered the matter, and the effect of which would be most beneficial on the health of the community. The long-promised County Government Bill cannot long be delayed, and that will be a suitable opportunity for introducing various important amendments in this direction into our sanitary code.

INSANE CONVICTS.

How best to care for insane convicts is a problem which has been anxiously studied in recent times by medical men, prison authorities, and social-science reformers in most civilised countries. It is generally supposed that England has been, on the whole, the most successful solver of this problem. The English system has been carefully examined by the French, with the result that their leading men in medical psychology and in the legislature have advocated its adoption in France. A Commission appointed by the Senate visited Broadmoor and the Lunatic Division of the prison at Woking, in 1883, and we can speak from personal knowledge of the satisfaction experienced by the eminent men who inspected these institutions. It is therefore with special interest that we find, in the recent report of the Directors of Convict Prisons, a memorandum by the Medical Inspector, Dr. Glover, touching the Lunatic Division of that at Woking. Pointed reference is made to the fact that the insane confined there are no longer to be under the management of the directors, and the occasion is, we think, a fitting one for drawing attention afresh to the course pursued up to the present time.

As is well known, a distinction is to be made which experience has proved to be very important, between lunatics who commit criminal acts, and convicts who become lunatic. Both these classes were admitted to Broadmoor till 1874, but in consequence of the representations of the Commissioner in Lunacy and the Superintendent of Broadmoor, insane convicts were from that time no longer sent to this asylum. The Secretary of State was doubtless enabled to make this order, by the expressed willingness of the Directors of Convict Prisons to make provision for the class referred to in one of the prisons. Ulti-

mately, Woking was utilised for this purpose, and this cour appears to have worked well.

It is an interesting fact that the "mark system" has been introduced even into the lunatic division, and Dr. Glover says it has been followed by good results, as shown in the conduct of the patients, the number of escapes and the cures. No attempt at escape has succeeded. As to recoveries, of 422 admissions (and re-admissions), as many as 105 recovered. In short, the history of this Division appears to show that decided success has accompanied, or followed, the experiment. It is not surprising, therefore, that Dr. Glover writes in a cheerful strain as to the past. We can only hope that if the management passes from the hands of the Directors of Prisons as intimated in the report, the present satisfactory state of things will continue. The good old motto may, however, be applicable here—"Leave well alone."

For the "Queen's pleasure men," even an institution like Broadmoor answers admirably, and it is the just pride of our country that a separate asylum for criminal lunatics has been established; but, for lunatic criminals, a well conducted division, in the prison bounds, devoted to their care may be safer for the community, as well as more economical. It should, however, be always borne in mind that, in consequence of the close relationship between crime and insanity, some so-called insane criminals have really been more or less mentally affected before they committed the crime for which they are undergoing imprisonment, and these ought to be carefully weeded out of the true convict class, and sent to Broadmoor. Moreover, our expression of opinion as against the course it is now proposed to take, must be taken in regard to the abstract question, and not as to Woking Prison in particular, where a change may be desirable for particular reasons best known to the Government.

UNDER the auspices of the Froebel Society, Dr. Francis Warner gave, during October and November, a course of six lectures on "Children, and How to Study Them." The lectures were addressed especially to teachers and school managers, and contained the results of much original observation.

THE Duke of Oldenburg, who established a "Pasteur Institute" in Russia some time ago, stated recently to a correspondent in Paris that 114 persons bitten by rabid dogs had been treated, and that only one, a man aged 72, had died.

AN Ingleby Scholarship, after examination in obstetric medicine and surgery, and the diseases of women and children, open to students who have completed two years, has been awarded to Mr. A. H. Nott. There were no competitors for the Sydenham or Queen's Scholarships.

DR. W. TINDAL ROBERTSON was elected Member of Parliament for Brighton on Monday last, without opposition. The profession is fortunate to secure in him another M.P. well able to represent its interests at Westminster.

"YELLOW TYPHUS" IN GREECE.

THE inhabitants of the Greek maritime town, Nauplia, have for some time past been suffering from an epidemic of a peculiar character, called by the Central Sanitary Authority, at Athens, "pernicious yellow fever," and by the Nauplia practitioners, "yellow typhus." It appears to be very virulent, proving fatal in most cases in a few days. The skin is of a deep yellow, which soon after death changes to black.

THE STURGE PRIZE ESSAYS.

THE above prizes have been awarded by the Rev. Canon E. Clarke, the Hon. Conrad Dillon, and Mr. J. S. Wood to Dr. N. Hardy, Mr. B. B. Rawlins and Dr. Robert Rentoul, Liverpool. The essays will appear in the *Philanthropist*.

THE LATE PROFESSOR GROHÉ.

THE death is announced of Dr. Grohé, Professor of Pathological Anatomy, Greifswald. He was one of Virchow's pupils, and assisted him in Würzburg and Berlin; he became Extraordinary Professor at Greifswald in 1858, and Ordinary Professor in 1862. There are numerous works by him, partly chemical and partly pathological. Professor Grohé, amongst other labours, proved the existence of glycogen in the lungs and cardiac muscle. He also injected pathogenic fungi into the circulation, and thus set up tubercular-like diseases in the tissues. Professor Grawitz, who no doubt will succeed to the professorial chair at Greifswald, has continued these researches.

THE BERLIN SURGICAL SOCIETY.

THE first meeting of the Berlin Surgical Society was held on November 22nd. Herr von Adelmann opened the proceedings by explaining the object of the Society, namely, to hold meetings once a month, in the lecture-rooms of the various hospitals of Berlin. The presidents, to be taken in alphabetical order, will receive the Society each in turn in his own lecture-hall, and will undertake to deliver an address, or to preside during the delivery of one. The first president took for the subject of his address the "Removal of the Diseased Spleen," and gave a historical retrospect of this operation in the "septic era." Professor Bergmann showed a patient, then convalescent, whose spleen he had removed fourteen days before, on account of the presence of hydatids. Herr de Ruyter stated that a mixture of iodoform, ether, and alcohol, killed the most resistant micro-organisms.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

A CONFERENCE in connection with the Metropolitan Provident Medical Association, 5, Lamb's Conduit Street, W.C., will be held at the Society of Arts, 18, John Street, Adelphi, on Tuesday, December 7th, at 4 P.M., for the consideration of the following questions: 1. The present condition of the out-patients' department of our hospitals; 2. The provident system as applied to the medical relief of the working classes. It is sought to elicit a full and free expression of opinion upon the above questions, and to endeavour, if possible, to agree upon some definite and systematic plan for the relief of the present crowded condition of our out-patient departments by providing for the medical treatment of the working classes in such a manner as to secure the general co-operation of the medical profession. Sir T. Spencer Wells and Mr. Timothy Holmes will take an active part in the movement, and have signed a circular convening the meeting.

SUICIDE OF A CHILD.

AN inquest was recently held before Mr. Langham, coroner, on the body of a girl, aged 8 years, who was found drowned. The child, who had always been of weak mind, left the house one day unperceived, and, wandering down to the river-side, walked straight into the water. The jury returned a verdict of "Suicide while temporarily insane"—a conclusion which, in our opinion, was not borne out by the facts of the case. The child was seen by two lads walking into the water with the air of a person quite unconscious of danger. Many children are drowned every year under very similar circumstances, without their death being attributed to suicide; indeed, it may be doubted whether the idea of suicide can be understood at so early an age. The question cannot be decided on purely sentimental grounds; for, as happened in the present case, the child's life was insured, and, as a consequence of the ver-

dict, the insurance-company declined to pay. We can scarcely doubt, however, that the company will, on consideration, come to a juster decision. If an adult walks into the river and is drowned, the presumption is naturally in favour of suicide, in the absence of evidence to the contrary; but in the case of a child, the presumption is quite the other way, and points rather to ignorance or foolhardiness. Suicide, like murder, is an act the essence of which lies in the intention of the person who commits it; and in the one case, as in the other, children too young to understand the full nature and consequences of the deed should be treated as irresponsible.

THE OLDEST UNIVERSITY IN THE UNITED STATES.

HARVARD UNIVERSITY, which is the oldest as it is still the chief university in the United States, has celebrated the earliest steps taken for its foundation two hundred and fifty years ago, by a series of addresses, sermons, and festivities. The University originated in a grant made by the General Court of the Colony in 1636 of £400 towards a school or college. Its first private benefactor was John Harvard, a graduate of Cambridge; and out of gratitude to him, his name was given to the new college, while the little town at which the college was built was re-named Cambridge. The Medical Department of the University, which has now existed for one hundred and three years, has since its foundation formed an active element in the life of the University. During the recent celebration, the honorary degree of LL.D. was conferred on Dr. Joseph Leidy, Professor of Anatomy in the University of Pennsylvania, Dr. S. Weir-Mitchell, and Dr. J. S. Billings.

HEALTHY SCHOOLS.

IN deference to recent keen public interest in matters connected with home and school sanitation, the necessity for pointing out to pupils and teachers the leading principles of hygiene is beginning to be recognised by school authorities. Great credit is due to Canon Cromwell, Principal of St. Mark's Training College for teachers at Chelsea, for having secured the deliverance by the National Health Society, 44, Berners Street, W., of a course of sanitary lectures during October and November. This course, which is of a very practical character, is now approaching completion; it includes just sufficient anatomy and physiology to facilitate the comprehension of the subsequent lectures which treat respectively of clothing, fresh air, games; ventilation and drainage of houses and schools; teeth, digestion, skin, baths; infectious diseases of, and dietaries suitable for, childhood and youth; water-supply and storage, climate, site, hygienic construction and arrangements of school buildings, temperance of children; "fagging," moral influences, good and bad, over-pressure; school sanitary precautions, athletics, and the school doctor. We commend Canon Cromwell's actions to the Principals of all good schools, whether for boys or girls.

THE COUNCILLORS AND THEIR FEES.

IT appears probable that one of the first duties which the reformed General Medical Council will be called upon to discharge will be to discuss its financial position, and, not improbably, to adopt a "self-denying ordinance." The Medical Act (1886) directs that in order to secure the maintenance of the standard of proficiency of the qualifying examinations of the various licensing bodies, the Council shall appoint such a number of inspectors as it may determine to be necessary to attend "at all or any of the qualifying examinations;" these inspectors will be required to report to the Council, "their opinion as to the sufficiency or insufficiency of every examination which they attend," and "shall receive such remuneration, to be paid as part of the expenses of the General Council, as the General Council, with the sanction of the Privy Council, may determine." It is clear that this new duty devolving upon the Council will lead to a considerable annual increase in expenditure. Probably the fees to the inspectors will amount to not less than £1,800 a year. Further, the number of members of the Council will in future be increased by eight, of whom five will be the direct representatives of the profession. One is nominated by Victoria University, and two by the Scottish Universities. Altogether there will be required an annual sum of about £2,500 over the expenditure of previous years, if the fees to members are to be maintained at the present scale. The annual income of the Council will probably be insufficient to bear this strain, at least so it is said. As has been often shown in this JOURNAL, by far the greatest part of the receipts of the Council and Branch Councils is paid to the members as fees for attendance at meetings of the Branch Councils, at the General Medical Council, at the Executive Committee, and as travelling and hotel expenses. As economy has to be practised, the plan which will be at once the most simple, the most equitable, and the most consonant with the duties of the Council, will be to agree to a general moderate reduction in fees paid to members.

SUSPECTED POISONING OF CHILDREN.

A CASE of suspected poisoning is the subject of investigation at Willenhall, South Staffordshire. Two children, named Morton, whose mother recently married a second time, were, a few days since, taken suddenly ill after their tea, and one of them, a little girl, died. A *post mortem* examination revealed the presence of a considerable quantity of arsenic in the stomach.

HOSPITAL SUNDAY FUND.

THE Hospital Sunday Fund amounts this year to £40,399, as compared with £34,320 in 1885, and an average of £30,121 in the thirteen years preceding. It was decided, at a meeting of the Council, to recommend June 19th as the date of Hospital Sunday next year, and a hope was expressed, looking to the unprecedented straits in which the hospitals and medical charities found themselves, that steps would be taken early to make the collections of 1887 worthy of the Royal jubilee, and commensurate with the needs of the hospitals.

MR. FURNEAUX JORDAN.

OUR readers will regret to learn that Mr. Furneaux Jordan, Senior Surgeon to Queen's Hospital, and co-Professor of Surgery in Queen's College, Birmingham, who has recently resigned his many surgical appointments, is compelled by the present state of his health to relinquish professional work entirely. His friends and old pupils intend to give him a substantial testimonial in recognition of his many contributions to the science of surgery, and of his services to the profession. Mr. Bennett May and Mr. Jordan Lloyd are acting as honorary secretaries (*pro tem.*) to the testimonial fund.

SIR JAMES PAGET ON SCIENCE TEACHING.

SIR JAMES PAGET, in distributing the prizes and certificates to the successful candidates at the London centre for the Oxford Local Examinations in the theatre of the University of London on Wednesday last, said, in congratulating the successful competitors, that it was well for us all and for the world that life was a continual competitive examination, for on no other condition was it likely that men's work and knowledge would be equal to the range of their powers. Speaking of the respective merits of classics and science, he said, as a man of science himself, he was not prepared to admit that the study of classics or of literature was a more efficient instrument for the training of the mind's powers than the study of natural science. He regretted the small number of candidates who submitted themselves for examination in science, and thought the schools were making a great mistake in not offering greater encouragement to scientific studies. The importance of these studies was being more and more recognised in the universities, and especially in the University of London. He said the schools should take warning in time. Science must have its due position assigned to it in our schools, and masters must be appointed equal in power and position to any of the

other masters. The number of persons of scientific attainments who were in request was constantly increasing.

POPULATION AND CRIME.

In spite of the increase of population, the number of persons in prisons is decreasing. The number of prisoners received during the year ending March, 1886, in local prisons, according to a Blue-book just issued, amounted to 156,723, as against 168,706 in the previous year. The average number has decreased almost continuously since 1878, when it was 20,833, to the present year, when it is 15,375, which is the lowest recorded for thirty-seven years. So far as the present year has gone, the fall is still continuing, for the population of the prisons in July, 1886, was 14,339, as compared with 15,782 at the corresponding date of last year. Had the prison population increased since 1878 in proportion to the general population, it would be 8,766 more than it actually is. The Commissioners think it only reasonable to suppose that this diminution is partly due to the development of a sound system of repressing crime by treatment in prisons. From a table in the main body of the report, dealing with the birthplace and sex of the prisoners, it is seen that a great excess of criminals of Irish birth have immigrated to England, and that there is a large proportion of females among the criminals from Scotland, Wales, and Ireland, especially the last. Thus, of English-born criminals, there is one woman to every two men; of Welsh and Scotch, the numbers are about equal; while the Irish give three women to two men.

METROPOLITAN INFIRMARIES.

A meeting of Medical Superintendents of the Metropolitan Infirmaries was held at the Lambeth Infirmary on Nov. 25th, Dr. Lloyd in the chair. Among those present were: Dr. Lloyd (Lambeth Infirmary), Mr. Lunn (Marylebone), Dr. Boulter (Woolwich), Dr. Garman (Hackney), Dr. Savill (Paddington), Dr. Webster (St. George's Union Infirmary), Mr. McCann (St. Pancras), and Mr. Neale (Clapham and Wandsworth Infirmary). The following resolutions were agreed to:—(1) Moved by Dr. Savill, seconded by Dr. Webster, "That, in view of the differentiation into departments which the science of medicine has undergone of recent years, the opinion of the Boards of Guardians be obtained as to the desirability of appointing specialists of eminence as Honorary Consultants to Poor Law Infirmaries, who shall be available for consultation with the Medical Superintendents; such Consultants not to have any power in the administration of these institutions, as set forth in the regulations now in existence at the various Metropolitan Infirmaries; and that a copy of this resolution be forwarded to the Medical Superintendent of each Metropolitan Infirmary." (2) Moved by Dr. Webster, seconded by Mr. Lunn, "That it is desirable that an increased medical staff be provided in the Metropolitan Infirmaries, in the form of a Resident Qualified Clinical Assistant (with board and lodging), in addition to the Medical Superintendent; but that such Clinical Assistant should not supplant the present Assistant Medical Officer." It was further agreed that these resolutions stand adjourned for further consideration at a meeting to be held on Saturday, December 4th.

PARALYSIS CONSEQUENT ON PAROTITIS.

In the *Progrès Médical* of November 20th, M. A. Joffray described a form of paralysis resulting from parotitis, or mumps, in the same manner as from diphtheria and other infectious diseases. It affected all four limbs, beginning, apparently, in the lower, and extending to the upper; the latter, however, being less markedly disturbed than the former. The paralysis was preceded by pains of a lancinating and constricting character, and became manifest about twenty-one days after the onset of the causal disease. It was associated with abolition of the reflexes—knee and plantar. The muscles failed to respond to faradic or galvanic excitation. This was the case not only with the muscles completely beyond volitional control, but also with those still capable of being influenced to some extent by the will of the patient. The sensibility of the muscles was increased, any slight pressure on them causing pain, whilst the sensibility of the skin itself seemed impaired. The special senses were intact. There was slight albuminuria, but no other disorder of the urinary function. Cure was effected, in the case of a child aged 4½ years, in the course of four months, by the administration of iodide of potassium.

CORPORAL PUNISHMENT IN BOARD SCHOOLS.

The subject of corporal punishment in board schools was discussed at the last weekly meeting of the London School Board, when Mr. Roston Bourke, representing the School Management Committee, presented a report recommending that the rule on corporal punishment should be as follows:—

"The Board are desirous of keeping corporal punishment within the narrowest limits possible. The utmost caution must be exercised in inflicting corporal punishment, so as never to strike a child on any part of the head, either with the hand or with any instrument whatsoever. Every case of corporal punishment must be recorded by the teacher inflicting the same in the punishment-book, and should, as far as possible, be dealt with at a particular time set apart for the purpose. The teacher must also state in the punishment-book whether the punishment was inflicted at that particular time, or at the time when the offence was committed. It is the duty of managers to inspect the punishment-book at their meetings, and of their chairman to initial the same. The head teacher is directly responsible for any corporal punishment, by whomsoever inflicted. In the case of a mixed school for boys and girls, under a master, the punishment in the case of girls must always be actually inflicted by an assistant mistress. Pupil teachers are absolutely prohibited from inflicting such punishment. Pointers must not be used for purposes of punishment."

The regulations have recently limited the power of inflicting punishment to the head masters, but it was felt that the necessity of maintaining discipline in the schools required the alternative indicated in the report, inasmuch as, in the absence of a head master or a head mistress, no punishment could be inflicted. After the question had been discussed for three hours and a half, the adjournment of the debate was agreed to. It is satisfactory to know that there is such strong disposition on the part of the Board to confine corporal punishment within the narrowest possible limits, and by the enforcing of stringent regulations, and the adoption of salutary precautions, to prevent an abuse of a power which, judicially and temperately wielded, is of the greatest importance for the maintenance of strict rule and discipline in large and mixed schools, which are chiefly filled from the lowest stratum of society.

METROPOLITAN ASYLUMS BOARD: CLINICAL INSTRUCTION.

The Committee of the Eastern Fever Hospital of the Metropolitan Asylums Board have appointed Mr. Reginald Dudfield, B.A., L.R.C.P. and M.R.C.S., to be junior assistant medical officer at the hospital for a limited period, this being the first appointment made for carrying into effect the resolution of the managers to make their small-pox and fever hospitals available for clinical instruction in infectious diseases for the benefit of registered medical men, whose opportunities for observing this class of diseases have been curtailed by the closure of general hospitals against patients suffering from small-pox, typhus fever, scarlet fever, and, in a less degree, enteric fever. The Local Government Board recently gave their sanction to the principle involved in Mr. Dudfield's appointment. The gentlemen thus appointed will be entitled "assistant medical officers." They will have specified duties, and be in all respects subject to the regulations in force with regard to the hospitals. The remuneration of the office is limited to the allowance of residence, rations, etc. In the first draft of the Asylums Board Scheme, prepared by Mr. Ernest Hart, provision was made for the admission of students, and regular clinical teaching. This provision was struck out by the timidity of the Poor-Law Board. It has been an unmitigated loss to the efficiency of

the hospitals, the welfare of the patients, and the cause of medical education, which is a public consideration. The present is a very insignificant instalment of advance in that direction.

BINOXIDE OF MANGANESE IN AMENORRHŒA.

THE effects of manganese in stimulating the menstrual flow, when its suspension is not due to pregnancy, have been fairly established by trials extending over nearly eighteen months. In the articles contributed to the medical journals on the subject, at the beginning of last year, the permanganate and the binoxide were both mentioned as possessing emmenagogue properties, but experiments have so far been made almost exclusively with the permanganate. In consequence, however, of certain disadvantages which are apt to attend the administration of this salt, unless several conditions are complied with, aided, perhaps, by theoretical notions as to the transformation which so unstable a body may undergo immediately after being swallowed, the binoxide, which is equally potent and less irritating, has latterly come into favour. Manganic dioxide, it is true, has been described as possessing no therapeutical value; but it is conceivable that if its effects are limited, even approximately, to the menstrual function, they may have escaped the attention of observers, especially if, as is not improbable, their investigations were confined to men or animals.

ACETANILIDE: A NEW APYRETIC.

A SUBSTANCE known to chemists who work with dyes by the name of acetanilide, which is produced by the action of heat on acetate of aniline, and is contained in rosaniline made with acetic acid and iron, has recently been found by two German observers, Drs. Cahn and Hepp, working in Professor Kussmaul's clinic, to possess powerful febrifuge or apyretic properties. They have given it the trivial name "antifebrin." It appears to have, weight for weight, about four times the power of lowering the temperature of fever-patients that antipyrin has. The doses given varied from 0.25 gramme to 1 gramme, as much as 2 grammes (half a drachm) being given during the twenty-four hours. In every case in which Drs. Cahn and Hepp gave the drug, it produced more or less reduction of temperature; sometimes the thermometer registered a normal temperature for some hours together, and in these cases the appetite often returned. The action of the antifebrin was accompanied by a certain amount of perspiration and with some redness of the skin, sometimes also by thirst and an increase in the urinary secretion. Occasionally a dark tint was observed in the skin of the feet and hands, but no serious symptom was observed in any of the twenty-four cases in which it was given. The price of the acetanilide is not high, being about a shilling an ounce. It can be administered conveniently in wine.

SANTAL OIL IN BLENNORRHAGIA.

DR. LITZEL, of Munich, furnishes (*Allg. Med. Central-Zeitung.*, Nos. 76 and 78, 1886) a somewhat detailed account of his experience of the use of santal oil and essence of copaiba, in the treatment of this troublesome affection. He at first gave this medicine with extract of coffee, but as at least half the patients showed extreme aversion to the drug, gelatine capsules were substituted, two or three capsules, each containing five minims of oleum santali, being taken three times a day. Of ninety-seven patients thus treated, four had gastro-intestinal disturbance; two of these had violent diarrhœa, and the other two severe dyspepsia. Eructations and burning sensations in the stomach were often noticed in the rest, but the drug was persisted with. It should not be given on an empty stomach. One bad symptom, which occurred in five cases out of the whole ninety-seven, consisted in severe congestive pains over the kidneys. Louis Jullien, in his recent work on *Urinary Diseases* (Paris, 1886), speaks of this symptom, also of urticaria, as being not infrequent. Sandal-wood oil is much better tolerated than balsam of copaiba, and if pain in the liver should arise, it suffices to discontinue the drug, and order a warm bath. The use of about thirty minims daily is generally enough to give the urine a distinct odour of the oil. The capsules used were Grimault's (Paris), and Paulcke's (Leipsig). Both these makers sell the pure oil in their capsules. The general indifference and distrust towards sandal-wood oil is apparently due to the fact that owing to its high price, it is extensively adulterated with copaiba balsam and castor oil, so that the commercial oil often contains only a small percentage of the genuine oil. Dr. Hager gives the following test of its purity. "Genuine E. I. sandal-wood oil (.0980 specific gravity) requires, to produce turbidity, from four to five volumes of dilute alcohol of specific gravity .0889, added to a clear mixture of one volume of the oil, and two volumes of absolute alcohol (.0799 specific gravity)." Dragendorf's test is simpler; namely, a solution of one part of bromine in twenty of chloroform. When from ten to fifteen drops of this test are mixed with one of the oil, the colour becomes a brownish violet, and later on dark blue. The pure oil is clear, light yellow in colour, and very pungent on the tongue; it has a slight odour of copaiba balsam. The results of treatment were these: 1. Given in an early stage, the secretion diminished rapidly, and the pain on micturition ceased. This result happened in thirty-seven out of forty-two cases. 2. If, after ten or twelve days, the oil be discontinued, the old symptoms reappear. 3. The best results were obtained when the oil was commenced in the third or fourth week of the gonorrhœa, together with the use of weak astringent injections. 4. Cystitis and gonorrhœal prostatitis were always greatly benefited by the oil. 5. Cases of gleet did best under local treatment.

FASTING AS A PROFESSION.

FASTING as a profession is becoming overstocked; in spite of their abstemious habits, its performers find it difficult to pay their way. The young man who in this country offered to enter into competition with the Italians, "if the necessary means were found," has ceased to occupy the attention of the public prints, but two fresh aspirants for fame have appeared, one in Brussels the other in Algeria. On Tuesday last Merlatti had completed the thirty-sixth day of his fast; he had lost nearly two stone in weight, and was so weak and exhausted that the question whether it might not be necessary to administer food in order to avert death was under discussion; the general emaciation, the sunken eyeballs, the trembling limbs, depression of spirits, and torpor of mind and body from which he is stated to be suffering, are the symptoms, already well known, of prolonged starvation. Yet it is only within the last week or ten days, since his life has been supposed to be in danger, and he has become a horrible spectacle of haggard wretchedness that his attempt has attracted sufficient attention to bring enough money to pay the hotel bill. Of Succi it is difficult to speak with patience. As we pointed out some weeks ago, he is a young gentleman who claims that the laws of the universe are suspended in his favour that his muscular force will increase rather than diminish as the end of his experiment approaches, and all by reason of the power of will and the virtues of a mysterious red liquid! He makes no secret of his intention to make money out of his performance, and no doubt, if he swims across the Seine in midwinter after having, as will be alleged, fasted for twenty days, he will succeed in drawing the Parisians in flocks to see him. A correspondent of the *Daily Telegraph* states that fully 200 persons were present when Succi began his fast at midnight, and various formalities were observed ere Succi, who is a short, slight man, with dark hair and moustache, brown complexion, and not particular robust, betook himself to rest. The medical committee had pronounced him to be in a satisfactory condition. His lunch had consisted of a few oysters, a fried sole, and a rumpsteak, and at about seven o'clock he had eaten more oysters, but nothing else, winding up with coffee and a cigar. Unlike Merlatti, he never smokes during his experiments. His bedroom contained a plain little iron bedstead, and he was careful to remove sheets, bolsters, and mattresses to show that nothing was concealed therein. The furniture was also duly examined. He reserves the right to rub himself with oil, but, during the fast,

which is to last thirty days, he is only to drink certain mineral waters and ordinary fresh water, hot or cold; on the twentieth day he is to take half the contents of a very small bottle containing another liquor. The other half would then be analysed. This is not the same as the vaunted red liquid, so that it is difficult to see the object of this piece of jugglery. It was added that every day Succi would either ride, walk, fence, or swim. At the commencement of the fast his weight was a little over nine stone. Succi, the spectators having gradually departed, retired to rest at 2 A.M. He rose at an early hour, and exercised himself for some time with his dumb-bells. "Fasting men" are, however, rapidly becoming a public nuisance, and we have yet to learn that their rather disagreeable exploits have any scientific or clinical value. As to Succi's liquid, it is natural to entertain a robust scepticism. "Secrets" of the sort have never yet proved worth knowing when divulged, and this is not likely to be an exception. "Autophagism" is the explanation of prolonged fasts, and from that law he cannot escape.

REPORT ON BERI-BERI.

THE *Nederlandsch Tijdschrift voor Geneeskunde* of November 13th refers to the fact that since the middle of August a Commission, convened by Drs. J. J. Cornelissen (Inspector of Army Medical Service in the Dutch Indies) and Sugenoya (Japanese Officer of Health), has been engaged in investigations regarding Beri-beri at Atjeh. It now publishes the results of these researches, which will, in all probability, shortly appear in full. 1. Beri-beri must be considered a contagious disease induced by some micro-organism. 2. The micro-organism is a bacillus which resembles the bacillus anthracis, but is smaller. Coloured with fuchsine or gentian-violet, it is plainly visible with a magnifying power of 560 diameters. 3. The bacilli are found in the blood, lungs, cardiac muscle, the pericardial, and cerebro-spinal fluid, the spinal cord, and in the degenerated peripheral nerves. 4. The same bacilli were found in cultivations made after Koch's method. 5. Beri-beri patients can infect certain localities; and persons in good health, coming from districts wholly free from Beri-beri, and settling in these localities, become subject to the affection. Wooden structures retain the infectious product more than stone buildings. Direct infection from one person to another could not be positively established, but contagion through the medium of wearing apparel was observed. 6. The channel by which the infection is carried into the human body is most probably through the respiratory passages. Inadequate nutrition is a predisposing cause. That the disease is not spread by drinking-water is evident, as water from artesian wells was in use at Atjeh, while distilled water was drunk on the ships. 7. Certain circumscribed localities can be infected with especial severity, while others in the immediate vicinity are wholly free. All localities, however, whether well or ill ventilated, new or old, were found to be capable of retaining the infection.

THE FOOTBALL ACCIDENT SEASON.

SEVERAL correspondents have taken us to task because we have ventured to express the opinion that football is not a pastime which tends to polish the manners of young men, and render them less rough. It is doubtless true that many accidents are to be traced to infraction of the rules of the game, and some to mixed teams of boys and men playing against each other. A great many habitual players appear to be unaware of the number of more or less serious accidents which occur weekly throughout the winter season; and it is a fact, whatever its explanation, that it is exceedingly difficult to obtain complete statistics. If the Football Association would take seriously in hand the duty of collecting these statistics, it would do a very useful work, and the result would probably compel it to take steps to put an end to the existing scandal. As it is, the reports which are easily available, are too fragmentary. For instance, last Monday's London papers contained a report of two accidents at Derby, one of serious concussion of the brain, the other of fracture of the collar-bone; but because there are no reports from other parts of the country, it would be unsafe to conclude that no accidents had occurred. Ten days ago, the Birmingham *Daily Post* collected some statistics for the previous Saturday; the result was one death, two broken legs, and two other fractures; and, on the following Monday, a player at Aston, near Birmingham, sustained a serious injury. Our contemporary believes that "vicious and ill-tempered play is on the increase;" and that "there is a good deal too much of 'charging' players who are not 'on the ball.'" It is very unpleasant to read of young men being kicked to death, even though it is all done in a friendly way; and a pastime so played as to lead to such accidents is brutal. That the accidents are generally due to bad rules, or to the infraction of rules, has been said again and again in these pages; that has been, indeed, our chief contention, and the logical conclusion has been drawn that if the constituted authorities of football cannot draw up and enforce good rules, after the manner of the M.C.C. rules for cricket, then public opinion will be justified in demanding that football played in public between men, or men and boys (for football in schools, between boys, is on altogether a different footing), should be subject to ordinary police regulations.

A MULTITUDE OF COUNSELLORS.

A SOMEWHAT mysterious paragraph, to the effect that the question of how to secure degree-giving powers for the teachers of university rank in London was likely to receive an unexpected solution by the admission of University College, London, to the Victoria University as one of its constituent colleges, appeared in the *Times* on November 29th. The paragraph went on to say that the Senate of University College is understood to have taken action in the matter. We have good reason to believe that the real facts of the case are that a proposition of this nature emanating from one of the professors of the faculty of science was by him brought before the Senate of the College at a recent meeting, and, at his request, referred to the several faculties for their opinion. It is hardly necessary to add that this curiously grotesque scheme is not likely to meet with the approval of the Senate, even if it ever seriously engages its attention; indeed, it is at least doubtful whether much real importance is attached to it, even by its fertile author. There are now at least seven schemes for popularising university degrees in London; thus there are three schemes for reforming the University of London, namely, Lord Justice Fry's, Sir Philip Magnus's, and the scheme for a dual university. Then there is the alternative scheme of the association for promoting a teaching university in London by co-operation among the teaching bodies; then there is the curious scheme to which we have referred above, and another, equally impracticable and undesirable, to form a university out of University and King's Colleges; and last, but not least, the scheme of the Royal College of Physicians and the Royal College of Surgeons.

UNIVERSITY EDUCATION IN LONDON.

THE Committee of the Senate of the University of London, appointed to report on the various schemes for bringing the University into more intimate relation with the teaching bodies in London, met on Wednesday last, and received a deputation from the Committee of Convocation appointed on the motion of Sir Philip Magnus. The members of the Senatorial Committee present were Sir James Paget (Vice-Chancellor), Mr. Fitch, Professor Carey Foster, Lord Justice Fry, Mr. R. H. Hutton, Mr. Osler, Dr. Pye-Smith, Dr. Quain, and Dr. E. J. Routh. The deputation consisted of Sir Philip Magnus, Mr. Anstie, Q.C., Mr. MacDowall, Dr. Collins, and Professor Tilden. The deputation went very fully into the details of their scheme, which has already been published (see BRITISH MEDICAL JOURNAL, 1885, vol. ii, p. 32), and considerable discussion took place. The Committee of the Senate has now before it three alternative schemes, which have a strong family likeness, though differing upon many points of detail. The scheme which was explained at the meeting on Wednesday is in

some respects the most conservative of all, while Lord Justice Fry's plan occupies an intermediate position. The question at issue is the old controversy between the graduates and the teachers which has been a bone of contention in every university from the earliest days of the foundation of the University of Paris, where it was hotly debated in the fourteenth century.

ELECTION OF DIRECT REPRESENTATIVES.

ADDRESSES of thanks for the support which has been accorded to them at the recent election will be found in our advertisement columns from Mr. Wheelhouse, Sir Walter Foster, Dr. J. G. Glover, Dr. B. W. Richardson, Mr. George Brown, and Dr. Bruce, of Dingwall. The full results of the polling are given on page 1119.

LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS.

THE arrangements for the customary courses of lectures at the Royal College of Physicians of London during 1887 are as follows: The Gulstonian Lectures will be given on March 3rd, 8th, and 10th, by Dr. Donald MacAlister, of Cambridge, whose subject will be "The Nature of Fever." The Croonian Lectures will be given on March 15th, 17th, and 22nd, by Dr. W. H. Broadbent, on "the Pulse." The Lumleian Lectures, on the "Pathology of Intra-uterine Death," will be delivered by Dr. Priestley, on March 24th, 29th, and 31st.

ARMY MEDICAL HONOURS.

THE following appointments, among others, are announced in a supplement to the *Gazette*. Deputy Surgeon-General John McNeale Donnelly, M.D., Indian Medical Department, to be an ordinary member of the Military Division of the Second Class, or Knights Commanders, of the Most Honourable Order of the Bath. Deputy-Surgeon-General Stewart Aaron Lithgow, C.B., M.D., Medical Staff, has received the honour of Companion of the "Distinguished Service Order," for action at Giniss. Surgeon-Major Henry William Alexander Mackinnon, of the Medical Staff, to be Brigade-Surgeon. Surgeon-Major Charles Sibthorpe, of the Indian Medical Department, to be Brigade-Surgeon.

HOSPITAL SATURDAY FUND.

IT is reported by the Committee of the Hospital Saturday Fund that the amount now in hand, after payment of all expenses, has reached £9,500, and that a considerable sum is yet outstanding. Although the number of receipts issued does not exceed that of last year, yet the aggregate to hand from the workshops is at least £500 in excess of last year. It is further reported that the expenses of the Fund show a decrease upon last year of £250. It has been resolved to distribute a sum of £9,750, and to close the Fund for the present year on the 30th.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

THE lectures to be delivered at the Royal College of Surgeons, during the ensuing year, are as follow. Mr. Christopher Heath: "On Certain Diseases of the Jaws;" Mr. Walter H. Jessop: "The Intra-Ocular Muscles;" Mr. J. Bland Sutton: "On Evolution in Pathology;" Mr. C. B. Lockwood: "On the Development and Transition of the Testis, normal and abnormal, with Observations on Congenital, Infantile, and Cæcal Hernia;" Mr. Henry Power: "The Relations between the Eye and some General States of the System;" Mr. C. Stewart: "The Auditory Organs of the Vertebrata, and on Some of the recent Additions to the Museum;" Dr. Francis Warner: "The Anatomy of Movement;" Dr. L. C. Wooldridge: "Nutrition." The date of each course of lectures will be announced in due course.

THE CHOLERA IN EUROPE.

REPORTS from Belgrade state that cholera broke out on November 21st in one of the infantry barracks; and that, since then, there have been fifty cases and ten deaths. King Milan was in the country when the first case occurred, but he at once returned to the capital, in order to superintend personally all the arrangements for checking the epidemic. His Majesty has shown himself indefatigable in visiting the cholera patients in the hospital, and in organising relief and remedial measures. His example has had the best effect, not only in allaying panic, but in stimulating the inhabitants to assist the authorities to do all that is needful for checking the spread of the disease.

THE BRITISH MEDICAL TEMPERANCE ASSOCIATION.

A MEETING of the above Association was held in the rooms of the Medical Society of London on Tuesday, November 30th, at which Dr. B. W. Richardson, who presided, delivered an address on "The Public-House and the Public Health." He regarded the public-house from five points of view: (1) as a centre of disease in itself, affecting its inmates. This was proved by the fact that innkeepers had the highest mortality of all classes of men in the kingdom; (2) as a centre for the spread of infection, of which, he said, no good evidence had been produced; (3) as a centre for the production of local diseases, especially of the chest; (4) as a centre for producing mental disease; (5) as a centre producing "national asthenia," a physical degradation of the body which predisposed to disease. He said that if in a town where the annual death-rate was 20 per 1,000, all persons lived under the same conditions as publicans, the death-rate would rise to 28 per 1,000. He believed that alcohol, in one way or another, was the cause of one-third of all the deaths in this country. In the discussion which followed, Drs. Norman Kerr and W. Pearce took part, and the following resolution, moved by Dr. J. J. Ridge, and seconded by Dr. Morton, was carried unanimously: "That this Association memorialise the Government to institute an inquiry into the extent of disease and mortality produced, directly and indirectly, by the public sale of intoxicating drinks."

CORROSIVE SUBLIMATE IN MIDWIFERY.

AT the meeting of the Obstetrical Society on Wednesday last, December 1st, an important paper was read by Dr. Dakin "On Mercurialism in Lying-in Women." He spoke of certain toxic results which might follow the routine use of douches of solutions of corrosive sublimate (1 part in 1,000, or 1 part in 2,000, of water) after delivery; his observations had been made when he was resident medical officer at the General Lying-in Hospital, during the tenure of office of Dr. John Williams and Dr. Champneys as physicians. The severe cases all occurred within a limited period. The observations of others, especially in Germany, were criticised; Dr. Dakin's conclusions did not entirely tally with them, especially in respect to results of the examination of the urine. Dr. Boxall discussed the question of the comparatively short period during which the cases of toxic effects were noticed, and called attention to the greatly improved results, as regarded mortality and prevalence of disease, which followed the substitution of corrosive sublimate for carbolic acid and permanganate of potassium. An animated discussion followed. Dr. Graily Hewitt was of opinion that danger might come if corrosive sublimate were henceforward, on the strength of the General Lying-in Hospital statistics, widely used in private practice; whilst Dr. Champneys believed that nothing but good could happen if that antiseptic were more widely employed. During his tenure of office at the hospital, in association with Dr. J. Williams, the total mortality from all causes was 7 in 1,000. The abstract of the paper, and the discussion which followed, will shortly be published.

METROPOLITAN WATER SUPPLY.

IT is not possible to over-estimate the importance to the health o this vast Metropolis of the purity of its water-supply. Of the five and a-half millions who inhabit greater London, two and a-half million are dependent upon the Thames for their supply of water. It is therefore high time that some measures were taken to prevent the discharge into the river, a few miles above the intakes of the Metropolitan Water

Companies, of the unpurified sewage of the five thousand inhabitants of the town of Staines. In his report just issued of the examination of the water supplied by the Metropolitan Water Companies during the month of October, Sir Francis Bolton draws special attention to this subject, and there will be a very general agreement with his remarks. He says: "Many of the towns on the Thames have diverted their sewage, or have purified or clarified it, whilst Staines, situate but a short way above the intake of the water companies, persistently neglects to undertake works to free the river from contamination, and nothing has been done, notwithstanding the numerous notices served by the Thames Conservators. If an appearance of fevers in excess should occur in London, and be attributed to the pollution of the river Thames, which forms the main source of the water-supply of the Metropolis, and the case of Staines is brought forward, what is to be said? This subject has now been under consideration for many years. No further time should be lost in bringing this important matter to a definite conclusion." There were indications recently that the Staines Local Board intended to deal with this important question, but, seemingly, the project has fallen through. It is certainly to be hoped that the report of Sir Francis Bolton will afford the necessary stimulus to the responsible authorities.

SCOTLAND.

ROYAL INFIRMARY, EDINBURGH.

At a meeting of the Managers of the Edinburgh Royal Infirmary, held on Monday, J. W. B. Hodsdon, M.D. Ireland, F.R.C.S.Ed., was elected an assistant surgeon.

EDINBURGH UNIVERSITY STUDENTS' UNION.

To the many members of the profession who have sons studying at Edinburgh University, it will be interesting to know that the efforts made to found a students' union in Edinburgh have this week culminated in the holding of a fancy fair on a most extensive scale, from which it is hoped that the greater part of the £11,000 required for the scheme will be received (£4,000 having already been collected). It is being held in the Waverley Market, and handsome gifts have been sent to it from all parts of the world. Full details are given in the local newspapers. We earnestly hope that it may be successful in enabling its projectors to establish an institution that is much wanted, and the fact that £2,000 was realised on the first day of the fair encourages us in the belief that it will.

DESTITUTE SICK SOCIETIES.

THE quarterly meeting of the directors of the Edinburgh Destitute Sick Society was held on Monday. The treasurer's report stated that 2,900 visits had been paid during the last three months; there had been about 350 new cases, and £490 had been distributed among the sick poor. At the annual meeting of the Portobello Destitute Sick Society, held on the same day, the report submitted by the treasurer showed that during the past year there had been 413 persons relieved. The financial statement showed the income to have been over £139 and the expenditure over £117. The Provost, who presided, said the Society deserved greater support, as it was doing a good work in the town.

ORPHAN HOMES OF SCOTLAND.

THE fifteenth annual meeting of these homes was held on November 23rd, in Glasgow. Sir William Collins, who was in the chair, stated that the income for all purposes during the past year was £23,000. The average expense for each inmate was £11 per annum. The average number of boys cared for at these homes was 560 annually, and for maintenance, teaching, and other household expenses, they cost only £6,127. Mr. Quarrier said he hoped next year to rescue 700 children. They sent about 230 children to Canada during the past year, and he hoped to send out 400 more soon. They had twenty-six homes, which cost over £70,000, and they wanted to build twenty-four more cottages, to cost something like £24,000.

LONGMORE HOSPITAL FOR INCURABLES.

THE directors of the Longmore Hospital for Incurables, Edinburgh, having requested Her Majesty the Queen to become Patroness of the Edinburgh Association for Incurables, she has graciously expressed the pleasure it will afford her to do so.

GENERAL MEDICAL COUNCIL.

A MISTAKE crept into the numbers given in last week's JOURNAL of those who voted for each of the candidates for the membership of the General Medical Council in Scotland. The correct numbers are given elsewhere, but it will be seen that the official statement scarcely alters the relative positions of the candidates.

WHAT WORKMEN CAN DO FOR MEDICAL CHARITIES.

A GRATIFYING example of what can be done by united effort on the part of the working classes for medical charities (by which they are themselves so largely benefited) is afforded by what has just been done by the workmen employed by Messrs. James Nimmo and Co., coalmasters, Clackmannan. It is announced that they have made the following contributions to various medical charities: Royal Infirmary, Glasgow, £25; Western Infirmary, Glasgow, £20; Royal Infirmary, Edinburgh, £10; Ophthalmic Institution, Glasgow, £4; Eye Infirmary, Glasgow, £3 3s.; Blind Asylum, Glasgow, £2 2s.; Dental Hospital, Glasgow, £1 1s.; Kilmuir Seaside Convalescent Home, £2 2s.; Dunoon Seaside Convalescent Home, £2 2s.; Lenzie Convalescent Home, £1 1s.; Sick Children's Hospital, Glasgow, £1 1s.

IRELAND.

THE Privy Council has authorised an expenditure of £1,000 for the erection of stores, etc., at Killarney District Lunatic Asylum.

MR. H. R. SWANZY, Surgeon to the National Eye and Ear Hospital, Dublin, Ophthalmic Surgeon to the Adelaide Hospital, has been appointed a Vice-President of the Ophthalmological Section at the International Medical Congress.

LURGAN UNION.

DR. E. HARMAN, late medical officer for the Lurgan No. 2 Dispensary, has been granted a superannuation allowance of £103 per annum.

LISBURN UNION.

BY the death of Dr. John Jefferson, a vacancy for a medical officer for the Lisburn district has occurred. The salary attached to the post has hitherto been £100 a year, exclusive of registration and vaccination fees; but, at a meeting of the guardians held last week, it was resolved that for the future it should be reduced by £20 in the year.

BELFAST ROYAL HOSPITAL.

THE expenditure of this hospital usually exceeds its income by several hundred pounds, so that it may be truly described as existing in a condition of chronic impecuniosity. At present the funds show a deficit of about £1,500, and various measures have been proposed to free the hospital from the debt, which hampers its usefulness. Owing to the large increase in the population of Belfast during the past few years, the demands on the resources of the institution have gradually increased, and as it possesses but little funded property, it finds its income less than its expenditure. After a time, when debts become pressing, an effort is made, by means of a bazaar or fancy fair, to

make matters straight; and this goes on year after year. It has been suggested that, as next year will be the jubilee year of Her Majesty's reign, in order to test their loyalty, the citizens of Belfast should raise by public subscription a sum of £25,000 for the permanent endowment of the hospital; the title of "Queen Victoria's Jubilee Fund" to be given to the sum in question. Although no one is very sanguine as to the result of an appeal of this kind, yet all will agree that some measures should be adopted to relieve the hospital from its present embarrassing condition, and place it on a more suitable basis for the future. If otherwise, and the necessary subscriptions do not flow in, the hospital must be considerably curtailed in its usefulness for the future.

THE MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.

THE one hundred and thirty-fourth annual report of this institution has just been published. The number of patients treated in the hospital during the past year was 3,716, and in the dispensary 8,117, making a total of 11,833. The total expenditure was £4,153 10s. 1d., making, with the balance, £4,337 2s. The total income from all sources amounted to £4,397 13s. 6d., leaving a balance on hand at the close of the year of £60 11s. 6d.

MEMORIAL TO THE LATE DR. J. M. JOHNSTON SCOTT (LURGAN).

A HANDSOME monument has just been erected in the Shankhill Cemetery, Lurgan, to perpetuate the memory of the late Dr. Johnston Scott, whose early death about a year ago excited such genuine and widespread regret. Dr. Scott, although only thirty-five years of age at the time of his decease, had already acquired an extensive practice in Lurgan and its neighbourhood, and had also gained a high reputation for professional capacity and active benevolence. The monument is in the form of a pedestal of polished grey granite, over twelve feet in height, supported by a base three feet nine inches square. The lower, or sub-base, is tastefully ornamented with chiselled work. The motto on the monument is the appropriate one—"The merciful shall obtain mercy." The deceased gentleman was a graduate of the late Queen's University, in Ireland.

THE ROYAL COLLEGES IN IRELAND.

WE have received the following notice:—The Licentiates and Members of the Royal College of Surgeons and of the King and Queen's College of Physicians in Ireland, the students of medicine, their parents and guardians, and all those who take an interest in the welfare of humanity, are invited to co-operate in favour of important changes required in the governing and examining Boards of the above-named corporate institutions, in the teaching at the Dublin medical schools and hospitals, and last, though most important, in the treatment of the sick poor in our hospitals. All persons who consider that the above require reform are requested to communicate with J. P. Doyle, Physician and Surgeon, 69, Lower Mount Street, Dublin.

SUDDEN DEATH OF A NAVAL SURGEON.

WE regret to announce the sudden death of Dr. Thomas O'Sullivan, staff surgeon of H.M.S. *Belleisle*, the guardship stationed at Kingstown harbour. After dining with a friend in Dublin on Sunday last, he was seized with a fit of coughing and immediately expired. A *post mortem* examination showed that death was caused by rupture of an aneurysm of the aorta. The deceased officer took his degrees of M.D. and M.Ch. in the Queen's University in 1869, and was about 42 years of age. The funeral took place on Wednesday with full naval honours in Glasnevin Cemetery.

THE ACADEMY OF MEDICINE IN IRELAND.

THE opening meeting of the session of the Obstetric Section was held on November 26th. Dr. Macan, Master of the Rotunda Hospital, and President of the Section, delivered an inaugural address; and a paper on "Placenta Prævia," was read by Dr. Fleming. A resolution, placing on record a declaration of the sense of the loss the Section has sustained by the recent death of Dr. Richard Henry, and conveying to his widow and father an expression of deep sympathy with them in their bereavement, was unanimously adopted.

RATHDOWN UNION.

AT a recent meeting of the guardians, Dr. Molony, medical officer of Arklow, reported that there were 49 defaulters under the Vaccination Act in his district. Proceedings were ordered to be taken in each case. The sanitary condition of Arklow is said to be desperate, no notice being taken of the numerous complaints forwarded by the medical officer of health. Scarlet fever has been rather prevalent of late in the district.

THE DUBLIN MEDICAL SCHOOLS.

THE entries for the current session, to judge from the misleading returns sent in to the so-called "Anatomical Committee," are exactly the same as last year, viz., 842. There are, however, certain changes in the numbers returned by the different school registrars, the principal change being an increase of 15 in the Trinity College School and a loss of 21 in the School of the Catholic University as compared with last year. The following is the return:—

Trinity College School	235
Royal College of Surgeons	129
Ledwich School	217
Carmichael College	181
Catholic University	217

THE OUTBREAK OF ENTERIC FEVER IN CORK.

AT a meeting of the Cork Board of Guardians, one of the members drew attention to the large number of cases of enteric fever in the workhouse. Fifteen fresh cases had been admitted during the week, and there were in the hospital altogether sixty cases of the disease. He suggested that an analysis of the water should be made, with the view of determining its purity. There should be a periodical analysis of the water supplied to the citizens, as is the custom in all large cities. In one instance a water-pipe got choked, and, on examination, there was found lodged in the pipe an eel, fourteen inches long, in a putrid condition. Dr. Donovan, medical officer of health, has urged on the Public Health Committee the necessity of undertaking the cleansing and lime-washing of the back-yards of the poorer classes; and also the ventilation of the principal main sewers of the city. Nine years since, Dr. McCabe, Local Government Board Inspector, held an inquiry as to the prevalence of enteric fever in Cork, and he particularly recommended the Corporation to see to the ventilation of the main sewers; but that body, although they had ample powers, never carried out the suggestion. For want of proper ventilation, large quantities of sewer gas forced its way to St. Luke's and other elevated portions of the north side of the city. One of the guardians proposed that the medical inspector of the Local Government Board should inquire into the present cause of enteric fever in Cork, but the proposal was not seconded. A resolution, however, was adopted, drawing attention to the insufficient fines inflicted by the magistrates for breaches of sanitary regulations, and the clerk was requested to write to the Public Health Committee in reference to this subject.

BEQUESTS.—Alderman Thomas Rose bequeathed £10,000 to the Manchester Royal Infirmary; £5,000 to the Salford and Pendleton Royal Hospital and Dispensary; £2,000 to the St. Mary's Hospital for Women; £1,000 to the Manchester Royal Eye Hospital; £1,000 to the Manchester and Salford Lock and Skin Disease Hospital; and £1,000 to the Manchester Clinical Hospital and Dispensary for Children.

GATESHEAD CHILDREN'S HOSPITAL.—Mrs. Southern and Miss Brown have subscribed £500, the Trustees of F. Glenton, deceased, £500, Lady Northbourn £50, Mrs. Edward Joicy £50, the Hon Mrs. Parson £25, and Mr. J. W. Robinson £25, to the building fund of the Gateshead Children's Hospital.

REPRESENTATION OF THE PROFESSION ON THE GENERAL MEDICAL COUNCIL UNDER THE MEDICAL ACT (1886).

RESULT OF THE POLL.

We announced last week the result of the voting. From the official return issued by the Registrar of the General Medical Council, we note that the number of voting papers sent out in England was 18,074, and the number of voting papers returned from England 13,381. The following is a full list of the persons nominated, and the number of votes given to each candidate :—

England.	
Wheelhouse, Claudius Galen (Leeds)	8,548
Foster, Sir Balthazar Walter (Birmingham)	7,718
Glover, James Grey (London)	6,614
Richardson, Benjamin W. (London)	4,704
Dolan, T. Michael (Halifax)	3,063
James, M. Prosser (London)	1,223
Morris, Edwin (Spalding)	986
Balding, Daniel Barley (Royston)	896
Taafe, R. P. B. (Brighton)	878
Brown, G. (London)	865
Carpenter, R. H. S. (London)	731
Bullock, Henry (Isleworth)	463
O'Connor, Bernard (London)	320
Watts, A. N. (Sharnbrook, Bedford)	214
Scotland.	
Bruce, William (Dingwall)	642
Morton, James (Glasgow)	596
Sinclair Robert (Dundee)	414
Ireland.	
Kidd, George Hugh (Dublin)	911
Jacob, Archibald Hamilton (Dublin)	614
Laffan, Thomas (Cashel)	195
McMordie, William Kirkpatrick (Belfast)	161

THE ASSOCIATION OF GENERAL PRACTITIONERS.

The Honorary Secretaries of this Association, Drs. Verdon and Bott, write from 414, Clapham Road, London, S.W., referring to the progress which is being made by this Association :—The objects of the Association are to advance the interests, support the rights, and promote the welfare of the general practitioner; and especially also to obtain for him a voice in the management of his own affairs upon the various legislative councils of the profession. Among the work already in progress is the organisation of meetings to consider the course recently pursued by the Royal College of Surgeons and the Royal College of Physicians, in excluding the Apothecaries' Society from combination in the joint Examining Board for England and Wales, thus, without any consultation with their Members and Licentiates, creating under the Medical Act of 1886 a new and competing class of general practitioners fully qualified, as they will be under this Act, by the Apothecaries' Society in Medicine and Surgery, and taking medical and surgical titles. Under any circumstances, it is urged that, in so momentous a matter, affecting deeply the interests of the whole body of general practitioners, they had a right to be consulted. They, in common, they believe, with the great body of the profession, feel that general practitioners ought no longer to be excluded from a voice in the management of their own affairs, but it is only by combination and the force which association gives, that they can assert those rights and give them effect. Self-help, they rightly say, lies at the basis of independence, freedom, and just principles, and it is only by combination that general practitioners can relieve themselves from having their most momentous interests dealt with by small and irresponsible councils, self-elected, or elected by some small constituency, of which the general practitioners, who form the immense majority of the profession, and who are its back-bone, have no share. Among the earliest adherents to the Association have been Mr. Husband (formerly of York), Bournemouth; Dr. Morris, Spalding; Dr. Danford Thomas; Dr. Holmane, Reigate; Mr. Ashton Ellis and Mr. Steele (Honorary Secretaries of the Association of Members of the College of Surgeons); Dr. Alfred Carpenter, Croydon; Mr. Wickham Barnes (Honorary Secretary of the Poor-Law Medical Officers' Association); Mr. Corner, Poplar; Dr. Maurice Davies; Dr. Richard Neale; Mr. George Ord; Dr. Crowe, Worcester; Dr. Alderson, Hammersmith (President of the West London Medico-Chirurgical Society); Dr. Gubb; Dr. Paramore; Dr. Grant, of Mile End; Dr. Cookson, Stafford; and many other well-known and representative men. The annual subscription is fixed at the modest sum of 2s. 6d.

THE RIGHTS AND INTERESTS OF GENERAL PRACTITIONERS.

SPECIAL MEETING OF THE METROPOLITAN COUNTIES BRANCH.

At the special meeting this (Friday) evening, at 8 P.M., at the School of Mines, Jermyn Street, called by requisition to consider the highly important resolutions, which we last week printed (on the subject of the exclusion of the Apothecaries' Society from the Conjoint Examining Board for England and Wales, by the two Colleges, without regard to the opinion of their Members or Licentiates, and of the claim of the Members and Licentiates to a share in the administration of the Colleges), we are informed that a large gathering is expected, and that the respective resolutions will probably be moved by Dr. Morton, late President of the Harveian Society, Mr. T. Holmes, Mr. Wickham Barnes, and Dr. Bott. Some surprise is expressed that at a special meeting called by requisition, other formal business, not included in the requisition, is put on the paper prior to the resolutions included in the requisition. No doubt, however, if any discussion be likely to arise on such business, it will be postponed to the end of the meeting, or another occasion.

EXCLUSION OF THE APOTHECARIES' SOCIETY FROM THE CONJOINT BOARD OF ENGLAND.

At the meeting of the Gloucestershire Branch of the British Medical Association, held on Tuesday, November 16th, it was proposed by Dr. Rooke (Cheltenham), and seconded by Mr. Bower (Gloucester): "That this Branch is of opinion that, in justice to the great majority of medical practitioners in England and Wales, and with the view of retaining the only existing check against unqualified practitioners, it is advisable that the Apothecaries' Society should be admitted to the conjoint examination scheme of the Royal College of Physicians and Surgeons."

CERTIFICATES IN PSYCHOLOGICAL MEDICINE.

The following is a list of the candidates who have passed the examination for the certificate of efficiency in Psychological Medicine, held at Bethlem Royal Hospital, November 29th and 30th: Percy Smith, Bethlem Royal Hospital; Thomas B. Hyslop, Bethlem Royal Hospital; G. M. Robertson, Edinburgh; James Neil, Warneford House, Oxford; Alan Rigden, County Asylum, near Shrewsbury; Walter Pearce, Maidenhead; J. Walter Scott, Fareham, Hants; G. D. Symes, Dorchester.

This examination has been instituted by the Medico-Psychological Association of Great Britain and Ireland, and demands a practical as well as a theoretical knowledge of mental disorders. It consists of a written and oral examination, including the certifying of an insane patient, and occupies a portion of two days. Candidates must be registered medical men, who have resided in an asylum, holding the office of clinical clerk, or as assistant medical officer, for at least three months, or have attended a course of lectures on insanity and the practice of an asylum (where there is clinical teaching) for a like period, or they must give such proofs of experience in lunacy as shall, in the opinion of the President, be sufficient. The following are the written questions at the recent examination, conducted by Dr. G. H. Savage and Dr. D. Hack Tuke: 1. Enumerate various methods of classification of mental disorders which have been proposed, and discuss their merits, specifying that method and the forms it comprises which you prefer. 2. What are the symptoms and previous history of an insane patient which would lead you to give an unfavourable prognosis? 3. What forms of mental disorder are most frequently associated with epilepsy, and what do you understand by masked or larvated epilepsy? 4. What are the questions you would especially ask, if treating a man's testamentary capacity? What would lead you to suppose him to pos-

sess this capacity, although his mind might not be sound on all points? 5. What treatment would you adopt in a case of acute delirious mania? 6. Mention the statutory forms required for the admission of a private patient into an English or Scotch asylum, and the conditions attaching to them.

ROYAL UNIVERSITY OF IRELAND.

At the last meeting of the Senate of the University, several most important alterations were made in the medical curriculum. The new regulations chiefly concern the courses of medical studies to be pursued by candidates for the degrees in Medicine in the University, and will come into operation next autumn.

It is enacted that medical students shall not enter upon their regular professional studies until the completion of their obligatory non-professional studies.

The First Examination in Medicine shall include Natural Philosophy, Systematic and Practical Chemistry, Botany, and Zoology; and particular weight shall be given to the practical part of the examination. The Second Examination shall include Systematic and Practical Anatomy, Systematic Physiology, and Pharmacology.

No certificate of attendance on any of the courses here prescribed for the second year shall be accepted, where such attendance appears to have been given before the completion of the full course prescribed above for the first year.

No certificate of attendance at instruction in any of the branches of study assigned to the third and fourth years shall be accepted, where such attendance appears to have been given prior to the completion of the second year of medical studies, as above.

At the end of the third year of medical studies, which shall comprise
Advanced Systematic and Practical Anatomy;
Advanced Systematic and Practical Physiology and Histology;
Medicine, including Therapeutics, and Pathology;
Surgery, including Therapeutics, and Surgical Pathology.
there shall be a special examination in the complete course of anatomy, physiology, and histology, as prescribed above.

The fourth year's course shall comprise the remaining subjects of the medical curriculum, viz. :—
Midwifery, and Diseases of Women and Children.
Mental Diseases (three months' course in a recognised institution where Clinical Instruction on Mental Diseases is given).
Medical Jurisprudence, with Hygiene.
Ophthalmology and Otology, a three months' course in an hospital having at least ten beds devoted to Diseases of the Eye and Ear.

In addition to the present regulations as to hospital attendance, practical midwifery, etc., which are maintained, the following provisoes have been made :—

(*a.*) No hospital attendance will be recognised where such attendance has taken place prior to the completion of the first year of medical studies.

(*b.*) The prescribed attendance during three months in a fever hospital, etc., must take place before the commencement of the fourth year of medical studies.

(*c.*) Attendance on practical midwifery and gynæcology shall not take place before the fourth year of medical studies.

The examination for the M.B. degree shall take place at the conclusion of the fourth year of medical studies, and will comprise all the subjects prescribed above for the third and fourth years of medical studies, with the exception of anatomy, physiology, and histology.

Should any candidate specially desire it, he may be allowed to present himself for the two examinations—that for the third year and the final examination—at the end of his fourth year. But in such a case, failure in the subjects of the third year's examination shall involve the complete loss of the whole examination.

The date at which this re-arrangement of the medical course shall be brought into operation as far as it affects the present students of the University, is fully set forth in the regulations.

HUDDERSFIELD INFIRMARY.—The Huddersfield Infirmary has been promised £500 to the building extension fund by the Misses Eastwood of Newhouse, and has received £100 under the will of Mr. Richard Wheatley, and £55 from the committee of the Holliday Charities Cup Competition.

THE LATE DR. HENRY G. BULL.—A marble tablet to the memory of the late Dr. Bull has been placed in Hereford Cathedral by subscription.

THE RELATION OF ALIMENTATION TO THE RESULTS OF SURGICAL PRACTICE.

No one familiar with the vicissitudes of surgical practice can doubt that the adjustment of the dietary to the particular needs of individual patients must have a very important and appreciable influence on the results to be hoped for from any surgical procedure. Indeed, it is only fair to surgeons to say that this fact is generally appreciated by them, but, unfortunately, that appreciation is not always as fully borne out in practice. The curious absence from surgical literature of any well thought out and systematic treatise (or indeed any treatise at all) on this important subject, has been noted in a paper read before the Section of Surgery of the British Medical Association by Dr. W. C. Wile, of Newtown, Connecticut, who made the omission the text of an original and careful discourse, in which he pointed out the advantages to be derived from a more punctilious regard of physiological requirements in dieting surgical patients. This department is one which has been more adequately studied in medical as opposed to surgical practice, although, even there, the directions are too often apt to take the form of general rules, or dieting on rule-of-thumb principles. The reproach more particularly made against surgeons is that they content themselves with ordering low or middle diet, without due regard to the condition of the patients' digestive and assimilative functions, and without the careful consideration of the nutritive value of the articles ordered to be given, which marks the decisions of all really scientific physicians.

Surgical patients, as a general rule, although, of course, there are many exceptions, need a tonic and strength-giving dietary to enable them the better to fulfil the demands created by surgical interference over and above the ordinary requirements of daily life; and if the best results are desired, the amount of nourishment must bear a well determined proportion to the extra wear and tear. Not only is such a diet necessary after the operation, but it is at least as desirable before, in order to place the organism in the most favourable conditions to cope with the more or less formidable remedial measures which it may have been determined to adopt.

Great and rapid strides have been made of late years in our knowledge of the phenomena of nutrition, and ample means have consequently been placed at the disposal of practitioners to meet the difficulties of alimentation under peculiar circumstances in a way which would not have been practicable in years gone by. It is in respect of these means that surgeons have lagged behind and failed to make use of the advantages that scientific research has placed at their disposal. The various plans of securing a maximum of nourishment within reasonable volume, by improved methods of extracting the nutritive material of meat, or the not less valuable ends attained by the administration of pre-digested or partially digested foods, are not utilised as they should be, although, as may well be supposed, surgeons are to be found who watch over this part of the treatment with the same solicitude that they extend to other departments. Still it cannot be denied that, as a rule, there is great room for improvement in this respect, and the sooner surgeons practise and students learn the extreme importance of a department of treatment hitherto regarded as subsidiary, the better will it be for the patients who are unfortunate enough to stand in need of surgical aid.

COLLECTIVE INVESTIGATION COMMITTEE.

LIST OF RETURNS RECEIVED DURING THE MONTHS OF AUGUST, SEPTEMBER, AND OCTOBER, 1886.

Aberdeen Branch: XIV, J. M. Booth, M.D. (2).
Bath and Bristol Branch: I, F. T. B. Logan; II, W. Duncan (2); E. Dunbar, M.D.; III, F. T. B. Logan; VI, R. Shingleton Smith, M.D.; XIII, E. Prideaux; Terebene, W. F. Lovell.
Dorset and West Hants Branch: XIII, W. V. Lush, M.D.
Dublin Branch: X, H. R. Swanzy, F.R.C.S.
Metropolitan Counties Branch: XIII, H. D. Rolleston; Intemperance, H. G. Friend.
North of Scotland Branch: IV, H. W. Laing, M.D., J. Ferguson, M.B.
South-Eastern Branch: East Kent District: Intemperance, C. E. Fitzgerald, M.D.
South of Ireland Branch: XIV, G. E. T. Greene (4).
South-Western Branch: North Devon District: X, J. E. Square, F.R.C.S.
Worcestershire and Herefordshire Branch: XIII, G. Birt, M.B.

The Secretary to the Collective Investigation Committee will feel obliged if any contributors who do not find their returns included in this list will communicate with him at once.

A LEARNED MEDICAL EDITOR.—The editor of the *Philadelphia Medical and Surgical Reporter*, Daniel G. Brinton, A.M., M.D., has been elected Professor of American Archæology and Linguistics in the University of Pennsylvania

INDIA AND THE COLONIES.

INDIA.

THE Viceroy of India recently opened a new hospital at Calcutta, which, at the Gaekwar's request, is to bear Lady Dufferin's name, thus commemorating her efforts to ameliorate the condition of women in India.

NEW ZEALAND.

TREATMENT OF INSANE PAUPER IMMIGRANTS.—We have received extracts from some of the newspapers of New Zealand bearing upon more or less important medical subjects. One of these concerns an opinion expressed some time ago, in the second annual report (1884) of the Inspector of the Lunatic Asylums of New Zealand, relative to the statistics for 1883. The proportion of insane persons under detention to the total population of the colony, having been 1 in 415, had risen in that year to 1 in 393, and this was looked upon as showing that the increase of 106 in the number of lunatics in the year was disproportionate to the increase of population in the same space of time; and the inspector was quoted as pointing out "that a large number are placed in colonial asylums from economical and other motives, rather than from urgent mental symptoms; and he has good reason to think that persons who have recently been in English asylums, or have shown insane tendencies, are not rarely shipped to this colony to escape the burden of their maintenance at home. It would appear only right," he remarks, "that these should be sent back; in fact, such a course has already been taken by a leading shipping company to avoid the penalties of the Imbecile Passengers Act." If the Inspector was correctly cited, it was an amazing assertion to make—that persons of unsound mind are designedly shipped from the mother country to New Zealand in order to escape the expense of their maintenance. Indeed, we understand that when a ship arrives at New Zealand, any passenger on board found to be of unsound mind on the voyage or on landing is, on the compulsion of the colonial authorities, either sent back by the shipping company in whose vessel such person arrived; or, if retained, the shipping owners have to defray the cost of maintenance. Whereas persons found insane on vessels arriving in this kingdom from New Zealand, if pauper or friendless, are maintained in asylums here at the expense of our ratepayers. In these matters there should be reciprocity, and a fair equitable arrangement, under which the home country and the colony should each bear their legitimate burdens for the maintenance of lunatics; and when this is done, the home country will be relieved from a double and unjust financial burden.

From another paragraph, we regret to learn that Dr. Grabham's recommendation that two inspectors of lunatic asylums should be appointed, one for the north and the other for the south island, was not carried out.

HOSPITALS IN NEW ZEALAND.—The Inspector of Hospitals in New Zealand highly approves of the system of nursing in operation at the Wellington and Auckland Hospitals, where an apprenticeship in the art of nursing is being served by ladies of good education, who may, hereafter, become centres for the training of skilled nurses throughout the country.

At the Dunedin Hospital it is stated that one shilling is charged for each prescription dispensed for out-patients, and that, although many cannot pay, and many evade payment, the result is a welcome addition (£125 a year) to the resources of a comparatively small hospital. It is added that "great care is taken to see that applicants are proper objects of charitable aid, and not in a position to employ a private medical practitioner;" but how this is accomplished is not explained.

At Christchurch there has been an action against a journalist for a newspaper libel on one of the hospital staff. The article complained of appears, as described in the judge's charge to the jury, to have been grossly defamatory and libellous. Headed, "Revolting Disclosures; Manslaughter or Worse," it "mentions a particular instance in which it alleges three or four times over that a patient has been killed in the hospital by a practitioner" (the plaintiff). Although the jury found that the article complained of was libellous, that its publication was not justified either by reason of the allegation of facts in it being true, or by reason of these allegations being fair comments on the conduct of the plaintiff in his capacity as one of the hospital staff—yet only the nominal damages of one shilling were awarded. The whole matter affords an illustration of the enormous licence of the press, and the sweet amenities of journalism in some of the colonies.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1887.

ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any bye-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

Meetings of the Council will be held on January 19th, April 13th, July 13th, and October 19th, 1887. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before each meeting, namely, December 29th, 1886, and March 24th, June 23rd, and September 29th, 1887.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council, unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary*.

WARD COUSINS' PRIZE.

THE Council of the British Medical Association offer the sum of £20 as a prize for the best essay on "The Pathology and Treatment of Abortion." The competition is open to all general practitioners who are members of the British Medical Association. Each essay must be sent, under a mark or motto, with a sealed letter containing the name and address of the writer, addressed to the General Secretary, on or before June 30th, 1887. The prize will be presented at the Annual Meeting of 1887.

FRANCIS FOWKE,
November 9th, 1886. *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are in progress on the subjects of

DIPHTHERIA, CANCER OF THE BREAST,
OLD AGE, THE VALUE OF HAMAMELIS,
THE VALUE OF PURE TEREBENE.

Memoranda on the above, and forms for recording individual cases, may be had on application.

THE ETIOLOGY OF PHTHISIS.—Continuation of inquiry. The Committee will be glad to receive the names of gentlemen willing to engage in joint investigation of any of the following points in relation to the origin of cases of Phthisis;—(*a*) The influence of residence and occupation; (*b*) the previous state of the patients' thoracic organs and general health; (*c*) heredity and communication. Full particulars will be sent on application.

The general inquiries into THE THERAPEUTIC VALUE OF HAMAMELIS AND PURE TEREBENE will be continued for another year, and a full report presented to the Section of Therapeutics in the Annual Meeting of 1887.

Returns are still received on THE CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, and schedules will be forwarded on application.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will, by the kind invitation of Dr. Adams, take place at Brooke House, Upper Clapton, on Thursday, December 16th, at 8.30 P.M. The chair will be taken by C. T. Aveling, Esq., M.D. A Demonstration of interesting cases of Nervous Diseases will be given by W. B. Hadden, Esq., M.D.—JOSEPH W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of the members of this District was held at Hastings on Tuesday, November 16th, Dr. HUMPHREYS, of St. Leonards, in the chair.

Next Meeting.—It was decided that the next meeting, if possible in conjunction with the West Sussex District, be held at Brighton in March.

Papers.—The following papers were read.

Abdominal Tumour formed by large Kidney.—The CHAIRMAN: Abdominal Tumour formed by a large Scrofulous Kidney. The patient, a young married woman, who lived in a marshy district, had symptoms of intermittent fever six months before coming under the author's care. A large oval swelling on the right side of the abdomen was aspirated, and afterwards incised. The woman died three days after the second operation. The right kidney was found completely disorganised, and filled with caseous matter arranged in pyramidal loculi. The caseation of the kidney had probably taken place years before. The feverishness evidently arose from the occurrence of suppuration. The right ureter was completely blocked by a core of putty-like matter, which accounted for the absence of any sign of urinary derangement, the urine coming solely from the left kidney, which was healthy.—The discussion which followed was directed to estimating the value of the band of resonance between the tumour and the liver in the diagnosis of kidney tumours.

Ascaris Lumbricoides.—Dr. ELLIOTT: Ascaris Lumbricoides.

Cancer of Sigmoid Flexure.—Dr. PENHALL: Cancer of the Sigmoid Flexure, with repeated attacks of intestinal obstruction. From the experience of this case, in which colotomy was not done, and contrasting it with others in which the operation had given great relief, the author urged the more frequent performance of that operation.

Intestinal Obstruction from Gallstone.—Dr. ALLEN: Intestinal Obstruction from Gallstone: Operation. The diagnosis in this case was made chiefly from the fact that obstruction had been preceded by gallstone colic. On opening the abdomen, a large stone was found impacted in the ileum, and removed through an incision in the bowel. The patient died apparently from shock.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

The Women's Hospital Question.—Service in Aid of the Southern Hospital.—The Proposed New Hospital for Infectious Diseases.—Annual Meeting of the Liverpool Institute.—Illness of the Mayor of Warrington.

SPECIAL general meeting of the Medical Institution is to be held on this (Friday) evening, at which the anxiously awaited report of the ospital Inquiry Committee will be received.

In my last communication I stated that, at the usual Hospital Sunay annual meeting, it was mentioned in the report presented by the Committee that that body was unanimously of opinion that the sum allotted to the Women's Hospital should be withheld pending the investigations. Last week, the Hospital Sunday Committee met, nd this question was again brought up. After a discussion, it was decided by a majority of one to place the Hospital for Women on the list of selected charities conditionally—that is, subject to the discretion of the Distribution Subcommittee, who will be influenced in their award by the report of the Medical Inquiry Committee. At this meeting the Home for Incurables in Parliament Street was added to the list of the medical charities benefiting by the Fund.

The annual service in aid of the Royal Southern Hospital took place at St. Barnabas Church on November 21st. The Mayor attended in state; and the collection, after a sermon by the Venerable Archdeacon Gore, amounted to over £100. The hospital was afterwards visited.

A letter has been received from the Local Government Board in which several suggestions are made in regard to the plans of the proposed new Hospital for Infectious Diseases at the south end of the city. This letter was in acknowledgment of the application made to the Board by the municipal authorities for sanction to borrow £15,000 for the erection of the hospital. It has been decided that the Corporation shall meet, as far as possible, the suggestions made in the Local Government Board's communication.

The annual meeting of the Liverpool Institute, one of our most popular public schools, will be held on December 17th, when Dr. B. W. Richardson is to deliver the prizes and an address.

It is reported that Dr. Mackie, the Mayor of Warrington, is seriously ill.

THE will of Dr. John Findlay Arthur, Surgeon-Major on the invalid list of the Madras Army, residing at Lochside House, New Hunstanton, has been proved, and duty paid on £28,888.

CORRESPONDENCE.

MEDICAL ATTENDANCE ON THE WORKING-CLASSES.

SIR,—The question of the possibility of introducing a more satisfactory method of medical attendance on the poor above the pauper class, is to be debated at a meeting, to be held at the rooms of the Society of Arts, on December 7th, at 4 P.M., Sir A. Clark in the chair. This meeting is called by an invitation signed by Sir Spencer Wells and myself, on behalf of the Metropolitan Provident Medical Association. My object in writing to you is to preclude any idea that the meeting is called for the purpose of recommending the particular scheme of Provident Dispensaries with which that Association has hitherto been connected; on the contrary, the meeting is called for the purpose of a genuine consultation, and we shall welcome the presence of anyone, whether he be a supporter or an opponent of the Provident Dispensary system, who will give any practical help towards a solution of the difficult problem before us. We are not blind to the defects of the provident system, as it has been hitherto managed; but, speaking for myself, I believe that if it could have fair play in London, it would be a great improvement on the present state of things. Still, if any better plan can be devised, neither I, nor, I believe, anyone else connected with the above Association, would have an instant's hesitation in adopting it. It is obvious, however, that such a plan can only be successfully worked by the active co-operation of the general practitioners, who are themselves engaged in that class of practice. One of the greatest of our difficulties hitherto is that they have, as yet, confined themselves to criticising the defects of the plans proposed, and have shown no disposition to organise a better system. Now, it is hardly necessary to point out that any particular scheme must be more or less in the nature of a compromise, and that some defects must be pardoned, if the scheme holds out a promise of compensatory advantages. Nor is it less obvious that the hospital staffs cannot be moved to any reform of the out-patient and dispensary system by anything short of a general movement on the part of the profession. We trust that the meeting of December 7th may be the commencement of such a movement—one in which the general body of the profession can co-operate heartily with the laymen interested in this great question.—I am, Sir, yours truly,

T. HOLMES.

18, Great Cumberland Place. November 30th.

AN ANCIENT VIRUS.

SIR,—A few days since I found the enclosed among the MSS. of the late Dr. Samuel Merriman, Physician Accoucheur to the Middlesex Hospital; it shows the antiquity of the venom against those members of the profession practising generally, and time does not seem to have weakened the virus.—Yours very faithfully,

JOHN J. MERRIMAN.

45, Kensington Square, W. November 29th, 1886.

"Badger, John, M.D.

"Published 'the statutes of the Colledge of Physicians, London, worthy to be perused by all men, but more especially Physicians, Lawyers, Apothecaries, Surgeons, and all such that either do or shall study, profess, or practice Physick.' 'Anno Domini 1694.'

"The statutes are given in Latin and English; they are preceded by an address 'to the Parliament of England,' and by a statement of "the base, dishonourable, and illegal dealing of the Colledge of Physicians, London, with a Doctor in Physick, admitted to the Degree in one of our own Universities.

"From this it appears that Dr. Badger was originally an Apothecary, but wishing to become a M.D., he entered at Emmanuel College, Cambridge, and obtained his Degree July 6, 1687. He states that he presented himself before the President and Censors, 'and was by them examined three several times in Latine, according to the form of the Statutes, and approved by them for a Licentiate, but was requested to suspend his admission of Licentiate till such time as he had quitted his Imployment in Pharmacy, and compleated his Degree (being then Batchelor in Physick) of Doctor in the University.'

"Having obtained this Degree, he again applied for admission as a Licentiate, but was from time to time deferred till new Statutes were made and promulgated, Sep. 28, 1687, by which new statutes he was excluded from his Licentiate unless he would *abjure* the Company of Apothecaries."

THE IRISH ELECTION.

SIR,—Allow me to contradict the statement in your issue of November 27th, that the other two gentlemen retired on Wednesday. Allow me also to warmly thank the gentlemen who voted for me, and to express my gratification that the two provincial candidates polled a number sufficiently respectable to prove that there is a goodly body of countrymen who are not prepared to accept the humble position of "hewers of wood and drawers of water" to a metropolitan caste.—Yours truly, THOMAS LAFFAN.

Cashel, November 27th.

PROTECTIVE INOCULATION.

SIR,—In your leading article on protective inoculation in the JOURNAL of November 27th, you mention a theory of the protection conferred by an attack of infectious diseases from subsequent attacks. I do not know when Dr. Salmon first advanced this theory, but it seems identical with the one which I put forward in the *Medical Chronicle* of June, 1886, page 255. Although I had not previously seen this view stated, I do not claim any credit for it, as it is a necessary consequence of previous work.—Yours truly, JAMES NIVEN.

UNQUALIFIED ASSISTANTS AND THE GENERAL MEDICAL COUNCIL.

SIR,—I see from the JOURNAL of Nov. 27th, that at a meeting of the Medical Council held on Saturday, November 20th, 1886, Dr. Quain moved, and Dr. Heron Watson seconded, "That charges of gross misconduct in the employment of unqualified assistants.....are.....regarded by the Council as charges of infamous conduct under the Medical Act." May I, most respectfully, through your columns, ask those gentlemen to define what they mean by gross misconduct in the employment of unqualified assistants? This, Sir, is a matter of the highest importance to general practitioners like myself, whose lot it is to live in a poor neighbourhood. My unqualified assistant, 38 years of age, who has been with me fourteen or fifteen years, is married and has a family, dispenses, keeps the books, attends ordinary midwifery, calls, and sees patients under my superintendence, that is to say, the patients seen by him are alternately seen by myself and by him. Would Drs. Quain and Watson consider this gross misconduct, and ask me to discharge him, and employ, instead, a recently qualified man, who would know little about dispensing, nothing about book-keeping, be held in contempt by the midwives, be perfectly satisfied that he could treat the patients much better than me, and attempt to do so to the dismay and disgust of the patients and their friends, and my confusion and perplexity; or still worse, employ an older man upon whom the 3 B's (Beer, Billiards, and 'Baccy) have made an indelible mark? If so, I may as well now, as at any other time, say, that if I am forced by the Medical Council to discharge my unqualified assistant (as I cannot afford to employ a man for the sole pleasure of his society), I will not be forced to employ one of the *unemployed* medical assistants, any more than I will be compelled to employ any other of "the unemployed." I was apprenticed in 1858. I kept myself whilst a student, and paid my lecture fees myself, and I have never known one day of enforced idleness (nor do I believe that any man who can and will work ever need be idle,) and there are hundreds, if not thousands, deserving general practitioners, who have had the same experience, and against whom this very insulting resolution is directed.—I am, Sir, yours obediently, M.R.C.S., L.R.C.P., and L.S.A.

SIR,—I request information with reference to the resolution passed by the General Medical Council on November 20th last. 1. What would be the position of a registered practitioner who acts as an assistant to an unqualified man under the said resolution? 2. What would be the position of medical men that assist an unqualified man, and cover his practice in all points of law? 3. What are the limits of the duties of an unqualified assistant? Can he sign the club-certificates of patients visited and attended by the principal in the latter's name when attending to the dispensing, in the principal's absence? 4. How is the General Medical Council going to visit the registered practitioners when their cases are brought to their knowledge in future? In the past all such complaints have been left unnoticed.

I might be permitted to make one suggestion, which is, I think, of universal application in putting down nefarious practices. The General Medical Council should ask the assistance of the Home Secretary directing a general rule to be framed by the Registrar of the Friendly Societies forbidding all clubs and workmen's organisations to accept certificates from unqualified assistants or registered practitioners who are assistants to unqualified men. It is the Registrars of Friendly Societies that could give the surest and best publicity to the resolution of the Council.—I am, etc., A MEMBER.

NAVAL AND MILITARY MEDICAL SERVICES.

MEDICAL WORK ON THE AFGHAN FRONTIER.

DR. OWEN, from accounts which have reached us, is doing good medical work on the Afghan frontier; many of the villagers come in for treatment at his dispensary, but many others, it is stated, are stopped by the Afghans. The *Pioneer*, to which we are indebted for this information, says the Afghans themselves when ill invariably come freely to our hospital for treatment, but Kazi Saadudin Khan's constant opposition to the country people coming in has been most difficult to meet, and has prevented much good work being done. There were, however, no fewer than 22,633 patients treated in the dispensary during the past year, including 80 major and 371 minor operations, although for more than half the time Dr. Owen has had only one hospital assistant, Pati Ram, to assist him. Last year the number of patients was only about 13,000. The correspondent adds: In June this year when we reached the Oxus and found a decently populated district to work in, no fewer than 4,521 patients were attended to, which proves of itself what a still better return there would have been to show if Dr. Owen had had the same opportunities elsewhere. Patients have been coming in all the way from Khiva, Samarkand and Bokhara, and, curiously enough, even the Bokharan villagers of Bosagha and Karki send us their sick instead of going to the Russians who are encamped in the midst of them. Considering the wilderness that Dr. Owen has lived in, his show of work is decidedly encouraging, and it is to hoped that the Amir will appreciate the work that has been done, and which has been the means of alleviating so much sickness and suffering among the people on his Russian frontier.

THE APOTHECARY DEPARTMENT IN THE FRENCH ARMY.

THE suppression of the *pharmaciens militaires*, or apothecaries of the army, is now under consideration in France. The subject is creating a strong feeling among the *pharmaciens* themselves, and is giving rise to a good deal of discussion in the French military papers. The question has arisen through a clause in a proposed law affecting the organisation of the army, which has recently been submitted to the Chamber of Deputies by General Boulanger, the present Minister of War. This clause provides that "the functions of the *pharmaciens* may be performed by medical officers who have devoted particular attention to natural science and chemistry." The change is advocated on the ground of economy, and also as attending to render the sanitary service of the army more simple. The pharmacy of a French military hospital of the first class occupies a very large space, and is furnished in a very costly manner. It is not like the dispensary of a British hospital—merely an establishment for dispensing the medicines used in the hospital—but has all the necessary appliances of a laboratory for preparing the extracts and numerous other articles contained in the official pharmacopœia, as well as for carrying out chemical analysis of all descriptions. It is argued that it would be far cheaper and simpler for all officinal medicines to be supplied to the hospitals from the large establishments of wholesale druggists, ready for being dispensed by competent persons in accordance with the prescriptions of the medical officers. This is the plan which is adopted in English hospitals, and, while it answers all the objects in view, it is obviously one which prevents an expensive multiplication of establishments. But a system which has existed since the beginning of the present century is not likely to be overturned even by such a reformer as the present French Minister of War, without considerable opposition. The *pharmaciens* of the French army have very powerful supporters. Although nominally a branch of the sanitary corps of the army, they have their own independent hierarchy, ranging from the *Pharmaciens Inspecteurs*, with the relative grade of a brigadier general, through the series of ranks corresponding with those of the medical officers, down to the junior *pharmaciens* ranking with sub-lieutenants. The letters which have appeared on the subject show that some of the French medical officers regard the *pharmaciens* as materially assisting them in the discharge of their own functions; while others, on the contrary, consider that their presence, constituted as they have been, has acted as an incubus on the sanitary service ever since their establishment. The issue of the controversy is looked for with much interest.

A VOLUNTEER MEDICAL STAFF CORPS FOR LEEDS.

THE formation in Leeds of a bearer company of the Volunteer Medical Staff Corps, under the guidance of Dr. de Burgh Birch, is, we are informed, in active progress. Although this corps will be called a

bearer company, its aim in time of war will be that of rendering immediate aid to the wounded, and the establishment and care of field hospitals. The complement of a company is four officers and sixty-two non-commissioned officers and men, who will serve under the same conditions as other volunteer corps, earning the usual capitation grant. The members at present enrolled are mainly students of the medical department of Yorkshire College, the officers being members of the staff. These are undergoing training according to the regulations of the Medical Staff Corps of the army, and they will have the same uniform as that body. In the spring an inspection will be held by the army medical authorities as a preliminary to the establishment of the company.

THE NAVY.

The following appointments have been made at the Admiralty during the past week: J. M. C. Cole to be Surgeon and Agent at Peel, Isle of Man; H. F. Jackson, Surgeon, to the Royal Marine Depot, Walmer, temporarily.

THE MEDICAL STAFF.

Deputy Surgeon-General S. A. Lithgow, C.B., M.D., has been granted the distinction of Companion of the newly created "Distinguished Service Order," for his services at the action of Ginnis, in the Soudan, in December, 1885.

Surgeon-Major H. W. A. Mackinnon is promoted to be Brigade-Surgeon, in recognition of his services during the operations in the Soudan in 1885-86.

Surgeon-Major G. B. Hickson, on arrival from England, is directed to do duty at the station hospital at Bellary, Madras.

Surgeon F. T. Skurrett, on arrival from England, is to do duty at the station hospital at Tuticorin, Madras command.

THE INDIAN MEDICAL SERVICE.

The services of Surgeon-Major W. F. Murray, M.B., Bengal Establishment, are placed at the disposal of the Home Department of the Government of India. Surgeon W. Beatson, Bengal Establishment, is appointed to act as Civil Surgeon of Bhangulpore, vice Surgeon-Major Murray.

Surgeon-Major J. H. Condon, M.D., of the Bengal Establishment, is promoted to be Brigade-Surgeon. Dr. Condon entered the service February 10th, 1858, but has no war record.

Surgeon J. Sykes, Bengal Establishment, officiating Superintendent of the Central Prison at Agra, on being relieved by Dr. J. W. Tyler, has been transferred to the civil medical charge of Mirzapore.

Surgeon-Major Charles Sibthorpe, Madras Establishment, is promoted to be Brigade-Surgeon, in reward for his services during the operations in the Soudan in 1885-86.

The services of Deputy Surgeon-General W. Farquhar, M.D., Madras Establishment, are replaced at the disposal of the Military Department.

Brigade-Surgeon B. T. Suffrein, Madras Establishment, Medical Officer 2nd Madras Lancers, on arrival at Bombay from leave to Europe, is ordered to report himself to the Deputy Surgeon-General Her Majesty's forces in Burmah, for duty as Senior Medical Officer of the Native General Hospital, Rangoon.

Surgeon-Major E. Levinge (now in Burmah) and Surgeons N. Chatterjee, A. G. E. Newland, and E. Ferrand, all of the Madras Establishment, are directed to report themselves to the Principal Medical Officer at Mandalay, for duty with field-hospitals.

Surgeons Dr. P. W. Warlimer and W. B. Bannerman, both of the Madras Establishment, are to report themselves to the Principal Medical Officer at Mandalay for duty with military posts.

THE VOLUNTEERS.

Acting-Surgeon J. I. Boswell, of the 1st Kent Artillery, has resigned his appointment, which bears date January 24th, 1885.

Surgeon A. A. Corte, of the 3rd Lancashire Artillery, is granted the honorary rank of Surgeon-Major.

Surgeon and Honorary Surgeon-Major R. T. Daniell, of the 2nd Middlesex Artillery, has resigned his commission, which dates from July 28th, 1875, although he did not join the 2nd Middlesex till October 1st, 1877; he is permitted to retain his rank and uniform.

Acting-Surgeon J. E. Fairlie, of the 6th Lanarkshire Rifles, has resigned his appointment, which dates from June 5th last.

Acting-Surgeon E. Cotterell, of the 2nd Oxfordshire Rifles, has also resigned; his commission dates from February 14th, 1883.

The following appointments have been made in the London Division of the Volunteer Medical Staff: Valentine Matthews to be Surgeon; C. J. L. Eames and T. R. Clarke to be Quartermasters.

ENTRANCE EXAMINATIONS.

J. C. M.—The questions set at the London examination of candidates for commissions in Her Majesty's Army, Indian, and Naval Medical Services have been published in the medical journals of the day for the past three years. The questions put at the last examination are printed at page 437 of the British Medical Journal of August 28th, 1886.

Trichlorphenol.—Trial is at present being made in America of "trichlorphenol" as an antiseptic; it is prepared by adding one part of a four per cent. solution of carbolic acid to a saturated solution of chlorinated lime, and filtering. The resulting fluid is said to be particularly useful as a local application in erysipelas.

Seasonable Donations.—Mr. Edward Kelly, late of York Street, now of 5, Broadway, Westminster, has given, through Dr. Fenton, in memory of his dear late wife, £400 to each of the following institutions, namely—Westminster Hospital; the Western Dispensary, Rochester Row; and to Miss Sharman's Orphan's Home, West Square, S.E.

OBITUARY.

SAMUEL M. MALCOMSON, M.D.Qu.Univ.Irel., M.Ch., and L.M., Belfast.

We regret to record the death of this talented young physician at the early age of 29. He received his professional training at the Queen's College, Belfast, and shortly after graduation was appointed house-physician to the Belfast Union Hospital—a position which he held for four years. He commenced private practice last year, and shortly afterwards was elected one of the attendant physicians to the Ulster Hospital for Women and Children. Unhappily, he did not long continue to discharge the duties of his new position. Never of a very robust constitution, he developed symptoms of pulmonary phthisis last spring, and never rallied after the onset of the disease. Change of air was sought without benefit, and last week the inevitable end came, not unexpectedly.

Dr. Malcomson's tastes lay altogether in the direction of scientific research. He was an enthusiastic student of microscopy, and, whether in powers of observation or skill in the *technique* of the science, he had few rivals and scarcely a superior in Ireland. He became a member of the Belfast Naturalists' Field Club in the year 1879, and during the two subsequent years he prosecuted an active research into the Foraminifera of Belfast Lough. He found and described eighty-seven species, one of which was new to Ireland. Of late years he made a special study of the recent Ostracoda of Britain, and published a valuable report upon the subject. This paper records 100 species, three of which were new.

In the month of August, 1885, he acted as one of the scientific officers of a dredging expedition along the south-west coast of Ireland, which was sent out by the Royal Irish Academy, under the direction of Professor Haddon and Mr. Joseph Wright, F.G.S. Dr. Malcomson was entrusted with that portion of the report which dealt with the Ostracoda and Capepoda. Last winter he conducted a class in histology, which was largely attended by the students of the Belfast Medical School.

Dr. Malcomson's scientific attainments, kindliness of heart, and unaffected simplicity of character had won for him the affection and esteem of a large circle of friends, by whom his untimely decease is deeply deplored.

MORTIMER BALDING, B.A. and M.D. (Cantab.), M.R.C.S.Eng.

The early death of Dr. Mortimer Balding, which took place at his residence, St. Albans, on 23rd November, has brought regret to a large circle of friends and acquaintances, who anticipated for him a distinguished and successful career. Dr. Balding was the son of the late Mr. James Balding, surgeon, of Barkway. He matriculated, in 1868, at Cambridge, and graduated B.A. in honours (Natural Science Tripos), 1870. He completed his medical education at the Middlesex Hospital, where he held a resident appointment; after which, he was engaged as private medical attendant to a well-known nobleman, and subsequently travelled in a professional capacity, first to the West Indies and to the Isthmus of Panama, and later, twice to South Africa, where he gained considerable insight into the peculiarities of tropical diseases; he made a second voyage to America as medical attendant to the late Earl Grosvenor, returning to England in 1880. Dr. Balding devoted himself to study, and took his last degree at Cambridge, his graduation thesis being on "Hydatid disease of Liver and its Treatment." Succeeding the late Dr. Prior, at St. Albans, in 1883, Dr. Balding soon acquired a large and rapidly increasing practice. He married in 1885, but in the spring of the present year, signs of failing health manifested themselves, and the melancholy discovery was made that he was suffering from adenoid cancer of the rectum. Dr. Balding, however, displayed the greatest heroism, and continued the practice of his profession as long as his strength permitted. In September last, colotomy was performed, which afforded considerable relief, and doubtless prolonged his life. Dr. Balding was assiduously attended in his illness by Dr. Sidney Coupland and Mr. Godlee, as also by Messrs. H. S. Hughes and Puddicombe, of St. Albans. Dr. Balding filled several public offices. He was a member of the Medical Annuity and Life Assurance Society, and during his sad illness participated in its benefits.

JOHN P. GRAY, M.D.

Among the medical notabilities of the United States, few have occupied a more prominent position than Dr. John P. Gray, the Medical Superintendent of the State Hospital for the Insane, at Utica, New York State. His name was in almost everyone's mouth in America during the excitement consequent on the assassination of President

Garfield by Guiteau. Dr. Gray was employed by the Government to ascertain the mental condition of the murderer, and reported that he was a sane and responsible man. While some mental experts agreed with Dr. Gray, others warmly contested his opinion, and much bitter feeling was caused, which has not yet died away, though we may hope that whatever faults of judgment (if faults they were) Dr. Gray may have committed in connection with this celebrated trial, or during his long career, may now be pardoned and forgotten in the presence of death, and that all the animosities which have been aroused may be buried in his grave.

It is probable that Dr. Gray never fully recovered from the savage assault made upon him, a few years ago, in his office by a man of unsound mind, not an inmate of the asylum. As Dr. Gray's death only occurred on Monday last, November 29th, we are not in possession of any particulars of his last illness, but have reason to know that he was the subject of Bright's disease.

Dr. Gray had been appointed President of the Section of Psychology of the International Medical Congress to be held next year at Washington.

CHARLES SANDERS, M.R.C.S., L.S.A.

THE death of Mr. Charles Sanders, of Chigwell, Essex, which occurred recently, in his 61st year, from angina pectoris, has brought regret to a large circle of friends. Mr. Sanders was the second son of the late Mr. Robert Sanders, barrister-at-law, and for thirty years he was medical officer for the Chigwell District, Epping Union, and filled offices in several local institutions, in which he constantly took a very lively interest. In him the needy of the district have lost a generous and warm-hearted friend.

ANDREW HOWDEN BALFOUR, L.R.C.S.E., PORTOBELLO.

WE regret to record the death of Mr. A. H. Balfour, of Portobello, brother of the late Professor J. H. Balfour and of Dr. T. N. G. Balfour, of Edinburgh. The deceased was educated at the High School and University of Edinburgh, and in 1844 he obtained the diploma of the Royal College of Surgeons of Edinburgh. He was for some time employed as surgeon in the Peninsular and Oriental Steamship Company's service, afterwards practising with great success in Hong Kong. In 1853 he came home and settled at Portobello, where he soon acquired one of the best provincial practices in Scotland. He held various public appointments, and was highly esteemed as a skilful and kindly practitioner, and as a worthy citizen. His health had been failing for some time, and he had been obliged to avail himself of the assistance of his sons, A. H. Balfour, M.D., and J. H. Balfour, M.B. He had, however, recovered to some extent, when an attack of pleurisy supervened and proved fatal. His death has caused a widespread feeling of sorrow in and around Portobello, where he will long be remembered for his many public and private virtues.

BUCKMASTER JOSEPH TUCK, M.R.C.S. ENG., L.S.A.

THE sudden death, in the prime of life, of Mr. Tuck, who for many years filled the post of medical officer of the Seaford district of Eastbourne, and was one of its best known and most highly respected inhabitants, has cast a gloom over the town of Seaford and its neighbourhood. The deceased gentleman was 49 years of age, and had been in practice at Seaford for about twenty-five years. Previous to settling in Seaford, he occupied the post of house-surgeon at Guy's Hospital. Mr. Tuck took an active interest in all the local institutions, and his loss will be greatly felt. He was president and surgeon of the Seaford True Blue Benefit Society, surgeon of the Seaford Loyal Lodge of Odd Fellows and of the Foresters, medical attendant of the Seaford Convalescent Home, and medical officer for the Seaford district of the Eastbourne Union. He was also commissioner of taxes for the Liberty of Seaford.

It has been said of him by one of those who knew him best: "Few events of note have occurred in the town of his adoption during the past quarter of a century in which Mr. Tuck did not take a foremost part. He was very sanguine as to the future of Seaford as a watering-place, and was ever ready to help forward anything that would conduce to the prosperity of the town. He, in conjunction with the late Dr. Tyler Smith, took considerable interest in the drainage of the town and sanitary affairs generally. He promoted the formation of a local board for Seaford, and filled the position of chairman of that body up to the time of his death."

Mr. Tuck was elected a member of the corporation soon after his arrival in Seaford, and, in a short time, became one of its most active members. As a Justice of the Peace he performed his duties with marked ability.

The *post mortem* examination showed that there was extensive fatty degeneration of the heart, and that death had resulted from rupture of the right auricle.

MEDICO-LEGAL AND MEDICO-ETHICAL.

TINFANI *VERSUS* EDIS.

THIS case, which came before Mr. Baron Pollock and a special jury on Tuesday last, was another action taken by Madame Tinfani against a well-known physician for, as was alleged, certifying without due care that the plaintiff was of unsound mind.

Mr. Hewitt appeared for the plaintiff; Mr. Bigham, Q.C., Mr. John Raymond, and Mr. Crispe for the defendant.

The plaintiff's case was practically the same as that in the case of Tinfani *v.* Spurgin, which was the subject of comment in the BRITISH MEDICAL JOURNAL on November 27th, page 1,043.

At the close of the case for the plaintiff, Mr. RAYMOND submitted that, upon the facts proved, the defendant was entitled to the verdict. By section 105 of the Lunacy Act, 1845, it was provided that any action for anything done in pursuance of that Act should be commenced within twelve calendar months of the release of the party bringing the action. In this case the plaintiff was released on November 11th, 1878, and the action was not commenced until December 22nd, 1884. He would submit, if necessary hereafter, that there was no evidence of want of due care on the part of the defendant; but he contended that, even if there were such evidence, or even evidence of malice, the lapse of time was an absolute bar to the action.

His LORDSHIP, stopping Mr. Raymond, asked Mr. Hewitt what answer he could make to the defence of lapse of time.

Mr. HEWITT submitted that what was done was not authorised by the Act.

His LORDSHIP, however, held that the lapse of time would be an answer, even if the acts complained of were not authorised by the Act. He thereupon directed the verdict and judgment to be entered for the defendant.

Mr. HEWITT, drawing his lordship's attention to the fact that the defendant, under the Lunacy Act of 1845, would be entitled to double costs, asked him to certify to deprive the defendant of them.

His LORDSHIP, however, stated that the law had said that, in such a case as this, the defendant should have double costs, and he did not think that he should affect to be wiser than the law.

SCHOOL-BOARDS AND THE SICK-CERTIFICATES OF TEACHERS.

S. P. S.—To the question submitted by our correspondent with regard to "the justifiability of a School Board making a by-law that, although a certificate of sickness of one of their teachers be submitted, they will not grant sick-leave till the said teacher has been visited and inspected, and reported upon by the medical man who holds the position of medical adviser to the Board," there can, we think, be but one answer, namely, that to refuse the certificate of the ordinary medical attendant of the patient, unless the professional opinion therein expressed be subsequently confirmed by the Board's medical officer, would, from our point of view, not only be discourteous to the former, and often embarrassing to the invalid, but very unjustly imply more or less distrust of the traditional honour of the profession. Such a by-law, moreover, would place the Board's medical officer in an invidious position, in so far that his ethical obligations to the faculty would necessitate an appeal to the medical attendant for his sanction to visit the patient; otherwise, he would commit a grave breach of professional etiquette, and subject himself to severe criticism; in addition to which, it is contrary to reason and common sense to contend that their medical officer could, by a single visit, form a more reliable opinion than that of the family attendant, based on his acquired knowledge of the constitution of the patient, and of the material points of the case and treatment; his certificate, therefore, is justly entitled to, and should, as a rule, command, every consideration and respect on the part of the Board, to whose attention may, also, be commended the fact that such official medical visits entail an additional and, as is shown above, unnecessary expenditure of the rates—a matter not to be altogether ignored in these days.

PRESENTATION.—On Thursday evening, November 11th, at the Oddfellows' Hall, Dowlais, P. R. Cresswell, Esq., F.R.C.S., chief surgeon to the Dowlais Iron Company, was presented with a gold watch by the members of the St. John Ambulance Classes of Merthyr and Dowlais, as a token of appreciation and gratitude for the series of lectures which he delivered to the above-mentioned classes.

INFANTILE TUBERCULOSIS.—In a recent number of the *Fortschritte der Medicin*, a case was mentioned of a child of healthy parents dying of marasmus six weeks after birth. At the necropsy three tubercles of the size of a pea, and one of the size of a nut were found in the thymus. Upon microscopic examination a small number of characteristic bacilli were found. As the child had been brought up on boiled cow's milk, M. Demme, who made the necropsy, considered the case to be one of congenital tuberculosis.

HOSPITAL AND DISPENSARY MANAGEMENT.

BARNWOOD HOUSE LUNATIC ASYLUM.

THIS institution was quite full throughout 1885, and many applications for admission had to be refused, on account of want of room. The average number of patients was 151, as compared with 143 in 1884, and 113 in 1881; of the total number, 63 were maintained during the year at a greatly reduced rate, and 6 altogether gratuitously, at a cost of upwards of £1,900. Dr. Needham reports that, as in 1884, so again in 1885, the great majority of the admissions were marked by extreme despondency and a suicidal disposition. The recovery-rate was most creditable, being the highest recorded for any year since the asylum was opened, namely, 66.6 per cent. of the admissions (transfers excluded); the mortality was, with one exception, the lowest for the same period, being only 2.6 per cent. of the average number resident.

Dr. Needham's remarks on the so-called "open-door system," are well worth quoting. He says, "while personal freedom has been widely extended to the patients, I have still been unable to persuade myself of the practical value or expediency of the general application of an arrangement which has been called 'the open-door system,' and which I have, therefore, not attempted to adopt generally. In every institution for the insane this, which has been claimed as a modern system, has been in partial operation for many years past, and in this hospital it prevails to as wide an extent as I consider to be compatible with the safety of the patients and the proper discipline of the establishment. At the detached houses it operates without restriction, because of the different character of the cases which are received into them. There can now be no doubt, from our experience, of the value, in the treatment of patients of the better class at least, of a limited number of detached houses, which can serve as outlets from the parent establishment, and afford temporary change to those who require or wish it, and a freer atmosphere for the convalescing."

One of the most noteworthy innovations during 1885 was the decision of the committee to appoint a second assistant medical officer, with permission to the senior to marry; this can hardly fail to promote the welfare and success of the hospital. It is to be wished that more of our British asylums would in this respect follow the example set them by so many Transatlantic institutions. "An educated companion to the gentlemen has been engaged, and his services have met with much satisfaction."

The only statistical table of which we wish to say anything is Table III. The same exception must be taken to this as was made last year, viz., that to get the total average mortality the annual percentages have been added together by the clerk, and the sum divided by the number of years. The result given in the report is 10.8 per cent., while the correct figures are 7.5 per cent.—a result to be expected in so admirable an institution.

As this incorrect method is very commonly made use of, we may perhaps point out its fallacy by asking those who adopt it whether, supposing they had £200 invested at 20 per cent., £1,000 at 6 per per cent., and £1,200 at 4 per cent., they would admit that their investments were paying an average of 10 per cent., that is, one-third of 20 + 6 + 4.

STAFFORDSHIRE COUNTY ASYLUM, BURNTWOOD.

THE number of patients admitted into this asylum in 1885 was smaller than for any year since 1880. The superintendent attributes this, not to any permanent decrease in the number of cases of insanity requiring asylum treatment, but to the reluctance on the part of medical men to certify patients while the Lunacy Laws remain in their present unsatisfactory condition. We find, however, on referring to Table III, that the diminution was entirely in the male admissions, and that the number of females admitted was above the average; it would, therefore, appear that some other cause must have been at work besides that suggested by Dr. Spence, for it is difficult to suppose that medical men would feel less reluctance to certify female than male lunatics.

There were 565 patients remaining under treatment on December 31st, 1885, on which day there were 41 vacant beds. The results of the year's work were satisfactory; the recoveries amounted to 39.2 per cent. of the admissions, and the death-rate was 8.7 per cent. of the average number resident. Necropsies were made in 26 out of the 49 deaths, a smaller number than for several years past. Of this falling off, Dr. Spence writes: "It is not due to any relaxation in our efforts to obtain the necessary permission for such examinations, but the objections made by the relatives of deceased patients are numerous, and, in too many cases, it is impossible to overcome them. I sometimes wonder how much consideration is shown for the very natural, though, no doubt, unscientific, feelings of the friends of patients in those much lauded establishments where *post mortem* examinations are the invariable rule." We leave the superintendents of these establishments to defend themselves, if there be any occasion for defence.

Several patients were, during the year, sent to the workhouse as chronic harmless lunatics; it is most satisfactory that "not one of the patients selected as suitable for treatment in a workhouse has, so far, been returned to the asylum."

There is no record of the use of either restraint or seclusion. We are glad to find that Dr. Spence has, for some time past, had each patient weighed monthly.

In accordance with the recommendation of the Commissioners in Lunacy, the Asylum Committee has purchased forty-five acres of land adjoining the estate; and has decided on the erection of a dining and recreation hall, to accommodate 600 or 700 patients; hitherto the dinners have been served in the wards.

The statistical tables are well and carefully prepared, evidently by some one who, for a wonder, understands his work.

ROYAL HOSPITAL FOR INCURABLES.

THE report of this institution, which was read at the thirty-second annual meeting held last week at the Cannon Street Hotel, shows a satisfactory state of things. Up to the present time 673 persons have been dependent on the funds of the institution, about 190 of whom were inmates. During the year a seaside house in connection with the asylum had been opened at St. Leonard's, the entire cost for the first year being defrayed by one of the supporters of the charity. To this house ninety of the most suitable cases had been sent in parties of five or six; owing to the generosity of friends and the mildness of the climate at St. Leonard's, they would be enabled to continue these seaside trips throughout the year. The year's receipts were, from dividends, £2,202; deposits at banks, £6,180; subscriptions, donations, and bequests, £22,793, amounted to £35,736. Of this sum, £11,866 was spent on the hospital, £9,920 on pensions, £3,391 on general expenses, and £5,000 was invested, leaving a balance of £5,201. The Chairman, in moving the adoption of the report, congratulated the institution on its satisfactory financial position. In his opinion it was largely due to the action of the board of management. The rest of the routine business of the meeting having been disposed of, the Chairman declared the poll open for the election of 25 persons from a list of 154 candidates, of whom 15 sought to become inmates of the asylum.

ST. JOSEPH'S HOSPITAL FOR CHILDREN.

THE twelfth annual report of this institution has just been issued, giving details of its operations up to September last. The hospital, which is situated in Upper Temple Street, Dublin, was founded in 1872 for the treatment of the sick children of the poor, and is open to applicants of all religious persuasions. It is under the care of six Sisters of Charity who, after many efforts, have succeeded in increasing the accommodation to 50 beds, and who have expended on the present hospital no less a sum than £8,000 since 1879, when they obtained possession of it. This they have done notwithstanding the discouraging circumstance that they have no permanent income, the charity being entirely and solely dependent on the generosity of the benevolent.

During the year 1885, 275 intern and 5,400 extern patients were treated. We are surprised that in this, a *bonâ fide* Children's General Hospital, no effort is made to utilise the material afforded for clinical instruction. It is true that four, at least, of the Dublin general hospitals have a small children's ward, and that there are also in the city the Dublin Orthopædic Hospital and the National Orthopædic and Children's Hospital. But considering the number of young patients that pass through its wards and dispensary annually, St. Joseph's would afford to the senior student or junior practitioner a larger field for the study of infantile diseases than is elsewhere available in the city.

GLASGOW WESTERN INFIRMARY.

THE annual meeting of the qualified contributors of the Infirmary was held on November 25th, the Lord Provost of Glasgow presiding. The following is an abstract of the annual report.

The number of patients treated during the year was—outdoor, 14,804; indoor, 3,517; total, 18,321. The number of visits of outdoor patients at the dispensary exceeded that of the preceding year by 3,591, being a total of 27,625; while the indoor cases treated to a termination show an increase of 302. The average daily number of

indoor patients was 373, as compared with 368 last year. The greatest number in hospital at one time was 417, and the smallest 323. The average period of residence of each patient was 38.7 days, against 41.8 last year. The number of deaths was 308, or 8.7 per cent. of all the cases treated to a termination. Of the fatal cases, however, 41 were of such a hopeless character when brought to the hospital that the patients died within forty-eight hours after admission. Deducting this number as usual, the death-rate is reduced to 7.6 per cent. The ordinary income for the past year was £14,358, and the expenditure £17,787, showing a deficit of £3,429, which was met from extraordinary income. The ordinary income shows an increase of £784 10s. 10d., obtained by a vigorous system of canvassing, adopted in anticipation of a deficit owing to the continued commercial depression. The managers are glad to report that most of the important public works and ship-yards have now adopted the systematic method of contributing—namely, that of the workmen allowing a small sum to be deducted off their wages each pay-day for infirmary purposes. Nine beds have now been endowed in perpetuity. Eight beds were maintained during the year by special donation of £50 each. Each patient, on an average, cost the institution over £5. The cost of each bed fully occupied during the past year was £47 13s. 8d., against £50 18s. the previous year, and £51 4s. 2½d. for the year ending October 31st, 1884. The average cost per patient was £5 1s. 1d., against £5 16s. 7d. and £5 7s. 7d. respectively in the two previous years.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE SANITARY SUPERVISION OF DAIRIES.

No indecent hurry has been manifested by the Government departments concerned in arranging for the transference to the local sanitary authorities of the duty of inspecting and regulating dairies and milk-shops, authorised by the Contagious Diseases (Animals) Act, which received the Royal assent so long ago as June 25th. That Act said, in as many words and with as much circumlocution as possible, that sanitary authorities were to take over the duties of inspection and registration from the veterinary authorities, and that any regulations then in force were to stand. It was apparently thought at Whitehall that all the local authorities—sanitary and veterinary—in every part of the kingdom, would at once bestir themselves to put the new Act into force, without any sort of official reminder or suggestion. As might be expected, difficulties have arisen, not only from the indifference of the veterinary authorities as to handing over of duties in which they never took an interest, and which have now no further concern for them, but also because of the imperfect character of the Act itself. It was introduced, more or less, in a hurry, and was passed through Parliament at a time when everyone was preoccupied with Irish affairs.

Other points will, no doubt, develop themselves, but there are some which seem to demand immediate attention. Take, for example, the regulation as to the sale of milk of "diseased cows." "Diseased" is defined in the Act of 1878 as meaning affected with cattle-plague, contagious pleuropneumonia, foot-and-mouth disease, sheep-pox, or sheep-scab. Thus, scarlatina, diphtheria, tubercle, etc., which have been observed in cows, do not seem to come within the scope of the new arrangements, although the milk of cows so affected has of late been found to convey infection to the human consumer. Again, what amount of air-space should be assigned to each cow in a dairy? and what is the exact meaning of "inspection of cattle in dairies"? There must also of necessity be at present considerable overlapping and intermingling of the areas of sanitary authorities and of local authorities under the Animals Act, with consequent confusion of regulations. It might have been hoped that difficulties of this nature would have been appreciated by the Local Government Board, and that the benefits likely to accrue to the public health from the transference of the supervision of dairies to the sanitary authorities would have induced the Board to afford as much help as possible to those who will have to perform new and delicate duties. Instead of which, the Board allows four months to elapse without making any sign, and now issues, at the end of October, an entirely perfunctory circular drawing the attention of local authorities to the powers conferred by the new Act.

As we have not had an opportunity of giving the substance of the Act before, it may be convenient to say now that Section 9 of the Act of 1886 has transferred to the Local Government Board and to urban and rural sanitary authorities in their several districts the powers—under Section 34 of the Contagious Diseases (Animals) Act, 1878—relating to the regulation of dairies, cowsheds, and milk-shops, formerly exercised by the Privy Council, and the local authorities acting under the latter Act. Under the Act of 1878, the Privy Council issued a "Dairies, Cow-sheds, and Milk-shops Order," which required the local authority to keep a register of persons from time to time carrying on in their district the trade of cowkeepers, dairymen, or purveyors of milk. The Order also contained provisions with respect to the lighting, ventilation, cleansing, drainage, and water-supply of dairies and cowsheds, the contamination of milk, and the sale and use of the milk of diseased cows; and it enabled local authorities to make regulations (*a*) for the inspection of cattle in dairies; (*b*) for prescribing and regulating the lighting, ventilation, cleansing, drainage, and water-supply of dairies and cowsheds in the occupation of persons following the trade of cowkeepers or dairymen; (*c*) for securing the cleanliness of milk-stores, milk-shops, and the milk-vessels used for containing milk for sale by such persons; (*d*) for prescribing precautions to be taken by purveyors of milk and persons selling milk by retail against infection or contamination.

By the recent Act this Order of Council and the regulations made by county authorities are to be deemed to have been made respectively by the Local Government Board, and, so far as they extend to the district of the sanitary authority, by the sanitary authority.

It is manifestly necessary, therefore, that every sanitary authority should obtain from the county authority a copy of so much of the register above referred to as relates to their district, and should also ascertain what regulations, if any, are in force in their district. Any expenses incurred by the sanitary authority in pursuance of the powers transferred to them by the recent Act are to be defrayed as if they were incurred in the execution of the Public Health Act, 1875, and in the case of a rural authority are to be deemed to be general expenses; and for the purpose of enforcing orders under Section 34 of the Act of 1878, and any regulations made thereunder, sanitary authorities and their officers will have the same right to be admitted to any premises as they have under Section 102 of the Public Health Act, 1875, for the purpose of examining as to the existence of nuisances; but no entry may be made, except with the permission of the local authority under the Contagious Diseases (Animals) Act of 1878, into any cowshed or other place in which an animal infected with any disease is kept, and which is situate in a place declared to be infected with such disease.

The Local Government Board has suggested that every sanitary authority should give directions to their officers to furnish to the local authority under the Animals Act notice of any disease of animals found by them in any dairy or cowshed. But would it not be even more important that the Privy Council Office should move the county authorities in their turn to instruct their officers to report to the sanitary authorities any outbreaks of infectious disease—human or animal—whereby milk in dairies might be contaminated? So far as we can ascertain, this has not been done.

HYDROPHOBIA AT CATERHAM.

Two men and three children, who were bitten by a mad dog at Caterham last week, were taken to Dr. Eady, who, wishing to ascertain at once whether the dog was really mad, went to the spot and found that it had already been killed. He found in its stomach straw, hay, and rubbish, but no remains of food. He applied carbolic acid to the bites, which were on the legs and hands; after which he took the dog to the Brown Institute for examination. Mr. Horsley and his colleagues declared the dog to have been mad. They approved of the treatment which had already been carried out; but, nevertheless, advised Dr. Eady to take the patients to M. Pasteur. The inoculations were accordingly commenced on November 24th. These cases will be watched with particular interest, inasmuch as there can be very little doubt but that the dog was mad.

EPIDEMIC OF SMALL-POX IN AUSTRIA.

A TELEGRAM from Vienna states that the epidemic of small-pox, which has of late been raging at Pesth, has already reached Gödöllö, where the Imperial family usually resides at this season. The epidemic is said to be also rapidly spreading in the province of Upper Austria, where, in at least a dozen villages, there are five or six fatal cases every day.

INFANT MORTALITY AND BURIAL CLUBS.

AT a recent meeting of the Northwich Local Board, Dr. Fox, medical officer of health, said that, in regard to infant mortality, Northwich compared unfavourably even with Salford. Of the actual mortality,

forty-six per cent. was due to infants under one year of age. The infant mortality indicated the existence of conditions calling for remedial measures. The Chairman said it would be interesting to know how many of these children's parents had been in burial clubs. Such clubs were well intended, but he was afraid they were a source of great temptation to poor people.

HARMLESS PAUPER LUNATICS.

IMBECILITY writes: I am medical officer of a union workhouse. Two of the inmates who were admitted some time since, in the ordinary way, as unable to maintain themselves, show decided symptoms of weak intellect, rendering them, in my opinion, unable to take proper care of themselves. This has been proved on sundry occasions, when they have been allowed to leave the workhouse for a day or two. Neither of the women has any friends able to look after her, and the relatives of one of them have written to me requesting me not to allow her to leave the workhouse in future. The other case shows some symptoms of insanity, but not, I think, sufficient to justify my certifying her to be a lunatic, though she has, perhaps, shown some suicidal tendencies.

Have I the power to return them as imbeciles in my usual weekly report, without calling in a magistrate? and if I can do this, must I return their names in the usual quarterly report of lunatics in the workhouse?

*** Under the circumstances related in our correspondent's letter, it is incumbent on him to give an instruction in writing, either to the master or the matron, according to the sex of the inmate, that A. or B., as the case may be, is mentally afflicted, and not capable of taking care of his or herself, and enter such names or name in his quarterly returns of harmless lunatics. In large workhouses, there is a book provided, printed under the orders of the Local Government Board, by Shaw and Sons, in which the name of every such lunatic or imbecile is regularly entered. This book should be laid on the Board Room table at every meeting, should be submitted by the master to the Workhouse Visiting Committee, and laid before the inspector or one of the Commissioners in Lunacy whenever such officials pay their customary visits to the workhouse. When any such lunatic or imbecile is discharged from the house, or recovers, the entry of such name should be cancelled.

HEALTH OF ENGLISH TOWNS.

In the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,698,817 persons, 5,551 births and 3,529 deaths were registered during the week ending Saturday, November 27th. The annual rate of mortality, which had been 19.3 and 19.1 per 1,000 in the two preceding weeks, rose again during the week under notice to 20.2. The rates in the several towns, ranged in order from the lowest, were as follow:—Brighton, 13.4; Birkenhead, 13.7; Derby, 15.3; Sunderland, 15.6; Portsmouth, 15.7; Birmingham, 16.6; Bolton, 17.8; Nottingham, 18.2; Bradford, 19.3; London, 19.4; Huddersfield, 19.4; Hull, 20.2; Cardiff, 20.7; Leicester, 20.9; Sheffield, 21.5; Liverpool, 21.8; Manchester, 22.0; Preston, 22.1; Leeds, 23.1; Salford, 23.7; Blackburn, 24.1; Plymouth, 24.5; Newcastle-upon-Tyne, 24.6; Oldham, 24.8; Bristol, 26.2; Wolverhampton, 26.7; Halifax, 26.7; and the highest rate during the week, 29.5 in Norwich. In the twenty-seven provincial towns the death-rate averaged 21.0 per 1,000, and exceeded by 1.6 the rate recorded in London, which, as before stated, did not exceed 19.4 per 1,000. The 3,529 deaths registered in the twenty-eight towns during the week under notice included 144 which were referred to measles, 75 to scarlet fever, 55 to "fever" (principally enteric), 54 to whooping-cough, 37 to diphtheria, 35 to diarrhœa, and not one to small-pox; in all, 400 deaths resulted from these principal zymotic diseases, against 411 and 402 in the two preceding weeks. The zymotic rate was equal to 2.3 per 1,000. In London the zymotic rate was 1.8, while it averaged 2.7 per 1,000 in the twenty-seven provincial towns, among which it ranged from 0.0 in Brighton and in Birkenhead, to 4.7 in Huddersfield, 6.5 in Wolverhampton, and 6.8 in Leeds. The fatal cases of measles, which in the three preceding weeks had risen from 66 to 103, further rose during the week under notice to 144; this disease caused the highest death-rates in Halifax, Leeds, Huddersfield, and Wolverhampton. The deaths referred to scarlet fever, which had been 74, 91, and 95 in the three previous weeks, declined to 75 last week, and caused the highest proportional fatality in Bradford, Liverpool, Sheffield, and Blackburn. The 55 fatal cases of fever exceeded by 1 the number in the preceding week, and were proportionally most numerous in Manchester, Norwich, Plymouth, and Bolton. The deaths referred to whooping-cough, which had risen from 17 to 49 in the four previous weeks, further rose during the week under notice to 54, and caused the highest rates in Leeds and Norwich. The 37 fatal cases of diphtheria showed a further decline from recent weekly numbers, and included 24 in London, 2 in Birmingham, 2 in Liverpool, 2 in Halifax, and 2 in Newcastle-upon-Tyne. The 35 deaths referred to diarrhœa were fewer than in any recent week. No fatal cases of small-pox occurred during the week under notice, either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday, November 27th. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 4.4 per 1,000, and was below the average. The causes of 53, or 1.4 per cent. of the 3,529 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, November 27th, 761 births and 528 deaths were registered in the eight principal Scotch towns, having an estimated population of 1,283,977 persons. The annual rate of mortality, which had been 20.1 and 21.4 per 1,000 in the two preceding weeks, was again 21.4 during the week under notice, and exceeded by 1.2 per 1,000 the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 16.3 in Leith, 16.4 in Perth, 16.7 in Dundee, 17.4 in Greenock, 18.8 in Edinburgh, 19.1 in Paisley, 23.0 in Aberdeen, and 25.3 in Glasgow. The 550 deaths registered during the week under notice in these towns included 64 which were referred to the principal zymotic diseases, against 81 and 77 in the two preceding weeks; of these, 17 resulted from whooping-cough, 17 from diarrhœa, 14 from scarlet fever, 8 from "fever," 4 from measles, 4 from diphtheria, and not one from small-pox. These 64 deaths were equal to an annual rate of 2.6 per 1,000, which slightly exceeded the mean zymotic rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Paisley, Aberdeen, and Glasgow. The fatal cases of whooping-cough, which had been 15, 17, and 19 in the three preceding weeks, declined again during the week under notice to 17, of which 13 occurred in Glasgow, and 2 in Aberdeen. The 17 deaths referred to diarrhœa showed a further decline from the recent weekly numbers, and included 8 in Glasgow and 4 in Dundee. The fatal cases of fever, which had been 7 and 6 in the two previous weeks, rose again last week to 8, of which 4 occurred in Glasgow. The 4 deaths from diphtheria showed a further decline from recent weekly numbers, and included 3 in Glasgow, where 3 of the 4 fatal cases of measles were also recorded. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 5.6 per 1,000, against 4.4 in London. The causes of 71, or 13.4 per cent. of the 528 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

In the week ending Saturday, November 20th, 364 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 21.9 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000:—Armagh, 20.7; Belfast, 18.6; Cork, 25.3; Drogheda, 4.2; Dublin, 23.6; Dundalk, 4.4; Galway, 23.5; Kilkenny, 16.9; Limerick, 27.0; Lisburn, 24.2; Londonderry, 28.5; Lurgan, 15.4; Newry, 10.5; Sligo, 4.8; Waterford, 30.1; Wexford, 34.2. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2.5 per 1,000, the rates varying from 0.0 in Limerick, Newry, Kilkenny, Drogheda, Wexford, Sligo, Lisburn, and Lurgan, to 6.5 in Cork; the 39 deaths from all causes registered in the last-named district comprising 5 from scarlatina, 2 from typhus, and 3 from enteric fever. Among the 79 deaths from all causes registered in Belfast are 1 from ill-defined fever, 5 from enteric fever, and 1 from diarrhœa. In the Dublin Registration District, the births registered during the week amounted to 196, and the deaths to 166. The deaths represent an annual rate of mortality of 24.5 in every 1,000 of the estimated population; omitting the deaths of persons admitted into public institutions from localities outside the district, the rate was 23.6 per 1,000. Twenty-two deaths from zymotic diseases were registered, being 3 below the average for the corresponding week of the last ten years, and 4 under the number for the week ending November 13th; they comprise 10 from scarlet fever (scarlatina), 1 from typhus, 2 from whooping-cough, 1 from diphtheria, 2 from enteric fever, 2 from diarrhœa, 2 from dysentery, etc. Thirty-four deaths from diseases of the respiratory system were registered, being 6 over the number for the preceding week, but 9 under the average for the forty-sixth week of the last ten years; they comprised 24 from bronchitis and 4 from pneumonia or inflammation of the lungs. The deaths of 9 children under 5 years of age (including 8 infants under 1 year old) were ascribed to convulsions. Four deaths were caused by apoplexy, 10 by other diseases of the brain and nervous system (exclusive of convulsions), and 7 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 16 deaths, mesenteric disease 3, and cancer 4. Five accidental deaths and 1 case of suicide were registered. In 23 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending Saturday, November 27th, 366 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 22.0 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 20.7; Belfast, 23.3; Cork, 18.8; Drogheda, 12.7; Dublin, 24.7; Dundalk, 21.8; Galway, 23.5; Kilkenny, 12.7; Limerick, 12.1; Lisburn, 19.3; Londonderry, 26.7; Lurgan, 5.1; Newry, 14.0; Sligo, 4.8; Waterford, 25.5; Wexford, 17.1. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2.6 per 1,000, the rates varying from 0.0 in ten of the districts to 6.7 in Galway; the 7 deaths from all causes registered in that district comprising 2 from measles. The 99 deaths from all causes registered in Belfast comprise 5 from scarlatina, 1 from typhus, 1 from ill-defined fever, 2 from enteric fever, and 1 from diarrhœa; among the 29 deaths in Cork are 1 from diphtheria and 5 from enteric fever; and the 15 deaths in Londonderry comprise 2 from measles. In the Dublin Registration District, the births registered during the week amounted to 197, and the deaths to 171. The deaths represent an annual rate of mortality of 25.3 in every 1,000 of the estimated population; omitting the deaths of persons admitted into public institutions from localities outside the district, the rate was 24.7 per 1,000. Twenty-three deaths from zymotic diseases were registered, being 1 over the number for the preceding week, but 8 under the average for the forty-seventh week of the last ten years; they comprise 7 from scarlet fever (scarlatina), 1 from typhus, 3 from whooping-cough, 1 from diphtheria, 1 from ill-defined fever, 5 from enteric fever, 4 from diarrhœa, etc. The number of deaths from diseases of the respiratory system registered during the week was 28, being a decline of 6 as compared with the number for the preceding week, and 21 below the average for the forty-seventh week of the last ten years; 16 of 28 deaths in this group were caused by bronchitis, and 5 by pneumonia or inflammation of the lungs. The deaths of 13 children under 5 years of age (including 6 infants under 1 year old) were ascribed to convulsions. Two deaths were caused by apoplexy, 9 by other diseases of the brain and nervous system (exclusive of convulsions), and 14 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 18 deaths, mesenteric disease 7, and cancer 4. One case of suicide was registered. In 18 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

It appears, from statistics published in the Registrar-General's return for the week ending November 27th, that the annual death-rate recently averaged 30.5 per 1,000 in the three largest Indian cities; the rates were 24.9 in Calcutta, 26.5 in Bombay, and 36.2 in Madras. Cholera caused 34 deaths in Calcutta, and diarrhœal diseases 48 in Madras; the greatest mortality from "fever" occurred in Madras. According to the most recently received weekly returns, the annual death-rate averaged 24.0 per 1,000 persons estimated to be living in twenty-one of the largest European cities, and exceeded by 3.8 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Peters-

burg was 23.1, and showed but slight increase upon the low rate in the previous week; the 411 deaths included 13 from typhoid fever, and 10 from scarlet fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 19.2, and ranged from 17.0 in Stockholm to 20.2 in Copenhagen and Christiania; diphtheria and croup caused 13 deaths in Christiania, 6 in Copenhagen, and 6 in Stockholm. In Paris, the death-rate was equal to 22.2, showing a slight decline from the rate in the previous week, but exceeding the rate during the same week in London by 2.8; the deaths included 27 from typhoid fever, 24 from measles, and 25 from diphtheria and croup. The 173 deaths in Brussels, of which 3 resulted from typhus and typhoid fever, were equal to a rate of 20.8. The rate in Geneva was 23.8, and the deaths included a fatal case of fever. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 23.2, the several rates being 21.5 in Amsterdam, 23.6 in Rotterdam, and 27.0 in the Hague; the 72 deaths in the last mentioned city included 13 from measles; diphtheria caused 5 deaths in Amsterdam, and scarlet fever 2 in Rotterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 26.4, and ranged from 19.5 and 20.7 in Vienna and Dresden, to 37.4 in Buda-Pesth, and 39.1 in Trieste. Small-pox caused 57 deaths in Buda-Pesth: diphtheria was proportionally most prevalent in Berlin and Breslau; and 18 deaths from cholera were reported in Trieste, and 6 in Buda-Pesth. The death-rate was equal to 22.6 in Rome and 22.5 in Venice; small-pox caused 3 deaths in Rome and 1 in Venice. The rate of mortality was equal to 44.1 in Cairo and 34.5 in Alexandria; diarrhœal diseases caused 107 deaths in Cairo and 34 in Alexandria; 21 deaths from typhoid fever occurred in Cairo, and 9 from whooping-cough in Alexandria. In four of the largest American cities, the recorded death-rate averaged 22.4, and ranged from 15.5 in Baltimore to 24.8 in New York. Diphtheria was fatally prevalent in each of these cities; 17 deaths were referred to typhoid fever in Philadelphia, 13 in New York, and 8 in Brooklyn.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

TOWYN.—During the year 1885, the number of deaths registered in this district was 65. Dr. Grosholz estimates the death-rate at 17.6 per 1,000. The death-rate from zymotic diseases was 0.55 per 1,000. The only deaths from any of the seven principal zymotic diseases were those of two children from measles. Towyn was visited early in May, by an epidemic of this disease. In this respect, it suffered similarly to a large proportion of the United Kingdom, for, in 1885, measles seems to have been particularly prevalent in all parts of the country, the deaths numbering 14,103. As far as could be ascertained, 46 houses were infected with the disease. There were, in all, 87 cases; of these, 33 were children under 5 years of age, and 54 persons over 5 years of age, of whom 5 were adults, one being a lady over 60 years of age. The cases, as a rule, were severe in character, and pulmonary complications were frequent. An epidemic of diarrhœa also visited several parts of the district, and extended as far as Aberdovey. The onset of the disease was usually sudden; the diarrhœa was very violent and frequent; the stools, at first frothy and offensive, soon assumed the typical rice-water character. This was accompanied, in many cases, and in all the female attacks, by persistent vomiting. For a day or two there was a rise of temperature, and the thermometer registered over 103°. About the third day the temperature rapidly sank below normal, this fall being accompanied by blueness of the lips, slight rigors, and muscular cramps. By the end of a week all these symptoms disappeared, and the invalids made rapid and complete recoveries. There was not a single death. There were two very strong points in regard to this epidemic. First, the extraordinary preponderance of adults attacked,—there having been only 8 children, compared with 81 grown-up persons, who suffered; and, secondly, the very satisfactory termination of all the cases in recovery. Dr. Grosholz is at a loss to account for its origin, and he thinks there must have been some prejudicial atmospheric influence at work. The spring was dry, and it is suggested that particles of pulverised manure may have blown in various directions, carrying with them some intestinal irritant.

LINCOLN RURAL DISTRICT.—Dr. Harrison reports 483 deaths during the year 1885, yielding a death-rate of 17.9 per 1,000. Little seems to have been done in the way of sanitary improvement. The village of Branston is in a very unsatisfactory state, owing to the want of a proper system of drainage. Dr. Harrison advised the adoption of a system of sewerage and regular scavenging, but his suggestions appear to have met with no response, as no drainage-works were carried out during the year. Plans for the drainage of the village of Metheringham are under consideration. There were 30 deaths from zymotic diseases, of which 5 were from enteric fever, and 5 from diphtheria. During the last ten years, diphtheria has caused 46 deaths, while in the urban sanitary district of Lincoln there have been 16 deaths in nineteen years from the same disease.

HALIFAX COMBINED DISTRICT.—The year 1885 has been remarkable as a year of low death-rates generally, and Dr. Britton reports that these districts have been no exception to the rule. The cold winds of early spring, however, caused many deaths from affections of the lungs—consumption, pneumonia, bronchitis, and the complications of whooping-cough. The proportion of deaths from zymotic diseases was not high in any district, varying from *nil* in Luddenden Foot and Rastwick to 2.7 in Stainland. In this district, three deaths were registered from diarrhœa; but properly speaking, two were from English cholera. An old woman commenced with diarrhœa; and, three days after, her son, aged 59, took the disease, and died in forty hours. The day he died, a woman who waited upon them fell ill, and succumbed after three and a half days' illness. Inspection only revealed an untrapped sink-stone outside the house, and an offensive ashpit. Dr. Britton considers the offensive alvine discharges from the first case produced the more serious cases afterwards. Scarlatina and measles prevailed in several districts at various periods of the year; but the outbreaks were of short duration, no did they often assume epidemic form. Scarlatina was the more fata and caused forty-one deaths; whereas measles was fatal in only seven cases. There was one death in Rastwick from small-pox. The commencement of the outbreak was kept secret; and, the patient not being vaccinated, it was a severe confluent case. The nurses went about amongst the neighbours without taking any precautions to prevent infection. Seven other cases took the disease, one of whom died (not vaccinated); on the third day, the disease assuming the hæmorrhagic form. The conduct of the patient in this case stands out in strong contrast with that which was the cause of the mischief. Although there was no hope of a recovery, the woman consented to go into hospital, rather than allow her neighbours to run any risk by her remaining among them. The infection was carried to Brighouse, and three cases resulted; but the disease was of a mild type, and was confined to two families. There was a number of cases of enteric fever in Layland, resulting in three deaths; but Dr. Britton assigns the outbreak to no specific cause. The death-rate for each district is recorded, with a brief account of its sanitary condition. Brighouse had the highest rate of mortality (23.3 per 1,000), owing to the large proportion of deaths of children under 5, and the fatality from lung-diseases. The lowest recorded rate was that for Warley (12.9 per 1,000).

BELPER RURAL DISTRICT.—The report for the two divisions of this district enter very fully into the causes of death generally, and each parish is dealt with individually as to population, birth- and death-rates, and sanitary or insanitary condition. The most striking feature of each report is the excessive infant mortality. Mr. J. T. Allen relates that the deaths of children under five, in his portion of the district, formed more than a third of the entire mortality. Dr. Gaylor makes the still more unfavourable statement that the proportion in the Alfreton district is nearly one-half. It is this which swells the rate of mortality, and if it could be modified, the death-rate would be very low indeed. The gross ignorance which exists on the subject of infant feeding and clothing, etc., is doubtless a powerful factor; and Dr. Gaylor does not hesitate to assert that these conditions are aggravated by the existence of a large amount of unqualified practice. Of one parish he says, "it is not a little remarkable that of 27 uncertified deaths, 17 are those of children, having a mean age of about 21 weeks." The deaths from zymotic diseases show a slight increase in Dr. Gaylor's district, but the rate was much below the average of England and Wales, being 0.95, against 1.89 per 1,000. Scarlatina was responsible for 4 deaths, typhoid fever for 1, and whooping-cough caused 10 deaths, all in one village. There were very few cases of typhoid fever throughout the whole district, and every effort was made to remove any insanitary conditions existing. Mr. Allen records a zymotic death-rate of 1.7 per 1,000, which is slightly above that of the Alfreton district, but below the rate for 1884. An epidemic of measles prevailed in four of the townships, but the deaths were few. He finds the present system of voluntary notification very unsatisfactory, and notes as an instance of its insufficiency, that measles had been in existence for a fortnight before it was reported. There is no hospital for the reception of infectious diseases, and the desirability of providing proper means of isolation is again put before the authority. The handbills which are issued with directions for the isolation of the sick, which means putting the patient into a separate room, are practically useless, as many of the cottages possess but one sleeping apartment. The death-rates were 14.60 and 14.1 for the Alfreton and Belper districts respectively.

WEDNESBURY URBAN DISTRICT.—Dr. Walter Garman, in entering upon his duties as medical officer of health for this district, has very appropriately set to work to present sanitary work in its proper light to his authority. He shows the necessity of having infectious disease notified, as "affording the only method by which an epidemic may be stamped out, or at least reduced to manageable dimensions;" and he holds up to his authority the necessity for isolation of infectious cases. When speaking of the satisfactorily large number of nuisances done away with, he speaks with evident satisfaction of the tact exercised by the nuisance-inspector and of an increase among the

inhabitants of the district of appreciation of the value of sanitary observances. The Local Board for Wednesbury need, it would seem, some energetic advice. The death-rate last year was 20.3, the zymotic rate was 1.2, and the infantile mortality 178. Among the causes of death in infants are diarrhœa, which is credited with 26 deaths; bronchitis and pneumonia, with 68; diphtheria, with 5; measles, with 14; and scarlet fever, 19. Among the zymotic class, "fever" accounts for 14 deaths; scarlet fever, 35; measles, 14; diphtheria, 5; diarrhœa, 31; and whooping-cough, 9. These are figures which there is hope of seeing reduced in next year's report for this district.

St. Pancras.—Mr. Shirley Murphy's final account of the vital statistics of this parish is highly satisfactory. We trust they may be equally so under his successor. Mr. Murphy was under no obligation to write a report for 1884, but offered spontaneously to do so; and, the Sanitary Committee having accepted his offer, the present volume is the result. We are glad to find that the vestry has so far made the *amende honorable* to Mr. Murphy as to return its thanks to him, engrossed on vellum, and signed with its corporate seal. The general death-rate was 19.72, of which 2.8 was due to zymotic diseases. This was considerably below the average for the past ten years, and may fairly be taken as an evidence of energetic sanitary reform. Small-pox caused a larger number of deaths than in any year since 1881, and Mr. Murphy makes its distribution in St. Pancras the subject of a very interesting portion of his report. By a series of charts illustrating the position of houses in his parish in relation to the Small-pox Hospitals of Highgate and Hampstead, and the distribution of the disease in the respective areas, he clearly traces a dissemination of small-pox from these institutions. A great stimulus was given to vaccination, consequent on this epidemic, 15,000 parishioners being revaccinated at the public stations. It deserves comment that, in the Regent's Park District, those revaccinated were twice as numerous as those only once vaccinated, and there were hardly any unvaccinated; whilst in the poorer districts the conditions were reversed, showing that the value of revaccination is better appreciated by the educated than by the uneducated portion of the community. An outbreak of enteric fever was traced to milk supplied from a farm in the neighbourhood of St. Alban's, where there was also an outbreak of a more serious nature. It was the same farm which caused the disastrous outbreak in 1883. Diarrhœa and whooping-cough showed an increased death-rate, and there was one death from typhus fever. The erection of a public mortuary will supply a long-felt want. The improved opportunities for the removal of the sick to hospitals, followed by the cleansing and disinfection of their houses, bedding, etc., is a distinct gain. The work of providing the parish with a constant water-supply has steadily progressed; houses have been inspected, and orders made for the demolition or repair of those unfit for human habitation. Mr. Murphy remarks that the gradual increase in the thoroughness of the sanitary work during the last few years, borne out by the tables appended to the report, has been of the greatest service to the parish in ensuring its better condition.

Hastings.—This popular health-resort was subject to a large amount of epidemic sickness during 1885. The mortality was not excessive, but much anxiety and labour were entailed on the health-officer in combating the spread of disease. Scarlet fever broke out in the early part of the year, principally in one district. One hundred and thirty-four cases were reported to Mr. Knox Shaw, and ninety were removed to the Sanatorium. Those attacked were chiefly school-children. From want of proper knowledge of the dangerous nature of the disease, some cases were found playing in the streets while in the peeling stage. Six deaths occurred from small-pox, of which five were stated to have been unvaccinated. Owing to the non-recognition of the disease in its early stages, infection was spread broadcast, and the mild nature of the epidemic added materially to the difficulty of stamping it out. Under the pressure of the unusual epidemic, the accommodation afforded by the Sanatorium was found insufficient, and a temporary iron hospital was erected on adjoining ground, to which the scarlet fever patients were removed. Mr. Shaw reports instances of attendants and others having contracted small-pox, owing to the imperfect nature of the isolation of the two classes of disease, and the matter is at present under the consideration of a committee. A sharp outbreak of measles during the last quarter of the year swelled the zymotic mortality by nearly one-half, and eleven deaths were registered from diphtheria. Mr. Shaw calculates the general death-rate at 14.23 per 1,000.

Bethnal Green.—Dr. G. P. Bate sends a very complete statement of his work in this parish, supplementing his report for 1884 with some valuable tables of vital statistics. The death-rate from all causes was 22.8, and at least half the deaths were those of children under 5 years. The death-rate from zymotic diseases was 4.4, against 3.7 in 1883. The total deaths from small-pox, including hospital cases, were ninety-nine; of these twenty-three had been vaccinated, forty-one were unvaccinated, and the remainder doubtful. Most of the cases reported were removed to hospital. In almost every case concealed and treated at home, Dr. Bate found proof that the disease had been communicated to others, in several instances to inhabitants of houses on both sides of that containing the infected person. An outbreak of eighteen cases, in Lisbon Street, clearly originated from the idle curiosity of spectators at the removal of a patient to the ambulance, he being carried across the pavement between a double row of people, whose curiosity rose above fear of contagion. Dr. Bate suggests that portable fire-engines, charged with strong carbolic acid solution under pressure, should be used to disperse such idlers, ostensibly for purposes of disinfection. Scarlet fever proved fatal in 100 cases; fevers were responsible for forty-nine, measles for thirty-seven, and diphtheria for fourteen deaths. Whooping-cough was the most fatal of all the zymotic group, causing 142 deaths. Diarrhœa caused 137 deaths, 127 of which were amongst young children, while five were attributed to cholera. In the sanitary work of the parish, many reforms are needed. The bakehouses are not in a satisfactory condition, only nine out of 142 establishments examined being in really good condition, though much time has been devoted to them by the inspectors. Numerous complaints arise from the inhabitants of the districts where fish-curing is carried on, of nuisances from improper storage of fish offal, and also through the method of conveying this offal through the streets.

Berkshire Combined Sanitary District.—Dr. Woodforde, in presenting his annual reports for 1884 and 1885, does not record any very serious outbreak of disease, though groups of zymotic cases were reported from time to time. The most important of these in 1884 was the outbreak of scarlet fever in those portions of the district of which the town of Abingdon is the centre. Poor living, dirt, and overcrowding, seem generally to have existed where the cases had a fatal termination; and the spread of the disease was at first due to children who attended the schools while imperfectly recovered from mild attacks. In the following year, certain outbreaks of small-pox of a limited character occurred in the Hungerford district. The main series of cases occurred in the union house, commencing with a tramp removed to the infectious diseases ward at the workhouse. The total number of attacks in this outbreak was twenty-seven, thirteen of which occurred among the inmates, and fourteen in the town. Dr. Woodforde considers that removals to hospitals for the purposes of isolation quite impracticable in rural districts, information being rarely received by the sanitary authorities, until the attack has too far advanced to allow safe removal. In the absence of compulsory notification, many cases never come to the knowledge of the health department at all; and, were enforced removal an habitual practice, concealment would be still more general. The assistance of trained nurses was found of effectual help in controlling the spread of infection. There were isolated cases of small-pox in several of the sub-districts. The mean death-rate from all causes was 16.3 and 16.5 in 1884 and 1885 respectively, and the zymotic death-rate 1.8 and 1.1 per 1000. The water supplies received special attention, and numerous samples were analysed. Wallingford and Egham were provided with an improved supply, and numbers of old wells were closed.

Stroud, Urban and Rural.—Mr. Partridge records for 1885, in both his districts, an increased number of deaths of old people; but whereas, in conjunction with zymotic fatality, this caused a higher death-rate (18.2) in the rural district, there was a diminution in the town rate (16.4 per 1,000). Scarlet fever cases were few in number, and only two deaths occurred. Measles was epidemic, but the disease was of a mild type. A case of small-pox was reported in the town on December 21st. There was no satisfactory evidence of the origin of contagion, and though every possible precaution was taken against infection, an addendum to the report states that four more cases have occurred. Mr. Partridge speaks of the difficulty experienced in the sanitary treatment of the cases, there being no adequate provision for isolation and disinfection. Three cases in the rural district were promptly dealt with, and there was no spread of the disease. The two worst cases had slight vaccination marks; the third, that of a child, had good and distinct marks. Typhoid fever was fatal in and about Stonehouse parish. In one instance, in spite of cautions from Mr. Partridge, impure water was used for drinking, and in all the cases glaring sanitary defects were discovered in the surroundings of the patients. There were no deaths from this disease in Stroud. The water-supply was carefully watched, the provision in some of the villages being very inadequate.

Hove.—The annual report for the year 1885, issued by Dr. Kebbell,

is of a very satisfactory character. For the last ten years, the death-rate has been at the very low figure of 13.5 per 1,000, and this year it is again within the average, 12.5 per 1,000. Only four deaths were registered from diphtheria, scarlet fever, and typhoid, and 21 from zymotic complaints generally. The infantile deaths were fewer than usual, owing to the diminished prevalence of summer diarrhœa. The number of deaths from scarlet fever during five years was 15; during the same period there were 51 deaths from whooping-cough, and 38 from measles.

PORT OF LONDON.—Dr. Collingridge's reports for 1885 contain some important observations relating to infectious diseases generally, but refer specially to the outbreak of cholera in Spain, and the continued watchfulness necessary to prevent the importation of the disease into this country. The rag trade with Spain or any infected ports was prohibited by the Local Government Board. Dr. Collingridge advocates compulsory disinfection of all such dangerous cargoes. It could easily be carried out, and at small cost, whereas the present system affords but little safeguard, and seriously affects a large and important industry. Small-pox was prevalent during the first six months of the year, but there was great diminution towards its close, owing to the constant vigilance of the officers, and to vaccination. Dr. Collingridge gives some important particulars of the cases detected. Typhoid fever was found in several ships, and a few cases of diphtheritic sore-throat occurred on the training ship *Worcester*, lying off Greenhithe, a very unsanitary village. A mild outbreak of diarrhœa on the *Warspite* was presumably due to the foul state of the river at the time, and Dr. Collingridge questions the suitability of the Thames, above Gravesend, as a mooring place for ships occupied by young lads. The pollution of the river by sewage was again a trouble, and several smoke nuisances were complained of. The inspection of ships was much facilitated by the provision of a new steam launch.

STOURPORT.—Dr. Masterman writes rather despondingly on the rate of mortality in this town. Favourably situated, fairly prosperous, and, during the past year, exceptionally free from zymotic diseases, Stourport had, in 1885, a death-rate of 19.45 per 1,000, which was 2.88 higher than that of 1884. Out of a total of 68 deaths, only 18 occurred above the age of 60, and the remainder was chiefly composed of bread-winners, cut off at the time when they ought to have been in the fullest enjoyment of health and vigour. In two cases, a certificate was returned of "chronic alcoholism." Infant-mortality was below the average. A little more attention to sanitation on the part of the Local Board would bring about a marked improvement, both to the health and cleanliness of the town.

WELLINGBOROUGH RURAL DISTRICT.—Mr. Howell Thomas reports that this district was the arena of a severe epidemic of scarlet fever during 1885. It assumed quite a malignant type in Borgent, and, of the 34 deaths attributable to this disease, 13 took place in that village alone. The fever spread to Grendon, Wollaston, and other villages. The usual precautions were taken, with the exception of closing the schools. The masters were careful in excluding all children from families in which it was known there were cases of scarlet fever, and Mr. Thomas considers this precaution more efficacious than rashly to close the school, and so allow the children to mix indiscriminately in the streets. Four deaths were registered from measles, and 1 from whooping-cough. Numerous cases of the latter disease appeared at Rushden, and, at the close of the year, it was very prevalent at Wellingborough. On the whole, the district was remarkably free from typhoid fever, though several cases occurred in some of the villages. There was a slight decrease in the mortality from consumption. Mr. Thomas fears that the damp clay soil, and the ill-ventilated and crowded workshops in which the majority carry on their occupation of shoemaking, will always cause a large mortality from this disease. The general death-rate of the district was 16.4 per 1,000 in 1885, against 15.2 per 1,000 in 1884.

COVENTRY.—A noticeable improvement in the sanitary condition of this city has had its natural effect upon the public health; and the death-rate recorded by Dr. Mark Fenton, for 1885, was lower than has ever been known, amounting to 16.2 per 1,000, against a rate of 19.0 in the country generally. There was no epidemic calling for notice, saving a mild outbreak of scarlet fever, which was soon checked by the free removal of the infected to hospital. Dr. Fenton instances a case which came under his notice, as pointing the necessity of the compulsory notification of infectious diseases. A family of five children, all suffering from scarlet fever, were found in a small house in a densely crowded district. The mother, a widow, took in mangling, and, though the children had been under medical treatment four weeks, no information had been given to the Sanitary Authority. In the majority of typhoid fever cases, some unwholesome conditions were discovered, amply accounting for the outbreaks. The condition of the district has been improved by removing the more flagrant and pressing instances, but Dr. Fenton is anxious for additional powers, so that the rate of progress may be maintained. The closing of houses unfit for habitation, or power to require such structural alterations as may be necessary, is a question that needs attention. A large number of dwellings were found quite old and ruinous, or ill-constructed, from a hygienic point of view, and the only improvements that could be effected under the present system, were cleansing and lime-washing. Dr. Fenton pursued inquiries in many courts, consisting entirely of this class of houses, with the result of finding a death-rate averaging 50 per 1,000, and, in some instances, reaching 100. The erection of a public abattoir is greatly wanted.

SUNDERLAND PORT.—Dr. Harris gives some interesting statistics relative to the inspection of ships in this port. The total number examined was 2,142, a decrease of ten on the year 1884. These represent the homes of a floating population of 24,066 persons. Cholera precautions were taken, as in the previous year, but fortunately no ship arrived in the river from any of the infected ports. Only nine ships had cases of serious illness on board, and of these, four were of an infectious nature, namely, small-pox and enteric fever. The unsatisfactory state of the building provided by the authority for the reception of cholera-patients was the subject of unfavourable comment on the part of the Local Government Board Inspector, Dr. Blaxall. Efforts have been made to secure a more suitable site, but Dr. Harris asserts that there is no place, either on the riverside or on the docks, where it would be prudent to erect a hospital. The river is very narrow, and the traffic so considerable, that a floating hospital cannot be attempted, which is much to be regretted. A valuable feature of this report, and one which should commend itself to medical officers of port sanitary authorities, is the analysis of the sanitary condition of the ships of various nationalities. It is an unpleasant surprise to find that British ships were less cleanly than those of foreign nations which visited the port. The returns show that 16.5 per cent. of British ships were in an unsanitary condition, against 12.3 per cent. of foreign ships generally. Of these latter, the German and French ships were most unsatisfactory. Defective ventilation was the most serious cause of nuisance. Dr. Harris advocates the use of a cowl, a local invention, which admits air, prevents the entrance of water, and extracts foul air; in fact, answers fully all the necessary requirements.

CLEATOR MOOR.—The total deaths in this district during 1885 were 115—equal to a death-rate of 11.03 per 1,000. Dr. Eaton devotes a considerable portion of his report to an analysis of the statistics composing this exceptionally low rate. There was a remarkable decrease in infant mortality; the zymotic rate is the lowest ever recorded for the district, and deaths from pulmonary, non-phthisical diseases fell to just half the number of the previous year. The district possesses a good and abundant water-supply, and an efficient sewerage system, while nuisances have been ferretted out and abated with great rapidity. The most difficult part of the work Dr. Eaton declares to be the isolation of infectious diseases, owing to the prejudices lingering in many minds against fever-hospitals, and the very strong natural desire, especially when children are affected, to have such cases treated at their own homes. The comparative absence of zymotic sickness during 1885 was a very satisfactory feature of the year's returns. Solitary cases of scarlet fever and diphtheria were reported, and seven of measles, one of the latter proving fatal.

BEDMINSTER RURAL DISTRICT.—In compiling his report for 1885, Mr. Adams has devoted a good deal of attention to an analysis of the causes affecting the death-rate. The epidemics during the year were few and comparatively mild in type, and the amount of sickness under this head was not great. Mr. Adams reports the usual difficulties of health officers in contending with such diseases. Wilful ignorance and carelessness in exposure of children to infection; attempts to keep the cases hidden; uncleanliness, and the difficulty of eradicating infection from cottages, are some of the experiences recorded. At Pill, in November, a good many cases of scarlet fever appeared. In one case, all disinfectants were refused, "They did not like the smell," and it was only by threatening a magistrate's order, that Mr. Adams could deal with the case. Two cases of diphtheria occurred at Nailsea, but the cause of the illness was not discovered. The rate of mortality was 16.5 per 1,000 for all ages, with a zymotic rate of 1.39. Vaccination was efficiently carried out in the district, but re-vaccination is not as general as Mr. Adams thinks it ought to be. Phthisis caused 38 deaths, pneunomia, bronchitis and pleurisy, 84. Damp, insufficient ventilation, overcrowding, scarcity of food and clothing, are among the causes noted. Mr. Adams urges the great importance of strictly enforcing the provisions of the Sale of Food and Drugs Act.

CROWLE.—The total absence of zymotic disease in this district during 1885 may be taken as evidence of excellent sanitary adminis-

tration. That nuisances do exist, Dr. Henry W. Ellis is ready to acknowledge, but that they have not given rise to epidemic sickness is owing to the circumstance of their being at no time of long duration. No summary or statement of nuisances removed is issued with the report. It is satisfactory to find that the water-supply from the public wells has been found free from contamination. The mortality was above the average, but the proportion of deaths of infants was not excessive. Of a total of 54 deaths, 21 were among the aged and infirm, and 11 were those of children under one year.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary Examinations for the Diploma, were, at a meeting of the Court of Examiners on November 27th, admitted Members of the College.

P. W. Quarty-Papafio, M.B.Edin., Gold Coast, West Africa, student of St. Bartholomew's Hospital and Edinburgh University; G. A. Pelley, L.S.A., The Terrace, Camberwell, of St. Mary's Hospital; Frank Thorpe, L.K.Q.C.P.I., Queen's Road, Oldham, of Manchester Royal Infirmary; W. L. Abbott, L.R.C.P.Lond., Philadelphia, of Pennsylvania and Guy's Hospital; Alfred Darlow, L.S.A., Redcliffe House, Plasket, G. H. O'Reilly, L.S.A., Wyndham House, Reading, T. W. Gibbard, L.S.A., Wellingborough, of King's College; R. W. Young, L.S.A., Sydney, New South Wales, and W. E. Redman, L.S.A., Lincoln, of University College; T. D. Lewis, L.S.A., Stoke Newington, of Guy's Hospital.

UNIVERSITY OF EDINBURGH.—At a meeting of the Senatus on November 27th, the Vice-Chancellor conferred the following Degrees.

Degree of M.D.—Thomson Bonar, Edinburgh (Thesis: Health-Resorts at Home and Abroad), and S. F. Wernich, Cape of Good Hope (Thesis: Some Points on Climate, Food, and Mode of Living in Relation to Disease), both of whom were commended for their theses.

Degree of M.B. and C.M.—A. E. Booth, England; C. G. Campbell, Canada; Arwid L. Kellgren, Sweden; G. J. M. Melle, Cape of Good Hope; P. W. Quarty-Papafio, Gold Coast; C. E. G. Stalkartt, Bengal; and Henry W. Wise, Isle of Man.

Degree of B.Sc. in the Department of Public Health.—P. P. Chetti, Bengal.

The following candidates have passed the Degree of Bachelor of Science (B.Sc.) in Public Health.

M. J. Bernstein, M.B., C.M.; P. P. Chetti, M.B., C.M.; G. C. Purvis, M.B., C.M.; J. M. Ross, M.B., C.M.; H. C. L. Scofield, M.B., C.M.; David Smart, M.B., C.M.; G. E. C. Wood, M.B., C.M.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed the Examination in the Science and Practice of Medicine, Surgery and Midwifery, and received certificates to practise, on Thursday, November 25th, 1886.

Browne, Henry, M.R.C.S., 137, Clomwell Road, Westbourne Park.
Davey, Thomas George, Helston, Cornwall.
Goodall, Henry, M.R.C.S., 21, Abingdon Villas, Kensington.
Jeaffreson, John Leslie, 3, Park Crescent, Stoke Newington.
Johnson, John George, 108, Lansdown Road, Clapham.
Lansdale, William, M.R.C.S., 64, Chelsham Road, Clapham.
Marshall, Arthur Lumsden, Bournemouth.
Moxon, Alfred, Easenhall, Rugby.
Phillips, George Gordon Owen, 16, Castletown Road, West Kensington.
Routh, William, Irvine House, Balham Park Road, Balham.
Ward, John Alfred, Ilwarardine Castle, Montford, Shropshire.
Yeoman, Wm. Metcalfe, M.R.C.S., Osmotherly, Northallerton.

MEDICAL VACANCIES.

The following vacancies are announced.

BALLYMENA UNION.—Medical Officer, Ahogill Dispensary. Salary, £75 per annum, and fees. Applications to Mr. William Miller, Honorary Secretary, Election on December 6th.

BRISTOL DISPENSARY.—Surgeon. Applications by January 1st, 1887, to the Secretary.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff.—Honorary Ophthalmic Surgeon. Applications by December 4th to the Secretary.

HOSPITAL FOR CONSUMPTION, Brompton.—Resident Clinical Assistants. Applications by December 18th to the Secretary.

KENSINGTON DISPENSARY.—Resident Medical Officer. Salary, £125 per annum, with apartments, etc. Applications by December 4th to Frederick Leach, Esq., 7, Stanford Road, Kensington Square, W.

MANCHESTER ROYAL INFIRMARY. Resident Medical Officer. Salary £150 per annum, with board and residence. Applications by December 18th to the General Superintendent.

NORFOLK COUNTY LUNATIC ASYLUM.—Medical Superintendent. Salary, £450 per annum, with board, etc. Applications by December 14th to the Clerk to the Visitors.

NORTH DUBLIN UNION.—Medical Officer. Salary, £145 per annum, and fees. Applications by December 11th to Thomas Molloy, Esq., 70, Lower Gardiner Street, Dublin.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, E.—Junior House-Surgeon. Salary, £70 per annum. Applications by December 4th to A. Nixon, Esq., 27, Clement's Lane, E.C.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Two Physicians.—Applications by December 4th to the Secretary, 216, Tottenham Court Road, W.C.

ROYAL MATERNITY CHARITY.—Physician. Salary, £60 per annum. Applications by December 8th to J. W. Long, Esq., 31, Finsbury Square, E.C.

ROYAL SEA-BATHING INFIRMARY, Margate.—Two Surgeons. Applications by December 20th to the Secretary.

SALOP INFIRMARY, Shrewsbury.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications by December 4th to the Board of Directors.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth. House-Surgeon. Salary, £100 per annum, with board, etc. Applications by December 20th to the Honorary Secretary.

UNIVERSITY COLLEGE, Bristol.—Medical Tutor. Stipend, £100 per annum. Applications by December 4th to E. Markham Skerritt, M.D.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea, S.W.—Resident Medical Officer. Applications by December 6th to the Secretary.

WEST LONDON HOSPITAL.—House-Surgeon. Applications by December 9th to the Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Assistant.—Applications by December 14th to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

COLLIE, R. J., M.D., appointed Surgeon to the Children's Hospital, Sunderland.

FOWLER, W., M.A., F.R.C.S.Eng., appointed Medical Officer to the Worshipful Company of Ironmongers, *vice* Dr. R. Fowler, deceased.

FRASER, Thomas, M.A., M.B., appointed Assistant-Physician to the Crichton Royal Institution, Dumfries.

HART, T., appointed Dispenser to the Seamen's Hospital, Greenwich, *vice* Mr. Puntan, resigned.

HOBBS, John, L.K.Q.C.P.I., L.R.C.S.I., appointed House-Surgeon to the Monkstown Hospital.

HUGHES, E. A., M.R.C.S., L.R.C.P., appointed Clinical Assistant (Skin Department) to the North-West London Hospital.

LISTON, Henry, L.R.C.P., L.R.C.S.Ed., appointed Honorary Medical Officer to the Sunderland Hospital for Sick Children, *vice* Mordey Douglas, M.R.C.S., L.R.C.P.Ed., appointed Consultant.

MANSON, M. O., M.R.C.S., L.R.C.P.Lond., appointed Junior Assistant Medical Officer to the Sussex County Asylum, *vice* R. Miller, M.B., resigned.

MELVILLE, H. B., M.B., C.M., appointed Assistant-Physician to the Crichton Royal Institution, Dumfries.

MITCHELL, Robert, M.A., M.B., C.M.Edin., late House Surgeon Dewsbury and District General Infirmary, appointed House-Surgeon to the Memorial Hospital, Jarrow-on-Tyne.

NASH, C., M.R.C.S., L.S.A., appointed House-Surgeon to the Gravesend Hospital, *vice* C. E. Robbs, M.B., M.A.Cantab., B.Sc.London, M.R.C.S., L.S.A., resigned.

WARD, J. O., M.R.C.S., L.S.A., appointed Medical Officer to the 4th District, Pontefract Union.

WILLS, W. A., M.B.Lond., M.R.C.S., appointed House-Surgeon to the Victoria Hospital for Children, Chelsea, *vice* P. D. Turner, M.B.Lond., resigned.

WILSON, A., M.R.C.S., L.R.C.P.Lond., appointed Administrator of Anæsthetics to the Manchester Royal Infirmary.

BEQUESTS AND DONATIONS.—Miss Alice Lowe, of Blackpool, bequeathed (after the expiration of certain trusts) £4,500 to the Bolton Infirmary, £1,000 to found an Infirmary at Blackpool, and £500 to the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties at Lancaster.—Mr. Thomas Phillips Danson, of Bootle, bequeathed £1,000 to the Endowment Fund of the Bootle Borough Hospital, and £500 to the Liverpool Dispensaries.—The Royal Albert Asylum for Idiots and Imbeciles has received £1,000 under the will of Miss Mary S. Rooke, of Skiddaw Lodge, £500 from Lord Winmarleigh, and £250 from Messrs. Storey, Brothers, and Co., towards the Recreation Hall Fund.—The Misses Briscoe have given £500, and the Magdalen Charity Trustees £200, to the building fund of the new hospital now being erected at White Rock, Hastings.—The British Home for Incurables has received £500 from "A. M. S.," for endowing the "Welcome" Pension.—The Right Hon. W. H. Smith, M.P., has given one hundred guineas to the Eastern Counties Asylum for Idiots.—The Great Northern Central Hospital has received £80 for the Maintenance Fund from the Amalgamated Friendly and Trade Societies, and £18 for the Building Fund from the North London Amalgamated Temperance Association.

ST JOHN AMBULANCE CLASSES IN JERUSALEM.—Raouf Pasha, the Turkish Governor of Jerusalem and President of the Local Centre, presented certificates to the St. John Ambulance Classes at Jerusalem on October 20th, and made a speech in French, expressing his pleasure at being present, and in furthering the objects of the Order, which he recognised as doing so much good both as regards ambulance work, and at the British Ophthalmic Hospital for the treatment of eye diseases, irrespective of creed. A vote of thanks to His Excellency was moved by Mr. Consul Moore, and seconded by Dr. J. H. Ogilvie, who has started a course of lectures on "First Aid" for the native police.

"COMPACT OF SEWAGE."—The iniquities of unprincipled builders, if less numerous than in the days when people were more confiding, are still sufficiently gross to demand, when discovered, the strongest condemnation. It was recently reported by the inspector of nuisances of the Parish of Bermondsey to the vestry that sediment taken from the public sewers was being used by a builder as mortar in the construction of houses in course of erection in that parish. Owing to the offensive smell arising from the stuff, the inspector, considering it injurious to health, ordered its removal. The vestry instructed the clerk to write to the Metropolitan Board of Works upon the subject, as it was stated that the contractor for cleansing the sewers under their control was in the habit of thus selling the refuse taken from the sewers to builders, who used it for mortar. The vestry clerk has now received a letter from the Metropolitan Board to the effect that they have given strict injunctions to their contractor to refrain in future from the objectionable practice complained of.

GUILD OF ST. LUKE.—A service, in connection with the Guild of St. Luke, will be held in St. Thomas's Hospital Chapel on Tuesday, December 7th, at 5.30 P.M., when the sermon will be preached by the Right Rev. the Lord Bishop of Lincoln. This is the first of a series of services organised for the purpose of putting forward, amongst medical men and medical students, the objects of the Guild and its medical missionary work.

ST. BARTHOLOMEW'S HOSPITAL COLLEGE.—The Preliminary Scientific Exhibition of £50 for one year, open to students of less than six months' standing, has been awarded to Messrs. Sargant and Langford (bracketed equal).

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London. Mr. William Adams: The Advantages of Gymnastic Exercises in the Horizontal Position in the Treatment of Lateral Curvature of the Spine. Mr. H. Allingham: On a New Method of Excision of the Knee. Dr. Reser: A Case of Intraperitoneal Hæmorrhage in a New-born Child.

TUESDAY.—Pathological Society of London, 8.30 P.M. Dr. Hime (Bradford): Researches concerning Pasteur's Prophylactic. Mr. Crookshank: Flagellated Organisms in the Blood. Dr. S. West: Epithelioma of Larynx. Dr. Hadden: Disseminated Fibrosis of Lungs. Dr. Silcock: Addison's Disease associated with Cystic Condition of Pineal Body. Dr. Seymour Taylor: Included Ovum. Mr. Sydney Jones: Malformation of Hand (living subject). Dr. Pye-Smith: Ulcerative Endocarditis of the Right Side of Heart. Card specimens.—Mr. Sydney Jones: Large Calculus with Hair-pin as Nucleus. Mr. E. H. Fenwick: Finger-shaped Calculus. Dr. H. Sainsbury: Occlusion of Coronary Arteries in Angina Pectoris. Dr. Herringham and Mr. D'Arcy Power: Sarcoma of Brain and Spinal Cord. Mr. Shattock: Microphthalmos. Dr. Hadden: 1. Cirrhosis of Pancreas in Diabetes; 2. Tubercular Ulceration of Trachea; 3. Carcinoma of Cæcum. Dr. Hebb: Tuberculosis of Uterus. Dr. Pasteur: Lung in Chronic Pleurisy.

WEDNESDAY. British Gynæcological Society, 8.30 P.M. Specimens will be shown by Dr. George Elder and others. Dr. Routh: On the Etiology and Diagnosis from a Medico-Legal Point of View of some Cases of Nymphomania.—Epidemiological Society of London, 8 P.M. Dr. J. Edward Squire: Typho-Malarial Fever.—Hunterian Society. Dr. Pye-Smith: Observations in Prognosis.—Royal Microscopical Society, 8 P.M.

THURSDAY.—Ophthalmological Society of the United Kingdom, 8.30 P.M. Living and Card Specimens at 8 P.M. Mr. W. Adams Frost: Case of Symmetrical Swellings in Position of Lacrymal Glands. Dr. C. E. Beevor: Case of Ophthalmoplegia Externa without any other symptoms. Mr. A. St. Clair Buxton (introduced): A Pocket Refraction Case. Mr. W. H. Jessop: 1. Case of Atrophy of Iris; 2. Lamellar Cataract exhibiting marked Triradiate Arrangement. Mr. A. Quarry Silcock: Choroidal Hæmorrhage in Region of Macula. Papers.—Mr. W. T. Jackman (introduced): Results of an Examination of the Eyes of School-children. Dr. W. A. Brailey: Hydatid Cyst of Orbit. Dr. J. A. Ormerod: Ecchymosis and Œdema of Eyelids without obvious Cause. Mr. Edgar A. Browne: Case of supposed Quinine Amaurosis. Mr. W. H. Jessop: Case of Sudden and Lasting Lateral Nystagmus.

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Herringham: Two Cases of Diphtheritic Paralysis; Affections of Heart and Choreic Movements. Mr. Treves: On Acute Myositis. Dr. Montague Murray: On a Case of Gastric Ulcer, with Unusual Complications. Dr. Samuel West: Right Hemiplegia, with Slight Rigidity and Aphasia, occurring during a Paroxysm of Whooping-Cough; subsequently passing into a condition of Athetosis.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

DAVIES.—On November 25th, at Preswylfa, the wife of Dr. Davies, Colwyn Bay, North Wales, of a daughter.

THOMSON.—November 30th, at "The Limes," Ampthill, Bedfordshire, the wife of William Arnold Thomson, F.R.C.S.I., of a daughter.

DEATH.

ELKINGTON.—On November 26th, at his residence, Frederick Road, Edgbaston, George Elkington, in his 79th year.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M.: Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's.—1.30 P.M.: St. Bartholomew's (Ophthalmic Department); Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S. 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30; Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT, UNDER ANY CIRCUMSTANCES, BE RETURNED.

QUERIES.

SURGEON asks where he can find a record of cases of retention of urine from stricture relieved by suprapubic puncture of the bladder, by Mr. Thomas Paget, of Leicester.

W. M. L. asks: Will any medical officer of Free Gardener's Lodge say whether he is bound to supply expensive medicines, such as Morson's Pepsina Porci, etc., to sick members, without extra charge, or whether he is entitled to charge half price, or what arrangement is made?

MR. WM. CURRAN (6, Auriol Road, W.) writes: Having just heard from a friend—a gentleman connected with our High Court of Justice—that a friend of his who had taken, at his instance, some bronchial troches, which I had recommended to himself, under the impression that they were made up after the formula of Dr. Marcy Mackenzie, had thereby brought on himself a specific rash, I write to ask if any of your readers has ever heard of such an occurrence, or if any similar phenomenon is to be found recorded in the literature of our art. The "specificity" of this rash, which ran all over him, has been determined by the medical man he consulted on this occasion; and it appears further that the troches he took were not Mackenzie's, but Brown's. These are an American preparation, and their principal constituent is, I understand, pulv. cubebæ (?)

Can any of your numerous readers tell me what has become of the "blocks" from or through which the now defunct *Transactions of the Provincial Medical and Surgical Association* were illustrated? There are a few of these I am anxious to possess, on loan or otherwise, for a purpose of my own; and I would be even willing to pay a small sum for the use or loan of them. There is one especially, namely, that representing a "Singular Case of a Foreign Body found in the Heart of a Boy," I am desirous of obtaining. Possibly one of your numerous readers may be able to help me in this matter.

COST OF CRECHES.

DR. LAMB (Arnold, Notts) would be glad of any information as to the establishment and cost of maintaining *crèches*, or for the title of a book that would give him any information on the subject.

INTERNAL USE OF MENTHOL.

J. M. D. will be glad to know if menthol has been given internally for facial neuralgia, and in what doses and form.

ANSWERS.

J. B. F.—Licentiates of the College of Physicians are addressed by us with the courtesy title of "Doctor." Any departure from that rule is an inadvertence.

CHARLIER HORSESHOES.

MR. LEWIS MACKENZIE (Tiverton) writes: Dr. Strathy asks for information about "Charlier tips." I have much pleasure in sending you my experience. On January 1st, 1886, whilst the roads were a mixture of fresh metal, melted snow, ice, etc., I took five horses off their usual shoes, and put them all on to Charlier tips supplied by Mr. South, of New Bond Street; harness-horses, hacks, and hunters alike have done well. I drove one horse eight miles the first day, another sixteen miles, and a third I rode eighteen miles on the first day. I have had no lameness; one hunter, after a very hard day about a month after he was first tipped, in very wet weather, went a little sore; a few days' rest put this right, and, last week, he went thirteen miles to a meet. I rode him (I ride sixteen stone) for hours with hounds, and then sixteen miles home; he never carried me better, and was out again, one day intervening, as sound as a horse could be.

I would advise every member of my profession to read *Horses and Roads*, by Free Lance, and adopt in their entirety the suggestions contained in that excellent book; we should then hear less of those barbarities of bygone days that I see to my shame still advocated in the JOURNAL, such as "steel screws," "rough nails" and "calkins."

THE APOTHECARIES' SOCIETY AND THE CONJOINT BOARD.

DR. W. DONOVAN does not seem to understand the position under the Medical Act of 1886. The Apothecaries' Society has not, as he supposes, "come a cropper;" on the contrary, it has had conferred upon it a new and prolonged existence, with greatly increased powers of attracting surgical as well as medical diplomates. The uniformity of titles which he aims at can only be accomplished by admitting the Apothecaries' Society to the Conjoint Board.

HOME FOR TROUBLESOME INVALID BOY.

MR. F. L. NORRIS (St. Osyth) writes: I see a question is asked by a M.D. in the JOURNAL for information where a home could be found for a boy. Is a private or public home required? if the former, I could offer him a comfortable healthy home, and the air here is generally considered especially favourable for anyone with a phthisical tendency. I shall be glad to give any information desired.

THE Home for Invalid Boys, Westbourne Road, Forest Hill, S.E., could undertake the charge of the boy on moderate terms.

UNPROFESSIONAL ADVERTISING.

CHEMIST.—The advertisements of Mr. Smith are in the highest degree unbecoming, and should engage the attention of the College of Surgeons.

The Infirmary paragraph, reciting weekly the names of the medical officers, is, in our opinion, unusual and objectionable; and, now that their attention has been called to it, the medical officers will probably request the Secretary to desist from the practice.

DR. C. CUNNINGHAM (Bristol).—The circulars should be brought under the notice of the Council.

CLEANING HYPODERMIC NEEDLES.

DR. T. WAKEFIELD (67, Nottingham Place, W.) writes to say that even the finest hypodermic needles can be cleaned with watchmakers drills by boring first from one end and then from the other. In this way, the necessity of heating the needle in a flame is avoided. Dr. Wakefield also states, with respect to India-rubber tyres, that, whilst deadening the noise of the wheels, they do not lessen the vibration. They likewise increase the draught for the horse, and do not last more than twelve months. Good Cee-springs are more effectual in producing easiness of motion.

REGISTRATION OF FOREIGN DIPLOMAS.

QUÆRENS.—Under the last Medical Act, it was provided that foreign diplomas were to be admitted to registration, subject to the approval of the General Medical Council. In reply to applications made soon after the passing of the Act in question in reference thereto, to the Registrar of the Council, a printed form was sent to the effect that the matter would shortly be brought before the Council, and the question decided as to what diplomas would be allowed. So far, no further reply has been received, and, according to the published reports of the proceedings at the meeting of the General Medical Council, no allusion would appear to have been made to the subject. It is, however, one of sufficient importance to the parties interested—and they are many—to have merited consideration, if only to put an end to the suspense and uncertainty which at present exist.

DR. BRYAN (Northampton).—Heath's *Dictionary of Surgery* answers the purpose of a practical treatise.

E. P. ROE.—We regret to say we have no information as to the affairs of the "Briton" office.

NOTES, LETTERS, ETC.

WE have received several letters from correspondents complaining that they did not receive any voting papers in connection with the election on the General Medical Council.

CHLORIDE OF AMMONIUM *versus* EXPLORATORY INCISIONS IN INFLAMMATORY DISEASES OF THE LIVER.

BRIGADE-SURGEON WM. ALEXANDER, M.D., writes: At a time when operative measures to reach the concave surface of the liver in search of abscesses and other diseased conditions are recorded, and when transfixion of the liver in various directions is regarded as an operation gratifying alike to the patient and the medical attendant, it may be a relief to some to know that such measures may in most cases be prevented by timely treatment, for in many instances they have not had the successful result described in the JOURNAL of November 13th.

It is becoming a recognised fact that abscess of the liver occurs more frequently in Great Britain than was previously supposed, and the present time may not be inopportune for bringing before the profession a line of treatment which has proved most beneficial in congestive and inflammatory conditions of the liver.

Many years ago, it was my pleasure and privilege to have been associated with Dr. W. Stewart (now Surgeon-General), when he was making those researches in Burmah which resulted in the publication of a monograph on the treatment of inflammatory hepatic diseases by the use of chloride of ammonium in large doses.

There is no finer field in the world for the study of such diseases than Burmah, and the recorded experience of many years passed in constant contact with a disease which had previously been so fatal to Europeans in that country and Southern India is entitled to respect.

A reference to Dr. Stewart's book, page 78, table ii, shows a total admission of 153 cases of hepatic disease; tabulated—simple enlargement 33, hepatitis 104, abscess of liver 16, not one of which terminated fatally. Dr. Stewart has informed me that he and his colleagues subsequently treated 77 cases, including 8 of abscess of liver, without a death, by the administration of chloride of ammonium without transfixion or exploration.

If I may add my own testimony to the above, I may briefly say that, for a period of three years subsequent to the introduction of the chloride of ammonium treatment, I had many cases of hepatitis and abscess of liver under my care, and can only recall one death, which was peculiar in this wise, that the case had been under treatment for abscess of the liver for many weeks, and all symptoms of the disease had subsided, when sudden head-symptoms supervened, which resulted in death. *Post mortem* examination showed that the site of the abscess contained an inspissated mass of a cheesy consistency, imbedded in healthy liver-tissue. Death was caused by a large abscess in the anterior portion of the right hemisphere of the brain. Dr. Stewart's work is written with an earnestness and enthusiasm characteristic of the man, and, no doubt, this earnestness had much to do with the success of his treatment.

It is right I should state that, since that period, during a subsequent tour of service in Central India, the treatment, though generally successful, failed in three instances in my hands, the patients dying from abscess of the liver. The circumstances were, however, not favourable, and the disease, in one instance, ran a remarkably rapid course. It was the case of a soldier in the Royal Scots Fusiliers, who had entered himself for a mile race. He ran the race, and came in second, and, no doubt, forthwith adjourned to the canteen. To the best of my recollection, he went "on guard" that night, and was removed to hospital towards morning, where he died within twenty-four hours. A *post mortem* examination showed the entire liver-substance one pulpy mass of broken-down tissue mixed with pus.

Since that time, I have treated many cases of enlargement of the liver and congestion with inflammatory symptoms, and believe, with Dr. Stewart, that careful attention to the mode of procedure he has laid down will, in most cases, prevent the necessity for the more energetic measures I have referred to. Should such fail in a case of abscess, I would unhesitatingly seek to give relief by operative measures, and can see no reason why abdominal section should not be more frequently resorted to than has hitherto been customary where severe cases of this disease are of frequent occurrence.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following questions were set in the Second Examination for the diploma of Fellow, held on November 24th, 1886.—*Pathology, Therapeutics, and Surgery.* 1. Describe, and contrast clinically and pathologically, the conditions known as (*a*) pulpy degeneration of synovial membrane; (*b*) Charcot's joint-disease; (*c*) chronic rheumatoid arthritis. 2. Give the symptoms, diagnosis, and treatment of tetanus; and discuss the causes and pathology of the disease. 3. Give the pathology, symptoms, and treatment, general and operative, of malignant disease of the rectum. 4. Describe the various forms of gangrene of the lower extremity, and state fully the treatment appropriate to each. Candidates were required to answer all four questions.

ERRATUM.—In "Inquirer's" letter published in the BRITISH MEDICAL JOURNAL of November 27th, respecting the rights of Licentiates of the Royal College of Surgeons of Ireland, the words "we have a legal right to supply medicines," should have been "to apply medicines."

Medical Providence.

Mr. W. Fleming Peeples, M.D., writes: The profession is distinctly indebted to Dr. W. Newman for his recent address to the Midland Branch of the Association, but it is still more indebted to Dr. Alderson, who dealt with the same subject in a more comprehensive and more practical way at the meeting of the West London Medico-Chirurgical Society on November 8th. Dr. Newman "drew attention to the necessity for some systematised plan of provident insurance by the poorer classes, so as to secure medical aid in times of sickness," and "he limited the scope of his remarks to small towns and villages, leaving the larger communities out of the question."

Dr. Alderson seems to have shown that it was both desirable and possible to afford not only medical aid in times of sickness to the poorer classes, but medical direction and advice for the prevention of sickness to all classes, by the plan of health assurance. As it is now nearly ten years since the necessity above referred to first became evident to me, and as I have been giving unremitting attention and study to the subject during that time, with the result that health assurance for all classes has been for some years past an accomplished and successful fact, I may perhaps be allowed to point out some truths connected with medical providence that seem to have escaped recognition, truths which, now more than ever, it concerns the medical profession to apprehend.

If my readers will but give the subject a little careful and unbiassed thought, they will find that the contrast between health assurance on the one hand, and clubs, amalgamated friendly societies, and provident dispensaries on the other, is both striking and instructive.

Dr. Rentoul, of Liverpool, about a year ago I think, gave some figures of what he evidently considered the satisfactory working of provident dispensaries in a pecuniary aspect, and as these institutions seem to be regarded by many as the best representatives of the provident system, I may quote the figures referred to for comparison now. The Metropolitan Provident Medical Association has 25,000 members, with an income of £3,297 yearly; health assurance, class A, with the same membership, would yield, without difficulty or injustice, £5,000. I do not know how much of the first named sum is swallowed up in expenses, but I know that in some institutions of the same kind, and, I believe, also in that just referred to, no more than one half of the members' contributions ever reaches the pockets of the medical officers. In health assurance, on the contrary, every penny of the fees comes directly to the doctor, and generally these contributions are subject only to a small deduction for drugs, and a trifling sum for the printed forms. One provident society, according to Dr. Rentoul, has a membership of 8,460, and, of these, 6,524 were treated for illness during the year, the medical officer's remuneration being at the rate of 6d. for each visit, including medicines. How, again, does health assurance compare with this? Let the following figures, taken from my own books (Class A) for 1885 supply the answer.

The sum received for 100 members (I have reduced the actual numbers to percentages for clearness and simplicity) was just over £25; 60 of these members were ill during the year, involving 600 attendances (visits, consultations, etc.), the visits also numbering 60. This gives the sum of 8s. 4d. for each patient or case, or 8s. 4d. for each visit, including medicines. As about one-half of the so-called attendances were mere repetitions of prescriptions, I am justified in saying that the amount received was equal to 1s. 6d. per attendance, or 7s. 6d. per visit without medicine. The medicines cost about £1 10s. per 100 members per annum, or 6d. per patient. It will be seen that the proportion of visits was small. This is as it should be, and where there is a suitable room for seeing patients of the working classes, it is always possible to discourage unnecessary visits, which are so numerous in ordinary practice, and increase the number of consultations, with much saving of time and energy to the doctor, and without the least detriment to the patient.

But these are not the only points of contrast. Clubs, provident dispensaries and the like, do not permit the medical attendant to have any voice in deciding what amount each individual member shall pay. The fees are fixed, uniform, inflexible, and, owing to the management of the funds by the laity, the interests of the medical profession are not sufficiently protected, many persons being admitted who are well able to pay a contribution higher than the limit allows. The medical attendant has no opportunity of seeing the members at entrance (except in friendly societies), nor subsequently before the onset of an illness requiring treatment. He is thus denied the chance of doing anything for prevention until, in many cases, it is too late.

In contradistinction to all this is the system of health assurance. Between the doctor and his client there is no middleman; the relation is, as it ought to be, immediate and direct. The medical attendant keeps his fees under his own control, and is at liberty to vary them as justice may require. He thus protects himself from imposition and from overwork, results which, by enhancing his efficiency, promote the welfare of the public. The medical attendant sees the client not only at the time of entering, but usually also at each subsequent payment of the fees he sees either the client himself or some member of his family, and he is, therefore, in a position to give preventive advice, to forestall incipient disease, and thus to save himself—as I have often done—a considerable expenditure of labour, time, and drugs, and his client much suffering and money.

There is not the least reason why the larger communities should be left out of the question. Health assurance is quite as needful, and just as fit and suitable for large towns as for small towns and villages.

That health assurance really supplies a want which is felt with increasing acuteness as time goes on is obvious from the gradual and steady, but recently more rapid progress, which it is making; the letters which I receive from my medical brethren from time to time, and the ever increasing demand for the printed forms, leave no doubt that the question of medical providence for all classes is already solved, and that the scheme only needs to be generally known and understood to be generally adopted. I shall be happy to give further information, with specimens of the forms employed, to anyone who sends me a stamp for the purpose.

The English Conjoint Board and Medical Education.

M.R.C.S.Eng. writes: The present regulations of the Conjoint Board for England, which practically do away with the preliminary training of medical students, otherwise than in medical schools, is one of grave importance to the students themselves, to their parents, and the public generally. I would ask how many of the gentlemen who are at present studying under these regulations will, when they have obtained the L.R.C.P., M.R.C.S.Eng., be really fit to practise their profession? Will they know anything of general practice? Could they compound a bottle of medicine, or even write a prescription correctly? Have they ever seen a case of measles, scarlet fever, or croup? My experience of men who have never had any preliminary training, either as pupils at a recognised provincial hospital, or of a medical man holding necessary appointments, but have passed their whole time of medical study at a "school," has been most unfortunate. These recently qualified school men are quite useless as assistants to the general practitioner, and thus he is driven to employ the practical but "unqualified" assistant. I would also ask how many of the students at the schools have their schedules signed up for "dressing" for their final examination, who have never done anything more than dress in the surgery or out-patient room, have never seen a fractured leg put up, or dressed a stump; in fact, have never been dressers at all; this must be so, because only a few out of the large majority of students can be "full dressers" at a medical school which counts its pupils by hundreds.

Then, with regard to operations, the majority are never closer to the patient than the steps of the "theatre," and, therefore, lose all the minutiæ of the operation, and of the after-treatment, they of necessity, see nothing; at the provincial hospitals, the pupils assist during an operation, and afterwards daily see the patient till the termination of the case.

I hope the newly appointed members of the Medical Council will give this subject their early consideration; and until the English Conjoint Board see fit to alter their regulation which does away with all provincial students, I shall be obliged, much against my will, to advise students to take the L.R.C.P., L.R.C.S., Edinburgh, the Scotch Colleges still recognising the value of the provincial hospitals to students and the public.

Hepatic Phlebotomy.

Dr. M. R. Ryan, Surgeon M.S. (Chatham) writes:—It appears that the first case in which Dr. Harley employed the method, occurred in September, 1884. He will probably not be surprised to learn that his practice has been anticipated, doubtless in many more instances than those with which I am acquainted. Referring to notes of Professor Maclean's lectures, taken at Netley ten years ago, I find the following.

"In a case of hepatitis, attended with very acute symptoms, Professor Maclean suspected the formation of an abscess, which was making its way to the surface. On the introduction of an exploring needle and subsequent aspiration, no pus appeared, but about six ounces of pure blood were withdrawn. The symptoms rapidly subsided, the patient recovering quickly and completely. The good result was apparently attributable to the local abstraction of blood, and though no safe conclusion as to the efficiency of the procedure can be drawn from a single case, the plan seems worthy of a further trial."

Soon after my arrival in India, a year or so later, I witnessed an almost precisely similar occurrence. This led me afterwards to resort to the abstraction of blood from the liver by aspiration in two cases of extremely acute hepatitis. The result in both was most satisfactory. The pain and febrile disturbance quickly subsided, and the patients made rapid recoveries.

With regard to puncturing the liver's capsule as a remedial measure in certain cases, it would appear that a somewhat similar proceeding has been in vogue from time immemorial among the Chinese (from whom we derive our knowledge of the use of acupuncture), not only in the case of the liver, but of other inflamed internal organs.

Dr. R. H. Quill, Surgeon-Major M.S. (Woolwich), writes to the same effect. He says:—For years past Professor Maclean, of Netley, has, by precept and practice, impressed upon us the benefit frequently to be derived from direct depletion of the liver; and his counsel has been extensively acted upon, with advantage to our patients and credit to ourselves. It is only right for me to say that, in military practice, I have never heard or read of the direct abstraction from the liver of so liberal a quantity of blood as twenty ounces; personally speaking, I should be very sorry to subject a patient of mine to so serious a loss; the more so, from my having found in practice that the simple puncture of the liver in several directions, with a long and fine trochar, is of itself, independently of the abstraction of even a drachm of blood, productive of the greatest benefit. I have known an almost immediate cessation of all the signs and symptoms of acute hepatic inflammation follow such a procedure, the explanation of which I leave to Dr. Harley's ingenuity.

Dr. John Buxton, late Surgeon Army Medical Staff (Blackpool), states, from personal experience, that puncturing the liver's capsule in chronic congestive hypertrophy, has a curative effect. When serving in India he frequently found, when probing with aspirator needle for abscess of the liver, that though unsuccessful in hitting off an abscess, there was decided diminution in the size of the liver, and a marked improvement in the patient's general health. In one case of hepatic abscess, in which fluid reaccumulated after two tappings; the cavity of the abscess was well washed out with 1 to 60 warm carbolic lotion, after a third tapping, with most marked benefit; there was no after pyrexia, nor any return of the abscess. The case occurred in Peshawur, in 1874, and was probably one of the first cases so treated. In a paper then prepared, Dr. Buxton expressed the following opinion.

"Early operation is the great secret, I believe, and one need not be disheartened by not hitting off an abscess, for I have frequently operated on cases suspicious of hepatic abscess, both anteriorly and posteriorly, with the best results; the introduction of the needle and exploration of the liver substance evidently act as a stimulant to contraction in torpid enlargement of that organ, in addition to having a moral and salutary effect on those suspected of malingering."

Medical Politics.

Dr. Spencer T. Smyth (17, Tyson Road, Forest Hill, S.E.) writes: The election of direct representatives in the Medical Council having come off, it now seems the three following subjects are engaging the attention of the profession, namely: 1. The admission of members of the Royal College of Surgeons to the franchise; 2. The exclusion of the Apothecaries' Society from participation in the examinations of the Conjoint Board of England and Wales; and 3. The constitution of a teaching university for London.

Under the first head, I see no absolute reason why Members of the Royal College of Surgeons, at least of ten years' status, should not have a voice in the election of the Council, as Fellows now do, but with this difference, that Fellows only should be eligible for seats in the Council and examining board, the Council, as now, directing the affairs of the College.

2. The Apothecaries' Society, which in times gone by more especially, has contributed greatly to the interests of the general practitioners, by having the legal rights of preventing unqualified practitioners from exercising the function appertaining to the practice of medicine. To my mind (as a licentiate of upwards of forty-three years' standing), it does appear that the two Royal Colleges are committing a serious blunder in refusing the Society to amalgamate with

them in the examinations of the Conjoint Board; as matters now exist, it would prove most undesirable to have a second examining corporation in London, which certainly will accrue if refusal still be carried out by the Conjoint Board. I grant all counter-practice ought to be abolished, as by so doing the profession would assume its proper place in the eyes of the public at large.

3. It is most desirable a teaching university should be established, whereby London students would be enabled to obtain degrees in medicine and surgery, as is conducted in Scotland and Ireland. Surely immediate steps ought to be taken, in order to carry out such design. The two Royal Colleges might affiliate with other Colleges, and constitute themselves an university for granting medical and surgical degrees, thus doing away with the necessity for our London students quitting the Metropolis for those seats of learning whereby they can obtain such distinctions elsewhere.

SPURGIN *v.* NICHOLSON.

ADDITIONAL subscription, T. A. Collinson, Esq., West Pelton, 10s. 6d.

QUALIFIED AND UNQUALIFIED ASSISTANTS.

Mr. W. J. DAVENPORT writes: As my name has again appeared in the JOURNAL of November 20th, and remarks are made evidently showing that the case *sub judice* is not at all understood, will you kindly allow me space for the following remarks?

I passed the Preliminary in Arts at the Royal College of Surgeons in July, 1869, registered as a medical student, and entered one of the largest London medical schools, where I remained four years and a half, going through the entire prescribed curriculum with the different appointments. In July, 1871, I passed the primary professional examination in anatomy and physiology; and in November, 1873, I passed the final examination in surgery and surgical anatomy, and paid twenty guineas for the diploma, which, however, was withheld until I had passed in medicine somewhere. During the period I have mentioned, I lived with, and was a pupil of, my uncle, the late Sir Alexander Nisbet, M.D., M.R.C.P.Lond., etc.; but, just as I had finished my hospital course, he died, and I was obliged to become an assistant, which position I have maintained up to the present time. Twelve months ago last October, I passed in medicine and materia medica at the College of Surgeons. If, Sir, the above facts are made known and understood (which they ought to be), why am I persecuted as I am? Why can I not act as an assistant? I should hail with delight any prosecution the Home Secretary or the General Medical Council may undertake against me.

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AN ADDRESS

ON

THE LIFE AND SCIENTIFIC WORK OF ALBRECHT VON GRAEFE.

Delivered on the occasion of the Presentation of the Graefe Medal to PROFESSOR VON HELMHOLTZ.

By PROFESSOR DONDERS, of Utrecht.

[This medal, recently instituted by public subscription, in perpetual memory of Albrecht von Graefe, is awarded every ten years by the Ophthalmological Society, meeting annually at Heidelberg, to the man of whatever nation who may be designated as having rendered the greatest service to ophthalmology.

The ceremony of the first presentation of the medal took place at the close of the Quincentenary Festival of the University of Heidelberg, on the 9th of August, 1886, Professor von Zehender, of Rostock, presiding, in presence of the Pro-Rector, Professors, and many distinguished visitors. The President, having opened the assembly in a few appropriate words, called on Professor Donders, of Utrecht, who spoke as follows.][1]

The days have but just passed in which the University of Heidelberg has brilliantly celebrated its quincentenary festival. From a brilliant present, it can look back with pride upon a glorious past, which displays in every field of human knowledge, both great men and great results. Here on the beautiful banks of the Neckar, has ophthalmology, too, been wont annually to pitch its tent from the dawn of its most modern era. Under the shade of Alma Mater, the Ophthalmological Society was born. It invites you this year to a festival commemoration, and to me has been entrusted the honourable task of addressing you.

It was in the autumn of 1857 that Albrecht von Graefe met here for the first time with some of his followers, among whom were Horner von Zehender and Weber, in order to discuss the most recent advances in ophthalmology. In the next year there appeared also by von Graefe's invitation, Arlt, Müller, and myself. From Heidelberg, there were also present, Kussmaul and many others. In 1859, the publication of the transactions was resolved on. So far, the assemblage had the form of a congress: every member had the right to introduce friends, and every member of the profession might enter. In 1863, it first formed itself into a "Society," but with very liberal rules, by which the committee was empowered to admit into the society, on the nomination of two members, those oculists who had given evidence of scientific aims. In 1864, it counted already more than 80 members, and among them, Baum, Reute, Coccius, Busch, and Forster, from Germany; Arlt, Gulz, Schellwag von Carion, and Hasner von Artha, from Austria; Sichel and Desmarres, from France; Bowman, Critchett, and Mackenzie, from the United Kingdom; besides von Zehender, Horner, Hairion, Worlomont, Snellen, Hoyack, MacGawly, Junge, and Szokalsky, from the other countries of Europe. Soon their numbers were swelled by the presence of Williams, Agnew, and others from America, and thus the society had assumed already an international character.

Albrecht von Graefe both was and remained the soul and centre of the Society till his strength failed him. He died on July 20th, 1870, on the eve of the great struggle with France, at a time when Germany could spare comparatively little sympathy for the quiet death at home of one of her eminent sons. But when, in the following year, peace having been restored, the members of the Society again gathered here, a universal desire was expressed to do homage to his memory. In the first place, so thought his nearest friends, the opportunity must be widely afforded of contributing to a monument to the great ophthalmic surgeon who had made all mankind his debtors; and, as the result of their united exertions, under the presidency of von Langenbeck, they may look upon the statue, raised in 1882, near the chief scene of his activity, his native city, Berlin. But, beyond this, the Society desired to render a special homage to its founder. Should they endow scholarships in ophthalmology? Should they seek to perpetuate his name by a charitable institution—an Eye Hospital? But then came the idea of founding a Graefe medal, to be presented every tenth year to the man who, among his contemporaries, should have most powerfully contributed to the development of ophthalmology; and this idea was almost universally approved. And must not every doubt as to the wisdom of the decision be silenced, when we see to-day Hermann von Helmholtz "thankful," as his telegram puts it, "that his old work should be remembered with fresh honours," ready to accept the medal thus unanimously awarded to him?

A double task is now imposed upon me. The statutes decree that the presentation of the medal, with an address to the recipient, must be preceded by a discourse commemorating the merits of Albrecht von Graefe. This task I joyfully undertake. On the one hand, it will always be easy to connect the results of the present day with those of the man whose grand figure stands at the commencement of an era of which we seem to see no end. I have the privilege of being able to speak to you, and in this intimate circle I may venture to speak in the first place from my own personal recollections.

Albrecht von Graefe himself showed me the house in which, on May 22nd, 1828, he first saw the light, a stately mansion which his father, the first Director of the Surgical *Clinique* of the University, owed to the munificence of his King, Frederick William the Third. His father remained his guide only up to his twelfth year, but his mother was spared to exert a happy influence over his career for eighteen years more. No pains were spared in his education. After receiving private instruction from the best tutors, he attended the French gymnasium. Chance has thrown into my hands a report of the Director Kramer upon our Graefe. Two significant words in it struck me, "Attention in the classes intense and searching."

Intense and searching—these characteristics of the boy of 14, marked also the man. The next year he quitted the gymnasium. After busying himself for another year, principally with mathematics, philosophy and chemistry, he entered at the University, where he could count among his teachers, Müller, Dieffenbach, Schönlein, Romberg, and also Rudolf Virchow, who later became his great and true friend.

But his education was to take a wider range. As a young Doctor, scarcely 19 years old, he set out for the most part in the company of his early friends, first towards Prague, which then stood in the van of scientific progress. He was chiefly attracted by the *clinique* and by the person of Ferdinand Arlt. With him he learned to understand how much ophthalmology could do, and how much it had still to accomplish. And at once his choice was determined; he would become an ophthalmic surgeon. This decision brought him, in the winter of 1848-49 to Paris, where he hoped to learn and see much in the *cliniques* of Sichel and Desmarres. And in this he was not mistaken. At Sichel's he was captivated by the wealth of the material; at Desmarres' by the eye and hand of the master. Sichel was delighted with his pupil; Desmarres soon learned to appreciate his worth. When, occasionally, Desmarres himself could not attend to his *clinique* or, as often happened, when he could not complete it in the time at his disposal, it was his young German colleague who took his place. Everything, including operations, was entrusted to him, and that in presence of a swarm of specialists, for the most part senior to himself, who were wont to resort to the *clinique* from all countries.

Of French surgeons, he liked best to hear Malgaigne; of physicians, Louis; and of specialists, "the most characteristic feature of Paris," Trousseau on children's diseases; and Ricord, who especially charmed him. Later on, he almost exclusively employed himself under the direction of Claude Bernard, in the Collège de France, with experimental physiology, and especially with the intracranial section of nerves and the ocular muscles.

The winter of 1849-50 found him in Vienna, where in Friedrich von Jaeger he found his father's friend, who received him with open arms. In order to perfect himself as an oculist, he turned to the best account the *cliniques*, courses, laboratories, and everything else of the kind that Vienna afforded. Of von Brücke's lectures on physiology he spoke with great appreciation.

In August, 1851, at the first International Exhibition, chance threw von Graefe and myself together in London. I had already enjoyed there for some days the companionship of Friedrich von Jaeger when one morning a young man in Alpine costume rushed into Guthrie's eye-hospital—he had reached London but about two hours before—and threw himself into von Jaeger's arms. With the words, "You are made for each other," the latter literally threw him into mine. And he was not mistaken. From early morning when, on our way to Moorfields Hospital, we took our modest breakfast in Oxford Street amongst the workmen going to their work, till late evening, when we gratefully quitted the hospitable home of our friend William Bowman, we remained inseparably united in common objects of pursuit. Von Graefe was my guide in practical work, of which I had as yet but little

[1] We are indebted to Professor Donders and Sir William Bowman for condensing and revising this most interesting address.

experience, and I again could impart to him much from the physiological side. This mutual instruction constituted for us a great attraction. These days in which von Graefe unfolded the whole charm of his fine nature belong to the happiest recollections of my life.

Abundantly qualified and eager for work, he returned to his native town. Though everyone here had prophesied for him a splendid future, the event surpassed his most sanguine expectations. At his own cost, he established a *clinique* on the French system, consisting of an out-patient department, together with some beds intended chiefly for operation cases. "Since I started," he wrote to me two months later, "I have registered 230 patients." And he thought then that, within the year, these would amount to at least 1,000. After ten months, there were already more than 1,900 ; and, after eight months more, though not yet 25 years old, he had at his disposal thirty-six beds, and a material of eye-disease which, as he writes, "could well compare with the largest in either London or Paris ;" "for," continues he, "if our out-patient department only amounts to 4,000 patients a year, the perfectly regular attendance of the patients, the exact observations and the clinical experimental aim in the treatment constitute in my opinion points of some value." A few years later, the annual number reached the astounding figure of 10,000.

During his stay at Vienna, he began a short course on ophthalmology to some of his friends. When these asked him if he would also speak of therapeutics, he gave the following significant reply, "That we will study together in Berlin." And this time had now arrived. What course he was to strike out has been above related. If he put value on his *clinique*, it was on account of the absolutely regular attendance of his patients, the exact observation, and the careful experimental investigation of the results of treatment. These include everything. At first, he gave special attention to the anomalies of the muscles. This inquiry was a continuation of the researches already begun in Paris, and which were, perhaps, further excited by our discussions and inquiries in London. I need not remind you how he has again brought into repute the operation for strabismus, and what he showed to be attainable by advancement and setting back of the tendons in the most varied forms of muscular contraction and paralysis. And then there appeared from his hand a classical investigation of the mode of action of certain remedies ; first, of nitrate of silver ; later on, of chlorine water, atropine, eserine, etc. And in diphtheritic ophthalmia, the clinical determination of which is one of his greatest services, his suggestions as to treatment are the crowning merit of the work. He followed now a more surgical method of cure than he had been able to employ with Desmarres, and he was especially studying the mode of action of iridectomy and paracentesis, the pressure-bandage, and also scarification as a means of cure. In cataract extraction, even under the most favourable circumstances, a considerable percentage of cases was lost through suppuration. Surgeons accepted this as inevitable. Von Graefe did not rest till he had discovered the safest method, and reduced the risk to a minimum. For the obstructive *Abstine si modum nescis*, he substituted the rule of progress, "Observe and act ;" and yet he was on his guard against every rash proceeding. He removed cysticercus from the vitreous, incised retinal detachments, and, even in central scotoma from myopia, sought for and arrived at operative remedies. Thus, also, he encountered glaucoma. After all attempts to cure or to avert this, the most terrible of all diseases of the eye, had failed, oculists had abandoned it in despair ; but it was von Graefe alone who could not rest there. Again he began to track the evil in all its manifestations, and he became more and more convinced that the destructive effects depend upon the increased tension of the eye. Against this he now concentrated his forces. Paracentesis gives, as was already known, only transitory relief of the symptoms, and even that, as he discovered, only for the first time.

Could iridectomy do anything ? The idea gained strength with him. He rememberd cases where ulceration and infiltration of the cornea were improved by iridectomy. After this operation, he had seen corneal and scleral staphylomata diminish. He therefore thought himself justified in trying it against glaucoma. The difficulties of execution did not frighten him. Anxiously he awaited the result, and, behold ! the goal was won. This was von Graefe's greatest triumph, undeniably the greatest which ophthalmology can boast in our century. May no literary strife soil this fair page in the history of our science. The truth is, as Haffmans has already recorded, that von Graefe had been anticipated more than thirty years before by Mackenzie, who, however, had not followed up the practice so as to establish it ; and his track, long neglected, had remained unknown to our Graefe. To have followed the track to the goal, and to have laid it open to others, is the immortal merit of Albrecht von Graefe.

Together with the eye *clinique*, the school which bears von Graefe's name, was opened. Even before the *clinique* had attained great proportions, von Graefe's fame had penetrated far and wide, and from all sides young and old flocked to see and hear the youthful master. Those who still mistrusted his renown came, saw, and were conquered.

At first von Graefe continued to give some theoretical lectures, of which Horner speaks with admiration, but soon he restricted himself to the *clinique*, and capable assistants were entrusted with the different courses. In addition to his eye *clinique*, his private practice increased. From all sides, from all countries, the sufferers swarmed to Berlin to their saviour, as they called our hero. And this was quite explicable. As a physician, a therapeutist, von Graefe stood in the first rank. Horner has stated this, and Schweigger and many others have confirmed it : "Von Graefe accomplished more of a perfect and sterling kind than had ever been done before." He himself knew it. "In many respects (perhaps in elegant, not in good, operating—I recognise none other) I must yield to my colleagues ; but give me a couple of wards and some patients, and a fortnight's treatment will show that I can hold my own." Thus von Graefe, in everything so modest, expressed to me his self-confidence on this point. This was the sacred goal of all his efforts, and why should he not dare to cherish within his breast his satisfaction in having obtained it ?

In the year 1857, after von Graefe and some professional friends had first met together in Heidelberg, the first International Ophthalmological Congress was to be held at Brussels. In August he wrote to me : "I have no great longing for Brussels." I convinced him that he ought not to be absent, and he accordingly came. A genuine ovation awaited him there. The entire ophthalmological world was there, and every eye was turned to him. When he had finished his communication on Glaucoma in his own fresh and graphic manner, yet still so earnest and impressive, the storm of applause broke forth. And in the evening von Graefe and a few colleagues were found with lamp and ophthalmoscope at the Eye Institute at Brabant, where he demonstrated the still little known instrument, and the method of its use, to many of his colleagues from the South of Europe.

Could von Graefe go on satisfying the ever-increasing claims upon him ? Already, in 1853, he had written to me how one morning in August, wearied in body and still more in mind, handing over both *clinique* and private practice to his assistants, he had gone away secretly to seek for restoration where he had always found it before—among the beautiful Alps—and how he, already in a few weeks a different man, had felt "what a load of cares weighed upon his young soul, and threatened the balance of his mind." And each succeeding year that exhaustion returned. And every year, after spending some days here in Heidelberg, his longing drove him to the Alps. Once—it was in the year 1859—Arlt and I were able to accompany him there, days never to be forgotten. On the beautiful high peaks he was just as sure a guide as in the field of ophthalmology, and the charm of his character was at its height.

But his restoration each year was incomplete. As early as 1856, he speaks of an illness, and of a heavy oppressive period following upon it. To set him up again, he needed nothing else than another cure of glaucoma, which had indeed made him happy, and another visit from Arlt, who had "rejoiced like a child at its happy results." But still worse was to follow. In the year 1861, Switzerland was not his most cherished aim. A fortunate star smiled on him from the North. In a few weeks he was to be united to the lovely and gifted Countess Anna Knuth, whose charms had won his heart. One more meeting with his friends in Heidelberg, and he would be off to Roeskilde for the realisation of his best hopes. But no ! there was awaiting us in Heidelberg the crushing news that von Graefe was detained by sickness in Baden-Baden. At his request, the usual scientific meetings were held ; then we hastened to Baden-Baden to learn more particulars. Three days previously, von Graefe, percussing himself, had discovered an extensive pleuritic effusion, which had developed gradually without febrile symptoms ; and his friend, Traube, summoned from Berlin, had confirmed the diagnosis. I found him lying peacefully on his bed, in quiet submission, and with comparatively little difficulty in breathing. "My poor friend," said I, pressing his hand. "Yes, poor friend," repeated he, and added, "It took me a full hour to give up all my illusions. But now I am all right again. Tell me about Heidelberg." And when I had talked of this for an entire hour, his longing was still unsatisfied ; he took up Goethe, which lay by his side, and pointed out to me the words, the deep meaning of which had so often struck us as we read them on Jaeger's test-types, "One cannot too early realise how superfluous one is in the world." At the outset sufficiently serious, his illness assumed in October and November a very ominous character. "I myself," wrote von Graefe, "merely

wavered between the prospect of succumbing and becoming permanently an invalid." And his physicians were of the same opinion, though rather inclining towards the worst. At last, in December, his condition assumed a more cheerful aspect; and at the commencement of February, after five months' terrible confinement, he was able to quit Baden-Baden as convalescent, in order to seek at the Mediterranean the fresh air for which he had earnestly longed; and he inhaled it in full draughts and with splendid results. "You can scarcely form an idea," so he wrote me from Nice, "how splendidly invigorating the air is here. I took my first walk with the greatest apprehension; my limbs and lungs seemed to fail me. For the first quarter of an hour, I crept along only with great effort; then it got easier and easier, so that at last I reached home actually stronger than when I started." On April 15th, he left Nice to return by way of Paris to Berlin, where, on June 6th, his long-deferred marriage took place.

We now enter on the second period of von Graefe's active life, which is separated from the first by his illness and his marriage. I shall occupy but a short time with it. Was this second period, which began with von Graefe's 34th year, and was to last but eight years, very unlike to the first?

He entered upon it with the firm resolve of limiting very much the sphere of his activity in Berlin, especially in his lectures and hospital work during the first summer session, and of attending the *clinique* only twice a week. But soon his life returned to the old grooves; external circumstances and inward impulse prevailed over the best resolutions. His young wife behaved very bravely. He could devote but a few hours to her; she was content with them. He cared little for comfort, nor did she. He did not tie himself to time, a disturbing element in every house, but not in theirs. She lived by and for him, always subordinating her wishes to his. On his journeys, he took—yea dragged—her everywhere with him. She, proud and happy to belong to him, wished for nothing better. But what a love was his too. I have never observed her make a serious attempt at any real change in his mode of life. Sometimes he was heard to complain when the pressure of work became too great; but he never shirked it. With all the disinterestedness of his nature, the homage offered to the surgeon-therapeutist still did him good. Be this as it may, patients were to him a daily necessity. When they were wanting, he felt a void which perhaps only the Alps could fill. Even at Nice, when scarcely convalescent, he saw patients daily for a few hours before sauntering about in the fresh air.

Some sunny years still awaited von Graefe. In quick succession, his wife presented him with three children; and his spacious handsome house in the Bellevue Strasse, in which he brought together every comfort for his family, gave him great gratification—more, indeed, than I had anticipated.

As his guest—it was permitted to me to be the first—I was not only a witness of his domestic happiness, but I also saw him by the side of his amiable and hospitable wife in a select circle of friends, beaming with joy and felicity. But too soon came an end to so much that was bright and beautiful. The loss of one of his beloved children deeply affected him. More than once he wrote to me about it in most pathetic terms; nor could he any longer conceal from himself the approaches of the dreaded consequences of his late illness. In the meantime, little of this was externally visible, and he fulfilled his duties as before, with unwearied devotion. Regularly every day, for hours together, he visited his out-patient room, with its unwholesome atmosphere, and he delivered his clinical lectures with the same ardour and under the same stormy applause as heretofore. He also continued to record regularly in the *Archives* the fruits of his investigations and experience, which he for the most part prepared in the holidays, dictating them in his well-known expressive style. In this second period, he treated still further of tuberculosis of the choroid, and referred again to intra-ocular tumours; he examined the calabar bean, the compress bandage, and hypodermic injections as means of cure. And in this period fell almost entirely the invention of his modified linear extraction. More than once he recurred to muscular anomalies—the operation for strabismus and muscular asthenopia—and wrote in addition two masterly treatises on glaucoma, the first as the earliest work of this second period, the second as his death-song only a few months before his end.

From 1857, his letters, with all their charms and interest, breathe more and more some heaviness of mind. One can feel the reason of it; yet he still continued his work as if there were to be no end to it. The *clinique* did not fall off, for here the need was ever greater than the opportunity of satisfying it. Also his voice, though somewhat less resonant, was still heard in the lecture-theatre with the old applause. And he was still at the service of everyone who required his help, with the same willingness as in the first days of his practice. Nevertheless, he took refuge, at the entreaties of his medical friends—especially in the last two years, when his chest-symptoms became almost insupportable—at Inselbad, by Paderborn.

I will not relate what grief I saw there in the summer of 1869, when he, with his own little promising case, saw the life of his wife threatened by an embolic pneumonia, which broke her health for ever, and his youngest born fatally stricken with a rapidly increasing malady. And yet, on his return home, he began anew the old work with the old courage, and as much strength as still was left to him.

The end came in 1870. On May 23rd, he wrote: "My state of health continues to be wretched. Fever I have none, it is true, but I am excessively exhausted. I spend about twelve hours a day out of bed, of which four are devoted to clinical pursuits. I have also begun my lectures, perhaps more for my own entertainment than for that of my auditory. That, as a rational man and a physician, I can cherish for myself no great hopes, is self-evident; but occupation up to the last moment appears to me the best, and holds me back from useless questionings." His last letter, still written with his own pen, some days before his death, is about a consultation, and is a pattern in style, a masterpiece in precision. The conclusion is heartrending: "My health grows worse and worse, but enough of that to-day. I look upon each day as my last, and I am especially concerned at the grief of my wife. In inseparable friendship, thine old friend, Graefe."

At last the hour was come. On July 19th, 1870, after a charming summer's evening, he was to pass the night in his garden-saloon. A couch was put up for him. Scarcely had he lain down, when he felt the death anguish. Everything possible was done. "Agony," said he; "nothing to be done." Slowly the night-hours wore away. Once more he longed to see the gleam of breaking day. Then he passed away gently.

Albrecht von Graefe leaves with us the impression of a man to whom a mission had been entrusted, and who left us after fulfilling it. Sixteen years have gone by since his death, and his successors have followed in his footsteps; and thus tens, and even hundreds, of years may pass, and thousands may still come to follow in the same track. For men with a mission to fulfil but rarely make their appearance in any particular department. Von Graefe has been regarded by some as one born under a propitious star; the value of his services having been attributed to the fortunate relation in which they stood to the invention of the ophthalmoscope. Those who so judge run the risk of overlooking his true greatness. The ophthalmoscope has raised the level of ophthalmology; but it has raised to the same level the achievements, the merits of all its representatives. Each glance into the eye with the ophthalmoscope was a revelation; but every observer made his discoveries at his own time. The most competent observer, who gave the most correct atlas, carried off the palm. But, even in this, von Graefe has his special merit—in the discovery of the cysticercus; in the diagnosis of embolism of the arteria centralis; and in the optic neuritis consequent on intracranial pressure. But his chief services—the teaching of anomalies of the muscles; diphtheritic ophthalmia; the improvement of the method of cataract extraction; not omitting the cure of glaucoma—lie outside the sphere of the ophthalmoscope. Without the ophthalmoscope, he would have surpassed his contemporaries still more than with it.

Love and trust so great, with such grand talents, must, at any period and at any point of our knowledge, have brought about great results and worked wonders.

I turn now from our dear departed friend to Hermann von Helmholtz, whom we have the happiness of seeing amongst us in the full vigour of his manhood. It would be superfluous for me to enter fully into a description of his merits or to sound his praises before you. Everyone knows that of living natural philosophers none surpass, and but few equal him, and that he has taken a permanent place among the great men of all time. Two years older then he, I have followed from the beginning all that he has achieved. His contributions to science when a young army surgeon in Potsdam garrison, where his mathematical talent was already conspicuous, at once attracted the attention of physiologists. They proved how strongly he was inclined to devote his powers to the solution of problems, either entirely new or already abandoned as incapable of solution; a bold critical task, but all the more glorious if accomplished. I may remind you of his inquiries on the nature of putrefaction and fermentation, on the waste of tissue, as well as on the development of heat in muscular action, of his measurement of the waves of muscular contraction and of his determination of the velocity of nervous impulses produced by stimulation. In the meanwhile, he wrote the article "Heat" in the *Encyclopædic Dictionary of the Medical Sciences*, followed by the "Report on the Theory of the Physiological Phenomena of Heat." Both already foreshadowed the fruitful principle of the conservation of energy, which, independently of Julius

Robert Mayer, he was soon afterwards to develop in a vigorous form, accurately describing all the facts relating to it; the power of that theory to explain the origin of light and heat in the first development of the solar system (according to the theory of Kant and Laplace) he fully demonstrated and confirmed by calculation. In the same way a practised eye could already discover in his reports on "Theoretic Acoustics" and on "Physical Optics," just as in his first researches in the latter field, the germ of the great things which he was afterwards to unfold to our view.

When von Helmholtz turned his official activity from the field of physiology to that of physics, we understood, respected, and even heartily welcomed the change; for after having in the field of physiology shed light on nearly every question of a physical kind, we should have regretted to see him entering the field of microscopy, of physiological chemistry, or of experimental physiology, where time and diligence are the great factors, and where talents such as his could not attain their proper proportions.

And in the field of mathematical physics, in that of pure mathematics, and, on the border line where philosophy and mathematics meet, he continues with undiminished powers to astonish the world by his contributions—contributions of which the special importance is implied in this, that they are appreciable by the intelligent public, without any special knowledge, and admit of popular demonstration as von Helmholtz himself has fully proved.

But what has caused us, ophthalmologists, to indicate the great natural philosopher as the man to whom, among all now living men, ophthalmology is most indebted? You know the reason. Von Helmholtz has a double claim to this distinction; first, for the greatest work of scientific research, and, second, for the most fruitful invention.

This greatest work is his *Manual of Physiological Optics*, with which, in this field of intellectual labour, only one other can compare, one of less ample range, but just as profound and, perhaps, as inspired, the *Science of Musical Sensations*. But, in the author of that work, von Helmholtz has, as you know, no rival to fear.

In the composition of his *Physiological Optics*, von Helmholtz imposed upon himself the colossal task of testing every important statement by his own observation and researches; and this task he has fulfilled to the letter. A glance into his laboratory will show how, beginning with acute questioning, then controlling and experimenting, he makes everything clear to himself, and writes it all down in a clear, broad style, in order now to examine more closely what has been contributed by others towards the attainment of these results, and to record their names and researches, careless whether, in doing so, he clothes them with a share of his own proper merit.

Only the man strong in the consciousness of gigantic powers can be so independent, so negligent of his own deserts. And if we open the *Manual*, now some thirty years after its first appearance, we are, even at the present stage of science, astonished at the correctness of the insight and of the statements, so that we might almost be tempted to believe in his infallibility. This greatest work, next to the *Anatomy of the Eye*, is the foundation of our knowledge of the pathological processes and the key to our explanation of the symptoms. And this is his first claim to our distinction; his second claim, the most fruitful discovery.

The year 1851 will always be marked with golden letters in the annals of ophthalmology, as that of the discovery of the seat of the accommodative power, and as the year of the invention of the ophthalmoscope. If it be a satisfaction to me to venture to claim the first for my countryman, Dr. A. Cramer, I must not here omit to state that von Helmholtz shortly afterwards arrived independently at the same result. With a noble modesty, for which I thank him, he declared himself convinced, after an examination of the treatises sent to him, that the enigma of accommodation, upon which so many enquirers had in vain exhausted their ingenuity, was in reality solved as to the main points, and that little more remained for him to do in the researches he still contemplated. But, as concerns the invention of the ophthalmoscope, that belongs to von Helmholtz, and to von Helmholtz alone. Further, we see him define the conditions under which the eye can be illuminated—conditions which were not as yet distinctly determined. And he soon discovers that it must be possible to see the fundus of the eye by reflected light. From this moment dates the invention of the ophthalmoscope. It had merely to be constructed—a thing easy enough for von Helmholtz. And even this construction displays the accomplished physicist. Later alterations may facilitate its use, and the employment of the inverted image may have its incontestable advantages, but, in truth, the instrument in its original form is optically more complete than any other, and was so considered by that finest of all observers, Eduard von Jaeger, and made use of for his wonderful drawings and exact determinations of refraction. How the ophthalmoscope could be serviceable to ophthalmologists, how the eye under examination, whilst its fundus becomes visible, constitutes for the emmetropic examiner a lens (a Stanhope lens), too weak in myopia, in hypermetropia too strong; and how, simultaneously with the examination of the fundus, the refraction can be determined; all this was clearly indicated by von Helmholtz. But he never thought, or, at least, he never said, that the new instrument implied the dawning of a new era for ophthalmology. Von Graefe felt it immediately. When he, for the first time, saw the background of the eye, with its nerve-entrance and its blood-vessels, his cheeks reddened, and he called out excitedly, "Helmholtz has unfolded to us a new world!" and then, "What remains there to be discovered?" added he, thoughtfully. It was, indeed, humiliating to hear it said, banteringly, that black cataract was that disease in which the patient saw nothing, nor the surgeon either. Treatment was then but a groping in the dark. Under the same name were thrown together the most diverse affections of the fundus oculi and of the nerve-apparatus; and even disturbances of refraction and accommodation, such as astigmatism and muscular asthenopia, were reckoned with amblyopia. And against these most diverse disturbances the same empirical remedies were employed—many of them a real torment to the patient—not only with little beneficial result, but sometimes at the cost of health.

In 1858, von Helmholtz exchanged Bonn for Heidelberg, where he hoped soon to see his desire for a laboratory gratified. Here we had special pleasure in welcoming him on the occasion of the meeting of our Society. At our invitation, he was to join us at our meetings, and honour our festive board with his presence. The thought occurred to von Graefe of testifying our respect and gratitude by the presentation of a small gift. A silver goblet was soon found, and the names of the members present engraved upon it. At von Helmholtz's side, von Graefe arose, and described in animated language how the invention of the ophthalmoscope, which adorned the name of von Helmholtz with the laurel of immortality, elevated and rendered happy the ophthalmologist. "Under our eyes," this was the tenour of his speech, "we see the mists disperse, which for hundreds of years have clouded the view of our best observers, and an unexampled field is won for the healing art, from which even already, after a few brief years, have been reaped most admirable fruits." And, turning to von Helmholtz, he handed him, in the names of all of us, the goblet, with the words of the inscription, "To the creator of a new science, to the benefactor of mankind, in thankful remembrance of the invention of the ophthalmoscope." Von Helmholtz was visibly moved by this unaffected proof of our gratitude. It was, as he said, the first public acknowledgment of his merits. In his own home, beloved lips said, "Better than a decoration." And von Helmholtz replied, "Certainly! it is a decoration on the part of competent judges."

And now, twenty-eight years after that memorable day, highly esteemed and honoured von Helmholtz, I turn to you in the name of that Society for which von Graefe then spoke, and, so to say, in his name, the name of our Master and Patron, offer you the first honorary medal instituted in his memory. May this gift hereafter—when, following the first modest tribute which our Society long since ventured to offer you, Science in her highest embodiments, and your Emperor, whom you reverence and esteem, shall have heaped upon you all the distinctions suitable to great endowments associated with great deserts—may this gift still remain to you a gratifying symbol of the privilege you enjoy of living in a generation that honours you as its benefactor.

May this happy knowledge, which is not granted to every man of genius, illumine with its gentle light the evening of your life, in which you may see yourself always surrounded in unfading freshness of mind and body by the love of all that are dear to you.

Professor VON HELMHOLTZ replied in the following terms:—Gentlemen,—You have, by the exceptional honour which you have conferred upon me, called for an expression of gratitude to which I hardly know how to give utterance. When, a year ago, I was made acquainted with your determination to select me as the first recipient of the medal which has been dedicated to our ever-memorable Master, I was agreeably surprised, but, at the same time, placed in a difficulty. Agreeably surprised, naturally, that after the rapid flight of fifteen years, which I have had to devote to other studies, you still so vividly remember the assistance that I was once able to render to ophthalmology; and the more joyfully so, since, in the meantime, what I have contributed has, through the wonderfully rapid development of ophthalmology, been subjected to the most numerous and searching tests, and has been in a measure modified and superseded by newer inventions and investigations.

And now my difficulty begins. When I myself calmly review the real history of my ophthalmological discoveries, I cannot help saying to myself:—Some of them were due to good fortune, and the rest was but the work of a well-instructed workman, who had learned rightly to employ the ready-made means and knowledge of his predecessors. I have previously—at the first festival in memory of von Graefe, when we unveiled his statue at Berlin—expressed the same thoughts before you. "The ophthalmoscope," I said, "was a discovery rather than an invention"; that is to say, when a well-trained physicist came and once grasped the importance of such an instrument, nothing more was wanted, since all the knowledge had been developed which was required for its construction. As regards the good fortune, it has so far favoured me by forcing me into a position which I did not at the time regard as good fortune at all. My inclination and my interest were from early youth directed towards physics. My father, a teacher in the gymnasium, living in very straightened circumstances, but a man who had strikingly exemplified in his life the lofty scientific enthusiasm of Fichte's philosophy, and of the war of liberation, explained to me, sorry as he was to do it, that physics did not constitute a science by which a livelihood could be obtained—and, indeed, at that time this was so—but that, if I would study medicine, I might combine with it the natural sciences. Well, as a man of these days, who has no leisure to grieve over lost opportunities, but must try and make the best of any situation—and has moreover learned to wait—I accepted the situation as it was, and in the meanwhile studied medicine. But this ultimately proved an advantage. Apart from the fact that I thus attained to a much wider knowledge of the science of nature than would usually have been the lot of students of physics and mathematics, and, independently of the favourable circumstances which that period afforded to a young medical man trained in physical science, I have by this study become, in my later ophthalmological work, deeply sensible how vast an amount of useless science, as well as of printer's ink, has been wasted on the theory of accommodation, and what an abyss of ignorance has been comprised under the name of "the black cataract,"—an abyss which, indeed, proved by subsequent illumination to have been far deeper than could have been at that time imagined.

The ophthalmoscope has unfolded itself to me simply out of the necessity of discussing, in my lectures on physiology, the theory of emission of light by the eye. Why does the human eye not glisten under ordinary circumstances, since in its background there is situated a spot—small, indeed—but clear white; that is to say, the end of the optic nerve, which must reflect light in the same way as the most sparkling tapetum of animals' eyes? Why do animals' eyes sometimes shine with such remarkable lustre, though they may only be illuminated by a small distant flame? These questions, when once proposed, were not difficult to answer, and now the answer is known to everybody. Once answered, they furnished the means of lighting up the eye of another human being, and of seeing it plainly.

Ophthalmometry, on the other hand, developed itself out of the question of the theory of accommodation, of which numberless views have been expressed, most of which were very easy of refutation, while none admitted of proof. Having read that the weak reflections of light from the lens, the so-called images of Sanson, had been seen by others, I myself sought them. As soon as I for the first time undoubtedly did see them, and had found them even less feeble than I had expected, I became conscious that the process of accommodation could be cleared up in all its details. Meanwhile, Cramer, under Donders's guidance, had anticipated me; he had already fully recognised the alteration in the anterior surface of the lens. The determination of the very minute changes of the posterior lens surface required more exact observations, and these led to the system of ophthalmometry which I have worked out. Only after the alterations of shape of the lens had been established from every point of view could a proper theory of the mechanism of accommodation be given.

Another side of ophthalmology to which my attention had been already directed by the doctrine of J. Müller concerning the specific sense energies, was the theory of colours. Not being inclined to speak in my lectures of things that I had not myself seen, I made experiments in which I blended together the spectral colours in pairs. To my astonishment, I found that yellow and blue gave not green, as had up till then been generally asserted, but white. Yellow and blue pigments, when mixed, give green, and, till then, the mixing of these coloured materials was regarded as corresponding with that of the spectral colours; that produced at once an important change in all the previously accepted laws of colour admixture, but it comprised something still more important. Two master minds of the first rank, Goethe and David Brewster, were of opinion that the yellow and the blue could be directly seen in green. They had seen the result of the gradual mixture of the two colours with the brush, and they believed that they were able to divide their perception of the resulting colour into two parts, neither of which, in reality, was there at all. This was one of the circumstances which first drew me over to the empirical theory of perceptions. It indicates even now the contrast between my position in the theory of colour-perception and that of Hering and his adherents, who hold firmly by the opinion that from the perception one can directly read off its several component parts.

This series of investigations led me at last to the determination to work afresh through the entire subject of physiological optics, which work I have recorded in the manual which I have published. Looking back over this series of investigations, I cannot see, speaking quite candidly, that in this department (I will not speak of others) I have been more, even at the best and under the most charitable view, than an attentive, diligent, and well-trained worker, who has done, shall we say "well?"—what he had learned to do, and just what a person can be taught to do. Now to such, do not the claims of others stand in contrast who have accomplished something further, namely, done for themselves what one cannot be taught to do?

This question reminds me of certain considerations as to the different characters which scientific activity exhibits in the various branches of science. If we confine ourselves here to those branches devoted to the observation and regulation of the material world, we find the one extreme most accurately represented in theoretical physics. Here we find matter regulated by exactly defined, undeviating laws, whose consequences can be worked out with the utmost accuracy of mathematical thought. So far as our knowledge extends will the origin and relation of things be freed from all darkness and all mysticisms. The forces of Nature, thus subdued, not only submit themselves theoretically to the knowledge of man, but are also the ministers of his will. Consequently, new conquests in this direction require, for the most part, the highest stretch of the human intellect, of which but few individuals are capable. But whatever of such knowledge has once been conquered, and stereotyped in the exact and clearly understood form of science, can be certainly and completely transferred to future generations. But the area which can be subjected to the unconditional command of perfect knowledge is, unfortunately, very limited; and, indeed, the organic world for the most part lies without it. But in numberless cases we are obliged to act, though we have no clear idea of the relative bearings of things—in politics, in war, in every act of intercourse of men, and also in medicine. Here is prominently displayed another phase of intellectual endowment, whose purest form we see embodied in the artist. Rich experience gives a knowledge of the typical course of phenomena, which he who possesses it cannot describe in words; and lo, when he is called on for action, he is found competent for it, though unable to state the precise reason for his action. I have always regarded great physicians as artists in this sense, and the mode in which they sought to transmit their knowledge to others as a sort of allegorical representation, which is treated unjustly if we regard it as a physiological theory, and apply to it a standard of that kind. The gifted physicist sees in these departments only the easily recognisable defects of such quasi-theories; he practises unsafely and unsuccessfully; he feels himself discontented and unhappy, and is therefore without moral influence on the patients and their friends; in short, he recognises here the limit of his powers.

Now permit me to convey my conclusions also in an allegorical form, so that I may not wound any personal susceptibilities. Let us suppose that up to the time of Phidias nobody has had a chisel sufficiently hard to work in marble with perfect control of the form. At least they could mould clay or carve wood. But now a clever smith discover how a chisel can be tempered. Phidias rejoices over the improved tools, fashions with them his god-like statues and controls the marble as none have done before. He is honoured and rewarded. But great geniuses are most modest just in that in which they most excel others. That very thing is so easy for them, that they can hardly understand why others also cannot do it. But there is always associated with high endowments a correspondingly great sensitiveness for the defects of one's own work. Thus, says Phidias to the smith, "Without your aid I could have done nothing of that. The honour and glory belong to you." But the smith can only answer him, "But I could not have done it even with my chisels, whereas you, without my chisels, could at least have moulded your wonderful works in clay; therefore I must decline the honour and glory, if I will remain an honourable man."

But now Phidias is taken away, and there remain his friends and pupils, Praxiteles, Paionios, and others. They all use the chisel of the smith. The world is filled with their works and their fame. They

determine to honour the memory of the deceased with a garland which he shall receive who has done the most for the art and in the art of statuary. The beloved Master has often praised the smith as the author of their great success, and they finally decide to award the garland to him. "Well," answers the smith, "I consent. You are many, and among you are clever people. I am but a single man. You assert that I singly have been of service to many of you, and that many places teem with sculptors who decked the temples with divine statues, which, without the tools that I have given you, would have been very imperfectly fashioned. I must believe you, as I have never chiselled marble, and I accept thankfully what you award to me. But I myself should have given my vote to Praxiteles or Paionios."

THE BRADSHAW LECTURE
ON
BACTERIOLOGY IN ITS RELATIONS TO SURGERY.

Delivered at the Royal College of Surgeons, on Thursday, December 2nd, 1886.

By HENRY POWER, M.B.Lond., F.R.C.S.,
Senior Ophthalmic Surgeon and Lecturer on Opthalmic Surgery at St. Bartholomew's Hospital: Senior Surgeon to the Royal Westminster Ophthalmic Hospital.

GENTLEMEN.—I propose in the lecture which you have this year done me the high honour of electing me to deliver in commemoration of Mr. Bradshaw, to place before you the knowledge which has been recently gained by the new science of bacteriology, in its relations to surgery. In beginning to work at the subject, I immediately found myself confronted with a difficulty which arose from the great confusion that at present exists in regard to nomenclature; and though I probably do great wrong to some of those who are now my auditors, I am convinced that many surgeons have only hazy and indistinct ideas in regard to the classification of these minute beings, and will not be ungrateful to me if I place before them a succinct account of the arrangement that is accepted provisionally by the best authorities in Germany and France, as well as in this country, and add a brief outline of the chief facts that are known in regard to their life history.

Truth, says Lord Bacon, is more easily educed from error than from confusion, and no better illustration could be adduced of the maxim than the advantages that are to be gained from even a provisional and incomplete arrangement of these minute organisms into genera and species. Botanists have divided plants into two great groups: phanerogamous plants, with more or less showy flowers and conspicuous organs of generation and fructification; and cryptogams, which propagate in a secret, inconspicuous, and mysterious method by spores. The cryptogams are again divided into those which have a stem and leaves like ferns, and those which produce flat expansions on or in which the spores grow, and which are termed thallophytes. The thallophytes were formerly divided into fungi, algæ, and lichens, the broad distinctions between which were that the fungi were destitute of chlorophyll, contained much nitrogen in their composition, and lived on organic substances, whether dead or living, and in air; that algæ contained chlorophyll and lived in water, building up their bodies from inorganic material; and, finally, that the lichens consisted of a mixture of cells, some containing, some destitute of, chlorophyll, nourishing themselves on inorganic substances, and usually living in air. Late researches by Schwendener and others have rather tended to show that the lichens are really algæ which have been invaded by fungi; and, at all events, it has been found that neither lichens nor algæ bear any very important relation to disease, and that those minute organisms which are really influential in the production of a very considerable number of the maladies incidental to man and animals, and especially those which are of an infectious or contagious nature, belong to the fungi. Now the fungi have been subdivided by Flugge—looking at them essentially from a hygienic, and not from a botanical, standpoint—into four groups: (1) the fungi proper; (2) the mycetozoa; (3) the blastomycetes; and (4) the schizomycetes.

Many of the true *fungi* play an important part in the economy of nature, and are of great importance to man in their industrial relations. To mention only two of them. The ustilago carbo forms the black smut of wheat and other cereals, and tilletia caries or bran forms a similar substance in the interior of the grain, and gives a fœtid odour to it. Peronospora infestans is the fungus of the potato disease. Botrytis bassiana is the muscardine disease of the silkworm. Uredo or æcidium (of which puccinia graminis is an example) forms the red rust of wheat, which is perhaps one of the most important and interesting fungi, and the singular history of which in connection with the barberry, is now well known from De Bary's observations. Then come the aspergilli, interesting because some of them can grow in the bodies of warm-blooded animals, and are capable of producing attacks of pneumonia in man and animals. The spores of these fungi are everywhere so abundant that it is only requisite to expose a piece of black bread to the air for a short time, and then place it in a moist warm chamber, and one or other form of aspergillus, according to the temperature, to appear with certainty. The erysiphe-oïdium, or mildews, are found in the grape disease, caused by oïdium tuckeri and oïdium lactis, which forms a white covering to milk, bread, and dung; and closely allied to these are the fungi causing the parasitic skin diseases known as favus, herpes tonsurans, and pityriasis versicolor. The mucors and penicillium complete the list, these being the most common of all. None of them are of particular importance to the surgeon, except perhaps to the army surgeon, to whom the quality of the food, and especially of the bread, supplied by the commissariat, is a subject of unfailing interest.

The Mycetozoa may be passed over, as so little is known in regard to their relation to disease.

The Blastomycetes are represented by the yeasts and organised ferments which convert sugar into alcohol and carbonic acid, and the examination of which, in the hands of M. Pasteur, may be said to have led the way to all recent research on the subject of microbes.

From them we pass to the *Schizomycetes*, which have been differently grouped by different observers, and I here exhibit to you the classifications of Zopf and of Flügge, and also of Klein, whose excellent little work on Micro-organisms, just published, should be in everyone's hands. Klein divides the schizomycetes into micrococci, bacteria, bacilli, and spirilla, and each of these he subdivides into those that are septic, those that are zymogenic, those that are chromogenic, and those that are pathogenic. Septic microbes are those which excite, or at least accompany, the putrefaction of organic matters. Their action on proteids, as Hoppe-Seyler has pointed out, resembling digestion: the first products being peptones, then leucin, tyrosin, and the fatty acids; and, finally, indol, phenol, scatol, hydrogen sulphide, ammonia, carbonic acid, and water. From putrefying animal substances there may be obtained a material which is certainly not living,—for it can dialyse through a membrane,—but capable of exciting septicæmia when introduced into the healthy body of animals, a condition which must be carefully distinguished from pyæmia. Septic poisons produce an effect commensurate with the quantity of the poison introduced; if the quantity be small, only slight and transient effects are produced; if it be large, the effects are more severe, and vomiting, rigors, spasms, and collapse ending in death, may occur. *Post-mortem* examination shows congestion and hæmorrhage of the lungs, and intestinal mucous membrane. In pyæmia, on the other hand, a poisonous agent is also introduced into the system, but it so far differs from the poison of septicæmia that it appears to be living, and capable of multiplication, so that a very small quantity may prove fatal by the formation of numerous and widespread abscesses. It is possible, however, that, as Klein argues, large open wounds may become the seat of the multiplication of various organisms, which, by producing a septic poison, may produce septicæmia when absorbed in sufficient quantity.

Zymogenic Microbes.—The term zymogenic action is only another term for the induction of fermentation, and upon the whole of this subject a flood of light has been thrown by the labours of Pasteur. The chief forms are (1) the alcoholic, (2) the lactic, (3) the viscous, (4) the acetic, (5) the ammoniacal, (6) the butyric, and (7) the putrid fermentation. The agents are always microbes destitute of chlorophyll, and are generally anaerobic, obtaining the oxygen they require for growth and activity from the oxidised compounds in the liquid in which they grow. The micrococcus of urea and that of the phosphorescence of putrid meat and fish are, however, aerobic. The ammoniacal and the putrid fermentations are of the greatest interest to the surgeon. The former is exemplified in the action of the micrococcus ureæ and the bacillus ureæ in converting urea into ammonium carbonate. The micrococcus ureæ appears, when cultivated, in the form of minute spherical cells, either separate or united in diplococci, or in

tetrads or in chains. They do not fluidify gelatine. The development of the microbe is not interfered with by the alkalinity of the fluid, and it can continue when the proportion of ammonium carbonate is as much as 13 per cent. The most favourable temperature for its development is from 30° to 33° C. The bacillus ureæ is a short plump bacillus, with rounded poles about twice as long as wide. Growth only takes place on the surface, and like the micrococcus. Its action, as is now well known, is to decompose urea into ammonium carbonate with absorption of water. $CO\begin{cases}NH_2\\NH_2\end{cases} + 2H_2O = (NH_4)_2CO_3$.

Chromogenic Microbes.—The term "chromogenic" is applied to those which develop colouring matter. This is sometimes soluble, sometimes insoluble, in water. The microbes are always aerobic. The most remarkable form of chromogenic micrococcus is the M. prodigiosus, or red snow. The most remarkable of chromogenic bacteria are the bacterium rubescens of Ray Lankester (*Mic. Journal*, 1873), which appears in vessels containing decomposing astaci, and which is noticeable for its pleomorphism, and the bacterium cyanogenum, which is the cause of blue milk.

Pathogenic Microbes.—The pathogenic organisms are those which are capable of generating disease; and the evidence on which their disease-producing powers rest is, it must be admitted, sufficiently satisfactory, for no microbe is regarded as the cause of a disease unless it is, in the first place, found to be constantly present in that disease, either in the blood or in the tissues; secondly, unless when carefully isolated and cultivated, it can, when introduced into the body of a healthy animal, give rise to the original disease, and be again found in quantity in the body.

That the air contains a large number of particles floating in it has been shown by many observers, amongst whom Cunningham in India, Salisbury in America, Sanderson in England, Robin in France, and especially Miquel, of the Montsouris Observatory, may be mentioned. The apparatus of Miquel consisted of a S-shaped tube with a vane, so that the open mouth was always directed to the windward quarter. In the interior was an inverted funnel, the small extremity of which almost impinged on a horizontal plate of glass, the surface of which was rendered glutinous or adhesive by covering it with a solution of glucose in glycerine, and which was replaced from time to time. Examination of this plate showed some inorganic substances, such as fine crystals and iron; and many organic particles, such as vegetable cells and fibres, pollen-grains, grains of starch, the spores of penicillium, aspergillus, coremium, and some botrytidæ, septonema, the septate ends of leptotrichum, trichosternium septosporium, helicotrichum, vibrios, and many other spores; and, lastly, various animal substances, such as the scales of butterflies and moths, particles of wool and feathers, and also microbes. He has given an excellent graphic representation of the number of microbes contained in the air blowing from different quarters over the Observatory of Montsouris, which is situated to the south of Paris. From this it appears that the air picks up in its passage across Paris in the course of half an hour three times the number of microbes it contains when blowing over the country. In the water, as might be expected, they are still more numerous, and nothing shows more clearly the effects of the drainage of a large city into a river than the fact that at Bercy on the Seine, above Paris, the number of microbes was about 5,000,000, whilst at Asnières, below Paris, it was nearly 13,000,000 per cubic litre, whilst a litre of rain-water contained 248,000 (Miquel). That these particles not only enter our bodies, but are arrested and retained in them, is shown by the conclusive yet simple experiment of Tyndall, who, by transmitting a beam of electric light through air before and after it has been respired, showed that, however thickly populated before, it is entirely free from organic and inorganic particles after it has once passed through our lungs. It may be incidentally mentioned that many microbes exist under ordinary circumstances on or in our bodies. Such are those which Bizzozero has shown fasten on our dead and desquamating epithelial scales, the leptothrix found between the fingers and toes, the bacillus of the smegma preputii, the numerous micro-organisms found between the teeth in all but those who are exceptionally cleanly in their habits, and which have been described by Miller and Lewis, and the various microbes of the intestines. In regard to the life history of the schizomycetes, it may be said that they are all microscopic, and some of them only just visible under the highest powers. They are composed of a special form, named by Nencki microprotein, which is destitute of sulphur and phosphorus, and is not precipated by alcohol. Some move, others are motionless. Some form a kind of gelatinous capsule, which, fusing with those of adjacent microbes, produce a zoogloea. Many require a special soil. V. Jacksch has shown that the micrococcus ureæ can grow on ammonium succinate and lactate and malate, but not on ammonium formiate, acetate, or butyrate. Some require oxygen—the aerobic microbes of Pasteur; others can grow without access of free oxygen, obtaining that element from the soil on or in which they grow. Most grow best at some definite temperature. The multiplication of the schizomycetes takes place by fission only, or by fission and by the formation of spores. The separation and isolation of these micro-organisms is a matter of much difficulty, but it can be effected by Pasteur's fluid method, or, still better, by Koch's method of plate culture and growth in sterilised peptone gelatine and agar-agar.

True Breeding.—A considerable divergence of opinion still exists as to whether the various forms of microbes are really specifically distinct from one another, and whether successive generations so far retain their characters that they may be held, supposing the conditions to be similar, to breed true. This is obviously of importance in a sanitary and hygienic point of view, for, as Mittenzweig (p. 25) has well expressed it, if a form of microbe which has been ascertained to possess injurious qualities can be developed out of a harmless form, it is impossible that we should ever be able to establish sanitary measures that are of the least value, since we are always surrounded by millions of germs which may at any moment develop into a dangerous enemy. On the other hand, if these prove to be specific varieties, it is perfectly possible that by gaining an accurate knowledge of its life history, its mode of origin, its favourite haunts, its mode of attack, the conditions of temperature and soil which are most favourable to its growth, its fruiting, the germination of its spores, and the like, we may learn to know an enemy, and may adopt precautionary measures which shall have for their object the extermination of the species in question.

Micrococci.—The pathogenic micrococci which are of interest to the surgeon are (1) those of the pus of open wounds, (2) the micrococcus of erysipelas, (3) the micrococcus of gonorrhœa, (4) the micrococcus of acute infectious myelitis, and (5) the micrococcus of progressive necrosis. The bacilli are (1) those of syphilis, (2) those of tubercle and lepra, (3) those of tetanus, (4) those of anthrax, (5) those of ulcerative stomatitis, and (6) those of foot-and-mouth disease.

Micrococcus.—Several forms of micrococcus are associated with disease in man. First, the staphylococcus pyogenes aureus. This was first recognised by Ogston in 1881 (BRITISH MEDICAL JOURNAL, March 12th, 1881). It appears in the form of spheroidal cells 0.87μ in diameter, which may either be isolated or twin, or arranged in groups of four, or in the form of a short chain of three or four elements, but sometimes also in irregular groups, from which its name is derived. The colonies fluidify gelatine, but not agar-agar. When they are in contact with air, they assume a bright yellow tint, but if covered with a layer of oil, they remain white. This is the most common microbe found in collections of pus in man, and much evidence has been accumulated to show that either it or its excreta are the active agents in the production of abscesses; for, in the first place, Rosenbach and Passet have demonstrated that abscesses do not, as has hitherto been generally believed, necessarily result from the subcutaneous injection of even highly irritating substances—such, for example, as the oil of turpentine—unless some microbe be present; whilst certain forms of microbes are almost constantly found in abscesses, and some kinds of suppuration appear to be especially induced by the staphylococcus aureus. Thus, it may be regarded as peculiarly apt to occasion boils, acute abscesses, and empyema. It is found also in acute osteo-myelitis, though whether it is the exclusive cause of this disease is not certainly known. Other affections in which it has been noticed are metastatic affections, pyæmia, and ulcerative endocarditis. Mr. Hartridge and myself found it in the pus of a hypopyon. The poisonous qualities this kind of pus-microbe possesses are well shown by an experiment made by Garré, and quoted by Flügge, in which a little of the cultivated micrococcus rubbed into the completely intact and healthy skin of the arm irritated the excretory ducts of the glands of the skin, and occasioned a widespread group of furuncles. Other forms of staphylococcus have been described by late observers under the names of staphylococcus pyogenes albus, citreus, and tenuis, which differ in the two former cases in the colour assumed by culture-colonies, and in the latter by the slightly larger size of the cocci, and their disposition to exhibit two dark poles and clear equator. The citreus and tenuis forms are stated each to occur in about 10 per cent. of the pus removed from abscesses. Micrococci of pyæmia and of septicæmia have been described as occurring in the rabbit. Those of pyæmia were obtained from animals into which maceration fluid had been injected; those of septicæmia from those in which fresh meat infusion had been injected. Pyæmic micrococci are round; septicæmic are oval: the former mere points, only $\frac{1}{100000}$th of an inch in diameter; the latter large, $\frac{1}{25000}$th. Pyæmic micrococci cause strong infiltration at the point of inoculation. Peritonitis,

metastatic abscesses in lungs and liver, and the capillaries contain heaps of micrococcus-masses with blood-corpuscles enclosed, and there are many thrombi. Septicæmic micrococci cause no coagulation of the blood, never surround the blood-corpuscles, but push them to one side. There is no peritonitis; the blood-vessels are often filled with them.

Although the purulent discharges of gonorrhœa and of the purulent ophthalmia of new-born children were examined by many competent observers with a view of discovering the active agents producing these diseases, it was not till the technical methods of Koch had been introduced that any success attended the efforts made for the discovery of these agents. In 1879, however, Neisser first demonstrated the existence of a microbe, which has been recognised by nearly all microscopists, and is evidently intimately connected with the whole group of purulent and contagious diseases of mucous membranes. In the following year Bokai and Finkelstein obtained pure cultures of this micrococcus in the course of two or three weeks, and on introducing a small portion of such cultures into the male urethra an acute attack of gonorrhœa rapidly followed, though when a little eucalyptus oil had been added to the culture, which killed the micrococci, no effects were observed. A similar experiment was performed by Bockhart on a general paralytic. Haab found that the cocci of purulent ophthalmia were absolutely identical with those of gonorrhœa. According to Cornil and Babes, the microbes of gonorrhœa, when fresh, are small spheroidal bodies about four micro-millimètres in diameter, which appear to possess some power of motion. They are often arranged in pairs, or even in tetrads, the opposed surfaces being then somewhat flattened. Cornil and Babes believe they have recognised two forms, one a little larger than the other: the latter are disposed in heaps outside the cells; the former are within the cells. They colour easily with strongly staining agents, as methyl-violet and fuchsin, but do not stain when treated on Gram's plan. They are found in the epithelial cells, both attached and free, and in the pus cells. The gonorrhœal pus of the male usually contains nothing but micrococci; but that of the female, obtained or collected from the vulva, at the orifice of the urethra, or in the vagina, contains long filaments like those of leptothrix buccalis, and masses of large spores which fill the pavement cells of the membrane. The best, the fullest, and the most recent account of this form of micrococcus has been given by Bumm, whose description I shall follow. Bumm's experiments were made exclusively upon the conjunctiva, which, as he points out, presents special advantages for experiments of this kind; for, in the first place, it is very easily infected; the infection attacks the whole surface simultaneously, and does not slowly spread from point to point; the moment of the commencement of the inflammatory reaction can be precisely noticed, and a portion can without difficulty or harm be excised for examination. There can be no doubt that a very small quantity of the gonorrhœal pus, containing micrococci, is capable of spreading the disease, and the natural and healthy moist surfaces of the conjunctiva and of the urethra seem to be well adapted for their growth and multiplication, so that they appear in great numbers in the course of twenty-four hours. Whilst other forms of micrococci, it they enter the eye, are unable to effect a lodgment, but are washed away by the tears, the gonococcus cleaves, as Bumm remarks, with an eminently invasive force, to the superficial epithelial cells, and the soft protoplasmic substances they contain; they then grow down, for the most part, between the epithelial cells, till they reach the papillary surface of the mucous membrane, and at the end of the second day of infection, the whole epithelial investment is completely beset with diplococci. The membrane now begins to present signs of reaction; swarms of white corpuscles escape from the blood-vessels, and make their way between the tissue elements till they arrive at the surface of the epithelial investment. The cells of this layer, already disturbed in their arrangement by the growth of the fungus, become further separated by the intrusion of the white corpuscles and pus-cells, and may even be raised in flakes, and detached by the movements of the lids, leading to capillary hæmorrhages between the epithelium and connective tissue. In the event of a croupous exudation forming, the gonococci form rows and heaps between the fibrinous network and the lymphoid cells. In the case of the eye, the disease stops suddenly at the limbus corneæ and at the margin of the lids, and when the epithelial investment is broken down, the microbes seem to have little power of penetrating the papillary tissue. They do, however, extend along the fibres of the fibrous tissue, and where these separate from each other form little colonies not exceeding the size of the area of a divided capillary. Coincidently the phenomena of inflammation increase in intensity, the round cell infiltration extends to a depth of 2 mm. beneath the surface of the mucous membrane, and the cells become tightly packed, and at this time the suppuration stage of the disease is fully developed. In the course of about four days, when the conditions are favourable, a renovation of the epithelial coat takes place, commencing from the scattered remains of the old epithelium; a single layer is first formed, and by proliferation of the cells of this, a second and a third are formed beneath the first, the cells being flattened, with fusiform processes. The development of the microbes now seems to terminate, though it may recommence, and solid rods of cells dip into the subjacent tissue, reminding the observer of the growing zone of cancroid. The gonococci quickly die when introduced into the tissue of the cutis, which explains the negative results formerly obtained by the syphilographers, and Bumm considers on this ground that the statements of those who have found gonococcus in the knee-joint and lymphatic glands require corroboration. No doubt they had a micrococcus before them, but no evidence has been afforded that it was gonococcus. He has himself found in the pus of acute bubo diplococci, which, however, both by their staining with Gram's methods and their mode of growth when cultivated, proved to be streptococcus aureus. In this case the staphylococcus which is frequent in gonorrhœal pus had entered through erosions of the prepuce or of the urethra, and had occasioned the suppuration of the gland.

I need hardly say how valuable a knowledge of these organisms has proved in the prevention of a terrible disease—the purulent ophthalmia of new-born infants. Formerly of common occurrence in all lying-in institutions, it is now, or perhaps I ought to say it might be now, by the use of well-known precautionary measures, entirely abolished. Sexual connexion should not take place during the last week or two preceding delivery. The hands and (if such are required) the instruments of the accoucheur should be absolutely clean. If there is the least doubt as to the existence of any discharge in father or mother, the vagina may be washed out with a dilute solution of corrosive sublimate (1 in 10,000); and if any discharge show itself in the infant, it should be promptly met and arrested by the instillation of a drop or two of a solution of silver nitrate containing from 1 to 3 per cent. of the salt; and all head-coverings and napkins, shawls, and the like, to which discharge is likely to adhere and then dry up, should be frequently washed. By proceedings like these Credé, and the speakers at a recent meeting of the German Gynæcological Society were able to point to the satisfactory result that, from an average of 150 cases per 1,000, the number of purulent ophthalmic cases in the German Lying-in Institution had fallen to 2, and even these were due to the fact that the appropriate measures were not properly carried out.

The streptococcus erysipelatos was first noticed by Lukomsky (Virchow's *Archiv.*, vol. lx.), who found it at the margin of an erysipelatous area where the disease was making active progress. The lymphatics of the skin presented the zoogloea of micrococci. The microbes in the centre of the area were dead. Orth and Fehleisen (*Ätiologie der Erysipelas*, 1883) have experimented largely with the cultivated forms. It appears to present subordinate forms in different instances. Inoculation of the erysipelatous microbe into the ear of rabbits in *most* instances caused redness and increased heat of the ear, though less violent than when streptococcus pyogenes was introduced. The inflammation began in from thirty-six to forty-eight hours after inoculation, in the form of a well-defined area of redness, which extended in the course of the veins to the root of the ear. The animals soon recovered completely. The difference between this microbe and that of ordinary pus, which it closely resembles in appearance, rest, on experimental and clinical evidence. Streptococcus pyogenes occurs, according to Flügge, in about one half of all kinds of pus, while that of erysipelas occurs only in this affection, and is capable of being transmitted from one person to another. Fehleisen has continued the culture through seventeen or more generations on sterilised gelatine, and has still found that when inoculated into patients with a view of curing lupus, cancer, and sarcoma, a typical attack of erysipelas was induced. The subject of acute infectious osteomyelitis was first worked at by Rosenbach, who thought the infection might be analogous to one of the ordinary ferments, and from experiment he arrived at the conclusion that it was the lactic acid ferment; but Kraske has quite recently demonstrated that several microbes are present in this disease, and that in all probability the active agent is the well-known form of micrococcus named M. pyogenes aureus, the co-operating agents being the M. pyogenes albus, the streptococcus pyogenes, and some forms of bacillus. The paths by which the poison may enter the system are various, and Kraske reports one case where a fatal case started from a furuncle on the lip. Similar results have been obtained by Becker.

Bacilli.—From the micrococci exemplified in these forms of suppuration let us turn to the other grand division of microbes, the

bacilli. A typical example of the bacillus is presented by charbon, which has been so fully worked out by Koch and Klein; no spores are formed in the animal body; it increases only by fission in that situation. This bacillus is one of the most interesting on three grounds; first, that it was the first instance in which a microbe could be shown to induce disease; secondly, because it can attack man as well as animals, though certain breeds show themselves to be exempt from its attacks; and, lastly, because by inoculation its virulent effects can be greatly modified. The charbon bacillus belongs to the aerobia, since its growth is almost arrested when the access of oxygen is cut off. The colonies, when nourished on gelatine, form small punctiform masses with wavy contour, which quickly spread over the surface of the gelatine, effecting partial fluidification. A mere trace inserted into the veins of mice, rabbits, guinea-pigs, hedgehogs, sparrows, sheep, or horses, causes sickness, which, in the mouse, may kill in twenty hours, and, in rabbits in forty-two hours, the bacilli being found, after death, in the spleen and in the capillaries of the lungs, liver, kidneys, and intestines. Pasteur and Toussaint made the extremely important discovery that the exposure to moderately high temperature materially diminished the virulence of charbon bacillus, and that its action was also softened by certain poisonous substances, though their morphological features remained unchanged.

The presence of peculiar forms of cells in syphilis had been announced by Hallier, Lostorfer, and others some years ago, before precise methods of investigation had been devised; but it was only in the course of last year that Lustgarten (*Wien. Med. Jahrb.* 1885), obtained, by special modes of staining, evidence of the presence of a microbe peculiar to syphilis. His plan was to make sections, and place them in aniline water and a concentrated alcoholic solution of gentian; to remove the dye in a solution of potassium permanganate; the brown flocculi of reduced manganese dioxide were then removed with sulphuric acid, and the sections then appeared completely colourless, with the exception of the bacilli of syphilis. Lepra and tubercle bacilli were stained in the same way. The bacilli found in syphilitic neoplastic formations resemble those of tubercle, and are usually curved, sometimes in opposite directions, and are, on the average, 4.5 μ long, extremes being met with varying from 3 to 7 μ. They often present a feebly marked enlargement at one extremity. The contours are not always parallel, but have kinks and indentations in their course. With high powers the bacilli appear of a deep blue tint, and have bright oval spots arranged at equal distances from one another in their interior, which he thinks are to be regarded as spores. The bacilli are contained in large oval or polygonal cells, where they occur in groups of from two to eight, intercrossing with one another. On the whole the bacilli are rare, so that several sections may be made before a single bacillus-containing cell can be found. In examinations of sixteen cases, Lustgarten found these cells to be invariably present, and in particular he found them in a periosteal gumma in a case of congenital syphilis. On the other hand, he was unable to find them in two excised soft chancres, and in numerous pathological as well as healthy tissues which were examined after similar treatment; and the same difficulty has been experienced by other observers, and especially by Alvarez, who believes he has found the syphilitic bacilli of Lustgarten, or organisms indistinguishable from them, in the smegma of the prepuce or of the vulva.

Strümpell (*Neurolog. Centralb.* No. 19, 1886, p. 433) has quite recently called attention to the etiological relations that exist between tabes and progressive paralysis and syphilis. He found that in 61 per cent. of the cases of tabes that had fallen under his own observation syphilis had previously certainly existed, and that in no less than 90 per cent. it had probably been present. He endeavours to show by citing the analogous nerve degenerations that occur in diphtheria that we have not here to deal with the deposit of the primary disease-producing microbe in the nervous system and its multiplication there, but rather that the secondary disease proceeds from some chemical poison produced no doubt by the original microbes. Similar nerve conditions occur after typhus and after dysentery. The most severe forms of nervous affection may follow the simplest and slightest attacks of these diseases. The attack of tabes so long after that of the original syphilis is not surprising when we reflect how chronic a disease syphilis is. It must be acknowledged, however, that the view that the secondary affections of syphilis are due to the secretion of syphilis bacilli—that is to say, to ptomaines produced by them—is far less probable than that the bacilli wander from the original seat of inoculation and induce local disease. Take, for example, syphilitic iritis. Surely the blood poisoning which would excite a sharp attack of iritis would produce serious disturbance of many other organs; but we can easily explain the occurrence of the iritis if we admit that the bacilli are carried by the current of the blood, till they are arrested in some spot which, like the highly vascular iris, is well fitted for their multiplication; and it is not, then, surprising that there may be no other signs of constitutional disturbance than such as are occasioned by the local conditions of pain.

Another subject of the highest possible interest to the surgeon—the etiology of tetanus—has recently received some elucidation from the labours of Roser and Heiberg, of Rosenbach of Göttingen, and of others. The causes of this affection have hitherto been in the last degree obscure, and I need hardly do more than refer to the reflex irritation theory. Roser and Heiberg first suggested that, owing to the formation of some miasm, a poison was generated which, being absorbed, caused the disease. Though supported by many observers, as Arloing and Tripier, Billroth and others, endeavoured to transmit tetanus by inoculation, and failed. In fact, these negative results appear to be attributable to the circumstance that dogs were chiefly used for experiment, animals that appear to be singularly indisposed to suffer from tetanus. The first positive results were obtained by Carle and Rattone, who obtained from a pustule of acne, matter which being injected into twelve rabbits, caused eleven to be infected with tetanus; and further, the disease was transmitted from one of these animals to another. More recent observations have been made by Rosenbach (*Centralb. f. Clin.*, No. 24, 1886) who took the material for his experiments from the body of a workman, aged 23, who, in Febuary of the present year, had frost-bitten feet, and who died the day after his admission into hospital, from tetanus. It was taken an hour after death from just below the line of demarcation. Two guinea-pigs, into whose thighs small fragments were introduced in the evening, exhibited well-marked tetanus the following morning, and died in the course of the day. The inoculation of other animals from these only succeeded when the material used for inoculation was taken from the immediate vicinity of the point inoculated. But when this was done, four guinea-pigs and eleven mice were rendered tetanic. The tetanus thus produced was in all respects identical with Nicolaier's earth-tetanus. It differs in the order of the appearance of the symptoms according to the position of the place where the inoculation is made. For example, if in a mouse the inoculation is made in the groin, the tail is found, after incubation of from nine to twelve hours, to be erect and directed stiffly to the side inoculated. The corresponding leg is stiff in all its movements, and is soon stiffly extended, the sole turned upwards, the toes clenched. The same phenomena are then seen in the opposite posterior extremity. The stiffness extends to the lower muscles of the back. The animal can only move by means of its fore feet. After the lapse of eighteen hours the anterior extremities become stiff, and immediately after trismus and opisthotonos, and, with every touch, even mere contact of the glass jar, tetanic spasms set in. The animal then lies in a state of exhaustion, with intense dyspnœa, and soon only slight shallow respiratory movements and feeble convulsions afford evidence that life still persists. Death usually takes place in twenty-four hours. If a mouse were inoculated at some other point—as, for example, over the humerus—the extremity soon became motionless, and quickly became prone and stiff; a few hours later the ear fell back, the prominent eyeball of the field mouse became retracted, the lids half closed, the jaws tightly closed; eighteen hours after the inoculation the whole body was bent towards the inoculated side, the left fore foot stiff, the hind foot movable; on contact tetanic cramps were excited, and again in twenty-four hours the animal was dead. The process was the same in guinea-pigs and in rabbits, though in the latter animals the general tetanic convulsions were less marked. The period of incubation is at least twenty-four, and in the majority of cases, thirty-six hours. Professor Flügge and his coadjutors informed Rosenbach that they had been able to obtain pure cultures of earth-tetanus-bacillus, but that they experienced great difficulty in transferring such pure cultures from one medium to another. Experiments made with a view of explaining this peculiarity suggested that the presence of some other fungus was requisite; in other words, that, as occurs in some of the higher animals, commensalism existed, perhaps due to the fact that the companion fungus promoted its growth by absorption of oxygen; and this observation, if supported by others, is interesting in connection with the fact that tetanus is peculiarly liable to follow wounds in injuries in which foreign bodies or necrosis and gangrene are present. The question whether the tetanus bacillus spreads itself throughout the body, and by what channels this occurred, has been the subject of many researches by Nicolaier, who found the bacilli in question once in the sciatic and twice in the spinal cord. Inoculation with fragments of organs succeeded fourteen times in fifty-two experiments. As the bacillus does not appear to be very abundant, it is difficult to understand how the simple growth of a fungus could produce such violent effects upon the nervous system; and it seems more probable that, as

the old supporters of the zymotic nature of tetanus thought, some kind of poison resembling strychnine was generated by the bacilli. We may suppose, then, that the bacilli streaming forth from the point of inoculation, as from a centre, distribute themselves through the body, and, further, that each bacillus lying in tissues represents a small but constantly acting source of poison, which first affects its own immediate vicinity, but, as a consequence of absorption and in co-operation with others, affects ultimately the whole body, and we may thus explain the local tone and tension, its gradual extension, and, finally, the affection of the whole system.

It is interesting to consider how these organisms exert their baneful influence on the living bodies of the higher animals. How, for example, do the bacilli of splenic fever act upon cattle? There are clearly four ways in which we may explain the action of microbes upon the infected animal. In the first place, they may act like an invading army on a peaceful population; they may simply consume their stores of pabulum. Possessing greater strength and vitality than the normal tissues, which are highly specialised and perhaps require more complex food—that is, food which has been more or less highly assimilated,—these young and vigorous warriors seize upon and appropriate the raw material, and practically starve out the more delicately framed cells. And this action cannot be overlooked, in whatever mode we may seek to explain their influence. Their enormous rate of reproduction has been already referred to, and we have only to look at the drawings of Klein and others of the thorough infiltration of many organs to understand what a powerful influence they must exert in this direction, and how the normal cells weakened by inanition may fall, like Gulliver before the Lilliputians, victims to the attacks of their minute but numerous and persevering enemies; and, if any further proof were needed, it would be found in the serious effects that are produced upon the economy by any constant drain, whether it be from an imperfectly healed abscess, from leucorrhœa, or even from purulent ophthalmia. Secondly, they may act by interfering with the due performance of the functions of the various depurating organs. Klein, in his numerous and excellent drawings, has frequently represented the kidney, and we see the capillaries of the glomeruli blocked up with myriads of microbes. It is clear that the urea and other final products of the regressive metamorphosis of the tissues must be imperfectly eliminated, and if retained in the body must contribute their share in the development of disease.

But another view may be held. It may be said, so far as we know, all living beings produce excreta, the simplest of which, carbonic acid and water, contain the carbon, hydrogen and oxygen of the food; whilst the nitrogen is eliminated in the form of urea or uric acid or guanin, or some other soluble and generally poisonous compound. Microbes can constitute no exception to this rule; but, whereas in most instances the products of excretion are thrown forth into the vast receptacles of the atmosphere or of the waters or of the soil of the earth, and by the play of other forces become harmless, they are here discharged into the body of the animal on which they are living, and so bring about its destruction more or less quickly, but as surely as if that animal's own excreta were retained in its body.

There is still another explanation which on many grounds has recommended itself, as accounting more satisfactorily for the phenomena observed, both to chemists and biologists. It is that the injurious effects produced by microbes are due, not to what they take or to what they excrete, but to what they leave, and this is closely associated with the imperious demand they make for oxygen. Being in many instances anaerobic—that is, living and multiplying without direct exposure to air—they must obtain the oxygen they require for the process of life from the tissues by which they are surrounded; but when oxygen is withdrawn from such complex chemical compounds as those of which our bodies are constructed, the elements enter into new combinations, and then, under the name of ptomaines (from πτῶμα, a dead body), are believed to be the really poisonous agents. Attempts have been made to isolate these compounds; and it has been shown that they are of the nature of alkaloids, and resemble, both in their constitution and in their effects, those deadly poisons that may be extracted from digitalis, conium, tobacco, delphinum, and other noxious plants. In reference to this, it may just be noted that Miquel (*Les Organismes Vivants*, 1883, p. 103) has cultivated a bacterium which has the singular power of converting a gramme of sulphur in the course of forty-eight hours into hydrosulphuric acid on the addition of four litres of boiling water and some tartrate of ammonium. This bacterium often fixes itself in vulcanised india rubber tubes, and in the course of a few hours can charge the water they contain with from 60 cc. to 70 cc. per litre of sulphuretted hydrogen.

The difficulty which must strike everyone in regard to the action of these microbes on the body is the comparative rarity of disease. How is it, if the air is swarming with these ferocious microbes, that we do not all succumb to their attacks? How can anyone escape? Pasteur meets the difficulty by stating that the healthy body is capable of resisting the attacks of these foreign agents, and that so long as the surface is intact no harm comes from their ingestion. A healthy man is probably capable of resisting the attacks of the majority of pathogenic organisms, at least for a time. The cells which cover the surface of our bodies and line our alimentary, respiratory and genito-urinary tracts possess their own vital energy, and when perfectly normal cannot be invaded by any microbe; they present an impenetrable front to such organisms along their whole line. When, however, by mechanical, chemical, or other injury the vitality of these cells is lowered, a door is opened for the admissions of such organisms, which, having once penetrated the tissues or the blood, find a fit soil for multiplication; and these may prove, by their mere numbers or by their effects, injurious or fatal to the whole body. Nothing can demonstrate this better than the experiment recently made by Orth and Wyssokowitsch (Virchow's *Archiv*, Bd. ciii., 1886), who found that staphylococcus could be injected into the blood of a rabbit without apparent injury; but, if before the injection, a slight mechanical injury was inflicted on the valves of the heart, typical endocarditis was at once produced.

In conclusion, I would desire to point out that this branch of inquiry is of quite a special character, and that it requires very considerable practice and entire devotion of time. Take my own case. I was most desirous to obtain cultures from various diseases of the eye attended with suppuration, to illustrate this lecture, but it is requisite, in the first instance, to have sterilised tubes and plates to grow the microbe. Though pretty well accustomed to delicate operations, very special precaution is required to introduce the matter gained without entrance of foreign bodies. Then an incubator is wanted; and, finally, there is the long and difficult examination with the microscope, with all its details of cutting, staining, mounting, and, not least, preserving in an accessible form. On these grounds, I hope that the Council of the College will see fit to institute, with part of Sir Erasmus Wilson's bequest, a laboratory devoted to this object, where one or two able demonstrators may continue the study of bacteriology, and prosecute, with all modern appliances, those researches, which are certain to prove of service in the diagnosis and treatment of disease.

PATHOLOGY OF ANEURYSM.

Read in the Section of Pathology at the Annual Meeting of the British Medical Association in Brighton.

By TIMOTHY HOLMES, M.A. Cantab., F.R.C.S.,
Surgeon to St. George's Hospital.

I UNDERSTAND it to be the wish of the managers of this meeting that the discussion which they have asked me to introduce shall turn rather on the practical aspect of the question than the theoretical—that is, shall bear on medical and surgical practice, rather than anatomical details. The time at our disposal does not allow of a complete treatise on the disease; and, therefore, all I shall here attempt will be a discussion of some of its main particulars, in connection with points of practice which are still unsettled. I shall speak of the influence of syphilis in causing aneurysm; of the relation between the aneurysmal tumour and the mouth of the sac; of the vital actions of the sac itself, and of some of the methods of spontaneous cure; using these pathological questions as illustrating the treatment of the disease (1) by medical means, (2) by the old operation, (3) by electrolysis, (4) by the introduction of foreign bodies, (5) by manipulation, (6) by Esmarch's bandage and by flexion, (7) by rapid pressure, and (8) by the distal ligature.

It is evident that I can only touch on all these matters very lightly, and that my office to-day is rather to start doubts than to solve them.

Stated generally, the cause of aneurysm may be said to be the weakening, in a given spot, of the resisting power of the wall of the artery to the blood-pressure. The artery is weakened by a wound or laceration of the external coat, or of the whole wall of the vessel, or (which I believe is common) by laceration of the internal coats, so that the blood insinuates itself beneath the external coat, and distends it; or an atheromatous patch deprives the artery of its elasticity in that

spot; or an ulcer penetrates the arterial wall completely[1] or incompletely; or the artery is weakened by inflammation of the parts which surround and support it; or increased strain is put upon it by corporeal exertion, or by cardiac irregularity; or these various causes are variously combined.

But it is evident that such general statements are of little use in practice. We are not yet fully informed as to the nature of the various degenerative processes to which arteries are liable. Two, however, are familiar to us—the atheromatous, which used to be regarded as a fatty degeneration, but which is now believed to be really inflammatory, though fatty changes speedily ensue, and the syphilitic, or gummatous, which has been minutely studied in the arteries of the brain, and which, no doubt, affects other arteries also. No one doubts that the atheromatous degeneration is a constant cause of aneurysm; but the connection between aneurysm and syphilis is a more doubtful matter, and it is to this question that I shall first address myself.

The logical possibility—nay, even the great probability of such a connection—is indubitable. There is no question that the subjects of aneurysm have frequently had syphilis. Dr. Mahomed published statistics to prove that aneurysm is more common in syphilitic subjects than in others (*Path. Trans.*, vol. xviii, p. 347); and, however short of proof such statistics may be, we may admit that the fact is probable. But it does not show any real connection between the two pathological processes, nor did Dr. Mahomed adduce it for that purpose. In fact, he expressed in the same paper his conviction that there is not a tittle of evidence that the prevalence of aneurysm in syphilitic cases is due to a "syphilitic arteritis." Syphilitic subjects are usually persons broken down by hard living of all kinds, and have been exposed, beyond the average of other men, to the causes which produce diseases of the circulatory system.

In saying that it is still uncertain whether aneurysm is produced by a specific syphilitic arteritis, I do not wish to be understood as denying that a syphilitic affection of the arteries exists. Many cases have been put on record in which lesions exactly like the gummatous affections of other parts, have been found in the arteries of persons the subjects of other syphilitic diseases. This has been done, especially for arteries of the brain, by Heubner (*Die luetische Erkrankung der Hirnarterien*, Leipzig, 1874), and many cases are described with complete anatomical details by English pathologists, such as Clifford Allbutt (St. George's Hosp. Reports, iii, 60; *Path. Trans.*, xxiii, 16); Greenfield, Gowers, Buzzard, Davidson (*Ibid.* xxviii, pp. 272, 286, 295, 300), Sharkey (*Ibid.* xxxiv, 10), and many others. Constitutional syphilis seems to affect the arterial system, sometimes in the form of a thickening of the internal coat, with exudation in the neighbouring more external portions of the arterial wall, and narrowing or even complete obstruction of the tube, sometimes in the form of gummatous tumours of the external coat, or the sheath. Now it is obvious that a deposit, whether in the external or internal part of the wall of the vessel, may soften or break down, and so leave the vessel weakened at that spot, and prone to aneurysm. Admitting fully, however, the theoretical possibility, when we come to look to the records of cases, there seems little proof of the prevalence of such syphilitic ulceration of arteries. Thus, in Heubner's work, we have notes of fifty cases from his own and others' practice, in most of which the whole arterial system was examined after death. In only one case (No. 24) was there an aneurysm, and in one other (No. 18) ulceration and rupture of an artery. In both these cases, the artery affected was in the brain. In none was there any external aneurysm. There was indeed more or less extensive atheroma in several, but it is obvious that there is no reason why an atheromatous subject should not contract syphilis, or *vice versâ*. The two processes, however,—the syphilitic, and the atheromatous degeneration of arteries,—are very clearly contrasted, and in many respects opposed to one another: mainly in these two particulars, that the syphilitic process is most common in the smaller vessels, especially the cerebral—the atheromatous in the largest arteries; and that the syphilitic leads usually to thickening of the arterial walls, contraction of the tube, and thrombosis, while the atheromatous produces weakening of the wall of the vessel, leading to aneurysm or rupture. There is, therefore, little support from pathological anatomy for the view that syphilis is a frequent cause of aneurysm; nor has the great practical objection ever been answered, that, if it were so, aneurysm would be far more common in the female sex than it is. The question is an important one to our present purpose, since the assumed syphilitic nature of the disease has been used to explain the alleged virtue of the iodide of potassium in its cure. I would, therefore, just remind you how often these, like other affections, are classed as syphilitic when they occur in syphilitic persons, and again, how often the previous occurrence of syphilis is inferred from the existence of an affection which the observer assumes to be syphilitic.[2]

My own view of the matter is that the true syphilitic degeneration of arteries rarely leads to aneurysm, but rather to the obliteration of the small vessels which are its favourite seats. But I would not deny that there may be exceptional cases, in which the syphilitic deposit breaks down prematurely, and the arterial wall gives way, either totally, causing hæmorrhage; or partially, leading to aneurysm.

The fact that aneurysm is more prevalent among the syphilitic than the non-syphilitic, if true, seems to me inconclusive. In this, as in all other medical matters, nothing is more misleading than the so-called "statistical" argument. The causes of medical facts are so complex, that it is hardly possible to eliminate all causes but one, in two opposed series of cases; yet this must be done before a reliable statistical comparison can be made.

I have not here the space, and perhaps it hardly falls within my appointed province, to discuss the alleged virtues of iodide of potassium in the cure of aneurysm. Without denying its success in the hands of others, I can only say that in my own hands, and in the other cases which I have had the opportunity of watching, it has proved futile. If it cures, it does so, I think, not by any specific influence on an assumed syphilitic deposit in the wall of the vessel, but by its influence on the general circulation. Nor have I ever been able to convince myself of the curative virtue of any drug. Complete rest and carefully regulated diet are almost always beneficial, and, in some exceptionally fortunate cases (such as Mr. Stanley's)[3] may produce a cure; and, as far as I can see, it is more reasonable to ascribe the cure in those cases which have recovered under the use of iodide of potassium, acetate of lead, or other drugs, to the accompanying rest and regimen than to the medicinal treatment.

Whatever may have been the pathological action (traumatic or spontaneous) which has weakened the wall of the artery, it yields in a portion or the whole of its circumference, and for a greater or less distance; and hence a difference arises between different forms of aneurysm, which has great practical significance. The typical form of those aneurysms which are produced by the giving way of a small portion of one side of the wall of the artery has been described, with his usual lucidity, by Mr. Syme, who, however, committed the error of speaking as if he believed that all aneurysms are of this form—an opinion which I cannot think that so great a surgeon could really have entertained, though his words imply it. "In every aneurysm, whether large or small, traumatic or spontaneous, the aperture of the artery is situated towards the centre of the tumour, so that a portion of the vessel, longer or shorter according to the size of the sac, is contained within its cavity, or rather embraced by its wall." (Syme, "Treatment of Axillary Aneurysm," *Medico-Chirurgical Transactions*, vol. xliii, p. 138.)

Many aneurysms are, no doubt, of what we may call "the gummate" form—standing off from the trunk of the vessel like a bud. On the other hand, many are of the cylindrical or fusiform variety, having been formed by the yielding of a more or less extensive tract of the whole artery. Many, again, are of a mixed form, having, as in the fusiform aneurysms, two openings in the sac, by which the artery enters and quits it; but these are not, as in the fusiform, at opposite ends of the tumour, but may be close together.

The practical importance of these apparently minute particulars

[1] I once met with a striking case of perforation of the aorta by a small ulcer. A friend of mine, a medical man in the prime of life, fell down in the street, and died in a very short time, with symptoms that led us to suspect the bursting of an aneurysm. He had had no previous illness. On *post mortem* examination, no aneurysm was found. The descending thoracic aorta showed a small perforation, which would just admit a probe. With the exception of a very small patch of atheroma, not far from this ulcer, the whole arterial system was quite healthy. He was not known ever to have had syphilis, had long been married, and was the father of healthy children

[2] I will instance this by referring to two cases: one reported by Dr. Goodhart, in Vol. xxvi of the *Pathological Transactions* as a case of "nummular arteritis." There were round raised patches on the inner surface of the aorta, apparently due to thickening of the internal coat, one of which had softened and formed an aneurysm. The patches no doubt bore some resemblance to one of the forms of syphilitic degeneration. There was the scar, as of an old bubo, in the groin; there was fibrous degeneration of the testes, and fibrous cicatrical bands in the trachea and bronchi. All this Dr. Goodhart believes to constitute distinct proof of previous syphilis, although the man denied ever having had the disease. Still Dr. Goodhart does not claim the case as an instance of syphilitic arteritis, but wisely leaves the question open. Many such cases, however, are hastily assumed as syphilitic. The second case is one published by Dr. Turner, in Vol. xxxvi of the *Pathological Transactions*. Here a woman died from ulceration of the aorta into the pericardium, probably proceeding from the softening of such a patch as existed in the last case. The disease is classed as syphilitic, because the patient was a prostitute; yet there was no proof of her having had syphilis, and no syphilitic lesion existed in any other part of the body. Now, without denying the probability of this being a syphilitic lesion, I submit that it is in no way proved to have been so, and that there is no reason to deny that similar arterial lesions may take place in persons entirely free from all taint of syphilis.

[3] A drawing of this preparation was exhibited.

would be at once apparent to any surgeon who should often repeat Mr. Syme's adventurous operations for the cure of aneurysms in the axilla, neck, and abdomen. In all these situations (more especially the neck) it might be a question of immediate death or life to the patient, whether there was only one opening which the surgeon's finger could command, or whether there was a second in some possibly remote, and certainly unknown, position, down which the blood would pour (for in all parts of the body, and in the neck especially, the refluent stream is very rapidly formed), obscuring all the field of operation, and very probably rendering the ligature of the artery impracticable.

Let me illustrate these different relations between the vessel and the aneurysm by these three drawings, taken from actual specimens. This diagram, taken from Scarpa, shows the condition described by Syme. There is a single opening, a portion of the artery is embraced by the wall of the aneurysm, and the old operation might have been performed; though, of course, not without the most formidable danger. In this, on the contrary, taken from an axillary aneurysm, preserved in the Museum of Guy's Hospital, there is a large sausage-shaped tumour, and the artery opens into and out of it by two openings situated several inches from each other; besides which, large branches open out of the sac, and the tumour is embraced on all sides by the nerves of the brachial plexus. In the third drawing which I shall have to refer to again, a small popliteal aneurysm is shown, with the artery opening into and out of it. If the disease had gone on longer, and the aneurysm increased to a large size, these two openings might have been separated by the whole extent of the tumour, as in the last specimen, or the sac might have grown upwards or downwards along the vessel, leaving the two openings separated by either a large or small distance.

But, in speaking of Mr. Syme's cases, we should recollect that some of them were not really aneurysms, in the strict sense, but instances of subcutaneous laceration of arteries, there being no sac. These cases are rather analogous to wounds of arteries, and are amenable to the same treatment.

And this leads me to speak of the importance of the sac in the pathology and cure of aneurysm. We are, I think, too apt to reason about aneurysm as if the sac were a dead india-rubber bag, acted on by hydraulic pressure, instead of a living tissue, whose vital actions must be taken account of, in any complete theory of the growth or cure of aneurysm. The persistent fluidity of the blood in healthy vessels is due, no doubt, to the vital properties of their walls. The constant presence of layers of coagulum in portions of aneurysmal sacs can hardly be due to other than the converse of such properties. The rapidity with which under favourable circumstances aneurysmal tumours shrink and sometimes almost disappear is quite inexplicable on mechanical principles, and must be due, in great part, to the vital actions of the tissues forming the sac. The sudden growth of aneurysms in one direction, and often when consolidation is going on rapidly in other parts of the tumour, is equally a vital phenomenon. And all this shows that our treatment, to have the best prospect of success, must be directed not to the contents only of the aneurysm, but must be such as to place the sac in the most favourable conditions. The treatment introduced by my late friend, Mr. Moore—viz., the introduction of foreign bodies has the inevitable defect that it is in no way directed to the sac of the aneurysm; inevitable, I say, because the treatment was only intended for, and should only be used in cases where more promising measures are inapplicable. In many cases it even acts injuriously on the sac, producing inflammation and softening, which lead either to rupture or to extension of the tumour. The same may be said of the electrolytic treatment. It is often injurious to the sac and to the tissues around it, and therefore has often an injurious and sometimes a fatal effect on the aneurysm. Yet there is no doubt that both electrolysis and the introduction of foreign bodies have, in fortunate cases, been followed by considerable benefit. In one famous case—that of an abdominal aneurysm treated by the introduction of copper-wire by Professor Loreta, of Bologna (BRITISH MEDICAL JOURNAL, April 11th, 1885), this improvement was so considerable as to produce temporary cessation of all the symptoms and an appearance of radical cure.

I will here translate the account which Professor Loreta gave me of the termination of this case in a letter dated May 3rd, 1885:—"His death happened ninety-two days after the operation, he being at the time in an excellent state of health and the tumour hardly perceptible to the touch. *Post mortem* examination showed that his unexpected death was caused by rupture of the aorta immediately above the tumour, just where the remains of the aneurysmal sac joined at an angle with the anterior wall of the aorta. The sac was only the size of a walnut, and perfectly consolidated by organised coagula; the copper-wire was unaltered and rolled up into a ball inside the sac itself. In fact, everything showed that the effects produced were actually those sought by the operation." Professor Loreta adds, as a conjecture, that it is possible that the compression and other changes following on the consolidation of blood in the tumour might have interfered with the circulation in the wall of the artery, and thus produced the rupture in its coat.

Another case was lately published, under the care of Dr. Cayley and Mr. Hulke (*Medico-Chirurgical Transactions*, vol. lxix, p. 267), in which considerable temporary benefit was obtained in a case of aortic aneurysm by the insertion of wire; and Mr. Bryant's case of popliteal aneurysm is well known, where a considerable amount of consolidation followed the insertion of horse hair (Bryant's *Practice of Surgery*, 4th ed., vol. i., p. 517). And we may easily admit that either of these methods might indirectly, or accidentally, prove curative by the production of a clot which might obstruct the mouth of the aneurysm and imitate that cure by impaction, which I believe to be not very uncommon, and which was deliberately imitated by Sir W. Fergusson in his very ingenious, but very dangerous, proposal of manipulation. This same form of cure is also, I believe, often produced by the action of Esmarch's bandage[4], and in all forms of direct pressure, as well as the "rapid" method of indirect pressure.

Now in this cure by impaction of the clot, the sac plays a prominent part. Released from the constant distending and disturbing force of the circulation, it rapidly contracts on the semi-solid contents of the aneurysm, and furnishes the means and the agents for the absorption of its fluids, so that the tumour rapidly shrinks and hardens. Whenever the disappearance of the *bruit* proves that the mouth of the sac is obliterated we may expect this to occur, and it appears to me that the rapidity of the action varies with the integrity and vigour of the sac. All the methods of natural cure afford valuable indications for surgical treatment, but this method by impaction of clot, is of especial interest from the analogies which it presents with some of the most recently-introduced methods of treatment, manipulation, Esmarch's bandage, flexion and rapid pressure. In manipulation, the cure is sought almost wholly by the impaction of clot. The surgeon attempts to empty the tumour of its fluid contents by pressure and to detach some of the clots by rubbing the sides of the sac against each other. In one case, at any rate, where Sir W. Ferguson manipulated an aneurysm at the root of the neck, the symptoms produced were identical with those which marked the impaction of clot in the carotid in Dr. Bence Jones's case to be presently mentioned, and they were no doubt produced by the same cause. Again, in the use of Esmarch's bandage, not only the dissection of Mr. Wagstaffe's case just referred to, but also the history of other successful cases seem to me to prove that impaction of clot plays a large part in the process; and I doubt not that the same thing often, if not always, occurs in the cure by flexion of the limb. In successful cases, also, of rapid pressure, the pulsation and the *bruit* usually go on after the pressure is withdrawn, and then the *bruit* stops, while the contents of the tumour still remain semi-fluid, and even some pulsation may be detected. The movement in the contents of the sac then ceases, as the impaction becomes complete, and soon the rapid shrinking of the tumour testifies to the completeness of the cure. In other cases the *bruit*, after a temporary absence, recurs, and the aneurysm is soon pulsating as strongly, and its contents become as completely fluid, as before the application of pressure.

All these methods of treatment partake, therefore, of the dangers involved in the spontaneous cure by impaction, while they have also dangers of their own, manipulation, Esmarch's bandage, and flexion, involving the risk of rupturing or contusing the sac; while rapid pressure causes in some cases injury to the viscera or other parts by the compressor, and, in others, involves the danger of prolonged anæsthesia.

Too little importance is, I think, usually attributed to the existence and character of the aneurysmal *bruit*. Its absence is of evil augury for the curability of the case, as proving that there is no proper mouth to the aneurysmal sac. Let me instance this in the case (reported in the ninth vol. of the *Clinical Transactions*) of a very small popliteal aneurysm, or aneurysmal dilatation, destitute of *bruit*, occurring in the person of a man in the prime of life, aged 34, and apparently in good health, but whose unfortunate end seemed to show that he was much addicted to drink. Though the tumour was so very small, and the patient tolerant of pressure, no progress towards cure was made by more than a month's patient treatment, and so the artery was tied.[5] One can hardly doubt that a sacculated aneurysm of so small a size would have easily yielded to flexion or pressure.

[4] See the illustration to Mr. Wagstaffe's paper in *Pathological Translations*, xxix., 72, showing soft coagulum in the sac undergoing lamination, and obstruction of the artery in the neighbourhood of the tumour. The aneurysm had been cured about three months.

[5] A diagram of this case was exhibited.

We see how rarely external aneurysms are devoid of *bruit*, and, on the contrary, how common this is in thoracic aneurysm: and the reason is obvious, namely, that the former are, as a rule, sacculated and curable, theothers often destitute of any distinct orifice, and practically incurable.[6]

Then the way in which the *bruit* radiates from a given spot, and the presence or absence of a thrill due to roughness or coagula on its sides, are important practical points, which should not be left out of view in the study of any case with a view to treatment.

The nature and direction of the growth of an aneurysm are often matters of much importance in choosing a means for stopping such extension when it threatens to become dangerous. This is clearly shown in cases where innominate or aortic aneurysms are growing towards the windpipe, and where that growth has been stopped by the distal ligature of the carotid. Such operations are often successful in preserving life, even though the aneurysm remains uncured. I would refer to a case (reported in *Clinical Transactions*, ix, 114) of a young woman, then unmarried, whose left carotid artery I tied for an aortic aneurysm. I heard from her in July, 1884, nearly nine years after the operation, and she was then in fair health, married, and attending to her household duties. I wrote again to her former address a few weeks ago, and received no reply, so cannot say whether she is still alive. The aneurysm had never been cured, but its growth had been suspended during this long period. Nor is it difficult, I think, to see how these operations prove beneficial. The aneurysm grows in the given direction because the "carotid" portion of the sac, either through weakness or through organic softening, the result of inflammation, yields to the force of the carotid circulation. The ligature of the artery diverts the blood into the anastomosing branches, derived either from the subclavian of the same side, or from the opposite side of the body, and thus the pressure is taken off from the weak portion of the sac, which may then recover its contractile power as coagulation commences in that portion of the tumour. I have tried to show that this coagulation may be powerfully assisted by the coagulation of blood in the tied artery, extending into the mouth of the sac, but it does not seem that such extension of clot from the seat of ligature is a necessary condition of cure.

Let me illustrate my meaning by a reference to the accompanying drawings—some of the series which I had made for a course of lectures on aneurysm delivered many years ago at the College of Surgeons. They show three preparations; the first is from a case of innominate aneurysm, reported by Mr. Heath (*Path. Trans.*, ix, 95), in which the subclavian portion of the sac was cured by the impaction of clot in the mouth of the artery as it leaves the tumour, but the carotid portion went on growing, and burst into the trachea; the second are two views of a preparation taken from a patient of Dr. Bence Jones in St. George's Hospital, whose case is reported in the same volume of the *Path. Trans.* Here (as the front view shows) the carotid artery has been obstructed by clot, causing the obliteration of the whole vessel, exactly as after a long-previous ligature. The impaction of clot in the carotid artery occurred about five years previous to his death, which was caused by phthisis. It was attended by urgent head-symptoms and complete loss of consciousness. This has been followed by the complete cure of the whole of the carotid portion of the sac; and this portion is so much the larger, that it appeared at first sight as if the whole tumour was obliterated; and it is so reported in the *Path. Trans.* But on making a section at the back of the tumour (as represented in the second view) I found that the subclavian portion of the sac, which was very small, is unobliterated, and that the stream of blood passed directly up this portion of the sac into the subclavian artery. The cure, therefore, though practically complete, was anatomically imperfect. The third shows precisely the same state of parts in a case where the carotid artery has been obliterated by the ligature. The patient was under the care of Dr. Wright, of Montreal, and the artery was tied eighty-seven days before death. The patient died from cerebral softening, the result of the operation; but its effect on the aneurysm was to produce a "practical cure," exactly like, in every particular, to the effect of the impaction of clot in the carotid artery in the former case.

These three cases, taken together, form the neatest demonstration that I am acquainted with of the action of the distal ligature; the first shows a state of things in which distal ligature of the carotid might possibly have been followed by complete cure; while the second shows that, even without complete cure, the growth of the aneurysm may be stopped, and the patient restored to health by the spontaneous obliteration of the carotid as it leaves the sac; and the third is an interesting example of the production of precisely the same state of parts by operation on the carotid.

If I am right in this explanation of the action of the distal ligature, it would follow that the complete obliteration of the tumour can only be anticipated when the aneurysm is situated on a single artery without branches, as would be the case in an aneurysm affecting the carotid artery alone; but that in aortic and innominate aneurysms only portions of the sac can thus be consolidated. This, however, may often be the means of preserving the patient from immediate death.

There are many cases, especially of aortic aneurysm, where the growth of portions of the sac has threatened to prove fatal, and where such portions of the tumour have been successfully dealt with by the introduction of foreign bodies, or by electrolysis—that is to say, the operation has succeeded in producing consolidation in that portion of the tumour, and the patient has been rescued from the immediate danger; and it is, I think, more in these partial proceedings than in attempts at complete cure that the value of electrolysis and the introduction of foreign bodies is shown.

I do not think that I ought to occupy your time further. The observations I have made are, no doubt, disjointed and unsystematic; but they may, I hope, furnish material for discussion to the many able pathologists and surgeons attending the meeting.

Mr. BARWELL said that the excellent paper just read by Mr. Holmes went over a very wide and varied ground. He would only touch upon one of the subjects which he had broached, namely, the absence of any dependence of aneurysm on syphilis. He had had very large opportunities, which he had constantly seized, of examining aneurysms and diseased arteries; the result, omitting details, is that he had not, in a single case, found that large vessels were affected with syphilitic manifestations at all comparable with the undoubted syphilitic changes that were found in small arteries, more especially in the small branches of the internal carotids. Nor must we accept the dicta of certain morbid anatomists who assumed that a subject marked with scars on the genitals and groins was syphilitic; such scars were very rarely or never due to syphilis, but to chancroid; and, in collating the results of observations, a large deduction would have to be made on account of the above very common error.

Mr. SYMONDS said that the only point to which he wished to refer was that mentioned by Mr. Holmes as a cause of aneurysm, namely, softening of the vessel from external inflammation. He had recently operated upon a case of aneurysm occurring in a stump, which was communicated to the Pathological Society. Here there had been suppuration in the stump, and to the softening of the vessel he attributed the formation of the sac. This case he looked upon as confirming Mr. Holmes's suggestion, that in all cases of aneurysm forming in stumps the vessel was diseased. He would also suggest that the rupture of such an aneurysm might more frequently be the cause of secondary hæmorrhage than was at present allowed. If this were admitted, the hæmorrhage in phthisis, known to occur from ulceration into a vessel, or from a ruptured aneurysm, was brought into closer relation with secondary hæmorrhage.

Dr. DRESCHFELD made some observations on the obscurity of the etiology of aneurysm. He agreed with Mr. Holmes that syphilitic endarteritis was not the cause, and drew attention to the amount of pressure an artery affected with atheroma could bear without breaking. As to treatment, one had to be very careful not to draw conclusions from one or two cases. The introduction of wire into the aneurysmal sac was likely to give better results than simple electrolysis. In a case under the care of Dr. Simpson, of Manchester, electrolysis was tried, and, after four or five applications, in the course of three years, no marked beneficial results were obtained; and the *post-mortem* examination showed that the patient had two aneurysms of the aorta, of which one, which had not been treated, was cured spontaneously, while the one which had been treated by electrolysis had showed but a very thin layer of fibrin. Dr. Dreschfeld also spoke of the injection of fibrin ferment into the aneurysmal sac. This treatment had been tried in one case, but unsuccessfully.

Mr. HOLMES, in reference to the question of diagnosis, said he had had a case of abdominal aneurysm, under his own care, in which a man came into the hospital with a fixed pain in the back and stiffness of the vertebræ, but no perceptible tumour. Soon afterwards a swelling appeared, and the man was carefully examined, both by auscultation and palpation, and neither *bruit* nor pulsation were detected. Death soon afterwards occurred from the bursting of the tumour, which was then found to be aneurysmal. In another case, under a colleague, the

[6] The drawing first referred to is an interesting example of the curability of a very large aortic aneurysm when sacculated, and with a comparatively small orifice. It is from Mr. Stanley's celebrated case of a publican, in whom this very large aneurysm perforating the chest-walls was cured by rest and abstinence.

case was so confidently diagnosed as a psoas abscess, that it was shown to the students in discussing the treatment of that disease. Mr. Holmes thought these cases in point, as showing the occasional (though doubtless rare) absence of the usual symptoms of aneurysm of the abdominal aorta.

OBSCURE DISEASES OF THE SPINAL COLUMN.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association held in Brighton.

By NOBLE SMITH. F.R.C.S.Ed.,
Surgeon to the All Saints' Children's Hospital.

Obscure diseases of the spinal column may exist as cancer, hydatids, syphilis or absorption from the pressure of an aneurysm, but the disease which most frequently occurs is caries; and I propose to limit my remarks on the present occasion to that affection.

The first object of my paper is to show that it is not only in the early stages that it is difficult to diagnose caries of the spine, but that the disease may sometimes progress to a very advanced stage of destruction of the spine; and that a patient may even die from its effects without its nature having been recognised.

A very deceptive peculiarity of some cases is the kind of pain experienced, or sometimes the entire absence thereof. I have met with several cases where pain in the back had been attributed to lumbago, continuing for several years (a suspicious fact). Cases have been sent me by gynæcologists to whom the patients have applied, believing that their troubles proceeded from some uterine complaint.

Case of March 6th, 1884, aged 5. Disease seen at the age of 2, and has since been increasing, but there has been no pain whatever.

Then follow several cases in which the pain was felt chiefly or entirely in the back, and was severe and nearly constant. Others in which the pain was only produced by stooping, or moving the legs, as in walking upstairs.

Case of November 20th, where the angular deformity in the dorsal region was very severe, and had been increasing for years, but there had never been any pain.

Case of December 2nd. Also a very severe case, aged 10. Hip-joint disease at the age of 3, coming on four months after a severe fall; at the age of 8, another fall occurred, followed by projection of vertebra in the upper dorsal and lowest cervical regions; much deformity; abscess in side of the neck, and paraplegia; but there had never been any pain.

These facts seem to me to teach the importance of extreme care in making a diagnosis.

Absence of pain, and, in fact, of all the symptoms usually described in books, characterises the history of some cases, the *post mortem* specimens of which are to be found in museums. In the Museum of the Royal College of Surgeons, No. 2,064 A (old number), (see Fig. 1), is the upper part of the spine of the late Dean Buckland,

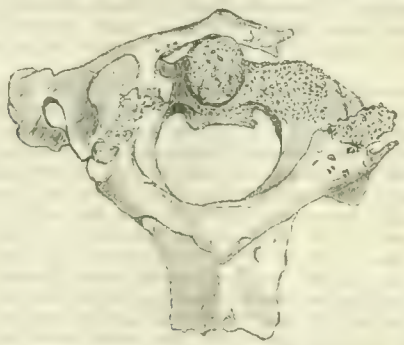


Fig. 1.

of Westminster, who died in 1856, aged 52. The preparation consists of "The five upper cervical vertebræ (only the atlas and axis are here shown), with a portion of the occipital bone affected at several points with carious ulceration. The right transverse process, and both upper and lower articular surfaces of the same side of the atlas, are entirely destroyed. The corresponding condyle of the occipital bone is also diseased, and the articular surface of the axis, the right transverse process of the third vertebra, and the left occipito-atlantoid articulation." This description is taken from the catalogue, which further records that "no other symptoms manifested themselves during life but those attributed to melancholia."

In St. George's Hospital Museum, 2 A or V, 156 (see Fig. 2), is a



Fig. 2.

specimen, in which: "The lateral masses of the atlas," I quote from the Catalogue, "are extensively destroyed, and the tubercles for the attachment of the transverse ligament quite gone. The superior articular processes of the axis are greatly, the left almost entirely, worn away. The odontoid process is reduced to half its natural size. The posterior ligament remains intact, but the transverse and check ligaments have been completely destroyed."

From a boy, aged 8 . . . The report states: "This case is of interest as showing how large an amount of disease of the atlas and axis may exist without giving rise to any of the ordinary or characteristic symptoms of disease of the cervical spine. The possibility of the existence of such disease was not overlooked; but, on the contrary, was constantly," the writer observes, "before my mind, and led to repeated and most careful investigations, with a view to its discovery; but these failed entirely to elicit any signs of its presence.

"There was no pain on rotating, or nodding or pressing the head; no difficulty in raising it; none of the characteristic fear of moving the head; no thickening over the bones; no tenderness or swelling behind the pharynx; in fact, until the end of the boy's final illness, nothing but wry-neck." . . . "I need hardly say," proceeds the writer, "that, had I been aware of this, I should not have allowed him to move his head nor to leave the recumbent posture."

We ought, perhaps, to learn a lesson from this case; and to consider that, although the symptoms were so unlike what we have been taught to expect, yet the fact that they were soon relieved by fixation and recumbency, and rapidly recurred when the patient began to move about again, were then relieved a second time by recumbency in a fixed position, after six weeks of which the patient was seen with "the head held straight but stiffly, after the manner" (as was said) "of one with cervical spine disease," ought to have been considered indicatory of the nature of the disease. It was not, however, so considered, and the child was allowed to get about.

Another case in St. George's Hospital Museum is that numbered 2 B. There exists caries "of the bodies of the upper four cervical vertebræ and intervertebral cartilages, communicating with an ulcerated opening at the back part of the pharynx. The membranes of the spinal cord were in this situation united to each other, and to the posterior surfaces of the vertebræ. The upper part of the spinal cord was softer than natural. The symptoms produced by the disease were so slight that the ulcer of the pharynx was not, previous to the patient's death, known to have any communication with the bones of the spine. The patient died suddenly."

In the Royal College of Surgeons Museum, No. 2093, is the specimen of a very remarkable case in a child about 6 years of age, in whom "the symptoms were supposed to be those of hydrocephalus. A swelling occurred at the side of the neck. The child steadied its own head with its hands, and moved very cautiously. The symptoms gradually ceased, and the child regained health, but died, at the age of 12, from lumbar caries. The *post mortem* examination showed the great displacement of the upper two vertebræ from disease; there had been no hydrocephalus" (Fig. 3)

Here was one of the characteristic symptoms of diseased vertebræ, but, probably because of the absence of other symptoms, the nature of the disease was overlooked.

In Guy's Hospital Museum, No. 1080[a], is a specimen in which the fourth dorsal vertebra is quite destroyed, and those above it partially so by caries. The child was 6 years old, and was admitted with urgent symptoms of croup. He died, but the respiratory organs were found quite healthy, whilst beneath the œsophagus and opposite the diseased bones, there was a large abscess communicating with the diseased vertebræ.

Another specimen in St. George's Hospital Museum (No. 3569, old number) is the spine of a woman of 60, admitted for paraplegia of three months' standing, and who died suddenly. Examination of the spine during life failed to afford evidence of vertebral disease. The contiguous portions of the bodies of the third and fourth dorsal vertebræ are partially destroyed, and the intervertebral substance completely so.

There is also a specimen in St. Mary's Hospital Museum, A b. 124, aged 21. The sixth, seventh, eighth, ninth, and tenth dorsal vertebræ were involved. The disease had not been recognised during life, probably chiefly because, as the loss of bone-substance happened to be in the posterior part of the bodies of the vertebræ, there was no deformity. The absence of deformity, although long known to be compatible with a severe degree of caries, is often in the present day thought to be a proof of absence of this disease.

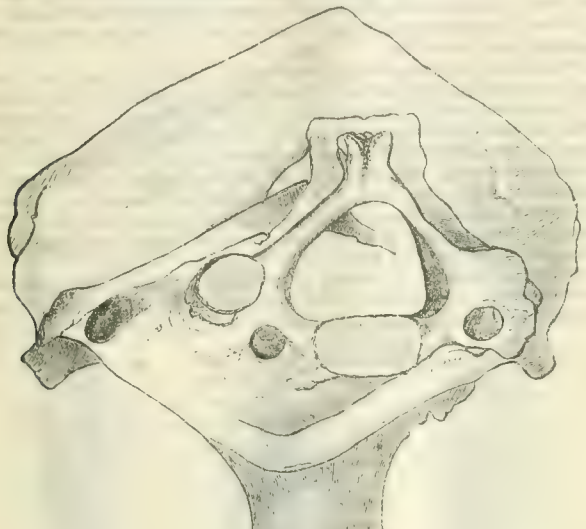


Fig. ...

I will now refer to those points of diagnosis which seem to me most important.

Deformity.—A projection of one or more spinous processes may be unmistakable, or, when slight (and other characteristic symptoms are absent), the projection may be attributed to an irregularity of formation, or to projection from rickets or weakness.

In caries, the vertebræ about the diseased part are commonly partly fixed by inflammatory action, so that upon careful extension of the spine, as by laying the patient in the prone position, the projection does not so readily disappear as in other cases, but it may so disappear, and yet other symptoms clearly indicate disease to be present. In the lumbar region, the spine in weakness alone will fall in to a great degree, whereas in caries, although the projection may disappear, yet there will be, as a rule, no great incurvation. As to irregularities without disease, I have not found them very common in healthy spines, yet we must not forget their possible occurrence.

Absolute pain, as we have seen, may be absent, but, upon careful inquiry, I have generally been able to elicit some symptoms of discomfort.

Indigestion is a common result when the disease is situated in the dorsal region; and, with regard to this as well as other discomfort or pain caused by caries, I attach much importance to persistence; there is not that variation in the pain which occurs when the cause is independent of spinal disease, although, of course, there may be aggravations from other causes in addition, but generally the patient will describe a certain amount of indigestion as regularly occurring. Patients who say that they do not suffer any pain should be closely questioned as to discomfort from difficulties in the performance of the functions of respiration, circulation, digestion, and also of the organs situated in the pelvis; and when the discomfort or difficulty is found, its position should be compared with the corresponding part of the spinal column. Indigestion, as well as other symptoms of this class, will, if dependent upon caries, be aggravated by exercise, and, of course, by stooping movements especially; but even here I would not lay down any rule, as I believe there is hardly any disease in which there are so many exceptions.

Pain attributed to lumbago, when persisting, as in the case above referred to, must be considered a very suspicious sign, and, in respect to caries in this region, we must not forget that it takes a longer time, or rather, it necessitates a greater destruction of bone to produce an angular deformity than in the dorsal region, because of the natural incurvation of the part affected. Here the plan of bringing into use the psoas muscles by making the patient, while standing, raise the knees alternately, is a very valuable test, as it will often elucidate the presence of disease when other symptoms are obscure.

The examination of the spine itself by means of heat and cold, with a view to the detection of pain, is a very unsatisfactory plan; at least, I have not found it reliable. With regard to pressure upon the spine, the results are very uncertain; some patients, with undoubted and extensive disease, will feel no pain in this region, although they are suffering severely internally, or on the front surface of the trunk. Frequently pain or discomfort is felt only when the patient is stooping, and especially when stooping to put on stockings or boots; or pain or discomfort, otherwise present, is aggravated by these actions.

Pain from uterine complaints may simulate affections of the spine, but the facts must be ascertained by sufficient inquiry. The same remark, of course, applies to disease or disorder of the other viscera.

The movements of the body are important indications. I need not describe the characteristic careful method of locomotion which children pursue who suffer much pain from caries, or how they avoid sudden or jarring movements. It is in cases where no absolute pain is described that we may yet notice that the patient has a somewhat quieter manner than natural, and the well known plan of getting the patient to pick up a small object from the floor is a useful proceeding, even this plan, however, may not show much or any sign, and yet the general movements of the body may be peculiarly careful. I would seldom try the effect of pressure upon the top of the head, and certainly not in a violent manner, as by such means we might easily aggravate the disease. Children will sometimes be fond of assuming the prone position, which they almost invariably find more comfortable than the supine. On the other hand, caries may exist in a very severe and progressive condition and yet the patient be most active. A child may jump and run about in a most energetic manner, looking robust and well, and yet with progressive ulceration of the bones; this activity is of course not likely to last long, but if not restrained the disease will rapidly increase. Paralysis in various degrees of the part of the body situated below the seat of disease is necessarily a very important symptom.

In making the above few observations, I have not attempted to describe any plan of diagnosis, but only to refer to some points which I have noticed as varying somewhat from the symptoms usually described in text books. And what I would urge most is the frequency of the absence of the ordinary signs and symptoms of this serious disease, especially the absence of pain.

What I take to be a great fallacy is very prevalent in respect of this disease, and it leads sometimes—perhaps I should be more correct if I said leads often—to mistakes being made in the diagnosis: I refer to the belief that caries of the spine is nearly always an effect of scrofula. Scrofula is doubtless a predisposing cause, and in some cases apparently the sole cause, but caries of the spine certainly often exists quite independently of any constitutional disease.

As to treatment, all are agreed as to the principles, and that, without rest of the diseased parts, there is little hope that the patient will do otherwise than rapidly get worse and die. It is with regard to the manner in which that rest should be obtained that surgeons differ. Many are satisfied with recumbency alone; others prefer mechanical fixation of the spine, and allow the patient to run about. Medicine is usually given, and lime, iron, and cod-liver oil, form the staple remedies, in addition to fresh air and wholesome food.

With regard to the rest of the diseased bones, I think all practical men who have seen much of this disease will agree with me that mechanical fixation is the most potent factor in the achievement of this condition.

Whatever apparatus is used, it should be one which the surgeon understands, and can control, and the bearing of which he can himself modify as occasion may require; it should not interfere with freedom of thoracic respiration, but should support the upper part of the body by securing the shoulders.

I would further add that, although some cases of caries of the spine

may be treated successfully without a great deal of attention, there are others—and their number is large—in which no trouble must be spared to effect the desired cure. The adaptation of the apparatus may require frequent alteration; the position of the patient during recumbency, and even the management of every detail of his life, may have to be supervised, or at least directed, by the surgeon. We must not rest content with saying that some cases will recover and others will die. I would rather urge my belief that every case, if dealt with with sufficient energy, and if taken in hand before the constitution is undermined, may be cured provided no intercurrent disease be present to complicate the case.

Mr. JESSOP remarked upon one or two signs of carious spine, on which, in cases of difficulty and obscurity, he relied with some confidence. First came the power of the patient to twist his spine, as in looking behind him, whilst his feet were kept in apposition and motionless. Then there was the effect of pressure upon the head by the hands of the surgeon, a means of diagnosis which, if attended with some danger in advanced cases, was safely applicable in those which were obscure; again, there was the pain elicited by jumping from a chair or table. He mentioned these chiefly because Mr. Smith, in his remarks, seemed to condemn them, and he desired it to be understood that he applied them only in cases of obscurity, and therefore presumably of early disease.

EXAMINATION OF THE NASAL CAVITIES FROM THE FRONT.

Read in the Section of Otology at the Annual Meeting of the British Medical Association in Brighton.

BY E. CRESSWELL BABER, M.B.LOND.,
Surgeon to the Brighton and Sussex Throat and Ear Dispensary.

EXAMINATION of the nasal cavities from the front has long been a favourite method of ascertaining the condition of the interior of the nose. For two reasons, however, there is often, especially to the beginner, considerable difficulty in recognising the different structures presented to the eye. They are—first, the perspective view of many of the parts which alone can be obtained; and, secondly, the variations in appearance which these parts present in the same individual at short intervals of time. In order to facilitate the examination, and to render a record of its results more easy, I have made some sketches of the views obtained by this method, which are, as far as I know, the first representation of these parts as seen in the living subject.

The detailed study of the subject necessary to produce the drawings has brought out some points which I think may be of interest to the Section, although it is, of course, impossible to enter fully into the subject in the limited time now at my disposal.

The extent to which the deeper parts of the nasal cavity are visible from the front depends largely upon the state of the erectile body on the anterior extremity of the inferior turbinated bone; in other words, upon whether this structure is in a collapsed or in a swollen condition.

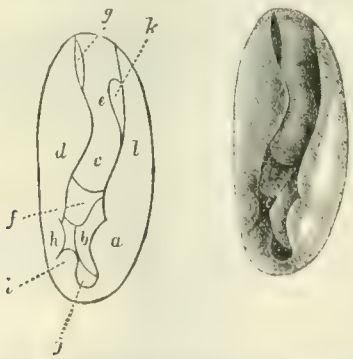


Fig. 1.—Left Anterior Rhinoscopic View in a Woman, aged 26. *a* Anterior extremity (collapsed) of inferior turbinated body. *b* Inner surface of same, seen in perspective, showing a rounded swelling. *c* Anterior border of middle turbinated body, ending below in the angle, which in this case presents a puffy swelling. Above, the anterior border terminates in the neck of the body (*e*). *d* Tubercle of the septum. *f* Lower border of middle turbinated body. *g k* Depressions on either side of the neck; *g* forming part of the olfactory slit, and *k* a portion of the middle meatus. *h* A moderately deep-seated swelling on the septum. *i* Ditto, much further inwards. *j* Inferior meatus, through which the movements of the palatal muscles can be seen. *l* "Neck" of the inferior turbinated body.

1. *View when the Anterior Erectile Body on the Inferior Turbinated Bone is collapsed.*—When the inferior turbinated body is collapsed (Fig. 1), its anterior extremity (*a*) forms a somewhat irregular undulating surface, terminating below in a more or less sharp margin, which overhangs the inferior meatus. Above, it tapers gradually into the outer wall of the nasal cavity, forming, as viewed from the front, a kind of "neck" (*l*). Its inner surface is seen greatly fore-shortened, and appears either as a shallow concavity or as a slightly rounded eminence (Fig. 1 *b*). When examined with a probe, the bone can be felt under the mucous membrane, and the instrument does not sink in to any depth.

Middle Turbinated Body.—Above, and at a considerably greater distance from the nasal orifice, is seen the middle turbinated body (Figs. 1 and 2).

A consideration of the anatomy of the nose will show that, provided there be nothing to intercept the view, the parts of the middle spongy bone visible will be the anterior and inferior borders, the angle of junction of the two being the part which is nearest to the observer's eye; each of these borders presents an inner and an outer lip. Moreover, as the surgeon's eye is usually closer to the septum than to the outer wall of the nasal fossa, a portion of the inner surface of the bone will also be visible.

Theoretically, these are the parts which should be seen, but, practically, a considerable portion of the middle turbinated body is hidden by the tubercle of the septum (Fig. 1, *d*, Fig. 2, A *e*). The tubercle of the septum, which was first described by Morgagni, and has been recently figured by Zuckerkandl, consists of a thickening of the mucous membrane, containing glandular elements, at the front entrance to the olfactory slit. The view obtained, therefore, depends to a great extent, upon the shape and size of this structure. The three diagrams in Fig. 2 have been drawn to show the different appearances which are met with.

When the tubercle is absent, or so small as not to interfere with the view (Fig. 2, Diagram C), the anterior margin of the body is seen terminating above in the "neck" of the bone, that is, the narrow portion where it joins the body of the ethmoid; below this, it runs downwards and, usually, outwards, increasing in breadth as it descends. Beneath the angle of the body, and rapidly receding into the distance, and, therefore, less highly illuminated is the inferior border. The outer lip of the anterior border is separated from the outer wall of the nasal cavity by a deep groove of greater or less width (Fig. 1, *k*). This groove, into which a probe can be inserted, is of importance, as it leads into the hiatus semilunaris. A little of the internal, or median, surface can sometimes be seen. Between it and the septum is the olfactory slit. The whole body, when viewed from the front, often presents a sigmoid form, being convex above, and concave below on its inner or septal aspect. When the tubercle is small, we have the appearance shown in Fig. 1. The inner lip of the anterior margin of the middle turbinated body is, to a great extent, hidden, but above the tubercle is seen the "neck" of the body. A more prominent tubercle will hide the whole inner lip of the middle turbinated body, but a part of the neck remains visible (Fig. 2, B).

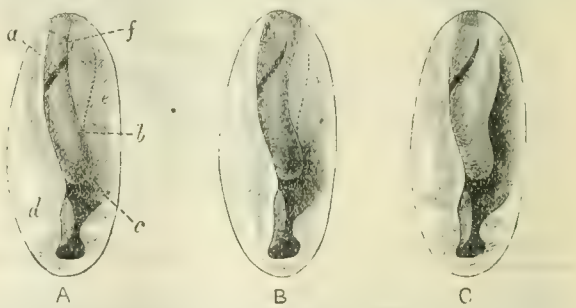


Fig. 2.—Diagrams illustrating different appearances presented by the tubercle of the septum. (Right anterior rhinoscopic view.) *a*. Outer lip of anterior border of middle tubinated body. *b*. Angle of middle turbinated body. *c*. Lower border of middle turbinated body. *d*. Inferior turbinated body. *e*. Tubercle of septum. *f*. Outer wall of nasal cavity. In diagrams A and B, the margins of the middle tubinated body, hidden by the tubercle, are indicated by dotted lines.

Diagram A shows the parts as they very commonly appear. The tubercle, which is large, and extends to the top of the field of vision, conceals the neck and the whole of the inner lip of the anterior border of the body, leaving only a small portion of the outer lip of the an-

terior border (*a*), the angle (*b*), and the lower border of the body (*c*), exposed to sight. The outer lip of the anterior border is sometimes hidden by a swelling of the outer wall of the nasal cavity at *f*, which swelling may be temporary in character. The view may also be rendered more difficult to understand by puffiness of the mucous membrane of the middle turbinated body in this situation, partly hiding the neck of the body.

All these appearances are met with in practice, but, in my experience, it is more rare to find the tubercle flat or absent, than to see it hiding a considerable portion of the middle concha.

Not having found any references to the tubercle of the septum in the living subject, I was for some time at a loss to account for this swelling, so constantly present on the septum. On studying Zuckerkandl's description of the tubercle in the dead body, however, I recognised that it was the tubercle that I really had before me.

The tubercle must be distinguished from a deflection of the septum, which, in the living subject, it resembles in appearance. It is commonly seen on both sides in the same individual, and by inserting one blade of a Fränkel's speculum into each nostril, the two tubercles can be compared. At the same time, it is important to remember that a deflection of the septum in this situation, which is of common occurrence, may modify the aspect presented by the tubercles, making one appear more, the other less, prominent than usual. Like the inferior turbinated body, though in a much less degree, the tubercle appears capable of undergoing temporary swelling; at least it can be reduced by the application of cucaine. It is soft to the touch of the probe, by which it can, to a certain extent, be pushed aside. Touching it often gives rise to sneezing, under apparently normal circumstances. It may be fairly suggested, I think, that the tubercle guards and protects the anterior extremity of the olfactory slit, in the same manner that the anterior end of the inferior turbinated body, especially when erected, guards the respiratory region, the protecting agency of the tubercle being enhanced by its tendency on contact with a foreign body, to give rise to the violent expiratory act of sneezing.

Besides these usual appearances of the middle turbinated body, it will be readily understood that others occur which it is impossible to detail here.

The mucous membrane covering the middle turbinated body is paler than that on the inferior. It is normally smooth and shiny in appearance, and often presents a very minute red and yellow mottling, which is best seen in reflected sunlight.

The Septum.—Having described the tubercle, I need say but little else regarding the septum. The frequency with which it presents irregularities and deflections renders it necessary to estimate its straightness by a comparison of the appearance on the two sides. It is very usual to meet with a small conical eminence opposite the anterior inferior end of the lower spongy bone (see Fig. 2). A ridge is sometimes seen running upwards and backwards from this, and corresponding to the anterior margin of the vomer. Other prominences occur higher up and farther back on the septum (Fig. 1, *h*, *i*). When the septum is much deflected, not only the lower, but also the middle turbinated body in the larger nasal cavity, often exceed their fellow in size.

By projecting a strong light through the inferior meatus (Fig. 1, *j*), or through the space between the inferior turbinated body and the septum, the movements of the palate during deglutition or phonation can be very commonly seen. When the palate is at rest, the posterior wall of the naso-pharynx is visible. It presents a nodulated, hillocky aspect, often with several light spots, and, being seen *en face*, is more highly illuminated than the deeper parts of the septum and inferior turbinated body. In fairly wide nasal cavities, the upper margin of the choana, with its two arches, one immediately above the other, is sometimes seen, also the swelling on the septum close to its posterior margin, which is so often observed by posterior rhinoscopy.

2. *View when the Anterior Erectile Body is Swollen.*—We have hitherto considered the appearance presented when the anterior erectile body on the inferior turbinated bone is collapsed. We must now turn to the view when this structure is swollen.

Fig. 3 is taken from a man, aged 24, in whom the erectile body was seen to swell while he was under examination. Twenty minutes previously, the inferior turbinated body presented an appearance very similar to that shown in Fig. 2, Diagram A. The middle turbinated body was plainly seen, also the palatal movements. In its swollen state, on the contrary, you see the inferior turbinated body practically occludes the inferior meatus, preventing all view of the naso-pharynx, and allowing only a glimpse of the middle concha. When more swollen still, as often happens, the inferior turbinated body hides the latter completely, being in close contact with the septum. The inferior turbinated body itself appears as a round shining eminence, with a smooth surface; above, it is prolonged into a broad neck (*b*). This neck is formed by erection of the mucous membrane above the inferior turbinated bone, rather than of that on the bone itself, and is of great practical importance, on account of the way in which it hides the upper part of the nasal cavity. The sensation produced by touching the swollen inferior turbinated body with a probe is that of a soft cushion, which can be deeply indented by pressure, but rapidly regains its original globular shape. This characteristic serves to distinguish it from true hypertrophy of the turbinated body. Its colour does not necessarily differ from that of the non-erected body, but it may be either paler, or more florid in appearance.

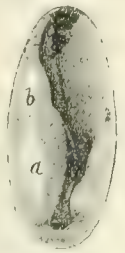


Fig. 3.—Right Anterior Rhinoscopic View.—*a*, erected inferior turbinated body terminating above in the swollen "neck," *b*, which almost entirely conceals the middle turbinated body. The upper part of the drawing is slightly diagrammatic.

The view of the deeper parts is, in my experience, much more commonly interfered with by swelling of the anterior erectile body than by malformation of the septum or inferior turbinated bone. If necessary, however, the swollen tissues can be pressed aside with a probe, blunt hook, or other instrument, and a limited view of the deeper parts obtained, or, better still, the erection may be reduced by cucaine. Cucaine, as you know, possesses the property of contracting the swollen erectile tissue in the nose, and is therefore valuable for distinguishing between erection and hypertrophy of the inferior turbinated body, and for rendering the nasal cavity clearer both for purposes of respiration and for facilitating anterior rhinoscopy. Its action appears, however, to vary in degree in different cases.

Except when it is extreme, erection of the anterior part of the inferior turbinated body alone does not produce marked nasal obstruction. I cannot here enumerate the different causes which give rise to this temporary erection, but in its slighter stages it is no doubt a physiological phenomenon, the entrance of irritating particles into the nose being thereby prevented.

A few words in regard to the use of the nasal probe. This instrument is, of course, only to be employed under careful guidance of the eye. Besides giving information about the shape, attachments and consistence of growths, especially of small swellings on the turbinated bodies, it is indispensable for ascertaining the reflex irritability of the different intra-nasal structures. By stroking gently in turn the inferior and middle turbinated bodies and septum, and by observing whether any reflex phenomena—such as sneezing, watery secretion, erection of the inferior turbinated body, or cough—be produced, important information may be gained. Touching the anterior extremity of the inferior turbinated body produces, in my experience, no reflex phenomena as a rule; exceptionally it gives rise to cough. The effect of touching the tubercle of the septum has already been mentioned.

In conclusion, I would mention my conviction that in recording the appearances presented by anterior rhinoscopy, a rough sketch of the view obtained, accompanied by a few notes, is far more effective than many lines of description, and sketching these parts is facilitated by the use of the nasal outlines which have been prepared at my suggestion by Messrs. Danielsson.

It is, of course, only possible to speak from one's own experience, but I have found graphic representation of so much practical value, that since making the original drawings in 1884, I find I have drawn between three and four hundred anterior rhinoscopic sketches in the notes of cases under my care.

BEQUESTS AND DONATIONS.—Mr. William Hayes, of Clarence Place, Cork, bequeathed £300 to St. Patrick's Hospital, and £50 to the North Infirmary, both at Cork.—Mr. Charles Thomas Wakefield Parry, J.P., bequeathed £100 to the Chester Infirmary.—The Leicester Infirmary has received £100 under the will of Mr. W. Bowman.

ON A CASE OF ABSCESS OF THE TEMPORO-SPHENOIDAL LOBE OF THE BRAIN, DUE TO OTITIS MEDIA, SUCCESSFULLY TREATED BY TREPHINING AND DRAINAGE.

By W. R. GOWERS, M.D., F.R.C.P.
Physician to University College Hospital;
AND
ARTHUR E. BARKER, F.R.C.S.,
Surgeon to University College Hospital, and Teacher of Practical Surgery at University College.

A BRIEF history of this case will first be given, followed by the authors' comments.

A. W., aged 19, one of our museum porters, was admitted into University College Hospital, under the care of Dr. Gowers, on September 15th, 1886. His family history was excellent, except that his father had had a stroke of paralysis. His personal record was also good, he having had no illness except scarlet fever in 1875. Since then the right ear has discharged thin yellow fluid, on and off, small in quantity and offensive; it has been almost continuous in the cold wet weather of winter. On the last day or two of August, 1886, he began to feel very unwell generally, and complained besides of aching pain behind and around the affected ear. On September 11th he took to his bed, his temperature being 105° Fahr. The next day the temperature was 103°, and the following evening 99.4°. There was no history of constipation or diarrhœa.

On admission (September 15th) a careful examination revealed no impairment of any function of the central nervous system; the movements of the eyeballs were normal, and the pupils were equal; the latter reacted to light and accommodation; there was no ptosis, nystagmus,

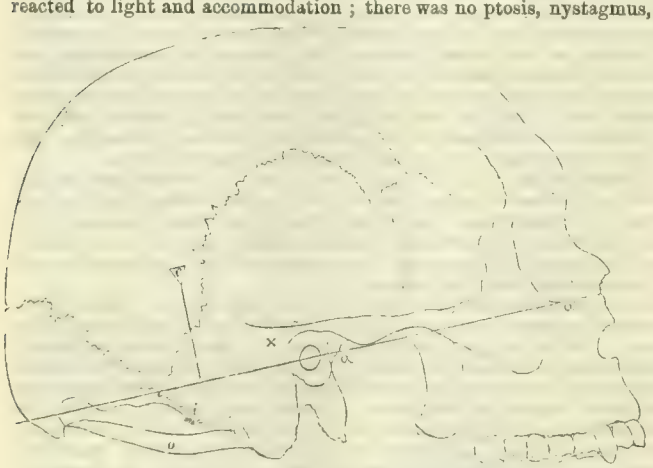


Fig. 1.—From a photograph of a dissection of the skull before exposing the brain. *aa*. Reid's "base line" running from the lower border of the orbit through the centre of the auditory meatus. *c*. The exact point at which the pin of the trephine was applied to open the cerebral abscess, just behind the squamosal suture. *x*. The point at which the mastoid antrum was opened. *i*. The foramen for the mastoid vein. *o*. On the point below the inferior curved line at which the cerebellum should be explored if abscess arises in it.

diplopia, hemiopia, or strabismus. There was, however, double optic neuritis, slight in degree, but unequivocal. The hearing was normal, as also were taste and smell; there was only a trace of fœtid discharge from the right ear. The respiratory and circulatory systems exhibited nothing unusual, nor did the digestive system, except a foul tongue and bad taste in the mouth. Urine healthy; no albumen or sugar; specific gravity, 1024. In the evening the temperature rose to 101°.

On September 16th, Dr. Gowers ordered a blister behind the right ear, also two grains of calomel. Temperature in the morning, 97.6°; evening, 96.2°. Pulse 52. The next day he had two grains of calomel, followed by a saline aperient. The temperature remained low all day, being 97.2° at 11 P.M. It rose on the 18th to 101.8°, but fell immediately, and remained nearly normal until 7 A.M. on the 21st. On the 20th, he had three grains of calomel. On this day, Mr. Barker saw him, and found a large perforation in the right membrana tympani in the anterior and upper segment; through this the middle ear was wiped out, and was found to contain a moderate amount of stiff creamy fœtid *débris*. There was no further obstruction to this opening, and no sign of acute inflammation anywhere about the middle ear. The drum was opaque, and not congested. An injection of warm solution of sulphate of quinine was ordered, with a dressing of iodoform. There was no swelling in the mastoid or temporal regions, and only a little tenderness, probably due to the blister. From the morning of the 21st, the temperature had steadily fallen to 97.6° at 7 A.M. on the 23rd; it varied between this and 98.8° until the end of the month. The optic neuritis continued, and increased in degree, the papillæ becoming more swollen, with whitish spots on their surface. On the 25th, the patient became more dull, and required to be roused to answer questions. He had a severe attack of vomiting, without previous nausea. Temperature 97.6° in the evening. His pupils were now for the first time noticed to be unequal, the right being more contracted and sluggish than the left. There was no headache, and no squint. The optic neuritis was more marked. On the 27th, the symptoms were still more aggravated, but the temperature remained 98° throughout the day. On the 28th, Mr. Barker decided to open up the mastoid antrum and middle ear, search for matter in the latter, and wash it out and drain, if present. This was done in the usual way with a gouge at a point about half an inch above and behind the centre of the auditory meatus (Fig. 1, *x*). On opening the antrum, there was no gush of pus, but some came away on the instrument; and, on injecting the meatus, a quantity of curdy and very fœtid material was forced out of the opening in the bone (*x*); and, on inserting a syringe into the latter, similar matter welled out of the meatus. Having then thoroughly washed out the middle ear with carbolic lotion, the whole area of operation was dusted with iodoform and dressed with salicylic wool, a drainage-tube being left in the opening.

The next day the patient was decidedly better, though still slightly drowsy; the inequality of the pupils less evident, though the right did not yet dilate as fully as the left. Temperature, 98.4° to 99°. The wound was dressed with boracic fomentations, and was draining well.

The day following, he was still better in himself and much brighter, having slept well, and suffering no pain. The pupils, however, remained as before, and the optic neuritis was steadily increasing in intensity. Temperature, 98.6°.

On October 1st, a silver drainage-tube was substituted for the rubber one in the mastoid opening (*x*).

On the 2nd, he was not so well, having had a restless night; there was no pain, but the patient vomited in the morning; bowels confined; drowsy. Temperature, 98.8° to 97.8.

On the 3rd the patient was drowsier, and had been slightly delirious during the night; he vomited a quantity of very offensive matter, resembling pus; no rise of temperature; no squint; no headache. During the 4th, he felt drowsy; the next day, more so. Temperature normal. While Mr. Barker was syringing out the middle ear, there was well-marked nystagmus to the left in both eyes, which ceased immediately after the injection was discontinued. In the evening, the temperature rose to 105°, and the patient had a rigor, lasting forty-five minutes. After this the temperature soon fell. Dr. Gowers, considering that the rigor and the intense optic neuritis, taken in conjunction with the almost negative result of the previous exploration, constituted evidence of the existence of a cerebral abscess, asked Mr Barker to trephine and search for one in the temporo-sphenoidal lobe. This was done the same evening. In the first place, the meatus, wound, and middle ear were thoroughly cleansed by washing out with carbolic lotion (1 in 20), and dusting with iodoform. The incision of a week before was next met by another, running downwards and forwards, from above and behind, and a V-shaped flap was thus formed, with its base above. This was dissected up, and the bone was found perfectly healthy. A spot was then marked for the pin of the trephine just an inch and a quarter behind and a inch and a quarter above the centre of the meatus of the ear (Fig. 1, *c*). But, before opening the skull here, the soft parts were stripped off the bone behind the mastoid process, and the foramen for the mastoid vein (*i*) was specially examined. Everything in this region was found perfectly normal. The trephine was then used at the point indicated, which corresponded to the interior posterior angle of the parietal bone close to the squamosal suture (Fig. 1, *c*). When the upper two-thirds of the disc of bone had been cut and cautiously elevated, the dura mater was found to be quite normal. That membrane was then divided with a knife and turned back, when the surface of the brain was seen to be unaffected, nor was there any fluid in the arachnoid space. The whole wound and the opening made by the trephine having been again thoroughly washed with strong carbolic lotion and dusted with iodoform, Mr. Barker thrust a hollow aspirator needle at (*c*) about the size of a No. 4 catheter, into the temporo-sphenoidal lobe in a direction inwards, forwards, and downwards. This was done slowly,

and when the point had reached about half an inch inwards from the surface of the brain, a curious bubbling sound was heard like the escape of gas through the needle, and a moment later thick, yellow, intensely fœtid pus began to pour from it, and was received in a measure-glass to the extent of four and a-half drachms. When the pus had ceased to run, the needle was cautiously pushed a little farther into the brain, but, as no more fluid ran off, it was withdrawn, and a sinus forceps was at once slipped into the opening in the cortex, and was used to dilate it. On this, more pus flowed out, probably to the amount of two or three drachms. Then, to provide for very thorough drainage of the cavity, a small-sized Volckmann's spoon was introduced into it, and the cortex was scraped away to the extent of the opening in the dura mater. The whole area of operation was then washed and dusted over with iodoform as before, and a rubber drainage tube about two inches long, also dusted over with iodoform, was placed, with about an inch of its length, within the abscess. The V-shaped flap of skin was then cut away at its base so as to leave the trephine hole uncovered and perfectly free to drain. The external wound was dressed with carbolised gauze dusted with iodoform.

No nerve-symptoms were observed during the operation, though carefully watched for. It was noted, however, that at one time the breathing became very bad, but improved at once on the escape of the pus from the abscess, the pulse going up at the same time to 150.

The morning after operation, the following note was made. "October 6th, fair night, less drowsy, optic neuritis still of the same intensity. Temperature 98·4 ; pulse 90 ; no vomiting." The wound was dressed, and found to drain freely. Curiously enough the pus from the abscess was now found to be perfectly odourless. On the 7th there was decided improvement in every way, except that the papillitis was still intense. Temperature from 97.8° to 100°. A silver tube, the size of a No. 8 catheter was now placed in the brain for drainage, instead of the rubber one, which was difficult to retain in place ; about half an inch of the new tube lay within the abscess cavity. In the evening, while the middle ear was being washed out, nystagmus was again noticed. Mr. Barker remarked that he had seen this phenomenon in a similar case before, on washing out the middle ear. There were neither headache, vomiting, or other nerve-symptoms, and the intellect was quite clear. On the 8th, while the tympanum was being washed out, pain was complained of in the right eye, which the patient at once rubbed with his knuckle for relief. There was no alteration of the pupil at this moment. Temperature 98·4°. The next day the patient felt so well that he was given fish for dinner. On the 11th the brain was only washed out and dressed once, and the tube removed and cleared once, and whether *post hoc* or *propter hoc*, the temperature became subnormal, 97.6 ; the pulse, however, was 100°. On the 12th the silver tube had slipped out, and was replaced at dressing. Nystagmus was again noticed, as before, during the cleaning of the cavity of the tympanum, but there was no pain in the right eye. Fomentations as before ; bowels very constipated ; temperature normal. On the 13th he appeared to talk a little more slowly than on the previous day, not answering questions at once ; otherwise very well. Temperature 100° ; pulse 90 ; bowels open. On the 16th a new silver tube with a flange was used, which could be fastened in position by a silk thread round the head. The cavity in the brain still appeared to be of considerable size, judging from the amount of the boracic lotion which ran back through the silver tube on each washing out of the abscess. Nystagmus was again noticed under the same conditions as before. The patient was improving very rapidly, and gaining flesh and colour. On the 19th, exactly a fortnight after the operation, the drainage-tube was left out of the brain-cavity, and the patient was allowed to get up. No ill-effect followed.

From this date onwards there is little to note, except that the patient improved rapidly in every way. The temperature was now normal, and remained so till the end of his stay in hospital. There was no trace of hernia cerebri at any time. The brain-abscess was still washed out daily with boracic lotion as before.

On the 20th, Dr. Gowers reported that the optic neuritis was much improved in every way, and by the end of the month it had almost disappeared.

The patient left hospital for the convalescent home on November 12th, thirty-eight days after operation, looking and feeling very well, and with the trephine wound quite healed. He was still to continue to wear a silver drainage-tube in the opening into the mastoid antrum, which was to be syringed out with boracic lotion daily as before, Mr. Barker wishing, if possible, to establish a permanent fistula into the antrum, and middle ear at this spot. The hearing, carefully tested in a quiet room the day before leaving the hospital, was perfect on the left side, and extremely good on the right. A watch was heard eight or ten feet off on the left, and more than a foot off on the right side, and musical sounds much farther. There was no damage whatever to the nervous apparatus of the ear on either side, as tested with the tuning fork on the vertex ; it was only the conducting apparatus on the right which had suffered. The right meatus was full of pus when the test was applied, so that much of the slight deficiency of hearing recorded was due to simple mechanical obstruction of the meatus.

Remarks by Mr. Barker.—When asked by Dr. Gowers to see this patient for the first time, on September 21st, I had no doubt that his condition was due to mischief starting in the middle ear, although the symptoms were much less marked than usual ; but as to what particular form this mischief was taking, I was obliged to admit to myself that I was very uncertain. Four hypotheses presented themselves. The symptoms were due certainly either to (1) pent-up fœtid matter in the middle ear and its mastoid offset, with septic absorption therefrom ; (2) to phlebitis of the lateral sinus ; (3) subdural abscess ; or (4) abscess in the temporo-sphenoidal lobe of the brain, or in the cerebellum. I confess to having been inclined to the first or third alternative, and was not prepared to accept the last. The past history suited No. 1 exactly. Scarlatinal otitis media, lasting up to date ; the cessation of the discharge with the onset of the severe symptoms ; the heavy aching pain in the temporal and mastoid regions ; and the fact that, though a large perforation existed in the membrana tympani, a quantity of stiff curdy *débris* blocked it and the tympanic cavity—all combined to make a very familiar picture. On the other hand, the fact that there was a large opening in the membrana tympani suggested a doubt whether enough blocking had taken place to confine much matter in the tympanum, and whether the drowsiness, optic neuritis, and dull pain might not be due to subdural abscess. The symptoms seemed to me hardly marked enough for cerebral abscess. For instance, the temperature, although it had been subnormal, was not persistently so ; and the pulse had not been steadily slowed, though often below 60. A recent experience, too, in four cases in which the symptoms were very similar, and in three of which I trephined the mastoid antrum, and thus drained the middle ear, with a perfectly good result, even to the disappearance of previously well-marked optic neuritis in one of them, led me to think that Nos. 1 and 3 were the safest working hypotheses in this case. When, a week later, the patient's condition seemed to deteriorate, this view was acted on, and I explored the tympanic and mastoid cavities by cutting into the latter from behind, with the result of finding much inspissated matter and clearing it out. I felt, too, that, whether the cranium was to be opened or not, this cleansing of the tympanic ramifications must first be accomplished, in order to minimise the risk of meningitis if the more severe operation should be necessary ; and I cannot but attribute the success of the latter in a great measure to the thorough cleansing of the adjacent inflamed cavity after the first operation on the middle ear. The fact that after the latter the patient was distinctly better for several days showed also, I think, that the condition in the middle ear contributed to produce part, at least, of the general symptoms. The persistence of the latter, culminating in the rigor of September 5th, with a temperature of 105°, certainly justified further search for pent-up matter ; and to Dr. Gowers belongs all the credit of urging that it should be looked for. On the question where it should be sought for, if intracranial, my views coincided with his. From pathological experience, my own opinion agrees with his—that, in these cases of inflammation of the tympanic walls, intracranial abscess is more frequently found in the temporo-sphenoidal lobe than in the cerebellum or elsewhere ; and this is only what might be expected, when we consider that the roof of the tympanum is usually the thinnest of all its walls, and that more small vessels pass from the petrous bone to the brain and along the squamous petrosal suture from the tympanum to the dura mater than elsewhere. Nevertheless, before actually opening the skull, I determined to make an exploration which I had made and found useful in a very similar case, and which, I am led to think, will often afford important evidence as to the situation of the intracranial suppuration in the future, namely, whether it is cerebral or cerebellar ; that is to say, I exposed the foramen for the mastoid vein (*i*), remembering that, if there be inflammation on the posterior aspect of the petrous bone, it can hardly reach the cerebellum without forming a layer of pus under the dura mater of the lateral sinus. If this is so, the pus will escape by the mastoid foramen if the latter be exposed. This was the case in an operation I performed lately for opening the mastoid antrum, the patient being now practically well. I think that if, in suspicious cases, it were made the rule to examine the mastoid foramen, a good guide to the extent of the disease posteriorly towards the cerebellum would be found.

Not finding any evidence of mischief in this foramen, one source of

uncertainty was removed, and I had less hesitation in exploring the temporo-sphenoidal lobe and dura mater covering it. The spot selected for this operation was just one inch and a quarter above and one inch and a quarter behind the centre of the cartilaginous meatus of the ear (Fig. 1 *c*), Reid's "base line" (*a a*), running from the lower border of the orbit through the centre of the auditory meatus being taken as the most convenient basis of measurement. This point lay upon the inferior posterior angle of the parietal bone, and over the posterior part of the middle temporo-sphenoidal convolution, as proved afterwards by photographs taken of an adult skull, and of the brain underlying it *in situ* (vide Fig. 2 *c*). This, I knew from expe-

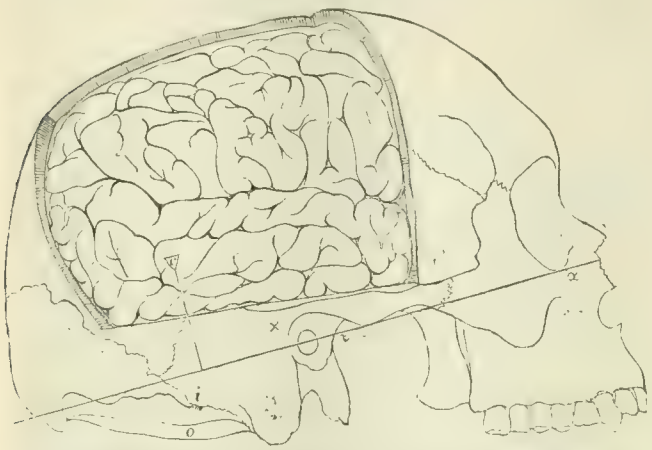


Fig. 2.—Photographed from the same skull with the brain exposed *in situ*. The lettering is the same as in Fig. 1. The point at which the opening was made in the cerebral cortex (*c*) is observed to lie on the posterior part of the middle temporo-sphenoidal convolution.

rience in the dead-house, would bring me down upon the most usual seat of abscess in the temporo-sphenoidal lobe, and also of subdural abscess, should the pus lie along the squamoso-petrosal suture. It would also be above the posterior branch of the middle meningeal artery. In this particular case, too, this spot had the advantage of being somewhat removed from the opening (*x*) previously made in the mastoid antrum, which was still discharging very fœtid pus, and would be therefore very likely to contaminate the surface of the brain, if an opening were made at all near to it. That it was possible to prevent this is very encouraging.

A silver drainage-tube was used in this case for the cerebral abscess, as it was found easier to introduce and retain in position than a rubber one.

The size of the abscess was at least that of a sphere one inch and three-eighths in diameter. I find by experiment that a body of that size displaces as nearly as possible six drachms. Now four drachms and a half were actually received in a measure-glass from the cannula, and at least one drachm and a half to two drachms must have been evacuated after the latter was withdrawn. Probably the abscess contained nearly one ounce of pus. The latter was intensely fœtid. In thrusting the needle into the brain, I aimed inwards, forwards and downwards from the point of entry. Travelling in this direction, the point of the needle would eventually have nearly struck the roof of the tympanum at a distance in the adult of about one inch and a quarter from the surface of the brain.

As the pus was reached at about half an inch from the surface of the brain, it was not necessary to go farther; but, in an adult, it would always be safe to go as far as an inch and a half from the point and in the direction given above; and, by doing so, it would be almost impossible to escape striking any collection of pus present in the whole area most liable to suppuration, that is, between the squamous petrosal suture and the roof of the tympanum.

So far as I can learn after careful search—with the help of Dr. Neale's invaluable "*Digest*," the *Centralblatt f. Chirurgie* from its commencement until now, Schmidt's *Jahrbuch* for the last two years, and Virchow and Hirsel's *Jahrbuch* for the same time—this appears to be the first case in which a cerebral abscess, due to tympanic suppuration, has been correctly diagnosed, localised, and evacuated by operation with complete success. Traumatic abscess of the brain has often been treated successfully by operation, but it belongs to a totally different category to the disease in question. If following fracture, whether simple or compound, it is easily diagnosed and localised; if due to a blow without fracture, it may not be quite so easy to localise; but, at all events, if an error be made, the processes about it are not septic. But, in the above case, not only was there a difficulty in diagnosis and localisation, but the risks of operation were enormously enhanced by the intense foulness of the whole suppurative process in the temporal region; and the fact that a fœtid septic abscess had to be opened and drained through a healthy portion of brain and the unaffected arachnoid space. That this should have been possible is extremely encouraging. The figures I have drawn from photographs kindly made of my own dissections of an adult skull and brain *in situ* by my friend Mr. Marriott. To insure accuracy, all measurements and markings were made on the parts before being photographed.

NOTE.—December 4th. Patient returned from the Convalescent Home to-day. He suffers no pain of any kind, and appears in excellent health, and is fat. Dr. Gowers reports that the optic neuritis has not yet quite disappeared, being practically in the same condition as when the patient left the hospital. Both wounds behind the ear are completely closed, and there is only a trace of moisture in the deeper part of the ear.

EXPERIMENTAL RESEARCHES CONCERNING PASTEUR'S PROPHYLACTIC.[1]

BY T. WHITESIDE HIME, A.B., M.B.DUB.,
Medical Officer of Health, Bradford.

DR. HIME referred, at the commencement of his paper, to the difficulties which were placed in the way of scientific research in this country in all that concerned the life and well-being of man and the higher animals. Fortunately there was no difficulty in pursuing such researches abroad. For some months he had been, in Paris, engaged in studying Pasteur's method, and availing himself of the extreme kindness and generosity of the Professor in following the practice of his laboratory. The affability with which Pasteur received all comers, and the candour and want of reserve with which he explained and demonstrated his methods to all earnest inquirers, were in his experience unequalled, and worthy of imitation everywhere. It was unavoidable that the subject of rabies should be unfamiliar to the vast majority. It was not given to every man to have a supply of the virus at his disposal. The number of cases and deaths from rabies in this country was comparatively so small, that few medical men had ever seen one, and Pasteur's method of treatment was still unfamiliar to the general public, except through unscientific reports in the daily papers. Hence to some extent the attitude of the profession in this country, which had preserved a cold silence on the subject. Hence also the boldness of the few critics who had ventured to oppose Pasteur. One of these was a lady, who felt her belief in the existence and goodness of a Deity shaken by Pasteur's success. Spitzka, of New York, was another critic. His familiarity with Pasteur's method was strangely illustrated by his request, published in the BRITISH MEDICAL JOURNAL, to be informed what were the symptoms of rabies in the rabbit; while his experimental skill in the practice of the method was shown by his statement that it is "a very difficult matter to keep any rabbit inoculated with fresh brain material by trephining alive" (see JOURNAL, Oct. 30, 1886). Dr. Hime could assert, from personal knowledge, that there was no more difficulty in keeping a rabbit alive in such circumstances than in keeping an infant alive after vaccination. The interference with physiological function in the former case, if the operation were done by an operator skilled in the method, was nothing like so marked as in the latter, there being no fever, no loss of appetite, no restlessness, and no local symptoms. Another critic in this country had shown himself possessed of more dialectic skill, but he, too, was entirely ignorant of the practice of Pasteur's method; he had never seen the practice in Pasteur's laboratory; he had never seen any other person perform the inoculation; he had never done it himself, and had never seen either a living or dead rabbit which had been so inoculated; yet he could criticise the method, and take Pasteur to task (without a shadow of reason) for not performing control experiments. Having devoted himself to the study of the question for months in Paris, and performed numerous experiments, Dr. Hime related to the Society some which he desired to be regarded as types of many others having the same result. He had selected them because they were, he thought, important in themselves; and, further, they met the objections raised against Pasteur's method in this country. The facts which he would detail were all within his own knowledge.

That the disease in the rabbit from which Pasteur obtained his

[1] Abstract of a paper read at the Pathological Society on December 7th, 1886.

material for human inoculations was true rabies was indubitable. Nerve matter taken from such a rabbit and inoculated on a dog intracranially—the only certain method—invariably produced true rabies. If nerve matter be taken from a human being dead from an attack of canine rabies, and be inoculated on a rabbit, a guinea-pig, and a dog, all three will take rabies and die. The dog will have rabies according to his kind, with symptoms either of the dumb or furious character. The guinea-pig will exhibit very characteristic symptoms, and the rabbit will develop the symptoms peculiar to its kind—such as, for convenience, may be called the "Pasteurian disease."[2] But an interesting and important fact must be borne in mind. The virus used for the experiment, being canine virus which had passed once through the human subject, retained certain canine peculiarities as to period of incubation and date of death. If instead of human nerve-tissue from persons who have died of canine rabies nerve-matter direct from a dog which has died of rabies was employed for inoculation, the animal would be similarly affected, and the disease produced in the rabbit could not be distinguished from that caused by inoculation with nerve-matter taken from a human being who had died of rabies after inoculation with canine virus. If, again, nerve matter were used taken from one of the rabbits employed by Pasteur for protective inoculation, the course of the disease in the various animals would be shorter. Pasteur used for his protective inoculation virus which, originating in ordinary canine rabies, had been passed directly from rabbit to rabbit in some hundreds of cases. The result was that the virus had become intensified, and killed more rapidly than the original canine virus.

It was alleged at one time that the deaths following Pasteur's inoculations were due to them. This was triumphantly disproved by the experimental demonstration that the virus in the deceased was canine-virus (derived from the original bite) and not rabbit-virus inoculated by Pasteur. The opposite result was obtained if the virus were passed from monkey to monkey through a long series; the virus became weaker and weaker. But, no doubt, just as the virus of anthrax or fowl-cholera, which had been modified by cultivation, could be brought back to its primitive virulence, so the weakened rabic virus of the ape, and the intensified rabic virus of the rabbit, could be brought back to their original degree of virulence. If Pasteurian virus were passed through the dog once, and then inoculated on a rabbit, it would be found not to have resumed canine characteristics by passing once through the dog. But more frequent passages through the dog would probably restore its primitive characteristics. The symptoms in the rabbit inoculated with Pasteurian virus were special; the period of incubation (five to six days) and the date of death (nine to ten days) were more invariable than in any other disease of man or animal known to Dr. Hime. Further, the symptoms were very characteristic and unchanging, notably the slightness of the general symptoms, even after paralysis had become marked. The temperature[3] also was very interesting, and markedly different from that found after intracranial inoculation with other materials than the Pasteurian virus or rabic virus from some other source. The following is a characteristic chart of the temperature of a rabbit which died of the Pasteurian rabies:—

First day[4] ...	102·6° Fahr.		Sixth day ...	105.6° Fahr.	
	102·2° ,,		Seventh day ...	105.8° ,,	
Second day ...	103.0° ,,		Eighth day ...	106.4° ,,	
Third day ...	102·8° ,,		Ninth day ...	104.1° ,,	
Fourth day ...	103.0° ,,		Tenth day ...	97.0° ,,	
Fifth day ...	104.2° ,,		Eleventh day ...	86.0°[5] ,,	

The febrile stage might be shorter, and the fall more gradual, but the latter was always great. The elevation was not always so great as in this example, but the curve was characteristic, and the temperature usually gave indications before the actual symptoms appeared. The cause of the temperature in the rabid dog was similar. At first there was no change, then the temperature rose rapidly, and might reach 105° or 106°; the period of acme lasted one or two days, and was succeeded by a very rapid fall to about 84.6°, when death ensued. The fact that the disease was always and invariably transmissible by inoculation was of great importance as regards its pathology, and as distinguishing it from other diseases.

With regard to *post mortem* appearances in the Pasteurian rabbit, there was nothing pathognomonic, any more than in the dog or the human subject dead from rabies; all the organs appeared free from disease; the brain was slightly hyperæmic as a rule, the heart contracted, and the bladder generally full. The stomach almost invariably contained food; the cæcum was also generally full, and the remainder of the intestine commonly contained but little, the small intestine being most frequently empty. This absence of morbid conditions was in itself remarkable, and was certainly not found after death from injury to the brain in the operation, nor after death from intracranial injection of putrid material. In this case, pus was found within the cranium, and other evidences or purulent absorption were detected. It was alleged by Dr. Dolan (in the BRITISH MEDICAL JOURNAL, September 4th, 1886, p. 475, line 15 from the bottom) that the inoculations were made "into the rabbit's medulla," and that "the same kind of affection in rabbits could be produced by injecting almost any kind of diseased material into the same region." The injection was not made into the medulla, nor into any part of the nervous system. It was made into the space beneath the dura mater and pia mater, and the brain was not injured nor touched by the instrument in a successful operation. The medulla, indeed, could not be reached at all (as suggested by Dr. Dolan) from the site of the inoculation, without traversing almost the entire mass of brain. But even if the brain were injured (and it certainly was not, as specimens exhibited proved[6]), mechanical lesions of the brain or medulla did not produce a specific contagious disease indefinitely transmissible by inoculation, and presenting the symptoms of the Pasteurian disease. These were certainly not the symptoms of injury to the brain or of any part of the nervous system. The allegation that injection of "almost any other kind of diseased material" would produce the symptoms could only be disproved by experiment. Intracranial injection of sterilised bouillon did not produce the symptoms of the Pasteurian disease, nor any other morbid symptom, and rabbits so injected did not die if the operation were skilfully performed. Rabbits inoculated according to Pasteur's method with sterilised bouillon, rubbed up with putrid meat, died with symptoms entirely different from those of the Pasteurian disease, and without the characteristic paralysis and temperature. But still more noteworthy was the fact that the disease produced by injecting putrid material was not transmissible, while the Pasteurian disease was always transmissible by intracranial injection. If the same bouillon as was used in these operations, rubbed up with fresh brain matter from a healthy dog, was injected into a rabbit according to Pasteur's method, the rabbit did not die, notwithstanding Spitzka's statement to the contrary, and did not exhibit one symptom of the rabbit inoculated with Pasteur's virus, which always died. Intentional lesion of the rabbit's brain in the performance of a Pasteurian operation, when nothing was injected, did not necessarily cause death, and if it did the symptoms were utterly different from those of the rabbit which had died of the Pasteurian disease or from putrid infection, and inoculations made from such a rabbit did not cause death. Nerve-matter from dogs which had been suspected of rabies, and had died, or been killed in consequence, had frequently been injected intra-cranially in rabbits as a diagnostic. If the dogs were rabid, the Pasteurian disease developed in the rabbits; if not, the rabbits survived without showing any symptoms of disease. This crucial method of diagnosis was due to Pasteur, but it could not be applied so as to settle every doubtful case in England, owing to existing legislation.

The virus used by Pasteur for protective inoculations originated in the rabid dog, and was the virus of rabies. Pasteur had published results showing that the material used for his later protective inoculations of man caused rabies in animals which were unprotected. If virus be taken from a rabid dog and be passed through a series of rabbits, it produced the same disease as was developed in the rabbits from which Pasteur took his matter for preventive inoculations. If the virus from such rabbits were inoculated back into the dog or other susceptible animal, it produced true rabies in them, and if then passed back to the rabbit it reproduced the same symptoms. Human rabies, if inoculated on the rabbit, produced the same symptoms, with such variations only as were due to its origination in the dog, cat, or other animal. These variations were exhibited chiefly in the length of the period of incubation, and the period elapsing before death, the disease invariably terminating fatally. No other known disease produced the same results, nor could the symptoms be caused either by surgical brain lesion or the intra-cranial injection of inert

[2] Dr. Hime stated that he used this term for brevity's sake, without special reference to the fact that the period of incubation and the period elapsing before death had been shortened in the rabbits used by Pasteur for preventive inoculations. This shortening of these periods did not alter the nature of the disease, any more than the nature of the virus in a case of typhoid or scarlet fever was altered because in particular conditions it might kill in ten or three days respectively, instead of in twenty or in six days.

[3] The normal temperature of the rabbit and the dog is about 102° F.

[4] Immediately before inoculation. [5] Death.

[6] One was a rabbit's skull and brain injected, after trephining, according to Pasteur's method, with a coloured solution of gelatine. The gelatine was seen solidified on the surface of the pia mater, the brain being intact, the whole being a distinct demonstration of the method of performing Pasteur's operation. Another interesting specimen exhibited by Dr. Hime was a fresh preparation of a rabbit's brain inoculated in Pasteur's laboratory on December 4th. The skull-cap was removed, showing the brain free from the slightest injury.

material such as sterilised bouillon, or with putrid material. The Pasteurian disease was specific, and very distinctly characterised by its course and symptoms, which were different from those of any other disease; it invariably ended fatally, and was transmissible by inoculation from animal to animal. Dr. Hime did not give the statistics with regard to the success of Pasteur's treatment, but stated that the protection afforded to dogs by Pasteur was proved beyond doubt or question, and analogy would suggest that the same method was applicable to man. Dogs could be protected either by inoculation before infection or afterwards. Further, the protection afforded was against a virus far more active than ordinary canine virus. The reality of this protection established the truth of Pasteur's principle. That his practice was capable of improvement was not impossible; but he had already effected a great deal in a short time. It had been objected that the inoculated prophylactic virus was inert because the patients showed no specific symptoms, but the objection had no weight; it might as well be said that arsenic was inert because a patient taking that drug showed no toxic symptoms. Dr. Hime was inclined to think that there was a decided though slight reaction. He himself had experienced local symptoms and distinct axillary tenderness while under treatment, and in others these were more marked. He had made numerous thermometric observations on persons under treatment, but, so far, could not assert that there was any characteristic thermal change. Some, while admitting that protection had been successful in cases of slight wounds, thought Pasteur's system ineffectual against severe wounds. These persons admitted that the principle of the method was scientific and sound, but found, they thought, a weak point in detail. Finally, from the fact of the undoubtedly low mortality among Pasteur's patients, corroborative evidence was obtained. The rabid condition of the animals in a very large number of these cases was proved either by experimental inoculation or by certificates from veterinary surgeons, the statistics included no doubtful cases, these being purposely omitted. Dr. Hime expressed the opinion that Pasteur had established a true prophylactic treatment against rabies. The establishment of a Pasteur Institute in this country, he thought, was called for; such institutions were already established in Paris, Moscow, St. Petersburg, Odessa, Samara, Varsovia, Naples, and Milan. Turin and New York would soon be provided with such institutions. The English public were still vainly waiting for the report of the Royal Commission of inquiry into this subject. While this report was being prepared other countries were acting, and we were satisfied to send our patients to Paris for treatment, instead of making provision for them in England.

A NEW POSITION FOR OPHTHALMIC OPERATIONS.

By G. M. GILES, M.B., F.R.C.S., Surgeon, Indian Medical Service.

THE supine position is, as most must have felt, by no means a convenient one for eye-operations. It is, however, the only practicable one when chloroform is used as an anæsthetic. The discovery, however, of a local anæsthetic, in the shape of cucaine, leaves us free to adopt any position that may be found most convenient for patient and operator.

For the last fifteen months I have been employed with an exploring party in the regions lying beyond our North-West Indian frontier. Transport difficulties have rendered it necessary for us to fly very light. Hence, as may be well imagined, an operating couch formed no part of my equipment. A good deal of surgery of all sorts came to my hands, much of it ophthalmic, and I was often at a loss how to improvise a couch of some sort. Not unfrequently even the low country bedstead was unobtainable, so that one had to operate on the ground. Now, to operate even on a low bed is most difficult in ophthalmic cases, the surgeon's position being so constrained that all steadiness of hand is lost. Hence, after adopting cucaine, which I came to do very early in our travels, I began to try various positions with the view of finding one suitable to the peculiar exigencies of camp life, and finally hit upon the following position, which has been found so entirely convenient that I feel sure it is well worth a trial, not only by such as have to operate under difficulties, but even as a position of election.

The operator sits on an ordinary chair, with the knees well separated so that the patient may be able to sit on the ground between his feet. The position of the latter varies according to the nature of the operation and the side operated on. In ordinary cases, such as iridectomy, removal of pterygia, etc., he is seated with his back nearly to the operator, but with the face turned slightly to the left for the left eye, or to the right for the right. Seated thus, between the operator's feet, he throws back the head so that the occiput rests firmly on the surgeon's thigh; the left thigh in operations on the right eye, and *vice versâ*. This position answers equally well for cataract-extractions on the right side. For left cataract, however, unless the operator actually prefers to use the left hand, the following modification is necessary. Seated, as before, on the ground, between the operator's feet, he faces quite to the surgeon's left, then throwing back his head, and turning it slightly so that the chin points to the surgeon's hip-joint, he rests the occiput firmly on the operator's right knee. With the patient in this posture, it will be found perfectly easy to operate with the right hand.



The method is, no doubt, specially suited for dealing with Orientals, who are accustomed to sit on the ground; but for the limited time required for an operation, I do not think it will be found too constrained for Europeans. Primitive as it may seem, I feel sure that anyone who will give it a fair trial will find the position much more convenient than either an ordinary operating couch or a dental chair.

The illustration shows the relative position of operator and patient in a cataract-operation on the left eye.

LOOSE CARTILAGES IN THE KNEE-JOINT.

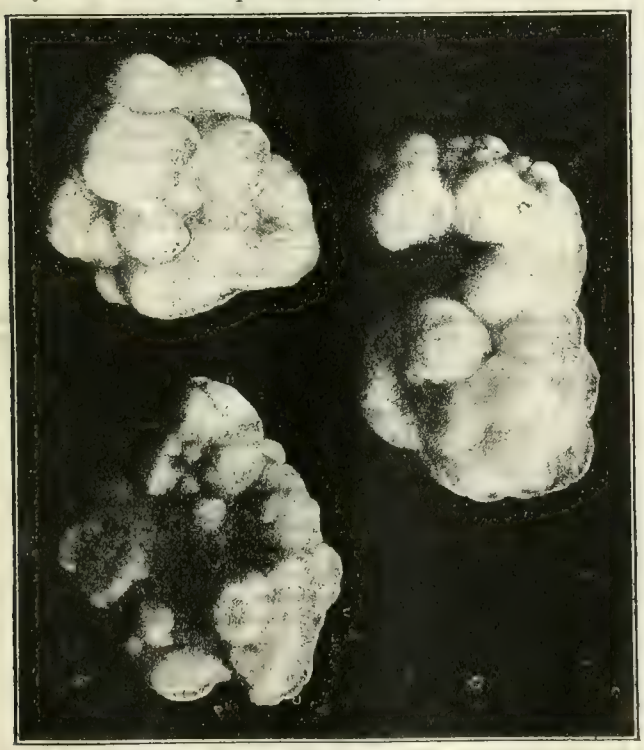
By WILLIAM J. SHAW, M.B., F.F.P.S.G., Assistant-Surgeon, Glasgow Royal Infirmary.

W. W., aged 27, was admitted into Glasgow Royal Infirmary, September 6th, 1886, suffering from loose bodies in the knee-joint. His occupation was that of a moulder, which he had followed for eleven years, during which time he has had to work almost continually on his knees. Twelve months ago, his attention was drawn to his knee-joint, in which he felt a very severe pain, or, as he described it, "a kind of grip." This pain increasing in severity, he requested admission to the hospital for the purpose of getting something done, as neither by night nor day had he relief from the excessive agony he was suffering. Examination in hospital showed that the right knee-joint was very much swollen as compared with that of the left side; this swelling being due to the presence of a number of loose bodies of considerable size, one of them being nearly as large as the patella itself, and all being very freely movable from one part of the joint to

another. The feeling conveyed to the hand on grasping the joint, and moving it, was the sensation produced by feeling a number of marbles in a bag. The affected joint was rather hotter to the feel than the healthy one. There were no signs of inflammation; and therewas no history of rheumatism.



On September 12th, the joint was opened under strict antiseptic precautions, and twenty-two loose cartilages were removed. The total weight of these bodies amounted to 1,681 grains; they varied in weight from 230 grains to 20 grains. The largest body measured fully an inch and three-quarters in length, by an inch in breadth,



and an inch in thickness. The bodies were white in colour, and were of different sizes, one or two being as small as a boy's marble, the majority of them being of considerable size, up to an inch and three-quarters in length, fully an inch broad, and an inch thick. All were formed alike of smaller rounded masses stuck together like the lobes of a conglomerated gland, each body being distinctly rounded on its outer surface, but flattened on its lateral, or inner adherent surface. A large part of the outer surface of one of the largest masses had undergone calcareous degeneration. On cross section, the surface presented a distinctly laminated character, the outer laminæ being firm, bluish white in colour, and about a quarter of an inch in thickness. This disclosed a slightly darker and softer part, which occupied the centre; and the two parts might be distinguished as the cortical and medullary portions. Opaque spots were formed in both the cortical and medullary parts, which were obviously due to calcareous degeneration.

The microscope showed that the structure of the bodies was that of fibro-cartilage, in which the fibrous element was comparatively scanty and the hyaline was predominant. The cells of the latter were arranged in large irregular masses embedded in a granular matrix, which were surrounded and only slightly traversed by fibrous tissue. Numerous patches of calcareous degeneration were found which seemed to affect chiefly the granular matrix of the cartilage.

The individual bodies were carefully weighed by Dr. Du Moulin and myself, and subjoined I give the weight of each cartilage: 230, 200, 170, 90, 90, 90, 80, 75, 70, 60, 60, 57, 56, 51, 49, 50, 44, 40, 40, 37, 22, 20 grains = 1,681 grains.

The patient made very satisfactory progress after the operation, his temperature remaining normal all through; the dressing was not changed till October 9th, twenty-two days after operation, when the wound was found to be healed, the drainage-tube (which was a decalcified chicken-bone) having become absorbed. Dry dressings were applied.

October 11th. The patient left the hospital able to walk perfectly well, but was advised to wear an elastic bandage for some time to support the joint.

HEARING, AND THE EXAMINATIONS FOR THE PUBLIC SERVICES.

By W. LAIDLAW PURVES, M.D.,
Aural Surgeon to Guy's Hospital.

A PHYSICAL defect, which does not seem to have received the attention it deserves in the examination of candidates for the different services, is that of a deficiency in the normal hearing power. In the case of the eye, any marked imperfection of vision in both eyes generally forces itself upon the observer by the peculiar gait, or position of the head, or closure of the lids, which the sufferer employs to give him his best possible unaided vision. But a loss of hearing power much below the normal, either in both ears or limited to one ear, may escape detection by a careful observer who does not have recourse to more minute methods of investigation for determining the acuteness of hearing. This arises partly from the fact that ordinary conversation is carried on in a much louder tone than is necessary for the proper hearing thereof. With two normal ears the same conversation could be carried on with half the volume of sound, or even in a whisper; and, as the pica or long primer types are employed by the popular publisher to give comfortable and easy reading to eyes much under the normal in acuteness, so does the barrister or lecturer gauge, as far as he can, an intensity of sound which will give his audience easy hearing without straining. But, in the case of the candidate for admission to any of the services, not merely is it necessary for him to have the vision and hearing which can carry him through the daily avocations of private life, but he ought to have a standard normal acuteness of both organs on both sides. With only one sound and normally acute eye or ear, a man may pass through life without anyone, perhaps even himself, having discovered that he was partially blind or deaf; but he is essentially a one-barrelled man, and his chances of remaining with good vision and hearing during life are about 50 per cent. less than those of a man with two normally acute eyes and ears.

Attention has been lately called to a standard of vision which is necessary for entrance to the Indian service, and the non-possession of which ensures rejection. It is, in the opinion of the writer, not less important that a standard of hearing-power should be formed for the same purpose. It is indeed probably of greater importance that a fuller examination be made of the aural organ and its acuteness, than of the visual organ and its function. For, as the loss of function by an abnormal refraction—which is the great cause of defect—can be remedied by the use of lenses, and make the candidate as fit, with those lenses, for the service as a candidate with normal refraction, so may the remedy of altered tension and position of the aural conduct-

ing apparatus be applied during the medical examination, so as to give a normal acuteness of function. But this full perception may not be present a few hours afterwards, and may be concurrent with tissue changes of a kind which should preclude the acceptance of the candidate. The spectacles are apparent to all, and will, as a rule, remedy the defective refraction at all times; but the changed tension, and the means of effecting it, are discoverable only by an expert, and may be used only on the occasion of the pass-examination.

Other conditions may be present in the conducting apparatus, which, though not causing any appreciable changes in the hearing power at the time of examination, which is virtually a test in direct simple conversation only, are liable to increase, and render the candidate unfit for the service. Such are exostosis, or an old callous perforation of the membrane, which, as long as the former does not materially lessen the calibre of the meatus, or the latter effects only slight changes in position, and interferes only in a small degree with the muscular accommodation, can be determined solely by an objective examination of the parts. The exostosis may never increase to such an extent as to block the canal, but a perforation will certainly, at some time or other, lead either to acute mischief, or to an early loss of acuteness for compound sounds.

Unless the examination be conducted in a manner which will ensure the detection of loss of acuteness of function with or without mechanical aids, of irregularities which may continuously or only temporarily interfere with the faculty, and of conditions which predispose to aural disease, it will fail in its intention.

That a set of rules should be drawn up regarding the defects of hearing which disqualify candidates for admission into the services, is the purpose of this paper, so that when the private medical adviser is consulted by the guardians of a proposed candidate, he may be able to inform them as to his possessing the required acuteness of vision and hearing.

That such advice should be sought by all guardians of such candidates before entering them on a lengthy and expensive training, is the warning of the writer.

FLEXIONS OF THE UTERUS.

By A. B. R. MYERS, Surgeon-Major, Scots Guards.

When reading the address of Dr. Graily Hewitt on the above subject in the British Medical Journal of November 13th, it greatly surprised me to find that, though many cases were enumerated, no reference was made by himself or by the numerous authors he quotes to what I for years have considered a very important factor in flexions of the uterus—viz., tight lacing. It is a very old story, but the omission of any reference to it by authorities when dealing with uterine diseases leads me to believe that the following remarks may not be amiss.

Now, as regards the abdomen, what is the result of a constricted waist in a woman?

1. Compression of the abdominal walls and consequent loss of tone of the abdominal muscles.

2. Diminution of space for the abdominal viscera.

3. A general forcing downwards of the liver and intestines, with consequent pressure on the uterus and strain on the uterine ligaments.

It is stated that, in girlhood, there is frequently found great laxity of the tissues of the uterus; consequently, a downward pressure upon it at such age must be very injurious, more especially when this is combined with the accumulations of two days to a week or more of constipation, as in many women who lead sedentary lives.

Further, in order to produce the long waist of the day, it is usual for a woman, after fastening her stays, to force them down as far as possible on her hips, the result being that the lowest portion of the abdomen bulges forward. This defect is met by the "scientific" stay-maker, who curves inwards the bottom of the stays; and thus, pushing back the bowels, she increases the downward pressure on the uterus and its appendages.

Displacements of the uterus are often undoubtedly produced by sudden exceptional strains, such as those mentioned in the above-named address; but would they, I ask, so often occur if these parts had not been already weakened by a process of tight lacing?

Expect the savage to give up the ring in his nose, or other like adornment, sooner than civilised woman her waist; and if pictures of the displaced liver do not affect her, neither will the fear of any other possible injury do so; but, let us at least not forget how much she is responsible for her own sufferings, and instruct her accordingly.

OBSTETRIC MEMORANDA.

CASE OF LABOUR WITH KYPHOTIC PELVIS.

On November 8th, 1886, I was called by a midwife of the Royal Maternity Charity to Mrs. C., aged 30, in labour with her sixth child. Of the five former children, the mother was delivered of one by craniotomy; one presented with the breech, and was stillborn; one was born alive without assistance; in one pregnancy the labour was brought on prematurely, and the child delivered alive by turning—it lived twelve hours; and one child was born alive with the aid of forceps applied by Dr. George Roper, my predecessor in the service of the charity.

The patient, on the present occasion, began to feel labour pains on November 7th, at 5 P.M. The membranes ruptured on November 8th, at 3.30 A.M. As after this the labour did not progress, I was sent for, and arrived about 8 A.M. I found the head in the pelvic cavity, but not as far as the perinæum. It was extremely flexed, the posterior fontanelle being the presenting part; the anterior fontanelle was behind, and high up. The sagittal suture ran almost exactly in the antero-posterior direction. The forceps was applied, and the child delivered alive without much difficulty, and without injury to the perinæum. The impressions made by the blades of the forceps were almost exactly symmetrical, being below and a little behind each malar eminence.

The following measurements were taken after delivery. Internal, by Johnson's method: brim, transverse, about 4½ inches; antero-posterior, more than 5 inches. Outlet, antero-posterior, 4 inches; transverse (between tubera ischii), 3¼ inches. External: between anterior superior iliac spines, 9½ inches; iliac crests, 10⅝ inches; external conjugate, 7¼ inches. Patient's height was 4 feet 6 inches. There was angular curvature of spine, involving the last dorsal and all the lumbar vertebræ; the projection formed by the spines of the affected vertebræ measured (over the curve) 5½ inches from above downwards. There was no appreciable lateral curvature. The junction of the last lumbar vertebra and the sacrum anteriorly did not form a promontory. The child weighed 5¾ lbs. The following measurements of its head were taken about eight hours after delivery; occipito-mental, 5⅛; occipito-frontal, 4½; bi-parietal, 3½ inches; bi-temporal, 3 inches. There was a caput succedaneum, about the size of a crown piece, situated with its centre nearly over the posterior fontanelle.

In this case, the head in the pelvic cavity took the position which was most favourable to its passage, the long diameter of the head rotating into the long diameter of the pelvis. This is the position which it would, *a priori*, have been expected to take.

G. Ernest Herman, M.B.Lond., F.R.C.P.,
Obstetric Physician to the London Hospital.

SURGICAL MEMORANDA.

METHOD OF PREVENTING BLEEDING IN THE OPERATION FOR PHIMOSIS.

It is a usual practice, before commencing the operation for phimosis to avoid bleeding by tying a bit of tape round the root of the penis. In very young children, there is often some trouble in this. I have therefore had an elastic tourniquet made with a small clip, which I



find answers the purpose admirably. It entirely prevents all bleeding during the operation, is rapidly applied, and easily removed. The accompanying wood-cut represents the tourniquet of the exact size. It is made by Wright, of New Bond Street.

Paul Swain, F.R.C.S.,
Surgeon to the South Devon and East Cornwall Hospital.

HOUSEMAID'S KNEE.

In the Journal of November 20th, Dr. Saunders alludes to the treatment of "Housemaid's Knee." If he will apply a fresh ammoniacum c. hydrarg. plaster spread on either leather or swan's down, and

keep it in apposition with a bandage, he will find all swelling disappear in a week or ten days, without the aid of either trocar, aspirator, or confinement to bed. The affection is common here amongst weavers as well as domestic servants, and I find that 99 per cent. of the cases can be cured in that way. Suppuration rarely takes place, and the only caution given is to avoid kneeling on the affected part.

CHARLES W. THORP,
Dobroyd, Todmorden. F.R.C.S.I., L.K.Q.C.P.I.

NASAL CALCULUS.

IN connection with Dr. Bovill's case of rhinolith, reported in the JOURNAL of October 16th last, the following account of a nasal calculus removed by me in 1885, may prove interesting.

Magni Ram, a Sadhu or religious mendicant, aged 65, was admitted into the Mayo Hospital at Jeypore, on September 16th, 1885, with a very painful swollen nose and a sinus on the left side of the organ from which large quantities of pus were escaping. The probe detected a hard substance at the bottom of the sinus. The opening was enlarged, but, as the foreign body could not be readily removed, and was ex-



tremely hard, it became necessary to separate the nose from its attachments in the left side, thus admitting of the extraction, with some difficulty, of a huge rhinolith weighing 720 grains. It was accurately moulded to the top of the nasal cavities on both sides. The external wound healed rapidly, and the patient was discharged on October 12th, without deformity or suffering of any kind. He stated that he had fallen on a stone twelve months before admission. The calculus measures two inches by seven-eighths of an inch, and has the appearance, and almost the consistence, of ivory, on section.

THOMAS H. HENDLEY,
Jeypore, Rajputana. Surgeon-Major, I.M.D.

FRACTURE OF STERNUM.

WM. C., a sailor, aged 58, was seen as an out-patient at the Liverpool Northern Hospital. A plank caught him under the end of his breastbone, which he felt break. When he coughs or makes an effort, he feels pain shoot from the epigastrium to the back. At the lower end of the sternum is seen a small transverse ridge, which is readily reduced, but returns on removing the pressure. On coughing, the piece of bone sinks into its normal position. When replaced, on lateral movement, bony crepitus is readily obtained. The broken fragment is one inch and a quarter in length and a quarter of an inch in thickness. The fracture is transversely through the ensiform appendix, the upper or broken end of which is displaced on the front of the sternum, while the lower end of the appendix projects forwards.

WILLIAM HORROCKS, M.B., F.R.C.S.

DISLOCATION OF THE HUMERUS REDUCED BY RIGHT ANGLE TRACTION.

ON November 18th, a stout, muscular horse-dealer, weighing about sixteen stone, slipped from the edge of the pavement, falling on his left side, with the arm outstretched to save himself. He had to be assisted to get up, and was taken home, complaining of much pain about the shoulder, and inability to use the arm. Supposing that he was suffering from a sprain, the shoulder was rubbed by his wife with some liniment. After four days, however, finding no relief, he sought my advice, when mere inspection indicated a sub-glenoid dislocation of the humerus.

Being aware of the difficulty sometimes attending reduction by the usual method, even with anæsthesia, and appreciating the rational procedure of Dr. Neil Macleod, recommended in the JOURNAL, I adopted his recommendation with great success; for without an anæsthetic, and using only gentle traction, the head of the bone was immediately reduced with a perceptible sound and movement. The patient stated that the manœuvre caused no pain.

JOHN A. LYCETT, M.D.
The Hollies, Graiseley, Wolverhampton.

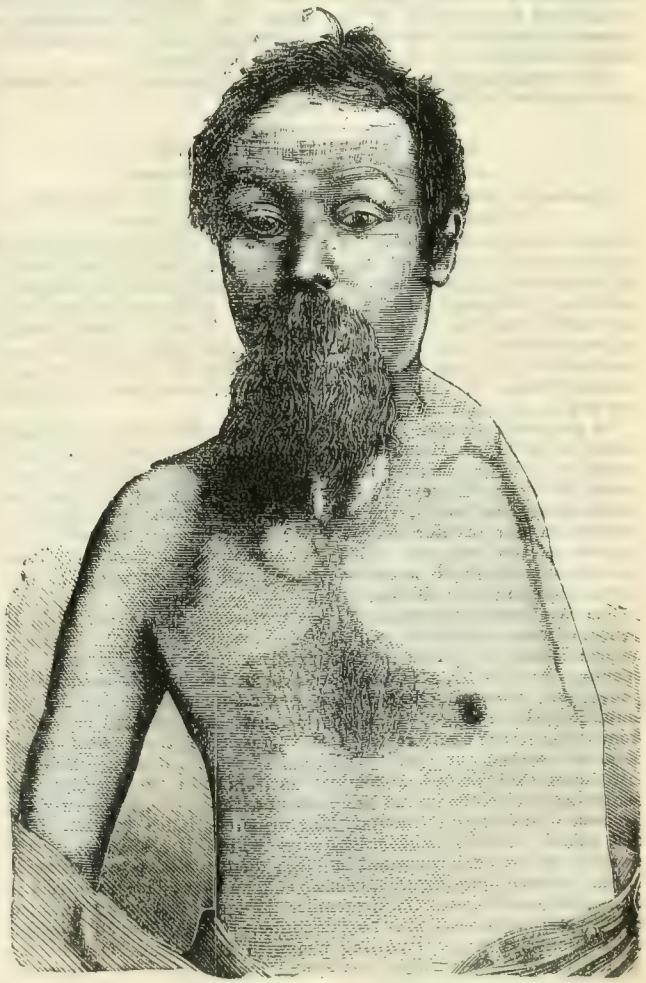
REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

SUNDERLAND INFIRMARY.

AMPUTATION OF ARM AND SCAPULA FOR SARCOMA.

(Under the care of Mr. E. A. MALING.)

J. K., aged 50, a bricklayer's labourer, a tall, spare, but fairly healthy-looking man, was admitted on December 18th, 1885, for a tumour of the left shoulder. He stated that he had enjoyed good health until twelve months before, when he noticed a small "lump," about the



size of a walnut, at the lower angle of the left scapula. It did not at first increase much in size, but gave him a little pain whilst at work.

Lately, however, it had grown so rapidly, and had become so painful, that he was unable to follow his employment.

On examination, the tumour was found to be situated on the dorsum of the scapula below the spine, and extending into the axilla. There was distinct fluctuation all over the growth, and the skin covering it was very tense, and of a dark purple colour. It was ten inches in breadth by seven in length. It was diagnosed to be a sarcoma, and as the shoulder-joint was evidently involved in the disease, it was decided to remove the scapula with the upper limb. To this the patient, after some hesitation, consented.

Accordingly, on January 22nd, 1886, the limb was removed, after preliminary ligature of the subclavian artery, and division of the clavicle. The patient was anæsthetised with ether, and the operation was performed under antiseptic precautions. There was very little hæmorrhage, and the wound healed well. About a month after the operation, the man began to complain of pain in the right side of his head, and a distinct swelling could be felt over the parietal bone on that side. On April 2nd, the patient went home, and reported himself at intervals. The cephalalgia was at times agonising, and he complained of occasional stinging pains referred to the amputated limb. On September 10th, Mr. Maling was urgently called to see him, and found that he had been seized with a fit whilst in bed, and was unconscious. During the day he had four more fits of an epileptic nature. He was readmitted on September 18th. There was no recurrence of the fits, nor had he any during his stay in the infirmary. On October 24th, he discharged himself, and he has not been seen since.

Remarks.—Microscopical examination of the tumour confirmed the diagnosis; it was found to be a mixed-celled sarcoma, made up of a large cavity filled with blood, and lined with muscular-looking tissue resembling the ventricles of the heart. It would be interesting to know to what extent the fact of his carrying a hod on the shoulder during work had to do with the origin of the tumour.

The accompanying woodcut shows the appearance of the stump after removal of the limb.

LEEDS GENERAL INFIRMARY.

TWO CASES OF SUPRAPUBIC LITHOTOMY.

(Under the care of A. W. Mayo Robson, F.R.C.S., Lecturer on Operative Surgery, Yorkshire College, Leeds.)

Case I.—*Encysted Calculus.*—J. C., aged 38, a mill-hand, residing in Leeds, was admitted on August 18th, 1886, having been sent by Mr. Ambrose Atkinson, who had sounded the patient and found a calculus. The patient had had symptoms of stone for six years, and had noticed his urine to contain a good deal of pus for three months before admission. Mr. Atkinson remarked that there must be some peculiarity in the case, as at the first sounding he clearly detected a calculus, whilst on a second examination after some interval it could not be felt, although the symptoms persisted.

On admission the man looked thin and haggard, and was evidently much pulled down. His urine was alkaline (specific gravity 1018) and contained a large quantity of pus. On sounding with Thompson's sound, the floor and sides of the bladder seemed to be quite clear, but on depressing the handle, the click of a calculus was felt above the prostate in the anterior vesical wall; as it retained its site in all positions of the body, Mr. Mayo Robson concluded that there must be a calculus encysted behind the pubes, and that it would be best reached by the suprapubic operation.

The usual suprapubic operation was performed on August 19th, 10 ounces of water being used to distend the rectal bag, and 12 ounces of boracic lotion (10 grains to the ounce) to distend the bladder. On opening the bladder, a stone, composed of lithic acid, coated with phosphates, measuring one inch and three-quarters in length, was found lodged in a pouch, just above the prostate and behind the pubes, from which it was easily removed with forceps. After the bladder had been well washed out with weak carbolic lotion, a drainage-tube was introduced through the abdominal incision into the bladder, the remaining part of the wound being closed with sutures. The tube was removed after forty-eight hours. The urine continued to drain from the wound until September 8th, after which it all came by the urethra, but it still contained a large quantity of pus, for which copaiba, cubebs, quinine, iron, benzoic acid and santal oil were tried in turn, with some relief. On September 23rd and following days the bladder was washed out with boracic lotion. On October 16th he was made an out-patient, still passing pus with the urine. On October 22nd his wife reported him better, and brought some of his urine, which did not contain much pus.

Case II. *Suture of Bladder: Primary Union.*—J. B., aged 4, residing in Leeds, was admitted on October 6th, 1886, with symptoms of calculus of seven months' standing.

On October 10th, he was sounded under chloroform, and a hard stone felt.

On October 14th, the bladder was distended with five ounces of boracic lotion (1 in 40), and the rectum with a small Barnes's bag holding three ounces. Under full antiseptic precautions, a vertical incision, an inch and a quarter in length, was made above the pubes, and the tissues carefully divided until the loose cellular tissue over the bladder was reached; a large vein was drawn aside, and two catgut sutures were fixed in the bladder to aid afterwards in the application of sutures; between these the bladder was opened and the stone removed by means of small forceps; the calculus, which was of uric acid, weighed 40 grains; it was 2½ centimètres long by 1 thick and 1½ wide. The bladder having been again sounded, the edges of the vesical wound were brought together by five chromicised catgut sutures, which only pierced muscular and submucous tissues. The superficial wound having been closed by catgut sutures, a small drainage-tube was inserted, to which was attached a thread of catgut, so that it might be drawn out without disturbing the dressings. The wound was then dressed with a layer of gauze wet with carbolic lotion, and over this salicylic wool. The child passed urine normally, the first only being tinged with blood. The drainage-tube was drawn out on the second day; and on removing the dressing on the fifth day, the wound was healed. The little patient had had no pain or discomfort, and a normal temperature throughout. He went home well on October 27th.

Remarks by Mr. A. W. Mayo Robson.—The first case illustrates well how it would be quite possible to sound a bladder, and fail to discover the calculus, although a large one might be present; it also shows the importance in sounding of depressing the handle, and exploring the upper region of the bladder.

In this instance, lateral lithotomy would have been much inferior to the suprapubic method; for, besides having a large stone to deal with, the pouch would have been hard to get at from the perinæum. The cystitis which so retarded convalescence was evidently simply a continuation of the pre-existing inflammation, as he had been passing a large amount of pus for some time previously. If one compares the after-course of the second with the first case, there is a marked contrast; instead of a wearisome discharge of urine through the abdominal wound, and a gradual healing by granulation, retaining the patient in bed for several weeks, one has an antiseptic operation, no pain, normal micturition, one dressing, union by first intention, and the patient well within the week, so obtaining all that one can wish for.

The question is, "How can we always obtain primary union?" for I believe this is only the second or third example in which it has occurred, the first being one of Mr. Parker's. I cannot see why, with strict antisepticism, careful suture of the bladder, taking care not to include the mucous membrane in the stitches, and the insertion of a drainage-tube through the linea alba for twenty-four or forty-eight hours, one should not always obtain primary union, and that without risk; I believe the chief danger would be cellulitis due to extravasation or to pent-up secretion, and this would be guarded against by the presence of the drainage-tube, by careful suturing, and by Listerism.

Soon will have to be settled the question of the universal application of the suprapubic to the exclusion of the perineal operations, for all stones that cannot be crushed, and even for all calculi coming under the care of surgeons who have not much experience in the use of the lithotrite. The operation is so simple and so certain, that I cannot help feeling that it is destined to replace perineal lithotomy, the mortality from which, in the best hands, is about one in eight, and one which at times presents very great difficulties and dangers even to experienced surgeons.

ST. MARY'S HOSPITAL.

A CASE OF PENT-UP PUS IN THE TYMPANIC CAVITY.

(Under the care of Mr. Field.)

[From notes by Mr. F. A. Brooks, Clinical Clerk.]

R. C., aged 31, a brass finisher, was admitted into the hospital on October 1st, 1886, complaining of great pain in the head and giddiness. He was in an extremely restless condition, and at times unconscious, with temperature 103.4° Fahr., respirations 38, and tongue thickly coated with a brownish-white fur. By Mr. Luff, the house-surgeon, he was ordered, on admission, five grains of calomel and a bromide of potassium mixture. The patient was placed, at first, under the care of Dr. Broadbent.

When about two years old, he had scarlet fever; he also, when still young, was twice rendered insensible by blows on the head. When about 13, he attended University College Hospital for otorrhœa of the right ear, and he had always subsequently been liable to a return of this. About four months before admission, the discharge became thicker and more offensive, and his deafness increased. He thereupon consulted a medical man, and the otorrhœa was checked; but he now constantly felt giddy, and, in walking, reeled about as if intoxicated. A short rest failing to alleviate his symptoms, he was obliged, after nine days, to give up work and take again to his bed, where he remained eight weeks under treatment. During this time, he suffered from a perpetual discharge of pus from the affected ear, with violent pains on the right side of the head. As he continued to grow steadily worse, his medical man, Dr. Baker, advised his removal to St. Mary's Hospital; he was brought in a cab, being unable to walk.

For a week after admission the patient remained in a totally unconscious condition; the discharge from the ear was very scanty; there was facial paralysis, and the temperature persisted at 104°. He was then entrusted to the care of Mr. Field, who was sent for on the evening of October 8th. On the removal by Mr. Field of a large polypus on the membrana tympani, a considerable quantity of pent-up pus made its escape through an opening in that structure, and the patient was at once greatly relieved. The temperature an hour afterwards fell to 98.8° Fahr., and a sound sleep ensued. On the following day, the facial paralysis disappeared entirely. Recovery was interrupted only by a slight relapse on October 22nd; and, after the excision of some small remnants of the polypus, the case was transferred from the ward to the out-patient department.

Remarks by Mr. Field.—This case is one of a class far more numerous than is generally supposed, and points to the extreme danger attendant on the retention of pus in the tympanic cavity. This may be due, not to polypus, but to the presence of a large exostosis in the external meatus, as in a case now under my observation in the Manvers Ward. For this patient, K. W., a female, aged 34, I have already made a free exit for pus by breaking up some of the osseous growth with bone forceps, and it is intended shortly to remove still more of it by means of the drill. As, however, there has been facial paralysis for the past two years, the prognosis in this case cannot be very hopeful.

An instance in which the refusal to permit the timely removal of a large exostosis eventuated in death was reported by me in the British Medical Journal of this year (vol. i, pp. 338 and 385). In children, pent-up pus in the tympanum is a cause of meningitis frequently overlooked; and in many cases a fatal result may, I feel certain, be prevented by paracentesis of the membrana tympani. In regard to this matter, I may refer to a case published in the *Practitioner* of this year (vol. xxvii, p. 81) by my colleague, Dr. Lees, with whose consent I first punctured both membranes, and then, by the use of Politzer's bag, blew out some accumulated pus. Immediate relief was thus afforded, the previous significant retraction of the head beginning to disappear, while the fontanelle lost its tenseness, and the movements of the eyes assumed their normal character. I have seen many similar examples of severe cerebral symptoms, several of which have been sent to me by Drs. Barlow and Lees, of the Children's Hospital; although oftentimes the little patients have been at death's door, recovery has speedily followed on puncture of the drum-head.

The operation of paracentesis, I need scarcely say, is harmless if properly performed; and by its means, in many a case of scarlet fever, not only absolute deafness, but fatal meningitis might have been obviated. We may, in short, take it as a rule that pent-up pus in the tympanum must in all instances be freely evacuated.

Tunbridge Wells.—A very favourable account is given of the public health of this district during 1885. Mr. William Stamford reports that in the zymotic class of diseases, there was a striking amendment on an already low average death-rate, the 21 deaths registered giving a rate of 0.8 per 1,000. Whooping-cough contributed the largest proportion of deaths. From measles there were only 2 deaths, though the disease was epidemic in the latter part of the year. The Sanatorium did good service in controlling an outbreak of small-pox. Mr. Stamford reports that most of the nine cases of this disease admitted into the hospital were the outcome of infection from a case imported from Taunton, in Somersetshire. The houses from which removals were made were thoroughly cleansed and disinfected. Scarlet fever of a mild type was prevalent, and its spread was also checked in a very satisfactory manner. Mr. Stamford is apparently contented with the condition of the town, inasmuch as he cannot recommend any further measures for adoption by the Committee of the Local Board.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Tuesday, December 7th, 1886.

J. Syer Bristowe, M.D., F.R.S., President, in the Chair.

Tumour of Palate.—Mr. Stephen Paget read a supplementary note on a specimen of tumour of the hard palate, which he had exhibited to the Society on a previous occasion. The tumour was undoubtedly innocent, yet it contained large masses of epithelial cells and cell-nests. Mr. Walsham had lately removed a similar innocent tumour from the same situation; it also contained cell-nests. In both tumours there were indications of glandular structure, and tracts of embryonic tissue. The existence of cell-nests in tumours, which were undoubtedly innocent, was a point of great pathological interest. These tumours of the palate were closely allied to those occurring in the parotid region, and were probably examples of included embryonic vestiges.

Pasteur's Prophylactic.—A paper on Pasteur's method of preventing the development of rabies after a bite was read by Dr. Hime. An abstract will be found at page 1156.—Mr. Victor Horsley said that Dr. Hime had confirmed Pasteur's statement with regard to the existence of a true rabic virus, and as to the possibility of prophylactic treatment. He disagreed with the statement that, in the *post mortem* appearances, there was nothing pathognonomic. He thought it possible to say whether an animal had died of rabies if the disease ran its ordinary course.—In reply to questions by Mr. Thomas Smith and others, Mr. Horsley mentioned as distinctive points the condition of the stomach; in almost every case of ordinary rabies, and of rabies produced by inoculation, there were submucous hæmorrhages and congestion of the mucous membrane. The foreign bodies so often found in the stomach of the dog were evidence of perverted appetite. The root of the tongue and the larynx, in almost all cases, were in a state of active congestion. The central nervous system presented no definite changes. In almost every case there was marked congestion of the lungs in patches, and catarrhal pneumonia. The small intestine in the rabbit was empty, congested, and full of straw-coloured serum. In the dog, the small intestine was empty, and in both animals the large intestine contained fæces.—Dr. Hime said, in reply, that his experience did not bear out Mr. Horsley's statement with regard to the contents of the stomach; its value was small, because a varied collection of rubbish might be found in the stomach of a dog which had not died of rabies, and the stomach of a dog which had died of rabies might be empty. Where paralysis came on early, it might anticipate the perverted appetite, and then the stomach was empty.—Mr. Horsley expressed his agreement with Dr. Hime's last remark.

Flagellated Organisms in the Blood.—Dr. Crookshank gave an account of a parasite found in the blood of animals (camels and horses) dying during an epidemic in India, locally known as "Surra." The organism had been described as a spirillum, but in reality it was a fusiform body with a delicate longitudinal membrane, a long flagellum—and a stiff rigid filament at the other end. An organism of somewhat similar characters had been found in the carp, and described as a member of a new order—"hæmatomonas." In reality, however, it appeared to be a new species of trichomonas. Organisms of this order had been found by the late Dr. Timothy Lewis in rats in India; and in 25 per cent. of rats from the London sewers Dr. Crookshank had found fusiform organisms moving in the direction of the flagellum, with a stiff rigid filament at the other end, and a delicate longitudinal membrane; that is to say, the organisms were morphologically identical with those found in the Indian epidemic. Whether the organisms seen in the camel and horse were pathogenic or not, the rats appeared to be in good health.

Epithelioma of Larynx.—Dr. Samuel West exhibited a specimen of extensive epithelioma of the larynx from a man, aged 43, who had been ill for nine months before admission on account of dyspnœa; tracheotomy was performed, but the patient shortly died. A large epitheliomatous ulcer was found to extend from the base of the epiglottis to the first cartilage of the trachea; the left halves of the thyroid and cricoid cartilages were destroyed, as well as the left arytenoid cartilage. The growth was confined to the larynx, and the lymphatic glands were not enlarged.

Disseminated Fibrosis of Lungs.—Dr. Hadden showed the lungs of a man, aged 60, a mason, who died from the effects of an injury. No history could be obtained. Scattered all over the surface of the lungs were numerous small, white dots, surrounded by a ring of pigment. The white dots were simply thickenings of the pleura, and the pig-

mented areas corresponded to small hard fibrous nodules just beneath the pleura. There was a large hard pigmented mass at the apex of the right lung, and the pleura over it was thickened. A small calcareous nodule was found in the centre of the mass. The nodules and the large mass were made up of dense fibrous tissue with pigment. There was no excavation, nor caseation, and no bacilli. The bronchial glands were pigmented and calcareous. The lung-tissue generally was crepitant, but not emphysematous. The author thought it likely that the case was really one of masons' phthisis, although the change was not diffuse, as was usual in this disease. Syphilis was a possible cause, but there were several points against it.—The PRESIDENT said that he had looked upon a somewhat similar case which he had examined after death, a good many years ago, as an example of obsolescent tubercle.—Dr. P. H. PYE-SMITH referred to the occurrence of solid sub-pleural growths, surrounded by rings of pigment; they were probably of a tubercular nature.—Dr. EWART thought that the nodules were fibrous thickenings of the pleura arising in connection with irritation of the lymphatics; probably they were examples of a mild form of masons' phthisis.—Dr. PERCY KIDD agreed with Dr. Ewart that the condition was not tubercular.—Dr. SIDNEY COUPLAND was also of opinion that the specimen was an example of masons' phthisis; in one similar case which he had examined for Dr. Greenhow, the lymphatics were much thickened, though some still remained pervious.—Dr. HADDEN, in reply, dwelt on the fact that the change was not confined to the pleura, but also involved the lung.

Addison's Disease, with Cystic Pineal Bodies.—Mr. A. Q. SILCOCK showed two specimens of cystic disease of the pineal bodies. In one case a man, aged 36, who died two days after admission into hospital with obscure symptoms, of which the most prominent was vomiting, the adrenal bodies were in the condition typical of Addison's disease. No tubercle bacilli were found in the caseous matter. The skin was not notably pigmented as observed after death. In the second case, the patient was a woman who presented some pigmentation of the abdomen and the inner sides of the thighs; the pineal body was cystic and as large as a cherry. The adrenal bodies were enlarged; microscopically the changes were those of a general fibrosis, with thickening of the arteries and areas of caseation—that is to say, apparently in an early stage of the change characteristic of Addison's disease. Sir William Gull had suggested that changes might be found in the pituitary body as its structure so much resembled that of the adrenal bodies; and as the structure of the pineal and pituitary bodies was similar, he showed the specimens, though comparative embryologists held that the pineal body was homologous with the vertex-eye of lacertilians, so that the concurrence of disease of the adrenals and a cystic state of the pineal body was probably merely a coincidence.

Included Ovum.—Dr. SEYMOUR TAYLOR showed a specimen of included ovum taken from a male infant aged 11 months. The tumour was situated behind the stomach in the median line and lying on the first and second lumbar vertebræ. It was the size of a duck's egg, and showed signs of a rudimentary vertebral column with coccyx, spinal cord and meninges; there was also a dense mass of fat. There was a skin covering, rudimentary limbs and pelvis, and vernix caseosa. These features indicated the developmental condition of the fœtus at the tenth or twelfth week.—Dr. WALTER GRIFFITHS thought that this case was rather an example of acardiacus than of anencephalus. The unusual degree of development depended on its being contained in a host which lived for nearly a year.—Mr. STEPHEN PAGET referred to a recorded case of fœtal tumour of the hard palate as showing that the condition described by Dr. Taylor was not necessarily due to invagination.—Dr. PYE-SMITH said that he believed that the occurrence of included embryos could only be accounted for by some theory of true included ovum, which had found its way into the pleuro-peritoneal cavity. The possibilities of transference were very great at an early stage of development.

Card Specimens.—Mr. SYDNEY JONES: (1) Malformation of Hand; (2) Large Calculus with hair pin as Nucleus.—Mr. FENWICK: Finger-shaped Calculus.—Dr. HERRINGHAM and Mr. D'ARCY POWER: Sarcoma of Brain and Spinal Cord.—Mr. SHATTOCK: Microphthalmos.—Dr. HARRINGTON SAINSBURY: Occlusion of Coronary Arteries in Angina Pectoris.—Dr. HEWETT: Tuberculosis of Uterus.—Dr. HADDEN: (1) Cirrhosis of Pancreas in Diabetes; (2) Tubercular Ulceration of Trachea; (3) Carcinoma of Cæcum.—Dr. PASTEUR: (1) Lung in Chronic Pleurisy; (2) Organs from a case of Addison's disease.—Dr. PITT: (1) Multiple Erosions of Stomach after a burn; (2) Ascending Nephritis leading to local scarring of Kidney.—Mr. REGINALD HARRISON: Urinary Organs from a case of Bilharzia Hæmatobium.—Mr. T. SMITH: Hypertrophy of Mammary Gland with Adenomata.

MEDICAL SOCIETY OF LONDON.

MONDAY, DECEMBER 6TH, 1886.

Mr. R. BRUDENELL CARTER, F.R.C.S., President, in the Chair.

On the Advantages of Gymnastic Exercises in the Horizontal Position, in the Treatment of Lateral Curvature of the Spine.—Mr. WILLIAM ADAMS read a paper on this subject, in which he recommended a combination of the various systems of treatment such as recumbency, muscular exercises or gymnastics and mechanical support, in place of relying upon any one system exclusively. The degree in which they were combined must vary according to the case, age, and other circumstances. For gymnastic exercises in the horizontal position, he had recently employed an improved exercising plane, made by Mr. Ernst, at his suggestion; this apparatus he exhibited to the Society. The plane was six feet in length, and made on an incline, having a sliding board, half the length, fitted with pulleys, and movable up and down the inclined plane in grooves at the side. The exercise consisted essentially in the patient drawing himself up the inclined plane, while the body was resting on the sliding board or movable stage. This movement might be repeated several times, say from five to ten times a day at the commencement, with intervals of rest, and gradually increased, but always avoiding fatigue. Mr. John Shaw was the earliest advocate of horizontal exercise, and gave an illustration of an exercising plane, in his work on the subject, dated 1823. This was modified by Amesbury, but the plane exhibited comprised Mr. Shaw's plane, with several useful appliances for special exercises. By a combination of recumbency and gymnastic exercises, and the addition of mechanical support in some form best adapted to the requirements of each case, deformity might be remedied in the earlier stages, and its progress arrested.—Mr. EDMUND OWEN expressed some disappointment with the paper. He thought the use of mechanical supports tended to prevent the growth of muscles, and preferred rest and proper exercise carried on under surgical supervision.—Mr. BERNARD ROTH said that the methods advocated by Mr. Adams were neither new nor useful.—Mr. JAMES BLACK mentioned two cases which had been markedly benefited by postural treatment and rest.—Mr. WALTER PYE said that it could not be doubted that cases did exist which could be treated only by mechanical support, and therefore that it would not be justifiable to discard the treatment entirely.—Mr. BAKER and Mr. BENHAM took part in the discussion, and, in reply, Mr. ADAMS maintained that in many cases where structural changes had taken place in the vertebræ, the treatment by muscular exercise was altogether inadmissible.

On a new method of Performing Excision of the Knee-Joint.—Mr. H. ALLINGHAM read a paper on a new method of performing excision of the knee-joint. The joint was opened by a long vertical incision, and the patella divided into two lateral halves, which, together with the soft parts, were slipped to the sides of the joint; the crucial ligaments having been divided, the joint was firmly flexed, and a slice removed first from the femur, and then from the tibia; the lateral ligaments were not divided. The whole surface of the joint, and the synovial pouches were then cleared of synovial membrane; the patella, if only slightly diseased, was scraped, and the two halves brought together and sutured; if much diseased, it could be shelled out of the entire quadriceps tendon without destroying the connection of the muscle with the ligamentum patellæ, and the split tendinous expansion, together with the split ligamentum patellæ, could be brought together with catgut-satures. Drainage-tubes were inserted through suitable posterior counter-openings, and the wound closed with separate sutures. The operation must be performed with antiseptic precautions. Mr. Allingham claimed that by this procedure the joint was more thoroughly opened to inspection at the operation; that dislocation of the tibia backwards after the operation was prevented; that the undivided quadriceps antagonised the hamstrings; that progression was better for the same reason, and that the prospect of obtaining movement was greater.

CAMBRIDGE MEDICAL SOCIETY.

FRIDAY, NOVEMBER 5TH, 1886.

J. B. BRADBURY, M.D., President, in the Chair.

Pseudo-hypertrophic Paralysis.—Dr. BRADBURY showed a boy, aged 12, from Castle Hedingham, two first cousins of whom were said to have died with this disease. In 1881 a tendency to fall frequently when running downhill was observed, and he was unable to get up off the floor when in a sitting posture. His intellect has gradually been getting weaker, and his eyesight has been failing for the last three months. He is said to have had large calves since birth. His appearance is fairly healthy, but he complains of weakness in his legs,

and pain in the back on sitting up, and walks with a swinging movement of his body from side to side. When placed on the floor he pulls himself up with his hands or climbs up his thighs in the characteristic fashion. He stands on his toes with his heels off the ground, and the belly arched forwards. The deltoids, erectores spinæ, latissimi and the chondro-sternal portion of the pectorals are atrophied; the gastrocnemii and latissimi do not react to the faradic current. Sensation is good, but the tendon reflexes are absent. The optic discs appear normal, but there is slight internal strabismus when reading. Urine normal.—Mr. MARTEN showed for Dr. MCALISTER a boy, aged 10, who was suffering from the same disease.—Dr. BRADBURY remarked that his case was a very typical one, the condition of the muscles, gait and movements being quite characteristic.

General Sarcomatosis; Death from Acute Myelitis.—Mr. LAURENCE HUMPHRY related the case of a gardener, aged 19, single, who was admitted into Addenbrooke's Hospital on July 14th, 1886. He had always enjoyed good health until the present illness, and there was no history of heritable disease in the family. The present illness commenced about the beginning of June, 1886, with pain in the loins, and weakness in the legs; he had to give up work, but was able to walk about. The patient on admission was pale and weak, and had evidently lost flesh; he complained of aching pains in the knees and hips. The evening temperature was 102°, the morning 98°, and there were slight sweats. In the right submaxillary region was a freely movable swelling about the size of a walnut, which he had hardly noticed. Four days after admission the legs became suddenly numb and powerless, and the urine had to be drawn off by catheter. A few hours after, he suffered from severe girdle pains, at the level of the umbilicus. On July 19th there was a zone of hyperæthesia at the umbilicus, and more or less complete loss of sensation from this downwards. The bowels acted unconsciously. The symptoms now all pointed to sudden compression of the spinal cord and rapidly ascending myelitis. During the day a crop of subcutaneous sarcomatous nodules, with flat tops and a surrounding zone of redness, appeared on the abdomen and chest. There was copious sweating, and the temperature varied from 98° in the morning to 104° in the evening. The subcutaneous nodules increased in number, and extended to the scalp, but there were none larger that a sixpence. The tumour in the neck also increased considerably. The patient became gradually weaker and more drowsy, and died on August 18th.—Mr. J. GRIFFITHS gave the account of the *post mortem* examination. The tumour in the neck was beneath the sterno-mastoid muscle, and was sarcomatous, of the small round-celled variety. There were numerous flattened growths of small size on the outer surface of the dura mater along the longitudinal sinus and also on its inner surface in front of the fissure of Rolando. On the inner surface of the 7th, 8th and 9th dorsal vertebræ there was a mass of new growth so thick as to produce evident compression of the corresponding part of the cord. The spinal cord below the mid-dorsal region distended its membranes, and below the seat of compression was soft and granular-looking. There were small secondary nodules on the pleura and pericardium. In the kidneys were small secondary growths chiefly in the cortex, and in the medulla were numerous small abscesses surrounded by well-marked congestion. The ureters and pelves were thickened and inflamed. The bladder was thickened, and the inter-muscular connective tissue much increased. The small abscesses in the kidneys contained micro-organisms, and minute embolic abscesses were found commencing in the liver and walls of the heart. The vessels supplying the softened area in the cervical region were found to be plugged with the same bacteria. All the secondary growths and subcutaneous nodules had the same structure as the tumour in the neck.

Death following soon after Washing out a Dilated Stomach.—Mr. MARTEN brought forward the case of a patient who was admitted into Addenbrooke's Hospital, under Dr. Bradbury, for stricture of the pylorus. He was 48 years old, and seven years previously had been an in-patient, with symptoms of pyloric ulcer. His stomach was now much dilated, and he suffered from flatulence, vomiting, pain, and increasing weakness. He vomited large quantities of frothy fluid, containing sarcinæ. Ten days after admission, it was decided to wash out the stomach. Soon after passing the tube into the stomach the patient became very faint, so it was withdrawn. About two hours afterwards, he complained of stiffness in the jaws, with inability to open the mouth, and rigidity of the arms, which were strongly pronated and flexed, the thumbs being turned into the palms. He was conscious, and sweating profusely. The rigidity spread to all the muscles of the limbs and trunk, and the temperature rose to 103.4°. He became pulseless and livid, the temperature rising to 107.2° before death, which occurred six and a half hours after washing out the stomach. *Post mortem* examination showed a simple stricture of the pylorus with the scar of an old ulcer, and a much dilated stomach. There was no injury or abrasion of the mucous membrane. The other organs were healthy, and no lesion of the brain was discovered. Mr. Marten said the fatal symptoms very closely resembled tetanus, although no wound of any kind could be found to induce it. The symptoms were not characteristic of strychnine poisoning, and the patient had no opportunity of obtaining any.

Scirrhus of Stomach.—Mr. LAURENCE HUMPHRY showed a case of schirrus of the stomach in the early stage.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, NOVEMBER 25TH, 1886.

DR. CLEAVER, President, in the Chair.

Opium in Maniacal Excitement.—Mr. B. WALKER related a case of an old lady, aged 84, who became so violent, that the assistance of three persons was needed to keep her in bed, and preparations for removal to an asylum were made. Eleven hours' sleep followed the administration of one grain of opium. The patient's mind was restored.

Cases in Midwifery Practice.—Mr. W. MAKEIG JONES related two cases from midwifery practice. 1. Large thrombus of right labium in a young primipara. Evacuation of a pint of clot was followed by severe eclampsia, and suppression of urine. The patient made a good recovery. 2. Fatal hæmorrhage. In this case, a ruptured artery in the vagina gave rise to fatal hæmorrhage in less than an hour after labour in a multipara.—Remarks were made by the PRESIDENT, Messrs. KNIGHT, WALKER, CHEESEWRIGHT, Drs. GWYNNE and ROBERTS, and Messrs. PYE-SMITH, GARROD, and KILHAM.

Iodoform Poisoning.—Mr. KILHAM related a case of iodoform poisoning in a girl aged 15, who took four drachms stirred in water. When seen two hours later, the skin was cold and pale, and she was trembling; the pulse was feeble. The stomach-pump was used until iodoform ceased to come up, and then glycerine, milk, and a little brandy were administered.

Poisoning by Cucaine.—Mr. KILHAM also related the case of a male, aged 30, who took 4½ grains of hydrochlorate of cucaine. In twenty minutes, he was seized with severe pain in the stomach and throbbing in the head, loss of sight and of power in the legs, with incoherence of speech and confusion of ideas. Severe vomiting followed, with cramps in the stomach and legs, very profuse perspiration, intermittent action of the heart, cyanosis of the face, and a feeling of suffocation; then ensued severe prostration, shivering, and coldness of the skin, which passed off in about three hours, but prostration and vomiting lasted all the next day. Thirty-six hours after taking the cucaine, he began to lose taste, and had a leathery feeling in the mouth, and tingling of the fingers. The treatment consisted in emetics and stimulants.—Remarks were made by Mr. SNELL, Dr. ROBERTS, Mr. JONES, and Mr. PYE-SMITH.

GLASGOW MEDICO-CHIRURGICAL SOCIETY: SURGICAL SECTION.

FRIDAY, NOVEMBER 19TH, 1886.

A. PATTERSON, M.D., Vice-President of the Section, in the Chair.

Corrosive Sublimate Dressings.—In resuming the discussion on Dr. Caldwell Smith's paper, Dr. FLEMING showed to the Society the bichloride dressings which he employed, and the method of applying them. They consisted of gauze; one coloured blue was prepared by immersion in a solution made as follows: Corrosive sublimate, 1 part; ammonium chloride, 1 part; water, 250 parts; the other, coloured red, was immersed in a solution differing from the above, by containing 1-5th part of glycerine. After immersion, the gauze was dried. In employing these, the red gauze, in a double layer, was dipped in a watery solution of the bichloride, and then applied to the wound. A strip of the same gauze might be employed for drainage. Outside this red gauze the blue gauze was applied. The glycerine in the red gauze lessened the adhesion of the dressing to the wound, and, when moistened, was readily removed. Dr. Fleming believed that there was formed at the point of contact with the wound a film of "serum sublimate," under which, as under a scab, the healing process occurred. He did not use the spray.—Dr. H. E. CLARK's dressing differed from Dr. Fleming's in two points: it was uncoloured, and chloride of sodium was employed to facilitate solution. With this dressing he employed naphthaline. The use of the spray was reserved for treatment of very serious cases, and as an additional precaution.—Dr. JOHN DOUGALL directed attention to the literature bearing on the antiseptic powers of corrosive sublimate, and showed that Koch was not the first who discovered its relatively high position as an antiseptic. Waterton, eighty

years ago, used it for preserving skins; Kyan, for preventing dry-rot in timber; and Dr. Ure, for embalming purposes. Twenty years ago, Dr. Angus Smith compared its powers with those of other alleged antiseptic agents, and in 1870 and two succeeding years, Dr. Dougall published the results of experiments which showed that, when added to a putrescible fluid, organisms did not appear for 182 days, whereas, with carbolic acid, they appeared in 26 days. When applied to a wound, the sublimate was not decomposed but combined with the lymph and might, according to the quantity of lymph, be either in an insoluble condition, or in solution, and, therefore, capable of being absorbed.—Dr. HECTOR CAMERON used the spray in opening abscesses connected with thoracic and abdominal cavities, but, for recent wounds, he had employed sublimate dressings with good results. In excision of the knee-joint in children, the first dressing was frequently undisturbed for five weeks, by which time the wound was healed, and the bones united. Latterly, he had tried mercuric cyanide.—Dr. BEATSON observed that the constitutional condition of the patient had to be considered in deciding upon the best dressing materials for the case.—Dr. MACEWEN thought Dr. Smith would get still better results if he used the dry sublimated dressings, instead of lint dipped in a watery solution. He (Dr. Macewen) regarded the bichloride as a dressing which was cheap, easily used, and gave excellent results. The results were not better than he obtained under the carbolic gauze, but the latter was more expensive, and required to be changed more frequently. In his last forty consecutive cases of primary amputation, excluding those where death occurred within forty-eight hours after admission, the wounds healed under the dressing of wood-wool pads applied after the completion of the operation. Occasionally, there might be found, upon removal of the dressing, a small spot of granulation-tissue.—Dr. ALEXANDER PATTERSON said the discussion had been most interesting, and those who had spoken had obtained excellent results with the use of the bichloride. There seemed to have been no failure and no deaths. He was still old-fashioned enough to use the spray and the carbolic gauze-dressing, and he obtained satisfactory results. His operation-book showed that, from May 1st to that day, he had performed 137 operations, with only one death.—Dr. SMITH replied.

Card Specimens.—Dr. BEATSON showed the parts illustrating the Common Intracapsular Fracture of the Neck of the Femur, and of Fracture through Anatomical Neck of Humerus, from the same patient and on same side of body. The articular surface on the head of humerus was tilted round, so as to be in contact with the upper end of the lower fragment.

ACADEMY OF MEDICINE IN IRELAND: MEDICAL SECTION.

OPENING MEETING, FRIDAY, NOVEMBER 19TH, 1886.

JAMES LITTLE, M.D., President, in the Chair.

President's Address.—The PRESIDENT gave a short address on some of the circumstances which have prevented a precise knowledge of the action of medicines.

Narcolepsy.—Dr. A. W. FOOT read a paper on Narcolepsy (so called by M. Gélineau in 1880), and narrated the case of a youth, aged 18, who had been under his observation for three or four years, during which time he was subject to sudden attacks of morbid somnolence, which came on whether he was sitting, standing, walking, driving, eating, or playing the piano. He had no tonic or clonic spasm, retained common sensation, and did not lose consciousness. His personal history was good, but he came of a neurotic family. No treatment availed to relieve him. Dr. Foot referred to two other cases which had been observed in Ireland by Professor Macnamara and the late Dr. Graves; and concluded by suggesting that the word hypnolepsy would be more correct than narcolepsy; that this condition was quite different from the sleeping sickness of Western Africa; and by pointing out the distinction between it and epilepsy.—Dr. HENRY KENNEDY said that, in Simpson's Hospital, he had frequently observed persons, more or less advanced in life, showing a tendency to fall asleep under unusual conditions—for instance, at dinner. He considered this tendency to be due to the blood being overloaded with the purest kind of fat, as described by the late R. Smith.—Mr. CORLEY mentioned a case which he had had under treatment that tallied in every respect with the description of the disease given by Dr. Foot. After death, a small abscess, twice the size of a walnut was found in the posterior right lobe of the cerebrum; and no doubt the symptoms depended upon that. The striking similarity in the symptoms described by Dr. Foot indicated that some part of the cerebrum was affected in his case also.—Dr. C. J. NIXON had recently seen a member of his own profession who was suffering from attacks like angina pectoris. The gentleman in question, who was close on 60, had been for several years, whilst in the Army Medical Service, subject to sudden attacks of periodic sleep at extraordinary times, even on duty. The intervals between the attacks greatly decreased, and he was obliged to leave the service.—The PRESIDENT said he had seen only one such case—that of a powerful young man, aged 27 or 28, who managed successfully a great business in the city. He was of a family in whom neurotic affections abounded consequent on close intermarriage, his father and mother being first cousins. He had frequently fallen asleep in the train, while several times he had, for the like reason, fallen off his horse. At the same time, his intellectual faculties were unimpaired. Dr. Little had prescribed strychnine, but the attacks had not subsided. The gentleman now dined in the middle of the day, and took half an hour's sleep after dinner; and thus he was enabled to resume business for the rest of the day. He was a teetotaller and a non-smoker.—Dr. KNIGHT and Mr. A. BENSON also joined in the discussion.—Dr. FOOT replied. He was aware of Smith's observations on fat and free oil, which that writer had used, not in connection with extreme tendency to sleep, but with fatty degeneration of the viscera, and thus he had described free oil flowing out of the body. Sleepiness at meals had nothing to do with narcolepsy. A good dinner, a warm fire, and a comfortable chair, invited sleep. Following Gélineau and Dana, he had used the word "narcosis." One of Gélineau's patients, who was a soldier, had started a nice medico-legal question—"What would become of me," he asked, "if the sleep attack came on me whilst on sentry or on guard? I would be shot, and not for any fault of mine."

Myxœdema.—Dr. C. J. NIXON read a paper on a case of myxœdema, having previously exhibited the patient.—Dr. M'SWINEY said the paper, as also a recent case operated on by Sir William Stokes, proved that the crucial experiments performed by the surgeon often disproved theoretical conclusions which were the result of mere observation.—Sir WM. STOKES said his case was that of a female with a rapidly increasing bronchocele. Owing to the mechanical effects of pressure of the tumour, he deemed it necessary to relieve her. The operation consisted of two parts. He first removed the left lobe of the thyroid gland as the larger of the two. The wound healed, and the patient perfectly recovered. After a considerable interval, she presented herself again for admission into hospital. The tumour on the right side having at first undergone remarkable diminution, increased rapidly, and again gave rise to the serious symptoms referable to mechanical pressure. Thereupon, he removed the remaining lobe of the thyroid. The wound completely united, and the patient seemed to go on favourably till the remarkable symptoms detailed in Dr. Nixon's case supervened—pallid face, puffy eyes, and swelling about the wrist and ankles, which pitted on pressure, while the intellect became impaired. At length she had convulsive, somewhat epileptiform seizures, respirations became difficult, and she expectorated large quantities of mucus; finally she died from exhaustion. He had little doubt there was a distinct connection between the complete removal of the thyroid gland and the symptoms which subsequently developed. Still he would not take a gloomy view of the future of thyroidectomy. There had been a large number of cases of removal of the thyroid gland unattended by the development of myxœdema.—Dr. C. J. NIXON replied that Sir William Stokes's case bore out the views which he had expressed. In those cases of complete removal alluded to, there might have been supernumerary glands, which would take on the function of the extirpated thyroid; but Professor Horsley warned surgeons against the removal of the entire thyroid gland. He witnessed a remarkable case in which pressure became so distressing as to render operative procedure advisable. His colleague intended to remove the gland; but he found such difficulty that he contented himself with the division of the deep cervical fascia over it, which sufficed to allow of the gland coming forward, and thus pressure was taken off the trachea. The curious result of the relief of pressure from the gland was, that it underwent extremely rapid atrophy, and the goitre cured itself.—The Section then adjourned to December 17th.

TRICHINOSIS.—Several cases of trichinosis have occurred recently at Rupersdorf, in Germany. Two women have died from the disease, and many inhabitants of the town are seriously ill from the same cause.

MILITARY SUICIDES.—A remarkable increase in the number of suicides committed by German soldiers is reported. In the Prussian, Würtemberg and Saxon corps, and in a Bavarian brigade, the total number of suicides in May was 23, in June 25, in July 22, and in August 21. At the beginning of the year the number of suicides was less considerable. In the first eight months of this year, the number of suicides in the corps above mentioned was 149.

REVIEWS AND NOTICES.

DISEASES OF TROPICAL CLIMATES. Lectures delivered at the Army Medical School. By WILLIAM CAMPBELL MACLEAN, M.D., C.B., Surgeon-General, late of H.M. Indian Army, formerly Member of Senate of the Madras University, Superintendent of Hyderabad Medical School, and Professor of Military and Clinical Medicine in the Army Medical School, Netley. London: Macmillan and Co., and New York, 1886.

WE do well to remember that the greatest enemy of the British soldier is disease. It is more destructive than all the weapons and modern inventions of warfare put together. In the wars that occurred between the years 1793 and 1815, the British Army lost eleven times as many men from disease as from injuries inflicted by fighting. At Walcheren, in 1809, the deaths in the British force rose to the proportion of an annual mortality rate of 640 per 1,000, among the private soldiers—an average which has happily seldom if ever been exceeded in the annals of our army. During the American War of the Rebellion, lasting from April, 1861, to May, 1865, the loss to the army of the Union, under the heads, "killed in battle," and "died of wounds and injuries," amounted to 110,030, whilst the total number of deaths from disease was 224,586. It has been calculated that the sick of the British army at Varna, in 1854, were in the proportion of 140 per 1,000, or nearly one-seventh of the whole force, and this before a soldier of Lord Raglan's army had fired a shot or seen the enemy. Keeping these facts in view, we are in a position to appreciate the important bearings of military medicine, and of the clinical study of the diseases to which soldiers are liable. The work now before us treats of tropical diseases—those giants of destruction which are continually crippling our national strength, and which have often stood between us and victory. Professor Maclean has produced a work of unquestionable importance, and of great merit, which will assuredly take an honourable place by the side of the valuable writings of Martin, Morehead, Moore, Chevers, and Sir Joseph Fayrer. Within the compass of a small volume, extending over little more than 300 pages, we have a masterly summary of a subject which is confessedly wide and difficult. Those who know how difficult it is, and how scattered is its literature, will best be able to appreciate the irksomeness of the task of condensing such a subject within anything like reasonable limits. This arduous undertaking has been admirably accomplished by Dr. Maclean, with a skill which can only come from wide knowledge, varied experience, complete practical familiarity with his subject, powerful grasp of thought, and a facility of lucid exposition such as is possessed by but few men. Almost every page of the work before us abounds with valuable clinical teaching, based on the author's long and interesting experience in India, Burmah, and China, and on his thorough knowledge of the history, causes and consequences of the diseases to which the British soldier is exposed, and of the conditions by which he is surrounded in barracks, camps, hospitals, on the march, and in the actual fighting line. We feel sure that it must greatly facilitate scientific study at the Army Medical School to have such useful handbooks as this, which is lucid and accurate without being in the least shallow or flimsy, and which simplifies an abstruse subject without detracting from its dignity and value. Although so short, the work before us takes cognisance of a large number of subjects of extreme importance; and, in doing this, it is always thoroughly practical. The diction and literary style of the book are exceptionally vigorous and forcible, making us feel that we have to do with a powerful, eloquent, and earnest teacher. The clinical descriptions of the phenomena of disease are singularly true to life. The subjects of which our author treats are the following:—Malaria, intermittent and remittent fevers, enteric fever, febricular and relapsing fever, dengue, yellow fever, insolation, diarrhœa, dysentery (acute and chronic), cholera, diseases of the liver, beri-beri and guinea-worm. Throughout the work there is a judicious avoidance of fruitless controversy; and points on which the world of science is still divided in opinion are set forth with an impartiality that bespeaks a mind more ready to ponder and be patient, than eager blindly to accept the possibly too hasty generalisations of modern pangermists, or unduly to exaggerate the claims of an exclusive microbic pathology. Whilst, however, our author carefully avoids wasting time over fruitless theories, on which too much ink has already been spilt, we must do him the justice to say that he is always ready with a bold and fearless assertion of his own opinion, based upon wide experience and honest research. His work has further the great merit of not being over-loaded with ill-digested figures and statistics; and we are glad to say that we find ourselves in perfect accord with our author on most points of practical importance, whilst ground enough remains for such differences and shades of opinion as favour, rather than retard, scientific progress.

The very important fact is recorded by Dr. Maclean that, whereas formerly the mortality of the European army in India was something like 69 per 1,000,—in 1882 the death-rate for all India was only 13.07 per 1,000 from all causes. In Bengal, for the same year, it was only 12.07. In Bombay it was only 10.37; and in Madras, for the year 1883 (a cholera year) it was only 10 per 1,000. Such results as these are of great moment to the army and to the nation,—proving as they do, beyond cavil or dispute, that army hygiene and military medicine are together doing really good work. In saying this, we have no desire to rest satisfied. There remains much more to be done than we have either space or time to allude to. Yet we must not ignore what has been achieved, or depreciate its value. We think our author states the case very mildly when he says that, after the largest possible allowance has been made for the beneficent operations of sanitary reform, a share in the splendid results may reasonably be claimed for the successful and improved treatment of disease. We are the more strongly confirmed in this opinion when we think of the old days, when asthma was cured by wood-lice, and fevers were checked by tincture of vipers; when bleeding was the sheet-anchor in the treatment of cholera; when "to forego a trial of the lancet was reprehensible"; when, in the course of a short illness, a certain Mr. E. "was bled twice, and had seventeen dozen leeches applied"; when, in a single case of tropical disease, Chisholm gave 6,000 grains of calomel, which he was pleased to call "the Samson of the Materia Medica"; when "weak and exhausted stomachs were rendered hopelessly rebellious with waggon-loads of Peruvian bark"; when in the practice of Dr. Jackson, ten pounds of blood were taken in twenty-four hours for the cure of an adynamic fever; when extract of saffron was considered a perfect specific for most diseases by Bontius, who called it "the anchor of hope"; when Admiral Watson, the gallant captor of Chandernagore, was declared to be much more safe in the line of fire from the French batteries than in the hands of his physician; when Lind talked enthusiastically of "the advantages of a gentle salivation of only fifteen days;" when such was the approved treatment of splenic cachexia; when "four hundred soldiers, afflicted with scurvy, took mercury and died, in consequence of the salivation it produced." Such was the past. Bontius, Chisholm, and Lind were leading physicians in their day. We believe that they loved their profession and worked zealously in its cause, and for this we honour them. But, with all respect be it said, they did not know how to treat tropical diseases. At least, most persons in these days, suffering from a severe malarial remittent fever, would vastly prefer to be treated in accordance with the principles approved by Maclean, Chevers, and Fayrer, than after the fashion of Lind, Chisholm, and Bontius. They lived according to their lights, in or about the days—"the good old days," as some would call them—when military hospitals were hot-beds of pestilence and putrid fevers; when their inmates lay three or four in a bed, some of them not unfrequently suffering from typhus; when hospital comforts were not dreamt of, and hospital clothing was not supplied; when chartered troop-ships were small, overcrowded, unseaworthy, and ignorantly commanded; when "barbers followed armies in the exercise of their calling, as shavers, hair-cutters, and practitioners of surgery;" when the military surgeon ranked with the drummer, received one shilling and sixpence a day—"the same as trumpeters and giudons" (heralds), and varied his sterner professional duties by "shaving and other feats of barbery." Those must, indeed, have been terrible days for the soldier, when clinical instruction was unknown; when erysipelas and hospital-gangrene were seldom absent; when there was no thought of the science of hygiene; no field hospitals or transport; no nursing system; no antiseptics; no conservative or bloodless surgery; when the wounded, even on fields of victory, were left to perish uncared for, and prisoners of war were despatched without a thought of mercy.

Dr. Maclean's book concludes with a "Farewell Address" (to his pupils at Netley), which is at once dignified and very touching. In days of old, the Spartan soldier, after the battle, took pride in bringing forth his shield, as a proof that he had faced his enemy, and bravely stuck to his weapons. So Dr. Maclean, after long and hard service, with becoming pride and modesty, produces ample proof that his back was never to the foe, and that he still believes in and loves to handle his trusty weapons. On vacating the important professorial chair which he had held so long, he said: "I can only honestly claim to have done my best to acquit myself of my great responsibilities, and I can with truth say, that a consciousness of those responsibilities has hardly ever been absent from my mind during every waking hour of my life since I undertook them." Many hundreds of Professor

Maclean's former pupils, now serving with distinction and honour, at home and in far-off lands, can heartily testify to the strict accuracy of this statement; and we do not wish for anything better than that they, in their day and generation, may prove themselves to be men of the same fibre as the distinguished author of the excellent work which we have been considering—whose first commission in the army, be it noted, was dated April 15th, 1838; whose actual service in the East extended over more than twenty-two years; whose name has ever since been intimately and honourably associated with the origin and growth of the Army Medical School, where he has been a power for good during a quarter of a century—ever commanding the esteem, confidence and affection of his pupils. During the same long course of years, he has presided over the Medical Division of the Royal Victoria Hospital at Netley, where, with irrepressible ardour and unflagging energy, he has worked in the interests of the British soldier. His labours and their results have amply vindicated the wisdom of those who placed him there; and, long though his period of toil has been, he has certainly not yet outlived his usefulness. After no less than forty-seven years of splendid service to the State, and of unswerving devotion to duty, this veteran of science and war, is, we are glad to think, still active in body, young in feeling, clear of head, stout of heart, and able to watch, with unabated interest, the work of the many army surgeons of the present day, whose ambition it is to study the comfort and happiness of the soldier, successfully to treat the diseases to which he is exposed in the course of service, and thereby to add to our national strength.

We hope it may never be forgotten that it is only by judicious and steady improvements in military administration, by a generous encouragement of the science of military hygiene, and by carrying out the teachings of such works as the one we have now been considering, that we can ever hope to have an army in such a state of health, training, and efficiency, that it might be entirely annihilated, but never driven back.

In corroboration of the truth of the statement with which the present article opens, the following words, from the report of the commission appointed to inquire into the sanitary state of the army in India, may be here appropriately quoted: "It is impossible to read the losses of particular regiments in the war of the Mutiny without being struck by the inextinguishable valour of the British soldier; but it was disease, and not the enemy that killed him." With this sentence may be coupled another not less memorable: Napoleon, on his death-bed, said to Surgeon Archibald Arnott, of the 20th Regiment: "You should be kind to them, for there are not better soldiers in the world than the British infantry."

MANUAL OF PATHOLOGICAL HISTOLOGY. By CORNIL and RANVIER. Second edition, re-edited and enlarged. Translated, with the approval of the Authors, by A. M. HART. Vol. II., Part II. London: Smith, Elder and Co.

THE final instalment of the translation of this standard French text-book, recently published, includes the special pathological histology of the liver, peritoneum, pancreas, spleen, thyroid gland, suprarenal capsules, genito-urinary organs, mammary glands, and skin. Hence this volume includes departments of morbid anatomy of importance and interest to all of the three great sections into which the profession is divided, namely, to physicians, surgeons, and gynæcologists.

The entire work has an advantage which, unfortunately, cannot be claimed for many of our own most popular text-books. It has been prepared by the authors when in the fulness of their fame, and not when they were still only seekers after scientific celebrity. In this country, when the author of a standard text-book gets on in the world, he is too apt to leave later editions to the care of colleagues often as young as he was when he first wrote the work. This bad system is rare in French medical literature. Cruveilhier was justly noted for the conscientiousness with which he revised all the editions of his great work, and MM. Cornil and Ranvier deserve all credit for the same care in respect to their manual. Nor is their revision merely literary; the matter is revised from the dead-house, the dissecting-room, and the microscope.

The study of the medical dialect of the French language may be of value to the student, but to him science must come first; and as scientific study is impeded by difficulties in translation, the aid of the translator is required. With regard to this manual, the task has been ably performed. The chapters on the liver and kidney will be of great value to the pathologist and to the physician. They are models of the manner in which an account of the pathology of special organs should be written. The normal anatomy of each organ is carefully detailed, and not dismissed in a few lines. The naked-eye and microscopic appearances of diseased parts are described minutely but clearly.

A very good feature in MM. Cornil and Ranvier's work is the judicious blending of references with the expression of their own opinions. English writers are too apt to attach the chief importance to the authorities whom they quote, and often give their own opinions almost apologetically. German authors pile their references into formidable strata of small print interposed between the chapters. Our authors' references are made so as to indicate the opinions of others, and not either to bolster up their own, or to turn the reader's attention to every brand-new article on pathology. We may single out the history of albuminous nephritis (page 492) as a good example of skilful handling of copious references.

In the chapters on diseases of the genito-urinary system, the paragraphs on the histology of metritis are especially deserving of attention, as they treat of a subject upon which the opinions of practical gynæcologists remain much divided.

The section on the pathological anatomy of the skin, consisting of some 120 pages, and containing 53 engravings, is the most complete exposition of what is known on that subject that has so far appeared. For that reason, this section of the *Manual* demands special notice. The fruitful work done during the last decade in the St. Louis Hospital, and in the laboratory of the Collège de France, is here brought together for the first time in a concise and handy form, whilst the contemporary work in the same field done in Germany and elsewhere, receives ample notice and recognition. Until recent times, our knowledge of the pathological changes in morbid conditions of the skin has been exceedingly scanty, and in no department more than this has the revival made itself felt. French dermatology, resting on a scientific basis, is again rapidly acquiring the eminent position that it occupied so long in the earlier part of the century, and the researches of MM. Cornil and Ranvier themselves have contributed in no small degree to this restoration. To what extent this scientific activity has advanced our knowledge of diseases of the skin, can hardly be appreciated without a perusal of the fifth section of this volume.

The section is introduced by an account of the normal histology of the skin, illustrated by two engravings that deserve study. In one, a vertical section through the epidermis, the deposit of drops of oleidin in the cells of the stratum granulosum is shown in an instructive manner; in the other, migration of lymph-cells into the spaces between the cells of the rete mucosum, in even a very slight form of irritation, is depicted.

The changes that underlie the so-called elementary lesions receive careful treatment. Measles is shown to be a form of cutaneous congestion. In a fragment of skin removed from a patient on the second day of the eruption the vessels were found full of blood, and a few migratory cells were found in the papillæ and in the Malpighian layer and yellow pigment granules in the superficial layer of the papillæ. In sections stained in a partly aqueous, partly alcoholic solution of safranin, small micrococci were found stained red.

The authors recognise as clinically distinct the various kinds of purpura, such as simple purpura, rheumatic purpura, apyretic (hæmorrhagic) purpura (Werlhoff's disease), febrile purpura, and cachectic purpura, but the anatomical lesions, which are minutely described, are dependent more on the degree than on the cause of the disease.

Erysipelas is described as the type of œdematous dermatitis of bacterial origin and the anatomy and micro-organisms of the disease are illustrated in three excellent engravings.

The part played by micro-organisms in various skin diseases receives full treatment, as was to be expected in a work on which M. Cornil's name appears, and their relations to leprosy, phlegmon, and lupus, together with the special relations of the latter disease to tuberculosis, are clearly and concisely stated.

One great charm of the French language is the necessity which it imposes upon the writer of expressing his thoughts clearly. This advantage cannot be claimed by the German language, and English writers can shield hazy ideas behind clumsy forms of literary construction. MM. Cornil and Ranvier write well, and the translator has succeeded in the difficult task of rendering their clear French into good English.

BEQUESTS AND DONATIONS.—Mr. Edward Kelly, of Broadway, Westminster, has given £400 to the Westminster Hospital, and £400 to the Western Dispensary, Rochester Row, in memory of his late wife.—Colonel H. O. Gould has given £100 to Charing Cross Hospital and the Mercers' Company £50 to the Samaritan Fund

NOTES ON BOOKS.

CHRISTMAS BOOKS.

Messrs. Nimmo, of King William Street, Strand, maintain their reputation as the publishers of Christmas books of choice execution and special literary interest, by two books, which they send us this year. One is the ever fresh and delightful *Vicar of Wakefield*. This volume is printed on fine, thick paper, and has a scholarly memoir by George Saintsbury, illustrated by 114 dainty-coloured illustrations in the old-fashioned style. We have not seen for many a day a more pleasant and artistic book, or one more sure of universal admiration as a gift-book. A companion volume in large paper is a translation of Goethe's *Reynard the Fox*, by Thomas James Arnold, with sixty illustrations from the designs of Wilhelm von Kaulbach, and twelve Indian proof engravings by Joseph Wolf. The literature and the art work of Germany are still insufficiently known and appreciated in this country, where we are apt to be impressed chiefly by the scientific and warlike achievements of that country. The illustrations of Wolf are very characteristic, but perhaps a little heavy. Both these volumes belong to the higher class of literary and technical work, and such as we too rarely see in the productions of the English press.

The Religious Tract Society, of Paternoster Row, sends a volume of the *Leisure Hour*, one of the magazines which still maintain a world-wide circulation. It contains excellent articles on subjects such as "The Pilgrimage of Sinai," "Feats of Modern Engineering," "Stories of the English Shires" by Professor Creighton, and Dr. Gordon Stables' spirited story entitled "Summer Rambles in My Caravan." Mrs. Oliphant's novel, "A Poor Gentleman," runs through the volume. The *Sunday at Home* is a family magazine for Sabbath reading. It has a pretty coloured frontispiece, "Youth and Age," a reproduction of a water-colour drawing by Birket Foster; and some other coloured illustrations of remarkable interest, among which should be mentioned that of Mount Ararat, from a painting by Sanskowsky, Tiflis. The chromo-lithograph illustrations are a remarkable feature in this magazine. An excellent book for boys is *The Handy Natural History*, just published by this Society, by J. G. Wood, the well-known author of *Homes without Hands*. It includes 226 engravings, and is not only a most attractive compendium of natural history information, but a book likely to lead boys on to wish to know more of the creatures here so picturesquely illustrated and pleasantly described. The most important of their publications from the artistic point of view this year is a small quarto book entitled *Australian Pictures*, drawn by pen and pencil by Howard Willoughby, of the *Melbourne Argus*. These comprise 107 illustrations of sketches and photographs engraved by E. Whymper and others, as well as a map. The letterpress gives a most pleasant account of the configuration and climate of that great island-continent, of which the population is already nearly three millions. The bird's-eye view of Melbourne gives a forcible impression of the rapid growth and great wealth of that beautifully placed city. The interest which all Englishmen feel in their colonies will be strengthened by books such as these. *The People's Almanack*, price 1d.—a marvel of cheapness—contains sixteen illustrated pages, full of useful information.

Messrs. Cassell and Co., of Belle Sauvage Yard, have forwarded us their ever-welcome volume of the *Magazine of Art* for 1886—a marvel of copious illustration and interesting disquisition on varied art subjects. It is one of the most welcome of monthly magazines, and an interesting volume for the library. The volume of *Cassell's Family Magazine* is well illustrated, and contains a selection of wholesome stories, pleasant chat, and pretty verses. Three Christmas story-books from the same publishers are: *A World of Girls*—the story of a school, with eight original illustrations by M. E. Edwards; *Strong to Suffer*, a sympathetic and interesting story of the Jews, a hundred years after the Christian era; and *Under Bayard's Banner*, a stirring story of the days of chivalry, by Henry Firth, with eight original illustrations by E. Blair Leighton. All of them are pleasant books for Christmas gifts.

Mr. Fisher Unwin, of Paternoster Square, sends us *Prince Peerless*, a fairy-folk story-book of the kind which young people love, and not without a weird interest, by the Hon. Margaret Collier, sympathetically illustrated by the Hon. John Collier. Also a fresh little girls' story, very artistically bound and daintily illustrated, entitled *In the Time of the Roses*, a tale both told and illustrated by Florence and Edith Scannell. The volume of *Boys' Own Stories*, by Ascott R. Hope, is full of scenes of prison life, battles, revolutions, and wild adventure, selected chiefly from famous scenes in history, and, therefore, conveying some instruction, as well as much amusement.

Messrs. Skeffington and Son, Piccadilly, send a very pretty series of books, attractive in technical production, and having all more or less a serious and useful moral underlying a vein of romance and imagination. *My Birthday Present* is a series of original birthday stories for boys and girls from 6 to 12 years of age, with an appropriate illustrated frontispiece for the inscription of the donor and recipients' names. *Just One More Tale* is another collection of short original stories for children from 4 to 10 years of age, a companion to a previous volume, *Please Tell Me a Story*, which has had a remarkable success. The stories are very bright and attractive. *The Little Rick-Burners*, by that popular authoress, Charlotte M. Yonge, is a miniature story with a moral, told in a way that will attract young readers, and issued in a delightfully pretty little volume. *Bound by Fetters*, issued by Messrs. James Blackwood and Co., is a temperance tale illustrating the evils of drink, a fertile subject, which is well treated, and conveys a moral which many people think cannot be too early instilled into the minds of the young.

Messrs. Nelson and Sons, of London and Edinburgh, forward a very handsome volume of copiously illustrated stories and poems for little people, entitled, *Each Little One's*. Its 382 pages are crammed with illustrations, some of singular beauty, and all good. The stories and poems are all very short; they are very numerous, and all by different authors, so that there is plenty of variety. Another attractive volume, of stirring and hair-breadth adventure, is that entitled *Jack Hooper*, by Commander Verney Cameron, R.N. The adventures of the hero at sea and in South Africa will have a thrilling interest for our boys, who will thus acquire an acquaintance with some features of tropical Africa, as described by the author, who claims to be the first man of European blood who succeeded in crossing tropical Africa from East to West. The book is well illustrated with twenty-three full-page illustrations, and altogether it is a most attractive volume, and one which any boy would count a prize.

Messrs. Dean and Co. (160a, Fleet Street) send us a number of cheap children's books of the kind for which they have an old-established reputation. *The Little One's Own Album* contains over three hundred original tales in prose and verse, and over three hundred chromo pictures of scriptural, rural, and domestic subjects. It is a rich mine for the youngsters. *With a Show*, by Charles Du Val, and *A Wizard's Wanderings from China to Peru*, by J. W. Holden, are stories of adventure all over the world by public entertainers, whose enterprise now leads them to most distant places, and gives them strange experiences. A conjuror like Mr. Holden, among the wild tribes of Africa, has, naturally, many curious experiences to relate of modern natural magic brought into competition with the tricks of the native medicine men. *Little T's 'tories for Other Little Ones*, by J. Fayle, are written in verse, and treat themes for the most part well worn with a good deal of freshness. *Memoir of a Cat, by Herself*, written by Lady Herbert, and illustrated by the Baroness Agnes de Tuyll, will please some children, and has the merit of being marvellously cheap (it can be bought for sixpence), attractively bound, and well illustrated.

CHRISTMAS CARDS.

Christmas cards seem to be issued in less variety this year than usual. Messrs. Mansell and Co., of Oxford Street, go out of the beaten track. They do not issue the ordinary Christmas cards intended to be looked at and thrown aside, but their productions have all a permanent artistic value, and are intended as decorations to be retained throughout the year. Among them are some admirably executed permanent photographs on porcelain, mounted as tablets to stand on the table. Some of these are portrait heads, and others permanent photographs on dull porcelain, after the delicate and artistic engravings of Bartolozzi. They have also a set entitled "Beautiful Faces and Figures," facsimiles of crayon drawings, the series being 2s. 6d. in the large size, to 1s. in the small. Also a series of etchings from plates by V. Hine and E. Rischgitz, at the price of 2s. 6d. for each set of six, which are really artistic productions of permanent value, such as their recipients will delight to look upon for many a day. The little "Presentation Folio" gives three pictures of beautiful female heads (2s.).

Messrs. Raphael Tuck and Co. have also some notable productions in their Christmas cards. The chief among them is a chromo-lithographic production of the famous "Ansidei" Madonna of Raphael, from Blenheim Palace, which is now the property of the nation, having been purchased for £70,000 for the National Gallery. It is a reproduction of considerable beauty and fidelity, of one of the most valued art possessions of the nation, and will doubtless be extensively purchased and carefully preserved by many. The same firm issues four etchings by Myers, after Constable, which constitute a small art treasure. A little illustrated book for children of the *Babes in the Wood* is also the pro-

duction of this firm. Altogether they have nigh upon 600 sets, ranging from three to four cards in each set. A novelty, which is gaining increased popularity, is the artistic private card series— little boxes of a dozen cards, illustrated, and leaving space for the name of the sender. The "Visette" Christmas and New Year cards of Mr. J. F. Bennett, 82, Queen Street, Cheapside, carry out the same principle. They consist of some attractive and well executed hand-painted studies of flowers, birds and landscapes on tinted and dark enamelled gilt bevelled-edged cards. These visiting card and autograph novelties are, we believe, in much demand. There is a quiet reasonableness about most of the specimens that have been submitted to our notice which warmly recommends them to sober people who are not always disposed to send Christmas cards of rollicking fun or overstrained sentiment; at the same time the little illustrations of each of the cards is always artistic and attractive.

DIARIES FOR 1887.

DIARIES are among the necessary provisions which we all have to make at the close of the year to prepare for the coming season.

Messrs. Collins and Sons send us their excellent interleaved Shilling Scribbling Diary, showing a week at the opening, very suitable for medical men, and also a Commercial Diary similarly got up. It is a speciality of these diaries that they are printed on a neutral tinted paper, very restful to the eye, and having, therefore, a hygienic value which medical men are not likely to overlook. Their Hanging Diary, with detachable leaves, is in a form which is very useful as a memorandum of daily engagements.

Messrs. Parkins and Gotto issue an excellent Working Scribbling Diary, No. 37, folio size, interleaved with blotting paper, at a shilling, and also a small Book Diary for the desk in green cloth, similar to Letts' diaries, at a shilling, which seems to us remarkably good and cheap, and a useful desk companion. They have also a Monthly Pocket Diary, printed in twelve parts, each month making a little separate book for the pocket. The twelve are sold for two shillings and sixpence.

Messrs. Griffith and Farran (St. Paul's Churchyard) send us "Blackwoods' Medical Call Book" price 1s. 6d. An elongated Table Diary, two days on each page, for registering medical calls, and intended for the use of the general practitioner.

The Religious Tract Society (Paternoster Row) have a Pocket Book, bound in roan, in the old-fashioned style, with folding tuck, which is also a Scripture calendar for 1887, and gives a variety of commercial and other information. Each daily division for engagements is headed with a scriptural text. Their *Young People's* Pocket Book is arranged in a similar manner, and includes a great many memoranda concerning the organisations and engagements connected with children's religious associations.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICINAL SOAPS.

THE Milton Chemical Company of Glasgow has sent us a series of medicinal soaps. The cakes are of various shapes and forms, and contain iodoform, corrosive sublimate, blue gum, and other drugs and chemicals. The blue gum-tree soap, prepared from the eucalyptus globulus, has an agreeable and not too persistent odour. It possesses antiseptic properties, and will be found useful in the treatment of many skin-affections. The "Java-Java" perfumed soap, in balls, is almost transparent, and is well adapted for toilet purposes. Several of the combinations are well adapted to the requirements of medical practitioners, and the soaps generally are well worth a trial. They have evidently been prepared with care, and the selection of the active constituents has been judicious.

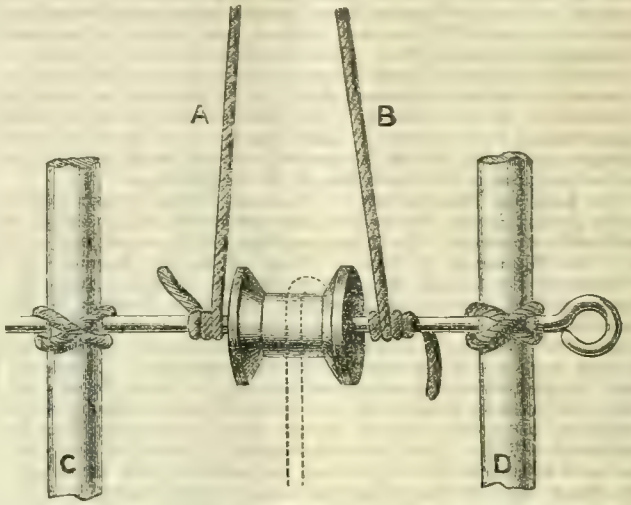
"CARNABYN."

WE have received from Messrs. Hooper and Co., of Pall Mall, a sample of a preparation which they have recently introduced under the registered title of "Carnabyn." It is said to be composed mainly of extracts of malt and meat, with glycerine, in an agreeable and well-selected vehicle. It is recommended by the proprietors in the treatment of the diseases in which these agents are indicated. The dose is from half to a wineglassful three times a day. It is put up in an attractive form.

EXTENSION PULLEY.

[Communicated by the Director-General Medical Department, R.N

THE accompanying sketch illustrates an extension apparatus for fractures, which can be improvised in a few moments from materials to be found in every household; the only requirements being a large kitchen skewer, a cotton reel, and a yard or two of strong cord. This last is attached by clove hitches to the skewer at either side of the reel, and the lines A B secured above to the cross-rail of the bed. Figure of eight seizings keep the skewer in position against the outside of the upright bed-rails, C D.



As the suspension cords are close to the reel, there is no danger of bending the axle, no matter what the weight applied. The position of the extension cord from the limb to the weight is indicated by dotted lines. WM. DIGBY LONGFIELD, Fleet-Surgeon, R.N.

A SIMPLE TEST FOR ARSENIC IN WALL-PAPER.

A SIMPLE and easily-applied test for arsenic in wall-papers has been devised by Mr. F. F. Grenstted. No apparatus is needed beyond an ordinary gas-jet, which is turned down to quite a pin-point, until the flame is wholly blue; when this has been done, a strip of the paper suspected to contain arsenic is cut one-sixteenth of an inch wide, and an inch or two long. Directly the edge of this paper is brought into contact with the outer edge of the gas-flame a grey colouration, due to arsenic, will be seen in the flame (test No. 1). The paper is burned a little, and the fumes that are given off will be found to have a strong, garlic-like odour, due to the vapour of arsenic acid (test No. 2). Take the paper away from the flame, and look at the charred end—the carbon will be coloured a bronze-red, this is copper reduced by the carbon (test No. 3); being now away from the flame in a fine state of division, the copper is slightly oxidised by the air, and on placing the charred end a second time, not too far into the flame, the flame will now be coloured green by copper (test No. 4). By this simple means it is possible to form an opinion, without apparatus and without leaving the room, as to whether any wall-paper contains arsenic, for copper arseniate is commonly used in preparing wall-papers. Tests 1 and 2 would be yielded by any paper containing arsenic in considerable quantities.

VERTIBULAR SELF-ADJUSTING TRUSS.

MESSRS. MAGGS and SON, Yeovil, are the manufacturers of a new inguinal truss. The essential features of the instrument are, that the spring is made of a different curve, so that it can be worn higher up, and comes over the hip-joint; that the pad is attached to the spring by means of a screw fitted loosely thereto, whereby greater play is obtained, so that, with any movement of the body, the pad remains fixed, without any inconvenience to the patient; and that the pads are made of various sizes and shapes to suit the rupture. The truss presents sufficient novelty to ensure it an extensive trial by the large numbers who suffer from this common and disabling malady.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The Issue of the BRITISH MEDICAL JOURNAL now amounts to

13,300 COPIES WEEKLY

which will be found, if tested, to show AN EXCESS of considerably more than a QUARTER OF A MILLION Copies annually over that of any other Medical Journal in Great Britain.

The British Medical Journal.

SATURDAY, DECEMBER 11th, 1886.

THE BRITISH MEDICAL ASSOCIATION AND THE "BRITISH MEDICAL JOURNAL."

RETROSPECT AND PROSPECT.

ON the occasion of issuing our programmes for the forthcoming year, and in a number which usually meets the eye not only of all the members of the Association and of all our usual readers, but also of a large circle of readers in the United Kingdom and the Colonies, outside the membership of the Association, we habitually take occasion briefly to review the progress of the Association and the growth of the JOURNAL during the year, and to refer to any immediate events of interest which foreshadow future change or further development. Now, as for many years past, the record is one of continuing growth, of unchecked development, and of enlarging usefulness. One great object for which the British Medical Association has strenuously laboured for a long series of years has been accomplished during the present year.

MEDICAL REFORM: THE COMPLETE QUALIFICATION.

We need not tell again the story of the long struggles, the courageous effort, the many disappointments, and the persistent labour by which a further advance in medical reform has been achieved through the instrumentality of the British Medical Association, and the agencies which it can command, in the face of much determined opposition in high quarters, and of obstinate resistance on the part of many corporate bodies which felt, but wrongly felt, their interests to be threatened. Two great objects the British Medical Association has held in view, and we have steadily maintained them as paramount to all other considerations. The one was the declaration of a parliamentary standard of minimum qualification, which should include adequate examination in medicine, surgery, and midwifery. Until a recent time, it was within the power and was the practice of more than one corporation to put upon the *Register*, with the full power of practice in all departments, gentlemen who had been only partially examined, and, whatever their qualifications might be, had not been tested in all the elements of everyday practice. It is, indeed, so many years ago, that ordinary memories will have forgotten the demonstration which the BRITISH MEDICAL JOURNAL first afforded of the urgent necessity for such a measure, by the costly and elaborate analysis of the *Register*, in which the bare facts were set forth with a telling force to which it was impossible to make any answer. This demonstration, and the organised movement which ensued, were tardily followed by some voluntary action on the part of various corporations to enter into conjunction, whereby the evils permitted by the law, which had been due to the separate actions of the corporations during a long course of years, should be ended so far as the particular corporations were concerned. That step they took, however, only under the pressure of a strongly expressed professional and public opinion in which they could not but acquiesce. We cannot feel that any particular thanks are due to the corporations which took these steps only under the pressure of impending legislation, and in view of the force of external public and professional opinion, which they in no degree initiated or encouraged, but to which they tardily yielded. In saying this, we have no ungracious sentiments nor any particle of ill-will. It is the way of corporations to stand long upon the old ways, and to safeguard their particular interests, and, from one point of view, this seems to be regarded too often as their main, sometimes even as their sole, duty. Corporate bodies from their very constitution, from the restrictions of their charters, from the dangers which seem to threaten them in view of any kind of modification, are always disposed at the outset to oppose changes and to resist a progress which has its menacing as well as its promising aspects. All this is now happily, in respect to the question of complete qualification for all degrees in future to be registered, a page of history which has just been closed. The part which the British Medical Association, on behalf of the profession, has played, is one of which it has good reason to be proud, and one in which it is a satisfaction to us to know that we have been enabled to afford assistance, without which, it is acknowledged on all hands, the movement could hardly have been brought to its successful termination.

DIRECT REPRESENTATION OF THE PROFESSION ON THE GENERAL MEDICAL COUNCIL.

The next great principle which the Association has this year seen crowned with legislative acknowledgment is that of the direct representation of the profession in the General Medical Council. Any one who pleases to turn to the past Blue-books will see that, almost without exception, all the distinguished gentlemen who are commonly classed under the honourable title of leaders of the profession gave to that proposal a determined opposition. It is a great array of names, which we shall not recapitulate; but it is an instructive roll, inasmuch as it shows that a long training in collegiate and corporate traditions had led these gentlemen so thoroughly to distrust the representative principle, as applied to the medical profession, that they appeared to think, and openly said, that serious dangers to the tranquillity, progress, and dignity of the profession would result from conferring this limited franchise on its members. Until now corporations, and corporations alone, had a voice in the General Medical Council, and the members of the profession at large—very few of whom have at present anything to say in the government of the Colleges and corporations—were quite outside the sphere of influence. The Government and Parliament declined to listen to arguments which belonged rather to a past age than to those which are recognised as belonging to the present generation of Englishmen. A small modicum of direct representation has been accorded to the profession as the Association

so continuously demanded that it should be. The elections have taken place, and without turmoil, and the representatives selected have not been of a revolutionary character, or such as are likely to bring any discredit either on the profession or on the Council. It was but natural that some of those who have taken a leading part in shaping the policy of the Association in this matter, guiding it with so conclusive a success, should be among the trusted representatives elected by the profession in England to sit in the General Medical Council. Dr. Edward Waters and Mr. Ernest Hart, who have taken, perhaps, the most prominent part in this work, declined to be nominated, although pressed by large and influential bodies, and although their election would have been a foregone conclusion. They felt that they would prefer that no possible shadow of doubt as to the entire disinterestedness of their motives should rest upon a past course of exertion which could be looked back upon with so much satisfaction; and, in doing so they offered, we venture to think, an example which is not altogether needless in this or in any other generation, and which may, perhaps, not be without its public uses. The absence of Dr. Waters from the Council is universally lamented. His services have been fitly crowned by the highest honour which it is in the power of the British Medical Association to confer, and his example of disinterested and laborious effort, pursued through a long series of years, at an immense sacrifice, for a great public and professional object, will long remain as a brilliant record in the pages of medical history. We see, with great satisfaction, that his fellow townsmen and friends, lay and medical, are also taking steps to testify to their sense of his public and private worth.

Representation of the Members and Fellows in the College of Surgeons of England.

The same failure to recognise the rights of the profession at large to a voice in the conduct of its own affairs, which led so many persons to give evidence before the select Committee of the House of Commons adverse to the principle of the representation of the profession on the Council, has hitherto prevailed in the Council of the College of Surgeons of England, and induced it to resist the demands of its Fellows and Members for a share by the commonalty of the College in the administrative conduct of its affairs. This question, which has now been pending some time, has recently assumed a more acute form owing to the proceedings at a meeting held in the theatre of the College on November 4th.

At that meeting, not only were the claims of the Fellows and Members generally put forward in a more earnest, coherent, and resolute form than on any previous occasion, but a specific demand was urged, that the Council of the College of Surgeons should not decide on the important question of admitting, or refusing to admit, the Apothecaries' Society to a share in the Conjoint Examination Board of England and Wales, without first taking the opinion of their seventeen thousand Members. It is obvious, and it was made plain, that that is a question which very closely touches the future interests of the whole body of Members, and of the general practitioners at large. It was but reasonable that the Members of the College of Surgeons should be taken into the counsels of their College, and should be allowed to influence its decision in this matter. The limited number of consulting surgeons, who constitute the Council, could have but an imperfect acquaintance with the details of the various ways in which the threatened creation by the Apothecaries' Society of a new class of medical and surgical practitioners might affect their Members. They know little of the trials, difficulties, and exigencies of general practice in poor neighbourhoods, and in rural districts. They are not general practitioners, and this is a general practitioner's question. They possessed, and still possess, by the constitution of the College, the sole and exclusive power of ultimate decision, and there was, therefore, all the more reason why, having announced in fair words, a desire for occasional consultation with their Members, they should on this occasion, when so strong and unanimous a wish was expressed for further consultation on so vitally important a subject, at least have had the grace to hear before they struck. Unfortunately they took an opposite course: they sat absolutely silent in the face of the Members while the resolution was being moved, discussed, and carried without a dissentient voice. They neither intimated that the negotiations had reached an advanced stage, nor that there was any technical difficulty in carrying out the resolutions, nor that they were disinclined to carry them out, nor that they had any policy on the subject or saw any difficulties in the policy suggested; but within a few days they came secretly, without any communication with their Members or with the general body of Fellows, to a hurried agreement with the Council of the College of Physicians to exclude the Apothecaries' Society, and this decision they conveyed to the Society in a curt letter delivered an hour before a meeting of the Members and Licentiates of that body, convened to discuss the subject and to make representations to the Colleges as to whatever decision they might arrive at.

Such a course of procedure is, so far as we know, or have been able to ascertain after careful inquiry, unprecedented in the history of any public body. Giving the Council of the College and all its members the fullest credit for the best intentions, for the most disinterested love of the College, and for the fullest desire to carry out a policy which they considered to be for the general professional welfare, we find it impossible to acquit them in this instance of a course of action alike unjust and unstatesmanlike. We believe their decision to have been essentially wrong, because it tends to perpetuate disunion in the profession at a moment when we are all hoping for unity: because its first effect will be to create a new portal for general practitioners, and a rival class under circumstances likely to be dangerous and disastrous to their own Members, and injurious to the future strength and development of the College. We believe, also, that if persisted in, it will seriously imperil, if it does not render impossible, the attainment of a degree for London diplomates; and that thus it will deal a heavy blow at the prosperity of the London medical schools. But whether the decision be right or wrong, it is impossible to see how the course pursued in arriving at it and enforcing it can be justified; and it is noteworthy that not one voice has yet been raised in defence of it. If they have any defence to make, they have been very careful up to the present time to maintain a studied silence; and silence under such circumstances, and in the face of such a universal chorus of disapprobation, is a strong form of self-condemnation.

The Association of General Practitioners.

A newly formed Association of General Practitioners, some particulars of which will be found in another column, is preparing to afford to the general practitioners of the country a means by which they can, on these and such subjects, henceforth bring pressure to bear upon the Colleges, with the view of obtaining for themselves

the representation to which we have strongly urged their right, and to combine generally for the purpose set forth in their programme. From some points of view there is always an objection to the multiplication of associations, but special emergencies arise in the history of the profession and of communities which seem to call for special organisation; the present state of medical affairs in this respect, and the treatment which the medical practitioners have met with in their respective Colleges in relation to this all-important question of conjoint examination, or of the creation of a new class of general practitioners, are such that it is not at all surprising that it has been thought advisable to create a new organisation for dealing with this special subject. We see with pleasure, in the list of those who have joined this Society, the respected names of men such as Husband (York), so many years Treasurer, and formerly a President of Council of the British Medical Association; Alfred Carpenter (Croydon); Wheelhouse (Leeds); Holman (Reigate); Joseph Rogers; Wickham Barnes; Danford Thomas; Steele and Ellis, the Secretaries of the Association of Members of the College of Surgeons, and many other representative names; this indicates that the movement will be carried on with vigour and discretion, and without any sort of hostility to existing Associations. The British Medical Association will naturally feel deeply interested in the progress of this movement. Its powerful and multiple organisation is peculiarly fitted for eliciting the opinions and concentrating the strength of general practitioners in such direction as they may think most likely to advance the general good. Within its widely extended boundaries, and upon its common platforms, all branches of the profession meet, and as nearly all the consultants and members of hospital staffs, whose voices should be heard on such a subject, are members of one or other department of the Association, they will have there a convenient opportunity, if they choose to take it, of giving full utterance to their opinions, and of endeavouring to impress upon their brethren in general practice the reasons which guide their course of action and the conclusions at which they think it just to arrive. They will be listened to with the respect and regard with which they are invariably met on all occasions when they take part in the affairs of the Association, and there can be no doubt that among the coming questions of the next year this will take a prominent place. The signal has been given by a meeting of the Metropolitan Counties Branch, called by requisition, at which a series of resolutions were moved affirming the principles to which we have referred. Called in the evening, at a time at which it is particularly inconvenient for general practitioners to attend, and especially those practising in the poorer neighbourhoods, the attendance was not so large as might have been wished, although it was considerably larger than at many important meetings which have been summoned in that Branch to discuss questions of medical politics affecting general practitioners. It is notable, however, that, although various consultants were present, no voice was raised of opposition to any of these proposals. A policy of silence is sometimes a policy of strength, but it is a very feeble barrier to oppose to the advancing progress of a great public sentiment; if there be any well-grounded arguments to be urged against the reforms which are now demanded, it will be well for those who are prepared to urge them to state their arguments openly and publicly, and not to entrench themselves behind a barrier of impenetrable silence. Mr. Erichsen has done excellent service by stating with great ability the arguments which prevail in some quarters against the claims of the Fellows and Members of the College of Surgeons to a larger share in the administration of its affairs. We have, we hope, done ample justice to those arguments; but, after stating them with great fulness, and examining them with all the impartial care at our disposal, and with the aid of some of the acutest minds in our own and in the legal profession, we have been unable to find that they have any substantiality, or that they represent more than the ordinary formulæ of obstruction. On the whole, then, while closing one chapter in medical progress, happily sealed by parliamentary approval, it seems likely that we are now opening another which is rather one of internal progress, but which may, nevertheless, if the Colleges prove to be absolutely immovable, again require at an early date the invocation of parliamentary assistance in the nature of a Royal Commission on their charters and constitution.

The British Medical Association happily contains within its organisation the means and channels by which every interest is fully represented. Earnestness on the one side and reasonableness on the other should lead in the future, as they always have in the past, to real and sound progress, which we shall all be able to regard with hopefulness and satisfaction.

The Journal.

Of the Journal itself we need say but a few words; as certain figures which are referred to in another column indicate, and as the continual growth in the size, and severity in the sifting of contents, sufficiently testify, the course of the British Medical Journal during the past year has been one of uninterrupted development. The circulation of the Journal, as now guaranteed, is phenomenal and without precedent. A weekly circulation such as that which the British Medical Journal has now attained implies that at least every other member of the profession actually subscribes for a copy, and it is probably read by three-fourths of the members of the profession throughout the country. The incessantly increasing demands on space have been met by a corresponding increase in the number of pages, which will be more than maintained during the coming year. Even with this necessary expansion of space, we find ourselves contantly under the necessity of declining and returning valuable manuscripts for which we have no hope of being able to find room. Brevity is a passport to publication, of which many even of our ablest contributors and correspondents insufficiently appreciate the importance.

It has been from the first our wish and our ambition that the British Medical Journal should fairly represent every just interest of the medical profession, both in Great Britain and the Colonies, whether that interest be scientific, educational, political, or social. We shall endeavour in the future as in the past to make its pages a living picture of all that is sound in scientific investigation and in clinical experience; of all that is progressive and public spirited in political and social work, and of all that tends to advance the education, to promote the welfare, and to unite the interests of our common profession.

We are deeply sensible of the serious responsibility which is involved in the editorial conduct of a journal wielding so vast an influence. This responsibility entails labours upon the whole of our editorial staff which have been hitherto fulfilled, as we trust they will be in the future, in a manner to secure the adhesion of a greater body of medical readers than has ever previously in medical history honoured the pages of any medical journal.

We have had the misfortune, during the course of the year, to be deprived of the services of a faithful officer of the Association—our sub-editor, Dr. Alexander Henry—from the effects of an illness incidental to advancing years. Of the fidelity and assiduity with which these services have been rendered, we cannot speak with too high a praise. Dr. Henry is now, happily, recovering in some degree his health; and the universal affection and respect with which he is regarded in the profession will cheer his latter days, and reward his past labours.

THE MEETING OF THE BRITISH MEDICAL ASSOCIATION IN DUBLIN, AUGUST, 1887

THE annual meeting of the Association next year will be held in Dublin. Since the first meeting of the Association in Ireland in that city, in 1867, there have been two other annual meetings in Ireland, namely, in Cork in 1879, and in Belfast in 1884. It will, we think, be admitted that among the many successful and pleasant meetings the Association has had, those that have been afforded it in the Sister Isle have been second to none. The Irish meetings have been remarkable, not alone for the cordiality of the welcome and the genial hospitality displayed on each occasion (which were as characteristic of the nation as was the beauty of the varied scenery the visitors were given such numerous opportunities of enjoying), but were also distinguished by the excellence of the work done, and by real progress. Thus, at the Dublin meeting in 1867, the scientific work was for the first time arranged and transacted in sections, with (as now) a President and Hon. Secretary, and the Daily Journal was for the first time supplied. Public, or State Medicine, may be said to have had its organised origin at the same meeting. The address the late Dr. Rumsey gave on that occasion, and the speeches delivered in support of the resolution then adopted by the present Sir Henry Acland, and by the late Dr. Stokes, the President of the Association, and by other distinguished men, gave life and vigour to the movement which received a powerful impetus from the meeting of the Association at Dublin, and has now become a part in the government of this and every other civilised country.

The circumstances under which the Dublin Branch and the profession generally in the Irish metropolis and its vicinity come forward on the present occasion with a most cordial invitation to hold the fifty-fifth annual meeting of the Association in Dublin, are such as will be appreciated. In several ways it involved at the time an amount of self-sacrifice with some which cannot be forgotten, but which, when viewed togethe with the unanimous desire now displayed to make the meeting a success in every way, augurs well.

The Provost and Senior Fellows of Trinity College have signified their willingness to give all the assistance in their power towards furthering the success of the meeting. By their permission, all the Sections will be given accommodation in the College buildings, where also will be the reception-room and the various rooms required for the use of the Council and the officers. The addresses will be delivered in the Examination Hall. The Senate of the Royal University of Ireland has also placed its magnificent halls and rooms at the disposal of the Reception Committee. In this building, which was formerly the Exhibition Palace, an evening reception will be given by the President-elect (Dr. Banks) and the Dublin Branch, and also the public dinner. The King and Queen's College of Physicians, the Royal College of Surgeons, and the Academy of Medicine, have each contributed the handsome sum of 100 guineas to the Reception Fund. The Apothecaries' Hall of Ireland has also intimated its intention of subscribing, and many liberal private subscriptions have been handed in.

Owing to the circumstance that the sectional arrangements cannot receive the sanction of the Council until its next meeting, in January, we are unable now to give them; but, from the forecast we have received, our readers may be assured that efforts have been made to place in the various honourable positions, representative and leading men from different parts of the United Kingdom. The names of the readers of addresses will assuredly commend themselves. They are: in Medicine, Dr. Gairdner, of Glasgow, Physician to the Queen in Scotland; in Public Medicine, the Rev. Samuel Haughton, M.D., F.R.S., D.C.L., Fellow and Senior Lecturer of Trinity College, Dublin; and, in Surgery, Mr. Edward Hamilton, Professor of Surgery in the Royal College of Surgeons in Ireland. The various committees have been organised, and are in full working order, with Dr. George F. Duffey as Senior Honorary Local Secretary. The date of the meeting has been fixed for the first week in August, so as to give ample time for those who wish to go on to the meeting of the International Medical Congress to proceed to America either from Londonderry, Queenstown, or Liverpool.

As regards public and private entertainments and excursions, there will be no lack. Trinity College will, we understand, invite some of the leading Members of the Association to dinner in the Commons Hall on each of the three free days. The Medical Club has also intimated its wish to entertain forty visitors at dinner on Wednesday, August 3rd, at its picturesque rendezvous at Boher-na-breena in the Dublin mountains. Dublin is most favourably situated as regards its vicinity to the neighbourhood of beautiful scenery; the adjoining county, Wicklow, is famed for its beauty, and numerous excursions to different points in it, and to adjoining places of interest, will be arranged.

Judging from the precedent of the former meeting in Dublin, it is not improbable that the universities and colleges may confer honorary degrees and fellowships on some of the most distinguished foreigners and members who are expected to visit Dublin next year. As the meeting in 1867 in Dublin was signalised, as we have said, by a marked improvement in the conduct of the sectional business, so, we have reason to hope, will the 1887 meeting in the same city be the starting point of a further, now much needed, change in a similar direction. The business to be transacted at the annual meetings has increased to such an extent, with the growth of the Association, that it threatens to swamp the scientific proceedings, unless measures are adopted to prevent such an untoward result. This subject is now before the Council. The Dublin Executive Committee has grasped the matter, and has proposed a scheme for adoption at the next meeting which appears to have many points to commend it. It is proposed that as much as possible of the formal business of the Association, including the reception of the different reports, should be got over on the first day. With that object, the first general meeting will be held at 11 A.M. instead of at 3 P.M. as heretofore; and it will be at the option of the meeting to continue its sitting, if necessary, with an adjournment for luncheon, until 5 P.M. It is also proposed that the sectional work should be done in the morning from 11 A.M. until 1.30 or 2 P.M., and that the addresses should be delivered at 3 P.M. This scheme was approved at a largely attended meeting of the Reception Committee

last week, and, if adopted, ought to be given a fair trial at Dublin.

We have little doubt that the meeting of the Association again in Dublin after an interval of twenty years will do good in many ways. Englishmen, as a rule, know very little of Ireland, or of Irishmen at home. Apart from the value and usefulness of scientific intercourse between the members of a common profession which our annual meetings afford, we cannot shut our eyes at the present time to the importance of an interchange of thought on other matters affecting our common interests, but concerning which a lamentable want of knowledge too widely exists.

FUTILE INQUESTS.

TWENTY-EIGHT thousand six hundred and three inquests in two thousand six hundred and sixty-four of which the absurd verdict "found dead," and in ten thousand nine hundred and one the negative verdict of "natural causes," was returned! Together these amount to thirteen thousand eight hundred and ninety-nine inquests, costing the country £44,650, ending in nothing more than confessions of failure. They make up a coroner's bill for one year which is by no means satisfactory to the tax-payer, or creditable to the forensic medicine of the day. In fact, the Coroner's Court, in its present form, is an anachronism, and calls for reform, if not for entire reconstruction on a different basis, one which shall reconcile the unhappy conflict between the medical and legal interests, and place the medical witness in a less anomalous position.

The election of the coroner by the freeholders of the county is a relic of antiquity which has very properly been set aside in the case of the Sheriff and other judicial officers of the State, and might well be dispensed with here, as have been the property qualification and honorary character of the post, which were insisted on in early statutes. At present he is almost always a member of the legal or medical professions, though the former is represented in overwhelming proportion.

The duty of the coroner is to find out the cause of death; and, since murders are, happily, of comparatively rare occurrence, the question is mostly whether the death were due to disease or not, and this is not fully answered unless the actual cause of death, *i.e.*, the precise nature of the disease, be clearly ascertained. This, even a lawyer must admit, cannot be done except by a medical man. It is not enough even to know that the deceased was suffering from a disease which might at any time prove fatal; for an invalid is as likely as a healthy man to be the victim of foul play, and, perhaps, more likely to put an end to his own miserable existence than is one in the full enjoyment of life.

In support of the claims of the lawyers, it is urged that the coroner has to sift a mass of evidence, much of it furnished by ignorant witnesses, and to separate what bears on the case from what is irrelevant, that he must know what is legal evidence, and what is not.

There is a certain amount of truth in this line of reasoning, but there is also a fallacy of omission. The evidence on which his decision, in nine cases out of ten, must ultimately turn, is evidence of a special and highly technical nature. Even if we ignore the fact that every clinical examination of a patient involves the process of sifting and weighing the very same evidence as is adduced at an inquest, which is really nothing more or less than a *post mortem* inquiry, conducted under the additional difficulty of the absence of *ante mortem* observation, the question whether a medical man can easier acquire a knowledge of the broad laws of evidence as accepted in courts of law, or a lawyer make himself master of pathology, with the sciences of anatomy and physiology on which it rests, without having studied in a medical school, is one which no one not blinded by prejudice could have a moment's difficulty in answering. The sole duty of the coroner is to find out the cause of death; if he allow himself to go beyond this he is overstepping the limits of his office, and meddling with matters with which he, as coroner, has no concern; for in committing a man for trial he merely deals with him as a probable factor, or part of the cause. It is true that when a man's head is severed from his body by a passing train it does not need a doctor to decide the cause of death, but such plain cases form an insignificant minority of those which come under the notice of the coroner; in the vast majority the cause, though probably it might have been easily enough recognised by any medical man who had seen the person during life, can only be determined under the circumstances by a *post mortem* examination.

It may be urged that a legal coroner can instruct his jury to return a verdict in accordance with the medical evidence. Certainly this is better than dispensing with medical evidence altogether; but then he must either be prepared to decide on the merits of that evidence, to pronounce an opinion on matters of which he is totally ignorant, which few would have the hardihood to attempt, or he must accept as authoritative the views and conclusions of any medical practitioner who may chance to have been called in. In doing so he makes him an assessor, regardless of his fitness for the duty, and virtually resigns the entire responsibility to him. The medical men who are usually summoned by the friends or neighbours of a person found dead, and who by common consent and courtesy are subpœnaed as witnesses, busy men practising in poor and crowded localities, or the no less hard-worked village doctors, do not, as a rule, possess any special knowledge of or experience in forensic medicine. The practice of the courts appears to lend support to the common belief that any medical man has but to make a *post mortem* examination to ascertain with ease the cause of death writ large and clear. A greater mistake could scarcely be made; for very few, except those who are actually engaged in pathological work at the larger hospitals, are fully competent to make a *post mortem* examination, and to interpret its results correctly; these men are rarely called, unless when criminal proceedings are set on foot by the Public Prosecutor, by which time cadaveric changes have effaced, even if unskilful manipulations have not previously destroyed, the more delicate and characteristic appearances. Most general practitioners would gladly relinquish the duty of performing a necropsy to an expert. What we really want is a class of medical men corresponding to the German *physicus*, men who have undergone a thorough course of practica training in pathological and laboratory work, and passed a severe examination in these subjects and in forensic medicine generally, and are thus fully qualified to act as experts in all medico-legal investigations. In Germany such men are appointed to all the larger towns and to rural districts of sufficient extent, under the titles of Stadtphysicus or Bezirkaerzt respectively. To this officer any suspicious case of death is referred. He then makes a *post mortem* examination—such as is here unknown outside the walls of the best hospitals—with analyses, if such be called for, and sends in his report, signed under

oath, to the Public Prosecutor of the province, who either instructs him to certify accordingly, or institutes criminal proceedings.

Perhaps when, with a reform in our system of Local Government, the re-organisation of the Sanitary Service comes under consideration, and special qualifications are demanded for the post of Medical Officer of Health, which, unfortunately, are not required at present, a class of highly educated and scientific medical men may be called into existence, competent to act as experts in all matters pertaining to the public health and to forensic medicine. The raw material is to be found in plenty in the leading medical schools, where there are many young men who would willingly forgo the prospect of the most lucrative practice for such a career of responsibility and dignity, with congenial devotion to science.

As to the existing antiquated and clumsy procedure, there can be no doubt that half the inquests held at present are odious farces, painful to the friends of the deceased, with no advantage to the cause of justice; and that, while verdicts of "Visitation of God" are simply profane, those of "Natural causes," when no adequate means have been taken to show what the causes were, or even that they were natural in any other sense than that they were not supernatural, are, to say the least, a waste of public money, leaving the public as wise or as ignorant as it was before.

THE STATUS AND RIGHTS OF THE MEMBERS OF THE COLLEGE OF SURGEONS.

We are to-day enabled to print in another column an important legal opinion which has just been taken upon the constitutional questions now at issue between the members and the governing body of the College of Surgeons. The barrister to whom the case was submitted has obtained access to most of the documents which bear on the original constitution and history of the College, so far as these throw light upon the contention put forward by Mr. Erichsen and the leading opponents of reform. The question is, whether it is true or untrue that the Members have an inherent and constitutional right, by virtue of their membership, to some share in the government of the College. In the light of the early history of the communities of Surgeons, as it is here set out by counsel, we think not even Mr. Erichsen will venture to deny that by the original nature and constitution of the communities now merged in the College of Surgeons, the Members or Freemen had not only a right, but the sole right of government. These ancient Guilds were, in fact, democracies of the purest type. They had their origin in the idea of a brotherhood banded together for mutual defence, whose ordinances, by the nature of the case, were matters of common assent, and who elected their presidents and officers, and took counsel as to their common concerns, at a kind of social and religious festival, which every guild-brother was not only entitled, but bound to attend. The account of these old-world communities will probably seem, to not a few of our readers, a bitter satire upon the present government of the profession. In those days, the "Mystery of Surgery" was far less important, either in scientific or in social value, than it is with us; but at any rate the Colleges of Surgeons, such as they were, relied for the good government of their order upon the free discussion of all questions in a parliament to which every member was bidden.

Mr. Costelloe points out that this theory of self-government was maintained with little change until at least the Tudor times, and probably later. It does not seem to be clear at what period the executive officers, who, by the constitution of all Guilds, were the deputies of the whole community, succeeded in transforming themselves into a co-optative body; but, for the purpose of the present argument, the history of this degeneration is irrelevant. No one denies, and the apologists of the Council have publicly affirmed, that the existence of a self-elected Court of Assistants was an abuse. The impossibility of defending such an autocracy was admitted by the very Charter which created the present limited electorate. The real question is whether that limited electorate was rightly constituted, having regard to the history and inherent character of the society itself. We think that no one who follows the logic of the opinion now before us can reasonably deny that, when it was resolved to revive the elective character of the governing body, the paramount claims of the freemen ought not to have been ignored. It may be arguable that it was a sound and reasonable policy to create a special class of Fellows, who, in virtue of their scientific eminence, should have a larger share of power. Whether this be so or not is beside the present question; for the most advanced of the reforming party in the College have no objection to leave to the Fellows the lion's share of privilege. The sole point of the present argument is that the ancient right of the Members, as such, ought to have been in some way restored to them; and that, if the Crown had been properly advised, this would undoubtedly have been done. At that time it, no doubt, appeared to many that the creation of any electoral body, however limited, was a great advance. But public opinion, as to all matters electoral, has moved on since then; and it is now impossible to maintain, either from the point of view of modern tendencies, or of ancient constitutional right, that the Members of the College have any reason to rest contented with a system by which they are made strangers in their own house.

THE EAST MIDDLESEX CORONERSHIP.

A special County Court of Freeholders of the Eastern Division of Middlesex will be held this day (Friday) at the Vestry Hall, Bethnal Green, to elect a Coroner for that division, in place of the late Sir John Humphreys. Mr. George Collier, late deputy coroner for the division, having withdrawn from the contest, there are now six candidates for the office—viz., Dr. Macdonald, M.P., Mr. Wynne Baxter, deputy coroner for the City of London, Dr. Porter, Mr. G. H. Young, Mr. J. Underhill, and Mr. T. Beard.

MANUFACTURE OF FIREWORKS.

Attention was called at the last meeting of the Metropolitan Board of Works to the dangerous and illegal practice of firework-making by private persons. Only recently a serious explosion occurred from this cause in a dwelling-house in Union Grove, Clapham, resulting in serious personal injury. It was pointed out that persons making fireworks for their own use would render themselves liable to a penalty of £100 a day. It is to be hoped that the practice may be checked by this public announcement of the serious penalties which may be imposed.

REPORTED SUICIDE OF A MEDICAL PRACTITIONER.

The death of Dr. Riddell, of Dunsford, is reported to have occurred under melancholy circumstances. The deceased gentleman, who held several poor law appointments, was recently (in consequence, it is said, of repeated differences with his neighbours) called upon by the Local Government Board to resign his offices. He died from the effects of poisoning by strychnine, and left behind him a letter, expressing his belief that he had been persecuted because of a difference between himself and another resident in the parish, with regard to family affairs.

THE SURGICAL AID SOCIETY.

At the twenty-fourth annual meeting of this charitable organisation, held on Monday, it was stated that during the year the Society had relieved 6,412 persons, including 2,311 men, 3,156 women, and 945 children, or an average of 123 a week. The Society had also given 79,954 surgical appliances to the suffering poor, of which number 9,563 were given during the past year. The total income for the year was £5,485, of which £3,469 was derived from annual subscriptions, being an increase of £310. The expenditure for the past twelve months was £5,414. It was announced that donations had been received at the meeting amounting to £380, and that the Earl of Aberdeen had accepted the post of president.

KEEPING OUT THE WIND.

The north-westerly gales, of which we have had unpleasant experience during the past week, have been the cause of considerable inconvenience to persons engaged in the Law Courts; even the judges have found constant cause for complaint. Mr. Justice Hawkins has resorted to the expedient of having a sort of wooden sentry-box placed on the bench at his back, in order to screen him from the cold draughts. This structure, however, has not proved as effective as Sir Henry Hawkins's many friends could wish; for during the hearing of an opposed motion, on Wednesday, one of the counsel engaged asked that he might be allowed to mention the case again on Wednesday week, whereupon his lordship joyfully responded that he hoped not to be sitting there shivering with the cold on that day, as it would fall within the Christmas vacation.

DEGREES FOR LONDON MEDICAL STUDENTS.

The scheme favoured by the Councils of the Royal College of Physicians and the Royal College of Surgeons, for obtaining a charter empowering the Colleges to grant a medical degree to students who pass the examinations of the Conjoint Board, is stated to be rapidly assuming shape. We believe that the opinion strongly prevails, especially at the College of Physicians, that the degree of M.D. ought not to be granted to students at the time that they qualify, or after a merely qualifying examination, but that some further test and some further proof that opportunities for obtaining experience in the practical work of the profession have been utilised, should be required. A meeting of the Comitia of the College of Physicians has been summoned to meet next week in connection with this matter, and the subject will also be engaging the attention of the College of Surgeons at about the same time.

ERASURES FROM THE "MEDICAL REGISTER."

We are asked by the Registrar of the General Medical Council to state that, as a result of inquiries carried on during this year with a view of correcting the present *Medical Register* for the purpose of the election to the General Medical Council, many practitioners are liable to have their names erased from the *Register*—the letters of inquiry as well as the voting papers sent to them having come back through the dead-letter office. It is, therefore, to be hoped that those whose names are not already correctly stated in the *Register* will take the earliest opportunity of communicating their present addresses to the Registrar, Mr. W. J. Miller, General Medical Council Office, 299, Oxford Street, London, W., in order that their names may not be erased from the *Register*, the sheets of which will shortly undergo final revision for the press.

SUICIDE OF A PROFESSOR OF SURGERY.

It was recently announced that Professor S. P. Kolomnin, one of the surgical professors at the Imperial Military Medical Academy of St. Petersburg, had shot himself under very sad circumstances. It appears that, a few days previously, he had performed an operation on the rectum in a young married lady, under cucaine-anæsthesia. Immediately after the operation, the patient succumbed, owing, it is presumed, to the cucaine having been pushed too far. Professor Kolomnin was so affected by this unfortunate circumstance that, although his friends assured him that he was in no sense to blame, the result being a pure accident, he committed suicide with a pistol on the 11th (that is, the 23rd) of November. Very contradictory accounts are given in the daily papers, and no details have as yet appeared in the Russian medical journals, so that it is impossible to judge whether the cucaine was in reality the cause of the patient's death.

HEALTH EXHIBITION AT WARSAW.

We are informed that a Health Exhibition will take place at Warsaw in May and June, 1887. The objects exhibited will be chiefly of Polish make, but foreign goods will not be excluded. The exhibition will be under the patronage of the Countess Potocka, and the following are the officers already named:—President: Professor Szokalski, M.D. Vice-Presidents: Professor Luczkiewicz, M.D.; M. Grotowski, Chief Engineer of the City of Warsaw; and M. Janicki, civil engineer. General Secretary: J. Polak, M.D. Further particulars will be given in due course.

LEPROSY IN RIGA.

At a meeting of the Riga Medical Society, Dr. Bergmann made a communication which proves beyond any doubt that Riga is one of the regions where leprosy is endemic. During the last twenty-one years there were admitted to the local General Hospital as many as fifty-two cases of the disease. This number may be considered large—especially in view of the fact that only such lepers were admitted as suffered from some intercurrent affection, or from open sores. In addition, Drs. Bergmann, Jansen, Bernsdorff, Carblom, and Stavenhagen, all of Riga, each saw several cases in their private practice. Of the hospital patients above mentioned 39 were either natives or old inhabitants of the town. Twenty of them (8 men, with 2 deaths, and 12 women, with 2 deaths) suffered from the tubercular form of the affection; 7 (4 men, and 3 women, with 2 deaths) from the anæsthetic variety; 10 (7 men, with 2 deaths, and 3 women) from a mixed form. For the remaining 2 (men) the type of the disease was undetermined.

M. PASTEUR ON VIVISECTION.

Mr. A. H. Bycott forwards us the following letter, which he has received from M. Pasteur:—"Paris, le 12 Nov., 1886. Monsieur,—Vous trouverez les dernières statistiques publiées sur la rage dans la brochure que je mets à la poste en même temps que cette lettre (Lecture faite le 2 Nov. aux Académies des Sciences et de Médecine à Paris). Pour le charbon, c'est environ cinq cent mille animaux—bœufs, vaches, moutons—qui sont vaccinés en France chaque année. Vous me demandez en outre mon opinion sur la vivisection. Une pareille question ne devrait pas être discutée. Je condamnerais, à l'égal de la femme la plus sensible, la barbarie dans la vivisection. Mais qui est donc le savant digne de ce nom à qui on pourrait reprocher cette barbarie? Quant à s'apitoyer sur la mort de quelques lapins lorsque le but est de sauver la vie d'un homme, quant à faire du sentiment devant le sacrifice de quelques moutons pour sauver des moutons et des bœufs par centaines de mille, il n'y a que des insensés qui puissent raisonner ainsi."

SUPERANNUATION OF POOR-LAW OFFICERS.

A deputation from the Poor-law Association of England and Wales waited upon Mr. Ritchie, M.P., President of the Local Government Board, on Tuesday, to urge the Government to bring in a Bill making superannuation of Poor-law officers compulsory. It was submitted that, though the guardians were at present empowered to award superannuation allowance to retiring officers, yet that that power was discretionary, and in cases where the superannuation was not granted, much injustice and hardship was sometimes caused. It was suggested that, to meet the charge which this would involve, there should be a contribution from the Government, another from the officers themselves, and the remainder from the boards of guardians. Mr. Ritchie

in reply, said that he felt doubtful of the reception such a Bill would receive from the boards of guardians; and, although some cases of hardship had been mentioned, yet the boards had undoubtedly very largely exercised their present power to grant superannuation. It would be the endeavour of Parliament to confer larger powers upon localities than they now possessed, and he thought that it would look like going in the opposite direction if, on the eve of the Government taking that step, they were to fetter the hands of boards of guardians by proposing to Parliament a Bill for the compulsory superannuation of Poor-law officers. He could not undertake to bring in such a Bill, and recommended the gentlemen interested to look more to the local authorities throughout the country than to the central Government.

A FASTING WOMAN.

Succi and Merlatti are entirely eclipsed by a poor woman who lives in the village of Serrata, near Porto Maurizo. She is forty-five years of age, and has been bed-ridden for the last twenty-seven years. The story goes that for these twenty-seven years she has taken no food. From the age of 18 to 20 she occasionally took a little broth, but since that time her neighbours believe that she has subsisted entirely on water, drinking four glasses a day. Her character does not appear to have been influenced by this mode of living, for she is generally cheerful and in good spirits. Once a month she falls into a state of catalepsy, and remains in that condition for one or two days, during which her eyes are always open, and have a glassy appearance. Professor Novaro, of the University of Turin, has frequently visited the woman, and he intends to publish notes of the case.

ACCOUCHEMENT DURING HYPNOTIC SLEEP.

In the *Wiener Med. Wochenschrift* a case is mentioned of a woman whom Dr. C. Braun succeeded in rendering unconscious during labour by throwing her into a condition of hypnotic sleep; the uterine contractions were particularly painful. They were equally violent during the period of unconsciousness, but the intervals were somewhat longer; dilatation of the passages took place in the most satisfactory manner, and delivery was speedily accomplished. The placenta was expelled into the vagina, and was easily withdrawn with the hand. On awakening, the patient did not complain of pain, and afterwards slept naturally for several hours. One of the most interesting features of the case was that the uterine contractions induced contraction of the abdominal muscles without awakening the patient. Hæmorrhage was very slight.

THE PECULIAR PEOPLE IN RUSSIA.

In the *Permsky Epidemiologitchesky Listok*, No. 8, 1886, p. 117, Dr. D. Nikolsky, of Shemakhinsky Zavod (on the Ural), writes that in his district there exists a religious sect called *Perevreshtchentzy* (Anabaptists), the members of which regard any medical treatment as a great sin, and accordingly keep all cases of disease occurring in their midst as far as possible secret from medical men. Every proselyte is first of all baptised anew; in other words, he is obliged to take a bath either in a river or in a big tub filled with cold water. The procedure is carried out without any regard to the proselyte's health and strength. Dr. Nikolsky saw cases in which patients suffering from typhus fever, after admission into the sect, were at once duly bathed in a river in April, and died two or three days later in consequence.

LANOLIN MERCURIAL OINTMENT.

Dr. Bernard Brandis, of Aachen, in his work "Principles of the Treatment of Syphilis," writes thus: "I must also mention the mercurial ointment brought forward by Professor O. Liebreich, of which the basis is formed by lanolin. This salve is thus prepared:—100 parts of mercury, 25 of lanolin, and five of (grey) mercurial ointment, are rubbed together thoroughly, and then mixed with 50 parts of mutton suet, to which, when melted, 175 parts of lanolin have been previously added. An elegant and smooth preparation results, without any disagreeable odour, and the trials of it here detailed speak most decidedly in its favour. Those who use it on patients boast of the ease with which it is 'rubbed dry,' and we may presume that the mercury is rapidly taken up by the skin."

THE APOTHECARIES' ACT AND PRESCRIBING CHEMISTS.

An inquest was held at Gloucester on Saturday last on the body of a married woman who died suddenly two or three days after her confinement. It was stated that the deceased objected to send for a medical man, and her husband procured a draught from a neighbouring chemist, Mr. Hughes. Dr. Peacock, who made a *post mortem* examination, stated that death was due to gradual failure of the heart's action, arising from diseased lungs, enfeebled heart, and recent delivery. In reply to one of the jury, Dr. Peacock stated that if a medical man had been called in he was afraid deceased could not have recovered. The coroner (a solicitor), in summing up, said no doubt Mr. Hughes (the chemist) was aware that there was such a statute as the Apothecaries' Act in existence; a certain section of that Act provided that no one but a registered apothecary was entitled to advise or to prescribe for anybody under a penalty of £20, and that an action might be brought by anybody who might choose to be an informer. He knew that it was the custom of chemists generally in Gloucester and other places to do this sort of thing, although he wished it to go forth that he was not referring to any chemist in particular. The chemist in this case had acted straightforwardly in sending a copy of the prescription to the coroner, and he was absolved from any blame in the matter. The coroner concluded by saying that it was the province of medical men, and medical men only, to prescribe for the ailing. The chemist asked the coroner what he was to do under certain circumstances, but the coroner declined to advise him. A verdict was returned in accordance with the medical testimony.

RECENT RESEARCHES IN DIURETICS.

To what extent the Malpighian corpuscles and the renal tubules respectively take part in the secretion of urine, is not yet accurately known, although the researches of Heidenhain, Nussbaum, and others, have added much to our knowledge. It seems likely that an investigation into the mode of action of diuretics will throw great light on the question, because a diuretic drug may act either on the Malpighian corpuscles, increasing the flow of urinary water, or on the renal tubules, increasing the amount of urinary solids, or on both structures. The great difficulty, however, in experiments on the kidney in living animals, is that of estimating how much of the effect produced by a drug is due to changes in the circulation, or in the nervous system, which has an influence on the secretory activity of the kidney, as well as on the blood-vessels. Munk has, in his recent experiments, eliminated these factors by investigating the action of diuretic drugs on an excised kidney. The organ, after excision, was nourished, under a pressure of 100 to 190 millimètres of mercury, by a stream of blood and salt solution through the renal artery. The drug was added to the liquid, and its effect noted by the amount and quality of the urine, collected through a cannula placed in the ureter. Before the addition of any drug, it was found that the amount of urine secreted in an hour varied from 4 to 24 cubic centimètres; that this was a true secretion, and not a simple diffusion, was shown by the fact that it contained a greater proportion of saline constituents than the circulating fluid. The addition of chloride of sodium, nitrate of sodium or potassium, caffeine, dextrose, cane-sugar, or glycerine to the circulating fluid, increased the secretion of urine three to fifteen times, the pressure remaining the same; while in the case of nitrate of potassium and of caffeine, there was an increased rapidity of flow of the circulating fluid. Diuresis of this nature and under such conditions could only result, according to

Munk, from a stimulation of the secretory cells of the kidney by the drug, a conclusion which, as regards caffeine, had already been arrived at by von Schroeder. An interesting result obtained by Munk was the appearance of hippuric acid in the secretion from the kidney, when benzoate of sodium and glycocol were added to the fluid circulating through the vessels of the kidney. As is well known, benzoic acid given to any animal appears as hippuric acid in the urine; and this result has been supposed to be due to the action of the intact blood-corpuscles. But, in Munk's experiment, these were absent; hence he concludes that the transformation is probably brought about by the oxygen which is combined with the hæmoglobin.

INTESTINAL MOVEMENT.

THE investigation of the normal intestinal movements and the different modes by which they may be excited is very important from the standpoint of practical medicine, and Dr. Theodore Cash, in his recent research on this subject, has obtained results which are likely to prove of great value. His observations were made by means of a "Vella's fistula" in dogs: that is to say, by isolating a piece of intestine about one foot and a-half long, and stitching both ends to the abdominal wall, while the continuity of the divided intestine was restored by ligatures and returned to the abdomen. An isolated piece of intestine, with its vascular, nervous, and lymphatic supply intact, was thus obtained for observation. The rapidity of peristalsis was ascertained with great nicety by travelling solid bodies, which recorded their motion on a blackened surface by means of a thread attached to a writing lever. It was found that during hunger there were periods of complete quiescence of the intestine; and that after food regular movements set in, which fell to a minimum in four to five hours. The acts of swallowing, the administration of a small quantity of sulphuric ether (which caused salivation), and mental impressions as well as mechanical irritation of the wound, were also found to excite peristalsis. Exercise was also found to be favourable to peristalsis, which, in all cases, took place in the physiological direction. The results obtained by Dr. Cash confirm and extend what has been known from clinical experience of the exciting causes of peristalsis; and the exact knowledge obtained by the methods he employed will, no doubt, lead to an important investigation of the action of drugs on the intestine, and thus to a more exact and scientific administration of medicinal agents.

DE SENECTUTE.

To most people there is something peculiarly fascinating in a description of the habits and constitution of persons who have lived to extreme old age; even if the reader is not possessed by a secret hope that he may rival them in vitality, his imagination is stimulated by the history of men and women who were born in the last quarter of the eighteenth century, living on to witness the achievements, to share the sorrows, and, in their own persons, to afford matter for the scientific speculations of the last quarter of the nineteenth century. The series of fifty-two cases of reputed centenarians got together by the Collective Investigation Committee has been analysed by Professor Humphry, of Cambridge, who is able to state positively that, in eleven cases, two males and nine females, the evidence left no doubt that these old people were really centenarians. In the large majority of the cases the evidence was not conclusive, but there can at least be no doubt that all had attained to a very great age. Swift, in his *Voyage to Laputa*, has given a description of extreme old age so appalling, and yet so nearly in accordance with every-day experience, that it is a pleasure to find Professor Humphry championing our common humanity, and describing centenarians who were cheerful, retained their faculties and their interest in relatives and old friends, and even showed a marked liking for making new acquaintances. The centenarian generally comes of a long-lived family, and is a person of active habits, both of body and mind, a good sleeper, endowed with a good appetite, and a tranquil, cheerful disposition. One centenarian collier had always drunk as much as he could, and expressed his intention of continuing this habit, but all the others were stated either to have been moderate or very moderate in the indulgence of this taste or to have been total abstainers. The majority also did not take tobacco in any form, but one chewed the drug, and seven, of whom four were women, smoked a great deal. Perhaps the most interesting fact which has come out of the analysis of these cases is that, though centenarians, as a rule, have not suffered much from illness during their long lives, yet a considerable number of instances were met with where even severe illnesses had been recovered from at an advanced age. Indeed, some of these old people seem to take a new lease of life, as the saying is, after passing four-score years, and are not only able to resist fresh attacks of acute disease, but even apparently to throw off some of the effects of chronic maladies from which they had been previously suffering. It is interesting to note that women are in a decided majority in Professor Humphry's list; after making every allowance for their comparative immunity from accident, exposure, and anxiety, and their greater temperance in eating and drinking, there still appears to be reason to believe that woman possesses a greater inherent vitality than man. In conclusion, we may be allowed to express the hope that Professor Humphry may live to swell the list and improve the male percentage.

THE TRAINING FOR THE PRELIMINARY SCIENTIFIC.

THE wide range of the subjects in the Preliminary Scientific Examination of the University of London, includes some which are not taught at all the medical schools in London. It is not unusual for the medical student who wishes to pass his examination, to provide himself with the necessary teaching before coming to London, unless he joins one of the three or four large schools which lay themselves out to furnish such instruction. Everyone who is aiming at scientific distinction in the four other English universities, finds himself abundantly supplied by his *Alma Mater* with the means of instruction in these preliminary sciences; but many of the London schools, aiming at different objects, have provided different methods. Some months ago, by a union of four of the smaller medical schools of London, viz., Middlesex, St. George's, Charing Cross and Westminster, careful arrangements were made for those of their students who desired to obtain degrees from the University of London to supply themselves easily with the required lectures and practical instruction in biology, and a portion of the ordinary courses in physics and chemistry at the Normal School of Science, South Kensington. We are sorry to find that this offer has not met with a response, and that as yet no students have availed themselves of it. It was, indeed, hardly to be expected that the plan should have made itself so quickly known, for it was only announced at a time in the medical year when the destiny of a student is generally already settled. The difficulties, also, which invariably beset combination among bodies hitherto uncombined, cannot be overcome in a moment, although combination may be generally agreed to be the wisest plan, as has been so signally shown by the gradual and uniform success of the union for teaching purposes of hitherto disunited colleges in our elder universities of Oxford and Cambridge. The hospital schools are more or less analogous to the colleges with some special distinctions. The study of the gradual solution, or attempts at solution, of some educational problems, elsewhere, which are only beginning to raise discussion in London, may prove useful in various ways, both as warning and suggestion, and we may hope that before another year is past, the combination of some medical schools for special teaching at South Kensington may be in working order without in the least degree prejudicing the activity and usefulness of the great teaching centres at present existing.

BEQUEST AND DONATION.—Mr. C. G. Du Pre, late of Wilton Park, Buckingham, has bequeathed £300 each to Brompton Consumption Hospital and the King's College Hospital.

SCOTLAND.

HONOUR TO A SCOTTISH DOCTOR ABROAD.

We have pleasure in observing that the Spanish Government has suitably acknowledged the services of Dr. John Sutherland Mackay, of Huelva (a graduate of St. Andrews' University) during the cholera epidemic two years ago. He went through every district visited by the scourge, rendering what help he could. For his courage and devotion he has had the Grand Cross of Isabel of Spain conferred upon him. The decoration is a gold Maltese Cross, with a ground of white enamel on each side, and bears two inscriptions. One is "Por lealtad acrisolada" (for pure bravery), and on the other "Por Ysabel la Catolica."

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.

The number of patients treated in the Royal Hospital for Sick Children, Edinburgh, during the month of November, was 113; of these, 53 were admitted during the month, and 60 were in the hospital at the end of October. There were 26 discharged from the hospital cured, and 12 relieved. The average daily number in the hospital during the month was 58. At the dispensary, 560 patients were treated, and 11 vaccinated, making in all 571. Of 298 new cases during the month, 241 were from the city, 46 from Leith, and 11 from the country. Thus the total number of patients treated at and in the hospital during the month was 648.

CLINICAL TEACHING IN EDINBURGH FEVER HOSPITAL.

The exceedingly unsatisfactory state of matters at present existing in the Edinburgh School in the matter of clinical instruction in fevers is at last to be remedied. The Town Council, at a meeting held recently, agreed to make a trial for three months of a system by which sixty students will receive practical instruction in the City Fever Hospital in sections of not more than six at a time. No fee will be charged this session, and at the end of it the Medical Officer of Health will submit a report on the working of the plan to the Town Council.

THE STUDENTS' FANCY FAIR.

In the Journal of December 4th there was a notice of the Fancy Fair, by which the students of Edinburgh University endeavoured to raise sufficient funds to establish a "Union." We have pleasure in recording the entire success of the undertaking. When all the expenses of the fair have been discharged, there will probably remain a sum of about £10,000, which, added to the three or four thousand pounds previously raised, should enable the committee to proceed with the acquisition of suitable premises.

MEDICAL MISSIONARY SOCIETY, GLASGOW.

The annual meeting of the Glasgow Medical Missionary Society was held last week. The report stated that during the year there had been 17,314 cases treated at the Oxford Street Dispensary, and 30,445 at the Moncur Street Dispensary. The financial condition of the Society was not flourishing; it had begun the year with a deficiency of over £409, which the directors had hoped would have been diminished. The year, however, had closed with an expenditure of over £543 in excess of the income; and the Society still owed the property amount of £250.

DESTRUCTION OF A BLIND ASYLUM BY FIRE.

The Glasgow Blind Asylum, one of the finest buildings in Glasgow, was burned down last week. The northern wing, six stories of which were burnt out, and three flats of the southern wing, were destroyed. The damage is estimated at £10,000 at the least. It is satisfactory to know that the whole of the inmates escaped unhurt, but this was only effected after considerable difficulty.

GLASGOW PHILOSOPHICAL SOCIETY.

An ordinary meeting of this Society was held on December 1st under the presidency of Dr. J. B. Russell. Mr. William Key, manager of the Tralleston Gas Works, read a paper on the "Coal Question, and its Bearing on the Illuminating Power of Gas." In passing, he remarked on the use of gas for cooking purposes, stating that experiment showed that a joint cooked by a coal-fire cost 3d., with a loss of 11.53 per cent. o weight, while the roasting of a similar joint by gas cost only ¾d., with a loss of only 8.25 per cent. of weight. To use coal-gas properly for illuminating purposes, he said that as large a flame as possible should be used, with not more than 7 to 10 lbs. of pressure at the burner for gas of 23 or 24-candle power. They sometimes had complaints of insufficient illumination in a room with three or four jets burning at once. The reason was that the burners were too small, whereby the consumer might be losing 60 per cent. of the light the gas was capable of developing, and the remedy was to get one good No. 7 or No. 8 burner in place of the three or four small ones. As it was impossible to regulate the pressure to consumers in cities and towns, he advised each consumer to have a controlling governor to prevent undue pressure.

GLASGOW SOCIETY FOR PREVENTION OF CRUELTY TO CHILDREN.

The second annual meeting of this Society was held in Glasgow on December 1st, Sir Edward Colebrooke presiding. Major Lysons, the Secretary, read the Committee's annual report. It stated that, during the year, no less than 249 children had been brought into the shelter from sleeping on stairs, etc., as against 50 last year. During the year, 1,120 cases had been inquired into, involving the welfare of 1,753 children; 979 children had been sheltered; 7,283 meals had been given; 400 children had been clothed, or partially clothed, and 1,484 had been sent to industrial or day schools, or training-ships, etc. A drawing-room sale in aid of the Society was undertaken by ladies, by means of which £191 4s. 3d. were added to the funds. Archbishop Eyre remarked that the report showed a great increase on the work done during the previous year. Thus, 534 cases had been investigated more than during the previous year, 340 more children sheltered, 181 more clothed, and 3,103 more meals given. The Chairman was afraid that, in spite of the large amount of work done, only a corner of the question had been touched, and he was deeply impressed with the belief that there were worse cases that they had not yet reached, which it was their business to hunt out by every means in their power. The meeting was large and influential, and contained the promise of a powerful and permanent organisation to save children from lives of misery and destitution.

IRELAND.

Dr. George Gray, of Castlewellan, co. Down, one of the Vice-Presidents of the North of Ireland Branch of the British Medical Association, has been appointed a Vice-President of the Therapeutical Section of the International Medical Congress to be held at Washington.

SIR PATRICK DUN'S HOSPITAL.

The King and Queen's College of Physicians, which is the trustee of the estate devised by Sir P. Dun for the benefit of the hospital bearing his name, has granted the use of the College for a bazaar to be held in Easter week in aid of the funds of the institution.

JERVIS STREET HOSPITAL.

It is proposed to open the new building for the reception of patients on the first day of next year. There has been great delay in bringing the new building into use, but we are informed that all difficulties have now been overcome, and that the wards will be ready on the day named. A grand ball in aid of the funds of the hospital will be given in the new Leinster Hall on January 19th.

THE ROYAL BARRACKS, DUBLIN.

THE outbreak of typhoid fever at the Royal Barracks, Dublin, is said to be due to their unsanitary state. The number of cases has been considerable, and among the patients who have succumbed is numbered Colonel Conne.

THE DUBLIN ORTHOPÆDIC HOSPITAL.

THE tenth annual report of this hospital was presented at a meeting of the patrons and governors of the institution last week. The Committee stated that, in consequence of the general depression, they had been compelled to limit their operations owing to the difficulty of obtaining increased funds; hence the work of the past year did not exhibit an increase on the year before. Were it not for the substantial assistance received through the grants of the Dublin Corporation, the Council of the Hospital Sunday Fund, and the results of the fancy ball last May, the work of the hospital would have been very limited.

ULSTER MEDICAL SOCIETY.

THE second meeting of the session took place in the Museum, Belfast, on December 1st, the President (Dr. Whitla) in the chair. A large number of new members were balloted for, and unanimously elected. It was decided to revive an old regulation of the Society admitting country practitioners to membership at a reduced fee. Dr. Barron was elected Secretary of the Society, in place of Dr. Lindsay, who was subsequently elected to a seat upon the Council. Dr. O'Neill exhibited a patient suffering from an interesting gunshot-injury. Dr. Harkin, J.P., read a paper upon Nocturnal Incontinence of Urine, in which he gave details of a remarkable series of cases where a cure had been effected by blisters applied to the nape of the neck. The discussion on the paper was adjourned to the next meeting. This is the first meeting of the Society in their new library, which is most convenient and comfortable.

THE QUEEN'S JUBILEE AND MEDICAL CHARITY IN BELFAST.

THE Belfast Royal Hospital is the only general hospital in that great manufacturing centre, and is doing a noble and indispensable work. It would be a great calamity if its usefulness should be in any measure curtailed for lack of such adequate pecuniary assistance as a large and wealthy community is abundantly able to afford. The suggestion to raise a Jubilee Fund, to which we referred last week, was originally made by Mr. Richard Patterson, J.P., of Kilmore, Holywood, co. Down, in a communication to the Belfast papers. Commenting on the fact that the ordinary income of the hospital is at least £1,000 below the ordinary expenditure, he urges that in commemoration of the Queen's Jubilee year, the sum of £25,000 should be raised by public subscription, and invested, so as to afford a permanent addition to the funds of the hospital, sufficient to insure it against future pecuniary embarrassments.

BELFAST HEALTH-RETURN FOR NOVEMBER.

THE death-rates from all causes, from lung-affections and zymotic diseases, were comparatively low, and the borough has been free from all diseases of an epidemic form. The rate in lung-diseases, though slightly higher than that of last year, is below the average of this season in the year; hence we may regard the reports of the last two months on the health of Belfast as satisfactory.

CARMICHAEL COLLEGE MEDICAL SCIENCE ASSOCIATION.

THE opening meeting for the session of this Association was held in the College on December 1st. There was a large attendance of visitors and of members. The chair was taken by Dr. J. W. Moore, and the President of the Association, Dr. A. H. Corley, Vice-President of the Royal College of Surgeons, delivered an admirable address on Clinical Teaching and Clinical Study. He said that each of the two systems of clinical instructions now pursued—the bedside lecture and the bedside catechetical—had its own advocates. The first system might be compared to a sermon, of which the patient in the bed might be regarded as the text. It was easy to understand that there might be good sermons and bad sermons, and it was obvious that the catechetical system, if properly carried out, had everything in its favour. It enforced attention, cultivated the senses, sharpened the wits, impressed the memory, and diminished the nervousness of youth and inexperience. He believed more diligence, care, and ability were displayed in clinical teaching in Dublin than in any other medical school he was acquainted with. The clinical teacher had three duties: his duty to himself, his duty to his patient, and his duty to his class. With regard to the time when students should begin clinical work, he was in favour of introducing the student, at the earliest possible moment, to the sights, the sounds, and the odours of the hospital ward, and he hoped the time would soon come when residence in hospital would be required of every student. As a student, a grinder, a lecturer, a clinical teacher, and even as a patient, he had viewed his profession from every possible standpoint, and he solemnly warned them that no amount of study could replace diligent hospital work. A vote of thanks was passed to Dr. Corley, on the motion of Dr. Kendal Franks, seconded by Mr. Auchinleck. Mr. Myles, in a humorous and strikingly forcible speech, moved that the Association was deserving of the support and approval of the students of the Carmichael College, and of the medical students of Dublin generally. Dr. Broomfield seconded the resolution, which was adopted by acclamation. The usual votes of thanks having been passed, the proceedings, which were of a most interesting and instructive character throughout, terminated.

THE OUTBREAK OF TYPHOID FEVER IN CORK.

LAST week a deputation from the City and County of Cork Medical and Surgical Society waited on the Public Health Committee of the Corporation, with reference to the fever epidemic at present existing in that city. Dr. Moriarty, the President, said that at a meeting of their Society they adopted some resolutions and made a few suggestions regarding the prevalence of typhoid fever in the city; and they hoped that they would be adopted by the Public Health Committee. The following resolutions and suggestions were then read by Dr. Cummins, the honorary secretary:—"1. That, having carefully considered the able report of Dr. Donovan, Medical Officer of Health, we would respectfully urge on the corporation the necessity of at once carrying out the various suggestions contained in it, as we fully agree with the views put forward by him with regard to the unsanitary condition of the city at present. 2. That we are of opinion that the present epidemic of typhoid fever is largely, if not entirely, due to the very defective sanitary condition of the city, the faulty construction of the sewers, and the mode in which they are at present cleansed. We would suggest that they be cleansed at night and the openings closed by day, and that the sewerage matters be at once disinfected, prior to removal to properly placed and constructed manure depots. 3. We would strongly urge on householders the advisability of using disinfecting fluids in their water-closets and house-drains. 4. With regard to the proposition that the sewers be ventilated, we would urge the necessity of properly-constructed ventilating shafts, with fresh air inlets, so that a continuous current of air may always circulate in the shafts. Mere surface ventilation of the sewers we consider would be attended with great danger to the public health. 5. We consider that the whole system of sewers is radically defective, and our suggestions are with a view to making temporary improvements, pending the adoption by the Corporation of a more thorough system of drainage. 6. We also think that the sewerage matters, at present deposited in the Park and Western-road, should be disinfected at once, and that the public be urged not to assemble in the neighbourhood of those accumulations. 7. We would also recommend that domestic scavenging be daily carried out by the Corporation. 8. With reference to the water supply of the city, we are of opinion that it is not all that could be desired. We would urge on the Corporation the necessity of at once remedying the condition of affairs exist-

ing at Macroom, where sewerage matter is discharged into the river from which our supply is obtained, and also of attending to other possible sources of pollution." A vote of thanks was passed by the Public Health Committee to the medical gentlemen for their valuable suggestions.

PAYMENT OF MEDICAL WITNESSES.

At the Connaught Assizes, before the Lord Chief Baron last week, an application was made on behalf of two medical witnesses for suitable remuneration. The Lord Chief Baron allowed three guineas a day, with travelling expenses, and £1 a day for personal expenses. In these cases, the medical men had to go from Limerick to Sligo.

MEETING OF THE BRITISH MEDICAL ASSOCIATION IN DUBLIN, 1887.

The first meeting of the Reception Committee was held on Wednesday, December 1st, 1886, in the College of Physicians, at 5 o'clock, to make arrangements for the annual meeting of the British Medical Association to be held in this city in the month of August, 1887.

Dr. Robert M'Donnell, F.R.S., occupied the chair, and subsequently Sir George H. Porter. Others present were:—Dr. Gordon, Dr. Mapother, Dr. Connolly Norman, Sir George B. Owens, J.P.; Sir William Stokes, President of the College of Surgeons; Dr. Collins; Dr. Edward O'Neill, Governor of the Apothecaries' Hall; Mr. Henry T. Bewley; Mr. Anthony Traill, F.T.C.D.; Dr. Swanzy; Mr. Robert Moore; Dr. J. W. Moore; Dr. Arthur Foot; Dr. Grimshaw, Registrar-General; Sir William Carroll; Dr. Atthill; Dr. Cranny; Dr. P. C. Baxter; Dr. C. Gunn; Dr. William Carte; Dr. Arthur Benson; Dr. John B. Storey; Dr. Fraser; Dr. Christopher Nixon; Rev. Dr. Haughton, F.T.C.D.; Professor Cunningham; Dr. Montgomery; Dr. Hamilton Burke, Local Government Board Inspector; Dr. Charles Fitzgerald; Dr. John K. Barton; Dr. Henry Fitzgibbon; Dr. MacSwiney; Dr. Charles Ball; Dr. Walter Smith, hon. local treasurer; Dr. George F. Duffey, hon. local secretary; Dr. L. Hepenstal Ormsby, F.R.C.S.I.; and Dr. Andrew Horne, hon. secretaries Reception Committee, etc.

Dr. G. F. Duffey, the hon. secretary, explained very fully to the meeting all the arrangements that had been suggested, so as to make the meeting a great success when so many English, Scotch, foreign, and American physicians, surgeons, and scientists would visit Dublin. As the arrangements would be so very extensive, it would be necessary to arrange the business in sections, with a chairman and an active hon. secretary appointed for each section, who would work in harmony with the senior hon. local secretary. In this way each officer would be made cognisant of every matter of detail taking place in each section. Without this precaution, arrangements could not be considered complete.

After some discussion, it was proposed by Sir George Porter, seconded by Dr. Swanzy, and carried unanimously:—"That the arrangements and recommendations of the Executive Committee, as stated by Dr. Duffey, be adopted by this meeting."

The election of chairman and hon. secretaries to each Section was then proceeded with. The following were then unanimously elected:—

Museum Committee—Professor W. Thornley Stoker, chairman. Section A—Food and drugs—Dr. Quinlan, hon. secretary. Section B—New books, instruments, appliances—Mr. Lentaigne, hon. sec. Section C—Anatomical and pathological specimens—Mr. A. M'Kee, hon. sec. Section D—Hygiene and sanitary appliances—Dr. H. Colpoys Tweedy, hon. sec.

Local Entertainments Committee—Sir Charles A. Cameron, chairman.

Excursions Committee—Dr. Edward D. Mapother, chairman.

Dinner Committee—Mr. Austin Meldon, F.R.C.S.I., chairman.

Soirée and Conversazione Committee—Sir William Stokes, chairman.

Reception Room Committee—Sir Robert Jackson, C.B., chairman.

Dr. Duffey then submitted the proposed programme of the daily proceedings for the annual meeting in August, when it was proposed by Dr. Grimshaw, Registrar-General, seconded by Dr. Atthill, and unanimously carried—"That the proposed scheme of programme for the annual meeting, August, 1887, be approved of by this meeting."

Sir George Porter having been called to the second chair, the meeting separated.

THE STATUS AND RIGHTS OF THE MEMBERS OF THE COLLEGE OF SURGEONS: COUNSEL'S OPINION.

A case to advise as to the relative rights of the Fellows and Members having been laid before counsel, with copies of the charters and ordinances of the College of Surgeons so far as these are accessible, the following opinion has been received:

With a view to advising, as requested, upon the original status and rights of the Members of the College of Surgeons, I have perused the modern charters, and have obtained a large amount of information from other records concerning the original constitution of the community; and I am of opinion as follows.

1. Although the name of "The Royal College of Surgeons in London" dates from the Charter of 40 Geo. III, A.D. 1800, which forms the starting-point of what may be called the modern organisation of this Society, yet it is abundantly clear from that Charter itself, as well as from the Society's own records, that the College was not in any sense a new creation. It was intended to be, and was, merely a reorganisation of the earlier society, styled "The Master, Governors and Commonalty of the Art and Science of Surgeons of London," which had been created by a Statute passed in 18 Geo. II, A.D. 1745, and had become disorganised, and for certain purposes reduced to impotence, by the mismanagement of its governing body. This Society was itself the continuation and the representative of a series of guilds or communities connected with surgery, whose privileges it inherited by direct succession. It will be observed that the Charter of 1800 begins by granting to the late master and all the members of what it calls "the late Company" (though that does not appear ever to have legally ceased to exist), that they shall be and remain a body corporate by the present name; while by a later clause, the charter specially provides that the College of Surgeons shall exercise and enjoy all the "gifts, grants, liberties, privileges, and immunities, real and personal, whatsoever and wheresoever," which had been "given, granted, and confirmed unto, or otherwise lawfully acquired by and belonging to the said late Master, Governors and Commonalty of the Art and Science of Surgeons." It is clear from these and the other provisions, that the intent and effect of the Charter of 1800 was not to terminate, but to continue the corporate existence of the more ancient societies of Surgeons in London. For this reason it carefully recites the official history of these societies in the main instances of their recognition by the Crown, commencing with the Letters Patent of February 24th, 1 Ed. IV, by which "the Freemen of the Mystery of Barbers of the City of London using the Mystery or Faculty of Surgery" were for the first time incorporated into a "Mystery and Commonalty" by the Royal Prerogative.

It will be necessary to recur presently to the history of this corporate body in detail, but it will be sufficient here to state shortly that, besides this incorporated Company of Barber-Surgeons there was another "Fellowship of Surgeons" which was recognised by the City of London, as a corporation, although it had not been in any way incorporated by the Royal Prerogative. To terminate the evils of divided jurisdiction, an Act was passed in 32 Hen. VIII, A.D. 1540, by which these companies, therein spoken of as "The Barbers of London" and "The Surgeons of London," were united and made one commonalty perpetual, to be called thereafter the "Masters or Governors of the Mystery and Commonalty of the Barbers and Surgeons of London." The same statute conferred upon the freemen of the united company "all and singular the benefits, grants, liberties, privileges, franchises and free customs" at any time granted to the Companies of Barbers or Surgeons, as fully as any of their predecessors had ever enjoyed the same. I am of opinion that this clause gave the sanction of law to all the franchises possessed by the freemen of any of the earlier guilds, including whatever right of control they had as to the policy or government of the body corporate. After a charter of James I (of which I have not yet been able to see a full copy), the liberties of the united guilds were confirmed by a charter of 5 Charles I, which, after reciting that the old companies had enjoyed divers privileges and franchises by statute and charter, confirmed to them "all and singular the manors, messuages, lands, tenements, customs, liberties, franchises, immunities, jurisdictions, and hereditaments whatsoever, which *the men of the said companies* had held, used, or enjoyed, by any lawful means or title whatsoever." The union of the two companies was dissolved by the Act of 1745 already referred to, and thereby such members of the united guild as were freemen of the company, and had been admitted surgeons according to its rules, were incorporated as a separate commonalty, by the name of the Master,

Governors, and Commonalty of the Art and Science of Surgeons. As this Act placed no limitations upon the previous royal grants and confirmations of the collective privileges of both companies to the freemen of the united body, I am of opinion that those freemen-surgeons who constituted the new corporation in 1745, and their successors in 1800 and since, had and have a full title to the enjoyment of all the ancient franchises of the surgeons and barbers, in so far as the same were not inconsistent with the separation of the two crafts effected by the Act.

I am of opinion, therefore, on this head of the case, that the present Members of the College of Surgeons now possess at law all the rights and franchises which can be shown to have been at any time rightfully enjoyed by the Freemen of the Ancient Company of Barbers, or Barber-Surgeons, or by the Ancient Fellowship of Surgeons, except in so far as any of these rights may have been specifically altered by Parliament in any of the statutes from 32 Henry VIII onward, or legally abrogated by the Royal Prerogative in the modern charters of 1800, 1822, 1843, and 1852.

2. It follows that the question as to the true or constitutional relation of the governing body to the ordinary Members of the College can only be answered by investigating the original and inherent constitution of the early Societies. These belonged to the numerous and well-known class of organisations technically called Guilds. That form of association is of great antiquity, for it reaches back to the very commencement of Saxon civilisation in England, and was of vital importance in the development of the earliest municipal life. There exists in the Public Record Office, at the Guildhall, and in the archives of many of the ancient boroughs, a vast mass of records from which the constitution of these Societies can be traced in its development from the very earliest times. That development exhibits an almost monotonous uniformity of type. We find everywhere that the earliest Guilds were "Fraternities" of neighbours, in the nature of an extended family, organised for mutual protection against the oppression of the great lords. A little later, a type of organisation precisely similar was applied to bodies of persons carrying on merchandise together, who frequently formed the nucleus of a market-town; and to these the name of Guilds-Merchant is distinctively applied. At a still later period the same organisation was taken up by the members of the different handicrafts, who, in many cases, were themselves oppressed by the patrician merchants of the growing towns. This latter class, which is known as the Craft Guilds, and to which belonged the various London companies, including these now in question, arose in and after the eleventh century, about the time when the early serfdom of the craftsmen came to an end (see Professor Brentano's preface to Toulmin Smith's *Collection of Ordinances of English Guilds*, pp. cviii, cix, cxviii, etc). They almost always appear to have existed *de facto* as voluntary "fraternities" of a quasi-religious character, before they became legally incorporated. In London, where the City has claimed the right of creating corporations, many, if not all of the early craft-guilds, were sanctioned and recognised by the Mayor and Aldermen. Otherwise, they could be incorporated only by Royal Prerogative, and for this privilege they paid a fee-farm or annual rent, of which the earliest instance on record seems to be that of the Weavers' Company, which obtained a charter and paid rent as early as the reign of Henry I (A.D. 1133). Those which had not made arrangements with the Crown, were fined, under the name of "Adulterine Guilds," to the number of 18 in 26 Henry II, though the City seems to have protected them (cf. *Madox, Hist. Exch.*, 390, and *Great Roll of the Pipe*, 26 Hen. II, rot. xi b., 27 Hen. II, rot. ult., etc.). One of their most important privileges was the right to elect their own "alderman" or warden. In England this was never restricted (Brentano, p. cxxi, sq.), and in the less oppressed towns of the Continent it was also the rule, though there were cases abroad where the feudal lords confiscated the ancient custom of free election. (Lacomblet II, p. 250, quotes an arbitration award between the Prince Archbishop of Köln and the citizens, A.D. 1258, "quod ab antiquo consuetudine fraternitates eligunt sibi quosdam, qui magistri fraternitatum dicuntur, per quos insolentes compescuntur;" and Berlepsch V, 30, from a charter of the Archbishop of Magdeburg, A.D. 1157, "jus et magisterium Sutorum ita consistere, ut nullus magistratum super eos habeat, nisi qui ex communi consensu magistrum sibi eligerint.")

By the end of the thirteenth century, it had everywhere become general for the Craft Guilds to control their crafts by their freely elected masters, and they held thenceforward a position of great civic importance and power. So far as London is concerned, their franchises and privileges were confirmed to them generally by a Charter of Edward III; and from about 1344 onward, the Ordinances made by the "common assent" of all the members of each company came to be formally ratified at the Guildhall by the mayor and aldermen as a portion of the City legislation, and were enrolled among the City Records (cf. Riley's *Memorials of London*, and Herbert I, 28, 29, etc.).

The constitution of all such companies at the time when the Company of Barber-Surgeons first becomes known to history cannot be better described than in Professor Brentano's own words, as to which he specially reminds us that the handicrafts all attained a development so similar even in details that whoever knows one set of Guild Statutes knows all (p. cxxv). "The very soul of the Craft Guilds," he says, "was its meetings, which brought all the brothers together every week or quarter. These meetings were always held with certain ceremonies for the sake of greater solemnity. The box, having several locks and containing the Charter of the Guild, the Statutes, the money, and other valuable articles, was opened on such occasions, and all present had to uncover their heads. *These meetings possessed all the rights which they themselves had not chosen to delegate.* They elected the Presidents (originally called Aldermen, afterwards Masters and Wardens) and other officials. As a rule, the Guilds were free to choose their Masters, either from their own members or from men of higher rank" (cf. *Ord. of Eng. Guilds*, p. 305, in the decree of Ed. IV concerning the Tailors' Company of Exeter, etc.) "Did the election fall on a Member who would not accept it, he was subjected to fines. Of a Council which, like that of the Court of Assistants of later times, stood by the side of the Masters, we find in early days at most but a trace in the quorum of members who had to co-operate with the Master on various occasions, as, for instance, in the exercise of jurisdiction. In England we first notice, in 1397, in the records of the Grocers, that six persons of that Company were chosen to aid the Wardens in the discharge of their duties. These cases excepted, Assistants are first met with in the xvi century."

It ought to be observed (cf. p. 128) that at this period the Craft Guilds were not monopolies. Every competent person was then permitted to carry on the craft if only he submitted himself to the organism created for the purpose of regulating it. Once admitted, he then, as a member entitled to vote, exercised his fair influence on its decisions. But, as is well known, the craft did not tolerate the admission of any person to any trade till he had proved himself a proper workman. The Company of Surgeons accordingly had, no doubt from the commencement, some elective machinery devised by themselves for securing this indispensable condition, and from this the Court of Examiners which we find in later times was and is an obvious development. It, therefore, was originally also dependent entirely for its election and authority on the votes of all the freemen.

In course of time a number of the crafts, in the altered conditions of industry, fell almost altogether into the power of large capitalists, and the decay of the old principle of commonalty and brotherhood was emphasised by a division of the members of many of the English companies into three distinct classes—the livery, to which only the rich masters were admitted; the householders, to which the poorer masters belonged; and the journeymen, who were known as freemen or bachelors, for they were commonly forbidden by the by-laws to marry until they had attained their mastership in accordance with the ordinances of the guild. About the same time, and as a part of the same degeneracy, the sovereign meeting of all guild members is found to be gradually elbowed out of its control over current business by a "Court of Assistants." The power of these bodies grew up in the course of the sixteenth century, and the first legal recognition of such a system of control is said to belong to the reign of Philip and Mary (see *Herbert*, vol. i, p. 118). After James I, the reactionary tendency of the Stuarts showed itself in the royal recognition by many charters of this unconstitutional exclusion of the members of a community from their inherent voting power. But even then, although the masters, wardens, and assistants, came in the end to be purely co-optative bodies, an "election-day" still continued to be held in the Guild Hall of the company, at which all the members or freemen of the guild assembled according to their ancient custom, and at which the election of the officers was at least proclaimed, and thereby ratified by the freemen. (*Herbert*, ii, p. 652, etc; *Brentano*, p. clii.) In connection with this transfer of power, some protest was made in the Clothworkers' Company, about the year 1649, against the usurpation by the Court of Assistants of the rights of the body of freemen, and on that occasion the apologists of the court so far forgot their antecedents as even to endeavour to explain away the meaning of "commonalty" in the statutes of the company. (*Brentano*, p. 152; and Chitwin's *Collection of the Company of Clothworkers' Privileges*, 1649, B.M., *ibid.*) The manner in which the change from a democracy to a close oligarchy came about seems to have been by the enactment of by-laws in each guild, always by the members assembled in regular meeting, whereby, in the first place, a body of "Assistants" was

formed, to act with and partly control the masters, and then various powers were delegated one by one to the court or council thus constituted. The authority of such a council depends, therefore, altogether on an original vote and assent of all the freemen, and these would have always retained their inherent right to take back the powers so conferred, if the Assistants had not fortified their *de facto* tenure of power by obtaining charters or statutes, purporting to exclude the freemen from interference. How far any royal charter could of itself and without the authority of Parliament legally effect this, is a question which can only be decided on the merits of each case as it arises; but I am of opinion that in every case the presumption would be in favour of maintaining the constitutional franchise of the freemen, which is, in fact, the basis and essence of the association.

3. From the confused records of the fourteenth century at the Guildhall, it appears that there were originally two Craft-Guilds concerned with Surgery. One of these was originally the Guild of the Barbers, which is found in full action as early as the second year of Edward II, A.D. 1308, when it is recorded that they elected a Master-Barber, and, as the Craft-Guilds were not then fully independent of the City, they presented him to be admitted and sworn by the Mayor and Aldermen. They had become a Livery Company before 1387. The other was the Guild of Surgeons, so-called, which is first mentioned as recognised by the City in 1354, and as receiving approval of regular Ordinances from the Mayor and Aldermen in 1368, from which year onward elective "Masters of the Surgeons" appear to have been admitted and sworn at Guildhall. It is general knowledge that many of the barbers about the thirteenth century acted as the assistants of the clerical physicians, who were forbidden to shed blood by Papal ordinance in 1215; and it appears from the records that as early as the reign of Edward III it was found necessary to exercise some control over these "Barbers practising Surgery," and to have some test of their capacity. Accordingly, in 1415, the "Barbers exercising the Faculty of Surgery" were constituted into a separate community, or section of the Barbers' guild, and by an Ordinance of the Mayor and Aldermen, it was arranged that they should, by a majority, elect two Masters of their own. These three sets of Masters seem to have been annually elected and sworn in at the Guildhall for some time before the grant of the first Letters Patent of 1 Edward IV, A.D. 1462, already mentioned. It is evident that the separate Community of Surgeons was of considerable importance, since a joint College of Physicians and Surgeons was created under the authority of the City in 1422, with large examining powers, although it does not seem to have continued. It is notable in this connection that the "Fellowship of Surgeons," as distinct from the Barbers' Company, placed on record in 13 Henry VI an Ordinance to the effect that all their Craft were to meet yearly on their Saint's day to "choose four Masters, as old custom was." This and the other provisions of that Ordinance prove by their exact identity with those recorded in Toulmin Smith's *English Guilds* that this Fellowship of Surgeons, as well as the Guild of Barbers and Barber-Surgeons, was a Craft-Guild of the ordinary type.

It is impossible to ascertain in what way, or how far, the original Barbers' Company branched off into two bodies, consisting of Barbers and Barber-Surgeons respectively. An analogous arrangement, however, is shown to have arisen in the Weavers' Company, a branch of which became the Merchant Tailors. The Charter of 1 Edward IV appears to relate mainly to the Barber-Surgeons section, for it is granted on the petition of the "freemen of the mysterye or craft of barbours of our Citie of London using the mysterye, craft or facultye of surgerye," and it is these that it incorporates into a fellowship: and, accordingly, we find an indenture of July 12th, 8 Henry VII, made between the two fellowships called respectively the "Fellowship of Surgeons" and the "Fellowship of Barbours-Surgeons and Surgeons-Barbours," for the strict regulation of the practice of surgery in the City and suburbs. It was the same two fellowships which were united by the Act of 32 Henry VIII, and whose joint privileges, as has been said above, descended to every member of the college founded by the Letters Patent of 40 George III.

That these privileges included a right of free election of governors and all other officers in both companies, and also a continual oversight and control of their administration by periodical meetings of all the "freemen," is abundantly clear from the records of these Companies themselves, apart from the mass of evidence as to the analogous guilds of other crafts.

The Master of the Barbers, first noticed in 1308, the Master of the Surgeons, noticed in 1368, and the Masters of the Barber-Surgeons, commencing probably in 1375, were all of them elected by their respective companies, presumably on the traditional election and festival day of the guild, and were presented to be sworn in at Guildhall as the elected representatives of their Brotherhood. The one instance to the contrary in 1415 is clearly exceptional. In the first record, which appears to recognise a separate class of Barber-Surgeons, namely, the Petition and City Ordinance of 49 Edward III, it is expressly provided that there shall be "two honest persons of the said trade, *chosen by common consent*, to be guardians of the said craft," who should then be presented and sworn before the Mayor; and by the same Ordinance the right of examining unlicensed persons was given to the freemen collectively (Guildhall Letter Book H, 276). So in the Ordinance of 1415 (Guildhall Letter Book I, 1496) the Mayor and Aldermen enact that, "*by the majority of all the Barbers practising Surgery* within the City, there should be chosen two to act as overseers." So in the regulations for the joint College of Physicians and Surgeons, established in 1422-3, it was ordered by the Mayor and Aldermen (May 15th, 1423, Letter Book K, 62 b) that all the physicians of London should each year choose two surveyors of physic, and all the surgeons of London should each year "choose two masters for the craft of chirurgy," and that the examinations in medicine should be in the hands of these officers. There is extant also the full text of the Ordinances of the Fellowship of Surgeons, as settled "by all the commonalty," in 13 Henry VI, A.D. 1435, and preserved among the archives of the Barbers' Company. By this we find that all of the craft are to assemble on the feasts of SS. Cosmas and Damian (under penalty of a fine for non-attendance), and "choose them four masters for the year, as old custom was," and then to choose also four others as trustees of the fellowship. Besides this great assembly, four meetings of all the freemen, at which a full attendance was also enforced by fine, were to be held quarterly for the discussion of the business of the guild. These meetings were "of duty." The masters might convene others, but if they omitted to convene the regular assemblies, they were themselves fined. The examination of Surgeons not free of the guild was to be by the masters "with their fellowship." The masters and the trustees were to give bonds that they would hold and employ the guild property "to the use of all the craft." Finally, the masters were sworn to keep the Ordinances thus settled, and neither to attempt nor to allow any variance "*without the assent of all the fellowship*," that is, of all the freemen in meeting assembled, provision being duly made for orderly debate, "when the masters at any time sit in judgment, or in examination, or in communication with the whole fellowship." These same Ordinances were confirmed (with further provisions for the punctual holding of the regular meetings), "by the advice of all the worshipful men in the science of surgery in all the commonalty," in the 19th year of Henry VII, A.D. 1503.

For the other community, including the Barbers and Barber-Surgeons, we also possess in the Guildhall Records (Letter Book K, 250) an Ordinance approved at Guildhall in 1450, which, though less full, is equally distinct in its recognition of the right of all the freemen (which no one then disputed) to an elective and legislative franchise. The four quarterly meetings, for example, are expressly provided for, under penalties for absence, and it is declared unlawful to admit anyone into the "brotherhood" without the "*common assent of all the brethren of the said craft, or the more* part of them," upon pain of fine for "such of the masters or wardens that doth contrary."

The Charter of the Barber-Surgeons in 1462 is not clearly worded, and refers, no doubt, to some existing ordinances now lost; but it provides in terms that "the Masters and Commonalty might make statutes and ordinances for the government of the said mysteries," and that the power of admitting able persons "into the said mystery and the liberty of the said City" was to be vested in the Masters and Commonalty in like manner. Still later, in 1493, when an indenture of composition was solemnly made between the Company of Barber-Surgeons so incorporated and the independent Fellowship of Surgeons, it was provided that each of these communities separately should elect two Wardens, the Court of four thus elected having the general government of all those practising surgery in London. In 1499 (15 Henry VII), the Barber-Surgeons' Charter appears to have been confirmed without alteration in the wide provisions above noted (cf. Letter Book M, 216); and a further confirmation, by way of "inspeximus," was obtained in 18 Henry VIII, A.D. 1526. Down to this date, therefore, there is, as far as I have seen, no evidence of any break in the full sovereignty of the whole body of freemen, as to all matters vitally affecting any of the Surgeons' Guilds. The first mention of a "Court of Assistants" which I have been able to find is in the statutory ratification of the Barber-Surgeons' By-laws, allowed, pursuant to the Act of 19 Henry VII, by Sir Thomas More and others in 1530 (22 Henry VIII). This code of by-laws indicates the commencement in this craft of the degeneracy above-mentioned of the old "brotherhoods" into bodies more subject to the domination of a caste or clique of rich men. The admission of new freemen is permitted, contrary to the chartered or inherent right

of the Members, to the Masters with a majority of their twenty-four assistants; and a broad distinction is made between those who were "of the Livery" and those who were not, while the power of admission to the Livery is again arrogated to themselves by the Court of Assistants. Yet at the same time the control of all the freemen was maintained by the continuance of the annual and quarterly gatherings of the whole Membership, with the ancient fines for non-attendance, and with provisions indicating that lively debate was still maintained; and every freeman of the company was not only allowed, but bound to read a lecture in hall in his turn. The fusion of the Barber-Surgeons and the independent Surgeons effected by the Act of 32 Henry VIII confirmed, as has been already said, the existing "franchises and free customs" of the members of both companies, though I am as yet unable to say whether it modified to any extent the ancient system of government. I find no evidence, however, that this Court was itself otherwise than elective, and still subject to the control of the general vote; and I think that, down to the close of the Tudor period, and possibly much later, the theory at least of complete "fraternity" and self-government was maintained.

With reference to the rise and character of the Court of Assistants, I note that in their own petition for the charter of James I, in 1604, they allege that a custom had grown up to have twelve men of the livery yearly chosen as electors to choose four of the livery to be masters for one year, and that the Assistants were to be chosen for life. In these two encroachments lies, no doubt, the origin of the gradual decay of the influence of the freemen as a body; but I think it is clear that both the Assistants and the Electors were at first freely elected by the votes of all the freemen at the traditional yearly meeting. I have not ascertained at what precise date the Assistants became self-elective and took to themselves the further power of nominating the Masters, but whenever this was done it was obviously an abrogation of the ancient rights of the members, and a subversion of entire nature and conception of the society. Probably it was done at first by a bye-law accepted for convenience, when the public spirit of the membership was at a low ebb and when compulsory attendance at meetings was felt to be irksome. Such a bye-law would be valid, but would also be revocable; for I am of opinion that nothing less than the express words of an Act of Parliament could take away the right of the freemen to meet and revise the Ordinances of their community. How far this inherent right has been effectually taken from them by the various statutes, I cannot at present advise, as I have not before me a full text of all of these, and much will turn on minute points of construction. I observe, for example, that although the Act of 18 George II. gives power to two Masters and nine Assistants to hold courts and make bye-laws, it does not purport to take away the right of all the members in annual meeting to do the same. Certainly it does not take away their right of meeting and their general rights as the beneficiaries of the College property to have reasonable access to, and enjoyment of everything which may be vested in the Masters or governing body, in trust for the whole society.

Finally, without expressing any opinion on the extent to which the ancient rights of the freemen or members may still be legally enforced, notwithstanding the modern usages and the statutes and charters embodying the present limited system of government, I am clearly of opinion on the main question submitted to me, that the members are the original and normal electorate and governing body; that by the nature of the case the Masters and any limited body exercising any kind of control are the delegates of the members and trustees of all rights or property for them; and that the creation of the body of Fellows in 1843 as a limited electorate by way of repairing the abuses of a co-optative government, was an entire departure from the true character of the College. I think, therefore, that apart from their actual legal rights, the members have the strongest constitutional claim to be restored by an amended charter to the position which they originally held, and that they will be well advised to insist upon this claim, with whatever modifications they may be willing to accept, by petition to the Crown and Parliament and by proper protests and resolutions at each general meeting of the society.

(Signed) B. F. C. COSTELLOE.

THE MILK OF RABID COWS.—The Russian newspaper *Vratch*, in announcing the establishment at Moscow of an Institution for the Preventitive Treatment of Rabies, asks whether persons who have drunk the milk of a cow suffering from rabies should be subjected to preventitive inoculation. This question has arisen in connection with a family at Odessa.

METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

A SPECIAL general meeting of this Branch was held at the Royal School of Mines, Jermyn Street, Piccadilly, on Friday, December 3rd, at 8 o'clock; Dr. BRISTOWE, President, was in the chair. The number of members present was sixty-nine, among whom were—

Barnes, J. W., Esq., F.R.C.S.
Hutchinson, S. J., Esq., M.R.C.S.
Marsh, Howard, Esq., F.R.C.S.
Jelly, William, Esq., M.D.
Merriman, J. J., Esq., M.R.C.S.
Cribb, H., Esq., M.R.C.S.
Grant, A., Esq., M.D.
Bullock, J. E., Esq., M.D.
Oswald, J. W. J., Esq., M.D.
Oswald, R. J. W., Esq., M.R.C.S.
Roberts, C., Esq., F.R.C.S.
East, Edward, Esq., M.R.C.S.
Hadden, W. B., Esq., M.D.
Sandwell, E., Esq., M.R.C.S.
Mickle, W. J., Esq., M.D.
Masters, J. Alfred, Esq., M.R.C.S.
Holmes, Timothy, Esq., M.A.
Coupland, S., Esq., M.D.
Taylor, Charles, Esq., M.D.
Walters, F. R., Esq., M.D.
Walker, Joseph, Esq., M.D.
Evershed, Arthur, Esq., M.R.C.S.
Lucy, Wm. C., Esq., M.D.
Greenwood, Major, Jun., M.R.C.S.
Ellis, W. Ashton, Esq., M.R.C.S.
Pocock, Walter, Esq., M.R.C.S.
Verdon, H. Walter, Esq., F.R.C.S.
Brown, George, Esq., M.R.C.S.
Bott, W. Gibson, Esq., M.R.C.S.
Eastes, George, Esq., M.B.
Bartlett, Edward, Esq., M.R.C.S.
Cable, G. H., Esq., M.R.C.S.
Smith, W. Robert, Esq., M.D.
Stoker, George, Esq., M.K.Q.C.P
Henty, S. H., Esq., L.R.C.P.
Norton, J., Esq., M.R.C.S.
Finlay, D. W., Esq., M.D.
Barker, R. W., Esq.
Mason, J. W., Esq., M.R.C.S.
Meagher, J. S., Esq., M.R.C.S.
Dowse, T. S., Esq., M.D.
Ford, J., Esq., M.D.
Brown, C. G., Esq., M.D.
Wallace, Frederick, Esq., L.R.C.P.
Hart, Ernest, Esq., M.R.C.S.
Smith, T. Gilbart, Esq., M.D.
Massey, Hugh H., Esq., M.R.C.S.
Davies, Maurice, Esq., M.D.
Cook, T., Esq., M.D.
Blair, A., Esq., M.R.C.S.
Smith, Walter, Esq., M.D.
Paramore, R., Esq., M.D.
Gubb, A. S., Esq., L.R.C.P.
Bristowe, J. S., Esq., M.D.
Hare, C. J., Esq., M.D.
Dickson, Walter, Esq., M.D.

After the election of the new members had been proceeded with, it was agreed to postpone the question of the new by-laws until after the consideration of the resolutions contained in the requisition addressed to the President.

The PRESIDENT read a letter from the solicitor to the Association bearing on the rights of committees, and the extent to which executive power was vested in the Council of the Branch.

Dr. MORTON then proposed the following resolution:

Resolution 1.—"That this meeting is of opinion that the exclusion of the Apothecaries' Society from participation in the Conjoint Examining Board of England and Wales will, under the provisions of the recent Medical Act, 1886, lead to one or other of the following consequences, either of which is equally to be deplored in the interests of the public and of the profession, and especially of the general practitioners of England and Wales,

(*a*) Extinction of the Apothecaries' Society in the highly improbable, if not impossible, case of their not receiving the legal powers which the Act contemplates, to appoint surgical examiners recognised by law, a result which would be disastrous to the whole profession and to the public, seeing that the powers of the Apothecaries' Act alone avail to protect the profession against the practice of a large body of unqualified practitioners, and especially of visiting and prescribing chemists; or

(*b*) In case the Apothecaries' Society receive such powers of giving a surgical examination and surgical licence, legally registrable, the creation of a new class of surgical and medical practitioners throughout England and Wales, contrary to the intention of the legislature and the wishes of the profession, legally entitled to medical and surgical titles, who would compete on a lower grade with the existing Members of the College of Surgeons and the Licentiates of the College of Physicians."

He said that the exclusion of the Apothecaries' Society from the Conjoint Board was to be deprecated, because it would either lead to the extinction of the Society, or its constitution as a separate qualifying body, such as was not contemplated when the last Medical Act was passed. He said he was impressed more deeply than he could say with the importance of the crisis with which they had to deal. There had been growing up during the last twenty or thirty years a new generation of medical men, very different from those who preceded them, and with different aspirations. Their feelings had gradually taken shape, and were now finding expression. At the same time as these aspirations had taken shape, more especially in the action of the Fellows and Members of the College of Surgeons in connection with the election of the Council of that institution, a movement had also arisen for granting a medical degree which should give general practitioners the legal title of Doctor. This question, which had arisen with regard to the exclusion of the Apothecaries' Society, had relation with all the other movements; it had to do with the new powers of the Medical Council, with the action of the Royal College of Surgeons in regard to its members, and with the status of the Licentiates of the Royal College of Physicians. The Act of 1886 gave new powers to

the General Medical Council to supervise the examinations of the corporations—powers which enabled the Council to bring these examinations to something like the same level. It also gave powers to the corporations to combine together for the purpose of giving a treble qualification. Before the passing of that Act, the Colleges of Surgeons and Physicians were in process of combination. The Apothecaries' Society, as soon as the Act was passed—aware, perhaps, of the proceedings pending between the Colleges—applied to them, by a courteous letter, to be admitted to form part of the Conjoint Board, only following up, by so doing, certain negotiations which had almost been brought to a successful issue some years before. The Society received no answer to that letter until November 15th. In the meantime, the agitation in connection with the Royal College of Surgeons was proceeding; and, on November 4th, took place one of those curious meetings at the College, unexampled in the history of that or any other body. Facing a silent row of Councillors was to be seen a large and enthusiastic body of Members and Fellows who did all the talking. It formed an amusing and instructive contrast; the absolute powerlessness of those who had all the talk, and the absolute silence of those who had all the power. At the close of that meeting, a resolution was unanimously passed, deprecating the exclusion of the Apothecaries' Hall, and it was received by the Councillors with the silence characteristic of their attitude on those occasions. The meeting broke up in the hope that something would result from such an expression of feeling as was given by the body of men there present. On November 15th, a letter in the most curt terms was received by the Apothecaries' Society, declining to admit them into the combination, and shutting the door upon them altogether. He asked why the Society should have been thus excluded; it was not, perhaps, a highly dignified body; it was not, perhaps, on the same level historically and socially as the Colleges of Surgeons and Physicians, but if one looked back on its history, it would be seen to have an eminently respectable and an eminently useful history. There was a time when the College of Surgeons had not been in a position to look down upon the Apothecaries' Society, which originated in 1616; and the College of Surgeons of London did not separate from the Barbers until 1745, and certainly before that date the Society of Apothecaries was quite on an equality with the Company of Surgeons. Surgery had developed marvellously during the present century, and had raised itself to a point from which it might possibly look down upon the Apothecaries' Society, but the time had been when that was not so. Within the last half century, the Society of Apothecaries had rendered services to the public and to the profession which were fully equal to those of the College of Surgeons. It had taken up the duty of examining and qualifying practitioners of this country at a time when the College of Physicians would not deign to do so; but the real reason why he deplored its exclusion, was on account of the results which were likely to follow. If the Society of Apothecaries did not take a new departure, it would inevitably be extinguished; with no functions and no receipts, it would be unable to maintain itself. It was not a rich Society, and would, consequently, be unable to carry on an existence like other city guilds, and nothing would remain but to sell its premises and die. It was not only that the Society would be extinguished, but with it would be extinguished valuable powers which it alone possessed for the repression of illegal practice in this country. The Society of Apothecaries had possessed for many years powers under an Act of Parliament of its own for putting a stop to the practices of men who, as the technical phrase goes, "act as apothecaries." Under that Act, nearly all the successful prosecutions had been taken for the repression of quackery in its most insidious form. The General Medical Council, it was true, possessed powers, but they were in a different and less valuable form. The Council could prosecute persons for illegally representing themselves to be registered medical practitioners, a power which they had exercised very sparingly and to little purpose; but these powers, in point of fact, touched very few of the cases which constituted the real hardship of the general practitioners, especially those who practised in poor districts, where they had to compete with the prescribing chemists. The Apothecaries' Act met this case, and the Society placed its powers most generously at the disposal of the Medical Alliance Association. But would the Society of Apothecaries submit to extinction? He thought it was extremely unlikely. It had secured the insertion of clauses in the Medical Act, 1886, which would secure its continuance and usefulness. These clauses, in the event of a failure to combine, provided for the appointment of assistant examiners by the General Medical Council. It was very improbable that the General Medical Council would withhold that assistance from the Apothecaries' Society, and if it did, then the Act provided that the Society could apply to the Privy Council. There was scarcely room for doubt that, under these clauses, the Society of Apothecaries would be able to obtain surgical examiners to complete its examinations, and would then be able to send forth men fully equipped, and able to put their names on the *Register*. The result would be to create a lower order of practitioners side by side with the others ["Not lower"]; in any case a new order of practitioners who would not only be admitted at lower fees, but would probably have passed a lower standard of examination than the others. [*Expressions of dissent*] He thought it could hardly be doubted that it would be to the interest of the Apothecaries' Society to make the examination, as well as the fees, a little lower, in order to induce men to avail themselves of their diploma. At all events it must be one of two things; either the men qualified by the Royal Colleges would have to compete with men who had obtained their diplomas at half the expense, or there would be a lower and different class of men who would not take rank with the rest of the practitioners of this country, and who would practise among the poor, and would detract as much from the dignity of the profession at one end, as the magnates in Pall Mall and the West End might be supposed to add to it at the other. He had heard it said that it was deliberately contemplated by the two Colleges that such another and possibly lower order should be established. There might be something to be said in its favour, but in his opinion there was much more to be said against it. There was a real difficulty as to how to secure adequate medical attendance for poor people, and no doubt that would be urged as a reason for the establishment of a new order of medical men; but that was not the right solution; the true solution was, by the extension of the provident dispensary system.

Dr. VERNON, in seconding the motion, invited the meeting to take a common sense view of the question, which enormously affected the interests of a large body of practitioners, and the welfare of that body was synonymous with the welfare, dignity and success of the whole profession. One of two things would happen, if the decision of the Colleges of Surgeons and Physicians was to be final: either the extinction or the rejuvenescence of the Society of Apothecaries. If it became extinct, then whatever interest the profession had in the Act of 1815 would perish. In that Act was a clause of vital importance, which related to the prosecution of prescribing and visiting chemists, and it was only the fear of impending prosecution which stood as a barrier against a flood of illegal practice. It was very unlikely however, that the Society of Apothecaries would die. It would undoubtedly acquire the necessary powers, and their Licentiates would be qualified in medicine, surgery, and midwifery, would compete with the Licentiates and Members of the Colleges, and probably compete successfully. Instead of union, they would have thus perpetuated rivalry in the profession; instead of one common examination, one common licence and one strong authority, councils would be divided, and there would be weakness.

Dr. PARAMORE, in supporting the resolution, said that it was a marvel how medical life had advanced with such rapid strides as it had done during the last few years. There was a time when anybody could call himself surgeon, doctor or apothecary, and practise as such, when there was no law to prohibit his doing so. One was struck with admiration when one thought of the past, and what certain men had achieved with their few advantages, and with little or no recognition of their skill and knowledge. There were men who had stood head and shoulders above their fellows, who had advanced the science and art of surgery, but there probably never was a time when the profession was better placed than now, and yet they had met together because they were afraid that harm would be done or a slight placed upon them by the action of the Colleges in respect of the Society which had done so much to raise the status of the profession. The title of apothecary was not a high one; it simply meant one who prepared and sold medicines. He was considered by the public as a mere druggist, but the Apothecaries' Society held a fair examination perfectly comparable with that more recently introduced by the College of Physicians. Some things looked better than they were, but the title of apothecary looked worse than it really was. It would be far better to have a conjoint scheme in which the Hall was represented.

Mr. GEO. BROWN said he perfectly agreed with the resolution deprecating the action of the Colleges in this matter. Having taken an active part, with the assistance of several gentlemen then present in founding the first Association formed for the purpose of bringing special powers to bear for the purpose of bringing about the one portal system, he was not one to say anything which would be calculated to maintain in England multiple methods of getting into the profession. At the same time he felt that the time had gone by for hoping that the Colleges would be influenced by such resolutions as they might

pass that evening. It had been suggested by one or two speakers that one of the results of the exclusion of the Apothecaries' Society would be its extinction. They might, however, disabuse their minds; the Society would not be extinguished; the time had passed when that could take place. It might have been accomplished before the last Medical Act was passed. The Colleges would doubtless have been glad, with the assistance of the profession, to have secured such an end, but they had lacked the courage to take the initiative. Seeing the valuable privileges contained in their Act, he thought it was well that this was so. He must protest against that portion of Dr. Morton's speech which inferred that a probable result of the exclusion of the Hall would be the creation of a lower order of practitioners. Why should they be a lower grade? He would like to hear what difference there would be in their position. They would have gone through the same curriculum, and would have passed equally good examinations. He had seen the Reports of the Visitors appointed by the General Medical Council, and they proved conclusively that the Apothecaries' examination could hold its own with any examining board in the United Kingdom. Was it because these men would have paid lower fees? He was unable to see what effect that could have on their skill or ability. He might quote the poet's lines about "the rank is but the guinea stamp, a man's a man for a' that." He did not find that the licentiate of the Apothecaries' Society carried on, as a rule, a practice of a lower class than practitioners in general. He cordially supported the resolution as a protest against the conduct of the Colleges of Physicians and Surgeons.

Mr. WALLIS MASON said that the fear expressed by the previous speaker that the Councils were not to be influenced upon this question, did not exist in his own mind. They must be influenced. No doubt force must be applied from every side, in order to press upon them a solution of the question. Success was certain, if only the cause were urged with determination. Much useful influence could be brought to bear, if only medical men would interview their Member of Parliament. The attention of the Government might then be effectually called to these questions. If necessary, the public should be called upon for assistance, for they also were interested in it, and should be educated as to its merits.

The resolution was then put to the meeting, and was carried by 39, there being only five dissidents.

Mr. TIMOTHY HOLMES then proposed:

Resolution 2.—"That, seeing that the Royal College of Physicians and the Royal College of Surgeons of England are entrusted with the regulation of the examinations and status, and with the protection of the interests of the general practitioners throughout England and Wales, and that, under the Medical Act of 1886, their powers and monopoly in this respect are greatly strengthened, it is just and important that the Members of the College of Surgeons and the Licentiates of the College of Physicians respectively should be duly represented in the Councils of these Colleges, and should be admitted to a rightful share in the administration of their own affairs in relation to the government of these Colleges."

He said that he had discussed the subject so fully elsewhere, that it would be unnecessary and inconvenient to trespass for any length of time upon the attention of the meeting. The subject no longer admitted of argument; in any case, his experience of it when proposed at the College of Surgeons was such that he could fairly say that he had never heard any serious argument brought against it. The position was that the Members of the Royal College of Surgeons were entitled, not, of course, by law, but by every consideration of justice and public policy, to a voice in the management of the College. That voice and that influence they could not have unless they were allowed to nominate Members to sit on the Council of that College. That opinion he had advocated the other day at the meeting at the College of Surgeons, and nothing was brought against it which could influence the decision of that meeting, nor did he suppose any argument would be brought against it here. It was, therefore, quite superfluous for him to waste time in arguing it afresh. If the Members of the College of Surgeons were content that a great institution, which had now grown into an enormously wealthy corporation, to a very great extent through their contributions, should be managed entirely without their having any voice in the distribution of the great funds which that corporation had become possessed of; if they were satisfied that this great corporation should be managed so that they themselves had no interest whatever in it—hardly knew, in fact, who the managers of the institution were,—if they were satisfied with such a condition of things, then so was he. If, on the other hand, they considered such a state of things to be monstrous, if they were determined it should no longer exist, then he would tell them that they had the remedy in their own hands; that there never was an occasion on which they were so perfectly certain to be successful. If the Members determined that they would have a voice in the management of the Corporation, they had nothing to do but to go on in the way which was perfectly well known to everybody; they had only to influence the public, the profession, and the governing classes of this country, and success was perfectly assured. It did not appear to him that the management of the College of Physicians had succeeded in exciting the admiration of the profession. He certainly thought that, if the lower class of graduates of that College chose to claim a reasonable and proper share in the management of the College, it would be only reasonable and proper that they should have it. He did not consider himself in any sense a revolutionist, nor even a radical. The Members had claimed no preponderating voice in the Council; they were perfectly aware of the benefit which had arisen to the profession and the College from the creation of the order of Fellows, and they had not proposed to interfere in any degree with that order.

Mr. ALFRED S. GUBB, in seconding this resolution, said that it would not be inopportune to say a few words on the position of the Licentiates of the College of Physicians. He hoped that the success which was about to attend the claims of the Members at the College of Surgeons would serve as a precedent for that hitherto quiescent body, the Licentiates of the College of Physicians. The present was a most opportune moment for them to urge their right to a voice in the management of their College, at any rate when matters were discussed which were possessed of such great importance to their interests and to their future. It was only quite recently that the College of Physicians had begun to give a qualifying diploma, and even when this step was resolved on, the scheme was conceived in the narrowest possible spirit, without giving them any share in the government, or any voice wherewith to express their wishes. The very language of their diploma was calculated to hurt the feelings of most recipients; in fact, the conduct of the College of Physicians towards its Licentiates had been that of a step-mother. If the Licentiate were so untrustworthy, and so uneducated a person that his presence in the Council would contaminate that body, and lower it in the eyes of the profession—if he were not even to be trusted with a voice in the management of his own affairs—then the sooner his connection with the College was severed, the better it would be for everybody.

Mr. STOKES said the question was not so much whether it was desirable to give the Licentiates and Members of the Colleges fresh powers, but rather how they should be endowed with the powers. The same obstacles did not exist in obtaining the Membership of the College of Physicians as existed in the case of the Fellowship of the College of Surgeons: the examination for the latter consisted of subjects which would have to be specially prepared, whereas at the College of Physicians, the subjects were just those with which a man might be supposed to be becoming daily more familiar.

Dr. SIDNEY COUPLAND proposed to divide the resolution, so as to take the College of Surgeons separately from the College of Physicians, but this was negatived by the meeting.

The resolution was then put to the vote, and was carried by 39 for and 1 against.

Mr. MAJOR GREENWOOD then proposed Resolutions 3, 4, and 5 *pro formâ*, and they were seconded by Dr. BOTT; and Mr. ERNEST HART proposed as an amendment (seconded by Dr. Vernon), the resolutions modified so as to conform to the laws of the Association as laid down in the letter read by the President from the solicitors to the Association on the subject of the powers of committees.

The resolutions, as amended, were adopted unanimously.

Resolution 3.—"That the Council be requested to prepare a petition setting out the above resolutions, and that the respective Colleges be requested to receive deputations to explain the grounds on which the foregoing resolutions are based, and to urge their acceptance."

Resolution 4.—"That the Council be requested to prepare copies of these resolutions, to be forwarded at once to all the Branches of the British Medical Association, and for publication in the medical papers, and that the Branches of the Association be requested to hold meetings, with the least possible delay, to consider the above resolutions, with a view to communicating any decision at which they may arrive to this Branch, and to the respective Colleges."

Resolution 5.—"That the Council be requested to appoint a Committee, which shall include members of its own body, and the following gentlemen, to carry out the above resolutions, and to take such action as may seem best calculated to give them effect."

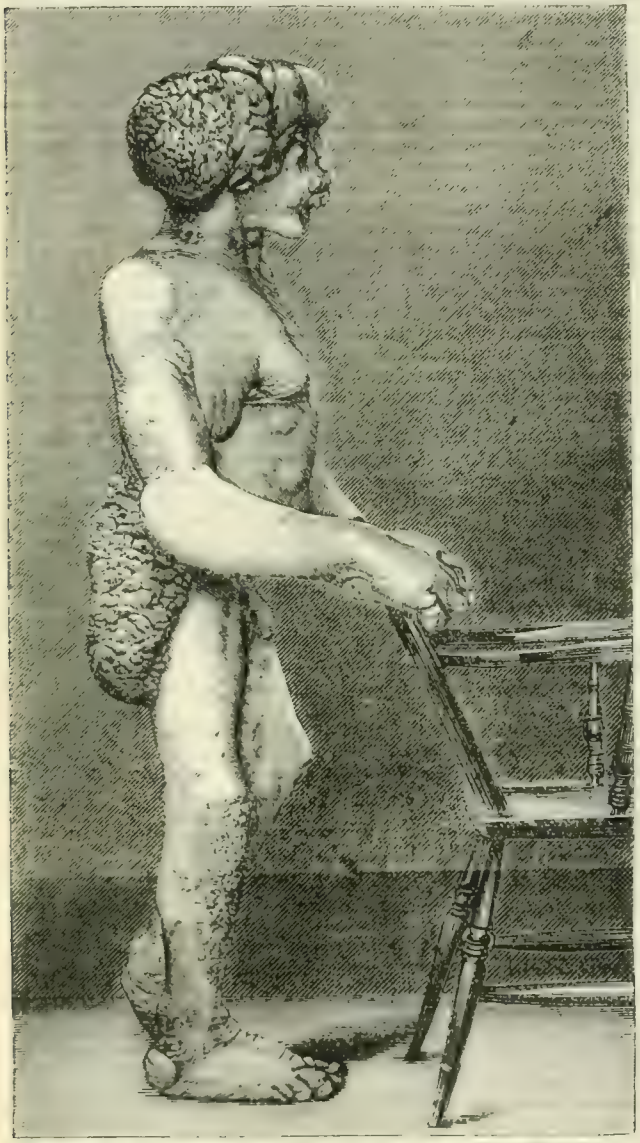
The following was the Committee appointed to act with the Council of the Branch: Mr. T. Holmes, Dr. Danford Thomas, Dr. Alderson, Dr. Grigg, Mr. Eustes, Dr. Maurice Davis, Mr. Wickham Barnes, Dr. Gibson Bott, Dr. H. W. Verdon, Mr. F. Wallace, Mr. Major Greenwood, Mr. Ernest Hart, Mr. F. M. Corner, Mr. H. H. Massey, Mr. Gubb, Mr. W. A. Ellis, Mr. W. C. Steele.

The Report of the Council containing new by-laws proposed for adoption, in reference to the increase of the Council of the Branch, etc., came up for consideration; but, after some technical explanations by Dr. Grigg showing the necessity for certain verbal alterations to secure accuracy, the consideration of the subject was deferred until the next meeting.

THE "ELEPHANT-MAN."

A LETTER from Mr. Carr Gomm, Chairman of the London Hospital, appeared last week in the *Times*. It contained an appeal to the charitable public on behalf of John Merrick, a man afflicted by so terrible a deformity that he cannot venture out by daylight to the garden of the hospital. Not only does his condition prevent him from being kept in a general ward or admitted into an institution for incurables, but he cannot even travel by public conveyances. Among other experiences of this kind, acutely painful to his feelings, a steamboat captain refused on one occasion to take him as a passenger.

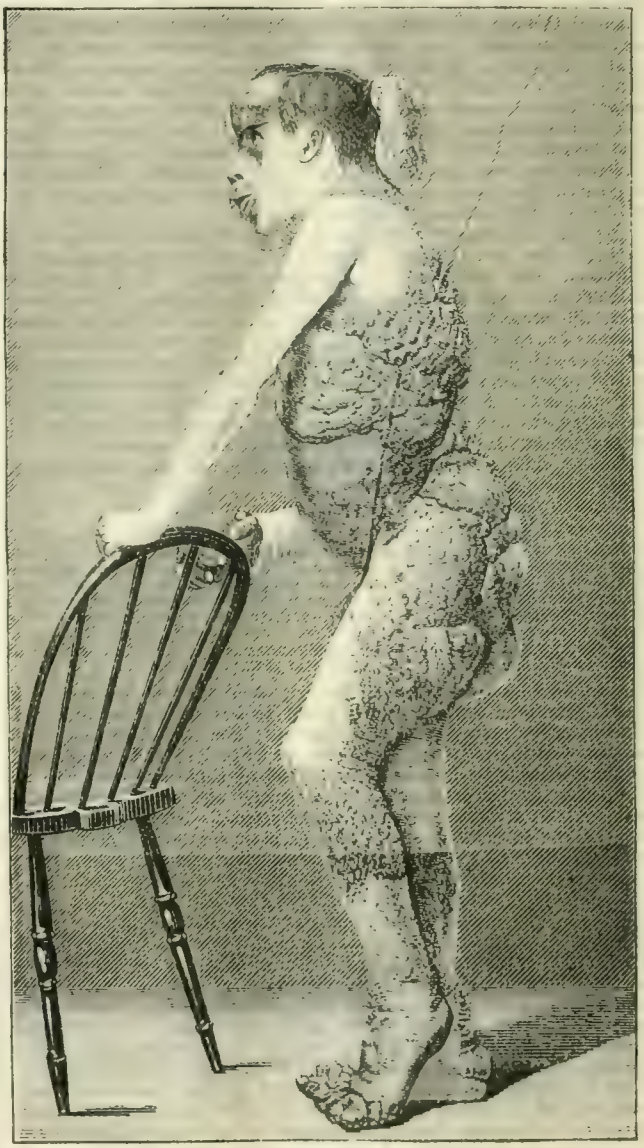
Most medical men who read the letter must have naturally concluded, provided that they were not in possession of certain facts, that this unhappy man is the subject of elephantiasis. It turns out, however, that his case has been twice before the Pathological Society of London. The first notice appeared in the JOURNAL of December 6th, 1884; the second in our issue of March 21st, 1885; and the case was fully reported in the Society's *Transactions* (vol. xxxvi, 1885, page 494) as "A Case of Congenital Deformity," and figured at Plate xx.



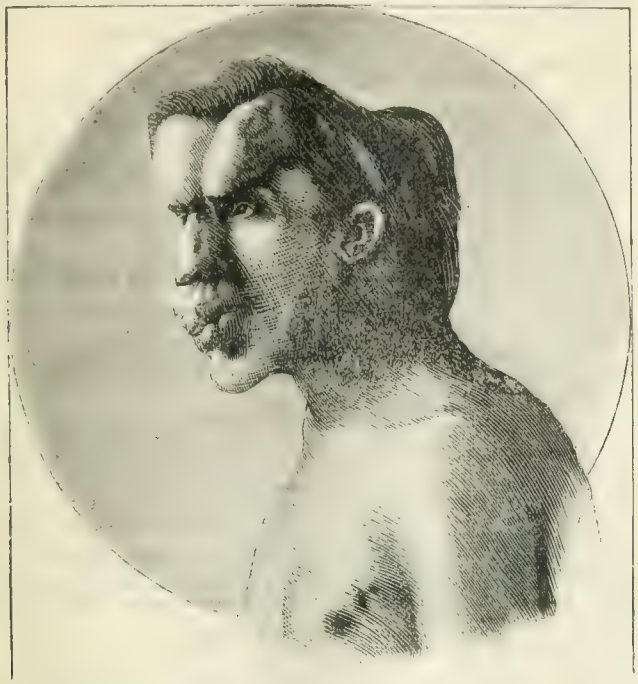
Since that plate was taken, the disease has made great progress. Through the kindness of Mr. Treves, we have been supplied with four photographs, representing the patient's present condition. A comparison of these drawings with the plate above noted wil show how the disease has advanced during the past two years.

The "elephant-man" is a native of Leicester, and is about twenty-seven years of age. He earned his living at one time by exhibiting himself under the name which he still bears—a name not meant to imply elephantiasis, but bestowed on him on account of the bony exostoses on his frontal bone. This, combined with a deformity of the superior maxilla which gives a trunk-like appearance to the nose and upper lip, causes the profile of the face to remind the observer of the profile of an elephant's head.

Mr. Treves discovered him about two years ago, when he was exhibited in a room off the Whitechapel Road. The police stopped this degrading exhibition, and the unhappy "elephant-man" endeavoured to make a living in a similar manner in Belgium; but a sum of £50, which he had saved, was stolen by his showman, and he made his way back to England in a destitute condition. He was taken in at the London Hospital, but, as Mr. Carr Gomm states in his letter to the *Times*, the question now arises, What is to be done with him in the future? We learn from Mr. Treves that he has received piles of correspondence from the curious and from the charitable on the subject; and we trust that poor John Merrick will, through the efforts of the benevolent, be enabled to end his days in peace and privacy, with a small competence.



The elephant-man is short, and lame through old disease of the left hip-joint. The integuments and the bones are deformed. The subcutaneous tissue is greatly increased in amount in certain regions, here the integument is consequently raised prominently above the



surrounding skin. This tissue is very loose, so that it can be raised from the deeper parts in great folds. In the right pectoral region, at the posterior aspect of the right axilla, and over the buttocks, the affected skin forms heavy pendulous flaps.



The skin is also subject to papilloma, represented in some parts, as in the right clavicular region, by a mere roughening of the integument; over the right side of the chest, the front of the abdomen, the back of the neck, and over the right popliteal space, the growth is small; on the other hand, great masses of papillomata cover the back and the gluteal region. The eyelids, the ears, the entire left arm, nearly the whole of the front of the abdomen, the right and the left thigh, the left leg, the back of the right leg, and the penis and scrotum are free from disease.

The deformities of the osseous system are yet more remarkable. The cranial bones are deformed and overgrown, so that the circumference of the patient's head equals that of his waist. This deformity is better shown by the woodcuts than by any verbal description. Bony exostoses spring from the frontal bone, the posterior part of the parietals, and the occipital. Irregular elevations lie between these bosses, and all these deformities are very unsymmetrical. The right superior maxillary bone is greatly and irregularly enlarged. The right side of the hard palate and the right upper teeth occupy a lower level than the corresponding parts of the left side. The nose is turned to the left, and the lips are very prominent. A connective-tissue growth was removed at the Leicester Infirmary, four years ago, from the front part of the right upper jaw.

All the bones of the right upper extremity, excepting the clavicle and scapula, and the bones of both feet, are hypertrophied, without exostoses.

The patient can give no family history of similar deformity, but declares that his mother was knocked down by an elephant, in a circus, when bearing him. The hypertrophy of the bones existed ever since he can remember; the thickening of the skin and papillomatous growths were very trifling in degree of development during childhood. The papillary excrescences are increasing rapidly, and hypertrophy of the integuments of the right hand is causing it to become slowly crippled. The patient's general health is good.

AN ASSOCIATION OF GENERAL PRACTITIONERS.

THE secretaries of the Association of General Practitioners, Drs. Bott and Verdon (414 Clapham Road, S.W.) write to us as follows:

"The progress which this Association is making is extremely satisfactory, and indicates that the general practitioners of England and Wales are fully in sympathy with our programme, and recognise the necessity at the present critical moment of obtaining for themselves a voice in the management of the affairs of the profession, which are their own affairs, and from which they are, at present, excluded by the Councils of the College of Surgeons and College of Physicians. At a very important meeting of the Metropolitan Counties Branch of the British Medical Association on Friday evening (December 3rd), Dr. Morton, the respected ex-President of the Harveian Society, and one of the leading general practitioners of London, himself a distinguished prizeman and graduate of London University, protested in terms which were all the more impressive from their evident restraint and intensity of conviction that the general practitioners of England had been treated too long with injustice by the small body of metropolitan hospital surgeons and physicians, who take upon themselves to control the two Colleges, and to regulate the destinies of the general practitioners, without affording them even opportunities for consultation on matters most affecting their interests. It is no imputation, either upon the character or the intentions of this small percentage of consultants to say that they have no foundation for the assumption on which they tacitly act, that by education, by experience, or by mandate, they have any just right to deal with the great questions of the rights and interests of the whole body of the profession, as if they, who are less than 5 per cent. of the profession, really constitute and are entitled to speak for the whole body. It is a sort of fashion to speak of certain gentlemen as leaders of the profession, but it is an utter misnomer to apply such a term to those who have no communication with the herd who are described as following them, but who are really dragged after them, mutely and blindly, and without any opportunity of offering a word of protest, in the constitutional fetters which have been riveted by the charters of the respective Colleges. The commonalty of those Colleges have had nothing to say in the framing of the charters, and they will decline henceforth to be dealt with as if they were persons incapable of forming an opinion, unfit to act upon it, and whose only duty is to pay their fees at the Colleges, to go about their business, and to be heard of no more.

The first work of this Association will be the organisation of meetings to consider the course recently pursued by the London Colleges of Physicians and Surgeons in excluding the Apothecaries' Society from combination in the Conjoint Examining Board for England and Wales; thus, without any consultation with their Members and Licentiates, creating, under the Medical Act of 1886, a new and competing class of general practitioners, who will be fully qualified under this Act by the Apothecaries' Society in medicine and surgery, and who will,

under any circumstances, be entitled to full medical and surgical titles. Everyone is now agreed—except, perhaps, the Councils of the Colleges—that in so momentous a matter, affecting deeply the interests of the whole body of general practitioners, they had a right to be consulted. The great body of the profession will, we believe, concur in the opinions entertained by the newly-formed Association of General Practitioners, that the profession ought no longer to be excluded from a voice in the management of its own affairs. It is, however, only by combination and by the force which association gives, that the general practitioners can assert those rights and give them effect. The honorary secretaries of the new Association are—Dr. W. H. Verdon, 410, Brixton Road, and Dr. W. G. Bott, 414, Clapham Road, S.W. The Association, has been formed in no spirit of hostility to any corporate body, or to any existing organisation in the profession; but self-help lies at the base of independence, freedom, and just principles, and it is only by combination that general practitioners can relieve themselves of having their most momentous interests dealt with by small and irresponsible councils, self-elected or elected by small constituencies of which the general practitioners, who form the immense majority of the profession, and who are its back-bone, have no share.

Among those who have already come forward to take part in founding the Association are :—

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Sir B. W. Foster, President of the Council of the British Medical Association.
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W. A. Marsh, Esq., M.R.C.S., Kennington.
Piercey Fox, Esq., M.R.C.S., Clapham Road.
F. H. Alderson, Esq., M.D., Hammersmith.
Major Greenwood, Esq., L.R.C.P., Dalston.
Ernest Hart, Esq., M.R.C.S., Wimpole Street.
Richard Neale, Esq., M.D., South Hampstead.
George W. Crown, Esq., M.D., Worcester.
Edwin Morris, Esq., M.D., F.R.C.S., Spalding.
Alfred S. Gubb, Esq., L.R.C.P., Hammersmith.
F. M. Corner, Esq., M.R.C.S., Poplar.
Maurice Davis, Esq., M.D., Brunswick Square.
E. H. Roe, Esq., M.R.C.S., Manchester.
George Harrison, Esq., M.R.C.S., Brixton Hill.
W. Mickle, Esq., M.D., M.R.C.P., Grove Hall, Bow.
Thomas George, L.R.C.P., New North Road, W.
William Sedgwick, Esq., M.R.C.S., Park Place, N.W.

Allen, Marcus, F.R.C.P.Ed., M.R.C.S., L.S.A., 20, Regency Square, Brighton, and Pall Mall Club, London, S.W.
Adams, J. O., M.D., F.R.C.S.Eng., Brooke House, Upper Clapton, E.
Adams, Geo. D'Arcy, M.D., C.M., San. Sci. Cert.Camb., Clifton Gardens, Maida Vale, W.
Anderson, W. Milne, M.B., C.M., Gipsy Road, West Norwood.
Adcock, Hugh, L.R.C.P.Ed., and L.M., M.R.C.S., L.S.A., 50, Grange Road, S.E.
Abud, Richard, L.R.C.P.Ed., M.R.C.S., 5, Eastbourne Terrace, Bayswater.
Alderson, F. H., M.D., M.R.C.S., L.M., L.S.A. (Council), Southerton House, Glenthorne Road, Hammersmith.
Ambrose, Rob., B.A., L.R.C.P., L.R.C.S., L.M.Ed., 1, Mount Place, Whitechapel Road, E.
Bailey, H. F., M.R.C.S., L.S.A., 3, Lee Terrace, Blackheath, S.E.
Barnes, G. F., M.B.Lond., M.R.C.S., Streatham Common, S.W.
Bernard, J., F.R.C.S., 37, Warwick Road, Earl's Court, S.W.
Bullock, J. E., M.D., M.R.C.S., L.S.A., 87, Ladbroke Grove, Notting Hill, W.
Braye, H. H., M.R.C.S., L.S.A., 3, The Mount, Whitechapel Road, E.
Bell, W. J. Noel, M.R.C.S., 316, Clapham Road, S.W.
Bianchi, Robert, M.R.C.S., L.S.A., 25, Stamford Street, S.E.
Brunton, W. R., M.R.C.S., L.S.A., 43, Kirkdale, Sydenham, S.E.
Buck, A. H., L.R.C.P. and L.M.Ed., M.R.C.S., 47, Primrose Hill Road, Haverstock Hill.
Boysey, A. H., 118, Stoke Newington Road.
Bernard, Alfred, Mere, Bath.
Butters, John, L.R.C.P.Ed., L.F.P.S.Glas., L.M., 4, Berkley Street, Liverpool.
Bott, W. Gibson, L.R.C.P., L.M.Ed., M.R.C.S., 414, Clapham Road, S.W.
Brown, T. Lloyd, M.R.C.S., L.S.A., 4, Shepperton Road, Islington, N.
Brown, J., L.R.C.P., Burwood House, Bacup.
Bader, C., M.R.C.S., L.S.A., 10, Finsbury Circus, E.C.
Blackman, J. E., M.D., M.R.C.S., L.S.A., Portsmouth.
Berry, W., L.S.A., Preston House, Holmfirth, Yorks.
Barnes, J. Wickham, F.R.C.S.(Exam.), L.S.A. (Council), 3, Bolt Court, Fleet Street, Honorary Secretary Poor Law Medical Officers Association.
Brook, W. F., M.R.C.S., L.S.A., Fareham, Hants.
Barr, W. H., L.R.C.P. and L.M., L.R.C.S.Ed., L.A.H., etc., Dub., Belgrave Place, Bury, Lancashire.
Bigg, J. M., L.R.C.P., M.R.C.S., L.S.A., 6, Sunnyside Villas, Child's Hill, Hendon, N.W.
Barraclough, R., M.D., L.R.C.P., M.R.C.S., and L.M., L.S.A., 34, Dulwich Road, Herne Hill.
Bratt, W., M.R.C.S., L.S.A., Shipston on Stour.
Boyd, Campbell, L.K.Q.C.P.I., L.M., 108, Denmark Hill, S.E.
Bowes, R., F.R.C.S., L.S.A., Richmond, Yorkshire.
Coles, J. W., L.S.A., 197, Camberwell New Road, S.E.
Carruthers, J. G., M.R.C.P.Ed., M.R.C.S., L.S.A., Selhurst Road, South Norwood, S.E.
Cutmore, C. R., M.R.C.S. and L.M., 52, Warwick Square, Kensington, W.
Churchward, A., M.D., M.R.C.P.Ed., M.R.C.S., L.S.A., etc., Selhurst Road, South Norwood, S.E.
Coates, Matthew, M.D., F.R.C.S.(Exam.), L.S.A., etc., Mitcham Road, S.E.
Cook, P. J., M.D., C.M., M.R.C.S., L.R.C.P.Ed., L.S.A., Marmora House Honor Oak, S.E.
Chandler, H., M.R.C.S., 22, Battersea Rise.
Cotton, T., M.D., L.R.C.P., M.R.C.S., L.S.A., 214, Seven Sisters Road.
Crossman, J., M.R.C.S., L.S.A., 331, Wandsworth Road, S.W.
Creed, Thomas, M.D., M.R.C.S., L.S.A., 6, Croom's Hill, Greenwich.
Crowe, G. W., A.B.T.C.D., M.D., M.R.C.S., L.S.A., etc., 43, Foregate Street, Worcester.
Capon, H. J., M.D., L.R.C.P., M.R.C.S., L.S.A., 159, Edgware Road.
Child, Edwin, Vernham, New Malden.
Cross, T. W., F.R.C.S.(exam.), L.S.A., 22, St. Giles Street, Norwich.
Cooney, J. E., L.R.C.P. and L.M.Ed., L.F.P.S.Glas., L.S.A., etc., Hon. Sec. Med Mat. in San. Science, 20, Vereker Road, Baron's Court, West Kensington.
Cookson, S., M.D., M.R.C.S., L.S.A., Stafford.
Conolly, S. F., L.R.C.P.Ed., L.M., M.R.C.S., L.S.A., 19, St. Quentin's Avenue North Kensington, W.
Crocker, J., M.R.C.S., L.S.A., Bingley, Yorkshire.
Carpenter, Alfred, M.D.Lond., M.R.C.P., M.R.C.S., L.S.A., etc. (Vice-President), Pres. Council B.M.A., 1879-81, 5, Grosvenor Street, W., and Duppas House, Croydon.
Cousins, J. Ward, M.D.Lond., F.R.C.S.(exam.), L.S.A., etc., Portsmouth.
Dewar, J., L.R.C.P., L.R.C.S., L.M.Ed., 132, Sloane Street, S.W.
Dickinson, W. G., L.R.C.P., M.R.C.S., Southfields, Wandsworth, S.W.
Draper, W., M.R.C.S., L.M., L.S.A., De Grey House, St. Leonard's, York.
Devlin, J. J., L.K.Q.C.P.Irel., L.M., L.R.C.P.I., Holmdale Road, Bromley.
Durno, Dr., 179, Coldharbour Lane, S.E.
Donald, Dr., 1, Auckland Road, Streatham, S.W.
Davis, Maurice, M.D., M.R.C.S., L.S.A. (Member of Council), 11, Brunswick Square, W.C.
Davison, James, M.D., F.R.C.S.Ed., L.R.C.P.Ed., etc., 8, Oxford Terrace, Upper Holloway.
Evans, T., M.R.C.S., L.S.A., 3, Trinity Square, S.E.
Elliott, J. W., L.R.C.P., L.R.C.S., L.H.A., etc., 2, Lower Breck Road, Liverpool.
Ellis, W. Ashton, L.R.C.P., M.R.C.S., Hon. Sec., Assoc. Members R.C.S., W. Dispensary, Westminster.
Edwards, T. E., L.R.C.P., M.R.C.S., etc., 98, Gloucester Crescent, Hyde Park.
Eastwood, J. W., M.D., M.R.C.P.Lond., etc., Dinsdale Park, Darlington.
Foster, W. J., M.D., M.R.C.S., L.S.A., etc., 1, Park Road, New Cross, S.E.
Fraser, R., L.K.Q.C.P., L.R.C.S.Irel., etc., Sisters Terrace, Lavender Hill, S.W.
Forster, Dr. R., 182, Southwark Park Road, S.E.
Forster, H. J., L.R.C.S.I., L.M., 420, Old Kent Road, S.E.
Fox, Dr. Piercy (Member of Council), 122, Clapham Road.
Fitz Rayne, W. A., L.S.A., 1, Cross Street, Southwark.
Ffolliott, N., L.K.Q.C.P.I., L.R.C.S.I., Preston House, Burnt Ash Lane, Lee, S.E.
Frazer, Dr. E., Mostyn Road, Brixton.
Franklin, L. H., M.R.C.S., L.R.C.P., L.S.A., 116, Wellesley Road, Gt. Yarmouth
Fennell, J. P., L.K.Q.C.P.I., L.M., L.R.C.S.I., etc., 44, St. James Road, Holloway, N.
Fry, W. J., M.R.C.S., L.S.A., Wateringbury, Kent.
Galton, E. H., F.R.C.S.Eng.(exam.), L.S.A., Springfield House, Brixton Hill, S.W.
Greene, W. T., M.A., M.D., etc., 186, Peckham Rye, S.E.
Griggs, W., M.R.C.S., L.S.A., Easton Lodge, St. John's, S.E.
Gibbes, F. R., M.R.C.S., L.S.A., Croydon Road, Anerley, S.E.
Gubb, A. S., L.R.C.P., etc. (Member of Council), 117, The Grove, Hammersmith.
Greenwood, Major, L.R.C.P., M.R.C.S. (Council), 18, Queen's Road, Dalston, E.
Gross, Asher, 40, Clapham Park Road, S.W.
Gardiner, B. H., M.R.C.S., L.R.C.P., L.S.A., Gloucester House, Barry Road, East Dulwich.
Grant, A., M.A., M.D., etc., 370, Commercial Road, E.
Hodgson, R., M.R.C.S., L.R.C.P., 19, High Street, Lewisham.
Harford, Dr., 211, Lower Road, Rotherhithe.
Hunter, R. H. A., M.R.C.S., L.R.C.P.E., etc., Clifton House, Battersea Park.
Harrison, G., M.R.C.S., L.S.A. (Council), Streatham Hill, S.W.
Hardy, H. Nelson, F.R.C.S.Ed., M.R.C.S., etc., Dulwich, S.E.
Hocken, E., M.D., M.R.C.S., Cleveland House, Wood Green, N.
Harlock, H., L.R.C.P., M.R.C.S., Singleton, Chichester, Sussex.
Hall, F., M.R.C.S., L.S.A., 1, Jermyn Street, S.W.
Hamill, R. J., M.A., M.D., etc., 272, Vauxhall Bridge Road, S.W.
Hands, A., M.R.C.S., L.R.C.P., Clyde House, Heath Town, Wolverhampton.
Hart, Ernest, M.R.C.S. (Council), 38, Wimpole Street, W.
Howard, H., L.R.C.P., M.R.C.S., 242, South Lambeth Road, S.W.
Harris, J. R., M.R.C.S., L.R.C.P.Ed., 13, Surrey Street, Strand.
Hartley, E., M.R.C.S., L.K.Q.C.P., L.S.A., etc., 31, Warwick Square, S.W.
Hopkins, J., M.R.C.S., L.R.C.P.E., L.S.A., etc., 93, Camberwell Road, S.E.
Holman, C., M.D., M.R.C.S., L.S.A. (Vice-President), Reigate, Surrey.
Husband, W. Dalla, F.R.C.S., L.S.A. (Vice-President), May Bank, Bournemouth.
Hague, Thompson, L.R.C.P., L.R.C.S., L.M.Ed., L.S.A., 320, Brixton Road.
Harding, J. A., M.R.C.S., L.R.C.P.Ed., Fortis Green, Finchley, N.
Hoskin, T., L.R.C.P., M.R.C.S., Hackney Downs, E.
Heffernan, W. Hilton, L.R.C.P., M.R.C.S., L.S.A., Alma Villa, Victoria Road N., Southsea.
Jones, A. Lloyd, M.R.C.S., L.S.A., 188, Brockley Road, S.E.
Jones, J. T., M.R.C.S., L.S.A., L.K.Q.C.P.I., 179, Brixton Road.
Jones, T., M.D., M.R.C.S., L.S.A., 2, Albert Square, S.W.
Knight, C. F., M.D., etc., 311, Brixton Road.
Knight, Dr., 12, Warwick Square, E.C.
Kavanagh, P., M.D., L.K.Q.C.P.I., L.S.A., 186, Lewisham High Road, S.E.
King, Dr., Holmwood, Surrey.
Lewis, T. Preston, M.D., C.M., M.R.C.S., 453, Brixton Road, S.W.
Leach, Alfred, Dr., 41, Charlwood Street, S.W.
Lawson, R. L., M.R.C.S., L.S.A., etc., Downshire House, Barry Road, East Dulwich.
Lindsay, J. M., M.D., M.R.C.P., Derby County Asylum, Mickleover, near Derby.
Larkin, S. G., M.R.C.S., L.R.C.P., L.M., etc., Grove Park, S.E.
Lattey, J., M.R.C.S., L.R.C.P., 23, St. Mary Abbot's Terrace, Kensington
Lloyd-Davies, P., L.S.A., Brynoch House, Abergele, Denbighshire.

Mutch, Dr., Manor House, Brixton Rise, S.W.
Mackintosh, Dr., Lavender Hill, S.W.
MacGavin, John, L.R.C.P., L.R.C.S., L.M.Ed., Trafalgar House, Greenwich.
Massey, Hugh, M.R.C.S., L.S.A. (Vice-President), 2, North Ter., Camberwell, S.E.
Mancor, A. T., M.B., C.M., L.R.C.P., L.M., etc., 98, Camberwell Road, S.E.
Mitchell, T. A., L.R.C.S.I., Rushey Green House, Catford, S.E.
Marsh, W. A., M.R.C.S., L.S.A. (Council), 17, Kennington Park Road, S.E.
Matcham, Alf., M.R.C.S., L.R.C.P.Ed., L.S.A., 13, Gladstone Street, Southwark.
Morris, Ed., M.D., F.R.C.S. (Exam.), etc., (Council), Spalding.
Mitchell, W. F., M.R.C.S., L.S.A., 110, Brixton Road.
Marshall, J., L.R.C.P., M.R.C.S., etc., 13, Liverpool Street, Dover.
Meeke, W. J., M.D., M.R.C.P., M.R.C.S., L.S.A., etc. (Member of Council), Grove Hall, Bow, E.
McKelvie, Rob., M.D., etc., 90, Finchley Road, Hampstead.
Moore, E. H., M.R.C.S., L.R.C.P., L.M.Ed., etc., 256, Cambridge Heath Road.
Merriman, J. J., M.R.C.S., L.S.A., 45, Kensington Square, W.
Mutch, F. R., M.D., C.M., etc., Snenton Road, Nottingham.
Mason, S. B., M.R.C.P.Ed., L.F.P.S.G., L.S.A., Denham House, Pontypool, Mon.
Masters, John A., M.R.C.S., L.R.C.P., Westhall Ho., Brook Green, W. Kensington
Nicholas, G. E., M.D., M.R.C.S., L.S.A., etc., 2 and 3 Church Road, Wandsworth.
Neale, Richard, M.D Lond., M.R.C.S., L.S.A., etc. (Member of Council), 60, Boundary Road, South Hampstead.
Noad, H. Carden, L.R.C.P., M.R.C.S., Chesham Lodge, Norwood Road.
Nicoll, John M., L.R.C.P., L.R.C.S.Ed., High Street, Poole, Dorset.
Ord, G. Rice, M.R.C.S., L.S.A., etc (Vice-President), Streatham Hill, S.W.
Oswald, J. W., F.R.C.S.Ed., L.R.C.P., L.S.A., etc., 245, Kennington Road, S.E.
Odell, Thos., M.R.C.S., L.S.A., Hertford.
Paramore, M.D., M.R.C.S., L.S.A. (Treasurer), Gordon Square.
Pocock, Walter, M.R.C.S., L.S.A. (Member of Council), Brixton Hill.
Powles, W., M.R.C.P., 91, Shepherdess Walk, N.
Palmer, Frederick, M.D., L.R.C.P., M.R.C.S., L.S.A., etc., Compton Lodge, East Sheen, S.W.
Pattison, Ed. Seton, M.R.C.S., L.R.C.P., etc., Granville House, Fulham, S.W.
Pinder, Ed., L.R.C.P. and L.R.C.S.Ed., L.S.A., etc., 13, Camberwell Green.
Popham, H. H., L.R.C.P.Ed., L.S.A., 185, Evering Road, Clapton, E.
Rose, A. D., M.B.Cantab., etc. (Council), West Hill, Wandsworth.
Roe, F. Leyland, M.R.C.S., L.R.C.P.Ed., Wellington House, Eccles.
Roe, Edwin, M.R.C.S., L.S.A. (Council), The Poplars, Patricroft, Manchester.
Richardson, T., L.R.C.P., M.R.C.S., L.S.A., 394, Commercial Road, E.
Rout, C., L.R.C.P., M.R.C.P., L.S.A., Hornsey.
Rigden, Walter, M.R.C.S., L.S.A., 16, Thurloe Place.
Robinson, T., M.D., M.R.C.S., etc., 5, Woburn Square, W.C.
Sedgwick, W., M.R.C.S., L.S.A. (Council), 12, Park Place, Upper Baker Street.
Southcombe, A. G., M.R.C.S., etc., 54, Goldsworth Street, Nottingham.
Steele, Dr., Florence Lane, Ealing, W.
Spooner, Ed., M.D., M.R.C.S., L.S.A., Blandford, Dorset.
Smailes, T., L.R.C.P.Ed., M.R.C.S., Horsley, Yorkshire.
Savage, J., L.R.C.P., M.R.C.S., L.S.A., 11, Avonmore Road, W.
Stubbs, P. B., Dr., 61, Ockendon Road, Canonbury, N.
Stear, H., M.R.C.S., L.S.A., Saffron Walden, Essex.
Thomas, G. H. W., L.R.C.P., M.R.C.S. (Member of Council), 79, New North Road.
Thompson, A., F.R.C.S., etc., Ampthill, Beds.
Tyler, A. K., Dr., 43, De Beauvoir Road.
Thomas, Danford, M.D., M.R.C.S., etc., Park Lodge, Paddington.
Thorne, G. L., M.D., M.R.C.P., L.S.A., Lenham, Maidstone.
Thorne, W., L.S.A., 87, Harrow Road.
Turle, J., M.D., M.R.C.S., L.S.A., Woodside Grange, North Finchley.
Verdon, H. Walter, M.D., F.R.C.S.(Exam.), etc., 410, Brixton Road, S.W.
Villanueva, Dr. F. H., 3, The Terrace, Camberwell.
Wade, C. H., B.A., etc. (Editor of *Hospital Gazette*) Beauclerc House, Upper Norwood.
Wilkinson, A., M.B., M.R.C.S., Tynemouth, Northumberland.
Wood, E. Stanley, L.K.Q.C.P.I., M.R.C.P., Clarence House, Pontypool.
Wagstaff, J.P., L.R.C.P., M.R.C.S., L.S.A., 61, Acre Lane, Brixton, S.W.
Workman, J. W., M.R.C.S., L.S.A., Reading.
Woods, D., M.D., L.R.C.P., L.R.C.S.I., etc., 30, Ebury Street, Eaton Square.
Willis, Arthur K., M.R.C.S., etc., Gascony House, West End Lane, N.W.
Watters, G. B., M.D., etc., Stonehouse, Gloucester.
Walsh, David, L.R.C.P. and L.R.C.S.Ed., 28, Bridge Road, Hammersmith.

The annual subscription is fixed at 2s. 6d. We shall be very glad to receive a post-card from any of your readers who will favour us with their adhesion. It is important that this Association should be extended so as to cover the whole country, and we especially desire also that our brethren in the provinces, whose voice has not yet been sufficiently heard, should take up this matter vigorously. We invite communications from provincial medical men willing to act as local secretaries, and in forming local organisations. The profession will await with much interest the action of the general committee to be formed by the Council of the Metropolitan Counties Branch in accordance with the resolution passed at the last meeting. The British Medical Association has often proved itself the shield for the general practitioners, and has put its lf at the head of movements intended for the benefit of the whole profession, in which the voice of many has been made to assert itself against the crystalised interests, and ancient and obstructive organisations of the few. We trust that to the British Medical Association and its branches the general practitioners of England may look for vigorous action in this matter. The question is one on which a great number of general practitioners feel very warmly, and in respect to which we have found it difficult, and perhaps have not altogether succeeded in refraining from using strong words. We desire, however, and we feel sure it is the desire of all connected with this movement, to carry it on without bitterness, and without imputation. The battle which this Association is initiating is one not against men, but against principles. Not an attack upon any individuals, or even upon any institutions; but a desire to see those institutions strengthened and enlarged, and brought into sympathy with the principle of representation which forms the basis of all that is best in English life and in the British constitution. Finally, although the movement is one in which general practitioners essentially are concerned, it is also one in which we have the sympathy of many, at least, of the younger men among the consultants. We do not doubt that when the question comes to be logically put before the colleges, and fairly discussed, that it will be found that it will evoke a far larger sympathy and more active support, even in the Councils of the Colleges themselves, than at present appears. For, in truth, the interests of the colleges and the interests of the profession are not two, as the present constitution and prevailing opinions in the Councils would seem to make it appear; but they are one, and it is to promote that unity of interest and the strength which unity will give, and which a representative constitution can alone confer, that we now mainly aim."

THE PROGRESS OF MEDICAL PROVIDENCE.

THE monthly Executive Committee Meeting of the Medical Sickness, Annuity, and Life-Assurance Society was held at 38, Wimpole Street, W., on the afternoon of Wednesday, December 8th, the following members of the Committee being present: Mr. S. W. Sibley (in the Chair), Dr. W. M. Ord, Dr. de Havilland Hall, Mr. J. Brindley James, Mr. Major Greenwood, Mr. F. Wallace, and Mr. E. Bartlett.

Mr ERNEST HART (Chairman of the Society), who was unavoidably absent, forwarded the following statement of the affairs of the Society, which was read to the meeting:—A careful examination of the progress made by the Society since January 1st afforded nothing but matter for hearty congratulation, and evidence that the Society was not only based on the most secure calculations, but that it had quickly attained a position which made it entirely independent of any new accessions.

EXAMPLES OF THE USEFULNESS OF THE SOCIETY.—The usefulness of the Society was proved every day by examples of the most striking kind. In some instances, members who had joined in the fulness of strength and health, and in early life, had been suddenly disabled by severe accidents; and the ample allowance of four guineas a week which this Society secured to them during periods of disablement had enabled them to provide the means for carrying on practice by a skilled assistant, and had saved them during the period of their illness, not only from loss, but from that wearying anxiety which so often aggravated and protracted illness. The number of accidents to which medical men were exposed was very considerable, more at least than could have been anticipated. Thus, during the present year, the Society has had to provide for the following cases. Three severe fractures; two severe injuries to the spine, owing to falls; three trap accidents; two severe sprains, and several minor injuries to the knee or ankle-joints. Other examples of the extreme importance to medical men of a provision of this sort were furnished by two classes of cases,—cases in which medical men had been suddenly seized with severe illness of temporary duration, and in which their rights in the Society had afforded them adequate sick-pay for several months, and had thus prevented disastrous disarrangement of their affairs. Among these were a large proportion of cases of acute chest diseases, infectious fevers, zymotic disease, and the like. Yet more striking cases were, perhaps, those—of which, unfortunately, they had one or two—of the unexpected occurrence of diseases of the nervous system, such as locomotor ataxy, of which they had one case, and in which the fund would possibly have to provide an annuity for a very long term. This was an example of the great benefits conferred by that provision in the Society's scheme which afforded sickness-pay throughout the whole period of life where an unforeseen disease became chronic and life-long. It was well known to those who had the management of benevolent societies how heart-breaking were the incidents often connected with such cases of life-long disablement where no such provision was made, and how impossible it was for the funds of any charitable society to afford anything like an adequate allowance in such cases. The half-pay sickness allowance from this Society was continued throughout life, where necessary. An important event of the year had been an amplification of the annuity system, which provided for a return of a proportion of the annuity premiums in cases where the subscriber did not live to the age at which the annuity would commence. It was gratifying to know that the Society had already earned the blessings of widows who would otherwise have been left without provision, and that its operations had proved an unmixed benefit to many hundreds of members of the profession, giving to all who were connected with it as members a sense

of security which they could not otherwise easily obtain, and having conferred benefits on many which had been most warmly acknowledged in the very satisfactory correspondence which from month to month came before the officers and the executive.

THE SYSTEM OF CERTIFICATES AND SAFEGUARDS.—It had, of course, been their duty to insist upon rigid inspection and certification of all new members applying, and also to see that the conditions of safeguard which were prescribed in the case of all applications for sick-pay were rigidly complied with, from week to week. These included a detailed declaration on the part of the member applying, and a certificate from an independent medical man, renewed from week to week, certifying personal examination, which had to be forwarded before each weekly cheque was received. These conditions were, almost without exception, very cheerfully, readily, and carefully complied with, as might be expected from the character of the body of members with whom they had to deal, and who had shown themselves as honourably sensitive to their duties to the whole body as to their individual claims. In one or two cases in which the certificates had not seemed to be perfectly regular, due inquiries had been made, and usually the apparent irregularities had been satisfactorily explained or set right. In one case, however, as to which some doubt remained, an arbitration was still pending; and in another case, the doubts entertained from circumstances appearing in connection with the certificates, had led to further inquiry carried out on the spot, and in this case it had been thought right to withhold payments, the evidence afforded not being at all satisfactory. Thus, it would be seen that, while settling every claim promptly and cheerfully, the executive had not allowed any detail to escape attention, and had endeavoured, with the utmost exactitude, to fulfil their duties to the Society as a whole, as well as to the individual claimants. In this he felt sure they would join him, in acknowledging how much they owed to the constant assiduity and indefatigable industry and attention to every detail of the affairs of the Society by their Secretary, Mr. Radley. It was the business of the Secretary to keep his eye on the affairs of the Society at every minute, and with most unremitting exactness. The position was one of considerable responsibility, and involving great labour, and it was a great satisfaction to the Committee to find that these duties had been performed throughout the year by Mr. Radley in such a manner as to earn their entire confidence and warm thanks.

THE FINANCIAL SUCCESS OF THE SOCIETY.—The financial affairs of the Society, as they knew, were in a position of the most flourishing prosperity. It had existed now for less than three years. During those three years the actuarial calculations of Mr. Neison, on which the tables were based, had necessarily been subjected to the most varied and complete control, and they had proved to be, as might have been expected from his reputation, and from the very careful instructions which were given to him, thoroughly sound, and calculated upon a basis which would amply meet all liabilities of the Society. It might now confidently be said that they would show a good surplus at the first quinquennial valuation. Without anticipating the balance-sheet, it would be found at the end of the present year that over £5,000 had been added to the reserves, after payment of £300 on account of members' deaths, and over £1,600 for sickness claims. Starting with absolutely nothing, less than three years ago, there would then be reserves amounting to over £14,000. This was more than sufficient, with the premium income at £8,000 a year, and steadily increasing, to afford financial evidence of the solid prosperity of the Society. These reserves, which were not capital held by shareholders for profit, but in first-class securities, were all invested in the names of their trustees at the best rate of interest obtainable, and, with the whole of the accruing interest, constituted the property of the assured, and of them alone. In conclusion, the Chairman said that the constitution of the Society, the unexampled economy with which its affairs had been conducted, the considerable savings thus effected, and the satisfactory surpluses which were apparent in all the funds, afforded proof of the stability of the Society. Its increasing numbers gave evidence of the spreading conviction among the members of the profession that such a provision against accident, sickness, old age, and death, was of the greatest value to all members of the profession, and especially to the younger members; while, on the other hand, its constitution was such as to afford the anticipation that it might from time to time yet further add to the advantages which such a Society was capable of conferring on its members and on the profession at large. Nothing in his whole life afforded him more satisfaction than the growing prosperity and assured usefulness of this already great society—great in its infancy, and destined, he hoped, to early achievements of the most wide-spread and beneficent influence.

Eight new proposals were considered, and, being all of a satisfactory nature, accepted. Some important points concerning the administration of the Sickness Fund were discussed, the payment of several accounts sanctioned, and the usual monthly financial and general business disposed of.

Particulars, copies of the last Annual Report and Accounts (to June, 1886), and proposal forms, with any further information, may be obtained on application to the Secretary, Mr. C. J. Radley, 26, Wynne Road, Brixton, London, S.W.

HOSPITAL AMBULANCE.

AN interesting event took place at St. Bartholomew's Hospital last week. An accident had occurred in some neighbouring works, and the people sent to the nearest hospital (St. Bartholomew's) for help and a stretcher. They were given the stereotyped answer that there was no such means of conveyance there, and that they could attend to the case only if it were brought to them. A few of the students, members of the Volunteer Medical Staff Corps, heard the remark, and under the direction of Mr. Huxley, Staff-Sergeant in the Corps, proceeded with a V.M.S.C. stretcher to the works, found the injured man, attended to him, and carried him back to the hospital. This is the first time in the many hundred years of its existence, that this hospital has sent out assistance from its walls. May we hope that it will form a fruitful precedent! At Charing Cross Hospital an ambulance litter is in readiness, and notice-boards are placed in the populous localities near the hospital. The litter is frequently called into use, and has done much good service already; but with the exception of this hospital, no other has yet attempted anything of the kind. Whose duty is it to organise street relief? As politics are the business of statesmen, and agriculture is the work of the farmer, so surely it is a medical man's duty to take in hand the work of surgery and medicine in all its branches. It is to be hoped that the seed sown by the V.M.S.C. will grow and ripen to an abundant harvest. The young men in its ranks now have a great work before them. We heartily congratulate the St. Bartholomew's students upon their zeal, and hope that they may manage to induce the powers that be in Smithfield to establish a proper system of hospital ambulance. On the last Lord Mayor's Day, four stretcher-bearer detachments were in readiness in the hall of Charing Cross Hospital through the entire proceedings. An accident was reported in Trafalgar Square, and four bearers proceeded to the scene, and carried the patient to the hospital with the utmost skill. These are but small beginnings, but it is hoped that London will be divided into definite areas, each served by a well-organised ambulance attached to a recognised hospital.

METROPOLITAN ASYLUMS BOARD.

AT a meeting of the Metropolitan Asylums Board on Saturday last, under the presidency of Mr. E. H. Galsworthy, to consider the important subject of making provision for future epidemics of small-pox, the adjourned debate respecting the erection of the proposed Convalescent Small-pox Asylum at Darenth was resumed, and brought to a conclusion. The meeting was a fully-attended one, and Mr. Hedley and Dr. Bridges, officials of the Local Government Board, were present. It will be remembered that the matter was referred to a special committee, who were of opinion that the suggested wooden buildings and huts presented enormous difficulties in the way of classification, and were difficult of supervision, besides the extra expenses, together with the further evil of absence of drainage and the great danger from fire. The committee insisted that experience in the army had shown the greater cost of wood, as compared with brick-work, and, moreover, the unsuitable character of the material for a hospital for the treatment of acute disease in winter in such a bleak place as the Darenth hills. It was thought, looking to previous epidemics, that the accommodation, including the number of beds on the ships, 400 in number, should not be less than 1,160 beds, and the committee accordingly recommended that they should have power to build for 760 patients at Darenth at a cost of £84,000; namely, for 200 men, 300 women and children, and two separate infirmaries of 30 each, with the necessary works, administrative offices, and establishments. It was pointed out that if the Local Government Board refused to sanction this necessary expenditure, upon it will rest the responsibility of any failure to provide adequate accommodation for the treatment of small-pox patients. The report was opposed by City members, especially and most energetically by Sir E. H. Currie.

The Rev. G. A. M. HOW (Poplar), by whom the discussion was resumed, was not favourable to the report, and urged that Dr. Burdon Sanderson had a scheme for the prevention of small-pox, which, if adopted, would render the hospitals unnecessary.

Sir V. KENNETT-BARRINGTON, who supported the report, pointed

out the fallacy of the notion that a wooden building, which was cheap to put up, was economical in the long run; while the danger from fire was very great.

Surgeon-General Bostock, C.B., called attention to the fact that the wooden huts were adopted by the army only as a temporary expedient, and the military authorities were in many cases displacing wooden for other buildings.

The Chairman moved that the report of the committee should be generally approved, and forwarded to the Local Government Board, with an intimation that, if the Board was prepared to sanction the erection of brick huts at Darenth for small-pox patients, the managers would submit a scheme, at the lowest cost consistent with efficiency, for its approval. This was seconded, and carried by thirty-nine to twenty-two.

The returns from the small-pox ships showed that during the fortnight no patients had been received. The returns from the fever hospitals showed that during the last thirteen weeks 124 fresh cases of fever had been received into the three hospitals, as against 157 in the fourteen previous days. Thirteen had died, 127 had been discharged, and there remained under treatment 701, as against 719 a fortnight ago. Of the whole, 586 were cases of scarlet fever, 1 was a case of typhus, 113 were cases of enteric fever, and 1 was classed as "other disease."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary meeting of the Council was held on Thursday, December 9th. The following recommendations of the Committee of Management of the Conjoint Examining Board were approved and adopted by the Council:—

1. That Mr. Thomas Cooke's School of Instruction in Anatomy and Physiology in Brunswick Square be recognised as a "place of study" for candidates rejected at the Second Examination of the Examining Board in England, subject to an annual renewal of such recognition on application from Mr. Cooke.

2. That the committee be empowered to determine questions relating to exceptions to the conditions of admission to the several examinations of the Examining Board in England.

3. That in the final part of Paragraph xviii, Section II, of the Regulations of the Examining Board in England, relating to the interval of two years required to be spent in professional study between the dates of passing the Second Examination and admission to the Third or Final Examination, the words "two Winter and two Summer Sessions" be substituted for "two years."

A report from the Committee on the practicability of adding a new wing to the Museum of the College was read, approved, adopted, and ordered to be entered on the minutes. The following were the recommendations of the Committee: "That, under the present altered circumstances of the College, it is desirable that the powers of the Committee be enlarged, with a view to (1) the more perfect extension of the Museum, (2) the extension of the Library, (3) the addition of workrooms, (4) the consideration of such other improvements as may suggest themselves to the Committee, (5) and the consideration of the increase of the staff which the foregoing additions will necessitate."

The circular to the Fellows, asking their opinion on the question of Members being allowed to vote at the election of Fellows as Members of Council, and of Members being eligible, under certain restrictions, for election as Members of Council, was read, approved, and directed to be issued at the end of the week.

Mrs. Frank Buckland presented a chair made by her late husband out of the wood of the bedstead of John Hunter.

The regulation relating to rejected candidates, requiring additional certificates at the second examination under the conjoint scheme, will be held to apply to the corresponding or primary examination for the Membership of the College alone.

Mr. Power was asked to publish the Bradshaw Lecture, delivered on December 2nd.

Sir Spencer Wells's motion on the question of appointing a committee to meet the Association of Fellows and Members, to discuss the subject of the first resolution passed at the annual meeting of Fellows and Members, was postponed.

If the proposed alterations in the College buildings be carried out, a large new museum building will be erected on the west side of the present edifice; it will be divided into three rooms. On the east side, on the site of the Conservator's house, an extension of the library building will be erected, and apartments for the Conservator will be built further to the east; at the extreme west, beyond the special museum, another dwelling-place will be erected for the Assistant Conservator. The facade of the College buildings would be greatly increased right and left, and a sitting statue of some distinguished surgeon would probably be placed in the court-yard, in front of each of the new wings. The designs, prepared by Mr. Stephen Salter, have been duly submitted to the Council.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1887. ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any bye-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

Meetings of the Council will be held on January 19th, April 13th, July 13th, and October 19th, 1887. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before each meeting, namely, December 29th, 1886, and March 24th, June 23rd, and September 29th, 1887.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council, unless his name has been inserted in the circular summoning the meeting at which he seeks election.

Francis Fowke, *General Secretary*.

COLLECTIVE INVESTIGATION OF DISEASE.

Inquiries are being pursued on the following subjects

Diphtheria,	Cancer of the Breast,
Old Age,	The Etiology of Phthisis,
The Value of Hamamelis,	The Value of Pure Terebene.

Memoranda on the above subjects, and forms for communicating observations on them, may be had on application.

The Inquiry on Habits of Intemperance is now closed.

A Report on the Chorea Inquiry has been prepared by Dr. Stephen Mackenzie; and will be published in the British Medical Journal as soon as the printing can be completed.

A Report on Centenarians, prepared by Professor Humphry, is published as a Supplement to the Journal this week. A full Report on the Old Age Inquiry will follow.

Reports are in preparation upon the Inquiries made into Acute Rheumatism, Diphtheria, Cancer of the Breast, and the Connection of Disease with Habits of Intemperance, and a further Report on Puerperal Pyrexia.

All these will be published in the Journal as soon as completed.

Application for forms, memoranda, or further information, may be made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting will, by the kind invitation of Dr. Adams, take place at Brooke House, Upper Clapton, on Thursday, December 16th, at 8.30 p.m. The chair will be taken by C. T. Aveling, Esq., M.D. A Demonstration of interesting cases of Nervous Diseases will be given by W. B. Hadden, Esq., M.D.—Joseph W. Hunt, Honorary Secretary, 101, Queen's Road, Dalston.

Aberdeen, Banff, and Kincardine Branch.—The next meeting of this Branch will be held in 198, Union Street, Aberdeen, on the evening of Wednesday, December 22nd, at 8 o'clock, when the President, Dr. Urquhart, will take the chair. Business: 1. Minutes, nomination of members, etc. 2. Ballot for admission of Dr. Arthur Morrison, Suez, Egypt; Dr. John D. Thomson, Marischal College; Dr. James S. Milne, Peterhead, as ordinary members of Branch. 3. Sequel to Case of Myxœdema, and results of *Post Mortem*, by Dr. Urquhart. 4. On the Treatment of Scarlatina Maligna by the Inhalation of Vapour of Carbolic Acid, by Dr. Michie, Cove. 5. Case of Fracture of the Base of the Skull, by Dr. Michie. 6. Exhibition of Specimen: Case of Enormous Hydrocephalus, by Dr. Cheyne, Aberdeen.—Robert John Garden, J. Mackenzie Booth, Honorary Secretaries.

Presentation.—On the occasion of the distribution of prizes in connection with Parkgate centre of the St. John Ambulance Association, the Right Hon. Earl Fitzwilliam, K.G., the President of the centre, presented Dr. Walker with a marble timepiece, Dr. Smith with a silver salver, and Dr. Edward Cheeswright with a silver-mounted inkstand, the gifts of their respective classes. His lordship highly complimented these gentlemen on having brought their kindly feelings and their professional skill to bear on so useful and disinterested a task.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Excision of the Larynx.—Suture a Distance.—Animal Tissue Grafting.—Antifebrin.—Tubercular Whitlow.—Bacterian Eruption in an Articular Wound.—Epidemic of Boils.—The Micrococci of Scrofulous Affections.—General News.

At the French Congress of Surgery, M. Léon Labbé described three cases in which he had excised the larynx. The first was for a large sarcoma, in the interior of the larynx, which had extended into the pharynx, so that deglutition became impossible. The patient was cured, but died from pneumonia five months after the operation. The second was for epithelioma, with enlargement of the neighbouring glands. The operation was easily performed, but the patient succumbed in consequence of the cannula not having been changed, as had been directed, and death ensued on the fifteenth day from septic pneumonia. The third patient was suffering from an epithelial sarcoma of the larynx, which impeded respiration; the glands were not affected. On the larynx being isolated, the patient turned pale and death-like, probably from contusion of the pneumogastric nerve. Artificial respiration was carried on for twenty-six minutes. The operation was then recommenced, and the patient recovered, and lived for four months and a half. In conclusion, M. Labbé recommended that tracheotomy should be done, as low down as possible, several weeks or months before the operation. The patient should be anæsthetised by means of the tracheal cannula; but he should be previously accustomed to the presence of the cannula in the windpipe. The best incision is a T-shaped one, the transverse cut corresponding with the thyroid body. After the first incision, it is better to employ small knives. The larynx should be isolated and pressed together as far as possible. It should then be divided from top to bottom, the epiglottis, however, being preserved as far as possible. The upper part of the wound should be sewn up, and an œsophageal sound inserted. The patient may take nourishment from about the fifteenth day after the operation.

At the French Congress of Surgery, M. Assaky made the following communication concerning *suture à distance*, and on the surgical applications of grafting animal tissues. *Suture à distance* is employed in order to restore the continuity of an organ in cases where the separated portions cannot be brought together. The suture-threads join these parts more closely together. The threads are of catgut, and it has been proved that these threads place the organs in a particularly favourable condition for the reproduction of tissues. This method of suture has, up to the present time, been used only for nerves and tendons. M. Assaky stated that in both of these cases he had found the results satisfactory. *Suture à distance* in nerve tissue has recently been adopted after the ablation of a neuroma; also in cases where a portion of a nerve has been destroyed by being impacted in a new formation; likewise when nerves are imprisoned in a callus, and in secondary nerve sutures in which direct re-union is impossible. The application of *suture à distance* should not be limited to the surgical treatment of tendons and nerves. It should be employed in rupture of muscle when the muscular tissue is not deteriorated; in cases of loss of bony substance, whether the periosteum is preserved or not. It appears probable that catgut, stretching from one fragment to the other, keeps the place to be occupied by the future bone, and helps ossification. Catgut may also be employed after resection of joints; artificial ligaments would thus be formed which would be rapidly converted into fibrous bundles. M. Assaky then stated that it was quite possible to transplant tissue from one animal to another of a different species or class.

Antifebrin is prepared by heating aniline with crystallisable acetic acid in a special receptacle; it is distilled and purified by successive crystallisations. It takes the form of a white crystalline powder, having no odour, and a slightly sharp taste; it is almost insoluble in cold water, easily soluble in warm water, and especially so in alcohol and liquids. It melts at 113° C., and distills at 292° C., without decomposition. It is neutral, and resists most reagents. The action of antifebrin is four times more powerful than that of antipyrin. Many observers have tested its effect in cases of typhoid fever, erysipelas, acute muscular rheumatism, phthisis, lung abscesses, fevers (leukæmia, pyæmia, septicæmia), and pneumonia. Antifebrin has been administered in doses of .25 gramme to 1 gramme in brandy, wine, or wrapped in wafer paper. A dose of 2 grammes has never been exceeded by Cahn and S. Hepp, who are studying this drug; but it can be increased without inconvenience, according to the nature, acuteness, and length of the complaint, and also according to certain conditions. The action of this substance manifests itself at the end of an hour, attains its maximum after four hours, and ceases, according to the dose, in the space of from three to ten hours. Antifebrin lowers the febrile temperature without exercising any influence on the normal temperature, and, according to various authorities, it has none of the disadvantages which attend the use of various antipyretics. It causes redness of the face, and profuse perspiration. No shivering has been observed in consequence of increased doses; though in some cases, as with antipyrin, patients have experienced a sensation of cold. Together with the fall in temperature there is a noticeable diminution in the beating of the pulse, accompanied by increase of arterial tension, as shown by sphygmographic tracings. In a few cases patients have complained of excessive thirst, and diuresis has been considerably increased (2,500 to 5,500 cubic centimètres). In cases of muscular rheumatism, antifebrin has lessened pain and fever very rapidly. The only untoward symptom which occurred when antifebrin was first administered was cyanosis of the face and extremities, which occurred in some patients; this, however, gradually disappeared, and left no cause for anxiety. According to Cahn and S. Hepp, antifebrin is highly to be recommended in clinical medicine, owing to its energetic action when given in small doses; also for its harmlessness to the stomach, and for its cheapness.

At the French Congress of Surgery, M. Peyrot communicated facts observed in the case of a patient suffering from paronychia, of tubercular origin, on the right middle-finger. The patient also had pulmonary tuberculosis. M. Peyrot amputated the finger. On microscopical examination the disease was found to be of tubercular nature.

At the French Congress of Surgery, M. Nepveu read notes of the case of a woman, aged 36, who had sustained an injury from falling on her hands. The third phalanx of the thumb was severely dislocated, with a large superficial wound. Local antiseptic treatment with corrosive sublimate and iodoform was adopted. A vesicular eruption appeared, which spread from the hand over the whole body. This was checked by an idoform dressing. There was no lymphangitis. On examination, a quantity of bacteria were found in the contents of the vesicles. The eruption followed the suppurating arthritis set up by the wound.

Dr. Al. Hergott (Nancy) communicated to the *Annales de Gynécologie* a series of cases of boils transmitted from one woman to another at the Maternité Hospital, by the common use of a basin which had not been sufficiently disinfected. Five women had an eruption of boils in the gluteal region. The manner in which the epidemic appeared left no doubt as to its origin. The basin, which was the vehicle of the disease, was washed with *liqueur de Van Swieten*, and no fresh cases occurred. This fact shows very clearly the importance of thoroughly disinfecting all utensils that are to be employed by more than one person. M. Gingeot states that the best method of transmitting boils with cultivations of fluids, is to dip a camel's-hair brush into the fluid, and brush over a hairy part, so as thoroughly to impregnate the orifices of the glands. This method is practically the same as that by which the contagion at the Maternité at Nancy was caused. (*Journ. de Méd. et de Chir. prat.*)

At the recent Congress at Nancy, M. Boucheron made a statement with regard to his researches, in conjunction with M. Duclaux, on the micrococci of scrofulous affections. These gentlemen sought to ascertain whether microbes were to be met with in scrofulous affections other than lupus. They selected impetigo for their examinations, and found a microbe having the aspect of a small chain of diplococci and of zoogloïc masses. They submitted it to cultivation, and injected into the veins of a rabbit two or three drops of a fifth cultivation, which speedily caused death. The necropsy showed only slight lesions except in some cases, where there was serofibrinous pericarditis; but there was an abundance of micrococci in the blood. Inoculation with a first cultivation-fluid produced lesions later on. Injections into the trachea, and mixing the cultivations with food, had no injurious effect. These cultivations, mixed with fresh lard and applied to the skin, may cause localised gangrene and glandular hypertrophy. A strong cultivation-fluid, injected into the cornea, produced keratitis and hypopyon; and a weak one caused slight detachment of the lamella of the cornea—phenomena analogous to those produced by a microbe in acne of the nostrils and eyelids. M. Boucheron does not believe that there can be purulent infection.

The *Gazette de Japon* relates that 59,000 persons were attacked by cholera this year. Of this number, 37,000 died.

Dr. Gouguenheim, physician to one of the Paris hospitals, has been directed by the French Minister of Public Instruction to proceed to

Vienna, for the purpose of studying the way in which laryngology and rhinology are taught in that University.

At the Académie des Sciences, M. Sacc presented to the Secrétaire Perpétuel some leaves of a plant employed by the inhabitants of equatorial countries, both as a prophylactic against the bites of venomous reptiles, and as a remedy when the injury has been inflicted. When the body has been rubbed with the plant, the smell drives away all reptiles. Should a bite, however, have been inflicted, infusions of the leaves are given internally, and poultices made with them are applied to the wound.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Important Meeting at the Medical Institution; The Report of the Women's Hospital Inquiry Committee.—Infectious Diseases in Liverpool.

ON the evening of December 3rd, a Special General Meeting of the Medical Institution was held, at which the report of the Committee appointed by the Institution to investigate the "Women's Hospital" matter, was read. The President of the Institution, Dr. Nevins, was in the chair, supported by the General Secretary, Dr. Bernard, and by Dr. Alexander, the Secretary to the Committee. There was a very large attendance of members and associates. After the report had been read by Dr. Alexander, a motion to the effect that the report be received and adopted, and that the members of the Committee be thanked for their labours, was proposed by Mr. M'Cheane and seconded by Mr. C. B. Wilson. An amendment, thanking the Committee for their full and valuable report, was moved by Mr. Puzey and seconded by Dr. A. C. E. Harris, of Birkenhead. A discussion ensued as to the desirability of dividing the motion into two parts, Drs. Gee and Carter and Messrs. Hamilton, Rushton Parker, and Puzey taking part in it. The amendment was then put to the meeting and carried, after which Mr. M'Cheane moved the reception and adoption of the report. Dr. Imlach then rose and criticised the report at length. He especially objected to the constitution of the Committee, and said that the statements made in the report as to the Committee were incorrect. He further objected to the wording of the paragraph dealing with the "causes of delay in presenting the report," and also to other paragraphs, and he concluded a long speech by declaring that the hospital and its medical officers had not been fairly dealt with by the Inquiry Committee; that no such recommendations as those in the report would ever have been suggested in the case of other hospitals, and that it was a pity to try and stifle a young and struggling institution. Mr. Stansfield, of Birkenhead, followed, speaking in favour of the report. After it had been proposed to adjourn the meeting, Dr. Harris moved, and Dr. Glynn-Whittle seconded, "That the report be referred back." This having been put and lost, and two or three other members having spoken, the motion made by Mr. M'Cheane was put to the meeting and carried by a large majority. A motion, that a copy of the report be sent to the Committee of the Women's Hospital and to the weekly medical journals, was carried, and the meeting separated.

A good deal of feeling was shown by some of the speakers; and it appeared to me that the majority of those present went away feeling relieved that what had promised to be a very stormy gathering had been got through fairly well. Naturally, opinions differ as to the report, and as to the mode of presentation of it. Some think that so lengthy a document should have been more fully discussed, more especially as the printed copies of it were seen for the first time at the meeting by the majority of the members. Others aver that it was best to dispose in one evening of a matter that has caused so much strong feeling. Some loudly assert that the report is wholly unsatisfactory, and even unfair; whilst others are disposed to stand by every word of it. What the consequences of the report will be is matter for conjecture. But one thing is certain—that all unite in hoping that it will tend to put an end to a very uncomfortable state of things.

During the week ending November 27th there has been a decrease in scarlet fever, and a slight increase in typhus fever; one case of small-pox was admitted into the hospital. There has been some talk as to the occurrence recently of so unusual a number of cases of measles in adults. One gentleman informed me that he had seen three cases in adults last week.

HOSPITAL FOR WOMEN, LIVERPOOL.

We have received the report of the "Inquiry Committee" of the Liverpool Medical Institution, above referred to, and append an abstract:—

Constitution of Committee.—The Liverpool Medical Institution, at a largely attended meeting, held on February 4th, 1886, adopted the following resolution: "In view of the large and increasing number of cases of abdominal section in the Hospital for Women in this city, as shown by the annual Medical Report for the year 1884-5, this meeting is of opinion that a Special Committee be appointed for the purpose of investigating the grave question of practice and ethics involved in the performance of these operations, and to report to a future meeting." The Committee consisted of: The President of the Medical Institution (Dr. Nevins), three former Presidents (Mr. Bickersteth, Dr. Cameron, Dr. Waters), one present and three former Vice-Presidents (Dr. Alexander, Mr. Mitchell Banks, Dr. Macfie Campbell, Dr. J. H. Wilson). At a subsequent period it was deemed right that the medical officers of the Hospital for Women should each, if they wished, send a representative to the Committee to watch their interests. Mr. Damer Harrisson and Dr. Barron were nominated on the part of Drs. Burton and Lupton. Dr. Imlach did not nominate any representative. After a short period of service Dr. Cameron resigned his seat. Owing chiefly to the illness of Dr. Imlach, and subsequently, to the civil trial, "Casey *v.* Imlach," the report was long delayed, and was only presented on December 3rd.

Mode of Procedure.—The report states that at the request of the lay Committee of the Hospital for Women the medical officers produced reports of all the cases of abdominal section done during the year 1885. These reports were laid before the Medical Board of the Hospital, who made comments upon them, and visited many of the patients at their own homes. The reports, with the annotations of the Medical Board appended to them in writing, then came before the Inquiry Committee. The Committee also invited the medical practitioners in Liverpool and the neighbourhood to give them any information about the subsequent progress of the cases which had been operated upon in the Hospital, and had been under their care before or after. The Committee visited at their own houses between 40 and 50 of the patients who had been operated upon. The Committee also examined certain specimens of ovaries and Fallopian tubes removed by Dr. Imlach, and voluntarily laid by him before the Committee for pathological investigation. The Committee appointed a deputation, composed of Dr. Cameron and Dr. Alexander, to visit the Hospital for Women, to look into the operation registers, and to examine the lady superintendent and nurses upon such points as might seem to them to bear upon the inquiry.

Report on Operations.—The Inquiry Committee expressed the opinion that the various operations involving abdominal sections had been performed skilfully, and with due attention to all proper surgical precautions. Of the whole number of abdominal sections for removal of the uterine appendages, 85 were performed by Dr. Imlach, 16 by Dr. Burton, and 5 by Dr. Lupton.

Ovariotomy.—The Committee were of opinion that the cases submitted to ovariotomy were fit and proper cases for it, and that the operations were done satisfactorily and successfully.

Exploratory Incisions.—The Committee were further of opinion that the few exploratory operations done at the Hospital for Women were justifiable.

Oöphorraphy.—Concerning oöphorraphy, or the replacement and fixation of prolapsed ovaries, the number of cases reported was not sufficient to enable the Committee to express any strong opinion either for or against it. But while they do not wish to regard it in the light of an unwarrantable operation, they find that the relief afforded by it to the patients was by no means clear and decided.

Removal of Uterine Appendages.—The greatest controversy is stated to have arisen with regard to the operation for removal of the ovaries and Fallopian tubes (uterine appendages). Out of 106 patients subjected to removal of ovaries and tubes, 9 died, being a mortality of between 8 and 9 per cent. The operation, when both ovaries are removed, inevitably produces sterility. Out of 92 patients on whom this operation was done in the Hospital for Women, 59 were between 20 and 30 years of age, while 7 were only from 17 to 20 years old. It may be said that the ovaries removed were already useless for child-bearing purposes, but the Committee consider that very great difficulty exists in making certain of this fact, either before or even at the time of operation. With regard to the alteration in voice, abnormal growth of hair, and assumption of masculine appearance which have been stated to follow loss of the ovaries, the Committee have no evidence that such ensues. Concerning the loss of sexual desire, however, it was found that a certain number of patients stated that they had not perceived any difference after the operation; from a large majority no information could be obtained; while out of those upon whose statements reliance could be placed, a considerable proportion averred that they had suffered a distinct loss of sexual feeling, to such an extent as to cause serious domestic unhappiness in not a few in-

stances. Furthermore, certain of these patients also complained of such a loss of physical energy and spirit, as prevented them from discharging their ordinary household or other duties as before operation. Out of 166 cases of abdominal section, it was found as a matter of fact, that, in 15 instances, a hernia resulted at the line of incision, and, of these, 13 occurred amongst the 106 removals of the ovaries and Fallopian tubes. This, however, did not represent the full percentage, because a large number of the 166 cases could not be traced, and the 15 cases of hernia were confined to those which could. The Committee have found that many of the patients operated on have received distinct and probably permanent benefit; in very nearly an equally large number, the relief did not seem to have been of a decided or lasting character, while, to some, the operation has been positively injurious. The Committee pointed out that the removal of the ovaries and Fallopian tubes is an operation which cannot be considered purely from a surgical aspect, but that it has also a certain ethical or moral element in it which cannot be put aside. For whether it be regarded as a mere sentimental objection or no, the removal of the organs which are characteristic of sex is, and always will be, viewed by the public and the medical profession with great misgiving. As a result of their investigation, the Committee are of opinion, considering the various risks attending the operation of removal of the ovaries and Fallopian tubes, and the uncertain nature of the results, that at the Hospital for Women sufficient care and discrimination have not been exercised in the selection of cases for operation, and that, in many instances, the gravity of the symptoms was not such as to have justified an abdominal section of any kind. The Committee also believe that, in ordinary cases of pelvic hæmatocele, the operation is not to be recommended. The Committee state with regard to bleeding myomata, that there are no definite records of a character likely to be useful, as to the subsequent shrinkage of the said tumours; while certain patients reported as "cured" have stated that they still suffered from hæmorrhage.

Recommendations.—The Inquiry Committee urge upon the authorities of the Women's Hospital that a more frequent use of consultations by the medical staff be made for the future. They are distinctly of opinion that consultations, in the proper sense of the word, have been too much neglected by one of the operators, and they suggest that Rule 39 should be modified, so as to read: "No operation of a dangerous character, or that involves abdominal section, shall be performed (except in cases of extreme emergency) without previously summoning a consultation of the consulting and acting surgeons for in-patients." The Committee also recommend that the medical staff should use more care to fully apprize the patients of the nature of the operations about to be performed, and their possible results. The patients examined by the Committee very generally denied that sufficient information—or, indeed, any information at all—was given to them as to what was proposed to be done to them. In view of the large proportion of cases of hernia occurring after abdominal section, especially after removal of the ovaries and Fallopian tubes, the Committee recommend that patients should, in future, be retained for a longer period in hospital after operation than has hitherto been the case.

In conclusion, the Committee are very strongly of opinion that the diseases which alone should be treated in the Hospital for Women should be those occurring in the female genito-urinary organs. Such operations as those for the cure of rupture, for the removal of the spleen, for cancer of the breast, or for opening the bowel in disease of the rectum (which, with others of a similar character to the number of 21, were performed in 1885 in this) are entirely unsuited for such a hospital.

Dr. IMLACH has addressed a letter, dated December 6th, to the president of the Hospital for Women, in which, after accepting the recommendation with regard to consultations, he criticises the composition and method of procedure of the Inquiry Committee. He complains especially that the distinction between extra-peritoneal hæmatocele and intra-peritoneal hæmatocele was ignored; he states that in the former condition he has never attempted to operate, while in the latter operative treatment to stop indefinite hæmorrhage is an urgent necessity. With regard to the operations which are justifiable, Dr. Imlach makes the following propositions:—

"1. In simple chronic ovaritis, without adhesions, removal of the organs, or indeed any other operation, is very rarely to be recommended. 2. When this condition is complicated only with peritoneal adhesions, oöphorraphy (in which no parts are removed) is justifiable when pain is persistent, urgent, and disabling. Judged by facts, this operation is absolutely devoid of danger. 3. In ovarian abscess, operation is imperative. 4. A like rule is applicable when there is an inflammatory or suppurative condition of the Fallopian tubes. 5. The question of sterility is readily and certainly determined at the commencement of an operation; it depends upon the condition of the tubes, rather than that of the ovaries. It can also be determined with considerable accuracy in the majority of cases previous to operation. 6. By the time intra-peritoneal hæmatocele is completely diagnosed, it is almost too late to operate; but there is also a more chronic and recurrent form. 7. In myoma, the question of operation is determined entirely by the persistence of symptoms. The Committee appear to doubt the existence of these tumours, yet dwell upon the persistence of their characteristic symptoms. That is taking a double advantage of me. If they had allowed me to appear before them, or asked for further information, this paragraph would not have been written. 8. When peritonitis intervenes in any of these cases, immediate surgical treatment is the only chance of saving life."

With regard to the charge of want of discrimination, Dr. Imlach states that he has treated sixty-seven cases of inflammatory disease, sent in with a view to operation, solely by *rest* and medical means; and that, as to age, two patients aged 19 were treated for large ovarian tumours, and two for double pyosalpinx—a condition of danger not amenable to remedial agents.

The letter concludes as follows:

"As to longer retention in hospital, it must be recognised that the advice of the Committee is excellent. We had found out the advantage by ourselves, but it is a difficult matter to carry into practice. During the past twelve months I have kept my patients in hospital, on an average, for five weeks after operative treatment, with excellent results. In conclusion, I can only say that I have never performed an operation that I would not, under like conditions, have advised my wife or any relative to undergo; and that I have been as conscientious in my work as any member of the critical Committee, from its President down to its Secretary. A vast deal has been made out of the fact that, since the illness of my late colleague, Dr. Lupton, I have not carried out Law 39 to the letter. Consultations we must hold; but far more important is our want of a competent and independent pathologist, who should report upon the conditions which had required surgical treatment. The first task I should ask of him would be a report upon the series of specimens I placed before the Inquiry Committee, which they have returned uncriticised. Should these opinions and this concession fail to gain acceptance, I must, in honour, tender my resignation. In any case, I trust your Committee will defend our nursing staff.—Yours obediently, FRANCIS IMLACH."

Mr. LAWSON TAIT has addressed to a resident in Liverpool a letter in which he says that he has two comments to make on the report of the Inquiry Committee:—"First of all, that I agree with it on the general principles discussed except on one point, and that is that the gentlemen composing it have evidently not had sufficient special experience to know that in many of the operations which they are discussing, especially in the worst cases, the full benefits of the operations are often delayed for two or three years. Some of my own most brilliant cases have had to go through that period of convalescence. To discuss and report upon cases operated upon in 1885 in the middle of 1886 is therefore absurd if we are to regard the report as final. The second matter on which I should like to speak is not directly alluded to in the report, but comes directly out of it. It is this, that the inquiry into the secondary result of surgical proceedings has been employed for the first time in the history of surgery in this particular operation first by myself, and secondly by this Liverpool Committee. They come to the conclusion which, I think, broadly speaking, is erroneous, that only about half of the cases have been really benefited. If this method of research were employed for any other surgical proceeding I do not believe that it would yield even so satisfactory a result as this."

NORTHAMPTON.—Dr. Lee Cogan claims for Northampton the right to be included in the list of healthy places. The rate for 1885, 18.5 per 1,000, though somewhat higher than that of 1884, is below the average, 19.6 per 1,000. The increase is attributed to the fatality from diseases of the lungs and respiratory organs, owing to the cold and damp of the autumn months. The zymotic mortality was slightly less than the previous year. Measles was most fatal, causing 72 deaths, and whooping-cough follows next on the list with 49 deaths. In no year, save 1883, has the mortality from scarlet fever been so low. Dr. Cogan's action in closing schools was made the subject of severe criticism, but he justifies himself by pointing to the marked and speedy abatement which resulted. The diarrhœa death-rate was particularly favourable. In 1884, there were 133 deaths from this disease; in 1885, only 31 were recorded, or a rate of 0.17 per 1,000; of these, four were adults.

CORRESPONDENCE.

DR. JACOB'S PUBLIC MEDICAL SERVICES.

SIR,—The late election has brought into prominence the services of Dr. Jacob, especially in defending the rights of the Irish workhouse and dispensary officers; so highly had I estimated this work, that no other considerations would have induced me to support any other candidate for the seat on the Medical Council if that were a fit reward for such services. I did not think it was, and had long felt that his disinterested devotion of time and money deserved a more substantial recognition. I now venture to suggest that a testimonial should be presented to him. The list of his nominators and of those who signed the powerful address to the dispensary officers supplies a capital committee, and I feel sure that a good many, like myself, unconnected with the service for which Dr. Jacob has incessantly worked during each of the past twenty years, will most gladly co-operate. In fact, already several leading men have expressed warm approval of the project.—I am, etc., E. D. MAPOTHER.

6, Merrion Square, Dublin, Dec., 1886.

THE STATE REGULATION OF MEDICAL FEES.

SIR,—Some time ago it was stated in the different medical journals that the State in Austria and Canada had fixed the amount of fees which were to be paid to medical men. No such law exists in Canada. The following letter will also show that in Austria no plan is carried out by the Government.—Yours truly, R. RENTOUL.

"No. 866.—British Consulate-General, Vienna.—Nov. 8th, 1886.—SIR,—In reply to your letter of the 2nd inst., I beg to inform you that no Act exists in Austria fixing medical charges. The custom is, therefore, about the same as in England. The fees paid in Vienna are, of course, higher than those in the provincial towns, and these are again higher than those paid in the open country. Generally, people at Vienna pay on calling on the physician for a consultation one to three florins (1s. 8d. to 5s.), and if they are visited by the physician, according to the position of the patient. Professors at the University are paid five to ten florins (8s. 4d. to 16s. 8d.) for a single visit or consultation. The Society of Doctors of Medicine has already long ago made various steps in order that an Act of Parliament be passed for settling this question, but, until now, nothing has been done. By book-post I send you a pamphlet by a private practitioner respecting the question of payment to medical men, which may serve to give you an idea of the wishes entertained by your colleagues here.—I am, Sir, yours most respectfully, GUSTAV NATHAN, H.B.M. Consul-General.

P.S.—The above does not make any mention of surgical fees."

THE ABUSE OF OUT-PATIENT DEPARTMENTS.

SIR,—At the meeting convened by the Metropolitan Provident Medical Association at the Society of Arts yesterday (Sir A. Clark in the chair), for the purpose of discussing sick assurance and the indiscriminate medical relief afforded at our hospitals, it was abundantly proved that there is a growing feeling of annoyance springing up at the manner in which outdoor relief is dispensed at the hospitals. It was proved beyond a doubt that the most serious conditions are overlooked in the out-patient room, and that most undeserving cases resort thereto. Now, Sir, as it is, I think, acknowledged on all sides that the evil requires an immediate remedy, I would suggest that the Association of General Practitioners, and of the Members of the Royal College of Surgeons, take the matter up and make a vigorous effort to improve the present discreditable state of affairs by a strong representation to the committees of the various hospitals. It was the opinion of the meeting yesterday that sick assurance is a right principle, but that it will not succeed without the co-operation of the hospitals, and indeed we cannot expect it to do so, since not only the poor, but the well-to-do, can get medical advice gratis at nearly all of our large hospitals. I am only repeating what I have heard scores of general practitioners give utterance to when I say that hundreds of patients of mine, who are well able to pay, are in the habit of attending the hospitals when they can get there, and sending for me when they can't. I can assure you, Sir, I feel it a grim mockery when the plate comes around for my contribution on Hospital Sunday, and I am stating what I know to be a fact, when I allege that many subscriptions are now withheld from the hospitals for the very reason referred to.—I am, Sir, your obedient servant, SAM. WILSON.

155, Mare Street, Hackney, E., December 8th, 1886.

MEDICO-LEGAL AND MEDICO-ETHICAL.

REGISTRARS' CHARGES.

SIR,—Is a registrar of births and deaths entitled to make a charge for registering a death and giving a certificate for burial? If so, how much is he entitled to charge? Yours, etc., DELTA.

"If an informant of a death attend at the office of the registrar for the purpose of registering the death, the registrar is not entitled to charge any fee to the informant for making the entry in the register, for which, in due course, he receives the fee of one shilling payable by the guardians of the poor for the Poor-law Union in which he holds office. If, however, the registrar be requisitioned (as he may be in accordance with the Registration Act) to attend at the house in which the death occurred for the purpose of registering the death, he is entitled to charge a fee of one shilling for so attending, in addition to the fee of one shilling payable by the guardians.

VISITING PATIENTS OF ANOTHER PRACTITIONER.

VINCIT QUI PATITUR.—Although we feel justified, after a critical examination of the ethical points involved in our correspondent's communication, in exonerating him from all wilful unethical intent in the case therein alluded to, we are clearly of opinion that in assenting, under the peculiar circumstances, to accompany his non-medical friend to see an ailing patient of Dr. ——'s, and acting as he did, without having previously obtained the sanction of the latter, "Vincit Qui Patitur" committed, however unwittingly, a grave breach of professional etiquette, and justly subjected himself to severe criticism and reproof. Still, censurable as we cannot but regard his conduct in the matter to have been, it did not justify Dr. ——'s (in his own house, moreover) exceptionally discourteous reception, and, if correctly reported, his more than ungentlemanly language, on our correspondent calling to explain, and, if necessary, to apologise. Such imputed offensive language is always much to be regretted, and especially so when uttered by a member of a cultured and honoured profession.

If our correspondent be, as we surmise, a young practitioner, we would venture to suggest to him a careful perusal of the *Code of Medical Ethics*, in which he will find valuable hints and rules for his own guidance, and, maybe, that of others also.

NAVAL AND MILITARY MEDICAL SERVICES.

CHANGES IN THE ARMY MEDICAL DEPARTMENT.

IN reference to a paragraph which has appeared in the public press, to the effect that several important changes are taking place in the higher ranks of the Army Medical Department, we are enabled to state that these are but the ordinary reliefs. Surgeon-General Reade, V.C., is appointed P.M.O. of the Southern District, the post vacated by Surgeon-General Sir A. D. Home, who is retiring from the active list of the Army Medical Staff on account of having reached the limit of age. Other similar changes will shortly occur, leading to promotion of a proportionate number of medical officers in the Deputy's grade.

THE NAVY.

STAFF-SURGEON J. A. ROBERTSON has been appointed to the *Belleisle*.

Surgeon J. M. PHILLIPS, M.D., of the *Goshawk*, died of fever on November 2nd, at Jamaica. Dr. Phillips entered the Royal Navy as Surgeon August 28th, 1882, and was appointed to the *Goshawk* in December, 1883.

THE MEDICAL STAFF.

SURGEON-MAJOR DUKE PARKE is granted retired pay, with the honorary rank of Brigade-Surgeon. He entered the service March 31st, 1868; became Surgeon March 1st, 1873; and Surgeon-Major March 31, 1880. Major Parke served with the expedition to Sherbro, on the West Coast of Africa, in 1883, and was mentioned in despatches.

Brigade-Surgeon W. A. GARDINER, and Surgeon L. W. SWABEY, both serving in Bengal command, have each leave of absence for six months on medical certificate.

Deputy Surgeon-General H. READE, V.C., Principal Medical Officer at Colchester, is to succeed Surgeon-General Sir H. Home, V.C., as Principal Medical Officer of the Southern District.

Surgeon A. KIRWAN, serving in Bengal, has resumed charge of the Civil Medical Duties of Attock, relieving Surgeon L. H. Truefitt, M.B.

Surgeon C. R. TYRRELL has been appointed to the Civil Medical Charge of Muttra, in the Bengal command.

Surgeon W. L. LANE, M.B., doing duty at the station hospital at Secunderabad, is to do duty at the station hospital at Belgaums, Madras command.

Surgeon-Major W. F. BURNETT is brought on the strength of Her Majesty's British forces, in the Bombay command, from November 2nd, the date of his arrival from England.

THE VOLUNTEERS.

ACTING-SURGEON G. T. WILLAN, of the 1st Volunteer Battalion of the Leicestershire Regiment (formerly the 1st Leicester Volunteers), has resigned his appointment, July 28th, 1877, although he did not join the 1st Leicester till October 1st of that year.

MR. C. E. BADDELEY has been appointed Acting-Surgeon to 2nd Shropshire.

Acting-Surgeon A. MACLACHLAN, M.D., of the 3rd Volunteer Battalion of the West Surrey Regiment (formerly the 6th Surrey Volunteers), has resigned his appointment, which dates from December 18th, 1878.

OBITUARY.

ALFRED WILTSHIRE, M.D., F.R.C.P.

On Saturday, December 4th, Dr. Alfred Wiltshire died at the age of 47, after an illness which had lasted several years, and effectually ruined a very promising career. Dr. Wiltshire was born in Gloucester in 1839; he was brought up at a private school, and received his medical education at University College Hospital. Previous to devoting himself to a speciality, he was in private practice in London. For some years he held the appointment of Medical Inspector of the Privy Council, and performed great services in the cause of vaccination. He took a very active interest in the work of reorganisation of the Medical Society of London, of which he was Treasurer. He read the Lettsomian Lectures before that Society in 1877.

Dr. Wiltshire always took a great interest in obstetrics and the diseases of women. He held, for a time, the appointment of physician to the Samaritan Hospital. In 1875, having decided to devote himself to the practice of obstetrics, he was appointed assistant-lecturer on obstetric medicine and physician-accoucheur (out-patients) to St. Mary's Hospital. At the same time he was an active Fellow of the Obstetrical Society of London. He read several valuable contributions at its meetings, and was appointed honorary librarian, honorary secretary (1874-6), and vice-president (1877-9). He was also physician to the British Lying-in Hospital, and physician for the diseases of women to the West London Hospital. Dr. Wiltshire was a bold operator and a good ovariotomist. In a well-known standard foreign work on diseases of the ovaries, by Professor Olshausen, it is admitted that "Wiltshire appears to be the first who had the courage to operate during collapse caused by torsion of the pedicle," and, indeed, his contribution on "A Large Multilocular Ovarian Cyst removed by Operation from a Patient with acute Peritonitis," in the nineteenth volume of the *Transactions of the Pathological Society*, may be said to have marked a new departure in ovariotomy. Henceforward, surgeons no longer considered that acute peritonitis was necessarily a contra-indication to ovariotomy, and just as the fear of causing peritonitis by attempting abdominal section was shown by Wells, Keith, Tait and others to be all but visionary, so Dr. Wiltshire's experience proved that peritonitis, when already present, was not so formidable as was hitherto supposed, and could be cured by removing the exciting cause. He also endeavoured to reduce the principles of gynæcology to a thoroughly scientific basis, and some of his efforts in this direction were displayed in his interesting "Lectures on the Comparative Physiology of Menstruation," published in the first volume of the JOURNAL for the year 1883. These lectures showed that Dr. Wiltshire possessed a good knowledge of comparative anatomy, and it was known to his friends that he frequently visited the Zoological Gardens to observe the animals in captivity there, and to make inquiries of the keepers as to their habits, particularly with regard to phenomena apparently homologous with the catamenia in the human species.

About four years ago he was stricken with symptoms of locomotor ataxy, which came on gradually, and his sanguine nature made him cherish the hope of eventual recovery. His condition, however, gradually became worse, and, in the summer of 1885, he felt himself compelled to resign his appointments at St. Mary's and the West London Hospitals.

Dr. Wiltshire, in 1877, married the daughter of the late Mr. Albert C. Waterlow, brother of Sir Sydney Waterlow, and by his marriage he became the brother-in-law of Professor Ferrier. Dr. Wiltshire's widow and two sons survive him.

In judging the professional career of Alfred Wiltshire, we may safely say that, both as a practitioner and a scientific man, he possessed abilities which placed him considerably above the average. He was a man of pleasing appearance, and, like many earnest and warm hearted people, was apt to be readily prejudiced either for or against persons or ideas.

INDIA AND THE COLONIES.

INDIA.

We learn from the report of the Inspector-General of Civil Hospitals that the number of in-patients treated at the 233 charitable dispensaries now open in Bengal was 25,766, and of out-patients 96,218, showing an increase in the number of in-patients, and a decrease of 4,648 in the out-patients. The death-rate during the year among in-patients was 15.59 per cent., as compared with 14.75 per cent. in the previous year. The total income was 5,08,683 rupees, while the expenditure amounted to 4,71,942 rupees. The amount of subscriptions from Europeans was 16,872 rupees, that from natives 1,06,185; the latter show a falling off of nearly 5,000 rupees. The cost of diet of each in-door patient varied from 2 annas 7 pies to 6 pies per diem. Thanks to the interest evinced by the medical officers in charge of these institutions, they are, we are told, models of cleanliness; and strict attention is paid to all hygienic arrangements.

WEST INDIES.

EPIDEMIC OF SMALL-POX IN JAMAICA.—The small-pox epidemic in Kingston, Jamaica, is, according to recent despatches, greatly on the increase. The authorities are now adopting stringent measures to check the disease, and infected houses are placarded with yellow bills, notifying the fact. At the time of the departure of the *Nile*, there were no fewer than 482 cases in Kingston, about one-half of which were fresh cases. The disease has been thoroughly stamped out in Colon, which is reported very healthy. The *Nile* steamship brought a clean bill of health from that port.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

BUILTH RURAL DISTRICT.—Dr. J. Herring has to report a large increase in the number of deaths during the past year. The total number registered was 122, as compared with 83 in 1884. This raised the death-rate to 18.05 per 1,000, the highest since 1883; the average death-rate for the last 8 years having been 17.82 per 1,000. It is, however, noticeable that, of the 122 deaths, 51 were of persons above 60 years of age, and 20 were of infants under 12 months; thus 71 were at the extremes of life. Diseases of the respiratory organs were more than usually fatal, and 10 deaths occurred from zymotic diseases. The most important outbreak was one of diphtheria, in which 9 persons were attacked, and so virulent was the type, that no fewer than 6 succumbed to the disease. Dr. Herring made searching inquiry into the cause of the outbreak, and it seems probable that the first case was contracted in a neighbouring district where diphtheria had been lurking for some months. No special unsanitary conditions were reported. The fear of infection among the people was very great, so there was no difficulty in securing isolation and disinfection.

MEDICAL NEWS.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen passed the Examination in the Science and Practice of Medicine, Surgery and Midwifery, and received certificates to practise, on Thursday, December 2nd, 1886.

Brook, William Frederick, 100, St. George's Road, Southwark.
Morham, Marcus Campbell, Swansea.

MEDICAL VACANCIES.

The following vacancies are announced.

BRISTOL DISPENSARY.—Surgeon. Applications by January 1st, 1887, to the Secretary.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent. Assistant Medical Officer. Salary, £120 per annum, with board, etc. Applications by December 30th to H. F. Youle, Esq., Guildhall, E.C.

FULHAM UNION.—Assistant Medical Superintendent and Dispenser. Salary, £100 per annum, with board, etc. Applications by December 18th to the Clerk to the Guardians.

HOSPITAL FOR CONSUMPTION, Brompton.—Resident Clinical Assistants. Applications by December 18th to the Secretary.

JAMES MURRAY'S ROYAL ASYLUM, Perth.—Assistant Medical Officer. Apply to Dr. Urquhart.

MANCHESTER ROYAL INFIRMARY. Resident Medical Officer. Salary £150 per annum, with board and residence. Applications by December 18th to the General Superintendent.

NORFOLK COUNTY LUNATIC ASYLUM.—Medical Superintendent. Salary, £150 per annum, with board, etc. Applications by December 14th to the Clerk to the Visitors.

NORTH DUBLIN UNION. Medical Officer. Salary, £145 per annum, and fees. Applications by December 11th to Thomas Molloy, Esq., 70, Lower Gardiner Street, Dublin.

ROYAL SEA-BATHING INFIRMARY, Margate.—Two Surgeons. Applications by December 20th to the Secretary.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth. House-Surgeon. Salary, £100 per annum, with board, etc. Applications by December 20th to the Honorary Secretary.

ST. LUKE'S HOSPITAL.—Resident Clinical Assistant. Applications by December 14th to the Secretary.

WESTERN GENERAL DISPENSARY, Marylebone Road, W.—Dispenser. Salary, £80 per annum. Applications by December 11th to the Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Assistant.—Applications by December 13th to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

BARENDT, F. H., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Bootle Borough Hospital.

BAUMGARTNER, Henry S., M.B., M.S.Durh., M.R.C.S., L.S.A., appointed Visiting Surgeon to the Prudhoe Memorial Convalescent Home, Whitley, Newcastle-on-Tyne.

BONAR, Thomson, M.D.Edin., appointed Assistant Resident Medical Officer to the Royal National Hospital for Consumption, Ventnor, Undercliff, Isle of Wight.

BRENCHLEY, A., M.D., M.R.C.S., appointed Medical Officer to the Camberwell Provident Dispensary, *vice* H. C. Brenchley, M.R.C.S., L.S.A., deceased.

BUCKELL, W. R., F.R.C.S., L.R.C.P., appointed Resident Surgeon to the Cheltenham General Hospital Branch Dispensary, *vice* A. A. Dighton, L.R.C.P., L.R.C.S., resigned.

OLIPHANT, E. H. Lawrence, M.D.Edin., appointed Assistant Obstetric Physician to the Glasgow Maternity Hospital.

SHAW, Harold, B.A., M.B., B.S.Cantab., appointed Resident Clinical Assistant to the Birmingham Borough Asylum, *vice* J. W. Lichfield, L.S.A., L.R.C.P., resigned.

SUDDEN, E. Scott, M.B., M.R.C.S., appointed Assistant House Surgeon to the Leicester Infirmary and Fever House.

SILK, J. F. W., M.D., appointed Chloroformist and Registrar to the Great Northern Central Hospital.

TABOR, Charles J., M.B., M.R.C.S., L.R.C.P., appointed Medical Officer of Health for Illogan District, Redruth Union, Cornwall.

VAUGHAN, J. C., M.B., appointed House-Physician to the Bradford Infirmary and Dispensary, *vice* E. G. Carter, M.R.C.S., L.R.C.P., resigned.

WILKINSON, G. S., L.R.C.S.I., L.R.C.P.E., appointed Medical Officer and Public Vaccinator to the Scarborough Union, *vice* R. Wyllie, L.R.C.P.E., L.S.A., deceased.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London. Dr. Keser: A Case of Intraperitoneal Hæmorrhage in a New-born Child. Dr. Marmaduke Sheild: On the Administration of Ether, and on the Selection of Anæsthetic Agents in Surgical Operations.

TUESDAY.—Society of Medical Men Qualified in Sanitary Science (at the Parkes Museum, 74A, Margaret Street, Regent Street, W.), 4 P.M. Dr. Alfred Carpenter: The Duty of the State to foster the Cultivation of Sanitary Science. Dr. J. F. J. Sykes: The Sanitary Medical Service as a Career.—Royal Medical and Chirurgical Society, 8.30. Mr. Savory: On the Effect upon the Femoral Artery of its Ligature for the Cure of Popliteal Aneurysm. Mr. Treves: Richter's Hernia or Partial Enterocele.

WEDNESDAY.—Royal Meteorological Society, 7 P.M. Mr. G. J. Symons: International Congress of Hydrology and Climatology at Biarritz. Rev. T. A. Preston: Phenological Observations for 1886. Professor S. A. Hill: A Criticism of certain Points of Professor Langley's Researches on Solar Heat. Mr. R. L. Holmes; The Hurricane of March 3rd-4th, 1886, over the Fiji Islands. Mr. W. H. Lyne: Meteorological Observations made at the Military Cemetery, Scutari, Constantinople, 1866-85.

FRIDAY.—Society of Medical Officers of Health, 7.30 P.M. Dr. Alfred Hill will communicate a recent decision under the Public Health Act. Dr. Alfred Ashby: The Powers and Duties of Sanitary Authorities and their Officers in respect of Dairies Cowsheds, and Milkshops in Extra-Metropolitan Districts.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

ANDERSON—MOON.—At Edenfield, Cupar, Fifeshire, on December 8th, by the Rev. John R. Scoular, Cupar, assisted by the Rev. Edward Davis, rector of Wilford, Notts, uncle of the bride, Alexander M. Anderson, M.D., Dundee, to Margaret Robertson, eldest daughter of the late William Moon, J.P., and of Mrs. Moon, of Edenfield.

SMITH—ROBSON.—At Long Penton Parish Church, Northumberland, by the Rev. E. S. Grover, Vicar, H. Lyon Smith, L.R.C.P.Ed., of Chester-le-Street, to Pattie, youngest daughter of the late George Dalgleish Robson, Esq., Notary Public, of South Shields.

DEATHS.

GOODWORTH.—On December 3rd, at Winterton, Doncaster, Mary Elizabeth, the wife of Roger Portington Goodworth, L.R.C.P., M.R.C.S.

UMPLEBY.—At his residence, 19, South Parade, York, Henry Umpleby, M.D., M.R.C.S., forty-seven years in practice at Bedale, aged 71.

WILTSHIRE.—On December 4th, aged 47, Alfred Wiltshire, M.D., F.R.C.P., late Joint Lecturer on Obstetric Medicine, and Physician Accoucheur to St. Mary's Hospital.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M. Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M. Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY .....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's—1.30 P.M.: St. Bartholomew's (Ophthalmic Department) Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY .....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; † M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30: Obstetric, M. Tu. F., 1.30; Eye, M. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S. 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, M., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT, UNDER ANY CIRCUMSTANCES, BE RETURNED.

QUERIES.

DR. ILIFF will be much obliged if any of our readers can inform him of any London depôt or office of Holland's "Patent Instep Arch." It is made of leather and steel, and he has found it very useful.

ANSWERS.

TREATMENT OF NON-PAUPER IMBECILE CHILDREN.

SENEX inquires whether there is any institution where a boy, aged 11 years, the son of an old servant, apparently in good health, bright, and cheerful, with good hearing, but unable to articulate beyond the words "mamma, papa," could be placed without a high charge, or whether any treatment could be adopted at home.

*** The case is not one for treatment at home. It is difficult to find a home for this class, but it is worth while applying to Dr. Cobbold, Earlswood, where some imbeciles are admitted for a moderate payment.

DR. W. DUNSTON.—Saccharine is not at present commercially obtainable, but we believe it is likely to be produced in considerable quantities before very long. The C. C. whole wheat gluten, of which you speak, we know nothing of, but its composition could easily be obtained by forwarding it to any competent chemist for analysis.

MR. LENNOX BROWNE informs us that he is in no way responsible for "Brown's Lozenges." The rash described by Mr. Curran was, in his opinion, the result of the cubebs.

DR. C. M. CAMPBELL should call the attention of the Colleges in question to the very disreputable article; and it is for them to take some action concerning the extraordinary statements of the gentleman who parades their titles.

DR. TURVER (Paris).—There is no English journal dealing exclusively with cutaneous and syphilitic diseases

CHARLIER HORSESHOES.

EXPERIENTIA DOCET writes: For Dr. Strathy's benefit, I will give the result of my experience. In the midland or southern districts, where there is usually plenty of mud upon the roads in winter, and a good layer of snow at that period, the Charlier shoe is *the* thing; but, up in the north-western district, I have, to my cost, found them quite useless. The roads here are storm-swept, bare, and, in winter, covered generally with a very slippery thin layer of ice, and occasionally, but seldom, with snow. In proceeding one night, in a hurry, six miles out, my horse (a very sure-footed one) commenced slipping at the top of a hill, with all its feet together, and at a pace of about six miles an hour, ran the shaft through a carriage-house door, and snapped off both shafts, luckily neither injuring itself nor me. Needless to say, I abandoned the Charlier, and adopted the ordinary shoe of this district.

The moral is this. Shoe according to your district. Where there are hills and bare roads, the Charlier shoe is useless, as it wears out in about from ten to fourteen days, even though made of steel. By adopting it here, I gained (?) a pair of broken shafts, broken knees for the horse, and severe strain of various tendons. In fact, I now stick to the chisel-headed calkins, and also have a toe-piece welded upon the hind shoes. Again, where (as here) the roads in summer are nearly covered with loose round stones, the shoes must be raised from the ground, or your horse will come down.

NOTES, LETTERS, ETC.

RETENTION OF URINE.

MR. C. M. JESSOP writes: Without disparaging the value of Mr. Hodder's guarded aspirator, may I suggest that, before it is again employed, full doses of tincture of iron may be tried. I have never known twenty drops, given every ten minutes, to fail in overcoming spasmodic stricture in conjunction with a hip-bath. I need not say they are cases of very common occurrence in military service. I should not venture the suggestion had the drug been named among the medicaments used.

COMMUNICATIONS, LETTERS, etc., have been received from:

Dr. Sam. Wilson, London; Dr. James Blake, London; Mr. C. B. Lockwood, London; Mr. Edmund Owen, London; Mr. H. T. Butlin, London; Dr. Ferrier, London; Dr. Garson, London; Mr. H. Hodson Rugg, London; Mr. Shirley F. Murphy, London; Dr. C. R. Illingworth, Accrington; Dr. Tatham, Salford; Mr. William F. Haslam, Birmingham; The Secretary of the City of Dublin Hospital; Dr. H. Umpleby, York; Dr. Henry Bennet, Mentone; Mr. John J. Merriman, London; Mr. J. Matthews, London; Brigade-Surgeon Curran, London; Mr. Charles Scatchard, Boston Spa; Mr. R. P. Goodworth, Doncaster; Mr. James Ricketts, St. Helens; Dr. Tarver, Paris; Dr. Walter MacKeon, Long Eaton; Messrs. Lorimer and Co., London; Dr. Rich, Liverpool; Mr. J. A. Marston, London; Dr. Imlach, Liverpool; Dr. W. Alexander, Streatham; Mr. T. H. Wyatt, London; Dr. C. G. Lee, Liverpool; Messrs. Thomas Christy and Co., London; Mr. J. Farrant Fry, Swansea; Dr. D. H. Cullimore, London; Mr. J. P. Doyle, Dublin; Messrs. Burroughs, Wellcome, and Co., London; Dr. J. Black, London; Dr. Hime, Bradford; Mr. Lennox Browne, London; Our Manchester Correspondent; Dr. C. M. Chadwick, Leeds; Dr. R. Rentoul, Liverpool; Dr. Brailey, London; Mr. G. Sturge, London; Mr. W. Pugin Thornton, Canterbury; Mr. H. F. J. White, Caxton; Mr. Adams Frost, London; Dr. W. Dickson, London; Mr. Charles Nash, Gravesend; Dr. L. Shaptel, Exeter; Dr. Maxwell, Woolwich; Dr. S. Martin, London; Dr. Mickle, London; Mr. J. E. Cooney, London; Dr. Duffey, Dublin; Mr. C. Douglas, Leicester; Mr. W. Lewis, Cardiff; Sir B. W. Foster, Birmingham; Dr. W. Wylie, Skipton; Mr. P. Boobbyer, Nottingham; Mr. G. E. Muskett, Sydney, N.S.W.; Mr. W. Williams, Llanfair, Abergele; Dr. Rogers, London; Mr. Fred. Evans, Cardiff; Mr. J. Leslie Callaghan, Street, Somerset; Mr. F. Haughton Villanueva, Camberwell; Mr. W. Pearce, Maidenhead; Dr. P. Boulton, London; Mr. T. H. Morse, Norwich; Dr. R. J. Garden, Aberdeen; Our Glasgow Correspondent; Senex; Captain Pead, Dulwich Grove; Mr. B. F. C. Costelloe, London; Dr. J. Ormsby, Dover; Dr. James Bryden, Hawick; Mr. H. B. Hewetson, Leeds; Mr. Campbell Boyd, London; Mr. Gerald Smith, Upper Clapton; Mr. D. E. Wilson, London; Mr. W. Kennedy, Northampton; Messrs. Maggs and Son, Yeovil; Dr. A. T. Myers, London; Mr. Wm. Rose, London; Mr. A. Bernard, Liverpool; Dr. Gray, Castlewellan, co. Down; Mr. A. H. Benson, Dublin; Dr. Iliff, London; A. B. C.; Mr. W. V. Barre, Ellesmere Port; Dr. Murdoch Brown, Edinburgh; Mr. Charles Tabor, Carn Brea, Cornwall; Mr. W. T. Rogers, Newcastle-on-Tyne; Mr. C. Greville, Birmingham; Mr. J. Brewster, Bootle; Professor Hamilton, Aberdeen; Mr. H. Allingham, London; Mr. W. Stephenson, Beverley; Surgeon E. Eckersley, Sheffield; Mrs. M. Evans, Stockport; Mr. C. Dorrington Batt, Witney; Mr. Lawson Tait, Birmingham; Mr. W. Hardin, West Drayton; Our Newcastle Correspondent; Dr. W. Donovan, Birmingham; Mr. Ernest D. Bower, Gloucester; Dr. W. E. Steavenson, London; Rev. J. H. Wanklyn, London; Mr. J. W. Irvine, Clayton-le-Moors; Mr. Reginald Lucy, Worcester; Mr. G. Shaw, Enfield Highway; Mr. W. J. Smith, Rotherham; Dr. Saundby, Birmingham; Mr. W. H. Spurgin, Maryport; Mr. Joseph Balfe, Guildford; Dr. Reginald Southey, London; Dr. More Madden, Dublin; Messrs. Brainsby and Sons, Peterborough; Dr. J. W. B. Hodson, Edinburgh; Professor Humphry, Cambridge; Dr. W. Hunter, Edinburgh; Mr. R. L. Dickson, Maguiresbridge, Bristol; Messrs. Price Sons and Co., Bristol; Dr. H. Albrecht, Berlin; Dr. T. Schmulewitsch, St. Petersburg; Mr. A. H. Stanley, Guisborough; Mr. H. V. Palin, Wrexham; Messrs. Thrupp and Maberley, London; The Editor of the *British Trade Journal*, London; Dr. Tuke, London; Mr. S. Barwill, Birmingham; Surgeon-General Mackinnon, London; Mr. Oliver Withers, Nottingham; Dr. Pisani, Malta; Mr. A. Armstrong, Ryde; Mr. J. Marshall Lamb, Kudat, B. North Borneo; Messrs. P. B. Burgoyne and Co., London; Mr. Wm. Carter, Great Yarmouth; Mr. R. H. Cooper, Wexford; Dr. Ireland, Prestonpans; Dr. J. A. Goodchild, Bordighera, Italy; Drs. Antonio Baratieri and Carlo Bareggi, Milan; Mr. A. H. Bigott, Lincoln; Mr. W. Dunstain, London; Mr. W. W. Wagstaffe, Sevenoaks; Dr. Madge, London; Dr. T. Laffan, Cashel; Dr. St. Clair Thomson, Florence; Mr. C. W. Sessions Barrett, Hinckley; Editor of *Igea*, Rome; Dr. J. Wigglesworth, Painhill, near Prescot; Mr. W. Fleming Phillips, Southampton; Mr. H. J. Prangley, Anerley; Mr. W. Francis Crofts, Stoke-on-Trent, etc.

BOOKS, ETC., RECEIVED.

How Tom became a Traveller; or, Other Folks at Home in Asia and Africa. London: Dean and Son. 1886.

A Wizard's Wanderings from China and Peru. London: Dean and Son. 1886.

Little T's Stories. By Mrs. Fayle. London: Dean and Son. 1886.

Memoir of a Cat. By Herself. London: Dean and Son. 1886

With a Show through South Africa. By Chas. du Val. London: Dean and Son. 1886.

Handbook of Geographical and Historical Pathology. By Dr. August Hirsch. Vol. III: Diseases of Organs and Parts. Translated by C. Creighton, M.D. London: New Sydenham Society. 1886.

Eighth Annual Report of the Illinois State Board of Health. Springfield, Ill., U.S.A.: H. W. Rokker. 1886.

Mental Disorders and Nervous Affections. By George Moseley. London: J. and A. Churchill. 1886.

A New Departure in Science. By C. B. Radcliffe, M.D. London and New York: Macmillan and Co. 1886.

The Healing Art. Two Volumes. London: Ward and Downey. 1887.

The Treatment of some of the Forms of Valvular Disease of the Heart. Lettsomian Lectures. By A. E. Sansom, M.D., F.R.C.P. Second Edition. London: J. and A. Churchill. 1886.

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Post-Office Orders should be made payable to the British Medical Association, at the West Central Post-Office, High Holborn. Small amounts may be paid in postage-stamps.

FIFTY-FIFTH ANNUAL MEETING, 1887.

THE BRITISH MEDICAL ASSOCIATION.

President—Withers Moore, M.D., F.R.C.P., Senior Physician to the Sussex County Hospital, Brighton.
President-Elect—John T. Banks, M.D., Regius Professor of Physic in the University of Dublin.
President of the Council—Sir B. Walter Foster, M.D., F.R.C.P., Professor of Medicine in Queen's College and Physician to the General Hospital, Birmingham.
Treasurer—Charles Macnamara, F.R.C.S., Surgeon to the Westminster Hospital, London.
Editor of the British Medical Journal—Ernest Hart, Esq., London.
General Secretary—Francis Fowke, Esq., 161A, Strand, London, W.C.

The FIFTY-FIFTH ANNUAL MEETING of the Association will be held on August 2nd, 3rd, 4th, and 5th, at DUBLIN, under the Presidency of JOHN T. BANKS, M.D., D.Sc. (Hon.), F.K.Q.C.P.I.

An ADDRESS in MEDICINE will be delivered by Wm. T Gairdner, M.D., F.R.C.P.Ed., Professor of Medicine in the University of Glasgow.

An ADDRESS in PUBLIC MEDICINE will be given by the Rev. S. Haughton, M.D., F.R.S., D.C.L., Senior Lecturer, Trinity College, Dublin.

An ADDRESS in SURGERY will be delivered by Edward Hamilton, M.D., Fellow and Professor of Surgery, R.C.S.I.

The objects of the Association are—the promotion of Medical Science, and the maintenance of the honour and interests of the Medical Profession. The Subscription to the Association is One Guinea annually; and each Member on paying his Subscription is entitled, in addition to the other advantages of the Association, to receive weekly, post-free, the "British Medical Journal: being the Journal of the British Medical Association." The Subscription is payable, in advance, on the 1st January in each year.

Gentlemen desirous of becoming members of the Association should communicate their wish to the Honorary Local Secretaries or to the General Secretary, F. Fowke, Esq., 161A, Strand, London, W.C., in order that the proper steps may be taken for their election.

For the Annual Subscription of One Guinea, paid in advance, the BRITISH MEDICAL JOURNAL is forwarded weekly to Members, free by post. For persons not Members of the Association, the Annual Subscription is Twenty-eight Shillings.—Orders, enclosing remittances, should be addressed to Francis Fowke, Esq., at the Office of the Journal, 161A, Strand, W.C.

GRANTS IN AID OF ORIGINAL RESEARCHES IN MEDICINE AND THE ALLIED SCIENCES.

Annual Grants of the total value of £300 are made, in aid of Scientific Researches in Medicine and the Allied Sciences. Applications, stating the nature and objects of the intended research, should be sent to Mr. Ernest Hart, Honorary Secretary to the Scientific Grants Committee, or to the General Secretary, at the Office of the Association, 161A, Strand, London, W.C.

At the Annual Meeting in Liverpool, in 1883, the Association instituted, in addition to the grant above-mentioned two Research Scholarships, each of the yearly value of £150, tenable for three years.

HONORARY LOCAL SECRETARIES—GEORGE F. DUFFEY, M.D., 30, Fitzwilliam Place, Dublin.
WM. COX NEVILLE, M.D., 11, Upper Pembroke Street, Dublin.

The BRITISH MEDICAL JOURNAL for 1887.

Edited by ERNEST HART, Esq.

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AN ADDRESS
ON THE
EMPLOYMENT OF COMPRESSED AND RAREFIED AIR IN THE TREATMENT OF CASES OF CHRONIC BRONCHITIS, EMPHYSEMA, AND SPASMODIC ASTHMA.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Brighton.

By ARTHUR GAMGEE, M.D., F.R.S.,
Fullerian Professor of Physiology in the Royal Institution of Great Britain; late Physician to the Manchester Hospital for Consumption and Diseases of the Throat.

It is not my intention in the present communication to bring before the Section a systematic account of the various methods of employing compressed and rarefied air in the treatment of pulmonary disease, but rather very briefly to state the general results which I have hitherto obtained by the employment of a method which, though constantly in use on the continent of Europe, has not received at the hands of English physicians the attention which it deserves.

The careful studies which have been made of late years concerning the physiological action of variations of atmospheric pressure on the pulmonary and cardiac functions—in particular, the fine researches of Paul Bert incorporated in his classical work *La Pression Barométrique*—have shown the remarkable influence which these variations exert, and have supplied the groundwork for the rational treatment of certain cases of chest-disease.

Until the publication, last year, by Dr. C. Theodore Williams[1] of his interesting lectures on the compressed-air bath and its uses in the treatment of disease, in which he gave a brief systematic account of this method of treatment, as well as the results of his own experiments in its use, no English physician had given evidence of having paid any attention to a therapeutic method, which, *primâ facie*, appears most promising, whilst it has been advocated by many continental physicians of great and deserved eminence.

Three principal methods of employing compressed and rarefied air in the treatment of disease present themselves; to wit,

First, by means of air baths or chambers capable of holding one or several individuals, and the air of which may be rarefied or condensed by powerful pumps, the degree of rarefaction or condensation being measured by means of mercurial gauges. Such chambers, of which examples are to be found at Ben Rhydding, Ilkley, and at the Brompton Hospital, are of costly construction and working. In some cases, as in some of the air-baths existing on the Continent, arrangements exist which allow the employment of either compressed or rarefied air. Usually, however, as is the case with the chamber at Brompton, only a set of condensing pumps exists, so that the method of treatment by compressed air alone can be carried out. As a rule, therefore, patients subjected to treatment in the air-baths are placed there for a considerable time, usually for about two hours; the air is gradually compressed to the desired extent, and then, after a certain pause, the pressure is very gradually reduced to the normal, abrupt diminutions of pressure being liable, as the experience of divers and the experiments of Paul Bert have shown, to induce most serious consequences. In the air-bath, as it is usually employed, both the exterior of the body and the interior of the lungs are subjected to an increased or a diminished pressure, as the case may be, the conditions being similar to those which exist, in the first case, when a person ascends a high mountain or goes up in a balloon; in the second, when one is carried down to low depths in a diving-bell.

Secondly, by means of an air-bath provided with arrangements by means of which the air upon the exterior of the body may be either compressed or rarefied, whilst the patient breathes air at normal pressure either saturated or not with medicinal vapours. It was Hauke who first applied this method, and applied it particularly to bring about increased thoracic movements in atelectasis and many other pulmonary conditions of childhood.[2] A very practical apparatus of this description appears to be the pneumatic cabinet devised by Mr. Kitchener, and at present employed in America, the effects of which have recently been subjected to a scientific examination by Professor Martin and Dr. Donaldson.[3]

Thirdly,[4] by means of more or less portable apparatus, usually in the form of single or double gasometers, provided with masks or face pieces which fit closely to the mouth, or to the mouth and nose, and which permit of the patient respiring either compressed or rarefied air or air at the pressure of the atmosphere, and expiring either into a gasometer containing air under a pressure higher or lower than that of the atmosphere or into the atmosphere. The number of these apparatuses, as the reader will convince himself who peruses the sections in Oertel's work on Respiratory Therapeutics, which treats of them, is exceedingly great.

"The number of apparatuses," says Dr. Theodore Williams, "devised for condensing and rarefying the air is very large; for, in addition to air-baths to be described presently, there are many methods in which the air is inspired through a mask closely fitting to the nose and mouth. Of these, Hauke's was, perhaps, the earliest, of which Waldenburg's, alluded to before, is a modification. This consists of a hollow metal cylinder or bell, containing a certain volume of air, which is plunged into a second and reversed cylinder, containing water, By means of pulleys and weights, an equilibrium is established, and a pipe is passed from the air-cylinder, through a drying box, to a mask fitting the patient's mouth, enabling him to respire the air, which can be either rarefied or condensed by raising or lowering the cylinder in the water. This is done, in the first instance, by drawing off water, in the second, by placing weights on the cylinder. Schnitzler's is a further and simpler modification of the same system. Some, as Cube's, and Schnitzler's second form, are double apparatuses, and consist of two cylinders, one for condensing and the other for rarefying the air; both are connected by pipes with the inhaling mask, and taps regulate the supply of one or the other to the patient's lungs. A third form is Biedert's, who arranged a species of leather bellows to compress or rarefy the air as required; but the most ingenious example of this form is Fraenkel's, which consists of a kind of portable concertina, simple and cheap, and capable of being worked by the patient himself, the objections being the contracted attitude necessary for this purpose, and the impossibility of regulating the pressure. This little instrument is recommended by Oertel for the treatment of asphyxia by artificial respiration. "A fourth form is the apparatus of Geigel and Mayer, constructed on the principle of the centrifugal pump, by which air is stored up in a central reservoir, being compressed by the action of water. "Ingenious as the above methods are," adds Dr. Williams, "all have this objection, that their efficacy depends on the completeness with which the patient applies the breathing mask, and also on the amount of pure air available. As a rule, the use of the mask is exceedingly irksome, and many complain of its inducing faintness and headache. It is also impossible to keep up a proper supply of fresh air at the requisite pressure, and consequently there is the danger of rebreathed air. For these reasons, the surrounding a patient with an atmosphere of condensed or rarefied air, which he can respire without let or hindrance from artificial mouth-pieces, is preferable, and air-baths are consequently more easy of application. Nevertheless, the above forms are of great use when compressed air-baths are not available, and when it is advisable, after a course of such baths, to carry on the treatment by condensed air for long periods in the patient's home."

I think it almost impossible that any one should peruse the vast literature relating to the uses of compressed and rarefied air, to which many of the most distinguished physicians of Germany have contributed, without desiring to have the means at his disposal, which, we are told, have restored to comparative health and comfort, and in a brief period, some cases of extensive pulmonary emphysema, for instance, in which the patient's life had become a burden, and for which all other therapeutical means were of no avail. An air-bath such as I have referred to is, however, an apparatus so costly in construction and maintenance that no physician could contemplate its erection for the use of his patients alone; only one of the portable apparatuses is available to him. After carefully considering the various forms of these apparatus, I procured about a year ago one of Professor Schnitzler's continuously acting machines, as made by the mechanician

[1] Lectures on the Compressed-Air Bath and its Uses in the Treatment of Disease (British Medical Journal, April and May, 1885, and Smith, Elder, and Co. 1885).

[2] In Oertel's *Respiratory Therapeutics*. Vol. 3 of Von Ziemssen's *Handbook of General Therapeutics*, p. 589 *et seq.*

[3] *The Pneumatic Cabinet and Pneumatic Differentiation.* By F. Donaldson, Jun., M.D. *The Maryland Medical Journal*, Feb. 23rd, 1886.

[4] *Preliminary account of Experiments in regard to the Circulatory and Respiratory Changes observed in Animals placed in the Pneumatic Cabinet.* By H. N. Martin, F.R.S., Professor in the Johns Hopkins University and Frank Donaldson, Jun., M.D.

Hauke, of Vienna, and with this I have treated a few cases of pulmonary disease. As our information concerning the beneficial results to be obtained by the use of such an apparatus is entirely obtained at second hand from our continental brethren, I thought it might be of interest to some English physicians to have the results of my first experiences of it.

The apparatus, of which I shew you a diagram on a reduced scale, consists of a large oval trough, which is partially filled with water, within which are two gasometers. The two gasometers, which slide up and down on guiding rods, are so connected together by cords running on pulleys that they always balance one another, and one rises and the other falls, and *vice versâ*. Through the centre of the two gasometers pass two tubes, which reach to their summit; these tubes may be made to communicate with the exterior by two stop-cocks placed near the base of the outer trough, which stop-cocks in the ordinary working of the apparatus are kept closed. They end, however, in a brass-plate soldered in the middle of the anterior surface of the apparatus, and which forms part of a very ingenious discoid valve. This consists of two circular brass plates, the inner one previously referred to soldered to the apparatus, and the outer one turning round a pivot. This rotating plate bears two tubes, one which we may call the respiratory tube being longer than the other. By rotating the outer circular plate we may either shut off all communication between the gasometers and the exterior, or we may at will bring the respiratory tube in connection with either of the two gasometers or bell jars. When this has been done, the other gasometer communicates by means of the shorter tube with the atmosphere. In the centre of the apparatus here is a winch, by the aid of which two iron rods, supporting an iron platform for the reception of weights, can not only be moved up and down, but the effect of the weights may be transmitted by means of a movable and jointed metallic arm to either gasometer, so that we may at will press on the one or on the other. When the disc is unweighted, and made to press on one of the gasometers, it exerts a pressure equal approximately to a load of five kilogrammes. Two additional weights of five kilogrammes are provided, and can at will be placed on the platform. A mercurial gauge, which is in connection with the respiratory tube, indicates the pressure, positive or negative, which exists in the gasometer with which the respiratory tube is connected. Lastly, the apparatus is provided with a mask, which fits over the mouth and nose, and with a most ingenious valvular stop-cock, which is easily worked by the patient, and which enables him either to establish a communication with the gasometer, or with the external air, so that he may, for instance, inspire atmospheric air at ordinary pressure, and expire into a gasometer containing a partial vacuum, or inspire compressed air, and expire into the atmosphere; these are, in fact, the two uses to which the apparatus is usually put.

When we wish our patient to inspire compressed air, the discoid tap is turned, so that the respiratory tube communicates with one of the gasometers which is full of air, and which has been raised to its highest position. We then bring the arm of the iron platform, more or less weighted, according to the pressure which we desire, into the position in which the effects of the weight shall be transmitted to this cylinder; the mercurial gauge indicates the pressure of the air, which is usually made to vary between 0.76 and 15.2 millimètres (corresponding to a water-pressure of from 10.3 to 206 millimètres). The patient, then placing the mask over his face, by simply pressing with his finger on the valve, inspires the compressed air contained in the bell, which enters the air-passages with a pressure corresponding to the weight of the bell. On removing the finger from the valve, this flies up of itself, and allows the lungs to communicate with the atmosphere.

With each inspiration the bell sinks, in proportion, of course, to the amount of air inspired. But in the same manner the lower bell rises, as air is continually passing into it from the tubes connected with it. When one bell reaches the bottom, its companion has then reached the top, and is full of air. We have only then to close the valve by rotating the circular plate, and to wind up the weights, so that they may now press upon the full gasometer, an operation which is most rapidly effected, and the patient commences to inspire the air of this gasometer. In order to inspire rarefied air, the respiratory tube is brought into communication with the lower of the two bells; the upper one being weighted, the pressure in the lower bell will be a negative pressure, depending upon the amount of weight pressing upon its weighted companion bell.

Theoretically, and I believe practically too, such an apparatus as Schnitzler's presents some advantages over an air-bath; and in this respect, that we may vary the modes of respiration in a manner impossible in the air-bath. We may, for instance, in one case—as, for example, in a case of chronic bronchial catarrh with profuse expectoration—cause the patient to inspire compressed air, and to expire into the atmosphere; whilst in another, say a case of emphysema—we may cause the patient to inspire air at ordinary pressure, and to expire it into a partial vacuum.

In practice, I have not realised some of the drawbacks which Dr. Theodore Williams has referred to as connected with the portable apparatus, as, for instance, that the mask is irksome, and induces faintness and headache. In my experience, the chief inconvenience has depended upon the fact that the mechanical details of the apparatus, as made by Hauke, are not so carefully carried out as one could wish, especially in that the friction of the bearings is too great, so that the pressure, as observed with the mercurial gauge, does not correspond exactly with the theoretical pressure due to the load; and that the adjustment of pressure, on increasing or diminishing the weight on the cylinder, does not occur instantly. I intend, however, to have certain parts of the apparatus reconstructed in England, and these drawbacks will then cease. The one chief objection, however, to the method depends upon the time taken up by the process. If the physician has not a trained assistant to superintend the process, he will find that the time which it occupies constitutes a practical objection to its constant use. I intend in the future to publish a full account of all the cases in which I have the opportunity of employing the method of treatment now under consideration, especially as it is of great importance to establish in what respects the results with a portable apparatus, permitting of the employment both of compressed and rarefied air, differ from those obtained with the compressed air-bath. I may, however, refer briefly to two of the cases, in which I have recently obtained results which could not have been obtained by other methods.

The first case was one of a young lady, aged 26, who, since childhood, had suffered from attacks of spasmodic asthma of great severity. She had the physical signs of marked emphysema, as evidenced by the form and slight movement of the chest, the very diminished cardiac dulness, and the position of the liver. She complained of great breathlessness on going upstairs or ascending hills, and could only sleep when propped up with pillows. In this case, I usually caused the patient to inspire air at ordinary pressure, and to expire into rarefied air, though at each sitting I also employed, for a short time, inspiration of compressed air. Her symptoms underwent a marked change within the first week of treatment, and, at the end of a month, the change which had occurred was surprising. The patient was able to run upstairs, to take long walks, and to lie flat in bed. Her asthmatic attacks also diminished considerably in frequency and severity. She left St. Leonard's, and I have since heard that there has been a partial return to the old state of things, though her condition is now very much better than when the treatment was commenced.

The second case to which I shall refer is one of a middle-aged woman, who has, for the last fifteen years, suffered from chronic bronchitis, and has had occasional attacks of acute bronchitis. She has also been subject to asthmatic attacks. She had not, for a long time before she came under my care, been free from bronchial catarrh. In her case, also, there was marked evidence of emphysema.

I employed, in this case, treatment both by compressed and rarified air, continuing it, however, for a longer period than in the first case. The results have been quite as remarkable. The chronic bronchial catarrh has well nigh disappeared, the asthmatic attacks have become exceedingly unfrequent, and the patient is able to undergo an amount of exertion previously impossible to her.

In both these cases, the improvement in the free movements of the chest, as determined by the erythometer and the spirometer, has been remarkable, and fully bears out the experience of previous observers.

I trust that the few remarks which are contained in this paper will tend to direct the attention of medical practitioners to a valuable therapeutic measure, which is not, in my opinion, so well known as it deserves to be.

Dr. Bowles had no doubt of the efficacy of compressed-air in suitable cases, but it was essential that it should be viewed rather as a means of mechanical relief in a mechanica difficulty, than as a cure for asthma. Dr. Bowles did not admit that there was such a disease as asthma; he looked upon it as a symptom only, similar to coughing, sneezing, hiccough, and many other reflex phenomena, and considered this method of compressed-air treatment valuable as a means of affording time and opportunity for investigating and treating the disease which gave rise to the reflex phenomenon of so-called asthma. He had heard from an experienced physician at Meran that there the cases recurred, after this mechanical treatment, as in Dr. Gamgee's

cases, and probably this was to be accounted for by the fact that the mechanical treatment was alone treated, and the true course of the disease left undealt with.

OBSERVATIONS
ON
DR. BERGEON'S TREATMENT OF CHRONIC DISEASE OF THE LUNGS AND AIR PASSAGES BY MEDICATED GASEOUS ENEMATA.

By J. HENRY BENNET, M.D., Paris,
Late Physician-Accoucheur to the Royal Free Hospital.

DURING a residence last summer at Evian les Bains, on the south or cool shore of the lake of Geneva, Dr. Bergeon, of Lyons, came to see me, in order to bring under my notice his new treatment of phthisis and other pulmonary diseases. Dr. Bergeon is a well-known and experienced Lyons physician, and *agrégé*, or assistant-professor, at the school of medicine of that city.

When Dr. Bergeon first told me that he had discovered a new mode of treatment by which pulmonary phthisis, and other pulmonary diseases—asthma, chronic bronchitis, etc.—could often be cured, and nearly always alleviated, and retarded in their evolution, I smiled internally. I have so often heard of and tried new remedies, only to fall back on the old, that I was incredulous. His explanation of his treatment, however, at once dispelled this frame of mind, leaving me with the impression that he had hit upon something absolutely new, and of serious import. Indeed, I felt bound to admit that he had opened out a new field in pulmonary therapeutics, and that his views deserve, and must imperatively obtain, serious consideration and trial. The following is a condensed statement of his theories and practice.

Dr. Bergeon commenced his inquiries and experiments some years ago. Imbued with the parasitical, microbic, bacillary views of the day, he wished to discover a mode of destroying these morbid germs. Like many other experimentalists, he tried to do so by medicinal means, by inhalations, by hypodermic injections, but all in vain. He then remembered the experiments made by Claude Bernard thirty years ago on the absorption of gases by the large intestine. That eminent physiologist discovered that carbonic acid gas, when injected, was absorbed by the intestines in large quantities, without any toxic effect whatever. The same result was obtained with sulphuretted hydrogen, although it is poisonous if inhaled. Dr. Bergeon repeated these experiments on animals, principally on rabbits, with the same result. He then tried the injection of large quantities of the carbonic acid gas in human beings—to the extent of two, three, or four litres (quarts) two or three times in the twenty-four hours, with absolute immunity from any toxic effect. The gas is expelled by the mouth in the course of a few minutes after injection, without oppression, dyspnœa, or intestinal disturbance. The carbonic acid gas appears to be innocuous, but without any decided medicinal effect. It is the sulphuretted hydrogen, a powerful microbicide, which appears to exercise the therapeutic influence.

Dr. Bergeon, having got so far, having obtained an innocuous medium in the carbonic acid, began a series of experiments with various medicinal agents, which it would be too long to enumerate, stopping at last at sulphuretted hydrogen, as evolved from natural mineral waters. He found the most efficacious to be that of the Eaux Bonnes in the Pyrenees. By passing the carbonic acid through a bottle charged with this water, it becomes impregnated with the sulphuretted hydrogen gas which it contains, and this is well borne by the intestines. It is absorbed by the intestinal venous system, and rapidly exhaled by the mouth through the lungs. In two or three minutes, on applying the nose to the patient's mouth, the air emitted is found to be tainted by the sulphurous gas. Twenty minutes is the time prescribed for the slow, gradual injection of four litres. The abdomen becomes distended; but without pain, unless atmospheric air is, from imperfect manipulation, injected with the medicated gas. If this is the case, there are intestinal colics, or tormina, atmospheric air being apparently an irritant. It is singular to feel with the hand placed on the abdomen the gradual distension of the latter, even in a very emaciated subject, often without pain or even discomfort. Within half an hour after ceasing the injection, all the gas is absorbed and expelled through the lungs and mouth, the abdomen regaining its usual shape and softness. This I have repeatedly witnessed.

Dr. Bergeon claims marvellous therapeutic effects for this medication. He says that he has been applying it for the last two years to all the cases of chronic pulmonary and throat disease that have come under his observation; indeed, in more than two hundred cases, although the experiments were made at Lyons, where the climate is bad, the results have been successful to a degree that has surprised and astonished him. He says that, in early phthisis, even in acute general phthisis, a form of the disease nearly always rapidly fatal, in two or three weeks there is generally an arrest, and in a few months a cure. Even in advanced, incurable phthisis great amelioration is obtained. The pulse is lowered, the temperature falls, the night sweats cease, the appetite returns, the expectoration rapidly diminishes, losing its purulent character, and the cough becomes less harassing and frequent. The amelioration, he says, is also rapidly obtained in advanced laryngeal phthisis, when all local or constitutional treatment has failed to give ease, or to arrest the ulcerative process. Asthmatic attacks are relieved with more certainty than by any other means, including the hypodermic injection of morphine.

These are very marvellous statements; but, coming from a scientific man of mature age, occupying a prominent orthodox position in a great medical centre (Lyons), and brought forward as the result of several years of trial and observation, they must command attention and counter-trial. Certainly, to pass from eight to ten or twelve litres of medicated gases through the intimate structure of the lungs several times in the twenty-four hours is a tangible reality, and a new departure in thoracic therapeutics. The entire structure of the lung is certainly reached; both the healthy and the morbid tissues are thoroughly searched out and permeated.

I am one of the least disposed to admit the local origin and nature of phthisis. I have always thought and taught that it was a constitutional disease, depending on hereditary and general conditions manifesting themselves locally, and have never believed in panaceas. I have only succeeded, according to my own lights and convictions, in arresting and curing the disease (which I have very often accomplished during the last twenty-six years) by hygienic treatment, coupled with such medicinal agencies as the complications of the disease treated required. Thus, *a priori*, I am not prepared enthusiastically to accept and endorse any new local mode of treatment; but facts are stubborn things, and Dr. Bergeon adduces facts, or apparent facts, in support of his views. At present he courts publicity and the most searching inquiry. After waiting two years, he says, until his experience became confirmed by successive series of cases, he has brought his views before the scientific world without the slightest reserve or reticence. He has communicated them to the Paris Academy of Sciences (*Comptes Rendus*, July 12th, 1886, p. 176), to the French Congress for the Advancement of Science, 17th August, 1886, to the Paris Academy of Medicine, through M. Cornil (*Bulletin de l'Académie de Médecine*, 2me série, s. xvi). Moreover, his pupil, Dr. Morel, has recently published an exhaustive pamphlet, entitled "Nouveau Traitement des affections des Voies respiratoires d'après la Méthode du Dr. Bergeon." (G. Masson, Paris, 120, Boulevard Saint Germain.) In the *Bulletin de Thérapeutique* of November 30th, Dr. Dujardin-Beaumetz has also published an interesting article.

In September I was in Geneva, and saw several physicians there who were trying this treatment, as they stated, with apparent benefit. On my arrival at Mentone in October, I found a young Russian patient of former days, aged 21, dying of advanced phthisis, under the charge of her travelling physician, Dr. Cacace, of Naples. We tried the injections merely to see if we could give her ease. This was certainly done, and at first the treatment was attended with such an unhoped-for rally, that the family wished to see Dr. Bergeon himself, so I summoned him from Paris, where he then was. The rally, however, was only temporary, and she has since died. I had previously attended her here successfully at the age of 9, for scrofulous swellings in the neck; and at 16 for amenorrhœa and chlorosis, and this was her end. She thus went through the various phases of hereditary phthisis. The last therapeutic effort could only be expected to ease her sufferings in some measure.

Dr. Bergeon, who has remained a while with us to rest, has given a lecture to the twenty-two doctors who practise here, has seen several other patients in consultation, and has answered all our questions. He says that non-success is generally the inevitable result of inefficient application of the treatment or of the bad quality of the sulphur

water. At first the medical attendant must himself give, or see given, the enemata twice a day, slowly and cautiously, twenty minutes at least being devoted to each injection. He must begin at first with one litre, gradually increasing the amount, an hour before meals or three hours after, with careful study of what each individual is able to bear. All this, he states, cannot be left to unskilled hands at first. When, however, tolerance has been established, and the patient has become familiarised with the treatment, it can be entrusted to a skilled nurse or to a clever member of the family, or even to the patient. The carbonic acid must be generated on each occasion, and the bag or balloon must be first scrupulously emptied. If any gas remains in the balloon, atmospheric air enters through its walls by endosmosis and acts as an intestinal irritant. This is the all but invariable cause of the pains when they exist. On each occasion a half bottle of Eaux Bonnes water has to be used, which costs a franc in France—probably more in England. The water must be opened and smelt, and if not loaded with sulphuretted hydrogen, as is often the case, it must be thrown away. Dr. Bergeon has tried chemically-made gas, but all such preparations cause pain and do not succeed. The penalty for the neglect of any of these precautions is failure.

Dr. Bergeon has tried on animals, as stated previously, many chemical agents—chlorine, turpentine, ether, ammonio-bromine—but they all produce irritation of the intestinal mucous membrane, and even gangrene, and he has had to abandon them. The only agent beyond the natural sulphuretted hydrogen of mineral waters that he has found quite innocuous and efficient is the fluid sulphuret of carbon, the preparation that has been found so successful in destroying the phylloxera on vines. A teaspoonful is put into a glass tube, stopped at both ends with cotton, and the carbonic acid gas is passed through the tube, having previously been washed by passing it through a bottle of pure water.

Thus, there are many points to be scrupulously attended to in applying this treatment, and it has some drawback. It is most painful to the feelings of the patient, and not less so to those of the medical attendant. Both these considerations will have more weight with an English than with a foreign population, owing to national habits and peculiarities. It imposes a very arduous and unpleasant task on the medical attendant, especially on those advancing in life and very busy. In the case of senior consultants like myself, its adoption all but necessarily entails handing over the management of the case to juniors, to younger or less occupied men. And yet if the microbes and bacilli can be destroyed—or, in other words, if the morbid local conditions can be improved or cured thereby, and if they are really important factors in the disease—it will have to be adopted. I may remark that although the bacilli diminish in number, they do not disappear from the sputa, even in the cases most completely cured. This, says Dr. Bergeon, seems to imply that their presence is not the *fons et origo mali* in phthisis. He says that he does not propose his plan as a microbicide treatment, but merely as one that succeeds. In any case this treatment will have to be put to the test of experiment. In Paris several leading physicians are now trying it in the hospitals, and report very unexpected good results. My Neapolitan friend, Dr. Cacace, who is assistant to the Professor of Clinical Medicine at Naples, will bring it before the profession there very shortly, on his return. He has already had the promise from the professors at the university of that city that it will be thoroughly tested. I hope this short account will lead to its being tried in our special hospitals in England as well as in private practice.

Formerly we could have thoroughly tested any therapeutic novelty at Mentone in our own sanatorium in one winter. The field of observation, however, is now much narrower on the Riviera, as we see comparatively few cases of phthisis. They are nearly all sent to the Swiss mountains, to the high altitudes. I think the prevalent professional feeling on this point a mistake, but I am afraid my opinion has not the weight it formerly had. Yet we have here all winter the "non-microbic" atmosphere which is sought for in the high altitudes—a land wind blows from 4 P.M. to 8 A.M. (during sixteen hours) from mountains 4,000 feet high behind us, and "non-microbic" sea air blows from the sea during the remaining eight hours. And that with a mild, but cool, temperature, which allows us to sleep all winter with the window discreetly open.

A Russian physician at Nice, Dr. Jacoby, tells me that he spent last summer examining the Swiss mountain winter stations, that he found the outside air pure, but that inside the hotels he found in midsummer any amount of microbes and bacilli responding vigorously to culture. For my own part, although by no means prepared to endorse the modern bacillary theory of contagion in phthisis, I should decidedly prefer not to spend the winter—nay, even a tithe of it—in a hotel full of consumptives in all stages of advanced disease, exhaling microbes and bacilli in profusion with every breath. This objection to the breathing of a poisoned atmosphere indoors would hold good, whether I adhered to old or adopted modern ideas on the subject.

I must do Dr. Bergeon the justice to say that he does not pin his faith on anti-bacillary, microbicide theories. He does not say that patients get better under this treatment because it destroys the germs of the disease. It may be so, but he does not affirm that such is the case, the more so as bacilli are still found in the sputa in cases in which the expectoration is reduced to mere mucus, and in which all, or nearly all, the constitutional symptoms of phthisis have disappeared. He feels certain, however, that the treatment by injection of sulphuretted hydrogen is decidedly antiseptic, and curative of local lesions. This is all that he feels warranted in asserting in the present stage of the therapeutic question.

We are accustomed to connect the respiration of atmospheric air containing an abnormal amount of carbonic acid, as in badly ventilated dwellings, churches, assembly-rooms, with decidedly toxic results. There is certainly, in many instances, immediate suffering; and if the influence is continuous, there is gradual deterioration of the health, and often development of scrofula, or phthisis, or other diseases of lowered vitality (see Dr. MacCormack's writings and my works on Phthisis).

The introduction of many litres of gas daily through the venous system by intestinal injection, although it is speedily got rid of by the lungs, would, one would think, be equally if not more pernicious. One would expect this immense amount of carbonic acid thrown into the venous blood to interfere with retrograde nutrition, with the transformation and elimination of used-up nutritive material. Singular to say, such does not appear to be the case. All the functions of life, of retrograde nutrition and elimination, are said to take place normally, as I have myself seen in several cases in which the treatment has been continued daily for weeks. Probably what, according to Claude Bernard, occurs with sulphuretted hydrogen may also occur with carbonic acid and other gases. They are poisonous when they pass into the arterial system through pulmonary inhalation, but innocuous when merely present in the venous system by intestinal absorption. Recent researches also have shown, I believe, that the air expired by animals contains animal products—*ptomaines* they are called in French—of a very poisonous nature. Dr. Bergeon appears so impressed with the innocuous character of carbonic acid introduced into the animal economy in any form, that he does not, in my opinion, attach enough importance to ventilation in the daily life of his patients—a common error abroad. Dr. Bergeon asserts, with great emphasis, that so far from nutrition being impeded or deteriorated, the very reverse is the case; the appetite returns very soon, and the power of digestion with it, and most patients begin to increase in weight, often very rapidly.

Since the above was written, I have seen a young Englishman, aged 27, whom I placed under Dr. Bergeon's care four days ago. He had been suffering from severe idiopathic asthma for six weeks, had never had a good night during that time, and had passed the last five nights out of bed on a chair. He had been sent from London to try change, but had found no relief at Cannes or at Monte Carlo. The very day he arrived at Mentone, and consulted me, he was placed under Dr. Bergeon, who gave him an injection. He remained in bed all night, and this he has continued to do ever since. The last, or fourth, night has been the best he has had for more than six weeks. He now feels free from oppression, and quite well. The case is a very remarkable one.

Several instruments have been proposed for the administration of the gas. That which Dr. Bergeon uses is one constructed by his pupil, Dr. Morel. It can be procured at La Pharmacie Centrale, 7, Rue de Jouy, Paris; cost, 70 francs, or £2 16s.

Description of Dr. Morel's Gas-Injection Apparatus used by Dr. Bergeon.

Fig. 1.—About three tablespoonfuls of bicarbonate of soda are placed in the bottle, which is then closed carefully with the india-rubber stopper, inserting the glass balloon, with a stem descending into the bottle. Dilute sulphuric acid (one part to four of water) is then poured into the balloon, and allowed to drop into the bottle on the bicarbonate of soda. The carbonic acid gas thus generated passes through a gutta percha tube supplied with stop-cocks into the gutta percha sac or balloon, previously carefully emptied of atmospheric air by folding. When the sac is filled, the stop-cock is shut, and the gas escapes externally, until the acid is turned off and the glass balloon removed.

Fig. 2.—The balloon filled with gas is then connected to a gutta

percha tube provided with a pressure sac, and then to one end of the cross branch of an instrument called *barboteur*, which is introduced into the bottle containing the mineral water, or other medicated agent. The vertical part of this instrument reaches the bottom of the bottle, from whence the gas which escapes, loaded with the medicated agent, passes into another tube for anal injection. If sulphuret of carbon is used, a teaspoonful is poured on cotton previously placed in the glass tube, the tube stopped with a little more cotton, and then placed on the one that connects the *barboteur* with the anal tube.

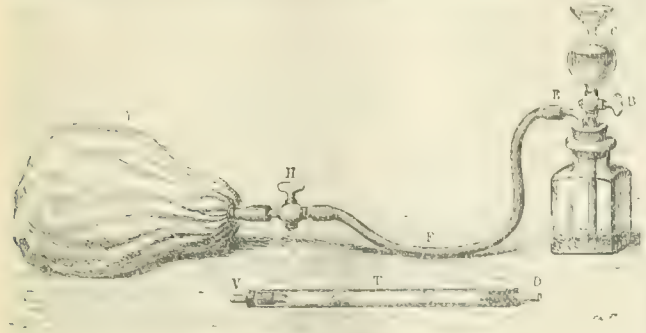


Fig. 1.

The carbonic acid gas, the medium in this case, is passed through plain water instead of through mineral water. When the mineral water is used, about six ounces of hot water should be put into a large bottle, and the half bottle of Eaux Bonnes water added, so as not quite to fill the bottle. This is to warm the gas. Dr. Bergeon has tried

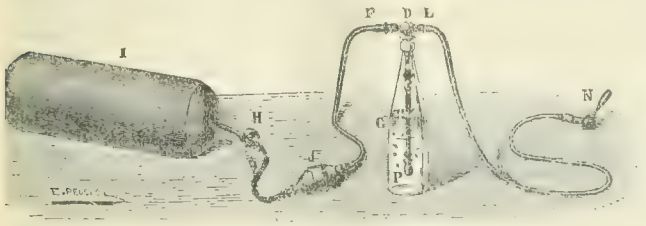


Fig. 2.

many sulphur waters, but has found none equal to the Eaux Bonnes. He is still looking for a better one, more loaded with gas, and hopes that of Ponlippo at Naples may prove better.

Mentone.

ON FOUR CASES OF CORNEA-GRAFTING.

By W. JOHNSON, L.R.C.S., L.R.C.P.Ed.

The following four cases of cornea-grafting were done in Jabalpur during the present year. They were all, I am sorry to say, though carefully done and attended to, unsuccessful; but it may be of interest to record my experience of an operation that has as yet been so seldom attempted. The only successful case I can find mention of is given in Juler's book (*Ophthalmic Science and Practice*, 1884), in which an account is given of the transplantation of a strip of cornea with conjunctival flaps from an enucleated human eye into the eye of a man whose cornea had been rendered opaque by an explosion. Good union took place, and a fair amount of vision was gained by the time the patient left the hospital. Subsequently, owing to exposure and privation, the transplanted cornea became opaque. Doubtless this resulted from the lowered vitality of the transplanted portion; and this lowered vitality of the graft and its inability to withstand the encroachment of the more vitalised tissues around it is the great difficulty I have found to exist.

Meeting with a large number of eye-cases among the Gonds, many of whom were totally devoid of any useful sight from the presence of thick cicatrices or sclerosed patches in both corneæ, or perhaps in one only, the other eye being entirely destroyed, the desire was forced upon me to try to restore a portion of sight to these otherwise hopeless cases. I had read of attempts at cornea-grafting in various books and papers; and on looking up my latest book (Juler's), I found the description of Professor Wolfe's operation in the case mentioned above. After carefully considering the subject, I concluded to try the operation mentioned in De Wecker's work (page 145), and sent home for a trephine for the purpose. The trephine I ordered had four teeth, like the teeth of a saw set in a circle, each with one cutting edge turned in the same direction, so that when the instrument was rotated to the right it cut a circular groove. I soon found, however, by trial on sheep's eyes, that the tooth arrangement was a faulty one, as the teeth had a tendency to tear the corneal tissues instead of cutting them clean, and they also had a tendency to cause the instrument to deviate from the circular path first taken. I overcame this difficulty by getting the teeth ground down so that only a circular even edge remained. This was sharpened by grinding it from the outside all round. The next difficulty was to fix the instrument in one groove when in action, and not to allow it to travel over a large part of the cornea, as it tends to do owing to the mobility of the eye and the slippery tissues on which the trephine rests. This difficulty I met by getting an instrument made of bone, which consisted of a handle and a head, both flat and about an eighth of an inch thick. In the head of this instrument was a circular hole just large enough to admit the cutting end of the trephine and to allow it to rotate freely. When this was applied to the centre of the cornea, and pressed down, it served as a guide to the trephine and kept it to one spot when being used. That it might the better lie on the cornea, the under side was grooved to the curvature of the latter. When the trephine has well entered the cornea, or just before it has perforated, the bone instrument is removed, and the excision of the circular piece of cornea completed. The trephine cuts out a circular piece of cornea of about a quarter of an inch in diameter. This piece of cornea I usually found greatly thickened, sometimes almost an eighth of an inch instead of about one-twentieth of an inch, which is the thickness of the normal cornea.

I will first give my method of operating, and then refer briefly to the four cases operated on and their results. The first point to settle is whether the case is a suitable one or not. Only cases where the sight of both eyes was practically lost were selected. Then I endeavoured to satisfy myself of the healthy condition of the fundus by finding out if there was any perception of light and of shade, especially of sunlight, or the light of a lamp, etc. Having settled this point, I took the tension of the eye; got the history of the case, and so on. Eyes with staphylomatous cicatrices were rejected, as also were those with nystagmus. If the tension was about normal, the perception of light decided, and the history of the case in other respects favourable, I considered it a suitable one for operation. The younger the patient, and the shorter the time that has elapsed since the loss of sight, the more hopeful, *cæteris paribus*, will be the result of the operation. As to the cornea to be transplanted, I may say that I was practically restricted to animals' corneæ, as the enucleation of an eye of a native with the cornea intact is a very rare thing out here. Another reason for taking only animals' corneæ is that, if the operation is to succeed, and to be adopted in complete corneal opacity, we should from the number of cases be practically compelled to depend mainly on a supply of animal corneæ. I selected rabbits, both because they have several times been the subject of experiments on corneal grafting, and because they are not difficult to get, and also because, being small, they are easily managed—a point of no small importance where one has only the assistance of an imperfectly trained native. The rabbit's cornea has also nearly the same thickness, and nearly the same curvature as the human cornea.

Having anæsthetised the front of the patient's eye with cucaine, I trephined a circular piece from about the centre of the opaque cornea, by applying first the bone guide, and then the trephine through the hole of the former. If the bone guide be firmly pressed on the eye, no other instrument of fixation is needed, except, of course, the eyelid-speculum. When the trephine is nearly through, it is found to yield, and, perhaps, some vitreous escapes. It is now taken away, and the excised portion seized with small forceps, and entirely cut away with the point of a von Graefe's cataract-knife. This is usually necessary from the iritic adhesions at the back of the cornea. The edge of the wound is now well cleaned with the small knife and forceps, and any bleeding stopped with cold water. Sometimes the hardened remains of the lens or its capsule are found behind the cornea. These should be removed, and the vitreous allowed to present. All being ready, the selected full-grown rabbit is now killed by an assistant. I found it cheaper to do this than to waste anæsthetic and time in rendering it unconscious. Immediately the rabbit is killed, a portion of the centre of one of its corneæ is excised by the trephine in the same way as the piece from the patient's eye. For this purpose, a cutting edge of slightly larger diameter is fixed to the trephine. The graft is taken

up with small forceps, washed in warm water, and immediately put into the patient's eye. The object of making the graft slightly larger than the aperture in the patient's eye is now seen, for with a little care it can be easily put into its place, and being, as it were, a tight fit when the eyelids are carefully closed and padded, and bandaged, it will remain where it has been placed without the use of any sutures whatsoever. If it shows any tendency to sink into the eyeball, there is still usually no difficulty, as the reaccumulation of the aqueous and vitreous humours will press it outwards, and it will be kept in place by the pressure from within on the one hand, and the pressure of the eyelids from without on the other.

Another advantage in having the graft slightly larger than the aperture is that, being pressed more firmly against the edge of the latter, it grows to it more quickly, and, of course, its nutrition is also sooner re-established. This is, indeed, a vital point, and the success of the whole operation turns upon maintaining the vitality of the graft, and in restoring its nutrition as soon as possible. After this the patient is kept very quiet for two days, at the end of which he is laid on the table, the bandage removed, and the upper eyelid carefully raised to see if the graft is in the right position, and growing to the surrounding parts. The eye is again closed up for two or three more days, after which it is daily opened, cleaned, and examined, and carefully re-bandaged to protect the graft from injury. Very weak solutions of carbolic acid were used for cleansing purposes. After the first three days the patient is allowed to move about.

Case I.—Boy, Hindu, aged 12; one eye destroyed, the other covered with a dense cicatrix, on the surface of which the epithelium was thickened and dried, as in a case of xerosis, only in this case the condition seemed to be confined to the cornea alone; it had resulted from ulceration four years ago. A portion of rabbit's cornea was grafted as above described; some vitreous was lost. The graft fixed itself without any difficulty, and without the formation of any pus. In a few days it began to be covered with thickened and opaque epithelium from the surrounding tissues. In this and the following cases the graft preserved its translucency (not its transparency, which is lost in a few hours) for a few days (four or five), and then gradually became opaque from without inwards, apparently from overgrowth of the surrounding epithelium.

Case II.—Boy, aged 14, Mussulman. One eye lost, the other covered with a dense cicatrix from small-pox four years ago. Grafted rabbit's cornea, as in the previous case. Found the vitreous very fluid, and the aperture made by the trephine did not retain the circular form, but was somewhat oval, from irregular dragging of the cicatrix. On this account, I had some difficulty in properly placing the graft. This case ran the same course as the last, except that I tried to check the too rapid ingrowth upon the graft by mild cauterisation of the edge of the aperture. This was only done once, but it was followed by such a tendency to ulceration, that I avoided using caustic again. I may mention that the epithelium of the graft seemed to waste considerably during the first few days, on which account it took on a slightly roughened appearance.

Case III.—A young Hindu woman. Only one eye was suitable for operation. After having removed the portion with the trephine, I found the eye nearly empty of liquid, although the eyeball still retained its form completely. On pressing on its sides, a thin liquid, not at all like healthy vitreous humour, appeared at the aperture. On asking the patient if she had any perception of diffused daylight, she said she could clearly perceive when the hand was, and when it was not, held in front of the eye. The graft from a rabbit's eye was put in. It fixed itself very well, but finally became opaque like the others.

Case IV.—This was a Mussulman, about forty years of age. He had suffered from chronic ulceration of one cornea for some years, which, on healing, had left a dense mass of cicatrix. The other eye was much shrunken, and useless. Grafted from a rabbit's eye. The man left whilst I was away from home; but, on making inquiries, I learned that the graft finally became opaque and useless for vision.

These four cases all agree in this: the grafts fixed themselves, and grew to the surrounding tissues, without any difficulty. Then their vitality seemed gradually to decline, as shown by the progressive loss of transparency, and by the absence of feeling when touched, and also by the partial loss of their epithelium. Finally, they became red and opaque, apparently by overgrowth from the outside, and lost their individuality, and seemed to dwindle away. At the end of about three months it would be impossible to say, from the appearance of the eye, that a corneal graft had been made.

The result in these cases, though discouraging, will not prevent my pursuing the subject further; but they present several questions for careful consideration.

We may ask whether the corneal graft I made was sufficiently large to maintain its vitality under the new conditions. I see no reason to think that any alteration in size would materially affect the results given above, while to enlarge the graft to any great extent would certainly increase the difficulty of attaching it to its new place, as well as cause the risk of a considerable loss of vitreous.

Another point is that the corneal cicatrix or sclerosis into which the graft is put differs largely from the normal corneal tissue; its vitality is, in one sense, higher, and it is often more or less vascular, besides the irregular collections of leucocytes and cicatricial tissue. It is very doubtful how far such tissue can provide a proper supply of lymph and migratory corpuscles on which the normal corneal nutrition depends. Again, if we make the graft larger, we shall increase its mass more than we shall increase its periphery (it being a circular body); and as its nutrition is derived from the periphery, the demand for nutriment will increase in greater proportion than the source of nutrition will increase. This may be worth consideration.

Another question is whether the circular or the oblong form of the graft as proposed by Professor Wolfe would best secure the future nutrition of the transplanted portion. Theoretically, the oblong form has a longer periphery, and, therefore, a better source of nutrition for its mass. Has it any other advantage? Is the fact that the ends of the oblong graft are brought up to the edge of the cornea, as in Professor Wolfe's case, of any importance from this point of view? Those ends also, in his case, were fixed on either side by two attached strips of conjunctiva. Doubtless those strips were formed by Professor Wolfe with the object of thereby suturing the graft to the surrounding conjunctiva. Do they serve no other object? We know, for instance, that the operation of syndectomy (peritomy), in which the conjunctival and subconjunctival tissues are cut through around the cornea, arrests, through the agency of the cicatrix formed, a considerable part of the excessive nutrition that travels to the cornea in such diseases as pannus, sclerosis, etc. Conversely, we may assume, therefore, that, in addition to the pericorneal nutritive supply, part, at least, of the superficial nutrition of the cornea is derived from the conjunctival and subconjunctival tissues; and possibly the conjunctival flaps in Professor Wolfe's operation may partly serve as vehicles of nutrition as well as for attachment. His graft may thus, both from its shape and conjunctival flaps, possess advantages over the circular graft; but it has the disadvantage of not being so easily made and adapted as the round one, and the almost insuperable drawback of being limited either to human corneæ, or of being derivable only from such other animals as have corneæ about equal in diameter and curvature to the human cornea.

As we cannot expect that ocular therapeutics will stop short at the large cicatricial and sclerosed barriers that destroy the sight of many eyes otherwise comparatively healthy, we may hope that the operation of cornea-grafting will receive more attention in the future, and that the comparative merits of the different kinds of grafts, and their ways of adjustment, will be duly weighed and tested. Meanwhile, I am loth to give up the circular form of graft which I have experimented with, as it is so generally and easily applicable.

I have spoken of the "lowered" vitality of the graft as being probably the cause of the opacity which followed. It would certainly seem to be the chief cause in those cases where experiments have been made on animals, where both the graft and the eye operated on were healthy. But, perhaps, "perverted" nutrition would be a more accurate term to apply to the grafts in my cases; for I noticed that the opacity seemed to go from the outside inwards, instead of beginning at the centre, where nutrition may be supposed to be lowest. Another point probably of some importance to the final result was that up to the time when the opacity of the grafts was nearly complete, they had not regained any sensation, as shown by want of feeling when a small probe was pressed on their centre. This anæsthesia may not have been without influence on the nutrition of the graft.

The uniformity of the results in all cases, on the Continent and at home, that I find mention of—viz., advancing opacity and final uselessness for vision of the corneal graft—points clearly to some common cause or causes of failure, whether inherent in the eyes operated on, the grafts themselves, or the methods of operation, that will demand the attention of all future operators in this direction.

Jabalpur, E. India.

Holmesdale Cottage Hospital.—Earl Stanhope, in presiding at the thirteenth annual meeting of the friends and supporters of the Holmesdale Cottage Hospital, at Sevenoaks, paid a high tribute to the nursing and medical staff.

A CASE OF FÆCAL ACCUMULATION IN THE RECTUM AND COLON; COMPLETE OBSTRUCTION OF BOWELS SUPERVENING: OPERATION: RECOVERY.

By PRICE MORRIS, L.R.C.P.Ed., L.F.P.S.G.

During the month of August, 1877, I was consulted by a young lady, aged 24, who complained of symptoms of indigestion, occasional vomiting, etc., for which I prescribed. Finding, on passing her home about a week afterwards, that she was no better, I asked her to undress herself, so that I might properly examine her. To my great astonishment, I found that she had large, nodulated, firm, painless, movable tumours, occupying the lower part (and chiefly the left side) of the abdominal cavity. There was no gastric tenderness, menstruation had been regular, the bowels were being moved—in fact, there existed a kind of spurious diarrhœa. I considered it advisable at once to examine the rectum, when I found that this was tremendously distended, and packed full of dry, nodulated, earthy, fæcal matter, the anus being in a continual state of patency, due to the paralysis of the sphincter by mechanical distension. So much was the rectum distended, that a child at full period could easily have passed through it. Before going any further, I had better state that this individual, when a child, was in the Denbigh Infirmary, under the care, I believe, of Dr. Turnour, for accumulation in the bowels.

Getting the patient on the edge of the bed, covered with a sheet of oil-cloth, and using plenty of soaped warm water, I diligently dug away at this mass with my finger (which I think better and safer than a spoon) for a considerable length of time, finding that the mass was gradually descending as it was being removed below. Suffice it to say, that in this way the whole masses in the colon and rectum were cleared.

I cautioned the patient now about taking occasional aperients, and an enema to prevent a recurrence; but this she failed to do, so that after losing sight of her for about eighteen months, I was called to her again.

This time I found her just in the same state, applied the same treatment, but not with the same result, inasmuch as a mass was left in the sigmoid flexure of the colon, which would not descend into the pelvis. This could be felt by introducing a long tube, against which the point would impinge, but which would give way under a little pressure. Injections were of no avail, coming out as administered, owing to the compactness of the mass. After this attempt to clean the bowels, symptoms of complete obstruction supervened, as evidenced by her vomiting every meal she took, as well as a total stoppage of any fæcal discharge from the bowels.

These symptoms were not accompanied by any greater distension or tenderness of the abdomen, neither was there any additional pain; and in spite of the administration of various kinds of purgatives and medicines, as well as enemas, they continued persistently for several weeks. The patient, in the meantime, was getting rapidly emaciated, so much so that, before long, death from starvation must take place.

At this critical period her parents asked me one day if I would have any objection for her to see a very eminent provincial surgeon, which, of course, I gladly consented to. I wrote a full history of the case for her to take with her, which the above gentleman kindly acknowledged, with the remark that it was a very extraordinary case, and that he had not made up his mind what to do. In a few days more I received another communication, stating that, upon further examination, he found that the case was beyond the reach of surgery, and recommending a trial of large doses of aloes. The patient returned home, and tried the above doses for a fortnight, but each dose came back.

Whilst she was away, an idea on one occasion suggested itself to my mind of doing something for her. The idea was to introduce my hand into the gut, and to push it up as far as possible, with the intention of getting at and removing the obstruction. After apprising her and her parents of this—stating that, if it was not successful, she would be left in the same state as at present—I operated, with the assistance of my old master, Dr. Davies, of Llanfair Talhaiarn, and Dr. Roberts. My intention was to dilate the anus; but, finding this impracticable, under chloroform, I divided the whole structures back to the coccyx. Now I could easily pass my hand; and Dr. Roberts passed a long tube in by my wrist, through which warm soaped water was injected. At the top of the pelvis I came across the big mass which I had so often felt and vainly attempted to remove, but now I could easily crush it. The arm was now withdrawn, when the whole was expelled. After reintroducing the arm, I found that the colon was in a very abnormal condition, because, instead of there being an ascending, transverse, and descending colon, it was one tremendously distended chamber, and with my whole arm introduced up to the axilla, I could, on account of her great emaciation, investigate and manipulate every part of the abdominal cavity, with the other hand externally. Strange to say, in the neighbourhood of the right iliac fossa I found an opening of an oval shape, large enough to allow the passage of a good-sized plum (an inch and a half long), with a well-defined margin. This was plugged with a lump of hard fæcal matter, which was removed and crushed in the large amount of water which had by this time been injected. Every part was now thoroughly examined; and, after satisfying myself that there could be nothing more, the arm was withdrawn. Sutures were carefully inserted, a soft elastic catheter placed in the bladder, and by-and-bye a large dose of opium given. Vomiting occurred next day, due, no doubt, to chloroform; after which she went on for a fortnight, fed upon liquid nourishment, without any vomiting. At the end of this time, I detected a doughy kind of swelling in the left iliac fossa, which, I thought, must be the result of what she had been eating; and in a few days more, upon removing the sutures and catheter from the bladder, fæcal matter was found in the rectum, which was all easily removed by an enema.

After this, she got up, gradually resumed her ordinary diet, and I took care to watch her carefully for some time, with the satisfaction to find that the bowels gradually resumed their normal functions without the use of aperients or enemas; the bowel, no doubt, as time went on, in spite of its extraordinary distension, resuming its tone and contractile power; whilst the inestimable advantage of a sphincter capable of discharging its fuctions has been regained. In this way the patient has kept for over seven years. Lastly, what the above opening was, unless it was the ileo-cæcal valve, I am at a loss to know.

FIVE CASES OF PULMONARY PHTHISIS TREATED BY THE "BACTERIUM TERMO" SPRAY.

By A. PRIMROSE WELLS, M.A.Cantab., L.R.C.P.Ed., etc.
Surgeon to the Household of His Excellency the Lieutenant-Governor of the Isle of Man.

Seeing an article in the British Medical Journal of October 2nd, headed "Failure of the Bacterial Treatment of Consumption," I think it only fair to state what has been my experience in five cases subjected to this treatment. I can scarcely say that failure has been the result of my efforts, for in two of the five cases marked improvement resulted, which continues up to the present time. The first case was that of a painter and paper-hanger, aged 43. He had lost his mother and a brother of consumption. In September of last year he caught cold, and had been ill until the time I saw him in April. He then had lost over a stone; his appearance was typical of advanced phthisis—great shortness of breath, bad cough, sputa sinking in water, with much pain in the chest, and continual diarrhœa. Physical signs showed breaking down in the upper part of the left lung, with a cavity under the left clavicle, clicks in the right apex, and commencing disease throughout the whole lung. Having obtained a pure cultivation of "bacterium termo" in a meat-infusion, by means of an incubator, kindly lent me, I injected six ounces a day in three sittings into the lungs, with a fine spray-producer. While pumping the spray, the patient was made to take as deep inspirations as possible; these were quick and shallow at first, but as time went on they became very deep and long.

At the end of a fortnight, his condition had greatly improved; the diarrhœa had ceased, the cough and expectoration were less, the appetite had become better, and the physical signs showed more natural breath-sounds.

At the end of a month, his condition was sufficiently improved for me to allow him to go back to his work—that of painting and paper-hanging—at which trying occupation he has been employed ever since. I, however, took the precaution of continuing the spray twice a-day for three weeks more.

In this case, although I never could get the patient's lungs free of disease, yet a good deal of repair had taken place, weight had been gained, and a healthy appearance substituted for his consumptive look.

The second case was that of a girl, aged 20, who came from a distance to consult me. She had lost several members of her family from consumption. Her lungs were very weak, and there was disease in both apices, but no cavities. I put her under treatment, and in ten days she had so much improved that she went home to enable her sister,

who was in a worse condition than herself, to come and undergo the treatment. The sister, however, was too ill to be moved, and going to see her at the house, I found she was very far gone in a most rapid form of disease. I persevered with her, but could never find that she benefited in any way, and she died three weeks from the time that I saw her first. The sister continues to keep well.

The fourth case was that of a sailor, aged 53, with a bad family history. There was advanced disease in both lungs, and extreme prostration, and loss of weight had been very rapid. When first put under treatment, he improved somewhat, but soon aphthous patches appeared in the mouth, the unhealthy condition of which seemed only to be aggravated by the spraying of putrid matter into it, and he died in less than a month.

The fifth case, a lady living in Lancashire, I have never seen, but her medical man has minutely described her condition to me, and has sanctioned her undergoing my treatment; she has been suffering for some years, and had nursed a brother dying of the disease shortly before she herself became affected. She has most religiously and minutely followed all my directions, but though her general health has slightly improved, her medical man states there is no improvement in the physical signs of her chest, but rather the contrary. The conclusions I draw from a trial of this treatment are, that the forced deep inspirations necessary are very beneficial in some conditions of the chest; that when diarrhœa is present it checks it, improving the appetite as a rule; that it has a tendency to diminish expectoration, and an influence for good in cases not too far gone, but that in rapid forms of the disease, and where much excavation exists, it is useless.

TOBACCO AMBLYOPIA IN WOMEN.[1]

By A. HILL GRIFFITH, M.D.,
Assistant Surgeon, Manchester Royal Eye Hospital.

I WISH to make some remarks on a form of bad vision caused by the use of tobacco, and will call your special attention to seven cases occurring in women which I have observed at the Manchester Royal Eye Hospital. All complained of a rather rapid deterioration of vision, and the fundi were either quite normal or only showed very insignificant changes. How then was the diagnosis made certain in these, as it is in all cases of tobacco amblyopia, by the presence of a central colour scotoma? This test is easily applied by causing the patient to cover one eye, while with the other he or she gazes steadily at the eye of the examiner, who then brings a small piece of red or green paper, fixed on the end of a pen, into the centre of the patient's field, and notes the presence or absence of the patient's perception for colour in that part of his field. This test, so easily applied, is, I believe, an infallible test of bad sight produced by tobacco; and, further, I have never met with a central colour scotoma in a person who did not use tobacco, though I ought here to say that some such cases have been recorded. In my experience, then, a case of central colour scotoma is synonymous with tobacco amblyopia. I cannot too strongly insist upon the necessity of applying this test in all recent cases of failure of sight, whether in men or women, where the ophthalmoscope reveals a normal, or nearly normal, state of the fundi, and you will be astonished how large a proportion of such cases will fall under the head of tobacco amblyopia. Hardly a day passes at the Royal Eye Hospital without a case turning up. We must not be thrown off our guard by any slight changes we may find in the fundi, and at once conclude that they are the cause of the defective sight, for they may be only accidental changes in a case of tobacco amblyopia, and have little or nothing to do with the bad sight. For example, in three cases I have seen a solitary retinal hæmorrhage confined to one eye, the vision being equally diminished in both; in several, fine vitreous opacities; in others high degrees of myopia with posterior staphyloma, and in one woman I at first imagined the bad sight to be due to the presence of a few very minute white ticks at the maculæ which were only made out with difficulty by the erect image. In this case I afterwards found a colour scotoma, and elicited the fact that the patient smoked. Again, I have seen two cases in patients with well-advanced locomotor ataxy, and have no hesitation in saying that it was tobacco, and tobacco alone, that was the cause of the bad sight. Professor Hirschberg, in a paper on Tobacco and Alcohol Amblyopia, in the second volume of the JOURNAL for 1879, says "we never meet with the disease in women," and the only cases I have seen recorded besides my own were published by Mr. G. A. Berry in the *Ophthalmic Review*, April, 1884. I may further add that at the Royal Eye Hospital the first diagnosis of the affection in a woman was made rather less than twelve months ago.

[1] I have written more fully on this subject in a paper on "The Field of Vision," *Med. Chron.*, November, 1886.

ACUTE PERITONITIS: OPERATION AND RECOVERY.

By JOHN W. TAYLOR, F.R.C.S.,
Surgeon to the Birmingham and Midland Hospital for Women.

THE subject of acute peritonitis and its treatment is always interesting. The following case is, I think, especially so from the completeness of its history, the promptness shown by the medical attendant in his diagnosis of the patient's condition, and the success attendant on the operative measures adopted.

On Friday, November 12th, Dr. Leslie Phillips asked me to see a married lady, aged 21, whose previous history was as follows. Her first labour occurred on September 28th, 1886. Forceps were applied for uterine inertia. Three days after delivery, she developed pain and tenderness in the left iliac region, with fever. From this date until the end of October, when the lying-in attendance ceased, she had intermittent feverish attacks, with pain and tenderness in the same situation. On vaginal examination, there was a feeling of resistance on the left side of the cervix, but this was not well marked.

On November 11th, at 11 P.M., while lying quietly in bed, nursing the baby, she was attacked by a sudden pain in the left side of the belly, which caused her to vomit; she continued in pain all night. Dr. Phillips saw her at 12 noon, diagnosed escape of matter into the abdomen (thinking it a phlegmon of the broad ligament, or a pyosalpinx), and, a few hours later, requested me to see the patient with a view to opening her abdomen. At our consultation we found the patient very feverish, her temperature being 104° Fahr., and her pulse 140. There was some distension and great tenderness of the abdomen, and, on examination by the vagina, an ill defined swelling was found behind the uterus, acutely tender to the touch. The uterus itself was fairly mobile, and of normal size. No vomiting had occurred since the morning, but the countenance was anxious, and the condition evidently grave.

Some peritonitis was undoubtedly present, and in all probability this was of pelvic origin. In view of the mobility of the uterus and the absence of continued vomiting, I hardly thought that the symptoms justified a more accurate diagnosis, but, as the sequel showed, the original one formed by Dr. Phillips, of rupture of an abscess on the left side, causing acute peritonitis, proved to be entirely correct. We advised early operation as the only proper treatment for the patient's condition, and her husband very wisely readily consented.

The next morning, November 13th, at half-past nine, I opened the abdomen (Dr. Phillips assisting me, and Dr. Potts giving ether). I found that the lower part of the abdomen and pelvis contained seropurulent fluid, which welled up into the incision as soon as the peritoneum was opened. The appendages on the left side, together with the intestines, omentum, and uterus, were matted together into a mass in which it was difficult to distinguish the different structures. The omentum and tube were first differentiated, and the Fallopian tube, much thickened and inflamed, was brought to the surface. The corresponding ovary, which was adherent to the top of the uterus, and had therefore been beyond the reach of vaginal examination, was carefully separated, and both tube and ovary were withdrawn outside the incision. The ovary was then seen to contain an abscess in its substance, which had broken by two small ulcerated openings, from which thick yellow pus was freely oozing. The affected ovary and tube were then removed; the broad ligament pedicle, which was very thick and fleshy, being transfixed and tied in two halves with silk. The ligature cut through the tube, but held the rest of the stump well, so that but little hæmorrhage occurred after the ligature was applied. As the appendages on the right side appeared to be perfectly healthy, these were not interfered with. The abdomen was well washed out with warm water; and, before closing the abdominal incision, a drainage-tube was inserted in the pelvis.

The progress of the case since the operation has been very satisfactory. The drainage-tube was removed on the third day. The patient is now (November 28th) convalescent, her temperature and pulse are normal, and her appetite is good.

To recapitulate briefly the leading features of the case: We have a history of recurrent febrile attacks, with left iliac pain following confinement. Seven weeks after the labour, a sudden attack of acute abdominal pain, accompanied by vomiting, and passing on into symptoms of general peritonitis, in which, however, the febrile element was unusually marked. Proof, on laparotomy that a burst abscess was the cause of this, and rapid recovery on removal of the abscess-sac and cleansing of the peritoneum.

SURGICAL MEMORANDA.

DISLOCATION OF THE HUMERUS REDUCED BY RIGHT-ANGLE TRACTION.

In a communication to the British Medical Journal of November 6th, p. 860, on the above subject, Fleet-Surgeon Longfield speaks of "steadying the shoulder with his left hand." Counter-extension can be very efficiently made in reducing common shoulder dislocations by pressing against the acromion, and I venture to think that the importance of the latter in the above connection has hitherto been insufficiently recognised. This must be my apology for now describing a simple "variety" of the right-angle traction method which, suggested itself to me when I was house-surgeon at the London Hospital in 1859; it was then found to answer very well, and I have subsequently used it in my army practice. It is briefly as follows. The patient being seated (though this is not necessary), the surgeon stands by him; with his right hand he grasps the patient's injured arm just above the elbow, raises it to a right angle with the body, and grips it at the wrist by pressing it firmly between his own right arm and chest; he next extends his left arm, and applies the upper margin of his left palm to the prominent acromion; then, making steady extension, to disengage the head of the humerus from its abnormal position, and simultaneous counter-pressure against the acromion, he lifts or guides the humerus into place, using the patient's arm as a lever of the third kind, with the fulcrum at the patient's wrist. Like Dr. Macleod and Fleet-Surgeon Longfield, I have found that no great force is required; but, with the left hand on the acromion, and patient's arm and wrist grasped as above described, the surgeon has a considerable purchase; he might also, if he wished, place his knee against the axillary border of the scapula.

I do not wish to claim priority in the use of this method; it has probably been practised by others, including bone setters, but I can recommend a trial of it to my sporting brethren in the hunting-field, there being no necessity to take off one of their boots, nor, perhaps, even the sufferer's coat, a consideration in cold or stormy weather.

E. H. Lloyd, M.B., F.R.C.S., late Medical Staff.

The value of the method of reduction of dislocations of the shoulder described by Dr. Neil Macleod in the Journal for January 30th of the present year, is illustrated by the following case.

A woman came to me with a subglenoid dislocation of the humerus occasioned by a fall directly upon the shoulder-joint. By gentle traction of the arm at right angles to the trunk, I found the head of the bone slipped quite easily into its place.

The assistant Dr. Nash speaks of was readily dispensed with by placing my unbooted foot against the chest-wall as a means of counter-extension whilst the patient was in the recumbent position. No anæsthetic was needed.

Oliver Withers, L.R.C.P.Lond., M.R.C.S, Nottingham.

PURPLE SUFFUSION OF THE EXTREMITIES ALTERNATING WITH ATTACKS OF HÆMATINURIA.

M. N., aged five, female, has been subject to attacks of hæmatinuria for three years. The attacks occur after a chill, and are more frequent in cold weather. Between the attacks the arms and legs become, as the parents say, black and cold, pain is complained of, and apparently some loss of power in the legs and feet. These interim attacks are also associated with chill. The hands and feet, as far as the ankles, become of a deep purple tint, equally diffused and not disappearing on pressure. There are pain and tenderness in the parts affected. No sweating or swelling. The skin assumes a healthy appearance, and the pain subsides in less than thirty minutes. The urine looks normal, and is free from albumen. There is no real loss of power in the legs, but movement is restricted to avoid pain. Ross describes a somewhat similar condition under Plantar Neuralgia (*Diseases of the Nervous System*, first edition, vol. i., pp. 517-18), and he cites a case of Weir Mitchell's, in which the upper and lower extremities were affected. The alternation of hæmatinuria with vaso-motor disturbance of the extremities in this case suggests a common origin of both.

Bearing in mind the reciprocity of skin and kidneys, a vaso-motor paralysis, similar to that observed in the extremities, may occur in the kidney, great congestion would ensue, and the colouring matter might escape. The short duration of the attack, in each affection, is reconcilable with temporary vaso-motor disturbance.

T. F. Tannahill, M.B.,
Medical Officer H.M. Convict Prison, Borstal.

REPORTS
OF
HOSPITAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ST. MARY'S HOSPITAL, MANCHESTER.

SUPRAPUBIC LITHOTOMY IN AN ELDERLY WOMAN.

(Under the care of Dr. C. J. Cullingworth.)

[The Notes of the Case are by Mr. Ernest Annacker.]

The suprapubic method of operating was adopted in this case, not only on account of the comparatively large size of the stone, but also because both vaginal lithotomy and extraction through the dilated urethra seemed, for special reasons, to be contra-indicated. Thus, for example, there was extreme narrowing of the vaginal orifice. The patient had been married, but, owing to the ill-health of her husband, marriage had never been consummated, and the hymen was still intact. Senile contraction, to an unusual extent, had now taken place, so as still further to narrow the orifice; the free border of the thickened posterior portion of the hymen extended so far forwards as actually to conceal from view the meatus urinarius, and it was with considerable difficulty that even one finger could be passed into the vagina. Vaginal lithotomy, therefore, could not have been effected without free division of the hymen and perineum. On the other hand, if the urethra were dilated, the age of the patient rendered it very doubtful whether the power of retaining the urine would ever be regained. The case derives additional interest from the fact that the patient underwent the operation of abdominal section for the removal of an ovarian cyst in the early part of the previous year. The surprising manner in which she recovered from that operation (the temperature during convalescence never exceeding 98.8° Fahr., and the patient being well enough to return home at the end of three weeks) made us hopeful of an equally satisfactory result on the present occasion.

Ann W., a peculiarly spare, dark-complexioned widow, aged 61, was admitted on October 12th, 1886, suffering from frequent and painful micturition, a sensation of burning in the urethra, hæmaturia, and other symptoms of vesical calculus. On passing the sound, a stone of moderately large size was detected lying on the posterior wall of the bladder. It is uncertain how long it had been present. Before the ovariotomy in February, 1885, bladder-symptoms were complained of, but they were supposed to be due to the pressure of the tumour. Similar symptoms were also noted during the period of convalescence after the operation, and then they were attributed to irritation from the use of the catheter. The bladder had been a source of more or less suffering ever since, but it was only during the last four months that the symptoms had become urgent. The bladder was not sounded until the patient again came under hospital treatment, a day or two before admission.

On October 13th, chloroform having been administered, six fluid-ounces of a solution of boracic acid (120 grains to a pint) were injected into the bladder, and retained by the finger of an assistant compressing the urethra against the pubes. The rectal bag was not used. An incision, 3¼ inches long, was made in the middle line, terminating at the symphysis pubis. The muscular and aponeurotic layers were divided on a director; bleeding being arrested by pressure-forceps. A flaccid fold of peritoneum, which now bulged into the wound, dipping down within an inch of the pubes, was carefully separated with the finger, and drawn upwards. The connective tissue in front of the bladder was then scratched through with the finger-nail; and, on passing the finger gently down in order to ascertain the precise position of the calculus, the extremely thin wall of the distended bladder gave way under the pressure; the finger entered the bladder, and a quantity of its fluid contents escaped. Keeping the finger in the bladder, a loop of carbolised silk was passed by means of a needle through the wall of the bladder on each side of the opening, and the two loops were handed over to an assistant. By this means, all risk of difficulty from retraction of the bladder was obviated, and any further separation of the tissues outside the bladder securely prevented. The opening in the bladder was now slightly enlarged, and an attempt made to remove the stone, first, with a pair of lithotomy-forceps, and then with the two index-fingers in the manner suggested by Sir H. Thompson. Neither of these plans succeeding readily, a single index-finger was introduced, and the stone easily scooped out

between the finger and the symphysis pubis. The upper half of the abdominal wound was now closed by means of one carbolised silk-suture, and two sutures of silkworm-gut. The lower half of the abdominal wound and the wound in the bladder were left open, the temporary silk-loops previously introduced being removed. A piece of india-rubber drainage-tube, 5½ inches long, was passed into the bladder through the wound, and left there for the first twenty-four hours. The bladder was not washed out, nor was a catheter inserted. The wound was covered with pads of sublimate wood-wool enclosed in antiseptic gauze; later, it was dusted with iodoform, and covered, first, with a pad of boracic lint, and, outside this, with pads of wood-wool to soak up the urine. Convalescence proceeded rapidly. The temperature on the second day reached 99.6°, but after that never exceeded 99°. A little urine was passed by the urethra, for the first time, at one o'clock, on the day after the operation. The quantity so passed each day was carefully measured. At no time was there any dribbling; all the urine passed was passed voluntarily. The following table shows the amount of urine passed daily by the urethra for eighteen days after the operation.

During the 1st 24 hours there was none.		During the 10th 24 hours,	18 fld. oz.
,, 2nd ,, ,,	3 fld. oz.	,, 11th ,, ,,	27 ,,
,, 3rd ,, ,,	2½ ,,	,, 12th ,, ,,	20 ,,
,, 4th ,, ,,	3¼ ,,	,, 13th ,, ,,	21 ,,
,, 5th ,, ,,	4¼ ,,	,, 14th ,, ,,	36 ,,
,, 6th ,, ,,	10 ,,	,, 15th ,, ,,	28 ,,
,, 7th ,, ,,	12 ,,	,, 16th ,, ,,	24 ,,
,, 8th ,, ,,	13 ,,	,, 17th ,, ,,	40 ,,
,, 9th ,, ,,	16 ,,	,, 18th ,, ,,	46 ,,

The quantity of urine flowing from the wound diminished gradually after the first few days, and, on the fourteenth day, the flow had entirely ceased. The bowels were relieved by enema on the seventh day. The sutures were removed on the eleventh. On November 6th, the patient was discharged, the wound having almost entirely healed.

The calculus was composed of lithic acid, covered with a phosphatic deposit. Its shape was that of a flattened ovoid. It measured 1⅝ in. × 1⅜ in., and weighed 277.6 grains.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 14TH, 1886.

GEORGE POLLOCK, F.R.C.S., President, in the Chair.

On the Effect upon the Femoral Artery of its Ligature for the Cure of Popliteal Aneurysm. By W. S. SAVORY, F.R.S., Senior Surgeon to St. Bartholomew's Hospital.—The paper contained an analysis of twenty-six specimens in the museums of the London hospitals in which the femoral artery had been tied in Scarpa's triangle for the cure of popliteal aneurysm. Of these specimens, 17 were complete. Of these 17, the artery was pervious throughout in 13, and partially closed in 4. In none was the artery impervious throughout. Of the 17 specimens, 15 were cured. In these, the artery is pervious in 11, and partially closed in 4. In 2, the operation had failed to cure, and the artery remained pervious in both. In one case of a hawker, aged 37, under the author's care at St. Bartholomew's Hospital, who had a popliteal aneurysm of about three months' date, which could be controlled by pressure on the femoral artery, the femoral was tied at the head of Scarpa's triangle. This completely stopped the pulsation for three days, after which there was very slight return. A year later, the man, after much laborious exercise, returned with a slight pulsation, and a larger tumour; there was some relief from rest and an elastic bandage, but finally the artery was tied at the upper limit of the popliteal space, which gave a very good result. In a second case of popliteal aneurysm essentially similar, the femoral artery was tied first in Scarpa's triangle, then in Hunter's canal, and finally with two catgut-ligatures in the upper part of the popliteal space, and this last operation resulted in a satisfactory cure. The inference from the retrospect of a large number of cases was that in the majority of cases of popliteal aneurysm it was more advisable to tie the popliteal artery than the femoral, and that the danger of rupture of the artery under such circumstances had been somewhat exaggerated. — The PRESIDENT congratulated Mr. Savory on his paper, and inquired if he had found any similar patency in the femoral when the external iliac artery had been tied for femoral aneurysm.—Mr. CROFT had taken great interest in the whole paper, and commented on one point which was touched upon, and had been under consideration for some years, viz., whether it was better to use a single ligature for a large artery, or two ligatures, with division of the artery between them. Mr. Savory's paper, so far as his narrative of cases went, was in favour of the double ligature, and that method Mr. Croft considered to give an additional element of safety to the operation; so that with the modern antiseptic cleanliness there was a far better chance of avoiding all secondary hæmorrhage and healing by first intention than there used to be in the old operation.—Mr. HULKE declined to touch on the question of double ligature, as being beside the point. He had learnt much from the paper, as he had previously been of opinion that after ligature the artery was obstructed down to the aneurysm, which he now understood was a mistake. He also considered Mr. Savory's advice to tie the artery close down upon the aneurysm as of great value.—Mr. JOHN WOOD said it was undoubtedly important to consider the question of tying the artery near the aneurysm. Many lives had certainly been hitherto lost by so doing; but there had been a complete revolution in surgery since the introduction of modern aseptic treatment. He considered the question of double ligature was important, for by double ligature and division of the artery between the ligatures the tension was much relieved, and the chances of consolidation of the aneurysm increased. It was important to tie the artery before the aneurysm had grown so large as to exert much pressure on the surrounding parts, for then there was less fear of secondary hæmorrhage and gangrene.—Mr. T. SMITH confessed that since he had come to years of discretion he had always tied the artery in such cases in two places, and divided it between the ligatures. By means of modern appliances and Esmarch's bandage it had been made a comparatively easy operation. As to this method of dividing the artery between two ligatures, he was quite unaware before that evening that Mr. Savory had ever practised it, and congratulated him on having adopted it.—Mr. A. A. BOWLBY had taken much interest in the question whether the arterial walls in popliteal aneurysm were generally to be found in as good a condition just above the aneurysm as higher up in the femoral; and from the examination of many specimens he had come to the conclusion that they were as good or even better, thus bearing out the general observation that the results of atheroma grew worse as the arteries approached the heart.—Mr. BALLANCE, in much experimental work, had never found the artery obliterated for any distance below the seat of ligature.—Mr. T. SMITH begged to be allowed to remark that the most modern works treating on the patency of the artery below the ligature agreed with Mr. Savory's conclusions, and among these he should include Mr. Ballance's researches; it was only the older text-books that did the reverse.—Mr. SAVORY, in reply, said his paper dealt with the condition of the femoral artery only after ligature, and that condition he had found to be different from what he was certain was the general view. Several points had been raised which he could hardly answer, because he thought the Society would not permit him to discuss antiseptic treatment in general that evening. If he had been so permitted, he should have had to ask Mr. Croft questions about what he meant by cleanliness, and Mr. Wood what he meant by aseptics. He still retained, he admitted, his disagreeable habit of questioning other people. As to the point of double ligatures of the artery, he was still of opinion that the evidence, when looked at fairly all round, was not in favour of it, but of the old plan of single ligature with silk, and not any animal membrane. That had been his general practice, and in that way he should go on. He admitted he had used catgut as a double ligature in one of the cases he had mentioned, but that was only because the artery was small, and had been tied before.

Richter's Hernia, or Partial Enterocele.—By FREDERICK TREVES, F.R.C.S.—The author said that in this form of hernia a part only of the circumference of the bowel was engaged in the hernial orifice and there strangulated. The strangulation might be complete, and might proceed to gangrene without the lumen of the bowel being entirely occluded. The nomenclature of this rupture was obscure. From the majority of English writers it received the title of Littre's hernia. The hernia described by Littre in 1700 was not of the character now under notice, but was an example of the escape into a hernial sac of a Meckel's diverticulum. These two varieties should be kept quite distinct. The author traced the history of these forms of rupture as displayed in surgical literature. The name of Richter's hernia was proposed, since the first scientific recognition of the condition was due to that surgeon. In Richter's hernia the small intestine was involved, and was held by that part of the gut that was most remote from the mesentery. The condition was met with more frequently in women than in men, and in femoral than in inguinal ruptures, was limited to adults, and occurred in recent as well as in old-standing protrusions. The mode of formation of the hernia was discussed, and the question of the formation of diverticula considered. The author described four cases that occurred in his own practice. The account of the clinical and pathological aspects of

the condition was based upon the examination of fifty-three recorded cases. The symptoms tended to assume a milder character than was observed in the usual form of strangulation. The vomiting was slighter, less frequent, was often of late onset, and was very rarely feculent. Hiccough was uncommon. The bowels might remain open during the whole progress of the strangulation, or might act occasionally, or would respond to aperients. In certain instances persistent diarrhœa might exist. Tympanitic distension of the abdomen was uncommon. The hernial tumour was very small, and often not recognised. The gut was practically irreducible by taxis, and if prolonged efforts were employed, reduction *en masse* not unfrequently occurred. The mortality was exceedingly high, being represented by 62.2 per cent. This depended upon the difficulties in the way of diagnosis, upon the irreducibility of the gut, and upon the remarkable frequency of gangrene. The mortality after herniotomy was proportionately high. The special features in the treatment were considered. The hernia deserved notice on account of the peculiar features involved in its pathology, its special clinical aspect, its grave prognosis, and the light that it threw upon the production of strangulation symptoms in general.—Mr. HULKE expressed himself as much indebted to Mr. Treves for the very complete and learned essay he had brought before them. He was inclined to think that what Littre published in 1700 had to do with diverticula solely, and his second book, in 1714, with cases in which the whole of the circumference of the bowel was constricted. Richter also, he believed, when writing in 1779, had no very clear conception of the variety of hernia which Mr. Treves was naming after him. Richter described "small herniæ" which occurred all over the abdomen, and were sometimes mesenteric and sometimes intestinal; but their nature was merely conjectural, for he probably never saw the bowel himself, either in life or after death. Mr. Treves seemed to him not to have paid enough attention to what Riecke had written on the subject, and the name hernia lateralis seemed very well suited to the condition Mr. Treves had described. He could not think the cases so very rare; indeed, the fact that Mr. Treves had had four such cases himself contradicted that, but they were often not diagnosed. His impression was that the mildness of the symptoms Mr. Treves had mentioned was not at all diagnostic—in fact, that the symptoms were rather unusually acute.—Mr. TREVES, in reply, said he had merely suggested Richter's name as a convenient one to couple with this special variety of hernia, as he could not help considering that Richter's work had done a good deal towards making it known. He should, however, be quite willing to accept the term partial enterocele, if it were not thought too cumbrous and too inexact. The Secretary, in reading his paper, had very wisely omitted parts of it which he was afraid would have been even more tedious than the rest, but in those parts Mr. Hulke would find the points which he had raised fully discussed.

CLINICAL SOCIETY OF LONDON.

FRIDAY, DECEMBER 10TH, 1886.

THOMAS BRYANT, F.R.C.S., President, in the Chair.

Two Cases of Diphtheritic Paralysis with Heart Affections and Choreic Movements.—Dr. HERRINGHAM read a paper on these cases. On admission, there was in both great weakness of the legs, with a tottering gait, and the deep reflexes were abolished. The legs were in other respects normal. In one case (a girl, aged 9), eight or nine weeks from the beginning of the weakness the knee-jerk was suddenly present in excess, and with it ankle-clonus. The jerk became normal in four weeks, the clonus vanished in six weeks. The heart, which was normal on admission, became affected during her stay in bed with mitral disease, and so remained after an interval of ten months. The other case (a boy, aged 4), did not ever show ankle-clonus or extension jerk, but a few days after his discharge he returned with a faint mitral murmur. If, as was now supposed, diphtheritic paralysis was due to disease of the central grey matter of the cord, this case was in favour of the theory that the deep reflexes depended upon this part, and were increased in disease, not because the brain's veto could not travel down the cord, but because the grey matter was itself altered.—Dr. SIDNEY COUPLAND said he did not gather whether the signs of enlargement of the heart were observed at the very commencement of the case, and, if not, he would be disposed to attribute it to myocarditis. He thought this was a not unfrequent complication of diphtheria. It was interesting to note that it was principally in cases which had not been treated from the beginning that the paralysis was found.—Dr. ANGEL MONEY said he had investigated the conditions of the advent of diphtheritic paralysis, and had remarked an accentuation of the knee-jerk prior to the weakness, a condition which he attributed to the "irritable weakness" of our forefathers. He had also noticed, in one or two cases, that, during this period, a tap on one ligamentum patellæ elicited a jerk of the other, and *vice versâ*.—Dr. MACLAGAN thought that any part or organ of the body was liable to be affected by diphtheria. He quoted the case of an old gentleman who suffered from a sore throat in Paris, in whom, two or three weeks later, distinct and well-marked ataxic symptoms made their appearance, but these ultimately disappeared, and the patient was now quite well. He thought the heart affections, as well as the diphtheria, might be due to anæmia.—Dr. PERCY KIDD thought that all the cases of cardiac affection in diphtheria could not be classed as functional. In a great many cases which he had examined, marked changes were found in the cord.—Dr. THOMAS BARLOW said he did not think one's understanding of the subject would be advanced by classifying these affections as anæmic or functional, especially as definite lesions had been found in many cases. If they were attributable to anæmia, why did they not get the same symptoms after other forms of anæmia? The clinical group of symptoms was very definite, and had every appearance of depending on a definite cause. Dr. Money's observations about the slight increase of knee-jerk in the earlier stages were confirmed by his own, and he had recently had a striking example of the kind in a young woman, after a mild attack of diphtheria. He would suggest that the cardiac condition was perhaps due to dilatation.—Dr. S. WEST said he was about to make the same remark as Dr. Barlow on the classification of these cases as functional. One argument against their being myocarditis was their having lasted so long. In one case the murmurs persisted after the paralysis had disappeared. The uncertainty and variability of the murmurs was evidence against their being due to valvular, or organic lesions.—Dr. HERRINGHAM, in reply, said he did not think the murmurs were due to myocarditis. Dr. Money had told them of a very interesting circumstance in reference to the period of irritability before the weakness, but that did not explain the period of irritability afterwards.

Acute Myositis.—Mr. TREVES read a paper on this subject. A carman, aged 22, was admitted into the London Hospital with "an inflamed arm." Three weeks previously he was exposed to severe cold when driving, and had been wet through. The chief symptoms were rigor, *malaise*, fever loss of power in the arm, and cramp-like pain. Similar pains appeared in the calves of both legs. The affected parts were swollen and tender. The trouble in the legs soon subsided; but the swelling in the left arm increased. The muscles, notably the deltoid and biceps, were enlarged, were hard and very tender. There was fever. Under treatment, extending over three weeks, the induration of the muscles gradually disappeared without suppuration, and the man made a complete recovery. Mr. Treves considered the case to be one of acute myositis, and entered fully into the points raised by the differential diagnosis. Mr. Treves divided acute myositis into the following varieties: 1. Simple myositis, due to to injury or the direct extension of inflammation. 2. Myositis from cold. 3. Infective myositis. This interesting affection had been fully described by Connor, Hayem, and Scriba. The usual centre of infection was a common boil, and the similarity of the disease to acute osteo-myelitis might be considered to have been demonstrated. 4. The myositis of trichinosis. The present patient was in the habit of eating a quantity of ill-cooked pork, and Mr. Treves discussed the phenomena of cases of mild trichinosis that underwent spontaneous cure. 5. Secondary myositis, that is, that attending certain eruptive fevers, the myositis of syphilis, and the muscle-inflammations of pyæmia, puerperal fever, scurvy, glanders, and ulcerative endocarditis. The general phenomena of true muscle-inflammation were considered, together with the usual seats of that inflammation and the clinical evidences of the disease.—Dr. F. DE HAVILLAND HALL wondered that Mr. Treves had not included glossitis from cold in his description, two cases of which he had seen quite lately.—Mr. GODLEE asked why Mr. Treves had not included the cases of so-called myositis specifica?—Dr. EWART said he wished to know exactly what was meant by myositis: was it an inflammation of the muscles or of the sheath? In the latter case the rheumatic theory would not be out of place. Regarding the classification, he would not like to see the pathology of the condition lost sight of.—Dr. GOODHART was disposed to question whether cases of acute myositis were as uncommon as was supposed. He remembered two cases of sudden pain and induration in the calf of the leg in adult men which, now that he had listened to Mr. Treves's paper, looked very much like acute myositis.—Dr. SIDNEY COUPLAND said that Dr. Goodhart's cases reminded him of one under his own care, but in which the lesion was embolic, and not myositic.—Dr. S. PHILLIPS inquired whether any connection could be supposed to exist between the gonor-

rhœa from which the patient had suffered, and the myositis. Some time since, a man had come to him with induration and rigidity of both arms, who was then suffering from gleet; and he had seen another case in a medical student under similar circumstances.—Dr. S. WEST said he had seen a case in which the pain came on after cold, and the patient was sent to the hospital as a case of rheumatic fever. The whole of the muscles of both forearms and some in the thighs and elsewhere were extremely tense, and exquisitely painful and tender. The temperature was also raised. It continued for six or seven weeks, during which time the muscles rapidly wasted. The man had signs of nephritis on admission, albuminuria, œdema, etc. He had thought of trichinosis, but did not think it was admissible in this case.—Mr. TREVES, in reply, said he had studiously avoided the vexed question of glossitis as mentioned by Dr. Hall. Such cases in children generally consisted of inflammation of an ill-conditioned tongue, and in adults it occurred in individuals with dirty and uncared-for mouths. Personally, he was unable to grasp the idea of glossitis due to cold; if people went about with their tongues hanging out, the explanation might be possible. He thought it was strictly an affection of the muscle, and not of the structures round it. He could say nothing as to the connection between it and gonorrhœa.

A Case of Gastric Ulcer with Unusual Complications.—Dr. MONTAGUE MURRAY read a paper on this subject. An anæmic girl, aged 23, was admitted on February 15th, with indefinite gastric symptoms. On the 16th the temperature rose suddenly to 103.6° Fahr., a sharp pain was experienced in the left side, and a pleuritic rub could be heard. On the 17th the abdomen was found to be tender and swollen. During the 17th and 18th there was severe vomiting. Hæmatemesis began on the 19th. At first the blood was bright red, and the amount ten ounces, but subsequently the quantities were smaller and the colour much darker. The patient rapidly became weaker, and died on the 22nd. Vomiting ceased four hours before death. At the *post mortem* examination, acute left pleurisy and acute peritonitis were found. On opening the stomach, a small ulcer was seen at the cardiac end, its outline was roughly circular, its diameter an inch, its wall thickened and precipitous; and its floor composed of peritoneum perforated in the centre by an aperture, one-eighth of an inch in diameter. Three questions were discussed: 1. The age of the ulcer. 2. The time of the perforation. 3. The connection between the ulcer and the inflammation of the serous membranes. 1. It was argued that while the symptoms on admission did not clearly point to ulceration, yet when considered with the subsequent history, and the *post-mortem* appearances, it was clear that the ulcer must have been present at that time. The immediate cause of the hæmatemesis was probably the straining during the severe vomiting which preceded it. 2. The perforation as a cause of the pleurisy and peritonitis was rejected on the ground that the hæmatemesis did not begin until after the onset of the three complications; that the vomiting did not cease until four hours before death; and that there was no evidence of extravasation from, or inflammation in the neighbourhood of, the perforation, which was believed to have coincided with the cessation of vomiting. 3. The connection of the ulcer with the pleurisy and peritonitis was rendered probable because of the existence of communicating lymphatics; the occurrence of left pleurisy with an ulcer at the cardiac end; the rarity of the two conditions occurring simultaneously; and the absence of any other discoverable cause.—Dr. BERNARD O'CONNOR asked whether any examination had been made *ante* and *post mortem* of the condition of the lungs, and of the under surface of the diaphragm.—Dr. MITCHELL BRUCE said there were few cases more trying in reference to the course to be pursued than those of perforation of the stomach. There was not, as a rule, any difficulty as to diagnosis, but as to treatment. The assumed rule that people who had hæmatemesis were not likely to have perforation was evidently not a reliable one. He thought the peritonitis preceded the perforation, and the fact gave some hope of help from surgical intervention if only had recourse to in time.—Dr. MURRAY, in reply, said that the lungs and diaphragm had both been carefully examined, and nothing abnormal had been found.

Living Specimens.—The following were exhibited. By Mr. CRIPPS: A case of Lumbar Colotomy for Rectal Cancer in a Woman.—By Mr. A. PEARCE GOULD: A case of Branchial Fistula of Pinna of Left Ear.—By Dr. A. H. ROBINSON: A case of Venous Angioma of Leg.—By Dr. HEADINGHAM: A case of Mitral Disease after Diphtheria.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, DECEMBER 9TH, 1886.

J. W. HULKE, F.R.C.S., F.R.S., President, in the Chair.

THE PRESIDENT announced the gift of A. von Graefe's ophthalmoscope and blotting pad from Dr. A. Samelson, of Manchester, and he also announced that he had presented to the Society the three ophthalmoscopes which had been handed round during his introductory address at the last ordinary meeting of the society.

Living Specimens.—Mr. ADAMS FROST showed a woman with symmetrical swelling in the region of the lacrymal gland. On the left side the swelling was so hard that it occurred to him there might be a mixed fibro-cartilaginous tumour, such as was seen in the case of some parotid tumours.—Mr. POWER said that he had at a recent meeting brought under the notice of the members of the Society a somewhat similar case in a boy, where the proptosis had become very great, and he had removed one gland; on examination it was found to present a simple overgrowth of fibrous tissue.—Mr. JESSOP showed a case of intra-uterine atrophy of the iris, the anterior epithelial structure being in great part wanting.—The PRESIDENT thought that the case was especially remarkable in that there was no evidence of any affection of any of the other structures of the eye.—Mr. JESSOP showed a boy with lamellar cataracts with a view to ascertain whether it was usual for the Y-shaped appearance of the striæ to be inverted at the front of the lens and upright at the back.—Mr. SILCOCK showed a patient with a large semi-circular hæmorrhage at the posterior pole of the eye just above the yellow spot. The question was whether this was due to rupture of a choroidal or a retinal vessel; continental authorities all favoured the former view, English authorities the latter.—Mr. NETTLESHIP asked what were the points in favour of choroidal affection; it seemed to him that there was a decided presumption in favour of retinal disease. One noticeable feature was that the retinal vessels which disappeared in the hæmorrhage were tortuous, whilst those below the macula were not tortuous. If the hæmorrhage had taken place into the choroid, one ought to be able to see some retinal nerve fibres stretched over the clot, but these could not be seen in the case before them, and in similar cases they were generally not present. After the blood had disappeared, a tolerably large retinal vessel sometimes came into view more or less blocked, being presumably the one from which the hæmorrhage had taken place. Then the shape of the hæmorrhage (almost always semi-circular) was intelligible on the retinal hypothesis, but it was very difficult to see why a choroidal hæmorrhage should be so limited.—Mr. JESSOP said that in the last volume of the *Transactions* he had recorded a similar case where a large hæmorrhage quite cleared up, leaving only white spots along one of the retinal vessels.—Mr. POWER had seen several such cases, and thought they were undoubtedly of choroidal origin, as a thin, delicate structure could always be seen over the hæmorrhage. If the hæmorrhage were in the retina he was doubtful if the complete recovery which undoubtedly took place would ever be met with.—Dr. ANDERSON mentioned a case of Bright's disease, in which there had been a large hæmorrhage at the fundus; there was typical albuminuric retinitis, and his impression was that the hæmorrhage was in the retina.—Mr. W. LANG showed a young woman, aged 25, with post-neuritic atrophy of the optic nerve, but good vision; she had had fits in childhood, and for the previous five years had been subject to "bilious attacks," with vomiting and attacks of giddiness.

On the Eyesight of School Children.—Mr. JACKMAN read a paper on this subject, based on the examination of 456 children. The cases of ametropia were carefully tested in all cases, with and without a mydriatic, with the exception of the 32 cases of astigmatism in the Coggeshall Boys' School. In any doubtful case the cornea was examined through a + 10 D lens. The colour sense was examined by means of coloured wools. The 456 children ranged from the age of 5 to 14 years, and were scholars at the seven following schools: Coggeshall National Boys'; Coggeshall National Girls'; Coggeshall British Boys' and Girls'; Kelvedon National Boys'; Kelvedon National Girls'; Kelvedon British Boys' and Girls'; Feering Boys' and Girls'. The children were not in any way selected for examination. The statistics showed the following percentage for each defect: Ametropia = 19.2; hypermetropia = 6.5; myopia = 2.17; astigmatism = 10.5; anisometropia = 5.04; colour blindness = 1.7; defective internal rectus = 8.7; strabismus = 2.8. Plans of the seven schools were taken, and the ratio between the window-space and the floor-space noted for each school. Upon comparing these results with the percentage of cases of myopia in each school, no connection could be traced between the two, as was evident from the following table:

SHEFFIELD SCHOOL OF MEDICINE.—The Sheffield Town Trustees have given £250 (second donation) towards the new buildings for the School of Medicine.

School.	Window space to Floor Space.	Myopia.
Coggeshall Boys' ..	1 square foot : 12 square feet ..	2. 1 per cent.
Kelvedon Boys' ..	1 ,, : 7.7 ,, ..	0 ,,
Coggeshall British ..	1 ,, : 6.7 ,, ..	2.5 ,,
Kelvedon British ..	1 ,, : 6.5 ,, ..	2.17 ,,
Kelvedon National Girls'	1 ,, : 5.8 ,, ..	1.88 ,,
Feering	1 ,, : 5.3 ,, ..	0 ,,
Coggeshall Girls' ..	1 ,, : 7.0 ,, ..	7.6 ,,

Neither could the positions in which the children sat with regard to the positions of the window be shown to affect directly the amount of myopia in the several schools. The school books used in all the schools were of good print, with the exception of the copy of Shakespeare used for the higher standards; but this was used in the schools which gave a low percentage of myopia, as well as those which showed a high percentage. It was therefore necessary to seek further for a cause as to the difference in the amount of myopia noticed in the seven schools under consideration. In all the Coggeshall school children examined, the percentage of myopia was = 3.4; in Kelvedon = 1.2; in Feering = 0. The Coggeshall children were of very low vital stamina; their parents were, as a rule, poor, and the children were brought up on ill-nourishing food, the absence of milk in their diet being particularly noticeable; moreover, their surroundings more nearly approached to those of children resident in larger towns. The Kelvedon children were of better constitutions, and milk was much easier obtained in this village. The Feering children were of still better constitutions, and their surroundings more conducive to good health. It therefore seemed probable that the amount of myopia was directly dependent upon the constitutional stamina of the children. In connection with this point, it was of interest to refer to the percentage of cases of defective internal recti muscles, as a similar ratio was apparent between the constitutions of the children and this defect. In the Coggeshall children the percentage was 12.5; in the Kelvedon, 11; in the Feering, 0.—Mr. ADAMS FROST thought that Mr. Jackman had done good service in drawing their attention to other causes of myopia than defective light, but he held that it was rash to draw conclusions from so small a number of cases. His own statistics were not worth much, because the examination had been hurried and conducted without atropine, which would make the percentage of myopia higher than it should have been.—Mr. POWER, referring to the differences between boys and girls, spoke of the close work the latter had to do; he had ascertained that in hemming a cambric handkerchief thirty-six stitches an inch were made. Lace-making, he observed, went on at one of the schools, and this was very fine work. Light might be of importance in regard to the quality and character of work required.—Mr. EDGAR BROWNE said that, in reference to lighting and window space, the outside surroundings must be taken into consideration; it was essential that from every seat in the rooms on the ground floor a strip of sky should be visible. In sewing, girls always held their work six inches or less from their faces, and put the head down, both actions being factors in producing strabismus, etc.—Mr. JACKMAN, in reply, said he had not made any measurements of the lace-work, but it was generally on a black ground, and whilst working the girls usually sat with their faces to the light.

Hydatid Cyst, causing Proptosis; Cysts in Liver, Lungs, Brain, and other Viscera; Unilateral Optic Neuritis.—Dr. W. A. BAILEY exhibited specimens, and gave an account of this case, of which the following is a summary. The patient, a female child, aged 2, was generally healthy till fourteen weeks before death; then the left eye did not close properly during sleep, and she used to wake up occasionally with a screaming fit. Eight weeks later she was admitted to Guy's Hospital, where, on September 28th, she had a convulsion. Then, being taken with whooping-cough, she was transferred to the Evelina Hospital. It was noticed that the liver had a bossy feel, the nodules varying in size from a pea to a walnut. The left eye was markedly proptosed, and directed downwards and forwards. The lids were pinkish and slightly swollen, but the extensively visible sclerotic was quite white. The lateral movements were much limited, and the upward movement was entirely wanting. The pupil was active to light and accommodation; its indirect reflex action was perfect. The optic disc was diffusely swollen and ill-defined. The veins were very large, dark, and tortuous. The vision on this side appeared good. The other eye seemed to see properly; its fundus was quite normal. The child was very irritable, constantly calling out "Oh! my eye!" if examined, or even moved for any purpose whatever. On October 4th, at 6 A.M., she was convulsed for forty minutes. On October 11th, the liver was apparently more distinctly nodular. The breathing was irregular, with a great many *râles* and rhonchi. On Oct. 13, at 9.30 A.M., she was convulsed for over two hours. The convulsions began on the left side, though the movements were shortly transferred to the opposite side. Then the right hand was clenched, and there was a continuous jerking movement backwards of the hand and arm. The right leg was slightly convulsed. The right eye was turned to the left, and its pupil was widely dilated. The left eye was much congested, and protruded and jerked slightly. The breathing was jerky and noisy, with a good deal of froth about the mouth. The temperature rose from normal at the commencement of the convulsion till 3 P.M., when it was 104·2°. Death occurred about twelve hours later. At the *post mortem* examination, a cyst of the size of a large walnut was found in the upper part of the left orbit, and its pressure had displaced the eye forwards and downwards. It was actually within the superior rectus muscle of the eye, implicating it from near its origin right up to its tendinous insertion; the muscular fibres were seen to expand, as a thin sheet, on the posterior part of the cyst, except on its lower and outer aspect, where they were scarcely traceable. Further forwards, all trace of them was lost, except on the extreme inner side, where they were continued as an extremely attenuated layer right up to the tendinous insertion of the muscle. The much-enlarged liver showed numerous cysts, projecting as bosses, on its surface, most of them about the size of a pigeon's egg. Thirty-six could be counted without any dissection. The lungs contained about twenty large cysts, mainly in their lower and posterior parts. There were recent pleuritic adhesions at each base, but no fluid exudation. The spleen showed a very large cyst, nearly two inches in diameter, projecting from its upper part. The right kidney showed a somewhat smaller cyst, and one of the size of a pea was found imbedded in the left ovary. None were found in the peritoneum. On opening the cranial cavity, the dura mater was found closely adherent to its walls. A cyst, the size of a tangerine orange, was imbedded in the posterior superior part of the right cerebrum, where it shelled out easily from beneath the unaffected pia mater. It occupied the region of the right angular gyrus and sub-marginal convolution. It was clearly ascertained that the cysts were those of the Tænia echinococcus.

Dr. HUGHLINGS JACKSON thought the fact of the uniocular neuritis in this case of great interest. He was inclined to attribute it not to the local affection of the muscle of the eyeball, but to pressure on the cerebral hemisphere by the cyst which was found there, and which probably caused the left-sided fits. He had seen only three cases of uniocular neuritis, all in hemiplegics, the neuritis being on the side opposite to the cerebral disease. A microscopical examination of the nerve in this case would be of interest to see if there was any difference between it and the ordinary double neuritis.—The PRESIDENT thought that the concurrence of cysts in so many different parts of the body was interesting. He had seen only two cases of hydatid of the orbit, in young lads, and single in each instance; after removal, both recovered.—Mr. NETTLESHIP asked if there was any local inflammatory condition of the orbit to account for the neuritis.—Dr. BRAILEY said that there was nothing locally, except the size of the cyst, to have produced neuritis. He had supposed that it might have been due to the proptosis; but after what Dr. Jackson had said, he was prepared to change his mind. The cyst was entirely in the muscular tissue. He would make a microscopical examination of the nerve.

Ecchymosis and Œdema of the Eyelids, without obvious cause.—Dr. ORMEROD read a paper on this subject, the prominent features of the affection being that the patient complained of his eye turning black, as if from a blow, in the course of a night, or in a few hours' time. On examination, ecchymosis of the eyelids, or in some cases œdema only, was found. Usually pain in the eye or the head preceded the attack, but no injury, and no fit. The attacks might be recurrent. Three cases were given where this was witnessed: a man, aged 72, suffering from vertigo and pains in the head; a woman, aged 54, suffering from paralysis of one arm; a woman, aged 55, epileptic. Other cases were mentioned where similar "black eyes" were complained of by the patients. A definite explanation was not attempted, but the possibility of a connection with migraine was suggested by an observation of O. Berger's. The ecchymoses of tabes dorsalis were quoted to show that extravasation of blood might be caused by disease of the nervous system.—Dr. COUPLAND referred to spontaneous hæmorrhages in the hysterical. He recollected a case of a young woman with symmetrical hæmorrhages on both sides of the body, and he thought it might belong to the same group as that described by Dr. Ormerod.—The PRESIDENT believed that different kinds of cases had been grouped together, all the patients but one were advanced in life, and probably had diseased vessels. Ecchymoses were very common after straining at stool or coughing.—Dr. HADDEN mentioned the case of a medical man who had swelling of the lids, which lasted a fortnight, and had completely passed off; there was no albuminuria, and no local cause could be found to account for it. He also referred to the case of a young woman who had recurrent swelling of the lids without known

cause. He thought that fugitive swelling of the hands, feet, or eyelids was not uncommon.—Dr. ORMEROD said that in only one case had there been no hæmorrhage, but in all there had been pain; straining could certainly be excluded in some of the cases—for example, those where it came on during sleep. Though the patients were past middle age, their arteries had appeared to be sound. He thought the paroxysmal nature of the affection was an important feature.

Case of Supposed Quinine Amaurosis.—Mr. EDGAR BROWNE read a paper on a case of supposed quinine amaurosis. The diagnosis in the earlier recorded cases of quinine amaurosis had been facilitated by a knowledge of the amount of the drug taken. In this case, the quantity was not clearly ascertained. The patient was a powerful man, aged 34; had syphilis in 1877, was carefully treated; was temperate; formerly a heavy smoker; general health perfect. Fell into the water at Shanghai on Janury 3rd, 1886; had a rigor next day, followed by pneumonia. On January 6th, temperature 104°. Was told he was taking quinine to reduce his temperature. On January 7th, temperature rose to 105°, or more. The patient believed the quinine was increased to thirty grains every two hours, but there was no professional note of this amount. Patient thought he had taken about 120 grains in this way. Towards afternoon he had "a confusion" in the ears, and became very deaf. About 4 P.M. there was a flickering before his eyes, and he suddenly went completely blind, "as if they had turned out the gas." He had a doubtful perception of the difference between dark and tropical sunlight, but he could not perceive the flame of a candle a few inches from his eyes. Pupils were widely dilated. At the end of six weeks he began to see objects in bright sunlight, and his central vision rapidly returned. April 19th. Pupils 3½ mm, equal; acted to light and accommodation. Central colour-vision quite perfect. Vision: right eye, $\frac{2}{3}\frac{0}{0}$ and Jäger 1 at 12 inches well; left eye, $\frac{2}{3}\frac{0}{0}$ and Jäger 1 at 12 inches fairly. Slight paresis of internal rectus. No sign of syphilis, except a doubtful enlargement of posterior cervical glands. Patellar reflexes normal. Fields for white very contracted; greatest diameter nowhere beyond 20° from fixing-point. (Charts of fields for white and colours were shown.) Optic discs very pale; vessels extremely small and contracted. Hearing perfect. From that time to December 4th scarcely any change had taken place, except a slight failure in central vision of left eye. Fields unaltered. He could distinguish a light thrown from a short-focus mirror (as in testing the sensibility of the retina in cataract) up to the periphery. He was placed in great difficulties by his telescopic vision, and constantly ran against things. He was in remarkably good health; no sign of cerebral or spinal mischief, except perhaps the slight paresis of the rectus. These cases were uncommon. Mr. Browne had collected references to eighteen cases, including his own. The symptoms were blindness and deafness of a very marked character—deafness first in order of time, temporary in duration, and recovery rapid. Two cases got well in twenty-four hours, one in ten days, in one there was some permanent impairment. The onset of the amaurosis was sudden or very rapid, more complete than was known in any other recoverable condition. It resembled the dense darkness of atrophy, for which one case was mistaken. In one case the deafness and blindness were so complete, that communication was only possible by touch. In cases examined early with the ophthalmoscope, a whitish haze with a central cherry-coloured spot was observed at the macula, as in embolism. The retinal vessels were always extremely contracted. In one case the contraction was first noted on the eighth day of the blindness, the first examination being on the fourth. The optic discs were pale, pupils always widely dilated, and insensible to light. In one case accommodation-reflex (convergence) was present. Hence it might be inferred that the state of the pupil was due to the blindness, and not to affection of the third or sympathetic. The mobility of the pupils was restored. The duration of the blindness was very remarkable. No perception of light existed for three or four days, six weeks, and even seven months. Recovery of central vision when it commenced was rapid. There was central colour-blindness in early convalescence. In one case colour-blindness in the peripheral field was noted. A very marked contraction of the field was noticed. Out of eighteen cases, no contraction in four; contracted for colour, one; no notes, two; great contraction, eleven. In one case there were central scotomata, but it was not noted if the patient was a smoker. In some cases the field widened somewhat, but in pronounced cases it was never fully restored. The perceptive portion of the retina corresponded to the non-vascularised space around the macula, exactly the opposite condition as regards parts of the retina affected in axial neuritis, when there was central scotoma with peripheral perception. This pointed to a more decided demarcation of the central from peripheral retina than was usually described. Recovery of central vision was generally perfect; permanent blindness had not been recorded. The quantity of quinine taken ranged from 180 grains in a single dose, 100 grains a day for four days, to 46 grains a day for eight days in adults. An explanation of the symptoms was not easy. The resemblance to embolism or hæmorrhage into the optic nerve was obvious, but the bilaterism and complete recovery of central vision negatived these. The retinal ischæmia seemed local; there were no signs of general cerebral anæmia. The influence of the vaso-motor system must be considered. The first effects of toxic doses of quinine were felt in the labyrinthine circulation. It was supposed that the inferior cervical ganglion was especially affected, and that the condition was hyperæmia. It seemed unlikely that hyperæmia of the labyrinth should co-exist with retinal anæmia with the same mechanism, and the deafness was temporary, while the peripheral blindness was permanent. The affection was probably local. The occlusion of the arteries was not retro-ocular nor quite complete, or atrophy of the optic disc would be a probable sequence. There was no sign of periarteritis, nor was there any pressure, veins and arteries being alike attenuated. Quinine applied locally caused contraction of minute blood-vessels. Highly cinchonised blood, passing into a peripheral circulation unprovided with anastomoses, might deposit sufficiently to prevent the ingress of blood till such time as the contraction has become permanent. Information was needed on the appearances in the early stage of the amaurosis, whether the pupil reacted to myotics, what was the condition of the optic disc, and whether there was any fluorescence of media or retina.

MEDICAL SOCIETY OF LONDON.

MONDAY, DECEMBER 13TH, 1886.

R. BRUDENELL CARTER, F.R.C.S., President, in the Chair.

Case of Intra-peritoneal Hæmorrhage in a New-born Infant.—Dr. KESER read the notes of the case of a male infant, born at full term of healthy parents, and after a normal labour, on April 29th. Respiration was established with some difficulty. On the following day, the infant lost a few drops of blood from the nose, and an ecchymosis was seen under the conjunctiva of the left eye. In other respects, the child appeared healthy. There was, however, a little swelling of the scrotum on one side, which gradually increased in size, and, at the same time, other ecchymoses made their appearance on the back and elsewhere. The abdomen also became swollen, and the penis œdematous. Some dulness was detected in the flanks. Finally, the abdomen became still more distended and discoloured, and the child ultimately succumbed on May 8th. At the *post mortem* examination about eight ounces of fluid blood escaped from the peritoneal cavity, but there were no signs of peritonitis, and the intestines were healthy. The spleen measured 9 centimètres in length (the normal length at that age being between 3 and 4). The upper half of the viscus was swollen and dark purple in colour, the lower half was pale, and the limit between the two was very distinctly marked. No history of hæmophilia, or, indeed, of any particular malady, could be traced in the family of either parent.—Mr. MORGAN recalled a somewhat similar case, which he had published in the *Transactions of the Pathological Society* some years since. No history bearing on the case could be elicited from either parent, and several healthy children had been born. One, however, had previously died under circumstances which rather pointed to a similar cause. The child in question became jaundiced, and had a large ecchymosis over the right arm, and on other parts of the body. After death, a congenital obliteration or absence of perforation of the ductus choledochus communis was found. He added that these cases occurred more frequently in females than males, and showed a tendency to occur in the same families.

The Selection of Anæsthetic Agents in Surgical Operations.—Mr. MARMADUKE SHEILD pointed out, in an exhaustive paper, the advantages attending the use of ether as an anæsthetic agent, especially when administered by means of Clover's apparatus. He enumerated certain exceptions to the rule that the risks attending the use of this agent were very much less than when chloroform was used. He went very fully into the details of the duties of an anæsthetist, and the precautions which he ought to take.—The PRESIDENT alluded to the apprehensions with which past experience had filled the breasts of ophthalmic surgeons when chloroform or ether had to be used. Now, he was glad to say, the introduction of cucaine had rendered the employment of general anæsthetics to a large extent unnecessary, and so relieved them of a constant source of anxiety.—Mr. BAILEY endorsed Mr. Sheild's remarks, and thought that every medical man should be capable of administering an anæsthetic; in fact, he thought a certificate of proficiency in the administration of anæsthetics should be required just as for vaccination.—Dr. HEWITT said he thought very

highly of the practice of administering nitrous oxide gas before commencing to give ether, but the transition should be carefully graduated.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, DECEMBER 1ST, 1886.

J. B. POTTER, M.D., President, in the Chair.

Specimens.—The following specimens were shown:—Mr. ALBAN DORAN: A Dissection of the Muscles of the Female Pelvis.—Dr. PHILLIPS: Conjoined Twins; Dicephalous monster delivered with one pain without assistance.—Mr. MALCOLM showed, for Mr. J. KNOWSLEY THORNTON, a pair of Diseased Ovaries.

Mercurialism in Lying-in Women.—"On Mercurialism in Lying-in Women undergoing Sublimate Irrigation," by W. R. DAKIN, M.D., B.S. The author gave a list of deaths recorded from mercurialism in lying-in patients, with an epitome in each case of the *post mortem* appearances. He mentioned Keller's recognition of mercury in the urine of patients douched with sublimate solution; this had been confirmed by his own experiments. Having noticed the contra-indications to its use, he detailed the method employed at the General Lying-in Hospital, and examined the conditions affecting susceptibility to the poison, including Von Herff's experiments. The symptoms of poisoning were given in detail in the cases observed. He narrated two cases, one of the milder form of poisoning, and one fatal, in which the *post mortem* appearances and histology of the kidneys were given, and made a comparison of results obtained as regards temperature, rate of involution, and duration of lochia, under different modes of using the solution. The precautions to be observed, and the most successful method of use, were then indicated, the opinions of Continental physicians quoted, and the treatment which proved most useful pointed out.—Dr. BOXALL thought that the first fatal case related by Dr. Dakin was due to shock from the sudden passage of foreign material into the blood-stream through the uterine sinuses. He had seen such a fatality after an intra-uterine injection of carbolic acid. As one of Dr. Dakin's immediate predecessors at the General Lying-in Hospital, he had an excellent opportunity of observing the results obtained by carbolic acid and permanganate of potash, compared with corrosive sublimate as an antiseptic agent. He showed a table representing the morbility among all the patients admitted to the hospital during sixteen months. Nothing but sublimate irrigation (1 in 2,000) was used during the latter half of the time, and the morbility was reduced in a marked degree. Among 240 patients delivered during the sublimate era, three cases of slight mercurialism occurred, while pyæmia, septicæmia, and local pelvic mischief, were almost entirely eliminated. Dr. Dakin had reported ten cases of mercurialism after 165 deliveries; but the symptoms were very slight, and a solution of 1 in 1,000 was at present employed immediately after labour. Dr. Boxall thought that sublimate solution deteriorated, owing to the alkalinity of London water, and he advised a concentrated preparation from which to make the solution for immediate use, with the addition of acid hydrochlor. dil. in the proportion of four drachms to each ounce of solid sublimate.—Dr. JOHN PHILLIPS thought that the question of intra-uterine injections was still undecided. As regards vaginal injections, if there were no lacerations the use of the sublimate might be safe, not otherwise. He used a 1 in 2,000 solution to dip the hands in before examinations, and was accustomed to add enough litmus to colour it pale purple.—Dr. MATTHEWS DUNCAN recognised the supreme importance of the subject now brought before the Society in a valuable contribution. He remembered the wonderful diminution of morbility in the Edinburgh Maternity Hospital when antiseptic treatment by carbolic acid was introduced there. Now he had no maternity hospital, unfortunately, but only the experience acquired in home and consulting practice. Nothing in the history of midwifery could show such beneficent results in practice as antiseptics, and the importance of details was shown by Dr. Boxall's table of the results in the York Road Hospital—a gradual and very large diminution of morbility as the antiseptic was changed from Condy's fluid to carbolic acid, and from that to corrosive sublimate; from first to last a diminution of more than 30 per cent. The paper showed the dangers of mercurial antiseptics, and he should not be satisfied with care after the mercurial poisoning began. Such care might be too late. In consequence, he confined the use of the sublimate to one or two occasional applications, using carbolic acid for the continuous antiseptic washings. He had not seen hydrargyrismus when the antiseptic was used in that way. Great care must be taken to leave no pool of the solution in the patient. This is especially necessary when what has been called "ballooning" of the vagina occurred—a state due rather to intra-abdominal pressure than any condition of the perinæum.—After a few remarks from Dr. PARAMORE, Dr. GRAILY HEWITT said that he thought that the practice of midwifery in private and in a lying-in hospital could not be looked upon as identical as far as the frequent use of antiseptic injections was concerned. He was anxious to insist on this, because if it went about that the internal injection of a dangerous antiseptic, such as corrosive sublimate, was, in the opinion of this Society, essential to the safety of the lying-in patient, it would be the cause of infinite mischief. No doubt, in a lying-in hospital, extreme precaution was justifiable, but, in private practice, less dangerous materials could be employed, and the frequent use of injections could not be held to be necessary.—After a few observations from Dr. ROGERS, Dr. CHAMPNEYS expressed a fear that the present discussion might hamper those who rightly might wish to use sublimate irrigations in suitable cases. Private practice and hospital practice differed in one respect; in both, the patient required protection from infection by the accoucheur and nurse, but in the latter she also required protection from other patients. They had to balance the risk of sepsis against the risk of mercurialism, and he unhesitatingly embraced the latter. During the five years that Dr. John Williams and he had charge of the General Lying-in Hospital, their total mortality was but 7 per 1,000; and, in the face of such results, he cheerfully accepted the responsibility of the risk of mercurialism by routine *post partum* irrigation with sublimate. In private practice, he reserved this for cases specially liable to infection—cases of operation—in which he did not hesitate to wash out the uterus (if entered by the hand) or vagina with corrosive sublimate, 1 in 1,000 or 2,000. He did not usually repeat the sublimate, preferring to leave one of Ehrendorfer's iodoform bougies in the uterus. In simple cases in private, he used Condy's fluid.—Dr. W. DUNCAN, Dr. FOWLER, and the PRESIDENT took part in the discussion; and Dr. DAKIN replied.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, DECEMBER 3RD, 1886.

F. H. ALDERSON, M.D., President, in the Chair.

The Treatment of Stricture of the Rectum by Electrolysis.—Mr. WHITMORE read a paper on this subject, of which the following is an abstract. Ulceration was often a cause, but more often a result, of stricture; in many instances it was both a cause and an effect. Mr. Whitmore had treated incipient stricture, as well as old standing cases, with the best results by electrolysis. In one case he had dilated the rectum from the size of a No. 18 French rigid urethral bougie to that of a No. 9 rectal bougie in three months; no contraction had taken place during a clear fourth intercurrent month. In another case, that of a man who had undergone a severe operation for fistula nine years previously, and who had taken two years to dilate his rectum from No. 2 to No. 4 rectal bougie, and who was in a most critical condition from inflammatory symptoms, the author had increased the size from No. 4 to No. 7 in three months, no contraction happening in an intercurrent fourth month. Neither of the patients had been confined to bed, and much improvement had taken place in their health.—After some remarks from the PRESIDENT and Dr. THUDICHUM, Mr. EDWARDS said that he had tried electrolysis in two cases of stricture of the rectum, with some success. In cases of stricture of the urethra, of which he had treated upwards of forty by electrolysis, excellent results had so far followed, but sufficient time had scarcely yet elapsed for an opinion to be formed as to the permanence of the cure.—Mr. HARRISON CRIPPS remarked upon the pathology of rectal stricture, and said that, of one hundred cases admitted into St. Bartholomew's Hospital, ninety-five were women and only five men. There seemed to be a close connection between child-bearing and the disease, the history generally being that the fourth confinement or so was a difficult one, and was followed by pelvic cellulitis; this caused the contraction of that portion of the pelvic fascia which runs round the rectum, whereby a "kink" in the gut was produced, which subsequently became the starting point of fibrous stricture.—Mr. REEVES agreed with Mr. Cripps in the main, but his view did not explain rectal stricture in single women. In the simple forms of the affection, he thought digital dilatation was the best treatment.—After some remarks by Mr. BENTON, Dr. ALTHAUS said he believed that these were the first cases in which electrolysis had been used in the treatment of stricture of the rectum. The effect of electrolysis was to cause some decomposition in the tissues; by this means subsequent contraction was prevented.—Mr. WHITMORE replied, and laid emphasis upon the fact that his paper only dealt with fibrous strictures. With regard to the occurrence of stricture of the rectum in single women, it was certain that constipation was the chief cause.

Inversion of the Uterus during Parturition treated as a Polypus and Ligatured.—Dr. ALBERT VENN read a paper under this title, which

was followed by a short discussion, in which the President, Dr. TRAVERS, and Dr. THUDICHUM took part.

Cases, with Remarks, in Gynæcological and Orthopædic Surgery.—Mr. REEVES read a paper upon this subject, and the PRESIDENT, Dr. OWLES, Dr. CAMPBELL POPE, and Mr. KEETLEY took part in the discussion which followed.

Living Specimens.—Mr. WHITMORE: Cases of Stricture of the Rectum treated by Electrolysis.—Mr. EDWARDS: A case of Excision of the Rectum.—Dr. SAVILL: A case of Ichthyosis Sebacea, Melanoderma, and Tubercular Syphilide.

Card Specimens.—Dr. SAVILL: Gumma of Liver found in the body of a woman, aged 72, who died of heart disease; Kidneys in a case of Acute Nephritis.—Mr. ALFRED COOPER: Carcinoma of the Rectum. Mr. EDWARDS: Carcinoma of the Rectum.—Mr. ALDERTON: Vertical Rupture of the Aorta.—Mr. LUNN: Right and Left Kidney, with Bladder of a man, aged 54, a small calculus completely blocking the left ureter; death occurred from the effects of urethral stricture of twenty years' standing.—Mr. H. PERCY DUNN: A Hernial Sac and Contents removed during life; Pulpy Degeneration of the Elbow-Joint.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, NOVEMBER 24TH, 1886.

LLOYD OWEN, F.R.C.S.I., President, in the Chair.

Abscess of Ovary.—Mr. JOHN W. TAYLOR showed a specimen of abscess of the ovary which had burst by two small openings into the peritoneal cavity, causing acute peritonitis. Laparotomy was performed, the ovary removed, and the peritoneum washed out. Rapid recovery followed.

Hernial Sacs.—Mr. M. A. MESSITER showed two hernial sacs that he had recently removed, and spoke strongly in favour of attempting a radical cure by the removal of the sac and suture of the ring. He had adopted this plan in many cases, and his results had been most satisfactory.

Tricuspid Regurgitation.—Dr. FOXWELL showed five patients with tricuspid regurgitation. One was a woman with old mitral disease and hepatic pulsation. Two were young anæmic girls; these had pulsation in the external jugular, slight on standing, considerable when lying down; a faint systolic murmur in the third and fourth left spaces, close to the edge of the sternum, was heard in the erect position; in the supine, this became much louder, and was heard, also, in the fifth left space, as well as across the sternum in the corresponding right spaces, and was slightly audible at the apex. A fourth was a pale, nervous young man, who presented a condition similar to the two preceding. The fifth was a young blacksmith, with an old presystolic murmur. On standing, a loud systolic murmur was audible in the second left space, conducted upwards and outwards into the first left space, but not across the sternum to the right, nor towards the epigastrium. This murmur Dr. Foxwell considered to be due to compression of the pulmonary artery by the dilated left auricle. On this patient lying down, pulsation was noticed in the external jugulars, and a much softer systolic murmur was heard both to the left and right of the sternum in the third, fourth, and fifth spaces.

Tropical Abscess of Liver.—Dr. T. STACEY WILSON showed the organs from a case of tropical abscess of the liver. The patient, aged 48, died of exhaustion and loss of blood from dysentery. About nine months ago, an abscess of the left lobe, which pointed anteriorly, was opened, and around the point of incision firm adhesions had taken place. Some time before death, an abscess formed in the right lobe; this caused the hepatic dulness to extend up to the third rib on the right side, as extension downwards was limited by the adhesions.

Parovarian Cyst.—Dr. MALINS showed a large parovarian cyst that he had successfully removed from a patient, aged 34.

Strangulated Hernia.—Mr. BENNETT MAY read a record of forty-six cases of operation for strangulated hernia.

ACADEMY OF MEDICINE IN IRELAND.

SURGICAL SECTION.

OPENING MEETING, FRIDAY, NOVEMBER 12TH, 1886.

The President, Sir WILLIAM STOKES, M.D., President of the Royal College of Surgeons, Ireland, in the Chair.

The Inaugural Address.—Sir WILLIAM STOKES delivered the inaugural address, which has already appeared (see page 961).

Ovariotomy.—Dr. F. V. MACDOWELL read notes of a successful case of ovariotomy performed by him in Baltinglass Infirmary.

Nephro-Lithotomy.—Mr. KENDAL FRANKS read a paper on nephro-lithotomy in a man, aged 28, from whose left kidney he had excised a large stone on May 6th last. The case was the first of the kind in which the operation of nephro-lithotomy had been performed in Ireland. The kidney was reached by the lumbar incision; the stone was felt completely filling the pelvis, and was excised through an incision in the substance of the kidney. The calculus was friable, composed of phosphate of calcium, carbonate of calcium, and ammonium magnesium phosphate, and weighed 171.3 grains when washed and dried. It was removed piecemeal, being too large to extract entire. The lumbar wound healed by first intention, the site of the drainage-tube continuing to discharge urine for four weeks. The patient had returned to work several months ago, was free from pain, and in good health. He still passed some pus with the urine.—Mr. THOMSON said the difficulty that must always present itself in such cases was that of diagnosis, and not the difficulty of removing the stone, once its presence was made clear. He had seen two operations on the kidney, and he had another case under observation. In one, there was a large distinct tumour on the left side. All the symptoms referable to stone in the kidney were present, but the organ was too large for removal through the lumbar incision. The tumour was removed, and the stone found; but there was also a stone in the other kidney, and the result was fatal. In a proportion of those cases there was a great tendency to infection of the second kidney; and, when one was removed, it was not always certain that all the mischief had departed; indeed, the patient might be worse off than before. Another point of importance was in reference to the incision. Where the kidney was not specially enlarged, so as to present a tumour in the abdominal cavity, the lumbar incision was attended with least risk. In one case of stone which he saw, the kidney was so large that there could be no question of the futility of attempting to remove it through the lumbar incision. The only proper course would be that adopted by Mr. Knowsley Thornton, of removing the tumour by abdominal section, and draining the abdominal cavity through the loin.—Mr. FRANKS, in reply, said of course Mr. Thomson referred to cases of nephrectomy, and not of nephro-lithotomy.

OBSTETRICAL SECTION.

OPENING MEETING, FRIDAY, NOVEMBER 26TH.

A. V. MACAN, F.K.Q.C.P., President, in the Chair.

Placenta Prævia.—Dr. FLEMING read a paper on the etiology of placenta prævia, and then went on to enumerate the various ideas as to the source of the blood, giving as the most feasible that of Schroeder—namely: 1. That uterine contractions impel the blood from the place whence the placenta has been separated. 2. That from the separated portion blood circulating through the chorion villi becomes lost. 3. That unguarded examination may lacerate the placental tissue, and so cause fœtal hæmorrhage. The separation of the placenta is most satisfactorily explained as follows: 1. Owing to its formation, the placenta cannot adapt itself to the extension of the organ. 2. It is unable to retract with the cervical zone during labour, the membranes being still intact. With regard to the treatment, until within recent years the obstetrician's choice was limited in the early stage, before the os was much dilated, to the following methods: 1. Plugging the vagina, which is ineffectual, and increases the risk of sepsis. 2. Forcible dilatation, version, and immediate extraction, fraught with extreme danger to the mother, as it increases tenfold the risk of *post partum* hæmorrhage, owing to laceration of the soft parts. 3. Forcible dilatation and extraction by instruments; this method is, of course, open to the same objection as the last. 4. Separation of the entire placenta; this certainly controlled the hæmorrhage, but inevitably destroyed the child. He wished now to draw attention to the methods adopted in the Rotunda Hospital for several years past. 1. The membranes were ruptured if the presentation was normal. This acted by allowing the placenta to retract within the lower segment, and by causing the presenting part of the fœtus to act as a plug. This is sufficient in a large number of cases. 2. Intero-external version was performed, a leg being brought to act as a plug, and expulsion by natural efforts being waited for, or aided very cautiously when the os was sufficiently dilated. Expulsion might not take place for a considerable time. The advantages they claimed for this treatment were: (*a*) it abolished the use of the tampon, and lessened the risk of sepsis; (*b*) it allowed early operation, before much blood had been lost; (*c*) it arrested hæmorrhage; (*d*) it enabled the patient to rally, gave the os time to dilate, and lessened the risk of *post partum* hæmorrhage from lacerating the cervix or vaginal soft parts. Dr. Louis, writing in the *American Journal of Obstetrics*, gives 4.5 per cent. as the maternal mortality after this method, and computes the infantile mortality to be 60 per cent., and draws the inference that the mortality of children born after natural efforts is not higher

than in those in which immediate extraction has followed version; therefore, since the child's chance of survival is so frail, the mother should incur no risk on its account. 3. In some cases when everything favoured extraction, such as a well-dilated os and head low down—delivery was sometimes effected with forceps; and in other cases it was necessary to diminish the calibre of the head by perforation, and extract rapidly. In the early stage of labour, the most reliable way of bringing the patient to a satisfactory condition was by the "combined method of version," and, having brought down an extremity in such a way as to form a plug, to wait for the expulsion of the child by natural efforts, very cautiously aided. With reference to the statistics of the cases occurring in the Rotunda Hospital for the past three years, ending November 3rd, 1886, 4,514 cases were delivered during this period; and in this collection twenty-three cases of placenta prævia were observed, in which there was a maternal mortality of four deaths, three of which were complicated with other serious affections, such as pleuropneumonia, sloughing fibroid tumour, and multiple fibroid, preventing contraction subsequently; and one patient was in a collapsed state when admitted. Out of these twenty-three cases, eleven infants were lost.—Dr. KIDD thought that very many patients were lost by waiting. When a small hæmorrhage occurred, and if they found that the placenta was attached to the os uteri, they should accomplish delivery as soon as possible. If the hæmorrhage was extensive, and if the os was sufficiently dilated, the next important thing was to turn. Having done that, the best thing was to wait. If the membranes could not be reached and ruptured, the best thing to do was to introduce a Barnes' bag. Where there was a complete presentation of the placenta, and it was found difficult to rupture the membranes, the placenta should be perforated. Sir James Simpson once, in conversation with him, said that to plug the vagina in a case of placenta prævia was "fool's practice." He thought Dr. Fleming had exaggerated the danger of lacerations. After hæmorrhage had gone on for some time, the os uteri became flaccid, and very rarely tore rather than yielded.—Dr. MORE MADDEN, Dr. BYRNE, Dr. DILL, Dr. MASON, and Dr. W. SMYLY, took part in the discussion.

REVIEWS AND NOTICES.

THE FELLOWS, MEMBERS, AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS. London: Printed by Ballantyne, Hanson, and Co., Chandos Street, W.C. 1886.

THE articles which appeared in the *Lancet* on October 30th and December 11th, concerning the history of the College of Surgeons, together with a letter of criticism upon Mr. Erichsen's pamphlet, have been printed in a handy form as a further contribution to the discussion of the pending claim of the Members to some share in the government of the College. We have already dealt with the matter somewhat exhaustively, but we gladly welcome this able, well-informed, and timely publication.

By this time, indeed, the weight of argument bears so heavily against the apologists of the Council, that it is hard to conceive how any unprejudiced person can have two opinions on the matter.

The writer of this pamphlet will be found to corroborate, at almost every point, the careful and elaborate Opinion of Counsel which we printed last week; and he arrives at an equally positive conclusion as to the overwhelming strength of the historical argument in favour of the Members' Franchise. He goes in some detail into the history of the Surgeons' Guild during the dark times of the seventeenth and eighteenth centuries; and in this we are under the impression that he concedes too much to Mr. Erichsen, when he admits that the statutes of 1604 and 1745 effectually abolished the Members' electoral and legislative rights. Even he, however, remarks that the Members continued to have a right of meeting in general court on important occasions, from which fact alone it seems to be clear that they still retained an ultimate legal right of control.

We would, among other things, especially draw the attention of our readers to the graphic account given in the pamphlet, as to the misdeeds of the Court of Assistance in the period which followed the discontinuance of the ancient general meetings in 1784. It is clear that the Members of the Company who petitioned Parliament in the last years of the century still claimed as of right that they ought to be convened and consulted on matters vital to the corporation, and that their contention was supported by the authority of Lord Thurlow and by the acquiescence of Parliament. The master and assistants had at the time sold corporate property without the consent of the Members, and had made purchases far beyond the legal limit. They had been guilty of gross maladministration, and in particular they are charged with having divided among a small clique, in the name of examiners' fees, a large proportion of the collegiate income.

It is no wonder that Lord Thurlow said that, under such circumstances, the Members had "the strongest title in the world" to have their complaints heard. It is clear that, at that time, the verdict of Parliament was in favour of making proper provision for the ancient rights and franchises of the Members, and for reforming in that sense the autocracy of the assistants. But in obtaining, by private influence at Court, the Charter of 1800, the old clique stole a march upon Parliament and the profession. It would be wholly against reason to maintain that this backstairs constitution is any argument against the revival of rights which are bound up with the essence of the corporation, and which had been recognised as being the ultimate controlling power from a time before historic memory.

It is curious to compare the spirit in which the supporters of the monopolist Bill of that day endeavoured to exclude the Members from their rights, on the plea that "some of them were ignorant," with Mr. Erichsen's similar suggestion that the ordinary Members of the College are too uneducated to be safely trusted with any part of its control. The retort which was made then is equally appropriate now. If it were the case that the Members were not sufficiently educated, it would only be the fault of the Council that it was so. The writer, who signs himself "Historicus," easily disposes of Mr. Erichsen's extraordinary argument from the analogy of other bodies. He shows that neither in regard to the College of Physicians nor to the University of London is Mr. Erichsen's contention tenable. It is still more absurd, however, with regard to the Scottish Universities. When Mr. Erichsen had the misfortune to appeal to the analogy of these colleges, he can hardly have taken the trouble to inform himself of their constitution. If he had procured any of their calendars, or looked into the Scottish University Act of 1858, he would have seen that the controlling body in each of them is the "University Court," composed of a limited number of members, of whom a relatively very large proportion are directly or indirectly the representatives of the ordinary graduates, and even the students, the remainder being representatives of the professorial or teaching body. In St. Andrew's and Aberdeen there is a University Court of six members, of whom two derive power from the graduates, two from the students, and two from the teaching Senate. In Glasgow the Senate has one additional member. In Edinburgh, for special reasons, there are eight members of the Court, two of whom derive their power from the municipal authorities. He would also have found that the "General Council" of each university, composed of all the ordinary graduates in medicine, law, arts and divinity, has itself endowed with considerable powers of influence and initiative, by reason of its statutory half-yearly meetings and its standing committee. But perhaps the most formidable part of the indictment contained in the pamphlet before us is the summary in its concluding pages of the mismanagement of the examination system controlled by the College from the year 1800 to the present time. In 1818 complaint was made of the examinations of the College in the House of Commons. In 1826 a large meeeting, presided over by Mr. (afterwards Sir William) Lawrence, condemned their examination as "perfectly ridiculous." Later on, the same private complaints continued, until in 1866 the pressure of the Visitors appointed by the Medical Council compelled the College of Surgeons to appoint examinations in medicine. In 1874 there was a further complaint by the Visitors and another partial reform. In 1881 the Royal Commissioners condemned the omission of any qualification in midwifery, and thereby compelled a further reform. And now, in 1886, the future historian will record the wanton refusal of the Council to make proper arrangements with the Apothecaries' Company, in spite of the direct protest of all those most interested in the future of the profession.

The simple Members of the College may not all be so distinguished as Mr. Erichsen and others, to whose scientific eminence we desire to pay all respect; but we imagine the mass of reasonable folk will find it hard to believe that a wide constituency, if it had existed since 1800, would have made any greater mistake than those which stand recorded against the actual government of the College.

The moment is a critical one; and, in commending this little pamphlet to our readers, we desire to impress not only on those who belong to the College, whether as Fellows or as Members, but upon all who by their interest in the profession are interested in the welfare of so powerful a body, that it is a general duty to consider gravely the points of history and policy that bear on the present dispute. The Council have challenged the appeal to history, and it has gone against them. On the question of policy they have not as yet made much

advance. The old argument of vested interest is still their sheet-anchor; and, as to this, we can only hope that the majority of the gentlemen whose votes as Fellows are now required, will feel it a point of honour not to allow their names to be used for the purpose of upholding an unconstitutional and obnoxious monopoly.

THE VOICE, MUSICALLY AND MEDICALLY CONSIDERED. By ARMAND SEMPLE, B.A., M.B.Cantab., M.R.C.P.Lond. London: Baillière, Tindall and Cox. 1886.

THIS little book is divided into two separate parts, each provided with a preface, and separately numbered. The first (pp. 68) consists of "Musical Considerations," and has previously appeared in the *Musical Standard*; the second (pp. 128) bears the heading of "Medical Considerations." In Part I, the author distinguishes clearly between the various kinds of human voice, and gives directions for their several cultivation. Part II contains a sketch of the anatomy and physiology of the larynx, and directions for using the laryngoscope, followed by remarks on the different diseases of the organ, their prevention and cure.

As this work appears to be intended for the public, it is a mistake to have described and figured the different laryngeal instruments, which can only have a value for the medical reader. The second portion of the book is liberally illustrated. A large proportion of the figures, however, have previously appeared in Dr. Prosser James's book, whilst those portraying the laryngoscopic appearances in different diseases are hardly sufficiently clear to be satisfactory.

The concluding chapters of Dr. Semple's work are devoted to vocal hygiene, special and general, and to a description of the different modes of breathing. The book is concisely and clearly written, and contains a considerable amount of information in a small space.

PRACTICAL NOTES ON THE TREATMENT OF DEFORMITIES. By HENRY F. BAKER, F.R.C.S.Edin., Assistant-Surgeon to the Royal Orthopædic Hospital, etc. London: Edward Stanford. 1886.

THE author, having been, before occupying his present office, resident house-surgeon for ten years at the Royal Orthopædic Hospital, desires in this book to describe briefly the methods of treatment which he has found to be best adapted for the relief or cure of the more common deformities, pointing out where he himself has encountered most difficulties, and indicating what means he has found best calculated to surmount them. It gives us pleasure to state that Mr. BAKER has performed his task very well. The work consists of a series of essays, every one of which bears the stamp of genuine practical experience, of intelligence, and of honesty. The more original parts of this book have already appeared as separate articles in the journals. Mr. Baker is not remarkable for any tendency to audacious innovation or reckless and revolutionary attacks on long accepted first principles of treatment; this, we need hardly say, we consider by no means a fault, but a positive virtue. But without being one of the bold bad young men of surgery, who wantonly disturb the repose of pre-Listerian seniors, we do think that a writer, who, from his position and abilities has a just claim to be regarded as a leader in orthopædic surgery, might have shown a little more appreciation of the invaluable orthopædic work of men like Ogston, Macewen, Volkmann, and Miculicz, not to mention that of Robin and the younger men of the now reviving French school. We have only left out the name of Lister because all men must know that his genius has been the inspiration of the others. Any record of experience, however, is valuable, so we must congratulate Mr. Baker on the production of a useful and practical little book.

NOTES ON BOOKS.

Subjective Symptoms in Eye Diseases. By GEORGE BERRY, M.B. (Edinburgh: Oliver and Boyd. 1886).—The title of this excellent monograph is misleading, and does not do justice to its contents. It is really a series of essays on the diagnostic value of different subjective eye symptoms, and, although some of these depend upon ocular diseases, several are indicative of morbid conditions of the brain, or of the general system. Indeed, we consider what may be called the medical portion of the book by far the most valuable, as it treats of the various symptoms with greater fulness than the ordinary text-books. The chapter on pain and asthenopia contains little that is not well known to all those who have paid any attention to ophthalmology, but the conditions producing binocular diplopia are described with great perspicuity. In the chapter on Night- and Day-Blindness, the effects of exposure to the electric light are referred to, but the symptoms are not described; the subject is one which is comparatively recent, and would have been interesting, but we appreciate the author's difficulty in deciding what symptoms to select. Dr. Berry adopts Hering's theory of colour-vision, and, although it is of theoretical rather than practical value, we consider this the best written section of the book; we cannot conceive, however, why neither here nor elsewhere toxic amaurosis is described, since the symptoms in the early stage are purely subjective. From the medical point of view, the cases of amblyopia which occur very rapidly without ophthalmoscopic signs, and those of hemianopia, are the most interesting. The book is written throughout in a clear style, and is evidently the result of careful thought. The symptoms with which it deals are those to which least attention is usually devoted in systematic treatises on ophthalmology, and their diagnostic value is often very great. We believe that Dr. Berry's book will prove an invaluable addition to the library, both of the general physician who has been trained to investigate the visual functions, and also to that of surgeons practising ophthalmology.

Ophthalmic Hospital Reports, XI. Part II. July, 1886. Edited by R. Marcus Gunn. (London: J. and A. Churchill.)—This part is, we should say, inferior in interest to its immediate predecessor, and, indeed, below the average. Messrs. Lang and Barrett are the authors of two papers: the one on the refraction of the eyes of mammalia, and the other on the action of myoptics on accommodation. Excluding the Curator's report, and three very short cases by Mr. J. Hutchinson, junior, these occupy the entire book. There are many interesting points in both papers, especially in the first; but we protest against the piebald appearance which is produced by giving all quotations in the language in which they were written; the authors have no right to assume that their readers know German; if there were any doubt as to the proper English equivalent, the German might have been given in brackets, but we prefer to see English books written in English. The Curator's report contains an interesting account of some cysts in the retina; we believe, however, that this condition is more common in eyes which have been lost from injury than is generally stated.

ASSOCIATION OF GENERAL PRACTITIONERS.

DR. WALTER VERDON (410, Brixton Road, London, S.W.) has sent us the following further list of names received since the publication of the first list last week.

Brierley, J. D., M.D., C.M., M.R.C.S., Alma House, Old Trafford, Manchester.
Colmer, P. S., M.D., L.R.C.P., L.S.A., etc., South Street House, Yeovil.
Carre, Dr., 131, Camberwell Road, S.E.
Coryn, Dr. W. J., 153, Acre Lane, Brixton, S.W.
Davies, Price Lloyd, L.S.A., Bryncoch House, Abergele, Denbighshire.
Dix, Arthur, L.S.A., Totton, Southampton.
Emmett, Richard, M.R.C.S., L.K.Q.C.P., etc., Woodside, Kingston Road, Portsmouth.
Frazer, W., B.A., M.D., etc., Elmhurst, Bournemouth.
Finzi, Dr. J. M., 99, Sutherland Gardens, W.
Forshall, F. H., L.R.C.P.Ed., L.R.C.P.L., M.R.C.S., etc., Southwood Lane, Highgate, N.
Fisher, S. W., M.D., M.R.C.S., L.S.A., etc., 136, Marine Parade, Brighton.
Good, F. C., M.R.C.S., L.S.A., St. Neots, Hunts.
Hubbard, H. W., L.R.C.P., M.R.C.S., 19, Elgin Crescent, W.
Hargreaves, J. B. L.R.C.P., F.R.C.S.Ed., etc., Wellgarth House, Armley, Leeds.
Howell, T. A. Ives, L.R.C.P., M.R.C.S., 14, High Street, Wandsworth.
Jones, J. Thoresby, L.R.C.P.Ed., M.R.C.S., etc., 34, Maryland Road, Sutherland Gardens, W.
Job, P., M.R.C.S., L.S.A., Newark-on-Trent.
Jalland, W. H., F.R.C.S.Eng.(Exam.), L.R.C.P., etc., St. Leonard's House, York.
Kennedy, A. E., L.R.C.P., L.F.P.S., etc., Chesterton House, Plaistow, E.
Kendall, W. B., L.R.C.P.Ed., M.R.C.S., etc., 5, South Terrace, Dorchester.
Lankester, H., M.R.C.S., L.S.A., 74, High Street, Leicester.
Lord, R., M.D., M.R.C.S., etc., Notting Hill, W.
Laxton, T. L., L.R.C.P., M.R.C.S., Shepley, Huddersfield.
Measures, J. W., M.R.C.S., L.S.A., Todmorden.
Morris, Dr. H. E., Sidmouth, Devon.
Martin, H. A., M.D., M.R.C.S., L.S.A., Beach Tower, Crannwater Park, Southsea.
Oswald, Rob., L.R.C.P., M.R.C.S., etc., 212, Clapham Road.
Pridmore, C. W., L.S.A., 116, Jamaica Road, S.E.
Parrott, J., L.R.C.P.Ed., M.R.C.S., 82, Camberwell Road, S.E.
Pook, W. J., M.R.C.S., L.R.C.P., 2, Hemingford Road, Barnsbury, N.
Penfold, H., M.R.C.S., L.S.A., Brighton.
Ross, C. E., L.R.C.S.I., L.K.Q.C.P., etc., Tenbury, Worcestershire.
Sandwell, E., L.R.C.P.Ed., M.R.C.S., etc., 10, Soho Street, Soho, W
Stanley, W. H. R., M.D., etc., 106, West Road, West Ham, Essex.
Spencer, Dr. W., Church Gate End, Retford.
Threadgale, Rob., M.D., etc., 3, Brondesbury Road, Kilburn.
Unwin, J. B., L.R.C.P., L.R.C.S., etc., Dunchurch, Rugby.
Worley, W. C., L.R.C.P., M.R.C.S., etc., 103, Green Lanes, N.
Wright, J. S. A., L.R.C.P.Ed., L.S.A., etc., 153, Upper Kennington Lane, S.E.
Walker, C. R., M.D., etc., Leytonstone, E.
Woollett, S. W., M.R.C.S., L.S.A., Southwold, Suffolk.
West, J. A., M.R.C.S., L.S.A., 113, King Henry's Road, N.W.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The Issue of the BRITISH MEDICAL JOURNAL now amounts to

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The British Medical Journal.

SATURDAY, DECEMBER 18th, 1886.

THE CIRCULAR FROM THE COUNCIL TO THE FELLOWS OF THE COLLEGE OF SURGEONS.

IT will be within the recollection of our readers that after the recent meeting of Fellows and Members, the Council of the College of Surgeons decided to do what it had previously refused when it was proposed in Council—and it was announced that a circular letter was in course of preparation, by means of which the opinion of the general body of Fellows would be ascertained. This was a course which was not only conciliatory but obviously wise, since if the opinion of the general body of Fellows were opposed to that of the majority of the Council it would be hopeless for the latter to persevere in resisting the proposed reforms, while, if the Council could plead a marked opinion of the majority of the Fellows in favour of the support of their privileges, it would at any rate give them a decent pretext, as the representatives of the Fellows, for persisting in their opposition, though it would, of course, in no sense be decisive on the merits of the case. But both the wisdom and the conciliatory effect of the circular depend on the terms of the reference, and in this essential particular the Council has blundered in the most singular manner. Instead of consulting the Fellows on the subject of the proposed changes, they have circulated two questions, so undefined as to admit of several different answers, and to render a simple answer in the affirmative or negative useless for all practical purposes. The first question is: "In your opinion, should Members of the College be allowed to vote for Fellows as members of Council?" A Fellow might argue, "I am not going to let every youth of 21, who squeezes through the College have the same voice in its management as a Fellow." Or he might argue, "There are at least a dozen times as many Members as Fellows. If they all vote together, the Fellows will really have no voice in the College." And in either case his negative answer would be obtained by a tacit misrepresentation of the proposals urged at the late meeting. The same may be said of the second question: "In your opinion should Members of the College be eligible for seats on the Council?" Looked at from one point of view, the bare acceptance of such a principle might make it possible for the most ridiculously unfit persons to direct the affairs of the College; and, from another, might, under conceivable circumstances, oust the Fellows from all power. But the plan proposed at the meeting is open to no such objections, and a negative answer, therefore, to the Council's two questions will be useless to it for any practical purpose, since it will be open to anyone to argue that it is inapplicable to the plan proposed by the meeting. Nor would an affirmative answer on the part of the majority of the Fellows to the above question, if unqualified, be much more decisive. There is a large influential and active party, both in and out of the Council, opposed to any change, and it would be easy for them to fortify themselves with legal opinions as to the possible effects of the change involved in the laconic questions of the Council, such as would justify that body in persistent opposition. We regret the more this unlucky move on the part of the Council, because it may throw some doubt on its good faith, and may import into the controversy a bitterness from which it has hitherto been free. We trust this will not be so, and we shall certainly set the example of abstaining from any such insinuation. But it is clear that the issue raised by the Council's questions is different from that involved in the resolution of the meeting, and this has been shown most completely and most tersely in a post-card bearing the signature, already well-known in this connection, of "Historicus," which has been sent, we believe, to every Fellow (and which will be found in another column). We cannot do better than repeat the warning of "Historicus" to very Fellow who has not yet returned the circular to the College, not to do so without specifying whether he is or is not in favour, not of the wide generalities of the Council's questions, but of the limited and practical proposals of the meeting's resolution.

Meanwhile, the incident shows how necessary it is for all who are in favour of the resolution to be up and doing. The form of the questions is undoubtedly such as to catch all possible votes from the Fellows, and it must be intended to use these votes for some practical purpose. This can only be to support the Council when it applies for the long-promised new charter; as this application will now probably soon be made, it behoves those who are promoting the Members' petition for a restitution of the rights of which they were deprived by the charter of 1843, to get this into as forward a state as possible. The Fellows can hardly answer the questions of the Council with an unqualified affirmative, and any use they may attempt to make of an unqualified negative must be met by the reforming party with temperate argument and with well-organised opposition.

THE ABUSE OF MEDICAL CHARITIES.

THE abuse of our medical charities is a subject which has never ceased to engage public attention, but which seems now to be so earnestly taken up by influential persons that we may hope to see some more determined and more successful effort made to remedy the abuses proved to exist than those which have occupied medical reformers during the last quarter of a century. It is, of course, in gigantic London that such abuses are most gigantic, but the abuses themselves are similar in character and only a little less in extent in all large cities, while the most remote rural districts have abuses of their own. But as these latter are chiefly connected with poor-law administration, or, rather, maladministration, we shall not speak of them here. The abuse of medical charity in large towns is becoming a really grave professional question. The general practitioners who practise among the poor

complain that the competition of gratuitous charities on the one hand, and sick clubs on the other, leaves them scarcely the means of livelihood. Medical reformers complain that the over-crowding of the out-patient departments prevents any deliberate treatment of the cases, or any sufficient instruction of the students, and that while the medical men are thus deprived of their patients, the poor are not adequately relieved.

Many of these complaints find an echo and a powerful support in a very interesting pamphlet on the "Abuse of our Medical Charities on the part of the Public and the Profession," which has been reprinted by Dr. Erskine, of Glasgow, from the *Glasgow Medical Journal*, and which we can heartily commend to the careful perusal of our readers. They will there see that the abuse of the out-patient departments (for it is with this part of the hospital-system that Dr. Erskine alone concerns himself) at Glasgow is very great—perhaps almost as great as in London—though, as he justly says, it is very difficult to get exact statistics on the subject. This difficulty in collecting exact figures has been used by the defenders of the present system to insinuate doubt as to the existence of any abuse at all. But the manœuvre, though dexterous, is hardly fair. The figures usually quoted are, we may allow, dubious, though they are collected from the authentic reports of the charities themselves. This proceeds from the tendency on the part of hospital officials to confound attendances with individuals; but, looked at in any way, the figures show an enormous prevalence of so-called medical charity; and, besides, the fact is patent to all who take the trouble of visiting out-patient rooms for themselves, that they are so crowded that the patients are often kept waiting for many hours, and that it has been found necessary in some of them to provide refreshment-stalls for the unfortunate people who thus spend more than half a working day to obtain half a minute's perfunctory notice from the overworked medical officer. Most important is it to bear in mind that this abuse is, as Dr. Erskine properly says, on the part of the profession as well as the public, for no amount of public agitation will succeed in effecting any adequate reform, unless the sympathy and the active co-operation of the profession are secured for a more rational system. It was not the public which started the present out-patient system, but the profession, and it has grown to its present gigantic proportions within the memory of men still alive, in consequence of the persistent competition between rival institutions, which was originated and stimulated by their medical officers and managers. It is, therefore, by the medical profession that the first effort must be made for its reform; and the slow progress of that reform hitherto has been owing to the apathy of the profession—an apathy which, we trust, is now passing away. The meeting a few days ago at the Society of Arts' Rooms, under Sir A. Clark's presidency, was an encouraging sign of this change. It resulted in the formation of a committee, at least half of which is to be formed of general practitioners, to consider the various plans now in use, or suggested, for the medical treatment of the poor of London, and to attempt to devise some system in which the profession generally can join—it being premised that a reform of the present out-patient departments is a necessary preliminary. This preliminary will probably prove the most difficult part of the task. But the reformers have in their favour the advantage of a public feeling, which is nearly unanimous. The time has almost gone by when men cared to defend the indiscriminate reception of all kinds of cases, and all classes of patients in the out-patient rooms as necessary for the selection of in-patients, or as useful for medical instruction—still less as either necessary or useful for the public health; and it is gratifying to see that the hospital authorities, as well as the medical public, are now waking up, however slowly, to the mischief which it produces. True, in most cases their attempts at reform are blundering or inadequate—inadequate, as only regarding the pecuniary circumstances of the applicant (the London Hospital system) while ignoring his medical circumstances, which are of far more importance—blundering, like the Guy's system of charging a few pence for admission. Still, they show an advance on the days when the excellence of an out-patient department was judged of by the largeness of the numbers passed through it; and with a little instruction from professional advisers, they can be easily made the commencement of a real reform. We believe that the Committee nominated at the late meeting has already begun the necessary preliminaries, and will soon be in active work.

Considering the opinions which this JOURNAL has always held and expressed on the out-patient question, and on the question of medical providence, it is superfluous to say how sincerely we wish them success. Our object rather is to impress upon our readers the necessity for forming clear opinions on the matter, and for that sacrifice of time and thought which is required for some definite action. Medical men are a busy race—their habits and pursuits do not familiarise them with public speaking—nor is it easy to find time to attend meetings and committees. All this is true enough; but it is so obvious that reform is necessary, and that no progress can be made towards it without individual effort, that we may fairly hope that the labours of the Committee will be encouraged by the sympathy of the medical public, and aided by their personal exertions. And we trust that we may also look forward to a wise spirit of accommodation on the part of those who are to frame and those who are to work the new system. The reform of abuses so wide-spread and inveterate must necessarily be slow, and at first imperfect; but by mutual good feeling and a wise spirit of compromise, we are confident that a provident system can be devised which will deserve and obtain the co-operation of the medical profession in London. In provincial towns, as Dr. Erskine's pamphlet shows, there is a similar need for reform; but in them the difficulties are less, and improvement may be hoped for more quickly. It would, indeed, be a scandal on the good sense of the profession if the present abuses were to be allowed to continue.

THE LIVERPOOL HOSPITAL FOR WOMEN, AND THE REPORT OF THE COMMITTEE OF INQUIRY UPON THE OPERATIONS PERFORMED THEREIN.

THE circumstances which led to the institution of a formal inquiry into the recent surgical work at the Liverpool Hospital for Women do not require to be told again. The Report of the Committee is now before the profession and the public, and it is with this that we are concerned. This report must be read in connection with the comments and reply of Dr. Imlach, one of the staff, whose conduct has been the main topic of criticism. We will not enter into his objections to the constitution of the committee, and the mode in which it conducted its investigations.

Let us consider some of the chief points in the report. Four classes of operations are specified. (1.) Ordinary ovariotomy.

"The expediency of this operation," they say, "is now universally recognised." But it is well to remember that it was not very long ago assailed with even more passion than are the operations actually under discussion. (2.) Exploratory incisions into the abdomen. "The few operations of this kind done at the hospital were, the Committee think, justifiable." At one time this operation was denounced as almost criminal. The odium heaped upon Frederic Bird is not even yet compensated for by the posthumous honour which is due to one who did so much to extend the beneficent domain of medicine by calling in the aid of surgery. The first condition of successful treatment is a true diagnosis. In a large proportion of cases of abdominal and pelvic disease, it is now known that the only sure treatment is surgical. In many cases a cure by surgical operation follows immediately upon the exploratory incision that laid bare the disease. In other cases, the disease also being revealed, just indications for future conduct are obtained. (3.) Oöphorraphy, or the replacement and fixation of prolapsed ovaries. Not to dwell upon the barbarous outrage upon etymology committed in the word, we are disposed to concur in the general terms of the judgment passed upon the operation by the Committee. They say that "experience of it is not yet large enough to enable them to express any strong opinion either for or against it;" and they urge that "the uncertainty as to whether the ovaries will retain the position in which they are fixed, together with the danger attached to all abdominal sections, constitute serious objections to frequent use of this proceeding." (4.) Removal of the ovaries and Fallopian tubes ("uterine appendages"). Controversy is naturally invited more especially to this operation. The Committee accepts the view that "it enters into the category of legitimate and justifiable surgical proceedings." It limits its inquiry to the way in which it has been employed at the hospital, and the subsequent results. It appears that, out of 106 patients submitted to this operation, 9 died, giving a mortality of between 8 and 9 per cent. The conclusion of the Committee is that "if the operation be done for comparatively trivial affections, or for conditions which might be remedied in a reasonable time without resorting to operation, and if the results are afterwards found to be far from certain, curatively, then a mortality of 8 or 9 per cent. is a serious objection to the operation done under these circumstances." Much of the virtue in these "if's" lies in the vagueness of the contingency.

The question of sterility, together with that of loss of sexual feelings and of physical energy, is much insisted upon. Now, if it be admitted that, in a given case, the ovaries and tubes are so affected as to be a source of danger or serious impairment of health, these questions may properly be eliminated. Disease of the ovaries and tubes must necessarily, in the majority of cases, entail sterility, and render sexual intercourse painful, if not even dangerous. Organs entailing danger and pain, and which are not likely to be treated successfully in any other way, are surely better removed by an operation which does not involve a risk greater than the disease. For this appears to be the guiding principle: Which is the more serious risk, the disease or the remedy? The question is not always easy to answer. It is one that must demand anxious deliberation; and, as a rule admitting of few exceptions, it should be decided on consultation with colleagues and after full and frank statement of the case to the patient and her friends.

Upon this latter point, that of clear explanation to the patient, there appears some conflict in the evidence. This is, in our opinion, a matter of paramount importance in this as in all serious operations. However difficult it may be in some cases to put the mind of the surgeon into intelligent communion with that of the patient, it must in most cases be possible to give such a statement of the object aimed at, and the dangers, immediate or remote, of the operation proposed, that the patient can form a reasonable judgment upon it. In some cases, where the judgment of the patient is clouded or incompetent, that of responsible friends must be appealed to. How is this best done? The patient is entitled to know what it is proposed to do, in order that she may give an intelligent assent. The surgeon should be protected against subsequent reproach or action. The case then should, we suggest, be stated in writing, a counterpart being preserved; this may then be the basis of verbal explanations. Were this rule followed, the Committee would not have had occasion to say that the patients examined upon this point "very generally denied that sufficient information—or, indeed, any information at all—was given to them as to what was proposed to be done to them."

As to the expediency of abdominal incision for "pelvic hæmatocele," the Committee express the opinion that "in ordinary cases it is not to be recommended." They do not define what are "ordinary cases." But Dr. Imlach is precise. He says: "They have once more ignored the distinction between extra-peritoneal hæmatocele or thrombus, and intra-peritoneal hæmatocele. If, as I believe, they refer, by the term 'ordinary,' to the former variety, I am certain they are right. . . . By the time intra-peritoneal hæmatocele is completely diagnosed, it is almost too late to operate; but there is also a more chronic and recurrent form."

As to "bleeding myoma," the Committee and Dr. Imlach are at variance. The Committee do not appear to have obtained satisfactory evidence of the shrinkage of the tumour and the relief from hæmorrhage. But hæmorrhage and pain were not the only indications for operation. Pressure upon the pelvic organs, notably upon the bladder, may entail dangerous, and, in the long run, fatal disease. In cases of myoma, it has long been the established rule to forbid marriage. Pregnancy and labour are likely to be disastrous, and ovarian activity is, therefore, dangerous.

The Committee conclude by expressing the "very strong opinion that the diseases which alone should be treated in the Hospital for Women should be those occurring in the female genito-urinary organs." All other cases "should be relegated to a general surgical hospital." But can the Committee advise how the selection of cases, in order to distribute them as it think ought to be done, is to be accomplished? The very strongest plea for exploratory incisions is to determine what the disease is, that is, to distinguish between what may be disease of the liver, of the kidney, of the intestines, of the uterus or its appendages. Where have the most splendid results of abdominal surgery been achieved? Is it in the general hospitals that Wells, Tait, and Keith in this country, and Marion Sims and Emmet in America, have made their brilliant achievements in abdominal surgery? Those who have found independent fields for work may very fairly ask: What right have general hospital surgeons to stamp with the stigma of incompetence men outside their own circle? In education the latter equal them, and in cultivated knowledge and skill in abdominal surgery they may claim to be superior. Is it for the good of the public or of the profession that

any one class of surgeons should be permitted to claim exclusive privileges, and to assume the power of tying the hands of their brethren!

A "TEACHING UNIVERSITY FOR LONDON."

THE Association for Promoting a Teaching University for London has held its second annual meeting, and the Executive Committee has described the conferences and consultations which it has held during the past year, and has explained the course which it proposes to follow in the future. Starting from the proposition that changes are to take place, and that the facilities for obtaining degrees are to be increased in London, this Association appears to look upon the University of London and the Royal Colleges of Physicians and Surgeons as rival champions, and to be prepared to stand by and watch the combat in the interests of the public. Its ideal is a University of many faculties, in the government of which metropolitan teachers should have a large share, granting degrees to London students at the end of a curriculum completed in London Colleges and Medical and Legal Schools; but, if it cannot attain so much, then it will struggle to maintain its fundamental principle, which is that in the coming University, however constructed, the teachers should have their rightful influence.

The meeting on Wednesday was miserably small, but the quiet, business-like tone of the proceedings did something towards making up for the lack of popular enthusiasm. The short extempore speech made by Professor Bryce, M.P., was a model in its way; moderate, incisive, and conceived in the true spirit of the broadest liberality, it can only be a matter of regret that it was not delivered before the Councils of the two Royal Colleges, instead of being addressed to a small assembly of teachers who were already convinced. The movement is now thoroughly on foot, and the Association not unnaturally is inclined to claim to have had a large share in setting it going. However this may be, the Association is now doing a useful work; and a perusal of the report of its proceedings, published in another column, will serve to prove to those who were not present at the meeting that the Association has settled down to its work, and is at length able to see clearly the extent and limitations of its field.

The Committee of the Senate of the University of London appointed to consider the various schemes for the reform of the University has been in communication, as we have mentioned from time to time, not only with the Association for Promoting a Teaching University, but with the Committee of Convocation; and it has had before it the scheme drawn up by Lord Justice Fry. We understand that, at a meeting held on Wednesday, these various proposals were discussed at great length, but that no final decision has been reached. Upon this Committee of the Senate, medical interests are in the hands of Sir James Paget, Dr. Pye-Smith, and Dr. Quain, so that the diversity of interests and modes of thought are, perhaps, as fairly represented as the present constitution of the Senate will permit.

THE PROPOSED MEDICAL UNIVERSITY.

As we intimated some weeks since, the proposition which the College of Surgeons and College of Physicians of England have for some time been maturing, for the purpose of obtaining the right of conferring a medical degree on London students, has undergone various changes in the course of discussion. The latest form which it has assumed is that at which we hinted in indicating that it would probably take the shape of aiming at the creation of a Medical University, formed essentially by a conjunction of representatives of the two Colleges. The broad outlines of this plan are, that the existing conjoint licence for minimum qualification would remain unaltered; that each College should retain intact its existing privileges and powers; that a new University would be created by charter from the Crown on the application of the two Colleges; and that its degree would be conferred on London medical and surgical licentiates after some further probation, and as the result of a medical exercise of which the character has yet to be determined. The advantages of this plan are obvious, and it would meet many objections which might be successfully urged to the mere giving of a degree as an addition to or in substitution of the present licenses, without any further medical exercise. It may, however, reasonably be anticipated that, to ensure success for such a plan, it will be necessary somewhat to widen the basis of the constitution. It would, indeed, in our view, be an essential element in any such medical university that the teaching bodies of London should be represented. By the teaching bodies, of course we mean the medical schools and colleges of London. This, we were glad to find advocated in the able address delivered by Mr. Marshall at the meeting of the Association for Promoting a Teaching University for London, on Wednesday evening last. Professor Marshall is one of the ablest and most thoughtful of the representative surgeons of London. He has the advantage, in this matter, of having an intimate connection with the College of Surgeons, of which he has been President, and which he now represents in the General Medical Council, of no little experience in connection with the working of the University of London, and he exercises just and considerable influence in the Association of which he is Chairman. Thus he is enabled to take a many-sided view of the question, and there is no doubt that in officially advocating—as we are glad to see he has done—the claims of the medical teaching bodies in London to a large representation in any such body as the proposed "University of Westminster," he is pursuing a course which more than any other will tend to give a wide and solid foundation to such a body, and will greatly increase the chances of its being called into efficient existence. There is one other point which, in our view, cannot be overlooked in considering the probabilities of such a charter being granted, and the claims of all parties in the existing state of the medical profession to take part in it. This is as to the claims of the Apothecaries' Society of London. We have before indicated that that body has not only historic claims to consideration, but has a powerful vitality, which has been greatly strengthened by the clauses of the Medical Act of 1886. Having been refused for the moment admission to the Conjoint Board it will, in due course of events, either enter into conjunction with some other body, which is, perhaps, at present a dubious contingency, or it will receive separate powers to give a registerable surgical, as well as medical, qualification. Its diplomates, therefore, will rank on precisely the same footing as those of the Conjoint Colleges. They will have the same just claims to be admitted to the examinations of the new University a the diplomates of those Colleges. Unquestionably, these rights will be put forward by the Apothecaries' Society with all the energy which an indefeasible claim and a necessity for existence can give; and the profession, which is now well aware that the continuance of the Apothecaries' Society, and the keeping alive

of the provisions of its Acts, are of vital importance in the ordinary contingencies of general medical practice, will support that claim. For not even the diplomates of the two Colleges or of the "University of Westminster" would be able to protect themselves against many forms of unqualified practice without the assistance of the Society of Apothecaries. It is well that all the facts should be before those who are acting in this matter, and that the representatives of the London schools should have these considerations clearly before their mind. Some opposition may naturally be expected to this very desirable project from universities in other parts of the kingdom, who may, to some extent, suffer numerically when medical degrees are as easily obtainable by metropolitan and English students as they are by those of the great schools of other divisions of the Kingdom. It would be unfortunate if this kind of difficulty should be complicated by internal dissensions or opposition from within; but a persistent denial of justice to the Apothecaries' Society and its Licentiates, present or future, and a disregard of the interests of general practitioners, would be a serious obstacle to what may otherwise, we hope, be regarded as a not distant attainment of the great desideratum—a medical degree for the students of the metropolitan schools on equitable and reasonable terms.

THE eighth annual entertainment given to the patients by the Charing Cross Hospital Students' Club will be held in the Board-room of the hospital this day (Friday) at 7 P.M.

THE proposal to present to Sir Andrew Clark, Bart., a testimonial in recognition of his distinguished services to the London Hospital and Medical School, is receiving a large amount of support not only among his colleagues and former pupils, but from many distinguished laymen, including H.R.H. the Duke of Cambridge.

MERLATTI completed the task he set himself of fasting fifty days at half-past six on Wednesday evening. His condition is stated by the physicians to be satisfactory, and he was able to retain a small quantity of a specially prepared wine administered to him.

M. EMILE FLOURENS, whose appointment to the Foreign Office in Paris was gazetted this week, is a son of the distinguished physiologist, and brother of the Communist leader. Their father, who died in 1867, was the colleague of Cuvier, a member of the French Academy, and Secretary of the Academy of Sciences. One of his last works was a critique of Darwin's "Origin of Species."

BOTTLE THROWING.

THE dangerous practice of hurling empty bottles from the compartments of railway-carriages to the imminent danger of workmen employed on the line is so largely on the increase, that the general Manager of the Midland Railway Company has again found it necessary to warn the travelling community against this stupid practice, which has often been attended with serious consequences.

THE GENERAL MEDICAL COUNCIL.

WE understand that notices convening a meeting of the General Medical Council on Tuesday, February 15th, 1887, have already been issued, and that they have been sent also to the newly-elected members, who do not technically become members of the Council until January 1st. Meetings of the Executive Committee have been summoned on Friday, January 14th, and on Monday, February 14th.

RESIGNATION OF MR. ST. GEORGE MIVART, F.R.S.

THE staff of St. Mary's Hospital have presented a handsome silver bowl and stand to Mr. St. George Mivart, F.R.S. It bears the following inscription: "To Mr. St. George Mivart, as a token of regard and esteem from his friends and colleagues of St. Mary's Hospital Medical School, on the occasion of his resigning the Chair of Comparative Anatomy."

CHOLERA IN BULGARIA.

A REPORT reached Sofia on Monday which leaves no doubt that several deaths have occurred from cholera in a village in the vicinity of Tirnova. The disease is said to have originated with a peasant, who came from Hungary, bringing with him some clothes belonging to a man who had died of cholera. Immediate measures were taken to confine the malady to the one village, where only a few deaths have occurred. No further fatal cases have been reported for a week.

CHOLERA AT GORIZIA.

A TELEGRAM from Constantinople says that, in consequence of the reappearance of cholera at Gorizia, it has been decided to maintain the quarantine regulations on arrivals from Austria and Italy as before, and the decision of the Sanitary Board, telegraphed on Saturday, is therefore rescinded until further orders.

HYDROPHOBIA AT CATERHAM.

THE whole of the five persons who were taken to Paris by Dr. Eady, of Caterham, to be treated by M. Pasteur after being bitten by a mad dog, have returned to their respective homes, and are reported to be progressing favourably towards recovery. The process of inoculation was performed at Pasteur's laboratory in the Rue Vauquelin, by Dr. Roux.

THE PREVENTION OF HYDROPHOBIA.

NOTTINGHAM is taking the initiative among provincial towns in an attempt to stamp out rabies, and has already issued stringent orders with regard to the muzzling of dogs. There has been a serious outbreak of rabies in the town; and the Town Council, at its last meeting, received the testimony of several veterinary surgeons and the medical officers of health for the borough as to its prevalence. It was stated that a horse and a cow, as well as a number of dogs, had been attacked with the disease. The Committee has availed itself of the powers conferred upon it by a recent Privy Council Order, and has issued regulations ordering the muzzling of all dogs for two months. It is to be hoped that, at the expiration of this time, the regulations may be continued for a more lengthened period; but it is only by combination on the part of towns and rural districts throughout the country that the disease can be stamped out.

THE POLICE ORDER AND RABID DOGS.

IT is officially reported that, during the month of November, the police captured 1,614 stray dogs in the metropolis, and of this number about a dozen are said to have been suffering from rabies. Fifty-one private individuals were bitten during that period, including six by mad dogs. Several police constables were also bitten.

SOCIETY FOR THE PREVENTION OF HYDROPHOBIA AND REFORM OF THE DOG LAWS.

AT a special meeting of this Society on December 3rd, at the offices, 50, Leicester Square, London, the following gentlemen were elected members of the general committee: Mr. Ernest E. Batt, of the Brown Institution; Mr. Brudenell Carter; Mr. Irwin Cox, J.P.; Dr. Glover; Mr. Ernest Hart, Chairman of the National Health Association; Dr. King; Mr. John T. Nettleship; Dr. B. H. Paul; Dr. G. W. Potter; Professor Pritchard; Mr. Briton Rivière, R.A.; Mr. Romanes; Professor Robertson; Professor Tyndall, and several others. The question of holding a public meeting at an early date was discussed at some length, and was finally referred to the executive committee for arrangement.

RABIES FROM THE BITE OF A CAT.

THE death from hydrophobia of a man who was bitten by a cat in the month of August last was the subject of an inquest at Manchester last week. The man, since the bite, had complained of pains in his right arm. A medical man was sent for, and at once pronounced him to be suffering from hydrophobia. Upon his advice, the deceased was taken to an infirmary. When admitted, he was in a dying condition, and, after lingering for a short time in great agony, he expired. The verdict of the jury was in accordance with the medical evidence, namely, that the deceased died from hydrophobia caused by the bite of a cat.

THE LIVERPOOL HOSPITAL FOR WOMEN.

AT the last meeting of the British Gynæcological Society, held on December 8th, it was moved by the president, seconded by Dr. Granville Bantock, and unanimously resolved that: "The report of the Committee appointed by the Liverpool Medical Institution to inquire into the practice at the Liverpool Hospital for Women be referred to the council of this Society, with instructions that they do report upon the same."

CREMATION.

THE twelfth cremation at the crematory of the Cremation Society of England, St. John's, Woking, took place on Monday last. The body was that of a retainer of the Prince of Chamba, named Chandan, a Brahmin, who died from consumption. A representative of the Ayra Somaj in London (who are interested in procuring the approved rite for Hindoos) was present. Some time ago, the rite of cremation could not be performed on the body of the wife of an Indian rajah owing to the want of a crematory, and the uncertain state of the law. This is the first cremation of an Indian subject in this country.

ELECTION OF CORONER.

THE following is the result of the voting for the election of coroner for the Eastern Division of the county of Middlesex, in the place of the late Sir John Humphreys: Baxter, 1,401; M'Donald, 1,069; Young, 696. Messrs. Beard and Porter also received a few votes each. We greatly regret that the influence of the medical men in the district was not sufficient to ensure the election of a medical candidate. In such a case, it would be exceedingly desirable where a medical candidate exists that a medical committee should be formed, that only one medical candidate should stand, and that the whole force of the profession should be exercised to ensure the election of a medical candidate. We hope this course will be pursued in the western division, if the district be divided.

NEW CORONER'S COURT AND MORTUARY FOR ST. PANCRAS.

THE ceremony of laying a memorial-stone for the erection of a coroner's court and mortuary for the extensive parish of St. Pancras was performed on Wednesday last. The site is in the rear of the Old St. Pancras' burial-ground, on what was formerly a part of Agar Town. The mortuary, which embraces all modern improvements, consists of three separate rooms adjoining each other, but entirely disconnected: one for deceased poor from the adjacent workhouse, a second for the outside public, and a third for infectious cases, the most perfect isolation being observed. As a protection to jurymen, the duty of "viewing" the bodies is done through a glass screen. The coroner's court is a spacious room.

POST-GRADUATE COURSES.

A POST-GRADUATE course has been instituted at St. Mary's Hospital Medical School, which will include a series of lectures and demonstrations to be given on Saturdays at 4 P.M. in the coming year. Lectures will be given by Mr. Shirley Murphy on Public Health Questions: Vaccination, Food Diseases, Infectious Diseases, and Health-Requirements of the Dwelling-House; by Mr. Edmund Owen on Spinal and Hip-Joint Disease; by Mr. Pepper on Inquest Practice, Special *Post Mortem* Examinations, Medical Witnesses—their Duties and Remuneration, Equivocal Causes of Death; by Dr. Cheadle on the Feeding and Food-Disorders of Infants and Young Children; by Mr. Malcolm Morris on Certain Skin-Diseases; by Mr. Field on Catarrhal Deafness, Otorrhœa, and Aural Polypi, and other Aural Affections; by Dr. Broadbent, Demonstrations of Various Forms of Heart-Disease, Prognosis, and Treatment; and by Dr. de Watteville, on the Choosing of a Battery, Application of Electric Currents to the Body, Methods of Treatment, and Electricity in Diagnosis.

EXAMINERS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were elected examiners for the ensuing year, namely: Elementary Anatomy, Messrs. James Black, W. B. Clarke, A. P. Gould, C. W. M. Moullin, and R. W. Reid; Elementary Physiology, Messrs. E. H. Fenwick and W. D. Halliburton; Anatomy, Messrs. W. H. Bennett, R. J. Godlee, H. G. Howse, and Edmund Owen; Physiology, Messrs. W. M. Baker, C. H. Golding-Bird, and J. McCarthy; Anatomy (Fellowship), Messrs. W. Anderson, R. J. Godlee, H. G. Howse, H. Morris, and E. Owen; Physiology (Fellowship), Messrs. W. M. Baker, C. H. Golding-Bird, B. T. Lowne, and J. McCarthy; Midwifery, Drs. W. Duncan, G. E. Herman, J. B. Potter, and John Williams.

FELLOWS AND MEMBERS OF THE ROYAL COLLEGE OF SURGEONS.

THE circular to the Fellows of the College, asking for their opinion on the questions of the admission of Members to the franchise, and of the eligibility of Members as candidates for seats on the Council, was issued on Saturday. The following is a copy of the circular and the letter which accompanies it:—"Royal College of Surgeons of England, Lincoln's Inn Fields, W.C., 9th December, 1886.—Sir,—You are doubtless aware that by the Charter of the College, dated September 14th, 1843, 'a new class of Members' was created 'to be called Fellows,' and in that Charter it was provided that none but Fellows should thenceforth become members of the Council, and that the right of election of members of the Council should vest in the Fellows alone. The Council having decided to seek alterations in the Charters to enable Fellows to vote by voting-papers, without personal attendance, at the election of the Council, and to effect other changes therein, an application has been addressed to the Council by some Members of the College requesting the Council to seek further alterations in the Charters, so as to enable Members to take part in the election of the Council and to be themselves eligible for seats on the Council. The Council will be glad if you will answer the questions printed on the fly-leaf of this circular, appending thereto your signature and address, which will be treated as confidential, and return the same to me, not later than Friday, the 31st instant, in the enclosed stamped envelope. I am, Sir, your obedient servant, EDWARD TRIMMER, Secretary."—"CIRCULAR TO FELLOWS—(*a*) In your opinion, should Members of the College be allowed to vote for Fellows as members of the Council? (*b*) In your opinion, should Members of the College be eligible for seats on the Council?" [Here follows the space for the Fellows' signature and address.] The following post-card, addressed to the Fellows, Members, and Council of the Royal College of Surgeons, has been sent to all the Fellows:

"SIR,—A resolution was passed, almost unanimously, at a general meeting held at the College of Surgeons on November 4th, to the effect that it would conduce to the welfare of the College, and tend to promote the interests of medical polity and education—(*a*) if Members of ten or more years' standing were empowered to vote (separately or conjointly with Fellows) in the election of the Council; and (*b*) if Members of twenty or more years' standing were eligible to sit in the Council to the extent of not more than one-fourth of the Council. The voting circular just sent out by the Council raises a false issue or a new one. I respectfully suggest that, whether you agree with the resolution or not, your answer should clearly specify whether it refers to the resolution, or to the new, different, and undesirable proposals involved in the unqualified interrogations of the Council.—I am, Sir, yours truly, HISTORICUS."

"London, December 13th, 1886."

THE TRANSMISSION OF ANTHRAX FROM THE MOTHER TO THE FŒTUS.

THE question whether anthrax can be communicated by the mother to her offspring before birth is still undecided. Branell and others believe that the bacilli cannot pass by way of the placenta to the fœtus—the placenta, so to speak, acting as a filter, and preventing the passage of these organisms into the blood of the fœtus. He inoculated an animal during gestation with the virus of anthrax, and death ensued in two days. He then infected four healthy animals; one with blood from the dead mother, three with blood taken from the organs of a fœtus; the animal infected by the blood of the mother died next day, whilst those infected by the blood of the fœtus evinced no sign of the disorder. Strauss, on the other hand, states that he has found the bacilli in the fœtal blood, but admits that the number of bacilli found in the body of the fœtus is very small.

EMPLOYMENT OF CHILDREN IN PANTOMIMES.

A DEPUTATION from the National Vigilance Association waited upon the London School Board at their last meeting, with a memorial asking the Board to prevent the employment of young children under ten years of age at pantomimes and other public performances, as being bad, educationally, physically, and morally. The late hours, the polluted atmosphere, the constant changes of temperature and clothing, the long periods without food frequently passed by the children, the walk home in the coldest hours of the nights, caused frequent illnesses, resulting in many cases in consumption, rheumatic fever, and even premature death. Reference was also made to the moral tendency of this unhealthy and artificial life. It was estimated that a thousand children were so employed in the London theatres. The deputation thought the prosecution of one of these employers could not but have a good effect, as the defendant would have to prove that the children he employed were in receipt of an efficient education. It was agreed to refer the matter to the By-laws Committee, with instructions to take such proceedings as they might think desirable.

THE OPHTHALMOLOGICAL SOCIETY.

THIS Society, at its last meeting, received most valuable additions to its incipient museum in the shape of Helmholtz's, von Graefe's, and Zehender's original ophthalmoscopes, the first and last being presented by Mr. Hulke, the President of the Society, and von Graefe's by Dr. Samelson, of Manchester. There was, as usual, a large amount of business to be got through. The chief papers were contributed by Dr. Brailey and Dr. Ormerod. The former related a case of hydatid tumour in the orbit, which presented the somewhat uncommon feature of uniocular neuritis, the exact mode of production of which remains a little doubtful. The latter described certain painful attacks of œdema and subcutaneous hæmorrhages around the orbits, the occurrence of which seemed to depend in some way on the nervous system; but further than that it did not seem possible in the present state of our knowledge to go. Mr. Jackman contributed the results of a very laborious investigation into the eyesight of some school children, and brought forward evidence to show that myopia was largely dependent upon constitutional debility. The best paper of the evening, that of Mr. Edgar Browne on a case of supposed quinine amaurosis, was taken at so late a period that it could not be read even in abstract, still less discussed.

THE ELIMINATION OF VIRUS FROM THE ANIMAL ORGANISM.

THE following is the result of observations made by Signor Trambusti on the elimination of virus from the animal organism, at the Institute of Pathological Anatomy at Pisa. The object was to clear up the still obscure point as to the elimination of the virus, and to make a special examination—(1) as to whether the elimination of a particular microbe is effected through all the secretory organs, or whether any particular organ has a predilection for a particular microbe; (2) as to whether the elimination takes place at any period of the infection; (3) as to whether the eliminated microbes still retain their pathogenic power, like those found in the blood, or whether they are expelled as dead bodies, or only modified in their pathogenic power. It being impossible to extend these complicated researches to all the diseases generated by microbes, the author confined himself to typhoid fever and malignant pustule. From numerous experiments, it appeared to result that the bacillary elements of malignant pustule and typhus are eliminated from the animal organism while retaining their full pathogenic power, and not as dead bodies. The author concludes—(1) that the pathogenic micro-organisms may be eliminated by the secretory glands of our organisms, through the epithelium, and through the capillary vessels intact, and that some of these micro-organisms are eliminated by preference rather through one organ than through another; (2) that the elimination takes place whenever these organisms are found in the circulation, whatever may be the period of infection; (3) that the pathogenic micro-organisms which are eliminated by healthy organs always retain their infecting power.

ELEGANT PHARMACY.

THE Committee appointed by the Pharmaceutical Conference at the annual meeting at Birmingham, on August 30th, is charged with a duty which is not only arduous in itself, but so mixed up with purely trade interests as inevitably to lead to a certain suspicion in the minds of many, that the whole movement is really intended to check the development of pharmacy in certain directions, and practically to boycot certain classes of preparations. The Committee, however, we are glad to learn, understands the mandate which it has received in a wide sense, and will study the questions at issue, from a scientific as well as from a commercial point of view; the chief results of its labours, if they are carried to a successful issue will be, it is hoped, to popularise "elegant pharmacy," and, in fact, to put it within the power of every chemist to compete on advantageous terms with the many "elegant" proprietary mixtures and syrups which are now so widely advertised. With this object the Committee will probably work in three directions; it will prepare formulæ for good flavouring mixtures, somewhat resembling the elixirs which have come into extensive use in the United States since their introduction by the Pharmaceutical Association, and as new drugs are introduced into practice, it will study their chemical and pharmaceutical qualities, and will devise the best working methods for preparing convenient preparations. The most captious critic could find no fault with these aims, but the Committee treads on dangerous ground when it proposes to publish formulæ designed to supplant good proprietary preparations, the composition and preparation of which are kept secret by their inventors. It would be a matter for regret if the Committee, which met for the second time on December 8th and 9th, took any hasty decision on these matters, for if once the rumour, unfounded we are willing to believe, that the whole movement is merely a device to maintain a commercial superiority threatened by enterprising rivals, is confirmed by injudicious action, the work of the Committee, however good in other directions, will always be regarded with suspicion.

PROF. KOLOMNIN'S FATAL OPERATION AND SUBSEQUENT SUICIDE.

AFTER the many false rumours about the late Professor Kolomnin's unfortunate case and his subsequent suicide, it is satisfactory at last to have the whole matter cleared up by Dr. Botkin, Professor of Clinical Medicine in St. Petersburg, who had been at various times consulted by his deceased friend with regard to his health, and who had a full knowledge of all the circumstances of the case. The patient who was operated on was a young woman, who had been sent from the medica out-patient department into the surgical wards. Professor Kolomnin found a large ulcer of the rectum, which he believed to be of a tuberculous nature; he decided to scrape and cauterise it. Proposing to employ cucaine as an anæsthetic, he made a number of inquiries as to the maximum dose, and looked up the literature of the subject, which comprised about thirty cases, in which from 6 to 90 grains (the Russian

grain = 1.0417 grain English), had been employed. Most of these cases were operations for crushing urinary calculi, and though the bladder, if healthy, is known to be quite unable to absorb such a quantity of the drug, in some cases vesical disease was present, and in these absorption must have occurred. Again, Professor Dieulafoy had employed 48 grains of cucaine in a rectal operation with success. Having regard to all these reported facts, Professor Kolomnin thought himself justified in disregarding the opinion of his colleague, the Professor of Pharmacology, who said he considered two grains a maximum dose. He, however, decided to give rather less than half the quantity used by the French professor, and to administer it in four rectal injections. After the third of these, it was found that anæsthesia had not been produced, so Professor Kolomnin introduced a speculum, touched the surface of the ulcer with a dry sponge, and gave another injection, which produced anæsthesia, though not of a very complete character. The ulcer was scraped, and an oiled plug left in contact with it. The pulse was then somewhat rapid. Forty-five minutes afterwards the pulse became greatly enfeebled, and the respiration laboured, the face and hands assuming a livid appearance. Everything was tried without avail—faradization, artificial respiration, subcutaneous ether injections, ammonia, stimulating and nutrient enemata, and even tracheotomy, with inhalation of oxygen—death being evidently due to the toxic action of cucaine. In some quarters Professor Kolomnin was much censused, but he himself considered that, with all the authority of numerous reported cases, he was not to blame for using the quantity of cucaine that he did. He, however, fancied that he had made an error in diagnosing the ulcer as of a tuberculous nature, and worried himself about having undertaken the operation. As to his own personal condition, he had lived for some years a most secluded life, devoting himself entirely to his scientific work, and making no intimate friends. He had latterly complained of palpitation and sleeplessness, and had become very irritable and, in some instances, apparently forgetful, so that there is no doubt in his eminent colleague's mind that when he committed suicide he was not really aware of the gravity of what he was doing. The day before he had gone to Professor Botkin to ask him to give an address at a medical society for him, as he felt too unhinged to do it. This request was complied with, his own death serving, alas! as the subject.

A NEW CANDIDATE FOR CHARITY.

THE Governors of Guy's Hospital have at length made up their minds to take a step which has long appeared to some among their number inevitable; the income derived from the broad acres which belong to the hospital has been decreasing until now the diminution has assumed very serious proportions; various efforts have been made to curtail expenditure, and from time to time wards have been closed; an attempt also was made to raise income by "reserving" certain beds in the general wards, "into which patients are admitted at a guinea a week, where they receive all the advantages of the hospital." Whether this was a strictly legal course to pursue may be doubted, and it is safe to conjecture that the Governors had some difficulty in persuading the Charity Commissioners to permit its adoption; but the scheme, as might have been anticipated, failed to make any great impression on the growing indebtedness of the hospital. The Governors now come forward with a bold demand for the free gift of £100,000, to enable them to keep open the present number of beds, "already," they say, "reduced below the needs of the population." A public meeting will be held at the Mansion House on Monday next, December 20th, and, backed up as the appeal will be by powerful city magnates, there is every reason to expect that the response will be liberal. It is, however, sincerely to be hoped that this appeal from one of the richest charitable institutions in the world—for Guy's Hospital owns property which, even in these days of agricultural and general depression, must probably be worth a good deal more than a million sterling—may not result in merely deflecting the stream of benevolence from the general hospitals which have to depend entirely on voluntary contributions into the coffers of Guy's Hospital. No doubt the Governors are of opinion that it is wise to act upon the advice often given to the promoters of charitable undertakings, to ask for more than you expect to receive, and would be well satisfied to get half of the sum which they demand; the Hospital Sunday Fund—appealing for all the hospitals in London, and with an unrivalled agency for reaching the charitable classes—has only succeeded in obtaining a yearly average sum of £30,000; extraordinary efforts during the past year only raised the amount to £40,000. The rivalry of such a wealthy institution as Guy's Hospital appealing for so large a sum, will be regarded as a great hardship by the managers of unendowed hospitals, who for many years have been struggling to make both ends meet. Before giving this immense sum to Guy's Hospital, the public has a right to know how its still large revenues are expended, and it is to be hoped that this right will be insisted on.

SCOTLAND.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

THIS Society met on December 10th. Dr. McCall Anderson read a paper on cases illustrative of syphilitic disease of the nervous system, and Dr. Middleton showed a patient suffering from syphilitic paraplegia.

DUNDEE ROYAL INFIRMARY.

THE directors of the Dundee Royal Infirmary have opened an establishment in the Lochee district, for the purpose of supplying medicines to out-door patients, and they are now considering the advisability of making similar arrangements for other outlying parts of the town. They have also determined to start a library in connection with the infirmary.

STIRLING ROYAL INFIRMARY.

THE report of the managers of the Stirling Royal Infirmary submitted at the annual meeting of the subscribers shows that, during the past year, the number of in-door patients was 226, being 12 less than in the previous year, and the number of out-door cases 1,584, or 36 less than in the previous year. The income was £984, as against £1,070; and the expenditure £948, as against £1,011; while the legacies bequeathed amounted to £725, making a total of £2,633 received since the foundation of the hospital.

KILMARNOCK INFIRMARY AND FEVER HOSPITAL.

AT the annual meeting of the subscribers to the Kilmarnock Infirmary and Fever Hospital, the financial condition of the institution occupied a large share of attention, as the expenditure (£1,528) slightly exceeded the income (£1,521), and this, with the deficit of last year, left a balance due to the bank of about £350. The invested capital amounts to £5,605. It was resolved that for the future in cases of legacies not expressly left for other purposes, one-half should be devoted to the capital fund and one-half to the ordinary maintenance fund.

IMPORTANT ENDOWMENT FOR DUNDEE.

AN important announcement has been made this week with regard to University College, Dundee. At a meeting of the Council held on Monday, it was intimated that Mr. Thomas H. Cox, of Maulesden, had offered a donation of £12,000 for the purpose of founding a Chair of Anatomy in the College in commemoration of the Queen's Jubilee. It is almost needless to say that the Council accepted Mr. Cox's munificent offer. The establishment of a Chair of Anatomy in Dundee is the first step towards the formation of a complete Medical School in Dundee; and the size of the town, the enterprise of its people, and the liberality of its wealthier citizens, together with the connection

already existing with St. Andrew's University, render the prospects of such a school very hopeful. Mr. Cox is a member of the well-know firm of Messrs. Cox Brothers, jute spinners and manufacturers.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

At the usual monthly meeting of this Society, held on December 13th, two patients were shown by Dr. G. S. Middleton. One was a woman, with a rheumatic history, suffering from multiple subcutaneous growths on the hands and other parts; the other was a case of blindness, following right hemiplegia, and exhibiting double optic neuritis advancing towards atrophy. Mr. Clark showed a specimen of cystic carcinoma of the mamma; Dr. Coats exhibited specimens from a case in which a fish-bone transfixed the œsophagus, and penetrated the aorta, causing fatal hæmorrhage, and also an aneurysm in a pulmonary cavity, which caused death by hæmoptysis.

GLASGOW MAGDALEN INSTITUTION.

The twenty-seventh annual meeting of this institution was held on December 10th. The report showed the total ordinary income to be £4,587 16s. 2d., and the total expenditure to be £4,668 14s. 1d., there being thus an excess of expenditure over income of £80 17s. 11d. The deficit was due to a decrease in the annual subscriptions, the amount received from this source being £807, the smallest for the past twenty-five years. The average number of inmates resident in the homes was 162, and the total number of cases dealt with was 339, of whom 94 were satisfactorily disposed of by being restored to friends or placed in service. The percentage who left of their own accord or were dismissed was 16.4. The average cost of dieting, including superintendents, was 3s. 4¼d. a head weekly. The total yearly cost for each inmate was £19 8s., of which sum each earned, on an average, £13 0s. 4d., leaving £6 7s. 8d. to be met by public subscription.

UNIVERSITY OF ST. ANDREW'S.

The Senatus Academicus of the University of St. Andrew's has presented a memorial to the Right Hon. the Secretary of State for Scotland, praying for two additional chairs for its Medical Faculty, namely, a chair of Anatomy and a chair of Botany. The St. Andrew's Graduates' Association are also moving in the same direction. About six weeks ago, a deputation appointed by the University had an interview with the Right Hon. the Secretary of State for Scotland and the Right Hon. the Lord Advocate, urging the propriety of augmenting the Medical Chairs to the extent indicated, by introducing a clause or clauses to that effect into the forthcoming Universities (Scotland) Bill. St. Andrew's University has always felt the necessity of increasing its teaching medical staff, and attempts have been made from time to time in this direction for very many years past. The present seems a favourable opportunity for attaining the desired end. The University is desirous of increasing its teaching staff to enable it to give two *Anni Medici*, the period of residence required for medical graduation at the Scottish universities. With two additional Medical Chairs, St. Andrew's would not only be able to give the first two years of the medical curriculum, but it would be enabled to draw upon the extra-academical and Hospital Schools of the United Kingdom for the last two years, an arrangement which could not fail to be very convenient to many aiming at a university medical degree. St. Andrew's has now a seat at the General Council of Medical Education and Registration of the United Kingdom, and is splendidly equipped as regards the teaching of chemistry, physiology, and zoology. It has also a very fine medical library and museum, and the amenities of St. Andrew's as a place of study are everywhere recognised. Of late years St. Andrew's has made great strides in science teaching, and, if it only succeeds, by public or private endowment, in obtaining its present request, it may in the future become as well-known for its medical teaching as it has in the past been for its divinity and arts teaching.

IRELAND.

We understand that the reports as to the prevalence of enteric fever in the Royal Barracks, Dublin, have been greatly exaggerated.

EDUCATIONAL VACCINATOR FOR DUBLIN.

Amongst medical practitioners who have graduated in Ireland it has long been felt to be a hardship that, although they may have been competent to perform public vaccination in their own country, and may, in fact, have possessed the certificate in vaccination given by the Dublin Cowpock Institution, or the Vaccine Department of the Irish Local Government Board, yet they have been precluded from holding the appointment of public vaccinator in England until they obtained a "Special Certificate of Proficiency in Vaccination" from one of the teachers or examiners authorised to grant certificates for the purposes of the Order in Council of December 1st, 1859. Such teachers and examiners have from time to time been appointed by the English Local Government Board in most of the large towns in England and Scotland, but not in Ireland. For maintaining this exception in the case of Ireland, there has been no sufficient reason. It has, we believe, been considered that the standard of efficiency in vaccination demanded of public vaccinators in Ireland was not so high as in England, where the public vaccination stations are periodically inspected by a Government inspector, and that there would be inconvenience in authorising an Irish vaccinator to grant certificates of proficiency in vaccination, unless his system of vaccinating were similar to that recognised in England, and unless he would in all cases require a sufficiently high standard of proficiency. Some months ago the Dublin Branch of the British Medical Association brought this subject before the Local Government Board, and, as the result, the Board, after careful investigation of all the circumstances, have just issued their order, appointing Dr. A. N. Montgomery (who is known officially as the "Secretary" of the Vaccine Department of the Local Government Board for Ireland), subject to their orders, to "give certificates of due qualification in the practice of vaccination to any person or persons, after due instruction or examination by him in the said practice at the public vaccination station at No. 45, Upper Sackville Street, Dublin." We feel quite sure that this is a very judicious appointment, and that it will be fully appreciated by students of medicine in Ireland.

THE CONSUMPTION HOSPITAL, THRONEMOUNT, BELFAST: FIRST ANNUAL MEETING.

The first annual meeting of this hospital was held on Tuesday, November 14th, at Thronemount, the Venerable the Archdeacon of Connor occupying the chair. The medical report, submitted by the attending physician, Dr. Lindsay, showed that 25 patients had occupied the beds during the year; of these, 4 died in the hospital, 1 being moribund on admission; 8 were discharged in greatly improved health, and, in most cases, returned to their occupations; 5 left the hospital of their own accord without material benefit, and 8 remained under treatment, of whom 5 had made a substantial gain since admission. In view of the fact that the hospital is specially designed for advanced cases (incipient phthisis being admitted into the Royal Hospital), these results were regarded as satisfactory. An analysis of the occupations of the patients showed that nearly two-thirds of the cases admitted were those of workers in mills and factories, which act as veritable breeding-grounds for phthisis. The report further expressed the great satisfaction of the medical officer with the nursing and with the comfort, cleanliness, and thorough efficiency of the domestic arrangements of the hospital. The general report, read by the Rev. J. C. Street, gave very ample details of the year's work, and urged that no time should be lost in embracing the offer of Mr. Foster Green (the founder of the charity) to build a new wing at the cost of £15,000, provided the sum necessary for its endowment be first

obtained. A subscription-list was opened, and nearly £2,000 was subscribed on the spot, including a generous gift of £1,000 from Mr. Green. In replying to the vote of thanks passed to him for his services during the year, Dr. Lindsay stated that nearly one-sixth of the population of Belfast succumbed to phthisis, which meant that the disease carried off at least 700 victims from their midst annually. He attributed the indisposition to provide adequate hospital accommodation for the disease to the mistaken idea that little could be effected by medical treatment, and expressed his own conviction that, in a considerable proportion of cases, the temporary arrest of the disease, with the addition of years of fairly useful life to the patient, might be confidently expected.

AN APPEAL.—THE LATE DR. NOWLAN.

THIS gentleman was for over thirty years a medical officer of one of the largest, most densely populated, and poorest dispensary districts in Dublin. He was indefatigable in his work; and gained the esteem of his board of guardians by his high character, and the regard of the poor by his attention and kindness to them. Owing to the demands on his time by his public duties, he was unable to secure private practice. Having a large young family to provide for, he could not afford to pay a substitute and take any holiday. He was literally, therefore, worked to death, and, unfortunately, he leaves a widow and nine children totally unprovided for. The dispensary medical officers and some of the guardians and officials of the North Dublin Union have got up a subscription for the relief and support of this afflicted family. The case is, indeed, an unusually distressing one. Some members of the profession in Dublin have already subscribed to the fund, but further contributions are urgently needed, and will be thankfully acknowledged by Dr. J. R. Ferguson, 20, Upper Sherard Street; and Dr. Albert O. Speedy, 28, North Frederick Street, Dublin.

PROPOSED TESTIMONIAL TO DR. ARCHIBALD JACOB.

IT is gratifying to learn that the proposal to present a testimonial to Dr. Jacob has been warmly taken up in Dublin and throughout Ireland. A circular letter, convening a meeting to-day (Saturday), at 4.30 P.M., at the Royal College of Surgeons of Ireland, has been signed by Professor Edward Hamilton, Dr. James Martin (Portlaw), Dr. E. D. Mapother, Dr. John H. Chapman, Professor W. Thornley Stoker, and Dr. John L. Walshe (Kilmacthomas). The letter points out: "That the present is a fitting time for the members of the Medical Profession throughout Ireland, and especially those holding public appointments, to present to Dr. Jacob a testimonial as a recognition of their esteem for him personally, as well as of the inestimable and unceasing efforts he has, for the past twenty years, exerted for their benefit, whilst being himself a disinterested person. Not only as editor of the *Medical Press and Circular*, but also as one of the most active and zealous members of the Irish Medical Association, Dr. Jacob has devoted for many years his valuable time and most able advocacy to all matters for the advancement of the interests of the Medical Profession. Of this we feel assured you cannot fail to be aware; and, further, that you are cognisant of the fact that his recent candidature for the office of Direct Representative has entailed a very considerable expenditure on his part." It is proposed that all the preliminary arrangements shall be made at this meeting, and there is good reason to hope that the testimonial will prove, in every respect, thoroughly satisfactory. Communications should be addressed to Dr. Chapman, 122, Pembroke Road, Dublin; Professor Hamilton is the Hon. Treasurer.

THE new infirmary at Workington, which has been built at a cost of about £3,000, was formally opened by Mrs. Wilson, the wife of Mr. Alexander Wilson, Managing-Director of the Cyclops Iron and Steel Works, belonging to Messrs. Charles Cammell and Co., Limited, on November 29th, in the presence of the Bishop of Carlisle, Sir Wilfrid Lawson, M.P., Mr. Henry Curwen (of Wokington Hall), the members of the Local Board, and many others. Mr. Wilson presented a cheque for £380, so that the building should be opened free from debt.

DEGREES FOR LONDON MEDICAL STUDENTS.

ASSOCIATION FOR PROMOTING A TEACHING UNIVERSITY FOR LONDON.

A MEETING of the Association for promoting a Teaching University for London was held at King's College on December 15th. The chair was taken by Professor JOHN MARSHALL, F.R.S., and among those present were Professor James Bryce, M.P.; Dr. W. J. Russell, F.R.S.; Sir George Young, Bart.; Sir Dyce Duckworth; Dr. S. Wilks, F.R.S.; Mr. Herbert Page; Dr. Allchin; Dr. S. Coupland; Principal Wace, D.D.; Professor Adams; Dr. Sturges; Mr. Macnamara; Professor Scrutton; Professor Cunningham; Dr. Norman Moore; Mr. George Cowell; Mr. John Tweedy; and Professor Frederick Pollock.

A further (second) report, describing the steps taken by the Committee since the last meeting, on December 2nd, 1885, was presented. It stated that a full statement in detail of the proposals before the Association was drawn up and sent with a covering letter to the governing bodies of the University of London, University College, King's College, the Royal Colleges of Physicians and Surgeons, the Medical Schools, and the Council of Legal Education. The Senate of the University, the Councils of University and King's Colleges, and the Medical School of Guy's Hospital appointed Committees, with whom the deputations from the Committee of the Association had interviews. University and King's Colleges expressed a general approval of the objects in view, and the proposals were favourably received by Guy's Hospital, while Sir James Paget, on the part of the Committee of the Senate of the University told the deputation that the general disposition was to move in the direction indicated by the Association. The report concluded by stating that the Committee of the Association, while awaiting some further communication from the Senate of the University of London, which, it was understood, would be made either to the Association or to the university teachers of London, proposed to take steps for bringing to the notice of Her Majesty's Government, the need for the co-operation of the Government and the legislature in order to place university teaching in London on a more satisfactory basis.

The CHAIRMAN observed that it was a matter for congratulation that the Association was able to meet in the buildings of one of the institutions deeply interested in the success of the movement, which he said had materially advanced during the past twelvemonths. The London University had taken into serious consideration the practicability of working the scheme for a dual university, and the Royal Colleges of Physicians and Surgeons had advanced so far beyond the first crude idea, which was to obtain power to confer the title of Doctor, as to be prepared to seek to obtain the right to grant degrees and constitute a university. The Executive Committee of the Association proposed to seek an opportunity to have a conference with the College, in the hope of inducing them to work under a larger scheme, which would benefit all departments of education, and not one only. The Association did not desire to transform itself into a university, but to promote the formation of a university by the best available means. In any case, any scheme which would leave the government even of a university consisting of only one (medical) faculty in the hands of the Colleges alone, could not even temporarily satisfy the Association unless the teaching element was represented. If this point could be carried, then, even if the medical faculty remained isolated for the time, it would eventually be possible to add other open faculties. The University of London and the two Colleges were about to approach the Government, and the moment was opportune for this Association, which represented wider interests, to make its voice heard.

SIR GEORGE YOUNG, in a speech which was in great part a paraphrase of the report, dwelt especially on the fact that, in its interview with the Committee of the Senate of the University of London, the deputation perceived that great significance was attached to the question whether those who were to take the degrees of the university of the future, were in all cases to be students who had gone through a course of instruction at recognised institutions. The answer of the deputation was necessarily in the affirmative, and the Association was not likely to depart from this, which was its main principle. The fact that the University and the Royal Colleges were in motion showed that the prospect of achieving the objects of the Association had greatly improved; for it must be remembered that since the constituted authorities now admitted that changes were necessary, they at the same time practically admitted that the decision as to what these changes should be must not rest merely with them, but that interested individuals or bodies should have a share in the final adjustment. He moved the following resolution:

That the Report be received, and that the Executive Committee be empowered to approach Her Majesty's Government for the purpose of obtaining from the Government and the Legislature the necessary measures for forming a Teaching University in London.

Dr. WACE (Principal of King's College), in seconding the resolution, mentioned, as an instance of the various quarters in which the need of a university in London was felt, the fact that the regulations of the scheme for extending university education in London by the delivery of courses of lectures in various localities, had been drawn and sanctioned by a joint Committee of the Universities of Oxford and Cambridge. He considered it absurd that London should have to go to Oxford and Cambridge for this sanction. He drew special attention to the phraseology of the resolution, the word "forming" having been substituted for "founding," to avoid the implication that the Association desired to replace existing institutions.

Professor BRYCE, M.P., in a speech which was much applauded, said that he thought the Committee was fully justified in contending that it was now time to go to the responsible government of the country to enlist its sympathies with, and perhaps its control of, the movement; considering the greatness of the undertaking, and the diffusion of interest in London, the fact that existing institutions had been brought to admit that reform was necessary, marked a considerable advance. The Association was the only body which could represent the public at large; it had no special interests, and it could speak in the name of the general population of London, which had a great interest in the matter. It would be much better for the Royal Colleges of Physicians and Surgeons, much more advantageous to them in the long run, to unite to form a faculty which should be a part of a large and complete university. Faculties must always gain in strength by combination; this was the history of the mediæval universities, which owed much of their power and influence to the association of faculties. These, he said, were not the days when a medical faculty could be considered satisfactory which was not associated with a scientific faculty, or a legal faculty not associated with a historic faculty. In an age when the intimate connection between the sciences was so generally recognised, the proposal was retrogressive. He believed that the University of London ought to be expanded; it would be a nobler task for it to be at the head of science, of learning, and of teaching in London, than to retain its present exclusively examinational powers. He instanced the present condition of the Training Colleges, and the needs of advanced historical students, as examples of the want which existed. When once a university was constituted on the lines favoured by the Association, many as yet unforeseen paths of usefulness would open before it.

The resolution was put and carried without a dissentient.

A vote of thanks to the Chairman was moved by Sir Dyce Duckworth, and seconded by Professor Scrutton. Mr. Marshall briefly replied, and the proceedings terminated.

The attendance was very small, not more than thirty persons, excluding reporters, being present.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

A CONFERENCE of members and friends of this Association was held on the afternoon of Tuesday, December 7th, at the Society of Arts, John Street, Adelphi, for the purpose of eliciting "a full and free expression of opinion upon the present condition of the out-patient departments of the metropolitan hospitals, and the provident system as applied to the medical relief of the working classes;" and to endeavour to agree upon some definite and systematic plan for the relief of the present crowded condition of the out-patient departments, and to provide for the medical treatment of the working classes by their own payments, in such a manner as to secure the general co-operation of the medical profession.

Sir ANDREW CLARK, Bart., M.D., took the chair at 4 o'clock, when there was a large attendance of the profession.

The CHAIRMAN said they had met to discuss a very important question of medical relief. This was one of the most important subjects within the whole range of medical polity, and it affected the interests, not only of the sick poor, but of the profession. The matter required to be subjected to the strictest scrutiny. He had not formed any definite opinion upon the subject; and it might possibly be fortunate that it was so, seeing the position he had been called upon to occupy that night. Like many others present, no doubt, he desired much more information than he yet had, and it was necessary that all that was known upon the subject should be set forth in order that they might be guided to a right conclusion. Looking at the resolution before them, he thought all the essential grounds necessary for a decision would be brought before them that afternoon. First of all, it would appear whether the existence of a Provident Association was necessary; then they would probably hear whether the good done by provident associations counterbalanced the evil which they did; next, if it is right they should exist, whether it should be as private or as public bodies; and, further, whether they should be affiliated to hospitals, or whether they should have an autocracy of their own. In the next place, the question would arise how such associations would be most efficient; whether the officers should be appointed for an indefinite time; or whether, considering the amount of instruction such posts would yield to junior practitioners, the officers should be appointed for a limited time only. Another very important point would be to inquire what persons should be admitted to the benefits of the association, and upon what terms; how they were to regulate the disbursement of the funds which accrued, and how these should be distributed amongst the medical officers.

Mr. TIMOTHY HOLMES proposed the first resolution, which was as follows: "That, in the opinion of this meeting, the future medical attendance on the poorer classes ought to be conducted on the principle of sick-assurance." He said the question they had met to discuss that afternoon was first mooted quite thirty years ago, but nothing really definite had taken place until the Metropolitan Provident Medical Association took the matter in hand. The result was, so far as he was acquainted with it, that the movement was successful in some districts, but not in others; and, on the whole, there was not that advance which they had hoped to see. There was no doubt that the principle of the Association was a sound one, because it was exactly similar to that upon which all insurance societies worked. The out-patient departments of the metropolitan hospitals were very greatly abused in more ways than one; they were so crowded, that the medical men could not devote a proper amount of attention to each patient; and the patients numbered many who could well afford to pay for the advice they received. The establishment of provident associations was a step in the right direction. With regard to the character of the associations, he considered that they should be public, and not private; further, that they should be affiliated to the great hospitals, so that the advantages of study might be within reach of the medical practitioners connected therewith. A great difficulty would probably arise in determining who should, and who should not, be members of the association. The best method of settling that question would probably be to have some wage-limit, and a scale of pay graduated according to the amount earned. These were questions which would be more readily settled when the associations were formed.

Mr. LUSHINGTON, treasurer of Guy's Hospital, seconded the resolution. He thought that such associations, if properly safeguarded, were capable of doing a great deal of good. The working men would feel they were honestly paying for what they received, and they would thereby be enabled to preserve their independence. They had established a rule at Guy's which worked well, namely, to allow out-patients to pay something towards the cost of their medicine. The charge levied was not less than threepence. [A voice: "And medical men have to starve." Signs of dissent.]

Dr. PARAMORE said he did not approve of the suggested medical associations: they seemed to be only an extension of the club system, which was in itself a degradation. He infinitely preferred the method suggested by Dr. Sheen, of Cardiff, which was a dispensary with a strict wage-limit, all the subscriptions going to a common fund, and being divided at specified periods, according to the number of cases visited.

Mr. F. B. JESSETT gave an account of the successful working of an association on the principle of sick assurance with which he had been connected. They limited members to those receiving up to 30s. a week.

Dr. WALTER SMITH insisted that in such associations there should be a wage-limit.

Dr. GLOVER asked what amount would be received by the medical attendants under the plan of a provident association.

Mr. W. G. BUNN said their association now had about forty medical gentlemen on its list; and there were 25,000 members. Some of the medical men received £100, and others scarcely one hundred pence.

Mr. GEORGE BROWN believed that, if properly worked, the medical provident associations would be a great success.

Dr. R. J. LEE observed that the system in vogue at Guy's of allowing patients to pay 3d. for their medicine, cut away the ground from under the Voluntary Provident Medical Association. At the same time, he thought such a principle could not be applied at the great hospitals, which were so often made use of in cases of sudden illness.

The resolution was carried.

Mr. W. Bousfield, chairman of the Metropolitan Provident Medical Association moved the next resolution :—"That the attention of the governing bodies of hospitals and other public authorities be called to the necessity for some check on the indiscriminate provision of medical treatment at hospitals and dispensaries." In his opinion, although attention had been called to this matter before, the state of the London hospitals had not improved; while, on the other hand, the experiments which had been made in the establishment of provident dispensaries had been a success. It was necessary, however, in order to enlarge their area of work, to enlist the support of medical men generally; and he hoped that would result from the conference which was held that afternoon. At some of the metropolitan hospitals, including the London Hospital, patients were treated by students, which was not a desirable matter.

The Chairman here rose and said he could not allow such a statement to go forth with regard to the London Hospital, and he should at once put the question to Mr. Nixon, who was present, as to whether students were allowed to treat patients?

Mr. Nixon said, at the London Hospital the students were not allowed in any way to treat the patients.

Mr. Adams, in the course of his remarks, repeated the allegation about the London Hospital, and was checked by the Chairman, whereupon he apologised for the statement.

Mr. Bousfield said, elaborate inquiry had been made in 1873 by the Out-Patient Reform Committee with regard to the practice, and, out of forty-eight hospitals, only eleven were able to state that their out-patients were not prescribed for by unqualified medical students.

Dr. Belcher declared that the present unhappy condition of medical men was due to the scandalous abuse of hospital funds.

Mr. G. Brown proposed that the resolution should be prefaced by these words :—"That, in the opinion of this meeting, the out-door departments of the metropolitan hospitals, as at present carried on, are a source of public evil."

On it being put to the vote whether these words should be added to the resolution, ten voted in its favour and sixteen against the addition.

The resolution was then carried as originally proposed.

Sir T. Spencer Wells moved the appointment of a committee for the purpose of reporting on the subject of assurance as applied to the treatment of the sick, and said what they all wanted was to avoid the encouragement of pauperism in the patients treated, and the cultivation of a more manly and independent spirit. He had lately received the report of what had been done at the Victoria Dispensary, at Northampton. In the last year the receipts amounted to £1,751, and upon the division being made one medical man received £887, another £415, and a third £284. He had also been informed that the operations of the provident dispensaries at Liverpool had positively resulted in a diminution of the cost of medical relief under the Poor Law administration.

A vote of thanks was then passed to the Chairman, and the Conference closed.

Committee appointed, with power to add to their number: Sir A. Clark, Bart., Sir T. S. Wells, Bart., Mr. T. Holmes, Dr. Glover, Dr. Alderson, Mr. Nelson Hardy, Lieut.-Col. Montefiore, Mr. W. Bousfield, Mr. W. G. Bunn.

PARLIAMENTARY BILLS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

REPORT OF THE CHAIRMAN ON PRIVATE SANITARY LEGISLATION FOR NEXT SESSION.

In accordance with my usual custom, I report herewith, for the information of the Committee and of the members of the Association, a summary of the notices which have been given by Corporations and Local Boards, as to their intention to apply to Parliament in the forthcoming session for medico-sanitary powers not covered by the general statute law. It is important that the attention of the profession in the towns named should be directed to these intentions of their local sanitary authorities, since important medical interests are involved in the powers asked for by the corporations.

I have judged it best to adopt, as far as possible, the language of the notices themselves, since it is not always clear, from these preliminary announcements, to what extent local authorities intend to push their requests. It will be observed, however, that, in the main, the powers asked for are based upon what Mr. Sclater-Booth's Committee of 1882, and the later committee of this year, judged to be permissible. All six places—Over Darwen, Wakefield, Weston-super-Mare, Weymouth and Melcombe Regis, Willesden, and Wolverhampton—wish for powers to require the compulsory notification of infectious diseases. The desire of Willesden to be possessed of these powers is particularly interesting, in view of the intimate (indeed, inseparable) connection of that place with the metropolis. Three of the remaining five places are manufacturing towns in the North and Midlands, and two are health-resorts in the Western country. There could not well be a greater diversity amongst the communities seeking these notification powers. The Parliamentary Bills Committee has repeatedly—but hitherto with little success—urged the necessity of this question of notification being thoroughly examined and inquired into by a Parliamentary Committee, not in connection with the proposals of individual towns, but on broad principles applicable to the whole country. It may be hoped that next Session the Government may be found willing to assent to an inquiry of this kind.

Over Darwen seeks to make further and better provision for detecting and preventing the spread of contagious and infectious diseases, and for requiring notice to be given of such diseases, and to empower the Corporation to provide hospitals or temporary accommodation and nurses and medical treatment. To compel cowkeepers and persons engaged in washing or mangling clothes, and others, to furnish a list of their customers in certain cases, and to provide for the inspection of dairies, &c., beyond the borough. To provide for the cleansing and disinfection of any house, or any articles therein, or of any person liable to communicate contagion or infection; to prohibit the retention of dead bodies; to provide for the removal and interment of persons dying from infectious disease; to provide for the recovery of any expenses incurred by the Corporation; and to prevent the use of public conveyances for the removal of the bodies of such persons. To compel, under a penalty, common lodging-house keepers to give the notice required by Section 84 of the Public Health Act.

Wakefield wants to make further provisions with respect to the prevention of infectious and other diseases; for the giving of notice as to infected persons; the providing of temporary or permanent hospitals or shelters for persons suffering from infectious diseases, and for families turned out of infected premises; for providing nurses; the removal of infected persons to hospitals; removal and burial of dead bodies; prohibition of the retention of diseased dead bodies; prohibition of the letting of infected premises; and penalty for offences under Section 84 of the Public Health Act, 1875. Also, for the furnishing of particulars by cowkeepers, dairymen, and others, both within and without the borough, and to make better provision in regard to the sale of milk.

Weston-super-Mare.—The Improvement Commissioners of this place desire to make further provision for the prevention of the spread of infectious diseases, and to require notice to be given to the Commissioners of persons suffering from any such diseases; to authorise the Commissioners to provide and maintain hospitals, sanatoriums, and nurses and attendants; to provide temporary accommodation for persons suffering from such diseases; to secure the isolation of such persons; to charge and recover the costs of removal of such persons, and their maintenance while isolated or removed. To require persons engaged in washing clothes to furnish a list of owners; and cowkeepers, milksellers, and others to furnish a list of their customers. To authorise the inspection of dairies and places beyond the district; to compel the disinfection of buildings and of articles and persons liable to communicate contagion or infection; and to make further provision with respect to the retention, removal, and burial of dead bodies.

Weymouth and Melcombe Regis.—The Corporation of this place ask further powers with respect to the prevention of infectious diseases; the removal of infected persons; the supplying, inspecting, and destroying of unwholesome or unsound articles of food or drink; the disinfection of premises and articles; the procuring of accommodation for the persons occupying the said premises; the providing of nurses; and the retention, removal and burial of corpses.

Willesden.—The Local Board of this rapidly growing London suburb are very comprehensive in their requirements. They wish to do the following things: To provide for notification to the Local Board of the existence within the district of infectious or other diseases, and for certificates or declarations by medical practitioners attending persons suffering therewith; to empower the Local Board to remunerate any such medical practitioner for the same; and to make persons offending wilfully against the proposed enactment liable to a penalty. To empower the Local Board either to require any owner or occupier to cleanse and disinfect any house or part of a house, or any articles therein, or themselves to cleanse and disinfect such house, part of a house, and articles; and for that purpose to remove any such articles,

and to recover the expenses attending such cleansing, disinfecting, and removal from the owner or occupier, and to make other provision for defraying the expenses thereof. To prohibit, under a penalty, the retention of bodies of persons dying of infectious diseases elsewhere than in a mortuary. To prohibit, if thought expedient, the removal of the body of any person dying from infectious disease from any hospital or place of temporary accommodation, except for the purpose of immediate burial, and to provide for the immediate burial of the body of any person dying from any infectious disease, and of the recovery of the expenses thereof. To empower justices to regulate the removal and the mode of conveyance for the purpose of interment, and the interment of the body of any person who has died of an infectious disease; or to empower the proper officer to carry out the same; and to recover the expenses thereof. To prevent the use of public conveyances for the removal of the bodies of persons who may have died from infectious disease. To make provision for enabling the Local Board to cause the supply of water to be renewed to any house from which it may have been disconnected, the payment of rates and expenses of such renewal, and the recovery of the same in a summary way.

Wolverhampton seeks to make further provisions with respect to the prevention of infectious and other diseases; the giving of notice as to infected persons; the providing of temporary or permanent hospitals or shelters for persons suffering from infectious diseases, and for persons turned out of infected premises; the providing of nurses; the removal of infected persons to hospitals; the removal and burial of dead bodies; the prohibition of the use of public conveyances for the removal of infected persons or dead bodies; the prohibition of the retention of diseased dead bodies; the prohibition of the letting of infected premises; the furnishing of particulars by cow-keepers, dairymen, laundresses and others, both within and beyond the borough, and the making better provision with regard to the sale of milk and penalty for offences under Section 84 of the Public Health Act, 1875. Also to empower the Corporation to enter premises for the purpose of cleansing and disinfecting the same, and for the destruction of infected bedding and articles, and for the removal in certain cases of persons suffering from infectious diseases, and for the recovery of the costs of maintenance in hospital.

To these may perhaps be added the *Bradford* Bill, one of the clauses of which is to authorise the transfer from the trustees of the Bradford Fever Hospital to the Corporation, of the buildings, funds, etc., of that hospital, and to empower the Corporation to maintain, alter, and enlarge such hospital. Also to enable the Corporation and the trustees, if deemed advisable, to hand over to any of the existing medical charities of the borough all or any of the moneys now invested in the names of the trustees.

SOCIETY OF MEDICAL MEN QUALIFIED IN SANITARY SCIENCE.

THE first ordinary meeting of the Society of Medical Men Qualified in Sanitary Science was held at the Parkes' Museum, Margaret Street, on Tuesday last; Sir Joseph Fayrer, M.D., K.C.S.I., in the chair.

Mr. COONEY, the hon. secretary, read the report, which stated that the council had been in constant communication with the various medical corporations, universities, and the General Medical Council, with a view to making the nomenclature of diplomas in sanitary science uniform, and had strongly recommended that "Diploma in Public Health" be the title adopted for registration. There were stated to be altogether 245 medical men qualified by examination in sanitary science. A communication was read from the Société Française d'Hygiène conferring the title of honorary membership on the president of this society.

Dr. ALFRED CARPENTER, in an address on the "Duty of the State to foster the cultivation of Sanitary Science," pointed out that there was no analogy whatever between the work done by the State in other directions, and that which it accomplished for the fostering of sanitary science. Whilst nearly thirty-five millions were annually spent on the duty of self-defence, less than 1 per cent. was devoted to medical purposes, and yet the necessity for preserving the health of the army and navy was of the utmost importance to the kingdom. Five millions were voted last year for educational purposes and the prevention of crime, yet out of that sum nothing was granted towards the prevention of disease amongst the children which were brought together in the elementary schools, and something less than ten thousand pounds a year was devoted by the sanitary authorities to their officers for the purpose of superintending the metropolitan district. There were at the present moment thirty-six men in the service of the State, each deriving five thousand pounds a year for the protection of property, while for the protection of health not a single one could come under that category. Dr. Carpenter contended that the State at this present moment was not in any way fostering sanitary work as it ought to do. The reports of our sanitarians, Dr. Buchanan and Mr. Simon, as collected by the veteran of sanitary science, Mr. Chadwick, showed that the saving of life was the production of wealth, and that the saving of health was in a corresponding manner of immense advantage and importance to the welfare of the nation. Dr. Carpenter described the apathy in sanitary matters that existed prior to the Public Health Act of 1848, and the insanitary conditions that prevailed in large towns, such as Liverpool and elsewhere. He also spoke of the large part which the men who banded themselves into a society, called the Provincial Medical and Surgical Society (afterwards the British Medical Association), took in calling the attention of the Government to the fact that preventable disease was ravaging the land, whilst those in high places made no effort to check it. In consequence of these representations the Public Health Act of 1848 was passed, and that was the first occasion on which sanitary science was recognised by the State. Dr. Carpenter dwelt on the powerlessness of the profession in the councils of the country, to which was to be attributed the comparative parsimony with which money was voted for any object connected with the removal of the causes of disease. Medical men differed from those of other professions, in that the work of sanitation and preventive treatment to which they gave their best energies, tended directly to the diminution of their own incomes. There were now fifteen societies in London, having for their object the promotion of the public health. It seemed to him (Dr. Carpenter) that it was the duty of the State to come forward and foster such an institution as the Parkes' Museum, which was sadly deficient in funds. The men who were doing the greatest sanitary work for the benefit of the country were not those who were earning their thousands a year, and it seemed to him a disgrace that in this advanced age such neglect should be possible. Dr. Carpenter concluded a very interesting address by expressing the hope that the number of medical men in the House of Commons would be largely increased.—Sir JOSEPH FAYRER said one of the great causes why sanitary science had not advanced more rapidly was because people did not believe in the necessity of it. They were beginning to see that necessity now. They were beginning to know that life and death figures were plastic things, which might be raised or depressed. They had seen the death-rate in India reduced in the last fifty years from 60 to 16 per thousand, and there was absolutely no reason why the death-rate of London should not be reduced far lower than it was at present by insisting on an adequate supply of pure air, pure water, and other sanitary requirements.—A vote of thanks to Dr. Carpenter was unanimously passed.

Mr. J. F. SYKES, M.B., B.Sc., read a paper on "The Sanitary Medical Service as a Career," pointing out the unsatisfactory position of the Medical Officers of Health as a body, pecuniarily and socially The paper was illustrated by some interesting tables, showing, among other things, the varying incomes of the Health Officer, according to acreage and population, in the Northern and Southern Districts. The Northern District, it appeared, was paid on the lowest scale. It was stated that the paper would be published, and a vote of thanks to Mr. Sykes brought the meeting to a close.

HOSPITAL AMBULANCE.

WITH reference to the report published on December 11th, Mr. RICHARD DAVY points out that Westminster Hospital has interested itself in ambulance work, and has, in common with other hospitals, availed itself of the advantages of his slung stretchers and ambulance van. Mr. Davy's van has conveyed patients to St. Bartholomew's Hospital and Westminster, as well as patients from King's College Hospital, St. Thomas's, and Westminster, to various country districts. The slung stretchers have been used in Spain, France, and many parts of Great Britain. Want of funds has doubtless prevented ambulance expansion; for the old saying "Money makes the mare to go" is absolutely true, as applied to hospital ambulance work.

In Mr. Davy's opinion, it is one of the functions of the police, rather than the student, to go into the highways and byways and convey patients into an hospital, yet at Westminster, since 1875, it has been recognised as a duty to assist convalescent patients on their homeward journeys.

The names of Surgeon R. J. Reece (one of the house surgeons), Corporal Ogle, and Privates Robinson and Newton, should have been mentioned as forming, with Staff-Sergeant Huxley, the party of medical students who, as mentioned in the paragraph, have first gone

out from the gates of St. Bartholomew's as an ambulance corps for real work in assisting the injured. It should be added that the assistant chloroformist, Mr. Watts, accompanied the detachment.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 19th day of January next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, December 16th, 1886.

NOTICE OF QUARTERLY MEETINGS FOR 1887. ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any bye-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council*.

Meetings of the Council will be held on January 19th, April 13th, July 13th, and October 19th, 1887. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before each meeting, namely, December 29th, 1886, and March 24th, June 23rd, and September 29th, 1887.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council, unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are being pursued on the following subjects

DIPHTHERIA, THE ETIOLOGY OF PHTHISIS,
THE VALUE OF HAMAMELIS, THE VALUE OF PURE TEREBENE.

Memoranda on the above subjects, and forms for communicating observations on them, may be had on application.

The Inquiries on OLD AGE, CANCER OF THE BREAST, and the CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, are now closed.

A Report on the CHOREA Inquiry has been prepared by Dr. Stephen Mackenzie; and will be published in the BRITISH MEDICAL JOURNAL as soon as the printing can be completed.

A Report on CENTENARIANS, prepared by Professor Humphry, was published with the JOURNAL of December 11th; a full Report on OLD AGE will follow.

Reports are in preparation upon the Inquiries made into ACUTE RHEUMATISM, DIPHTHERIA, CANCER OF THE BREAST, and HABITS OF INTEMPERANCE, and a Supplementary Report on PUERPERAL PYREXIA. All the above will be published in the JOURNAL as soon as completed. Tables of the Chorea and Acute Rheumatism cases will be published in separate form.

The Returns made to the GEOGRAPHICAL INQUIRY are being tabulated for report.

Application for forms, memoranda, or further information, may be made to one of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

[illegible], Dublin, and KING'S COUNTY Branch. The next meeting of this [illegible], to be held at 35, Lower Dawson Street, Abercorn, on the evening of Wednesday, December 22nd, at 8 o'clock, when the President, Dr. Urquhart, will take the chair. [illegible] Meeting. 1. Members' Cases, etc. 2. Ballot for admission of [illegible] Members. 3. Papers: Dr. John D. Thomson, Marischal College, [illegible] Milne, Peterhead: Honorary members of Branch. 3. Specimens: [illegible], from a Case of Fatal Metrorrhagia, by the Inhalation of Vapour of Carbolic Acid. 4. [illegible] Specimens: Case of Fracture of the Base of the Skull, by [illegible] Specimens of Cerebral Hydrocephalus, [illegible] Reflex Jaundice, [illegible] Reflex Jaundice, by Dr. JOHN GRAHAM, J. MACKENZIE BOOTH, Honorary Secretaries.

[illegible] Branch. The next ordinary meeting will be held at the [illegible], on Tuesday, January 4th, at 8.30 P.M. Dr. Batten will give his presidential address.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held, by the kind invitation of Dr. Mickle, at Grove Hall, Bow, on Thursday, January 20th, at 8.30 P.M. The chair will be taken by Cornelius Garman, Esq. Dr. Mickle will demonstrate, and a number of patients illustrate, various forms and phases of insanity and general paralysis of the insane. Dr. C. R. Walker will show a patient suffering from locomotor ataxy, with perforating ulcer of the foot.

BATH AND BRISTOL BRANCH.

THE second ordinary meeting of the session was held at the Grand Pump-room Hotel, Bath, on Thursdey evening, December 9th, C. GAINE, M.R.C.S.E., President, in the chair. There were also present forty members.

New Members.—The following gentlemen were elected members of the Association and Branch. Drs. W. J. Williams, Bath; W. Wilkinson, Bath; and Messrs. C. S. Reade, Horfield; P. Watson Williams, Bristol; J. E. Trask, Bath; R. Davis, Bath; and E. J. Sheppard, Clifton.

Communications.—1. Dr. MARKHAM SKERRITT read a paper On the Occurrence of Albumen in Hydatid Fluid.

2. Dr. E. T. FOX read notes of "A Peculiar Case."

3. Mr. H. W. FREEMAN gave the notes of a Case of Ovariotomy, followed by Intra-peritoneal Hæmorrhage, reopening of the Abdomen, with Recovery.—Mr. GREIG SMITH and Mr. N. C. DOBSON made some remarks on the case, to which Mr. FREEMAN replied, and showed some instruments which he had found useful during the operation.

4. Dr. A. B. BRABAZON read notes of a Case of Belladonna Poisoning successfully treated by Hypodermic Injections of Apomorphine and Pilocarpine.—The following gentlemen spoke on the case: Mr. MASON, Dr. SKERRITT, Dr. SWAYNE, and Mr. E. LAURENCE.

GLOUCESTERSHIRE BRANCH.

THE annual meeting was held at Cheltenham on November 16, 1886; Dr. GOODING, President, in the chair.

Election of Officers.—The following officers were elected for 1887:—President, Dr. Batten, Gloucester. Members of Council: Dr. Needham, Gloucester; Dr. Gooding and Mr. Bennett, Cheltenham; and Dr. Currie, Lydney. Messrs. Bowre and Fowler were re-elected scrutineers. Mr. G. Arthur Cardew, Cheltenham, was appointed honorary secretary.

Balance Sheet.—The balance-sheet was presented, showing a balance of £2 19s. 2d.

The Exclusion of the Apothecaries' Society.—The following resolution was proposed by Dr. ROOKE, and seconded by Mr. BOWRE, and carried:—"That this Branch is of opinion that, in justice to the great majority of medical practitioners in England and Wales, and with the view of retaining the only existing check against unqualified practitioners, it is advisable that the Apothecaries' Society should be admitted to the conjoint examination scheme of the Royal College of Physicians and Surgeons."

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

The Epidemic of Cholera at Le Guilvinec.—Muscular Contraction and Animal Heat.—Bone Grafting.—Analysis of Urine in Cases of Abdominal Tumours.—Megaloscope.

THE *Revue d'Hygiène* gives an account of the epidemic of cholera which raged in the little town of Le Guilvinec, in Brittany, at the end of 1885 and the beginning of 1886. The author is not a medical man, but M. H. C. Monod, Prefect of Le Finistère, who, from his position as prefect of the department in which Le Guilvinec is situated, was able to obtain the fullest details. M. Monod was named prefect of Le Finistère when the cholera was raging in all its violence; and by the energetic measures which he adapted he succeeded in checking it, though not without much trouble. Le Guilvinec is a small fishing village, which, during the epidemic, contained a population of only seven or eight hundred persons. There were 125 cases of cholera and 71 deaths. All the circumstances of the epidemic could be far more accurately ascertained and studied than in large centres, such as Toulon, Marseilles, etc., where the circumstances of individual cases, the modes in which contagion is spread, etc., cannot be analysed in detail. M. Monod, on the other hand, was able to investigate each particular case in the same manner that M. Marez last year studied the epidemic in each of the towns situated in the Côte d'Or. M.

Monod was ably assisted in his undertaking by the mayor of Le Guilvinec, a fisherman by trade, who, immediately on the outbreak of the epidemic, put aside his occupation and devoted himself entirely to attending on his fellow-citizens. M. Monod gives circumstantial details respecting each case, and each house visited by the epidemic; by this minute investigation he was enabled to construct genealogical trees of the epidemic, showing the manner in which the contagion was communicated to the 69 different houses in which it made its appearance. The house No. 4, for instance, was the source of infection in 23 cases, among which there were 11 deaths. The disease was traced to No. 33 (in which all the patients recovered) in 25 cases, among which were 18 deaths. Seven persons contracted the disorder directly from this house. Among other interesting details, Mr. Monod relates the different ways in which the cholera was transmitted. A child of 13 had played at a spot a little way from the village with some straw and other things, which had just been removed from the house of a choleraic patient in order to be burned. The child died from cholera on the following day. M. Monod adopted the most energetic measures for stamping out the epidemic. All soiled linen was immediately soaked in solutions of sulphate of copper; the stools of the patients were disinfected with the same salt. Straw and other things of small value were removed in tightly-closed receptacles to a considerable distance from the village, and there burned. The houses were disinfected. As the epidemic was drawing to a close, a number of fishermen from the different villages along the sea-coast made their appearance at Le Guilvinec for the yearly mackerel fishery. M. Monod, fearing that this sudden increase of population would cause a fresh outbreak of cholera, ordered military tents to be pitched for the accommodation of the new arrivals. They, however, refused to occupy these tents, and were further incited to refusal by the inhabitants of Le Guilvinec, who objected to losing the yearly profits they made by letting rooms to the strangers. M. Monod then repaired to Le Guilvinec, accompanied by his wife, and, after pointing out to the assembled fishermen the danger that would be caused to themselves, as well as to the inhabitants of Le Guilvinec, if they persisted in their refusal to occupy the tents, promised to furnish them with straw and planks with which to construct beds, and finally offered to occupy one of the tents himself. All resistance on the part of the fishermen was thus overcome. M. Monod does not state that his courage and good sense worked wonders, but we may be allowed to do so.

At a recent meeting of the Biological Society, M. Quinquaud described the result of his experiments on muscular contraction and animal heat. It is well known that since the beginning of this century animal heat and muscular contraction have been carefully studied by the most eminent men. Much knowledge has been gained on these subjects, but many points still remain obscure. One of these is how heat can be produced with ease, and its intensity varied at will in a living animal. The following experiment gives some help towards a solution of the problem:—The muscles of a dog's leg were stimulated twice every second during three quarters of an hour by means of an induced current of known intensity. After from five to six minutes' stimulation, the rectal temperature began to rise (the rapidity or slowness of the increase of heat varied within certain limits according to the species of the animal), the animal was considerably excited; its respiration was quickened from 22 to 112 and 120 a minute, becoming irregular after the cessation of the current; the animal was muzzled, but breathed easily through the mouth and nostrils. M. Quinquaud also made the following experiment:—A dog, weighing 12 kilogrammes, with a rectal temperature of 39.4° C. (102°.6 Fahr.), was electrified during thirty-five minutes. After an interval of twenty minutes, the thermometer marked 41° C. (105.°8 Fahr.), the respirations were increased to 128 during the application, and afterwards the dog was in a panting condition, as it might have been after a long run. The electric stimulation was continued during three-quarters of an hour, but after its cessation the animal continued to pant violently; death ensued two hours after the beginning of the experiment, with a temperature of 42° C. (107.6° Fahr.). The venous blood on the side which had been subjected to electric stimulation contained .70 gramme of glucose. The side which had not been subjected to this influence contained 1.20 grammes of glucose. In a second experiment a dog was used which weighed seven kilogrammes, with a rectal temperature of 39.7° (102.9° Fahr.). The muscles of the right leg were stimulated; the animal at once passed urine and fæces; urine was thus obtained for analysis. Fifteen minutes afterwards the rectal temperature was 41.1° (105.9° Fahr.); twenty-five minutes later it became 41.7° (106.5° Fahr.); the respirations were 112; the agitation moderate. The applications were continued for half an hour; the dog remained in a panting condition during the whole evening, as if it had run under a burning sun. The experiment was made at 11 A.M.; the next morning the animal had recovered. Venous blood on the side subjected to electric stimulation contained .75 gramme, on the other side, 1.5 gramme of glucose. The third experiment was on a dog weighing six kilogrammes, with a normal rectal temperature of 39.5° C. (102.7 Fahr.). The animal had already been subjected to several electrisations. At 10.38 A.M. the application was begun, and at 10.48 the rectal temperature was 39.9° C. (103.1° Fahr.); at 11.2, 40.1° C. (104.1 Fahr.); at 11.35, 40.7° C. (104.7° Fahr.); and at 12 o'clock, 41.4° C. (106.2° Fahr.). In this experiment the increase of heat was slow, but the temperature rose progressively as in the other experiments. The animal remained in a panting condition for seven or eight hours, and finally recovered, but if the experiment had been continued there is no doubt that it would have succumbed. These experiments are interesting, as showing (1) that a localised muscular electrisation can engender a condition of general hyperpyrexia; (2) that death may follow electrisation, owing partly, at least, to increase of temperature; (3) that a larger amount of saccharine matter is excreted on the side on which an artificial muscular contraction has been produced; (4) that electrisation offers a ready means of restoring heat after exposure to cold. M. Quinquaud has promised to describe, at a future meeting of the Biological Society, the disturbances caused in the different functions of the organism, and the manner in which death was caused.

At the French Congress of Surgery M. Poncet expressed the belief that it would be possible to reconstruct a destroyed bone by means of osseous grafts. It is not after cicatrisation that the grafting can be expected to succeed; it is at an anterior period when active healing of the wound is taking place that the grafting can be made under the most favourable conditions. M. Poncet then cited the case of a child of 11, from whom a long sequestrum of the tibia had been removed after osteomyelitis. This sequestrum measured twenty-five centimètres in length. One month after the operation the first attempt at grafting was made. The fragments were taken from a newly-born infant which had just died. Antiseptic dressing was used, and the limb was kept at rest with plaster splints. Twelve days later the dressing was changed; there was slight suppuration. New grafts, composed of four bony fragments, were then procured from a young kid. These were implanted in fleshy granulations and only one was eliminated. Six months after the operation there was a solid bony mass, thirty centimètres in length; the child became strong and able to walk.

At the French Congress of Surgery, M. Thiriar (of Brussels), speaking of the analysis of urine in cases of abdominal surgery, stated that in benign tumours the proportion of urea in urine is always more than twelve grammes, whilst in malignant tumours there is always hypo-azoturia. In support of this opinion he mentioned several cases in which he was able, by this indication alone, to diagnose a tumour as benign or malignant, which was afterwards confirmed by the operation, the necropsy, or the subsequent course of the tumour.

At the French Congress of Surgery, M. Boisseau du Rocher exhibited a megaloscope, invented by himself for the purpose of exploring deep seated cavities, such as the bladder, intestines, and stomach. By means of this intrument the mucous membrane of the bladder may be examined over an area of twenty-nine centimètres. It is fixed on a stem varying in shape and calibre, adapted to the cavities examined. The mucous membrane must be washed previous to examination.

SWITZERLAND.

[FROM OUR OWN CORRESPONDENT.]

Antipyrin as a Hæmostatic.—Faradisation in Jaundice.—On the Origin of Gonorrhœal Cystitis.—Rupture of the Gravid Uterus.—Electric Baths.—Vaccination Scars.—Supernumerary Fingers and Toes.—Renal Disease and Insanity.—"The Art of Washing the Hands."

At a meeting of the Geneva Medical Society, Dr. Goetz stated that, following the recommendation of Dr. Huchard, he used antipyrin as a hæmostatic in three cases of bleeding. One was a case of severe and prolonged epistaxis in a young man suffering from hæmorrhagic purpura; the second was a case of bleeding from the gums after the extraction of a tooth; and the third was a case of metrorrhagia from uterine fibroid. In the two former cases the drug was employed locally in solution; in the third, one gramme of antipyrin was incorporated in a gelatine pessary.

Dr. Henri Secretan treated a case of catarrhal jaundice in a child, aged 11, by faradisation of the gall-bladder. The disease had not

yielded to three weeks' treatment with ordinary cholagogues. The flow of bile was re-established after three daily sittings, each of ten minutes' duration. A small cylindrical electrode was introduced into the rectum for the length of 8 centimètres, while another was applied in the region of the gall-bladder. In the intervals between the faradic sittings, large enemata, consisting of one litre of cold water, were administered.

In the *Revue Médicale de la Suisse Romande*, October 1886, p. 621, Professor H. Oltramare, of Geneva, writes that he has seen urethro-cystitis in 65 out of 120 cases of gonorrhœa in men. In 40 of those 65 cases, inflammation of the urethra spread backwards after the patients had begun treatment by injections. In common with Diday, Guyon, Leprévost, Jullien, and others, the author regards intra-urethral injections as a most frequent coure of cystitis in the course of gonorrhœa, pus being driven by the injected fluid beyond Wilson's muscular diaphragm. The danger is greatest during the first 15 or 20 days of the disease, and when certain indifferent (non-antiseptic) fluids are used. For the avoidance of such a complication, the following rules are laid down by the author: (1) Indifferent injections (so-called "emollient," "soothing" injections, such as tepid water, decoction of linseed, etc.) should be absolutely prohibited during the whole course of gonorrhœa. (2) Injections are generally contraindicated during the acute stage of the disease, when they are almost sure to wash the pus inwards beyond Wilson's diaphragm. (3) The treatment should consist in the administration of balsamic drugs, and an appropriate regimen, both at the outset and at a later stage, if the disease should again assume a marked virulent character. (4) Before each injection the patient must pass water and carefully squeeze the discharge out of his urethra. (5) The injection should be performed slowly. The quantity used should not be more than can be contained within a moderately distended urethra.

Dr. A. Favre, of Fribourg, describes an interesting case of rupture of the gravid uterus during labour at full term. It occurred in a pauper woman, aged 33, who was suffering from osteo-malacia, with extreme contraction of the pelvis. The true state of things became evident only when laparotomy had been performed. A dead fœtus and placenta with membranes were found floating in the peritoneal cavity, whilst the womb was firmly contracted to the size of a child's head. The site of the rupture could not be ascertained. The abdominal wound was closed by suture, no provision for drainage being made. Recovery took place without an unfavourable symptom, the highest recorded temperature being 38.5° C. on the third day. Fifteen days after delivery, the patient was up and about.

Discussing the treatment by electric baths, Dr. G. Mehlem, of Montreux, states that he obtained the best results in neurasthenia. He has also seen very marked improvement in two cases of alcoholic tremor, a diminution in frequency of epileptoid fits (after thirty galvanic baths), and a striking amelioration in a case of symmetrical gangrene of the extremities. In this last case, the patient was able, after fifty sittings, to resume his occupation. With regard to the physiological effects of electric baths, Dr. Mehlem observed a decrease in frequency of the pulse (8 to 15 beats a minute), retardation of the breathing (3 or 5 a minute), improvement of appetite, digestion, sleep and mental activity, and an increase of sexual power. The temperature of the body underwent no regular change, as proved by about 5,000 observations. The temperature of the baths varied from 32° C., to 35° C.

A writer in the *Correspondenz-Blatt für Schweizer Aerzte*, No. 18, 1886, who had a good opportunity of studying vaccination-scars at the Basle Federal Athletic *Fête* (*Turnfest*), draws attention to the æsthetic aspect of the "art of vaccination." Very many of the men had ugly, thick, and broad scars, reaching sometimes down to the elbow. When spoken to about the matter, they expressed indignation at the disfigurement inflicted upon them by the vaccinator. The writer recommends that more attention should in future be paid to this matter, which, though trifling in itself, may sometimes strengthen the hands of anti-vaccinationists.

Dr. F. K. Stoekly, of Bluebank, states that supernumerary fingers and toes are found with extraordinary frequency amongst negro tribes living beyond the Orange Free States. He mentions the case of a Caffre, aged 18, who himself had six fingers on each hand; while the same anomaly was present in his father, in his mother, in his four sisters, and in one brother. His mother had also a double series of toes on both feet.

Professor L. Wille, of Basle, gives a good account of two very interesting cases of mental disease caused by renal affections, or rather by uræmic poisoning of the blood. Unlike the case previously described by the same author (*Corresp. Blatt f. Schweiz. Aerzte*, 1883, No. 9), both of his present patients recovered. One was treated with colchicum, aconite, opium, and baths; the other with a diet of milk and eggs, and Salvator water. Clinically, both of the cases belonged to the category of "acute mania with hallucinations" of Meynert, the symptoms being extreme mental restlessness and excitement, with intercurrent stupor, anxiety, numberless delusions, and more or less fixed ideas. Mental phenomena developed concurrently with the uræmic symptoms, and disappeared as the renal disease abated.

In a communication to the Thurgau Medical Society, Dr. E. Haffter, of Trauenfeld, discusses the paramount importance of antisepsis in surgical and obstetrical practice; and, amongst other things, said that he is the best antisepticist who best understands how to wash his hands, "since the latter are the most common vehicles of infection." The "art of washing hands" is not an easy one, according to the author. To ensure absolute surgical cleanliness of the hands, they must first be carefully washed with potash soap and water as hot as can be borne, and then with a 5 per cent. solution of carbolic acid, or 1 per mille solution of corrosive sublimate, or chlorine water.

NEWCASTLE-UPON-TYNE.

[FROM OUR OWN CORRESPONDENT.]

Traumatic Aneurysm of Axillary Artery, the Result of Attempts at Reduction in old-standing Dislocation of Humerus.—Traumatic Aneurysm of Anterior Tibial.—Newcastle Clinical Society.—Children's Hospital for Gateshead.—Government Inspector's Report of Gateshead Workhouse Hospital.—Durham County Hospital.

A SOMEWHAT rare accident happened at the Newcastle Infirmary a few weeks ago. A sailor was admitted suffering from dislocation of the humerus of four weeks' duration. The house-surgeon failing to reduce it, the surgeon, under chloroform, made several attempts; at the conclusion of one of these, the axilla was seen to swell, evidently with blood. The axilla was opened, and search made, without success, for the bleeding vessel. The cavity was plugged, and the hæmorrhage stopped; but subsequently it broke out again, and the man died from exhaustion. An inquest was afterwards held, and a verdict of accidental death returned. It will be interesting to know the condition of the artery, and the position of the wound in its coats.

A second case of traumatic aneurysm has also been under treatment in the Infirmary—that of a young man who some time ago received a stab in the front of the leg from a knife. In addition to a swelling on the front of the leg, there was a large swelling in the calf. The surgeon cut down upon the vessel, and tied both ends. The interosseous membrane was found absorbed, and the tibia and fibula denuded of periosteum. The swelling in the calf was opened, and the clots turned out. Hæmorrhage was very free from this cavity; and, as the bleeding points could not be found, and the lad was in an exceedingly emaciated and unhealthy condition, the surgeon amputated below the knee-joint, and the case has done well.

The second meeting of the Clinical Society was held last month. Several new members were elected. Dr. Benjamin Barkus and Dr. Frain were elected honorary members. Dr. Bramwell showed a case of lymphadenoma in a little boy. The disease commenced as a small lump on the left side of the neck. Several glands on both sides of the neck and in the axilla subsequently enlarged. The first swelling, situated under the sterno-mastoid, was removed after division of that muscle. The growth was not checked. A discussion arose as to the distinguishing points between this disease and lympho-sarcoma. Dr. Campbell read an interesting and practical paper on Intestinal Obstruction; several specimens were shown; and a useful discussion followed. For the next meeting there is a full agenda paper; and Dr. Page, of the Local Government Board, will lead a discussion on the Relation of Underground Air and Water to Questions of Public Health.

A movement is on foot, and indeed has already made some progress, for the erection of a Children's Hospital in Gateshead. The amount required for the first portion—a central wing—is £1,500, and already £1,310 has been received. Seeing that a new Children's Hospital will shortly be opened in Newcastle, a similar institution in Gateshead is not required; it would have been much better had the two towns combined and erected a Children's Convalescent Home, which is much needed, instead of having two similar institutions, which must more or less encroach upon each other's resources.

Mr. Knollys, the Government Inspector, having reported unfavourably of the Gateshead Workhouse Hospital, the Gateshead Guardians held a meeting a few days ago, to consider and reply to the report. The feeling of the members seemed to be that the inspector had drawn up a highly sensational and incorrect report, and the following resolution was passed:—"That this Board convey to the Local Government Board their strongest expressions of disapproval of the conduct of

the inspector in making so highly sensational and exaggerated a report, and that in the opinion of this board there was no necessity for it."

The new wing erected at the Durham County Hospital, by the munificence of the late Mr. Eden, was opened recently by Lord Durham. Durham is the centre of a large mining population, and to its hospital most of the accident cases are taken. The new wing will add greatly to the usefulness of the institution.

CORRESPONDENCE.

MEDICAL DEGREES FOR METROPOLITAN STUDENTS: THE VICTORIA UNIVERSITY AND UNIVERSITY COLLEGE, LONDON.

SIR,—Your note headed "A Multitude of Counsellors," in which reference is made to the proposed application of University College for recognition as "a Constituent College" of the Victoria University, induces me to offer a few remarks on the subject. There appears to be in connection with this matter a wonderful amount of excitement and astonishment, whereas the proposal is as simple, natural, and straightforward a thing as can be imagined. The Victoria University is not a place, but a public body, with a Royal Charter open to the inspection of all. As a University, it puts into practice three principles which are considered as fundamental conditions of the permanent success of any university organisation by many of my colleagues at University College, viz., (1) it confers its degrees only upon students who are certified as having attended the approved curriculum of one of its constituent colleges. (2) The curriculum is mainly determined by, and can be from time to time modified by, a body consisting chiefly (but not exclusively) of the Professors of the constituent colleges. (3) The examinations of the students of a constituent college are conducted by the Professors of that college, assisted by an equal number of external examiners. I may add further, that only colleges of a certain completeness of equipment, such as the first college of the University, viz., the Owens College and University College, London, can, according to the Charter, be admitted as constituent colleges of the Victoria University, and it would appear from the Charter that the admission of such colleges, without restriction as to locality, is desired and intended.

When I further state that the charter provides for the holding of examinations by the University in any of the constituent colleges, for the purpose of admitting the students of such colleges to the degrees of the University; and when I further state that the University has the power of conferring a Degree in Medicine which has precisely the same legal value as that of the present University of London—you will not, I think, be surprised that some of the professors of University College should think that it would be a wise thing to take advantage of the position offered by the circumstances, and apply to have University College, London, placed on the list of constituent colleges. There is nothing very alarming or revolutionary in such a step. We are already "recognised" by the University of Edinburgh, and by the Royal University of Ireland, for portions of the medical curriculum (as much as half, in the former instance); why should we hesitate to be recognised by the Victoria University, for the whole of that, and of the curricula in arts and in sciences as well?

One of the regulations of the Victoria University which appears to me to be especially wise and liberal, is worthy of the careful attention of the medical teachers and students of London. Special facilities are afforded in regard to matriculation for medical students, whilst at the same time, out of the four years of medical study required of candidates for the degree of Bachelor of Medicine, two only need be passed in a constituent college of the University. The other two years may be passed at any college or medical school recognised for this purpose by the University. Thus, if University College were admitted to the position of a constituent college, it would be possible for students who had finished two years of preliminary studies in a provincial school, or elsewhere, to qualify themselves for the degree by two years clinical and strictly medical study at University College Hospital; whilst conversely students might study their preliminary science, and their anatomy and physiology at University College, and then, having thus completed the required two years, might proceed to study in the wards of any of the London hospitals, or of any provincial hospital recognised by the University.

I can understand that some of the London medical schools might possibly envy the advantages which would thus be secured to University College, which, nevertheless, it must be candidly admitted, are no more than are warranted by the capital represented by its building, site, and endowments and the general completeness of its arrangements in all Faculties. But I confess that, on the other hand, it does not seem to me at all a remarkable thing that the Professors of University College should desire the very simple step to be taken of securing the advantages which are to be had for the asking. I am hopeful that when they have looked at the matter a little closely, all true friends of University College and of university education will join in the request for so perfectly harmless and, at the same time, eminently desirable a concession. One thing, I may remark, seems to be not improbable—that whether such an application is made on behalf of University College or not, the only other college in London which is so organised as to be able to make a similar application, viz., King's College, will do so.

The fact is, Sir, that the constitution conferred on the Victoria University by its charter is almost precisely what we need for the new University of London, or for that wing of the old one which Convocation would reject were the Senate to propose it. It would, I venture to think, be a wise—and, if I may use the expression, a "physiological"—mode of proceeding in this matter, not to rend the air any longer with cries for the creation of a new thing, but quietly to accept what is ready for us at the hands of the Victoria University; and then, after a few years' experience and organisation, to request the Privy Council, if (and only if) it should then be thought desirable, to sever the connection of the London Colleges with their northern brethren, leaving the former not what they were before the connection, but possessed of a University charter and organisation. Such a charter as that of the Victoria University conferred on a body representing the great teaching institutions of London, would enable it to admit not only University and King's Colleges as constituent colleges, but to admit also the larger medical schools as "constituents" so far as purely medical studies are concerned. Such a University of teachers could also be induced to accept evidence of a candidate having passed examinations held by the Conjoint Board of the Colleges of Physicians and Surgeons of London as excusing that candidate from similar examination-tests imposed by the University.

It seems to me that the only way in which a teaching university can be healthily founded in London is by enabling *one* institution to grow and gradually organise the materials around it. This important function is clearly indicated for University College. Surely no friend of that institution imagines that the blunder by which it was shorn of university powers at its birth, fifty years ago, was in reality a piece of wisdom, which should be imitated as often as the opportunity may arise.—I am, Sir, yours faithfully, E. RAY LANKESTER.

SIR GEORGE BURROWS ON THE COLLEGE OF PHYSICIANS AND THE APOTHECARIES' SOCIETY.

SIR,—In a Memoir of George Mann Burrows, M.D., F.L.S., sent to "Dr. Merriman with Dr. G. Burrows's compliments" (the present Sir George Burrows, Bart.), I find the following. It needs no comment from,—Yours faithfully, JOHN J. MERRIMAN.

Extract of "Memoir of George Mann Burrows, M.D., F.L.S., &c."

"Having been long impressed with the conviction that a large number of persons were practising medicine without having any sufficient knowledge to guide them, and without having given any proof of their capabilities, the subject of this memoir, in the year 1812, in conjunction with many other respectable practitioners, organised the Association of Surgeon-Apothecaries of England and Wales. The great object of this Association, as stated in their memorial to the College of Physicians, 'was to improve the education and render more respectable their own body.' The Association applied for 'the parental advice' of the College of Physicians in framing a proposed legislative enactment, and invited the President and Censors of that College to form a part of a superintending body over the general practitioners; but the College authorities replied 'that they could not give any advice or assistance to them on the occasion.' The assiduity, energy of character, and sound judgment displayed by Dr. Burrows in conducting the affairs of this Association, soon obtained for him the confidence of his Associates, and he was elected chairman of the Association. In this capacity he served the cause for three years with untiring zeal, much to the detriment of his private interests, and to the injury of his health. Upon the passing of the well-known Apothecaries' Act in 1815, the Association warmly expressed their thanks to their Chairman, and begged his acceptance of 500 guineas as some compensation for the time devoted to their service. It was always a source of much regret to Dr. Burrows that the College of Physicians, 'the recognised head of the medical profession,' declined taking a part in the examinations appointed under the provisions of the Act of 1815. When the administration of this Act was confided

to the Society of Apothecaries, Dr. Burrows was appointed one of the members of the First Court of Examiners of that Society. From this board, however, he very soon retired. He had the satisfaction of living long enough to witness a gratifying improvement in the attainments of the general practitioner throughout the empire, and corresponding advances in the medical education of all classes of the profession, which might in great measure be fairly attributed to the judicious regulations promulgated from time to time by the Court of Examiners appointed by the Society of Apothecaries according to the Act of 1815."

THE "OUTRAGE" OF "EXPERIMENTS" ON THE BRAINS OF ANIMALS.

SIR,—A careful study of a review of a work on *The Functions of the Brain*, recently published in your JOURNAL, contains the substance of the work in question, which, taken from that review, may be epitomised as follows.

After a period of ten years since the appearance of the first edition of that work, during which time further "experiments" continued to be performed, we are yet only on the threshold of inquiry. It may be questioned whether the time has yet arrived for an attempt to explain the mechanism of the brain and its functions. The investigation is conducted in the midst of conflicting views, apparently contradictory experiences, and almost insurmountable difficulties. Its subject is surrounded by threads of confusion, and involved in depths of mystery. With regard to the functions of the spinal cord, it is thought probable that many processes are carried on by the same structures. The destruction of the corpora quadrigemina causes blindness and interference with the power of stable equilibrium. With regard to the cerebellum, the experiments and conclusions of Flourens regarding co-ordination still maintain their position as originally advanced, but the problem of its functions is still far from being definitely solved. The general result, as determined by the effects of injuries and disease, is that the cerebellum seems to be a complex arrangement of individually differentiated centres. Adverting to the functions of the cerebrum, the general principle of cortical localisation is more or less accepted by all. This is the primary division into motor and sensory centres. An exact settlement of the cortical representation of the sense of sight has not yet been made, and the whole question is in an uncertain position. No modification has been made as to our knowledge of the auditory centre. The olfactory and gustatory centres are not differentiated. No positive evidence has been adduced to show that special forms of sensation or special regions of the body have different cerebral localisations. The locality and extent of the motor cortical centres are the same as enunciated ten years ago. Upon erasing the functions of the frontal lobes, nothing new of importance has recently been determined. On the functions of the corpus striatum and optic thalamus, we are still much in the dark. Clinical observation seems to prove that both may be diseased without apparent alteration of either motion or sensation; therefore, their functions remain doubtful.

What then do the results of the "experiments" detailed amount to? To absolutely nothing that is reliable or likely to be useful, beyond what is referred to the effects of disease, and to be ascertained by clinical observation. Neither does it appear in what way the "results," such as they are, admit of being applied in the case of man, or are capable of elucidating the intellectual phenomena in human beings. It therefore follows that the method of investigation thus indicated has utterly and completely failed in its intended purpose. Having done so, it will, it is hoped, be abandoned for the future, in favour of the only efficient methods of inquiry. These methods include the careful study of cases of cerebral disease, including their treatment, to be found in published records and in case-books of hospitals, clinical observation, and reports of *post mortem* examinations. Unhappily, the tendency of "experimental" methods now in force, is to distract attention from the only true methods of learning how to diagnose and treat disease; namely, experience and judgment.

C. A. GORDON, Surgeon-General.

25, Westbourne Square, W., December, 1886.

* We would refer our correspondent to what Dr. Ferrier said on this subject in his Marshall Hall Prize Oration, 1884: "It has been a lamp to lighten the path of the clinicist through darkness almost chaotic; it has sharpened clinical vision, so that now many things are clearly seen which were formerly supposed not to exist; it has given a precision to clinical and pathological descriptions which will be searched for in vain in the older records of cerebral disease; it has cleared our conceptions as to the significance of numerous symptoms, and rationalised many purely empirical generalisations, and is every day bringing us nearer to that which Virchow has termed the goal of modern medicine, namely, the localisation of disease. But when this has been reached as regards cerebral disease, when we are able to determine the exact nature and position of the *materies morbi*; is it at all likely that we shall stop here? This would be very improbable, even though we should as yet have none, or only the most vague notions in what direction practice might be influenced. But there are already signs that we are within measurable distance of the successful treatment by surgery of some of the most distressing and otherwise hopeless forms of intracranial disease, which will vie with the splendid achievements of abdominal surgery."

It may interest our correspondent to know that the surgical treatment of cerebral tumours and similar otherwise incurable cerebral diseases, so strongly advocated by Dr. Ferrier in the address from which we have quoted, has in several instances of late been applied with triumphant success. No doubt, in addition to the facts laid before the profession by Mr. Horsley at the Brighton meeting of the Association, we shall have in due course full details of these brilliant achievements. Those who have planned and carried them out profess to be guided by the facts and lessons of experiments on the brains of monkeys and other lower animals.

THE ADMISSION OF THE APOTHECARIES' SOCIETY TO THE CONJOINT BOARD.

SIR,—In regard to the meeting of the Metropolitan Counties Branch, on December 3rd, I may be permitted to observe that it seemed to be the natural sequence of the meeting in the same place, over which I had the honour to preside six months ago, when it was resolved to request the London Colleges to endeavour to obtain powers to grant medical degrees to London students. A new complexion has been given to the question by the recent legal sanction afforded, since that time, to the various licensing bodies, allowing them to combine for the common good. We all agree in grateful recognition of the good work that has been recently done by the three Medical Corporations of London in improving medical education, and in raising professional status. But all who have studied the subject must admit that, in the first instance, the Society of Apothecaries was chiefly instrumental in bringing about this improvement. Sixty years ago it was far ahead of the Colleges in furthering medical studies, more especially in the obstetric art, and, ever since, the Apothecaries' Society has exercised a powerful and very beneficial influence on the profession. By its system of apprenticeship, compulsory attendance on lectures and hospital practice, and sound common-sense examinations, the Society has succeeded in training two generations of healers, not surpassed in any country for character, intelligence, attainments, and practical efficiency, and well fitted to sustain its noble Ovidian motto "Opifer per orbem."

I have no personal bias or interest in this matter, as I have not the honour to belong to any of the London Corporations, but I, in common with all, most earnestly desire the prosperity and greatness of the London School of Medicine, which does not at present occupy the pre-eminent position it ought to hold among the medical schools of Europe, and chiefly by reason of the want of a central controlling power to animate and direct it.

By the union of the Colleges with the Apothecaries' Society a most important step would be gained in this direction, leading in no long time to a really great medical school, or rather university, worthy of the metropolis. It might embrace not only all the London schools, but also those medical schools of England and Wales that have not been already appropriated by the Northern Universities of Victoria and Durham. This new institution, guarded by a reasonably stringent preliminary examination in arts and sciences, might be styled the Medical University of England, and in it the profession, the corporations, the teachers, and the students, should all be represented and have a voice. Headed by the three great licensing bodies, not, as now, having conflicting interests, but harmoniously united in one degree-giving corporation, a Board of Studies would be constituted, in which professors and clinical teachers should have their legitimate influence. The medical schools would be organised on a rational basis, and the waste of valuable time, and the dreary unremunerated labour that now too often harass teachers and pupils, would be to a great extent obviated. Clinical work in the hospital wards, with faithful tuition in the dead-house and laboratory, could well be separated from the systematic lectures and demonstrations in the schools which might, to the advantage of all parties, be fewer in number than at present. Eminent professors could then be honestly recompensed for their instructions, and encouraged in zeal instead of, as too often occurs, being out of pocket while working conscientiously in teaching small classes, and waiting

for lucrative practice. Other needed reforms relating to the appointment and tenure of hospital officials would come more directly under the cognizance of the profession, which would take a deep and lasting interest in their Alma Mater.

It is obvious that the first and most important step towards this happy consummation would be attained by the colleges uniting cordially in intimate combination with the Society of Apothecaries for the mutual benefit of all, and to the great advantage of the profession and the public. In this matter the true interests of all concerned are identical. There is now, as is well known, no real distinction between the various branches of the profession. In London and some other large towns, physicians, surgeons, obstetricians, and the minor specialists can find a field for practice if possessed of capital sufficient to tide them over the early years of professional struggle, and if associated with some one of the medical charities, most of them excellent, but others of a rather questionable description. But even in London and its vast suburbs and all over the country there are scarcely any other than general practitioners, earning their daily bread in the exercise of every department of medical duty, and not disdaining to dispense medicines any more than to apply a bandage or to pass a catheter, if desirable, for the relief and benefit of their patients. Among such men are to be found many individuals of the most finished and expensive education and graduates of all the universities of high academical distinction, equal in all respects to their brethren of the Colleges, which institutions, indeed, have been largely recruited from them. The medical profession is now practically "one and indivisible," and the name should accord with the reality. For the future, there should be only one portal for all entering it. That was the great distinctive feature of the excellent Bill of 1870, which unfortunately did not become law, but which united at the time the good wishes of all three London corporations and of the profession in England and Wales. A golden opportunity now presents itself for the renewal of this most reasonable and desirable scheme of union. With mutual goodwill a *modus vivendi* could doubtless be readily attained. It is to be fervently hoped that the Colleges may reconsider their hasty decision and finally determine on a triune examining board and one portal, and so, by showing sympathy with the general body of the profession, retain the respect and regard which have hitherto been freely accorded them.

An outsider myself, but conversant from twenty-five years' active work in London with the wants and wishes of many of my brethren, I venture to trouble you with this expression of their sentiments on this important and critical question, which must soon be decided.—I remain, Sir, yours faithfully, WALTER DICKSON, M.D.

THE "DEGREE" OF M.D. AND THE GENERAL PRACTITIONER.

SIR,—As long as I can remember—and this is more than thirty years—"this M.D. business" has been gradually becoming a matter of increasing interest and importance. For very many years the licence obtained from the Apothecaries' Company was *the only one* under which medical men could legally recover debts. It was essentially both a qualifying and withal a protective introduction to the practice of medicine.

In earlier times, English practitioners positively objected to the title of M.D., considering, as they did, that, if anyone adopted it, it should be the older men, who desired to practise as pure consultants only; and that it was absurd for young men to assume such a title. In short, it would then have been regarded as an undoubted species of charlatanism. It is a positive fact that at that time "the Scotch title of M.D." was viewed with anything but admiration in England. But by degrees the Scotch graduates began to emigrate from the home of their M.D.ship, and to spread themselves over England; and it cannot be denied that not a few endeavoured to make capital out of their diplomas, and thus "traded," as it were, on their self-asserted superiority over their English neighbours. Take an instance in point. Not long ago, in a well-filled court of justice, the clerk spoke of me as "Dr." Immediately a Scotch M.D. officiously intervened, and in a most offensive and egotistic manner said (addressing the judge), "Not 'Dr.'—'Mr.'", superciliously emphasising the "Mr." I observed a sort of half-bewildered expression on the faces of the people in court, who seemed to infer that, somehow or other, I was only half qualified. Now this was just the impression which my Scotch neighbour wished to produce, and he succeeded "fairly well." Herein lies the gist of all this discussion and strong feeling. So long as mere titles carried no importance with them—so long as they made no actual difference in practice—it mattered little or nothing; but as soon as the assumed superiority of a "university degree" began to have any significance or any weight with the public, then the matter assumed an altered and a more important complexion. It has now become necessary to meet the changed state of things, and to provide for the new fashion.

English practitioners now seek what they formerly purposely avoided, and the public is beginning to expect what formerly they were inclined to smile at, for, although the people generally called every medical man "Doctor," they did not all mean by this that they supposed him to be an "M.D." However, in the present altered circumstances, it is not only desirable, but even necessary and right, that means should at once be found for providing that very large body of English medical men, and students, with the means of obtaining an M.D. degree, on at least equal terms with the Scotch Universities. If the College of Physicians and Surgeons decline to act with the Apothecaries' Company, by all means let the latter take the matter into their own hands. The time of chartered colleges and privileged corporations is gone by. The Apothecaries' Company have only to act fearlessly and honourably, and they will find themselves supported by the public, the House of Commons, and something like ten thousand general practitioners. M.R.C.S., L.S.A., AND L.M.

MEDICAL CELEBRATION OF THE QUEEN'S JUBILEE.

SIR,—My attention has been called to a letter in the BRITISH MEDICAL JOURNAL, of November 27th, from Dr. Wilkie Burman, in which he suggests that the Queen's Jubilee would be a good opportunity for raising a fund to provide a school for the daughters of medical men.

May I call his attention to an advertisement which has been appearing in the JOURNAL for some time, announcing that such a College is to be opened in January next. This College has already received the support and approval of some of our leading men, and is to be conducted on the same lines as Epsom, the fees being exactly the same. Scholarships are already arranged for—one entitling the holder to a free education (to be given to an orphan, the election as to the most deserving candidate to be decided by vote of a committee), and another of the value of ten guineas to be decided by competitive examination in the ordinary way. Other scholarships are being promised, and will be available later on.

There will be accommodation for thirty girls in January, and for an additional fifty at Easter. I shall be happy to give Dr. Wilkie Burman any further particulars he may require.—Faithfully yours,

LEONARD WALTER PEAD, Captain, M.A., Exeter College, Oxford,
Secretary to College for Daughters of Medical Men.
Ivyhurst, Dulwich Grove, S.E.

THE JACOB TESTIMONIAL.

SIR,—I see by a letter from Dr. Mapother in the JOURNAL of December 11th, that it is the intention of the profession to present Dr. Jacob, Editor of the *Medical Press*, with a suitable testimonial for his services rendered to the profession. For the past twenty years, there has been no project on foot for the good of the profession in which Dr. Jacob has not been a leading figure; giving his evidence before Royal Commissions, etc., and as, I may say, at the helm of the Irish Medical Association, he has done incalculable good. Like all public men, he has his enemies, but I challenge any one of them to prove that he has received a farthing of pecuniary reward for his opinions, which were always given straight, in honest good faith that he was acting for the best. There are few who can judge better as to the honesty of purpose of Dr. Jacob than the writer; I have had opportunities of studying his work for years, and I have been often surprised at the indefatigable exertions he would put himself to, causing a loss of time and money for his trouble. On January 20th, 1883, a letter appeared in the BRITISH MEDICAL JOURNAL, signed "Medicus in Rure," advocating a testimonial, when I replied, on February 24th, endorsing, as I now do, the claim Dr. Jacob has on the profession; but, with the extraordinary unselfishness of the man, he refused the project (see his letter of March 24th), and thus the matter fell to the ground. He has been recently put forward by his many admirers to stand, at great personal expense, as the Irish direct representative of the profession in the General Medical Council; but, although he had to contend against one of the most influential of the Dublin consultants, he polled 614, against his opponent, Dr. Kidd's, 911, being thus beaten by 297. Surely this is sufficient to show how he is admired for his staunch honesty of purpose.

The *Medical Press*, in which Dr. Jacob writes his fearless opinions, was founded by his illustrious father, Professor Arthur Jacob, in 1838; and for his services he was presented with a medal, and a banquet in the Royal College of Surgeons on June 3rd, 1861. I sincerely hope that the profession at home and abroad will recognise merit, and

give honour to whom honour is due, and thus make the testimonial befitting the occasion. Dr. Edward Hamilton, 120, Stephen's Green, Dublin, is the Honorary Treasurer.—Yours, etc.,

December 14th, 1886. SEMPER VIGILANS.

ALCOHOL AND THE MEDICAL STAFF.

SIR,—With the increase of scientific knowledge, it has become a question whether it would not be for the good of hospitals if the Managers were to find some non-intoxicating beverage for the use of the medical staff. This would be in consistency with a large amount of medical testimony, corroborated by strong statistical evidence. The records of ancient history give evidence of the longevity of those who did not use alcohol. In modern times, when the mischief became specially apparent, Sir Benjamin Brodie and other medical men, to the number of two thousand, signed a strong declaration in 1847, in which are the following words: "That total or universal abstinence from all alcoholic liquors or beverages of all sorts would greatly contribute to the health, the prosperity, and the happiness of the human race."

Now, as the medical staff of our hospitals form part of the human race, it is evident it applies to them, and for them to cease from its use would be for their benefit. Since the declaration of the late Sir B. Brodie and others, many years have elapsed, and their testimony has been strongly confirmed by the statistics of the Life Assurance Societies, which have three classes of assurances: (1) Lowest class of premiums, for abstainers; (2) Moderate drinkers, whose lives prove shorter than the abstainers; (3) Publicans and others, deemed dangerous lives.

From these remarks, I hope no one will think me unfriendly to the medical profession. On the contrary, I desire their good, and hold the profession in high esteem, especially for their kindness to the poor. I think it possible that some medical men, from habit or want of due thought, are victims of the seductive influence of alcohol, and do not reflect that it is bought with subscriptions given to aid the sick and suffering; and that, as they would be better without it, the cost of the alcohol so used is wasted. This is in accordance with the opinion of an eminent physician of the present day also: "That the great majority of people at any age, and of either sex, will enjoy better health, both of body and mind, and will live longer without any alcoholic drink whatever." (*See* Sir H. Thompson, M.D., 1886.)

So far as my researches have gone, I estimate the alcohol consumed by the staff of hospitals of London to cost from £4,000 to £5,000, and that in some small hospitals more alcohol is used by the staff than by the patients; this was admitted to me by an official to be the case in a country hospital. In general (with a few exceptions), the large hospitals in the country do not expend so much in alcohol for the staff as in London districts.

When the attention of the public shall be directed—as is desirable—to hospital expenditure, it may be expected that many subscribers may hesitate to allow their subscriptions to be applied to purchase for the hospital staff what is not only wasteful but injurious.—Yours, faithfully, GEO. STURGE.

Sydenham Hill Road, December 4th, 1886.

OL. PINI SYLVESTRIS IN THE TREATMENT OF CHRONIC BRONCHITIS.

SIR,—Mr. Robson's note on the use of Ol. pini sylvestris, in chronic bronchitis has rather surprised me, as I thought that its beneficial effects in diminishing expectoration, both in that ailment and in phthisis, were well known. I myself commenced its use in 1877, nearly ten years back, on the advice of my late brother, F. Goodchild, M.B.; and several of my medical friends have constantly prescribed it for almost as long a period. For almost all cases of purulent, or of exceedingly profuse expectoration, it has proved, in doses of two or three mimims, the most valuable drug at my command; and has achieved all the results which have been more or less conceded to its present fashional rival, pure terebene.

J. A. GOODCHILD.

INDIA AND THE COLONIES.

INDIA.

THE HEALTH OF BOMBAY.—From the Bombay Commissioners' Administration report for the year ending March 31st it is seen that the number of births, exclusive of still-born, was 14,964, whilst the number of deaths was 21,580; the births and deaths, per thousand of population, were thus 19.35 and 28.25 respectively, or, if allowance be made for the usual increase of population, 17.72 and 25.88. Although it is estimated that there are three men in Bombay to every two women, this birth-rate is extremely low. The proportion of birth-rate and death-rate among Parsees is pretty equal, the birth-rate of that community being 28.43. There were 598 cases of cholera, with which exception there was no serious epidemic during the year; there were only 55 deaths from small-pox, and the general health of the city was fairly good. For the last five years there has been a lower rate of mortality among Europeans, but as there has been a corresponding increase in the death-rate of Eurasians, the probability is that many of these enter themselves in the census returns as Europeans. It is thought that overcrowding has a great deal to do with the mortality, and as Camateepoora has a cubic house space of only 250 feet for each inhabitant, it is hardly to be wondered at that the health of that district compares unfavourably with that of other parts of the city, where there is a much larger percentage of cubic feet. Vaccination operations were not so satisfactory as in previous years, the number of re-vaccinations being only 860 against nearly 3,000 in 1884, and more than 1,500 in 1885, when there was a small-pox epidemic.

VILLAGE SANITATION.—The new Sanitary Commissioners of Madras have induced the local government to take up the important question of village sanitation. The district board will be required in future to report fully all that is done for the improvement of towns, villages, and fairs.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL RELIEF FOR VOTERS.

OUR readers may remember the outcry which was raised for electioneering purposes in the summer of 1885, and which resulted in the hasty passing through Parliament of the "Medical Relief Disqualification Removal Act, 1885," 48 and 49 Vict., c. 46. It is an old principle of our common law that persons who have, shortly before an election, been in receipt of alms were disqualified from voting, because from their dependent situation they were not capable of giving their judgment freely. This principle was recognised and formulated by the Reform Act of 1832, 2 Will. IV, c. 45, s. 36, which, as amended by 30 and 31 Vict., c. 102, s. 40, provides "that no person shall be entitled to be registered in any year as a voter who shall, within twelve months previously, have received parochial relief or other alms," etc. Medical relief given at the expense of the rates comes under this head. By the Poor-law Amendment Act, 1834, 4 and 5 Will. IV, c. 76, s. 56, it was enacted that "all relief given to or on account of the wife, or to or on account of any child or children under 16," should be considered as given to the husband or father, as the case might be. So the law stood till 1875; and it was undoubted that if a man or his family received medical attendance or aid, at the expense of the rates, he received parochial relief, and thereby for twelve months became disqualified to be on the register of Parliamentary voters. The Act passed in 1885, however, altered this, as it, by Section 2, says that "where a person has, in any part of the United Kingdom, received for himself or for any member of his family any medical or surgical assistance or any medicine at the expense of the poor-rate, such person shall not by reason thereof be deprived of any right to be registered or to vote." And Section 4 defines the term "medical or surgical assistance" as including "all medical or surgical attendance, and all matters and things supplied by or on the recommendation of the medical officer having authority to give such attendance and recommendation at the expense of the poor-rate." The first decision, so far as we are aware, on the construction of this Act, has recently been given in the case of Honeybone *v.* Hambridge, which was an appeal from a revising barrister. It appeared that Mrs. Honeybone obtained an order for attendance in her approaching confinement by the parish medical officer, but that, when the time came, she was in fact attended by an uncertified midwife, who attended at the request, not of the medical officer, but of the relieving officer, and who was afterwards paid for her attendance by the relieving officer. The barrister struck Honeybone's name off the list of voters, holding that this attendance, being paid for out of the rates, amounted to parochial relief; and that, being rendered by an uncertified midwife, it was not "medical or surgical attendance," nor was it "a matter or thing supplied on the recommendation of the medical officer." The Court, however (Lord Coleridge, Baron Pollock, and Mr. Justice Smith), reversed the barrister's decision, and decided that Honeybone was entitled to his vote on the ground that the intention of the Act is that persons who have occasional assistance of a medical or surgical kind shall not on that account be disqualified, and that the assistance

rendered was of that kind, although rendered, not by a medical man or surgeon, but by an unqualified person. This certainly seems, from a medical point of view, to be a bad precedent, for it looks like a recognition of unqualified practitioners. But it must be remembered that the question before the Court was simply whether or not Honeybone was to be deprived of his vote. The judges arrived at their decision with some doubt, but it seems to be in accordance with the intention of Parliament (if it can be presumed to have had one) when it passed the Act of 1885. If Mrs. Honeybone had been attended by the parish medical officer, as the order she obtained directed, her husband's vote would clearly have been protected by Section 2 of the Act; and it would undoubtedly have been a hardship on him to have lost his vote because the parish chose to employ an unqualified person, and so effect some small saving for the rates. As regards the right to vote, the decision in Honeybone *v.* Hambridge declares the law, and will probably be followed; but it does not in any way amount to a sanction of the conduct of the relieving officer in employing an uncertified midwife where the attendance of a qualified medical practitioner had been asked for and ordered; nor does it show that the Court would uphold the employment of an unqualified person, if the question before it was as to the right of such person to recover payment for his or her attendance.

DEATH-CERTIFICATES AND INQUESTS.

SIR,—In your leader on "Coroners' Inquests," and also in Mr. Browne's letter on "Death-Certificates," both in the JOURNAL of October 23rd, reference is made to a "burial order" given by a registrar of deaths. The certificate (1) of notification, or (2) of registration given by a registrar is not declared by the Registration Act (Births and Deaths Registration Act, 1874) to be, or have the force of, an order or permit to bury, though it is commonly employed in that behalf. A "burial order" is an order given only by a coroner. The Registration Act provides (Section 17) that, "except upon holding an inquest, no order, warrant, or other document for the burial of any body shall be given by the coroner."

Section 16 provides for the entry on the death-register of the finding of the coroner's jury, but "without any alteration of the original entry," if the death has been previously registered.

Section 20 provides that, when a person "has been attended during his last illness by a registered medical practitioner, that practitioner shall sign and give" (to a qualified informant) "a certificate stating to the best of his knowledge and belief the cause of death, and such person" (the informant) "..... shall deliver that certificate to the registrar, and the cause of death, as stated in that certificate, shall be entered in the register. Where an inquest is held ..... a medical certificate of the cause of death need not be given to the registrar."

No provision is made in the Act for informing the medical attendant when an inquest is held or not, nor does the Act provide that in any case whatever a medical certificate shall not be given, so that the only safe plan to pursue is to give a certificate in all cases, whether the death be by violence or not.

Section 14 requires the registrar "forthwith .... to register the death;" and Section 35 renders him liable to a penalty of £50 if he refuses to do so.

With these sections, I come to the following conclusions:

1. A coroner is strictly prohibited from giving any order for the burial or nonburial of a body, unless he holds an inquest, and he has nothing whatever to do with ordering or countermanding the registration of a death which is duly certified as to its cause.

2. A registrar is bound, under all circumstances, to register a death when certificate of its cause is delivered to him, totally regardless of the fact of the death being caused by violence or otherwise.

3. That the instruction given by the Registrar-General to registrars not to register a death which is certified to be due to violence, or the like, is not only *ultra vires*, but is a direct incentive to the registrar to commit a breach of the statute, and to incur a penalty of £50.

Mr. Browne and other coroners would do well to remember that the Coroners' Acts were passed hundreds of years before there was a College of Surgeons, a Medical Act, 1858, or a Births and Deaths Registration Act, 1874; that they are now, in great part, obsolete statutes, and that they are virtually (but not actually) repealed by the two Acts just mentioned, in all cases where a registered medical practitioner shall have certified the cause of death. This is exactly what might be expected in the nineteenth century. Medical men are medical jurists—educated examiners, and licensed as such; but a coroner may have no knowledge whatever of the symptoms of disease, or of evidence of violence, much less the policeman who collects the information for him, and may, therefore, be absolutely incompetent to decide whether a given case is suspicious and needs further elucidation, or otherwise. When we look to the absence of mental qualification required by law for the office of coroner, and to the fact that the first requirement of him is that, on his election-day, he shall be able to provide for the electors (the county freeholders), free conveyance by road or rail from the uttermost parts of the county to the place where the poll is taken, and also for the requirements of his election agents (whose number and pay is not limited by any statute), is it any wonder that the Legislature should provide for medical opinions being given by medical men only?

If the law requires to be consolidated, and if the provisions of the Coroners' Acts, passed hundreds of years ago, are incompatible with the provisions of the Medical Act, 1858, and the Births and Deaths Registration Act, 1874, we may attribute these incongruities to the superabundant legal acumen in the House of Commons, and the deficiency of medical talent there.

Apologising for the unavoidable length of my letter, I am, yours, etc.,
Southport. R. M. CRAVEN.

FEES TO MEDICAL WITNESSES.

MR. CAMPBELL BOYD writes: Early in the present year I was living in Worcestershire—since then I have settled in London—when a poaching affray occurred, during which three police constables were severely injured; I then attended to them. Three of the poachers escaped at the time, and of these two were arrested about two and a half months since. I received a summons to appear in Worcestershire before the magistrates, and give evidence regarding the injuries received by the police constables. I had to procure a substitute, and leave within a few hours. The case was adjourned to quarter sessions in Worcester.

For all this I received—three weeks afterwards—£1 1s. and my fare from Paddington, but no hotel expenses or my cab-fare across London, which was a heavy item. This I consider was a great hardship (only having a few hours' notice), and professionally a great inconvenience; I had to pay a substitute, lose two days, and travel 240 miles, for one guinea.

Three weeks afterwards, I attended Worcester sessions, which occupied three days, and for that I received £3 3s. and my railway fare from Paddington, but no hotel or cab expenses. As the Clerk of the Crown said that this was the extreme allowance, on my return I wrote to the "Home Office," giving full particulars, and asking if they could grant me better remuneration; and now, after five weeks, I get a reply, saying that the "Secretary of State" regrets that he is unable to add to the fees allowed.

The point I should like your opinion on is, can I refuse on a magistrate's summons to appear again before them in Worcestershire, as one of the miscreants is still at large, and may be arrested any day.

The payments made seem to be according to the scale, except that two shillings a night for lodgings might have been allowed, and the travelling expenses should have been calculated from residence instead of from Paddington Station. Probably the attention of the Clerk of Assize was not properly drawn to these items. The scale is very inadequate, and the energies of the Medical Council might usefully be directed towards getting it revised. A witness in a criminal case, if subpœnaed to attend in a distant part of the United Kingdom, may demand conduct money, and is not liable to a penalty for non-attendance unless it is paid; but conduct money, in accordance with the scale would be considered sufficient.

EVIDENCE IN CORONERS' COURTS.

DR. ILLINGWORTH.—The inquiry before a coroner's jury is as to cause of death; before a jury trying a case of manslaughter, whether the prisoner charged is guilty. Evidence, therefore, which may be relevant on one inquiry may be irrelevant and inadmissible on the other. Judges, moreover, as a rule, pay little heed to the findings of a coroner's jury; and often where such a jury has returned a verdict of manslaughter against a man, unless that finding is confirmed by the Grand Jury, the person charged is acquitted without even hearing the witnesses.

"WITHOUT CUTTING."

F.R.C.S.ENG.—The pamphlet is a good example of the shifts to which so-called homœopathic practitioners are reduced. Though it is nowhere specifically stated, the writer appears to desire his readers to infer that the application of a caustic paste is a homœopathic procedure. The application is admittedly painful, and is probably as often as not unsuccessful; on the whole, it is not likely that our correspondent or other regular practitioners will lose many patients owing to the virtues of a homœopathic caustic paste. The author of the pamphlet is a graduate of the same university, and holds the same licence as our correspondent, who might draw the attention of the authorities of the two bodies to the pamphlet, but not, we fear, with much hope of inducing them to take action, for it is difficult to see what legal ground there would be for dealing severely with the author.

ETIQUETTE ON COMMENCING PRACTICE.

THE difference of opinion in the advice tendered to "M.D." by his professional friends in relation to "'Medical' etiquette, or the rule of the profession on commencing practice," etc., indicates to our mind (associated as it is with like dissimilar views expressed in recent analogous cases), a modern innovation on the custom of olden days, in which we have it on high authority that it was the invariable practice for the new comer to call on the resident local practitioners, whose duty it then became to return the courtesy visit. That such was the prescribed and accepted rule is, we think, materially strengthened by the fact that the following rules, extracted from the *Code of Medical Ethics*, chapter iv, page 90, were cordially approved by the late venerable Nestor of the profession, Sir Thomas Watson, and other like eminent representative practitioners; and, in our opinion, it would be well that such should be the acknowledged professional rules of modern times. We therefore insert them in their entirety for the guidance of the junior members of the faculty.

"1. In the absence of any published rule, or collegiate instruction, on such and kindred matters, it is not to be wondered at that young practitioners should be so generally ignorant of the 'unwritten' custom or etiquette (diverse as it is from that pursued in ordinary social life, in relation to new residents) expected from members of the profession on commencing or changing the locality of practice, in town or country, which entails on each new comer, young or old, an obligation to call, with as little delay as may be, upon every duly qualified, legitimate medical practitioner resident within a reasonable distance of his own selected place of abode, and courteously announce his intention to practice in the locality.

"In towns of not exceeding 35,000 inhabitants, and containing about thirty—more or less—medical men, a preliminary visit of courtesy should be paid to each several practitioner; but in those in which the preceding numbers are much exceeded, the call or visit may very fairly be limited to such practitioners as live within a radius of (say) half a mile, or less, according to the nature and population of the locality; while in London and other large and densely populated cities, the area of call must necessarily be circumscribed, and in a great measure left to the judgment and discretion of the intending practitioner himself, or of a local professional friend. As a safe and simple guide, however, in either or any case, the extreme area of call for such initiatory visits may, perhaps, be sufficiently defined by a circle, comprising within its space about thirty practising members of the faculty.

"N.B.—It may be prudent to note, *en passant*, that practitioners in the position of 'assistants' are, as such, exempt from making or receiving the call; and in either case it should be omitted.

"3. In rural districts, it will be well to extend the radius of call to four miles, or more, according to local circumstances, and the prospect of friendly social intercourse with the neighbouring practitioners; and which, in the interest of self, the profession, and the public, cannot be too carefully cultivated by the faculty at large."

CORONERS AND THE CAUSE OF DEATH.

L.R.C.P.E. writes: At the time that a fresh coroner is about to be elected, perhaps the following, which occurred in my practice, may point a moral. Some few weeks back, I was hastily summoned to see a man reported to be dying. Upon arriving, I found the patient in a moribund condition. I visited him again during the afternoon, and he died the same evening, never having regained consciousness. I obtained the following history: he was 33 years of age, had been an epileptic for some few years, was an out-patient at a London hospital, and saw the physician under whose care he was three weeks previous to his death.

As it is not usual for epileptics to die in a fit, what was the cause of this man's death? Upon communicating with the coroner, he decided not to hold an inquest. I presume the coroner, being a lawyer, took the "common-sense" view of the question that Baron Huddleston advises, in preference to that of a medical man "gloating over his scientific knowledge." Probably a medical coroner would not have been so easily satisfied.

NAVAL AND MILITARY MEDICAL SERVICES.

HONORARY RANK FOR ARMY MEDICAL OFFICERS.

We have received a long communication, signed "M. S.," in which the writer urges that the concession of honorary rank will confer substantial benefits on the officers of the Army Medical Staff. He thinks that the military authorities, swayed by their habits of thought, would more readily accord to medical officers the consideration due to their rank in the army if this was indicated by such a title as "Captain Medical Staff." He says that these officers are now at a disadvantage in dealing with the authorities as compared with the officers of the Army Pay and Commissariat Departments to whom honorary rank has been accorded. He says, moreover, that in the eyes of military men there is nothing, when out of uniform, to distinguish between a medical officer ranking as a major-general and a medical officer ranking as a captain. He also expresses regret that in advocating this claim for honorary rank the army medical officers find in their civilian professional brethren their "most bitter and unjust opponents." The army medical officers do not desire in any way to sink their profession, but merely that their relative rank in the army should be made always evident by the granting of honorary rank. He thinks that the object in view would be certainly gained if the Indian medical officers joined heartily in supporting the claim.

INSTRUCTION TO VOLUNTEER MEDICAL OFFICERS.

It is proposed to make special arrangements for instruction to enable Volunteer surgeons to acquire a practical knowledge of bearer company drill, and to meet the requirements of the examination for certificates in proficiency. Drills are held on Wednesdays at 7.30 P.M. in the Guildhall, where the officer instructor will be pleased to give further information regarding the course.

CHANGES OF STATION.

The following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:—

	From	To
Deputy Surgeon-General H. T. Reade, V.C.	Colchester	Portsmouth.
,, ,, T. W. Fox, M.D.	Egypt	Colchester.
Brigade-Surgeon P. B. Smith, M.D.	Aldershot	Bengal.
,, H. M. Macbeth	Weedon	Dover.
,, S. Archer	Egypt	Ceylon.
,, J. Robinson	Curragh	C. of Good Hope.
,, F. Fergusson, M.D.	Jersey	Madras.
,, R. W. Berkeley	Bengal	Jersey.
Surgeon-Major W. P. Smith	Enniskillen	Sheffield.
,, J. Fleming, M.D.	Half Pay	Aldershot.
,, S. Flood	Sheffield	Enniskillen.
,, N. B. Major	York	Madras.
,, T. O'Reilly	Dublin	London.
,, M. M. Gallwey, M.D.	Woolwich	Bengal.
,, J. Coats, M.B.	Fleetwood	C. of Good Hope.
,, P. Connolly	Aldershot	Sierra Leone.
,, H. H. Stokes, M.B.	Dublin	Bengal.
,, W. H. Bates	Warley	Madras.
Surgeon I. B. Emerson	Coventry	Weedon.
,, W. T. Johnston, M.D.	Sheffield	Ashton-u.-Lyne.
,, C. G. D. Messe	Africa	Dover
,, A. Sharpe, M.D.	Bengal	Sierra Leone.
,, J. H. A. Rhodes	Bengal	Hong Kong.
,, R. Caldwell	Egypt	Colchester.
,, C. C. Reilly	Egypt	Portsmouth.
,, C. Hayden, M.D.	Aldershot	Sierra Leone.
,, H. D. [illegible], M.B.	Cootamun	Bengal.
,, J. P. S. Hayes	Canterbury	Bombay.
Quartermaster C. Johnson	L. District	China.
,, S. Evans	Colchester	E. District.
,, T. F. Kennedy	Bermuda	Chatham.
,, W. Merriman	West Indies	Devonport

MEDICAL STAFF.

The promotion of Surgeon-Major H. W. A. Mackinnon to the rank of Brigade-Surgeon, which was recently announced, has been cancelled, and this officer has been made a Companion of the newly-created Distinguished Service Order for his services during the campaign now proceeding in Burmah.

Brigade-Surgeon P. B. Smith, M.D., is promoted to be Deputy Surgeon-General, *vice* S. Fuller, retired. Dr. Smith's previous commissions are dated: Assistant-Surgeon September 15th, 1857; Surgeon, December 2nd, 1871; Surgeon-Major, March 1st, 1873; and Brigade-Surgeon, May 7th, 1882; he is at present serving in Bengal, but has no war record.

Brigade-Surgeon W. O'Halloran, who retired on half-pay May 25th, 1885, is reappointed to the full-pay establishment, *vice* Dr. P. B. Smith.

Surgeon-Major R. H. Gardner, M.B., whose promotion from the rank of Surgeon was recently announced in the British Medical Journal, served in the Egyptian campaign of 1882, and was at the engagement at El Magfar, in the two actions at Kassassin, and at Tel-el-Kebir (medal with clasp and Egyptian bronze star). He was also present at the capture of the Minhla Forts, in Burmah, on November 18th, 1885, and was in medical charge of the King's Liverpool Regiment when King Thebaw was taken prisoner, and accompanied him in medical charge from Mandalay to Madras.

Surgeon H. H. Brown, M.B., on arrival from England, is ordered to do duty at the station-hospital, at Bangalore, in the Madras command.

It is reported from Mandalay that Surgeon E. W. Kelsall has died of cholera at Yemethen, in Upper Burmah; his commission was dated March 31st, 1875, he having been born in 1851. He served in the war in Afghanistan in 1879-80, and took part in the defence of Candahar, and was mentioned in despatches for his services at the sortie of Deh Khojah (medal). He was also in the Egyptian war of 1882, and was at the battle of Tel-el-Kebir (medal with clasp, and Egyptian bronze star). He returned to India at the beginning of 1884, from whence he was but recently sent to Burmah.

THE INDIAN MEDICAL SERVICE.

Deputy Surgeon-General Henry Cook, M.D., Bombay Establishment, has retired from the service, which he entered as Assistant-Surgeon, January 24th, 1855, having attained to the rank of Deputy Surgeon-General, June 23rd, 1884. Dr. Cook served in the Persian war in 1857 (medal), and in the campaign in Abyssinia in 1867-68 (medal).

Brigade-Surgeon C. T. Eyes, of the Madras Establishment, has retired with a step of honorary rank. His Assistant Surgeon's commission dates from February 20th, 1856, and his rank as Brigade-Surgeon from July 23rd, 1883. He served in the Deccan during the Indian mutiny of 1857-58, and was at the action of Satpoorah Hills (medal).

Surgeon P. de H. Hare, Bengal Establishment, has leave of absence for six months on medical certificate.

Brigade-Surgeon J. C. Penny, Bengal Establishment, on return from Dalhousie, has resumed charge of his duties as Civil Surgeon of Umritsur.

Surgeon-Major R. Jameson, M.D., Bengal Establishment, Superintendent of the Central Prison at Benares, is appointed a Deputy Sanitary Commissioner, and is posted to the First Circle.

Surgeon-Major W. R. Browne, M.D., Madras Establishment, is reappointed Medical Officer of Ootacamund for two years from the expiration of his present tour, but will continue to officiate as Surgeon of the General Hospital.

Surgeon D. F. Dymott, M.B., Madras Establishment, is directed to officiate as Inspector of Vaccination and Deputy Sanitary Commissioner, *vice* Surgeon-Major Lang, but to continue to act as Secretary to the Surgeon-General with the Government of Madras.

The services of Deputy Surgeon-General W. Fargihar, M.D., Madras Establishment, having been replaced at the disposal of the Provincial Commander-in-Chief, that officer is directed to assume charge of the duties of Deputy Surgeon-General of Her Majesty's forces in the Belgaum and Western Districts.

Brigade-Surgeon W. H. Roberts, M.D., Madras Establishment, is ordered to report himself to the Principal Medical Officer with the Burmah Field Force, at Mandalay, *vice* Surgeon J. W. Evans, who will return to Madras on relief.

Surgeon-Major Edward Sexton, M.D., Medical Officer to the 17th Bombay Native Infantry, is promoted to be Brigade Surgeon, *vice* Brigade-Surgeon C. K. Colston, who has retired. Dr. Sexton served in the China war in 1860 (medal with clasp), and in the Abyssinian war in 1867-68 (medal).

Surgeon-Major J. J. Monteath, M.D., Bengal Establishment, has leave of absence for six months on medical certificate.

Surgeon-Major G. Bomford, M.D., Bengal Establishment, is appointed Second Resident Surgeon of the Presidency General Hospital, during the absence of Surgeon J. Clarke, M.D.

The services of Surgeon-Major C. Sibthorpe, Madras Establishment, are replaced at the disposal of the Public Department.

Surgeon J. A. Burton, Madras Establishment, doing duty in the Eastern District, is to report himself to the Deputy Surgeon-General of Her Majesty's forces in the Bangalore Division and Ceded District for general duty.

The services of Surgeon A. F. Sargent, of the Bombay Establishment, are replaced at the disposal of the Commander-in-Chief.

THE VOLUNTEERS.

Surgeon David Archibald, of the 1st Fife Artillery, has resigned his commission, which dates from September 9th, 1861, although he did not join the 1st Fife till October 1st, 1877; he is granted the honorary rank of Surgeon-Major, and permitted to retain his uniform.

Surgeon, G. G. Tatham, M.D., of the 3rd Volunteer Battalion of the Lancashire Fusiliers (late the 17th Lancashire), has also resigned, his commission being dated July 15th, 1882.

Surgeon G. P. White, of the 5th Surrey, has likewise retired; he joined the corps February 23rd, 1881.

Mr. D. C. Smith is appointed Acting-Surgeon to the 2nd Volunteer Battalion of the Norfolk Regiment (formerly the 2nd Norfolk Volunteers).

Mr. G. S. Woodhead, M.B., has been appointed Surgeon to the Edinburgh Division of the Volunteer Medical Staff Corps.

Superannuation.—Mr. John James Ilott, L.R.C.P.Edin., etc., late Senior Medical Officer to the Whitechapel Union Workhouse and Infirmary, has obtained a superannuation allowance of £90 per annum.

OBITUARY.

NORMAN CHEVERS, C.I.E., M.D., F.R.C.S.Eng., Deputy Surgeon-General, H.M. Indian Army.

THE announcement of the sudden death of Dr. Norman Chevers will excite feelings of sincere and deep regret in the minds of many, both in this country and in India. He was a man of fine intellectual capacity, high mental culture, profound learning and ceaseless industry. A patient and earnest worker in several important departments of medicine, his removal by death will be a distinct loss to the profession. He was born at Greenhithe, on the Thames, in 1818. He passed his boyhood there, and at Southsea and Portsmouth. His father—the late Dr. Forbes Mackbean Chevers—was a surgeon in the British navy. Norman Chevers studied medicine at Guy's Hospital; and he was always pleased and proud to speak on the subject of his early associations at Guy's. He may be said to have been, even then, a man of mark. In his latest work he incidentally mentions the fact that the first twelve years of his own professional life were spent chiefly in Maze Pond, Pimlico, and Upper Stamford Street—"all original paludal localities." His first commission in the Bengal army dated from 1848, and he retired from India in 1876, with the rank of Deputy Surgeon-General. The first few years of his service were passed at the stations of Purulia in Maunbhoom, Chittagong in Eastern Bengal, and Hourah. From 1855 till 1861 he was secretary to the Medical Board which then administered the Bengal Medical Department. His duties in this appointment were very varied and laborious, extending as they did over the period of the Indian Mutiny and the years immediately following it. His devotion and indefatigable application to duty at that time were officially recognised by the principal Inspector-General of his department, who, we happen to know, recommended him for the honorary distinction of physician to Her Majesty.

From 1861 to 1876, he was Principal of the Calcutta Medical College, Professor of Medicine, and First Physician of the College Hospital. At the time of his leaving that institution, the number of Hindu, Mahomedan, and Christian students amounted to something like 1,400. He was a Fellow, and had formerly been President, of the Faculty of Medicine of the University of Calcutta; and for many years from the first opening of the Calcutta University, he was a University Examiner in Medicine and Midwifery.

Throughout his career in India, Dr. Chevers strove earnestly to enlighten and to better the condition of the people of Bengal. In 1851, he published a work on the *Management of the Diseases of the Heart*, which terminated a series of *Contributions on Cardiac Pathology and Therapeutics*, commenced ten years previously. This book commanded the approbation of the highest medical authorities in England, such as Walshe, Peacock, and Fuller. It was translated into French, and published in Paris. Dr. Chevers's account of the morbid lesions of the pulmonary artery and of the coronary arteries of the heart were of particular interest. He also wrote, in the *London Medical Gazette*, on the Structural Anatomy of the Veins, on the Pathology and Treatment of Aortic Aneurysm, and on the Effects of Ligature of the Carotid Arteries upon the Cerebral Circulation. In 1852, he published a work on *Removable and Mitigable Causes of Death*, in which, to use his own words, he modelled into a system the scattered facts upon which our knowledge of English public hygiene then rested. For nineteen years—namely, from 1853 until 1872—he was co-editor of the *Indian Annals of Medical Science*, a great undertaking, in the cause of medical science, which was "unattended with pecuniary emolument." In the early numbers of this valuable periodical, he published the results of an Inquiry into the Means of Preserving the Health of European Soldiers in India. Of this book Professor Parkes wrote in terms of high eulogy—saying that no medical officer should serve in India without studying it. As an addendum to the above, Dr. Chevers published a *Historical Review of the Moral and Social Condition of the British Soldier*, which is very interesting. In 1854 he contributed an excellent article to the *Calcutta Review*, vol. xxiii, on Surgeons in India, Past and Present. In 1855 appeared his great work on *Medical Jurisprudence in India*, which in six years passed through three editions. It was largely cited by the late Dr. Alfred Taylor; and to the author of this manual, which is a perfect mine of valuable information, the Royal College of Physicians of London awarded the Swiney prize. In 1864 Dr. Chevers wrote on the *Preservation of the Health of Seamen*—especially those frequenting Calcutta and the other Indian ports. This book met with the approbation of the late Lord Lawrence, and it was reprinted by the Government of Bombay for distribution to sailors. An enlarged edition appeared in 1866.

In the *Indian Annals* Dr. Chevers also wrote on the following subjects:—The Social Status of the Medical Profession; the Physician's Calling; Tracheotomy in Hydrophobia; the Antidotal Action of Tobacco in Poisoning by Strychnine; a Successful mode of Treating Mercurial Salivation; on the Calcutta Drainage Scheme; on the Reclamation of the Calcutta Salt-water Lake; on Humanity in War, etc.

In the *London Medical Gazette*, at different times, he produced papers on the Treatment of Pulmonary Consumption; on the Inflammation of the Serous Tissues in cases of Anthrax; on Congenital Stricture of the Thoracic Aorta.

In *Guy's Hospital Reports*, amongst many other subjects, he discussed the Causes of Death after Operations and Injuries in London Hospitals. This memoir elicited high praise from the late Sir James Simpson.

In the *Indian Medical Gazette*, Dr. Chevers wrote on the Fever of the Burdwan District; on the Conditions during Life of the Liver and Kidneys in Asiatic Cholera; on the Prevention of Uræmia in the Stage of Reaction, etc.

In 1874, Dr. Chevers was specially deputed to proceed to Cawnpore to assist, as a medical expert, in conducting the investigation of the identity of the man arrested at Gwalior as the infamous Nana Doondhoo Punt, of Bithoor—more generally known as the "Nana Sahib"—who took such a cruel part in the Cawnpore massacre of 1857. Dr. Chevers received the thanks of the Government of India for the manner in which this duty was performed.

After his retirement from the public service, Dr. Chevers received the distinction of Companion of the Order of the Indian Empire. His many friends would have been gratified, and certainly not surprised, had a Knight-Commandership of even a higher Order been conferred on one who was held in such high esteem and respect by the profession, the value of whose services was not to be reckoned with gold, and whose name was synonymous with all that is honourable.

At the Social Science Congress at Birmingham, in 1884, as President of the Sanitary Branch, he delivered an address on Health in England. At the opening of the Conference of the Epidemiological Society of London, at the International Health Exhibition, as President of the Epidemiological Society, he delivered an address, on July 22nd, 1884, on Health in India. He was a member of the Medical Committee appointed by the Secretary of State for India to inquire into Professor Koch's discovery of a cholera-bacillus. Within the last three months has appeared Dr. Chevers's great work—a *Commentary on the Diseases of India*—which is the outcome of a study of the subject maintained for thirty-eight years, a volume comprising the results of the observation, thought, and experience of his professional lifetime. We hope, before long, to publish a separate review of this *magnum opus*, which is fully worthy of the author's high reputation.

Now that he has passed away, many will continue to think of Norman Chevers with kindly affection and tender regret. Never was there a man more devoted to study. Throughout life, he intensely enjoyed the pleasure of "solitude broken by a book." He established for himself a literary reputation of no mean standard; and the influence of his writings will be lasting. Pure in heart, of high motives, and tender sensibilities, he was always faithful to the interests of the profession, to duty and to truth, in thought, word and deed. Gentle, genial, and generous by Nature, upright and noble in every relation of life, he could—when the occasion called for it—wield his pen with unmistakable power. His wit was playful and ready, his sarcasm delicate and subtle, and his satire very keen, yet free from personal bitterness. For anything pretentious or false, he evinced an instinctive and undisguised repugnance. He could not bear to smooth over anything that might possibly be misleading; and he could be uncommonly rough upon anything that savoured of vulgarity or meanness. His writings are characterised throughout by deep research, earnestness, and careful accuracy; and his last work by itself represents an abundant literary harvest. After much toil, he suddenly sank to rest, and he now sleeps well. Of him it may be truly said, "Literarum quæsivit gloriam, invenit Dei."

ROBERT NAIRNE, M.D.Cantab., F.R.C.P.

ROBERT NAIRNE, M.D., F.R.C.P., who died on November 5th last, at his residence in Beckenham, Kent, was born in 1804, and was therefore, in his 82nd year at the time of his death. It was in July 1883, after a little more than a quarter of a century's active service as a Commissioner in Lunacy, that he retired from his office upon a well-earned pension. His resignation, however, at the mature age of 79, was more in consequence of increasing deafness than because he felt his weight of years. Indeed, as an Honorary Member of the Lunacy Board, and up to within twenty-four hours of death, few men enjoyed better health than he did, looked more hale, or could have been intel-

lectually brighter. Tall and upright as a man in the prime of life, time touched him very gently, and only, in his later years, endowed him with a stoop, but one which his commanding height could well afford. His jaw was resolutely moulded, although a smile lurked always very close about the corners of his mouth. The man's character and strong natural physique were well expressed in his face. Any physiognomist might read at once that he was an earnest, honest, clear-sighted, straightforward man, neither fretting himself nor easily worried by others, able to make up his mind quickly, and to state his opinion, often without furnishing reasons for the faith that was in him.

He was educated first at Edinburgh, and then at Trinity College, Cambridge, where he took his Doctor's degree in 1832. His medical training was acquired at St. George's Hospital, where he was early placed upon the staff. In 1838 he was elected a Fellow of the College of Physicians, and in 1839 he became Physician to St. George's, where he was, later on, a lecturer on medicine. He served several times as Censor, and was still more often placed upon the College Council. Always by nature a genial man, he learnt his profession at a good school, and, as the colleague of Sir B. Brodie and Cutler, he had friends who could have helped him in life. Had he remained a physician, there is good reason to think that he would have earned what the world calls success in private practice. This, however, was not to be his lot.

In 1856 he married the daughter of John Gott, Esq.; and in 1857 the death of Dr. Hume vacated a Commissionership in Lunacy. Eighteen of the best years of his life, spent as a physician to a London Hospital, had satisfied his ambition in this direction; and when his friends advised his offering himself for the vacant post, they tempted one who was quite ready to exchange an uncertain for a regular income. It is true that he was not known at that time to have been particularly conversant with the care of the insane, nor was he forearmed with special experience in the management of asylums; but he was a perfect gentleman, very courteous and very patient, and possessed of easy, quiet manners.

As a physician he had hitherto acquitted himself so as to entitle him to the respect of all who were acquainted with him; he had further made himself a few firm friends. The then Lord Chancellor, to whom he owed his appointment, was doubtless well advised. Dr. Nairne was as a Commissioner what he had always been as a physician: cautious, clear-headed, and plain-spoken. He was patient with all alike, high or low; he listened to everyone's tale attentively, and never seemed or was in any hurry. We happen to know ourselves how very kind-hearted he was, how justly he would express his opinion when this was adverse, and how much hope he would hold out to those who were utterly despairing. "You never know," he would say, "how much an opportune word may do;" in his circuits, and upon his visits he dropped many such.

His last illness, a cerebral seizure, was very short; it was preceded by a slight premonitory attack of paresis. Nature in him had been very strong, but the machine was not constructed for all time. He had lived a long, useful, happy life, and passed away in ripe old age, with his faculties unimpaired till very near the end. Indeed, death came, as the wise man might desire it should come, without pain, and giving little warning, so that we are reminded by it of Mrs. Barbauld's lines on Life—

> "Then steal away, give little warning;
> Choose thine own time;
> Say not good-night, but in some brighter clime
> Bid me good morning."

EBENEZER WATSON, M.D., F.F.P.S.G.,
Surgeon to the Royal Infirmary, Glasgow.

DR. EBENEZER WATSON died at Glasgow on December 13th. He had been suffering for eighteen months past from an ill-defined disorder, characterised by recurrent attacks of fever. The son of a distinguished physician of Glasgow, he was himself for a long period of years one of its eminent surgeons. Already a graduate in Arts of Glasgow University, he graduated in medicine in 1846, and afterwards studied at King's College, London, under Sir W. Ferguson, and subsequently in Paris and Germany. In 1848 he settled down in practice in Glasgow, rendering able service during one of the visitations of cholera. For about thirty years he was Surgeon to the Royal Infirmary, and for a long term of years he also occupied the chair of Physiology in Anderson's College, a post which he resigned in 1876. He devoted special attention to diseases of the throat, and wrote several papers connected with that department of surgery. In 1867 he also published papers on the physiological action of Calabar bean and its use in tetanus and strychnine-poisoning. His position among his professional brethren is indicated by the fact that for two years he was President of the Faculty, and not the least service rendered by him to the Faculty was his vigorous and successful defence of its interests, when threatened by the Medical Bill of 1883. A surgeon of wide knowledge and experience, a skilful operator, and a lucid teacher, he was also a man of varied culture and attainments.

HOSPITAL AND DISPENSARY MANAGEMENT.

METROPOLITAN HOSPITAL SUNDAY FUND.

AT the annual general meeting of the Hospital Sunday Fund, recently held at the Mansion House, the Lord Mayor presiding, the report of the Council was presented, showing that the Fund of 1886 amounted to £40,399 7s. 7d. as compared with £34,320 8s. 5d. in 1885, and an average of £30,121 6s. 8d. in the thirteen years preceding. The report of the committee of distribution recommended the payment of awards to 154 institutions (of which the names are given), being equal in number to those which shared last year's fund, and an increase of 40 since the first awards were made in 1873. The total amount available for distribution, after allowing sufficiently for liabilities and the usual current expenses, was £38,279 3s. 4d. Of this total £36,679 3s. 4d. was distributed among 103 hospitals and 51 dispensaries. Four per cent. of the total collected, namely £1,600, was set apart to purchase surgical appliances during the ensuing year. The accounts showed a total receipt of £42,488 11s., comprising £40,399 7s. 7d. collections and donations, and a balance of £2,049 4s. 2d. from last year. Of this sum there had been awarded £38,046 19s. to hospitals and dispensaries, and for surgical appliances. The expenses of management amounted to £1,592 14s. 3d., leaving a balance carried forward of £2,808 16s. 8d. Sir S. Waterlow, in moving the adoption of the report, called attention to the fact that the collection this year was the largest that had ever been made. The report was unanimously agreed to.

SHERBURN HOSPITAL.

THE early history of Sherburn Hospital, the foundation deed of which bears the date of 1181, is of considerable interest, as narrated in the *Durham Diocesan Magazine* for October. It was founded by the well-known Hugh Pudsey, "the Jolly Bishop of Durham," A.D. 1157 to 1194, as a house of mercy for the reception of lepers of both sexes, and was dedicated "to Christ, the Blessed Virgin, Lazarus, Martha and Mary. The Hospital was in the form of a quadrangle, with a lower range of buildings for men on two sides and for women on one. Accommodation was provided for sixty-five lepers. The food allowance of the inmates appears to have been liberal; they each received daily one loaf, weighing five marks, and a gallon of ale, and between two, one mess or commons of flesh on three days a week, and of fish, cheese or butter on the remaining four. On high days a double mess; in Lent fresh salmon or other fresh fish; and on Michaelmas Day four messed on one goose. Other minor rations of cheese, salt, herrings, butter, eggs, greens, onions, etc., were regularly served. Our modern fuel was at that time unknown, and, as would appear from an ordinance, peat, yule-logs, and trusses of straw, formed the fuel of that day. The religious ordinances were strictly defined, and, during Lent and Advent, the brethren were required to receive corporal discipline in the chapel, and the sisters likewise in the presence of their Prioress—"donec omnes vapulent." During matins, the bedridden sick were taught to raise themselves on their beds; those who were too weak to do this, "in pace jaceant et quod dicere possunt dicant." By the year 1429, great abuses had arisen, and the revenues of the hospital had been mainly turned to private emolument. There is reason to believe that about the middle of the previous century the hospital-buildings suffered greatly from the ravages of the Scots. In the year just mentioned, a petition was made to Bishop Langley to inquire into and reform abuses. About that time (1434), the character of the foundation became changed, seeing that "leprosy had by this time become almost extinct in England," and a new constitution was granted; it ordered that the master should henceforth be in holy orders, and that the management and discipline of the hospital should be subject only to the bishop.

UNREGISTERED DRUGGISTS.—The Pharmaceutical Society of Great Britain recently obtained a verdict of £10, claimed as a penalty, from a man named Jarman, for selling laudanum and calling himself a druggist, when he was not registered as such, contrary to the provisions of the Pharmacy Act. The action was tried at the Salford County Court, before Judge Russell. The judge suggested that an application should be made to the Treasury for a reduction or remission of penalties, because the defendant had given up business.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF BELFAST.

THE monthly report for November, presented to the Town Council at their last meeting, is as follows:—"In the past month the medical officers of health of the several sub-sanitary districts have returned 26 cases of zymotic diseases occurring among dispensary applicants; namely—typhus, 10; typhoid or enteric fever, 9; scarlatina, 7. Twelve of these were removed to the Hospital for Contagious Diseases, every precaution having been taken by fumigation, cleansing and lime-washing of the houses whence the infected were removed. Some bedding and clothing used by the sick were destroyed by fire. In the four weeks ending November 20th, the Registrar-General for Ireland returned 41 deaths from zymotic diseases in Belfast; namely—scarlatina, 5; typhus, 4; diphtheria, 1; enteric fever, 10; simple fever, 3; and diarrhœa, 18. He also registered 56 deaths from phthisis, and 62 from diseases of the respiratory organs, showing a mortality of 118 from lung affections. There were 596 births registered in the same period, and 326 deaths, giving a natural increase of 270 individuals. There were 55 deaths amongst children under one year of age, and 60 in persons at and over 60 years of age. Fifty-eight individuals died in our public institutions, and 10 perished from accident or violence. The average death-rate for the four weeks was, from all causes, 19.1; from lung diseases, 6.9; and from zymotics, 2.3. The death-rate of children under one year was 3.2, and of persons at and above 60 years, 3.5. The average reading of the barometer, taken daily in the Town Hall at eleven o'clock, was 29.80 inches; the average maximum temperature, taken at the same time and place, was 48.5 inches. The highest reading of the barometer was on November 24th, when it indicated 30.80 inches; the lowest was on the 15th, when it marked 29.20. The highest temperature was on the 20th, when the thermometer indicated 56 degrees; the lowest was on the 16th, when the temperature fell to 40 degrees. There were 24 days of westerly winds, and 6 of easterly. Rain fell on 14 days, with a rainfall of 4 inches. The month of November, though showing many and rapid changes, has, on the whole, been remarkably mild, especially between the 17th and 28th. The death-rates from all causes, from lung affections and zymotic diseases, have been comparatively low, and the borough has been happily free from all diseases in an epidemic form. This is indicated by the small number of zymotic diseases returned by the medical officers of health, and sent to hospital, as also by the low death-rate in these affections—namely, 2.3 per 1,000. The rate likewise in lung diseases, though slightly higher than that of last month, is below the average of this season of the year; hence, we may regard the reports of the last two months on the health of Belfast as satisfactory. The duties of the sub-sanitary officers have been efficiently performed during the past month.

DIPHTHERIA AT SANDWICH.

A SERIOUS epidemic of diphtheria is reported to have broken out at Ash, near Sandwich, Kent. Already five persons are said to have died, and several others are dangerously affected. The village schools have been closed, and every effort is being made to subdue the epidemic.

FEVER IN GLASGOW.

DR. J. B. RUSSELL, the medical officer of health, reports that, during the fortnight ending December 4th, there were 528 deaths registered, as compared with 472 in the fortnight preceding—an increase of 56, representing a death-rate of 26.4 per 1,000 living, in place of 23.5. The number of deaths from diseases of the lungs was 189, as compared with 174; from diarrhœa, 12, the same as in the preceding fortnight, and these all below five years of age; from enteric fever, 4, in place of 6; and from infectious diseases of children, 63, in place of 59—namely, 28 from scarlet fever, 27 from whooping-cough, and 8 from measles. There had been a decrease in the fatality of scarlet fever of 4, and an increase in the fatality of measles of 5. Twenty-six cases of enteric fever were registered during the fortnight. There were also registered 181 cases of measles, 178 of scarlet fever, 39 of whooping-cough, and 18 of diphtheria, of which 120 were removed to hospital. In the hospitals there were at that time 334 cases of scarlet fever, 53 of measles, 45 of enteric fever, 24 of whooping-cough, 6 of erysipelas, and 2 of typhus—in all, 464 cases, as compared with 438 that day fortnight. On Saturday, December 4th, there were 485 patients in Belvidere Fever Hospital—the highest number since October 25th, 1880, when there were 520.

DISPATCH IN DIAGNOSIS.

A CORRESPONDENT comments on the statement of a medical chairman of the Sanitary Committee of a northern town, that, in the absence of the medical officer of health, he individually examined, in one afternoon, 695 children in a school in which one of the pupils had suffered from scarlet fever, and he found not one suffering from any infectious disease or its consequences. Supposing the examination took five hours, it would allow as nearly as possible half a minute to each child. The examination obviously could not be of a very detailed character, and we cannot refrain from expressing the opinion that it was calculated to give a false sense of security. The intention was, doubtless, excellent, but thoroughness is of so much importance in such a matter, that it would have been better to have procured skilled assistance, and to have made the examination in reality what it was obviously intended to be.

LOCAL BOARD. 1 and 2. A partner is not liable to any penalty if he holds office while the other member of the partnership sits on a Local Board. The third question is not clear. The individual is appointed, not the firm, and neither the Local Board nor the Local Government Board could take cognisance of the private contract between partners.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, December 4th, 5,317 births and 3,652 deaths were registered in the twenty-eight large English towns, including London, dealt with in the Registrar-General's weekly return, which have an estimated population of 9,093,817 persons. The annual rate of mortality, which had been 19.1 and and 20.2 per 1,000 in the two preceding weeks, further rose during the week under notice to 21.0. The rates in the several towns, ranged in order from the lowest, were as follow:—Birkenhead, 14.2; Brighton, 14.3; Nottingham, 16.5; Derby, 17.0; Birmingham, 17.5; Cardiff, 17.6; Norwich, 17.6; Sheffield, 18.1; Leicester, 18.3; Portsmouth, 19.1; Huddersfield, 20.0; Bradford, 20.2; London, 20.3; Salford, 21.2; Hull, 21.8; Sunderland, 22.1; Wolverhampton, 22.2; Liverpool, 22.5; Blackburn, 22.7; Newcastle-upon-Tyne, 22.9; Bolton, 23.0; Halifax, 23.3; Bristol, 23.4; Preston, 25.7; Leeds, 26.0; Manchester, 26.6; Plymouth, 27.9; and the highest rate during the week, 32.1 in Oldham. The death-rate in the twenty-seven provincial towns averaged 21.5 per 1,000, and exceeded by 1.2 the rate recorded in London, which, as before stated, was 20.3 per 1,000. The 3,652 deaths registered during the week under notice in the twenty-eight towns included 379 which were referred to the principal zymotic diseases, against 402 and 400 in the two preceding weeks; of these, 134 resulted from measles, 70 from scarlet fever, 61 from whooping-cough, 46 from diarrhœa, 36 from "fever" (principally enteric), 32 from diphtheria, and not one from small-pox. These 379 deaths were equal to an annual rate of 2.2 per 1,000. The zymotic death-rate in London was equal to 1.7 per 1,000, while in the twenty-seven provincial towns it averaged 2.6, and ranged from 0.5 in Bolton and in Nottingham, to 5.7 in Leeds, 5.9 in Wolverhampton, and 6.0 in Halifax. The deaths referred to measles, which had increased in the four preceding weeks from 66 to 144, declined to 134 during the week under notice, and were proportionally most numerous in Bristol, Halifax, Leeds, and Wolverhampton. The fatal cases of scarlet fever, which in the two previous weeks had been 95 and 75, further declined during the week to 70, and caused the highest death-rates in Salford, Bradford, Manchester, and Plymouth. The 61 deaths from whooping-cough showed a further increase upon recent weekly numbers; this disease was proportionally most prevalent in Huddersfield, Halifax, and Sunderland. The fatal cases of "fever," which had been 54 and 55 in the two preceding weeks, declined during the week under notice to 36,—a lower number than in any week since August last. The 32 deaths referred to diphtheria showed a further decline from the numbers returned in the three previous weeks, and included 12 in London, 8 in Liverpool, and 5 in Birmingham. No death from small-pox was registered during the week under notice, either in London or in any of the twenty-seven provincial towns, and no small-pox patients were under treatment in the Metropolitan Asylum hospitals on Saturday, December 4th. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 5.5 per 1,000, and was slightly below the average. The causes of 99, or 2.7 per cent. of the 3,652 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

In the twenty-eight large English towns, including London, dealt with in the Registrar-General's Weekly Return, which have an estimated population of 9,093,817 persons, 5,553 births and 3,984 deaths were registered during the week ending Saturday, December 11th. The annual rate of mortality, which had been 19.1, 20.2, and 21.0 per 1,000 in the three preceding weeks, further rose during the week under notice to 22.9, and exceeded the rate recorded in any week since March last. The rates in the several towns, ranged in order from the lowest, were as follow:—Brighton, 12.1; Birkenhead, 17.0; Hull, 17.7; Birmingham, 18.0; Cardiff, 18.6; Nottingham, 19.9; Sunderland, 20.5; Bradford, 20.7; Bolton, 20.7; Norwich, 21.0; Preston, 21.1; Huddersfield, 21.2; London, 21.9; Leicester, 22.0; Sheffield, 24.8; Plymouth, 25.2; Newcastle-upon-Tyne, 25.2; Liverpool, 25.7; Salford, 25.7; Leeds, 25.7; Bristol, 27.4; Portsmouth, 28.3; Oldham, 28.4; Halifax, 28.7; Manchester, 29.2; Derby, 30.1; Blackburn, 30.5; and the highest rate during the week, 33.3 in Wolverhampton. In the twenty-seven provincial towns the death-rate averaged 23.7 per 1,000, and exceeded by 1.8 the rate recorded in London, which, as before stated, did not exceed 21.9 per 1,000. The 3,984 deaths registered in the twenty-eight towns during the week under notice included 181 which were referred to measles, 65 to scarlet fever, 60 to whooping-cough, 50 to "fever" (principally enteric), 35 to diarrhœa, 32 to diphtheria, and 1 to small-pox; in all, 424 deaths resulted from these principal zymotic diseases, against numbers declining from 411 to 379 in the four preceding weeks. The zymotic rate was equal to 2.4 per 1,000. In London the zymotic death-rate was 2.1 per 1,000, while it averaged 2.7 in the twenty-seven provincial towns, among which it ranged from 0.5 per 1,000 in Birkenhead and Bolton, to 5.3 in Halifax, 6.5 in Leeds, and 9.1 in Wolverhampton. The fatal cases of measles, which had been 144 and 134 in the two preceding weeks, rose to 181 during the week under notice; this disease caused the highest death-rates in Huddersfield, Leeds, Halifax, and Wolverhampton. The deaths referred to scarlet fever, which had declined in the three previous weeks from 95 to 70, further fell to 65, and caused the highest proportional fatality in Leicester, Salford, and Bristol. The 60 fatal cases of whooping-cough were within one of the number recorded in the preced-

ing week, and were proportionally most numerous in Bristol and Huddersfield. The deaths referred to different forms of "fever," which had been 54 and 36 in the two preceding weeks, rose again during the week under notice to 50, and caused the highest rates in Preston and Salford. The 35 fatal cases of diarrhœa showed a decline of 11 from the number in the previous week. The deaths from diphtheria, which in the four preceding weeks had declined from 46 to 42, were again 42 during the week under notice, and included 14 in London, 7 in Liverpool, 3 in Portsmouth, and 2 in Huddersfield. A fatal case of small-pox was recorded in Leeds, but none either in London or in any other of the provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday, December 11th. The death-rate from diseases of the respiratory organs in London during the week under notice was equal to 6.2 per 1,000, and slightly exceeded the average. The causes of 57, or 2·4 per cent. of the 3,984 deaths registered during the week in the twenty-eight towns were not certified, either by registered medical practitioners or by coroners.

HEALTH OF SCOTCH TOWNS.

In the eight principal Scotch towns having an estimated population of 1,283,977 persons, 749 births and 570 deaths were registered during the week ending Saturday, December 4th. The annual rate of mortality, which had been 21.4 per 1,000 in each of the two preceding weeks, rose to 23.1 during the week under notice, and exceeded by 2.1 per 1,000 the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 12.5 in Greenock, 18.5 in Leith, 20.1 in Dundee, 21.2 in Edinburgh, 21.2 in Aberdeen, 21.7 in Paisley, 27.3 in Glasgow, and 27.9 in Perth. The 570 deaths registered during the week under notice in these Scotch towns included 25 which were referred to scarlet fever, 19 to whooping-cough, 17 to diarrhœa, 9 to measles, 8 to diphtheria, 3 to "fever," and not one to small-pox; in all, 81 deaths resulted from these principal zymotic diseases, against 77 and 64 in the two preceding weeks. These 81 deaths were equal to an annual rate of 3.3 per 1,000, which exceeded by 0.8 the average zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates during the week under notice were recorded in Aberdeen, Edinburgh and Glasgow. The fatal cases of scarlet fever, which had been 24 and 14 in the two preceding weeks, rose again during the week to 25, of which 19 occurred in Glasgow, 3 in Dundee, and 2 in Edinburgh. The 19 deaths referred to whooping-cough exceeded by 2 the number in the previous week, and included 16 in Glasgow, and 3 in Edinburgh. The 17 fatal cases of diarrhœa differed but slightly from recent weekly numbers. The deaths from measles, which had been 4 in each of the two preceding weeks, rose to 9 during the week, of which 7 occurred in Glasgow. The fatal cases of diphtheria, which had declined from 11 to 4 in the three preceding weeks, rose again during the week under notice to 8, and included 3 in Edinburgh, and 3 in Glasgow. The 3 deaths referred to fever were fewer than those returned in any recent week, and included 2 in Glasgow. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 6.2 per 1,000, against 5.5 in London. The causes of 78, or nearly 14 per cent. of the 570 deaths registered during the week in these Scotch towns were uncertified.

During the week ending Saturday, December 11th, 811 births and 544 deaths were registered in the eight principal Scotch towns, having an estimated population of 1,283,977 persons. The annual rate of mortality, which had been 21.4 and 23.1 per 1,000 in the two preceding weeks, declined again to 22.0 during the week under notice, and was 0.9 per 1,000 below the mean rate for the same period in the twenty-eight large English towns. Among these Scotch towns, the rate was equal to 14.8 in Leith, 17.0 in Edinburgh, 18.0 in Perth, 18.2 in Paisley, 18.9 in Aberdeen, 20.9 in Greenock, 22.8 in Dundee, and 26.8 in Glasgow. The 544 deaths registered during the week under notice in these towns included 63 which were referred to the principal zymotic diseases, against 64 and 81 in the two preceding weeks; of these, 17 resulted from scarlet fever, 15 from diarrhœa, 15 from whooping-cough, 6 from diphtheria, 5 from "fever," 5 from measles, and not one from small-pox. These 63 deaths were equal to an annual rate of 2.6 per 1,000, which slightly exceeded the mean zymotic death-rate during the same period in the twenty-eight large English towns. The highest zymotic rates in the Scotch towns during the week under notice were recorded in Aberdeen, Greenock, and Glasgow. The fatal cases of scarlet fever, which had been 14 and 25 in the two preceding weeks, declined again to 17, of which 12 occurred in Glasgow, and 3 in Edinburgh. The 15 deaths referred to diarrhœal diseases showed a slight decline from recent weekly numbers. The fatal cases of whooping-cough, which had been 17 and 19 in the two preceding weeks, declined to 15 during the week under notice, and included 9 in Glasgow, and 4 in Edinburgh. The 6 deaths from diphtheria showed a decline of 2 from the number in the previous week, and included 2 in Glasgow, and 2 in Dundee. The fatal cases of "fever" which had been 8 and 3 in the two preceding weeks, rose again to 5, of which 2 occurred in Glasgow, where 4 of the 5 deaths from measles were also recorded. The death-rate from diseases of the respiratory organs in these Scotch towns during the week under notice was equal to 6.2 per 1,000, and corresponded with the rate in London. The causes of 59, or 10.8 per cent., of the 544 deaths registered during the week in these Scotch towns were uncertified.

HEALTH OF IRISH TOWNS.

In the week ending Saturday, December 4th, 1886, 393 deaths were registered in the sixteen principal town-districts of Ireland. The average annual death-rate represented by the deaths registered was 23.7 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 0.0; Belfast, 17.2; Cork, 27.3; Drogheda, 31.1; Dublin, 37.2; Dundalk, 15.1; Galway, 43.7; Kilkenny, 8.5; Limerick, 28.3; Lisburn, 9.7; Londonderry, 21.4; Lurgan, 35.9; Newry, 10.5; Sligo, 13.4; Waterford, 31.7; Wexford, 21.4. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 2.5 per 1,000, the rates ranging from 0.0 in Galway, Kilkenny, Drogheda, Wexford, Dundalk, Sligo, Lisburn, and Armagh, to 7.1 in Londonderry; the 12 deaths from these causes in the latter district comprised 7 from measles and 1 from diarrhœa. The Registrar of Londonderry, No. 2 District, remarks, "There is an epidemic of measles in my district, and throughout the city." The 393 deaths registered in Belfast comprise 2 from scarlatina, 1 from typhus, 1 from enteric fever, 1 from continued fever, and 1 from diarrhœa; among the 41 deaths in Cork are 1 from scarlatina, and 3 from enteric fever; the 21 deaths in Dublin comprise 1 from typhus and 1 from whooping-cough; and the 7 deaths in Limerick include 1 from typhus. In the Dublin Registration District, the births registered during the week amounted to 171, and the deaths to 190. The deaths represent an annual rate of mortality of 25.1 in every 1,000 of the estimated population; omitting the deaths of persons admitted into public institutions from localities outside the district, the rate was 27.2 per 1,000. Twenty-four deaths from zymotic diseases were registered, being 1 over the average for the corresponding week of the last ten years, and 1 over the number for the week ended November 27th; they comprised 1 from measles, 8 from scarlet fever (scarlatina), 1 from typhus, 2 from whooping-cough, 1 from ill-defined fever, 5 from enteric fever, 3 from diarrhœa, etc. Thirty-one deaths from diseases of the respiratory system were registered, being 3 over the number for the preceding week, but 16 under the average for the forty-eighth week of the last ten years; they comprise 23 from bronchitis and 5 from pneumonia or inflammation of the lungs. The deaths of 19 children (including 15 infants under 1 year old) were ascribed to convulsions. Two deaths were caused by apoplexy, 3 by epilepsy, 9 by other diseases of the brain and nervous system (exclusive of convulsions), and 16 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 27 deaths, mesenteric disease 5, and cancer 5. Three accidental deaths were registered. In 32 instances, the cause of death was "uncertified," there having been no medical attendant during the last illness.

In the week ending Saturday, December 11th, the total number of deaths registered in the sixteen principal town-districts of Ireland was 478. The average annual death-rate represented by the deaths registered was 28.8 per 1,000 of the population. The deaths registered in the several towns, alphabetically arranged, corresponded to the following annual rates per 1,000: Armagh, 5.2; Belfast, 26.8; Cork, 22.7; Drogheda, 50.7; Dublin, 35.0; Dundalk, 30.6; Galway, 13.4; Kilkenny, 29.6; Limerick, 20.2; Lisburn, 19.3; Londonderry, 53.9; Lurgan, 25.7; Newry, 14.0; Sligo, 14.4; Waterford, 18.5; Wexford, 12.8. The deaths from the principal zymotic diseases in the sixteen districts were equal to an annual rate of 3.2 per 1,000, the rates varying from 0.0 in ten of the districts to 14.3 in Londonderry; the 19 deaths from all causes registered in that district comprising 7 more from measles and 1 from whooping-cough. Among the 114 deaths from all causes registered in Belfast are 1 from scarlatina, 1 from whooping-cough, 1 from diphtheria, 2 from simple continued fever, 3 from enteric fever, and 5 from diarrhœa; and the 35 deaths in Cork comprise 1 from scarlatina, 3 from enteric fever, and 2 from diarrhœa. In the Dublin Registration District, the births registered during the week amounted to 178, and the deaths to 241. The deaths represent an annual rate of mortality of 35.6 in every 1,000 of the estimated population; omitting the deaths of persons admitted into public institutions from localities outside the district, the rate was 35.0 per 1,000. Twenty-four deaths from zymotic diseases were registered, being equal to the number for the preceding week, but 2 under the average for the forty-ninth week of the last ten years; they comprise 8 from scarlet fever (scarlatina), 1 from typhus, 3 from whooping-cough, 3 from enteric fever, 7 from diarrhœa, etc. Fifty deaths from diseases of the respiratory system were registered, being 19 over the number for the preceding week, but 5 under the average for the forty-ninth week of the last ten years; they comprise 33 from bronchitis, and 9 from pneumonia or inflammation of the lungs. The deaths of 33 children (including 16 infants under 1 year old) were ascribed to convulsions. Four deaths were caused by apoplexy, 13 by other diseases of the brain and nervous system (exclusive of convulsions), and 11 by diseases of the circulatory system. Phthisis or pulmonary consumption caused 32 deaths, mesenteric disease 4, and cancer 8. Three accidental deaths were registered. In 50 instances the cause of death was "uncertified," there having been no medical attendant during the last illness.

HEALTH OF FOREIGN CITIES.

It appears, from statistics published in the Registrar-General's return for the week ending December 4th, that the annual death-rate recently averaged 32.1 per 1,000 in the three principal Indian cities; the rates were 24.2 in Bombay, 34.5 in Madras, and 38.4 in Calcutta. Cholera caused 98 deaths in Calcutta, against 34 in the preceding week; "fever" mortality showed a much larger excess in Calcutta and Madras than in Bombay. According to the most recently received weekly returns, the annual death-rate averaged 23.9 per 1,000 persons estimated to be living in twenty-two of the largest European cities, and exceeded by 2.9 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 21.8, and showed a considerable decline from the rate in the previous week; the 388 deaths included 16 from typhus and typhoid fever, and 11 from scarlet fever. In three other Northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 19.3, and ranged from 18.0 in Stockholm to 20.2 in Copenhagen; diphtheria and croup caused 7 deaths in Christiania, 6 in Copenhagen, and 2 in Stockholm; 7 fatal cases of whooping-cough occurred in Copenhagen, and 2 of typhoid fever in Christiania. In Paris, the death-rate was equal to 23.0, slightly exceeding the rate in the previous week, and was 2.6 above the rate during the same week in London; the deaths included 15 from typhoid fever, 22 from diphtheria and croup, and 1 from small-pox. The 156 deaths in Brussels, of which 7 resulted from diphtheria and croup, and 2 from "fever," were equal to a rate of 18.7, showing a considerable decline from the rates in recent weeks. The rate in Geneva was only 16.6, although 2 of the 23 death were cases of measles. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 23.4, the several rates being 20.8 in Amsterdam, 25.3 in Rotterdam, and 27.7 in the Hague; scarlet fever caused 6 deaths in Rotterdam, whooping-cough 4 both in Amsterdam and in Rotterdam, and diphtheria 3 in Amsterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 26.4, and ranged from 21.1 and 22.6 in Berlin and Dresden, to 32.2 in Trieste, 35.9 in Hamburg, and 38.1 in Buda-Pesth. Small-pox caused 98 deaths in Buda-Pesth, 2 in Prague, and 1 in Vienna; the deaths from cholera in Buda-Pesth declined to 4; diphtheria showed the greatest mortality in Hamburg, Dresden, Prague, and Berlin; typhoid fever caused 13 deaths in Hamburg. The death-rate averaged 21.4 in three of the largest Italian cities, and was equal to 19.7 in Venice, 20.2 in Rome, and 20.9 in Turin; small-pox caused 2 deaths in Rome and 1 in Venice, and typhoid fever 5 in Turin and 2 in Rome. The rate of mortality was equal to 37.9 in Alexandria, and to 40.5, in Cairo; diarrhœal diseases caused 42 deaths in Alexandria and 110 in Cairo; 11 deaths from typhoid fever were recorded in Cairo, and 5 of small-pox in Alexandria. In four of the principal American cities, the recorded death-rate averaged 21.2, and ranged from 18.6 in Baltimore to 26.1 in New York; diphtheria and croup showed considerable mortality in New York, Brooklyn, and Philadelphia; 42 fatal cases of measles were reported in New York; typhoid fever caused 6 deaths in Philadelphia, 8 in Brooklyn, and 5 in Baltimore.

It appears, from statistics published in the Registrar-General's return for the week ending December 11th, that the annual death-rate recently averaged 31.0 per 1,000 in the three principal Indian cities; the rates were 22.8 in Bombay, 34.

in Calcutta, and 32.6 in Madras. Cholera caused 63 deaths in Calcutta, against 31 and 98 in the two preceding weeks; 38 fatal cases of diarrhœal disease occurred in Madras, and "fever" mortality showed the largest excess in the same city. According to the most recently received weekly returns, the annual death-rate averaged 24.5 per 1,000 persons estimated to be living in twenty-two of the largest European cities, and exceeded by 1.6 the mean rate during the week in the twenty-eight large English towns. The death-rate in St. Petersburg was 29.6, showing a considerable increase upon the rates in recent weeks; the 465 deaths included 4 from small-pox, 12 from "fever," and 12 from scarlet fever. In three other northern cities—Copenhagen, Stockholm, and Christiania—the death-rate averaged only 15.1, and ranged from 14.3 in Stockholm to 17.1 in Christiania; diphtheria and croup caused 12 deaths in Christiania, 8 in Copenhagen, and 2 in Stockholm; 4 fatal cases of scarlet fever occurred in Christiania, and 2 in Stockholm. In Paris, the death-rate was equal to 23.3, scarcely differing from the rates in recent weeks, but exceeding the rate during the same week in London by 1.5; the deaths included 22 from typhoid fever, 22 from diphtheria and croup, and 31 from measles. The 173 deaths in Brussels, of which 6 resulted from diphtheria and croup, were equal to a rate of 20.7. The rate in Geneva was 25.2, but no fatal cases of zymotic disease was reported. In the three principal Dutch cities—Amsterdam, Rotterdam, and the Hague—the mean death-rate was 23.2, the several rates being 21.0 in Amsterdam, 24.9 in Rotterdam, and 27.7 in the Hague; measles caused 4 deaths in Amsterdam and 2 in the Hague, and croup 6 in Amsterdam. The Registrar-General's table includes nine German and Austrian cities, in which the death-rate averaged 26.8, and ranged from 19.9 in Berlin, and 21.3 in Dresden, to 32.1 in Prague and 40.9 in Buda-Pesth. The 332 deaths in Buda-Pesth included 85 from small-pox, 25 from scarlet fever, 12 from diphtheria and croup, and 2 from cholera. Diphtheria showed fatal prevalence in most of these German cities, the greatest mortality occurring in Hamburg, Dresden, and Prague. The death-rate averaged 22.0 in three of the largest Italian cities, and was equal to 18.2 in Venice, 19.9 in Turin, and 22.1 in Rome; small-pox caused 8 deaths in Rome, and "fever" 6 in Rome and 5 in Turin. The rate of mortality was equal to 35.6 in Alexandria and 50.9 in Cairo; 36 deaths from diarrhœal diseases occurred in Alexandria and 129 in Cairo, and the fatal cases of typhoid fever were 16 in Cairo and 4 in Alexandria. In four of the principal American cities, the recorded death-rate averaged 22.2, and ranged from 17.9 in Baltimore, to 24.9 in New York. Diphtheria and croup caused considerable mortality in each of these four American cities, and the reported deaths from typhoid fever were 11 in Brooklyn, and 8 both in Philadelphia and Baltimore.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An extraordinary meeting of the Fellows was held on Thursday, December 16th; Sir W. Jenner presiding.

A letter from Sir R. Webster to the President of the College was read, in which he referred to the foundation of the John Lucas Walker Studentship at the University of Cambridge, and requested that the President would consent to become one of the electors to that studentship. The College unanimously approved of the President's acceptance of this office.

A report was received from the Committee of Management of the Conjoint Examinations. It contained the following recommendations, which were sanctioned by the College:—

1. That Mr. Thomas Cooke's School of Instruction in Anatomy and Physiology, in Brunswick Square, be recognised as a "place of study" for candidates rejected at the second examination of the Examining Board in England, subject to an annual renewal of such recognition on application from Mr. Cooke.

2. That the committee be empowered to determine questions relating to exceptions to the conditions of admission to the several examinations of the Examining Board in England.

3. That in the final part of paragraph 18, Section II, of the regulations of the Examining Board in England, relating to the interval of two years required to be spent in professional study between the date of passing the second examination and admission to the third or final examination, the words "two winter and two summer sessions" be substituted for "two years."

A report was also received from the Building Committee, stating that satisfactory progress was being made with the new Examination Hall, and the committee was formally empowered to provide all necessary fittings (other than furniture) for the new building.

The report of the Committee of Delegates, appointed by this College and the College of Surgeons to consider the question of the desirability and practicability of granting degrees in medicine and surgery to persons who have passed the conjoint examinations of the two Colleges, was received and ordered to be entered on the annals. This report recommended the adoption of two resolutions:—1. That candidates who have passed the examinations of the Examining Board in England for the licence of the Royal College of Physicians of London, and the diploma of Member of the Royal College of Surgeons of England, should have a degree in medicine and surgery conferred upon them, provided that they have passed such examination in arts and science as may hereafter be defined, and have pursued clinical studies in London—or in other medical school or schools, if the governing body should so determine—for at least two years after having passed the second professional examination.

2. That an application be made to the Crown by the Royal College of Physicians of London and the Royal College of Surgeons of England, acting conjointly, for power to confer degrees in medicine and surgery.

The report further pointed out the reasonableness of the demand for an opportunity for students to obtain medical degrees in London, and also the fact that the essentials of a university, as regards teaching and the means of study in medicine, exist more fully in London than anywhere else in England. The social influences of collegiate life existed to a considerable extent in the intercourse of the students of the London medical schools with each other and with their teachers; and the examinations of the Colleges on the subjects comprised in their curriculum were on a level with those of the majority of the universities of the United Kingdom. This being so, it was desirable that the formal privilege of conferring degrees should be obtained; this power would stimulate the development and progress of higher education.

Dr. Wilson Fox moved the adoption of the first resolution.

Dr. Allchin moved, as an amendment: "That no scheme for the conferring of degrees on the Licentiates of the Royal College of Physicians and the Members of the Royal College of Surgeons can be deemed satisfactory unless it provide for the conferring of such degrees by a university outside the Colleges themselves, but on which they may be represented." He thought that the idea of a genuine university involved residence, and that its function was primarily educational. He asked what was to be the relation of the Colleges to the proposed university; were they to be absorbed and lost? Practically, he looked upon the proposal as one for the foundation of a second-rate university.

Dr. Norman Moore seconded the amendment. He insisted that any steps taken by the Colleges must be distinctly with a view to the improvement of medical education. He advocated the scheme proposed for the "Teaching University."

Dr. Curnow thought that the proposed action of the two Colleges would really prove to be the first step in the formation of the "Teaching University," which might include the faculties of Arts and Science, by-and-bye. Someone must take the first step, and it was impossible to wait until the teachers in Arts and in Science had come to an agreement. Universities differed in character all the world over, and markedly so in England.

Dr. Bristowe thought that it had been decided, by the resolution passed by the College some months ago, that the degree ought to be granted by the Colleges themselves.—Sir George Paget and Sir Risdon Bennet dissented from this interpretation. The amendment was supported by Dr. Chambers, and opposed by Dr. Wilson Fox, Sir William Gull, and Dr. Quain. Finally, on the motion of Sir H. Pitman, the discussion was adjourned.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A special meeting of the Council was held at the College on Thursday, December 16th, to consider a report from the Committee of Delegates appointed by the Royal Colleges of Physicians and Surgeons, to consider the question of granting degrees in Medicine and Surgery. The report was discussed and adopted with certain verbal alterations, and referred back to the Delegates for consideration of these amendments, in conjunction with any alterations which may be introduced by the College of Physicians, which was simultaneously engaged upon the consideration of the report.

Royal College of Surgeons of England.—The following Members, having passed the final examination for the Fellowship on November 24th, 25th, 26th, and 27th were, at a meeting of the Council held on December 9th, admitted Fellows of the College, namely:—

G. H. Sylvester, L.R.C.P.Lond., Dry Hill Park, Tonbridge, Kent, date of membership, April 16th, 1878; J. R. Dodd, M.D.Durh., Army Medical Staff, July 21st, 1879; F. C. Vinrace, M.D., Q.U.I., 17A, Temple Row, Birmingham, November 11th, 1879; E. M. Little, L.R.C.P.Lond., 18, Park Street, W., January 21st, 1880; E. K. Campbell, M.B.Edin., 64, Guilford Street, W.C., July 21st, 1881; T. H. Openshaw, M.B.Durh., London Hospital, January 17th, 1882; E. Hudson, L.S.A., Indian Medical Service (Bengal), July 31st, 1882; E. Harrison, M.B.Cantab., Royal Infirmary, Hull, May 17th, 1883; J. Elliott, M.B.Lond., St. Bartholomew's Hospital, July 29th, 1884; G. W. H. French, Rose Bank, Highgate, April 23rd, 1884; C. E. Tanner, M.D.Durh., Marlborough, Wilts, October 22nd, 1884; H. M. Page, L.R.C.P. Lond., 27, Westbourne Park, January 26th, 1885.

One other Candidate passed the examination, but not having attained the legal age (25), will receive his diploma at a future meeting

of the Council. Fourteen Candidates failed to reach the required standard; four were referred for six months, and ten for one year.

The following Members, having passed the final examination in May last, and having since attained the legal age, were also admitted Fellows.

J. H. Targett, M.B.Lond., Guy's Hospital, January 24th, 1883; E. W. Roughton, Brook Green, W., January 24th, 1883.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the recent examination for Degrees in Medicine and Surgery, the following candidates satisfied the examiners:

For the Degree of Doctor in Medicine for Practitioners of Fifteen Years' Standing.—J. Deans, M.R.C.S., L.S.A.; W. Le Gros Denzilloe, M.R.C.S., L.S.A., M.R.C.P.Ed.; C. E. Hardyman, F.R.C.S.Edin., M.R.C.S., L.S.A.; J. Hedley, M.R.C.S., L.S.A.; T. S. Smith, L.R.C.S.Edin., L.S.A.; T. O. Wood, M.R.C.S.Eng., F.R.C.S.Edin., F.R.C.P.Edin.

For the Degree of Doctor in Medicine (Essay).—H. W. Dixon, M.B., L.R.C.S.Edin., G. W. Richards, M.B., M.R.C.S.; C. F. Rumboll, M.B., M.R.C.S.; W. Slater, M.B., L.R.C.S.Edin.

Gold Medal for Best Essay for Year 1886.—J. V. Salvage, M.B., L.R.C.P., M.R.C.S. *Proxime Accessit.*—C. F. Rumboll, M.B., M.R.C.S.

Final Examinations for the Degree of Bachelor in Medicine: Second Class Honours in Order of Merit.—W. J. Hadley, M.R.C.S., L.S.A., London Hospital; J. W. Dalgliesh, College of Medicine, Newcastle-upon-Tyne; T. E. Honey, St. Mary's Hospital. Pass-list in Alphabetical Order.—W. M. Abbot-Anderson, University College; W. D. Arnison, College of Medicine, Newcastle-upon-Tyne; A. F. Bradbury, College of Medicine, Newcastle-upon-Tyne; G. Cranstoun, St. Thomas's Hospital; R. Crosby, M.R.C.S., College of Medicine, Newcastle-upon-Tyne; G. T. Giddings, London Hospital; A. Green, College of Medicine, Newcastle-upon-Tyne; F. Hewkley, M.R.C.S., London Hospital; G. G. Howitt, College of Medicine, Newcastle-upon-Tyne; R. W. Jalland, L.R.C.P., M.R.C.S., L.S.A., St. Bartholomew's Hospital; W. Lansdale, M.R.C.S., Guy's Hospital; T. McInerney, L.K.Q.C.P., L.R.C.S.I., Ledwich School of Medicine, Dublin, and College of Medicine, Newcastle-upon-Tyne; A. J. H. Montague, L.R.C.P., M.R.C.S., L.S.A., St. Thomas's Hospital; F. J. J. Orton, M.R.C.S., L.S.A., Queen's College, Birmingham; A. C. A. Packman, M.R.C.S., College of Medicine, Newcastle-upon-Tyne, and Sheffield School of Medicine; F. W. Ramsay, L.S.A., College of Medicine, Newcastle-upon-Tyne; H. Renney, College of Medicine, Newcastle-upon-Tyne; R. B. Robson, College of Medicine, Newcastle-upon-Tyne; T. A. Robson, College of Medicine, Newcastle-upon-Tyne; W. F. Steele, College of Medicine, Newcastle-upon-Tyne; F. Winter, College of Medicine, Newcastle-upon-Tyne; W. M. Yeoman, College of Medicine, Newcastle-upon-Tyne.

For the Degree of Bachelor in Surgery.—W. M. Abbot-Anderson, University College; W. D. Arnison, College of Medicine, Newcastle-upon-Tyne; W. Baigent, M.B., College of Medicine, Newcastle-upon-Tyne; A. B. Blacker, M.B., L.R.C.P., M.R.C.S., L.S.A., St. Thomas's Hospital; A. F. Bradbury, College of Medicine, Newcastle-upon-Tyne; R. Crosby, M.R.C.S., College of Medicine, Newcastle-upon-Tyne; J. W. Dalgliesh, College of Medicine, Newcastle-upon-Tyne; A. C. Dove, M.B., M.R.C.S., St. Bartholomew's Hospital; J. H. Garrett, M.B., University College; T. H. Openshaw, M.B., L.R.C.P., M.R.C.S., L.S.A., London Hospital; H. B. W. Paige, M.B., College of Medicine, Newcastle-upon-Tyne; W. Race, M.B., College of Medicine, Newcastle-upon-Tyne; F. W. Ramsay, L.S.A., College of Medicine, Newcastle-upon-Tyne; H. Renney, College of Medicine, Newcastle-upon-Tyne; W. G. Richardson, M.B., College of Medicine, Newcastle-upon-Tyne; T. A. Robson, College of Medicine, Newcastle-upon-Tyne; C. F. Rumboll, M.B., M.R.C.S., St. Bartholomew's Hospital; W. F. Steele, College of Medicine, Newcastle-upon-Tyne; J. Straughan, M.B., College of Medicine, Newcastle-upon-Tyne; W. Turnbull, M.B., L.S.A., College of Medicine, Newcastle-upon-Tyne; F. Winter, College of Medicine, Newcastle-upon-Tyne.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly Examination for the licences of the College, held on Monday, Tuesday, Wednesday, Thursday, and Friday, December 6th, 7th, 8th, 9th, and 10th, 1886, the following candidates were successful:

For the Licence to practise Medicine and Midwifery.—T. D. Ambrose, Montreal, Canada; T. G. Barton, Rathmines, Dublin; E. J. Byrd, Leeds; J. Garth, Preston, Lancashire; W. Greene, Dublin; C. J. C. O. Hastings, M.D.Univ. Vict.Coll.Toronto; J. P. Howe, Dublin; P. McSwiney, Dublin; J. E. Midgley, M.D.Univ.Trin.Coll.Toronto, St. Thomas's, Ontario; A. E. Murphy, Kingstown, co. Dublin; H. M. Norris, Deal, Kent; B. B. Pattullo, M.D. Univ.Vict.Coll.Toronto, Toronto; T. J. Rossiter, Enniscorthy, co. Wexford; J. B. Ryan, Cahirconlish, co. Limerick; W. J. Shee, Carrick-on-Suir, co. Waterford.

For the Licence to practise Medicine only.—C. V. Burgess, Redruth, Cornwall; T. A. Connellan, Carrick-on-Shannon; H. G. G. Day, Rathgar, Dublin; H. E. B. Dickson, Ivy Bridge, Devon; St.L. J. Edmundson, Dublin; J. Ellison, Scarborough; I. P. Hartford, Dublin; W. A. Kelly, Waterford; A. F. Smith, Donoughmore, Queen's co.; G. H. Spencer, Bolton, Lancashire.

For the Licence to practise Midwifery only.—R. V. B. Smyth, M.D.Univ.Dubl., Strabane, co. Tyrone; M. P. Williams, M.D., R.U.I., Dungarvan, co. Waterford.

The undermentioned Licentiate in Medicine of the College having complied with the by-laws relating to Membership, pursuant to the provisions of the Supplemental Charter of December 12th, 1878, has been duly enrolled a Member of the College.

J. Deegan, Lic. Med. 1870, Woodville, Coolarne, Turloughmore, co. Galway.

MEDICAL VACANCIES.

The following vacancies are announced.

BRISTOL DISPENSARY.—Surgeon. Applications by January 1st, 1887, to the Secretary.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent.—Assistant Medical Officer. Salary, £120 per annum, with board, etc. Applications by December 30th to H. F. Youle, Esq., Guildhall, E.C.

CROYDON UNION.—Vaccination Officer. Applications by December 20th to the Clerk to the Guardians.

FULHAM UNION.—Assistant Medical Superintendent and Dispenser. Salary, £100 per annum, with board, etc. Applications by December 18th to the Clerk to the Guardians.

HOSPITAL FOR CONSUMPTION, Brompton.—Resident Clinical Assistants. Applications by December 18th to the Secretary.

HOSPITAL FOR THE INSANE, Barnwood, Gloucester.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to Dr. Needham.

JAMES MURRAY'S ROYAL ASYLUM, Perth.—Assistant Medical Officer. Apply to Dr. Urquhart.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer. Salary £150 per annum, with board and residence. Applications by December 18th to the General Superintendent.

MIDHURST UNION, Sussex.—Medical Officer. Salary, £80 per annum, and fees. Applications by December 25th to the Clerk to the Guardians.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—House-Surgeon. Salary, £50 per annum. Applications by December 20th to the Secretary.

ROYAL SEA-BATHING INFIRMARY, Margate.—Two Surgeons. Applications by December 20th to the Secretary.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth. House-Surgeon. Salary, £100 per annum, with board, etc. Applications by December 20th to the Honorary Secretary.

MEDICAL APPOINTMENTS.

BLUMER, G. Alder, M.D., L.R.C.P., L.R.C.S.Edin., appointed Medical Superintendent to the State Lunatic Asylum, Utica, New York, U.S.A., *vice* John P. Gray, M.D., LL.D., deceased.

BOOTH, Mackenzie, M.D., appointed Chloroformist to the Aberdeen Infirmary.

CALLAGHAN, James Leslie, L.R.C.P.Ed. and L.R.C.S.I., appointed Honorary Medical Officer to the Sir George Bowle's Hospital, Butleigh, Somerset.

DAVIDSON, J. Mackenzie, M.D., appointed Ophthalmic Surgeon to the Aberdeen Infirmary, *vice* Professor Dyce Davidson, deceased.

DOUGLAS, Claude, M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Assistant Surgeon to the Leicester Infirmary.

GARDNER, W. T., M.B., M.R.C.S., L.R.C.P., appointed House-Surgeon to the West London Hospital, *vice* R. Lake, M.R.C.S., L.R.C.P., resigned.

GARROD, A. E., M.A., M.B., M.R.C.P., appointed Honorary Physician to the St. Marylebone General Dispensary, *vice* T. T. Pyle, M.D., M.R.C.S., resigned.

GRABHAM, G. W., M.D., M.R.C.S., appointed Honorary Physician to the Bradford Infirmary and Dispensary, *vice* Dr. Alexander, resigned.

FISKE, T. H., M.B., C.M.Edin., appointed Assistant House-Surgeon to the Rotherham Hospital.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London. Clinical night. Dr. Ord will show a case of Hypertrophic Cervical Pachymeningitis. Dr. Orwin will show a case of Lupus of Larynx, also Hereditary Specific Disease of Tongue. Mr. Marmaduke Sheild: Ulcer of Face. Mr. Bull: Enlargement of Thigh in a Boy. Mr. Noble Smith: Case of Club-Foot and other cases.

TUESDAY.—Pathological Society, 8.30 P.M. Dr. Hale White: Ulceration and Endocarditis of the Right Side of Heart. Dr. Pasteur. Syphiloma of Heart. Dr. A. Money: Rare Aneurysm of Undefended Space. Dr. Handford. Fatty Tumour of Heart. Dr. Hadden: Fatal Cases of Alcoholic Paralysis. Dr. Barlow: Ulcers of Stomach in case of Tuberculosis. Mr. Bruce Clarke: Epithelioma of Bladder. Mr. Swinford Edwards: Tumours of Testis and of Spermatic Cord. Card Specimens: Mr. S. Paget: Sarcoma of Foot. Dr. Handford: (1) A series of Specimens of Œsophageal Disease. (2) Fusion (congenital?) of the Aortic Valves, with three Coronary Arteries. Mr. Shattock: Hammer Toes.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

STALLARD.—On December 14th, at 338, Oxford Road, Manchester, the wife of Prince Stallard, M.B., C.M., of a son.

DEATHS.

CATTLIN.—On November 13th, at Glendale, Bournemouth, William Alfred Newman Cattlin, F.R.C.S.E. Friends will kindly accept this intimation.

HOPGOOD.—On December 12th, at Stow-on-the-Wold, Gloucestershire, Philip Downing Hopgood, M.R.C.S.E., L.S.A., aged 42.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M. Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M. Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY ....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's—1.30 P.M.: St. Bartholomew's (Ophthalmic Department) Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY ....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin. M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S. 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, Tu., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30: Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3. Eye, M. Th., 2.30; Ear, M., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES, BE RETURNED.

QUERIES.

G. H. would feel obliged if any medical brother could recommend him a boarding school for his daughter, aged 12, within easy access of Derby, and where the terms inclusive would not exceed £50 *per annum*.

AMBULANCE APPLIANCES.

DR. H. J. PRANGLEY (Anerley, S.E.) writes: It having been decided by the proprietor of the Croydon Racecourse to take some measures for the treatment of any accidents that occur at the race meetings held there, I have been requested by him to draw out a list of surgical necessaries. I should be greatly obliged to any member who has had special experience in such ambulance work for any hints as to what inexpensive collection of splints, bandages, and other appliances it would be best to provide; and as the subject is not one of general interest, I would ask him to communicate with me directly. I might add that the cases to be treated will be few in number, but of course any accident may arise.

REMEDY FOR LOSS OF HAIR.

A SURGEON would be thankful to any professional brother who can tell him of a remedy that will prevent the hairs of his moustache falling off, and quicken new growth. It was at one time a good one, but latterly it has become thin and bald in places, causing a shiny appearance where the hair has disappeared.

ANSWERS.

AMERICAN DEGREES.

J. G. R. can have the information he desired (JOURNAL of November 27th) *re* American degree by sending his address to W. Williams, Hafod-y-gan, Llanfair, Abergele.

CHLORIDE OF AMMONIUM IN HEPATIC DISEASE.

THE book referred to in Dr. William Alexander's letter was, *Stewart on Hepatic Diseases*, published by Smith, Elder, and Co., 15, Waterloo Place, S.W.

HIGH INSTEPS.

DR. ITTEL.—The London depot for Holland's "Patent Instep-arch" is 416, Brixton Road, S.W.

M. P. J. should communicate with the Registrar for Ireland, Dr. R. L. Heard, 35, Dawson Street, Dublin.

THE PRODUCTION OF THE HUMAN VOICE.

MUSE will find the points on which he seeks for information fully explained in any of the following works; Morell Mackenzie, *Hygiene of the Vocal Organs* (Macmillan and Co.); Gougenheim and Lermoyez, *Physiologie de la Voix et du Chant* (Paris, 1885); Gutzmer, *Physiologie der Stimme*, in the first volume of Hermann's *Handbuch der Physiologie*, Leipzig, 1879.

HOUSEMAID'S KNEE.

DR. C. R. ILLINGWORTH writes: I think Dr. Saunders would be better satisfied with Lister's plan of treatment—that of tapping and subsequent immediate blistering, for the purpose of inducing a flow of coagulable fluid into the cavity, with consequent absorption and adhesion.

NOTES, LETTERS, ETC.

UNQUALIFIED ASSISTANTS AND THE GENERAL MEDICAL COUNCIL.

AN ASSISTANT OF THE SOCIETY OF APOTHECARIES, LONDON, writes: Will you kindly publish a few remarks from an unqualified man on the above subject?

Now that the Council has adopted its resolution, can it act upon it? Has the Council the power to deprive hundreds of men of the means of obtaining an honest living? As I understand it, to be guilty of infamous conduct, a medical man must do something that is illegal; and as the practice of an unqualified man, under the control of his master, has not been declared by law to be illegal, how can a medical man be held guilty of infamous conduct?

If the Council's resolution be put into force, how are we unfortunate unqualified men to get a living? Take my own case. I have been engaged as an unqualified assistant for fifteen years, during which time I have acquired a vast amount of practical experience in medicine, surgery, and midwifery, and have received able instruction in all these branches from my employers, and in addition to this instruction in private practice, I have the run of the practice in a small hospital, and receive valuable teaching from its staff of physicians and surgeons. I am now 37 years of age, am married, and have three children (one only a few hours old), and I would ask how I am to obtain daily food for these dear little ones of mine if the only means of which I am possessed of getting a living is taken from me? My case is like unto many others.

Your correspondent "M.R.C.S." (JOURNAL of November 27th) makes a very good suggestion, namely, to "register those of us who can produce evidence of a certain standard of experience." This, if carried out, would be a boon to us of the present day, and in a few years the profession would be rid of unqualified men.

Could not the unqualified men in London hold a meeting, and arrange to memorialise the new General Medical Council on this question of registration of unqualified men? I am sure that the names of we men in the country could soon be obtained.

In conclusion, may I add that I do not want to stand in the way of any young qualified man, but I do want bread for my wife and children.

AN UNQUALIFIED ASSISTANT WITH COMPLETE HOSPITAL CURRICULUM writes: This matter is becoming of vital importance to those whom it is most likely to affect, namely, the men who have to earn a precarious and meagre subsistence as "legally unqualified" assistants. Every week we see in the medical papers fresh clamours for their annihilation, but never any suggestion from their adversaries which may tend to ameliorate the hardship of their wholesale expulsion, or to save a large and by no means undeserving class of men from starvation. It is not the bulk of the profession that desire the suppression of unqualified assistants (such as are properly supervised by legally qualified principals), but it is a powerful minority whose voice is heard in the Council, most of whom are consultants, and do not require to employ assistants, whether qualified or unqualified.

If it be decided to discontinue the employment of unqualified assistants, do not in common justice, turn over all those who are making a living by assisting

qualified practitioners, but give them a chance of continuing their vocation, provided that they can show a reasonable claim to be allowed to do so. I would suggest that one or more examinations of a certain standard be held for assistants, and that those who satisfy at that examination be allowed to continue as unqualified assistants, and to register as such, and that other unqualified men be excluded from entering the profession subsequently to the last period fixed for the examination, and registration of assistants. If some such plan as this be adopted, it will at least give unqualified men a last chance of clinging to their profession, and they will then have no occasion to complain that their livelihood has been snatched from them by arbitrary and unjust legislation.

LEAD-POISONING THROUGH HOME-MADE WINES.

MESSRS. PRICE, SONS, AND CO., Bristol, write: Our attention has been called to your article on "Lead-poisoning through Home-made Wines." It is quite true that common pans and common earthenware are glazed with compositions having lead in some form or other. But Bristol glazed stoneware, made by Powell and Sons and ourselves, and also by several potters in London, has no such drawback, and is glazed so perfectly as to withstand not only fermentation of wine or fruit, but the severest tests applied for electrical purposes, for accumulators, secondary batteries, etc.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following were the papers set at the recent examination for the Diploma of Member:—

October 15th, 1886.—Surgical Anatomy and the Principles and Practice of Surgery.—1. Give the attachments of the Quadratus Lumborum Muscle, and mention, in their normal positions, the several parts in relation with it. 2. Describe the operation of Excision of the Elbow-Joint, and give, in their order, the relation of the parts concerned. 3. How would you proceed to investigate a case of imperfect sight, with the object of determining in what part of the visual apparatus its cause is seated? 4. Describe the more common Ulcers of the Tongue. Give their chief differences, and their appropriate treatment. 5. Describe the symptoms of Rupture of the Urinary Bladder, and the complications which may result from it. State the various plans of treatment which have been recommended, and give your reasons for the method you would adopt. 6. Give the symptoms, progress, terminations, and treatment of Caries of the Vertebræ.—Candidates were required to answer at least four questions (including one of the first two), and were strongly advised to answer all six.

October 16th, 1886.—Midwifery and the Diseases of Women.—1. Describe the signs of Pregnancy at the sixth month. 2. Describe the natural terminations of Labour with the shoulder presenting. 3. Describe a case of Phlegmasia Dolens, from the onset of an attack to recovery. How would you treat it? 4. Describe a case of Urethral Caruncle, giving it symptoms, its treatment, and its behaviour under treatment.—Candidates were required to answer three of the four questions.

October 16th, 1886.—Principles and Practice of Medicine.—1. Describe the symptoms and treatment of Rheumatic Fever. Enumerate its chief complications and sequelæ. 2. What are the causes, symptoms, physical signs, and treatment of Ascites? 3. Discuss the etiology, anatomical characters, and clinical signs of Vesicular Emphysema. 4. Give an account of the action and uses of the following preparations, and mention their doses:—Carbonate of Ammonium, Tartarated Antimony, Hydrate of Chloral, Compound Pill of Soap, Compound Spirit of Ether, Tincture of Nux Vomica, Wine of Colchicum, and Copaiba.—Candidates were required to answer three of the four questions, including question No. 4.

EXTRA-UTERINE FŒTATION TREATED BY ELECTRICITY.

DR. W. E. STEAVENSON writes: My remarks at Brighton on the above subject, as quoted in the JOURNAL of November 27th, might be taken as being adverse to the employment of electricity in cases of extra-uterine fœtation. That was not my wish; what I wanted to elicit was the best mode of applying electricity in such cases, and, if possible, by what means or in what way the electricity acted so as to destroy the fœtus.

The Association had before it two successful cases of extra-uterine fœtation, each cured by electricity, and in each case the electricity was employed in an entirely different way; so that the active cause of the destruction of the fœtus in one case must have been essentially distinct from that which caused its demise in the other.

In the face of the strong expression of Dr. Robert Newman, the great apostle of electrolysis in New York, at the recent annual meeting of the American Medical Association, it would be rash not to give electricity a fair trial in all cases of extra-uterine fœtation. Dr. Newman is reported to have said: "And now, Mr. President, I add to the list the greatest achievement of electrolysis, the certain saving of every woman afflicted by extra-uterine pregnancy, while all perished in former times. Successful cases have been reported by A. D. Rockwell, E. G. Landis, Nathan Bozeman, Garrigues, Reeve, Lusk, and others. The *modus operandi* is simple. Repeated applications, one metal probe in the vagina or rectum, near and below the tumour, the positive sponge-electrode above the abdomen, will destroy and absorb the fœtus. It is of great importance to the obstetrician—nay, to every practitioner—to know that he has a certain remedy to save life in this troublesome anomaly of nature."

Dr. Newman has in this connection used the term electrolysis in a different sense to that in which it is understood in this country.

TINNITUS AURIUM A SYMPTOM ONLY.

MR. H. BENDELACK HEWETSON (Ophthalmic and Aural Surgeon to the General Infirmary at Leeds) writes: In the BRITISH MEDICAL JOURNAL of December 4th, I see it reported, but shortly, that Mr. Ward Cousins read a paper entitled "Tinnitus Aurium," describing a method of treatment by "the alternate injection and evacuation of medicated air," before the meeting of the Southern Branch of the South-East Hants District. It would be interesting to learn how the air was medicated, and into what part of the ear it was injected; but I take it, that tinnitus aurium, being but a symptom only of many forms of ear disease (and even when present not always symptomatic of disease of the ear), it cannot be possible to treat successfully as a disease *per se* that which is looked upon as a subjective symptom of some lesion in the ear, or some disorder elsewhere. I can only conceive it possible that "tinnitus aurium" can be either temporarily or permanently relieved by this method when it depends on some error in intra-tympanic air-tension. But I wish forcibly to draw attention to such a title as being entirely misleading, and I maintain that, however imperfectly reported, it is unscientific to attempt to treat a symptom of many forms of disease of the ear, and other errors of general health, by some universal plan applied to all, which the report of the paper (possibly quite unintentionally) implies.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. J. Alfred Wanklyn, London; Dr. Ireland, Prestonpans; Mr. F. C. Montague, London; Dr. T. L. Vanderstraeten, Colombo, Ceylon; Mr. Adams Frost, London; Mr. A. F. Keyworth, Marple; Mr. J. F. Owen Fowler, Hereford; Dr. M. P. Jones, Alfreton; Dr. D. Williams, Truro; Dr. C. Penruddocke, Winchcombe; Dr. Willoughby, London; Mr. C. Clay, Forant; Dr. Rentoul, Liverpool; Mr. A. F. Wilson, Stow-on-the-Wold; Mr. R. Fletcher, Lower Broughton, Manchester; Mr. Simeon Snell, Sheffield; Mr. W. H. Webb, Kingsbridge; Surgeon-Major Gardner, Fort William, Calcutta; Dr. S. Fitch, Halifax, Nova Scotia; Mr. J. H. Parkinson, Sacramento; Mr. Robert Hagyard, Hull; Dr. Smith, Woolston; Mr. P. Holland, London; Dr. Martin, London; Mr. E. J. Flynn, South Stockton-on-Tees; Mr. F. R. P. Darke, Salisbury; Mr. C. Douglas, Leicester; Dr. Styrap, Shrewsbury; Messrs. W. J. Bush and Co., London; The Secretary of the Hospitals Association, London; Mr. J. Brindley James, London; Mr. P. Swain, Plymouth; Messrs. Woollams and Co., London; Dr. Grant, Cairo; *The Hospital*, London; Dr. C. R. Illingworth, Clayton-le-Moors; Mr. R. J. Scott, Bath; Mr. A. J. Fitch, Glasgow; Messrs. Maggs and Son, Yeovil; Dr. Cullimore, London; Dr. Grimshaw, Dublin; Dr. Spender, Bath; Mr. T. Taylor, Bocking; Dr. T. Laffan, Cashel; Mr. C. B. Keetley, London; Dr. W. Duncan, London; Mr. H. Corby, Cork; Dr. Grailly Hewitt, London; Mr. G. W. Collins, London; Mr. H. E. Allen, London; Mr. J. V. Fitzgerald, Birmingham; Professor McKendrick, Glasgow; The Secretary of the University of Durham, Newcastle-on-Tyne; Mr. W. Young, London; Dr. Edge, Manchester; Mr. A. Jacques, London; Dr. E. Long Fox, Clifton; Messrs. Cassell and Co., London; Dr. Geraghty, Loughrea; Mr. C. J. R. McLean, Yeadon; Mr. E. East, London; Mr. J. Lemon, Southampton; Surgeon-General C. A. Gordon, London; Dr. J. Wiglesworth, Rainhill; Mr. A. Ambrose, Buckhurst Hill; J. H. W.; Mr. C. H. Phillips, Hanley; Dr. W. Alexander, Streatham; Dr. E. M. Cosgrave, Dublin; Sir Dyce Duckworth, London; Mr. H. N. Custance, London; Mr. H. Scott, Manchester; Mr. W. B. Blackett, London; Dr. J. F. Tannahill, Borstal; The Editor of the *Charity Record*, London; Mr. C. Glasier, Eastbourne; Mr. T. G. Parrott, Bournemouth; Dr. J. D. Grant, London; Dr. Mickle, London; Dr. Tatham, Salford; Mr. R. S. Bryant, West Morchard; Dr. S. Hughes, Birkenhead; Dr. J. W. Hunt, London; Mr. A. Blumer, Sunderland; Mr. W. Johnson Smith, London; Our Edinburgh Correspondent; Our Liverpool Correspondent; Dr. Lloyd Francis, Northampton; Dr. Maxwell, Woolwich; Professor Pettigrew, St. Andrew's; Mr. L. M. Cordner, Aughnacloy, Tyrone; Mr. G. F. Blake, Dublin; Mr. T. Holmes, London; Our Berlin Correspondent; Dr. Zehender, Rostock; Dr. W. Hunter, Edinburgh; Dr. Ferrier, London; Mr. F. P. Maynard, Newcastle-on-Tyne; Mr. J. Macgregor, Salop; Mr. W. Watson Cheyne, London; Surgeon-Major Stephen, Lahore, etc.

BOOKS, ETC., RECEIVED.

Text-Book of Pathological Anatomy and Pathogenesis. By Ernst Ziegler. Translated and Edited by Donald MacAlister, M.A., M.D. Sections IX-XII. London: Macmillan and Co. 1886.

Treatise on Chemistry. By Sir H. E. Roscoe, F.R.S., and C. Schorlemmer, F.R.S. Vol. III. Part III. Organic Chemistry. London: Macmillan and Co. 1886.

Transactions of the Pathological Society of London. Vol. XXXVII. 1886.

On Fevers; the History, Etiology, Diagnosis, Prognosis, and Treatment. By Alex. Collie, M.D. London: H. K. Lewis. 1886.

Gout and its Relation to Diseases of the Liver and Kidney. By Robson Roose, M.D. Third Edition. London: H. K. Lewis. 1886.

Whitaker's Almanack. 1887.

The Prescriber; a Dictionary of the New Therapeutics. By J. H. Clarke, M.D. Edin. Second Edition. London: H. Kimpton. 1886.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE "BRITISH MEDICAL JOURNAL."

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Post-Office Orders should be made payable to the British Medical Association, at the West Central Post-Office, High Holborn. Small amounts may be paid in postage-stamps.

RETROSPECT: 1886.

In pursuance of an annual custom, we give in this, the last number of the British Medical Journal which will be published in 1886, a summary of events of medical interest during the year which is coming to an end.

THE BRITISH MEDICAL ASSOCIATION.

For the British Medical Association 1886 has been another year of unbroken prosperity; its influence has grown, its usefulness has increased, and the number of its members has multiplied. The number of new members elected during 1886 has been 855.

The annual meeting at Brighton was, in every way, a success. The President, Dr. Withers Moore, and the other members of the profession in Brighton and its neighbourhood, had been at great pains to attain this end. The presidential address on the higher education of women attracted a good deal of general attention at the time, and was well adapted to the occasion. The address in Medicine by Dr. John S. Billings, of Washington, who was invited to discharge this duty in consequence of the death of Dr. Austin Flint, senr.; that in Surgery by Mr. Frederick Abell Humphry; and that in Public Medicine by Dr. E. D. Mapother dealt with subjects in their several departments of great interest to the profession. The work of the sections was carried on with much vigour, and several well-sustained discussions on practical subjects took place.

The invitation to hold the next meeting in Dublin, conveyed by Dr. Duffey and Professor Bennett in the name of the profession, has been cordially accepted, and the Association will meet there on August 2nd, 3rd, 4th, and 5th, under the presidency of Dr. J. T. Banks.

Branches of the Association.—The Branches of the Association are increasing in number. The whole of England is now apportioned out into Branches. Scotland is now nearly covered, and will, no doubt, soon be fully apportioned. In Ireland, we regret that the Cork Branch—the first Branch formed in Ireland, which for many years was most active, and was the centre of a brilliant meeting in 1879—does not now meet. We venture to hope that this Branch will soon be reorganised.

The Colonial Branches are also flourishing. A new Branch in Bermuda was recognised by the Council on April 14th, and a report was laid before the last meeting of the Council that the Branch of the Association in British Guiana had been reorganised. We have just received notice that a new Branch is being formed at Halifax, Nova Scotia; this Branch will be cordially welcomed as the first North American Branch. The Branches in Jamaica, and at Adelaide, Melbourne, Sydney, and Madras are all doing active work; while others are promised at Bombay, in the Punjaub, and Cape Colony. The Association is thus stretching throughout the British Empire. Members of the medical profession who are legally qualified to practise in the country in which they reside, may become members of the Association. The Association comprises members in many of the colonies, who hold Government appointments, and are legally qualified to practise in their own colony.

The communications from these Branches and members are always welcome; they are valuable as setting forth the various forms and modifications of disease in other climates, and the mode of treating these diseases.

Alteration in By-Laws.—At the annual meeting, the by-law with regard to the election of representatives was altered; in the United Kingdom, the representative must be, at the time of his election, resident within the area of the Branch. But, with regard to the Colonial and Indian Branches, it is required that, at the time of the election of the representative, "he shall be a recognised member of the Branch, and shall have resided within the area of the Branch for at least twelve months prior to his election. The election of Colonial and Indian Members of the Council shall be annual, and shall be subject to the same by-laws as the election of other representative members."

MEDICAL REFORM.

The year 1886 will ever be memorable in the annals of the British Medical Association on account of the enactment of the Medical Act of 1886, which Her Majesty the Queen, in her speech on the dissolution of the last Parliament, described as "effecting important reforms in the medical profession."

Fifty-four years have come and gone since the Association embarked in the struggle for medical reform. Twenty-six years passed before the Medical Act of 1858 became law. That Act was accepted as an instalment only. It provided reciprocity of practice, a register of the members of the profession, and the formation of a national *Pharmacopœia* under the direction of a Medical Council. Strenuous efforts were at that time made, on behalf of the Association, to enforce improved general education on the part of all entering on the study of medicine, and to make the double qualification in medicine and surgery obligatory before registration, but on both points the Association was beaten owing to the strength of the corporations.

Though defeated in some important points, the Association felt compelled to accept the imperfect Act of 1858 in the hope of subsequently amending it. The Medical Council, during the first two years of its existence, evinced considerable activity and interest respecting the general education of the medical man; but this interest soon flagged, and little or no good followed. Supineness reigned supreme. Then it was that the Association again stirred and revived the demand for the direct representation of the general body of the profession, in order to introduce into its councils men who had no vested interests to protect, and whose great object would be to elevate the profession of which they were representatives. In 1868, in pursuance of this object, the Association appointed a committee to secure the direct representation of the profession when the Medical Act should be amended. The Association addressed the Medical Council on the subject, but their representations were disregarded. In 1870, a Government Medical Bill was carried through the Lords, but was withdrawn in the Commons, because it did not concede the principle. The Association then appointed a Medical Reform Committee in place of the so-called Direct Representation Committee with a broader mandate. Bill after Bill has been introduced by this Committee on behalf of the Association, Select Committees have taken evidence, a Royal Commission has reported, and the result has been that all the principles in regard to medical reform with which the Association started in 1832 have received the sanction of the legislature. Repeated efforts were made by a powerful Government to embody these principles in an Act of Parliament; the result would have been the diminution of the numbers of the Medical Council, the indirect representation of the universities and corporations, and the direct representation of the profession in it. The attempt failed, and, in the last instance, a less ambitious measure was framed, which is embodied as the Medical Act of 1886. Though this Act is not all that could be desired, it is an unquestionable improvement upon that of 1858, and deserves the commendation bestowed on it. As regards professional education, the three-fold qualification is compulsory, and placed under the supervision and control of the reformed Medical Council; as regards the composition of the Council, the rising Victoria University, embracing the flourishing medical colleges of Manchester, Liverpool, and Leeds—will be represented, whereas the provincial schools previously had no voice in it; but, above all, the profession will send five direct representatives to take part in its deliberations. The Medical Act of 1886 may well be regarded as a great triumph, virtually achieved by the Association, and will constitute a vantage-ground whence further improvements may be accomplished. Twenty-eight years have gone, during which the Association has unceasingly laboured to improve the Medical Act of 1858, and the result is a victory which must exercise in the future a powerful influence over our profession.

THE GENERAL MEDICAL COUNCIL.

Alteration in Constitution.—Visitation of Examinations and Schools—Examination in Mechanics.—Statistics.—The British Pharmacopœia.—Registration of Sanitary Diplomas.—Length of Curriculum.—Removal of Names.

Alteration in Constitution.—The General Council of Medical Education and Registration met twice in full session during 1886. The first session began on June 1st, the second on November 16th; in the interval the Medical Act Amendment Bill had become law, and the number of members was thereby at once increased, one representative having been assigned to the Victoria University, and two additional representatives to the Scottish Universities. During the second session, the election of the direct representatives of the profession was actually in progress. The President of the Council had intentionally arranged "that the last session of the Council under its old constitution should terminate before the result of the election was known;" but, within a few days after the adjournment, the announcement was made that Mr. Wheelhouse, of Leeds (late President of the Council of the British Medical Association), Sir Walter Foster, of Birmingham (President of the Council), Dr. Glover, of London, Dr. Bruce, of Dingwall, and Dr. Kidd, of Dublin, had been chosen by substantial majorities, after a heavy poll. Four new members were nominated to the Council by corporations, and took their seats during the year—Sir Dyce Duckworth (Royal College of Physicians, London), Sir Wil-

liam Gull, Bart. (London University), Dr. D. C. McVail (Faculty of Physicians and Surgeons, Glasgow), and Mr. Mitchell Banks, of Liverpool (Victoria University).

Visitation of Examinations and Schools.—During the summer session, a series of reports by the visitors appointed to attend the examinations of the universities was presented, and excited a good deal of discussion, some of the criticisms contained in the reports being vigorously combated by the representatives of the incriminated bodies. The cost of these visitations, which were conducted by Drs. Balfour, Barnes, Bristowe, Buchanan, Finny, Leishman, and Kidd, and Messrs. Holden and Rawdon Macnamara, was over £2,000. The Council, however, as a body appeared to believe that mutual criticism of this kind was productive of good results, for it adopted a proposal to carry out a visitation of medical schools. The terms of the resolution, which was moved by the Rev. Dr. Haughton, namely, that "it is highly important to visit and report upon the methods of teaching required by the licensing bodies," are elastic, and, though the motion was carried by 13 votes against 4, the Committee appointed to consider and report upon the best system by which the visitation could be carried out has found much difficulty in arriving at a decision. It presented an interim report to the Council at the autumn session, stating that a circular letter had been addressed to all the licensing bodies, and to the medical schools, and that no objection had been raised on their part to the proposed visitation, except by St. Bartholomew's Hospital. The report suggested that the Committee should be empowered to obtain the opinion and advice of the Branch Councils on the best method of conducting the visitations. The question whether the Council could legally devote its funds to such an inquiry having been raised, it was determined to take counsel's opinion thereon.

Examination in Mechanics.—The regulation of the Council requiring than an examination in elementary mechanics should be passed before registration led to a long discussion, and in the end it was resolved to continue the regulation in force, subject to a modification in favour of undergraduates at universities with a prolonged curriculum, where the subject is required at an examination taken at a more advanced period.

Statistics.—The Statistical Committee, during the course of the year, presented and published a summary of statistics regarding medical students registered as beginning the study of the profession in the quinquennium 1871-75. The investigation involved the tracing of the destinies of 6,403 registered students. It is proposed that a quinquennial analysis of a similar kind shall be published in future.

The British Pharmacopœia.—The whole of the first issue of the new edition of the *Pharmacopœia* having been disposed of, the edition was reprinted from the stereotyped plates after the corrections had been embodied; up to the commencement of the autumn session, 20,730 copies had been sold. Professor Attfield was appointed to report annually on the revision of the *Pharmacopœia;* it will be his duty to furnish to the Pharmacopœia Committee (1) abstracts of researches and opinions published by therapeutists, pharmacologists, pharmaceutical chemists, and chemists and druggists, scientific and analytical chemists, and botanists; (2) reports on the accuracy and feasibility of experiments and suggestions made by such persons, such reports to be founded upon test experiments performed by the reporter.

Registration of Sanitary Diploma.—The method of carrying out the provision of the Medical Act, 1886, authorising the registration of sanitary diplomas, was discussed at some length, owing to an anxiety to make use of some uniform title. It was found that there were certain legal questions involved, and the matter was referred to the Executive Committee, with power to obtain and act upon legal opinion.

Length of Curriculum.—The length of the curriculum to be required after registration was discussed on a motion by Dr. McVail to make a resolution, adopted in 1885, recommending a period of five years, if the subjects of elementary physics, chemistry, and biology, were included in that period, or at least four years if a satisfactory examination in these subjects had been passed previous to registration, compulsory. The resolution was adopted by a large majority, but in a somewhat unsatisfactory way, as a considerable number of members abstained from voting either way; as a logical sequence, the Council subsequently passed a resolution recommending the licensing bodies to give effect to a resolution, also passed in 1885, requiring students to spend at least four winter and three summer sessions at a recognised medical school. The Council, however, declined to insist, or even to recommend the licensing bodies to insist, that candidates shall always attend lectures qualifying for a second or third examination after passing the first or second respectively.

Removal of Names.—The names of three practitioners were removed from the *Medical Register*, and the names of two dentists from the *Dentists' Register*.

UNIVERSITIES, COLLEGES, AND MEDICAL SCHOOLS IN ENGLAND.

The University of Oxford.—The present occasion may be said to be the first in which the University of Oxford has taken its place among the fully equipped medical schools of this country. The new anatomical school has been completed, and has been in use since the beginning of the session. The arrangements for teaching physiology are also in complete working order. The number of students who have begun to dissect this term is encouraging.

The University of Cambridge.—The Medical School at Cambridge continues to grow in importance year by year; the number of freshmen who have expressed the intention of studying medicine is nearly 120, and the number of students dissecting has been so large that it has been found necessary to take steps to provide additional accommodation.

The University of Durham.—A new degree, that of Bachelor of Surgery, has been instituted, which must in future be taken before the degree of Master in Surgery can be obtained. A licence in sanitary science has also been instituted, and is open to all registered medical practitioners who have attended certain courses of instruction during a year of professional study at the University of Durham College of Medicine.

The Victoria University.—The degree of M.D. was conferred for the first time during the past year. The number of students at the two constituent colleges of the University—Owens College, Manchester, and University College, Liverpool—who are presenting themselves for examination, make it certain that the gentlemen upon whom the degree was conferred will not long hold an isolated position.

The University of London.—The chief matter of interest in connection with the University of London has been the question of reform. The pressure brought to bear by the Association for Promoting a Teaching University, and by the Committee of Convocation over which Sir Philip Magnus presides, has, it is understood, greatly strengthened the hands of those members of the Senate who are impressed by the necessity for making some alterations in the constitution of the University, in order to bring it into closer relation with the teachers.

Metropolitan Medical Schools.—Though the efficiency of the medical schools has been increased both with regard to scientific and clinical instruction, the number of students who have entered for the full curriculum appears to be tending to diminish rather than to increase. It has been frequently pointed out in these pages that this state of things is not likely to improve until degrees in medicine are placed within the grasp of the majority of medical students educated in London. As we indicated last week, there is a good prospect that, by united action, the two Royal Colleges may obtain the necessary charter to constitute a Medical University, for the creation of which there are not wanting precedents in the famous School of Salerno, and in the history of several other mediæval universities.

Provincial Medical Schools.—With regard to the medical schools not above-mentioned, it will be sufficient to refer to the continued prosperity of those in Birmingham, Leeds, and Bristol, and to recall attention to the movement on foot for erecting a new school of medicine, affiliated to Firth College, in Sheffield, where every requisite for scientific and clinical instruction exists.

The Royal College of Physicians, London.—The chief topic of general interest which has engaged the attention of the governing body of the Royal College of Physicians during the year has been the scheme above referred to for obtaining a charter empowering the two Colleges to grant degrees in medicine. The Croonian trust fund having largely increased in value, the College was able to adopt a scheme which provided not only for a more liberal payment to the lecturer, but will also empower it to make grants for the promotion of scientific investigations on the subjects of the lectures; it was determined that physiological chemistry was to be understood as included in the term physiology, and that with this proviso the lectures might deal with anatomical, physiological, or pathological topics at the discretion of the lecturer. Sir William Jenner was re-elected President of the College for the sixth time. Dr. Allchin resigned his position as Assistant Registrar, and was succeeded by Dr. Liveing.

The Royal College of Surgeons of England.—The acute phase of the dispute between the College and the Fellows and Members has become chronic, and its present condition is best represented by the resolutions passed at the meeting of Fellows and Members on November 4th, and by the subsequent action of the Council in framing a certain circular for distribution amongst the Fellows. At the November meeting a resolution, moved by Mr. Holmes, was passed with very few dissentients. The words of this resolution were: "That, in the opinion of this meeting, it would

conduce to the welfare of the Royal College of Surgeons, and would tend to promote the interests of medical polity; (1) if Members of the College were empowered to take part, separately or conjointly, with the Fellows in the election of members of the Council. (2) If Members of the College were eligible to sit in the Council, provided (*a*) that no Member of the College shall be entitled to vote until he has been such Member for a period of ten years; (*b*) That no Member of the College be eligible to sit on the Council till he have been such Member for a period of twenty years; and (*c*) that not more than one-fourth of the Council shall consist of Members of the College who are not also Fellows." To give effect to the recommendation in this resolution, Dr. Ralph Gooding moved: "That the Council be requested to empower some of its members to confer occasionally with representatives of the two Associations of Fellows and Members, and with Fellows and Members independent of these two bodies." This resolution was carried *nem. con.* Dr. Alderson moved a highly important resolution, wherein the Council was requested to consider the advisability of combining with the Apothecaries' Society, as well as with the College of Physicians, for the purposes of conjoint examinations. This was carried unanimously. There was less unanimity concerning certain proposals to widen the basis upon which the Fellowship is obtained. Throughout the meeting the Council, as usual, was mute, the President himself merely discharging the technical duties of a chairman.

On the other hand, the last act of the Council has been to issue a circular for distribution amongst the Fellows. In short, the Fellows are to be questioned upon the substance of Mr. Holmes's resolution at the November meeting. As the resolution was agreed to all but unanimously, the action of the Council seems to be unnecessary. In this circular the motive for its publication was explained. The Council had decided that voting by voting-papers should be allowed, and for this purpose they were compelled to ask for a new charter. The present occasion seemed, therefore, opportune to consult the Fellows upon another important question.

As to our opinions on the above subject, they are well known, and have been openly expressed in every recent number of the JOURNAL. The last meeting was an improvement upon its predecessors, as the oratory was less diffuse and impulsive than before.

Another subject in relation to the history of the College in 1886 is the laying of the foundation-stone, last spring, of the new Examination Hall by the Queen. The recent death of the widow of Sir Erasmus Wilson will shortly put the College into the possession of an enormous legacy, which will bring in an income of between six and eight thousand pounds, to be devoted to the museum and library. Next year the precise manner in which the money is to be applied to museum purposes will be decided. It is to be hoped that it will be expended on the foundation and maintenance of a great national pathological institute. The Council, however, appears inclined to apply the legacy to other purposes. At the last Council meeting a report from a special committee on the practicability of adding a new wing to the museum was read, approved, adopted, and ordered to be entered on the minutes. The report recommended the extension of the museum, library, workrooms, and of the staff of officers and servants. According to plans and designs already prepared by Mr. Stephen Salter, a large wing would be built on the west side of the present edifice in Lincoln's Inn Fields, including three spacious chambers as part of the museum, as well as a residence for the Assistant-Conservator. The eastern museum already extends to the east of the back of the College buildings, but in front the corresponding space is now occupied by the Conservator's house. It is proposed to build an extension of the library on the site of that house, adding apartments for the Conservator further to the east. Thus the College buildings would form an imposing edifice, with two large wings. As the legacy is not yet in the hands of the College, it would be premature to criticise the above arrangement; but the profession will probably desire that the new museum buildings and workrooms, if built, are devoted to other purposes than the mere preparation and exhibition of specimens.

The work of the Council, independent of its relations to the Fellows and Members and to the College of Physicians, has not been of signal importance. Several professional evil-doers have been deprived of their diplomas; and it is said that steps will be taken to punish other offenders, although an eminent surgeon declared at the November meeting that this task was the duty of the General Medical Council. The July elections can hardly be considered as a part of the work of the Council, being rather the work of the Fellows; but they were of great importance as signs of the times. Messrs. Lund, Berkeley Hill, Reginald Harrison, and Sibley were elected members of Council. Mr. Sibley is the first general practitioner who has been elected on the Council of the College. Equally important were the presidential elections at the ensuing Council meeting. Instead of the customary routine system of a formal election by rotation, the actual President, Mr. Savory, was re-elected, whilst Mr. Jonathan Hutchinson and Sir Joseph Lister were elected Vice-Presidents.

Various measures were advocated and sometimes adopted at the Council meetings with a view to the conduct of the examinations for the College diploma alone, and for the conjoint examinations. The Council endeavoured to equalise the regulations for corresponding examinations on the two separate Boards. Thus, the regulations relating to rejected candidates, requiring additional certificates at the second or anatomical and physiological examination under the conjoint scheme, will be held to apply to the corresponding or primary examination for the Membership of the College alone. Mr. Savory will deliver the Hunterian Oration next February.

The Apothecaries' Society.—The position in which the Apothecaries' Society is placed by the Medical Act, 1886, the refusal of the two Colleges to admit its representatives to the Conjoint Board, and the serious consequences to the whole profession which will ensue if this refusal is persisted in, and if the Society succeeds, as no doubt it will, in obtaining from the General Medical Council or the Privy Council, associate examiners in surgery, have been so fully and recently discussed that the arguments need not be recapitulated here.

SCIENTIFIC PAPERS IN THE BRITISH MEDICAL JOURNAL.

THE following classified list of the contributions to the science and practice of Medicine, published in the BRITISH MEDICAL JOURNAL during 1886, will not only indicate the wide range of subjects discussed in its pages, but will serve the purpose of an analytical index of subjects, and so facilitate reference.

Reports to the Scientific Grants Committee.—The following reports to the Scientific Grants Committee have appeared:—On the relationship of the formation of urea and uric acid to the secretion of bile, by Dr. D. Noel Paton (two reports). A study of certain of the conditions of infection, by Mr. W. Watson Cheyne (Research Scholar). Experiments and observations relating to the process of fatigue and recovery, by Dr. Augustus Waller (Research Scholar). On capillary embolism of the brain and spinal cord, experimentally studied; its relations to the various forms of chorea, by Dr. Angel Money. On an apparently peripheral and differential action of ether upon the laryngeal muscles, by Dr. Semon and Mr. Victor Horsley. On some of the compounds of hæmatin—namely, the hydrochlorate, hydriodate, and and hydrobromate, by Dr. Vincent Harris. On the fate of extravasated blood, by Dr. William Hunter. On hæmoglobin and methæmogoblin crystals, by Dr. W. D. Halliburton. On gluten and the proteids of bread, by Dr. Sidney Martin. On the action and therapeutical value of vegetable astringents, by Dr. Ralph Stockman.

Anatomy and Physiology.—In addition to the reports abovementioned, we have published a lecture, by Dr. Thomas Oliver, on a source of urea too little recognised: On the ready determination of urea-excretion, by Dr. Hingston Fox: On a new acid found in human urine, which darkens with alkalies, by Dr. Robert Kirk: Abstracts of three lectures on the brain mechanism of sight and smell, by Dr. Alexander Hill; of Dr. William Osler's Cartwright Lectures on certain problems in the physiology of the blood corpuscles; and of Mr. Frederick Treves's six lectures on the intestinal canal and peritoneum in the mammalia.

Congenital Deformities.—Mr. Wheelhouse has published a clinical lecture on deformities of the skeleton, and their treatment by general and surgical means. Messrs. William Anderson and Henry A. Fotherby have related the history of two families in which a very similar deformity of the hands and feet was transmitted through several generations. Messrs. R. W. Parker and F. Churchill have discussed the causation and treatment of club-foot. Cases of spina bifida have been recorded by Dr. Ward Cousins and Mr. F. A. Southam. Dr. John Phillips has described an example of diaphragmatic hernia.

Diseases and Injuries of the Brain and Nervous System.—Two of the courses of lectures annually delivered at the Royal College of Physicians dealt with the pathology and treatment of diseases of the nervous system, the Gulstonian Lectures by Dr. Seymour J. Sharkey on spasm in chronic nerve-disease, and the Lumleian Lectures on the electrical condition of the human body by Dr. W. H. Stone; the latter were to a large extent physiological, and dealt with the subject of man as a conductor and electrolyte. Dr. Julius Dreschfeld took diabetic coma for the subject of his Bradshaw Lecture. Mr. Victor Horsley described a series of cases in which he had operated upon the brain for the removal of a tumour or scar-tissue, and discussed the principles

which should guide the surgeon in undertaking operations within the cranium, in a paper on "brain-surgery," read in the Section of Surgery at the Annual Meeting. Dr. W. R. Gowers and Mr. Arthur E. Barker subsequently contributed an important paper on a case of abscess of the temporo-sphenoidal lobe of the brain, due to otitis media, successfully treated by trephining and drainage. Dr. J. Hughlings Jackson's paper on a case of fits resembling those artificially produced in guinea-pigs discussed a subject with which his name is identified. Dr. W. Odillo Maher, of Sydney, N.S.W., has recorded a case of abscess and hernia cerebri following a fracture of the skull, successfully treated by trephining and drainage; and Dr. T. Law Webb a case of recovery after extensive fracture of the skull treated by trephining. A case of cerebral abscess with typhoid-like rash, has been recorded by Mr. W. Boulting. Dr. Suckling has described cases of word-blindness and word-deafness, and Dr. P. J. Cremen a case of amnesic aphasia. Dr. Byrom Bramwell has published an important paper on a remarkable lesion of the nerve-centres in leucocythæmia. A case of hæmorrhage into the crura cerebri has been recorded by Dr. Edwin Rickards; a case of cerebral hæmorrhage illustrating the mode of recovery by Mr. Percy Fleming from the practice of Dr. Fredk. Roberts; Dr. Arthur H. Clemow has contributed notes on a case of intra-meningeal hæmorrhage; Dr. Charles M. Chadwick has published a paper on embolus of the basilar artery. A case of chronic effusion into the ventricles of the brain, with optic neuritis, has been reported by Mr. T. Wardrop Griffith from the practice of Dr. Churton, and a case of sudden death from cerebral aneurysm soon after the receipt of a blow on the head, by Mr. F. P. Maynard from the practice of Drs. Drummond and Armstrong. Dr. Adolphe Wahltuch has recorded a case of violinists' cramp treated successfully by electricity. Dr. W. S. Playfair's observations on what is called neurasthenia, read in the Section of Medicine, have been published, as has also a paper by Dr. E. Long Fox on the therapeutics of the neuroses. Dr. W. Hale White has discussed the prognosis of secondary symptoms and conditions of exophthalmic goître. Cases of epileptic automatism have been described and discussed (in the Hospital Reports) by Dr. Althaus and Dr. Byrom Bramwell; and, in the same department of the JOURNAL, Dr. Suckling has recorded a case of ophthalmoplegia externa, a case of anæsthesia of the hand, and a case of locomotor ataxy with hysterical anæsthesia; Dr. Byrom Bramwell, a case of locomotor ataxy, with almost complete absence of lightning-pains; Dr. R. M. Simon, two cases of severe neuralgia, one due to sarcoma baseos cranii; Mr. Reginald Harrison, a case in which recovery followed suture of the median and ulnar nerves eighteen months after their accidental division; Dr. James Murphy, two cases of Charcot's joint-disease. Dr. Gowers has discussed the symptoms of spinal caries in the old. Dr. de Watteville has published a paper on tendon reactions; Mr. C. S. Jeaffreson, a paper on so-called lead-neuritis; Mr. Charles Atkin, a paper on deformity of the feet due to perforating ulcers; Drs. Whipham and Myers, a paper on some chronic nervous sequelæ of small-pox, especially as affecting the speech. Cases of Raynaud's disease have been recorded by Mr. Jonathan Hutchinson, and by Mr. Allman Power, from the practice of Mr. Hyde.

Mental Diseases.—A clinical lecture by Dr. G. E. Shuttleworth on idiocy and imbecility, a paper on the premonitory symptoms of insanity by Dr. Henry Sutherland, and a paper on mental symptoms with locomotor ataxy by Dr. G. H. Savage have been published during the year, as have also a paper on delusions the result of intestinal accumulations by Dr. A. E. Bridger, a paper by Dr. James Adam on visceral lesion or disorder and mental disease, an address by Dr. M. D. Macleod on puerperal insanity, and a paper by Dr. S. A. K. Strahan discussing the question how the medical spirit can best be kept up in asylums for the insane; and Dr. P. W. Macdonald has made some remarks on a case of mania with phthisis. The address in the section of psychology by Dr. Clouston on the relationship of bodily and mental pain was published in full; the greater part of the proceedings of this section were published in abstract, the subjects discussed being: dietetics in lunacy practice, consanguineous marriages and mental unsoundness, alternation of neuroses, staining of nerve tissues, the separate care of recent cases, the alleged increase of insanity, suicidal tendencies in congenital imbeciles, pathology of general paralysis, imbecility and hereditary imbecility, the Idiots Act, and the use and abuse of seclusion.

Diseases and Injuries of the Eye.—During the year the following lectures and papers on diseases and injuries of the eye have appeared: the Bowman lecture on the parasitical diseases of the eye by Professor von Zehender, of Rostock, the address by Professor Donders, of Utrecht, on the life and scientific work of Albrecht von Graefe, delivered on the occasion of the presentation of the Graefe medal to Professor von Helmholtz, together with the recipient's response; a report of the causes of blindness, and a paper entitled "Are the eyes of the offspring of the blind affected, are their marriages fruitful?" by Mr. Simeon Snell: Messrs. Stanford Morton and J. W. Barrett published a clinical investigation of the various methods of practising retinoscopy; Mr. Gustavus Hartridge some observations on tobacco amblyopia, and Mr. Simeon Snell a clinical lecture on the treatment of detachment of the retina. Mr. Charles Oldham's address in the section of ophthalmology on recent progress in ophthalmology, and papers read in the section by Mr. Greenway on the use of ice and carbolic acid, and by Dr. Bell Taylor on resection of the optic and ciliary nerves as a substitute for ablation of the eyeball, were published. Dr. Dempsey described a case of orbital aneurysm; Dr. G. M. Giles has described a new position for ophthalmic operations; Mr. Adams Frost has contributed a paper on the early treatment of convergent strabismus; Dr. Mules a paper on evisceration of the eye, and its relation to the bacterial theory of the origin of sympathetic disease; and Dr. Neve a memorandum on trophic ulceration of the cornea.

Diseases and Injuries of the Ear.—A lecture on the removal of osseous tumours from the ear, by Mr. George Field; and papers on the tuning-fork in the diagnosis of lesions of the internal ear, by Dr. McBride, and on hearing and the examination for the public services, by Dr. Laidlaw Purves, have been published during the year. Mr. Jonathan Hutchinson has contributed a memorandum on the best method of removing foreign bodies from the ear; and Mr. F. A. Brooks has reported a case of pent-up pus in the tympanic cavity, from the practice of Mr. George Field.

Diseases and Injuries of the Lungs.—Clinical lectures by Dr. A. T. H. Waters, on cancer of the lungs, and on certain cases of lung-disease resembling acute phthisis have appeared during the year. Dr. R. Neale has advocated the open air treatment of phthisis. Mr. Cresswell Baber has made some remarks on the theory of bronchial asthma; and Dr. Handford has recommended the disinfection of phthisical sputum. Dr. Vincent Harris and Dr. Cullingworth have recorded cases of diaphragmatic empyema; Dr. Rickards, ten consecutive hospital cases of empyema. Dr. Roderick Maclaren has recorded a case of empyema with removal of portions of six ribs, with remarks on a method of resection where the thorax is rigid, and Mr. Astley Bloxam a case of abscess of lung after swallowing a fish-bone. The treatment of hæmoptysis has been discussed by Dr. S. West, Mr. H. T. Batchelor, and Dr. P. W. Macdonald.

Diseases and Injuries of the Throat, Nose, and Adjoining Cavities, and of the Thyroid Body.—Two lectures on tumours of the larynx, their pathology, symptoms, and treatment, with illustrative cases, by Dr. David Newman; papers on the examination of the nasal cavities from the front, by Mr. Cresswell Baber, and on a case of œdematous laryngitis, by Dr. D. H. Charles, have been published. Examples of rhinolith have been recorded by Surgeon-Major Moriarty, by Mr. Edward Bovill, and by Surgeon-Major T. Hendley. The subject of the voice as a stringed instrument was discussed by Messrs. George Stoker, Lennox Browne, H. Casson, J. D. Grant, and others. Sir W. Stokes has related a case of acute myxœdema following thyroidectomy, Mr. Rupert C. Chicken has reported a case of excision of a thyroid cyst, Mr. J. Astley Bloxam two cases of thyroidectomy, Dr. A. T. Sloan and Dr. Hurley have discussed the question "Is goître hereditary?" Dr. William Webb has made some observations, chiefly on the etiology of goître, and Dr. J. P. Bramwell has recorded a case of thyroidectomy.

Diseases and Injuries of the Heart and Blood-vessels.—An address on cases of valvular heart-disease long free from serious symptoms, by Sir Dyce Duckworth; papers on cardiac dilatation at puberty, by Dr. G. N. Pitt; on displacement of the heart occasioned by traction, by Dr. McAldowie; two cases of rupture of the heart, the one recorded by Dr. Macandrew, the other by Dr. Ogilvie Grant; a case of ulcerative endocarditis, recorded by Mr. G. N. Caley, from the practice of Dr. W. H. Broadbent; and a case of tricuspid disease, by Dr. F. R. Humphreys, have been published. Mr. Timothy Holmes has published a paper on the treatment of aneurysm; and Mr. Richard Barwell has described a method of treating aneurysm by electrolysis combined with the introduction of wire; a case of gangrene due to arteritis has been recorded by Mr. Biggs, and a case of traumatic aneurysm of the femoral artery, by Mr. F. S. Barber, from the practice of Mr. Spofforth.

Diseases and Injuries of the Abdomen, including Hernia.—The papers read in the discussion on the surgery of the liver at the Brighton meeting have been published, viz.: On the surgical treatment of diseases of the liver, by Mr. Knowsley Thornton, and by Mr. Lawson Tait; on a case of cholecystotomy, by Mr. Alfred Willett; on a case of abscess of the liver, by Mr. Howard Marsh, and on hepatic phlebotomy, by Dr. George Harley; Mr. John W. Taylor has

published papers on the diagnosis of distended gall-bladder, and on the treatment of acute peritonitis by laparotomy; Dr. Alexander Napier has described a case of intercurrent hepatitis and retained gall-stones; and Professor George Buchanan a case in which he performed cholecystotomy for the removal of biliary calculi retained in a gall-bladder with occluded cystic duct; Dr. W. Hind has recorded a successful case of hydatid of the liver, treated by aspiration; and Mr. Hooper May a second treated by incision; Dr. Price Morris has described a curious case of faecal impaction; a case of liver-fluke, by Surgeon W. L. Chester; a case of acute yellow atrophy of the liver (male), by Surgeon C. W. Johnson; two cases of cirrhosis of the liver, by Dr. Gooding; and a clinical lecture on cirrhosis of the liver, by Dr. Robert Saundby, have also been published. Cases of rupture of the spleen have been described by Messrs. C. R. Faunse and F. P. Maynard, and a case of cheesy infarct by Mr. R. S. Archer. Mr. Arthur E. Barker has described a new method of suture employed by him in a case of gastro-enterostomy for cancer of the pylorus and stomach; Mr. Thomas Morse has also recorded a case of gastro-enterostomy for cancerous obstruction of the pylorus; a successful case of gastrostomy, by Mr. William Square, and a case of excision of the pylorus, followed by death in four days, by Dr. Joseph Coats and Mr. Ernest Maylard, have also been published. A curious case of ulcer of the stomach opening into the left ventricle of the heart has been recorded by Dr. Magee Finny, and a fatal case of stricture of the sigmoid flexure of the colon, by Dr. de Bartolomé; a case of stricture of the small intestine, in which abdominal section was performed, and recovery occurred, with artificial anus, was reported by Mr. R. H. Russell, from the practice of Dr. Cureton and Mr. Eddowes; a case of imperforate rectum in an infant, in which Littre's operation was performed, by Dr. Hall Redwood; a case of traumatic enteritis and peritonitis in a patient presenting an anomalous condition of the inferior vena cava and iliac veins, by Surgeon G. A. Harris; a case of idiopathic acute peritonitis, by Surgeon-Major Quill; a case of strangulated internal hernia into the foramen of Winslow, by Mr. J. E. Square, and a case of strangulated hernia treated by puncture, by Dr. James Brydon, have been published. Mr. Frank S. Watson, of St. Helena, has reported the case of a patient who recovered after the infliction of a perforating wound of the intestine. Dr. Duncan Mackenzie has described a method of continuous rectal alimentation by means of an artificial stomach; Dr. George Herschel and Dr. Sidney Martin have discussed the use of papain in dyspepsia.

Diseases and Injuries of the Kidney.—Mr. H. Langley Browne has reported a case of laparo-nephrotomy, and Mr. Charles F. Pickering a case of nephro-lithotomy, in which recovery ensued in eight days. The question whether there is any connection between the so-called albuminuria of adolescence and a gouty inheritance was discussed by Dr. Stewart Lockie, and the occurrence of albuminuria in diabetes by Dr. Robert Maguire. Dr. Robert Saundby has reviewed the action of drugs in albuminuria, and Dr. C. H. Ralfe has discussed the relation of functional albuminuria to hæmoglobinuria; Dr. Thomas Oliver has published some observations on the relation of urea to certain diseased processes.

Diseases and Injuries of the Bladder and Urethra.—Lectures on the surgical treatment of stone in the bladder, by Mr. William Cadge, and a clinical lecture on the surgery of the male perinæum and external organs of generation, by Mr. C. G. Wheelhouse, have been published. Sir Henry Thompson's paper on the suprapubic operation for opening the bladder, read in the Section of Surgery at Brighton, has been published, as have also the following papers on this operation: Two cases of suprapubic cystotomy by Mr. Walter Pye; on a new procedure for the removal of small calculi from the bladder in male children, and on suprapubic lithotomy, by Professor Annandale; a case of suprapubic cystotomy for tumour of the bladder, by Mr. F. A. Southam; notes on a case of suprapubic lithotomy, by Dr. Rutherford Morrison; four cases of suprapubic lithotomy by the modern method, with remarks by Mr. W. H. A. Jacobson; a case in which suprapubic lithotomy was performed on a woman, by Dr. Cullingworth; two cases of suprapubic lithotomy, by Mr. A. W. Mayo Robson; on removal of tumours of the bladder, with four cases, by Dr. J. Greig Smith (one case of the suprapubic method). The following papers touching the operations to reach the bladder or urethra through the perinæum have appeared: A case where lithotomy was twice performed within fourteen months, with remarks on the recurrence of stone in the bladder, by Mr. Reginald Harrison; on repeated lithotomy, by Mr. Donald Day; an aseptic catheter for washing out the bladder, by Dr. James Foulis; on drainage of the bladder, with special reference to a post-prostatic operation, by Mr. E. H. Howlett; two cases of rupture of the urethra, by Mr. Charters Symonds; on the treatment of certain forms of urethral stricture by internal and external urethrotomy combined, by Mr. Reginald Harrison; a case of retention of urine from enlarged prostate, etc., operation, recovery, by Dr. W. C. Wile; a case of complete rupture of the urethra, with extravasation of urine, by Dr. Mackenzie. The employment of electricity in the treatment of diseases of the urinary organs, two papers by Dr. W. E. Steavenson and Mr. Bruce Clarke; on the nature of the so-called hypertrophy of the prostate, by Sir Henry Thompson; on the early treatment of prostatic retention of urine, by Mr. G. Buckston Browne; retention of urine, aspiration with the guarded needle, by Surgeon-Major Hodder; remarks on incontinence of urine in children, by Dr. W. H. Day; gangrene of the penis, by Dr. Coward; five cases of amputation of the penis for epithelioma, under the care of Sir William Mac Cormac; and a mode of preventing bleeding in the operation for phimosis, Mr. Paul Swain, complete the list of papers.

Diseases and Injuries of the Inguinal and Perineal Regions.—Examples of the radical cure of hydrocele by injection of carbolic acid, after Keyes' method, have been recorded by Mr. Voelcker, from the practice of Mr. Berkeley Hill, by Mr. G. Buckston Browne and Mr. J. K. Murray. Treatment of varicocele by excision, by Mr. A. W. Mayo Robson; six cases of varicocele treated by scrotal incision and ligature of the veins, recorded by Mr. Bernard Relton, from the practice of Sir William Mac Cormac; a clinical lecture on rectal fistula and hæmorrhoids, by Mr. Richard Davy; treatment of painful fissure of the anus without operation, by Dr. A. D. Macgregor, are the other papers in this department.

Diseases and Injuries of the Skin, including Syphilis.—Remarks on colloid degeneration of the skin, by Dr. Robert Liveing; on wash-leather skin, by Dr. P. H. Emerson; hydroa, by Dr. H. Radcliffe Crocker; case of pityriasis, by Dr. Walter Fell; a case of rhinoscleroma, by Dr. Sidney Davies; prurigo, by Dr. Myrtle; purpura hæmorrhagica, by Dr. Paterson; a case of purpura, with remarks by Dr. Mackey; a case of eczema-erysipelas; of lupoid coffee-stain patches; of morphœa taking the arrangement of zoster, by Mr. Jonathan Hutchinson; eczema-erysipelas, by Dr. Hingston Fox; recurring fibroid of the skin, by Mr. H. T. Batchelor; the anatomy of keloid in an early stage, by Dr. H. Radcliffe Crocker; pregnancy complicated by purpura hæmorrhagica, by Dr. John Phillips; microsporon furfur in pityriasis of the scalp; removal of superfluous hairs by electrolysis, by Mr. Gilbert Smith. The chief communications dealing with syphilis published during the year have been the Lettsomian lectures on some moot points in the natural history of syphilis, by Mr. Jonathan Hutchinson; Dr. H. Blanc's paper on late manifestations of tertiary syphilis unpreceded by symptoms of constitutional syphilis; and some remarks on the venereal disease chiefly in reference to its evolution, by Mr. F. Le Gros Clark.

Diseases and Injuries of the Bones and Joints and Muscular Apparatus.—Cases of fracture of the sternum have been recorded by Surgeon William Eames, R.N. A paper entitled "A new, easy, rapid, and painless method of reduction of dislocations of the shoulder without an anæsthetic, with cases," by Dr. Neil MacLeod, was followed by the publication of a series of cases and some discussion as to priority; Mr. Jonathan Hutchinson, jun., has redescribed a form of partial dislocation of the head of the radius peculiar to children; Dr. J. W. Smith recorded a case of epiphysitis affecting the long bones of the hand; and Mr. H. Bramwell a case of epiphysitis affecting the phalanges of the hand and toe. The treatment of fractures of the patella has been discussed by Mr. F. Treves; of loose cartilages in the knee-joint, by Mr. W. J. Shaw; and of housemaid's knee, by Mr. C. W. Thorp. A case of resection of the entire shaft of the tibia for necrosis with reproduction of the bone has been recorded by Dr. W. C. Wile; Professor E. H. Bennett has described the characters and treatment of fracture of the metacarpal bone of the thumb. Mr. Noble Smith has discussed the diagnosis of certain obscure diseases of the spinal column; Mr. J. T. Rudall has related a case of severe lacerated wound of the right leg, with total loss of extensor power, in which an operation was successfully performed; Mr. T. Sympson has recorded a case of myositis ossificans.

Obstetric Medicine.—Dr. Robert Barnes has discussed the alternatives to craniotomy in a paper which served as the introduction to a discussion in the Section of Obstetric Medicine; and Dr. Kinkead also contributed a paper on the same subject on that occasion. Mr. E. C. Andrews has recorded a case in which he extirpated the ruptured uterus. The desirability of the early performance of laparotomy in cases of abdominal pregnancy was very elaborately investigated by Dr. W. T. Lusk, of New York; Dr. Berry Hart contributed a successful case of abdominal section for ruptured Fallopian tube gestation; Dr. Aveling, a case of extra-uterine gestation arrested by electricity; and Dr. Petch another case treated by galvano-puncture. Mr. George Robert-

son recorded a case of extra-uterine gestation in which he removed a dead fœtus by perineal section, with a successful result. A case recorded by Dr. Horrocks, in which pregnancy was complicated by a pelvic tumour, gave rise to some discussion in these pages. Dr. Herman has recorded two cases in which labour was obstructed by kyphotic deformity of the pelvis. Dr. A. W. Edis has discussed the management of incomplete abortion; and Dr. W. S. A. Griffith has recorded a case of sapræmia due to imperfect abortion. Mr. John H. Brown has reported a case in which the os uteri was occluded at the time of labour; and Mr. A. Atkinson, the occurrence of rupture of labial varix during labour. Professor William Stephenson, after discussing the principle of traction-rods, made a simple suggestion applicable to any forceps. Dr. W. Brydon has described a case of spontaneous decapitation of a dead fœtus during labour. The indications afforded by the sphygmograph during labour have been investigated by Dr. J. W. Ballantyne; and Dr. Algernon Temple has made some observations on the prevention of laceration of the perineum in primiparæ. Dr. J. Stuart Nairne has made some remarks on a condition of the inner surface of the uterus with reference to a paper by Dr. Braxton Hicks published in 1885. Mr. Lawson Tait has published an analytical report on 139 consecutive ovariotomies, and has also discussed the general principles involved in the operation of removal of the uterine appendages in two addresses, one delivered before the North Wales Branch, the other before the Medical Society of London. Dr. C. J. Cullingworth has written on abdominal section for the removal of small intra-pelvic tumours. Mr. A. Mayo Robson has reported a consecutive series of cases in which he had opened the abdomen for the purpose of removing the ovaries or uterine appendages, in the Leeds General Infirmary. Mr. John W. Taylor has reported a case of hydrosalpinx, in which Mr. Lawson Tait removed one Fallopian tube only; and Dr. James Murphy a case in which, during the operation of salpingectomy the bladder was wounded, but in which the ultimate result was good. Dr. James Oliver has detailed the symptoms of inflammation of the mucous lining of the Fallopian tubes. Dr. Thomas Savage has discussed the surgical treatment of uterine fibro-myoma, and Dr. Francis Imlach the pathology and treatment of pelvic hæmatocele. Mr. E. J. Penny has reported the occurrence of sudden death from hæmorrhage into the abdominal cavity during menstruation. In June, the publication of Dr. W. F. Wade's Ingleby Lectures, on some functional disorders of females, was commenced; and at the same time appeared the first of Dr. Graily Hewitt's clinical lectures on the uterine neuroses. A clinical lecture on laceration of the os and cervix uteri and the operation of trachelorraphy, and a paper on the early history of flexions of the uterus, by the same physician, have also appeared; and Surgeon-Major A. B. R. Myers has also made some remarks on the latter subject. The late Dr. A. Wynn Williams described a form of perineorraphy. Dr. Robert Bell has discussed the etiology and treatment of endometritis. Dr. J. H. Aveling has published a lecture in which he recommended the use of the sigmoid repositor for the reduction of inversion of the uterus. Dr. Arthur W. Edis has made some remarks on two cases of metrorrhagia, and has discussed the clinical diagnosis of cancer of the uterus; and Dr. H. Handford a case in which that affection ran a remarkably rapid course.

Pathology.—Dr. P. W. Latham's Croonian Lectures dealt with certain chemical considerations bearing on the pathology of rheumatism, gout, and diabetes. Dr. Churton has recorded the occurrence in two cases of acetonuria in persons not suffering from diabetes. Dr. Pye-Smith has noted the occurrence of hypertrophy of the bladder in diabetes. Dr. Lorimer has made some observation on the diagnosis of saturnine gout, and Dr. Pearse has reported an interesting case of gout. Dr. Bedford Fenwick has made some general observations on Addison's disease. Mr. C. E. Abbott has recorded a case of myxœdema, and Dr. James Rigby a case of mollities ossium in the male. Dr. Hale White has endeavoured to throw light on a very obscure subject in a paper on "inexplicable pyrexia." Reports of Mr. J. Bland Sutton's lectures on evolution in pathology were published in the early part of the year. An instance of "black tongue" was described by Dr. J. R. Stocker, and Mr. Henry Strachan recorded a very interesting case of acute pneumonia *in utero*.

Infective Diseases.—In consequence of the great interest excited by M. Pasteur's researches on rabies and his system of inoculation, M. Vignal, of the Collège de France, prepared an elaborate report on his method. A short paper by Dr. Hime detailed some experiments which he had made to test the validity of M. Pasteur's claim. Dr. Norman has also described the precautions which may be taken against the spread and development of rabies and hydrophobia. Mr. Edgar Crookshank gave a short sketch of Koch's method of isolating and cultivating micro-organisms. Two of the annual orations which the Colleges are called upon to listen to were this year devoted to a review of the relations between micro-organisms and disease: Dr. Pavy, in his Harveian Oration, gave a slight sketch of the subject; while Mr. Henry Power, in his Bradshaw lecture at the College of Surgeons, went into the subject as it affects surgical methods in great detail. Numerous papers read in the Section of Public Medicine, dealing with the etiology and prevention of scarlet-fever, have been published; the authors of these papers were Dr. Boobbyer, Dr. Tatham, Dr. W. Squire, Dr. Hy. Ashby, Dr. Joseph Ewart, and Dr. Fredk. Pearse. Dr. T. Raven has made some observations on the extreme duration of infectiousness in measles, mumps, variola, scarlatina, and diphtheria, and on the association of rheumatism with scarlatina, a subject also treated by Dr. Henry Ashby. The association which is believed to exist between acute tonsillitis and rheumatism has been the subject of comment by Drs. Fox, Easby, Plimmer, J. Brown, and Cameron. Dr. Craig has made some observations on infectious sore-throat; Dr. G. F. Masterman and Mr. H. Nelson Hardy have discussed the etiology of diphtheria; Dr. Leslie Phillips has argued for its identity with membranous croup, while Dr. W. J. Mackie and Mr. Whitehouse have taken an opposite view; Dr. Edward Penny has discussed the diagnosis and treatment of the disease; and Dr. Lewis Marshall has reported a case of recovery from the disease after tracheotomy. Dr. Bruce, of Dingwall, has made another contribution to our knowledge of epidemic pneumonia. Dr. C. R. Macdonald, in the course of a most interesting paper on the diseases peculiar to the inhabitants of the lonely island of St. Kilda has dealt with a cognate subject in his remarks on "strangers' cold"; and has also given an account of the prevalence of trismus nascentium there. Mr. Frank Wright has recorded a case under the name of tetanus neonatorum. Mr. Reginald Ryle has made some observations on the nature of rötheln. Mr. Chauncy Puzey has described two cases of charbon; one in a woman, a sackmaker, and the other in a dock-labourer. Dr. T. D. Acland has described the appearances produced by the newly recognised disease actino-mycosis hominis. Dr. Quirke, Mr. Richmond, Dr. Campbell Munro, and Dr. Robert Banning have reported cases in which a child born while its mother was suffering from variola and immediately vaccinated did not contract the disease; and Dr. A. H. F. Cameron a similar case, in which the child was not vaccinated for several weeks; in each instance the vaccine pustules appear to have run their usual course. Dr. Beaven Rake has reported a case of anæsthetic leprosy complicated with facial carbuncle, thromboses of cerebral sinuses and mania; and Surgeon W. K. Hatch a case in which a student was accidentally inoculated during the performance of a necropsy.

Naval and Military Surgery and Exotic Diseases.—Mr. R. F. Tobin and Surgeon H. Hendley, I.M.S., have published some notes on the surgery of the late expedition to Suakim. Surgeon Aylmer Hayes has recorded a case of profuse secondary hæmaturia, after gunshot wound of the kidney; Surgeon Gilbert Kirker, R.N., has made some observations on direct bullet-fractures; Mr. Edward Atkinson has related a series of cases of gunshot wounds of the head; Surgeon-General Dr. Beatson has discussed the etiology and treatment of cholera and the management of epidemics; Dr. G. H. Gimlette has made a report on the cholera epidemic of 1885 in Nepal; Surgeon-General W. R. Cornish, C.I.E., has related the particulars of an outbreak of cholera amongst British emigrants on board a steamship; a speech by Dr. Robert Koch, giving the result of his latest researches on cholera, was translated for the JOURNAL; Dr. Matthew Hay has commented on the relation of the reaction of the gastric secretion to cholera infection. Surgeon-Major Shirley Deakin has discussed the connection between certain cases of œdema of obscure origin and kakké (beri-beri). Surgeon R. H. Firth has commented on the occurrence of jaundice and hæmatinuria in remittent fever; Surgeon-Major Macnamara has made some observations on the continued fever of Egypt.

Old Age.—An extensive report on a series of fifty-four reputed centenarians drawn up and discussed by Professor Humphry, has been published as a supplement to the BRITISH MEDICAL JOURNAL. Professor Humphry has also related many interesting particulars as to the habits and health of Miss Hastings, who exceeded the age of 104 years. Mr. Edmund Owen has reported the case of an old lady, aged 88, who underwent an operation for strangulated umbilical hernia; Mr. James Cantlie the case of a woman, aged 82, whose foot was amputated for senile gangrene; and Mr. G. O. Willis, the case of a woman, aged 86, who submitted to amputation of the forearm for epithelioma; all three patients recovered from the operations, and the last-mentioned was alive four years later.

Therapeutics.—Dr. Lauder Brunton's suggestive and original address in the Section of Pharmacology and Therapeutics at Brighton dealt with the connection between chemical constitution and physio-

logical action; Dr. W. H. Broadbent chose for the subject of his address in the Section of Medicine the remote effects of remedies. Professor Charteris commenced his winter course on therapeutics by a retrospective lecture, which was shortly afterwards published in these pages. The advantages of lanoline, a new basis for ointments, has been the subject of two elaborate communications from its discoverer, Professor Oscar Liebreich, of Berlin, who has also contributed a short paper containing a series of convenient formulæ, and an additional note on a special purified form. Dr. Walter Smith has noted the forms of skin-disease in which he has found the new unguent useful. Sir E. H. Sieveking, who has been making trial of the new hypnotic, urethan, has permitted Mr. C. C. Manifold to report a series of cases in which it was more or less successful; and Dr. Myrtle, of Harrogate, has written a short note in which he speaks favourably of the drug. Mr. Charles B. Plowright has contributed some general notes on ergot and ergotism. Dr. Lindsay Porteus has made some notes on strophanthus (hispidus), the new cardiac remedy. The use of viburnum prunifolium in abortion has been discussed by Dr. W. Macfie Campbell, Dr. Leith Napier, Mr. W. E. Green, and Dr. John Hy. Wilson. Dr. W. H. Day and Surgeon-Major Fairland have commented on the use of antipyrin, the latter unfavourably. Dr. C. R. Illingworth has recommended the use of perchloride of iron in whooping-cough. Dr. J. K. Strahan, in a paper read in the Section of Pharmacology and Therapeutics, pointed out a liability to obstruction of the intestines consequent on large doses of iron, and Dr. Fredk. Willcocks subsequently recalled some observations which he had made some years earlier, in conjunction with the late Dr. E. Buchanan Baxter, on the effects of large and small doses of iron. Mr. W. E. Hacon has recommended the trial of the bromides in hyperpyrexia; and Dr. C. S. Taylor that of piperine in intermittent fever. The value of terebene in winter-cough has been investigated by Dr. C. W. Suckling and Dr. J. Hutchison; Dr. McAldowie has pointed out that it is a generator of ozone; Dr. Murrell has briefly noted the results of increased experience; and Dr. Masterman has made some observations on the commercial varieties of terebene, and its chemical relations. Mr. Mayo Robson has recommended pine wood oil in bronchitis. Dr. Arthur Gamgee has made some observations on the use of compressed and rarefied air in the treatment of chronic bronchitis, emphysema, and spasmodic asthma. Dr. J. Henry Bennet, of Mentone, has described Dr. Bergeon's curious treatment of chronic diseases of the lungs and air passages by medicated gaseous enemata, and Dr. Primrose Wells has related four cases of pulmonary phthisis apparently benefited by another method of treatment only less curious—the inhalation of the spray of a cultivation of bacterium termo. Mr. R. S. Miller has made some remarks on the employment of cucaine, and cases exemplifying the advantages of the drug as an anæsthetic have been recorded by Dr. Macdowel Cosgrave, Mr. C. Randolph, Mr. H. B. Pope, Mr. W. B. Holderness, Mr. G. P. Stallard, and Mr. Mayo Robson; Mr. Alexander Thompson has recorded a case in which alarming symptoms were produced by it; Dr. W. S. Paget has endorsed its value in hay fever; in the same disease Dr. Moorhead has recommended occasional hypodermic injections of small doses of morphine and atropine. The treatment of diarrhœa has been the subject of many suggestions during the year, among which Mr. Charles Rothwell's recommendation of sulphate of iron, Dr. Braithwaite's of the same salt combined with salicylate of soda, and Dr. R. M. Simon's of ice-water enemata may be mentioned, as the most novel. Dr. Drysdale has raised the question whether mercury is an antidote to syphilis. Dr. J. Sinclair Holden has recommended salicylic acid in the treatment of diabetes in rheumatic persons. Dr. Paget Thurstan has related a case of spasmodic asthma, and Dr. Leslie Phillips has made some observations on the use of galvanism in infantile palsy. Dr. Murrell has discussed the therapeutic uses of massage. Mr. A. D. Macgregor has made some observations on the value of boric acid in various conditions of the mouth. Mr. Richard Robb has recommended the inflation of chloroform-vapour as a palliative or preliminary in the treatment of painful affections of the ear. Mr. J. A. Francis has described a simple method of performing artificial respiration.

Poisoning.—A fatal case of belladonna poisoning with hyperpyrexia (treated by pilocarpine) was reported by Mr. Charles E. Tanner. Dr. J. Grierson Brown has related a case of poisoning by strychnine, taken in the form of Hunter's vermin-killer, successfully treated by hypodermic injections of chloral-hydrate. Dr. J. J. O'Bryen described a very marked example of amblyopia produced by large doses of quinine. Mr. Edward East has reported the symptoms produced by about two drachms of "essence of camphor." The toxicity of paraffin has been the subject of communications from Dr. George Vincent, Mr. H. Shapter Robinson, and Surgeon G. A. Harris, I.M.S. Dr. W. V. Barró has recorded a case in which death occurred half an hour after taking about two drachms of liniment of aconite. A remarkable case, in which an old gentleman aged 81 recovered after accidentally swallowing three drachms of carbolic acid has been published by Dr. Boakins. Dr. G. H. R. Dabbs has recorded the symptoms produced in a servant-girl by half a pint of whisky containing an ounce of oxalic acid; Mr. Arthur Pearce those apparently produced by an aniline pencil. Dr. Richardson has reported a case of poisoning by phosphorus paste, fatal on the fifteenth day, occurring in the practice of Dr. Harris; and Dr. W. Martin a case of poisoning by liquid chloroform. Dr. Ernest H. Jacobs has drawn up a tabulated statement of the deaths from anæsthetics during 1885.

Public Medicine.—A lecture on the exciting causes of disease, delivered by Dr. Byrom Bramwell before the Edinburgh Health Society, has been published. Dr. E. D. Mapother's address in Public Medicine, delivered before the Association at Brighton, dealt with the medical profession in Ireland and its work. Dr. Taaffe's address in the Section of Public Medicine dealt with a variety of subjects—smoke-abatement, the decrease in the death-rate, the Registrar-General's weekly returns, infantile diarrhœa, and milk-scarlatina. Mr. Christopher Johnson has sketched the sanitary condition of England 100 years ago. The climate and sanitary conditions of Worthing formed the topics of an address given by Mr. W. J. Harris. Mr. Charles Roberts has made a proposal for the simultaneous study of the climate and vegetation of the winter health-resorts of southern Europe; and Dr. E. J. Tilt has contrasted the arrangements made for the comfort and treatment of invalids at Bath and Aix-les-Bains, very much to the disadvantage of the English watering-place.

Dr. J. J. Ridge has described the aims and claims of the British Medical Temperance Association.

Miscellaneous Papers.—Among the papers and addresses which cannot be conveniently classified under any of the above headings are Sir James Paget's address on John Hunter; a paper on re-infusion of blood in primary and other amputations, by Dr. John Duncan; and a case in which transfusion was performed four times, by Mr. Cotterill; a case of amputation of the arm and scapula for ossifying sarcoma, recorded by Mr. Bilton Pollard from the practice of Mr. Christopher Heath, and a similar case by Mr. E. A. Maling; a paper on the surgical treatment of certain tumours of the neck, by Mr. F. B. Jessett; a case in which an enormous fibrocystic tumour was removed from the parotid region, by Surgeon S. J. Rennie; a clinical lecture on cancer of the breast, by Mr. Edmund Owen; a paper by Mr. William Adams on chronic rheumatic arthritis; an address on some points regarding acute rheumatism requiring investigation, by Dr. Stephen Mackenzie; notes of a case of parturition complicated by acute rheumatism and endocarditis, ending in recovery, by Dr. J. E. Squire.

EDITORIAL ARTICLES.

NUMEROUS editorial articles, written, as a rule, by special contributors in various parts of the kingdom, and dealing with a great variety of subjects, have been published during the year.

The British Medical Association.—The Meeting at Brighton; Honours from the Association; The British Medical Association and the BRITISH MEDICAL JOURNAL—Retrospect and Prospect; The Work of the Sections at the Annual Meeting; The Meeting of the British Medical Association in Dublin, 1887.

Recent or Pending Legislation.—Five articles on the Medical Acts Amendment Bill, 1886; The Lunacy Acts Amendment Bill, 1886, in the House of Lords; The Lord Chancellor's Amendments to the Lunacy Acts Amendment Bill; The Recent Cases in Lunacy; Insane Convicts; The Burgh Police and Health (Scotland) Bill; The Delays of Sanitary Legislation.

The General Medical Council.—Two articles on the work of the General Medical Council; two articles on the Election of Direct Representatives, and two others on the State of the Poll.

The London Colleges.—The Presidency of the Royal College of Physicians of London; The Conjoint Scheme and Medical Education; The Society of Apothecaries and its Licentiates; A Ceremony and its Moral; The Art of Delay at the College of Surgeons; The Council of the Royal College of Surgeons; The Coming Meeting at the Royal College of Surgeons; The Meeting of the College of Surgeons and its Results; Mr. Erichsen's Pamphlet on the Members' Franchise; Who is to stop Unqualified Practice? A Grave Question for the Profession and the Colleges; The Colleges of Physicians and Surgeons and the Society of Apothecaries: a Grave Public and Professional Question; The General Practitioners and the Colleges: a Vital Question for the Profession; A New Order of General Practitioners; The Members,

Fellows, and Council of the College of Surgeons: A Constitutional and Historical Study; The Party of Privilege at the College of Surgeons: a Legal Study; The Status and Rights of the Members of the College of Surgeons; The Circular from the Council of the Fellows of the College of Surgeons.

Medical Education.—The Introductory Addresses; the Teaching of the Preliminary Sciences; Clinical Teaching and Clinical Teachers; Clinical Instruction at the Infectious Hospitals; Certificates in Psychological Medicine; Medical Student Life in London; Medical Students and Athletics; Preliminary Education; Changes in the Examinations and Medical Schools; Opening of the Medical Schools; Discipline of Medical Students in London; The Oxford Medical School; The Present Position of the Medical Schools in London; Resident Colleges at Medical Schools; Medical Degrees and Direct Representation; The Title of Doctor for Doubly-qualified Practitioners; two articles on The Reform of the University of London; A Medical Degree for London Students: by Whom and to Whom shall it be granted?; A "Teaching University for London;" The Proposed Medical University.

Physiology and Anatomy.—The Physiology of Sleep; The Dual Action of the Brain; Recent Researches on the Physiology of the Brain; The Relations of Size between the Lungs and Bronchi; On the Position in Nutrition of the various Classes of Food-stuffs; The Chemical Formation of Hard and Soft Tissues; Dr. Wooldridge's Recent Researches on Coagulation of the Blood; Albuminuria in Health; The British Association for the Advancement of Science.

Pathology.—Sir Erasmus Wilson's Legacy to the College of Surgeons; The Erasmus Wilson Lectures; Evolution in Pathology; The Advance of Pathological Photography; Photography in Pathology; Leprosy; The Transmission of Tuberculosis; Scarlet Fever from the Cow; Protective Inoculation; Abnormal Development of the Male Breast.

Medicine.—The Address in Medicine; The Nomenclature of Medicine; The Limits of Exact Knowledge in Medicine; Fallacies of Observations; Dr. Latham's Croonian Lectures; The Tests for Albumen in Urine; Unsettled Problems about Pneumonia; The Lesson of the Epidemic of Hydrophobia; Cauterisation in Hydrophobia; The Prophylaxis of Phthisis; Cold and Phthisis; Damp and Diphtheria; Professional Responsibilities.

Surgery.—The Address in Surgery; The Address in the Section of Surgery; Tumours of the Spermatic Cord; Problems in Syphilis; Dentistry and the State; The Minor Prophets of Surgery; Peritoneal Surgery; Enucleation of the Eyeball; Recent Experiments on the Production of Sympathetic Ophthalmia; On Lesions of the Cornea following the Instillation of Cucaine; Replacement of a Lost Eye.

Obstetrics.—Abdominal Palpation in Obstetrics; Comparative Obstetrics.

Therapeutics.—The Remote Effects of Remedies; The Connection between Chemical Constitution and Physiological Action; The Rightful Claimants; Respiratory Therapeutics; Terebene and its Derivatives; Iodide of Sodium *versus* Iodide of Potassium; Two New Hypnotics; Balneo-therapeutics; Mistakes in Dispensing; The Use and Abuse of Tea; Our Colonial Sanatoria.

Public Health.—The Address in Public Medicine; Sir Spencer Wells on Public Health; The Value of the Biological Test for Potable Waters; Registration of Sanitary Diplomas; Sanitary Plumbing; Practical Sanitation; The Regulation of Dairies; The Reform of Local Government; The New President of the Local Government Board; The New Appointments at the Local Government Board; Artisans' Houses fit for Habitation; Coroners and *Post Mortem* Examinations; Futile Inquests; Public Kitchens; Ships' Surgeons and Ships' Passengers; Unhealthy Health-Resorts; Health-Resorts; The Subsoil and Well-Waters of Rome; Cholera in Europe; The Cholera in Italy; On the Relation between the Water-Supply and the Prevalence of Cholera in Spain in 1885; Surgeon-General Beatson on Cholera.

Army and Navy Medical Services.—The Army Medical School; The Army Medical Staff; Ought Army-Surgeons to engage in Private Practice? Position of Brigade-Surgeons, Army Medical Service in India; Dr. Quain's Address at Netley; Small-pox in the Army and Navy; Civil Hospitals in India.

Social Questions within the Profession.—The Duties of Consultants; Consultants and General Practitioners; Mortality in the Medical Profession; Two Articles on Self-Help in the Medical Profession; The Abuse of Medical Charities; The Quality of Out-Patient Practice; Reform in the Treatment of the Sick Poor; The General Practitioner and the Poorer Classes; Medical Fees under the Labourers' Ireland Act; End of the Eastern Hospitals Scandal; Medical Officers of Schools, their Duties and Uses; The Liverpool Hospital for Women, and the Report of the Committee of Inquiry upon the Operations Performed Therein.

General Social Questions.—The President's Address; The Wear and Tear of Modern Life; The Long Winter; Health in Winter; The *Malaise* of Spring; Birthday Honours to Medical Men; The Annual Exodus to the Seaside; The Medical Aspects of Continental Tours; The Bartlett Case; Automatic Homicide; The Death of the King of Bavaria; A Candidate for a Drunkard's Retreat; The Truth about Alcohol; The Growth of Temperance.

SOCIETIES.

The Royal Medical and Chirurgical Society during 1886.—The Royal Medical and Chirurgical Society has published sixty-nine volumes of *Transactions*, and has by no means exhausted itself. Of late many younger flourishing and friendly rivals have grown up round it, who have attracted to themselves a very fair share of the new work that is being continually offered to the world by the growing energy of English medicine and surgery. A generation ago, its discussions and published volumes offered almost the only considerable collection of the results of English observation. Now these are more widely spread, and almost every branch of practice, and method of study has its Society and Transactions, and the total mass is, perhaps, ten times what it was. Still, the last year's work, brought forward at the Medical and Chirurgical Society, shows a solid value which very fully maintains its reputation, and will stand the wear of time. If an essay is accurate and complete, it does not always lead to such easy discussion or brisk repartee as a case related with a touch of partisanship or a tendency to doubtful inferences. Among the productions that find their way, as a rule, either to the Royal Society or the Medical and Chirurgical Society, are the careful essays on experimental research, of which there are not too many in England at present. Most of the best, notably Dr. Ferrier's and Mr. Victor Horsley's, have naturally fallen to the Royal Society, but among those that have come to the Medical and Chirurgical Society during the past year there is to be noted a clear and elaborate experimental inquiry by Mr. Ballance and Mr. Edmunds on the ligation of the large arteries in their continuity, which goes to show that, in some animals certainly, and in man very probably, the old doctrine that, in tying an artery, it was necessary to rupture the internal coats to secure occlusion is incorrect, and, further, that such rupture is neither necessary nor advisable. This revision of doctrine, or, at least, of practice, hardly as yet meets with the approval of the most experienced surgeons; but though the question may be still undecided, a settlement is greatly advanced by this paper. The work of Dr. Paul Chapman on *Cardiography* and of Mr. Sedgwick on the *Chemical Pathology of the Respiration in Cholera*, touch on more difficult points, and lead to less definite conclusions. The lengthy experiments by Mr. Gostling to show the increase in the proportion of white corpuscles to red in the blood during the process of suppurative but not serous inflammation, show how immense is the region yet unexplored in that most vital fluid, the blood. The inquiry has to do almost entirely with figures, and it is a pity that there are so many mistakes in arithmetic which must be more than printers' errors. Of the complete historical monographs which form a very valuable part of the *Transactions*, the most remarkable was that of Mr. F. Treves on what he proposed to call Richter's hernia, or partial enterocele, which was laid before the Society very lately, and can hardly be discussed in full before its publication, in a more complete form, in the *Transactions* of next year. An interesting but less historical companion monograph was that by Mr. Lockwood on a kindred subject, viz., encysted and infantile hernia. Dr. Champneys furnished a very complete account, in part historical, of the development of mammary functions in the skin of lying-in women, which is full of interest to the inquirer as to the origin of the human organism as we see it now. It tends to show that the sebaceous follicles of the skin are capable of furnishing a true mammary secretion, and that the true origin of the breast is from a highly-specialised aggregation of highly-specialised sebaceous follicles. Dr. Creighton's hypothesis, however, of the close analogy of the supernumerary axillary breasts to the developments of skin follicles found in the dog, has, perhaps, as much or even more to be said for it. Of the papers essentially statistical, the most elaborate, perhaps, was one by Dr. William Ogle on the mortality of the medical profession, a subject which can hardly help having some interest for all. A medical man's life in prognosis is not so bad as a brewer's or a publican's; there is just that to be said for it, but not much more. It is about as bad as a quarryman's, with his dangerous blasting work to do; but worse than a barrister's, and about twice as bad as a clergyman's. As to danger from infectious diseases, medical men die

very much less (one to five) than their neighbours of small-pox, because they know the value of the prophylactic, vaccination; but from scarlet fever, diphtheria, and typhus, where there is no prophylactic, they die much more frequently than other men. A statistical paper by Dr. Angel Money, on some points in pneumonia, especially the relation of delirium to pyrexia, as shown by the experience of twelve years in University College Hospital, established clearly enough that delirium is not the direct result of pyrexia, as Liebermeister has taught, but had hardly a wide enough basis (199 cases) to solve some of the riddles of the disease. Mr. Savory's recent examination of such specimens of femoral arteries ligatured for popliteal aneurysm as there are in London hospital museums, proved, as far as can be proved from twenty-six specimens, that, as a rule, the femoral artery is not entirely occluded below the point of ligature. Coming now to the class of contributions which may be more or less fairly called clinical summaries, there was a remarkable account by Mr. J. Knowsley Thornton, of 300 cases of complete ovariotomy, and 20 of exploratory abdominal operation. He could show that throughout this long series he had not lost a single case of the removal of a simple cyst or uncomplicated ovariotomy; and the review of the whole proved, as Sir Spencer Wells said, steady progress. The papers by Mr. Barwell, Mr. Jacobson, and Mr. Rivington, on the subject of suprapubic lithotomy, all contributed to the approval of the revival, under certain conditions, both for large and small stones, of that ancient operation of the sixteenth century, or even earlier. Mr. George Pollock touched shortly on the changes in bone and soft tissues after amputation of a limb, which have hardly received as yet the attention from pathologists which they deserve, and which have a very practical bearing on the health and comfort of the stump. Mr. R. J. Godlee and Dr. C. T. Williams approached the large subject of thoracic surgery in discussing the results of bronchiectasis treated by paracentesis in six cases, one of which may be considered to have been cured. The position of a bronchiectasis is hard for the physician to determine accurately, and for the surgeon to approach safely, and it was generally felt that only the slow but sure fatality of bronchiectasis would justify the attempt. A somewhat novel chapter was added to the history of typhoid infection by Dr. J. E. Squire, in an account of his experience of the disease with the troops at Suakim, where there seemed to him good reason to consider that the only possible mode of communication was by the air. The largest group of papers were those which dealt with, or were founded upon, one or two special cases of unusual character. Mr. J. Knowsley Thornton contributed a very remarkable case of excision of a cystic spleen, weighing twenty-six ounces, from a girl, aged 19, who showed no bad symptoms when she was last seen, two years after the operation. Dr. T. Barlow, after a very close observation of a case of a man dying with some paralysis on the eighth day of measles, was able to show some definite lesions of the spinal cord, even in that early stage, which were important as a guide to much of the pathology of nervous sequelæ of acute disease. Dr. Cayley showed a case of large thoracic aneurysm, in which death seemed to have been postponed for about two or three months by the introduction of forty feet of fine steel wire. The discussion which followed showed less disinclination to the trial of this, or similar methods, in very severe cases. Mr. Langton and Mr. Bowlby brought forward a remarkably complete series of specimens from a case of ulcerative endocarditis, to show all the stages between embolism and aneurysm. Mr. Chavasse exhibited a curious specimen of multiple neuromata, in which nearly every spinal nerve (as well as the pneumogastric) was affected with several tumours, but only trifling discomfort was felt; Mr. Jonathan Hutchinson, a case of congenital, and perhaps inherited, alopecia; Mr. J. B. Sutton, one of "harlequin fœtus," or general congenital seborrhœa; and there were many other minor specimens and discussions. It is an excellent habit which this Society alone adopts of publishing not only its papers, but its discussions. The very imperfect summary which our space will permit shows a very full record of industry and learning, and no fear in facing the more difficult of modern problems.

The Clinical Society of London has continued, during 1886, the same career of steady progress in practical medicine and surgery for which it has become noted. As in the previous year, the papers contributed by surgeons have somewhat preponderated, possibly because a surgeon, Mr. T. Bryant, presides over the meetings. It will be convenient to class the papers in two divisions; those contributed by physicians and surgeons respectively. In January, Sir Andrew Clark gave an interesting account of a case which he denominated "desquamative prostatitis," in which there was a discharge of hyaline cylinders resembling renal cylinders. Dr. Angel Money described a new symptom which he had observed in a case of megrim and epilepsy, and which consisted in an apparent momentary lengthening of a written or printed word, seemingly caused by a reduplication of one or more of the letters in the word. Dr. Samuel West related particulars of a case of chronic simple ulcers of the stomach and duodenum, without symptoms until the occurrence of perforation. In February, Dr. W. J. Tyson, of Folkestone, described three cases of universal alopecia, which had recently occurred in his practice. Dr. Hale White read a paper on hysterical pyrexia, which he prefaced by describing the case of a girl whose temperature on two separate occasions when she was admitted into Guy's Hospital rose to 105° Fah. Dr. Goodhart furnished notes of several cases of meningitis which were of obscure origin. The same physician also related particulars of a case in which intussusception of the upper part of the jejunum had existed for twenty-one months, with periodical attacks of pain and vomiting, and progressive wasting, and which, after death, was found to be associated with large polypoid growths in the jejunum. In March, Dr. T. Whipham and Dr. A. T. Myers contributed a paper on some chronic nervous sequelæ of small-pox, especially as affecting the speech. Dr. Samuel West read details of a case of baruria in a woman, with high percentage of urea. In April, Dr. S. Mackenzie read a paper on erythema nodosum, especially dealing with its connection with rheumatism. Dr. Samuel West described three peculiar cases of pneumothorax. Dr. Bristowe read notes of a case of gummata of the liver in a boy, aged 15, treated successfully with iodide of potassium and mercury. Dr. R. W. Burnet described a case of hydatids of the liver, discharged through the right lung, and coughed-up, in which the whole of the lower lobe of the lung was excavated. In May, Dr. Churton, of Leeds, related a case of aneurysm of the thoracic aorta treated by galvano-puncture. Dr. Percy Kidd contributed a case of aneurysm of the aorta, with extravasation of blood into the posterior mediastinum, compressing the œsophagus and vagus nerves, and then rupturing into the abdominal cavity; it was associated, during life, with frequent vomiting. Dr. R. Caton, of Liverpool, reported a case of aneurysm of the hepatic artery, and commented on the extreme rarity of the disease, of which only ten other cases were believed to be on record in European and American medical literature. The aneurysm burst into the hepatic duct. Dr. Hale White described a case of simultaneous inflammation of several serous membranes, namely, the pericardium, peritoneum, and pleura, in a girl aged 19, probably the subject of rheumatism. In October, Dr. Charlewood Turner described a case of congenital malformation of the heart, with systolic and pre-diastolic basic *bruits*. In December, Dr. Herringham read a paper on two cases of diphtheritic paralysis, with heart affections and choreic movements. Dr. Montague Murray related a case of gastric ulcer with unusual complications. The Albumen-Test Committee has presented its report, of which we gave a full account in the JOURNAL for June 26th. The Committee on Myxœdema is still sitting, and it is anticipated that the Committee's report may be presented to the Society during the present session. Large numbers of living specimens have been exhibited at the meetings during the year; but the limited space at our disposal prevents us from enumerating them in detail. The following have been the papers of chief interest to surgeons:—In January, Mr. Clutton read notes of a large cervical spina bifida, which was undergoing spontaneous cure when death supervened from diphtheria. Mr. Sympson, of Lincoln, showed a boy, aged 7, the subject of myositis ossificans, in whom large bony growths occupied the tendons of the latissimi dorsi, trapezii, and other muscles, so that a large saddle of bone was formed in the loin, preventing any bending of the back. Mr. Barker read a paper on a case of ununited fracture of the clavicle, causing pressure on the brachial plexus and writer's cramp, for which excision of the false joint, with wiring of the fragments, was done, perfect union of the bone and complete relief of the nerve symptoms ensuing. Mr. Brudenell Carter described an interesting case of recovery of vision after amaurosis consecutive to malarial fever. In February, Mr. Mansell Moullin read notes of a case of traumatic inguinal aneurysm, with rupture of the sac, treated successfully by ligature of the common femoral and external iliac arteries. Mr. Charters Symonds detailed a case of aneurysm occurring in a stump, resulting from Gritti's amputation, treated also successfully by ligature of the superficial femoral artery, opening of the aneurysm, and ligature of the femoral vessel above and below the sac. Mr. A. E. Barker gave full notes of a case of acute intestinal obstruction in a male, aged twenty-three, followed by acute general peritonitis, and treated successfully by abdominal section, release of the implicated bowel, and thorough sponging out of the peritoneum. The President on that occasion stated that he also considered the existence of acute peritonitis was no bar to the operation of abdominal section. In March, Dr. Roderick Maclaren, of Carlisle, read an account of a case of hernia cerebri suc-

cessfully treated by removing the protrusion and closing the opening in the skull with a silver plate. Mr. Jonathan Hutchinson gave brief notes of a case of necrosis of the lower jaw from the medicinal and long-continued use of phosphorus taken in pills. Mr. Clutton described a case of tubercular ulceration of the palate in a girl, aged 15. Dr. Longhurst gave the particulars of a case of popliteal aneurysm occurring in a patient, the subject of locomotor ataxy, and cured by pressure. Mr. Meredith read notes of a case of successful laparotomy for the relief of acute intestinal obstruction following ovariotomy. In April, Mr. W. J. Walsham described a case of lithotrity at a single sitting in a boy ten years old. Mr. Timothy Holmes related the case of a girl, aged 14, who fell and bruised the right side of the thorax; and in whom, without fracture of a rib, there was subpleural laceration of the lung, from which she recovered. Mr. J. R. Lunn furnished notes of a case of ununited fracture of the patella in a man aged 44, with 4½ inches of separation between the fragments, treated successfully by excision of the knee-joint. In May, Mr. Pick related a case of impaction of stone in one ureter, with atrophy of the kidney on the other side. Mr. R. W. Parker read a paper on the treatment of nævus by excision, and gave a clinical analysis of 564 cases of nævus. Mr. Victor Horsley described a case of suppuration in the mastoid cells, complicated by thrombosis in the lateral sinus, and septic embolism of the heart and left lung, in which recovery followed trephining of the mastoid process, etc.; and supplemented his paper with remarks on the prevention of septic embolism in such cases. In October, Mr. Pearce Gould exhibited a case of undeveloped sexual organs, associated with congenital defect of the tonsils, but believed the impression popularly entertained in this country that the tonsils and testicles are closely connected is erroneous. Mr. F. Treves produced a patient suffering from pulsating tumour of the head, with Raynaud's disease. Mr. Butlin gave further notes of a case of renal lithotomy (published in the *Transactions* of the Society for 1882), showing that the patient had since had stone in the opposite kidney, but had passed satisfactorily through his illness. Mr. Charters Symonds narrated a case of removal of the scapula for osteo-sarcoma, the patient being exhibited at the meeting, and remaining well, two years after the operation. Mr. Thomas Smith described a case of ligature of the common iliac artery with kangaroo tendon, with subsequent yielding of the knot, re-ligature with silk, gangrene of the limb, and death. Mr. Butlin contributed a somewhat similar series of events in a case of axillary aneurysm for which the subclavian artery was ligatured in the third part of its course, with slipping of the ligature shortly after the operation, re-ligature, collapse, and death. These cases gave rise to an animated discussion, in which most of the points relating to the ligature of vessels in their continuity were mooted. In November, one entire evening was taken up by the discussion of excision of the larynx. Mr. Henry Morris described the case of a man whose larynx was excised for epithelioma, and in which death occurred from exhaustion on the eighth day after operation. Dr. Felix Semon narrated a case of successful extirpation of the larynx for epithelioma of the left ventricle of Morgagni. Mr. Butlin related a case of epithelioma of the vocal cord for which partial excision of the larynx was performed, and in which there was, three months subsequently, no sign of return of the disease. Mr. Pick related other cases, and the opinion was expressed that partial excision held out much better hopes of success than total extirpation of the larynx. Another evening was devoted to an interesting discussion introduced by Sir Henry Thompson, who gave a brief sketch of six cases of tumour of the bladder in which he had operated during the last twelve months. He showed the parts removed in each instance, and gave the histories of the cases, and the results. Mr. B. Pitts, described a case of suprapubic lithotomy performed two years after the removal of a growth from the bladder by the perineal operation. Mr. Croft, Mr. Bryant, and Mr. H. Morris also described other cases of tumour of the bladder. Mr. B. Wainwright related a case of vertical fracture of the head of the right radius, and fracture of the coronoid process of the ulna. In December, Mr. Treves read a paper on acute myositis.

The Pathological Society of London.—The most extensive piece of work attempted by the Pathological Society of London during the last year was the collection of a series of cases and papers on tumours of the brain; the fifty-four specimens thus brought together were subsequently classified by a committee appointed for this purpose. In fourteen of the cases the growths were gliomatous, and of these, five were in the cortex; as all the tumours of this class were solitary, the table lends some support to the hope that such tumours may be successfully removed. Moreover, in the sixteen cases in which the growth was sarcomatous, three were in the cortex, one was connected with the envelopes, and four with the nerves, and in only two were multiple growths present. The report of the committee, however, was far from sanguine, as it stated that of the whole series, only two seemed suitable for removal. Several aneurysms of the heart were exhibited by Dr. Frederick Taylor, Dr. Samuel West, Dr. Norman Moore, and Dr. Money. Dr. Pye-Smith contributed an important paper on Teratoma, founded on a remarkable case where the tumour was attached to the liver. Among the dermoid cysts exhibited, mention may be made of an example lying below the tongue, shown by Mr. Stephen Paget, and of a pedunculated dermoid tumour from the sigmoid flexure, shown by Mr. Clutton. Mr. Arbuthnot Lane continued his papers on the osseous changes found in rheumatoid arthritis and in old age, and combatted with much courage certain prevalent opinions as to their causation. Mr. J. B. Sutton, in continuance of his researches in Comparative Pathology, exhibited and discussed a series of specimens of injuries and diseases of joints in animals. Professor Hamilton, of Aberdeen, described his method of making sections of the brain, and exhibited a series of beautiful preparations.

Obstetrical Society of London.—During the past year, many valuable papers have been brought before this Society. In January, Dr. Herman read a contribution "On the Production of the Shape of the Oblique Pelvis of Nægelé." He believed that the dwarfing of one side of the sacrum, rather than ankylosis of the sacro-iliac joint, was the cause of distortion, by leading to altered distribution of the weight of the body. The natural pressure of the femora pushed the acetabula upwards and outwards, as Dr. Champneys had shown; when this pressure was disturbed, so as not to be the same on both sides, the deformity in question developed. The distortion of the pelvis noticed in cases where a patient had had one lower extremity amputated early in life, so that the pressure of the femur on the sound side was unopposed, supported the view that the pressure of the femur was outwards. Nægelé's pelvis was entirely due to altered distribution of body-weight, the bone-structure being sound. Light was not thrown upon the subject by deformities where the pelvic bones themselves had been rendered flexible by disease. Dr. Braithwaite read notes of a singular case of gastrotomy for extra-uterine gestation; the child was successfully removed, but the placenta, which was large, never came away, and was, as he believed, absorbed. In February, Mr. Knowsley Thornton contributed a case in which two dermoid ovarian tumours were successfully removed from a woman in the fourth month of pregnancy. The operation was performed on February 4th, 1885, and the patient was safely delivered of a live child on June 23rd. Mr. Thornton noted that patients operated upon at this period of gestation generally avoided miscarriage, and recovered better than those subjected to operation a month or six weeks later. In March, Dr. Barbour, of Edinburgh, showed a very fine series of frozen sections from subjects who had died in the early part of the first stage of labour, in the third stage, and shortly after the conclusion of parturition. The obstetrical anatomy of the third stage series was shown in specimens from four cases of uteri obtained by Porro's operation. Every medical school in the kingdom should endeavour to add to its museum as many well-prepared specimens illustrating the mechanism of labour and the changes in the uterus as can possibly be obtained. Such specimens will be of far more value to the student than ready-made dissections of the popliteal space and similar preparations, which he should make for himself. Dr. Lewers communicated notes of a case of circumscribed sarcoma of the vagina and uterus. In April, Dr. Matthews Duncan read a valuable monograph "On Contraction, Inhibition, and Expansion of the Uterus." He discussed at length not only the healthy contractions of pregnancy and parturition, but also the contractions said to be present in childhood, and those of menstruation, of dysmenorrhœa, of uteri affected with fibroids, and of abortion. At the next meeting, Dr. Duncan read another communication "On Elasticity, Retraction, and Polarity of the Uterus." This subject, like the former, was discussed in relation to other conditions besides parturition. Dr. Amand Routh read a case of serous perimetritis, which gave rise to a discussion on that remarkable condition. Dr. J. Phillips read in June a monograph on spurious hermaphroditism, based upon four cases which occurred in the same family. In July, some "Observations on the Uterine *Bruit*" were read by Dr. Champneys. This paper contained valuable clinical records of auscultation of pregnant uteri, and of uteri affected with fibroid disease. In October, a very instructive discussion on rupture of the uterus and its management followed the reading of notes of several cases under the care of Drs. J. G. Swayne and Richard Cox. Mr. Alban Doran read a paper on papilloma of the interior of the Fallopian tube, a rare disease, and on the relation of obscure cases of peritoneal effusion to catarrh from the tube. Dr. Champneys, at the November meeting, read a second communication "On the Obstetrics of the Kyphotic Pelvis." He adhered, after further experience, to the con

clusions which he had expressed three years previously in the former paper. The fœtal head was, he maintained, usually more or less transverse at the beginning of labour, and not antero posterior, as usually described during labour. The occiput rarely turned forward; deep transverse position was common, and posterior rotation not uncommon. Lastly, the head sometimes passed out of the pelvis, practically between the tubera ischii in front, and the sacrum and coccyx behind, entirely neglecting the anterior part of the pelvis. The fact that within one year two papers have been read at the same Society on pelvic deformities in woman, suggests that a good concise treatise on the subject would supply a great want. It is highly important that the general practitioner should understand the mechanism of labour as affected by these distortions, but in order to do so, he must understand the meaning of the terms by which they are known, else such expressions as "Nægelé's," "Robert's," "scoliotic," "kyphotic," "spondylolisthetic," and "spondylolisthematic" pelves only serve to keep him from reading valuable papers which bear any of these terms for their title. Dr. Walter Griffith's *Scheme*, published in the nineteenth volume of the *St. Bartholomew's Hospital Reports*, would form an excellent basis for classification in such a work. At the December meeting, Dr. Dakin read a paper on mercurial poisoning in lying-in women, through solutions of corrosive sublimate employed for the douche. The cases of poisoning occurred together at a particular date. The great benefits which had followed the substitution of corrosive sublimate for Condy's fluid and carbolic acid, as proved by the statistics of the General Lying-in Hospital, more than counterbalanced the occasional appearance and symptoms of mercurialisation. A large number of pathological specimens were exhibited at the meetings, many being of high scientific interest.

The British Gynæcological Society.—During the past year Mr. Bland Sutton and Dr. Johnstone each read papers on the condition of the mucous membrane of the uterus during menstruation. Though working from different starting points, they both arrived at the same conclusion, namely, that it is only the epithelial layer which is shed or disintegrated. Dr. Grigg contributed a valuable paper on puerperal eclampsia. Dr. Bedford Fenwick has done good work in pointing out the relation between intra-abdominal tumours and cardiac degeneration. He related eighteen cases in which this condition was discovered *post mortem*, where death had resulted from some form of abdominal tumour. A long and exhaustive paper was contributed by Dr. Barnes on vicarious menstruation. The conclusions arrived at were that vicarious, or supplementary functional action, was a fundamental law in physiology; that there was nothing exceptional in vicarious menstruation; that vicarious menstruation might occur under various phases; and that it was conservative in intent and action, lessening or averting evil. In the discussion on the paper, Dr. Wilks expressed his scepticism as to the existence of vicarious menstruation. A unique case of pyometra was recorded by Dr. Fancourt Barnes. Over eighteen ounces of pus were released from the enlarged uterine cavity by dissecting up an occluded vagina in a multipara. Among other papers of interest was one on serous peritonitis by Dr. Edis.

The Medical Society of London, with its weekly meetings, has maintained the interest which attaches to the transactions of this venerable Society. The Lettsomian Lectures, delivered on January 4th and 18th and February 1st, by Mr. Jonathan Hutchinson, on "Some Moot Points in the Natural History of Syphilis," were of more than usual interest, treating, as they did, of sundry ill-understood phenomena in connection with that disease. The suggestions thrown out, though by no means universally accepted, were marked by the close observation and clinical insight characteristic of the author. The subject of the treatment of varicocele by excision, brought forward by Mr. A. Boyce Barrow, gave rise to an animated discussion on January 11th, as to both the method and the propriety of surgical intervention. On March 15, Mr. Edmund Owen showed a very successful case of excision of the upper end of the femur by Jordan's method, in which the portion removed had been reproduced, with the best results. On March 1, Dr. Hughes Bennett read a somewhat remarkable paper on "Spastic Paralysis:" a morbid state, as he observed, of widespread occurrence and great importance. He dealt with the subject exhaustively, both from a clinical and a pathological point of view. The papers of Dr. Day, on "Irritable Brain," on March 29, and of Dr. John Lowe, on "Traumatic Hydronephrosis," on April 5, were both possessed of interest. On April 12, Mr. R. Brudenell Carter exhibited a boy, nine years of age, on whom he had successfully performed Dr. Mules's operation of evisceration of the eye, followed by the insertion of a ball of glass, to preserve the size, contour, and movements of the globe; and on the same evening Dr. Sa West read some instructive notes on the family history of a case of hereditary tremors. Since the opening of the present session, Mr. Lawson Tait read a paper, before an unusually large audience, on the "Principles involved in the removal of the Uterine Appendages." In this paper Mr. Tait vigorously defended the practice which he has done so much to make popular. He impugned the arguments, the statistics, and the inferences of his opponents, and, on the ground that nothing succeeds like success, he claimed the sympathy and support of the profession. He dealt fully with the cases in which the operation was desirable, but was less explicit regarding those in which it should *not* be performed. The discussion which followed was perhaps less animated than had been anticipated, and no serious attack was made on Mr. Tait's position or practice. On a subsequent evening, Dr. Lewers contributed a valuable essay on the "Etiology and Pathology of Rupture of the Uterus during Pregnancy;" and on November 15, Dr. Hughlings Jackson read a paper on "A Rare Case of Epilepsy." Mr. Victor Horsley afterwards made some remarks on the subject, illustrated by limelight projections of a series of photographs of guinea-pigs, in which a similar condition had been artificially induced. The problem of cerebral localisation is evidently progressing in the hands of Mr. Horsley and his fellow-workers.

Ophthalmological Society of the United Kingdom.—The work done during this year by this Society has, if we mistake not, fully maintained the reputation and position of the Society. First and foremost, we may mention the discussion on Graves' disease, which took place in the spring. The Council issued a series of questions, to which they invited answers; the questions related chiefly to cases completed either by death or recovery, to the effects of treatment, to the etiology of the affection, and to certain points especially belonging to the eye; for example, Graefe's lid-sign, etc. Amongst those who took part in the debate, we may mention Mr. Jonathan Hutchinson, Dr. Bristowe, Dr. Wilks, and Dr. Hughlings Jackson, who, with a host of lesser celebrities, made communications of facts, many of which have added to or consolidated our knowledge of this strange malady in important respects. During the summer the long-expected report of the Special Committee on Sympathetic Ophthalmia was presented by Mr. Nettleship, the two years or more occupied in its production being fully explained when it was found to be based on the analysis of more than two hundred cases. Of the individual papers, it is not too much to say that several were of first-rate excellence, and dealt with the subjects concerned in an exhaustive manner. Without placing them in any special order, we would mention those of Mr. Priestley Smith on Primary Glaucoma in relation to Age, Mr. Nettleship on Meningitis after Excision of the Eyeball, Mr. Jessop on the Affections of the Eye in Herpes Facialis, Dr. Sidney Coupland on Thrombosis of the Cavernous Sinus, and the quite recent communication of Mr. Edgar Browne on Quinine Amaurosis. Mr. Lawford read an interesting paper on Tubercle of the Choroid, with especial reference to the tubercle bacillus; and Mr. Carter read a paper on Cataract Extraction. Many minor communications were made, of varying degrees of interest; we can only mention here that of Mr. Edgar Browne relative to the painting of a colour-blind artist. In conclusion, we must not forget the second Bowman Lecture, which was delivered by Professor von Zehender, of Rostock, and which appeared so lately in our pages that further reference to it is unnecessary.

The Society of Medical Officers of Health has endeavoured to make its proceedings more attractive to that large body of health officers whose duties are not confined to metropolitan administration. By the appointment of Professor Corfield, and of his successor Dr. Alfred Hill, as Presidents, assurance was given that the work of the Society would embrace subjects associated with sanitary administration in all parts of the country. A large accession of members has been the result. A number of valuable papers have been contributed, which have since appeared in an excellent volume of *Transactions*. Among the chief of these was a communication by Dr. Heron on the cholera-bacillus of Koch, in which the author offered strong arguments in favour of Koch's teachings. A further paper by Professor Bischof showed that at present too much reliance must not be placed upon the gelatine-peptone water test. Mr. Eassie, in a paper "On the Waters derived from the Bagshot Beds considered as Drinking Supplies," gave the result of original investigations of much value into the opportunities of pollution of waters from these sources. The presidential addresses by Dr. Corfield on the History of House Sanitation, and by Dr. Hill on Methods of Refuse Disposal, dealt thoroughly with these subjects, and form a useful contribution to our knowledge of them.

The Epidemiological Society.—The Epidemiological Society had under consideration a series of interesting papers from well-known epidemiologists. The presidential address by Dr. Walter Dickson gave an account of some recent epidemics at home and abroad. A com-

munication from Dr. Cameron, of Hendon, excited much attention, his subject being the cow disease, which had been associated by Mr. Power with a serious outbreak of scarlet fever among the drinkers of milk coming from the farm on which the cow-malady prevailed. The chronicity of diphtheria, or rather its recrudescence in some individuals, was discussed by Dr. D. Astley Gresswell, who showed much reason for thinking that these persons might in this way retain a power of infection. A further meeting was devoted to the discussion on an excellent paper by Dr. E. J. Edwardes on the Recent German Vaccination Commission. Other evenings were occupied by papers by Dr. Buchanan on Certain Alleged Injuries from Vaccination near Stettin, by Dr. Thorne Thorne on the Recent Sanitary Conference at Rome, and by Dr. G. B. Longstaff on the Statistics of Hydrophobia, Sir William Smart giving an account of the behaviour of cholera in ships. The volume of *Transactions* may shortly be expected.

Academy of Medicine in Ireland.—We have to record with pleasure the continued and increasing success of the Academy of Medicine in Ireland, which, in 1886, passed through the fourth year of its existence. The Fellows, Members, and Student Associates numbered, at the beginning of the Session, 211, 35, and 24 respectively; compared with 208, 27, and 24 in the preceding year. Besides this, the bead-roll of Honorary Fellows now includes the following distinguished names:—Professor Billroth, of Vienna; Professor Charcot, of Paris; Professor Emmet, of New York; Mr. Jonathan Hutchinson, F.R.S., of London; Sir William Jenner, Bart., F.R.S., of London; Dr. Thomas Keith, of Edinburgh; Professor Kölliker, of Würzburg; Sir Joseph Lister, Bart., F.R.S., of London; Professor Ludwig, of Leipsic; Sir James Paget, Bart., F.R.S., of London; Professor Pasteur, of Paris; Professor Schroeder, of Berlin; Mr. John Simon, F.R.S., of London; Professor Virchow, of Berlin; and Professor von Recklinghausen, of Strassburg. One Honorary Fellow died during the year—namely, Dr. Austin Flint, of New York. The meetings of the various sections and sub-sections took place regularly throughout the Session, and in some instances it was found necessary to hold special meetings in order to continue and conclude discussions on subjects of importance. In this connection we cannot hope to do more than mention the titles of the principal communications made to the Academy, with the authors' names. In the Medical Section, the communications were:—A case of true relapse in enteric fever, by Dr. J. W. Moore; partial embolism of the inferior division of the central artery of the retina, associated with repeated previous attacks of chorea, by Mr. Arthur H. Benson; on the therapeutic uses of the digestive ferments, by Dr. J. M. Purser; on some cases of pneumonia, by Mr. James Martin, of Portlaw; hyperpyrexia in rheumatic fever, by Mr. W. Langford Symes; periostitis following enteric fever, by Dr. H. C. Tweedy; the cardiac murmurs of the mitral area, by Dr. C. J. Nixon; a case of enteric fever, fatal by perforation, by Dr. Wallace Beatty; on the quantitative estimation of albumen, urea, and sugar in urine, by Dr. F. R. Cruise; clinical notes on a case of lichen planus, by Dr. J. Magee Finny; a case of enteric fever with unsual symptoms and morbid appearances, by Dr. James Little; a case of cerebro-spinal meningitis, by Dr. Richard A. Hayes; and cancer of the bronchial glands and lung, by Mr. M. A. Boyd. Before the Surgical Section papers were read by Mr. Kendal Franks on the advantages of the principle of dry dressings in antiseptic surgery and on the nature of scrofulous glands in the neck and their surgical treatment; Mr. R. F. Tobin, on the surgery of the late expedition to Suakim; by Dr. William McKeown, of Belfast, on a method of making an artificial opening in the membrana tympani, and of keeping it open for a considerable period, and on its therapeutic influence; by Mr. W. I. Wheeler, on pharyngocele and dilation of the pharynx, with existing diverticulum of the lower portion of the pharynx lying posterior to the œsophagus, cured by pharyngotomy, being the first case of the kind recorded; by Dr. E. H. Bennett, on extroversion of the urinary bladder, treated by Wood's operation; by Mr. W. Thornley Stoker, on bone-drainage in hip-joint disease; by Sir William Stokes, on bone-drainage in the treatment of the early stages of hip-joint disease; by Dr. Henry Fitzgibbon, on a case of ununited fracture of the humerus, and a method of treatment thereof by means of metal screw-taps, and by Mr. P. J. Hayes on electrolysis for the treatment of urethral stricture. In the Obstetrical Section, the chief contributors of papers were Dr. Lombe Atthill, on ovariotomy; Dr. T. More Madden, on displacement of the ovaries, on the treatment of chronic cystitis in women, and on the so-called laparotomy epidemic; Dr. W. C. Neville, on axis-traction in instrumental delivery, with a description of a new and simple axis-traction forceps, and on the treatment of presentations and prolapses of the funis; Dr. W. J. Smyly, on two cases of fibro-myomatous tumour of the uterus, and on the use of the curette in the diagnosis and treatment of disease of the uterine mucous membrane; and Professor Dill, of Belfast, on labial hæmatoma or puerperal thrombus. To the Pathological Section the communications were very numerous. The principal were—pathology of lead paralysis, by Dr. Wallace Beatty, who also showed and described the lungs from a case of pyo-pneumothorax; a milky fluid from a case of ascites, by Dr. G. F. Duffey; tumour of inferior saphena vein, by Mr. J. K. Barton; specimens from a case of Bright's disease, by Dr. A. W. Foot, who also exhibited a case of spontaneous rupture of the heart; osteomalacia, by Dr. E. H. Bennett, who at another meeting demonstrated certain laryngeal changes subsequent to laryngo-tracheotomy; a case of dentigerous cyst, by Mr. A. W. W. Baker; ulcer of the stomach, opening into the left ventricle of the heart, by Dr. J. Magee Finny, who also showed a case of pericarditis; a case of villous disease of the kidney, followed by hypertrophy, degeneration, and rupture of the heart, by Mr. W. Thornley Stoker; cancer of the liver, by Dr. James Little; mitral and aortic disease, by Dr. Walter G. Smith, who likewise presented an interesting specimen of ulcerative endocarditis, limited to the right side of the heart; a case of malignant endocarditis, by Dr. J. M. Purser; endocarditis, with localised pericarditis, by Dr. C. J. Nixon; rupture of a pelvic cyst, by Dr. Charles B. Ball; red granular kidney, by Mr. M. A. Boyd; and zonular cataract and dental malformations, by Mr. John B. Story. Nor were the sub-sections idle. To the sub-section of State Medicine communications were made by Mr. D. Edgar Flinn, on the duties of medical officers of health in England and Ireland contrasted; by Dr. C. F. Moore, on some considerations in reference to the sanitary condition of the Dublin dairy yards; by Dr. A. H. Jacob, the working of the Contagious Diseases Acts; by Dr. H. Colpoys Tweedy, cremation, its sanitary and judicial aspects; and by Dr J. W. Moore, remarks on the climate of Dublin, based upon twenty years' observations. Lastly, the sub-section of Anatomy and Physiology received elaborate communications from Dr. H. St. John Brooks, on variations in the nerve supply of the flexor brevis pollicis muscle, and on the morphology of the intrinsic muscles of the little finger, with some observations on the ulnar head of the short flexor of the thumb; from Dr. F. T. Heuston, on complicated muscular anomaly in the human arm; and from Dr. F. A. G. Davis, on irregularities of the thoracic duct. Some important official changes took place at the beginning of the session. Dr. Banks, the first President of the Academy, vacated his office on the completion of the third year of his presidency, and was succeeded by Dr. Robert McDonnell, F.R.S. Dr. George F. Duffey was elected General Treasurer, in room of Dr. McDonnell; Mr. William Thomson was re-elected General Secretary; and Dr. J. W. Moore was re-appointed Secretary for Foreign Correspondence.

In addition to those of the Societies above mentioned, condensed reports of the proceedings of the following Societies have appeared during the year: The Harveian Society, the West London Medico-Chirurgical Society, the Leeds and West Riding Medico-Chirurgical Society, the Cambridge Medical Society, the Sheffield Medico-Chirurgical Society, the Manchester Medical Society, the Manchester Pathological Society, the Glasgow Pathological and Clinical Society, the Glasgow Obstetrical and Gynæcological Society, the Wolverhampton and District Medical Society, the Brighton and Sussex Medico-Chirurgical Society, the Midland Medical Society, the Chester Medical Society, the Sunderland and North Durham Medical Society, the Northumberland and Durham Medical Society, the West Kent Medico-Chirurgical Society, the Plymouth and Devonport Medical Society, the Harrogate Medical Society, the Liverpool Medical Institution, the Yorkshire Association of Medical Officers of Health, and the Odontological Society of Great Britain.

ANATOMY.

Skull. Brain and Nervous System.—Alimentary Canal and Peritoneum. Orbit.—Vertebral Column.—Migration of Testis.—Pineal and Pituitary Bodies.—Embryology.—Abnormalities.

DURING the year which has come to a close, anatomy has made solid progress. Without doubt very little can be added to the mere details of human anatomy; but much remains to be done in the way of rational explanation and elucidation. The materials which are available for this purpose are of inexhaustible extent, and even the labours we have to chronicle have made but a slight impression upon them.

The Skull.—The structure and development of the skull is a subject which Mr. W. Kitchen Parker has made especially his own, and during the year this most painstaking and laborious worker has made an important addition to our knowledge by the publication in the *Transactions of the Royal Society* of two additional monographs upon

the subject; one upon the skull of the edentata, and the other upon the skull of the insectivora. Another important contribution to our knowledge of the skull is contained in an exhaustive monograph written by Herman Welcker (*Archiv. für Anthropologie*, 1886. Die Capacitat, &c., der Schadel Kapsel bei den verschiedenen nationen), and although of very much smaller scope than the monographs which have been mentioned, we may refer to the series of monographs which are being published by Professor Macalister upon the cranial bones in the *Transactions of the Royal Irish Academy*. These cannot but prove of service, and it is to be regretted that they are so little available to the ordinary student.

The Brain and Nervous System.—Professor Hamilton has continued his researches upon the Corpus Callosum. His paper is entitled, "Is the Commisural Theory of the Corpus Callosum Correct?" (*Rep. Brit. Assoc.* 1885-86), and we would refer our readers to the paper for an answer to this very pertinent question. A very good account of the corpus callosum in fish, amphibians, and reptiles is also contained in a paper by an American anatomist, Dr. H. F. Osborn (*Morph. Jahrbuch*, 1886, p. 223). Moreover, in our own columns we have published Dr. Alexander Hill's college lectures on questions connected with the brain ("The Brain Mechanism of Sight and Smell," BRITISH MEDICAL JOURNAL, March 6, 1886), in which the author ingeniously argues various abstruse points, and points out an interesting similarity in the minute structure of the sense organs—the eye, ear, and nose. The peripheral part of the nervous system has been very carefully considered by Dr. Herringham, in a paper upon the "Brachial Plexus," read before the Royal Society. ("The Minute Anatomy of the Brachial Plexus," W. P. Herringham, *Proc. Royal Soc.*, No. 243, 1886.) The author can claim to have placed a difficult subject upon a more rational basis.

The Alimentary Canal and Peritoneum.—The alimentary canal and peritoneum have been most laboriously examined by Mr. F. Treves, who has systematically dissected and described the appearances found in two hundred mammalia. The abstract of Mr. Treves's lectures upon this subject were published in our columns (BRITISH MEDICAL JOURNAL, March 27th, 1886, p. 582, *et seq.*), but doubtless such valuable material will be treated at greater length in another form. We may refer to a paper bearing upon the same subject by Pilliet and Boulart ("Sur l'estomac de l'hippotame, du kangaroo," etc., *Journal de l'Anatomie et de la Phys.*, p. 402, 1886).

The Orbit.—Besides the lectures which have been mentioned, our columns have contained abstracts of Dr. Brailey's lectures upon the muscles, ligaments, fasciæ, etc., of the orbit. Coming soon after Mr. Lockwood's able paper on the same subject, it will be interesting to see whether Dr. Brailey can confirm Mr. Lockwood's important and new observations, and we await with interest the publication of the lectures in full.

Vertebral Column.—The axial skeleton has also received its share of attention at the hands of Professors Cunningham and Sir William Turner. The former (*Journal Anat. and Phys.*, p. 238, 1886) discusses the vexed question of "The Connection of the os odontoideum with the body of the axis vertebra," and the latter in the same journal (p. 322) gives interesting statistics concerning "The Sacral Index in various Races of Mankind." Moreover, the last-mentioned anatomist has adduced evidence to show that even the things we think least variable may undergo modification, and in a paper on "The Lumbar Curve of the Spinal Column in several Races of Man" (*Journal Anat. and Phys.*, p. 536, 1886) he argues that the Chinese and Europeans have convex lumbar regions, the Andamanese, Negros, Maoris, Sikhs, and perhaps Hindoos, Esquimaux, and Lapps have straight lumbar regions; whilst the Australians, Bush, and Sandwich Islanders would have concave lumbar regions.

Migration of Testis.—Hardly a year passes without some observer essaying to explain that curious phenomenon—the transition of the testis, and Messrs. Debierre and Pravasz may claim that their paper on the subject ("Contribution à l'étude du Muscle crémaster du Gubernaculum testis et de la migration testiculaire," *Lyon Médicale*, 1886, Nos. 21, 22 and 23.), places it upon a better footing. They recognise that the internal cremaster is an upward prolongation of the gubernaculum, but in this observation they have been forestalled by Mr. Lockwood, who also treats of this subject in his paper on Infantile and Encysted Hernia (*Transactions of the Royal Medical and Chirurgical Society*, vol. lxix.). Moreover, the last-named author attributes an important pathological function to these fibres, and considers them competent to cause a migration of the cæcum or the production of the sac of an infantile hernia. Also in connection with the anatomy of the genito-urinary tract we may notice Mr. Bland Sutton's careful paper on "The Origin of Certain Cysts" (*Journal of Anat. and Phys.*, 1886, p. 432), in which he makes interesting observations upon the relation of the mesonephron to the ovary; and also upon the ultimate fate of the Wolffian duct in the female.

Pineal and Pituitary Bodies.—Not long ago the anatomical world was interested by the announcement that the pineal body was a rudiment of a long-lost eye, and recently Mr. W. Baldwin Spencer has published his monograph on "The Presence and Structure of the Pineal Eye in Lacertilia" (*Quarterly Journal of Microscopical Science*, October, 1886, p. 165). The writer attributes to de Graaf the merit of having clearly shown that in one particular animal the pineal gland actually is modified into a structure comparable to an invertebrate eye. Mr. Spencer, however, carries the observations much further, and shows that in many lizards this invertebrate eye possesses a cornea, lens, and retina of unanticipated perfection. The paper is one with which every anatomist should hasten to make himself acquainted. Whilst the epiphysis cerebri has been so well observed, the hypophysis has not been neglected. An exhaustive paper in the *Archiv für Micros. Anatomie*, 1886, p. 257, "Untersuchungen an der Hypophyse einiger Säugethiere und der Menschen," deals with its histology in the horse, cat, dog, rabbit, pig, and man.

Comparative Embryology.—Our space does not permit us to mention a tithe of what has been done in the field of comparative embryology, but perhaps we may notice Flemming's attempt to show that in the rabbit the Wolffian duct originates from epiblast ("Die Ektoblastische Anlage des Urogenital Systems beim Kaninchen," *Arch. für Anatomie und Phys.*, 1886, p. 236). Such an observation as this would, if clearly proved, reconcile many discrepancies; but it is so out of accord with what occurs in other vertebrates that, without doubt, even after Speer's paper showing a like origin in the dolphin, more evidence will be demanded upon this point before its acceptance. We may also refer to a useful paper by Heufe upon the development of the mole (*Quarterly Journal of Microscopical Science*, vol. xxvii, pt. 2, p. 140). We have already noticed in our columns the third instalment of His's great work upon Human Development; and, although it appeared towards the end of 1885, its importance is so great that it will not be out of place to mention it again (*Anatomie Menschliche Embryonen*, pt. iii; *Zur Geschichte der Organe*, Leipzig, 1885).

Abnormalities.—As usual, the various abnormalities met with have been recorded, and Wenzel Greuber (*Beobachtungen aus der Menschlichen und Vergleichenden Anatomie*, Berlin, 1886) continues his exhaustive records of anomalies. Moreover, the Guy's demonstrators have given a brief record of various rare deviations met with in the dissecting room of that institution. ("Abnormalities Observed in the Dissecting Room of Guy's Hospital during 1880 and 1884." Hale White, Arbuthnot Lane, and J. A. P. Price. *Guy's Hospital Reports*, 1886.) Although the labours which we have briefly mentioned are but a portion of what has been achieved during the anatomical year, they show, nevertheless, that steady and continuous progress is being made in this important branch of knowledge, and it may be claimed that the year compares favourably with any that has gone before.

PHYSIOLOGY.

Histology.—Protoplasm, Nerve and Muscle.—Special Senses.—Brain.—Spinal Cord and Reflexes.—Peripheral Nerves: Visceral Nerves.—Digestion and Nutrition.—Glandular System.

DURING the past year, numerous papers have been published on physiological subjects; those which are most important, and have a practical bearing on medical science, will be noticed here:—

Histology.—Of the researches on histological subjects published during the last year, many dealt almost exclusively with comparative histology; and though this direction of research is likely to consolidate and increase our knowledge concerning the tissue-elements of human structures, space does not allow of any discussion here of the results obtained. Flemming has described the formation of karyokinetic figures in the ovaries of mammals during the loss of the Graafian follicles. In thin sections of ovary, hardened in a mixture of chromic, osmic and acetic acids, and stained with sapranin or gentianin, the chromatin of the nucleus was found in the form of irregular or round bodies, while the nucleus itself was more or less disintegrated. There was altered chromatin in the liquor folliculi. Osmic acid preparations showed fatty degeneration of the cell substance. Flemming explains these signs by a disappearance of the follicle through so-called atresia, and designates the process as chromatolysis. He did not notice any wandering of leucocytes through the follicular sheath, as has been stated by some authors. The degenerated follicles showed many karyo-kinetic figures, while none were found in normal ripe follicles. Ehrlich has made some interesting observations as to the action of methylene-blue, which may possibly have an im-

portant bearing on future experimental researches on the nervous system. He has found that, when methylene-blue is injected into the circulation of the living rabbit, it stains all sensory fibres, the nerve-endings of taste and smell and the nerves of involuntary muscle and of the heart, while the motor nerve-endings of voluntary muscle, with few exceptions, are uncoloured. In the central nervous system were stained relatively large bundles, especially abundant in all the nerve-nuclei of the medulla oblongata, much fewer in number in the cerebrum; and a thick band of the finest varicose nerve-fibrillæ attached to the ganglion-cells (cortex cerebri). The colouring, Ehrlich thinks, is probably due to the sulphur contained in the methylene-blue, since dimethyl-phenyl-green, which differs from it only in not containing sulphur, has not the staining re-action of methylene-blue. He thinks, moreover, that only those nerve-endings which are saturated with oxygen become coloured, and that these must have an alkaline reaction. If these conclusions are confirmed by subsequent researches, much light will be thrown on the intimate changes occurring in nervous elements. De Graaf has made an extremely interesting research into the development of the pineal gland in amphibians and reptiles. He finds degrees of development in various genera, which taken as a series, show that the pineal gland is the remains of a once functional eye. Thus, during development, a portion of the gland is constricted off, and appears through an opening in the parietal bones, as what de Graaf calls the "corpus epitheliale." This body is united with its place of origin by a connective-tissue pedicle, which in an early stage contained a bundle of nerve fibres. The clue to the morphology of the pineal gland is found in the blind worm, in which the corpus epitheliale has a structure resembling the eye of one of the higher invertebrate animals, for example, a cephalopod: since its sheath contains long cylindrical cells like retinal rods, and pigment granules, while there is an embryonic lens and a vitreous space filled with protoplasmic tissue. These results are of interest in connection with the discovery by Baldwin Spencer (of Oxford) of a third, median, eye in some lizards, such as hatteria punctata (one of the lowest of the lizard tribe), the iguana, the chameleon, and lacerta ocellata. Moreover, in some extinct animals, the labyrinthodonts of the carboniferous period and fossil saurians, there is a parietal foramen, which would suggest the place of exit of a nerve going to a median eye, such as exists in the living hatteria.

Protoplasm, Nerve and Muscle.—Hermann has shown that during the passage of a galvanic current through water in which small animals (tadpoles, etc.) are swimming, they all become quiet, with their cephalic extremity towards the positive pole: at the opening and closing of the current they become restless. Romanes has tested the action of high pressure on the excitability of muscular tissue and of the heart: up to 150 atmospheres he found no effect produced, the heart of the frog going on pulsating and the muscle contracting to as small a stimulus as before subjection to high pressure. At a still higher pressure, another observer found that the irritability of muscular tissue was not altered, though the protoplasm ultimately died from the absorption of water.

Photography has found an interesting application in the registering of rapid movements of parts of the body, such as those of the pupil and of the vocal cords; it has also been applied to the determination of the velocity of the blood. The experiments were made in Tarchanow's laboratory in Kasan.

Special Senses.—Goldscheider has continued his researches into the distribution of sensory areas in the skin, and has during the year published the results as regards warm and cold sensory nerves. He finds that there are definite points in the skin, by stimulation of which the sensation of cold or warm may be produced. The sensation obtained by stimulating a "cold-point" is momentary and sharp; when a "warm-point" is excited, the sensation is accrescent and more diffuse. It is interesting to find that the temperature-points of sensation give no sensation of pain by mechanical or thermal stimulation. Temperature-points range themselves in chains and lines to one another, radiating from definite points, which might be called "radiating-points" or "centres of temperature-points." The chains of the cold-points are not the same as those of the warm-points, though the radiating-points are the same. For the localisation of these points, and for the numerous interesting experiments performed by the author, the original must be consulted.

Gradenigo, jun., has made some interesting experiments on the retina. He confirms the observations of Engelmann and of Angelucci, that the action of light on the cones and rods of the frog's retina is to cause the inner limbs of the former and the outer limbs of the latter to become shorter and thicker; and states that warmth produces exactly similar changes. The retinæ were fixed with nitric acid (3½ per cent.) and stained with logwood, and then examined microscopically as to the size of the rods and cones. Before the shortening of these elements, the pigment-granules began to spread between the rods; and the order of change afterwards was: shortening of the cones and outer limbs of the rods, then of the inner limbs; and, lastly, the nuclei became longer and more oval. For testing the action of warmth, the eye of a frog was excised under red light, and then was exposed to a temperature of 30° to 36° C.

Adduco and Mosso have made some experiments on the sense of taste, which are interesting from a physiological point of view. They found that ice diminished the sense to all kinds of taste—bitter, sweet, acid, and salt. Cucaine, however, removed only the taste for bitters, and that rapidly; while caffeine and morphine removed this taste more slowly, acting by exhaustion and not by paralysis, as cucaine does. It was found also that a 2 per cent. solution of sulphuric acid for 15 to 20 minutes, followed by distilled water, caused a sweet taste; and that quinine caused a sweet taste at the tip, and a bitter one at the back of the tongue.

In a case where, by the spread of disease from purulent inflammation of the middle ear, the upper part of the cochlea (one-and-a-half turn) was destroyed, Stepanow found that the perception of low tones was not lost; in fact, no tone-defect could be ascertained by examination, nor was there any loss of appreciation of whispering.

Brain.—Last year Ott and Richet had, independently, published experiments relating to the existence of a heat-centre in the brain, by irritation of which a rise of body-temperature was produced. Aronsohn and Sachs have made further experiments, with the result of more exactly localising the excitable region. These experiments were performed on rabbits, dogs, and guinea-pigs, and consisted in puncturing the brain, with antiseptic precautions, through a trephine opening in the angle between the coronal and frontal sutures, one millimètre from the longitudinal sinus. The needle, passing perpendicularly to the surface, traversed the cortex, the white substance of the fore-brain, the middle of the side of the caput corporis striati (near the nodus cursorius of Nothnagel), and the basal medullary layer and cortex. The puncture is effective only if it pierces the region of the corpus striatum mentioned, and the basal medullary layer and cortex. Puncture of parts in front and behind this region are without result. If the basal medullary layer and cortex be pierced, the maximum temperature is reached in two to seven hours; if the region of the caput corporis striati, the temperature rises more gradually, and does not reach its maximum before twenty-four, thirty, fifty, or even seventy hours. The rise of temperature is always febrile, and is accompanied by increase of respiratory movements and of frequency of the pulse. Some days after the injury, temperature, respiration, and pulse become normal, but a fresh puncture will cause the same phenomena to appear as at first. These results are extremely important in regard to the pathology of fever, and show, as the authors state, that a high temperature can be "purely nervous," without the agency of any modified waste-product of metabolism, or that of parasitic organisms being added.

Bechterew and Misslawsky have investigated the influence of the cortex of the cerebrum on the blood-pressure, and the activity of the heart; and Stricker has worked at the same subject. The former observers found that in a curarised dog there was a rise of blood pressure on stimulating, with a weak faradic current, all the part of the sigmoid gyrus lying behind the cruciate sulcus, the portions of the first and second primary convolutions touching this part of the gyrus, and the median part of the anterior division of the sigmoid gyrus, while a fall of blood-pressure followed stimulation of portions of the second and third primary convolutions, and of the part of the fourth adjoining the Sylvian fossa. The rise or fall of blood-pressure is preceded by a latent period. By excitation of the motor region, quickening of the pulse was observed. Stricker found a rise of blood-pressure on stimulating the cortical motor region, with or without a latent period of some seconds, and preceded by a fall when there was a latent period; a similar result was obtained by exciting the front portion of the corpus striatum, while excitation of the optic thalamus was without result. The rise of pressure was unaccompanied by a slowing of the pulse. Marchi has experimented on the results of extirpation of the cerebellum in dogs and monkeys, and has found that total extirpation caused diffuse sclerosis, especially of the grey substance of the pons Varolii lying round the pyramids, and that of the lower olivary bodies; of the peduncles of the cerebellum, and implicating Flechsig's direct cerebellar tract. The extirpation of one lateral lobe caused the same parts to be degenerated, but chiefly on the same side as the lesion: it was found, also, that the degenerated fibres of the superior cerebellar peduncle do not completely decussate with those of the opposite side. Extirpation of the middle lobe caused bilateral degeneration of definite bundles. Though no affection of nerve-nuclei could be

found, yet there was degeneration of the nerve-fibres in several cranial nerves, and in the anterior roots of the spinal nerves.

Spinal Cord and Reflexes.—Wassilieff has shown that the application of a gentle stimulation to the dorsum of the tongue causes it to assume a spoon-shape, from the middle to the root. Stimulation of the hard palate also causes the reflex action, which is supposed to be useful in the formation of the bolus. The faradic current is active in eliciting this reflex, whilst the constant current and thermal and chemical stimuli are inactive. De Watteville has shown that in healthy persons there is a "jaw-reflex," of similar character to that described by Beevor in certain forms of nervous disease.

Schiff had stated that, about four days after division of the posterior columns in dogs, excitation of the cortical motor region produced no muscular contraction, and explained the result by supposing an ascending degeneration to the cortical centres. Horsley, however, has repeated the experiments, and finds that, some days after division of the posterior columns in dogs, excitation of the cortex does produce movements; and, from microscopical examination, it was seen that the degeneration in the cord was only local, spreading one or two millimètres on each side of the point of section. In some cases there was very slight degeneration, so that no tactile anæsthesia was produced.

Experiments showing the influence of the cortex of the brain on blood-pressure in the dog have already been mentioned. Smirnow has investigated the vaso-motor centres in the spinal cord, continuing a line of research which has been diligently followed by many observers of late years. He confirms Laffont in stating that, in the rabbit, vaso-dilator nerves leave the cord between the first and third dorsal vertebræ; so that, if these nerves be divided, no dilatation of vessels ensues on stimulating the depressor nerve. By tying all the arteries going to the brain in the dog, and dividing the spinal cord at certain levels, the influence of the medullary vaso-motor centre could be removed. It was found that, when the section of the cord was made at the level of the third dorsal vertebra, stimulation of the brachial nerve caused a fall of blood-pressure, with slowing of the pulse, uninfluenced by section of the vagi or Ansæ Vieussenii. After section above the first dorsal, there was no fall of pressure on stimulating the brachial nerve; and after section below the sixth dorsal vertebra, there was but slight fall in the same stimulation, and no rise at all on stimulating the sciatic nerve. The results show that from the cord at the level of the first three dorsal vertebræ vaso-dilator nerves take their exit; and at the level of the third vertebra, vaso-constrictor fibres. The author considers the cord as a system of centres of vaso-dilator and vaso-constrictor nerves, arranged in a series.

Kowalewsky has performed some extremely interesting experiments on the nervous mechanism connected with dilatation of the pupil. His conclusions are, that there is an automatic intracranial centre for dilatation of the pupil (in cats), from which bundles of nerve-fibres pass down each lateral column of the cervical cord, and then through the cervical sympathetic to each eye; so that each eye receives fibres from both lateral columns. There is a similar intracranial centre and channel in the cord for the movements of the nictitating membrane, for protrusion of the bulb, and for widening of the space between the lids. The so-called cilio-spinal centre of Budge in the lower cervical cord is not automatic. Lastly, the channels by which excitation of the sciatic nerve acts reflexly on the pupil passes upwards along both lateral columns.

Peripheral Nerves: Visceral Nerves.—Vulpian has performed some experiments to determine the central origin of the glandular and vaso-dilator nerve-fibres of the chorda tympani and the glosso-pharyngeal. In curarised dogs under artificial respiration the nerves were stimulated in their course between their exit from the central nervous system and their passage through the base of the skull. It was found that stimulation of the trigeminus caused no secretion from the salivary glands or dilatation of the vessels of the mucous membrane of the tongue. Stimulation of the facial caused a flow of saliva from Wharton's duct, and with a strong stimulation, there was reddening of the anterior two-thirds of the mucous membrane of the tongue. With stimulation of the glosso-pharyngeal, the parotid gland secretes, and there is dilatation of the vessels of the mucous membrane of the tongue behind the crescent of the circumvallate papillæ. Vulpian concludes that in the chorda tympani the fibres of taste and the vaso-dilator for the anterior two-thirds of the tongue, and those of secretion for the submaxillary and sublingual glands, all come from the facial and depend for their nutrition on the ganglion geniculatum; while the fibres for the parotid gland and the vaso-dilators for the posterior third of the tongue come direct from the central nervous system with the glosso-pharyngeal, and do not enter the nerve by later anastomoses as has been thought by some. The most important research in this region of physiology published during the past year is that of Gaskell on visceral nerves; a research which marks an epoch in the study of the influence of the nervous system on excitable tissues. Gaskell shows that in the dog, visceral nerves leave the spinal cord in definite cervical, thoracic, and sacral regions; and may be recognised in the anterior roots of the spinal nerves as the smallest medullated fibres (about one-seventh the size of the largest). He considers that vaso-motor fibres leave the cord only in the thoracic region and enter the chain of sympathetic ganglia, which might more correctly be termed the chain of vaso-motor ganglia. For fuller details of the anatomy, the original must be consulted. From his experiments Gaskell has formulated a theory which he considers is of general application to the action of the nervous system on the heart, on vessels, on the movements of hollow viscera, and on the glandular structures. At the present time the theory applies chiefly to involuntary muscular tissue. The theory is this: All involuntary muscle-fibre is supplied by two sets of nerves, one of which (katabolic) increases tissue-change which accompanies functional activity, the other of which (anabolic) diminishes tissue-change and may be considered as constructive. Thus in the heart, the vagus fibres which cause inhibition of the heart would be anabolic, and the sympathetic fibres, which augment the beat, would be katabolic. The same mode of reasoning applies to the nerves of the blood-vessels and hollow viscera. It will be noticed that in this theory the nerves are supposed to retain their separate functions (whether of katabolism or of anabolism) right up to their termination in the tissue, and thus the supposition of the existence of peripheal centres in the heart, vessels, etc., is unnecessary. How far the theory will hold good for all the structures mentioned remains yet to be seen.

Digestion and Nutrition.—Ellenberger and Hofmeister have investigated the gastric juice of the pig, and the histology of the stomach. The left half (primary cardiac sac) of the glandular part of the mucous membrane contains short thick gland-tubes, with many surrounding lymph-follicles. In the right half, the fundus-gland region, the lumen of the glands is bordered by chief cells (hauptzellen), while the parietal cells (belagzellen) are in groups. The pyloric division of the stomach is rich in villi, but contains no parietal cells in the glands. The authors confirm for the pig, what is now generally accepted for carnivora, namely, that the parietal cells are acid-formers, while the chief cells are pepsin-formers. The cardiac sac produces no rennet ferment. Lewaschew has shown that in fasting dogs, the ferment-substance of the pancreas (trypsin) can disappear from the gland, while the zymogen-granules remain as thick as ever in the cells. This observation modifies Heidenhain's original view that the zymogen-granules were the ferment-formers; they can now only be considered ferment-carriers. This opinion is accepted by Heidenhain, in whose laboratory the work was done. Hanau has made some interesting observations on the quantity secreted by an isolated portion of intestine, the nerves of which have been divided. The animals (dogs) fasted twenty-four to thirty-six hours, and were fed four hours before the operation. The amount of secretion was found to equal $\frac{1}{30}$ to $\frac{1}{12}$ of the body-weight, or $\frac{2}{3}$ weight of the blood. The fluid secreted was at first clear, and then became turbid with clear epithelial-shreds. The secretion, like that from an intestine with intact nervous supply, had no digestive action or proteids. *Post mortem*, the portion of intestine was found dilated, lax like the intestine in an early stage of cholera. Some important experiments have been made on the movements of the stomach by Hofmeister and Schütz, and on those of the intestine by Cash; and the results obtained are likely to prove of great service. Hofmeister and Schütz investigated the automatic movements of the stomach of the dog by tying both ends, excising, and then suspending it in a warm chamber, in which the movements could be observed. The living stomach was found to be sharply divided into two parts, the larger one the cardia, the smaller the antrum pylori. In an empty stomach, a peristaltic wave begins at the cardia, and increases gradually as it extends along the great curvature. Then ensues the pre-antral contraction, which is a narrowing of the diameter of the stomach as the peristaltic wave reaches the margin of the antrum pylori. The peristaltic wave and the pre-antral contraction are together called the first phase of the "peristole." Following this first phase is the contraction of the antrum pylori, not peristaltically, but together, after which the pyloric sphincter itself contracts. The use of the contraction of the antrum is to drive the contents of the stomach into the duodenum; but if there are large solid particles in the liquid contents, instead of passing through the pylorus, there is an anti-peristaltic wave produced which drives the food back towards the cardia. Schütz has applied this method of research to the investigation of poisons in the stomach, and has obtained interesting results. Cash's experiments are also very im-

portant. A Vella's fistula was made in dogs, that is, a loop of intestine completely isolated, and with both openings stitched to the abdominal wall. By means of small bodies, to which a string attached to a lever was tied, a record could be obtained of the rapidity of peristaltic action. It was found, that during hunger there were periods of complete quiescence of the intestines; that after food regular peristaltic movements set in, and fell to a minimum in four to five hours. The act of swallowing, mental impressions, exercise and mechanical irritation of the fistula, all tended to excite peristalsis. Hofmeister, who had previously adduced experiments to show that peptones were absorbed by means of the lymph-cells in the mucous membrane, has extended his researches into a careful examination of the lymphatic plexuses in the gastro-intestinal mucous membrane. Important experiments have been published by Von Schroeder on the formation of urea in the liver. He had previously shown (and was confirmed by Salomon) that during the passage of ammonium carbonate and of the ammonium salts of easily oxydised organic acids through the portal system of an excised liver, there was a transformation into urea. He has now performed experiments on living dogs which showed that excision of the liver and kidneys stopped this transformation, whereas excision of the kidneys alone was powerless to do so. Also if the right kidney be excised, and the hepatic and the left renal arteries tied, and the portal vein united with the left renal vein by a glass tube, so that all the blood from the intestines passes through the kidney, it is found that the injection of ammonium salts does not lead to the formation of urea. It is concluded that this change occurs in the liver, and it is interesting that in an animal with an excised liver ammonium salts act as much more powerful poisons than in the normal animal. Side by side with these conclusions the experiments of Minskowski are important. After extirpation of the liver or ligature of the hepatic vessels in geese, he found that diuresis was produced, but that the amount of uric acid was diminished to $\frac{1}{10}$ to $\frac{1}{20}$ that of normal, while a large quantity of ammonia was excreted, five or six more times more than normal. He concludes that in geese ammonia is the precursor of uric acid, and that the transformation takes place in the liver; further, since urea subcutaneously injected appeared as urea in the urine, the transformation into uric acid which normally occurs in birds must take place in the liver. Other interesting facts were observed. There was no leucin or tyrosin in the urine, and sugar given to the animal caused the appearance of sugar in the urine. Sarcolactic acid was present. There is no doubt, from these series of observations, of the formation of uric acid by the liver in birds. Eröss has investigated the temperature in the rectum of 100 children, from birth and up to eight days of extra-uterine life. The average temperature at birth is 37.6° C. (99.7°Fahr.); it is lowered 1.7° C. during the first two hours, the average temperature during the first day being 36.47° C. (97.7° Fahr.). On the second day the average temperature is 37.18° C. (99° Fahr.), and on the eighth day, 37.16° C. (nearly 99° Fahr.). The rise on the second day is considered to be due to increased tissue-change; it is accompanied by loss of weight.

Glandular System.—Rogowitsch has experimented in Tschirjew's laboratory (Kiew) on the results of extirpation of the thyroid gland in dogs. He confirms Schiff and others as to the rapidly fatal result of the operation, ascribing it to "encephalo-myelitis parenchymatosa subacuta." The animals become apathetic, then have shivering and convulsive attacks, while there is difficulty of breathing and diminution of cutaneous sensibility. In animals that live three to four weeks there is cachexia and general paralysis. The changes found *post mortem* are engorgement of the vessels of the nervous tissue, with infiltration of the sub-adventitia with round cells. There is round-celled infiltration of the nerve-tissue itself, and swelling of the axis-cylinder and of the nerve-cells, which lose their contour and finally disappear. The grey substance is chiefly affected. The hypophysis cerebri is gorged with blood and the cells are in a state of colloid degeneration. There is no great diminution in the number of red corpuscles in the blood. An important fact is that when only one lateral lobe of the thyroid is excised the remaining portion of the gland undergoes hypertrophy after a time, with proliferation of epithelial cells and the formation of alveoli.

MEDICAL CHEMISTRY.

General Nutrition.—Proteids.—Digestion: Juices, Absorption, etc.—Blood.—Tissues and Organs.—Urine.

In our brief notes of the more important advances made in physiological and pathological chemistry since our last report, we shall follow more or less closely the order there adopted, and in doing so we may reiterate the remark then made of the impossibility of doing anything like justice to the subject in the space at our command—a remark, we may say, that applies even more strongly to this than to last year's work.

General Nutrition.—In a paper on the effects of minute quantities of inorganic salts on organic structures, Dr. Ringer states that lime lessens the amount of fluid that algin (a substance obtained from some of the commoner species of marine algæ) can imbibe, probably by combining with it. And while the effect of lime is to lessen the swelling of this vegetable-tissue compound, it likewise exercises a somewhat similar influence on certain animal products. His experiments with muscle make it appear that lime and potash salts are as necessary to the metabolism of muscle at rest as during activity. Active contractions are to be noticed in muscles placed in saline solutions, and when these cease, contractility still persists, and may readily be excited by the addition of substances like boric chloride.

North has continued his valuable series of researches upon the influence of bodily labour on the discharge of nitrogen. His results confirm those of Parkes, but he states that the disturbance produced by very severe labour is more immediate and more intense than was observed by Parkes. Retention of nitrogen followed the diminution of the nitrogen stored in the body produced by privation of nitrogenous food; and when, as the result of severe labour, the nitrogenous store was diminished, a corresponding diminution occurred in its discharge. This store of nitrogen is more constantly operative than is generally supposed. No increased phosphatic excretion ensued unless the work was very severe, the discharge of sulphates remaining proportional to that of the nitrogenous material.

It has been proved that part of the fat deposited in the bodies of pigs and geese is formed from the hydrocarbons of the food. Max Rubner's recent experiments appear to prove that the same holds good of the carnivora.

Proteids.—Schützenberger's researches lead him to regard albumen as formed by the union of one molecule of leucin with one molecule each of leucin, amido-valeric acid, and oxalic acid, and two molecules of ammonia, water being eliminated.

A characteristic new albumen reaction is described. If to one gram of albumen solution containing one part per million and a drop of formic acid, one drop of a solution of chloride of gold is added, a rose-red colour is obtained, with two drops a clear red, and with a third drop a blue colour.

Flour kept in sacks for some time shows traces of alkaloids, which gradually increase in quantity. When 12 to 18 months old, it yields sensible amounts, and the extract administered to sparrows kills them after a few hours, fresh flour giving no such results.

Mucin is soluble in dilute alkalies, precipitable therefrom by acetic acid, and when treated with dilute sulphuric acid yields a reducing substance, which Loebisch holds to be a carbo-hydrate, and the mucin itself a glucoside. Boiling renders the mucin no longer precipitable by acetic acid. Unlike the mucin from saliva and snail, tendon-mucin is not changed into coagulated proteid by boiling or by remaining under alcohol. The amount of mucin may be estimated not only by weighing the dried acetic acid precipitate, but likewise by the diminished alkalinity of the alkaline solution used to dissolve it, mucin itself possessing an acid reaction.

From experiments with cobra venom, Wolfenden concludes that its toxicity is not due to bacilli, alkaloids, or the hypothetical cobric acid, but that it depends solely on the proteid constituents present. These are globulin and an acid albumin, both of which probably kill by interfering with the respiratory mechanism; also a serum-albumin, likewise toxic, by producing a kind of ascending paralysis. In dubois poison the same proteids are present.

The power of the venom in all these snakes appears, then, to reside in the proteids, which certainly seems remarkable; for why should they, in these cases, be so strongly poisonous? The proteid molecule, however, is still but little understood, and accordingly it is not unreasonable, as the author suggests, that in some cases its arrangement may produce a poisonous body. In peptone itself we have an example of a toxic proteid, since injections of this body into the circulation have been shown by Schmidt-Mulheim to reduce the blood-pressure rapidly and remarkably. And some viper poisons appear to do the same. Indeed, there seems no antecedent improbability in the supposition that a rearrangement of the albumen molecule, without altering its ultimate composition, and without depriving it of its typical class characters, should make it poisonous. The truth is, our knowledge of the proteids is still but fragmentary.

Meat peptones owe much of their value to the large amount of extractives and salts they contain. Kuhne has recently shown that commercial peptones consist largely of albumoses; while clinical experience tends to prove Kemmerich's peptone to be more nourishing than Koch's; and, according to Pollitzer, peptone and hemi-albumose

appear to have the same nutritive value as it is. As to the physiological action of peptones and albumoses, Pollitzer has contributed some rather startling facts. Pure solutions of these bodies were employed containing 5 per cent. of the proteid and ½ per cent. sodic carbonate, which were injected into the external jugular and femoral veins of dogs at a temperature of 40° C. The results of the experiments were these: (1) All of them employed, with the exception of anti-peptone, exercised a strong narcotic action, a stage of excitement followed by manifestations of pain and distress being succeeded by narcosis, resembling that produced by chloroform. There was no motor paralysis, and the reflexes were unaffected. (2) The coagulation of the blood was either delayed or entirely prevented. It had already been found by Schmidt Mulheim, when he caused blood to flow into a vessel containing an equal portion of blood from another dog into whose veins an injection of peptone had been made, that the coagulation of the whole was prevented. Pollitzer corroborates him in this; but, on the other hand, he obtained coagulation when the blood was allowed to flow into ½ per cent. solutions of sodic carbonate containing one-fifth gramme of the different proteids. (3) Immediately after the injection the blood-pressure sank to a degree which would have been fatal to the animal, had it continued at its lowest point for a considerable period. This fall in pressure was due to vaso-motor paralysis, the splanchnic region being that chiefly affected. While a sufficiently large dose of any of the albumoses (a little more than ·3 gramme per kilo.) was inevitably fatal, peptone never produced this result so long as the kidneys were intact.

To obtain pure peptone, Kühne and Chittenden saturate artificial gastric juice with ammonic sulphate (which precipitates all the proteids, with the exception of peptones), by which means mucin and pepsin are thrown down; the pepsin is then dissolved up with dilute hydrochloric acid, and this solution they use as the digestive fluid. The pure peptone obtained by its means behaves with water like phosphoric anhydride, hissing, and evolving heat; it forms a brown, watery solution, has a cheesy but not unpleasant taste, and is precipitable by tannic, phosphotungstic, and picric acids.

Digestion: Juices, Absorption, etc.—Goldschmidt states that an active ferment is not pre-formed in the salivary glands, and that not only is sugar formed by the action of saliva, but also a certain amount of fatty acids, especially lactic.

According to Sundberg, a saturated solution of sodium chloride is the most advantageous means for obtaining pepsin from the mucous membrane of the stomach, free from proteids. The stomach, with the exception of the pyloric end, is rubbed up with a weighed quantity of the salt, and enough water is added to obtain a saturated solution. The whole is filtered after two or three hours, and the chloride removed by dialysis into acidulated water. To obtain the pepsin in a very pure state, it is precipitated from the acid solution by a mixture of calcic chloride and sodic phosphate; the precipitate collected, well washed, decomposed with hydrochloric acid, and then dialysed. In this way a very active pure pepsin is obtained, which is not precipitated by tannin, mercuric chloride, or the neutral or basic acetates of lead, all of which throw down Brücke's pepsin. The only reagent that acts as a precipitant of the new pepsin is absolute alcohol.

Schumberg corroborates previous investigations indicating the presence of a special milk-ferment in human gastric juice, whose activity is suppressed by sodic carbonate, but increased by hydrochloric acid. The diastatic action of this juice is ascribed by Hofmeister to the imbibition of the swallowed saliva by the gastric mucous membrane, in which it can be detected in the pyloric region. Ewald and Boas have detected the constant presence of lactic acid in the human stomach, as well on a meat as on a vegetable diet. It was only wanting when pure albumen alone was ingested. But, while they regard this acid as normally present, they ascribe it to an habitual but non-pathological fermentation.

Under Grützner's direction, Podwyssozki has found that pepsin is met with in the gastric mucous membrane under three forms: ordinary pepsin, soluble in glycerine and hydrochloric acid; propepsin, soluble in the same reagents, but without direct action on proteids, readily changed, however, into ordinary pepsin by the action of hydrochloric acid; and another variety of propepsin, insoluble in glycerin, but soluble in hydrochloric acid, and equally transformed thereby into ordinary pepsin. The amount of pepsin and propepsin is considerably augmented by allowing the mucous membrane to be exposed to the air for twenty-four hours. Change of the propepsin into pepsin occurs, and new quantities of propepsin seem to be formed. The most active extract, indeed, is prepared by exposing the stomach to the air for twenty-four hours (using camphor or salicylic acid as an antiseptic), and then treating the mucous membrane with hydrochloric acid (1/10 per cent.).

When a diet containing no chlorides, as powdered meat thoroughly washed with distilled water, is given to an animal, the chlorides disappear from the urine, and hydrochloric acid is absent from the gastric juice, although the formation of pepsin continues. But when carbo-hydrates are supplied with the washed meat, lactic acid is formed, and so peptonisation occurs.

Chandelon has shown that peroxide of hydrogen possesses the power of transforming albumen into peptones. The activity of trypsin he attributes to the oxygen generated. Now, according to Podolinsky, a solution of pepsin loses its digestive power when it is submitted to beer yeast, that is, when its oxygen is removed; and the pepsin thus rendered inactive has not its activity restored by the action of oxygen, although pepsin rendered inactive by carbonate of soda recovers its activity under the influence of a hydric peroxide solution but not by the action of oxygen alone.

A subcutaneous injection of pilocarpin increases the salivary and pancreatic secretions. In animals who have been starved for twenty-four hours, the yield of trypsin was abundant, but if starved for a longer period no trypsin was obtained, and yet here the so-called zymogen granules were found in abundance in the cells of the pancreas. These granules would therefore appear not to be zymogen themselves, but only carriers of it (Heidenhain, etc.).

Some recent work by Wenz throws considerable doubt on the power of intestinal juice to peptonise albumen. The intestinal mucous membrane was subjected to prolonged washing with various agents, thymol being used to prevent putrefaction. The experiments were made with loops of dogs' intestines after Thiry's plan, and the method adopted to detect the peptones was to shake the fluid with ammonic sulphate in excess, and test the filtrate for peptone by the biuret reaction.

It has already been maintained by Hofmeister that the absorption of peptones in the intestine is not a purely mechanical phenomenon of diffusion or filtration, but that it represents a function devolving on the leucocytes, which play, in relation to the assimilation of proteids, a part analogous to that performed by the red corpuscles in the respiratory function. He further maintains that the peptone is not in a free state in the blood, but is combined with the cells, by whose instrumentality it is carried to the places where it is assimilated; and that these leucocytes have their origin in the adenoid tissue of the intestine, particularly in Peyer's patches, the richness in young cells being directly proportional to the nutritive activity. The peptone, Hofmeister believes, combines with the nuclear substance of the cells; for he finds that it is possible to transform, in a very simple manner, peptone and hemi-albumose into a substance closely related to the nuclein group. The assimilation of the peptones and their transport to the elements of the organs being thus dependent on the lymphatic cells distributed on the deep surface of the mucous membrane, it would necessarily follow that the adenoid tissue ought to be most largely represented at those portions of the intestinal tract, where the absorption of peptones attains its greatest activity; and this Hofmeister has found to be the case.

In the artificial pancreatic digestion of proteids putrefaction readily occurs, indol, skatol, phenol, and oxy-acids being formed; but the presence of small quantities of carbo-hydrates entirely prevents this. In experiments with dogs it was found that, upon a flesh diet, mixed with sugar, starch, or glycerine, the formation of putrefactive products was lessened, although not completely prevented.

Blood.—Halliburton finds that while the proteids of the blood of birds resemble very closely those of mammals, the proteids of the blood-serum of cold-blooded differ from those of warm-blooded animals by their percentage being smaller, by the absolute and relative preponderance of the serum globulin over the serum-albumen, and by their serum-albumen seeming to consist of a single proteid.

According to Ehrlich the stroma of the red corpuscles plays an important part by hindering their dissolution, by preserving the hæmoglobin of a normal oxidation, and by opposing their penetration by different principles contained in the blood. It is the stroma which constitutes the protoplasm or discoplasm of the cell, the hæmoglobin the paraplasm; and by analogy of what passes in other cells we may admit that the hæmoglobin is formed at the expense of the stroma by endogenous production. This would explain the poverty in hæmoglobin of old or dyscrasic corpuscles.

Von Stein prepares blood crystals by defibrinating the animal's blood, or allowing it to coagulate and then expressing the clot. A drop of the serum thus obtained is placed on the slide, and when its borders begin to dry it is surrounded with Canada balsam, and afterwards covered with more of the same. The balsam must not be too liquid, but should have the same refractive index as the glass, and be dissolved in essence of cloves. The decomposition of the corpuscles is hastened by the active ozone in the turpentine.

Nencki and Sieber have succeeded in obtaining reduced hæmoglobin in a crystalline form. Crystallised oxyhæmoglobin of horse's blood is dissolved in water, to which some putrid blood is added, and the whole placed in an atmosphere of hydrogen, and then exposed to a temperature of 25° C. for eight to fourteen days. It is next allowed to cool down and absolute alcohol is introduced to the extent of about 25 per cent., and the mixture left for twelve to twenty-four hours at 5° to 10° C. Crystals of reduced hæmoglobin are deposited on the walls of the vessel in the form of six-sided prisms, which are doubly refractive, give the single absorption band, present a reddish violet tint, and when exposed to the air for some time show the double oxyhæmoglobin band.

MacMunn has demonstrated the presence of hæmatoporphyrin in the integument of certain invertebrates (slugs, etc.) This body possesses a characteristic spectrum in the acid and alkaline conditions respectively; but just as there are several hæmoglobins, so there are many hæmatins and hæmatoporphyrins. There are, in fact, classes of colouring matters presenting bands similar but not always identical in position.

In a series of recent papers Seegen has again taken up the questions as to the presence of reducing substances in the blood insusceptible of fermentation, the influence of alimentation on the quantity of sugar contained in the blood, and the physiological and pathological factors in diabetes. He denies Otto's conclusions, and maintains that the reducing substances in the blood are formed almost exclusively of dextrose; but that to obtain an accordance in the results of fermentation with those of polarisation and reduction, the fermentation must be allowed to continue for several weeks, as the blood-sugar ferments with excessive slowness. Most physiologists admit, with Bernard, that the sugar of the blood is formed in the liver by the transformation of the hepatic glycogen; but Seegen is opposed to this opinion, for, according to him, although sugar is formed in the liver it is not at the expense of the glycogen. To precipitate the albuminous matters of the blood before titrating for the sugar, Seegan recommends the use of acetate of iron. In all his experiments the blood of the hepatic was found to contain more sugar than that of the portal vein. This formation of sugar in the liver is not interrupted by a prolonged fast, but it is increased by a diet rich in carbo-hydrates. Among diabetics some fabricate their sugar at the expense of the proteids of their organism, others at the expense of the feculent material in their food. Seegen questions the existence of a sugar ferment in the liver. The hepatic tissue itself possesses a feeble diastatic power, just like all soluble proteids, egg albumen, and casein. He further maintains that the variations in the amounts of glycogen and sugar in the liver are independent of each other. After death, the sugar continues to be formed; its quantity augments, but the glycogen does not diminish proportionally. The sugar formation is a physiological phenomenon associated with the life of the hepatic cells. Immediately after death the quantity of sugar found in the liver is remarkably constant (0.4 to 0.6 per cent.). While denying the sugar to have its source in the glycogen, he believes it to have it in the peptones, the liver also possessing the power of transforming fat into sugar. In animals fed on peptones the sugar increases greatly; and by placing a piece of liver in a solution of peptone for some time, the quantity of sugar present is found to be 70 per cent. greater than in a similar fragment immersed in water. After many failures Seegen succeeded in establishing a constant diminution of the sugar in the blood as the result of an ablation of the liver.

From the testis and thymus gland Wooldridge has obtained a proteid body the injection of which into the veins of an animal caused instant death from wide-spread intravascular clotting.

As a constant result of a septic febrile condition in dogs, a diminution of the carbonic acid in the arterial blood occurs, lasting during the febrile condition. Minkowski asserts that this is due to a diminished alkalinity of the blood, which he ascribes to an increased production of acid bodies in the febrile state, during which, although the oxidations are more active, the products are different from those formed normally. But the diminution in the carbonic acid is not proportional to the internal temperature in the septic fever, nor is it an immediate consequence thereof, an accelerated respiration and modified nutritive exchanges intervening.

The following test for blood has been highly recommended as being more delicate and certain than Teichmann's. Make a watery extract of the blood stain, add to it a drop of tincture of iodine and a drop or two of acetic acid, and place a drop of the mixture on a glass slide, which is to be repeatedly passed through a flame, eight to ten drops of acetic acid being gradually added. Crystals of iodohæmin will make their appearance with absolute certainty in one to two minutes.

Tissues and Organs.—Nuclein was the name given to a substance found by Miescher in the yolk of egg. Kossel has compared this body with the nuclein of cell nuclei, but finds they are not identical. During development the egg nuclein becomes capable of producing bases rich in nitrogen, such as guanin, hypoxanthin, and adenin.

Zillner concludes that adipocere is formed from the various fats present in the body at the moment of death, and that the albuminoids take no part in this transformation.

The chlorides of rubidium and calcium act upon striated muscle in the same manner as the potassium salt, but the paralysing action is less pronounced, calcium being less active than sodium in this respect. The alkali metals, accordingly, considered in respect to their depressing action on the contractility of striated muscle may be arranged in a descending scale, extending from potassium to lithium; rubidium, calcium, sodium, and ammonium forming the intervening members (Harnach and Dietrich).

In the white substance of the sciatic nerve Chevalier found much lecithin and little cerebrin. This was the percentage obtained: cerebrin, 11.30; lecithin, 22.57; cholesterin, 12.22; albumen, 36.80; neurilemma, &c., 4.04; neurokeratin, 3.07.

Many years ago Schmiedeberg ascribed the arrest of the heart produced by muscarin to its property of exciting the inhibitory ganglia in the heart wall. This view was opposed by many observers, but in an admirable paper Kobert has recently maintained the exactitude of Schmiedeberg's original interpretation, the contrary results of other observers being attributable to the use of impure muscarin.

The differences in the irritability of normal muscle in its different parts are due to irregularities in the distribution of its motor nerves, and as these differences persist after curarisation, it seems certain that curare leaves certain terminal nerve elements in the muscle unaffected. Pollitzer supposes that the curare acts on the nerves at the points where the axis-cylinders are most exposed—that is, at the nodes of Ranvier, and in the first place on that particular node most exposed to the poison-bearing lymph currents—that is, the last; and that it is not the axis-cylinders themselves but the cement substance at the nodes upon which the drug exercises its specific action.

Von Schroeder has already proved that while the muscles and kidneys cannot transform carbonate of ammonia into urea, this power is possessed by the liver. The transformation, he further finds, takes place rapidly, but it will not occur at all if the liver is withdrawn from the circulation. It had been previously demonstrated by Minkowski that in animals deprived of their liver the excretion of uric acid diminishes rapidly, while ammoniacal salts are eliminated in great quantities.

Two methods have hitherto been adopted for the removal of glycogen from liver and muscle: extraction with hot water and with hot potash, the proteids being precipitated by hydrochloric acid and potassio-mercuric iodide, and then the glycogen by alcohol. Külz finds that the potash-extraction method is quicker and more thorough, and causes no loss of glycogen in the process of extraction. When an artificial mixture of glycogen and white of egg is similarly treated, it is found that 12 per cent. of the glycogen is thrown down with the proteid, although no such loss occurs during the similar precipitation of proteid in a potash extract of liver or muscle.

Urine.—The acid reaction of urine is due to the excess of acid over normal phosphates. The ratio of the phosphoric anhydride combined as normal phosphate to that as acid phosphate is the following: evening urine, 91:100; night urine, 56:100; morning urine, 58:100; or for the urine of the twenty-four hours, as 69:100.

Hypobromite solutions do not keep well, and accordingly Lunge has recommended the use of A. Frank's bromum solidificatum. The solution is thus prepared: 400 grammes of caustic soda are dissolved in a litre of water and kept in a stoppered bottle. To 100 cubic centimètres of this solution about 100 grammes of bromine, that is to say, 10 centimètres of the stick of the brom. solid. are added. When the stick is decolorised the solution can be employed.

On the relationship of the formation of urea and uric acid to the secretion of bile some interesting papers by Noel Paton will be found in this year's JOURNAL, to which we must direct the reader. Suffice it here to say that the author establishes a direct relationship between the urea formation and the biliary secretion.

Albuminuria.—The temperature, according to Loewy, exercises a marked influence on the composition of filtered liquids. The quantity of the filtrate increases with the elevation of temperature. He agrees with Senator in regarding the albuminuria occurring in certain febrile conditions as due to the elevation of temperature.

The effect of compression of the thorax has been studied by Schreiber, according to whom a slight temporary albuminuria is the result, its degree being increased with the duration of the compression. Serum albumin and globulin were the albumins met with. Schreiber

concludes that dyspnœa was not the cause of the albuminuria, but that the factors are: the diminution of the difference of pressure normally existing between the alveolar capillaries of the lung and the left ventricle; the diminished calibre of the pulmonary vessels, and the diminished extent of the respiratory excursions. A stasis in the pulmonary circulation is thus produced which is rapidly propagated to the renal capillaries, with consequent filtration of albumen. In young subjects (eleven to fifteen years) a thoracic compression lasting half a minute has sufficed to cause the appearance of albuminuria, of which there were no traces an hour subsequently.

Biliary Urine.—Oliver has proposed the following delicate test for the biliary acids. The solution is prepared thus: peptone in powder, 1.80 grammes; salicylic acid, 0.24 gramme; acetic acid, 60 drops; distilled water, 240 cubic centimètres. One part of urine containing biliary salts in a pathological proportion when added to three parts of this reagent causes the appearance of an opalescence, which disappears on the addition of one or two drops of acetic acid, but not on boiling. The urine should be transparent; if it contains urates in excess it should be warmed; if muddy from phosphates it is to be slightly acidified with citric acid, or filtered; if blood or albumen is present it is to be boiled and then filtered; and it is further advisable to reduce the density of the urine to 1008.

Sugar.—Two delicate tests have been proposed. A solution of hydrochloride of phenylhydrazine, containing sodic acetate, gives a yellow crystalline precipitate. By this test sugar is never found in normal urine. If much albumen is present it should first be separated. A more delicate test still is the following, by means of which sugar can always be detected, even in normal urine. A small quantity of the saccharine solution is mixed with two drops of an alcoholic solution of naphthol or thymol, and an excess of strong sulphuric acid added; a deep coloration is produced, violet with the former and red with the latter. The test is of especial value for microchemical examinations.

Pigments.—The physician's attention should be directed solely to two urinary pigments, urobilin and indican, as the existence of other pigments is doubtful, and their significance equivocal. Cervesata has published some interesting conclusions as to urinary indican, of which we shall briefly summarise the chief. Normal urine contains uro-indican, whose artificial or spontaneous decomposition gives rise to indigo. To detect the indigo blue, it suffices in most cases to employ sulphuric acid and chloroform; but it is always useful to treat the urine previously with basic acetate of lead, particularly when it is scanty, dense, and high-coloured. The sulphuric acid is preferable to the hydrochloric, because the reaction occurs more readily and more markedly, and is less liable to error. Vierordt's spectrometric method is recommended for its determination. In individuals in good health the indigo is found in very small amount, increasing, however, under a meat diet, but to a greater extent if aromatic compounds are administered; fasting, on the other hand, causes its diminution. Its elimination is greatly increased in diseases in which inanition and marked tissue-waste are prominent factors; also in diseases of the abdominal organs, particularly of the intestine; in many nervous affections, in splenic anæmia, renal cirrhosis, diabetes, and chronic lead poisoning. On the other hand, its elimination is very slight in fevers, parenchymatous nephritis, chlorosis, scrofula, advanced phthisis, catarrhal jaundice, hepatic cirrhosis, and ovarian tumours. The variations in its elimination are probably to be attributed to nervous modifications of the pancreatic secretion.

Aromatic Constituents.—Baumann has tried to determine the relationship between the putrid fermentations occurring in the intestine, and the formation of the sulphovinic and oxy-acids. From experiments on a patient with intestinal fistula he was led to conclude that when the putrefaction diminished in the intestine, as after the administration of calomel, the sulphovinic acids diminished equally in the urine.

A concentrated solution of picric acid produces a slight crystalline sediment in normal urine after an hour or two. Jaffe finds this to be partly uric acid and partly a double salt of kreatinin picrate with potassic picrate. It forms, indeed, a delicate test for kreatinin, giving a deep red colour with dilute solutions in the cold.

Alkaloids.—To detect these the reagent employed is thus prepared: iodine, 8; potassic iodide, 10; water, 10. Cool the urine to 0° C., after adding a few drops of the reagent; then concentrate a bright light by mean of a lens on the urine in a test tube placed against a dark background. The green fluorescence is readily seen. It can thus be shown that the proportion of alkaloids in the urine passed during the eight hours after waking is five times as great as in the urine of the rest of the day.

Toxicity.—Bouchard has continued his researches as to the toxicity of normal urine. Man, even in a normal condition, is constantly destroying and excreting poisons either introduced into or formed in the organism, and the urine is one of the chief sources of elimination.

After an intravenous injection of normal urine, there is contraction of the pupils followed by quickened shallow respirations and muscular weakness. The urinary secretion augments and the temperature falls. Death happens generally without convulsions, the animal dying most frequently in a state of coma. The quantity of normal urine necessary to destroy the life of a kilo of living tissue is very variable, oscillating between 10 cubic centimètres and 122 cubic centimètres per kilo, but 45 cubic centimètres may be taken as the mean in an adult. A man requires about two and one-sixth days to fabricate the quantity of urinary poison capable of poisoning himself, a co-efficient, it may be said, which varies little in health, but greatly in disease.

The urine secreted during sleep is less toxic than that of the waking period. The character of the poison eliminated in the two periods also differs greatly, that of the waking period being narcotic in its properties, and that of sleep being convulsive. During the former, therefore, the body produces a substance which, accumulated, will induce sleep; during sleep, on the other hand, it elaborates a convulsive principle, which, when it accumulates, would tend to produce muscular irritation and provoke wakefulness. The variations in the toxicity depend especially on the greater or less intensity of the oxidations; with increased muscular activity, for example, during which more oxygen is consumed, the toxicity is lessened.

Feltz has experimented with febrile urine, and he finds that it is much more toxic in its properties; and, further, that there is no proportional relation between the density of the urine and its toxicity, as is the case with normal urine. There must, therefore, be other toxic agents in febrile, than are to be found in normal urine.

According to Lépine and Aubert the special toxicity of febrile urine seems to be due to its organic rather than its saline constituents, as has been affirmed by some authorities; and, contrary to Bouchard and Pouchet, Villiers finds that normal urine never contains alkaloids, although these were present when the patient was suffering from febrile or inflammatory affections. Rovighi, again, like Feltz and Ritter, concludes from his experiments that uræmia is essentially determined by the salts of potassium, and that the uræmic convulsions are caused by an accumulation in the blood of inorganic salts, and more especially of those of potash.

PATHOLOGY.

Rhinoscleroma. — Tetanus. — Pleuropneumonia. — Glanders. — Pneumonia.—Cholera.—Injection of Micro-organisms into Blood.—Spread of Epidemics.—General Laws of the Infective Process.—Drinking Water.

In the department of bacteriology there are no new and startling discoveries to chronicle. The work which has been done has been rather in the way of studying the characteristics and life-history of the bacteria already known than of discovering new ones. The following is a brief summary of the most important and trustworthy researches.

Rhinoscleroma.—The presence of bacteria in rhinoscleroma was first demonstrated by von Frisch, and has since been confirmed by various observers. Paltauf and von Eiselsberg have succeeded in cultivating these organisms and in studying their characters, and their conclusions may be summed up as follows:—In the tumour-substance well characterised bacteria with capsules were constantly present in six cases examined, and from all these cases pure cultivations of the same species were obtained. No other organisms were found. These bacteria closely resemble Friedlaender's pneumococcus in form, mode of growth, and effect on the lower animals. The authors did not succeed in producing a disease similar to rhinoscleroma in the animals experimented on; nevertheless, they conclude from the facts of the constant presence of the organisms, of their large numbers, and of the absence of other kinds, that they are the cause of the disease. They succeeded in cultivating this bacterium, not only from the tissue of the growth, but from the nasal secretion in one case. They think that the disease is essentially a chronic inflammatory affection, and that it is generally preceded by long continued ozæna, or discharge from the nose, caused by the organisms in question. They do not look on this bacterium as absolutely identical with Friedlaender's pneumococcus; but as very closely allied to it—in fact, a variety of the same species; it is not so virulent as Friedlaender's organism.

Tetanus.—Experiments were published some time ago by Nicolaier, and are still being continued by Flügge, which showed that many specimens of earth contained bacilli which, when introduced beneath the skin of rabbits or mice, set up tetanic symptoms and death. These

bacilli were anaerobes, and spore-bearing, the spore being formed at one end of the rod. They have been grown in blood-serum, and when bits of thread are impregnated with the cultivation, and introduced beneath the skin of rabbits, the tetanic symptoms follow. The usual place selected for inoculation is over one of the thighs; in twenty-four to thirty-six hours the leg on that side is found to be rigid, this condition soon spreads to the leg on other side, and thence to the forelegs, and after this rigidity has lasted for some time the slightest jar or breath of air sends the animal into violent tetanic spasms. Inflammation does not occur at the seat of inoculation, and the bacteria only grow locally, and do not become diffused over the body. Rosenbach, at the meeting of the Surgical Congress last April, mentioned that in a case of tetanus in man, following a wound over the elbow, he had found the same bacilli in the wound; and he seemed inclined to think that they were the cause of the tetanus in his case. This subject certainly deserves further investigation.

Pleuropneumonia.—Polels and Nolen, in Rotterdam, have found a micrococcus in the pleuropneumonia of cattle which they consider to be the cause of the disease. This organism resembles Friedlaender's pneumococcus in appearance, and in the presence of a capsule; it also forms pin-head growths in gelatine, but these are cream-coloured rather than white. They were constantly present in the lungs and in the pleural exudation in all cases of recent pleuropneumonia, and when injected into the lungs of rabbits, guinea-pigs, dogs, and cattle, set up pneumonic alterations. Injection into the trachea of dogs, and inhalation of a spray of a cultivation, also set up pneumonia.

Glanders.—Loeffler has published in detail his investigations on glanders, and gives some very interesting facts, although the main results had been previously made known. As to the animals most liable to the disease, Loeffler has found that after horses and asses come goats and cats, and then sheep, rabbits, and guinea-pigs; swine and cattle are almost absolutely exempt. The bacilli are constantly present in the affected parts, though it is somewhat difficult to stain them distinctly. They are not present in the blood unless in the early stage of acute glanders, but as this is not the element in which they live, they are soon deposited in various organs. They grow readily in blood-serum kept at the body temperature, and from these cultivations animals can be readily infected with the typical disease. They also grow on potatoes, but if the cultivations are carried on for some time, the bacilli gradually lose their virulence. Loeffler believes that infection never occurs through the uninjured skin and mucous membrane, but only through wounds of the integument. He considers that the occurrence of infection from the intestinal canal is very improbable. He has also found that, in the case of one guinea-pig, the disease was hereditary.

Pneumonia.—A good deal of work has been done during the year in regard to the bacteria associated with pneumonia. Dr. Fraenkel published an elaborate research, carried out in 129 cases, of which eighty-three were tested by cultivation; and he found that the organism most frequently present was a diplococcus, an oval, lancet-shaped or round coccus growing in chains, and requiring a comparatively high temperature for its growth. This organism is apparently identical with Sternberg's micrococcus, and is frequently present also in the saliva of healthy persons. It produces a form of septicæmia in several of the lower animals. The same organism has been found in meningitis after pneumonia. Weichselbaum has found other pathogenic organisms: in nineteen cases he found a streptococcus of erysipelas; in five cases staphylococcus albus and aureus; and in six cases Friedlaender's pneumococcus. It remains to be determined whether Fraenkel's bacillus, as it is present in healthy saliva, may not be only secondarily engrafted on the pneumonic process. Dr. Manfredi has found in the sputum of pneumonia after measles, in two cases, not only Friedlaender's pneumococcus, but also a small micrococcus which has peculiar and fatal effects on several species of animals, notably on rabbits and guinea-pigs. Subcutaneous injection of cultivations of this organism into these animals is followed by the formation of an inflammatory swelling at the seat of injection, which rapidly reaches a considerable size, and has a marked tendency to break down and suppurate. The neighbouring lymphatic vessels and glands also become similarly enlarged, and on the third or fourth day small nodules, composed of granulation-tissue, are found in various internal organs, especially in the spleen and liver, and also to a less extent in the lungs. The animals die between the seventh and twelfth days after infection, and show the presence of the nodules, which have by that time attained a considerable size, and are undergoing degeneration in the centre in large numbers throughout the body. In the lungs, also, there is generally pretty extensive hepatisation, in addition to small numbers of the nodules. The micrococci are present in large numbers in the caseous centre of the nodules and at the margin; they are found chiefly in the interior of the cells. These observations require to be extended to other cases of this disease.

Cholera.—On the subject of cholera nothing new has been written, the various researches that have been made having only tended to confirm Koch's observations. The most important paper, as clearing away the difficulties raised by Emmerich's investigations, is one by Dr. Weisser, in the second number of the *Zeitschrift für Hygiene*. From a very elaborate research into the bacteria present in normal and abnormal human fæces and a careful comparison with the Naples bacterium, both as regards their morphological form, mode of growth and relation to animals, Weisser comes to the conclusion that bacteria are present in human fæces, normal and abnormal, in air, and in putrefying fluids which are identical with Emmerich's so-called Naples cholera bacteria in morphological appearance, in biological function, and in pathogenic action. Emmerich's assertion that these bacteria stand in an important etiological relation to Asiatic cholera is thus, in Weisser's opinion, proved to be erroneous.

Injection of Micro-organisms into Blood.—An important paper was published by Wyssokowitsch on the fate of micro-organisms when injected into the body of warm-blooded animals. In 1874, Traube and Gscheidlen found that, if a quantity of putrid fluid were injected into the blood of rabbits and dogs, and the blood taken twenty-four hours later, with aseptic precautions, no organisms developed in it, showing that the bacteria introduced had disappeared from the blood, or had been destroyed in it in that short time. Some years later, Watson Cheyne found also that saprophytic bacteria, when injected into the blood-stream of rabbits, disappeared from the blood in twenty-four or forty-eight hours, and he concluded that they had been destroyed in it. Pursuing the subject further, he found that, if larger quantities were introduced, along with the fluid in which they grew, they were able to survive for a longer time, and that the same was the case with smaller quantities, if the animals experimented on had been previously weakened in health by the administration of repeated doses of phosphorus or other poisons. He explained this fact on the supposition that the products introduced with the larger quantities of putrefying fluid, or the poisons previously administered, had so weakened the vitality of the blood and tissues that they were no longer able to destroy the bacteria. Wyssokowitsch has repeated the experiments, and has come in the main to the same conclusions as Watson Cheyne, but he has added several interesting observations. In the previous researches, mixtures of bacteria, probably not containing spores, were employed; but Wyssokowitsch used pure cultivations of known organisms, and found that, while sporeless bacteria were rapidly destroyed, the spores could retain their vitality in the body for a long time, and remained in the tissues in a dormant state. In both cases, the blood very rapidly became freed from organisms, but the spores were deposited chiefly in the liver, spleen, and medulla of bone, and were apparently taken up by the endothelial cells of the capillaries, in which they were found imbedded many days after their introduction. In one case a few spores of bacillus subtilis were found alive in the liver seventy-eight days after their injection, although none were present in the other tissues or organs. Wyssokowitsch's results with pathogenic organisms are very interesting. When only a few anthrax bacilli were injected, they disappeared from the blood almost completely for some hours, but after twenty-four hours they began to appear again, and increased in number till the death of the animal. When they were introduced in large numbers, this disappearance from the blood was not very marked. Apparently all bacteria tend to be deposited in the organs before mentioned, and in the case of non-pathogenic organisms are there rapidly destroyed unless spores are present. In the case of pathogenic bacteria, this deposit and destruction of the organisms is incomplete, and they very soon gain the upper hand, and again spread into and multiply in the blood. We have thus in the structure of the vascular walls, and especially in the endothelial cells of the capillaries, a protective arrangement against any bacteria which may find their way into the blood. These organisms are deposited and retained in or between the endothelial cells of the capillaries, especially in the organs in which the circulation of the blood is slowest. Then begins a battle between the cells and the bacteria, which results either in the destruction of the bacteria or of the cells, which in the latter case provide a pabulum for the further development of the organisms. Those bacteria which as a rule gain the victory must be looked on as specific bacteria, pathogenic for the class of animal experimented on.

Spread of Epidemics.—Although in many cases it is now definitively proved that the micro-organisms present are the cause of the disease, very little is known as to the modes of infection and the spread of epidemics, and accordingly the attention of several investigators has been attracted to this question. In the case of several diseases, such as

anthrax, typhoid fever, cholera, etc., Pettenkofer has strongly advocated their relation to the soil. He holds that a certain local and seasonable condition is essential to the spread of these diseases, and finds these two factors in a porous material, the soil, penetrable by air and water, and soaked with organic substances (local predisposition), and in variations in the moisture and temperature (seasonal predisposition). He teaches that the so-called contagious miasmatic infective diseases are in reality true miasmatic or soil affections. The virus is formed outside the body. The virus, *x*, leaves the body in an inactive condition; outside the body, in the ground or in a suitable substitute, something, *y*, is added to this inactive germ, and out of this combination, which occurs only outside the body, that is, out of *x* and *y* is formed the infective germ *z*. That this supposition is in part wrong, is now proved as regards anthrax and cholera, by the fact that the intestinal discharges from animals suffering from these diseases are capable of giving rise to them in another animal, showing that the infective material leaves the body in a thoroughly active condition. Nevertheless, when these and other similar diseases occur in an epidemic form, it must be admitted that there is some relation between the soil and temperature, and the spread of the disease. What this relation is has been the subject of investigation by Soyka, Hueppe and others. Soyka has examined the relation of bacteria to soil, taking especial note of the effect of moisture, temperature and air. He finds that when anthrax bacilli are placed on soil they rapidly develop spores, and thus provide for their future propagation, and that the rapidity and certainty with which this occurs depend on the degree of moisture, on the temperature, and on the access of air. The necessary conditions are present in nature during the greater part of the year, and it is in this way that the soil is so essential to the spread of this disease. For were it not for this effect of the soil, these bacilli would soon die out because they are quickly destroyed by the ordinary saprophytic bacteria, if they are not in the spore condition. The soil acts then not by adding to their virulence, but by providing against their destruction. Hueppe has made a special study of this matter in reference chiefly to an epidemic affection of deer caused by a small bacterium. Here Hueppe found that the only relation to the soil was, that the infection was generally intestinal, that the bacteria could vegetate luxuriantly outside the body, and were not killed in passing through the stomach. Pettenkofer looks on inhalation as the chief mode of infection, and in fact disregards infection through drinking-water. The researches of Hueppe and Soyka show that in this he is wrong, and that infection occurs probably most often through the food and drink. Each disease seems to have its special mode of infection, depending on the biological characters of the micro-organism which causes it.

General Laws of the Infective Process.—A very important research, also bearing on the conditions of infection, has been made by one of our Research Scholars, Mr. Watson Cheyne, and it was published in the JOURNAL of July 31st. In this research it was pointed out that the initial dose of virus was of great importance, and in several instances exercised a marked influence on the course and virulence of the disease. Various laws were made out—for example, the pathogenic dose of a virus varies inversely with the predisposition of the animal to the disease in question; in animals not very susceptible to a disease, the severity of the affection varies directly within certain limits with the amount of the virus introduced, etc. It was found that in some cases a small dose of a virus produced only a local effect, while a larger dose killed the animal, and the small dose might protect the animal from the fatal effect of a subsequent large dose. Although it is as yet impossible to measure predisposition, and thus to decide the dose for any individual, nevertheless the knowledge of the relation between these two factors is of the utmost importance as throwing light on the mode of spread of epidemics; while the fact that a considerable quantity of the virus is in many cases necessary for the production of a disease explains many anomalies, and affords indications for preventive measures.

Drinking-Water.—A good deal of work has been done during the year on the relation of bacteria to drinking-water. Dr. Percy Frankland brought a number of facts before the Royal Society in June, which showed that the ordinary saprophytic organisms which are found in water multiply with great rapidity when the water is kept for two or three days at about 20° C., even although it contains the merest trace of organic matter. After three or four weeks, however, the greater number have died, and only a few are found. The case is quite different with pathogenic organisms, of which Dr. Frankland tested three forms: bacillus pyocyaneus, Finkler's comma bacillus, and Koch's cholera bacillus. Water from various sources (distilled water, deep-well water, and filtered Thames water) was inoculated from cultivations of these organisms, and then set aside and tested from time to time by means of plate cultivations. The cholera bacilli in most cases died out within twenty-four hours, except when very actively growing forms from broth were used, in which case the bacilli increased slightly in number for a few days. In sewage they grew vigorously, and were found alive even after thirty days. Finkler's bacilli seem to die very quickly in water, and could not be found after twenty-four hours. Elaborate investigations have also been made on the relation of bacteria to water by Meade, Bolton and by Herræus. Bolton also found that while certain of the saprophytic bacteria ordinarily present in water multiplied enormously when the water was kept at a suitable temperature, pathogenic bacteria quickly diminished in numbers under the same conditions, and soon died out. And apparently, with few exceptions, the quality of the water is indifferent. The typhoid bacilli, especially, die rapidly, though in one instance Herræus found considerable multiplication at the bottom of the flask.

MEDICINE.

Diabetes.—Gastric Diseases.—Obesity.—Chronic Heart Disease.—Whooping cough.—Infantile Convulsions.—Peripheral Neuritis.—Pleural Effusion.

THE difficulty of appraising from year to year the value of the new work done in the department of medicine, strictly so-called, grows increasingly great. As the diagnosis of the physician becomes more precise, the surgeon, the bacteriologist, or the writer on therapeutics claims ever wider and wider range. The abdomen, the thorax, and the cranial cavity are successively invaded by the surgeon, until now we see cases of acute peritonitis, of pulmonary vomica, and of cerebral tumour handed over to his care. All, or nearly all the infective diseases are claimed by the bacteriologist as belonging to his department, and the diseases peculiar to women have long since constituted a special course of study and practice. From all this, it results that, in the compilation of such a Retrospect as that annually published in these pages, the subjects which fall into the department of Medicine are those which are the least well defined, the least understood, and, therefore, those which least lend themselves to the method here adopted. In the short notes which follow, no attempt is made to cover the whole field, but rather to gather a few observations which may serve to indicate the direction in which advance is being made. The chemical changes in disease form one of the departments which has attracted most interest, and in the next paragraph a hint may be found of the kind of work to be anticipated.

Diabetes.—In his Croonian Lectures, Dr. Latham gave prominence to the relationship which exists between certain forms of diabetes and rheumatism; in ordinary diabetes, there is reason to suppose that, owing to functional derangement of the liver, the metabolism of the glucose, which reaches the liver through the portal vein, is imperfectly carried out; in what may be called—for convenience—rheumatic diabetes, Dr. Latham appears to assume an imperfect muscular metabolism leading to the production of glucose, of aldehyde (and para-aldehyde) through the intermediary of lactic acid, or of acetone through the intermediary of oxyisobutyric acid. Patients suffering from rheumatic diabetes suffer from neuralgic pains in the joints and limbs, their urine generally contains an excess of uric acid, and probably either glycollic or lactic acid, and they are benefited by salicylic acid. Dr. Dreschfeld, in his Bradshaw Lecture, and Stokvis at the Wiesbaden Congress, both divided the cases of diabetic coma into two classes: diabetic collapse and toxæmia. In the former class, the loss of consciousness and death is produced by sudden failure of the heart, whether due simply to fatty degeneration or to that combined with exhaustion of the nerve centres, has not been determined. Dr. Dreschfeld tentatively made two subdivisions in the second class; in one, the symptoms resemble alcoholic intoxication, and are, perhaps, produced by alcohol; in the other, the toxic agent is either acetone, aceto-acetic ether, aceto-acetic salts, or oxyisobutyric acid; the characteristic symptoms are at first dyspnœa, vomiting, headache, and either restlessness and excitement or depression, then drowsiness, with more severe dyspnœa, followed by complete coma. Stokvis appeared to be very confident that imperfect elimination by the diseased kidneys was the determining cause; but as to the remoter causes he had less to say, and the view favoured apparently both by Dr. Latham and Dr. Dreschfeld, that the toxæmia is due to imperfect metabolism of albumen, is not only probable in itself, but likely to be of practical use in fixing attention on one of the dangers of an exclusively nitrogenous diet; it is known that the sudden change to such a diet from an ordinary way of living has been quickly followed, in a considerable number of cases, by the development of coma.

Gastric Diseases.—In the diagnosis of diseases of the stomach it has always been necessary to rely very largely on the subjective symptoms, and to this one fact is doubtless largely due the somewhat haphazard treatment commonly adopted. Recently, chiefly in Germany, several physicians have begun to study the conditions of the contents of the stomach at stated intervals after meals in various diseased states. Leube, Talma, and Riegel have been the chief workers in this field, and the last named has published an elaborate paper on the subject; his method is to begin by giving a full mixed meal, and then by emptying the stomach through a syphon at various hours, to ascertain the duration, generally over five or six hours, of digestion. The material thus withdrawn is filtered, and the amount of free hydrochloric or organic acids present in the filtrate, its peptic power, and the degree of acidity are ascertained. Perhaps the most interesting fact as yet observed is that in carcinoma of the stomach, except, perhaps, in the very earliest stage, no trace of free hydrochloric acid is ever found, while its absence under any other conditions appears to be very rare. In ulcer, and in dyspepsia with dilatation of the stomach and hypersecretion, attacks of pain were found to coincide with excessive acidity. The operation of washing out the stomach is in itself not devoid of danger, and its indiscriminate use can only bring it into disrepute, but in this country the method does not yet appear to have attracted the notice which it deserves. It seems to be particularly indicated in cases of dilated stomach with slow digestion. Washing out the stomach, combined with the administration of large enemata, has also led to the most brilliant results in intestinal obstruction, supposed to be due to internal strangulation. Miller, of Berlin, has isolated an immense series of micro-organisms from the contents of the alimentary tract; among them were five which, in the course of their development, gave rise to considerable quantities of gas; the amount of hydrochloric acid present in ordinary healthy gastric juice was enough to prevent their development, but, if swallowed with a meal, they had an opportunity of developing, at any rate for some time; by experimenting on himself, he succeeded in producing great flatulent distension, followed by diarrhœa. The existence of these micro-organisms may serve to explain the occasional attacks of flatulent colic and diarrhœa, from which the healthiest persons are liable to suffer, but it is questionable whether they can have much concern in producing, as has been supposed by some writers, the flatulent distension of ordinary chronic dyspepsia.

Obesity.—There is often a good deal of unnecessary hesitation in speaking of excessive fatness as a diseased condition; no doubt a very wide latitude for individual variations and idiosyncrasies must be allowed, but it is not uncommon to find even young adults whose natural functions are seriously interfered with by an extreme fatness. The good results claimed for systems of treatment based on very conflicting theories have been very puzzling, and have, in the eyes of many, given to any attempt to treat the condition on fixed principles an air of charlatanism. But M. Albert Robin has made a contribution to the subject, which appears to possess considerable value; obesity may be due either to excessive assimilation or defective disintegration; M. Robin's point is, that in the former condition the quantity of the urea is increased, in the latter it is diminished; to ascertain whether the urea is increased, it must be compared with the total urinary solids, and to express this relation he has invented the term co-efficient of oxidation; where the co-efficient is increased there is over-assimilation, where diminished, imperfect disintegration. He confirmed the statement of previous observers that an increase in the amount of urea without a corresponding increase in the total urinary solids, followed the imbibition of large quantities of water. Hence, in the class of fat people in whom disintegration is imperfect, he advises copious draughts, while in the other class in whom assimilation is too easy, he cuts down the quantity of fluid. His statements were rather severely criticised in Paris, but on the whole they stood the test well; at any rate, his method rests upon a rational basis of experiment, and seems a great advance on the crude systems now so fashionable in Germany, which seems to consist in little more than a rule of thumb diminution in the quantity of fluids, or a periodical resort to some *bad* where the water contains small quantities of sulphates or chlorides.

Chronic Heart Disease.—Chiefly through the advocacy of Oertel, the system of treating the chronic valvular diseases of the heart by regulated, but rather severe, exercise has been steadily gaining ground. The late Dr. Stokes, of Dublin, had, indeed, long ago written in the same sense; but his teaching was not much heeded, and the tendency has hitherto been to look upon valvular lesion as a disabling condition, debarring the patient from a life of active physical exertion. Many of the statements made in the ordinary text-books and manuals as to prognosis are undoubtedly too gloomy; an admirable paper by Sir Dyce Duckworth, published last summer in this JOURNAL, drew attention to this aspect of the subject; and the discussion at Brighton, initiated by Sir Andrew Clark, and continued by Professor Gairdner, Dr. Clifford Allbutt, Dr. Bristowe, and other experienced physicians, showed how widely-spread was the impression that errors in prognosis were commonly made. Oertel and his followers, however, go much further in that they not only do not forbid active exercise, but actually recommend it as a means of treatment; it is claimed for it that it acts beneficially on the general nutrition, on the nutrition of the heart itself, and, by unloading the venous system (through the perspiration induced), on its functional activity.

Whooping Cough.—The theory that in whooping cough the primary lesion is an affection of the naso-pharynx, appears to be gaining ground. Michael of Hamburg has described brilliant results from the use of powdered benzoin blown into the nose, while Dr. Barlow of Manchester, and Dr. Guelmi of Pavia, have had equal success by painting the pharynx with a 1 per cent. solution of resorcine, as recommended by Professor Moncorvo. The sputum ejected after a characteristic fit of coughing is said to contain minute white or whitish-yellow spots, which, when examined microscopically, are found to consist of micrococci in chains. The use of local applications appears to be founded upon the theory that the micrococci are the determining cause of the disease; the success of the method would at least invite an extensive trial of it, even on empirical grounds.

Intubation of the Larynx.—The extremely unsatisfactory results of tracheotomy in diphtheria have often been attributed to the fact that the operation is generally deferred until the last moment, when the patient is on the verge of total asphyxia. The disease has been for many years extremely prevalent in the Northern States of America, and among the large number of suggestions as to treatment due to American physicians, special mention ought to be made of intubation of the larynx, originally suggested by Loiseau and Bouchut, but first reduced to a working system by Dr. O'Dwyer. The introduction of the tube does not, it is said, present any special difficulty after a little practice. It is made of india-rubber, flattened from side to side, except for a short space in the middle, where it is made circular, in order that it may be less easily expelled during coughing; the length necessarily depends on the size of the larynx, and it should be just long enough to extend from the level of the epiglottis through the rima glottidis, and to within half an inch of the bifurcation of the trachea. The chief objection to its use seems to be the difficulty in swallowing fluids, due to the interference with the action of the epiglottis which the upper end of the tube inevitably causes, and the comparative frequency with which it is expelled by cough; it would appear, however, that the latter objection can be obviated by the choice of an accurately fitting tube. It is claimed for the method that the results are more satisfactory than after tracheotomy; but the cases reported are not as yet sufficiently numerous to give a statistical statement any great weight.

Infantile Convulsions.—The greatest obscurity reigns in the domain of medicine which embraces the so-called functional nervous diseases of infancy, and we must therefore be grateful to Dr. Hughlings Jackson for the ray of light which he has thrown upon the mode in which infantile convulsions are produced. He has applied his well-known synthetical method to the construction of a theory which will serve to explain many of the observed phenomena; he conceives of the central nervous system as containing groups of sensori-motor centres, grouped in three tiers; roughly speaking, the anatomical distribution coincides with this conception, the lowest centres being limited above by the pons, the middle consisting of the motor and sensory cortical centres, commonly so-called, and the uppermost of the brain in front of these motor centres. All the parts of the body are represented in each tier, but the combinations between centres become increasingly complex from the lowest to the highest. Further, it is apparently to be understood that the upper exercises a certain control or dominion over the next lower. In early infancy, the uppermost and middle tiers have not yet been developed, while the lowest is rapidly developing, and is, therefore, in a condition of unstable equilibrium, and, in consequence, liable to respond unduly and irregularly to physiological stimuli when these are intensified. Dr. Jackson goes back to imperfect respiration as the ordinary ultimate cause of convulsions in infancy. The imperfect respiration entails an unduly venous condition of the blood circulating in the respiratory centre, and any slight circumstance leading to a temporary increase in the venosity will produce a stimulus so intense, that, in the imperfectly developed and controlled lower centres it leads to an outburst of irregular activity, that is to say, to asphyxial convulsions. Some recent experiments by Rosenbach tend in the same direction. He has been able to produce fits, which he considers to be of the true epileptic type, by prolonged and forcible stimulation of

the cortex in the dog, whereas stimulation of regions below the cortex, if means were taken to prevent diffusion to the cortical centres, produced convulsive movements which were not of the epileptic type.

Peripheral Neuritis.—The pathology and symptoms of peripheral neuritis have continued to attract a good deal of attention during the year, but as the two interesting papers by Drs. Ross and Buzzard will very shortly be published in these pages, it is not necessary to go over the ground which they so completely covered at Brighton. Attention may also be directed to an elaborate paper by MM. Pitres and Vaillard, published in the *Revue de Medecine*, in which the occurrence of neuritis in locomotor ataxy is specially dealt with, and is shown to be capable of explaining some of the symptoms.

Pleural Effusion.—A discussion on the operative treatment of pleural exudations, which took place during the Medical Congress at Wiesbaden, did not add much to current knowledge; Franzel, who introduced the subject, advised a delay of three weeks, even in serous pleurisy, before tapping, and that even at the end of that time, only a part of the fluid should be withdrawn. Litten and Weber, on the other hand, advised early tapping; Weber and Fiedler laid stress on allowing as much fluid to drain away through a syphon as would flow spontaneously, but Heusner had found that even so dangerous symptoms might ensue. Each speaker preferred a different form of instrument, and the only point upon which there was an approach to unanimity was as to the advantages of resection of ribs in empyema.

SURGERY.

Pasteur's Prophylactic.—Head Surgery.—Chest Surgery.—Laryngectomy.—Operative Treatment of Goître.—Abdominal Surgery.

A REVIEW of the surgical records of 1886 shows that a steady advance has been made in several departments, but especially in that of the operative treatment of injury and disease of internal organs, with a view to attaining not merely temporary relief, but a radical and permanent cure, and the saving of life. The work that has been done in this direction, especially with regard to abdominal and pelvic lesions, has on the whole been attended by brilliant results. Surgical intervention in cases of severe and advanced disease of the thoracic organs—such, for instance, as aortic aneurysm and large pulmonary cavities—has certainly not been very successful, but, on the other hand, the direct operative treatment of affections of the liver and gall-bladder, of penetrating wounds of the abdomen, of intra-peritoneal rupture of the bladder, and of enormous vesical calculi, has had such results as should lead surgeons to reject for the present all ideas as to the finality of their art.

Pasteur's Prophylactic.—This subject, which was fully discussed in a report by Dr. Vignal, published in April in the BRITISH MEDICAL JOURNAL, has hitherto presented rather pathological than surgical interest. The results of Professor Pasteur's investigations and new method have to be tested by time and much study and experience, but at the present date the evidence seems to favour the view expressed by Dr. Hime at the Pathological Society, that a true prophylactic treatment has been established against rabies.

Head Surgery.—In a review of the most important of recent contributions to surgery, Mr. Victor Horsley's paper on Brain Surgery, read at the annual meeting of the Association, claims a prominent place, on account both of its scientific interest and of the novelty of the subject. The great value of this paper mainly consists, in the first place, in a detailed description of the author's method of operating on the brain and his application of antiseptic principles with a view to overcoming the difficulties and dangers of such procedure, and, secondly, in a report of three cases of serious cerebral lesion treated, as was proved by the presence of the patient in each instance, with complete success. In two of these cases the skull had been trephined for traumatic epilepsy, and in the third a tumour of tubercular nature had been removed from its previously ascertained situation at the junction of the lower and middle thirds of the ascending frontal and parietal convolutions. A point of special interest in this record is the great, and, indeed, indispensable aid that is afforded by the results of physiological research in the diagnosis and treatment of coarse and circumscribed lesions of the brain. That trephining, in cases of traumatic epilepsy, is a justifiable, and very often a most satisfactory method of treatment, has been proved by the cases of Mr. Horsley, Dr. Clark, of Glasgow, and other surgeons; but concerning the true value of operative interference in cases of cerebral tumour much, we think, has yet to be learnt. Up to the present time we have had four cases recorded, the well known case of Dr. Bennett and Mr. Godlee, the success of which might be regarded as doubtful; Mr. Horsley's case; one of removal of a soft diffused glioma by Dr. Hirschfelder, of San Francisco, which proved fatal on the seventh day; and a very successful case of endo-cranial, though not cerebral tumour, removed from the base of the skull by Dr. Durante, of Rome. The prospects of cerebral surgery with regard to the removal of new growths do not appear very bright to pathologists. Dr. Goodhart and Dr. Hale White, who have both studied extensive series of cerebral tumours, seem to have good grounds for doubt as to whether any but a small proportion of such growths can be accessible to surgical attack; and in the report of a Special Committee of the Pathological Society on forty-four specimens of intra-cranial growth, it is stated that two only of these seemed suitable for removal. On the subject of head-injuries, a lecture of much interest by Wagner, of Königshutte, has lately been published. This surgeon, who has had considerable experience in the treatment of compound fractures of the skull, holds that, in such cases, too much has been made of the dangers of intra-cranial pressure, and too little of the risk attending septic infection of the seat of injury. He would not apply the trephine for rupture of the middle meningeal artery, except in the presence of symptoms indicating that the hæmorrhage had been very profuse; and he holds that it is unnecessary to interfere with small depressed fractures, with the view merely of preventing compression. On the other hand, trephining, under strict antiseptic conditions, is strongly advocated by Wagner whenever there is reason to believe that foreign matter, however small it may be, has penetrated through the fracture into the cranial cavity. Another lecture of interest dealing with the treatment of cranial lesion has been published in the course of the year by Könlein, of Zurich, who is an advocate of trephining in cases of bleeding from the middle meningeal artery without fracture of the skull. In this report, the author, who has carefully studied the questions of the diagnosis of intra-cranial hæmatoma, and the proper place for the application of the trephine in the operative treatment of the lesion, reports four cases, in each of which the diagnosis of rupture of the middle meningeal artery was confirmed, and an intra-cranial hæmatoma exposed at the seat of operation. On the treatment of bullet-wound of the brain, a suggestive paper, based on a successful case of double trephining, was published early in the year by Dr. Führer, of New York, who, in a case of deeply penetrating wound without serious symptoms of hæmorrhage or compression, would explore the track of the bullet by careful probing, and trephine at the point where the bullet, after having traversed the intra-cranial cavity, has struck the interior of the skull. Other interesting cases of penetrating gunshot-wounds of the head have been reported during the year by Mr. Atkinson, of Leeds; Dr. Macdonald, of New York; and Mr. Astley Bloxam.

Chest Surgery.—Of the few contributions made during 1886 on the subject of chest surgery, that probably of most interest is the paper read before the Royal Medical and Chirurgical Society, in March, by Dr. C. Theodore Williams and Mr. Godlee, on the operative treatment of bronchiectasis. Two cases of this condition were reported in which paracentesis had been performed, on one patient with good results, on the second with but moderate success. The operation is here held to be indicated when the bronchiectasis is confined to one lung, is situated in the lower lobe, and has, overlying it, an adherent pleura. The discussion of this paper indicated—as will very probably be confirmed by any future cases of a like kind—that the value of operative treatment of such morbid conditions of the lung is likely to be seriously compromised by difficulty in diagnosis and the danger of hæmorrhage. With regard to the surgical treatment of empyema, Dr. Lagrange, of Bordeaux, has lately directed attention to the risk, in operations on the thorax for this disease, of wounding the diaphragm, and, with a view to the prevention of so serious an accident, insists on the necessity of never making the incision in the wall of the chest below the sixth rib. Operative interference in cases of hydatid disease of the lung has been advocated by Israel, of Berlin, who holds that an opening into the pleural cavity constitutes no danger to life, provided it be made under antiseptic precautions, and be speedily closed, the admitted air, it is stated, being soon absorbed. Notwithstanding the opinion held by this surgeon, that the risk of a radical operation is smaller than that of simple puncture of the cysts in cases of hydatids of the lung, the procedure recommended by him, involving as it does extensive resection of one or more ribs, and free section of the costal pleura, is of too heroic a character to meet with wide and serious attention.

Laryngectomy.—Extirpation of the larynx, an operation that for some few years has been of frequent occurrence in the practice of Billroth, Thiersch, and Hahn, has during 1886 been performed in Paris by Péan in two cases, one of which proved successful, and by Labbé in one case, in which death occurred from pneumonia after an interval of four months. The operation has in this country been recently

practised by Sir Wm. MacCormac, and at a meeting of the Clinical Society on November 9th a discussion was held on cases reported by Dr. Semon, Mr. Morris, and Mr. Butlin. The procedure of total removal of the larynx is well described by Mr. Pick as a "terrible one," and even if not speedily fatal, seems to offer but poor prospect of prolonged freedom from relapse. In Mr. Butlin's opinion "complete excision for carcinoma should be practised only in very rare instances, as the mortality due to the operation is large, the prospect of complete cure very small, and the patient might be less comfortable after than before the operation." Partial or unilateral excision, though less severe, and not so fatal, is applicable but to a few selected cases, and as a means of affording relief from dyspnœa and suffering seems in a large proportion of cases to present no advantage over inferior tracheotomy.

Operative Treatment of Goître.—At the annual meeting at Brighton, Sir William Stokes reported to the Section of Surgery an instance of the frequently observed dependence of a condition of myxœdema on complete removal of the thyroid gland, which was first fully described by Kocher, and which has since been carefully investigated by Mr. Horsley. In consequence of the frequent occurrence of the so-called cachexia strumipriva after complete thyroidectomy, and of the views based on the results of Mr. Horsley's experiments, the operation has naturally lost favour, and, indeed, in some quarters, is now regarded as an unjustifiable proceeding, its place being taken by less radical measures, such as partial excision, removal of diseased tissue by the process of "shelling-out," and simple division of the isthmus.

Abdominal Surgery.—In reviewing the additions made during the year to the extensive subject of abdominal surgery, it is barely possible to do more than refer briefly to some of the more important contributions that have been made chiefly by British, American, and German surgeons. On the question of the value of laparotomy in the treatment of perforative and persistent peritonitis, an interesting paper has been published by Krönlein, who, though acknowledging the unfavourable conditions under which such treatment is applied, as, for instance, the collapsed state of the patient, the difficulty in establishing a sure diagnosis, the complex arrangement of the abdominal organs, the adhesion and distension of coils of intestine, and the probable difficulty in finding the perforation, is still in favour of the operation, as affording the only opportunity of rescue from death. Three cases are reported, of which two were fatal, and one, in the words of the author, was attended with the most splendid results. Mikuliez, who is also in favour of this treatment, has contributed to Volkmann's collection a lecture on laparotomy in cases of gastric and intestinal perforation, and has reported three cases, of which one proved successful. Strudenski, a Russian surgeon, has reported one case of purulent peritonitis treated with good results by laparotomy; and Naumann, a Swedish surgeon, four cases of tubercular phthisis, in two of which the operation was followed by death. In New York, Dr. Hall has operated successfully in a case of suppurative peritonitis, due to perforation of the vermiform process. At home, Mr. Barker has reported to the Clinical Society a case of successful operation for the relief of acute intestinal obstruction associated with acute general peritonitis. To the subject of the treatment of gunshot and other penetrating wounds of the abdomen, for which so much had been done by Marion Sims, Parkes of Chicago, and Bull of New York, another contribution has been made in the United States by Professor Dennis. In the treatment of deep stabs and of gunshot wounds involving the abdominal cavity, Professor Dennis, bearing in mind the difficulty of diagnosing the extent of the injury, and the inevitably fatal result of leaving to itself any perforation of the intestinal tract, and holding that laparotomy performed with strict antiseptic precautions is not a serious operation, would advocate this procedure in doubtful cases as a diagnostic measure, and for the purpose of exploring thoroughly the contents of the abdominal cavity. At the annual meeting of the American Medical Association, held at St. Louis in May, Dr. Senn, the president of the Surgical Section, held that exploratory laparotomy was justifiable in all doubtful cases, for the arrest of hæmorrhage, the removal of extravasation, or the restoration of a breach of continuity. With regard to exploratory laparotomy in cases of gunshot of the abdomen, Dr. Packard of Philadelphia, has made some suggestions which claim serious consideration. It is pointed out that "the procedure is in itself of great gravity, and the patient's general condition must be fairly good to enable him to withstand this additional shock." The surgeon is advised not to carry out such treatment on his sole responsibility; for though "his main object must be to do all that is possible to save life; he must not overlook the fact that his course may be severely criticised, especially in cases which give rise to medico-legal inquiry." The chief contributions relating to operations on the stomach that have been published during the year are, one by Credé, of Dresden, on the Extraction of Foreign Bodies from the Stomach (*Archiv für Klinische Chirurgie*); a report of a successful case of Gastro-enterostomy for Cancer of the Stomach and Pylorus, by Mr. Barker; another case by Mr. Morse (BRITISH MEDICAL JOURNAL, Vol. i, 488), and a case of Jejunostomy for Cancer of the Pylorus, by Mr. Golding Bird (Clinical Society's *Transactions*). In April, Mr. J. Knowsley Thornton reported to the Royal Medical and Chirurgical Society two cases of splenectomy, one of which was successful, and appended an analysis of all previously recorded cases that he had been able to find. Ceci, of Genoa, has also lately put on record a case in which he removed, with good result, a hypertrophied and displaced spleen from a young subject. To the scanty literature on the surgery of the pancreas a very elaborate and able contribution has lately been made by Dr. N. Senn (*International Journal of the Medical Sciences*). Partial excision of this organ, it is stated, whether for injury or disease, is a feasible and justifiable surgical procedure. Partial excision of the splenic portion is indicated in cases of circumscribed abscess and of malignant tumour, in which the disease can be completely removed without danger of compromising pancreatic digestion or inflicting injury upon adjacent organs. Dr. Senn has proved by experiments on animals that extravasation of fresh and normal pancreatic juice into the peritoneal cavity is removed by absorption without causing peritonitis. Billroth has performed partial excision of the spleen in two cases, and an instance has recently been reported by Sulzer of removal, with a fatal result, of a large pancreatic cyst, which was supposed to be ovarian. The meetings of the surgical section at the Annual Meeting were this year rendered especially interesting, not only by the paper on brain-surgery, but also by several valuable papers, and a discussion on the surgery of the liver. The series of papers was headed by some remarks by Dr. George Harley on hepatic phlebotomy, and consisted in contributions from Mr. Thornton, Mr. Willett, Mr. Howard Marsh, and Mr. Lawson Tait on cholecystotomy and the treatment of abscess and hydatid cyst of the liver. The term "hepatic phlebotomy" is applied by Dr. Harley to a procedure which consists in the insertion into the upper and convex portion of the liver of a long trocar for the purpose of drawing off blood directly from the organ, and thus relieving any engorged condition. Like others who have had much experience of chronic and tropical affections of the liver, Dr. Harley has found much benefit to be derived from puncturing the liver's capsule, as a remedial measure, in cases of chronic congestive hypertrophy. The paper read by Mr. Knowsley Thornton shows what good may be done by operative surgery under antiseptic conditions in cases of hepatic abscess, hydatid cyst, and accumulation of gall-stones. Among the many interesting contributions in this series of papers on liver surgery, we have to notice a report from Mr. Lawson Tait, of thirty cases of cholecystotomy performed for the removal or crushing of gall-stones, for suppurating or distended gall-bladder, and for cholæmia. This list, which includes but one fatal case, establishes beyond dispute, Mr. Tait holds, that that operation, when properly performed, is as devoid of risk as any surgical proceeding possibly can be. In June, Professor Poulet, of Paris, published a case in which he had treated a hydatid cyst on the anterior surface of the liver by performing abdominal section; and, after removal of the fluid contents, and excision of the free portions of the cyst-wall, by stitching the edges of the hepatic cavity to the wound in the abdominal wall, in order to establish a fistula. Poulet, in his paper (*Revue de Chirurgie*), has given an analysis of thirty-nine collected reports of hydatid disease of the liver treated by abdominal section, and pointed out the indications for surgical interference in such instances, and the modifications adapted to the varying situations of the cyst with regard to the liver in different cases. Another French surgeon, Dr. Paul Reclus, has also recorded a successful case of free abdominal incision in the treatment of hydatid cyst of the liver, and has stated that in his opinion the application of caustics with subsequent opening of the cyst by knife or trocar is certainly not less dangerous than a free incision into the peritoneal cavity. In Russia, where surgeons have much experience of hydatid disease, free surgical treatment is now much in favour. Korach has practised incision in eighteen cases, and Sklifassovsky, of Moscow, has, in three cases, successfully practised free incision and sewing of the wall of the cyst to the edges of the abdominal wound.

Renal Surgery.—But little, if any, further advance has been made this year in renal surgery. The indications for and against removal of the kidneys have perhaps been more carefully studied, and there seems to have been a tendency to restrict, rather than to widen, the range of the operation. Dr. P. Wagner, of Leipzig, who has written an elaborate paper on surgical diseases of the kidney, based on cases under the care of Professor Thiersch, seems to be much impressed with

the probabilities of the danger of removing a single organ, or of leaving an organ incapable, through disease or atrophy, of performing its full function. The posterior and extra-peritoneal method of nephrectomy is still preferred by a large majority of surgeons, and in cases of large renal tumour, König, in order to avoid wounding the peritoneum, would perform a complicated extra-peritoneal section, by which the muscles of the abdominal wall are freely divided, and are consequently liable to be much weakened. Among the most important of the few recent contributions on nephrectomy is one by Von Bergmann, who is an advocate for the operation which he has performed in eleven cases either by straight or oblique posterior incision.

Suprapubic Cystotomy.—The subject of suprapubic cystotomy for removal of stone has, during the year, been fully discussed by Sir Henry Thompson, at the annual meeting of the Association; by Mr. Cadge, in his course of Hunterian Lectures at the College of Surgeons (BRITISH MEDICAL JOURNAL, Vol. i, 1149, 1202.); and by Mr. Barwell and others, at the Royal Medical and Chirurgical Society. The operation has now been frequently performed, both at home and abroad, and, on the whole, with most satisfying results. There can be no doubt that the modern method of cystotomy is of great value in the removal of very large stones, as in the cases that have been reported by Mr. Rivington, Mr. Thomas Smith, and Dr. Morison, of Hartlepool. According to Sir Henry Thompson, "suprapubic lithotomy will prove a safer and far easier operation, in the hands of most surgeons, than lithotrity for hard stones when these have arrived at a weight of about 1½ to 2 ounces"; but whether in such cases the high operation should always be preferred to perineal lithotomy must, we think, still remain open to doubt. The efficacy of rectal distension in cystotomy above the pubes, on which so much stress is laid by the advocates of this operation, is questioned by Mr. Barwell, who has been led by a series of experiments to form the opinion that this distension makes but very little difference in the position of the peritoneal fold in front of the bladder. That there is a risk of wounding the peritoneum in the high operation has been proved by a case reported by Polaillon, of Paris; and certainly, when the urine is foul and decomposed, there is danger of cellulitis. In the opinion of König, suprapubic cystotomy is a less difficult procedure than the perineal operation, but is attended with certain serious risks, especially septic inflammation of the anterior abdominal wall. With regard to the operative treatment of tumours of the bladder, there seems to be less room for doubt as to the superiority of the high method. On the subject of vesical morbid growths, valuable contributions have been made by Küster (Volkmann's *Sammlung*), Sir H. Thompson, and Guyon, of Paris. The BRITISH MEDICAL JOURNAL of June 19th and October 16th contains records of instances of cystotomy for tumours by Mr. Greig Smith and Mr. Southam. The long record of invariably fatal cases of intra-peritoneal rupture of the bladder has at last been followed by two recent instances, under the care of Sir Wm. Mac Cormac, of successful treatment of this very serious injury by abdominal section and suture of the wound in the bladder.

Surgery of the Vascular System.—With regard to the surgery of the vascular system, the following papers of importance are to be found in the last volume of the *Medico-Chirurgical Transactions*: A record by Dr. W. Cayley of a case of thoracic aneurysm treated by the introduction of steel wire; an experimental inquiry on the ligation of large arteries in their continuity, by Mr. C. A. Ballance and Mr. W. Edmunds; and a contribution from Mr. Rivington on the subject of wounds of blood-vessels by foreign bodies. Before the Clinical Society, a paper of much practical value was read, in May, by Mr. R. W. Parker on the structure and treatment of nævus. Another case of aortic aneurysm treated by the introduction of wire, with the usual unsatisfactory result, was reported early in the year by Dr. Ransokoff, of the United States. On March 29th, Mr. Bennett May tied the innominate artery for aneurysm, but with a fatal result from secondary hæmorrhage on the nineteenth day. The occasional occurrence of venous thrombosis and embolism after simple fracture has during the year been pointed out by Bruns, of Tübingen, who has collected thirty-five cases of this grave complication. At the last meeting of the German Society of Surgery, a paper of some importance on the treatment of arterio-venous aneurysm was read by Dr. Bramann, of Berlin.

Fracture of the Patella.—Most of the contributions of importance relating to injury of bone deal with fracture of the patella. The treatment of simple transverse fracture of this bone by exposure and suture has been warmly supported by Dennis of New York, and opposed by Brunner of Zurich, who holds that the results hitherto obtained by this method are not such as to justify its practice. Mr. Treves, of the London Hospital, has written on treatment of this fracture by Malgaigne's hooks (BRITISH MEDICAL JOURNAL); and on March 18th Mr. G. R. Turner read, at the Harveian Society, an able paper on compound fracture of the patella, containing a record of a case under his own care, and an analysis of nineteen other instances.

Fistula in Ano: Radical Cure of Hernia.—Among the few recent contributions of importance bearing strictly on the surgery of the intestinal canal, reference may be made to a paper (*Medical Record*) by Dr. Stephen Smith, of New York, on the immediate closure and rapid cure of fistula *in ano*; to a description, by Dr. McEwen, of a new operation for the radical cure of oblique inguinal hernia (*Annals of Surgery*); and to a clinical study by Anderegg, of Bâle, of 136 cases in which radical cure of hernia had been attempted by operative measures (*Deutsche Zeitschrift für Chirurgie*).

PHARMACOLOGY AND THERAPEUTICS.

Lanoline.—Pure Terebene.—Urethan and Hypnone.—Strophanthus Hispidus.—Benzol-eupnoin.—Binoxide of Manganese.—Digestive Ferments.—The Section of Pharmacology and Therapeutics at the Annual Meeting.—Collective Investigation Committee.

Liebreich's Lanoline.—The year 1886 has been characterised by considerable activity in the field of pharmacology and therapeutics. One of the first important papers to attract attention was a communication from Professor Oscar Liebreich, the distinguished Professor of Materia Medica in the University of Berlin, on a new substance which he has called Lanoline, which he recommends as a basis for ointments, and for other purposes. "Lanoline" is a cholesterin fat, differing from the ordinary fat of the panniculus adiposus chiefly in the fact that it contains crystals of cholesterin in place of glycerine. It is extracted from the fat contained in the wool of sheep, and, in a crude and impure form, has long been known as "wool-oil." Cholesterin fats have the great advantage of not being decomposed by boiling with alkaline solutions, whilst glycerine fats are at once split up into glycerine and soap. Pure lanoline absorbs water with the greatest facility, and can be rubbed into the skin with ease. From the peculiarity of its composition, it can never become rancid, and is consequently well adapted for the treatment of a great number of local affections. It adheres to the skin, and at the same time exerts a mild and soothing action thereon. It will speedily overcome, as Dr. Shoemaker has shown, rough and irritable conditions of the integument, and is probably the best application for chaps, chronic eczema, psoriasis, and allied affections. Its introduction as a therapeutic agent attracted much attention, and it is now largely employed in place of vaseline and other less absorbable fats, both alone and in combination with other substances.

Pure Terebene.—In the early part of the year there was much discussion as to the value of pure terebene, and its ally, turpene, especially in the treatment of chronic bronchitis and winter cough. Pure terebene has been so largely employed, that its action and mode of use are now thoroughly understood and appreciated. The great difficulty was to obtain the substance pure and free from other products of distillation; but this has at last been overcome, and there is now less fear of irritating and dangerous products being prescribed or dispensed. Turpene is a true hydrate of turpentine, or turpentine camphor. It is administered internally, in doses of from four to ten grains, usually in the form of compressed tabloids. It is a good expectorant, and sedative to the bronchial mucous membrane, and, in cases of chronic cough, gives excellent results. It has also been recommended as a diuretic, and has considerable power in increasing the flow of urine.

Urethan and Hypnone.—Urethan and hypnone, the two new hypnotics, have also been extensively used, although there is still some diversity of opinion as to their value. For the introduction of the first of these we are indebted to Schmiedeberg, of Strasburg, who fully investigated its action on the lower animals. Dr. Myrtle, of Harrogate, contributed some valuable and interesting observations on its use in various forms of insomnia. It should be given in doses of from one to five grains, and its effects are usually speedy and satisfactory; there being no subsequent constipation or headache. Hypnone is a liquid, and is best given in soluble capsules. The observations of Dr. Dujardin-Beaumetz on this new remedy have been confirmed by Constantin Paul and Huchard. The hydrobromate of hyoscine has been given as a hypnotic in doses of one-hundredth of a grain.

Strophanthus Hispidus.—Since the publication of Professor Fraser's article on strophanthus hispidus, numerous trials have been made of this new cardiac remedy, and there seems every probability that ere long it will entirely supersede digitalis. Dr. Lindsay Proteus

has published notes of several cases in which its exhibition was attended with prompt relief of palpitation, irregularity of the heart's action, and other distressing symptoms. Both for its cardiac action and as a diuretic, it is probably more efficient than any other remedy with which we are acquainted. In cases of functional cardiac irregularity, unattended with lesions of the valves, it may be regarded almost as a specific. In dropsy, whether of cardiac or renal origin, it speedily increases the urinary flow, and lessens the œdema. The tincture is the best preparation procurable, and the dose should not exceed five minims three times a day, to begin with. There are many varieties of strophanthus, and care should be taken to collect only the species referred to by Professor Fraser in his paper. It is not safe to substitute tinctures made from other species of strophanthus, the physiological action of which may not have been determined.

Benzol-ecgonin.—Dr. Ralph Stockman's article on the action of benzol-ecgonin, although chiefly of scientific interest, has its practical bearings. His conclusions may be summed up briefly by saying that he finds that this new substance is practically identical with caffeine in action, there being, however, minor points of difference.

Binoxide of Manganese.—Binoxide of manganese is being largely employed as an emmenagogue. Its introduction for this purpose is not new, as it was tried with good results about three or four years ago. If not quite as certain as permanganate of potassium, it has some advantages over that salt, the chief being that it possesses no caustic or irritating properties, and that it can be administered at any time, irrespective of food. The permanganate is apt to cause irritation of the mucous membrane of the stomach and œsophagus, unless given immediately after meals and with copious draughts of water. Both drugs act in the same way, and may be regarded as prompt and certain emmenagogues.

Digestive Ferments.—Several papers have appeared on digestive ferments, and it is now generally recognised that if any benefit is to be derived from the administration either of pepsine or extract of malt, experiments must be previously undertaken to ascertain their purity and activity. The dose of pepsine usually administered is too small to exert any very decided effect on the contents of the stomach, whilst extract of malt is not uncommonly prepared at a temperature which effectually destroys the ferment on the presence of which its activity depends.

Section of Pharmacology and Therapeutics at the Annual Meeting.—The work of the Section of Pharmacology and Therapeutics at the Annual Meeting at Brighton was of exceptional value, and was the means of calling attention to many new remedial agents. Dr. Lauder Brunton chose as the subject of his address the connection between chemical constitution and physiological action.

Collective Investigation Committee.—During the greater part of the year, the Collective Investigation Committee of the British Medical Association has extended its sphere of action, and has undertaken a series of therapeutical inquiries into the value of certain new remedies. The first memorandum issued was on the use of hamamelis in arresting hæmorrhage, whilst the second dealt with the value of pure terebene in the treatment of winter cough. The notes issued with these papers are clear and concise, and it is stated that they have been found of much value by medical men in many parts of the country. The inquiry is still open, but the results will shortly be tabulated, and a report issued.

OPHTHALMOLOGY.

The Ophthalmological Society.—Ophthalmological Section at the Annual Meeting.—The Von Graefe Medal.—Cucaine.—Sympathetic Ophthalmitis.—Substitutes for Enucleation.—Refraction.—Myopia.—Cataract Operations.

The Ophthalmological Society.—Although the past year can boast of no discovery comparable to that of cucaine, it has not been unprofitable. Further experience has been gained of the results of novel modes of treatment, and of new methods of diagnosis. The work done by the Ophthalmological Society, and at the Ophthalmological Section at the Annual Meeting of the Association, was fully equal to that of former years. The *Transactions* of the Ophthalmological Society open with a masterly paper by Dr. Hughlings Jackson, on the Connection of Ophthalmology and Diseases of the Nervous System. Mr. Berry's charming little book on *Subjective Symptoms* might with advantage be read in connection with this. The second Bowman lecture, delivered a few weeks ago by Professor von Zehender on Parasitic Diseases of the Eye (British Medical Journal, ii, 1073), dealt in a most able manner with a subject which is, in many respects, a modern one, and which has, perhaps, had more influence upon our views of the pathology of affections of the eye than in any other branch of surgery. The *Transactions* contain besides some reports of especial value, which will be again referred to.

Ophthalmological Section at the Annual Meeting.—Mr. Hutchinson's paper on Choroiditis at the Annual Meeting, illustrated by an immense collection of coloured illustrations of the fundus, forms an unrivalled clinical record. It is much to be regretted that lack of time or of skill has hitherto rendered the collection of such illustrations an impossibility to most; it is to be hoped that the sketch-book recently published by Dr. Haab may, in the future, render this more possible.

The Von Graefe Medal.—Ophthalmologists throughout the world will endorse the verdict of the Heidelberg Ophthalmological Society in awarding the von Graefe Commemoration Medal to Helmholtz, and it would have been impossible to have found a more fitting spokesman than Donders, or words more suitable than those used by him (for full report see British Medical Journal, ii, 1137).

Cucaine.—The hopes that were entertained of the value of this drug have been fully justified; it has proved an efficient anæsthetic for almost all operations on the eye, and but few accidents have followed its use. Some of these, such as desquamation of the corneal epithelium, can be guarded against by keeping the eyelids closed between the installations, while others, there is some reason to think, were not due to the cucaine alone, but to the combined action of it and of corrosive sublimate. The subject of these local lesions will be found discussed in a previous article (British Medical Journal, August 7th, 1886). General toxic symptoms have not, we believe, been recently recorded after its use for ophthalmic purposes, although they have occurred in other circumstances; this is probably due to the fact that the solutions usually employed have been less concentrated than those employed in general surgery.

Sympathetic Ophthalmitis.—The pathology of this affection has long been a matter for discussion, and the prevalent views seem now about to deviate slightly from the road on which they have recently been travelling. At the end of 1885, Deutschmann's theory that the inflammation of the sympathising eye was caused by the passage into it of micro-organisms from the injured eye along the optic nerves and chiasma, if not universally accepted, had certainly more adherents than any other. Although, however, the experimental evidence was very strong, there were several difficulties in the way of its acceptance. It was a matter of some uncertainty what was the normal direction of the lymph-current in the optic nerves; but, in whichever direction it flowed, the theory assumed that in one eye the micro-organisms travelled against it. Some recent experiments of Gifford's (British Medical Journal, ii, 826) have placed the matter in a new light. By the injection of fluid containing coloured substances in very fine suspension, he demonstrated that in each optic nerve there are two currents, the one in the inter-sheath space from the brain to the eye, and the other along the central vessels of the retina, which, leaving the nerve with the vessels, passes to the apex of the orbit. Further experiments on rabbits with the spores of the anthrax bacillus demonstrated that the second eye became affected by their travelling to the brain along this latter route, and that they were then transmitted down both optic nerves. In connection with this branch of ophthalmology should be read the comprehensive report of the committee appointed by the Ophthalmological Society. The evidence adduced is entirely clinical, not pathological, but much of it has a most important bearing upon questions of treatment and prognosis. For the conclusions that may be legitimately deduced from the evidence, we must refer the reader to the report; we will merely allude to the fact that the view generally held in this country, that enucleation has a favourable influence upon the course of the disease in the sympathising eye is, on the whole, supported by the evidence, and that the result of operations performed upon the exciting eye do not appear to be so unfavourable as it has been the fashion of late years to consider.

Substitutes for Enucleation.—As some of these were proposed with the view of diminishing the risk of meningitis that occasionally follows the removal of the eye, this seems a fitting place to refer to a most valuable paper by Mr. Nettleship (*Transactions of the Ophthalmological Society*) upon this affection. The discussion which followed its reading showed how widely the treatment of suppurating eyeballs differs in this country, some surgeons enucleating such eyes without hesitation, while others never do so, even when the inflammation has subsided, but allow the patient to wear an artificial eye over the shrunken stump. Evisceration, or emptying of the sclerotic, and Mules's operation, of introducing a glass sphere into the cavity, have not, we believe, been very widely adopted, but a considerable number of operations must now have been performed without any

untoward result having, so far, occurred. At the Brighton meeting, Mr. Adams Frost proposed to modify the operation by enucleating the globe, and then introducing Mules's sphere into Tenon's capsule, uniting this and the muscles over it. Until results have been published, it is impossible to estimate the practical value of this operation. At the same meeting, an attempt was made by Dr. Bell Taylor to re-introduce resection of the optic nerve as a substitute for enucleation. The operation may, however, be said to have had a fair trial, and to have been definitively abandoned by most surgeons.

Refraction.—Although the past year can boast of the introduction of no new test for refraction, or any discovery as to the causes of ametropia, it will be remembered as having seen the appearance of the best book on refraction since Donders' great work. The English translation of Landolt (*On Refraction and Accommodation*) will probably for many years be the standard book upon the subject; we have reviewed it in detail (BRITISH MEDICAL JOURNAL, vol. ii, p. 681), and need only say now that it is admirably adapted to serve either as a book of reference to the practitioner, or a text-book for the student. This year has also seen the commencement of a new edition of Helmholtz's *Physiological Optics*, a book which may be said to be one of the classics of ophthalmology, although, from the large prominence given to the mathematical part of the subject, and from its more theoretical character, its circle of readers will be a limited one. It is to be hoped that a good English translation will soon make its appearance. Loring's book on *Ophthalmology*, of which only the first volume has at present appeared, dealing to a large extent with refraction, as well as with the use of the ophthalmoscope for other purposes, may be mentioned in this connection; its thoroughness and clear style will render it a favourite with English readers, and it will teach much even to those who have long been accustomed to use the ophthalmoscope. This book contrasts favourably with the second edition of Galezowski's *Traité Iconographique d'Ophthalmoscopie*, which, although covering a wider field, treats to a great extent of the same subjects. The history of the ophthalmoscope, and many of its varieties, are well described, but as most of these are obsolete, they have not much interest for the practitioner. But the account of the ophthalmoscopic changes that occur in connection with various general diseases is hardly up to date, and there are few references except to French writers; the coloured illustrations in the atlas, which forms a large part of the book, are exceedingly crude, and we have failed to find any that are in the least degree true to nature. We could wish that Loring had introduced more coloured plates, as the few that are given, although leaving much to be desired, are decidedly above the average of such productions. The shadow-test still holds its own, and is almost universally recognised in this country as the best test for diagnosing the presence of astigmatism and the direction of the principal meridians. It possesses the great advantage over direct ophthalmoscopic examination, for those who only occasionally require to test the refraction, that it is easily learnt, and as it requires no technical skill, it is not soon forgotten. As a modification of the test, for hospital work, we note the apparatus contrived by Mr. Haines (*Ophthal. Rev.*, Oct.) for rapidly changing the lenses. This cannot compare with Mr. Couper's latest optometer, but the cost of the latter will be an obstacle to its general adoption.

Myopia.—The causes and mode of prevention of myopia are subjects which always engage much attention, and this year has been no exception to the rule. The publication of an English translation of Cohn's *Hygiene of the Eye in Schools* will do much to bring before English surgeons the evidence on which many of the theories in reference to myopia rest, but it is much to be hoped that it will serve a still more useful purpose in bringing under the notice of the educational authorities the evils that may result from "overpressure," and the means by which they can be minimised. The Germans have for many years been much greater offenders in this respect than ourselves, and are reaping the fruit in the enormous prevalence of myopia in their country. In the large board-schools, most of the structural defects that were so injurious in the older buildings are avoided, but much remains to be done in the way of instructing teachers as to the capabilities of the growing eye and the mischief that may result from its improper use. There can be no question as to the inconvenience of myopia to the individual, and the injury that would accrue to the nation if its prevalence were much increased, but considerable doubt has been thrown upon the view, hitherto generally held, that all cases of myopia are liable to continue to grow worse after school life, and to develop into the so-called "malignant" form. Certainly many do not get much worse after the termination of scholastic life, and the view has gradually been gaining ground that these cases are essentially different from the progressive form. This view is warmly supported by Landolt. We merely note this tendency; we have no space here to discuss the evidence bearing on the question.

Cataract Operations.—There is not much that is new to record in connection with this subject. The plan of getting rid of the cortex by injecting a stream of water into the capsule, as suggested by Dr. MacKeown, has, we believe, given satisfaction to those who have tried it, but the necessity of arranging several preliminary details, and the uncertainty at the commencement of an operation whether it will be required, much restricts its use. De Wecker, in Paris, uses a syringe, which, to our mind, is much more convenient, and injects a small quantity of an antiseptic fluid kept ready for the purpose. Graefe's operation is still the favourite in this country; in France, on the contrary, the iridectomy is generally omitted, and the incision is usually entirely corneal. The electric light has been found most useful in detecting transparent cortex and in needling operations. We note a tendency in some quarters to return to the ancient custom of not covering the eyes with a pad or giving them any further protection than is afforded by the closed eyelids; we believe that this tendency is a dangerous one, and that the modern practice is based upon sound principles.

OBSTETRICS.

Sänger's Operation.—Pyosalpinx in the Puerpera.—The Alternatives of Craniotomy.

Sänger's Operation.—In a paper read before the British Gynæcological Society, Dr. Meadows advocated the abolition of craniotomy, and the substitution, in its stead, of Sänger's modification of Cæsarean section. No doubt something is to be said on this point, but it is to be questioned if the maternal mortality would be diminished in anything like the proportion estimated by Dr. Meadows. In the practice of some obstetricians, the maternal mortality in craniotomy has been *nil*, and it is not to be supposed that they will readily change such successful results for Sänger's operation with its about 25 per cent. maternal mortality, especially as many cases are on record where live children have been delivered in cases where craniotomy was performed in the first labour. The last word has by no means been said on this point, and it will require much consideration and discussion before anything approaching a final judgment is reached.

Pyosalpinx in the Puerpera.—Dr. Grigg has published the *post mortem* notes of four cases of patients who died in Queen Charlotte's Lying-in Hospital. Dr. Allchin, who made the necropsies, found that death was not due, as might have been supposed if no *post mortem* examination had been made, to septicæmia, but to pyosalpinx on one or other side of the uterus. This is a new and instructive light on some of the causes of puerperal mortality. It is to be hoped that the new work inaugurated by Dr. Grigg will speedily be followed up by other obstetric practitioners. It offers a fruitful field for fresh research. The conclusion arrived at was that two, at least, out of these four patients, perhaps even three, might have been saved by operative interference.

The Alternatives of Craniotomy.—Dr. Robert Barnes, at the meeting of the Association at Brighton, summed up an exhaustive contribution to the subject with the conclusions that the legitimate aspiration and tendency of science is to eliminate craniotomy on the living and viable child. The advance of hygiene, improvements in the forceps, in turning, in the induction of labour, and in obstetrics generally, have materially curtailed the field within which craniotomy can be justifiable. In pelvic contractions, immovable tumours, rupture of the uterus, atresia of the vagina or cervix, some modification of the Cæsarean section was advisable. Dr. Kinkead also read a paper on the same subject, and concluded by saying, if the Cæsarean section was performed before the vital powers were weakened and the uterine tissues injured by protracted parturition, if it were done with the means at our disposal for controlling hæmorrhage, with the continuous suture, with thorough cleansing of the abdominal cavity, with scrupulous cleanliness and care in every stage, he had no doubt that it would be as safe for the mother as craniotomy, and that, considering the very high probability of saving the child, it ought to have a prior place to the only operation sanctioned by surgery which is undertaken with the avowed object of destroying life. Finally, he pointed out that to reduce the bulk of the child, or to extract its mutilated remains through a pelvis of two and a half or less conjugate, was an operation of extreme difficulty, one occupying a very considerable period of time, and needing for its successful accomplishment, as far as the mother was concerned, very great experience, and an amount of manual dexterity hardly to be acquired out of large cities; while, on the other hand, the Cæsarean section was an easy operation, capable of successful performance by any surgeon of ordinary skill.

GYNÆCOLOGY.

Ovariotomy. — Oöphorectomy. — Polymastia. — Foreign Gynæcological Literature.

Ovariotomy.—In May, we published a remarkable original article by Mr. Lawson Tait, on one hundred and thirty-nine consecutive ovariotomies performed in the years 1884 and 1885 without a death. Besides the description of the brilliant results which the author could claim, the paper was important for several other reasons. The practice of flushing out the peritoneum with hot water was strenuously advocated. An open contempt of antiseptic principles was expressed throughout, the author declaring that the fluid employed for the purpose just named was plain unfiltered tap-water, warmed by the addition of enough from the boiler, and full of germs and small beasts of thirty-four different varieties. Mr. Tait further expressed himself in favour of exceedingly limited abdominal incisions. In October, Mr. Knowsley Thornton read a paper at the Royal Medical and Chirurgical Society on "Three Hundred additional Cases of Complete Ovariotomy and Twenty Cases of Exploratory Operation," in which he noted that all these operations had been conducted with full antiseptic precautions, and claimed a progressive decrease in mortality throughout his series. In the discussion which followed, Dr. Playfair observed that he had recently operated on five cases in succession at King's College Hospital without the spray; indeed, on one occasion, when he asked an assistant to prepare it, he was told that there was not a spray-producer in working-order in the hospital. Strict antiseptic precautions, as the term was understood a very few years since, is certainly becoming less and less practised by ovariotomists; yet there do not appear as yet to be sufficient grounds for its complete abolition. It must be remembered that the successful non-antiseptic operators are all surgeons of very large experience, and their triumphs must be chiefly due to their skill.

Oophorectomy.—The question of oöphorectomy and removal of the appendages has been the subject of discussion at the Section of Obstetric Medicine, during the Annual Meeting, when the debate was led by Dr. Thomas Savage, at many meetings of societies, and in the pages of several publications. The October number of the *International Journal of the Medical Sciences* contains a Symposium on Castration in Mental and Nervous Diseases. Sir Spencer Wells, in a vigorous article, spoke in terms of the strongest reprobation against the freedom with which some surgeons resorted to oöphorectomy. That operation, he said, referring to the removal of healthy ovaries, might be advised in some cases of uterine fibroids, and in uncontrollable uterine hæmorrhages, in certain malformations of the genital organs, pelvic deformities and accidental obstructions of the vagina, and in a very limited class of cases of ovarian dysmenorrhœa or neuralgia, which had resisted treatment and endangered life or reason. In nearly all cases of nervous excitement and madness he considered it inadmissible. The patient, if sane, should always be asked for her consent, the consequences of the operation being explained to her at the same time. The excision of morbid ovaries and appendages should be distinguished from oöphorectomy, and ought not to be done without due consultation, as in most other cases of abdominal section. In nymphomania and mental diseases Sir Spencer Wells considered that it was quite unjustifiable. Dr. Hegar contributed the second article in the symposium. He maintained that the removal of normal ovaries for nervous diseases was justifiable, when the operator could feel certain that the nervous symptoms were due solely, or almost solely, to disease of the sexual organs. The after-results should be watched, as the artificial menopause induced by the operation was often attended with more serious complications than those which are not rarely observed during the natural "change of life," and the operation might set up local pelvic inflammations, one of the symptoms of which complication was a periodical non-menstrual discharge of blood from the uterus. The last article in the symposium was written by Dr. Battey. He took up a different line of argument, and declared that the ovaries were themselves diseased in those cases of nervous disorders, which he classified as oöphoro-mania, oöphoro-epilepsy, and oöphoralgia. He claimed excellent results, when the operation was performed for the last two conditions, judging from cases which had been operated upon more than two years ago; but his series of those cases did not as yet exceed 36; 23 he reported "cured" and 7 "improved." It was, to a great extent, in reply to the first article in the symposium that Mr. Lawson Tait read a paper "On the General Principles involved in the Operation of Removal of the Uterine Appendages," at the Medical Society in November. He expressed great objection to some of the terms which had been applied to this operation, and agreed with the substance of Sir Spencer Wells's arguments in the symposium, although he differed in matters of detail. Above all, he declared that the presence of irreparable disease in the appendages could be diagnosed with accuracy. He had successfully diagnosed cases since 1871, and had also taught large numbers of practitioners how to make such a diagnosis. He urged that most cases of disease of that kind suitable for operation would naturally come into the hands of men who were responsible, by their position in the profession, for their proper treatment, and that would be a barrier against improper operations. In reply to the remarks of those who joined in the discussion which followed his paper, Mr. Tait observed that tentative operations, where the abdomen was opened and attempts made to unravel the ovaries and tubes by breaking down old adhesions, without amputation of the appendages, had hitherto proved unsatisfactory. The fact remained that, at the close of the year 1886, the questions, surgical and ethical, relating to removal of the appendages, remain unsettled. In connection with the same subject, the inquiry instituted this year at a Liverpool Hospital, concerning the number of operations of this class performed in its wards, and the litigation to which one case gave rise will not soon be forgotten. The pioneers of established operations all had to bear opposition and abuse. This must be remembered, and due consideration should therefore be shown to those who, without the light of the experience of others, are performing operations which are not yet established. It cannot, at least, be imputed that they hide their new ventures from publicity; on the other hand, the medical public will demand similar candour from all who follow in their footsteps.

Polymastia.—Some good monographs on supernumerary breasts and nipples, and on milk-producing tracts of integument, have appeared in the course of the year. Dr. Champneys read a paper on the latter subject before the Royal Medical and Chirurgical Society in April, in which he showed that in lying-in women the sebaceous follicles of the skin were capable of producing true mammary secretion. Dr. Neugebauer, Jun., has published a paper on a case of multiple nipples in the *Centralblatt für Gynäkologie*, and several articles on the same subject have appeared in German and Russian medical periodicals.

Foreign Gynæcological Literature.—There is no space left for a review of important contributions in foreign medical papers. Some valuable papers have appeared in the *Archiv für Gynäcologie*. The first number of a new monthly journal, the *Nouvelles Archives d'Obstétrique et de Gynécologie*, appeared in Paris last January, bearing on its title-page several well-known and honoured names. It is a journal of high merit, and its later numbers keep up the reputation of the first which was issued.

THE POOR-LAW MEDICAL SERVICE.

In the first week of the year now drawing to a close we published the decision of the Local Government Board (Ireland) on the case of Dr. Ringwood, of the Kells workhouse, who had been subjected to much persecution by a majority of his board of guardians, consequent on his reporting the unsanitary condition of the workhouse and its offices, whereby much sickness had prevailed among the inmates and officers. The subject had been referred to a committee of the board, who brought up a report denying the correctness of Dr. Ringwood's statements, and recommending that the Local Government Board should be appealed to with a view to the dismissal of that gentleman. An official inquiry was held, when it was found that Dr. Ringwood's reports were fully borne out, and the Department exonerated him from all blame, and commended him for the fearless and honest way in which he had performed his duty. The Irish Local Government Board has always manifested the desire to support its medical officers, and is therefore fearlessly appealed to whenever a medical officer feels that he has been unjustly treated by the local board. The action of Mr. Justice O'Brien at the winter assizes at Cork was also referred to at a meeting of the Poor-law Medical Officers' Association, from which it appeared that, complaint having been made by a medical witness at the insufficiency of the payment made to him, the judge not only concurred with him in such complaint, but intimated to the Crown officials that he should insist on greater liberality being exhibited towards these gentlemen, who often attended at great inconvenience and no small expense, when they gave evidence in Crown cases. He also threatened to commit such officials for contempt of court if they disregarded his injunctions. It was proposed that the judge should be thanked and the Treasury appealed to. On January 23rd we gave our decision as to the conduct of the police who were in the habit of sending for the workhouse and district medical officer to attend persons who had been picked up drunk or ill and taken to the station-house, wrongly assuming that it was part of the duty of such officer to attend such cases gratuitously; we showed that he (the medical officer) would be justified in refusing to attend, as the police had no authority to send for him, unless upon the understanding that such services were paid for. On January 30th, 1886, we again re-

ferred to the case of Mr. Stokes of the Oundle Union, who having resigned his office in consequence of the insufficiency of his remuneration, was thereupon dismissed from his appointment as public vaccinator; a non-resident gentleman was appointed in his place, though distant eight miles from the district, and that irregular—nay, illegal—appointment was confirmed by the Department on the advice of the local inspector of the district. In the JOURNAL of February 13th, page 328, we published a communication from the Oundle Board of Guardians, in which they attempted to traverse our statements, when we pointed out that our annotations were founded on reports in the local press, and that it was impossible to dispute the correctness of our observations, as they were beyond question, and, further, that they were discreditable to the administration of relief in the Oundle Union.

On page 370, February 20th, we directed attention to the action of the Royston Board of Guardians, from which it appeared that one of the guardians had given notice that he should, at the next meeting of the board, move to reduce the salaries of all the officers, when we pointed out that the officials need not be alarmed—that all attempts of such a nature would inevitably fail of effect; this turned out to be strictly correct.

On March 6th, page 469, we called attention to the decision of the Department on the interpretation to be put on the 182nd and 183rd articles of the General Orders, from whence we learn that the Department holds that a district medical officer must be in attendance at, or immediately after, a confinement, to entitle him to an extra fee for any difficulty arising out of such case; but that the guardians would be allowed to give a gratuity to any officer where exceptional circumstances arose. We understand that, although the Evesham Board of Guardians had denied that any legal claim could be maintained, yet that they ultimately awarded Mr. Haynes £1 for his extra trouble.

On March 13th, page 527, we advised a correspondent as to the fee he should charge for a consultation with a neighbouring practitioner, as to the mental condition of a non-resident lunatic pauper, when we pointed out how necessary it was that full information should be sent by the querist as to all the particulars of the case, as it was practically impossible to give a satisfactory answer when, as in the case submitted to us, such a vague statement had been forwarded.

On March 27th, page 623, we drew attention to the manner in which Mr. Bridger, a district medical officer of the Chesterton Board of Guardians, had been treated by his board. Mr. Bridger's attention had been called by some poor women to the case of an aged woman by the name of Mary Bowers, who had been found by them lying on the stone floor of her room opposite the fire-place, in which there was no fire, cold and exhausted. By great attention she was moved, put into bed, and restored. Mr. Bridger finding that she had no one to look after her, directed one of the women to see the relieving officer, tell him of her condition, and ask him either to send some person to look in upon and attend to her, or to direct her removal to the workhouse. The relieving officer having elicited from the messenger that the old woman objected to go into the workhouse, neither visited her nor sent anyone to take charge of her. Two days afterwards she was again found on the floor in front of a fireless grate, quite dead. A coroner's investigation having been held, and the relieving officer having no explanation to offer for his evident neglect, the jury censured him, the coroner remarking that, if Mr. Bridger had put his request in writing, instead of sending a verbal message, he would have had him committed for manslaughter. Subsequently this board held an inquiry of their own, at which Mr. Bridger was subjected to most disgraceful bullying. Ultimately a resolution was proposed, and unanimously adopted, exonerating the relieving officer altogether, but when a similar resolution was proposed in reference to Mr. Bridger, it was only carried by a majority of three in a board where fifteen members were present. This board has been always notorious for the high-handed and unjust way in which it has treated its medical officers. In the issue of April 3, page 665, we published the first of several annotations on the case of Mr. A. B. Simpson, senior medical officer of the Birmingham Workhouse, who had been called on by the Local Government Board to send in his resignation, consequent upon an official inquiry into his management of the establishment. Mr. A. B. Simpson has been in hot water with his board on several occasions during his tenure of office, and there has been more than one official inquiry. On a previous occasion it had been recommended to the board by the Department that Mr. Simpson should be called on to resign, but a majority of the board having pronounced in his favour, he was, though reluctantly, allowed to remain. On this particular occasion it would appear that the chairman of the Workhouse Committee had requested his attendance in certain of the sick wards, nominally with the object of investigating the condition of the drainage. At their meeting the chairman took on himself to intimate to Mr. Simpson that he had come to the conclusion that the outbreak of childbed fever which had on two or three occasions taken place was due to him, the medical officer, and that he must require him to relinquish his superintendence of such wards and turn them over to his assistant. This was done without preconcert with his colleagues; it was not put in writing, nor was the decision of the chairman communicated to the master, matron, head nurse, the clerk of the board, or to the board itself. A fresh case having subsequently occurred, a coroner's inquiry was held, when it came out that Mr. Simpson had wholly disregarded this irregular—nay, impertinent—request of the Chairman, who could have no authority for his expression of opinion, nor for his requirement. At the request of the Board, an official inquiry was held by Mr. Henley and Dr. Mouatt, who not only reported adversely to Mr. Simpson, but went the length of requiring that he should send in his resignation, not so much for previous default, but for having disobeyed the order of this chairman, calling on him to relinquish his attendance on parturient women. This comment was so utterly at variance with the generally understood principles upon which orders were given under the Poor Law—which has never recognised the right of an individual guardian to issue orders, or to exercise authority except when acting as the mouthpiece of a committee, and which requires that all such orders shall be communicated in writing to the officer and reported to the Board—and the request itself was so silly and uncalled-for, that the Poor Law Medical Officers' Association felt constrained to interfere and memorialise the Department in Mr. Simpson's favour. The only result was that, in acknowledging the letter, the Department evaded the point that had been raised, and set out in detail all the peccadilloes which Mr. Simpson had been alleged to have committed. Ultimately, Mr. Simpson, having refused to resign, was dismissed from office. In April and May nothing particular occurred, save that in the early part of the last month, Dr. Rogers, the President of the Poor Law Medical Officers' Association, became permanently disabled, owing to a severe attack of bronchitis, followed by anasarca and morbus cordis. The chest-affection had been excited by exposure to night-air, in a visit paid to the Westminster Workhouse, to see a pauper belonging to St. Saviour's Union, who, with about sixty others, had been taken in as boarders. It unfortunately happened on the night which was the very worst of last winter. The story is interesting, as it enables us to record that the board of guardians of this union expressed the warmest sympathy with Dr. Rogers, unanimously voted him a lengthened leave, and undertook to pay his deputy for him whilst he was away recruiting his health.

On page 1089 (June 5th), we reported the case of Dr. J. Hurley, of the Wincanton Union, who, on an overseer's order, had attended a case of midwifery. On sending in his claim to the board of guardians, payment was refused, on the plea that the overseer had not reported the case to them, and he was referred to their official for his fee. Dr. Hurley, having written to the Local Government Board, was shortly after informed that, if he would include this fee in his next quarter's list of extras, it should be paid. No other ending could have been expected, as it was distinctly illegal on the part of the board of guardians to refuse payment of the fee when it was first applied for. On the same page, we alluded to the rule governing the fees for performing capital operations, and what should be the course to be followed by a relieving officer when required to apply to a district or other medical gentleman in cases of pauper-lunacy.

In our issue of July 17th, page 137, will be found a report of a case which came before the guardians of the Steyning Union. It would appear that the medical officer had sent in a claim for two cases he had attended, and the clerk run his pen through the same. It would also appear that the medical officer had been called without any order to attend a poor woman in labour. But other members of the family were ill at the time and in receipt of relief. Here the guardians, after some wrangling, granted the fee. The other case was different. He had been sent for in the night, the woman having been very ill, but no order was brought. Here the Board refused to pay anything at all, whereupon Mr. Medcalf complained that it was very hard on him that he should be called out of bed and get nothing for it. We pointed out at the time how foolish it was for district medical officers to attend to cases of urgency without an order, as when the services had been rendered the majority of boards of guardians would repudiate their liability—that overseers and assistant overseers were to be found in every parish, and when an order had been obtained from one of these, the guardians could be made to pay.

On the same page, we urged upon a medical officer whose fee for certifying in cases of lunacy had been reduced by his board, to write and point out that, considering the risk which medical men are

exposed to, if with the best faith in the world they certified in cases of lunacy, it would be in the highest degree unfair to cut down the fee. We also advised that he should get his colleagues to do the same thing.

On page 387, August 21st, will be found a full report of the work of the Poor-law Medical Officers' Association, extracted from our columns for the year ending with the Annual Meeting at Brighton. That meeting of the Poor-law Officers' Association was very well attended, and was rendered interesting by the very great sympathy expressed with Dr. Rogers in the serious illness which had overtaken him, and which had compelled him to resign his poor-law appointments, and his practice generally, of which more hereafter.

In the same issue will be found a reply to a question, submitted to us by a Scotch parochial medical officer, as to his dismissal from his appointment, and inquiring whether he would be entitled to compensation, and to whom he should apply. On page 398 will be found both question and answer, as well as the reply to the question of leave of absence, etc., and the fee for the examination of a lunatic.

On page 608, September 25th, will be found an annotation on the success which attended the spirited effort made by Dr. J. B. Cane, Dispensary Medical Officer of the Waterford Union, to get an increase of the amount of fee for visiting and reporting on the condition of labourers' cottages from 5s. to 10s. 6d.

On page 657, October 2nd, we published the resolution adopted unanimously by the Westminster Board of Guardians, at the meeting of that Board on September 27th, when Dr. Rogers's letter, announcing that, owing to continued ill-health, he was compelled to resign his appointments, was read.

On page 795, October 23rd, will be found another illustration of the readiness with which Poor-law medical officers will visit paupers, in cases of urgency, without any order, expecting that their boards will pay them the customary fee. We have so frequently advised them as to the course they should follow, that we much fear that many of them could not have read what we have written for their guidance.

On page 955, November 13th, will be found a report of the proceedings of the Westminster Board of Guardians, at their meeting on Nov. 5th, when the question of the superannuation of Dr. Joseph Rogers—notice for which had been given by Mr. Samuel Bonsor—who, for nearly sixty years, had represented the parish of St. Anne's, Soho, first on the Strand, and for the last eighteen years on the Westminster Union, came on for discussion. The Board was unanimous that superannuation allowance should be granted for the fourteen years he had been medical officer of the Westminster Workhouse, but a minority held that it should not be given for the twelve years he had held a similar position at the Strand. The majority took a contrary view, and it was based on these grounds—that St. Anne's, Soho, formed part of the old Strand Union, up to the time that the union was broken up in 1868, and that it was during the preceding twelve years, that Dr. Rogers had attended the sick-poor of this parish, which was the largest and most populous parish in that Union; that on the resignation of Mr. French, the fund, from which that gentleman was paid his superannuation allowance, was derived from St. Anne's and St. James's conjointly, seeing that that parish was, in 1868, joined on to St. James's to constitute the Westminster Union, and seeing also that Mr. French had never attended the in-door sick of St. Anne's at all. The Board was desirous of granting to Dr. Rogers the largest superannuation allowance in their power, and if the amount had been determined on the services rendered to the Westminster Union only, the grant would have been very small.

By the sanction of the Local Government Board to the grant being made for the services rendered to both parishes, an important precedent has been established, which it would be well for Poor-law medical officers to bear in mind.

In our issue of December 4th, page 1128, in answer to a correspondent who had written for our advice, we pointed out what was his duty in reference to weak-minded and imbecile persons so frequently to be found in workhouses, namely, that their names should be entered in a book specially provided for the purpose; that the fact of such entry should be brought to the knowledge of the master and and matron, who should have charge of such book; and that the entry in question should be understood by these officials to imply that the imbecile, or weak-minded person, could not be allowed to leave the workhouse; and that the book should be laid on the board-room table at each meeting of the board, and be open to any poor-law inspector or commissioner in lunacy who may visit the workhouse officially.

PUBLIC MEDICINE.

A Barren Session.—Work of Parliamentary Bills Committee.—Lunacy Acts Amendment Bill.—Burgh Police and Health (Scotland) Bill.—Regulation of Dairies.—"Milk Scarlatina." Sanitary Survey.—Unhealthy Health-Resorts.—Typhus Fever.—The Plumbers' Company.—The Metropolitan Asylum Board.—Metropolitan Water-Supply.—Small-pox in Montreal and Jamaica.

A Barren Session.—The ordinary current of public affairs has been so seriously deranged by the continuous discussion of Irish grievances and by the changes of Ministry, that the year has been almost barren of useful domestic and sanitary legislation. The reform of local government has made no visible progress, though a comprehensive measure would appear at last to be in preparation by the Government under the guidance of Mr. Ritchie, the President of the Local Government Board. Its introduction to Parliament, at the earliest possible moment, has been promised, but its active prosecution must depend upon the time occupied, when Parliament meets, in reforming the procedure of the House of Commons, and in effectually stemming the tide of obstruction.

The Parliamentary Bills Committee.—The political interests of the medical profession have, as hitherto, been carefully looked after by our Parliamentary Bills Committee; but, for the reasons already indicated, there was comparatively little opportunity for effective action by the Committee. A full report of the Committee's proceedings will be found at page 275 of the JOURNAL for August 7th.

The Lunacy Acts Amendment Bill of 1885 was reintroduced last session by Lord Chancellor Herschell, with large modifications; but, owing to the defeat of the Government, the Bill was withdrawn. The Subcommittee of the Parliamentary Bills Committee, that had been appointed specially to consider the subject, had, however, secured the incorporation in the measure of a number of important recommendations. If the amended Bill be again introduced, and be passed with some comparatively slight alterations, it will be a great boon to the insane, and to those who have to assume responsibility with regard to them.

Burgh Police and Health (Scotland) Bill.—This bulky Bill has been introduced in four successive sessions of Parliament, and during the past session it made practically no progress. Before such a measure becomes law, a careful inquiry is needed into the whole question of the relations of private medical men with local sanitary authorities as regards cases of infectious disease occurring in their practice.

Regulation of Dairies.—The only piece of general sanitary legislation of the year consists of a single clause, which, owing in great measure to the persistent representations of the Parliamentary Bills Committee in past years, was incorporated in the Government measure amending the Contagious Diseases (Animals) Act of 1878. By this clause (No. 9) the duty of regulating the sanitary arrangements of dairies, cowsheds, and milkshops is transferred from the Privy Council and the Courts of Quarter Sessions to the Local Government Board and the local sanitary authorities throughout the kingdom. We recently took occasion (in the JOURNAL of December 4th, page 1127) to comment on this involved and somewhat clumsy clause, and we pointed out that, although the object which it aimed at is one of paramount importance to the public health, and one which should have been secured many years ago, yet the amendment of the law is by no means as complete and satisfactory as it might have been. No doubt the haste with which the Bill had to be passed through its various stages prevented the details of the scheme from receiving their due share of attention. The chief defect of the measure consists in the fact that sanitary authorities and their officers have no recognised right given them to make observation of diseases in the cows themselves in cases where the purity of the milk is in question. Even the veterinary authorities, in dealing with "diseases" as defined by the Act of 1878, are restricted to cattle-plague, pleuro-pneumonia of cattle, and foot-and-mouth disease. Neither tubercle, anthrax, nor scarlatina in the cow is under regulation or observation.

"*Milk Scarlatina.*"—This last consideration is of especial importance, in view of the researches which have been undertaken, and are still being pursued by Mr. W. H. Power and Dr. E. Klein, F.R.S., under the direction of the Local Government Board, as to the possible relation of scarlatina in the human subject to a disorder having similar characters in the cow. These researches were first undertaken in consequence of the observations which Mr. Power made, in the early part of the present year, when investigating a severe and curious outbreak of scarlatina in some London districts that had derived their milk supply from a farm at Hendon; and in a very interesting and important report on the subject, issued some months ago by the depart-

ment, it was demonstrated beyond reasonable doubt that the outbreak of scarlatina in question was dependent upon a diseased condition of the milch cows at the farm—a condition which was first introduced by some recently-arrived animals, and which subsequently spread among the animals after the fashion of an infection. Dr. Klein's scientific investigations on this subject are still being carried on, and we have reason to believe that the report of them, which is promised to be given in the forthcoming report of the medical officer of the Board, will be found strongly to confirm previous observations as to the relation of disease in the cow to the infective property which may be found in the milk of that cow.

The Sanitary Survey.—The continued presence of cholera in southern Europe, with which we have dealt in a separate article, has tended to keep alive in a special manner the public interest in promoting good sanitary conditions throughout the country. It is satisfactory to find that the Local Government Board has not failed to make use of the possible appearance of cholera to induce negligent authorities to undertake sanitary improvements which, apart from cholera, are needed to resist typhoid and filth-diseases generally. With this object, the Board's medical staff have continued during the past year the sanitary survey of the country which they began in 1884. The survey of the port and riparian districts was under the more immediate supervision of Dr. Blaxall. That of inland districts was guided by Dr. E. Ballard, and included investigation of the cleanliness, sewerage, and drainage, the methods of excrement and refuse removal, water-supply, the condition of dwellings, the means for isolation of infectious disease and for disinfection, and the general sanitary administration, of the districts visited. The blue-book on Cholera recently issued by the Department gives a full account of the survey work up to March last, and from it we gather that, on the whole, we are now immeasurably better prepared to resist cholera than we were twenty, or even ten, years ago. The sanitary arrangements of port and riparian districts, upon which our security against the spread of cholera must very greatly depend, have been found excellent in some places—such as London, Tyne Ports, Liverpool, Swansea, Cardiff, Newport and Bristol—but in others seriously defective—such as Plymouth, Cowes, Hartlepool, Dartmouth, Exeter and Grimsby. The whole of the inspectors' reports, which are analysed at some length in the Blue-book already mentioned, show that the duty of caring for the public health is becoming increasingly appreciated by English communities, and that the recent survey (which we are sorry to understand was discontinued at the end of November) will have conduced to a more general fulfilment of sanitary duty by the representatives of those communities.

Unhealthy Health resorts.—During the year we have on several occasions found it necessary to call attention to the defective sanitary arrangements of several of our so-called health-resorts. Newquay, Cowes, Shoreham, Swanage, and others, have all called forth adverse criticism. It is to be hoped, in the interest of the prosperity of those places, as well as of persons who resort to them in search of health, the local authorities will no longer delay to remedy the unwholesome conditions that have been revealed.

Typhus Fever.—With the advent of winter, and the season of distress, we hear of the presence of typhus in some of our large towns. Cases have been recently reported in Liverpool, Leeds, and Middlesbrough.

The Plumbers' Company.—During the year this ancient City guild has entered on a new sphere of usefulness. Since sanitation first became a recognised science it has been a matter of very general complaint that much of the work done by so-called plumbers has been "scamped," and that as a consequence the health of individuals and of communities has frequently been endangered. With a view to meet this well-founded complaint, the Plumbers' Company has organised a system of registration of properly qualified plumbers, which has already received the recognition of the President of the Local Government Board, and of the leaders of sanitary science, and which deserves the support of sanitary authorities and sanitary officials generally.

The Metropolitan Asylums Board.—The difficulties which have of late years waited upon this board in their endeavours to provide adequate hospital accommodation for metropolitan small-pox cases are too notorious to need any detailed reference here. Suffice it to note that the results of Mr. Power's investigation, referred to in our last Retrospect, of the influence of the Fulham Hospital on the prevalence of small-pox in the immediate neighbourhood, and the evidence which the Local Government Board have acquired in support of those results, have greatly influenced the board in their dealings with this question. They have consequently shown considerable hesitation to take the responsibility of approving any scheme which would entail the aggregation of numerous cases of small-pox in one locality.

Metropolitan Water-Supply.—In connection with the further powers which the East London, Lambeth, and Southwark and Vauxhall Water Companies obtained from Parliament during the past year, it is of interest to note that the new powers of raising additional capital were given on such conditions as will ensure to the ratepayers and water-consumers a share of the profits that will be earned by such new capital; and the formation of a fund towards purchasing the undertakings in the public interest has also been provided for. During the autumn, serious complaints were made respecting the presence of eels in the mains of the East London Water Company. These creatures gained admission to the mains some years ago, through an accident to the filter-beds; and according to the evidence of the health-officers of West Ham, serious illness has, in several cases, been caused through the use of water from a service-pipe in which an eel had become entangled, and had decomposed. The company are prosecuting their difficult, but absolutely essential, duty of ridding their mains of eels and fish. Another source of danger to the consumers of the water supplied by those companies that draw from the Thames, is the discharge into the river, a few miles above the intake of the water-companies, of the crude sewage of Staines. This subject has for several years been under consideration by the Staines sanitary authority, and is one which needs to be immediately dealt with.

Small-pox in Montreal and Jamaica.—Apprehension has existed at some of our western ports lest small-pox should be introduced from Montreal or Jamaica, where the disease has been prevalent. A case actually did occur on board a vessel which arrived at Bristol from the former place, but proper precautions prevented any mischief resulting. In Montreal, small-pox was severely epidemic in the later months of 1885, and extended into the early months of the present year. Before it died out it had taught an instructive lesson as to the efficacy of vaccination as a prophylactic of small-pox, inasmuch as the disease was confined almost exclusively to the unvaccinated, whose ranks, especially amongst the French portion of the community, have unfortunately been greatly swelled of late through the assiduity of some anti-vaccination agitators. In Jamaica, small-pox broke out on March 12th last, and has since prevailed persistently in the island. Up to November 3rd, there had been about 1,800 cases and 256 deaths since the outbreak, and, of these, 1,090 cases and 190 deaths occurred in the town of Kingston. There is thus a curious, but at present unexplained, higher proportion of deaths to cases in Kingston than in the remainder of the island. Stringent measures have lately been adopted by the Colonial Government with the view of stamping out the epidemic.

PARLIAMENTARY BILLS COMMITTEE.

Lunacy Acts Amendment Bill, 1886.—Early in the year (see BRITISH MEDICAL JOURNAL, February 27th, 1886, pp. 415-6) the Parliamentary Bills Committee appointed a Subcommittee to consider the provisions of the Lunacy Acts Amendment Bill, 1886, introduced by the Lord Chancellor in the House of Lords. The Subcommittee adopted a series of suggestions, embodied in a memorandum, which, together with an introductory letter, was transmitted to the Lord Chancellor. Of these suggestions, the most important were:

(1) That the same degree of protection as was afforded by the Bill to those who sign certificates of insanity should be extended to those who have the care of the same patients subsequently.

(2) That the Bill should be amended by omitting the prohibition contained in it of the reception of a lunatic (other than one of those so found by inquisition) as a "single" patient; that is to say, in a house unlicensed for the reception of lunatics.

(3) That the clauses confiscatory of the property of private asylum proprietors should be omitted or modified, or the question of compensation entertained.

(4) That the provision should be modified by which any lunatic might be examined at the request of anyone, and discharged, if certain certificates could be obtained.

(5) That the provisions relating to workhouse medical officers should be modified; as also those relating to periodical reports and certificates from asylum medical officers.

A courteous reply was received from the Lord Chancellor, and, after consideration, several of the suggestions of the Committee were practically adopted by the Lord Chancellor, who introduced amendments of the Bill, in committee or recommitment in the House of Lords, making material, and, in some cases, fundamental changes in the operation of the Bill. Particularly was this the case with respect to the suggestion as regards "single" patients, and that concerning the clauses of the original Bill having confiscatory effects on private asylums. Other less important suggestions were also adopted. Yet the amendments of the Lord Chancellor with regard

to single patients introduced a departure from the general method of the Bill, both as regards the requirement of an order of the "Judge in Lunacy," and as regards the arrangements (liable to abuse) with respect to cases certified to be suffering from temporary unsoundness of mind, or senile mental decay, or to be desirous of voluntarily submitting to treatment. Another departure, of inexpedient nature, was the omission of the existing magisterial examination in pauper cases.

In a second memorandum, suggestions were forwarded to the Lord Chancellor (1) with respect to the extension to all medical men concerned in lunacy cases of the provisions of the Bill protective of the signers of certificates; (2) with respect to the release of lunatics under the method provided in the Bill, as already referred to; (3) with respect to the complex and detailed reports and certificates required from asylum medical officers in the Bill; and (4) with respect to the punitive clauses of the Bill bearing on workhouse medical officers, and that bearing on their non-remuneration. Shortly after this, the political crisis led to the withdrawal of the Bill; and the whole subject stands over till the next session of Parliament.

THE CHOLERA.

Cholera in Italy, Austria-Hungary, Spain, France, Japan and the Corea, and India. — Precautions taken in England. — Cholera on board a Troopship. — Dysentery at Riga.

EVER since cholera first made its appearance at Toulon in June, 1884, it has, like a spectre, been hovering over Southern Europe. Fortunately, but for no well-defined reason, it has not extended to Northern Europe, although for three seasons it has been threatening to do so. In a recent number of the JOURNAL (October 23rd, page 772), we gave a summary of the havoc which cholera wrought in 1884 and 1885; and from that summary it may have been observed that the disease, once started at Toulon and Marseilles, seemed to radiate northwards to Paris, and eastwards throughout the Italian Peninsula; whilst Spain, to the south-west, was soon afterwards invaded and terribly scourged. During the year just ended, however, the disease seems to have somewhat changed its points of attack, and has centred more particularly in the western and northern shores of the Adriatic, whence it spread north-eastwards through Carniola and Croatia, to Agram, Raab, Pesth, and Szegedin; and south-eastwards to Priedor and Novi in Bosnia, Belgrade in Servia, and even Tirnova in Bulgaria.

Cholera in Italy.—During December, 1885, sporadic cases were reported from Venice. This prevalence continued until the end of April last, by which time 116 cases and 80 deaths had occurred in the city since the beginning of the year. Early in May a sudden and rapid increase took place in the number of cases, and in the first week of June as many as 218 cases and 132 deaths were reported. The disease continued in Venice, with decreasing severity, until October, when the city was declared to be practically free from it. Altogether, not less than 1,000 cases, with about 620 deaths, have occurred in the city during the past year. It may here be noted that in some quarters it was asserted that the Venetian disease was not true Asiatic cholera, whilst others described it as "choleraic typhus." Meanwhile, however, an epidemic of undoubted Asiatic cholera was rapidly spreading in the south-eastern provinces of Italy. The disease broke out early in April at Brindisi, which is situated in a flat unhealthy locality, and by the 15th of that month 72 cases, of which 15 were fatal, had occurred in the town. From Brindisi it spread rapidly to the adjoining towns of Latiano, Francavilla, Fontana, Lecce, Bari, Barletta, etc., creating panic in the neighbourhood, and anxiety in the whole country. The sanitary arrangements of these places seem to be bad in the extreme, and, at Latiano especially, the polluted wells are charged with having been mainly instrumental in spreading the disease. During the summer, the towns of Chioggio, Treviso, Padua, Ferrara, Ravenna, and others in the valley of the Po, and in the neighbourhood of Venice, suffered somewhat severely from choleraic sickness. A few cases occurred at Torre Annunziata, near Naples, early in September, and at Rome in October. In September, Sardinia was invaded; but, although the disease was virulent in character, it does not seem to have diffused itself widely in the island. In the middle of October, cases were reported from Genoa, and further cases followed during November; but no cases appear to have occurred in the town, or, indeed, in the whole peninsula, since the 27th of the last mentioned month. It is estimated that up to the middle of October, when cholera as an epidemic may be said to have come to an end in Italy, 21,000 cases and 8,650 deaths had occurred throughout the peninsula. Some towns of Italy seem to have profited by their past experiences of cholera, and by the teachings of the Roman Sanitary Conference of last year. In Rome itself nearly all the wells have been filled up, and a wholesome supply of water provided, much to the benefit of the public health. Naples also seems to be improving its hygienic conditions. But at Florence, where it is asserted that the well-waters are very generally grossly polluted, and that cesspools of the worst sort prevail, there seems still to be great reluctance to effect the needed sanitary improvements.

Cholera in Austria-Hungary.—In December, 1885, occasional cases of cholera were occurring in Trieste, a town of about 135,000 inhabitants, situated at the extreme north of the Adriatic Sea, and of special importance as constituting the centre of Austrian foreign commerce. The disease died out in this town about Christmas, 1885, but broke out again on June 7th last, and from this centre rapidly spread through Fiume, Istria, Carniola, Gorizia-Gradisca, Croatia and Dalmatia, and into Bosnia and Servia. It is officially reported that, up to the middle of November, when the virulence of the epidemic may be said to have passed, about 900 cases, and 550 deaths, occurred in Trieste alone, and that in the province of Istria 672 cases, and 374 deaths, had occurred. Bad hygienic conditions prevail in all these districts. In some places the populace are reported to have been guilty of acts of barbarism, such as was common last year in Spain. They accused the local doctors of poisoning them, and in some cases actually resorted to violence. On September 12th cholera broke out in Pesth, where its advent had for some time been dreaded. It rapidly spread, owing to the execrable sanitary arrangements of the town, and before it died out, about November 20th, more than 1,200 cases, and 500 deaths, had occurred. Very severe censures were passed on the unpreparedness of the town to resist the cholera. The water-supply was described as being at all times indifferent in quality and inadequate in quantity, and it was said that over 30,000 of the inhabitants—a tenth of the total population—lived in damp underground rooms, where ventilation, a proper supply of water, and cleanliness were impossible. The town of Raab, which is situated on a tributary of the Danube, about half-way between Pesth and Vienna, and Szegedin, which is about 100 miles to the south-east of Pesth, suffered to some extent at the same time as the Hungarian capital. As in the case of Venice, some doubts have been expressed as to whether all the cases at Trieste returned as "cholera" were cases of the true Asiatic disease, and it has been noticed as a significant fact that during the summer no cases of diarrhœa or dysentery were recorded in Trieste, although those diseases are usually common there.

Cholera in Spain.—Spain has suffered comparatively little this year from cholera. In January the disease was still lingering in Malaga and Algeciras, where it had caused such great mortality during the previous summer; and during the first three months of the year a considerable number of cases occurred at Tarifa, not far from Gibraltar. But the disease seems then to have disappeared from Spain until October, when a fresh crop of doubtful cases was reported from Malaga.

Cholera in France.—France also has had but little cholera this year, but the little that it has had, occurring as it did in the Department of Finistère, close to our own shores, has had especial interest for England. No cases, so far as is known, have occurred in Finistère since May last; but during the first four months of the year the disease undoubtedly prevailed to an appreciable extent at Brest, Concarneau, Douarnenez, Audierne, and other places in that locality.

Cholera in Japan and the Corea.—Whilst we have been watching the progress of cholera nearer home, the disease seems to have been ravaging the greater part of the Corea, and to have caused great mortality in Japan. Exact statistics are not yet obtainable, but it is reported that in Japan not less than 50,000 persons have been attacked, and 35,000 have died; whilst in the Corea the population has been decimated.

Cholera in India.—India, the home of cholera, is never free from the disease; but during the past year there does not seem to have been any exceptional prevalence—at least in the three principal towns. As regards Calcutta, the fortnightly official returns during the first ten months of the year showed, as a rule, a mortality under the average of the previous five years; but since October 25th there has been a rapid and considerable increase in the cholera mortality in that city. From January 1st to December 8th, altogether 1,553 deaths from cholera had occurred in Calcutta, as compared with 1,836, the mean for the same period of the preceding quinquennium. In Bombay, during the same period, only 15 deaths occurred, as compared with 510, the mean of the same period of the previous five years. No deaths seem to have been recorded in Bombay during the months of July and August, and none since September 29th. In Madras, no death had been recorded since February 13th last.

Precautions taken in England.—We have shown, in a separate section devoted to "Public Medicine," that England is not unprepared

to resist the introduction of cholera. By way of special precaution, our Government has during the year prohibited, from time to time, as it has done on former occasions, the importation of rags from certain infected countries, and it has also made strenuous efforts to promote good sanitary conditions at our ports and throughout the country generally. In view of the somewhat special circumstances of the sea-approaches of Cardiff, the Government found it necessary to provide temporarily a steam tug to enable the Customs authorities, in carrying out the Cholera Order of the Local Government Board, to examine vessels from abroad before they entered the harbour.

Cholera on Board a Troop-Ship.—No case of cholera has actually reached our shores during the year; but, on October 24th, it was reported that four deaths from that disease had occurred on board Her Majesty's troop-ship *Euphrates*, then homeward bound from India. When the vessel reached Suez, the Egyptian authorities proposed to impose the stereotyped "quarantine at El Tor;" but, on the English Government threatening to send the vessel home by way of the Cape rather than submit to such an unnecessary, if not indeed perilous, proceeding, the vessel was allowed to pass through the Suez Canal "in quarantine." It should be noted that, by the time the vessel had arrived in the Red Sea, there was no choleraic sickness on board. The vessel arrived in the Solent on November 16th, and as medical examination revealed no sickness among the troops on board, they were landed, with all due precautions, and proceeded to their homes, without any evil results to the public health. The vessel was thoroughly cleansed and disinfected, and has since returned to India. Had any choleraic sickness or source of infection been found on board, the patient would have been isolated in the Government hulks at the Motherbank, which are always in readiness for such an emergency.

Dysentery at Riga.—It may be interesting here to note that, early in September, a severe outbreak of dysentery occurred at Riga, on the Baltic.

THE NAVY MEDICAL SERVICE.

THE Royal Navy has happily surmounted all difficulties in getting candidates, who increase in numbers at the six-monthly examinations; and it is now rarely that the name of a young surgeon is seen amongst those of officers "resigned." These are sound indications of prosperity, which, it may be hoped, will long endure. Promotion in the higher ranks has been unusually rapid, owing to early retirements, which is the greatest inducement to keep on active service. In the year there have been two deaths of retired Inspectors-General—Sir James Salmon, M.D., and Dr. J. Urquhart Bremner—both of whom had good war records. By the death of the former, a good-service pension of £100 a year falls to the patronage of the Admiralty. There is already some curiosity to see an early announcement of the name of the officer to whom this will be given, and the general opinion is that it will be on a senior officer who has received the very highest honours and decorations attainable for conspicuous meritorious services at seats of war, as well as in the chief naval hospitals. It may be asserted that a strong presentiment is entertained that the coming year of jubilee will not be allowed to pass without recognition by the granting of fresh honours. Both of the Royal services remember that the lists of medical officers once contained names with the rank of baronet accorded for services in war. It is now hoped that on so glorious an occasion, in which the heart of a whole nation will rejoice, the gracious hand that laid open to her medical officers the decorations of the Order of the Bath will be pleased to restore to their calling, and to place within their reach, the more enduring recognition of skilful medical services rendered to the Crown, for which precedents exist.

THE ARMY AND INDIAN MEDICAL SERVICES.

Army Medical Service.—Brigade-Surgeons in India.—The Volunteer Medical Staff Corps.—Personal Events and Changes in the Army Medical Service.—Indian Medical Service.

Army Medical Service.—The year which is just approaching its close has not been marked by any stirring events in the medical department of the army. The active operations in Egypt, which had led to large demands on the resources of the medical department, in order to provide for the hospital needs of the Nile expedition, and of the expeditionary forces in the Eastern Soudan, had ceased before the year commenced; and since the conclusion of those operations no fresh demands have been made on the department in England to arrange for war service. A large number of medical officers of the British army are on active service in Burmah with the various regiments and corps engaged in that country, and in the general and field hospitals established for the sick and wounded of the British troops; but, as the Burmah expedition is controlled and directed by the Indian Government, the medical arrangements for the whole of the forces engaged in it have been made in India.

Several interesting reports of the medical and surgical transactions connected with the military operations in Egypt in 1885 have appeared during the present year. They have been published in the form of a series of appendices to the Army Medical Department volume of statistics which was issued in July last, and it is a matter of regret that they have not been issued in some more widely-known and more accessible shape. Surgeon-Major G. B. Mouat, M.D., has written the medical history of the Nile expeditionary force from the 18th of March, 1884, to the 31st of July, 1885. His report embraces an account of the wounds and injuries received in the several actions during the advance on Khartoum, and in the subsequent engagements with the enemy, as well as of the diseases which were prevalent among the troops in the expedition. Several reports on the medical and surgical transactions of the Suakim expeditionary force in the Eastern Soudan have also appeared, the principal one having been furnished by the late Surgeon-General Barnett, who was chief of the medical staff with the expedition. A copious and interesting medical history of the followers—native, Arab, and European—who were attached to the British forces in the same expedition, has been written by Surgeon Hendley, of the Indian Medical Service; while other papers of value bearing on the medical history of the campaign have appeared—namely, a report on the work done on the Hospital Ship "Ganges" attached to the expedition, with observations on hospital ships in general, by Brigade-Surgeon Gribbon, M.S., and a paper of notes on the hospital equipment used during the military operations in the neighbourhood of Suakim, by Surgeon-Major J. Fleming, M.D., M.S. A considerable amount of medical and surgical experience gained during the two military expeditions in Egypt has thus been placed on record, and will remain available for future reference.

Brigade-Surgeons in India.—The medical officers of the British Medical Service holding the rank of brigade-surgeon, who are serving in India, still labour under the disadvantage of their grade not being recognised by the Indian Goverment so far as pay and allowances are concerned. We have received many communications on this subject in the course of the year, and have more than once expressed our opinion on the justice of the claims put forward by these officers. When due regard is given to the higher qualifications which the brigade-surgeons must be proved to possess before they can attain the grade, and when the advantages to the Indian Government are remembered which must result from this professional superiority in the posts of responsibility and importance in which the brigade-surgeons are usually employed, there can be little difference of opinion that it would be only wise and just for the Indian Government to recognise the title of the brigade-surgeons to a higher scale of pay and emoluments, on a basis corresponding with that on which the rank and pay of the same officers are dealt with by warrant when they are serving on the home establishment. We trust that, long before a retrospect of another year is required, the policy of conceding the just claims of the brigade-surgeons in India will be acknowledged by the Indian Government, and that the grant of a suitable staff-allowance to them will have been ordered. A movement has lately been set on foot to bring the matter to the notice of the Secretary of State for India, and the remarks referring to the subject that have appeared in our columns sufficiently indicate the desirability of a speedy settlement of the point at issue.

The Volunteer Medical Staff Corps.—The medical department of the Volunteer forces of this country has acquired a very considerable development during the past year. Like the artillery and engineer volunteers, and the various volunteer rifle corps, the Volunteer Medical Staff Corps now occupies a regular and distinct place in the official Army List. The names of the medical officers of the volunteer battalions still appear with their respective corps, while those of the Volunteer Medical Staff are separately shown in connection with the lists of officers of the Medical Staffs of the army and militia. This expansion of the Volunteer Medical Service is an important advance in its organisation, for it is evident that the more closely the Volunteer Medical Department is assimilated in its constitution to that of the Medical Department of the regular army, not only will its efficient working be more to be depended upon on occasions when the volunteer forces are brought together in large numbers, but the more useful will the Department become as an adjunct to the regular army medical service. The interest in military medical arrangements has become so much more widely diffused, and the subject has acquired such popularity throughout the country—partly owing to the full reports published in the journals of the day of field-hospital matters during recent campaigns, partly owing to the training of a considerable number of volunteers in stretcher drill, in the duties of bearer com-

panies, and other such exercises connected with service in the field; and in a certain degree also, perhaps, to the instruction given in all parts of the country in the classes of the St. John Ambulance Association—that it is easy to foresee that the movement which has advanced so far during the past year is destined to make still further strides in the future. There seems to be good reason for anticipating that the Volunteer Medical Staff Corps will shortly form a valuable reserve for the Army Medical Department. In case of an European war on a large scale, or in a war of extended duration, instead of the untrained civil practitioners who have been engaged in some former wars by the Government to fill up the gaps in the ranks of the regular service, the Volunteer Medical Establishment will constitute a body to which the Minister for War may resort with confidence for a supplementary supply of medical officers, stretcher-bearers, and hospital assistants, already disciplined and in a great measure familiar with the regulations and ways of military service. The position which is now given to the Volunteer Medical Staff Corps in the War Office Army List plainly indicates that some arrangement of the kind mentioned is looked forward to by the military authorities who have the direction of such matters.

Personal Events and Changes in the Army Medical Service.—The changes in the department include the retirement from the active list of two of the senior Surgeons-General—Dr. G. Auchinleck and Sir A. D. Home, V.C., K.C.B., both of whom attained the regulation limit of age for the grade during the present year. Sir A. Home had long been one of the most distinguished members of the medical staff. He gained the Victoria Cross for his gallant and courageous defence of a convoy of wounded under his medical charge in the advance on Lucknow at the time of the Indian Mutiny, and was made a Knight Commander of the Bath for his services in preparing and directing the medical arrangements of the Ashanti War of 1873-74 under the command of Lord, then Sir Garnet, Wolseley. He has been succeeded in the post of principal medical officer of the southern district, which he was holding at the date of his retirement, by another medical officer decorated with the Victoria Cross, Surgeon-General H. T. Reade, who also obtained the distinction for conspicuous bravery during the Indian Mutiny campaign, at the siege and assault of Delhi. The losses from death during the year have been numerous, both in the active and retired lists of the department. Among the officers in active employment, there have died Deputy Surgeons-General Wm. Skeen, M.D., A. Guthrie, and W. H. Corbett, M.D.; Brigade-Surgeon T. Oughton; Surgeons-Major A. Thomson, M.D., T. W. Orwin, T. R. Lewis, M.B., T. M. Kirkwood, F. Falwasser, R. B. Smyth; and Surgeons J. F. McCraith, H. S. Parker, F.R.C.S., G. S. O'Grady, J. Heath, M.B. (killed in action in Burmah), and T. Pedlow, M.D. The deaths among the medical officers on the half-pay and retired lists have included those of Surgeons-General H. L. Cowen and E. Gilborne; Inspectors-General Dr. A. Gordon, C.B., and T. R. Jameson, M.D.; Deputy Surgeons-General R. W. Read, C. G. Logie, M.D., J. Madden, W. G. Trousdell, M.D., W. L. Farmer, and J. McNab, M.D.; Brigade-Surgeons W. H. Pickford and T. Ramsay; and Surgeon P. Nicholson, M.D. Surgeon-Major T. R. Lewis, who died at the comparatively age of 44 years, had already acquired a European reputation, from his discovery of the *filaria sanguinis hominis*, and from his numerous investigations in the field of pathology. At the time of his death he was holding the position of Assistant Professor of Pathology in the Army Medical School at Netley. A notice of the career and scientific works of this distinguished army medical officer has been given in the JOURNAL of June 26th. It has been announced that his scattered writings and reports are being collected, and that they will shortly be published in a separate volume. Among the interesting events of the year may be mentioned the reception, on November 22nd, by the Army Medical Department mess at Netley of the portrait of Surgeon-General Maclean, C.B., who had held the professorship of tropical medicine in the Army Medical School for a period of nearly twenty-five years, and had retired from the position in the early part of last year; together with the presentation, about the same time, of a replica of the picture to Mrs. Maclean at the residence of Professor Maclean in Southampton, by a deputation of the subscribers to the testimonial fund from which the portraits had emanated. A report of the proceedings on these two occasions has recently appeared in our columns.

Indian Medical Service.—The military operations in Burmah have led to the necessity of medical assistance being provided on a large scale for the expeditionary forces, and the arrangements for the field hospital establishments and ambulance transport have been made in India on what appears to be a sufficiently liberal basis. Between the general hospitals at the base of the military operations and the advanced forces, a series of floating and travelling hospitals and flats have been formed, the flotilla not only being provided with the necessary fittings for hospital accommodation, and the means and appliances for the treatment of the sick and wounded of the European and native troops, but also carrying extra field-hospitals complete, with camp equipage and transport, ready to be sent forward, at any moment in case of need, with bodies of troops that may have to operate at a distance from the river. A great strain has been thrown upon the Indian medical establishment as regards the supply of medical officers, including those of the British medical service doing duty in India, as well as those of the Indian department, in order to meet the wants of the hospital establishments with the army, and the needs of the numerous detachments of troops which have been posted at various points over the theatre of conflict. The chief hospital ship, the *Rangoon*, is described as a spacious and well-fitted passenger steamer, admirably provided in every respect for the purposes to which it is temporarily devoted. Deputy Surgeon-General Donnelly, of the Indian Medical Service, has acted as principal medical officer of the expeditionary army. A new organisation of the administrative staff of the Indian Medical Service came into force in the spring of the year. Up to March 19 last the sanitary commissioners of the various provinces were entitled to the rank and privileges of deputy surgeons-general of the military service, in virtue of their holding the positions of sanitary commissioners. This rule ceased at the date mentioned, but it was still ordered that all Indian medical officers in civil employment would remain liable to be called on for military duty in the event of their services in a military capacity being required, and that when not wanted for military service they should be regarded as temporarily lent to the civil departments. At the same time, the duties of the sanitary commissioners with the Government of India, and with the governments of Madras and Bombay, and their relations to the sanitary commissioners attached to local governments and administrations, were more plainly defined than they had been in previous orders. The sanitary commissioners were constituted the heads of the Indian medical departments in their respective Presidencies, and were made responsible for the discharge of all the civil administrative duties in their respective provinces. New scales of pay were ordered for the various administrative appointments, and we are led to believe that, with a few exceptions, the new organisation has given general satisfaction to the Indian medical service.

The death of Dr. Norman Chevers, C.I.E., who retired a few years ago from the active list of officers of the Indian Medical Service, has been recently announced. The services of this very distinguished public servant were of many years' duration, and his professional relations with the Government of India, together with his work as a teacher in the Medical College of Calcutta, and as an author of numerous valuable publications, exerted an important influence on medical and sanitary progress in India. A sketch of the career of Dr. Chevers, together with a list of his writings, appeared in last week's JOURNAL, and it is only necessary, therefore, to revert to the fact of his decease in this retrospect, and of the great loss which the Indian Medical Service and the medical profession have sustained in this event.

MEDICAL EVENTS OF THE YEAR IN SCOTLAND.

EDINBURGH.

The Edinburgh School of Medicine and Female Students.—Dr. Gunning's Donation.—The Royal College of Physicians.—Post-Graduate Course.—Fever Hospital and Clinical Instruction.—The University.—Direct Representation on the Medical Council.—Medico-Chirurgical Society.—Medical Staff Corps.—Royal Infirmary.—Abuse of Medical Charities.—Small-Pox.—Rabies.—Ambulance Movement.—Small Hospitals and Convalescent Homes.—Obituary.

The Edinburgh School of Medicine and Female Students.—The year about to close has been marked by some noteworthy events. Through the indefatigable efforts of Miss Jex-Blake, the Edinburgh School of Medicine has again opened its portals to women, and a complete course of instruction has been arranged for them at the Royal College of Surgeons; already the pioneers of what it is expected will be a large army of female students have been engaged for two months in the study of anatomy and chemistry.

Dr. Gunning's Donation.—The liberality of Dr. Gunning, of Rio Janeiro, has given an impetus to original work in the University and Colleges of Physicians and Surgeons.

The Royal College of Physicians.—The Royal College of Physicians has determined to found and maintain an institute for medical observation and research, which will be open to Fellows, Members, and to such others as its managing committee may permit.

Post-Graduate Course.—A post-graduate course of instruction in more recent methods of investigation and therapeutics was given in September and October in Edinburgh, which was largely attended by graduates and qualified men. Its success was unequivocal, and intra-mural and extra mural teachers combined and worked loyally to conduce to this result.

Fever Hospital and Clinical Instruction.—Thanks to an enlightened Public Health Committee and to the untiring efforts of the Medical Officer of Health (Dr. Littlejohn), a well-equipped fever hospital has been provided, and arrangements have just been made for systematic clinical instruction in fevers to be given to students.

The University.—In the university there are no changes to record in the professorial body. As regards the students, however, we have to notice the continued usefulness of the Representative Council, and the success which attended the efforts of the students themselves in raising by a fancy fair about £10,000 towards establishing a Students' Union. By a substantial majority they elected for a second term of office Lord Iddesleigh as Lord Rector; his opponent was Sir Lyon Playfair, a former professor of the university. Two of the professors in the university have received the honour of knighthood from Her Majesty, Sir William Turner and Sir Douglas Maclagan, and the latter has just received the additional honour of re-election for a second term of office as President of the Royal College of Physicians. By the liberality of Lord Rosebery and others two important lectureships have been endowed in connection with the chair of Natural History, namely, one on the Philosophy of Natural History and the other on Embryology; Mr. Romanes has been appointed to the former and Mr. Brook to the latter.

Direct Representation on the Medical Council.—The profession in Edinburgh did not put forward a candidate from their own school for the General Medical Council, but the successful candidate, Dr. Bruce, received a considerable amount of support from them.

Medico-Chirurgical Society.—In the Medico-Chirurgical Society the most noticeable feature of the year was a paper read by Mr. Lawson Tait and the discussion which took place on it.

Medical Staff Corps.—The Edinburgh University Medical Staff Corps has gone on successfully and is in a state of efficiency.

Royal Infirmary.—In the Royal Infirmary, on the surgical side, the principal change to be noted on the staff is the retirement of the senior surgeon, Dr. Joseph Bell, whose term of office expired two months ago. He has been succeeded by Dr. John Duncan, by whose promotion Dr. P. H. Maclaren has now got wards. The death of Dr. Angus Macdonald created a vacancy which was filled up by the appointment of Dr. Halliday Croom as physician for diseases of women, while Drs. Berry Hart and Barbour were appointed assistant physicians in the same department. Messrs. Caird and Hodsdon were appointed assistant surgeons, and Mr. Skene Keith special assistant to Dr. Thomas Keith in the ovariotomy department.

Abuse of Medical Charities.—An important movement is going on in Edinburgh with regard to the overlapping of charities, and it is earnestly to be hoped that attention will be given to the abuse of medical charities.

Small-Pox.—At South Queensferry, a few miles to the west of Edinburgh, small-pox broke out among the workmen employed at that gigantic undertaking, the Forth Bridge. It not only attacked many of them, but spread through the burgh of South Queensferry, and became so rife that it was necessary to establish a hospital-ship. Slighter outbreaks was observed in some towns on the east coast of Scotland, and in some cases these were clearly traceable to the imports from Russia. With these exceptions there has been no serious epidemic of contagious or infectious disease.

Rabies.—The occurrence of some cases of rabies, and the large number of stray dogs, induced the authorities in Edinburgh to engage in a crusade against wandering dogs; and, by regulations somewhat similar to those employed in London, the danger and nuisance were abated.

Ambulance Movement.—The ambulance movement has taken deep root, and has spread throughout Scotland; and in most of the principal towns the instruction has been extended to the police.

Small Hospitals and Convalescent Homes.—We have also to notice the number of cases in which localities have provided, or are about to provide, small hospitals, and, in some cases, convalescent homes, such as at Gilmerton, Hawick, and Musselburgh.

Obituary.—Death has not been very busy during the past twelve months among the profession in Edinburgh and its neighbourhood, but the loss of Dr. Angus Macdonald was a heavy blow to the Edinburgh School, and a sore bereavement to his many friends and pupils; while we have also to chronicle the demise of Dr. Sidey, Dr. Dunsmure, and Dr. Balfour, of Portobello.

GLASGOW.

The University.—The Extra-mural Schools.—Extension of University Teaching.—Post Graduate Courses.—Combe Lectures.—Ambulance Lectures.—Health of Glasgow.—Lochfyne Disaster.—Meeting of the British Medical Association in 1888.—Direct Representation on the Medical Council.—Obituary.—New Hospital for Women.

In Glasgow and the West of Scotland the past year has been marked by a very considerable amount of activity in directions more or less interesting from a medical point of view.

The University.—The University continues to exhibit the prosperity which has so markedly attended it for the past fifteen years. The buildings which fifteen years ago were opened for work, and which were supposed to be ample for many generations, are already too small for the students, who come up annually in ever-increasing numbers, in almost every department. From the medical department especially, the demand for increased accommodation comes with urgency. But, although new buildings, costing something like £15,000, have been erected during the year, or are likely soon to be, the money having been provided by various generous donors, these are all for special and specified purposes, and none are available for purposes of extension. The movement for a chair of Pathology has not yet borne fruit, and the professors of Physiology, Zoology, and Botany are still dependent on the length of their private purses for the due equipment of their laboratories. The students will soon have at their disposal, for the purposes of their Union, a magnificent building, at present in course of erection, due to the generosity of a yet unknown benefactor. But the minds of the authorities are anxiously concerned about the question of the resources for the annual maintenance of the building, and even now anticipate a new annual claim upon their already restricted income. No changes have this year occurred in the teaching staff of the Medical Department, though new professors fill the chairs of Church History and Naval Architecture. For the latter, accommodation is now to be found in the new lodge, built of stones from the front of the old College in High Street, and erected at the expense of the Clyde shipbuilder, Mr. Pearce, M.P., who obtained the stone owing to the demolition of the remains of the old College by railway extension. The election of a parliamentary representative for the Universities of Glasgow and Aberdeen took place in the Bute Hall of Glasgow University on July 2nd, when James A. Campbell, Esq., of Stracathro, was returned unopposed. The threatened University reform has been agitating the professorial breast more deeply than usual this past year. Some of the reformers have for years back been disturbing the peace of the General Council of the University. This year, Dr. McVail boldly attempted to enlist the sympathies of the Council in his effort to get the Medical School of the Royal Infirmary erected into a college of the University, but failed. A deputation of directors of the Royal Infirmary secured the favourable ear of the then Secretary for Scotland, the Earl of Dalhousie, but the members of the Council proved less impressionable.

The Extra-mural Schools.—The Extra-mural Schools are carrying on a rather precarious existence, in marked contrast to the condition of affairs in Edinburgh. Anderson's College has reached a crisis in its history. The scheme of a Technical College for Glasgow, uniting the resources of Anderson's College, the Young Chair of Technical Chemistry connected with it, the College of Science and Arts, and Allan Glen's Institution, has been approved and sanctioned by Her Majesty. Under its operation, the Medical School of the College is to receive £5,000, wherewith to go and found a new home for itself. If, within a limited term of years, this has not been done, the money reverts to the Technical College. Those connected with Anderson's College Medical School are, therefore, engaged in settling on a site for the school, and very wisely are seeking ground in the neighbourhood of the Western Infirmary. But £5,000 is a small sum with which to equip a medical school fitted to give a thorough medical training. It is feared that, unless more money can be raised, to enable physiological and pathological laboratories to be fairly well endowed, the prospects of Anderson's College Medical School securing many students are small. At present, some of the classes, notably that of the practice of medicine, are well attended. If this School is moved further west, the Western Infirmary School will scarcely be able to maintain a separate existence. The Royal Infirmary School has really excellent accommodation and equipments, but a terrible lack of students. The reason alleged is the impossibility of getting men to study there so long as the monopoly of examination remains with the University; hence the attempt to get the Infirmary erected into a college of the University. The truth, however, seems to be, that there is a much smaller number of students coming to Glasgow of the class that

used to come from the English country districts. Victoria University, and such new institutions, have caused this diminution.

Extension of University Teaching.—A University Association has been formed in Glasgow for the purpose of extending university teaching to the masses of the people, and in general to follow out aims similar to those of the University Extension Scheme in operation in the East of London. Premises of a very modest kind have been secured in the East of Glasgow, in the neighbourhood of the Royal Infirmary and the Old College, and there the Association will soon begin work. The experiment of post-graduate courses of lectures was tried in Glasgow this autumn; but though the lecturers were Professor Gairdner, Dr. Coats, and Dr. Newman, a mere handful of auditors came to listen to their prelections.

Combe Lectures.—The Combe Lectures on Physiology to teachers, begun a couple of years ago in Glasgow by Dr. Andrew Wilson, were given this year as usual, and were largely attended by teachers. The subject was the "Nervous System and its Work." This new system of popular instruction on physiology and hygiene is a systematic course of lectures by one lecturer, is much preferable to the occasional lectures of different teachers, and ought to do an infinitely greater amount of good.

Ambulance Lectures.—Ambulance lectures are in great demand, and seem to be relished alike by the fashionable dame and the hard-working artisan. Classes for ladies are now held in several quarters of Glasgow. Queen Margaret College for Ladies gives a course, there is another in Dennistown, and others at Pollokshields and Partick. In Paisley, Greenock, Ayr—indeed, in most of the larger towns in the West—ambulance courses of instruction have been successfully carried on.

Health of Glasgow.—The health of Glasgow would have compared very favourably with former years, but for a sudden outbreak of scarlet fever in August, which continued on till nearly the close of the year. Various circumstances connected with the outbreak led Dr. Russell to call special attention to the recent pamphlet of the Local Government Board on milk-scarlatina. Scarlet fever has, indeed, largely prevailed in Scotland this past autumn, the outbreaks being, in many cases, almost co-incident with the reopening of the public schools. Dr. Russell has this month completed his review of the Vital Statistics of the City of Glasgow by the publication of the third and final part. We shall have the pleasure of giving, in a future number, a general summary of this laborious and valuable work of Dr. Russell's. At Greenock, typhus fever was very prevalent in the beginning of the year, eight cases coming from Port Glasgow, which has no fever-hospital of its own. In something like six months, no fewer than fifty-nine cases of typhus had come from the same locality to Greenock. From Annandale an outbreak of diphtheria has been reported. The agitation for the purification of the Clyde has not yet produced much result. A public meeting, called for the purpose of inducing the citizens to take up the question themselves, failed, the meeting simply deciding to leave the matter in the hands of the corporation. Meanwhile, the Town Council is re-considering the question; but whether their consideration will issue in any practical work remains doubtful.

Lochfyne Disaster.—At Lochfyneside a disaster occurred, at the end of September, on the occasion of a monster blast. The foul gas accumulated within the quarry, and a large number of excursionists who entered to view the result of the blast were overpowered, and several died before assistance could be rendered. Altogether seven persons died, and several others were seriously ill for many days. A Government investigation took place, and a report has been issued, finding no one responsible for the accident or its results.

Meeting of the British Medical Association in 1888.—The medical profession of Glasgow and the West of Scotland have decided to invite the British Medical Association to Glasgow in 1888, and a large and influential committee has been appointed to carry out the arrangements.

Direct Representation on the Medical Council.—The election for a direct representative of the profession in the General Council of Medical Education excited comparatively little interest in the West, in spite of the fact that a local surgeon, Dr. Morton, of Glasgow, was a candidate; and the election of Dr. Bruce, of Dingwall, has given rise apparently to no considerable feeling of any kind.

Obituary.—Death has this year cut off two of the oldest and most esteemed members of the profession, Drs. Scott Orr and Ebenezer Watson.

New Hospital for Women.—In the early part of the year a new charitable institution was opened in Glasgow, the Samaritan Hospital for Women, of which Mr. J. S. Nairn is surgeon, and from it a case of successful extirpation of the uterus for cancer was reported in March. The continuance of the commercial depression has, however, seriously affected the ordinary annual income of the existing institutions, and none has felt this more seriously than the Royal and Western Infirmaries, though they have, in the course of the year, been the recipients of numerous and valuable bequests.

ABERDEEN.

Aberdeen Medical School.—Medical Officer of Health.—Royal Infirmary.

Aberdeen Medical School.—The prosperity of the Aberdeen Medical School continues uninterrupted. Its numbers have shown a marked increase during the present year, and its character as a thoroughly hard-working and practical school has been fully maintained. There have been some changes in the professorial staff of the Medical Faculty. Professor Stirling, early in the year, accepted the chair of physiology at Owens College, and the vacancy thus caused at Aberdeen was filled by the appointment of Dr. McWilliam, Assistant Professor of Physiology at University College, London, a former student of Aberdeen University. About the same time Professor Stephenson became dean of the Medical Faculty in succession to Professor Brazier, whose services for a quarter of a century, as secretary, and latterly as dean, will long be held in grateful remembrance by medical graduates of the University. The beginning of the winter session was marked by a melancholy event, quite unprecedented in its character, which cast a gloom over the university, and caused profound regret to the whole medical profession in the north-east of Scotland. Dr. Alexander Dyce Davidson, Professor of Materia Medica, died suddenly while lecturing in his class-room at Marischal College. The chair thus vacated has not yet been filled; the duties are being discharged in the meantime by Professor Matthew Hay. Dr. Frank Ogston, well known in the city, and long assistant to the Professor of Medical Jurisprudence in the university, has gone to New Zealand, having been appointed to the chair of medical jurisprudence at Dunedin College, Otago.

Medical Officer of Health.—The city of Aberdeen has, in course of the year, lost the services of Dr. W. J. Simpson, its able and energetic medical officer of health, who has gone to take up similar duties at Calcutta. His place at Aberdeen has been filled by Dr. Theodore Thompson.

Royal Infirmary.—The Special Inquiry Committee at the Royal Infirmary has finished its work, and Professor Struthers has been thanked for his services as its chairman. He has since retired from the Committee of Management. Some changes have occurred in the staff. A new post of assistant-physician has been created, and Dr. Blaikie Smith, formerly chloroformist, has been elected thereto. His place as chloroformist has been taken by Dr. Mackenzie Booth. The office of ophthalmic surgeon (vacant by the death of Professor Dyce Davidson) has been filled by the appointment of Dr. Mackenzie Davidson. Plans for the enlargement and improvement of the Royal Infirmary have engaged the earnest attention of its management during the year; and now the project recently advocated by the Lord Provost, of making the infirmary improvement a celebration of Her Majesty's Jubilee, has been cordially taken up, and gives good hopes of its early realisation. A sum of £20,000 to £24,000 is necessary for the purpose. It has been resolved to endeavour to obtain a new Infirmary Bill to incorporate the Royal Infirmary and the Lunatic Asylum.

MEDICAL EVENTS OF THE YEAR IN IRELAND.

Medical Education and Examinations: The Conjoint Scheme.—The Royal University of Ireland.—The Royal College of Surgeons.—The King and Queen's College of Physicians.—The Academy of Medicine.—Direct Representation on the General Medical Council.—The Public Health.—Changes in the Staff of the Dublin Hospitals.—Obituary.

Medical Education and Examinations: The Conjoint Scheme.—Probably the most important event as regards medical education and examination that has occurred in Ireland for many years was accomplished last October. In the adoption by the King and Queen's College of Physicians and the Royal College of Surgeons in Ireland, of a scheme for constituting a conjoint examining board in Ireland by these corporations, a result has been at last arrived at which, judging from the collapse of four or five previous efforts to accomplish so desirable a union, was looked upon as almost hopeless. The impetus given by recent legislation, however, and the example of the sister Colleges in England, had a good effect in stimulating this union, which, we trust, will be for the benefit of the profession and

of the Colleges. The scheme was submitted to the General Medical Council on the last day of its recent meeting. The Council, however, declined to consider it until after January 1st, 1887, on the ground that it was then an expiring body, and not in a position to pass a measure of such importance. The proposed scheme is on the same lines as those of the English Conjoint Board, and the Apothecaries' Hall of Ireland is excluded from it. This exclusion of the Apothecaries is one of the points which caused the collapse of some of the former attempts at a combination of the Colleges. The majority of the Fellows of the College of Physicians are understood to be much more opposed to the admission of the Apothecaries into the scheme than are the Council of the College of Surgeons. It is a matter of grave doubt, however, whether, under existing circumstances, it would not be more judicious to include the Apothecaries, and allow them to examine in materia medica and practical pharmacy, rather than run the risk of the Hall obtaining assistant examiners. If, in the event of their exclusion from the conjoint board they should succeed in doing so, they might admit candidates to an examination sufficient for full qualification under the Medical Act, after an incomplete and unsatisfactory curriculum, and at a low fee. In that way an additional and unnecessary licensing body would be formed which might possibly damage the cause of medical education, and would compete injuriously with the Colleges themselves. In any case, each of the Colleges has appointed three of its Fellows as a committee of management, which is at present hard at work in preparing examination rules, suggestions as to text-books, a syllabus of studies, and several other matters in connection with the examinations, for report to the Colleges. Until the report has been presented the Colleges postpone fixing a date for the commencement of the scheme.

The Royal University of Ireland.—The Royal University of Ireland has progressed most satisfactorily during the year, and is giving indications of becoming a real teaching university. It sustained a severe loss by the death of its Chancellor (the late Duke of Abercorn) and two eminent members of the Senate; but it is gratifying to know that the places thus vacated have been filled by so distinguished a nobleman as His Excellency the Earl of Dufferin, Viceroy of India, and by two members of our own profession so well known as Mr. Thomson, of Dublin, and Dr. Whitla, of Belfast. Dr. Lyndham, Professor of the Practice of Medicine in Queen's College, Galway, has lately been elected a Medical Fellow of the University. We alluded in the JOURNAL of May 29th to certain allegations as to the method of conducting the oral medical examinations, which were referred to a special committee of the Senate for consideration and report. We have not heard whether any report has been made, but neither have we heard of any complaints with reference to the last examinations. It may therefore be concluded that any causes of complaint, if such existed, have been removed. A most important addition to the University has recently been completed. This consists of a massive pile of buildings, comprising a dissecting-room, 120 feet long by 30 feet wide, with an extremely lofty roof of varnished pitch pine, fitted with every necessary appliance; also a physical laboratory, 90 feet long by 30 feet wide; and a magnificent chemical laboratory, with separate compartments for the accommodation of eighty students. There are also two large halls, one for physiology, and the other for histology, both of which, as well as all the other departments, are splendidly lighted, and supplied with hot and cold water, warm water pipes, etc. The lavatories are most perfect, and near them is a large and well-appointed smoking-room for the use of the students. In connection with the University, it may be mentioned that a "Graduates' Reform Association" has recently been formed, the main purpose of which is stated to be "to make the Senate and the Convocation more representative of the mind and thought of the Irish nation." For this and other equally cogent reasons, no doubt, Mr. T. P. O'Connor, M.P., has been put forward by the Association as a candidate for the vacant Senatorship. There are three other candidates for the post, namely, Professor Stephen O'Sullivan, of Cork, Dr. McMordie, of Belfast, and Major FitzGerald; and the contest will probably be a close one. The honorary degree of M.A.O. was, at the last public meeting of the Senate, bestowed on Dr. H. Macnaughton Jones, of London, in recognition of his services to the University and of his professional position.

The Royal College of Surgeons in Ireland.—In the proceedings of the Royal College of Surgeons, there has been little to note during the year. On May 27th a new museum to receive the collection of casts presented to the College of Surgeons by Mr. Butcher, was opened with much ceremony by his Excellency the Lord-Lieutenant the Earl of Aberdeen; and at the same time a statue of Surgeon Dease, one of the founders of the College, was unveiled by Lady Aberdeen. The occasion was made more memorable by also publicly conferring the Honorary Fellowship of the College on M. Pasteur, Sir Joseph Lister, Bart., Professor Huxley, Sir Spencer Wells, Bart., Mr. John Marshall, and, "last, but by no means least," Sir James Paget, Bart. In the evening, there was a banquet in the College, at which the President, Sir Charles Cameron, was honoured by the presence of His Excellency, His Serene Highness Prince Edward of Saxe Weimar, the Duke of Abercorn, the Lord Mayor, Sir James Paget, and a distinguished and numerous company. Mr. Stokes, Professor of Surgery in the College, succeeded Sir Charles Cameron as President in June, and subsequently, a few days before the Lord-Lieutenant's departure from Ireland, accepted a knighthood from him. Dr. Corley was elected Vice-President, and will, in the ordinary course, become President next June.

An interesting *History of the College and of the Irish Schools of Medicine, including numerous Bibliographical Sketches and a Medical Bibliography*, by Sir Charles Cameron, was published at the expense of the College during the year. The work is dedicated to Mr. Matthew O'Reilly Dease, D.L., to whose generosity the College is indebted for the above-mentioned statue of his grandfather, Mr. Dease, and for defraying the expenses of erecting the Butcher Museum, etc. In the history of the College the year was also notable for the circumstance that in it a woman was for the first time admitted as a surgeon on the roll of the College. The lady—Mrs. Mary E. Dowson—had previously obtained the licences of the King and Queen's College of Physicians to practise medicine and midwifery.

The King and Queen's College of Physicians.—In the College of Physicians, Dr. James Little was elected President on St. Luke's Day (October 18th), in succession to Dr. Cruise. Dr. C. E. FitzGerald, Oculist to the Queen in Ireland, and Dr. Neville were elected Fellows of the College.

The Academy of Medicine.—The progress the Academy of Medicine has made has been most gratifying. It is now in its fifth session, and the work its various sections and sub-sections have done during the year is very encouraging. The annual volume of *Transactions* is a production which reflects credit on its editor, Mr. William Thomson, and on the Academy. His Excellency the Earl of Aberdeen, when Lord Lieutenant, honoured the President, Dr. Robert McDonnell, F.R.S., with his company at an official dinner at his private residence.

Direct Representation on the Medical Council.—Dr. George H. Kidd, ex-Master of the Coombe Lying-in Hospital, and an ex-President of the Royal College of Surgeons (Ireland) was, as our readers know, the successful candidate for the post of direct representative of the practitioners of Ireland on the General Medical Council. The number of voting papers issued was 2,671, of which 531 were not returned at all, and 55 were returned through the dead-letter office. Dr. Kidd polled 911 votes, being a majority of 297 over Dr. Jacob. Dr. Jacob's majority over Dr. Laffan was 419, and Dr. Laffan scored 34 more votes than Dr. McMordie.

The Public Health.—In the last quarter of 1885 there was an exceptionally low zymotic death-rate in Ireland, and this satisfactory state of things continued, to a great extent, through the first three-quarters of the present year. In Dublin, during the first two quarters of the year, there was great freedom from typhus, enteric fever, and scarlet fever. The deaths from zymotic diseases were 118 under the average for the first quarter of the previous ten years, and 206 below the average for the second quarter for the same period. Whooping-cough was, however, very prevalent; and, owing in great measure to pulmonary complications, due to the severe and variable weather, proved extremely fatal. It constituted 52 per cent. of the total mortality from zymotic diseases for the first quarter of the year. In the second quarter, the general death-rate in Ireland was below the average rate for the corresponding quarter of the previous five years. There was no marked prevalence of any zymotic disease, and the total mortality from the principal diseases of this group yielded a rate lower than that for any quarter since details regarding causes of death were first included in the quarterly returns. During the third quarter, the state of the public health was also very satisfactory. The general death-rate was low, both absolutely and comparatively, being below that for any quarter since the third quarter of 1882; and the total mortality from the principal zymotic diseases, although in excess of that for the preceding three months—a result due to the prevalence of diarrhœa in some districts, which is usual in the third quarter of the year—was below the average. Scarlet fever became prevalent in Dublin towards the end of the third quarter, as did, also, enteric fever to a less extent; but, with two exceptions, the weekly death-rate from zymotic disease, in the present quarter, has, so far, been lower than the average for the corresponding week of the last ten years. There have also been numerous important changes in the Public Lunacy Service during the year, which have been noticed in our columns.

The Dublin Hospitals.—There have been changes in their visiting staff of three of the Dublin hospitals. Messrs Lentaigne and Chance have gone from Jervis Street Hospital to the Mater Misericordiæ Hospital, to which also Dr. T. Murphy has been appointed a Physician. Mr. Myles and Mr. F. Conway Dwyer have been elected to succeed Messrs. Lentaigne and Chance as Surgeons to Jervis Street Hospital. At St. Vincent's Hospital, Mr. Tobin, formerly Assistant-Surgeon, has been promoted to succeed Dr. Mapother, appointed Consulting Surgeon; and Mr. Gaffney has been given the Assistant-Surgeoncy.

Obituary.—Fortunately there have not been many losses by death among the working members of the profession in Dublin to deplore this year. The obituary notices we have published were chiefly those of men who were personally better known to the past than to the present generation, but whose reputation will long be cherished among Irish chemists, obstetricians, and philanthropists. James Apjohn, Evory Kennedy, Henry Grattan, and Sir John Lentaigne, were men of whom any country might be proud. All these, as well as the kindly and esteemed Thomas Darby, of Bray, were octogenarians or septuagenarians. But Mr. Kilgarriff and, quite recently, Dr. Henry, were both taken away by, we believe, the same form of malignant disease in the prime of their lives. We have also to record the sudden and unexpected death, on the 19th instant, of Dr. Lyons, D.L., late M.P., and Crown representative for Ireland on the General Medical Council.

OBITUARY FOR 1886.

DURING the past year, it has been our melancholy duty to chronicle the death of many men much honoured by the profession. Perhaps the most prominent name is that of the well-known surgeon to Guy's Hospital, Mr. J. Cooper Forster, who had been President of the Royal College of Surgeons in 1884; he had held the surgical appointment at Guy's Hospital for twenty-six years, and, when he retired, received a valuable testimonial from his old pupils. Another well-known name is that of Mr. Francis Mason, whose genial presence has been much missed in London. The sudden death of Mr. Royes Bell removed a careful and conscientious teacher. Two surgeons who had devoted their attention to ophthalmology have passed away—Mr. J. C. Wordsworth, who had almost retired from the ranks of active practitioners; and Mr. J. F. Streatfeild, who was cut off in the midst of active practice. It is no exaggeration to say that the untimely death of Dr. Walter Moxon, a man of most original mind and singularly striking parts, cast a gloom over the whole profession; the work which he had heretofore done, at once sound and brilliant, gave promise of future contributions which can ill be spared. Almost in the same words might we mention the death of Dr. T. R. Lewis, of Netley, whose valuable researches on filaria and other parasites in India had earned for him an extensive reputation, which it was but reasonable to hope would have grown in width and depth during the many years of life which seemed to await him. Not thus need we speak of some of the veterans of the profession who have joined the great majority: of Dr. Frederick Farre, of London; Dr. Henry MacCormac, of Belfast; Dr. Evory Kennedy, of Dublin; Dr. Austin Flint, of New York; Mr. Gillott, of Sheffield; Mr. W. Bousfield Page, of Carlisle; Dr. Sidey, of Edinburgh; Dr. Sutro, consulting physician to the German Hospital, London; Mr. William Pearse, of Plymouth; Mr. Darby, of Bray; Dr. William Cumming, of Edinburgh; Dr. James Apjohn, professor of chemistry in Dublin University; Dr. Richard Grattan, better known as a politician than as a physician; Dr. James Dunsmure, of Edinburgh; Dr. John Grigor, of Nairn and of Rome; Dr. Eben. Watson, of Glasgow; Dr. Norman Chevers, C.I.E.; Dr. Ogilvie Forbes; Mr. George Busk, F.R.S.; Dr. R. J. Mann; Dr. Spencer Thomson; Mr. Samuel Gaskell, for seventeen years a commissioner in lunacy; Dr. Robert Nairne, for a quarter of a century a commissioner in lunacy; Dr. Wynn Williams, the obstetrician; Dr. Storrar, the chairman of Convocation of the University of London; Dr. Scott Orr, of Glasgow; and, last but not least, Dr. Gavin Milroy, of whose services to sanitary science the remembrance will be perpetuated by the annual lectures which will be delivered at the Royal College of Physicians. Dr. Alexander Dyce Davidson, professor of materia medica in the university of Aberdeen, and an ophthalmic surgeon of eminence, died suddenly in his prime; Dr. Alfred Wiltshire, physician accoucheur to St. Mary's Hospital, and Dr. Angus Macdonald, physician, and Dr. John Bishop, assistant surgeon to the Edinburgh Royal Infirmary, must also be numbered among those taken long before their life's work was done. Dr. Kelburn King, of Hull, and Dr. Brönner, of Bradford, like some of those above mentioned, though they had earned the right to rest by forty years of active work, were yet overtaken by death while still in harness; but Mr. Sampson Gamgee and Dr. James Wakley were men still in the prime of life. In Dr. T. Spencer Cobbold we have lost one of the few English physicians who made a special study of helminthology; his death, at the comparatively early age of fifty-seven, is a distinct loss to that department of medical science. To these names must be added those of Dr. Walter Fergus, for thirty-seven years medical officer of Marlborough College; Dr. R. D. Lyons, some time M.P. for Dublin, and a Member of the General Medical Council; and Dr. Aitken, of Rome, who have joined the great majority during the last few weeks.

PROVIDENT AND BENEVOLENT INSTITUTIONS FOR THE BENEFIT OF THE MEDICAL PROFESSION.

Medical Sickness, Annuity, and Life-Assurance Society.—A retrospect of the last year would hardly be complete which failed to include a reference to the progress and remarkable success of the Medical Sickness, Annuity, and Life-Assurance Society, which furnishes to medical men the opportunity of providing weekly sickness-pay during periods of disablement, together with annuities in old age and life-assurance on favourable terms. This Society is wholly conducted by unpaid managers, selected by the members from their fellow-members of the medical profession. Last year we were able to report an accumulated reserve fund of upwards of £7,000. During the present year, over £1,600 has been paid for sickness claims, and £300 on account of members' deaths. The premium income amounts to about £8,000 a year, and an addition of over £5,000 has been made to the reserves, which will shortly amount to over £14,000. The remarkable economy of management has allowed a considerable sum to be added to the credit of the Society, the expenses of management having been considerably below the actuarial estimate.

The cases provided for during the year included ten cases of severe accident, and others of minor injury, as well as numerous examples of severe temporary illness involving complete disablement from practice, and one or two of permanent disablement occurring in the prime of life.

An important extension has been made of the benefits of the Society by the construction of a new table, which provides for the return of a large part of the annuity payments in cases where the beneficiary does not live to the period at which his annuity would commence. Of this new table a very large number of persons have availed themselves.

The extension of this Society will do much to place members of the profession in a position of independence, and to enable them to provide against the unforeseen misfortunes of accident, severe illness, and premature death, which are otherwise the cause of so much misery, and which so frequently form the groundwork of pitiful appeals, which but imperfectly meet the worst extremities of poverty and distress. The growing prosperity and great extension of this Society is a source of warm congratulation. Its financial stability has long since been assured without any addition to its membership, but in the interests of the whole profession and of individual members it is very desirable that its membership should grow until it includes all the members of the profession who are not absolutely protected against "the slings and arrows of outrageous fortune." No such means of self-help has as yet been provided in any other profession, and it is creditable to the practitioners of medicine that they have been able—not without some self-sacrifice—to originate, develop, and carry on with complete success, an institution so much needed and of such wide-reaching and beneficent influence. The Chairman of the Society is Mr. Ernest Hart; the Vice-Chairman, Dr. Ord (St. Thomas's); the Treasurers, Mr. S. Sibley and Mr. Noble Smith; the Trustees, Mr. Hart, Dr. Ord, Mr. J. R. Upton, and Sir T. Spencer Wells. The management of the Society is entirely unpaid, with the exception of the Secretary, Mr. C. J. Radley, 26, Wynne Road, Brixton, S.W., of whom all particulars can be obtained.

British Medical Benevolent Fund.—The past year has marked an eventful epoch in the history of the British Medical Benevolent Fund, inasmuch as it has attained the 50th year of its existence. Founded in 1836 for the relief of medical men, their widows, and children, it began its useful career by relieving, by means of grants, two persons in 1836-7. This, the Jubilee year, will see upwards of 180 applicants relieved by grants; while, in addition, some sixty old people, all more, and some very much more, than sixty years of age, have been relieved by annuities of £10 or £20, to say nothing of the vast number indirectly assisted by these grants and annuities. A banquet, held in celebration of the jubilee, at the Holborn Restaurant, in July, under the presidency of Sir James Paget, resulted in an addition of £3,500

to the funds; of this, £500 has been used in grants, and the balance, together with £300—a legacy from a late member of the Committee—has been funded, and the interest is available for annuities. The effect of the Jubilee Celebration has been disastrous to the donation fund; so much so that the Committee, at the November meeting, was compelled to postpone the consideration of one-half the cases before them, simply because the purse was empty. The Committee deplores this, and confidently appeals to the benevolence of the profession to remedy so painful a state of affairs. The work of this charity is undertaken gratuitously by medical men. The grants are made without canvass or publicity, after careful investigation, and administered in the way best calculated to assist the wants of applicants. The annuities are an unspeakable comfort to those who have reached old age and have, either from sickness or misfortune, made no adequate provision. Mr. George Field is the Financial Secretary.

Society for the Relief of Widows and Orphans of Medical Men.—This Society, founded in 1788, relieves those widows and orphans of its deceased members who may need assistance. All legally qualified members of the profession, residing within a radius of twenty miles from Charing Cross, are eligible for proposal, yet it is surprising how few members of the profession avail themselves of the benefits of the Society. The annual subscription of two guineas secures to the widows and orphans of members substantial assistance should they be left unprovided for. In spite of public advertisement and private circulars addressed to all within the limits of the Society, the number of members has been gradually decreasing for some years; out of over 4,000 who might become members, only about 360 have joined. This year, owing to the increasing demands on the funds, and a falling off in subscriptions and donations, a present at Christmas could not be made to the widows and orphans in receipt of grants. During the year, 63 widows, 6 orphans, and 3 orphans on the Copeland Fund, have received grants from the Society, a sum of £2 714 15s. having been distributed among them. Five fresh widows have been taken on, 4 have died. The number of members has decreased, owing to 11 deaths and 5 resignations, while only 5 new members have been elected. The offices of the Society are at 53, Berners Street, W. (Mr. J. B. Blackett, Secretary).

Royal Medical Benevolent Fund Society of Ireland.—This society, which was founded in the year 1842, was "intended to be neither a benefit society nor an assurance club; but, strictly speaking, a Benevolent or Charitable Institution, founded and promoted for the express purpose of assisting our professional brethren when struggling under the pressure of disease or other calamity. It likewise proposed, under circumstances of peculiar urgency and distress, to administer relief to the widow or family of a professional man, who may have been deprived of the support and affection of a husband or parent." Since 1848 (the first annual distribution), £32,287 have been spent in mitigating dire distress. At the 48th annual meeting of the society, held on June 7th, the chair was taken by Dr. J. Magee Finny, Vice-President of the King and Queen's College of Physicians. The Report stated that during the year £185 had been distributed among medical men, £932 among their widows, and £86 among orphans, leaving a balance in hand of £135. The Committee feel the very great value of the society, and regret that, owing to want of more general support from the members of the profession they are unable to give adequate relief to all the urgent cases that annually apply for their aid. Mr. Arthur H. Benson, M.A., F.R.C.S.I., 42, Fitzwilliam Square, Dublin, is the Acting Secretary, and to him all communications should be addressed.

The Royal Medical Benevolent College, Epsom.—The Royal Medical Benevolent College, Epsom, has had a good financial year, owing in great measure to the very successful festival held in May, under the presidency of Sir Andrew Clark, Bart., when the collection announced exceeded £4,000. The annual subscriptions also have improved. At the usual elections in May four pensioners and twelve foundation scholars were admitted; two of the pensioners and seven of the scholars were candidates whose cases were recommended by the Committee of Examination as being especially urgent. There have been no alterations in the laws or regulations of the College during the past year, but some important proposals are now under the consideration of the Council. The Society has had to regret the loss of two valued members of the Council, Dr. Harvey K. Owen and Mr. J. W. Eccles. Dr. Owen has left money by his will for the establishment of a scholarship of £50 a year for the benefit of a foundation scholar, or other orphan of a medical man, who, on leaving the College, is about to pursue his studies with a view to graduation, and of a perpetual presentation at the school of St. Anne's Society for the orphan daughter of a medical man.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1886.

SUBSCRIPTIONS to the Association for 1886 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription-accounts close on October 31st, and all unpaid subscriptions must be forwarded, after that date, to the General Secretary, 161A, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The Issue of the BRITISH MEDICAL JOURNAL now amounts to

13,300 COPIES WEEKLY

which will be found, if tested, to show AN EXCESS of considerably more than a QUARTER OF A MILLION Copies annually over that of any other Medical Journal in Great Britain.

The British Medical Journal.

SATURDAY, DECEMBER 25th, 1886.

MEDICO-LEGAL QUESTIONS IN RELATION TO THE LAW OF DIVORCE.

THE medical witnesses in the recent case which has unfortunately occupied so much of the public attention, have been subjected to much and severe animadversion by counsel on grounds which appear to be entirely without foundation. The medico-legal aspects of the case raised some new questions of considerable importance, and the decisions in this and the previous trial establish conclusions not previously arrived at in any case hitherto tried.

The medical evidence was given throughout on both sides with great judgment and scrupulous accuracy, and appears to leave no room for cavil. From the facts stated in evidence, it appears that the husband had been operated on, both before and after marriage, for perineo-urethral fistula, due to gonorrhœa contracted in earlier life. In consequence of the condition of the husband, marriage was not consummated until four months after the ceremony. A fortnight after this consummation the wife suffered from a persistent vaginal discharge. She subsequently suffered from an attack of cellulitis. After she had recovered from this, the husband proposed to resume cohabitation; the wife refused, and ultimately appealed to the Court for protection. The trial took place in 1884 before Sir James Hannen, who, having heard the evidence of all concerned and numerous skilled witnesses, considered that she should be protected; the jury agreeing to that view, he gave judgment accordingly. This was appealed against, but the upper Court confirmed the judgment. This judgment was novel and important; it established this point, that the result of a former specific attack continuing, and being liable to injure the wife, would entitle her to a judicial separation. And it may, perhaps, be assumed that the same rule would hold good for both sexes. It appears that the judge did not require, in order to establish "cruelty," that there should be a recent specific infection. In this case, the surgeons called considered that pus would run along the urethra in cohabitation, and this they held would be fraught with danger; this view is in accordance with all modern teaching. Gynæcologists recognise that serious inflammatory attacks, and irritations of the

genital tract are liable to follow cohabitation with those who have had gonorrhœa, although all specific conditions have disappeared. This judgment is far reaching, but was, during the second trial, held to be a good one, which could not be disturbed. The question naturally arises, what length of time elapses before a specific attack (gonorrhœa) can wear itself out? This question did not affect the judgment above mentioned; but it is of much practical interest, and, in view of this judgment, important.

In the second trial, attempts were made to reopen the case, but these were checked by the judge. Another theory was, however, put forward as a possible explanation of the cellulitis; this was a suggested miscarriage shortly before the inflammatory attack. The consultant, however, who saw the case seven days after this was alleged to have taken place not only did not find the slightest evidence of miscarriage, but on the contrary found the os and cervix in accordance with the nulliparous state. Later on in the case, in dilating the cervix, it was ascertained to have the characters of congenital stenosis. The evidence on the other side was largely based on the suspicions of a nurse who *thought*, from the occurrence of severe pain and a free hæmorrhagic discharge, that a miscarriage had occurred,—a suggestion negatived by the medical evidence and easily rejected by both judge and jury. Every medical man is aware that cellulitis is very frequently associated with severe pain and free discharge, and the freer the discharge the less the internal swelling, this being nature's mode of relief. This and other phases of the case emphasize anew the risks which beset practitioners in their daily work, and the necessity for the strictest observance of professional discretion in their relations to patients of whatever position in life.

We regret to learn that, owing to ill-health, Dr. Wickham Legg has been compelled to resign the Assistant-Physiciancy and other appointments at St. Bartholomew's Hospital.

THE ANNUAL RETROSPECT.

The large amount of space occupied by the Annual Retrospect of the progress of Medicine in all its departments makes so large a demand upon our columns, that it is necessary to hold over original articles and a large number of communications until next week.

QUEEN'S COLLEGE, BIRMINGHAM.

Dr. Suckling concluded on Tuesday last his post-graduate lectures on the diagnosis and treatment of diseases of the central and peripheral nervous system. The delivery of such a course was more or less of an experiment; and judging from the large attendance, averaging over seventy-five, may be considered as a complete success. The lectures have been rendered additionally interesting, as well as instructive, by the exhibition of forty living cases in illustration of special portions of the course. Mr. Wood White, who demonstrated the use of the ophthalmoscope and perimeter in the diagnosis of nervous diseases, also showed a number of illustrative cases; and, after the last lecture, a demonstration of pathological specimens bearing upon the subject of the course was given. The success of this course will probably lead to its repetition from time to time.

TESTIMONIAL TO DR. EDWARD WATERS, OF CHESTER.

At the meeting of the Council of the Lancashire and Cheshire Branch, held at the Medical Institution, Liverpool, on Wednesday, December 8th, 1886, the following resolutions were unanimously adopted: (1) That a testimonial be raised to Dr. Edward Waters, of Chester, in recognition of his earnest devotion, through many years of self-sacrifice to the cause of internal medical reform: (2) That in accordance with the foregoing resolution, subscriptions to a testimonial fund be forthwith invited, to carry out the proposal. (3) That the members of the Council of the Lancashire and Cheshire Branch of the British Medical Association be, and are hereby appointed as a Committee (with power to add to their number), to raise a testimonial fund, and give effect to the preceding resolutions. The first meeting of the Waters Testimonial Fund Committee took place at the Medical Institution, Hope Street, Liverpool, on Wednesday, December 22nd, at 5 P.M.

SOCIETY OF APOTHECARIES.

At a Court of Assistants of the Society of Apothecaries, held on Tuesday last, Mr. R. Brudenell Carter was elected the representative of the Society on the General Council, under the provisions of the Medical Act of 1886. In electing Mr. R. Brudenell Carter as their representative, the Society has chosen a gentleman who is not a member of the Governing Body, nor even a Member of the Society, but only one of their Licentiates, and they could not have paid a greater compliment to their Licentiates than by adopting such a course. The Society has received up to the present time, from nearly 3,000 of their Licentiates, the most cordial approval of the action taken by the Society in endeavouring to form a combination with the two Royal Colleges, and the strongest expression on the part of the Licentiates of their wish to support the Society in the assertion of its rights and privileges. The Universities of Oxford and Cambridge, as might have been anticipated, have intimated that they are unable to combine with the Society; and so, likewise, has the Victoria University. The Universities of Durham and London have, as yet, given no final decision.

DEATH OF DR. AITKEN, OF ROME.

We deeply regret to hear of the death of Dr. Aitken, of Rome. This well-known and accomplished physician had for many years held a leading position in Italy, and was recognised as one of the ablest representatives of English medical science and practice on the continent. He was a favourite pupil of the late Sir James Simpson, and a most distinguished graduate of the University of Edinburgh. Dr. Aitken has for many years been suffering from a heart affection, the gravity of which was well known to him, and which involved the necessity for great precaution and abstinence from exertion. He continued, however, almost up to the last, to carry on the practice from which the requisitions of a large number of patients, who profoundly confided in his skill and kindness, made it difficult for him to withdraw, and to which he was deeply attached by his scientific tastes and predilections. Dr. Aitken was accomplished, not only in his profession, but as an artist and archæologist. Few Englishmen of cultivated tastes, who have spent any time in Rome, but have been indebted to him for many acts of hospitality and kindness, for much pleasant social intercourse, and kindly introductions to the artistic and scientific world in Rome, in which he held an enviable position. To all his medical friends he was an ever helpful, learned, and delightful guide; in him we lose a valued personal friend, a correspondent and regular contributor of many years' standing; our readers will miss the contributions of an able, well-informed, and accomplished writer, whose services were always at their disposal when occasions of interest arose. Dr. Aitken was a man of ample fortune, and spent the summer in travel and retirement. Of late years, in his visits to England, he has been less seen in professional circles than formerly, but his premature death will be felt none the less by a large circle of friends as a severe loss. He is succeeded, at Rome, by Dr. Edmonston Charles, whom he had lately associated with him in practice, feeling himself quite unequal to its burdens. Dr. Charles, who was formerly in practice in India, and subsequently at Cannes, had removed to Rome at Dr. Aitken's request.

SCOTLAND.

INFANT MORTALITY IN GLASGOW.

As the result of an inquiry into the vital statistics of Glasgow during the past six years, the medical officer of that city finds that "the mere fact that a child is born out of wedlock doubles the chances of death within a year of birth." In other words, out of 1,000 legitimate children born, 142 die before they reach their first birthday; while for illegitimate children, the corresponding figures are 277. This is the experience of other cities; indeed, in some the comparison is even more startling. But the Glasgow officer of health makes a grave charge. He speaks of the "fatal facilities" for obtaining certificates of the cause of death; and it is said that the death-roll of infants on the friendly societies' list is extremely heavy, especially of illegitimate infants.

IRELAND.

PROPOSED TESTIMONIAL TO DR. ARCHIBALD H. JACOB.

THE preliminary meeting to make arrangements for the proposed testimonial was held in the College of Surgeons in Ireland last Saturday. Dr. Corley, Vice-President of the College, took the chair. The following executive officers were unanimously elected:—Honorary Treasurers—Professor Edward Hamilton, 120, Stephen's Green, and Dr. Purcell, 71, Harcourt Street. Hon. Secretaries—Professor E. D. Mapother, 6, Merrion Square; Dr. John H. Chapman, 122, Pembroke Road. A committee was formed (with power to add to its number) from members of the profession in Dublin and the provinces, who had offered to promote the movement. It was agreed that there should be no limit to the amount of subscription, it being understood that the smallest subscription from provincial practitioners would be thankfully received.

ULSTER HOSPITAL FOR WOMEN AND CHILDREN.

THE sale of work in aid of the above institution, which may now be regarded as an annual event, was recently held in St. George's Hall, Belfast. The special object of the effort of this year is to clear off a debt of £300 incurred by recent alterations and improvements in the hospital. The hall was beautifully arranged a a gipsy-encampment. The Rev. Dr. Porter, President of the Queen's College, occupied the chair, and there was a numerous attendance. The sale was declared open by Mrs. Blakiston-Houston. Much of the work exhibited was very tasteful and artistic.

BRITISH GYNÆCOLOGICAL SOCIETY.

IN compliance with a unanimous resolution passed by the Society on December 8th, moved by the President, seconded by Dr. Granville Bantock, the Report of the Inquiry Committee of the Liverpool Medical Institution (concerning the practice of the Liverpool Hospital for Women) was referred to the Council, who have reported in the following terms:

"The Council have to report that upon such details of the report as are of a purely local character they do not propose to express any opinion, but they regret that the Committee did not see their way, with such an exceptional opportunity at their disposal, of expressing opinions which would have been of general use to the medical profession. The Council are very strongly of opinion that the time which had elapsed in the instance of all the patients whose cases were inquired into was not long enough to enable a complete and conclusive statement concerning them to be made. At the utmost this time could not have been more than twenty months, and from this point it diminished to about nine months. It must be borne in mind that, in all such cases, the ailment is of a chronic nature, and, therefore, unlikely to receive immediate relief; and, as in the instances of other operations (such as amputations, lithotrity, etc.), a much longer period, often three years, is required for a completion of the cure. The only other point which requires comment, in the opinion of the Council, is contained in the last paragraph of the Inquiry Committee's report. This paragraph recommends that the work of special hospitals for women should be greatly restricted in a direction which has, up to the present, been recognised by universal custom and practice as legitimately within their province. Operations upon the female breasts must certainly be regarded as an integral part of the surgery of the genito-urinary system.

"Concerning operations on the liver, spleen, kidney, and other abdominal viscera, the answer to the Committee's recommendation is simple and emphatic. Where were these operations before the establishment of special hospitals? In the hands of general surgeons they were not even attempted, and no satisfactory measure of success has attended efforts in this direction up to the present moment in any general hospital. The mere diagnosis of such cases requiring surgical interference is difficult, often impossible before exploration, and, when met with, their treatment is therefore far more likely to be successful at the hands of men who are, by daily experience, familiar with all the exigencies of abdominal surgery. The Council, therefore, must ask the Society to record an emphatic protest against the recommendation of the Liverpool Committee to limit the sphere of work which it is the chief aim and objects of this Society to further."

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room, Exeter Hall, Strand, London, on Wednesday, the 19th day of January next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, December 16th, 1886.

NOTICE OF QUARTERLY MEETINGS FOR 1887.
ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any bye-law of the Association, who shall be recommended as eligible by any three members, may be elected a member *by the Council* or by any recognised *Branch Council.*

Meetings of the Council will be held on January 19th, April 13th, July 13th, and October 19th, 1887. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary, not later than twenty-one days before each meeting, namely, December 29th, 1886, and March 24th, June 23rd, and September 29th, 1887.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council, unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

COLLECTIVE INVESTIGATION OF DISEASE.

INQUIRIES are being pursued on the following subjects

DIPHTHERIA, THE ETIOLOGY OF PHTHISIS,
THE VALUE OF HAMAMELIS, THE VALUE OF PURE TEREBENE.

Memoranda on the above subjects, and forms for communicating observations on them, may be had on application.

The Inquiries on OLD AGE, CANCER OF THE BREAST, and the CONNECTION OF DISEASE WITH HABITS OF INTEMPERANCE, are now closed.

A Report on the CHOREA Inquiry has been prepared by Dr. Stephen Mackenzie; and will be published in the BRITISH MEDICAL JOURNAL as soon as the printing can be completed.

A Report on CENTENARIANS, prepared by Professor Humphry, was published with the JOURNAL of December 11th; a full Report on OLD AGE will follow.

Reports are in preparation upon the Inquiries made into ACUTE RHEUMATISM, DIPHTHERIA, CANCER OF THE BREAST, and HABITS OF INTEMPERANCE, and a Supplementary Report on PUERPERAL PYREXIA. All the above will be published in the JOURNAL as soon as completed. Tables of the Chorea and Acute Rheumatism cases will be published in separate form.

The Returns made to the GEOGRAPHICAL INQUIRY are being tabulated for report.

Application for forms, memoranda, or further information, may be

made to any of the Honorary Local Secretaries, or to the Secretary of the Collective Investigation Committee, 161a, Strand, W.C.

BRANCH MEETINGS TO BE HELD.

GLOUCESTERSHIRE BRANCH.—The next ordinary meeting will be held at the Gloucester Infirmary, when Dr. Batten will give his presidential address, on Tuesday, January 18th, at 7.30 P.M.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held, by the kind invitation of Dr. Mickle, at Grove Hall, Bow, on Thursday, January 20th, at 8.30 P.M. The chair will be taken by Cornelius Garman, Esq. Dr. Mickle will demonstrate a number of patients illustrating various forms and phases of insanity and general paralysis of the insane. Dr. C. R. Walker will show a patient suffering from locomotor ataxy, with perforating ulcer of the foot.

OXFORD AND DISTRICT BRANCH.—The next general meeting will be held on Wednesday, January 26th, 1887. Members who wish to read papers or show cases are desired to send notice of such intention to one of the honorary secretaries, on or before January 18th.—Dr. DARBISHIRE, 60 High Street, Oxford; W. L. MORGAN, Esq., 42, Broad Street, Oxford.

CORRESPONDENCE.

THE CAMBRIDGE CHOLERA FUNGUS.

SIR,—In No. 247, vol. xli, of the *Proceedings of the Royal Society*, just published, there is a preliminary report on the pathology of cholera Asiatica by Messrs. C. Roy, J. Graham Brown, and C. S. Sherrington, in which these gentlemen describe and figure the occurrence, in the tissue of the intestinal mucous membrane of persons dead of cholera Asiatica, of hyphæ, or mycelial threads and "granules." Messrs. Vines and Gardiner, we are told, declared these to be chitridiaceæ. We are further informed that these chitridiaceæ were found by Messrs. Roy, Brown, and Sherrington in the intestinal mucous membrane of the twenty-five cases of cholera they have examined, as also in the kidney and in the blood-vessels of some of these cases. I have no hesitation in saying that I consider these statements are based on error. What these gentlemen have seen and described is nothing less or more than the hyphæ, or mycelial threads of common mould (probably aspergillus), which, during preserving the material, have grown from the free surface into the tissues.

I possess a large number of specimens made of the diseased intestine, lung, kidney, liver, and skin of various animals and man, in no way connected with cholera Asiatica; in many of these I find the exact appearances described and figured by these gentlemen—viz., mycelial threads of precisely the same size and appearance as those above mentioned. They are seen to penetrate from the surface, where they form a copious dense mycelium, into the depth to various degrees. I possess sections through the mucous membrane of the intestine of the calf, of the mouse, of the guinea-pig, and of man, in which these hyphæ have penetrated as deep as the submucous tissue; in the lymphatics of this part they were very abundant. Similarly, I have specimens of the lung of calf, cow, and guinea-pig, where the growth of the mycelial threads can be traced from the pleural surface into the lung tissue, in the lymph vessels of the interlobular septa they are very numerous, and possessed of those knob-shaped outgrowths figured and described by Messrs. Roy, Brown, and Sherrington. I have also specimens of the ulcerated skin of calf and cow where these hyphæ can be traced as deep as the subcutaneous tissue. Into the kidney and the mesenteric lymph glands they also penetrate, but less than in the above organs, probably owing to the greater density of the tissue. Now in all these instances these tissues had been preserved during and over the summer months; they were examined after three or more months' preservation, and the sections were stained in methyl blue. But I must state also that the same tissues had been examined fresh and after a few weeks' hardening, and in none of them had any mycelial growth been present. It is a fact, as is pointed out by Messrs. Roy, Brown, and Sherrington, that methyl-blue brings the threads out more easily and better than other aniline dyes. There can be absolutely no doubt about the identity of the Cambridge chitridiaceæ with the hyphæ of the common mould found in the sections of non-choleraic specimens. What Messrs. Roy, Brown, and Sherrington describe as "granules" connected by delicate filaments are in most instances filaments and granules seen in optical or real transverse section; with careful, fine adjustment of the microscope this can be without difficulty ascertained. Messrs. Roy, Brown, and Sherrington assume that their "chitridiaceæ" have been overlooked by others who have examined cholera sections, because methylene blue had not been used. This assumption is entirely wrong, because methylene blue, as Löffler's (or alkaline) solution, and in other modifications, had been used by many investigators. While in India I have largely used it for staining sections fresh and after a few days' to after a few weeks' hardening, and I know as a positive fact that the German commission have in Egypt, in India, and after their return to Berlin largely used this dye. But in not one single case have they, or have I, found anything of mycelial threads, either in the intestinal mucous membrane or in any other organ. The only difference between Messrs. Roy, Brown, and Sherrington on the one hand, and all the other investigators on the other, is this, that while the former kept their material bottled over the summer (*vide* their report, p. 177), the latter examined theirs fresh, or after short and careful hardening.

That this is the real explanation of the difference of our results is proved by the following:—A bottle containing bits of choleaic intestine preserved by me in Calcutta and brought over to England was opened many months after; sections were made of the intestine and stained in methylene blue. On the free surface of the mucous membrane was found a dense plexus of mycelial threads of common mould, from which threads of various thickness had singly grown into the tissue to the depth of the submucous tissue.

Of the same choleraic intestine numerous sections had been made in Calcutta, fresh and after a few weeks' hardening; these had been stained in methylene blue, but in none of them is there any trace of mycelial threads. I have these sections at present in my possession, and while they show that there is a complete absence in the mucous membrane of mycelial threads, the others—viz, those made of the same intestine and after the same method, but after having been kept bottled for some months' show beautiful mycelial threads pervading the mucous membrane through all depths. These threads, in their course, thickness, mode of branching, in the character of the bud-like sprouts—in short, in all their morphological character—are unmistakably identical with the hyphæ found in specimens of the non-choleraic intestine, lung, skin, kidney, mesenteric glands preserved, as stated above, over the summer.

In conclusion, I wish to say that I shall be most happy to place at the disposal of Messrs. Roy, Brown, and Sherrington, as also of Messrs. Vines and Gardiner, the materials or sections mounted and stained of the various non-choleaic tissues, in which are present the mycelial threads of common mould, identical with the Cambridge cholera fungus.—Your obedient servant,

E. KLEIN.

94, Philbeach Gardens, Earl's Court, S.W., December 18th, 1886.

OBITUARY.

WALTER FERGUS, M.D.

THE vast amount of good work done, the untiring energy and unremitting care bestowed on many, call for more than a passing notice of the death of the late Dr. Fergus, for thirty-seven years the valued and trusted medical officer of Marlborough College.

Dr. Fergus was born at Newcastle-on-Tyne in 1819, and educated at King's College, London, and at the University of Edinburgh, where he graduated as M.D. in 1842. Having obtained the diplomas of M.R.C.S. Eng. and L.S.A. in 1843, he was elected house-surgeon of the Staffordshire General Hospital in 1844, a post which he resigned only on being appointed to Marlborough College in 1849. This was practically the first appointment of its kind, no other public school having a resident medical officer. The value of the appointment was soon apparent; scrupulously punctual and methodical in a degree, he gave his undivided attention to the whole establishment. Boys and staff alike, and all who sought his aid, found a kind sympathetic friend and adviser. He enjoyed the perfect confidence of the Council of Marlborough College, and the successive head masters. Failing health compelled him reluctantly to resign his post in the early part of this year. The uniform work of medical officer, even to a large school, naturally somewhat restricted general practice, but he always kept himself well read in the scientific work of the day. He was a not infrequent contributor to the medical Press, and his opinion on the subject of public school life in its sanitary relations was highly valued. In the sick room he was at his best; here the patient had not only the competent adviser, but the kind and tender nurse.

Dr. Fergus had endeared himself to a large circle of friends by many acts of kindness, and by the interest he took in the parish of St. Peter, and Marlborough generally. He was pre-eminently a Christian man, and devoted himself to every good work; was most charitable to the poor, and his loss will be regretted by all who knew him.

He died almost suddenly at Ryton-on-Tyne on December 8th. His

end, though sudden, was not unexpected by himself, for he had expressed an opinion, a short time before, that he would not live long. He was buried at Marlborough on December 14th.

ROBERT DYER LYONS, M.D., D.L., F.R.C.P.I.

WE have to record with regret the unexpected death, on Sunday last, at 1 A.M., of this well-known member of our profession. A short time after leaving his residence, in Dublin, on the previous Friday morning, he was suddenly struck down with right hemiplegia, when walking through Molesworth Street. He became at once aphasic, and never made any rally.

Dr. Lyons was in his 61st year. He was a native of Cork, of which city his father, Sir William Lyons, was twice mayor. He graduated in Medicine in the University of Dublin in 1848, and devoted himself to the study of anatomy and microscopy—a subject at that time only in its infancy. At the outbreak of the Russian war, he was appointed Pathologist in Chief to the British army in the Crimea. The result of his observations was published in an official Report (Blue-book) on the Pathology of the Diseases of the Army of the East to the Minister of War. Subsequently, he investigated, with much care and enthusiasm, the Lisbon epidemic of yellow fever, in 1857, and also reported officially in a Blue-book on that subject. After his return from the East, Dr. Lyons was appointed Physician to Jervis Street Hospital, and Professor of Practice of Medicine and Pathology to the Catholic University of Ireland. The latter appointment he held up to the time of his death; but he left Jervis Street Hospital on being elected Physician to the House of Industry Hospitals, on the resignation of the late Sir Dominic Corrigan, Bart.

In 1858, Dr. Lyons published a *Handbook of Hospital Practice*, a second edition of which was issued in 1864; and in 1870, his *Treatise on Fever* appeared. He also contributed a few papers on medical subjects to the *Dublin Journal of Medical Science*; but, although his works were the result of evident labour and research, they somehow, like his speeches, seemed to lack spontaneity and conviction, and both consequently made but little impression on his readers or his hearers. In 1880, he was elected, on Liberal principles, a member for Dublin, but his parliamentary success was not great, and he went out at the late dissolution. While in Parliament, he was appointed the Crown representative for Ireland on the General Medical Council, a Deputy Lieutenant for Dublin, and a Senator of the Royal University of Ireland.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

LYTHAM.—During the year 1885, the number of deaths registered in this district was 90; 46 being males and 44 females. From these, Dr. Fisher deducts 20 deaths occurring within the district among persons not belonging thereto, and who may therefore be termed "non-resident," by which is meant all persons who are not householders, and who have not resided in the district for a longer period than three months. This leaves 70, which, when calculated on the population of 4,435 persons, will give a death-rate of 15.7 per 1,000 for the year ending December, 1885. But has the health-officer taken account of deaths belonging to the district which occurred outside it in institutions or otherwise? Diseases of the zymotic class caused five deaths, all due to measles; these gave a death-rate of 1.1 per 1,000. Two deaths in the Cottage Hospital from enteric fever are excluded from the returns, as the disease was contracted at St. Anne's-on-Sea, where the patients resided. Five other members of the family died from the same fever in the house from which these two were removed, the sanitary arrangements being lamentably faulty. Only two cases of scarlet fever were reported during the year, both imported, and of a mild character.

NEWCASTLE-ON-TYNE.—In addition to a report on the vital statistics of the year 1885, Mr. H. G. Armstrong gives a review of the mortality of the decade immediately prior to the date of the recent adoption by the Registrar-General of his altered classification of diseases and other causes of death. The total number of deaths registered in Newcastle during the ten years ended December, 1883, is 34,480. The mean annual death-rate of the period, calculated on the mean estimated populations of the two years 1874 and 1883, is 24.2; or, if calculated on the enumerated population of the census of 1881, 23.7 per 1,000 living. The death-rate for 1885 was 26.0 per 1,000, but, taking into consideration the probable under-estimate of population, and applying it to the above returns, the death-rate would be 23.8 per 1,000. The most prevalent and fatal zymotic disease was measles, from which 359 deaths were recorded. Of these, 204 were in the second quarter of the year. Mr. Armstrong writes at some length on the spread of infectious diseases and the character of the preventive measures adopted. Scarlet fever, the disease of greatest prevalence, is shown to be the disease in which isolation has been most neglected. Mr. Armstrong considers that power to compel the removal of the infective sick to hospital from dwellings where isolation is impracticable, is greatly needed. The report also includes sections on two other subjects not dealt with in former issues of the series, viz., the results of the house-to-house inspection, concluded during the year; and the domestic distribution of the water-supply of the city. The statistics, especially of the last two sections, represent a great deal of work. The inspection, it is believed, includes a return for every inhabited dwelling in the City, except two, to which admission was refused.

READING (URBAN AND RURAL).—The statistical returns of these districts for 1885 are not as favourable as those of the preceding years. Dr. John Shea reports of the borough that the birth-rate has been the lowest recorded since 1874, though the infant mortality was low. Pulmonary diseases, bronchitis, pneumonia, and pleurisy were more fatal in 1885 than in any year during the above period. Measles was very prevalent, and the mortality from pulmonary complications was high. It became necessary to close some of the elementary schools on this account. Scarlet fever was also epidemic in a mild form, its very mildness aiding its extension. These were the only two forms of zymotic disease that manifested themselves in the rural district, and measles only was fatal. The town did not escape so easily. Diphtheria and enteric fever cases were reported from time to time, and small-pox was imported on three occasions. Diarrhœa of a fatal type was almost entirely absent, owing to the dryness of the season. The advantages of the provision of a cottage hospital were made manifest by the successful treatment of a few selected cases of scarlet fever. Dr. Shea anticipates from this the future erection of a fever hospital, sufficiently large for the borough. He considers that the prohibition of school attendance from infected houses, and the free distribution of disinfectants, fall far short of the advantages of early isolation. The death-rate for the urban district was 18.0 per 1,000, 0.1 higher than in 1884, and as nearly as possible the average of the past ten years. That for the rural district was 11.8 per 1,000.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—M.B. Examination, 1886. Examination for Honours.

Medicine—First Class: J. W. Washbourn (Scholarship and Gold Medal), Guy's Hospital; W. J. Gow[1] (Gold Medal), St. Bartholomew's Hospital. *Second Class:* H. W. Gardner, St. Bartholomew's Hospital; R. B. Wild, Manchester and Owens College; R. Johnson, University College. *Third Class:* J. S. Hutton, St. Thomas's Hospital; A. F. Voelcker, University College.

Obstetric Medicine—First Class: H. W. Gardner (Scholarship and Gold Medal), St. Bartholomew's Hospital; R. Johnson (Gold Medal), University College; L. C. T. Dobson,[1] St. Bartholomew's Hospital; W. J. Gow, St. Bartholomew's Hospital, and J. W. Washbourn, Guy's Hospital; A. Carless, King's College. *Second Class:* L. M. Gabriel, St. Bartholomew's Hospital, J. A. Smith, St. Bartholomew's Hospital, and A. F. Voelcker, University College (equal).

Forensic Medicine—First Class: R. Johnson (Scholarship and Gold Medal), University College; J. W. Washbourn[1] (Gold Medal), Guy's Hospital; F. F. Burghard, Guy's Hospital; R. B. Wild, Manchester and Owens College; S. C. Jones, University College; G. E. Halstead, B.A., B.Sc., Guy's Hospital; A. E. Taylor, Guy's Hospital; A. F. Voelcker, University College. *Second Class:* K. N. Bahadhurji, University College; W. H. Horrocks, University College, and S. E. Prall, Guy's Hospital (equal); L. M. Gabriel, St. Bartholomew's Hospital; C. D. Muspratt, Guy's Hospital. *Third Class:* A. Carless, King's College; W. J. Gow, St. Bartholomew's Hospital; E. F. Bright, University College, and C. W. F. Young, St. Bartholomew's Hospital (equal); E. F. Trevelyan, B.Sc., St. Bartholomew's Hospital; E. R. St. Clair Corbin, University College.

B.S. Examination, 1886. Pass List.

First Division.—F. F. Burghard, Guy's Hospital; J. Elliott, B.Sc., St. Bartholomew's Hospital; E. Goodall, Guy's Hospital; G. E. Halstead, B.A., B.Sc., Guy's Hospital; F. C. Hart-Smith, University College; C. D. Muspratt, Guy's Hospital; W. G. Spencer, St. Bartholomew's Hospital; J. Swain, Westminster Hospital; J. J. D. Vernon, Guy's Hospital.

Second Division.—K. N. Bahadhurji, University College; R. Johnson, University College; A. E. Taylor, Guy's Hospital; A. F. Voelcker, University College; J. W. Washbourn, Guy's Hospital.

M.D. Examination, 1886. Pass List.

R. D. Batten, B.S., St. Bartholomew's Hospital; F. H. Berry, Guy's Hospital; E. H. Booth, Guy's Hospital; J. L. Boswell, Guy's Hospital; J. H. F. Brook, B.S., University College; F. F. Caiger, B.S., St. Thomas's Hospital; J. Calvert, B.A., B.Sc., St. Bartholomew's Hospital; E. J. Cave.[2]

[1] Obtained the number of marks qualifying for the University Scholarship.
[2] Obtained the number of marks qualifying for a gold medal.

St. Bartholomew's Hospital; C. C. Claremont, B.S., University College; E. P. Cockey, St. Mary's Hospital; C. R. Elgood, B.S., University College; R. F. Fox, London Hospital; J. P. Glover, St. Thomas's Hospital; E. W. Goodall, Guy's Hospital; C. Gross, B.S., Guy's Hospital; C. M. Handfield-Jones, St. Mary's Hospital; J. L. Hewer, B.S., St. Bartholomew's Hospital; F. Hinds, B.S., University College; H. H. Lankester, St. Thomas's Hospital; W. T. Maddison, King's College; F. W. Mott, B.S., University College; W. Pearce, B.S., B.Sc., St. Mary's Hospital; J. J. Powell (Gold Medal), University College; A. E. Price, B.S., Guy's Hospital; C. E. Purslow, Birmingham; E. Rice, St. Bartholomew's Hospital; K. R. Smith, B.S., University College; H. R. Spencer, B.S., University College; A. J. Turner, University College; L. C. Wooldridge, D.Sc., Guy's Hospital; S. Worthington, Guy's Hospital.

Logic and Psychology only.—J. W. Batterham, B.S., Westminster Hospital; A. H. Cook, University College; A. W. Dingley, University College; W. H. R. Forsbrook, Westminster Hospital; W. L. Heath, B.S., St. Bartholomew's Hospital; A. J. Jefferson, B.S., St. Thomas's Hospital; E. Shove, London School of Medicine and Royal Free Hospital; D. J. Slater, St. Bartholomew's Hospital; R. T. Williamson, B.S., Owens College.

M.S. Examination, 1886. Pass List.

Logic and Psychology only.—W. J. Roeckel, St. Bartholomew's Hospital.

Society of Apothecaries of London.—The following gentlemen passed the Examination in the Science and Practice of Medicine, Surgery and Midwifery, and received certificates to practise, on Thursday, December 9th, 1886.

Adams, Percy Targett, Ashford Road, Maidstone.
Brown, Edward Vipont, M.R.C.S., 123, Lady Margaret Road, Holloway, N.
Carey, Basil de Beauvoir, 22, Taviton Street, Gordon Square.
Challenor, William, 35, Alfred Place, Gower Street.
McLean, William Warker Laroche, "Ellerslen," Fulham Park Gardens, S.W.
Smith, Alfred Alexander, L.R.C.P.Ed., 43, Railton Road, Brixton.

The following gentlemen passed on December 16th:

Gravely, Harry, 48, Gloucester Crescent, Regent's Park, N.W.
Naumann, John Charles Francis, Woelman, near Eilenburg, Germany.
Sunder, Charles Edward, M.R.C.S., the College, Regent's Park, N.W.
Williams, John Thomas Creswick, Dolgelly, North Wales.

MEDICAL VACANCIES.

The following vacancies are announced.

BRISTOL DISPENSARY.—Surgeon. Applications by January 1st, 1887, to the Secretary.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Honorary Medical Officer. Applications by January 3rd, 1887, to the Chairman of the Committee of Management.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Honorary Surgeon-Dentist. Applications by January 3rd, 1887, to the Chairman of the Committee of Management.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent.—Assistant Medical Officer. Salary, £120 per annum, with board, etc. Applications by December 30th to H. F. Youle, Esq., Guildhall, E.C.

HOSPITAL FOR THE INSANE, Barnwood, Gloucester.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to Dr. Needham.

MIDHURST UNION, Sussex.—Medical Officer. Salary, £80 per annum, and fees. Applications by December 25th to the Clerk to the Guardians.

ST. MARYLEBONE INFIRMARY.—Assistant Medical Officer. Salary, £130 per annum, with board, etc. Applications by December 28th, to the Clerk to the Guardians.

UNIVERSITY OF EDINBURGH.—Examiner in Clinical Medicine. Salary, £75 per annum, and extras. Applications by January 17th, 1887, to the Secretary.

UNIVERSITY OF EDINBURGH.—Examiner in Surgery. Salary, £75 per annum, and extras. Applications by January 17th, 1887, to the Secretary.

UNIVERSITY OF EDINBURGH.—Examiner in Materia Medica. Salary, £75 per annum, and extras. Applications by January 17th, 1887, to the Secretary.

UNIVERSITY OF EDINBURGH.—Examiner in Physiology. Salary, £75 per annum, and extras. Applications by January 17th, 1887, to the Secretary.

UNIVERSITY OF EDINBURGH.—Examiner in Pathology. Salary, £75 per annum, and extras. Applications by January 17th, 1887, to the Secretary.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM, Powick, near Worcester.—Third Assistant Medical Officer. Salary, £100 per annum, with board, etc. Application by January 6th, 1887, to Dr. Cooke.

MEDICAL APPOINTMENTS.

Balfour, Andrew, M.D.Ed., appointed Medical Officer of the Parish of Duddingston, Midlothian, *vice* A. H. Balfour, L.R.C.S.G., deceased.

Balfour, John Hutton, M.B., C.M.Ed., appointed Certifying Surgeon to Factories in the burgh of Portobello, N.B., *vice* A. H. Balfour, L.R.C.S.E., deceased.

Baker, John, M.B., C.M., appointed Medical Assistant to the Broadmoor Lunatic Asylum.

Dolby, J. Harrington, M.R.C.S.Eng., etc., Senior Assistant Medical Officer, Worcester County Asylum, appointed Medical Superintendent of the Berks County Asylum, *vice* R. E. Gillard, M.D., resigned.

Garland, J. P., L.K.Q.C.P.I., L.R.C.S.I., L.M., appointed Medical Officer to the North Dublin Union, *vice* J. P. Nolan, L.K.Q.C.P.I., L.R.C.S.I., deceased.

Gerrard, John, M.D., M.A., M.R.C.S., appointed Physician to the North London Hospital for Consumption and Diseases of Chest.

Goulett, C., M.R.C.S., L.R.C.P., appointed Resident Assistant to the Wolverhampton and Staffordshire General Hospital.

Grant, John, M.B. and C.M.Ed., late Assistant Medical Officer, Inverness District Asylum, Inverness, appointed Assistant Medical Officer to the East Riding Asylum, Beverley, Yorks.

Harries, J. T., M.R.C.S., L.S.A., appointed House-Surgeon to the Salop Infirmary, *vice* R. H. Russsell, M.R.C.S., L.S.A., resigned.

Harper, Alex., M.B., M.R.C.S., appointed Resident Medical Officer to the Victoria Hospital for Children.

Hawkins, F. H., M.D., appointed Physician to the North London Hospital for Consumption and Diseases of Chest.

Henry, John P., Med.Sch., B.A., M.B., B.Ch.Dub., appointed Demonstrator of Anatomy in Carmichael College of Medicine, Dublin.

Hughes, S., M.B., C.M.Edin., M.R.C.S., L.S.A.Lond., late House-Surgeon to the Royal Infirmary, Liverpool, appointed Senior House-Surgeon to the Birkenhead Borough Hospital.

Keyworth, Arthur F., L.K.Q.C.P.I., L.M., appointed Medical Officer for the Marple and Hayfield District of the Manchester, Sheffield, and Lincolnshire Railway Mutual Provident Society, *vice* John Howe, M.R.C.S., L.S.A., deceased.

Larder, Herbert, M.R.C.S., L.S.A., appointed Medical Superintendent to the Whitechapel Union, *vice* J. J. Ilott, M.R.C.S., resigned.

Lawson, G., F.R.C.S., appointed Consulting Ophthalmic Surgeon to the Hospital for Epilepsy and Paralysis and Other Diseases of the Nervous System, Portland Terrace, Regent's Park, London, N.W., *vice* White Cooper, Esq., deceased.

Lyon, T. Glover, M.A., M.D., M.R.C.P., appointed Physician to the North London Hospital for Consumption and Diseases of Chest.

Macdonald, John A., M.B., C.M.Glas., appointed Medical Officer and Public Vaccinator to the Denton District of the Grantham Union, *vice* R. Kingston, M.R.C.S., L.S.A., resigned.

Morgan, A. K., M.R.C.S.E., appointed Medical Officer of Health and Superintendent of Sanitary Hospital, Bournemouth.

Mugford, S. A., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to th Kensington Dispensary, *vice* L. A. Buck, M.R.C.S., L.S.A., resigned.

Pearson, R., M.R.C.S., L.R.C.P., appointed Junior Assistant House-Surgeon to the Royal Infirmary, Hull, *vice* F. W. Pedler, M.R.C.S., resigned.

Pedler, F. W., M.R.C.S., appointed Assistant House-Surgeon to the Royal Infirmary, Hull, *vice* J. S. Collins, M.D., resigned.

Postlethwaite, F., M.R.C.S., L.S.A., appointed House-Surgeon to the Wallasey Dispensary, *vice* W. R. Etches, L.R.C.P., M.R.C.S., resigned.

Parry, R. H., L.R.C.P., L.R.C.S.Ed., appointed Resident House-Surgeon to the Glasgow Hospital for Sick Children, *vice* Dr. Moon, resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

Fowler—Sinclair.—On December 15th, at Loirston, Kincardineshire, J. Francis Scott Fowler, Esq., M.B., of the Army Medical Staff, to Annie, second daughter of D. Sinclair, Esq., of Loirston and Altens.

Pike—Wheatley.—On December 15th, at Saint Phillip's Church, Miltown, by the Rev. E. Parke Wheatley, B.A. (brother of the bride), assisted by the Rev. S. M. Harris, M.A., William Watson Pike, Army Medical Staff, youngest son of the late William Pike, Esq., of Achill, to Sarah Louisa, second daughter of the late E. Park Wheatley, Esq., Dublin.

DEATHS.

Spicer.—On December 9th, Mary Elizabeth Lavinia, wife of R. H. S. Spicer, M.D., of North Molton, Devon, aged 61.

Walker.—On December 16th, at Peterborough, Thomas Walker, M.D. and J.P., in his 91st year.

Diaries for 1887.—We have received, from Messrs. Cassell and Co., who will in future be the publishers of the well-known Letts's Diaries, a copy of Letts's No. 31, Rough Diary or Scribbling Journal, with a week in an opening, interleaved with blotting-paper, published at 2s. 6d. This is a folio diary, with some useful features. It contains a great deal of accurate information in addition to that usually given, with one page set apart for "memoranda of things lent," the utility of which will commend itself to those who are not in the habit of keeping a separate book for the purpose. We have also received Letts's, No. 26, octavo 1s. Pocket-diary and Almanac. From a list accompanying the books, it is seen that Letts's diaries, in the hands of Messrs. Cassell and Co. are published in every variety of shape and style to meet the wants of all professions and trades.

National Dental Hospital.—At the annual dinner of the past and present students of the National Dental Hospital, held at the Holborn Restaurant, the toast of "The Medical and Dental Schools" was proposed by Mr. Arthur Underwood, who said that these schools were inextricably associated with each other, and he trusted that they would always remain so. Dr. Cunningham, of Cambridge, had already made considerable strides in arranging a scheme of special education in the University of Cambridge. He was engaged in a great crusade in which he was preceded by Mr. Fisher—a crusade which would end in placing all schools under the special and proper supervision of a dental surgeon. Mr. Pearce Gould and Dr. Cunningham responded to the toast.

OPERATION DAYS AT THE LONDON HOSPITALS.

MONDAY.....10.30 A.M.: Royal London Ophthalmic.—1.30 P.M.: Guy's (Ophthalmic Department); and Royal Westminster Ophthalmic.—2 P.M.: Metropolitan Free; St. Mark's; Central London Ophthalmic; Royal Orthopædic; and Hospital for Women.—2.30 P.M. Chelsea Hospital for Women.

TUESDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M. Royal London Ophthalmic.—1.30 P.M.: Guy's; St. Bartholomew's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Westminster; St. Mark's; Central London Ophthalmic.—2.30 P.M.: West London; Cancer Hospital, Brompton.—4 P.M.: St. Thomas's (Ophthalmic Department).

WEDNESDAY ..10 A.M.: National Orthopædic.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: Middlesex.—1.30 P.M.: St Bartholomew's; St. Mary's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: London; University College; Westminster; Great Northern Central; Central London Ophthalmic.—2.30 P.M.: Samaritan Free Hospital for Women and Children; St. Peter's.—3 to 4 P.M.: King's College.

THURSDAY .....10.30 A.M.: Royal London Ophthalmic.—1 P.M.: St. George's—1.30 P.M.: St. Bartholomew's (Ophthalmic Department) Guy's (Ophthalmic Department); Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Central London Ophthalmic; Hospital for Diseases of the Throat; Hospital for Women.—2.30 P.M.: North-west London; Chelsea Hospital for Women.

FRIDAY .....9 A.M.: St. Mary's (Ophthalmic Department).—10.30 A.M.: Royal London Ophthalmic.—1.15 P.M.: St George's (Ophthalmic Department).—1.30 P.M.: Guy's; Royal Westminster Ophthalmic.—2 P.M.: King's College; St. Thomas's (Ophthalmic Department); Central London Ophthalmic; Royal South London Ophthalmic; East London Hospital for Children.—2.30 P.M.: West London.

SATURDAY .....9 A.M.: Royal Free.—10.30 A.M.: Royal London Ophthalmic.—1 P.M.: King's College.—1.30 P.M.: St. Bartholomew's; St. Thomas's; Royal Westminster Ophthalmic.—2 P.M.: Charing Cross; London; Middlesex; Royal Free; Central London Ophthalmic.—2.30 P.M.: Cancer Hospital, Brompton.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin M. Th., 1.30; Dental, M. W. F., 9.

GUY'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S. 2; o.p., M. W. F., 12.30; Eye, M. Th., 1; Ophthalmic Department, W., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, Tu., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, Tu. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2: Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.45; Obstetric, Tu. F., 9.30; o.p., M. Th., 9.30; Eye, Tu. F., 9.30; Ear, W. S., 9.30; Throat, M. Th., 9.30; Skin, Tu. F., 9.30; Electrician, Tu. F., 9.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W., 1.30; Eye, M. Th., 2; o.p., daily, except Sat., 1.30; Ear, M., 12.30; Skin, W., 12.30; Throat, Tu. F., 1.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetrics, M. Tu. Th., F., 1.30; Eye, M. Tu. Th. F., 2; Ear, S., 1.30; Skin, W., 1.45; S., 9.15; Throat, Th., 2.30; Dental, W., 10.30.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 8. Eye, M. Th., 2.30; Ear, M., 9; Skin, Th., 1; Dental, W.S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161A, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 161A, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the office of the JOURNAL and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the Manager, 161A, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES, BE RETURNED.

QUERIES.

FREEMARTIN.

J. D. writes: This is the name given to a female calf, born as a twin with a male one. Can anyone tell me the etymology and origin of the word?

INSTRUCTION IN MASSAGE.

J. DUNDAS GRANT, M.D., would be glad to know where a lady of considerable intelligence, and of robust character and physique, could acquire the art of massage.

THE DEGREE OF M.D.

M.R.C.S., L.R.C.P.Lond., L.S.A. writes: I see you announce that the scheme favoured by the Councils of the Royal College of Physicians and the Royal College of Surgeons for obtaining a charter for granting the degree of M.D. to those who pass the examination of the conjoint board is rapidly assuming shape, etc. Can you inform me whether the degree will only be open to those who pass the conjoint board, or will it be open to practitioners like myself who have passed the M.R.C.S. and L.R.C.P.Lond. separately at the respective Colleges?

ANSWERS.

ONE INTERESTED.—The address of the Income Tax Repayment Agency is 16, Artesian Road, London, W.

DR. LOUIS J. M. CORDNER (Aughnacloy, co. Tyrone) will find an account of senile decay of the mental powers, etc., in the following: An article by Dr. Anstie, on Certain Nervous Affections of Old Persons, in the *Journal of Medical Science*, vol. xvi, p. 31, April, 1870; one by Dr. Conolly, in *Medical Times and Gazette*, vol. i, p. 489, 1858; Dr. Maudsley's *Pathology of the Mind*; and *A Manual of Psychological Medicine*, by Drs. Bucknill and Hack Tuke.

PRODUCTION OF CARBONIC ACID GAS.

A.B.—The volume of CO_2 given off from sodæ bicarb. ℥i., when saturated with tartaric acid, will vary according to temperature and pressure; but assuming that the temperature is 60° F. and the pressure is 30 inches, that the sodium bicarbonate is pure and dry, and that the troy or apothecaries ounce of 480 grains is signified by the symbol ℥j; then the volume of CO_2 given off would be 533 cubic inches, or nearly 15½ pints.

NOTES, LETTERS, ETC.

THE RIDDELL FUND.

DR. JOSEPH ROGERS, President of the Poor-law Medical Officers' Association, writes: A letter, of which the subjoined is a copy, was recently forwarded to me. It refers to a very sad story, the particulars of which had been sent to me by the unhappy man several months ago, when he wrote for my advice, which was to the effect that it was much to be regretted that he had incurred the hostility of anyone who had it so much in their power to render his professional life uncomfortable, and I trusted that he would do his best to minimise the hostility he had evoked. It would appear, however, that it was not to be so, and the unhappy man rushed into eternity under the influence of a morbidly sensitive nature. The letter was sent on to me by his wife, who informs me that she is wholly dependent on the sale of his small practice for the present means of living.

My health is too much broken to take an active part in collecting anything for the poor woman's benefit, but Mr. John Wickham Barnes, F.R.C.S., 3, Bolt Court, Fleet Street, E.C., whom I have just seen, will kindly receive and apply for the widow's benefit any monies from the well-to-do members of the profession.

[*Copy.*]

Dunsford, December 3rd, 1886.

Dear Dr. Rogers,—Before this reaches you I shall be no more. My enemies have triumphed. One of the guardians made a most unprovoked attack (and, as he afterwards acknowledged, unfair attack) upon me, and in a moment of exasperation I wrote a letter to the Board of Guardians. They forwarded it to the higher Board, and now I have been dismissed. Standing now on the brink of eternity, I solemnly repeat what I told you before, that all the persecution arose from the fact of our turning our backs on —— daughter when we found that....We never mentioned our knowledge to any outsider, but my wife left the choir. From that day till now we have been cruelly boycotted, and now ruined. It is too late to begin life again. I trust myself and my family in the hands of God Almighty. If you can do anything for my wife and family, why God bless you. And now good-bye.—Yours truly,

(Signed) R. RIDDELL.

MR. J. WICKHAM BARNES (3, Bolt Court, Fleet Street) writes: Dr. Rogers having published my name as being willing to receive contributions for the widow of the late Dr. Riddell, of Dunsford, near Exeter, I think it only proper that your readers should know something of the case they are called upon to subscribe to. About two years ago, Dr. Riddell communicated with Dr. Rogers in regard to differences between himself and his guardians, arising, as he considered, from causes foreign to his appointment. Since that time, complaints (as he said, without reason) have continually been made against him, when, in a fit of desperation, he wrote an intemperate letter to his guardians, who forwarded the same to the Local Government Board, which brought an answer requiring his resignation. The shock resulting from this letter was too great for his enfeebled and worried brain, death by strychnine being the result; but immediately before taking this, he wrote a heart-rending letter to Dr. Rogers, expressive of his inability to bear up any longer against his troubles, thanking him for former kindness, and asking him to do what he could to assist his widow and children, who are left totally destitute. Dr. Rogers, I am grieved to say, is too ill to move in the matter, and if no one else can be found better able to help the poor widow and children, I will receive contributions for them, however small the amounts, and will insert them weekly in the BRITISH MEDICAL JOURNAL, with your kind permission.

Subscriptions already Received.	£	s.	d.
Jno. Woodman, M.D., Exeter	1	1	0
H. Mallett, Esq., dentist, Exeter	0	10	0
Dr. Joseph Rogers	1	1	0
J. Wickham Barnes, Esq.	1	1	0

The Degree of M.D.

HOPEFUL writes: So far as I have observed, legislation involving fundamental changes is frequently, if not always, accompanied by conditions which respect and secure life interests. This is both just and reasonable. The rank and file of the medical profession are so accustomed to the pressure of hardships, that they seem to have come to regard these as inseperably associated with professional life. One of these hardships has of late years come to occupy a very prominent position. I refer to the difficulty which a great proportion of medical practitioners have had to encounter in their efforts to obtain an university degree; which, in a great many instances, they have failed to secure. In what follows I intend to confine myself to a class of practitioners who must be somewhat advanced in life, and whose number is getting "small by degrees." Allusion is here made to some who, variously qualified, were in practice about the year 1858. One reason I mention 1858 is because my principal data will be taken from the Medical Directory for Scotland for that year. There it is stated as one of the regulations to be observed in granting the degree of M.D. by the then University and King's College, Aberdeen, that "practitioners who possess a licence or diploma from any of the Royal Colleges of Physicians or Surgeons, or from the Apothecaries' Company, and who have been engaged for at least five years in the practice of medicine after the receipt of the diploma, will be admitted to examination, on producing their licence or diploma, along with satisfactory evidence of good moral character, and of having studied the classics at a university or at an academy of acknowledged reputation."

Again, the "regulations applicable to medical practitioners," in connection with what was at one time "Marischal College and University, Aberdeen," contain, *inter alia*, the following: "Practitioners may be admitted, without residence, to examination for the degree of M.D., who have held a diploma or a licence in medicine or in surgery, for at least ten years, and who produce satisfactory evidence of good moral character, and having been engaged in practice during that period."

And yet again, the University of St. Andrew's had the following as one of its "regulations:" "Fellows, Members, and Licentiates of the Royal Colleges of Surgeons of England, Edinburgh, and Dublin, of the Royal College of Physicians of London, of the Faculty of Physicians and Surgeons of Glasgow, and of the London Apothecaries' Company, are eligible as candidates for the Degree of Doctor of Medicine, on producing their diploma or licence."

It need scarcely be stated here that the two Aberdeen teaching and licensing bodies mentioned above now constitute the university of that city. Although I shall not labour under the disadvantages of having only a single qualification, under the Medical Act of 1886, yet I am one of those who suffered by the changes introduced about a quarter of a century ago, and which should have been strenuously resisted. There cannot be a doubt that we have been unjustly deprived of our rights, and that we have not only an equitable claim to be allowed, as practitioners, to be candidates for the degree of M.D. at the Universities of Aberdeen and St. Andrew's, but we ought to be treated by the authorities of these universities with very great consideration.

This is a subject which should interest not only those immediately concerned, but which demands the attention and aid of the Imperial Government, of the General Medical Council, of the Universities of Aberdeen and St. Andrew's, of the Medical Corporations, of the Medical Schools, and of all the members of the medical profession who desire to see the restoration of what should never have been taken away.

The Office of Coroner and the Medical Profession.

DR. G. E. YARROW (97, Old Street, E.C.), writes referring to the observations in the JOURNAL of December 18th, on the above subject: Permit me to say that after conferring with some electors of great influence, I decided not to pursue my canvass, firstly, because it was thought unwise to split the medical interest, and, secondly, because Dr. Macdonald appeared to have a better chance of obtaining the appointment than myself; but it was clearly understood that in the event of a vacancy being created by the division of the district, I should again offer myself as a candidate, and hope to obtain the support of my medical brethren.

"Mont Dore" at Bournemouth.

THE REV. JAMES HERBERT WAKELYN writes: The Baths at Bournemouth, hitherto known as the "Mont Dore" Establishment, have, after many changes, passed into hands under which they will be simply at the disposal of the members of the medical profession, for use at discretion, being no longer under special control, and having no resident medical officer. It is hoped that this may clear the way for their more general use for health-purposes.

Medical Providence.

DR. W. FLEMING PHILLIPS requests us to state that his present address is 18, Oxford Street, Southampton.

A Degree for London Medical Students.

A DISGUSTED M.R.C.S. writes: On November 27th the University of London published their pass list, and thirty-six candidates were successful; so that, out of the seven or eight hundred students joining the London medical schools, all who start in practice, except thirty-six, do so under the disadvantage of not being entitled to call themselves "Dr.," and sign themselves M.D., although they have been as well trained and passed as severe tests as the Scottish graduates, and have done infinitely more practical work.

This right might be obtained if the Royal Colleges and the Society of Apothecaries were united; but "if a house be divided against itself it cannot stand," let alone succeed against the opposition of the universities of the three kingdoms. But if the Royal Colleges persist in their suicidal policy, the only course would be for the Society of Apothecaries to make some private arrangement with some British or even foreign university, such as Pennsylvania or Brussels, whereby the examination for a degree can be conducted at Blackfriars. The Licentiate of the Hall would then be equipped with a M.D., a legal power to recover fees for his duties, and a right to have his degree placed on the *Register*.

I am sure the thanks of all general practitioners are due to you for the hearty way you have championed our cause in the JOURNAL.

COMMUNICATIONS, LETTERS, etc., have been received from:

Our Manchester Correspondent; Mr. Lawson Tait, Birmingham; Dr. Hughes Bennett, London; Dr. W. L. Hunter, Pudsey; Dr. Newman, Stamford; Mr. J. Norton, London; Surgeon Battersby, Dublin; Mr. J. G. Jefferson, Lisburn; Dr. C. F. Knight, Dublin; Dr. E. L. Bey, Paris; Dr. Savage, London; Mr. H. Marturin, Winchfield; Dr. E. O. Daby, Hull; Dr. E. Waters, Chester; Dr. Walker, Peterborough; Mr. A. Hyde Clarke, Moulton; Dr. J. Johnston, Bolton; Dr. D. Newman (Glasgow); Dr. J. Braxton Hicks, London; Mr. C. Roberts, London; Dr. Sidney Martin, London; Mr. G. T. Gardner, London; Mr. H. L. Hoops, Eccles; Dr. Neale, London; Mr. H. W. Allingham, London; Dr. J. W. Moore, Dublin; Dr. Scott, Belfast; Mr. A. S. Manders, Melbourne, Australia; Mr. Sipke Tulp, London; Mr. G. G. D. Willett, Bristol; Mr. Wickham Barnes, London; Mr. G. Thieme, Leipsig; Dr. Imlach, Liverpool; Dr. Styrap, Shrewsbury; Dr. Hack Tuke, London; Mr. T. D. F. Evans, Birmingham; Mr. A. F. Hawkins, Birmingham; The Secretary of the Victoria University, Manchester; Messrs. Sells, London; Mr. H. K. Lewis, London; Mr. J. G. Wheatley, Dublin; Dr. R. Chalmers, Glasgow; Mr. J. Grant, Beverley; Mr. J. Dixon, Dorking; Dr. A. T. Myers, London; Dr. W. Laidlaw Purves, London; Messrs. Smith and Co., London; Office of the *Rock*; The Assistant-Secretary, Royal Meteorological Society, London; Mr. S. Smith, Peterborough; Messrs. Burgoyne and Co., London; Mr. Lennox Browne, London; Mr. M. G Biggs, London; Dr. H. Tizard, Weymouth; Mrs. Baker, London; The Secretary of Cambridge University; Mr. J. W. Hunt, Dalston; Dr. Laffan, Cashel; Mr. A. Trower, Broadstairs; Mr. C. Stonham, London; Mr. F. W. Kirkham, Downham; Mr. S. S. D. Wells, Plymouth; Mrs. H. Lovett, Swansea, Tasmania; Mr. J. E. Scowcroft, Bolton; Dr. W. H. Tayler, Anerley; Dr. Barnardo, London; Mr. J. F. Harris, Shrewsbury; Dr. G. Harley, London; Mr. J. N. S. Biggs, London; Messrs. H. Stopes and Co., London; Dr. B. W. Whitelegge, Nottingham; Dr. J. Price, Nottingham; Mr. H. Birlteel, Plymouth; Messrs. Atkinson and Philipson, Newcastle; Dr. F. Godfrey, London; Mr. Watson Cheyne, London; Mr. W. M. King, Chiswick; Dr. E. Klein, London; Mr. A. J. Pepper, London; Dr. S. J. Sharkey, London; Mr. J. W. Watkins, Newton-le-Willows; Mr. J. V. Fitzgerald, Birmingham; Dr. D. J. Leech, Manchester; Dr. P. Boulton, London; Dr. J. P. Henry, Dublin; Surgeon-General Gordon, London; Dr. Driffield, London; The Secretary of the Hospital for Epilepsy and Paralysis, London; The Secretary of the University of London; Dr. I. Smolsky, St. Petersburg; Mr. J. H. Douty, Powick, Worcester; Dr. Stephen Mackenzie, London; Dr. G. Fyfe, Gainsborough; Dr. Eylandt, Bournemouth; Dr. Lewers, London; Mr. C. J. Lee, Liverpool; Dr. Duke, Dublin; Dr. Ferrier, London; Mr. C. R. Keetley, London; Mr. J. W. Power, Peterborough; Dr. Huggard, Davos Platz; Mr. J. J. Merriman, London; Mr. W. Duncan, Frome; Dr. Ashby, Manchester; Mr. S. Plowman, London; Mr. T. D. Cook, Torquay; Mr. S. Murphy, London; Dr. D. Toby Matson, Edinburgh; Dr. Madge, London; Sir W. Smart, K.C.B., London; Mr. R. Freeman, London; Mr. G. E. Yarrow, London; Mr. W. L. Emmerson, Melton Mowbray; Dr. Maurice, Marlborough; Dr. Bampton, Plymouth; Sir E. Lechmere, London; Dr. G. F. Fulcher, Chingford; Mr. Edward East, London; Mr. Mayo Robson, Leeds; Mr. J. B. Blackett, London; etc.

BOOKS, ETC., RECEIVED.

On Irritable Brain in Children. By W. H. Day, M.D. London: Bailliere, Tindall, and Cox. 1886.

Classification and Nomenclature of Disease. By A. Rabagliati, M.A., M.D. London: Bailliere, Tindall, and Cox. 1886.

The Physicians' and Surgeons' Visiting List, etc., 1887; Forty-first Year. London: John Smith and Co. 1887.

Transactions of the Ophthalmological Society of the United Kingdom, Vol. vi, 1886.

St. Thomas's Hospital Reports. New Series. Vol. xv. 1885.

Contributions to Pathology and the Practice of Medicine. By John Richard Wardell, M.D. London: H. K. Lewis. 1886.

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SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

[The annexed page, No. 17, completes the Supplement (Professor Humphry's Report on Centenarians) issued with the Journal of Dec. 11th, 1886].

DIRECTIONS TO THE BINDER.

[The Supplement, pp. 1–17, including the annexed page, to be bound at the end of the Journal for 1886, Vol. II. It is included in the Index].

SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL:

TABLE OF THE CONDITIONS, HABITS, FAMILY HISTORY, ETC. OF CENTENARIANS,

Made from a Form of Inquiry Issued by the Collective Investigation Committee of the British Medical Association.

With Remarks and Analysis
By PROFESSOR HUMPHRY, F.R.S.

In the publication of this table it is not meant to be implied that each of the fifty-two persons positively attained to the age of 100 years. Some no doubt did so; and in eleven (two males and nine females) the age was confirmed by baptismal certificates or other records. Respecting others, there is necessarily more or less uncertainty; but these may reasonably be assumed to have reached nearly to that age. The name is given in each case; and the names are also given of the informants. These were nearly all medical men who volunteered the information which they would not have done unless they believed it to be correct, and who, in many cases, were well acquainted with the persons respecting whom they gave the particulars. The well-known pride of longevity and the tendency to exaggerate and deal with the marvellous throws some suspicion over all records of this kind, and, indeed, had well-nigh caused a revulsion to misbelief in the capacity of the human body to retain vitality for so long a period as a hundred years. Abundant well-established examples of its doing so have, however, dissipated that scepticism which, I suppose, is now held by scarcely any one. It will be observed that none of the cases here tabled range among the marvellous and startling instances we sometimes read of; not one is stated to have reached 110; one only is said to have been 108 and one 106.

Our thanks are due to the gentlemen who have been so good as to take the trouble (often considerable) to gather and give the information from which the table has been made. For assistance in compiling it, and for the analysis, I am indebted to A. Francis, M.R.C.S., of King's College, in this University. In a subsequent number I propose to offer some remarks upon the few instances which have reached me in which *post mortem* examinations of centenarians have been made; and I shall be very glad to receive any information on that head which may be sent me within the next two or three weeks.

I have a large collection of reports of persons between eighty and a hundred, which are all tabulated, and the analyses of which, with remarks, I hope in due time to publish in the Journal; but the interest attaching to a record of so many reputed centenarians will, I think, be deemed to justify the printing of this table at length.

A few reports of centenarians have come in since the table was in type, and the analysis made. Any special points arising from these must be given subsequently.

N.B.—The capital letter given in a column is the initial letter of one of the words in the heading above. Where *stout* and *spare* are in the heading, the word *stout* is indicated by "st." The horizontal line in a column indicates that no information on that detail was given, thus distinguishing from O which indicates a negative.

Though it must be granted even of the centenarian, as of all others, that he soon "passeth away and is gone," yet happily we are not obliged to admit that his "strength is but labour and sorrow." In many instances, on the contrary, he has, if not a green, yet a mellow and cheerful old age, one of happiness to himself and pleasure to others, brightened by a vivid though calm interest in the present, and unshadowed by apprehension of that which is to come. "Pay me a visit when you next come to Leamington," were usually among the words of adieu by Miss Hastings, at the age of 103, to her friends; "I shall like to see you, and hear how you are going on." There is a great moral in this; for while we are denizens in this Mammon, we are bound to make to ourselves friends of it, which is best done by a cheerful happy use of it, and by enjoying it and using well the powers and privileges it gives us; and the injunction is none the less imperative and valuable when the sojourn in it has lasted for five score years and more. Moreover, in this, as in so many other instances, the influences are reciprocal; for associated as cheerfulness and happiness are with good doing and kind feeling, they are also much dependent upon the smooth working of the several parts of a sound bodily machinery, to the healthfulness of which they in their turn not a little contribute. So long, indeed, as the body is enjoyable, and its functions go glibly and smoothly on, the tenant is commonly desirous of continuing its occupation. When it ceases to be so, when lassitude and weariness supervene, when means of communication with others are stopping, when the "*sans* everything" condition is impending, he is content to quit; and when the tenement becomes distressing or painful, he is anxious to do so. Still, though the capacities for activity and work may be passing away, and life's "iretful fever" with them, the old person may comfort himself with the reflection that a useful mission still remains in the benign influence of a serene and benevolent disposition, which calmly estimates the things of time and sense at their true value, and which, leniently regarding the shortcomings of others, gives the true crown of glory to the hoary head.

It is most satisfactory to find that the exercise—even the full exercise—of the various powers, mental and bodily, is not merely compatible with, but is conducive to, great age; that, as has been well said, "the harmonious development of the many-sided aspects of man is conducive to health and the prolongation of life," and that there need be no fear of entering heartily and actively, and with full interest and energy, into the assigned work of life, physical or mental. The body is made, not for ease and sloth, but for labour and play, for work and enjoyment, better still for enjoyment of work. Work, enjoyed as it should be, promotes health of body, and especially if stimulated by other motives than personal ambition and gain, engenders that cheerful placid frame of mind which is one of the adjuncts of centenarianism.

France has lately celebrated the centenary of a philosopher and a chemist, M. Chevreuil, who the same night occupied the President's box at the opera; and we are told that a Chinese centenarian recently passed the examination which qualified him to enter the highest academy of the Mandarins. Delightful was the account of Lady Smith, in whom a bright intelligent mind and a brisk healthy body had been in uninterrupted harmonious action for a hundred and three years, and who to the last took a lively interest in the world's political and other movements.

Among the centenarians on our own list, the intellect is stated to have been high in 11 and low in 5 only; 20 are reported as strong, 16 of average strength, and 12 only as feeble. Several were remarkable for mental and bodily activity and energy during their long lives. Many had been engaged in hard bodily toil, or mental work, or, successfully, in various occupations, and, in different ways, had played their parts effectually on the world's stage to the end of the long drama in better plight than the poet has represented them. I often wish Shakespeare had lived to give a brighter version of his seven stages, and to portray the old man not lean and slippered, but well favoured and booted, keen in life's interests, and happy in promoting the welfare and enjoyment of others. Even in the bedridden state, of which the tables give seven examples (four males and three females), one of whom had been bed-ridden for seven years, all is not cheerless. The quiet coziness, the even temperature, the freedom from exposure, and the reservation to the vital organs of nerve-energy and nutritive material, consequent on the diminished use of the muscular system contribute to prolong the lives of some feeble persons who still retain the pleasures of intellectual occupation and social intercourse, to say nothing of the enjoyment of sleep and the gratification of the appetite; and it is curious, though not unfrequently to be observed, that persistence in bed actually increases both sleep and appetite. Some aged people lie in bed in the winter; and, in the dull routine of the workhouse, many old people drift into the bedridden state.

In our tables, as usual in records of longevity, the women preponderate over the men (36 to 16), in spite of the dangers incidental to child-bearing and the diseases associated with the varying demands made, at different periods, upon the organs connected with that process. This is obviously, in great measure, to be attributed to the comparative immunity of the woman from the exposures and risks

(Continued on Page 14.)

AGED PERSONS, 100 YEARS AND

	Name.	Name and Address of Informant.	Age.	Single, Married, Wid. wed.	Male or Female.	Residence and Occupation.	Ailment, Constitutional Dis.	Feb. State, Average	Full-bloomed, Pair, Average	Strong, Feeble, Average	Height.	Weight.	Temper, Excit. Irrit.	Face, Lined, Clear, Full, Weak.	Sight, Good, Bad, Indifferent, Long, Short, Glasses	Hearing, Good, Bad, Indifferent, Dull	Joints of fingers and hands, Natural, Stiff, Deformed.	Digestion, Good, Bad, Moderate.	Appetite, Good, Bad, Moderate.	Ether, Large, Small, Moderate.	Number of Meals daily.	Alcohol, amount and kind.	Other Beverages.	Animal Food, amount daily.	Bowels, Daily, Alternately, Irregularly.	Aperients, Frequently, Rarely, Never.	Disposition, Placid, Irritable, Energetic, Lethargic.	Intellect, Rich, Low, Average.	Memory, past events, Good, Bad, Moderate. recent events, Good, Bad, Moderate.
											ft. in.	lb.																		
1	J. Butterworth	W. Fletcher, M.B., Ormskirk	103	W	M	Ormskirk Workhouse	P	—	—	F	—	—	B	L	G —	G	SD	G	G	M	3	Gin ℥ii	Tea oii	Little	D	R	P	A	G —
2	M. Pemberton	J. C. Edwards M.R.C.S., Ipswich	100	Wid	F	Bestead	P	F	F	S	5.10	196	E		G, L 40 yrs	G	N	G	G	L	3	None	Tea	℥iv	D	R	PE	A	G G
3	M. Smalley	H. Smalley, L.R.C.P. Dover	102½	W	F	Thurrock	C	A	A	F	5.5	—	B	C	Cataract	I	N	G	G	M	3	Very little	Little tea	Little	D	R	E	I	G G
4	S. Harris	T. S. Maguire, Stony Stratford	105	W	F	Castle Thorpe, Washing	C	S	A	A	5.3	—	B	C	L 50 yrs.	B	N	G	B	S	3	Little	—	Little	I	—	I	A	G —
5	A. Marquess	H. Macnicol L.F.P.S. Dalmally	100	S	F	Dalmally	P	A	A	S	4 9	—	E	F	S none	I	N	G	G	L	3	None	Tea	Moderate	A	N	E	L	B B
6	M. Mullender	A. Johnstone, F.R.C.S., Brighton	100	W	F	Brighton	P	S	F	F	4.11	—	E	W	G none	G	D	G	G	L	3	Little	Coffee	℥iv	D	N	P	A	M M
7	M. Liddell	J. Caldwell, L.R.C.P. Shotts, and J Blythe, M.D.	101[2]	S	F	Shotts	C	F	A	A	4.7	140	E	L C	One cataract I G 40 yrs.	I	N	G	G	M	3	None	—	℥iv	D	N	PE	A	G G
8	J. Reardon	D. Reardon, L.R.C.S. London	105	S	M	Limerick	C	S	F	A	5.8	165	E	L C	G 45 yrs.	G	N	G	G	M	2	Little whiskey	—	℥x i	D	R	IE	—	G M
9	R. Bunn	Dr. Whitby, Hunstanton	103	S	F	Hunstanton	C	S	—	—	5 3	—	B	L	Nearly blind	D	N	M	G	S	4	Little	Tea	Little	A	R	I	H	G G
10	S. Marshall	W. E. Williams, Abertyllery	106[3]	W	F	Nantyglo	P	S	P	F	5.4	120	B	W	G 35 yrs.	G	N	M	M	S	4	None	—	Little	D	R	I	L	G G
11	W. N.	J. Stear, M.R.C.S., Walden	100	W	M	Essex	P	S	A	A	5.10	147	B	C	G 30 yrs.	I	N	G	G	M	4	Little	Tea	℥vi	I	F	I E	A	G G
12	A. Hings	G. M. Humphry	100	S	F	Leicester	C	F	P	A	4.8	—	E	L C	G yes	G	N	M	M	S	—	Little	—	Little	D	N	I E	A	G G
13	F. Cobill	„ „	100½	W	F	Settrington		A	A	S	5.0	—	E	L C	G many yrs.	G	N	G	G	M	3	Little	—	Moderate	D	N	E	A	G G
14	I. Boyden	A. Ellows, M.D. Market Drayton	103	W	M	Market Drayton	P	A	A	F	6.0	—	E	C	G	B	N	G	G	L	4	—	—	—	—	—	—	—	—
15	J. Saint	J. Maclagan, M.D., Riding Mill	102[7]	W	M	Chollerton	P	A	F	A	—	—	B	C	G 30 yrs.	I	N	G	G	M	4	None	Tea, Coffee	Moderate	D	N	P	A	G G
16	C. Belst	A. Godfray, M.D., St. Heliers	101	W	F	Jersey	C	S	P	A	—	—	B	L	I commencing cataract	G	N	G	G	M	4	None	—	Little	I	R	E	L	A G
17	C. Boss	H. Boss	102	W	F	Sydenham	C	A	F	S	5.3	112	B	W	G none	I	N	G	M	S	4	Little	—	V v little	D	R	PE	A	G
18	W. Chappell	T. Redwood, M.D., Rhymney	100½	M	M	Rhymney	P	A	P	S	5.6	—	B	P	G 4 yrs.	G	N	G	M	S	3	None	Tea	¼iv	D	N	PE	H	G G

[1] Still from chronic rheumatism, deformed from contraction of palmar fascia. [2] Born August 23rd, 1784, as stated in family Bible; died March 5th, 1886 after two days' acute bronchitis. [3] Verified by vicar of parish. [4] Remembers, and will quote a great deal of the Bible. [5] Certificate of christening dated March 1786. [6] Sharp, rather slow in comprehending question, but smart in reply; reads for hours, and mends her own clothes. [7] Born February 21st, 1784.

UPWARDS.—*Condition at Present Time.*

Habits, Active, Sedentary, Bed-ridden, Out-door Exercise	*Smokes*, Much, Little, Pipe or Cigarettes, Cigars	*Snuff.*	*Sleep*, Good, Bad, More or less	*Sleep*, Number of Hours	*Hour of going to bed.*	*Hour of Rising.*	*Chest girth* in Inspiration.	*Chest girth* in Expiration.	*Elasticity of ribs* (Costal Cartilages, Instruct, Indistinct.	*Pulse*, No.	*Pulse*, Regular, Intermittent, Irregular.	*Pulse*, Large, Small, Moderate.	*Pulse*, Compressible, Incompressible	*Arteries*, Tortuous, Visible, Even, Knotty.	*Respiration*, No.	*Respiration*, Regular, Irregular.	*Area Sounds*, Much, Little, Absent.	Teeth. No.	Teeth. Upper Incisors.	Teeth. Upper Canine.	Teeth. Upper Molar.	Teeth. Lower Incisors.	Teeth. Lower Canine.	Teeth. Lower Molar.	Artificial, how long.	Present Maladies, their Nature and Duration.	Evidences of failure in Heart.	Evidences of failure in Lungs.	Evidences of failure in Brain.	Evidences of failure in Urinary Organs.	Evidences of failure in Other Organs.	*Malnutrition*, Slow, Difficult, Painful, Instead, Incontinence, Frequent.
S[1]	C	—	G	10	7	6	38	37	I	93	Ir	—	C	E	30	R	—	1	—	1	—	—	—	—	None	None	12	—	—	—	—	N.
A, little	N	None	G	10	10	8	—	—	—	75	R	L	C	—	—	—	A	0	—	—	—	—	—	—	None	,, [3]	—	—	—	1	—	I.[4]
S, none	N	None	G	8	11	11	—	—	—	—	R	S	—	—	—	—	L	0	—	—	—	—	—	—	Yes	Slight senile eczema	—	—	—	—	—	—
S, none	N	None	B	—	—	—	—	—	I	80	R	L	I	E	24	R	L	2	2	—	—	—	—	—	None	Senile lateral curvature	No	—	ne	—	—	N.
A[5]	N	—	G	12	9	10	29	28½	D	78	R	S	C	E	18	R	L	0	—	—	—	—	—	—	None	Flatulence from overfeeding	16	1	—	—	—	N.
A, none[7]	M	None	B	—	7	6	32½	32	I	75	R	M	C	I, V, K	18	R	L	0	—	—	—	—	—	—	None	None	No	—	ne	—	—	N.
A, little[8]	N	None	G	10	9	7	33	32½	I	86	R	S	C	T, V, K	14	R	M	17	—	—	1	4	2	10	None	,,	No	—	ne	—	—	N.
A, little	N	None	G	—	9	7	—	—	—	—	—	—	—	E	—	—	A	16	—	—	—	—	—	—	—	,, [9]	—	—	I	1	—	S.
S, none[10]	N	None	G	12	—	—	—	—	—	66	R	S	C	E	—	R	—	0	—	—	—	—	—	—	None	,,	No	—	ne	—	—	N.
S, none	L	Much	M	7	9	—	34	—	I	72	I	S	C	V	T	30	R	N	0	—	—	—	—	—	None	,,	—	—	—	1	—	I.
A[11]	N	None	M	9	10	10	—	—	—	64	R	L	C	E	—	R	M	1	—	—	—	—	—	—	Many years	,,	—	—	—	1	—	S.
A, moderate[12]	N	None	B	—	—	—	—	—	C	84	—	S	C	E	22	R	A	0	—	—	—	—	—	—	None	Circulation feeble; frequently sick and faint, as if she were dying	No	—	ne	—	—	N.
A, little	N	None	G	—	7	7	30	—	I	80	R	L	I	T, V, E	20	I	M	4	4	—	—	—	—	—	None	Loud systolic bruit at base, no appreciable interference with circulation; she is unconscious of any defect	1	—	—	1	—	F.
—	N	None	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Since report, man died, "as though from apoplexy"; just before death, right hemiplegia, speech not clear for some days	—	—	—	—	—	—
A[13]	—	—	G	—	9	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	None	—	—	—	—	—	—
A, none	N	None	G	8	10	10	—	—	—	70	R	S	C	E	18	R	L	0	—	—	—	—	—	—	None	,,	No	—	ne	—	—	N.
A, little	N	None	M	8	10	9	—	—	—	0	R	S	—	—	—	—	—	0	—	—	—	—	—	—	None	Some stiffness of joints	—	—	—	—	—	—
S, none	M	None	B	4	8	6	38	37	—	—	I	L	I	K	30	—	A	7	1	1	—	2	1	2	None	Pulse intermits six times in minute, impulse weak, slight bronchitis	1	1	—	—	—	N.

[1] Short walks and sitting out. [2] Sounds distinct, no murmur, very irregular, at one minute beating sixty to seventy, at another double as fast; chest resonant, respiratory sounds almost inaudible. [3] Had no illness until day before her death. [4] Some incontinence for ten years. [5] Walks daily half a mile, can walk three miles. [6] Heart and lung sounds weak, but no evidence of disease. [7] Can walk very well, and has all her faculties. [8] At 96 mended the thatch of her cottage, and was always the first home from church, being a rapid walker. [9] Abscess connected with spine leading to slight deformity in dorsal region; injured knee at 50, leaving stiffness; diarrhœa from 75 to 90; slight fevers twice in middle life; other ailments, from time to time, not definable; fractured neck of femur at 101, by a fall, on crutches afterwards. [10] Stays in bed in cold weather. [11] Walks in garden, fond of sawing firewood. [12] Goes to church twice on Sundays. [13] Heart-sounds normal, temperature 98°. [14] Works in garden, attended Hexham Market two years ago.

AGED PERSONS, 100 YEARS

No.	Residences and Occupation.	Age when married.	Duration of married life.	No. of children.	Affluent, Comfortable, Poor.	First or child of parents.	Stout, Spare, Average.	Educate, Robust, Average.	Health, Good, Moderate.	Often Ailing, Rarely.	Digestion, Good, Indifferent.	Bowels usually, Costive, Good (daily), Alternate.	Sadness, Early, Late.	Greyness, Early, Late.	Disposition, Placid, Irritable.	Energetic, Lethargic.	Intellect, High, Low, Average.	Habits, Active, Sedentary, Moderate, Average out-door Exercise.	Hours in bed.	Hour of rising.	Good, Bad, Average sleeper.	Appetite, Good, Indifferent.	Large, Small, Average eater.	Alcoholic Drink, amount and kind of.	Other Beverages.	Animal Food, amount of.	Smoked Much, Little, Moderately.	Snuff, Yes, No.	Illnesses Undergone.
1	Scarisbrick; collier, labourer gamekeeper	—	—	0	P	1 only child	A	R	G	R	G	G	—	L	—	E	A	Active, much out night and day	Few	—	G	G	A	2	—	Little	M	Y	Rheumatic fever when young, chronic rheumatism
2	Belstead; agricultural labourer's wife	—	—	9	P	2	St	R	G	R	G	G	—	—	—	E	A	Active, not much out	10	8	G	G	—	None	Tea	3iv	N	N	None
3	Ireland, Middlesex; clergyman's wife	35	47	1	C	2	St	A	G	R	G	G	—	E	P	E	A	Moderate, little out	7	7	G	G	S	Little	Little	Little	N	N	None
4	Castle Thorpe; lacemaker	30	37	7	C	3	St	R	G	R	G	C	—	L	P	—	A	Active	—	6	A	—	S	Little	—	Little	N	N	None
5	Dalmally; agricultural	—	—	—	P	1 of 13	S	R	G	R	G	A	—	E	—	E	L	„ much out	—	—	G	G	L	None	Tea	Moderate	N	—	Epilepsy from 17 to 70
6	East Grinstead; followed the army in four parts of the world for 21 years	10	45	11	P	1 only child	S	R	G	—	G	G	—	E	P	—	H	„ „	9	5	G	G	L	Little	—	3viii	M	N	Fever at Gibraltar
7	Shotts; grocer	—	—	—	C	1 of 6	S	R	G	R	G	G	—	E	P	E	A	„ little out	10	7	G	G	A	None	—	Little	N	N	Renal at 30 with loss of sight for 2 years, recovery complete
8	Limerick; farmer	32	28	9	C	5	S	A	G	R	G	G	—	L	I	E	A	„ much out	8	6	G	G	A	Moderate	—	3xii	N	N	(Note 9, previous page)
9	Norfolk; agricultural	—	—	—	C	—	A	R	G	R	G	G	L	—	I	—	H	„	9	5	G	G	A	Little	—	—	N	N	Gallstones at 60
10	Hampshire; farm-servant	24	15	10	P	7 of 9	S	A	G	R	G	G	E	E	I	—	L	„ „	7	4	A	I	S	None	—	Very little	L	M	Ten years in asylum after confinement
11	Various; various	40	7	2	C	3	S	A	—	O	C	C	—	L	I	E	A	„ „ [1]	8	6	G	G	A	Little	Tea	Little	N	N	Peritonitis
12	Leicestershire; schoolmistress	—	—	—	P	2 of 6	S	D	G	—	G	—	—	L	—	—	A	„ not much out	—	—	A	G	A	Little	—	Little	N	N	Bad fever at 25, jaundice, smallpox
13	Hull; none	44	—	1	C	1 of 7	A	R	G	R	G	G	—	—	—	E	A	„	—	—	G	G	A	Moderate	—	Moderate	N	N	"Very bad stroke" at 60, bled; 2 "less severe" strokes at 70 attended by unconsciousness, no paralysis
14	Hinstock; soldier	28	23	11	C	1 of 7	A	A	G	—	G	G	—	—	—	E	A	„	—	—	—	G	—	Beer Oiv	—	Moderate	M	N	None
15	Chollerton; dyer	31	45	—	C	1	A	R	G	R	G	G	L	L	P	—	A	„	7	6	G	G	A	Very little	—	—	N	N	None
16	Jersey; baker	23	45	10	C	2 of 4	S	R	G	—	G	C	L	L	—	E	H	„ „ „	6	5	G	G	A	None	Tea	Moderate	N	N	None
17	[illegible], domestic	20	60	10	C	9	A	R	G	—	G	C	—	L	P	E	A	„ much horse-exercise in early life	7	7	A			Little	—	Little	N	N	Three Fevers
18	Rhynnes; ploughman, 3 married after 40	12	80	10	C	3	A	R	G	—	G	G	—	L	—	—	A	Active, much out	6	7	G	G	A	Beer Oii	—	3v	M	N	Renal dropsy at 82 for 2 years

[1] Was fond of "Fee and runner." [2] "Always drank as much as I could, and always will do."

AND UPWARDS.—*Past History.*

Slight Ailments and Accidents.	Ages at Death and Causes of Death.										Ages if now living.			Blood-relationship between parents or grandparents.	Ages of father at birth of eldest or youngest child.	Ages of mother at birth of eldest or youngest child.	In members of family.							Remarks.
	Father's father.	Father's mother.	Mother's father.	Mother's mother.	Father	Mother	Brothers.	Sisters	Sons	Daughters.	Brothers.	Sisters.	Children.				Cancer.	Consumption.	Scrofula.	Gout.	Rheumatism.	Epilepsy.	Insanity.	
None. Broke legs at 16	—	—	102	—	Killed at Waterloo	At his birth	None	None	None	None			—	None	—	32	0	0	0	0	0	0	0	Rather rough life with exposure as gamekeeper; fond of drink, jolly person, sung a song at Christmas feast before his death; heart's action interesting.
— None	—	—	—	—	—	—	—	—	1 child in consun	died of tion			—	—	—	—	—	4	—	—	—	—	—	Total abstainer, regular habits, active, never a day in bed till the day before her death.
Catarrh, Coryza slight bronchitis Much shocked by severe carriage accident at 40	—	—	—	—	—	—	—	—	—	—			71, son	None	—	—	—	—	—	—	—	—	—	Three aunts reached 80 years. Very moderate in every respect.
None. None	—	—	—	—	90	50 child-birth	2 killed	3 lived to 80	—	—			6 from 54 to 71	None	—	—	—	—	—	—	F	—		Moderate, temperate.
Flatulence 20 years None	—	—	—	—	80	70	—	—	—	—		77	—	—	—	—	—	—	—	—	—	—	—	Epilepsy for many years, becoming less frequent as she got older.
Vomited blood at 90 recovered rapidly None	—	—	—	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—	—	—	Led a rough life in various countries; husband a sergeant in the army.
None. None	—	—	—	—	80	—	All dead		—	—			—	None	20	20	0	0	0	0	0	0	0	Can repeat about 100 psalms correctly; a quiet living, brisk person.
— —	—	—	—	—	45	78	0, 68, 72	91, 92, 80 77	—	—			7, from 50 to 75	—	—	—	—	—	—	—	—	—	—	Moderate, but often drunk to excess on festive occasions; spinal abscess when young.
None. Injured hip at 91 from fall, complete recovery	—	—	—	—	82	80	80, nine brothers	96	—	—		None		None	—	—	—	—	—	—	F	—	—	Quiet, temperate, uneventful life; total deafness and nearly complete blindness rendered communication with her difficult; great cognisance of state of weather.[1]
None. None	80	80	—	—	70	0	—	—	—	—		—	Son 69	—	—	—	—	—	—	—	—	S	—	Quiet, temperate, uneventful life.
Neuralgia, sciatica None	—	—	—	—	61	71	64		—	—		—	2 alive 51 & 53	None	—	—	—	—	—	—	—	—	—	—	— —
None. None	—	—	—	—	80	0	Old	Old	—	—		—	—	—	—	—	—	—	—	—	—	—	—	Mother's sister lived to 100; brisk, bright, clear; "would rather go than stop, if it be the blessed Lord's will."
None. None	—	—	—	—	Not old	Not old	—		—	—		—	—	—	—	—	—	—	—	—	—	—	—	The fits at 70 quite recovered from and not recurring.
Inguinal hernia many years. None	90	—	—	—	—	—	2	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	Free beer-drinker, but never drunk; tall man; died from apoplexy and paralysis.
None. None	—	—	—	—	76	Child birth	88	—	—	—	80	—	—	—	—	—	—	—	—	—	—	—	—	Aunt in Switzerland reached age of 105. Died soon after report.
None. Injured hip at 90, crutch since	—	—	—	—	90	2	Not old	70	—	—		—	3 sons alive 70 to 77	None	—	—	—	—	—	1	—	—	—	Quite intelligent; gave all the information herself, and insisted on Dr. Godfray accepting a piece of patchwork very nicely executed since her 101st birthday.
None. None	80	80	60[2]	70	85	75	75, 60, 60	80, 55	45	—		—	2 at 68 and 59	None	40	35	0	0	0	0	0	0	0	Longlived family, father's grandmother at 105. Quiet, easy, temperate life; her own theory very correct, namely, "that she had originally a very strong constitution and has been always very active in her habits and temperate in all things."
Mucus at 50 followed by loss and shrivel lugo of eye. Bruised thigh at 90, large slough, recovery	—	—	—	—	84	Killed[3]	65 cancer	—	—	—		—	68, 70	None	41	34	M	—	—	—	—	—	—	Strong, well built man; recovers at 82 from long continued (renal?) dropsy, and at 98 from large slough on thigh caused by a bruise, lost an eye from disease (retinal?) at 50; took beer rather freely; during greater part of life worked underground.

[1] Died, after a few days' illness, in 1886. [2] Small-pox. [3] Fever.

AGED PERSONS, 100 YEARS AND

	Name.	Name and Address of Informant.	Age.	Single, Married, Widowed. Male or Female.	Residence and Occupation.	Affluent, Comfortable, Poor.	Fat, Spare, Average.	Full-blooded, Pale, Average.	Strong, Feeble, Average.	Height.	Weight. lbs	*Figure*, Erect, Bent.	*Voice*, Loud, Clear, Full, Weak.	*Sight*, Good, Bad, Indifferent, Long, Short, Glasses.	*Hearing*, Good, Bad, Indifferent, Deaf.	*Joints* of fingers and hands, Natural, Stiff, Deformed.	*Digestion*, Good, Bad, Moderate.	*Appetite*, Good, Bad, Moderate.	*Eater*, Large, Small, Moderate.	Number of Meals daily.	*Alcohol*, amount and kind.	Other Beverages.	*Animal Food*, amount daily.	*Bowels*, Daily, Alternate, Irregularly.	*Appetite*, Frequently, Rarely, Never.	*Disposition*, Placid, Irritable, Energetic, Lethargic.	*Intellect*, High, Low, Average.	*Memory*, past events, Good, Bad, Moderate. ,, recent events, Good, Bad, Moderate.
1	J. Fornstone ..	C. Jordison, L.R.C.P. Malpas	102	W M	Malpas	P	S	A	S	5.8	152	E	L	S, G none	G	N	G	G	L	3	Little	—	Little	I	R	I	L	G G
2	R. R. .. .	Dr. Dunlop, Jersey	103	W F	Jersey	C	S	F	F	—	—	B	W	G 50 yrs.	B	S	G	G	—	—		—	—	—	—	—	—	—
3	Mrs. Drake ..	O. Kaufmann, Manchester Infirmary	101	W F	Manchester	P	S	P	F	—	—	B	C	L not for 12 yrs.	I	S	G	M	S	3	Little	—	Little	D	N	P	A	G G
4	S. H. .. .	L. Williams, M.D., Wheatley	100[1]	W M	Horspath	C	S	A	S	—	—	E	L	L many yrs.	I	N	G	G	M	3	None	—	Little	I	R	I	L	B B
5	J. Hastings ..	T. Pike, M.D., Malvern, and G. M. Humphry	103[2]	S F	Malvern	C	F	A	S	5.6	—	B	F C	Cataracts[3]	B	N	G	G	M	3	Little	—	3iv	A	F	PE	H	G G
6	M. Barton ..	W. Hall, F.R.C.S., Lancaster	101	W F	Heysham	C	—	—	—	—	—	B	C F	B	I	N	G	G	M	4	None	—	—	A	R	P	A	G G
7	M. L.	C. Pons, Nantes	108	W F	Dordogne	C	S	P	A	—	—	B	W	G 35 yrs.	G	N	M	M	M	2	—	Tea, Coffee	—	A	R	P	A	G
8	W. Hodge ..	H. Woodd, M.R.C.S. Caldstock	101[4]	W M	Collycliff	P	S	A	F	5.8	—	B	L C	G yrs.[5]	I	N	G	G	L	3	None	Tea	—	D	—	PE	A	G —
27	B. Charles .	W. Warren, L.R.C.P. Grosmont	105	W F	Skenfrith	P	S	P	S	5.2	—	B	F C	G, L[6]	G	N	M	G	L	3	Little	—	None	I	F	P	L	G G
28	A. Foot	A. Robinson, M.D., Mile End Infirmary	102	W F	Infirmary	P	S	P	F	5.3	—	B	F C	Cataracts	I	N	G	G	M	3	Port 3iv	—	3v	I	R	I	A	M M
29	A. de St. Croix	S. de St. Croix, Jersey	100	W F	Jersey	C	A	A	A	—	—	E	C	G 30 yrs.	I	D	G	G	M	—	Little	—	Little	A	R	E	A	G G
30	S. Robinson ..	L. Robinson, Jersey	104	W F	Jersey	A	A	A	A	—	—	—	C	G 40 yrs.[7]	B	S	M	G	M	3	Wine 3iii		Moderte	I	F	E	A	G G
31	J. G.	W. Fleming, M.D., Glasgow	100	S F	Glasgow	A	S	P	F	4.5	70	E	F C	G, L many yrs.	B	N	G	G	M	3	Little	—	Moderte	I	F	I E	H	G G
32	P. Gaban ..	J. Gorham L.R.C.S.I. Galway	102	M M	Mayo	P	A	A	A	5.8	112	B	F C	G	I	N	G	G	L	2	None	—	None	D	N	I	A	G —
33	J. Barley ..	E. Barnes, M.D., Eye	100	W M	Eye	P	A	F	F	5.11	—	B	L C	G none	I	N	G	G	L	3	None		3iv	D	R	P	A	G M
34	E. Walsh ..	W. Nicolls, student	103	W F	Cork	C	A	P	S	5.7	126	E	C	G	G	N	G	G	M	3	—	—	Little	D	N	P	A	G G
35	J. O'Connor ..	,, ,,	103	M M	Kerry	P	S	A	S	5.6	98	E	L F	Failing	G	N	G	G	M	2	Little	—	Little	D	R	PE	A	B B
36	Miss C. Pigot ..	W. E. Ledgard, L.R.C.P., Kirkby Lonsdale	100	S F	Whittington	C	F	F	S	—	—	E	L C	Blind 10 yrs.	I	D	G	G	L	5	Little	—	Much	D	N	E	A	G G

[1] Baptismal certificate January 21st, 1787, he being then two years old. [2] Baptised at Sutton Coldfield, March 14th, 1782. [3] Used glasses only six years, previously long-sighted. [4] Seems to be no doubt he was 101 last August. [5] Spectacles many years, for last twelve able to read without them. [6] Glasses not used for many years. [7] Cannot now get them strong enough.

UPWARDS.—*Condition at Present Time.*

Habits, Active, Sedentary, Bedridden, Out-door Exercise.	*Smokes*, Much, Little, *moderate*, Uses, None.	*Snuff.*	*Sleep*, Good, Bad, Moderate.	*Sleep*, Number of Hours.	Hour of going to bed.	Hour of rising.	*Chest-girth* in Inspiration.	*Chest-girth* in Expiration.	*Elasticity of rib-cartilages*, Distinct, Indistinct.	*Pulse*, No.	,, Regular, Intermitter, Irregular.	,, Large, Small, Moderate.	,, Compressible, Incompressible.	*Arteries*, Tortuous, Visible, Even, Knotty.	*Respiration*, No.	*Respiration*, Regular, Irregular.	*Arcus Senilis*, Much, Little, Absent.	Teeth. No.	Teeth. Upper Incisors.	Teeth. Upper Canine.	Teeth. Upper Molar.	Teeth. Lower Incisors.	Teeth. Lower Canine.	Teeth. Lower Molar.	Teeth. Artificial, how long.	Present Maladies, their Nature and Duration.	Evidences of failure in Heart.	Evidences of failure in Lungs.	Evidences of failure in Brain.	Evidences of failure in Urinary Organs.	Evidences of failure in Other Organs.	*Alcoholism*, Slight, Little, Notable, Inebriety, Frequent.
A	*m*	None	G	12	7	7	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	None	None[1]	No		ne	—		N.
S, none	—	—	—	—	—	—	—	—	I	84	R	S	C	E	28	R	—	0	—	—	—	—	—	—	From 50 to 90	Aphasia for fourteen days	—	—	1	1	—	I.
S, none	N	None	M	—	7	8	—	—	—	84	R	S	C	E	36	R	M	0	—	—	—	—	—	—	None	None	No		ne	—		N.
Bedridden	N	None	B	—	—	—	32	—	I	84	—	S	C	T V E	16	R	M	0	—	—	—	—	—	—	None	Senile dementia, very noisy	—	—	1	—	—	N.
S, none	N	None	G	8	9½	7	37	36½	I	70	R	L	C	V E	24	R	M	6	—	—	—	2	2	2	None	Heart-sounds natural, chronic bronchitis, no aches or pains, slight swelling of feet in warm weather	—	1	—	—	—	N.
A, little	N	None	M	—	8	9	—	—	—	70	R	—	C	T V	20	R	L	0	—	—	—	—	—	—	None	None	No		ne	—		N.
A	N	Little	M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32	4	2	10	4	2	10	None	,,	No		ne	—		N.
A[2]	*m*	None	G	—	8	7	—	—	I	3	—	—	—	T K	—	—	L	0[4]	—	—	—	—	—	—	None	Heart-sounds tumultuous and irregular; no maladies	1	—	—	1	—	*e.*
A, little	N	None	G	8	8	7	—	—	I	62	R	S	C	T	25	I	A	7	—	—	4	1	1	1	None	None	No		ne	—		N.
Bedridden	N	None	M	—	—	—	30	29	I	96	R	S	C	E	24	R	M	1	—	—	—	—	1	—	None	Tremor of hand	—	—	—	1	—	F.
S, none	N	None	G	8	10	10	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	None	None	—	—	—	—	—	—
S, none	N	None	G	10	10	9	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	None	,,	No		ne	—		—
S, none	N	None	G	—	12	10	—	—	—	65	R	L	C	T V K	20	R	L	0	—	—	—	—	—	—	Many years	Muscular weakness	—	—	—	—	—	N.
Bedridden 1 year	M	None	G	7	—	—	34	33½	—	66	R	—	I	—	25	—	—	1	—	—	—	1	—	—	None	Weak legs	No		ne	—		N.
Bedridden	N	None	G	8	—	—	40	39½	I	78	R	L	C	T V E	36	R	M	0	—	—	—	—	—	—	None	Cough four months	No		ne	—		N.
A[5]	*m*	None	G	10	10	8	—	—	—	—	—	—	—	—	—	—	—	32	4	2	10	4	2	10	None	None	—	—	—	—	—	—
A, daily	L	Yes	G	6	9	10	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	— —	—	—	—	—	—	—
S, none	N	None	G	7	10	8	—	—	D	62	R	S	C	T K	16	R	A	0	—	—	—	—	—	—	None	,,	No		ne	—		N.

[1] Soon after confined to bed for three weeks, gradually weaker, died without disease. [2] Out every day, "walked four miles yesterday." [3] "Could not feel any, radials so hard." [4] All came out whole. [5] Worked in field at 102.

AGED PERSONS, 100 YEARS

No.	Residences and Occupation.	Age when married.	Duration of married life.	No. of children.	Affluent, Comfortable, Poor.	First or child of parents.	Stout, Spare, Average.	Delicate, Robust, Average.	Health, Good, Moderate.	" Often ailing, Rarely.	Digestion, Good, Indifferent.	Bowels Relaxed, Costive, Good (daily), Alternately.	Boldness, Early, Late.	Greyness, Early, Late.	Deposition, Placid, Irritable.	" Energetic, Lethargic.	Intellect, High, Low, Average.	Habits, Active, Sedentary, Moderate, Average out-door Exercise.	Hours in bed.	Hour of rising.	Good, Bad, Average sleeper.	Appetite, Good, Indifferent.	Large, Small, Average eater.	Alcoholic Drink, amount and kind of.	Other Beverages.	Animal Food, amount of.	Smoked, Much, Little, Moderately.	Snuff, Yes, Much, None.	Illnesses Undergone.
19	Malpas; labourer	22	75	4	P	5 of 5	S	R	G	—	G	C	—	L	I	—	L	Active, much out	9	5	G	G	A	Little	—	Little	M	N	None
20	— —	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22	Various; soldier's wife	22	51	5	P	5 of 5	A	A	G	—	G	G	—	E	P	—	A	,, ,,	8	5	G	G	A	None	—	Moderate	N	N	None
23	Horspath; servant, farmer	24	64	7	C	—	S	R	G	R	G	R	—	E	I	E	A	,, ,,	8	5	G	G	L	Moderate	—	[illegible]	N	N	None
24	Malvern; benevolence	—	—	—	C	1 of 1	S	R	G	—	G	G	E	E	I	L	H	,, ,,	8	7	G	G	S	Little	—	Little	N	N	Acute bronchitis at 95 and 99, pneumonia and erysipelas of head at 99
21	Heysham; farmer's wife	22	56	8	C	4	A	—	G	R	G	G	L	L	P	—	A	,, ,,	—	—	G	G	A	None	—	—	N	N	None
25	Country (France); proprietr	—	—	—	C	2	A	D	G	R	G	G	L	L	P	—	A	,, moderate	12	7	G	G	—	Moderate	Mod	Very little	N	—	None
26	Farm-labourer	19	60	14	P	11 of 11	S	R	G	—	G	G	E	E	P	—	A	,, much out	—	5	G	G	L	Little	—	—	M	N	None
27	Skenfrith	20	50	5	P	1 of 15	A	R	G	R	G	G	L	L	P	—	L	,, ,,	9	5	G	G	A	Little	—	Little	N	N	None
—	London; laundress	20	2	1	P	3	S	A	G	R	G	G	—	L	—	E	A	Moderate, not much out	—	—	A	G	A	Little	—	—	N	N	Small-pox many years ago
29	Jersey; farmer's wife	18	23	4	C	—	A	A	G	—	G	G	L	L	P	E	A	Active, moderate out	8	6	G	G	A	None	—	Little	N	Y	Paralysis at 90
30	Jersey; wife of medical man	17	49	6	A	—	A	A	G	—	G	G	L	L	P	E	A	Active, moderate out	9	8	G	G	A	Little	—	Moderate	N	N	None
31	Glasgow; none	—	—	—	A	2	S	A	G	—	G	C	—	E	I	E	H	Active, moderate out	—	late	G	G	S	Wine ʒii to ʒiii	—	ʒv	N	N	Herpes zoster some years ago (severe)
32	Mayo; labourer	19	83	2	P	1	S	R	G	—	G	[illegible]	—	L	P	—	A	Active, much out	—	—	G	G	L	—	—	Very little	M	N	None
34	Suffolk; labourer	—	—	10	P	—	S	R	G	—	G	[illegible]	—	L	P	—	A	,, ,,	7	4	G	G	L	Little	—	—	N	N	Rheumatic fever at 70, complete recovery
24	Cork; farmer's wife	26	—	6	C	—	A	R	G	—	G	[illegible]	—	L	P	—	A	,, —	9	6	G	G	A	—	Milk Ov	Little	M	N	None
35	Kerry; farmer	40	63	7	P	2	S	R	G	N	G	G	—	L	P	E	A	,, much out	—	—	G	G	S	—	—	Little	L	Y	None
—	Shropshire; none	—	—	—	C	5	S	R	G	R	G	G	—	L	—	L	A	,, moderate out	8	7	G	G	L	Moderate	—	—	N	N	None

[1] The number of severe illnesses after 95, and complete recoveries, remarkable. Dr. Pike informs me that "she died March 12th, 1886 (then aged 104) from ex- [illegible] weather becoming her death. Six weeks previously she had attack, severe, of pneumonia, bases of both lungs; this passed through its ordinary [illegible] wonderfully; the lungs cleared up leaving only the state of chronic bronchitis from which she had long suffered, but she never

AND UPWARDS.—*Post History.*

Slight Ailments and Accidents.	Ages at Death and Causes of Death.									Ages if now living.			Blood-relationship between parents or grandparents.	Age of father at birth of subject of inquiry.	" mother "	In members of family.							Remarks.
	Father's father.	Father's mother.	Mother's father.	Mother's mother.	Father.	Mother.	Brothers.	Sisters.	Sons.	Daughters.	Brothers.	Sisters.	Children.				Cancer.	Consumption.	Scrofula.	Gout.	Rheumatism.	Epilepsy.	Insanity.	
None. None	—	—	—	—	—	—	2 over 80	—	—	—	—	—	—	None	—	—	—	—	—	—	—	—	—	Moderate man; died apparently from weakness without any obvious disease.
— —	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Died a month after apparently from decline of physical and mental force; Dr. Dunlop unable to obtain more particulars.
None. None	—	90	—	—	—	Old	All under 30	—	—	—	—	—	—	First born.	—	—	0	0	0	0	0	0	0	Temperate, moderate, healthy woman on whom varieties of climate—India, Egypt, Spain, Portugal, Ireland, Scotland—with the army, produced no ill effect; a headache for a few months on returning from India, the only trouble that she remembers.
Rheumatic gout at 60. None	—	—	—	96		—	Died young all drinking	—	—	—	—	—	between 60 & 71	—	—	—	—	—	—	—	—	—	Very temperate and long outlived the other members of his family, who "took to drink;" skin dry and shrivelled; takes a good deal of sedative to quiet him.
Cough 60 years. Dislocation of shoulder at 40, injured hip at 90, always lame after	—	—	—	100		81	13, 20, 87, 64, 74, 71	—	—	—	—	—	—	None	26	22	—	—	—	—	—	—	1	(See foot-note[1]).
None. None	—	—	—	92		71	—	—	—	—	—	—	—	None	35	35	0	0	0	0	0	0	0	A quiet, uneventful, very temperate life, calling for no especial exertion of body or mind.
None. Broke wrist at 104, good union	—	—	—	—	—	—	—	—	—	—	—	—	1 daughter 50	—	—	—	—	—	—	—	—	—	—	Good bony union of fracture at 104.
Herpes at 98. None	—	—	—	—	—	101	—	1 old	—	—	—	—	5 from 60 to 81	—	—	—	—	—	—	—	—	—	—	Very temperate steady man, very little alcohol; calcification of arteries remarkable, and he was very tremulous and desponding when the report was taken, though he had walked at least four miles the day before, thermometer placed in mouth and axilla at 95° gave no rise.
None. None	—	—	2	2	Over 70	Over 70	—	—	—	—	—	—	Son 70 dghtr 78	—	—	—	—	—	—	—	—	—	—	Quiet, temperate, person; long lived family.
None. None	—	—	—	—	90	75	—	2, 90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Lower limbs failing so that she cannot stand without support, never felt better in her life, slight irregularity in heart's action, not discernable in pulse.
None. None	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	The nature of the paralysis not stated, always good spirits.
Influenza. None	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Always good spirits, died shortly after, from exhaustion with bedsores; no special illness.
None. None	—	—	—	—	90	Young	—	65 hernia 75 bl in bowels	—	—	—	—	—	None	—	—	—	—	—	—	—	—	—	Clever woman, manages her house and conducts all her business affairs, writes beautifully, converses brilliantly, takes an intelligent interest in family and public affairs, frequently entertains luncheon parties.
None. None	—	70	—	—	70	90	40, fever 70, dropsy	90, 40, fever	—	—	—	—	80, 76	None	—	—	0	0	0	0	0	0	0	Wretchedly poor, weakness of lower limbs, long lived family.
None. None	—	—	—	—	—	75	—	6 from 50, 18 to 30 phthisis	—	—	—	—	52, 54	None	—	—	—	—	—	—	—	—	—	Very temperate; May 13th, 1886, Dr. Banner writes, that he died a few days ago of diarrhœa 3 or 4 days' duration.
None. None	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	— —
None. Injured hip at 37	10	80	60	70	40	80	50, 40	85, 103, 90	—	—	—	60	—	—	—	—	—	—	—	—	—	—	—	Drank like a fish during his whole life, and would today if he could get it; it appears, however, that he could not usually get much.
None. None	85	—	—	—	80	60	62, 84, 50	70	—	—	—	—	—	None	30	42	0	0	0	0	0	0	0	— —

thoroughly recovered her strength; her brain, which had been previously very clear, failing; five days before death she had a convulsive seizure, became less clear, took less nourishment, and finally slept away." An active, temperate person, of long lived family, happy disposition, never talked about dying, always asked her friends to come and see her again, newspaper read to her every day. Says she was a remarkably small baby. [2] Very old.

AGED PERSONS, 100 YEARS AND

Name.	Name and Address of Informant.	Age.	Single, Married, Widowed.	Male or Female.	Residence and Occupation.	Affluent, Comfortable, Poor.	Fat, Stout, Average	Fair-coloured, Law, Average.	Strong, Feeble, Average	Height.	Weight.	Figure, Erect, Bent.	Voice, Loud, Clear, Full, Weak.	Sight, Good, Bad, Indifferent, Long, Short, Glasses.	Hearing, Good, Bad, Indifferent, Deaf.	Joints or fingers and hands, Natural, Stiff, Deformed.	Digestion, Good, Bad, Moderate.	Appetite, Good, Bad, Moderate.	Eater, Large, Small, Moderate.	Amount of sleep daily.	Alcohol, amount and kind.	Other Beverages.	Animal Food, amount daily.	Bowels, Daily, Alternately, Irregularly.	Aperients, Frequently, Rarely, Never.	Disposition, Placid, Irritable, Energetic, Lethargic	Late hrs, High Low Average.	Memory, past events, Good, Bad, Moderate. recent events, Good, Bad, Moderate.
37 C. Wood	Paul Wood, Bandon	101	M	M	Mishells	C	A	F	S	5.7	lbs 120	E	C	Good, never	G	N	G	G	M	3	None	—	Little	D	N	P	H	G —
38 P. Gavan	J. Gorham, L.R.C.P., Leenane, co. Galway	102	W	M	Bundorragha	P	A	A	A	5.7	—	B	L	G	B	N	G	G	M	2	None	—	None	D	N	I	A	M —
39 M. Dunlevey	J. Drummond, M.D., Shields	100	W	F	Shields	P	A	A	S	5.4	136	E	C	G	G	N	G	G	L	4	Little	—	Moderte	D	N	E	A	G G
40 M. Francis	J. Jones, L.R.C.P., Tor Cradoc.	101	W	F	Port Talbot	P	S	A	A	4.5	–	B	W	G, L	I	N	M	M	M	3	Little	Tea	Little	I	R	I E	A	G M
41 Mary Hillam	H. Fox, M.R.C.S., Stoke Newington	105	S	F	Stoke Newington	C	S	A	A	—	—	B	W	Dim	B	—	—	—	—	—		—	—	—	—	E	A	—
42 Elizth. Howell	D. Reid, M.D., Tenby	100	W	F	Tenby	C	S	A	F	4.11	—	E	C	Dim yrs.—	G	N	G	M	S	3	Little	—	Very little	I	R	P	H	M M
43 S. Rowbottom	Edith Uzzell	102	M	F	Stanmore	C	F	A	S	5.5	—	E	C	G none	G	N	G	G	M	4	Great deal of beer	—	—	—	—	P	A	G G
44 Mary Rockett	J. Barnes, M.R.C.S. Clare	100¾	W	F	Clare	C	F	A	S	5.6	11	E	C	Cataracts 20 years	G	St.	G	G	M	3	Little	—	Moderte	D	R	P	H	G G
45 Ann Trew	Miss Palmer	101	W	F	Snetterton	C	S	P	S	5.3	8	E	F	G 20 yrs.	I	N	G	M	S	3	None	—	Little	D	R	E	A	G M
46 W. Gray	Professor Humphry, Cambridge	104	W	M	Chesterton	P	F	P	S	Short man	—	B	C	Blind 14 yrs.	B	N	G	G	M	—	Little	—	Little	—	—	P	—	—
47 Pellatt	D. Howell, Elstrey	104	W	F	—	P	A	A	A	—	–	–	–	—	–	—	–	–	–	–	—	–	—	–	–	–	–	—
48 M. G.	J. Wilson	104[1]	S	F	Liverpool	A	F	—	S	5.4½	—	E	C	G[2]	G		G	M	M	3	Moderate	—	Moderte	D	R	E	H	G G
49 M. Hamley	H. Millon Thorpe, Norwich	100[4]	W	F	Thorpe	C	A	P	S	5.6	—	B	L	G many yrs.	G	Slightly D	G	G	L	4	Little	—	Moderte	D	R	PE	H	G B
50 J. Riley	Rev. Riley	108	W	M	Largan	C	A	A	A	5.10	140	E	—	G few yrs.	—	—	—	B	—	—	Moderate	Tea	—	—	—	—	A	B B
51 M. Morris	Alderman James	103[5]	S	F	Cardiganshire	—	—	—	—	5.3	120	E	—	G	G	—			—	—	Little	Tea	—	—	—	—	—	G G
52 M. G. May	T. De Ville, M.D. Harrogate	101[6]	W	F	—	—	S	—	—	5.0	—	B	—	I	—	—	—	—	—	—	Moderate	—	—	—	—	—	[illegible]	G B

[1] Ascertained from family bible.
[2] Glasses only in the evening, for a few years.
[3] Slightly deformed, from rheumatoid arthritis.
[4] Born May 28th, 1786; died June, 1886.
[5] Born September 12th, 1778; died January 15th, 1885.
[6] Born September, 1779; died November, 1880.
[7] Childish for 6 years.

UPWARDS.—*Condition at Present Time.*

Habits, Active, Sedentary, Bedridden, Out-door Exercise.	*Nerves*, Much, Little, *moderate*, Uneven, None.	*Snuff.*	*Sleep*, Good, Bad, Moderate.	*Sleep*, Number of hours.	Hour of going to bed.	Hour of rising.	*Chest-girth* in Inspiration.	*Chest-girth* in Expiration.	*Elasticity of cartilages*, Distinct, Indistinct.	*Pulse*, No.	,, Regular, Intermittent, Irregular.	,, Large, Small, Moderate.	,, Compressible, Incompressible.	*Arteries*, Tortuous, Visible, Even, Knotty.	*Respiration*, No.	*Respiration*, Regular, Irregular.	*Tones Sounds*, Much, Little, Absent.	Teeth. No.	Upper Incisors.	Upper Canine.	Upper Molar.	Lower Incisors.	Lower Canine.	Lower Molar.	Artificial, how long.	Present Maladies, their Nature and Duration.	Evidences of failure in Heart.	Lungs.	Urinary Organs.	Other Organs.	*Micturition*, Slow, Difficult, Pain in, Natural Incontinence, Frequent.
A, much	N	None	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24	—	—	—	—	—	—	—	Died in 1884.	—	—	—	—	—
Bedridden	M	None	G	7	—	—	36	34½	D	78	R	S	C	E	30	R	M	1	—	—	1	1	—	—	None	Aortic regurgitation; slight bronchitis	1	—	—	—	N.
A, daily labour	M	—	—	8	9	5 30	28	—	—	70	R	L	C	T	—	—	A	32	4	10	10	4	2	10	None	None	No	—	ne	—	N.
S, little	N	None	G	—	10	10 23	21½	D	—	80	R	S	C	T	E	0	R	—	0	—	—	—	—	—	None	None	No	—	ne	—	N.
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	0		—	—	—	—	—
S, none		—	G	9	10	10	—	—	—	60	R	S	C	V	E	15	R	L	0	—	—	—	—	—	0	None	No	—	ne	—	N.
A walked out		—	G	10	8	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—
—		—	G	10	10	8	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	No	No	—	ne	—	N.
A, walked out	N	None	G	10	9	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—
A, walked	N	None	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—
A, none	N	None	G	—	11	10	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	None	None	No[1]	—	ne	—	—
Bedridden	N	None	G	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—
—	N	None	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	None	—	—	—	—	—
Bedridden 7 years	M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Rheumatism of leg	—	—	—	—	—
A, little out	M		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—

[1] Nineteenth child of father, and tenth of mother

AGED PERSONS, 100 YEARS

No.	Residences and Occupation.	Age when married.	Duration of married life.	No. of children.	Affluent, Comfortable, Poor.	First or Second child of parents.	Stout, Spare, Average.	Delicate, Robust, Average.	Health, Good, Moderate.	Often ailing, Rarely.	Digestion, Good, Indifferent.	Bowels Relaxed, Costive, Good (daily), Alternately.	Coldness, Early, Late.	Cheerfulness, Early, Late.	Disposition, Placid, Irritable.	Energetic, Lethargic.	Intellect, High, Low, Average.	Habits, Active, Sedentary, Moderate, Average out-door Exercise.	Hours in bed.	Hour of rising.	Good, Bad, Average sleeper.	Appetite, Good, Indifferent.	Large, Small, Average eater.	Alcoholic Drink, amount and kind of.	Other Beverages.	Animal Food, amount of.	Snuff, Much, Little, Moderately.	Snuff, Yes, Much, None.	Illnesses Undergone.
37	Mishells; farmer	53	48	6	C	2nd	A	A	G	—	G	G	L	L	P	—	H	Active, much out	8½	6	G	G	A	None	—	Little	N	N	None
38	Bandorrogha; labourer	29	78	7	P	2nd	S	R	G	—	G	G	L	L	I	—	A	,, ,,	6	6	G	G	A	Little	—	Very little	M	N	None[1]
39	Shields; farm labourer	17	20	8	P	2nd	S	R	G	—	G	G	—	L	—	E	A	,, ,,	8	5	G	G	A	Little	—	Little	*m*	—	None
40	Port Talbot; housewife	23	31	6	P	1st	A	R	G'	—	G	I	L	L	I	E	A	,, ,,	8	6	G	G	A	None	Tea	Little	—	—	None
41	Stoke Newington; shopkeeper	—	—	—	C	—	S	A	—	—	—	—	—	—	I	E	A	— —	—	—	—	—	—	—	—	—	—	—	—	—
42	Tenby; none	—	—	0	C	—	S	A	G	—	G	G	L	L	—	—	H	Active	—	—	—	G	A	—	—	—	—	—	None
43	Bushey	—	—	—	C	—	S	R	G	—	G	G	None	None	P	—	A	Active, walked much	—	6	G	G	A	Beer	None	—	—	—	None
44	Clare; farmer's widow	29	54	—	C	1st	S	—	G	R	G'	—	L	L	P	—	H	Active	—	—	—	—	—	—	—	—	—	—	None
45	Haughley; governess	33	57	6	C	1st	S		G	R	G	—	—	E	—	E	A	Active, walking and riding much	8	6	G	G	A	—	—	Little	—	—	Bronchitis, severe, 82
46	Chesterton; labourer	—	—	5	P	3rd	S	—	G	—	—	—	—	L	—	—	—	Active, much out	—	6	G	G	A	Little	—	Little	N	N	None
47	— —	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	— —	—	—	—	—	—	—	—	—	—	—	—	Severe fever at 84; quite recovered
48	Liverpool; none	—	—	—	A	2nd	S	R	G	—	G	G	L	L	I	E	H	— mod.	—	—	G	G	—	None	Tea	Little	N	N	None
49	Cornwall, Norwich; none	—	8	3	C	2nd	S	R	G	—	G	G	—	E	P	E	H	Active, moderate	7	4	G	G	A	—	—	—	N	N	— —
50	—; farmer	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	,, ,, out	—	—	—	—	—	—	—	—	—	—	— —
51	—; servant	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	,, much out	—	—	—	—	—	None	—	—	M	—	Paralysis at 7 years
52	—; farming	29	6	7	—	—	—	—	—	—	—	—	—	—	—	—	—	,, ,,	—	—	—	—	—	Moderate	—	—	M	—	None

[1] Never had a day's illness.

AND UPWARDS.—*Past History.*

Slight Ailments and Accidents.		Ages at Death and Causes of Death.									Ages if now living.			Blood-relationship between parents or grandparents.	Age of father at birth of subject of inquiry.	Age of mother	In members of family.						Remarks.
		Father's father.	Father's mother.	Mother's father.	Mother's mother.	Father.	Mother.	Brothers.	Sisters.	Sons.	Daughters.	Brothers.	Sisters.	Children.				Cancer.	Consumption.	Scrofula.	Gout.	Rheumatism.	Epilepsy.	Insanity.	
None.	None	—	—	—	—	—	—	—	—	—	—	—	—	—	None	—	—	0	0	0	0	0	0	0	—
None.	None	—	80	—	90	70	100	17, 70, 76 Fever	30, 82	—	—	None	None	N	72, 60	None	28	30	0	0	0	0	0	0	Filthy habitation; long lived family.
None.	None	89	70	[illegible]	—	95	40 child-birth	All in infancy, 11 months to 3 years	—	—	—	None	None	N	40, 40, 57	None	—	—	0	0	0	0	0	0	Brothers and sisters died early.
None.	None	aged	aged	50, accident	—	40	106	Dead years ago	-	—	—	—	80	52, 65, 68, 70	None	—	—	0	F	0	0	0	0	0	Father died of phthisis.
—	—	—	—	—	—	—	—	—	-	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Died in 1864. "Used to write out her bills up to the last, and without glasses, I believe."
None.	None	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Capable of receiving and conversing with people. Thoughtful and charitable to sick people. For one month before death, absolutely nothing but a little weak wine and water. Bowels did not act, and kidneys did not secrete half an ounce *per diem*. Death from exhaustion; no disease.
None.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Deceased.
—	—	—	—	—	—	65	93	83	81, 82, 78	—	—	84	—	—	None	—	—	—	—	—	—	—	—	—	Long lived family. Mother's side particularly healthy. Intellect and internal organs remained good to the last. Died May 28th, 1884, aged 100 years, 9 months, 3 weeks.
—	—	94	—	—	—	91	46	—	—	—	—	None	—	—	56, 57, 61	—	60	38	—	—	—	—	—	—	Long-lived family. Died June 14th, 1884.
—	—	—	—	old	—	72	38 child-birth	35, 50, 40 drown'd	70, 40, 82 lunatic	—	—	—	86	5 alive	—	—	42	2	—	—	—	—	—	—	Died recently
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Died 1884; remarkably cheerful and contented.
(Rheumatism lately)	Intracapsular fracture of neck of femur at 96; confined to house afterwards	—	—	—	98	90	94	4 under 40, 2 under 80	—	—	—	—	—	—	—	—	—	—	Several	—	—	—	—	—	Died, without being confined to bed a day, from natural decay.
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No out-of-door exercise for some years.
—	—	—	—	—	—	—	—	—	—	25	45	—	—	6 alive, 65, 63	—	—	—	—	—	—	—	—	—	—	Died, December 9th, 1884, of old age.
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Her memory, which was very retentive, like all her mental faculties, continued unimpaired almost to the last moment of her life. On 100th birthday, walked into hayfield and amused herself making hay.
None.	None	—	—	—	—	—	—	—	—	—	—	—	—	62, 55, 66	—	—	—	—	—	—	—	—	—	—	—

to which man is subjected, as well to her greater temperance in eating and drinking, and her greater freedom from the anxieties attendant upon the world's labour and business. Still, as I have said in a former essay (BRITISH MEDICAL JOURNAL, May 9th, 1885, p. 928), there appears also to be a greater inherent vitality in the female, as evinced by the fact that, even in the first year of life, when the conditions and exposures of male and female infants are the same, the mortality of girls is less than that of boys. A somewhat larger number of boys are born, but they are more difficult to rear, so that the females soon take the numerical lead, and they maintain it with almost steadily increasing ratio to the end. It is also to be learned from the analysis of the tables that the elasticity of the thorax, as evinced by the condition of the costal cartilages, and its capacity for dilatation during inspiration, is better preserved in women than in men. In the matter of the arcus senilis, also, the woman has the advantage; but, in the condition of the arterial system, much difference is not shown.

Of the 56 women, 26 had been married, and 11 had large families; and it may be some consolation to young mothers and their friends to find that 8 of the 26 married before they were twenty—1 at 16 and 2 at 17. The dangers, happily diminishing, which are incidental to child-bearing, must not be forgotten; but, irrespective of these, the process itself and the attendants thereon do not seem to militate against longevity. Indeed, the capacity for the full exercise of this, like that of the other normal functions, is one of the qualities in those who have the other requisites for attaining to great age. One only of the married women was childless; but neither the age at which she was married nor the duration of her married life are given.

It might be anticipated, indeed, from the matrimonial tendency, and the prolific quality evinced by the tables, the average number of children born to each, whether male or female, being 6, that there would be, through inheritance, a gradual increase in the centenarian breed; and it is probable that this is the case, and that the duration of life is, from this and other favouring causes, gradually being extended. The life-period of the children we have no means of determining with accuracy, the returns being, from various causes, imperfect; but we may safely accredit them with, at least, an average longevity. It is, moreover, a point of some interest that many of the centenarians were members of large families, averaging, indeed, 7 or 8; those designated as "only children" being limited to 2. Of the 52, 41 had been married, and 11, of whom 10 were women, had remained single; but we cannot from this draw any inference as to influence of matrimony upon longevity. Possibly something may be gleaned from the analysis of the numerous reports I have received of persons between 80 and 100.

The fact that 12 of the centenarians were "first children" does not accord with the idea entertained by some persons that first children are at a physical disadvantage. The generally prevalent custom of inheritance by the first-born, and the Mosaic injunction (Exodus xii, 2) "sanctify unto me all the first-born; whatsoever opened the womb among the children of Israel, both of man and of beast, it is mine," are also scarcely in harmony with such a view. Nevertheless, some confirmation of the view is furnished by the feeling on this matter, founded, it may be presumed, on experience in racing stables, which, I have been informed, is not in favour of firstlings. In the case of one of our centenarians, the parents were first cousins.

The tables and the analyses of present and past condition yield nothing striking or even novel or unexpected, or in that respect interesting; but they are not therefore less valuable or important. The average centenarian qualities are precisely those which might have been anticipated: a good family history; a well made frame of average, stature (5 feet 8, which is rather above the average, in the male, 5 feet 3 in the female); spare rather than stout, robust, with good health, little troubled with ailments of any kind, with good digestion, regular daily action of bowels; active, capable of much exertion, with the restorative advantages of good sound sleep permitting or inducing early rising; good vocal organs; a good appetite moderately indulged, with little need of, and little consumption of, alcohol or animal food; an energetic yet placid temperament; a good intelligence; the hair holding its ground and its colour well; the organs of sight and hearing performing their functions well and long. Our centenarians afford, in short, good examples through life of the *mens sana in corpore sano*; and in by far the greater number there was a total absence of any evidence of rheumatic or gouty affection, past or present, in the joints of the hands and fingers—a condition which is not unfrequently regarded as one of the heralds of old age, and which, doubtless, like many other local maladies of which it may be taken as a sample, is often prophylactic against other more serious maladies. It seems that the frame which is destined for great age needs no such prophylactics, and engenders none of the peccant humours for which the finger-joints may find a vent. To have a vent for such humours may be good, but it is less good than to be without them. Of the eight in whom those joints were stiff or deformed, it may be observed that one (1) a man, always "drunk as much as I could, and always will do;" a second and third (6 and 21), poor women, had been subject to much exposure, and had a rough life, following the army in various parts of the world; of the case of the fourth (20) also a female, in whom these joints were stiff, we have no account of the habits. The fifth (29), a female, appears to have been a temperate person in comfortable circumstances, in whom no particular reason for the deformity of the joints can be assigned; and the same may be said of the sixth and seventh (30 and 39), except that the latter was in the habit of partaking rather freely of animal food, and also probably of the eighth (49), though we have not much information as to her past habits. It is rather remarkable that all of these, except the first, are females; of these females, three were poor, and the others in comfortable or in affluent circumstances.

Teeth.—The loss of teeth presents some interesting problems. It seems to be an associate of civilisation, partly because the varied and peculiar conditions of civilised life tend to induce it, and partly because those conditions have the effect of preserving the body beyond the limits which, under natural or uncivilised conditions, appear to have been assigned to it. Not developed till the animal begins to care for itself, the teeth fade away when it ceases to be able to do so; and, in the state of nature, life is not much prolonged beyond the period when the self-providing powers are waning. Civilisation, however, brings many external or extraneous aids and protections which carry the body on beyond what may be called the dental or natural span, and maintain it in spite of losses and changes which, to the uncivilised man, would have been fatal. Of these changes, the loss of teeth is one from the ill effects of which we obtain great immunity. Twenty-four of our centenarians had no teeth, some had been without them many years, and the average number retained was only four or five, which, in many instances, we may conclude to have been of little value. The artificial substitutes were used in so few instances, that we cannot from them form an estimate of the aid afforded by these appliances in the prolongation of life; but that they do contribute to the maintenance of health and the prolongation of life can scarcely be a matter of doubt. The teeth had disappeared, as we have before found to be the case (BRITISH MEDICAL JOURNAL, May 9th, 1885, page 929) in the upper jaw more than in the lower; but the tables do not show so much difference between the men and the women as I then marked.

It is somewhat remarkable that, though as many as twenty-eight used glasses, thirty-five, including many who used glasses, are reported to have been in the enjoyment of good sight. The occurrence of presbyopia does not seem to be associated with, or to be a prelude to, inconvenience or impairment of sight beyond that which may be corrected by glasses. These had been used by some for forty or fifty years; and in three it appears that the defect was spontaneously rectified, and that as they grew older they became able to dispense with glasses.

That the majority of centenarians are content, as we find them to be, with three meals in the day, and are moderate or small eaters, partaking of little animal food and little alcohol, is in harmony with the lowered activity of the muscular and other organs, and the consequent lowered demand upon the nutritive processes and the nutritive supply. That nevertheless the rate of the pulse, averaging 70, and that of the respiration, averaging 22, is maintained, may be accounted for by the diminished elasticity of the circulatory and respiratory apparatus. The arteries become less capable of accelerating the blood-stream, and the vital capacity of the chest is much reduced, as shown by the slight difference in the chest-girth between the state of inspiration and that of expiration.

The sleep-duration, averaging nearly nine hours, indicates also a slowness, a feebleness, of the restorative processes. Repair is tardily and with difficulty striving to keep pace with wear. We know that it is one element in the developmental law of growth and decay, that it should not quite do so in the aged frame. Up to adolescence repair has the mastery, and the body gains in weight and strength; in middle-age, repair is about equal to wear; but in later life its gradual failure, attended with diminishing weight and strength, conducts the body slowly along its normal course to dissolution. Long, good sleep, does something to put a drag on the downward course, and is a great sustainer of the aged frame. Much difference in sleep-duration is noted in the tables. In some, sleep is said to have been short and indifferent, or bad, perhaps owing to peculiar disturbing causes; but in 32 out of 44 it is said to have been good.

The maladies of these old people range themselves chiefly under the head of weakness, evinced by inability to put forth or maintain much effort of any kind, bodily or mental. Fatigue soon comes on; the muscular weakness proceeding to partial or complete loss of the use of the lower limbs, and to tremor of the upper limbs. The difficulty of penning a straight line resulting from this latter, being the cause of the smallness of the handwriting, often noticeable of old people. The weakness of the brain evinces itself in impairment of memory, in slowness of apprehension, in inability to fix the thoughts long on one thing, and the tendency, therefore, to wander from one subject to another, and to travel to and fro, which may pass on to want of control, or imbecility, or even to dementia. This last, saddest state of all, was witnessed only in two of our centenarians. Indeed, the brain in many held out as well or better than other organs—which may be regarded one of the bright rays, if not the brightest, in the centenarian landscape.

The weakness, or failing, seems to have been about equal in the several great organs, showing that these organs presented to the last that good balance of enduring strength which is so essential to longevity. The lungs are, through life, the most sensitive to atmospheric changes, as well as to alterations in the conditions of the blood. Hence, bronchitic and pneumonic affections are a common source of distress, and a frequent cause of death at all periods of life; but it does not clearly appear that the very aged are more liable to them than those less advanced in years.

In the majority in our table the action of the heart was regular, the pulse small and compressible, and evidences of arterial degeneration not manifest. In some of those who were auscultated, more or less *bruit* was heard, indicating some valvular or arterial roughness; but it made no apparent impression, and the individuals were unconscious of any defect. The slowness of micturition mentioned in two men, and the incontinence in three females, as well as the frequency of micturition in three, may also be regarded as resulting from atony, rather than from disease. Indeed, these old people had outlived the period which is most liable to prostatic and other urinary troubles. Other minor maladies and discomforts, of which we may conclude that centenarians have their share, such as the slight eczema in No. 3, and the flatulence in No. 4, have, in many instances, probably been thought not worthy of mention.

Though the majority had suffered little from illness at former periods, some up to the very end of their long life, yet it is not unsatisfactory to find that the effects of illnesses, even when severe, do not always preclude longevity. No. 1 had rheumatic fever when young, and rheumatism afterwards; No. 5 had epilepsy from 17 to 70; No. 7 had renal disease, with loss of sight, at 30, from which there was complete recovery; No. 8 had an abcess connected with the spine, a stiff knee from injury at 50, and diarrhœa from 75 to 70, besides fevers and other ailments; No. 9 had gall stones at 60; No. 10 was ten years in an asylum after a confinement; No. 11 had peritonitis; No. 12 had had fever at 25, also jaundice and small-pox; No. 13 had "bad stroke" at 60, for which she was bled, and two less severe strokes at 70. No. 18 had renal dropsy at 82, lasting for two years; No. 23 had acute bronchitis at 95; No. 29 had paralysis at 90; No. 31 had severe herpes zoster; No. 33 had rheumatic fever at 70; No. 45 had severe bronchitis at 82; No. 51 had paralysis at 7; Nos. 6, 12, 17, and 47, had fever—12 and 47 badly.

The recoveries from illness at great age, to which I have before called attention in this JOURNAL (July 12th, 1884, May 9th, 1885, and August 7th, 1886), are to be noted. We find that No. 18 recovered at 82 from renal dropsy, which lasted two years, and at 98 recovered from a large slough on the thigh, caused by a bruise; No. 23 from acute bronchitis at 95, and pneumonia and erysipelas of the head at 99; No. 33 from rheumatic fever at 70; No. 45 from severe bronchitis at 82; and No. 47 from severe fever at 84. Six had suffered injury to the hip after the age of 90. One broke the neck of the thigh-bone at 90, and one at 101, the latter so far recovering as to go on crutches.

Most interesting and important of all are the life-habits of these old people, among which, activity, out-of-door exercise, and early rising, with moderation in diet and alcohol, stand out in strong relief, and are evidently among the important factors in longevity. At the same time, we perceive that most of them may be regarded as the attributes of the well-wearing body, that is to say, they are the resultants of health, as well as the promoters of it. The healthy, vigorous body, can scarcely be otherwise than active, in one way or other; and few things tend to promote health and vigour more than activity—activity without excitement—an activity which is not forced beyond the measure of good and easy repair—an activity which does not wear the body out. The candle ought to burn briskly, and, as a general rule, at both ends, regarding the head or brain as one, and the limbs or locomotory agents as the other; but it should not burn too fast; and it may be that, in some persons, an extra rate at one end is better to be compensated by a lower rate at the other. Some persons, at least, seem to find that severe and continued brain-work is incompatible with much leg-work. Into this question, however, I will not enter.

Upon out-of-door activity, with the refreshing influence of open air, stress should be laid, for it must not be supposed that exercises and athletics in-doors, where they are much more exhausting, are a sufficient substitute, especially in the case of young and growing persons.

Such activity causes a brisk trade in the nutritive market; and the demand is pretty sure to be met by the supply, when food can be obtained. The moderation or spareness in diet, notably in the past habits of our centenarians, limiting the supply, prevents a wasteful overflooding of the market, and compels an economical and good employment of all that is brought there. Surplusage can do but harm. The body associates itself with a certain well known evil agent in finding for idle food "some mischief still to do," although, in some individuals, a drainage for unused material may be made through the intestinal or renal or cutaneous organs, which, be it remembered, were never meant to serve that purpose, and which are likely to suffer from the strain thus put upon them. In many a more deleterious vent is found in gout, bilious attacks, etc., which, at the same time, cause a temporary arrest of supply, or in graver inflammatory attacks, or the still graver malignant affections. The temperance in all things of our centenarians has, without doubt, been one great means of keeping order in their nutritive system, and preventing aberrations into morbid processes. Few more mischievous notions have found their way into common acceptance than the idea that strength is proportionate to the amount of food taken; and it is accepted and mischievous, no doubt, in a greater degree than it would otherwise be, because it rests upon the basis of truth that strength cannot be maintained without a sufficient supply of food.

The total abstainers will not fail to observe that twelve of our centenarians had been through life, or for a long period, in their ranks; that twenty took little alcohol; that this was, in the case of some of them, *very* little; and that eight were moderate. No. 8, it is true, often drank to excess on festive occasions; No. 14 was a free beer-drinker; and No. 35 "drank like a fish during his whole life," which probably means when he could, for it is added that "he could not usually get much." The exceptions, therefore, show little against the rule. It is, perhaps, scarcely less important to note that our centenarians were, for the most part, small meat-eaters.

The early rising was in many of the instances necessitated by their occupations. Still, this habit must be regarded as an associate or sequence of the healthful activity just mentioned, and of an activity pervading the reparative work which has to be done in sleep—an activity which quickly and thoroughly refits the body for its next day's work, and gives the energy, the willingness, the desire to resume it. Sleep should come quickly, be intense while it lasts, and cease quickly and completely; quite awake or quite asleep; no hovering between the two; no need of, or desire for, a little more slumber, a little more sleep. "When one turns in bed, it is time to turn out," whether rightly or wrongly attributed to the Duke of Wellington, is a saying worthy of him, and accords with the energy that contributed to make his life great as well as long.

While we thus gain more clear knowlege of the qualities for, and the adjuncts to, centenarianism, an examination of the table shows that there is no royal road to it. We see that it is attained under a variety of conditions, and that few persons can be said to be excluded from the prospect of it. With regard to certain of the important requisites, we cannot alter our position. No one can make his family history better than it is, or make his body to be wound up for a longer period than its normal life's span; but it is the duty of each to endeavour to make it cover that span, and to go as long as its appointed time. The uncertainty as to that term, as it is one of the greatest blessings of life, so should it be one stimulus to us to ascertain and to follow the means most suited for prolonging life, especially as we find the result of our investigations to be that those are the means best calculated to turn it to good account and to make it happy.

ANALYSIS OF THE TABLE OF CENTENARIANS.

By A. FRANCIS, M.R.C.S., of King's College, Cambridge.

PRESENT CONDITION.

AGE.—Fifty-two returns; average age, about 102½ years. *Males.*—Sixteen returns; average age, about 102¼ years; respective ages, 108, 105, 104, 3 aged 103, 4 aged 102, 2 aged 101, 101¼, 3 aged 100.—*Females.*—Thirty-six returns; average age, about 102⅛ years; respec-

tive ages, 2 aged 108, 106, 3 aged 105, 3 aged 104, 4 aged 103, 102½, 3 aged 102, 7 aged 101, 100¾, 100½, 10 aged 100. In 11 cases, the age returned was verified by baptismal certificates or other records; of these, 2 were males, aged 101 and 100; and 9 were females, aged 108, 106, 104, 103, 102, 101, 101, 100½, and 100.

MALE OR FEMALE.—Fifty-two returns; M. 16, F. 36.

SINGLE: MARRIED: WIDOWED.—Fifty-two returns; S. 11 (of these 10 were females), M. 5, W. 36.

AFFLUENT: COMFORTABLE: POOR.—Fifty returns; A. 3, C. 23, P. 19.

FAT: SPARE: AVERAGE.—Fifty returns; F. 9 (of these 8 were females), S. 23, A. 18.

FULL-BLOODED: PALE: AVERAGE.—Forty-six returns; F. 8, P. 14, A. 24.

STRONG: FEEBLE: AVERAGE.—Forty-eight returns; S. 20, F. 12, A. 16.

FIGURE: ERECT OR BENT.—Fifty returns; E. 25, B. 25.

HEIGHT. *Males.*—Twelve returns; average, about 5 ft. 8½ in.; one also returned as short. *Females.*—Twenty-six returns; average about 5 ft. 3 in.

WEIGHT. *Males.*—Seven returns; average nearly 138 lbs. *Females.*—Ten returns; average about 129 lbs. Respective Weights. *Males.*—182, 165, 147, 140, 120, 112, 98 lbs. *Females.*—196, 154, 140, 136, 126, 126, 120, 112, 112, 70 lbs.

VOICE.—Forty-seven returns; loud, 6; clear, 16; weak, 7; full, 3; loud and clear, 8; full and clear, 6; loud and full, 1.

HEARING.—Forty-nine returns; good, 22; indifferent, 17; bad, 9; deaf, 1.

JOINTS.—Forty-seven returns; natural, 37; stiff, 4; deformed, 3; stiff and deformed, 1; the last was stiff from chronic rheumatism, and deformed from contraction of palmar fascia; slightly deformed, 2; one of these was "from rheumatoid arthritis."

SIGHT.—Fifty-one returns; of these, 34 had good sight; 6 had cataracts, in one case unilateral, in another commencing; in 8 others, failure of eyesight was reported, apparently independent of presbyopia.

GLASSES.—Thirty-five returns; 28 used glasses, 7 did not, but of these 4 were returned as "poor," and were possibly unable to read; 6 had used them for 40—50 years, 5 for 30—35 years, 4 for 10—20 years, 2 for 4—6 years, 5 for "many years," 2 for "few years." One had used spectacles for many years, but for last twelve years had been able to read without them; another had not used them for twelve years; another "not for many years," but one "cannot now get them strong enough."

DIGESTION.—Forty-seven returns; good, 40; moderate, 7.

APPETITE.—Forty-eight returns; good, 36; bad, 2; moderate, 10.

EATER.—Forty-six returns; moderate, 25; small, 9; large, 12.

NUMBER OF MEALS DAILY.—Forty-three returns; average number rather more than 3 daily; the greatest number was 5 daily (in 1 case); the least number was 2 daily (in 5 cases).

ALCOHOL.—Forty-six returns; none 15; little, 24; moderate, 6; great deal of beer, 1.

ANIMAL FOOD.—Forty-one returns; none, 3; moderate, 10; little, 25; very little, 2; much, 1.

BOWELS.—Forty-three returns; daily, 26; alternately, 6; irregularly, 11.

APERIENTS.—Forty-one returns; rarely, 22; never, 14; frequently, 5.

DISPOSITION.—Forty-six returns; placid, 14; irritable, 8; energetic, 11; placid and energetic, 8; irritable and energetic, 5.

INTELLECT.—Forty-six returns; average, 29; low, 5; high, 11; childish for 6 years, 1. One was said to be "slow in comprehending questions, but smart in reply."

MEMORY. Recent Events.—Thirty-nine returns; good, 26; bad, 6; moderate, 7. Past Events.—Forty-seven returns; good, 39; bad, 4; moderate, 4. One "remembers and will quote a great deal of the Bible," another could "repeat about 100 Psalms correctly."

HABITS.—Forty-eight returns; active, 26; sedentary, 15; bedridden, 7; of these, 4 were males and 3 females; one, a male, had been bedridden for 1 year, and one, a female, for 7 years.

OUT-OF-DOOR EXERCISE.—Forty-five returns; bedridden, 7; none, 16; of these, one "can walk very well," another "stays in bed in cold weather;" little, 9; one of these "mended the thatch of her cottage at 96, and was always the first home from church, being a rapid walker;" moderate, 1, she "goes to church twice on Sundays;" eight walk out; of these, one "walked four miles yesterday," another "walks daily half a mile, can walk three miles," another is "fond of sawing firewood;" two still work, one of these "attended Hexham market, two years ago;" one "worked in field at 102;" one was "much out."

SMOKES.—Forty-five returns; much, 7; four of these were women; little, 2; one was a woman; moderate, 3; one was a woman; none, 32; chews, 1.

SNUFF.—Forty returns; none, 37; much, 1; this a woman who also smoked a little; little, 2, one being a woman, who did not smoke, the other a man, who smoked a little.

SLEEP.—Forty-four returns; good, 32; bad, 5; moderate, 7. *Number of Hours.*—Twenty-nine returns; average, rather more than 8½ hours; 3 slept 12 hours; 8 slept 10 hours; 1 slept 4 hours; and 2 slept 6 hours.

HOUR OF GOING TO BED.—Thirty-five returns; average, about 9 o'clock, one retired at 12 o'clock, one at 11, and 5 at 7 o'clock; 7 were bedridden.

HOUR OF RISING.—Thirty-five returns; average, about 8 o'clock; six rose at 6 o'clock, one at 5 o'clock, nine at 10 o'clock, one at 11 o'clock, and one at 4 P.M.

CHEST-GIRTH IN INSPIRATION. *Male.*—Six returns; average, 36½ inches. *Female.*—Nine returns; average, nearly 31 inches. Male and female together, average about 33 inches.

CHEST-GIRTH IN EXPIRATION. *Male.*—Five returns; average, about 36½ inches. *Female.*—Seven returns; average, nearly 30 inches. Male and female together, average about 32½ inches.

ELASTICITY OF RIB-CARTILAGES. *Male.*—Six returns; distinct, 1; indistinct, 5. *Female.*—Thirteen returns; distinct, 5; indistinct, 8.

PULSE.—Twenty-nine returns; average, 74-75 per minute. In some cases, disease of the heart or lungs was returned, and in others the pulse-rate was unusually high, and the condition of the heart and lungs was not detailed; excluding these cases, eleven in number, the average becomes 69-70 per minute. *Regular, Irregular, Intermittent.*—Twenty-eight returns; R. 24; Irr. 1; Int. 3. *Large, Small, Moderate.*—Twenty-seven returns; L. 9; S. 17; M. 1. *Compressible, Incompressible.*—Twenty-eight returns; C. 24; I. 4.

ARTERIES. *Male.*—Nine returns; even, 4; knotty, 2; tortuous and knotty, 1; tortuous, visible, and even, 2. *Female.*—Twenty returns; even, 8; tortuous, visible, and knotty, 3; visible and tortuous, 2; tortuous, visible, and even, 1; visible and even, 2; tortuous and knotty, 1; tortuous, 2; tortuous and even, 1.

ARCUS SENILIS. *Male.*—Seven returns; much, 4; little, 1; absent, 2. *Female.*—Nineteen returns; much, 5; little, 8; absent, 6.

RESPIRATION.—Twenty-four returns; average, 24 per minute. Excluding those cases, eleven in number, in which heart or lung-disease was returned, or in which the rate of respiration was high, and the condition of the heart and lungs was not mentioned, the average becomes 21—22 per minute. *Regular and Irregular.*—Twenty-four returns; regular, 21; irregular, 3.

TEETH.—Forty-two returns; 24 had none, and in 13 the teeth were specified. Amongst the 37 cases, there were 144 teeth: upper jaw, 63—incisors, 19; canines, 8; molars, 36: lower jaw, 81—incisors, 23; canines, 13; molars, 45. In five cases the number was alone given. Average (42 cases) 4—5 teeth. In one case, they "all came out whole." *Males.*—Fourteen returns; 6 had none; average 4 teeth. *Females.*—Twenty-eight returns; 18 had none; average, nearly 5 teeth. Three females had a complete set, and another had 17 teeth; one male had 24, and another 16 teeth.

ARTIFICIAL TEETH.—Thirty-eight returns; none, 34; yes, 1 (female); many years, 2 (male and female); from 50—90, 1 (female).

EVIDENCES OF FAILURE.—Thirty-five returns; none, 18; failures in 17 cases. *Heart*, 2.—In one, "sounds distinct, no murmur, very irregular, at one minute beating 60—70, and at another double as fast;" in the other, "circulation feeble, frequently sick and faint, as if she were going." *Heart and Lungs*, 3.—In one, "heart and lung-sounds weak;" in another, "pulse intermits 6 times in minute, impulse weak, slight bronchitis;" in another, "aortic regurgitation, slight bronchitis." *Heart and urinary organs*, 3.—in one, "loud systolic *bruit* at base, no appreciable interference with circulation, micturition frequent;" in another, "heart-sounds tumultuous and irregular, micturition frequent;" in another, "heart's action slightly irregular, not discernible in pulse, frequent micturition." *Lungs*, 2.—in one, "chronic bronchitis;" in the other, "cough for four months." *Brain*, 3.—Senine dementia in two cases; in one, "childish for 6 years;" in the third case, apoplexy, right hemiplegia, aphasia, and death shortly after. *Brain and Urinary*, 1.—"Aphasia for 14 days, incontinence of urine." *Urinary*, 4.—One had "some incontinence for 10 years;" in two others, micturition was slow; and in another, "incontinence."

MICTURITION. *Male.*—Ten returns; natural, 7; slow, 2; frequent, 1. *Female.*—Twenty-three returns; natural, 18; frequent, 2; incontinence, 3—in one case for 10 years.

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PAST HISTORY.

AGE WHEN MARRIED. *Male.*—Twelve returns; average, nearly 31 years. *Female.*—Nineteen returns; average, nearly 25 years.

DURATION OF MARRIED LIFE. *Male.*—Twelve returns; average, 54-55 years. *Female.*—Eighteen returns; average, 33-34 years.

NUMBER OF CHILDREN. *Male.*—Sixteen returns; average, 6-7 children. *Female.*—Twenty-one returns; average nearly 6 children. One male, and one female had no children.

FIRST, OR—CHILD OF PARENTS.—Thirty-eight returns; average, about third child. Twelve of these were "first child," and of these 2 were also the "only child." In 14 cases the size of the family was also returned; and in these the average was second-third child, and the number in the family averaged 7-8 children.

AFFLUENT, COMFORTABLE, POOR.—Forty-nine returns; A. 3; C. 28; P. 18.

STOUT, SPARE, AVERAGE.—Forty-seven returns; st. 3; sp. 28; A. 16.

DELICATE, ROBUST, AVERAGE.—Forty-three returns; D. 2; R. 28; A. 13.

HEALTH.—Forty-five returns; good, 45.

AILING.—Twenty-one returns; rarely, 19; often (male) 1; never, 1.

DIGESTION.—Forty-five returns; good, 44; indifferent, 1.

BOWELS.—Forty-two returns; good (daily), 34; costive, 6; alternate, 1; relaxed, 1.

BALDNESS.—Eighteen returns; late, 14; early, 3; none, 1.

GREYNESS.—Forty-two returns; late, 29; early, 12; none, 1.

DISPOSITION.—Forty-three returns; placid, 14; irritable, ; energetic, 10; irritable and energetic, 8; placid and energetic, 7.

INTELLECT.—Forty-six returns; average, 32; high, 10; low, 4.

HABITS.—Forty-eight returns; active, 46; moderate, 2.

OUT-OF-DOOR EXERCISE.—Forty-one returns; much, 27; little, 6; moderate, 8.

HOURS IN BED.—Twenty-nine returns; average, 7 hours; one also returned as "few hours."

HOUR OF RISING.—Thirty-three returns; average, about 6 o'clock; one also returned as "late."

SLEEPER.—Forty-three returns; good, 38; average, 5.

APPETITE.—Forty-three returns; good, 42; indifferent, 1.

EATER.—Forty-one returns; average, 27; small, 7; large, 7.

ALCOHOL.—Forty-one returns; none, 12; moderate, 8; little, 20; and one who "always drank as much as I could, and always will do," *vide* also remarks Nos. 8, 14, 35.

ANIMAL FOOD.—Thirty-five returns; moderate, 7; little, 28.

SMOKE. *Male.*—Fifteen returns; much, 7; little, 1; none, 7. *Female.*—Twenty-eight returns; much, 4; little, 1; moderate, 1; none, 22.

SNUFF. *Male.*—Fifteen returns; none, 13; "yes," 2. *Female.*—Twenty-three returns; none, 21; "yes," 1; much, 1.

ERRATA IN THE TABLE.

No.	Column.	
4	Name and address of informant ..	*read* T. S. Maguire, M.D.
8	Evidences of failure	*omit* failure in brain.
	Slight ailments and accidents ..	*read* Fracture of neck of femur at 101, *vide* note 9 *supra*.
	Name and address of informant ..	*read* W. E. Williams, M.R.C.S., Abertylery.
	Arcus senilis, etc.	*for* N *read* A.
12	Evidences of failure	*omit* none.
14	Name and address of informant ..	*read* A. Eddowes, M.D.
	Evidences of failure	,, failure in brain.
15	Name and address of informant ..	*for* Riding Mill, *read* Mill-on-Tyne
17	,, ,, ,, ..	,, Boss, *read* H. Voss.
21	,, ,, ,, ..	*read* O. Kauffmann, M.R.C.S.
26	,, ,, ,, ..	*for* Caldstock, *read* Calstock.
28	Evidences of failure	*read* failure in heart.
29	Present maladies	,, paralysis.
32	Name and address of informant ..	*for* L.R.C.S.I, *read* L.R.C.S.E.
33	Evidences of failure	*omit* none, *read* failure in lungs.
38	Teeth: Number	*for* 1, read 2.
	Evidences of failure	*read* failure in lungs.
39	Teeth: Upper canines	*for* 10, read 2.
40	Name and address of informant ..	,, Tor Cradoc, *read* Tir Caradoc.
	Past History: Digestion, etc. ..	,, G, *read* I.
	,, Bowels, etc. ..	,, I, ,, G.
41	Artificial teeth	,, O, ,, none.
42	,, ...	,, ,, ,, ,,
44	Weight	,, 11 ,, 154.
	,, ...	,, 8 ,, 112.
48	Name and address of informant ..	*read* J. Wilson, M.D., Liverpool.
52	Present maladies	,, childish for six years.
	Evidences of failure	,, failure in brain.

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Penoy, W. J., Esq.	..	43, Caledonia Place, Clifton
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Ransford, T. D., Esq.	..	Queen Square, Bath
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Hargrove, C. W., Esq.	Lansdowne Villa, Acock's Green, Birmingham
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Harmar, J. R., Esq.	Oak Cottage, Monument Road, Edgbaston
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Harvey, John, M.D.	130, Heathfield Road, Handsworth, Birmingham
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Dunsmure, J., jun., M.D. .. 53, Queen Street, Edinburgh
Ewart, J. C., M.D. .. University, Edinburgh
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Martin, A. E., Esq. .. 13, Claremont Street, Glasgow
Meehan, A., M.B. .. .. 12, Hamilton Crescent, Partick Hill, Glasgow
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Moore, A. E., M.B., C.M. .. 1, Royal Terrace, Crosshill, Glasgow
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Morrison, A. G. B., M.B., C.M. .. 30, Sandgate, Ayr
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Conry, John T. C., Esq. .. Eccles, Manchester
Cooper, W., Esq. .. .. Springfield, Widnes
Corns, J., M.D. .. .. 121, Union Street, Oldham
Cornwall, W. C., Esq. .. .. 1, Price Street, Birkenhead [Moors
Cosgrave, A., Esq. .. .. 30, Bradshaw Brow, The Oaks, Bolton-le-
Costine, David D., M.D .. 235, Boundary Street, Liverpool
Corte, A. A., Esq. .. .. 16, Paradise Street, Blackburn
Court, W., Esq. .. .. 17, Fold's Road, Bolton
Coutts, J. A., M.D. .. .. Waterfoot, Manchester
Coveney, J. H., Esq. .. .. Lago di Como, Italy
Cox, J. J., M.D. .. .. Gilda Brook Road, Eccles
Craigmile, A., M.D. .. .. Falkland Road, Egremont, Cheshire
Cran, Jas., Esq. .. .. Townfield House, Great Harwood
Crawford, Joseph D., Esq .. 40, Rodney Street, Liverpool
Crean, R., M.D .. .. 26, Bury New Road, Manchester
Cregeen, J. N., Esq. .. .. 2A, Prince's Road, Liverpool
Crew, E., Esq. .. Alderley Edge, Manchester
Crockwell, W. H. B., M.D .. 30, Moss Lane West, Manchester
Crompton, F., Esq. .. .. Stanley Place, Bury
Crozier, Wm., Esq. .. .. 139, Queen's Road, Liverpool
Crutchley, H., M.D. .. Holmcroft, Alsager
Cullingworth, C. J., M.D. .. 260, Oxford Street, Manchester
Daly, R. A. Shelton, Esq. .. 225, Stretford Road, Manchester
Dambrill-Davies, W. R., Esq. .. Chelford, Cheshire
Dartnell, G. M., Esq. .. .. 1, Upper Parliament Street, Liverpool
Darwin, G. H. Esq. .. .. The Cedars, Didsbury
Davidson, A., M.D. .. .. 2, Gambier Terrace, Liverpool
Davidson, J. H., M.D .. .. County Asylum, Chester
Davidson, John R., Esq. .. 6, King Street, Blackburn
Davies, E. T., M.D. .. .. 191, Heyworth Street, Liverpool
Davis, G. H., M.D. .. .. 14, Park Terrace, Blackburn
Dawson, T., Esq. .. .. 26, Rodney Street, Liverpool
Deakin, J., Esq. .. .. Sale, Cheshire.
Dean, Charles W., Esq. .. Infirmary, Lancaster
Dean, T. N., Esq. .. .. 37, Shakspeare Street, Ardwick, Manchester
Dearden, R. J., Esq. .. .. 23, Upper Brook Street, Manchester
Dearden, W. F., Esq. .. .. Crumpsall
Denton, T. W., M.D. .. .. Newbold, Chester
Derham, B., M.D. .. .. 110, St. George's Road, Bolton
Derham, W., M.B. .. .. Albert Terrace, Preston
Derham, T., M.D. .. .. 84, Manchester Road, Bolton
Dewhurst, W., Esq. .. .. Garstang.
Dickinson, E. H., M.D. .. 162, Bedford Street, Liverpool
Dickinson, J. B., M.D. .. 53, Grosvenor Square, Stalybridge
Dimond, J. E., Esq. .. .. 157, Breckfield Road North, Liverpool
Dobb, Jas., Esq. .. .. Golborne, Newton-le-Willows.
Dobie, W. M., M.D. .. .. Northgate House, Chester
Dobie, W. H., M.B. .. .. Northgate House, Chester
Douglas, A. Latham, Esq .. 36, Croxteth Road, Sefton Park, Liverpool
Dowse, J. G., Esq. .. .. Longsight, Manchester
Doyle, F. A., M.B. .. .. Birch Hospital, Leigh
Dreschfeld, J., M.D. .. .. 292, Oxford Road, Manchester
Dumbreck, Alex., M.B., .. Skelmersdale, Ormskirk
Dunbar, R. P., M.D. .. .. 16, St. Alban's Place, Blackburn
Duncan, J., M.B. .. .. 16, Richmond Street, Ashton-under-Lyne
Duncan, Wm., M.D. .. .. Prospect House, Tyldesley, Manchester
Eames, T. B., Esq. .. .. Barnfield House, Stoneclough, Manchester
Earle, J., Esq. .. .. 1, St. Thomas St., Cheetham Hill, Manchester
Eason, A. M., Esq. .. .. Park Villa, Lytham
Eccles, E., Esq. .. .. New Town, Longridge, Preston
Eccles, R., M.D. .. .. 314, Kensington, Liverpool
Edge, A. M., M.D. .. .. 252, Oxford Street, Manchester
Edge, J. J., Esq. .. .. 17, Mottram Road, Hyde
Edwards, J. H., Esq. .. .. 17, Stretford Road, Manchester

Elias, D., M.D. .. .. 11, Hoghton Street, Southport (dead)
Elliott, J. W., Esq. .. Rocky Lane, Liverpool
Ellis, J. W., Esq. .. 3, Brougham Terrace, Liverpool
Emmett, W. H., Esq. .. .. Winterhey House, Horwich, Bolton-le-Moor
Evans, A. L., Esq. .. .. Hawarden, Chester
Evans, J. H., Esq. .. Waterloo, Liverpool
Evans, T. C., Esq. .. .. 1, Rose Vale, Liverpool
Evans, W. A., Esq. .. .. Salford Hospital, Manchester
Eyton-Jones, Thos., M.D. .. Grosvenor Lodge, Wrexham
Fairclough, J. J. K., M.D. .. 414, Stretford Road, Old Trafford, Manchester
Farrar, Joseph, M.D. .. .. Queen's Terrace, Morecambe
Faulkner, J. T., M.D. .. .. Chester Road, Stretford, Manchester
Fawsitt, T., Esq. .. .. 46, Union Street West, Oldham
Fay, T. W. W., Esq. .. .. 3, Canning Street, Liverpool
Fennell, T., Esq. .. Knutsford, Cheshire
Ferguson, John, Esq. .. 266, Stockport Road, Manchester
Ferguson, Fergus, Esq. .. .. 55, Manchester Road, Bolton
Ferguson, J. H., Esq. .. .. 53, Manchester Road, Bolton
Fernie, H. M., Esq. .. .. Park Green, Macclesfield
Fiddes, Thos., M.B. .. .. Urmston, Manchester
Finegan, J. H., M.D. .. 48, Rodney Street, Liverpool
Firth, R. H., Esq., Surg. M.S. Meean Meer, India
Fisher, L., M.D. .. .. Lytham, Preston
Fitzhenry, E. H., M.D. .. Villa Clara, Mentone, France
FitzPatrick, W. H., M.D. .. Hazel Mount, Stonycroft, Liverpool
Fleetwood, W. J., Esq. .. 63, Walton Vale, Aintree, Liverpool
Fletcher, John, Esq. .. .. 103, Wellington Road N., Heaton-Norris
Fletcher, J. H., Esq. .. .. 89, Manchester Street, Oldham
Flitcroft, T. E., Esq. .. .. Nuttall House, Mersehall Street, Bolton
Floyd, T. S., M.D. .. .. 11, Devonshire Road, Birkenhead
Folkes, F. H., Esq. .. .. Salford Hospital, Manchester
Fort, T., Esq. .. .. 31, Rochdale Road, Oldham
Foster, S. W., Esq. .. .. Barrow, near Chester
Fox, E. A. Esq. .. .. 12, Rylands Street, Warrington
Fox, R. Dacre, Esq. .. Oxford Road, Manchester
Fraser, P., M.B. .. .. Clough House, Leyland, Lancashire
Freeman, A., M.D. .. .. 260, Oxford Road, Manchester (San Remo.)
Gallimore, T., Esq .. Lymm
Garlick, Saxon, Esq. .. .. Hollinwood, near Manchester
Garner, J. E., M.D. .. .. 18, Winckley Square, Preston
Garstang, W., M.D. .. .. Springwell House, Blackburn
Garstang, E. W. H., Esq. .. .. Knutsford, Cheshire
Garthside, J., Esq. .. .. 6, Wellington Field, Liverpool
Gaskell, R. A., Esq. .. .. St. Helen's
Gellatly, Andrew, M.B. .. .. Fairfield, Manchester
Gilbertson, J. B., M.D. .. .. 1, Starkie Street, Winckley Square, Preston
Gilchrist, R. M., M.B. .. .. 504, Derby Street, Bolton
Gillibrand, W., Esq. .. .. Parkfield House, Chorley Road, Bolton
Glascott, C. E., M.D. .. .. 23, St. John Street, Manchester
Glazebrook, N. S., Esq. .. .. Hayman's Green, West Derby, Liverpool
Glynn, T. R., M.D. .. .. 62, Rodney Street, Liverpool
Godson, A., M.B. .. .. Cheadle House, Cheadle
Gordon, E., Esq. .. .. 244, Wellington Road, South, Stockport
Gornall, J. H., Esq. .. .. Warrington
Gorst, Henry, Esq. .. .. Huyton
Graham, W., M.D. .. .. Tonge, Middleton, Manchester
Granger, F. M., Esq. .. .. 18, Nicholas Street, Chester
Graydon, S., M.D. .. .. Carahor, Withington, Manchester
Gray, Robert A., M.D. .. .. St. John's Lodge, Blackburn
Greenhalgh, H., Esq. .. .. 64, Bell Lane, Bury
Greenhalgh, T., Esq. .. .. Stockport
Gregory, John, Esq. .. .. Rusholme, Manchester
Grimsdale, T. B., Esq. .. .. 29, Rodney Street, Liverpool
Griffith, A. H., M.D. .. .. Oxford Road, Manchester
Grime, H. A., Esq. .. .. 22, Water Street, Blackburn
Grime, John, M.D. .. .. 31, Great Bolton Street, Blackburn
Grime, T. J., M.B. .. .. Ingleton, Kirkby Lonsdale
Grimes, John, M.D. .. .. Grassendale, Liverpool
Grindrod, John A., Esq. .. .. Norden, Rochdale
Grossmann, K. A., M.D. .. .. 70, Rodney Street, Liverpool
Guest, A. H., Esq. .. .. 76, Dorset Street, Hulme, Manchester
Guest, E. S., Esq. .. .. 251, Oxford Road, Manchester
Gumpert, E., M.D. .. .. 266, Oxford Street, Manchester
Gwatkin, Owen, Esq. .. .. 97, Hyde Road, West Gorton
Haining, W., M.D. .. .. 82, Foregate Street, Chester
Hakes, James, Esq. .. .. Larrigg, Aigburth Road, Liverpool
Hall, Egerton F., M.D. .. The Ash Trees, Prescot
Hall, James, M.B. .. .. 128, St. George Road, Bolton
Hall, James, Esq. .. .. Fox Street, Preston
Hall, Richard S., Esq. .. .. Ince, Wigan
Hall, Wm., Esq. .. Thornbreak, Lancaster
Hall, William, jun., Esq. .. Stonewell, Lancaster
Hamill, J. W., jun., M.D. .. .. 1, Grove St., Higher Broughton, Manchester
Hamilton, A., Esq. .. .. Ashton-under-Lyne
Hamilton, A., Esq. .. .. 16, Whitefriars, Chester
Hamilton, R., Esq. .. 1, Princes Road, Liverpool
Hammond, J. H., Esq. .. .. Winckley Square, Preston
Hardie, James, M.D. .. .. 1, St. Ann's Place, Manchester
Harker, John, M.D. .. .. Hazel Grove, Benton-by-Carnforth
Harris, Alfred C. E., M.D. .. .. Kenyon Terrace, Birkenhead
Harris, Lane A., M.D. .. .. St. George's House, Chorley, Lancashire
Harris, Robert, M.B. .. .. 25, Duke Street, Southport
Harrison, C. J., Esq. .. .. 13, Whitefriars, Chester
Harrison, James, Esq. .. .. 60, Audley Range, Blackburn
Harrison, Reginald, Esq. .. .. 38, Rodney Street, Liverpool
Harrison, R. L., ... 23, Gambier Terrace, Liverpool
Hartley, J. H., ... 71, City Road, Manchester
Hartley, D., Esq. .. .. Fern House, Accrington
Hartley, Robert, Esq. .. .. Ashleigh Orrell, Wigan
Haslam, Chas., M.D. .. .. Carlton Terrace, Greenhays
Hawkes, John, M.D. .. .. High Street, Northwich, Cheshire
Haycock, T. L., M.D. .. .. Haydock, St. Helen's

Heap, S., Esq. .. .. 70, Spotland Road, Rochdale
Heath, W. R., Esq. .. .. 46, Hoghton Street, Southport
Heathcote, Godfrey, Esq. .. .. 83, Grosvenor Street, Manchester
Heathcote, Ralph, Esq. .. .. 7, Chatham Street, Piccadilly, Manchester
Heathcote, Rowland, Esq. .. .. Apsley House, Hyde Road, Manchester
Heckscher, M., M.D. .. .. 327, Oxford Road, Manchester
Hendry, D., Esq. .. .. 241, Boundary Street, Liverpool
Hendry, J. A., Esq. .. .. 244, Westminster Road, Liverpool
Heslop, W. J., Esq. .. .. 366, Stretford Road, Manchester
Henry, J., M.D. .. .. 107, Drake Street, Rochdale
Hepworth, F., Esq. .. .. Eccles, Manchester
Hewer, Edward, Esq. .. .. Sissinghurst Formby, Lancashire
Hewitt, John, Esq. .. .. 75, Lever Street, Manchester
Hewson, R. W., Esq. .. .. Coton Hill, Stafford
Heyworth, J., Esq. .. .. Manchester Road, Hollinwood
Hicks, J. S., Esq. .. .. 2, Erskine Street, Liverpool
Hickson, A. T., M.D. .. .. Asylum, Rainhill
Higgins, S. McCulloch, Esq. .. 23, Durning Road, Liverpool
Hill, C., M.D. .. .. 26, Great Mersey Street, Liverpool
Hill, M., M.D. .. .. Falkner Terrace, Bootle, Liverpool
Hindle, George, Esq .. .. Holker House, Darwen
Hirst, A., Esq. .. .. Prestwich, Manchester
Heath, F. A., Esq. .. .. 118, Portland Street, Manchester
Hodgkinson, A., M.B. .. .. Higher Broughton, Manchester
Hodgson, G. G., Esq. .. .. 71, Merton Road, Bootle
Hodgson, J., M.B. .. .. 149, King Street, Oldham
Hodgson, J. B., M.D. .. .. 64, Fishergate, Preston
Hodgson, W. J., M.D. .. .. Wellington Terrace, Rochdale
Hollinworth, J., Esq. .. .. Lees, near Manchester
Holmes, F., Esq. .. .. 3, Stockport Road, Manchester
Holmes, I., Esq. .. .. 7, York Villas, Walton Breck Road, Liverpool
Holmes, J., M.D. .. .. Ouselhurst, Radcliffe, Manchester
Holmes, W. R., M.B. .. .. 101, Manchester Road, Oldham
Hope, E. W., M.B. .. .. Municipal Offices, Dale Street, Liverpool
Hopper, A. M., Esq. .. .. 63, Rodney Street, Liverpool
Hopwood, R., Esq. .. .. Portland Place, Stalybridge
Hopwood, W. F., Esq. .. Portland Place, Stalybridge
Horrocks, W., Esq. .. .. St. Ann's Lodge, Turton, Bolton
Horrocks, W. H., Esq. .. 18, Great Mersey Street, Liverpool
Houlgrave, A., Esq. .. .. 1, Marine Crescent, Waterloo, Liverpool
Howard, J. F., M.D .. .. Sandycroft, Shaw, Oldham
Howard, R., Esq. .. .. 17, Chapel Street, Hyde, Manchester
Howarth, G., Esq. .. .. Derby Street, Bolton
Howe, John, Esq. .. .. Springfield House, Marple, Cheshire
Howie, James, M.B. .. .. 86, Princes Road, Liverpool
Hudson, F., Esq. .. .. 70, Wellington Road South, Stockport
Hudson, John, Esq. .. .. Ebor House, Bradford, Manchester
Hughes, James B., Esq. .. Roe Street, Macclesfield
Hughes, Samuel, Esq. .. .. 6, Prince's Road, Liverpool
Hughes, W. H., Esq. .. .. Latchford House, Ashton-under-Lyne
Hunt, D. de Vere, Esq. .. .. 46, St. George's Terrace, Bolton
Hunt, Robert, Esq. .. .. Park View, Preston New Road, Blackburn
Hunt, T. H., Esq. .. .. 134, Embden Street, Hulme, Manchester
Husband, W. E., Esq. .. .. 50, Bury New Road, Manchester.
Hutchinson, R., Esq. .. .. 77, Upper Parliament Street, Liverpool
Hutchison, James, M.B. ..
Hutton, H. R., M.B. .. .. 8A, St. John Street, Manchester
Hyrons, E. A., Esq. .. .. Fernleigh, Pedmore, Stourbridge
Ideson, J. J., Esq. .. .. Colne, Lancashire
Ilderton, H. P., Esq. .. .. Fairfield, Manchester
Imlach, F., M.D. .. .. 26, Canning Street, Liverpool
Irwin, J. H., Esq. .. .. Queen's Square, Lancaster
Irwine, W., M.D. .. .. 18, Peel Street, Liverpool
Jack, R. M., M.B. .. .. Sankey Street, Warrington
Jackson, Edward, Esq. .. .. Wheelton, Chorley
Jackson, Edwin, Esq. .. .. Whalley Range, Manchester
Jackson, E. S., M.B. .. .. Carnforth, Lancashire
Jackson, T. W., Esq. .. .. 13, St. Georges Street, Chorley
Jackson, S., Esq. .. .. Werneth Brow, Oldham
Jackson, William, Esq. .. .. Chestnut Villa, Bolton-le-Sands
James, David, M.D. .. .. Sale, Cheshire
Jameson, G. H., M.D. .. .. 36, Manchester Road, Heywood
Jamison, A. A., M.D. .. .. St. Helen's, Lancashire
Jardine, James, M.B. .. .. Hornby House, Heywood
Johnson, C., Esq. .. .. 31, Castle Street, Lancaster
Johnson, James, Esq. .. .. Breeze Hill, Bootle, Liverpool
Johnson, J. Mercer, Esq. .. West Derby Road, Liverpool
Johnson, Thomas M., M.D. .. 251, Chapel Street, Salford
Johnston, John, M.D. .. .. Manchester Road, Bolton
Johnston, F., M.B., ... Infirmary for Children, Liverpool
Johnstone, G. W., Esq. .. .. Fisher House, Arrell, Wigan
Jones, Arthur, Esq. .. .. 22, Hoghton Street, Southport
Jones, A. Emrys, M.D. .. St. John Street, Manchester
Jones, A., Esq. .. .. Rotherham
Jones, David, Esq. .. .. 71, Everton Road, Liverpool
Jones, John E., M.B. .. .. Chorley
Jones, J. H., Esq., ... Stretford Road, Manchester
Jones, Leslie H., M.D. .. .. Limefield, Cheetham, Manchester
Jones, Robert, Esq. .. .. 26, St. George's Square, Liverpool
Jones, R., Esq. .. .. 19, Stretford Road, Manchester
Jones, R. Hughes, Esq. .. .. 9, Fern Grove, Lodge Lane, Liverpool
Jones, Thomas, M.B. .. .. 96, Mosley Street, Manchester
Jones, W. O., Esq. .. .. Bowdon
Jordan, F. W., Esq. .. .. Astley House, Heaton Chapel, Stockport
Joseph, George W., Esq .. .. 5, Bold Street, Warrington
Joynson, G. T., Esq. .. .. Northwich
Judson, T. R., Esq. .. .. West Derby, Liverpool
Keay, J., M.D. .. .. Tivoli Dale, Stockport
Kennedy, John, M.D. .. .. 1, Farnham Place, Stretford Rd., Manchester
Kenyon, George A., M.B. .. Chester

Kershaw, A., Esq. .. Eastfield, Farnworth, Bolton
Kershaw, John, Esq. .. Sedgley Mount, Prestwich
Kershaw, Joseph, Esq. .. Manchester
Kershaw, W. E. E., Esq. .. Beech House, Middleton
King, G. M., Esq. .. 3, Grosvenor Terrace, Fulwood, Preston
King, H. W., M.D. .. Newgate Street, Chester
King, J., M.D. .. 108, Chapel Street, Bedford-Leigh
Kingsbury, G. C., M.D. .. 3, Brighton Parade, Blackpool
Kirk, Joseph, Esq. .. Hindley, Wigan
Kitchen, C. T. H., Esq. .. 98, York Street, Cheetham, Manchester
Knott, William, M.B. .. West Terrace, North Ormsby, Middlesborough
Knowles, Edward, M.D. .. 13, Church Road, Birkenhead
Knowles, H. W., Esq. .. Westfield Street, St. Helens
Knox, C., Esq. .. 59, Grange Mount, Birkenhead
Lamb, J., Esq. .. 16, Price Street,, Birkenhead
Laimbeer, E. J., Esq. .. Royal Infirmary, Liverpool
Langdon J. W., Esq. .. 26A, Winckley Square, Preston
Lambert, James, M.D. .. 80, Price Street, Birkenhead
Langshaw, J. P., Esq. .. Elmside, Lancaster
Larkin, F. C., Esq. .. 2, Fitzclarence Street, Liverpool
Latham, W., Esq. .. The Poplars, Ashton-in-Makerfield
Lawson, J., M.B. .. Hebden Bridge, Yorkshire
Lawson, S., Esq. .. Brierfield, Burnley
Lax, William, Esq. .. Ormskirk
Leach, Abraham, Esq. .. Waterhead, Oldham
Leach, Abraham, jun., Esq. .. 220, Manchester Street, Oldham
Leah, T. C., Esq. .. Norbury House, Hyde, Cheshire
Ledward R., W., M.D. .. 114, York Street, Cheetham, Manchester
Lee, C. G., Esq. .. 84, Bedford Street, Liverpool
Lee, Edmund, Esq. .. 421, Rochdale Road, Manchester
Leech, D. J., M.D. .. 96, Mosley Street, Manchester
Lees, J. E., Esq. .. Elton, Bury
Leigh, Herbert S., Esq. .. 239, Waterloo Road, Cheetham, Manchester
Leigh, T. D., Esq. .. 4, Shaw Street, Liverpool
Lenihan, P. J., Esq. .. 253, Regent Road, Salford
Lewis, Sigismund, M.D. .. 155, Duke Street, Liverpool
Ley, H. R., Esq. .. County Asylum, Prestwich, Manchester
Lightbourne, J. A., M.D. .. 17, Winckley Square, Preston
Limrick, W. S., Esq. .. 7, Waterloo Road, Waterloo, near Liverpool
Lindsay, J. F., M.B. .. 26, Great George Square, Liverpool
Lister, E. Esq., J.P., .. Swarthdale, Ulverstone (resigns)
Little, D., M.D. .. 21, St. John Street, Manchester
Livsey, A. E., Esq. .. 3, Carisbrooke Road, Liverpool
Livy, J., M.D. .. St. George's Terrace, Bolton
Lofthouse, J., Esq. .. West Bank, Rochdale (dead)
Longton, E. J., M.D. .. The Priory, Southport
Lowe, John, M.D. .. 261, North Road, Preston
Looker, J. E., Esq. .. Crescent, Levenshulme, Manchester
Lowndes, F. W., Esq. .. 40, Knight Street, Liverpool
Lowndes, H., Esq. .. 1, Catherine Street, Liverpool
Lowther, R., M.D. .. Cartmel, Carnforth
Lucas, Samuel A., Esq. .. 239, Boundary Street, Liverpool
Luckman, E., Esq. .. 61, Oxford Road, Bowdon, Cheshire
Lund, E., Esq. .. 22, St. John Street, Manchester
Lupton, Richard J., M.B. .. 58, Norwood Grove, Liverpool
McAfee, W., M.D. .. West Kirby, Birkenhead
Maccall, W. N., M.D. .. Hope Bank, Kersal, Manchester
McArdle, E. L., Esq. .. 339, Upper Parliament Street, Liverpool
McCheane, W., Esq. .. 47, Shaw Street, Everton, Liverpool
McClelland, J., M.D. .. Sefton Drive, Liverpool
Macdonald, A. D., M.D. .. 26, Spellow Lane, Liverpool
McEwen, Allan C., Esq. .. 26, Nicholas Street, Chester (dead)
Macfie, C., M.D. .. 240, St. George's Road, Bolton
MacGill, G., Esq. .. Hollinbrook House, Littleborough, Manchester

McGowan, S. A., M.D. .. 15, King Street, Oldham
McGeagh, W., M.D. .. 20, Spellow Lane, Liverpool
MacKenzie, J.A., M.B. .. 179, Albion Road, Farnworth, Bolton
Maclaren, C., M.D. .. 73, Walmersley Road, Bury
MacLean, C. A., Esq. .. Monte Video
Maclean, K., Esq. .. 23, Greek Street, Stockport
McKeown, D., M.D. .. 25, St. John Street, Manchester
Maclaren, Murray, M.B. .. Bootle Boro' Infirmary, Liverpool
McLiesh, N., M.B. .. 74, Cooper Street, Bolton
McNaught, James, M.D. .. Boothfold, Newchurch, Manchester
McNaughtan, T., M.D. .. 3, Queen's Square, Blackpool
McNicoll, E. Day, Esq. .. 15, Manchester Street, Southport
McNicoll, Robert, Esq. .. Hardshaw Street, St. Helen's
Macvie, W., M.B. .. Parkside House, 216, Stanley Road, Bootle
Magee, W. J., Esq. .. 76, Hampson Street, Bolton
Maguire, R., M.D. .. 2 Cambridge Street, Hyde Park, London, W.
Makinson, W., Esq. .. 61, Bury New Road, Manchester
Mallett, F. B., M.D. .. Newport House, Bolton
Mallett, W. J., M.D. .. 63, Burlington Street, Manchester
Manifold, W. H., Esq. .. 45, Rodney Street, Liverpool
Mann, J. Dixon, M.D. .. 16, St. John St., Manchester
March, H. Colley, M.D. .. 2, West Street, Rochdale
Marsden, H. H., Esq. .. Shaw-Leigh, Armside
Marsh, J. Holt, Esq. .. Hilton Lane, Little Hulton, Bolton
Marsh, J. J., Esq. .. Beaconsfield, Ormskirk
Marsh, N. K., Esq. .. 44, Bedford Street Liverpool
Marsh, W. Aspinall, Esq. .. Holly House, Hindley, Wigan
Marshall, B., Esq. .. Bolton Old Road, Atherton
Martin, Johnson, M.D. .. Bolton Road, Great Lever
Martin, J. M. H., M.D. .. Arnheim Park Gate, Blackburn
Martin, Richard J., Esq. .. Atherton, Manchester
Martin, W. N., Esq. .. The Limes, Walkden, Bolton-le-Moors
Martland, E. W., Esq. .. 1, Clegg Street, Oldham
Massiah, B. J., M.D. .. Dernford, Palatine Road, Didsbury
Mathews, W., Esq. .. Beam Street, Nantwich
Mathews, Frank, Esq. .. 10, Ducie Street, Manchester
Matthews, James, Esq. .. Yealand-Conyers, near Carnforth

Matthews, Joseph, Esq. .. Esplanade, Waterloo, Liverpool
Mayne, F. Walter, Esq. .. Urmston, Manchester
Meachan, E. Esq. .. Park Cottage, Turkey Lane, Manchester (resigns)
Meachan, J. J., Esq. .. 47, Churnet Road, Rochdale Road, Manchester
Melland, Fred., Esq. .. Victoria Park, Manchester
Meeson, Alfred, Esq. .. 2, Peel Street, Liverpool
Merriman, W. S., Esq. .. Heath House, Knutsford
Miller, A. P., Esq. .. Nelson-in-Marsden, Lancashire
Miller, Hugh, M.D. .. 26, Hamilton Square, Birkenhead
Mockett, G. T., Esq. .. Tyldesley
Monks, E. H., Esq. .. 29, Alexandra Road, Southport
Monks, E. H., Esq., Jun. .. Regent House, Wigan
Moore, E., M.D., .. 21, Pitt Street, Preston
Moore, Thomas, Esq. .. Hazel Grove, Stockport
Moore, W. H., Esq. .. 30, Great Mersey Street, Liverpool
Moorhouse, Edward Dobson, Esq. 153, Chester Road, Manchester
Moreton, J. E., Esq. .. Tarvin, Chester
Moreton, John, S., Esq. .. The Hospital, Barrow
Morgan, J. E., M.D. .. 1, St. Peter's Square, Manchester
Moritz, S., M.D. .. 155, York Street, Cheetham, Manchester
Morris, C. A., M.B. .. Royal Infirmary, Liverpool
Morris, G., Esq. .. High Street, Skelmersdale, Ormskirk
Morris, J. H., Esq. .. 22, The Crescent, Salford
Morris, Walter, Esq. .. 262, Blackburn Road, Bolton
Morrish, R. A., Esq. .. 20, Island Road, Garston, Liverpool
Moss, H., M.D. .. Moody House, Congleton
Mould, G. W., Esq. .. Royal Asylum, Cheadle, Manchester
Mules J. H., M.D. .. Delamere Road, Bowdon
Mulliner, T. E., Esq. .. 24, Upper Parliament Street, Liverpool
Munro, Seymour H., M.D. .. Nantwich
Murphy, C. O., Esq. .. Italian Villa, Alexandra Park, Manchester
Murphy, H. A., Esq. .. Beech House, Halliwell New Road, Bolton
Murray, H. G., Esq. .. Asylum, Prestwich
Murray, R. A., M.B. .. 18, Wellington Road South, Stockport
Musson, W. E., Esq. .. Mayfield, Clitheroe
Nall, S., M.D. .. Disley, near Stockport
Napier, T. W. A., Esq. .. Darlington House, Egremont
Nash, F., Esq. .. Todmorden (dead)
Neale, A. J., M.B. .. Gore Lodge, Greenheys, Manchester
Needham, Walter, Esq. .. Wilmslow
Nesfield, Stephen, M.D. .. 1, Richmond Place, Stretford Rd., Manchester
Neville, J. J., Esq. .. St. George's Road, Chorley
Nevins, J. B., M.D. .. 3, Abercromby Square, Liverpool
Newton-Clare, E. S., Esq. .. 2, Priory Villas, Calne, Wilts
Newton, G., Esq. .. Dukinfield Lodge, Dukinfield, Cheshire
Newton, John, Esq. .. 20, Marmaduke Street, Liverpool
Nichol, J. C., Esq. .. 223, Stretford Road, Manchester
Nisbet, J. T., M.B. .. 72, Devonshire Rd., Princes Park, Liverpool
Niven, James, M.B. .. 56, Union Street West, Oldham
Nuttall, Edward, Esq. .. Thornton, near Bradford
O'Donnell, W., Esq. .. 30, Darlington Street, Wigan
Ogden, C., Esq. .. Drake Street, Rochdale
Ogilvie, J., M.B. .. 128, St. George's Road, Bolton
O'Gorman, R. P., Esq. .. 64, Broad Street, Pendleton, Manchester
O'Grady, W. F., Esq. .. Swinton
O'Hagan, J. J., Esq. .. 40, Palmerston Road, Garston
O'Keefe, J. M., Esq. .. Widnes, Lancashire
Oliver, John B., Esq. .. 59, Parkfield Road, Liverpool
O'Sullivan, D. A., Esq. .. Oak Mount, Burnley
Owen, J. F. H., Esq. .. Falmouth, Cornwall
Owen, R. F., Esq. .. Tue Brook, Liverpool
Owen, S. H., M.D. .. Brooks Bar, Manchester
Oxley, M. G. B., M.D. .. 80, Rodney Street, Liverpool
Packer, J. M., M.D. .. Huyton, Liverpool
Paget, W. S., M.D. .. Victoria Road, Great Crosby, Liverpool
Parker, Edward, Esq. .. 126, Kirkdale Road, Liverpool
Parker, G. R., Esq. ..
Parker, Robert, Esq. .. Malpas, Cheshire
Parker, Roger, Esq. .. 19, Derby Lane, Old Swan, Liverpool
Parker, Rushton, M.B. .. 59, Rodney Street, Liverpool
Parkinson, John R., Esq. .. Mayfield, Ashton-on-Ribble
Parkinson, R. T., M.D. .. 120, Upper Brook Street, Manchester
Parks, John, Esq. .. The Wylde, Bury
Parry, D. L., Esq. .. Old Swan, Liverpool
Parry, Thomas S., M.B. .. 78, Northgate Street, Chester
Patchett, E. J., Esq. .. 80, Rishton Lane, Bolton
Paton, Robert, Esq. .. 77, Lever Street, Manchester
Patrick, G. A., Esq. .. 38, Bridge Street, Bolton
Patrick, Robert, Esq. .. 46, Derby Road, Bolton
Patterson, J. N., Esq. .. Earlstown, Lancashire
Patterson, Thomas, M.D. .. 521, Middleton Road, Oldham
Paul, F. T., Esq. .. 44, Rodney Street, Liverpool
Pearson, H. L., Esq. .. 4, Rock Park, Rock Ferry
Peirce, F., M.D. .. Hoylake, Birkenhead
Perrin, J. B., Esq. .. Vernon House, Leigh
Philips, E. J. M., Esq. .. 37, Rodney Street, Liverpool
Pierce, F. M., M.D. .. 27, St. John Street, Manchester
Pigg, Thomas, M.D. .. Parsonage Nook, Withington, Manchester
Pilkington, G. A., Esq., M.P. .. 241, Lord Street, Southport
Pilkington, J. E., Esq. .. Salford Royal Hospital, Manchester
Pinder, G. H., Esq. .. Great Clowes Street, Manchester
Pinder, T. H., Esq. .. 140, Alexandra Road, Manchester
Pinck, C. H., Esq. .. Nelson, near Burnley
Pinkerton, C., Esq. .. 26, Hoghton Street, Southport
Pitcairn, G. K., M.B. .. Littleborough
Pitts, H. Yate, Esq. .. Tue Brook, Liverpool
Platt, T., Esq. .. Clegg Street, Oldham
Pooley, W., Esq. .. Townhead, Rochdale, Lancashire
Popjoy, J. J. B., Esq. .. 15, Avenue Parade, Accrington
Porter, C. F., Esq. .. Melbourne, Australia
Powell, H. R., Esq. .. St. Dominic Grove, Liverpool

Pownall, A. E., Esq. .. High Lane, Chorlton, Manchester
Preston, H. H., Esq. .. 25, The Crescent, Salford
Price, John L., Esq. .. Standish, Wigan
Price, T., Esq. .. 22, Great Ancoats Street, Manchester
Priestley, —, Esq. .. 149, Winslow Road, Manchester
Pritchard, H., Esq. .. Beechwood, Lilley Road, Fairfield, Liverpool
Pughe, R. N., M.B. .. 54, Catherine Street Liverpool
Putsey, Chauncy, Esq. .. 71, Rodney Street, Liverpool
Railton, T. C., M.D. .. 1, Shakespeare Terrace, Old Trafford, Manchester
Ransome, Arthur, M.D. .. Bowdon, Manchester
Raverty, G. A., Esq. .. 422, Stanley Road, Liverpool
Rawdon, H. G., M.D. .. 42, Rodney Street, Liverpool
Rayner, A. C., M.D. .. 58, Pole Street, Preston
Rayner, E., M.D. .. Teviotdale, Stockport
Reid, J., M.D. .. Hardshaw Street, St. Helens
Renshaw, C. J., M.D. .. Ashton upon-Mersey
Renshaw, J. W., Esq. .. Ash House, Stretford, Manchester
Renshaw, W. A., M.D. .. Altrincham
Reynolds, E. S., Esq. .. West Riding Asylum, Wakefield
Reynolds, J. W., Esq. .. 71, Hope Street, Liverpool
Rhodes, F., M.D. .. Crefeld Villa, Withington, Manchester
Rhodes, J. W., Esq. .. Didsbury, Manchester
Rhodes, T. W., M.D. .. 471, Oxford Street, Manchester
Rich, A. C., M.B. .. 67, Catherine Street, Liverpool
Richardson, W. B., Esq. .. 33, Victoria Street, Blackpool
Richardson, R. J., M.D. .. 321, West Derby Road, Liverpool
Richmond, C. E., Esq. .. The Infirmary, Warrington
Ricketts, J., Esq. .. St. Helen's, Lancashire
Riding, E., Esq. .. 116, Stanley Road, Liverpool
Ridley, J. S., M.D. .. 10, Lune Street, Preston (dead)
Ridpath, D., M.D. .. 30, Derby Street, Ormskirk
Rigg, John, M.D. .. 66, Fishergate, Preston
Riley, J. P., Esq. .. 10, Cross Lane, Salford
Rix, Charles James, Esq. .. 116, Bloomsbury, Manchester
Robert, D. Lloyd, M.D. .. 11, St. John Street, Manchester
Roberts, Edward, Esq. .. Royal Eye Hospital, Manchester
Roberts, John, M.D. .. Brynsteg, Menai Bridge
Roberts, J., M.D. .. Abbey Square, Chester
Roberts, N. E., M.B. .. 24, Mulgrave Street, Liverpool
Roberts, Sir William, M.D., F.R.S. 89, Moseley Street, Manchester
Robertson, G., M.B. .. 2, Union Street, Oldham
Robertson, Robert, M.D. .. 11, Oxford Street, Liverpool
Robinson, E., Esq. .. Dunkinfield
Robinson, John, M.B. .. Preston Brook, Runcorn
Robinson, John, Esq. .. Frodsham
Robinson, J., Esq. .. Southgate House, Ulverstone
Robinson, J., M.D. .. Dunscar, near Bolton
Robson, J., M.D. .. 18, Rock Lane, Birkenhead
Rodger, Robert, M.D. .. Cheetham Hill, Manchester
Rogers, Thomas L., M.D. .. Asylum, Rainhill, Prescot
Rowcroft, W., Esq. .. 25, King Street, Wigan
Rose, J., Esq. .. 64, Mount Pleasant, Liverpool
Ross, James, M.D. .. 335, Oxford Road, Manchester
Rothwell, C., Esq. .. Chorley New Road, Bolton
Rowe, W. P., Esq. .. 32, Oxford Street, Liverpool
Royle, P., M.D. .. 27, Lever Street, Manchester
Russell, J. C., M.D. .. County Asylum, Lancaster
Russell, D., M.D. .. Vine House, Neston, near Chester
Samuels, A., M.D. .. 53, Shaw Street, Liverpool
Saul, W. W., M.D. .. Lancaster
Saville, J. J., Esq. .. Radcliffe, Manchester
Schofield, G. E., M.D. .. Lytham Road, Blackpool
Schofield, C. T., Esq. .. Stamford Road, Mossley
Scott, B., M.B. .. 50, Ardwick Green, Manchester
Scowcroft, J. E., Esq. .. Manchester Road, Bolton
Seaborne, R., Esq. .. Royal Asylum, Cheadle
Segar, J., M.D. .. 152, Lord Street, Southport
Sellers, W., Esq. .. Bank House, Radcliffe, Manchester
Sellers, W. H., Esq. .. John Street, Rochdale
Sells, H. L., Esq. .. County Asylum, Melton, Suffolk
Sephton, Richard, Esq. .. Culcheth, Warrington
Sephton, Robert, Esq. .. Park House, Atherton, Manchester
Sergeant, E., Esq. .. Town Hall, Bolton
Service, G. L., M.D. .. The Limes, Eccles
Settle, R., M.D. .. 52, Bridge Street, Bolton
Shackleton, J., Esq. .. Bridge Mills, Whitworth, Rochdale
Shaen, J. M., Esq. .. 47, Pembroke Place, Liverpool
Sharp, H., Esq. .. South Shore, Blackpool
Sharples, T., Esq. .. Wellfield House, Farrington, Preston
Shaw, T., Esq. .. Kirkham, near Preston
Sherman, W. H., Esq. .. Swinton, Manchester
Shears, C. H. B., Esq. .. 13, Upper Duke Street, Liverpool
Sheldon, E. M., Esq. .. 223, Boundary Street, Liverpool
Shuttleworth, G. E., M.D. .. Royal Albert Asylum, Lancaster.
Sidebotham, G. W., Esq. .. 11, Church Street, Hyde, Manchester
Sidebottom, R. B., Esq. .. Manor House, Mottram
Simpson, H., M.D. .. 2, St. Peter's Square, Manchester
Sinclair, W. D. .. 2, Hartington Street, Barrow-in-Furness
Sinclair, W. J., M.D. .. Oxford Road, Manchester
Sinclair, R. Bruce, Esq. .. Waterloo Place, Oxford Street, Manchester
Smith, C. E., Esq. .. Avenham House, Stretford, near Manchester
Smith, D. T., M.B. .. 36, Church Street, Preston
Smith, Edwards, M.B. .. 12, Folds Road, Bolton
Smith, G. W., Esq. .. 6, Aytoun Street, Manchester
Smith, H. E. .. Blackrod, Chorley
Smith, Hugh .. 28, Chorlton Road, Manchester
Smith, Hugh Kellett, Esq. .. 23, Russell Street, Liverpool
Smith, Hunter C., M.D. .. 29, Pin Mill Brow, Ardwick, Manchester
Smith, J. .. Woodley, near Stockport
Smith, T. Eustace, M.B. .. Lynton House, Warrington

Smith, W., M.D. .. 48, Gilda Brook Road, Eccles, Manchester
Smithard, C. L., Esq. .. 383, Oldham Road, Manchester
Somerville, John, Esq. .. Park Street, Macclesfield
Somerville, T. A., Esq. .. The Grove, Wilmslow
Southam, F. A., M.B. .. Oxford Road, Manchester
Sparrow, R. L., Esq. .. 326, Earlswood Terrace, Hollinwood
Sprakeling, R. J., Esq. .. 58, Merton Road, Bootle Liverpool
Stallard, J. P., M.D. .. 338A, Oxford Road, Manchester
Stanfield, W., M.D. .. Providence House, Lees, Oldham
Stark, P. W., M.D. .. Barrow-in-Furness
Steele, C. E., Esq. .. 56, Rodney Street, Liverpool
Steell, G., M.D. .. 8A, St. John Street, Manchester
Steeves, G. W., Esq. .. 53, Parkfield Road, Liverpool
Stephenson, W. H., M.D. .. 67, Ainsworth Street, Blackburn
Stevenson, G., M.D. .. Holly Bank, Stretford, Manchester
Steward, A., Esq. .. Mulberry House, Oldham Road, Manchester
Stewart, A., M.D. .. Brunswick Terrace, Pendleton.
Stewart, Andrew, Esq. .. 2, Christchurch Road, Birkenhead
Stocker, James R., M.B. .. Blundell Sands, Liverpool
Stocks, A. W., Esq. .. 24, Crescent, Salford, Manchester
Stone, G., Esq. .. 2, Mount Street, Liverpool
Stolterfoht, Henry, M.D. .. 60, Watergate Street, Chester
Stothard, W. J., Esq. .. Palatine Road, Didsbury, Manchester
Stowar, Wm. M., Esq. .. Sutton-by-Greater-Chester
Street, C. T., Esq. .. County Asylum, Prestwich
Stuart, J. B., Esq. .. Standishgate House, Wigan
Sunderland, E., Esq. .. Higher Bridge Street, Bolton
Sutcliffe, A. E., Esq. .. 345, Stretford Road, Manchester
Sutcliffe, J., Esq. .. Grosvenor House, Stalybridge
Sutcliffe, W. H., Esq. .. Knutsford, Cheshire
Sutherland, James, M.D. .. 325, Gt. Ancoat's Street, Manchester
Sutton, J. M., M.D. .. Hoylake (dead)
Symonds, C. P., Esq. .. Ormskirk
Tatham, G. G., Esq. .. 25, Upper Dicconson Street, Wigan
Tatham, J. W., M.B. .. Town Hall, Salford
Taylor, Alfred, Esq. .. 6, Market Street, Little Lever, near Bolton
Taylor, G. G. Stopford, Esq. .. Springfield Street, Ann Street, Liverpool
Taylor, H. Coupland, M.B. .. Davos Platz, Switzerland
Taylor Herbert, M.D. .. 69, Balliol Road, Bootle
Taylor, James, Esq. .. 22, Newgate Street, Chester
Taylor, J. J. B., M.B. .. Ulverstone
Taylor, R. Hibbert, M.D. .. 1, Percy Street, Liverpool
Telford, A. B., Esq. .. 38, Longfield Place, Bury
Telford, S., M.D. .. 236, Upper Parliament Street, Liverpool
Thomas, A. Harrison, Esq. .. Whittingham, Preston
Thompson, A., M.D. .. Lightburne, Ulverstone
Thomson, G., M.D. .. 5, Huddersfield Road, Oldham
Thomson, W., Esq. .. Wrenbury, Nantwich
Thorburn, W., M.D. .. Rusholme, Manchester
Thornley, J., M.B. .. 246, Halliwell Road, Bolton
Thorp, Charles W., Esq. .. Dobroyd, Todmorden
Tinker, F. H., Esq. .. Brookland House, Hyde, Cheshire
Tisdall, J. J., Esq. .. Mill Road Hospital, Liverpool
Torrop, J. S., M.D., .. Heywood, Manchester
Treadgold, F. C. A., Esq. .. 32, Higher Bridge Street, Bolton
Trimble, J. C., Esq. .. Louth House, Bamber Bridge
Trimble, R., M.D. .. 24, Winckley Square, Preston
Turnbull, James M., M.D. .. Spa Hotel, Tunbridge Wells
Turner, G. E. W., Esq. .. 235, Wellington Rd. South, Stockport
Turner, Herod, Esq. .. 1, Spotland Road, Rochdale
Twyford, E. P., M.D. .. St. Helens
Tyrer, R., Esq. .. Rainhill, Prescot
Tytler, P., M.D. .. 106, York Street, Cheetham, Manchester
Utting, John, Esq. .. Woodlands, Anfield, Liverpool
Vacher, Francis, Esq. .. 35, Hamilton Square, Birkenhead
Vaughan, W. E. W., Esq. .. Crewe Cottage, Crewe
Vernon, H. H., M.D. .. 39, York Road, Birkdale
Wahltuch, A., M.D. .. 8, Acomb Street, Manchester
Walby, T., Esq. .. 82, Old Hall Street, Liverpool
Walker, George, M.D. .. 11, Hamilton Square, Birkenhead
Walker, G. C., M.D. .. 19, Preston Road, Park Avenue, Southport
Walker, G. Edward, Esq. .. 43, Rodney Street, Liverpool
Wallace, J., M.D. .. 1, Gambier Terrace, Liverpool
Wallis, J. A., M.B. .. Whittingham, Preston
Walls, W., Esq. .. 17, Oak Street, Manchester
Walmsley, F. H., Esq. .. Belmont, Higher Broughton, Manchester
Walsh, John, Esq. .. Judd-falls, Stoneyhurst, Blackburn
Walter, W., M.D. .. 20, St. John Street, Manchester
Warburton, J. W., Esq. .. 114, Prince's Road, Liverpool
Ward, J. D., M.D. .. 281, Oxford Street, Manchester
Wartenberg, V. A., Esq. .. 11, Albert Terrace, Blackpool
Waters, A. T. H., M.D. .. 69, Bedford Street, Liverpool
Waters, E., M.D. .. 14, Nicholas Street, Chester
Watkins, John W., M.D. .. Stoneleigh, Newton-le-Willows
Watson, T. Boswall, M.B. .. 202, Tufnell Park Road, N.
Watson, John, M.D. .. 182, Stockport Road, Manchester
Watson, W. C., M.D. .. Forestate Street, Chester
Wearing, Allan, Esq. .. 45, King Street, Blackburn
Wearing, R., Esq. .. High Street, Wavertree, Liverpool
Weaver, F. P., M.D. .. East Bank, Frodsham
Webster, B., M.D. .. 2, Alma Terrace, Alderley Edge
Weightman, A. E., Esq. .. Haslar, Gosport
Welsh, A., M.D. .. Whitworth, Rochdale
Westby, G., Esq. .. Farm-leigh, Lodge Lane, Liverpool
Westmorland, Joseph, Esq. .. 151, York Street, Cheetham, Manchester
Wharton, J., Esq. .. Hopwood House, Lees Road, Oldham
Whitaker, G. H., Esq. .. The Knowles, Horwich, Bolton-le-Moors
Whitaker, J., M.B. .. West Houghton, Bolton
White, Charles, Esq. .. Warrington
White, James, Esq. .. 22, King Street, Wigan.
White, W., M.D. .. Hollingworth, Hadfield, Manchester
Whitehead, G. M., Esq. .. 7, Greek Street, Stockport

Whitehead, Walter, Esq.	Oxford Road, Manchester
Whitford, W., M.D.	37, Shaw Street, Liverpool
Whitham, A., Esq.	Aulington, Lancashire
Whitelegge, W. A., Esq.	Belgrave Square, Nottingham
Whittington, T., Esq.	Woodleigh House, Prestwich
Whittle, E., M.D.	Parliament Terrace, Liverpool
Wiglesworth, A., M.D.	Brougham Terrace, Liverpool
Wiglesworth, J., M.D.	Rainhill Asylum
Wild, G. S., M.D.	76, Bedford Road, Bootle, Liverpool
Wilkinson, A. T., M.D.	[illegible], Oxford Road, Manchester
Wilkinson, James Bates, M.P.	4, York Place, Harpurhey, Manchester
Willacy, C., Esq.	Mayfield Grove, Cheadle Hulme, Stockport
Willett, James, Esq.	Stretton, Warrington
Williams, A. E., Esq.	
Williams, C., Esq., J.P.	Duffryn, Merioneth
Williams, D. M., Esq.	63, Shaw Street, Liverpool
Williams, Hugh, Esq.	141, Breckfield Road North, Liverpool
Williams, John, M.D.	Swinton, Manchester
Williams, J. T., Esq.	Rossal House, Barrow-in-Furness
Williams, R, Esq.	82, Rodney Street, Liverpool
Williams, R. H., Esq.	Great Eccleston, near Garstang
Williams, W., M.D.	58, Rodney Street, Liverpool
Williams, W. H., M.B.	Rossall School, Fleetwood
Williamson, H. M., Esq	25 Stretford Road, Hulme, Manchester
Wills, T. M., Esq.	Clifford Villa, Merton Road, Bootle, Liverpool
Wilson, A. H., Esq.	11, Abercromby Square, Liverpool
Wilson, Charles B., Esq.	11, Abercromby Square, Liverpool
Wilson, G. A., Esq.	9, St. Alban's Place, Blackburn
Wilson, H., Esq.	High Street, Cheadle
Wilson, F., Esq.	Worsley, near Manchester
Wilson, James, M.D.	Newchurch, Rossendale, Manchester
Wilson, J. H., Esq.	320, Kensington, Liverpool
Wilson, Jonathan, Esq.	Ostrom House, Withington, Manchester (dead)
Wilson, R. A., M.D.	Hornby, Lancaster
Wilson, W., M.D.	80, Broad Street, Pendleton, Manchester
Winn, John, Esq.	Poulton-le-Fylde
Winterbottom, Arthur T., Esq.	Swinton, Manchester
Wisken, H., Esq.	Moss Street, Heywood, Manchester
Wollaston, T. G., M.D.	48, Princes Road, Liverpool
Wood, James, Esq.	40, Dicconson Street, Wigan
Wood, Thos. A., M.D.	Douglas, Isle of Man
Woodburn, W. H., Esq.	Broughton-in-Furness
Woodcock, R. F., Esq.	65, Standishgate, Wigan
Woodcock, S., M.D.	Old Trafford, Manchester
Woods, G. A., Esq.	57, Hoghton Street, Southport
Worrall, J. H., Esq.	8, Rochdale Road, Bacup
Worrall, R., M.D.	Sydney, New South Wales
Worswick, F. H., M.D.	243, City Road, Manchester
Wraith, J. H., Esq.	Over Darwen
Wright, G., Esq.	339, Oxford Road, Manchester
Wright, Gaskoin R. M., Esq.	193, Regent Road, Manchester
Wright, N. W., Esq.	288, Blackburn Road, Ashley Bank, Bolton
Wylde, J. H., Esq.	Hollinworth, Hadfield, Cheshire
Wyllie, A. H., M.D.	93, Manchester Road, Oldham
Yates, James, M.D.	Pit Bank, Oldham
Yates, Peter, M.B.	Infirmary, Bolton
Yeats, W., M.D.	272, Oxford Road, Manchester
Young, A. H., M.B.	14, St. John Street, Manchester
Young, Thomas F., Esq	Rose Bank, Merton Road, Bootle, Liverpool

MEMBERS UNATTACHED (126.)

Adams, J., M.B.	Woodville, Warrington.
Allan, Hector, M.B.	Whaley Bridge, by Stockport
Allbrecht, J. A., Esq.	Worsley, Lancashire
Anderson, A. J., M.B.	Deyn View, Prestwich
Aspinall, John, Esq.	Hindley, Lancashire
Atkin, Chas., Esq.	136, Mount Pleasant, Liverpool
Bailey, T. C., Esq.	Mill Street, Crewe
Baines, A. H., Esq.	37, Aughton Road, Birkdale
Ball, D., Esq.	Macclesfield
Barfoot, G. H., M.D.,	Birkenhead
Barnes, R. W., Esq.	Fleetwood
Barre, W. V., Esq.	Ellesmere Port
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Berry, J. J., Esq.	Pendlebury
Bird, W., M.B.	Burnley
Bland, George, Esq.	Macclesfield
Bowen, O., Esq.	Heyworth Street, Liverpool
Bowes, R., M.D.	71, Union Street, West Oldham
Bradford, P., Esq.	Convalescent Hospital, Southport
Bramley, L., Esq.	Wray House, Lancaster
Bredin, H. A., Esq.	Boro' Hospital, Bootle
Bringloe, C., Esq.	Westhoughton, Bolton
Brown, J. M., M.B.	95, Warwick Street, Greenheys, Manchester
Browne, R. J., Esq.	424, Borough Road, Birkenhead
Bucknill, E., M.D.	Rawtenstall, near Manchester
Buist, A. C., M.B.	Infirmary, Stockport
Butcher, A. H., Esq.	West Claughton, Birkenhead
Buxton, E., Esq.	Gt. Crosby, Liverpool
Byerley, Isaac, Esq.	Falkland Road, Egremont
Carmichael, A., M.D.	Barrow-in-Furness
Carmichael, A. H., Esq.	Liscard, Cheshire
Carr, T., Esq.	Clayton, Manchester
Cauty, H. E., Esq.	44, Catherine Street, Liverpool
Cavanah, J. W., Esq.	Islington, Liverpool
Challinor, E., Esq.	West Houghton
Chalmers, T. D., M.B.	5, Fenwick Street, Liverpool
Chapman, William, Esq.	Garstang
Collier, W. H. Esq.	Portland Street, Southport
Cook, George H., Esq	Hartford Hall,
Courtenay, G. T., Esq.	10, Clifton Road, Birkenhead
Counsellor, W. P., Esq.	Stock Hills, Whalley
Craven, R. M., Esq.	28, Hoghton Sreet, Southport
Croker, J. H., Esq.	Patricroft, near Manchester
Crowther, T., M.D.	Luddenden, near Manchester
Dale, T., Esq.	163, Islington, Manchester
Daniel, J., Esq.	Cheadle
Daniel, J., Esq.	Ancoats, Manchester
Dartnell, G. M., Esq.	1, Upper Parliament Street, Liverpool
Davidson, J. T. R., Esq.	Royal Southern Hospital, Liverpool
Davidson, P. M., Esq.	Congleton
Davy, T. G., Esq.	Northern Hospital, Liverpool
Day, P. H., Esq.	Poulton-le-Fylde, Lancs
Denholm, A., M.D.	Chorlton-cum-Hardy
Doyle, E. A., M.B.	Leigh
Dutch, M. A., Esq.	Crewe, Cheshire
Edlin, H. B., Esq.	Middlemore House, Levenshulme
Edward, A. A., M.D.	Bank House, Rawtenstall
Edwards, G. F., Esq.	Chorlton-on-Medlock, Manchester
Erwin, S. J., Esq.	Openshaw, Manchester
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Fletcher, R., Esq.	ArlingtonTer., Lower Broughton, Manchester
Foreman, T. D., Esq.	Denton, Manchester
Fourness-Brice, J., M.D	Oxton. Birkenhead
Garrard, C. R. O., Esq.	Pendleton
Garstang, E. M., Esq.	23, Bark Street, Bolton
Garton, W., M.D.	St. Helen's, Lancs.
Gill, S. A., Esq.	Formby, Liverpool
Gornall, R. G., Esq.	Newton Heath, Manchester
Goulding, J. H. O., Esq.	Wellington Road, Stockport
Grant, D., M.B.	Cheadle
Green, Thomas W., M.D.	Rawtenstall, near Manchester
Griffiths, D., Esq.	59, Mulgrave Street, Liverpool
Grimsdale, T. F., Esq.	29, Rodney Street, Liverpool
Hall, T., Esq.	Fleetwood
Halliwell, R. N., Esq.	Northfield House, Dewsbury
Hammond, R. E., Esq	771, Hyde Road, Gorton, Manchester
Handyside, A., Esq.	Earlstown
Hannah, N., Esq.	Ashton-in-Makerfield
Harbinson, A., M.D.	County Asylum, Lancaster
Hardman, W., M.B.	Blackpool
Harris, R., M.B.	25, Duke Street, Southport
Harris, T., Esq.	Royal Infirmary, Manchester
Harrison, James Bower, M.D.	Higher Broughton, Manchester
Harrison, J. A., M.D.	Haslingden, near Manchester
Harrison, G. C., Esq.	Southport
Harvey, H., M.B.	Wavertree, Liverpool
Hasler, J. C., Esq	47, Eamam, Blackburn
Haworth, E., Esq.	Oswaldtwistle, Lancashire
Hayward, J. D., M.D.	117, Grove Street, Liverpool
Heald, H., Esq.	62, Princes Road, Liverpool
Helme, J. M., M.D.	Rusholme, Manchester
Hill, J. de Vere, Esq.	31, Wesley Street, Liverpool
Hill, T. K., Esq.	Heywood, Lancashire
Holden, John, Esq.	Preston
Hoops, H. L., Esq.	Liverpool Road, Eccles
Howard, J. A., Esq.	1, Dingle Hill, Liverpool
Hopwood, W. F., Esq.	Stalybridge
Hughes, James, Esq.	Middlewich
Hughes, T. J., Esq.	217, Athol Street, Liverpool
Hoyle, W. E., Esq.	Tyldesley, Manchester
Hynes, A. M., Esq.	6, Salisbury Street, St. Helens
Illingworth, C. R., Esq.	Clayton-le-Moors
Jefferson, A., Esq.	20, Manor Road, Liscard
Johnstone, J. Esq.	Liverpool
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Croft, John, Esq.	43, Brook Street, W.
Crosby, Thomas B., M.D. ..	21, Gordon Square, W.C.
Cross, Robert, M.D.	42, Craven Street, Strand, W.C.
Cuffe, Robert, Esq.	Tattersall, Lincolnshire
Cumberbatch, L. T., M.D ..	25, Cadogan Place, S.W.
Curgenven, J. Brendon, Esq. ..	11, Craven Hill Gardens, W.
Dakin, W. R., M.D.	57, Welbeck Street, W.
Dalby, Sir William B., M.B. ..	18, Savile Row, W.
Dale, George C., M.D. ..	Ivy Lodge, Upper Tooting, S.W.
Daly, Frederick H., M.D.	185, Amhurst Road, Hackney Downs, E.
Daniel, W. Clement, M.D.	Epsom
Daniell, R. T., M.B. ..	20, Cathcart Road, West Brompton, S.W.
Davidson, Charles, M.D.	29, Cassland Road, South Hackney, E.
Davies, R. T., M.B. ..	23, Finsbury Square, E.C.
Davies, Gomer, Esq.	9, Pembridge Villas, Bayswater, W.
Davis, Maurice, M.D. ..	11, Brunswick Square, W.C.
Davis, Willoughby, Esq.	157, Gower Street, W.C.
Davison, James, M.D.	8, Oxford Terrace, Upper Holloway Road, N.
Day, William H., M.D. ..	10, Manchester Square, W.
Day, William H., Esq. ..	Chapel Street, Pentonville, N.
DeBrent, Mortimer J., Esq., ..	36, Victoria Road, Clapham Common, S.W.
De la Cour, George F., M.D.	282, Camden Road, N.W.
Dent, Clinton D., Esq.	61, Brook Street, W.
De Watteville, Baron A., M.D. ..	30, Welbeck Street, W.
Dickinson, Thomas, Esq.	33, Sloane Street, S.W.
Dickinson, W. H., M.D. ..	9, Chesterfield Street, W.
Dickson, Walter, M.D., R.N.	Custom House, E.C.
Dingley, A., Esq.	7, Argyll Square, W.C.
Dingley, William, Esq.	277, Camden Road, N.
Dixon, James [illegible] ..	Harrow [illegible]

Dobell, H., M. D. .. .. Bournemouth.
Dobson, F. C., Esq. .. Arlington Park, Gunnersbury
Doran, Alfred H. G., Esq. .. 9, Granville Place, W.
Douglas-Lithgow, R. A., Esq. .. 27A, Lowndes Street, S.W
Dowse, Langdon H., M.D. .. 81, Harley Street, W.
Dowse, Thomas S., M.D .. 14, Welbeck Street, W.
Drage, Charles, M.D. .. .. Hatfield, Herts.
Drake, Arthur J., Esq. .. Stratford, E.
Drake, Charles H., Esq. .. Brixton Hill, S.W.
Drysdale, Charles R., M.D .. 23, Sackville Street, W.
Duckworth, Sir Dyce, M.D. .. 11, Grafton Street, W.
Dudfield, T. O., M.D. .. .. 8, Upper Phillimore Place, W.
Dudley J. Gardiner, M.D. .. 71, Belgrave Road, S.W.
Duffin, A. B., M.D. .. .. 18, Devonshire Street, W.
Duka, Theodore, M.D. .. 55, Nevern Square, S.W.
Duncan, B. A., M.D. .. .. 29, Wimpole Street, W.
Duncan, Henry M., M.D. .. Abbey Road, South Hampstead, N.W.
Duncan, J. Matthews, M.D., LL D., F.R.S.E., 71, Brook Street, W.
Duncan, W. A., M.D. .. .. 6, Harley Street, W.
Dunn, H. Percy, Esq .. .. 3, St. Stephen's Road W.
Dunn, Robert William, Esq. .. 13, Surrey Street, Strand. W.C.
Du Pasquier, Claudius F. Esq. .. Church Road, Upper Norwood, S.E.
Durham, Arthur E., Esq. .. 82, Brook Street, W.
Durham, Frederick, M.B. .. 82, Brook Street, W.
Eady, George J., M.D .. Priory, Caterham
East, Edward, Esq. .. .. 16, Upper Berkeley Street, W.
Eastes, George, M.B. .. .. 69, Connaught Street, Hyde Park, W.
Easton, John, M.D. .. .. 19, Norfolk Crescent Hyde Park, W.
Edis, Arthur W., M.D.. .. 22, Wimpole Street, W.
Edmunds, James, M.D. .. 8, Grafton Street, Bond Street, W.
Edwardes, E. J.. M.D. .. 16, Acacia Road N.W.
Edwards, F. Swinford, Esq. .. 93, Wimpole Street, W.
Ellis, W. A., Esq., ... Western Dispensary, Westminster, S.W.
English, E., Esq. .. .. 1, Manor Road, Stoke Newington
Erichsen, J. E., Esq., F.R.S. .. 6, Cavendish Place, W.
Evans, John T., jun., M.D. .. Hertford
Eve, Frederick S., Esq. .. 15, Finsbury Circus, E.C.
Eve, R. W., M.B. .. .. Tyrwhitt House, Upper Lewisham Road, S.E
Evershed, A., M.D. .. .. 10, Mansfield Villas, Hampstead
Ewart, William, M.D. .. 33, Curzon Street, W.
Fairbank, John, Esq. .. .. 18, George Street, Hanover Square, W.
Farquharson, Robert, M.D., M.P. Migvie Lodge. Porchester Gardens. W.
Fayrer, Sir Joseph, K.C.S.I., M.D. 53, Wimpole Street, W.
Fegan, Richard, M.D. .. .. Westcombe Park, Blackheath
Felce, Stamford, Esq. .. .. Kenmure Lodge, Elgin Rd., St. Peter's Park W
Fenton, Frederick E., Esq. .. Ealing
Fenwick, B., M.D. .. .. 6, West Street, E.C.
Ferriani, A., M.D. .. .. 101, Gower Street, W.C.
Ferrier, David, M.D., F.R.S. .. 34, Cavendish Square, W
Field, George P., Esq. .. .. 13, Wimpole Street, W.
Fincham, George T., M.D. .. 13, Belgrave Road, S.W.
Finlay, David W., M.D. .. 9, Lower Berkeley Street, W.
Finn, J. M., Esq. .. .. 99, Sutherland Gardens. W.
Fisher, F. C., Esq. .. .. King's Langley
Fogo, James M.S., Esq., Surg.-Gen. Army and Navy Club, Pall Mall, S.W.
Forbes, D. M., Esq. .. .. 204, Hoxton Road, N.
Ford, James, M.D. .. .. Eltham
Forman, E. Baxter, M.D. .. 138, Stoke Newington Road, N.
Forrest, J. G. S., Esq. .. .. Camberwell House Asylum, S.E.
Forsyth, Alexander, M.D. .. 12, Park Place, Greenwich
Foster, Oswald H., M.B. .. Hitchin
Fotherby, H. A., Esq. .. .. Fulham Road, S.W.
Fotherby, Henry I., M.D. .. 3, Finsbury Square, E.C
Fothergill, J. Milner, M.D. .. 110, Park Street, Grosvenor Square, W.
Foulerton, John, M.D. .. 6, Devonshire Terrace, Notting Hill, W.
Fountaine, D. O., Esq. .. 225, Camden Road, N.W.
Fowler, Charles O., M.D. .. London Fever Hospital, N.
Fowler, Robert, M.D. .. .. 145, Bishopsgate Street Without, E.C.
Fraser, P. W., Esq. .. .. 6, Houghton Place, Ampthill Square, N.W.
Freeman, William H., Esq. .. 21, St. George's Square, S.W.
French, John G., Esq. .. .. 10, Cunningham Place, N.W.
Frost, William A., Esq. .. .. 17, Queen Anne Street, W.
Fuller, C. C., Esq. .. .. 10, St. Andrew's Place, N.W.
Fuller, William, Esq. .. .. Stoke Guildford, Surrey
Gambier, Thomas, Esq. .. Stockleigh Road, St. Leonard's-on-Sea
Gant, Frederick J., Esq. .. 16, Connaught Square, W.
Garlick, William, Esq. .. .. 11, Well Road, Hampstead, N.W.
Garman, C. E., Esq. .. .. 143, Bow Road, E.
Garman, H. V., Esq. .. .. Kent House, Bow Road, E.
Gaven, James A., Esq. .. .. 27, South Street, Thurloe Square, S.W.
Gawith, James J., Esq. .. .. 23, Westbourne Park Terrace, W.
Gervis, F. H., Esq. .. .. 1, Fellowes Road, Haverstock Hill, N.W.
Gervis, Henry, M.D. .. .. 40, Harley Street, W.
Gibbings, Alfred T., M.D. .. 93, Richmond Road, Dalston, E.
Gibbins, Arthur, Esq. .. .. 18, Stratford Place, W.
Gibbon, Septimus, M.B. .. 59, Oxford Terrace, W.
Gibbons, R. A., M.D. .. .. 32, Cadogan Place, S.W.
Gibson, Colin P., L.R.C.P. .. 10, Russell Square, W.C.
Gimlette, Thomas S., Esq. .. 32, Fitzroy Square, W.
Gittins, John, Esq. .. .. St. John's, Horselydown, S.E.
Goddard, C. E., Esq. .. Wembly, Harrow
Goddard, Frederick, M.D. .. 106, Highbury New Park, N.
Godlee, Rickman J., M.B. .. 81, Wimpole Street, W.
Godson, Charles, Esq. .. .. 1, Astwood Road, Cromwell Road, W
Godson, Clement, M.D. .. 9, Grosvenor Street, W.
Goodchild, John, Esq. .. .. Thurloe Road, Hampstead, N.W.
Goodchild, John A., Esq. .. Thurloe Road, Hampstead, N.W.
Gordon, Esmond, M.D. .. 25, Weymouth Street, W.
Gordon, Gordon S., M.D., C.B. .. 7, Westbourne Square, W
Gould, H. E. .. .. Small Pox Hospital, Highgate Hill, N.
Gould, A. P. .. .. 46, Queen Anne Street, W
Goullet, Arthur P., Esq. .. Finchley Road, N.W.

Gover, Robert M., M.D. .. 12, Hereford Gardens, W.
Gowers, William R., M.D. .. 50, Queen Anne Street, W.
Gowland, Peter, Esq. .. .. 34, Finsbury Square, E.C.
Grant, Alexander, M.D. .. 370, Commercial Road, E.
Grant, J. Dundas, M.D. .. 523, Commercial Road, E.
Grattan, Matthew H. Esq .. Ongar
Graves, F. G., M.D. .. .. 14, Chichester Road, W.
Gream, George T., M.D. .. Eastbourne, Sussex
Green, T. Henry, M.D. .. 74, Wimpole Street, W.
Greenwood, E. C., Esq. .. 11, Bentinck Terrace, Regent's Park, N.W.
Greenwood, George, Esq. .. Bush Hill Park, Enfield
Greenwood, Major, jun., Esq. .. 18, Queen's Road, Dalston, E.
Greet, W. A., Esq. .. .. 260, Caledonian Road, N.
Gregson, George, Esq. .. 63, Harley Street, W.
Griffith, John T., M.D. .. Talfourd House, Camberwell, S.E.
Griffith, W. S. A., Esq. .. 114, Harley Street, W.
Grigg, W. C., M.D. .. .. 27, Curzon Street, Mayfair, W.
Gristock, W., M.D. .. .. 6, Finchley Road, N.W.
Gross, Charles, Esq. .. .. St. Saviour's Infirmary, Walworth, S.E.
Grosvenor, Alfred O., M.D. .. Priory Road, West Hampstead, N.W.
Grosvenor, G. F., M.D. .. 121, Ladbroke Grove, W.
Gull, Sir Wm. W., Bart., M.D., D.C.L., F.R.S. .. .. 74, Brook Street, W.
Gunn, R. M., M.B. .. .. 54, Queen Anne Street, W.
Gwynn, Edmund, M.D. .. 10, Hampstead Hill Gardens, N.W.
Habershon, Samuel O., M.D. .. 70, Brook Street, W.
Hadden, Walter B., M.D. .. 21, Welbeck Street, W.
Haig, Alexander, M.B. .. Woodcroft, Grove Park, Lee, S.E.
Hall, Alfred, M.D. .. .. Tunbridge Wells, Kent
Hall, Frederick, Esq. .. .. 1, Jermyn Street. S.W.
Hall, F. de Havilland, M.D. .. 46, Queen Anne Street. W.
Halliburton, W. D., M.D. .. 135, Gower Street, E.C.
Hamilton, F. G., Esq. .. Sherborne Lane, King William St., E.C.
Hamilton, J. Lawrence, Esq. .. 34, Gloucester Terrace, Hyde Park, W.
Hare, Charles J., M.D. .. 15, Manchester Square, W.
Harle, Ezra, Esq. .. .. Eagle Villa, Darnley Road. Hackney, E.
Harper, Gerald S., M.B. .. 5, Hertford Street, W.
Harries, A. J., M.D. .. .. 202, Tufnell Park Road, N.
Harris, C. J., Esq. .. .. 11, Kilburn Priory, N.W.
Harris, Vincent D., M.D. .. 39, Wimpole Street, W.
Hart, Ernest, Esq. .. .. 38, Wimpole Street, W.
Hartley, E., Esq. .. .. 31, Warwick Square, S.W.
Hartt, C. H., Esq. .. .. 5, Romney Terrace, Greenwich, S.E.
Haward, E., M.D. .. .. 9, Harley Street, W.
Hawksley, Thomas, M.D. .. 11, Victoria Mansions
Hayes, T. C., M.D. .. .. 17, Clarges Street, W.
Hayward, H. Howard, Esq. .. 38, Harley Street, W.
Heath, Christopher, Esq. .. 36, Cavendish Square, W.
Hemming, W. B., Esq. .. .. 26, Notting Hill Terrace, W.
Henry, Alex., M.D. .. .. 132, Highbury Hill, N.
Henty, George, M.D .. .. 302, Camden Road, N.
Herman, G. E., M.B. .. .. 7, West Street, Finsbury Circus, E.C.
Heron, George A., M.D. .. 57, Harley Street, W.
Herringham, W. P., M.B. .. 22, Bedford Square, W.C.
Hess, Augustus, M.D. .. .. 14, City Road, E.C.
Hewby, J. P., Esq. .. .. 34, Blenheim Crescent, Notting Hill, W.
Hewitt, W. M. Graily, M.D. .. 36, Berkeley Square, W.
Hickman, William, M.B. .. 1, Dorset Square, N.W.
Hicks, J. Braxton, M.D., F.R.S. 24, George Street, Hanover Square, W.
Hicks, G. Borlase, Esq. .. Amhurst Road, Hackney, E.
Higgens, Charles, Esq. .. 38, Brook Street, W.
Hill, Berkeley, M.B. .. .. 66, Wimpole Street, W.
Hill, Frederick A., M.D .. 76, Abbey Road, N.W.
Hill, Samuel, M.D. .. .. 22, Mecklenburgh Square, W.C.
Hill, T. Harvey, Esq. .. .. 4, Stanhope Terrace, Bayswater Road, W.
Hill, William B., Esq. .. 105, Camberwell Road, S.E.
Hilliard, R. Harvey, M.D. .. Aylesbury, Bucks
Hills, A. P., Esq. .. .. Carlton House, Bridge Road, S.W.
Hobson, John M., M.D. .. 65, Lower Addiscombe Road, Croydon
Hodges, Herbert B., Esq. .. Watton, Hertford
Hodgson, George F., Esq. .. Montpellier Road, Brighton
Holding, Charles, Esq. .. .. 107, Victoria Street, S.W.
Holman, William H., M.B. .. 68, Adelaide Road, South Hampstead, N.W
Holmes, T., Esq. .. .. .. 18, Great Cumberland Place, W.
Holt, Barnard, Esq. .. .. 14, Savile Row, W.
Hood, D. W. Charles, M.D. .. 43, Green Street, W.
Hope, Wm., M.D. .. .. 56, Curzon Street, Mayfair, W
Horrocks, P., M.D. .. .. 9, St. Thomas's Street, S.E.
Horsley, Prof. Victor .. .. 80, Park Street, W.
Hoskin, Theophilus, Esq. .. 186, Amhurst Road, E.
Houchin, E. K., ... 23, High Street, Stepney, E.
Houghton, W. B., M.D. .. Warrior Square, St. Leonard's-on-Sea
Hovell, D. De Berdt, Esq. .. Elstree
Hovell, T. M., Esq. .. .. 3, Mansfield Street, Queen Anne Street, W
Howell, Horace S., M.D. .. 11, Boundary Road, St. John's Wood, N.W.
Howse, Henry G., M.D. .. 10, St. Thomas's Street, S.E.
Hubbard, Henry W., Esq. .. 26, Elgin Road, Notting Hill, W.
Huggard, W. R., M.D. .. Switzerland
Hulke, John W., Esq., F.R.S. .. 10, Old Burlington Street, W.
Humby, Edwin, M.D. .. .. 83, Hamilton Terrace, St. John's Wood N.W.
Hume, F. H., M. D. .. .. 53, Devonshire Street, Islington, N.
Humphreys, F. W., Esq. .. 24, Sinclair Gardens, W.
Hunt, Joseph W., M.D. .. 101, Queen's Road, Dalston, E.
Hunter, Sir Gwyer, M.D., M.P. .. 21, Norfolk Crescent, W.
Hutchinson, Jonathan, Esq. F.R.S. 15, Cavendish Square, W.
Hutchinson, S. J., Esq. .. 44, Brook Street W
Hutton, R. J., Esq. .. .. Stapleton House, Stapleton Hall Road, N
Ibbetson, George A., Esq. .. 19A, Hanover Square, W.
Iliff, W. T., M.D. .. .. 37, Kennington Park Road, S.E.
Ilott, Edward Esq., ... Bromley
Jackman, T. S. H., Esq. .. 11, Stoke Newington Road, N.
Jackson, George F. C., Esq. .. Marlborough House, 17, Poland Street, W

Jackson, J. Hughlings, M.D., F.R.S. .. .. 3, Manchester Square, W.
Jacques, Edwin, Esq. .. .. 206, Brixton Road, S.W.
Jagielski, Victor, M.D. .. 54, York Terrace, Regent's Park, N.W.
James, John, M.B. .. .. 11, Thurloe Square, S.W.
James, Joseph B., Esq. .. 42, Jamaica Road, Bermondsey, S.E.
James, M. Prosser, M.D. .. 3, Dean Street, Park Lane, W.
James, W. Culver, M.D .. 11, Marloes Road, Kensington, W.
Jardine, James, M.B. .. .. 1, Larkfield Road, Richmond
Jeken, Jas., Esq. .. .. Eltham, Kent
Jenner, Sir Wm., Bart., K.C.B., M.D., D.C.L., F.R.S. .. 63, Brook Street, W.
Jenniqs, C. E., Esq. .. .. 15, Upper Brook Street, W.
Jephson, John H., M.D. .. 20, Warwick Gardens, Kensington, W.
Jepson, Octavius, M.D. .. Asylum, Stone, Dartford
Jerain, James W., Esq. .. Cosham, Hants
Jessop, W. H. H., Esq. .. 37, Harley Street, W.
Johnson, George, M.D., F.R.S. .. 11, Savile Row, W.
Johnston, Joseph, M.D., Brig.-Surg. M.S. .. .. .. 24, St. John's Wood Park, N.W.
Johnston, W. B., M.D. .. 157, Jamaica Road, Bermondsey, S.E.
Jones, A. O'Brien, Esq. .. Epsom
Jones, C. Handfield, M.B., F.R.S. 24, Montagu Square, W.
Jones, Edward A., Esq. .. 413, Kingsland Road, N.
Jones, Philip W., Esq... .. Enfield
Jones, Sydney, Esq. .. .. 16, George Street, Hanover Square, W
Jones, T. Ridge, M.D... .. 4, Chesham Place, S.W.
Juler, Henry E. Esq. .. . 77, Wimpole Street, W.
Keen, E., Esq. .. .. 44, New Broad Street, E.C.
Keetley, C. R. B., Esq. .. 10, George Street, Hanover Square, W.
Kelly, Bernard, M.D. .. .. 12, Plough Road, Rotherhithe, S.E.
Kennedy, Alfred E., Esq. .. Plaistow
Kerr, Norman S., M.D. .. 42, Grove Road, N.W.
Key, A. Cooper, Esq. .. .. 30, Wilton Place, S.W.
Kiallmark, Henry W., Esq. .. 5, Pembridge Gardens, W.
Kibbler, R. C., M.D .. . 61, King Edward's Road, Hackney, E
King, W. Talbot, M.D. .. Glynes Villa, Amhurst Park, N.
Kingdon, John A., Esq. .. 2, Bank Buildings, E.C.
Kisch, Albert, Esq. .. .. 3, Sutherland Avenue, Maida Hill, W.
Kitching, George, M.D. .. Enfield (dead)
Lamb, W. H., M.B. .. .. 46, Kensington Park Gardens, W.
Lane, James R., Esq. .. .. 49, Norfolk Square, W.
Langmore, John C., M.B. .. 20, Oxford Terrace, W.
Langston, Thomas, Esq. .. 29, Broadway, Westminster, S.W.
Langton, John, Esq. .. .. 2, Harley Street, W.
Latham, C. W., Esq. .. .. 442, Hackney Road, E.
Lattey, James, Esq. .. .. 23, St. Mary Abbot's Terrace, W.
Lavies, J. S., M.D. .. .. 98, St. George's Road, S.W.
Lawrance, F., Esq. .. .. St. Alban's Terrace, Hammersmith, W.
Lawrence, L. A., Esq. .. 39, Belsize Crescent, N.W.
Lawson, R. Lockhart, Esq. .. Barry Road, East Dulwich, S.E.
Lawson, George, Esq. .. .. 12, Harley Street, W.
Lee, Henry, Esq. .. .. 9, Savile Row, W.
Lees, David B., M.D. .. .. 2, Thurloe Houses, Thurloe Square, S.W.
Leigh, William, Esq. .. .. Chiswick, W.
Leonard, Henry J., M.B. .. 279, Camden Road, N.
Lichtenberg, George, M.D. .. 47, Finsbury Square, E.C.
Ligertwood, Thomas, M.D. .. Royal Hospital, Chelsea, S.W.
Lipscomb, John T. N., M.D. .. St. Alban's
Lipscomb, Richard N., Esq. .. 52, Cambridge Road, Brighton
Litteljohn, Saltern G., M.B. .. Hanwell, W.
Liveing, Edward, M.D. .. 52, Queen Anne Street, W.
Liveing, Robert, M.D... .. 11, Manchester Square, W.
Llewellyn, Evan, Esq. .. .. 9, Mount Place, Whitechapel, E.
Lloyd, Robert H., M.D. .. Workhouse Infirmary, Lambeth
Loane, Joseph, Esq. .. .. 98, Tressillian Road, S.E.
Lockhart, W., Esq. .. . 67, Granville Park, Blackheath, S.E.
Lockwood, C. B., Esq.. .. 8, Serjeant's Inn, E.C.
Logie, Cosmo G., M.D., Surg.-Gen. Queensborough Terrace, W. (dead)
Lomas, William, M.D... .. 5, Pall Mall, S.W.
Longhurst, A. K., Esq. .. Mount Park Road, Ealing
Longstaff, George B., M.B. .. Wandsworth, S.W.
Lowne, Benjamin T., Esq. .. 65, Cambridge Gardens, W.
Lubbock, Montague, M.D. .. 19, Grosvenor Street, W.
Lucas, R. Clement, M.B. .. 18, Finsbury Square, E.C
Lucey, W. Cubitt, M.D. .. The Elms, Bush Hill Park, Enfield
Lunn, J. R., Esq. .. .. Marylebone Infirmary, Notting Hill, W.
Lynch, J. Roche, Esq... .. 8, Boyne Terrace, Holland Park, W.
McAndrew, James J., Esq. .. Three Colt Street, Limehouse, E.
Mac Cormac, Sir William .. 13, Harley Street, W.
MacCormack, M. J., M.B., Surg.-Maj. Pembridge Place, Bayswater, W.
MacDonagh, J. A., Esq. .. 64, Parliament Hill Road, Hampstead, N.W.
Macfee, John, M.D. .. .. 176, Commercial Road, E
McKellar, Peter H., M.B. .. Fever Hospital, Stockwell, S.W.
Mackenzie, F. M., Esq. .. 29, Hans Place, S.W.
Mackenzie, G. Welland, Esq. .. 13, William Street, Lowndes Square, S.W.
Mackenzie, Morell, M.D. .. 19, Harley Street, W.
Mackenzie, Stephen, M.D. .. 26, Finsbury Square, E.C.
Mackenzie, W. J., M.B. .. 314, Liverpool Road, N.
Mackinlay, J. G., Esq' .. 15, Stratford Place, W.
Maclagan, T. J., M.D. .. 9, Cadogan Place, S.W.
Maclaren, Alexander C., Esq. .. 60, Harley Street, W.
Maclean, Allan, Esq. .. .. Harpenden Hall, St. Alban's
McMunn, John A., M.B. . Royal Hospital, Chelsea, S.W.
Macnamara, Charles, Esq. .. 13, Grosvenor Street, W.
Macpherson, John, M.D .. 35, Curzon Street, W.
Macpherson, Peter, M.D. .. 81, Queen's Road, Brownswood Park, N.W.
Madge, Henry M. M.D. .. 4, Upper Wimpole Street, W
Mair, R.S., M.D. .. .. 24, Ledbury Road, Bayswater, W.
Marsh, Howard, Esq., . 36, Bruton Street, W.
Marshall, Francis J., Esq. .. St. George's Hospital, S.W.
Marshall, John, Esq., F.R.S. .. 10, Savile Row, W.
Marshall, John, Esq. .. .. 143, Grange Road, Bermondsey, S.E.
Marshall, William G., Esq. .. Asylum, Colney Hatch, N.
Martin, Henry C., M.D. .. 11, Somers Place, W.
Martin, Sydney H. C., M.D. .. 135, Gower Street, W.C.
Mason, Francis, Esq., ... 5, Brook Street, W. (dead)
Mason, J. Wallis, Esq. .. 1, Osnaburgh Terrace, Regent's Park, N.W.
Massey, Hugh H., Esq. . 2, North Terrace, Camberwell, S.E.
May, E. Hooper, M.D. . Tottenham
May, G. Parker, M.D. Maldon
May, Lewis J., Esq. .. Seven Sisters' Road, N.
May, W. Costall, Esq. .. 52, Tregunter Road, S.W.
Mayhew, Charles H., Esq. . 2, Randolph Gardens, Dover
Meadows, Alfred, M.D. .. 27, George Street, Hanover Square, W
Meagher, J. S., Esq. .. .. 10, Manchester Street, W.
Medwin, A. G., M.D. .. .. 34, Bruton Street, W.
Meiklejohn, J. W. S., M.D. 105, Holland Road
Mennell, Z., Esq. . Oxford House, Shepherd's Bush Road, W.
Meredith, W. A., M.B. .. 6, Queen Anne Street, W.
Merriman, J. J., Esq. .. . 45, Kensington Square, W.
Metcalfe, Edmund, Esq. .. 55, Clifton Gardens, Maida Vale, W.
Michael, William H., Esq., Q.C. 41, Parliament Street, S.W.
Mickle, William J., M.D. .. Grove Hall, Bow, E.
Mickley, George, M.B. . St. Luke's Hospital, E.C.
Millar, John, Esq., .. . Bethnal House, Cambridge Road, E.
Miller, H. P., Esq. .. 100, Stoke Newington Road, N.
Milne R. M.D. .. . 47, Grove Road, E.
Milson. R. H., M.D. 88, Finchley Road, N.W.
Mitchell, Robert N., M.D. Chester House, Brockley, S.E.
Mitcheson, J. H., Esq., . Bridport Hall, Edmonton
Mivart, F. St. G., Esq., 62, Green Street, W.
Money, Angel, M.D. .. . 24, Harley Street, W.
Monro, Henry, M.D. .. 16, Upper Wimpole Street, W.
Morgan, John H., Esq. 68, Grosvenor Street, W.
Morison, Alexander, M.D. 7, The Terrace, Green Lanes, N.
Morison, B. G., M.B. .. . 70, Marquess Road, N.
Morison, John, M.D. .. Cumberland Road, St. Alban's
Morris, Henry, M.B. .. .. 2, Mansfield Street, W.
Morris, James, M.D. .. 13, Somers Place, Hyde Park, W.
Morris, Malcolm A., Esq. .. 63, Montagu Square, W.
Morton, Thomas, M.D. .. Greville Road, Kilburn, N.W.
Mott, W. F., Esq. .. .. Charing Cross Hospital, Medical School. Chandos Street, W.C.
Moullin, C. W. Mansell, M.D. .. 80, Porchester Terrace, W.
Moullin, J. A. Mansell, M.B. . 69, Wimpole Street, W.
Mowat, George Esq. .. St. Alban's
Moxon, Walter, M.D .. .. 6, Finsbury Circus, E.C. (dead)
Muir, James, C. P., Esq. . 94, Ladbroke Grove, W.
Mumby, B. H., M.D... . Merton Road, Southsea
Mumford, W.L., M.D. .. 60, Fetter Lane, E.C.
Murphy, S. F., Esq. .. .. 41, Queen Anne Street, W.
Murray, A. D., M.B. .. Rickmansworth
Murrell, William, M.D. .. 38, Weymouth Street, W.
Musgrave, J. T., Esq. .. .. Irlam Villa, Finchley Road, N.W
Myers, Arthur B. R., Esq. .. Scots Guards
Neale, R. M.D. . 60, Boundary Road, N.W.
Nettleship, Edward, Esq. .. 5, Wimpole Street, W.
Nicholson, Emilius R. M.D. .. 89, Camden Road, N.W.
Nicoll, T. V., Esq. .. .. Glenarm House, Upper Clapton, E.
Nix, Edward J., M.D. .. 143, Gt. Portland Street, W.
Norry, W. A., M.B .. .. 5, Devonshire Square, E.C.
Norton, John, Esq. .. .. 38, John Street, Bedford Row, W.C.
Odell. William, Esq. . .. Hertford
Ogilvie, Chas. F., M.D., Surg.-Mj Warham Road, Croydon
Oppenheim, Lewis, Esq. .. 27, Cleveland Gardens, Hyde Park, W
Ord, William M., M.D. .. 37, Upper Brook Street, W.
Orwin, Arthur W., M.D. .. 15, Weymouth Street, W.
Ostlere, R. M.B. .. .. 28, Stoke Newington Road, N.
Oswald, J. W. J., M.D. .. 245, Kennington Road, S.E.
Oswald, R. J. W., Esq. .. 212, Clapham Road, S.W.
Owen, Edmund, M.B. .. .. 49, Seymour Street, W.
Owen, Isambard, M.D. .. 5, Hertford Street, W.
Paget, Sir Jas., Bt., D.C.L., F.R.S. 1, Harewood Place, W.
Paramore, Richard, M.D. .. 5, Gordon Square, W.C.
Parker, Robert W., Esq., . 8, Old Cavendish Street, W.
Parrott, Edward J., Esq. .. Hayes
Parsons, Sidney, Esq., .. 78, Kensington Park Road, W.
Patten, Charles A., Esq. . Marpool House, Ealing, W.
Paul, John H., M.D. .. . Camberwell, S.E.
Paul, J. Liston, M.D. .. 42, Queensborough Terrace, W
Pavy, Frederick W., M.D., F.R.S. 35, Grosvenor Street, W.
Payne, J. Frank, M.D. .. 78, Wimpole Street, W.
Pearse, W. E. G., Esq. .. 24, Bessborough Gardens, S.W.
Perigal, Arthur, M.D. .. Station Road, New Barnet
Pettifer, Edmund H. Esq. .. 50, Southgate Road, N.
Phillips, C. F. D., M.D. .. 10, Henrietta Street, Cavendish Square, W.
Phillips, John, M.B. .. .. 125, Harley Street, W.
Phillpot George F., Esq. .. Hemel Hempstead
Philpot, J. H., M.D. .. . 13, South Eaton Place, S.W.
Picard, P. Kirkpatrick, M.D. .. 59, Abbey Road, N.W.
Pitt, G. N., M.D. .. .. 34, Ashburn Place, South Kensington, S.W.
Playfair, W. S., M.D. .. . 31, George Street, Hanover Square, W..
Platt, W. H., Esq. .. .. West End Lane, Hampstead.
Pocock, F. E., M.D. .. .. The Limes, St. Mark's Rd., Notting Hill, W
Pocock, Walter, Esq. .. .. 57, Effra Road, S.W.
Pollock, James E., M.D. .. 52, Upper Brook Street, W.
Pollock, Robert J., Esq. .. Oak Lodge, Wimbledon Park, S.W
Poore, G. V., M.D. .. .. 30, Wimpole Street, W.
Pope, Edward, Esq. .. .. Tring
Pope, H. Campbell, M.D. 280, Goldhawk Road, Shepherd's Bush, W
Port, Heinrich, M.D. .. .. Finsbury Square, E.C.
Potter, George W., M.D. Highbury New Park N.
Powdrell, John, Esq. .. Euston Road, N.W.

Powell, R. Douglas, M.D. .. 62, Wimpole Street, Cavendish Square, W.
Power, Henry, M.B. .. .. 37A, Gt. Cumberland Place, Hyde Park, W.
Preston, W. J., M.D. .. .. 4, Abercorn Place, N.W.
Price, J. A. P., M.B. .. .. Reading
Pridham, Charles W., Esq. .. 10, Cromwell Crescent, S.W.
Priestley, W. O., M.D. .. 17, Hertford Street, Mayfair, W.
Pritchard, Urban, M.D. .. 3, George Street, Hanover Square, W.
Puddicombe, W. N., Esq. .. St. Alban's
Purchas, T. B., M.D. .. .. 9, Harewood Square, N.W.
Purves, W. Laidlaw, M.D. .. 20, Stratford Place, Oxford Street, W.
Purvis, J. P., Esq. .. .. Royal Hill, Greenwich, S.E.
Pye, Walter, Esq. .. .. 4, Sackville Street, W.
Pye-Smith, Philip H., M.D. .. 54, Harley Street, W.
Quain, Richard, M.D., F.R.S. .. 67, Harley Street, W.
Ralfe, C. H., M.D. .. .. 26, Queen Anne Street, W.
Randall, John, M.D. .. .. 204, Adelaide Road, N.W.
Rasch, Adolphus, M.D. .. 7, South Street, Finsbury, E.C.
Rayner, Henry, M.D. .. .. Asylum, Hanwell, W.
Rayner, J. A., Esq. .. .. 346, Kingsland Crescent, E.
Read, Thomas L., Esq. .. 11, Petersham Terrace, Kensington, S.W.
Rees, George Owen, M.D., F.R.S. 26, Albemarle Street, W.
Reilly, F. J., Esq. .. .. 107, Globe Road, E.
Reynolds, J. Russell, M.D., F.R.S. 38, Grosvenor Street, W.
Rice George, M.B. .. .. Sutton
Richardson, Benj. W., M.D., F.R.S. 25, Manchester Square, W.
Richardson, Timothy, Esq. .. 394, Commercial Road, E.
Rickards, Walter, M.D. .. 8, Cavendish Place, W.
Rigden Walter, Esq. .. .. 16, Thurloe Place S.W.
Ring, E. Cuthbert, Esq. .. 55, New Bond Street, W.
Ring, John, M.D. .. .. 12, Cambridge Gardens, Kilburn, N.W.
Ringer, Sydney, M.D. .. .. 15, Cavendish Place, W.
Rivington, Walter, Esq. .. 22, Finsbury Square, E.C.
Roberts, Arthur, Esq. .. .. 30, Kensington Square, W.
Roberts, David W., M.D. .. 56, Manchester Street, W.
Roberts, Frederick F., M.D. .. 102, Harley Street, W.
Roberts, J. Coryton, Esq. .. Avenue House, Peckham Rye, S.E.
Roberts, Henry W., Esq. .. Wickham Terrace, Lewisham High Rd., S.E.
Roberts, John D., Esq. .. .. Uxbridge Road, Ealing
Rogers, Braithwaite, M.D. .. 2, Upper Westbourne Terrace, W.
Rogers, George A., Esq. .. 164, High Street, Shadwell, E.
Rogers, George H., Esq. .. 3, Clifford Street, W.
Rogers, Hildyard, Esq. .. 43, Uxbridge Road, W.
Rogers, Joseph, M.D. .. .. 31, Montague Place, W.C.
Rogers, William R., M.D. .. 86, Berners Street, Oxford Street, W.
Rogers Harrison, C. H., Esq. .. 55, Stockwell Road, S.W.
Rogers Tillstone, H., M.B. .. 11, Englefield Road, N.
Rose, Henry Cooper, M.D. .. Hampstead, N.W.
Routh, Amand, J. McC., M.D. .. 6, Upper Montagu Street, W.
Routh, C. H. F., M.D. .. .. 52, Montagu Square, W.
Royston, Charles, M.D. .. .. 1, St. Stephen's Crescent, Westbourne Pk., W.
Rudyard, Alfred T., M.D. .. Watford
Rugg, B. Alfred, Esq. .. .. 1, Church Hill Villas, Wood Green, N.
Rygate, John J., M.B. .. .. St. Leonards-on-Sea
Ryle, Reginald, J., M.B. .. 14, Doughty Street, W.C.
Salter, J. H., Esq. .. .. Tolleshunt D'Arcy, Essex
Sandwell, Edward, Esq. .. 10, Soho Street, W.
Sangster, C., Esq. .. .. 148, Lambeth Road, S.E.
Sansom, Arthur E., M.D. .. 24, Harley Street, W.
Saul, William, M.D. .. .. 44, Bedford Square, W.C.
Saunders, Charles E., M.D. .. 21, Lower Seymour Street, W.
Saunders, Sir Edwin .. .. 13A, George Street, Hanover Square, W.
Saunders, George, C.B., M.D. .. Christchurch, Hants
Saunders, J. W., Esq. .. .. Bethnal Green Infirmary, E.
Savage, George H., M.D. .. Bethlem Hospital, S.E.
Savory, W. Scovell, M.B., F.R.S. 66, Brook Street, W.
Schmidt, Alfred E., Esq. .. 150, Bethnal Green Road, E.
Schofield, F., M.D. .. .. Camberwell House, Camberwell, S.E.
Scott, John, Esq. .. .. 10, Tavistock Square, W.C.
Seaton, Joseph, M.D. .. .. Sunbury, Middlesex
Sedgwick, Leonard W., M.D. .. 2, Gloucester Terrace, W.
Semon, Felix, M.D. .. .. 39, Wimpole Street, W.
Semple, Robert H., M.D. .. 8, Torrington Square, W.C.
Sequeira, H. L., Esq. .. .. 34, Jewry Street, Aldgate, E.C.
Sequeira, James S., Esq. .. Crescent House, Cassland Road, E.
Seton, David E., M.D. .. .. 12, Thurloe Place, S.W.
Sewell, Charles F., M.D. .. 21, Cavendish Square, W.
Shadwell, S. Clair, B., Esq. .. Lyndhurst, Walthamstow
Shaw, G., Esq. .. .. Enfield Highway
Sheldon, J., M.D. .. .. 123, Cornwall Road, Notting Hill, W.
Shelly, C. E., M.B. .. .. Hertford
Shepherd, W. G., M.D. .. 30, Myddelton Square, E.C.
Shepherd, W., Esq. .. .. 67, Eaton Rise, Ealing, W.
Sheppee, Benjamin, Esq. .. 2, Frederick Place, Old Jewry, E.C.
Shillitoe, Richard, Jun., Esq. .. Hitchin
Sibley, C. W., Esq. .. .. 7, Harley Street, W.
Sieveking, Sir Edward H., M.D. 17, Manchester Square, W.
Silcock, A. O., M.D. .. .. 5, Graham Road, Dalston, E.
Simmons, Edward, M.B. .. 6, Mandeville Place, W.
Simpson, G., Esq. .. .. 763, Old Kent Road, S.E.
Sinclair, George, M.D. .. 3, Clifford Street, New Bond Street, W.
Slimon, William, M.B. .. .. 1, York Place, Bow Road, E.
Sloggett, W. H., Esq. .. .. 73, Cambridge Gardens, W.
Smith, W. Anderson, Esq. .. 26, Caversham Road, N.W.
Smith, A. M., Esq. .. .. 89, Seymour Street, Hyde Park, W.
Smith, Edward, ... Amhurst Park, Stamford Hill, N.
Smith, Sir W. H. Le Fleming, M.D. 1, Cornbrown Road, Kensington, W.
Smith, Edward, M.D. .. .. Christ Hospital, E.C.
Smith, Frank, Esq. .. .. 24, Queen Anne Street, W.
Smith, Eustace, M.D. .. .. 5, George Street, Hanover Square, W.
Smith, Francis, Esq. .. .. The Asylum, Upper Clapton, E.
Smith, George, M.D. .. .. 63, Harley Street, W.
Smith, Henry Lee, M.D. .. 29, Charles Street, Berkeley Square, W.

Smith, Herbert A., Esq. .. 9, Grange Park Terrace, Ealing
Smith, Heywood, M.D. .. .. 15, Harley Street, W.
Smith, John, M.B. .. .. 29, Cassland Road, Hackney, E.
Smith, Protheroe, M.D. .. 42, Park Street, Grosvenor Square, W.
Smith, Richard T., M.D. .. 53, Haverstock Hill, N.W.
Smith, Roland D., Esq. .. 1, Clapton Square, E.
Smith, Walter, M.D. .. .. 2, Stanhope Terrace, Regent's Park, N.W.
Smith, W. Johnson, Esq. .. Seamen's Hospital, Greenwich
Smyth, Spencer T., M.D. .. Tyson Road, Forest Hill, S.E.
Snell, Edward A., M.B. .. 70, City Road, E.C.
Soutter, Mansfield C., Esq. .. 8, Cumberland Terrace, Finsbury Park, N.
Spooner, F. H., M.D. .. .. Howard House, Lower Clapton, E.
Squire, William, M.D. .. .. 6, Orchard Street, W.
Startin, James, Esq. .. .. 17, Sackville Street, W.
Steele, Russell, Esq. .. .. Hemel Hempstead
Steele, W. C., Esq. .. .. 1, Florence Terrace, Ealing Common, W.
Stephens, L. E. W., Esq. .. 24, Kelmore Grove, E. Dulwich, S.E.
Stevenson, T., M.D. .. .. 45, Gresham Road, S.W.
Stewart, A., Esq. .. .. 112, Cheapside, E.C.
Stewart, H. C., Esq. .. .. 22, North Bank, N.W.
Stewart, William, M.D. .. 37, Southwick Street, Hyde Park, W.
Stewart, William E., Esq. .. 16, Harley Street, W.
Stilwell, Henry M.D. .. .. Hillingdon, Uxbridge
Stiven, E. W. F., M.D. .. Harrow
Stocker, Alonzo H., M.D. .. Peckham House, Peckham, S.E.
Stoker, George, Esq. .. .. 25, Old Burlington Street, W.
Stokes, Henry F., Esq. .. .. 2, Highbury Crescent, N.
Stowers, James H., M.D. .. 23, Finsbury Circus, E.C.
Stowers, Nowell, Esq. .. .. 125, Kennington Park Road, S.E.
Strange, W. Heath, M.D. .. 2, Avenue, Belsize Park, N.W.
Strugnell, F. W., Esq. .. .. 45, Highate Road, N.W.
Sutherland, Henry, M.D. .. 6, Richmond Terrace, Whitehall, S.W.
Sutro, Sigismund, M.D. .. 37A, Finsbury Square, E.C. (dead)
Sweeting, R. D. R., Esq. .. Fever Hospital, Fulham, S.W.
Swindell, Joseph J., Esq. .. Finchley
Sykes, J. F. J., M.B. .. .. 171, Camden Road, N.W.
Sylvester, Henry, T., M.D. .. 7, Bessborough Gardens, Pimlico, S.W.
Symonds, C. J., Esq. .. .. 20, Weymouth Street, W.
Tait, Edward S., Esq. .. .. 54, Highbury Park, N.
Tanner, John, M.D. .. .. 13, Queen Anne Street, W.
Tapson, J. A., Esq. .. .. 83, High Street, Clapham, S.W.
Tatham, John, M.D. .. .. 12, George Street, Hanover Square, W.
Tatham, Robert G., Esq. .. 69, East India Road, E.
Tay, Waren, Esq. .. .. 4, Finsbury Square, E.C.
Taylor, Charles, M.D. .. .. 21, Cranfield Gardens, Finchley Road, N.W.
Taylor, F. M.D. .. .. 11, St. Thomas's Street, S.E.
Taylor, Thomas, Esq. .. .. Bocking, Braintree
Tegart, Edward, Esq. .. .. 49, Jermyn Street, S.W.
Tenison, E. T. Ryan, M.D., R.N. 215, Uxbridge Road, W.
Thin, George, M.D. .. .. 22, Queen Anne Street, W.
Thom, William, Esq., Surg-Genl. .. Paris
Thomas, G. Danford P., M.D. .. Park Lodge, Paddington, W.
Thompson, Alfred B., Esq. .. 18, Serjeant's Inn, E.C.
Thompson, E. Symes, M.D. .. 33, Cavendish Square, W.
Thompson, Sir Henry .. .. 35, Wimpole Street, W.
Thomson, G. J. Crawford, Esq. .. 111, Sinclair Road, W.
Thomson, W. Sinclair, M.D. .. 40, Ladbroke Grove, W.
Thorne, R. Thorne, M.B. .. 45, Inverness Terrace, W.
Thornton, J. K., M.B. .. .. 22, Portman Street, W.
Thorowgood, J. C., M.D. .. 61, Welbeck Street, W.
Thorp, Henry J., Esq. .. .. 29, Southwark Bridge Road, S.E.
Thudichum, J. L. W., M.D. .. 11, Pembroke Gardens, W.
Thyne, Thomas, M.D. .. .. High Barnet
Tibbits, Herbert, M.D. .. 68, Wimpole Street, W.
Tidy, C. M., M.B. .. .. 3, Mandeville Place, Manchester Square, W.
Tilley, Samuel, Esq. .. .. The Cedars, Cranford
Tilt, Edward J., M.D. .. .. 27, Seymour Street, W.
Timms, Godwin W., M.D. .. 9, Wimpole Street, W.
Tirard, Nestor I. C., M.D. .. 28, Weymouth Street, W.
Tomes, Charles S., Esq., F.R.S. .. 37, Cavendish Square, W.
Tomes, Sir John, F.R.S. .. Caterham Valley
Tonge, Morris, M.D. .. .. Harrow
Towne, Alex., Esq. .. .. 99, Rectory Road, Stoke Newington, N.
Townsend, T. S., Esq. .. .. 65, Queen's Gate, Kensington, S.W.
Trapp, J. E., Esq. .. .. 57, Darnley Road, E.
Travers, William, M.D. .. 2, Phillimore Gardens, W.
Treves, F. Esq. .. .. 6, Wimpole Street, W.
Tripe, John W., M.D. .. 232, Richmond Road, Hackney, E.
Truman, Edwin T., Esq. .. .. 23, Old Burlington Street, W.
Tucker, Anthony C., Esq. .. 50, Richmond Road, Barnsbury, N.
Tuke, D. Hack, M.D. .. .. Lyndon Lodge, Hanwell, W.
Turner, F. C., M.D. .. .. 15, Finsbury Square, E.C.
Turner, J. Smith, Esq. .. .. 12, George Street, Hanover Square, W.
Turner, Walter P., Esq. .. Leytonstone
Tweed, J. J., Esq. .. .. 14, Upper Brook Street, W.
Vasey, Charles, Esq. .. .. 112, Cambridge Gardens, W.
Veale, Henry R. L., Esq. .. 26, Claverton Street, S.W.
Venning, Edgcombe, Esq. .. 30, Cadogan Place, S.W.
Verdon, H. W., Esq. .. .. 410, Brixton Road, S.W.
Verdon, Michael J., Esq. .. 37, Craven Street, W.C.
Verley, Reginald L., Esq. .. 288, Devonshire Street, W.
Vinen, E. H., M.D. .. .. 17, Chepstow Villas, Bayswater, W.
Waggett, John, M.D. .. .. Union Club, Trafalgar Square, W.
Waite, Charles D., M.B. .. 3, Old Burlington Street, W.
Wakefield, Thomas, M.B. .. 37, Nottingham Place, W.
Walford, Walter G., M.D. .. 49, Finchley New Road, N.W.
Walker, A. D., M.D. .. .. 56, Ladbroke Grove Road, W.
Walker, Chas. R., M.D. .. Leytonstone
Walker, James P., M.D., .. 35, Bedford Square, W.C.
Walker, John R., Esq. .. 28, Portsdown Road, W.
Walker, Joseph, M.D. .. .. 20, Grosvenor Street, W.
Wallace, Frederick, Esq. .. 76, Clarence Road, Upper Clapton, E.

Wallace, Richard U., M.B.	Craven Park, Stamford Hill
Walsham, W. J., M.B.	27, Weymouth Street, W.
Walshe, Walter H., M.D.	41, Hyde Park Square, W.
Walters, F. R., M.D.	29, Finsbury Circus, E.C.
Walton, Haynes, Esq.	1, Brook Street, W.
Wann, Reuben T., Esq.	33, Highgate Road, N.W.
Ward, A. O., Esq.	Northumberland Park, Tottenham, N.
Warner, Percy, Esq.	Woodford, Essex
Watkins, Charles S., Esq.	16, King William Street, W.C.
Watkins, Edwin T., M.D.	61, Guildford Street, W.C.
Watson, John, M.D.	23, Woburn Square, W.C.
Watson, W. Spencer, Esq.	7, Henrietta Street, Cavendish Square, W.
Watson, W. Tyndale, M.D.	Tottenham
Way, John, M.D.	4, Eaton Square, S.W.
Webb, Frederick E., Esq.	110, Maida Vale, W.
Weber, Hermann, M.D.	10, Grosvenor Street, W.
Webster, F. R., Esq.	St. Alban's
Welch, Charles, Esq.	377, Hackney Road, E.
Welch, Charles H., Esq.	4, Upper Rock Gardens, Brighton
Welch, Samuel, Esq.	Lauriston Villa, Victoria Park Road, E.
Weller George, Esq.	The Mall, Wanstead, E.
Wells S. S. D., Esq.	6, Leigham Terrace, Plymouth
West, Samuel, M.D.	15, Wimpole Street, W.
Westcott, W. W., M.B.	4, Torriano Avenue, Camden Town, N.W.
Wharry, H. G. O., Esq.	Brooke House, Upper Clapton, E.
Wheeler, Daniel, Esq.	Chelmsford
Wheeler, Thomas, Esq.	Bexley, Kent
Whistler, W. McNeill, M.D.	28, Wimpole Street, W.
White, T. Charters, Esq.	32, Belgrave Road, S.W.
White, W. Hale, M.D.	65, Harley Street, W.
White, W. Henry, M.D.	43, Weymouth Street, W.
Whitmarsh, John L., Esq.	7, Fulham Road, S.W.
Whitmore, W. T., Esq.	7, Arlington Street, S.W.
Wigmore, W., Esq.	130, Inverness Terrace, W.
Wilbe, Richard H., M.D.	21, Finchley Road, N.W.
Willcocks, Frederick, M.D.	14, Mandeville Place, W.
Willett, Edmund, M.D.	6, Anson Road, Tufnell Park, N.
Willett, E. Sparshall, M.D.	Wyke House, Isleworth, W.
Williams, C. Theodore, M.D.	47, Upper Brook Street, W.
Williams, Dawson, M.D.	4, Oxford and Cambridge Mansions, N.W.
Williams, H. W., M.D.	168, Fulham Road, S.W.
Williams, John, M.D.	28, Harley Street, W.
Williams, W. Rhys, M.D.	19, Whitehall Place, S.W.
Willis, A. K., Esq.	West End Lane, West Hampstead, N.W
Willis, Julian, Esq	82, Sutherland Gardens, W.
Willoughby, E. F., M.B.	Bratton Lodge, Green Lanes, N
Wilson, Samuel, Esq.	155, Mare Street, Hackney, E.
Winslow, H. F., M.D.	14, York Place, W.
Wise, Alfred T. T., M.D.	Kursaal de la Maloja, Switzerland
Wise, Charles H., M.D.	Walthamstow
Woakes, Edward, M.D.	78, Harley Street, W.
Wood, Edward, Esq.	Glebe Lodge, Windmill Hill, Enfield
Wood, John, Esq., F.R.S.	61, Wimpole Street, W.
Wood, T. Outterson, M.D,	15, Princes Street, Hanover Square, W
Wood, William, M.D.	15, Princes Street, Hanover Square, W
Woodhouse, R. H., Esq.	1, Hanover Square, W.
Woods, J. F., Esq.	Hoxton House Asylum, Hoxton, N.
Worley, W. C., Esq.	103, Green Lanes, N.
Wright, Francis J., M.D.	Northumberland House, Stoke Newington, N.
Wylie, A., M.D.	507, Clapham Road, S.W.
Wyman, W.S., M.D.	Putney
Yarrow, G.E., M.D.	87, Old Street, E.C.
Yeo, I. B., M.D.,	44, Hertford Street, Mayfair, W

MEMBERS UNATTACHED. (847)

Achard, A. L., Esq.	77, Welbeck Street, W.
Ackery, John, Esq.	24, Queen Anne Street, W.
Acland, T. D., M.D.	7, Brook Street, W.
Adams, G. N., M.D.	120, Golborn Road, North Kensington, W.
Airy, H., M.D.	Local Government Board, Whitehall, S.W.
Allan, D., M.D.	160, Ladbroke Grove Road, W.
Allan, Francis J., M.D.	1, Dock Street, E.
Allchin, William H., M.B.	5, Chandos Street, Cavendish Square, W.
Allen, J. W., Esq.	60, Alexandra Road, N.W.
Allen, T., Esq.	Mill Hill Park, W.
Allt, N. W., Esq.	424, Clapham Rise, S.W.
Ambrose, R., Esq.	Mount Place, Whitechapel Road, E.
Anderson, H. B., M.B.	78, East India Road, E.
Anderson, J., M.D., C.I.E.	15, Gloucester Place, W.
Anderson, M. J. B., Esq.	Grayshot Road, Lavender Hill, S.W
Andrew, W. W., M.B.	Hendon, N.W.
Andrews, C., M.D.	62, Hammersmith Road, W.
Andrews, Henry C., M.D.	11, Addison Terrace, W.
Andrews, James, M.D.	Everleigh, Hampstead, N.W.
Anthonisz, P.D., M.D.	12, Tavistock Square, W.C.
Archer, E. L., M.B.	103, Earl's Court Road, W.
Armitage, J., M.B.	St. Bartholomew's Hospital, E.C.
Armstrong, R. S., Esq.	12, Chippenham Road, W.
Arnold, J., Esq.	48, Upper Gloucester Place, N.W.
Arnott, S., Esq.	213, Hill Street, Walworth, S.E.
Arthur, W., Esq.	92, Oakley Street, S.W.
Ashton, J. T., Esq.	12, St. John's Place, Notting Hill, W
Atkinson, J. M., M.B.	Infirmary, Marloes Road, S.W.
Atking, A. H. W., L.	94, Great Portland Street, W.
Bailey, R. G., Esq.	Rothbury Villas, Finsbury Park, N.
Baker, J. B., Esq.	27, Bassett Road, North Kensington, W.
Baker, J. P., Esq.	6, York Place, Portman Square, W.
Baker, T., Esq.	St. George's Union, Fulham Road, W.
Baker, W. R., Esq.	Quex Road, Kilburn, N.W
Balfe, J., Esq.	Hampden Club, N.W.
Ball, J. T., M.D.	29, Belgrave Road, S.W.
Ballance, C. A., M.B.	56, Harley Street, W.
Bamber, H., Esq.	Fulham Palace Road, W.
Barbour, J., M.D.	116, Newington Causeway, S.E.
Barker, A. E. J., Esq.	87, Harley Street, W.
Barker, J. C., Esq.	252, Mile End Road, E.
Barley, D. H., M.D.	Victoria Dock Dispensary, E.
Barnes, J. J. F., Esq.	Northumberland House, Finsbury Park, N.
Barnett, F. S., Esq.	Matthias Road, N.
Barrett, A. E., Esq.	25, Clarendon Road, W.
Barrett, W. A. H., Esq.	39, Angell Road, Brixton
Barron, H. J., M.B.	The Hawthorns, Church End, Finchley, N.
Barron, J., Esq.	1, Minford Gardens, W.
Barry, C. J., Esq.	2, Fulham Park Road, S.W.
Barry, F. W., Esq.	Local Government Board, Whitehall, S.W.
Bartlett, J. P., Esq.	12, Summer Place, Onslow Square, S.W.
Bartlett, H., M.D.	Sunnyside, Balham High Road, S.W.
Bass, C. W., Esq.	Great Ilford
Bateman, A. G., M.B.	64, Longridge Road, S.W.
Bateman, F. A. N., Esq.	62, Pall Mall, S.W.
Batten, H. A. W., Esq.	East Meon, Petersfield
Battle, W. H., Esq.	St. Thomas' Hospital, S.E.
Bayfield, H. O., Esq.	Lavender Hill, S.W.
Beale, G. B., Esq.	17, Queen Anne's Avenue, South Tottenham
Belcher, J. S., M.D.	125, Marylebone Road, N.W.
Bell, Alfred J., Esq.	1A, Cavendish Road, N.W.
Bell, W. J. Noel, Esq.	316, Clapham Road, W.
Benham, F. L., M.D.	93, Elizabeth Street, S.W.
Benham, R. Fitzroy, Esq.	Baron's Court, S.W.
Benington, R. C., Esq.	90, Sinclair Road, W.
Benoly, N., M.D.	46, Kenninghall Road, Clapton, E.
Bentham, S., Esq.	223, Brixton Road, S.W.
Berdoe, Edward, Esq.	Victoria Park Gate, E.
Berry, G., M.B.	Ophthalmic Hospital, Moorfields, E.C.
Berry, H. T., Esq.	29, Amwell Street, E.C.
Berry, S., Esq.	4, Cavendish Road, S.W.
Bernard, Insp.-Gen. J., R.N.,	37, Warwick Road, S.W.
Berton, Denny, M.B.	46, Canonbury Square, N.
Bhabha, Rev. S. D	St. Catherine's Park
Biden, E. J., Esq.	11, St. Mary's Road, Peckham, S.E.
Bigg, G. K. S., Surg. M.S.	56, Wimpole Street, W.
Birch, S. B., M.D.	61, Harley Street, W.
Bird, G. G., Esq.	22, St. Mary's Terrace, Paddington, W.
Black, J. Watt, M.D.	15, Clarges Street, W.
Blackley, John G., M.B.	2, Gordon Street, Gordon Square, W.C.
Blake, James, M.D.	1, Sussex Gardens, W.
Blake, J. F., Esq.	1, Princes Street, Storey's Gate, S.W.
Bland, A. R. H., M.D.	11, Gloucester Gardens, S.W.
Bodington, G. F., M.D.	Ealing College, Ealing, W.
Bond, J. W., M.D.	42, New Cross Road, S.E.
Boothroyd, J.S., M.D.	271, Brockley Road, S.E.
Bossey, Alfred H., Esq.	118, Stoke Newington Road, N.
Bott, H. S., Esq.	2, Beech Tree Villas, Enfield, N.
Bott, Henry, Esq.	Brentford
Boyd, C., Esq.	108, Denmark Hill, S.E.
Boyd, Stanley, M.B.	27, Gower Street, W.C.
Brabant, T. H., Esq.	35, St. George's Road, S.W.
Bradburn, J. D., Esq.	206, King's Road, S.W. (resigns)
Brackwell, J., Esq.	Sawbridgeworth
Bride, J. G., Esq.	22, Guilford Street, W.C.
Briscoe, J. F., Esq.	10, Sumner Terrace, Onslow Square, S.W
Brooks, J. P., Esq.	Consumption Hospital, Brompton, S.W.
Brown, G. B., Esq.	80, Wimpole Street, W.
Brown, J. B. S., Esq.	7, Irene Road, Fulham, S.W.
Browne, E. S., Esq.	17, Lansdowne Road, W.
Browne, J. W., M.B.	2, Norland Place, Notting Hill, W.
Bruce, R. M., Esq.	Eastern Hospital, Homerton, E.
Bryant, S. W. Esq.	24, Abingdon Villas, S.W.
Bryant, Walter J., Esq.	23A, Sussex Square, W.
Buckell, F. J., M.B.	316, Upper Street, Islington, N.
Bull, W., Esq.	207, New Cross Road, S.E.
Burnett, F. J., Esq.	28, George Street, Hanover Square, W.
Burns, J.N., M.B.	10, Brownswood Park, N.
Burrell, E., M.D.	20, Endsleigh Street, W.C.
Burt, A., Esq.	97, Uxbridge Road, W.
Burton, W. E., Esq.	4, Wimpole Street, W.
Bury, G., Esq.	Whetstone, N.
Bush, R. H., M.D.	6, Gloucester Terrace, W.
Buss, Henry, M.D.	Turnham Green
Button, H. H. W., Esq.	21, Rotherhithe New Road, S.E.
Butler-Smythe, A. C., Esq.	35, Brook Street, Grosvenor Square, W.
Buxton, D. W., M.D.	University College Hospital, Gower St., W.C.
Cæsar, R. T., Esq.	17, Grummant Road, Peckham, S.E.
Cahill, J., Esq.	26, Albert Gate, Hyde Park, S.W.
Caldwell, R., Esq.	The Library, Westminster Hospital, S.W.
Cameron, Charles, M.D., M.P.	80, St. George's Square, S.W.
Cameron, C. H. H., Esq.	Lochiel, Harlesden, N.W.
Cameron, J., M.D.	Guildford House, Hendon
Campbell, Chas. M., M.D.	31, Hereford Square, S.W.
Campbell, W. F., Esq.	88, Junction Road, Holloway, N.W.
Carr, J. W., M.B.	University College Hospital
Carter, C. H., M.D.	45, Great Cumberland Place, W.
Carvell, J. M., Esq.	2, 3, Bow Common Lane, E.
Cassidy, John, M.D.	4, Upper Berkeley Street, Portman Square, W
Chaffey, W.C., M.B.	28, Cedars' Road, Clapham
Chambers, F., Esq.	4, Chester Square, S.W.
Chambers, J. L., Esq.	249, Hackney Road, E.
Champneys, C. T., Esq.	25, Tavistock Street, W.C.
Chapman, C., Esq.	13, Carlton Hill, N.W.
Charnley, W., M.B.	Regent's Park, N.W.
Child, W. L., M.D.	Kensal Green, W.
Chittenden, T. H., Esq.	Whitwell, near Welwyn, Herts

Christie, A. K., M.B. .. .. 12, Colebrooke Row, N.
Christie, J. W. S., Esq. .. Leavesden Asylum, Watford
Clarke, J. A., Esq. .. .. Bushey
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Clemow, A. H., M.B. .. 60, Earls Court Square, S.W.
Coates, G., M.B. . Gloucester Road, S.W.
Cock, W., Esq. .. Queen's Road, Peckham, S.E.
Cockburn, R., Esq., Surg.-Gen. . 42, Leamington Park Villas, W.
Cockey, E. P., Esq. . St. Mary's Hospital, W.
Cocks, Benjamin, Esq. .. .. Buntingford, Herts
Cogswell, C., M.D. .. .. 47, York Terrace, Regent's Park, N.W.
Cocker, O. C., Esq. .. .. 49, Uxbridge Road, W.
Collie, J. W., M.B. .. 68, Leman Street, E.
Collins, W. J., M.D. .. .. Albert Terrace, Regent's Park, N. V.
Collyer, J. R., Esq .. . Oak House, Enfield
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Colquhoun, W. B., Esq. .. 312, Evering Road, Upper Clapton, E.
Comyn, J. S., M.D. .. .. Bayswater, W.
Conellan, A. S., Esq. .. .. Battersea Rise, S.W.
Cook, A. H., Esq. .. Denning Road, Hampstead, N.W.
Cook, P. I., M.D. . Marmora House, Honor Oak, S.E.
Cooke, R. H., Esq. .. . 73, Church Street, Stoke Newington, N.
Coombe, A. T., Esq. . .. 81, Clarendon Road, Notting Hill, W.
Cooney, J. E., Esq. . .. 20, Vereker Road, Baron's Court, S.W.
Cooper, G. F., Esq. .. St. Leonard's, Uxbridge Road, Ealing, W.
Cooper, R. T., M.D. .. .. 7, Stanley Gardens, W.
Corbould, H. F., Esq. .. .. St. John's Hill, New Wandsworth, S.W.
Corlett, J. B., M.D. .. .. 226, South Lambeth Road, S.W.
Cotton, Holland J., M.D. .. 109, Sloane Street, S.W.
Coutts, J. A., M.B. .. .. Welbeck Street, W.
Croft, J. McGrigor, M.D. .. 15 Abbey Road, St. John's Wood, N.W.
Cronk, H. G., Esq. .. ..
Crookshank, H. M., Esq. .. 14, Elgin Road, W.
Cross, J., M.D. .. 7, Stanhope Terrace, N.W.
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Crowdy, F. H., Esq. .. . South Grove, Highgate, N.
Cullimore, D. H., M.D. . 54, Wellbeck Street, W.
Cumberbatch, A. E., M.B. . 17, Queen Anne Street, W.
Dale, G., M.B. . Manor Park, E.
Dallaway, J., M.D. . . Langham Hotel, W.
Dalton, B. N., M.D. .. . Selhurst Road, South Norwood, S.E.
Dalton, Norman, M.D. . 18, Clements Inn, W.C.
Danaher, J. W., Esq. .. Manor House, Plaistow
Davies-Colley, J. N. C., M.B. 36, Harley Street, W.
Davies, T. G. D., Esq. .. . 26, Hatton Garden, E.C.
Davies, William, Esq. . 111, King's Road, Peckham, S.E.
Davis, C. D., Esq. .. 9, Lambeth Road, Brixton Road, S.W.
Davy, Richard, Esq. .. . 33, Welbeck Street, W.
Dawson, Y., M.D. .. 28, Hyde Park Street, W.
Day, J. R., Esq. . 121, Camden Road, N.W.
Day, W. H. H., M.B. .. Grove Vale, East Dulwich
Day, W. W., M.D. . Church Street, Lower Edmonton
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De Lisle, S. E., Esq. .. Three Counties Asylum, Stotfold, Baldock
De Meric, Henry, Esq. .. 25, Duke Street, S.W.
Dewar, John, Esq. .. 132, Sloane Street, S.W.
Dickson, C. C., Esq. . Bowmont House, Willesden Lane, N.W.
Dickson, W. J., M.D. .. .. 4, The Grove, Hackney, E.
Diplock, L. E., Esq. .. .. Bolton Gardens, Chiswick, W.
Dixon, John, M.B. .. 40, Victoria Road, Stroud Green, N.
Dixon, John, M.D. . Jamacia Road, S.E.
Dixon, W. E., Esq. .. 33, Harley Street, W.
Dodson, A. E., Esq. .. Earlsfield, Tooting, S.W.
Don Bavand, E. J., Esq. .. 115, Richmond Road, E.
Dove, J. B. R., M.B. .. Pinner
Dow, H. B., M. D. . 9, Pembridge Square, W.
Donwes, Howard, Esq. .. . North-East. Hospital for Children, Hackney, E.
Doyne, R. W., M.D. .. . 1, Clifton Gardens, Maida Vale, W.
Dresser, A. K., Esq. . Grove End Road, St. John's Road, N.W.
Drew, A. J., Esq. .. . 77, Gloucester Place, Hyde Park, W.
Dring, W. E., Esq. .. . Buckhurst Hill
Duncan, A., M.D. . 29, Wimpole Street, W.
Duncan, G. C., M.D. .. .. 7, Wimpole Street, W.
Duncan, James, M.B. .. .. 8, Henrietta Street, W.C.
Dunn, L. A., M.B. . 26, Trinity Square, S.E.
Dunstan, R., Esq. .. .. 99, Upper Tollington Park, N.
Durno, J., M.D. . 178, Cold Harbour Lane, Camberwell, S.E.
Dutton, T. D., Esq. . . 66, Finsbury Pavement, E.C.
Dwyer, H. H., Esq. .. .. 11, Argyle Road, Kensington, W.
Dyer, S. R. Esq. .. .. 15, Trinity Road, Wandsworth Common, S.W.
Dyte, David, H., Esq. .. 52, Beresford Road, Highbury, N.
Eagle, H. F. C., Esq. . . 217, Bethnal Green Road, E.
Edmunds, W., M.D. .. .. Lambeth Palace Road, S.E.
Edwards, T. E., M.D. .. .. 98, Gloster Crescent, W.
Emerson, P. H., Esq. .. .. Bedford Park, Chiswick
Ensor, E. T., M.D. .. .. 14, Ackland Road, W.
Evans, D. T., Esq. .. . Baldock
Evans, G., M.D. . .. 208, Burrage Road, Plumstead
Evans, H. N., M.B. .. .. 3, Thurlow Road, N.W.
Evans, J. A. M., M.B. . 123, Finborough Road, S.W.
Evans, T., jun., Esq. .. . 3, Trinity Square, E.C.
Evans, N., M.D. .. Cheshunt, Herts.
Evans, T. C., Esq. .. .. 105, Camden Street, W.
Evans, W. T., M.B. .. .. Westbourne Villas, Harrow Road, W.
Eyre, J. J., Esq. .. Vega House, Forest Hill, S.E.
Faraker, J. J., Esq. .. 14, Plough Road, Rotherhithe, S.E.
Farmar, E. Dorset, Esq. 77, Wimpole Street, W.
Farndon, L., M.D. .. .. 61, Harrow Road, W.
Fearnley, William, Esq. . 86, Elgin Road, W.
Fearnside, Dr. H. .. . De Vere Mansions West, De Vere Gardens, W
Fearon, Geo., M.D. .. .. 72, Worship Street, E.C.

Fell, J. W., M.D. .. .. 63, Tollington Park, N.
Fell, Walter, Esq. .. .. 198, Earl's Court Road, S.W.
Fendick, T. R., Esq. .. .. 52, Fore Street, E.C.
Fennings, Allen, M.D. .. .. 72, Ladbroke Grove, W.
Fenton, G., Esq. .. .. 1, Cumberland Street, S.W
Fenwick, Samuel, M.D. .. 29, Harley Street, W.
Ferris, John S., M.B. .. .. High Street, Uxbridge
Fitzgerald, W. A., M.D. .. Eye Hospital, Moorfields, E.C.
Fitzpatrick, T., M.D. .. .. 30, Sussex Gardens, Hyde Park, W.
Flack, James, Esq. .. .. Great Eastern Street, E.C.
Fleming, J., M.D., Surg.-Maj. M.S. Grosvenor Hotel, Victoria Station, S.W.
Fletcher, A. C., Esq. .. .. 12A, Charterhouse Square, E.C.
Forbes, Litton, Esq. .. .. 42, Harley Street, W.
Ford, E. M., Esq. .. .. 95, Peckham Rye, S.E.
Foulds, S., M.D., ... 140, Fulham road, S.W.
Fowler, J. K., M.B. .. .. 35, Clarges Street, W.
Fowler, W., M.A. .. .. 12, Old Burlington Street, W.
Fowler, W. C., M.D. .. .. 131, The Grove, Hammersmith
Fox, R. H., M.D. .. .. 43, Finsbury Circus, E.C.
Frampton, T. H. T., Esq. .. 62, Gloucester Terrace, Hyde Park, W.
Franklin, J. A., Esq. .. .. 7, High Street, Hampstead, N.W.
Friend, H. E., Esq, ... 30, Talbot Road, Westbourne Park, W.
Fuller, H. R., M.B., ... 45, Curzon Street, W.
Fyfe, Andrew, M.D. .. .. 112, Brompton Road, S.W.
Gabe, J. R., Esq. .. .. 16, Mecklenburg Square, W.C.
Gairdner, M. W., M.B. .. 39, Dover Street, W.
Galloway, A. W., Esq. .. 79, New North Road, N.
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Gardner, W. H., Esq. .. .. Hanover Square Club, W.
Garrett, J., Esq. .. .. Aondon Hospital, E.
Garrod, A. B., M.D., F.R.S. . 10, Harley Street, W.
Gaskoin, G., Esq. .. .. 7 Westbourne, Park, W.
Gauld, W., M.D. .. .. 101, Balfour Road, Highbury, N.
Gayton, W., M.D. .. .. Small Pox Hospital, Homerton, E
Gee, S., M.D. .. .. 54, Wimpole Street, W.
Gell, H. W., M.B. .. .. 47, Great Ormond Street, W.C.
Gibson, J. H., M.D. .. .. 56, Maida Vale, W.
Gilder, S., Esq. .. .. The Avenue, Mill Hill Park, W
Gill, W., Esq. .. .. 11, Russell Square, W.C.
Gillard, R., Esq. .. .. 86, St. Martin's Lane, W.C.
Girdler, G. T., Esq. .. .. 1, Caxton Street, S.W.
Godfrey, F., Esq. .. .. 11, Compton Terrace, N.
Godrich, F. Esq. .. .. 11. Victoria Grove, Fulham Road, S.W
Godwin, Ashton, M.D. .. 28, Brempton Crescent, S.W. [by-Bow
Goldie, Robert W., Esq. .. Poplar and Stepney Sick Asylum, Bromley-
Gordon, A. H., Esq. .. .. 21, Fairfax Road, South Hampstead
Gordon, G. A. S., Esq. .. .. Grove Lodge, Balham, S.W.
Gordon, H. A., M.D. .. .. 26, Knightrider Street, E.C.
Gordon, T. E., M.B. .. .. Queen Adelaide Dispensary, Pollard Road, Bethnal Green, E.

Gould, W. R., Esq. .. .. 11, Lamb's Conduit Street, W.C.
Gowing, B. C., Esq. .. . 36, Celville Terrace, Bayswater
Graham, J., M.D. .. .. 29, Gloucester Road, N.W.
Grant, L., M.D. .. . 9, Western Villas, New Southgate, N.
Granville, J. Mortimer, M.D. .. 14, Hanover Square, W.
Gray, J. A., Esq. .. .. St. Mary's Infirmary, Hornsey Rise, N.
Gray, John H., M.B. .. .. 8, Clapham Common Gardens, S.W.
Green, A. W., Esq. .. .. 7, Serjeant's Inn, E.C.
Greenhalgh, Robert, M.D. .. 35, Cavendish Square, W.
Greenish, R. W., Esq. .. .. 20, New Street, Dorset Square, N.W.
Griffin, T., Esq. .. .. 26, Drury Lane, W.C.
Griffith, G. de Gorrequer, Esq. .. 34, St. George's Square, S.W.
Griffiths, H. T., M.D. .. .. 57. Brook Street, W.
Gripper, W., M.B. .. .. 6, Sumner Place, Onslow Square, S.W.
Grosvenor, W., Esq. .. .. 10, Notting Hill Terrace, W.
Gubb, A. S., Esq. .. .. 117, The Grove, Hammersmith, W
Hale, C. D. B., Esq. .. .. 8, Sussex Gardens, W.
Hall, Ed. T., Esq. .. .. Blacklands House, Chelsea, S.W.
Hall, John, M.D. .. .. Monkridge, Crouch End Hill, N.
Hall, W. W., M.B. .. .. Kilburn Dispensary, Kilburn, N.W.
Hamill, R. J., M.D. .. .. 272, Vauxhall Bridge Road, S.W.
Hamilton, J., M.D. .. .. 60, Sydney Street, S.W.
Hamlin, W. T., Esq. .. .. 121, Tredegar Road, Bow, E.
Handfield, Jones C.M., M.B. .. 24, Montagu Square, W.
Harding, J. A., Esq. .. .. Osman House, Fortis Green, N.
Hardy, H. Nelson, Esq. .. The Grove, Dulwich, S.E.
Hare, Lancelot, Esq. .. .. 23, Prince's Street, Cavendish Square, W.
Harley, George, M.D., F.R.S. .. 25, Harley Street, W.
Harley, John, M.D. .. .. 39, Brook Street, W.
Harper, J., M.D. .. .. 41, Neville Street, Onslow Gardens, S.W.
Parrer, C., M.D. .. .. 34, City Road, E.C.
Harris, H., Esq. .. .. 6, Northampton Terrace, Harrow-on-the-Hill
Harrison, R. C., Esq .. .. Cunningham Road, Shepherd's Bush, W.
Harrison, T., M. D. .. .. 76, Chadwood Street, S.W.
Hartridge, G., Esq. .. .. 47, Kensington Park Gardens, W.
Hartnett, J. J., M.D. .. .. 5, Tavistock Square, W.C.
Haviland, H. J., M.D. .. .. Conservative Club, St. James's Street, S.W
Hartzhorne, B. F., Esq. .. 1, Victoria Villas, Chiswick, W.
Haward, J. W., Esq. .. .. 16, Savile Row, W.
Haycock, H. E., Esq. .. .. Sudbury, Harrow
Hazel, W. F., Esq. .. .. 71, Oakley Square, N.W.
Heale, A. Lawson, Esq. .. 12, Upper Montague Street, W.C.
Heath, W. L., M.B. .. .. 85, Gloucester Road, South Kensington
Hebert, P. Z., M.D. .. .. 35, Berners Street, W.
Henderson, A. M., M.D. .. 6, Hamostead Lane, Highgate, N.
Hensley, P. J., M.D. .. .. 4, Henrietta Street, W.
Hentsch, J.P., Esq. .. .. 4, Portland Place, Peckham Road, S.E.
Hern, W., Esq. .. .. 18, Stratford Place, W.
Hernage, Henry J., Esq. .. 1, Little Chapel Street, Westminster, S.W
Herron, J. W., Esq. .. .. 101, Gower Street, W.C.
Herschill, G., M.D. .. .. 37, Moorgate Street, E.C.
Hewett, Sir Prescott G., Bart. .. 1, Chesterfield Street, W

Hewitt, F. W., M.D. .. .. 23, Somerset Street, W.
Hewkley, F., Esq. .. .. Royal India Asylum, Ealing, W.
Heyward, H., Esq. .. .. Lordship Lane, Dulwich, S.E.
Hickens, Frank, W., Esq. .. London Hospital, E.
Hickman, W., M.D. .. .. 5, Elm Road, Mortlake, S.W.
Hicks, F. J., M.B. .. .. Brompton Hospital, S.W.
Hill, J. Higham, M.D. .. .. 34, Montague Place, Bedford Square, W.C.
Hill, J. R., Esq. .. .. 195, Earl's Court Road, S.W.
Hoare, A., Esq. .. .. 37, Fleet Street, E.C.
Hockridge, T. G., M.D. .. .. 27, Tysoe Street, W.C.
Hogan, J. C., M.D., ... 3, Radcliffe Gardens, South Kensington
Hogg, Jabez, Esq. .. .. 1, Bedford Square, W.C.
Hoggan, George, M.B... .. 7, Trevor Terrace, W.
Holland, Edmund, M.D .. Titchfield Terrace, N.W.
Holland, J. F. R., M.D. .. 56, Maida Vale, W.
Hollings, E., M.D. .. .. 4, Gordon Square, W.C.
Holman, W., Esq. .. .. 85, Clapham Road, S.W.
Holt, William, Esq., ... 1, Norton Folgate, E.
Holthouse, C., Esq. .. .. 35, Essex Street, Strand, W.C.
Holthouse, E. H., M.D. .. King's College Hospital, W.C.
Holyoake, R., Esq. .. .. 13, Rockmead Road, Victoria Park, E.
Hood, W. P., M.D. .. .. 11, Seymour Street, Portman Square, W.
Horden, J. O., M.D. .. .. 18, Messina Avenue, Kilburn, N.W.
Horsman, G. C., Esq. .. .. 22, King Street, Portman Square, W
Howard, E., Esq. .. .. 1, Devonshire Road, S.W.
Howard, R. J. B., Esq .. London Hospital, E.
Howse, A., Esq. .. .. 4, Windsor Terrace, Barking Road, E.
Howse, J. E., M.B. .. .. Victoria Park Hospital, E.
Hughes, E. A., Esq. .. .. 91, Onslow Gardens, S.W.
Hume, F. N., Esq. .. Addison Square, Kensington, W.
Humphreys, F. R., Esq. .. 73, Queen's Crescent, Haverstock Hill, N.W.
Hunt, Alfred, Esq., ... Bridge Road, Hammersmith, W.
Hurford, C. H., M.D. .. .. Uxbridge
Hutchinson, Francis, Esq. .. 29, Woburn Place, W.C.
Hutchinson, T. Cayley, Esq. .. 40, Elgin Crescent, W.
Hutton, E. R. Esq. .. .. West Green Road, Tottenham
Hutton, J. S., Esq. .. .. St. Thomas' Hospital, S.E.
Ilott, J. J. Esq. .. .. Infirmary, Whitechapel, E.
Instone, S. V., Esq. .. .. Bedford Park, Chiswick
Isaac, G. W., M.B. .. .. c.o. Dr. C. Peard, Brixton Rise, S.W.
Jackson, P. J., Esq. .. .. 6, Great Dover Street, S.E.
Jackson, Robt. A., Esq. .. 13, Ladbroke Grove, Notting Hill, W
Jacob, E. L., Esq. .. .. 9, Altenburg Gardens, Clapham Common, S W
Jacobson, W. H. A., M. B. .. 41, Finsbury Square E.C.
Jakins, P. S., Esq. .. .. Osnaburgh Street, N.W.
James, D. P., Esq. .. .. 34, Osborne Tearace, S.W.
Jaynes, V. A., Esq. .. .. 157, Jamaica Road, S.E.
Jeffries, W. C., Esq. .. .. 21, Victoria Road, S.W.
Jewell, C. C., M.B. .. .. 1, Upper Grafton Street, Fitzroy Square, W.
Johnson, J., M.D., ... 7, Hanover Square, W.
Johnson, J. B., Esq. .. .. 99, Rectory Road, N.
Johnson, W. B., Esq. .. .. 2, York Road, S.E.
Jollye, A. D., Esq. .. .. 73, Waterloo Bridge Road, W
Jones, G. T., M.D. .. .. 20, St. Augustine Villas, Archway Road, N.
Jones, H. Macnaughton, M.D .. Harley Street, W.
Jones, John, Esq. .. .. 60, King Street, W.
Jones, J. Thoresby, Esq. .. 34, Maryland Road, W.
Jones, Robert, Esq. .. .. Colney Hatch Lunatic Asylum, N.
Jones, R. Mansell, Esq. .. Woodstock House, Balham Hill, S.W.
Jones, T., M.D. .. .. Albert Square, Clapham Road, S.W.
Jones, T. W. C., Esq. .. .. 6, Westbourne Street, W.
Jones, Walter, M.D. .. .. 45, Finsbury Square, E.C.
Jones, W., Esq. .. .. Sycamore House, Edmonton
Jones, W. H. F., M.D... .. 28, Duke Street, Manchester Square, W.
Jordan, G. P., M.B. .. .. 156, York Road, S.E.
Keser, J. S., M.D. .. .. 60, Queen Anne Street, W.
Keen, W., M.D. .. .. 209, King's Road, Chelsea, S.W.
Keene, F., Esq. .. .. 11, Amersham Road, New Cross, S.E.
Keith, G. S., M.D. .. .. 54, Brompton Crescent, S.W.
Kelly, J. H., M.D. .. .. 82, The Grove, Hammersmith, W.
Kempster, W. H., M.B. .. Lavender Hill, Clapham Junction, S.W.
Kendall, T. M., Esq. .. .. St. Bartholomew's Hospital, E.C.
Kenny, A. S., Esq. .. .. 41, Guildford Street, W.C.
Kent, Thomas J., Esq... .. 89, Piccadilly, W.
Kershaw, J. E., M.B. .. .. 85, Palace Road, Lambeth, S.E.
King, Joseph, Esq. .. .. Greenhill, Hampstead, N.W.
King, W. M., Esq. .. .. Bedford Park, Chiswick
Kisby, J. H., Esq. .. .. 59, Foulden Road, Stoke Newington
Kite, J. A., Esq. .. .. Welwyn
Klein, E. L., M.D. .. .. 94, Philbeach Gardens, Earls Court, S.W.
Knaggs, H. V., Esq. .. .. 122, Camden Road, N.W.
Knight, F., Esq. .. .. University College Hospital, Gower St., W.C.
Knox, J., M.D. .. .. Bethnal Green Infirmary, E.
Lace, W. F., Esq. .. .. Hemel Hempstead
Ladell, W. J. S., Esq. .. .. 112, St. John's Road, Hoxton
Lake, Charles, Esq. .. .. 56, Guildford Street, Russell Square, W.C.
Lálcácá, C., M.D. .. .. 3, Whitehall Gardens, S.W.
Lammiman, R. W., Esq. .. Brockley, S E.
Lamprey, R. O., Esq. .. .. East Hill, Wandsworth
Lane, J. E., Esq. .. .. 42, Norfolk Square, W.
Lang, W., Esq. .. .. 26, Upper Wimpole Street, W.
Langford, P. P., M.D .. .. Park Lodge, East Finchley
Lavin, M. Drury, Esq. .. Iver Heath, Uxbridge
Law, W. T., M.D. .. .. 6, Brechin Place, South Kensington, S.W.
Lawrence, H. Cripps, Esq. .. 49, Oxford Terrace, W.
Lancaster, H. H., Esq.. .. 1, Elm Park Gardens, South Kensington, S.W.
Layton, H. A., Esq. .. .. Highbury Grove, N.
Leach, C. S., Esq. .. .. 59, Leonard Road, Forest Gate, E.
Leadam, W. Ward, M.D., .. 80, Gloucester Terrace, Hyde Park, W.
Leeson, Oliver J., Esq. .. 27, Longridge Road, South Kensington, S.W.
Leftwich, R. W., M.D... .. 167, Brixton Road, S.E.
Lemon, H. M., M.D. .. .. 12, Wharton Road, West Kensington Park, W.

Leslie, Wm., M.B. .. .. 54, Manchester Road, Cubitt Town
Lewers, A. H. N., M.D. .. 60, Wimpole Street, W.
Lewis, Louis, M.D. .. .. 73, Albert Street, Regent's Park, N.W.
Lewis, Lewis, Esq. .. .. 112, Brixton Rise, S.W.
Lilburn, J., M.D. .. .. 6, Brunswick Place, N.W.
Lindeman, S. H., Esq... .. Hammersmith
Lingard, A., Esq. .. .. 2, Palace Road, Albert Embankment, S.E.
Lister, Sir Joseph, Bart., M.B., LL.D., F.R.S. .. .. 12, Park Crescent, Portland Place, W.
Little, C. E., Esq. .. .. Shenley, Barnet
Lloyd, P. A., Esq. .. .. St. Mary's Hospital, W.
Lloyd, Samuel, M.D. .. .. 4, High Street, Bloomsbury, W.C.
Longhurst, A. E. T., M.D. .. 20, Wilton Street, W.
Lord, Richard, M.D. .. .. St. Ann's Villas, Notting Hill, W
Lough, J. J., M.B. .. .. 389, City Road, E.C.
Lovett, Samuel R., Esq. .. 13, Great Russell Street, W.C.
Low, R. M. P., M.B. .. .. 2, Nevern Road, S.W.
Lowe, J., M.D. .. .. 42, Green Street, W.
Lucy, R. H., MB.. .. .. London Hospital, E.
Lund, G., M.D. .. .. De Crespigny Park, S.E.
Lyle, T., M.D. .. .. 19, Westbourne Square, W.
Lyster, C. R. C., Esq. .. .. Bolingbroke Hospital, Wandsworth
Macauley, W. R., Esq. .. 55, Oxford Terrace, W.
McConaghy, J. F., Esq. .. The Poplars, Turnham Green
MacDonald, G. M., M.D. .. 17, Upper Wimpole Street, W.
McDonnell, Joseph, Esq. .. 22, Trafalgar Road, S.E.
McDonnell, M. A., M.D. .. 14, St. George's Terrace, Gloster Road, S.W.
Macfarlane, W., M.D. .. .. 15, Phillimore Place, W.
McHardy, M. M., Esq. .. 5, Savile Row, W.
McGregor, D., Esq. .. .. 424, Clapham Road, S.W.
Mackintosh, Donald, M.D. .. 110, Lancaster Road, Belsize Park, W.
Mackintosh, Hugh, M.D. .. 84, Brompton Road, S.W
Mackintosh, F. J., M.B. .. Etherley Road, Tottenham, N.
MacLachlan, A., M.D. .. .. 226, Old Kent Road, S.E.
Macnamara, G. H., Esq... .. 6, Warwick Road, Ealing
MacRae, Alexander C., M.D. .. 119, Westbourne Terrace, W.
Macready, J., Esq. .. .. 125, Harley Street, W.
McSwinney, G. H., M.D. .. Brook Green, W.
Makeham, H. W. P., Esq. .. 330, New Cross Road, S.E
Makins, G. H., Esq. .. .. 2, Queen Street, Mayfair, W.
Malcolm, J. D., M.B. .. .. 24, Bryanstone Street, W.
Mancor, A. F., M.B. .. .. 338, Walworth Road S.E.
Marcet, William, M.D.. .. 39, Grosvenor Street W.
Marriott, F. T., Esq. .. .. 46, Banner Street, E.C.
Marsh, E. A., Esq. .. .. 33, Bedford Road, Clapham, S.W
Marsh, T. C., Esq. .. .. 56, Fitzroy Street, W.
Marshall, B., Esq. .. .. 9, Bayley Street, W.C.
Marshall, F., Esq. .. .. 20, Frith Street, Soho
Marshall, J. B., Esq., .. Nightingale Road, Clapton, E.
Matheson, Farquhar, M.B. .. 11, Soho Square, W.
Maude, F., M.B. .. .. 2, Coppermill Lane, Walthamstow
Maudsley, Henry, M.D. .. 9, Hanover Square, W.
Maughan, J. Esq. .. .. 2, Devonshire Street, Portland Place, W.
Maxwell, James L., M.D. .. 104, Petherton Road, Highbury, N.
May, Harry, M.D. .. .. Ware
May, James, Esq. .. .. St. Anne's Road, Stamford Hill, N.
Maybury, H. M., M.D. .. 303, Upper Street, Islington, N.
McClure, T., M.D. .. .. Grove Hill, Woodford, Essex
McKelvie, R., M.D. .. .. 90, Finchley Road, N.W.
Meeham, W., Esq. .. .. 9, Taunton Place, N.W.
Megginson, T. C., M.B. .. Belgrave House, Upper Norwood, S.E.
Menzies, J. H., Esq. .. .. 11, Gwendwr Road, West Kensington, W.
Merces, J., Esq. .. .. 53, Drayton Park, N.
Mercier, C. A., Esq. .. .. The Flower House, Southend, Catford
Merryweather, J. W. C., Esq. .. 13, Marlboro Road. Gunnersbury
Meyers, H. H. Esq. .. .. 46, Woodstock Road, Finsbury Park, N.
Middleton, R. W., M.B. .. Fulham Road, S.W.
Miller, A., M.D. .. .. 5, Grosvenor Street, W.
Miller, J. D., M.B. .. .. 2, Norland Place, Holland Park, W.
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Mills, Samuel, Esq. .. .. 3, Southampton Street, Strand, W.C.
Moir, James, Esq. .. .. 6, Woodstock Road, Finsbury Park, N.
Monte, D. A. D., Esq. .. .. 83, Southampton Row, W.C.
Monti, P., Esq. .. .. 8, Young Street, W.
Moore, A., Esq. .. .. 53, St. Leonard's Road, E.
Moore, S. H. Esq. .. .. Holborn Union Infirmary, N.
Morgan, J., Esq., ... 3, Sussex Place, Hyde Park Gardens, W.
Morrison, John R., Esq. .. 57, Cannon Street Road, E.
Morton, Andrew S., M.B. .. 26, Weymouth Street, N.
Mosse, H. R., M.D. .. .. Hobart House, Clapham Common, S.W
Mould, J. T., Esq. .. .. 1, Onslow Crescent, S.W.
Mullin, J. F. L., M.D... .. 9, Mount Place, London Hospital, E
Murphy, T. C., Esq. .. .. 28, Brunswick Square, W.C.
Murphy, W. K., M.D... .. 29, Queen Anne Street, W.
Murray, John, M.D. .. .. 17, Westbourne Square, W.
Murray, H. M., M.D. .. .. 27, Savile Row, W.
Mushet, W. Boyd, M.D. .. 123, Blenheim Crescent, W.
Muspratt, C. D., Esq. .. .. Nightingale Lane, Clapham Common, S.W.
Myddleton, E. H., Esq. .. Camberwell House Asylum, S.E.
Myers, A. T., M.D. .. .. 24, Clarges Street, W.
Neale, W. H., M.D. .. .. 59, Queen's Gardens, Hyde Park, W
Nelham, A. Esq. .. .. 117, Warwick Street, S.W. (resigns)
Neville, T., M.D. .. .. 85, Pimlico Road, S.W.
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Newsholme, A., M.D... .. 29, High Street, Clapham, S.W.
Nicholls, H., Esq. .. .. Stevenage, Herts.
Nicholson, J. W., Esq... .. Glenbrook, Upper Edmonton
Nicholson, Williams, M.D. .. 2, Kent Villas, East Greenwich, S.E.
Noble, H. B., Esq. .. .. Tasman Road, North Stockwell, S.W
Noble, J. B., Esq. .. .. 33, Trinity Square, S.E.
Nootl, W. M., Esq. .. .. 8, Kensington Park Road, W.

Norton, Algernon C. W., M.D. .. 112, Westbourne Grove, W.
Norton, Arthur T., Esq. .. 101, Harley Street, W.
Norton, G. Everitt, Esq. .. 63, Upper Gloucester Place, W.
Nundy, Edward, Esq. .. .. Royal London Sick Dispensary, St. George's Cross, S.E.
Nunn, T. W., Esq. .. .. 8, Stratford Place, W.
Oakes, A. M.D. .. 99, Priory Road, N.W.
O'Connor, Bernard, M.D. .. 64, Brixton Road, S.W.
Oldfield, Frank, Esq. .. .. 174A, Boyson Road, S.E.
Oliver, James, M.B. .. .. 11, Montague Street, Russell Square, W.C.
Oliver J. Ferens, M.D. .. Chelsea
Openshaw, T. H., M.B. .. Poplar Hospital, E.
Orford, John, Esq. .. .. Royal Free Hospital, Gray's Inn Road, W. C.
Ormsby, G. H., M.B. .. 2, High Street, Wood Green, N.
Orton, G. H., M.B. .. 30, Lower Phillimore Place, W.
Osborne, Hy., M.D. .. .. 10, Churchfield Road, Ealing
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Owen, Rayley, Esq. .. .. 61, Cleveland Square, Hyde Park, W.
Owen, William, Esq. .. 201, Bethnal Green Road, E.
Owles, J. A., M.D. .. 106, Philbeach Gardens, S.W.
Palmer, James F., Esq. .. 8, Royal Avenue, Chelsea College, S.W.
Paradise, T. D., Esq. .. .. Surbiton Road, Surbiton
Parkes, L. C., M.D. .. .. 51, Cadogan Square, S.W.
Parr, G. C., M.D. .. .. 18, Upper Phillimore Place, W.
Parsons, H. F., M.D. .. .. Whitehall, S.W
Parsons, J. I., Esq. .. .. 90, Redcliffe Gardens, South Kensington
Patmore, T. D., Esq. .. .. 116, Conningham Road, Shepherd's Bush W
Paterson, Rev. H. S., M.D. .. 59, Cathcart Road S.W.
Paton, R. T., M.D. .. .. 11, Lawrence Road, Bow, E.
Peacocke, J. H. C., Esq., Surg. I. M. D. Wanderers' Club, Pall Mall, S.W.
Pearce, Joseph C., M.D. Manor House, Brixton Rise, S.W.
Pearce, Walter, M.B. B.S. (Lond.) St. Mary's Hospital, Paddington, W
Pearcey, W., M.B. .. .. 214, Lewisham High Road, S.E.
Pearson, David R., M.D. .. 23, Upper Phillimore Place, W.
Pedler, George H., Esq. .. 6, Trevor Terrace, Rutland Gate, S.W.
Pedley, R. D., Esq. .. .. Idminster Road, West Norwood, S.E.
Penkivil, J. H., Esq. .. .. 102, Battersea Park Road, S.W.
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Pett, Alfred, M.D. .. .. 57, Avenue Road, N.W.
Phibbs, R. F., Esq. .. .. 30, Sutherland Gardens, W.
Phillips, G. R. T., Esq. .. 20, Leinster Square, W.
Phillips, S., M.D. .. .. 12, Radnor Place, W.
Philpot, H. J., Esq. .. .. Warwick Road, N.W.
Pickett, Jacob, M.D. .. .. Colville Square, W.
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Pilkington, F. S., Esq. .. .. 3, Merrick Square, S.E.
Pinto, J. O., M.D. .. .. St. Thomas's Hospital, S.E.
Pirie, J. M. G., M.D. .. .. 49, Redcliffe Gardens, S.W.
Pitt, E. G., M.D. .. .. 17, Prince's Square, St. George's East, E.
Pitt, F. D., Esq. .. .. 1, Princes Street, Storey's Gate, S.W.
Plaister, W. H., Esq. .. .. Pembury House, Tottenham
Poignand, M., M.D. .. .. 145, Highbury New Park, N.
Poland, J., Esq. .. .. 27A, Finsbury Square, E.C.
Pollard, Joseph, Esq. .. .. 59, Great Marlborough St. W.
Pollen, H., M.D. .. c.o. Grindlay & Co., 55, Parliament St., S.W.
Pollock, G. D., Esq. .. 36, Grosvenor Street, W.
Pook, W. J., Esq. .. 123, Copenhagen Street, N.
Potter, J. B., M.D. .. .. 20, George Street, Hanover Square, W
Potts, Wm. Esq. .. .. 2, Albert Terrace, N.W.
Poulain, Victor, M.D. .. .. 124, Fulham Road, S.W.
Powell, H. M., Esq. .. .. 2, South View, Merton Road, S.W.
Powell, J. J., Esq. .. .. 200, Stanhope Street, Regent's Park, N.W.
Powell, Josiah T., M.D. .. 347, City Road, E.C.
Powell, S. K., M.D. .. .. 7, Thayer Street, W.
Power, C. J., M.D. .. Metropolitan Free Hosp., Commercial St. E.
Prankerd, O. R., Esq. .. .. 21, Church Crescent, South Hackney N.
Price, W. E., M.B. .. .. 7, Soho Square, W.
Priestley, R. C., M.B. .. 65, Upper Berkeley Street, W.
Propert, J. L., Esq., M.B. .. 112, Gloucester Place, Portman Square, W.
Pugh, J. H. Esq. .. 46, Marsham Street, Westminster, S.W
Purkiss, Arthur, M.D. .. .. 53, Kew Bridge Road, Middlesex
Radcliffe, C. B., M.D. .. .. 25, Cavendish Square, W.
Ramsay, William F. H., M.D. .. 67, Lancaster Road, W.
Ramskill, Jabez S., M.D. .. 5, St. Helen's Place, E.C.
Rawes, W., Esq. .. .. London Hospital, E.
Rawlins, H. A., Esq. .. .. 6, Sutherland Gardens, W.
Ray, C., M.D. .. .. 72, Bishop's Road, W.
Rayner, W., Esq. .. .. 4, Dorset Square, W.
Read, M., Esq. .. Hospital for Sick Children, Gt. Ormond St., W.
Reed, G., M.D., .. 2, Russell Chambers, Bury Street, W.C.
Reed, H. A., Esq. .. 33, Trinity Square, S.E.
Rees, John, Esq. .. 48, Sebert Road, Forest Gate, E.
Rees, W., Esq. .. .. 129, Queen's Crescent, Haverstock Hill, N.W.
Reeve, H., Esq. .. .. 286, Mile End Road, E.
Reeves, H. A., Esq. .. .. 78, Grosvenor Street, W.
Reid, A., M.D. .. .. 29, Canonbury Park North, N.
Reid, John, M.D. .. 12, Bridge Avenue, Hammersmith
Reid, James, M.D. .. .. Buckingham Palace, S.W
Reid, Robert W., M.D. .. 75, Palace Road, S.W.
Renner, Charles, M.D. .. 288, Marylebone Road, W.
Renner, William, Esq. .. .. 46, Woburn Place, W.C.
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Richardson, Ralph, M.D. .. 10, Roland Gardens, South Kensington, S.W.
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Roberts, H. P., Esq. .. .. 31, Great Coram Street, Brunswick Sq., W.C.
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Roberts, C., Esq. .. .. 2, Dalton Row, W.
Roberts, C. H., Esq. .. .. 4, Cambridge Terrace, Westbourne Park, W
Roberts, H., Esq. .. .. St. Bartholomew's Hospital, E.C.
Robertson, E. B., M.B. .. Lambourne End, Essex
Robinson, R., Esq. .. .. 8A, New Cavendish Street, W.
Robinson, T., M.D. .. .. 5, Woburn Square, W.C.
Robinson, T., Esq. .. .. 9, Princes Street, W.
Robinson, W. J., Esq., ... 1, Whittingstall Road, Fulham, S.W.
Roe, A. D., M.B. .. Consumption Hospital, Brompton
Roeckel, W. J., M.B. .. .. 7, Grosvenor Street, W.
Roper, G., M.D. .. .. 19, Ovington Gardens, S.W.
Rose, W., M.B. .. 50, Harley Street, W.
Ross, D. M., Esq. .. .. 54, Upper Berkeley Street, W.
Rout, C., Esq. .. .. Hornsey Park Road, N.
Rowland, J. T., M.D. .. .. 30, Gilston Road, S.W.
Rudderforth, E. H., Esq. .. 6, Air Street, W.
Rugg, G. L., Esq. .. .. Lambeth Infirmary, Kennington, S.E
Rugg, George P., M.D. .. Stockwell Villa, Clapham Road, S.W
Rygate, J. R., Esq. .. .. London Hospital, E.
Sanders, Charles, Esq. .. Chigwell
Sanders, J. W., M.D. .. .. Bleisho Road, Clapham, S.W.
Sanderson, Hugh J., M.D. .. 26, Upper Berkeley Street, W.
Saunders, H. W., M.B. Carvalla Lodge, Upper Tooting, S.W.
Savage, J., Esq. .. .. 11, Avonmere Road, Kensington, W.
Scarth, Isaac, Esq. .. 29, Amwell Street, E.C.
Schäfer, E. A., Esq., F.R.S .. Friern Barnet, North Finchley
Schofield, A. T., Esq. .. .. 141, Westbourne Terrace, W
Sedgwick, W., Esq. .. .. 12, Park Place, Upper Baker Street, N.W.
Shadwell, H. W., Esq. .. .. 167, The Grove, Hammersmith, W.
Sharkey, S. J., M.B. .. .. 77, Lambeth Palace Road, S.W.
Sharpe, H. J., Esq. .. 1, Queen Street, Worship Street, E.C.
Sheehy, W. H. P., Esq. .. 4, Claremont Square, N.
Shepard, W. L., Esq. .. .. 15, Euston Road, N.W.
Shepherd, Frederick, Esq. .. 33, King Henry's Road N.W.
Shepherd, J. B., Esq. .. .. 8A, New Cavendish Street, W.
Short, T. S., Esq. .. .. King's College Chambers, Strand, W.C.
Sieveking, H. E., Esq. .. 17, Manchester Square, W.
Simmons, F., M.B. .. .. Chelsea Hospital for Women
Simon, John, Esq., C.B. .. 40, Kensington Square, W.
Simpson, G. A. G., Esq. .. 23, Warwick Road, Maida Hill, W.
Skinner, D. S., M.D. .. .. 1, Bedford Gardens, W.
Skinner, W. A., Esq. .. .. 45, Lower Belgravet Street, S.W.
Skipper, E., M.D. .. .. 66, Navarino Road, Dalston, E.
Smallpeice, W. D., Esq. .. 42, Queen Anne's Gate, S.W.
Smith, Charles Wyatt, Esq. .. 149, High Street, Poplar, E.
Smith, E. S., Esq. .. .. Carlton House, Pembridge Villas, W.
Smith, Fred. M., M.D. .. Great Hadham
Smith, H., Esq. .. .. 82, Wimpole Street, W.
Smith, H. L., Esq. .. .. 80, Tollington Park, N.
Smith, Thomas, Esq. .. .. 5, Stratford Place, Oxford Street, W.
Smith, W. R., M.D. .. .. 74, Great Russell Street, W.C.
Smith, W. Wilberforce, M.D. .. 14, Stratford Place, W.
Smith, A. C. B. Esq. .. .. 1, Hill Side, Crouch End, N.
Snell, Edmund G. C., Esq. .. 102, Bonner Road, Victoria Park, E.
Snow, Herbert L., M.D. .. 40, Norfolk Terrace, W.
Snow, L. M., Esq. .. 122, King Henry Road, N.W.
Southcombe, A. G., Esq. St. Bartholomew's Hospital, E.C. [Bush
Spence, J. S., M.D. .. .. Oxford Ho., 329, Goldhawk Rd., Shepherd's
Spicer, K. H. S., M.B. .. 15, Bridge Avenue, S.W.
Spong, C. S., Esq. .. Seamen's Hospital, Greenwich, S.E.
Squire, Balmanno, M.B. .. 24, Weymouth Street, W.
Stanley, W. H. R., M.D. .. 29, Palace Road, S.E.
Steavenson, W. E., M.D. .. 15, Henrietta Street, W.
Steele, Frank, Esq. .. .. 22, Bloomsbury Street, W.C.
Steer, W., Esq. .. .. St. Olave's Infirmary, Tower Road, S.E.
Stephens, L. E. W., Esq. .. East Dulwich, S.E.
Stericker, W., M.B. .. .. 24, Tollington Park, N.
Stevenson, James, M.D. .. 466, Edgware Road, W.
Stevenson, N., Esq. .. .. 51, Wimpole Street, W.
Stirling, W. B., M.D. .. .. 86, High Street, Whitechapel, E.
Stokes, F. A., Esq. .. .. Rose Park Lodge, Upper Tooting, S.W.
Stone, W. D., M.D. .. .. 13, Oxford Terrace, Hyde Park, W.
Stone, W. H., Esq. .. 1, The Sanctuary, Westminster
Stonham, C., Esq. .. .. 99, Gower Street, W.C.
Stott, T. S., Esq. .. .. 1, Highgate Road, N.W.
Stubbs, P. B. T., Esq. .. .. 61, Ackendon Road, Canonbury, N.
Sturges, Octavius, M.D. .. 85, Wimpole Street, W.
Sumner, J. H. S., Esq. .. 74, Victoria Park Road, E.
Sutton, H. G., M.B. .. .. 9, Finsbury Square, E.C.
Sutton, R. S., M.D. .. .. 12, Granville Place, W.
Swaby-Smith, C., Esq. .. .. Tyssen House, Staines Road, Bedfont, N.W.
Swan, E. G., Esq., Surg. R.M. .. 4, Lanhill, St. Peter's Park, W.
Swain, E., Esq. .. .. Three Counties Asylum, near Baldock.
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Swinson, G. N., Esq. .. .. Ashwell, Herts
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Lewis, Charles, Esq. .. .. 67, Sandgate Road, Folkestone
Lewis, C. G. M., Esq. .. .. Wingham, Sandwich
Lewis, Henry, M.D. (Brussels) . West Terrace, Folkestone
Lister, Charles Henry, M.D. .. Addiscombe Road, East Croydon
Lloyde, Thomas Franklin, Esq. .. Reigate
Lochee, Alfred, M.D. .. . Oaten Hill House, Canterbury
Long, Arthur, Esq. . . 1, Priory Road, Dover
Lorrimer, J. A., Esq. . .. 33, Castle Street, Farnham
Lory, William John, Esq. .. 10, Beckenham Road, Penge
Lovegrove, Charles, M.D. .. The Oaks, Hythe
Lovell, W. F., Esq. .. .. Queen Street, Deal
Lowdell, Charles, Esq., Surg.-Maj. 9, Charles Road, St. Leonard's-on-Sea
Lucas, Geo., Esq. .. .. Uckfield, Sussex
Lyddon, R., Esq. .. .. 13, Albion Place, Ramsgate
Mackey, E., M.D. .. .. Brunswick Road, Hove
Mackintosh, Matt., Esq. .. Crowborough, Tunbridge Wells
McKellar, E., M.D. .. .. Woodleigh, Preston Road, Brighton
McQueen, Thomas, M.B. . Sussex House, Bolton Road, Eastbourne
Manning, Joseph, Esq. .. .. Wye, Ashford
Mansell, E. R., Esq. .. .. 9, Belle Vue, West Hill, Hastings
Mansell-Jones R., Esq. . Gilfach, near Denbigh
Manser, Frederick, Esq. .. The Priory, Tunbridge Wells
Marrack, A., Esq. .. . Tunbridge Wells
Marsack, Blackall, Esq. .. Tunbridge Wells
Marsh, Howard, Esq. .. .. 36, Bruton Street, W.
Marshall, Edward, Esq. .. .. Church House, Mitcham
Marshall, John, Esq. .. .. 13, Liverpool Street, Dover
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Martin, A. Rae, Esq. .. .. Rochester
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Martin, Robert, M.D. .. .. 51, Queen Anne St., Cavendish Sq., W.
Martin, Timothy H., Esq. .. Northgate, Crawley
Maynard, J. C., Esq. .. .. Erith
Medcalf, Ernest Sexton, Esq. .. 16 Hova Villas Cliftonville, Brighton
Meredith, J. E., Esq. .. .. 9, Albion Place Maidstone
Miller, John N., M.D. .. .. Heath End, Blackheath, S.E
Miller, Richard May, M.D. .. Brafield, Church Road, Upper Norwood
Monckton, S., M.D. .. .. Maidstone (dead)
Moncton, D. H., N.D. .. .. Maidstone [Upper Norwood, S.E.
Moore, Daniel, M.D. .. .. Hastings Lodge, Dulwich Wood Park
Moore, Ebenezer, Esq. .. Lifford House, Dartford
Moore, W. Withers, M.D. .. 18, Brunswick Square, Brighton
Morshead, E. G. A., M.D. .. 12, Quarry Street, Guildford
Morton, John, M.B. .. .. Eastgate House, Guildford
Morton, S., M.B. . Wellesley Villa Croydon
Nankivell, A. Wolcot, Esq. .. St. Bartholomew's Hospital, Chatham
Napper, Albert, Esq. .. .. 2, Chichester Place, Guildford
Napper, A. Arthur, Esq. . Broad Oak, Cranleigh
Newington, Herbert F. H., Esq. .. Tilehurst, Sussex
Newth, Alfred, H., M.D. .. Haywards Heath
Nicholls, F., M.D. .. .. 73, High Street, Croydon
Nicholson, Arthur, M.D. .. 98, Montpelier Road, Brighton
Nisbett, R. Innes, Esq. . Overcliff, Gravesend
Noad, Henry Carden, Esq. . Chesham Lodge, Lower Norwood
Oldham, C. J., Esq. .. .. 1, Brunswick Place, Brighton
Oldman, Charles E., M.D. .. The Grange, Blechingley
Ord, George Rice, Esq. .. Streatham Hill, S.W.
Ormsby, John, M.D. (Brussels) .. 7, Effingham Crescent, Dover
Osborn, Ashby G., Esq. .. 2, Priory Road, Dover
Oxley, A. R., M.A., M.B. .. Comsbro,' Leigham Court Road, Streatham Common, S.W.
Palmer, E. S., M.B. .. .. Park House, St. Peter's, Thanet
Pardington, G. L., M.D. . The Spa, Tunbridge Wells
Parsons, Charles, M.D. .. .. 2, St. James's Street, Dover
Parsons, Francis Henry, M.D. .. The Burst, West Worthing
Paul, John H., M.D. .. .. The Terrace, Camberwell, S.E.
Paxton, Francis Valentine, M.B. .. West Street Chichester
Payne, A., Bruce, Esq. .. .. 3, Desta Villas, Walmer, Deal
Pearce, Henry, Esq. .. .. Hurstpierpoint
Pearse, T. F., M.D. .. .. 31, W Brook Street, W.
Penfold, F. W. H., Esq. .. Rainham, Kent
Penfold, Henry, Esq. .. . 2, Brunswick Place, Brighton
Penhall, John T., M.D. .. 5, Everfield Place, St. Leonards

Parkes, Charles T., Stud., M.B.	80, Kimberley Road, Sydenham
Perry, C. F., M.D. (Bristol)	11, Eastcliff Place, Folkestone
Phelps, Philip, Esq.	Ashford, Kent
Phillips, W. A., M.D.	4, Court Street, Faversham
Philpot, Chas. W., M.B.	1, North End, Croydon
Pinching, C. J. W., Esq.	79, New Road, Gravesend
Pittock, George M., M.B.	13, Cecil Square, Margate
Plimmer, H. G., Esq.	Wallington, Victoria Road, Upper Norwood, S.E.
Plomley, John Fred, M.D.	Maidstone
Pocock, C. J., Esq.	24, Carlton Place, Brighton
Pollock, W., M.B.	40, Tennison Road, Tunbridge
Poole, George Kenneth, M.D., Surg.-Major M.S.	33, Anerley Hill, Upper Norwood
Porter, William Elliot, Esq.	Lindfield, Sussex
Pragnley, H. J., Esq.	100, Anerley Road, Anerley, S.E.
Prankerd, O. R., M.D.	6, Eaton Terrace, Kemptown, Brighton
Price, William P., M.D.	1, Ethelbert Crescent, Margate
Purvis, Prior, M.D.	5, Lansdown Place, Blackheath, S.E.
Rand, John, Esq.	Walton Heath Grove Hill, Dulwich
Ranking, John E., M.D.	15, Mount Ephraim Road, Tunbridge Wells
Raven, Thomas F., Esq.	Barfield House, Broadstairs
Ray, E. Reynolds, Esq.	Dulwich, S.E.
Reid, J., Esq.	12, Lower Bridge Street, Canterbury
Reid, T. Whitehead, Esq.	34, St. George's Place, Canterbury
Richardson, A. J., M.D.	45, St. John's Terrace, West Brighton
Richardson, C. E., M.D.	Station Road, Abbington, near Brighton
Richardson, Thomas Arthur, Esq.	24, London Road, Croydon
Richmond, Onslow R., Esq.	Lodgewood, Gravesend
Richmond, S., M.D.	Greenhithe, Kent
Rigden, George, Esq.	12, Burgate Street, Canterbury
Rix, Benjamin, Esq.	14, Mount Ephraim Road, Tunbridge Wells
Robbs, C. E., Esq.	Gravesend Hospital, Kent
Roberts, Bransby, M.D.	Badlesmere House, Eastbourne
Roberts, Henry William, Esq.	Ashetown Villa, Wickham Terrace, Lewisham High Road, S.E. Dulwich, S.E.
Robertson, W. B., M.B.	St. Annes, Thurlow Park Road, West
Robinson, John, M.D.	Midhurst, Sussex
Robinson, Maj. K., M.D. (Fellow)	Priory Gate, Dover
Rogers, Robert James, Esq.	40, Cannon Place, Brighton
Roper, Alfred George, Esq.	57, North End, Croydon
Roper, Arthur, Esq	Lewisham Hill, S.E.
Ross, D. M., M.D.	9, Pavilion Parade, Brighton
Ross, John Harris, M.D.	8, St. George's Place, Brighton
Roose, E. C. R., M.D.	45, Hill Street, Berkeley Square
Rosser, Walter, M.D.	George Street, Croydon
Roth, Bernard Mathios Simon, Esq. F.R.C.S.	35, Marina, St. Leonard's-on-Sea
Routh, A. C., Esq.	33, Marina, St. Leonard's-on-Sea
Rowe, T. Smith, M.D.	Union Crescent, Margate
Russell, F. R., M.B.	High Street, Guildford
Russell, G. I., Esq.	Broadlands, Riverhead, Sevenoaks
Rutter, Joseph, M.D.	Codrington House, Brighton
Salzmann, F. W., Esq.	18, Montpelier Road, Brighton
Sams, J. Sutton, Esq.	Eltham Road, Lee, S.E.
Sankey, William, M.D.	Sutton Valence, Staplehurst
Sarjant, J., M.O.	The Hill, Northfleet, Kent
Saunders, Edwin Dawes, Esq.	Tenterden, Ashford
Savill, T. D., M.D.	6, Harley Street, W.
Schollick, T. J., Esq.	13, Haydon Place, Guildford
Schön, James Edward, Esq.	Littlebourn, Wickham Park
Scott, A., Esq.	15, German Place, Brighton
Sedgwick, Charles, Esq.	Hollingbourn, Maidstone
Sells, C. J., Esq.	White Hall, Guildford
Simpson, W. S., Esq.	104, Marine Parade, Worthing
Slaughter, Thomas G., Esq.	Farningham, Dartford
Slaughter, G. M., Esq., Brig.-Sur.	Farningham
Sloman, Herbert, Esq.	37, West Street, Farnham
Sloman, Samuel G., Esq.	Farnham
Sloman, Samuel G., jun.	38, West Street, Farnham
Smallpiece, W. D., Esq.	42, Queen Anne's Gate, St. James's Park, S.W.
Smith, Edward Kaye, Esq.	Eversfield Place, St. Leonard's-on-Sea
Smith, E. Noble, Esq.	24, Queen Anne Street, Cavendish Square
Smith, G. J. Malcolm, M.D.	Howard Lodge, Hurstpierpoint
Smith, J., Esq.	12, Thanet Crescent, Talfourd Park, Streatham, S.W.
Smith, John P. M., Esq.	118, Western Road, Brighton
Smith, Rowland, Esq.	Cobham, Surrey
Smith, Samuel Parsons, L.K.Q.C.P.	Park Hyrst, Addiscombe Road, Croydon
Smith, W. H. M., Esq.	22, London Road, Croydon
Smith, W. Woodruffe, Esq.	Sittingbourne
Smithers, Bartholomew D., Esq.	Bridge House, Crookham, Hants
Soper, William, Esq.	37, Clapham Road, London
Spooner, Charles H., Esq.	15, Victoria Road, Cliftonville, Brighton
Spurrell, Flaxman, Esq.	Belvedere, Lessness Heath, Kent
Stamford, William, Esq.	Collingwood House, Tunbridge Wells
Stedman, A., Esq.	The Croft, Great Bookham, Leatherhead
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Stilwell, Robert R., M.D.	Springcroft, Beckenham
Stone, H. S., M.B.	Holmfield, Reigate
Strowers, James Herbert, M.D.	37, Finsbury Circus, E.C.
Strang, William Douglas, Esq.	13, Queen Adelaide Road, Penge
Strong, Henry John, M.D.	Whitgift House, Croydon
Styan, Thos. G., M.B.	1, Chapel Place, Ramsgate
Sutcliff, Joseph H., Esq.	Ripley, Woking Station
Sutton, William, M.D.	Camden Crescent, Dover
Swales, Edward, Esq.	Sheerness
Taafe, Richard P. Burke, M.D.	45, Old Steine, Brighton
Tamplin, Charles Harris, Esq.	44, Royal Road, Ramsgate
Tannahill, F. F., M.B.	H.M. Prison, Brecknock
[illegible]	[illegible]

Taylor, Henry S., Esq.	14, Quarry Street, Guildford
Taylor, John, Esq.	The Chimes, Hawkhurst
Tayler, W. H., M.D.	Tudor House, Anerley, S.E.
Terry, John Jenkin, Esq.	The Cottage, Wittersham, Ashford
Thompson, Charles Kobert, Esq.	Westerham, Edenbridge
Thompson, Henry George, M.D.	8, Aldscombe Villas, Croydon
Thornton, B., Esq.	14, Cecil Square, Margate
Thornton, William H., Esq.	Berkeley Lodge, Margate
Thornton, W. P., Esq.	28, St. George's Place, Canterbury
Thurston, Edward Whitfield, Esq.	8, Elwick Road, Ashford
Tomkins, Charles P., L.K.Q.C.P.	Beddington, Croydon
Travers, O. R., Esq.	San Nicolas, St. Leonard's-on-Sea
Trent, Thomas, Esq.	Tooting
Treutler, William John, M.B.	Fletching, Uckfield
Treves, W. Knight, Esq.	31, Daley Square, Clifton ville, Margate
Tribe, H. J. B., Esq.	25, Paddock Terrace, Chatham
Trollope, Thomas, M.D.	6, Maze Hill, St. Leonard's
Trowers, Arthur, Esq.	Lynch Point, Broadstairs
Tuke, Montague, Esq.	Sutton Valence, Staplehurst
Turner, Arthur N., Esq.	Egremont House, Thicket Road, Penge, S.E.
Turner, John Sidney, Esq.	Stanton Ho., Anerley Rd., Up. Norwood, S.E.
Turner, Richard, Esq.	22, School Hill, Lewes
Tyacke, Nicholas, M.D.	Westgate, Chichester
Tyson, William Joseph, M.D.	14, Langhorne Gardens, Dollestone
Underwood, John, M.D.	41, Robertson Street, Hastings
Uhthoff, J. Caldwell, M.D.	46, Western Road, Hove, Brighton
Upton, Herbert C., Esq.	28, Medina Villas, Hove
Vernon, Mark H. H., Esq.	Horsham
Verrall, Thomas Jenner, Esq.	95, Western Road, Brighton
Vipan, C., Esq.	Ford Bank, Dane Road, St. Leonard's-on-Sea
Vise, C., M.D.	General Hospital, Tunbridge Wells
Wacher, Frank, Esq.	Kingsbridge, Canterbury
Wagstaffe, W. W., M.B.	Purleigh, St. John's Hill, Sevenoaks
Walford, Edward, Esq., M.D.	2, Paragon, Ramsgate
Walker, George E., Esq.	4, St. Mary's Vale, Chatham
Wallis, Frederic, Esq.	Dorset House, Bexhill, Hastings (resigns)
Wallis, F. M., Esq.	Barrack Hall, Bexhill, Hastings
Wallis, H., Esq.	Alfriston, Polegate, Sussex
Wallis, William, Esq.	Oak Lea, Harthelt, Tunbridge Wells
Walter, Clement C., Esq.	Pencester Road, Dover
Walters, John, M.D.	Church Street, Reigate
Watson, George Samuel, Esq.	Mount Ephraim Road, Tunbridge Wells
Watson, William, Esq.	Theobald House, Rochester
Weekes, Henry, Esq.	Mansion House, Brompton, Chatham
Wheeler, F. J., Esq.	Parkhurst Road, Bexley
Wheeler, Thomas, Esq.	Bridge House, Bexley, S.E.
White, Charles J., M.D.	Snodland, Rochester
White, E. A., M.D.	14, Cecil Sq., Margate
White, E. W., M.D.	Kent Lunatic Asylum, near Canterbury
White, P. H., M.B.	Ryde House, Woking
White, R., M.B.	7, Clarendon Place, Maidstone
White, S. S., M.D.	41, Warrior Street, St. Leonard's-on-Sea
Whiting, Henry T., Esq.	Ceylon
Whittle, E. G., M.B.	61, Dyke Road, Brighton
Wiles, J., Dep.-Surg.-Gen.	2nd Reg. District Depot, Guildford
Wilkin, John F., M.D.	Beckenham
Wilkinson, J. Cooper, Esq.	Ashford
Wilks, George, M.B.	Ashford
Wills, J. R. B., M.B.	Bexhill, near Hastings
Williams, S. W. Duckworth, M.D.	County Asylum, Hayward's Heath
Williams, Hutchins, Esq.	Bloomville, Lee
Winter-Fisher, S., M.D.	13, Marine Parade, Brighton
Winter, John N., Esq.	13, Montpelier Road, Brighton
Wintle, H., M.D.	Church Road, Forest Hill, S.E.
Wood, C., Esq.	The Hospital, Dover
Wood, E. J., M.B.	Lees Lodge, Yalding, Kent
Woodman, Samuel, Esq.	Prospect Terrace, Ramsgate (Island)
Worship, John Lucas, Esq.	Manor House, Riverhead
Yate, Frederick, Esq.	Godalming
Young, Edmund, Esq.	Steyning, Hurstpierpoint
Young, Edward, Esq.	The Hall House, Hartlip, Sittingbourne
Young, W. W., M.D.	Aldershot

MEMBERS UNATTACHED (355).

Adey, C. A., M.D.	St. Leonard's-on-Sea
Air, A. C., Jun., Esq.	2, Bellevue, South Norwood
Alban, E., Esq.	Lindfield, Sussex
Alden, E. W., Esq.	7, Old Villas, Gipsy Road, S.E.
Alexander, T. A., M.B.	Church Street, Epsom
Alliott, A. J., M.D.	St. John's Hill, Sevenoaks
Andrew, G., M.D.	The Terrace, Gravesend
Anness, F. R., Esq.	Seamen's Infirmary, Plymouth
Archibald, J., M.D.	Lynton House, Brixton Rise, S.W.
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Atkey, W. T., Esq.	Grafton Road, Worthing
Atkins, F., Esq.	Plumstead
Austin, J. A., Esq.	West Norwood Lodge, S.E.
Austin, Thomas J., Esq.	Cromwell Road Place, South Norwood (Island)
Baker, C. E., Esq.	Tenterden
Barker, Samuel, M.D.	40, Eaton Place, Brighton
Barnes, A. R., M.B.	Pembury
Bartleet, W., Esq.	3, Cecil Road, Deal
Batty, W. E. L., Esq.	Dulwich, Kent
Bell, W. R., M.D.	Victoria Hotel, Hastings
Bennett, E., M.D.	14, Upper Rose, Chatham
Benson, A., M.B.	Sutton, Surrey
Bentley, C. E., Esq.	Ramsgate
Bolton, Mr. [illegible]	Cranbrook, Kent

Bevan, W. L. P., Esq. .. .. Lydd, Kent
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Bluett, G. A., Esq. .. .. 66, Upper Wilbury Road, Brighton
Bostock, A. S., Esq. .. .. North Pallant, Chichester
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Boucher, A. H., M.D. .. .. Sydenham
Boustead, R., M.D. .. .. 4, Adelaide Crescent, Brighton
Boyes, J. F., M.B. .. .. Cliftonville, Brighton
Bradley, C. L., Esq. .. .. 23, Albany Villas, Hove
Brodie, W. H., M.D. .. .. Downing Street, Farnham
Brookhouse, C. T., Esq. .. .. 43, Manor Road, New Cross, S.E.
Brown, C. H., M.B. .. .. Godalming
Brown, John, Esq. .. .. St. John's Hill, New Wandsworth, S.W.
Brown, R. G., Staff-Surg. R.N. .. .. R.M. Barracks, Sheerness
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Brownrigg, J. A., Esq. .. .. Streatham Common
Bryan, F. C., Esq. .. .. Littlehampton
Bull, J. W., M.D. .. .. Chislehurst
Bunn, C. G., Esq. .. .. 10, Weston Street, Upper Norwood
Burgess, W. F. R., M.D. .. .. Langham Cottage, Streatham
Caldwell, R., Esq. .. .. St. Bartholomew's Hospital, Chatham
Carpenter, E., Esq. .. .. Albemarle Road, Beckenham
Cash, J. T., Esq. .. .. Earsfield Road, Wandsworth Com., S.W.
Chadwick, Chas., M.D. .. .. Lynncourt, Broadwater Down, Tunb. Wells
Charles, T. C., M.D. .. .. Coventry Park, Streatham
Chatterton, W., Esq. .. .. Bromley, Kent
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Clark, G. B., M.D. .. .. Thurlow, Park Road, Dulwich
Clark, R., Esq. .. .. Lee Park, Blackheath
Clarke, C. F., Esq. .. .. 124, Crescent Road, Plumstead
Clarke, Ernest, M.B. .. .. 21, Lee Terrace, Blackheath
Clitherow, R. E., Esq. .. .. Lancaster House, Peckham Rye, S.E.
Close, E. N., Esq., ... H.M. Convict Department, Knapp Hill, Woking, Surrey
Clutte, C. P. B., Esq. .. .. Lower Tooting
Coates, W. H., Esq. .. .. Church Road, Tunbridge Wells
Cock, Edward, Esq. .. .. Dean Street South, S.E.
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Coleman, C. A., M.D. .. .. Streatham Common, S.W.
Collier, W., Esq. .. .. Hastings
Collingridge, W., M.B. .. .. 65, Tressillian Road, St. John's, S.E
Collins, W. Grosett, M.D .. .. Midhurst
Cones, J. A., Esq. .. .. Burgess Hill, Sussex
Connor, J. H. T., Esq. .. .. St. John's Hill, Battersea Rise
Cook, T. D., M.B. .. .. 15, Paragon, New Kent Road
Cooper, P., Esq. .. .. Blackheath, S.E.
Coryn, W. J., Esq. .. .. Acre Lane, Brixton, S.E.
Cowen, Geo., M.D. .. .. New Malden, Surrey
Crane, C. R., Esq. .. .. 8, Clermont Terrace, Brighton
Cressy, W. E., M.B. .. .. Wallington
Cronk, H. G., Esq. .. .. Repton, near Burton-on-Trent
Curling, T. B., Esq., F.R.S. .. .. 27, Brunswick Square, Brighton
Curtis, W. K. Esq. .. .. Burgate Street, Canterbury
Daldy, F. S., Esq. .. .. Horsham
Davidson, A. D., Esq. .. .. 11, Somerset Place, Swansea
Davies, R. C. N., Esq. .. .. Rye
Davis, A.R., Esq. .. .. Hythe, Kent
Davis, Theodore, Esq. .. .. Devon House, Caterham Valley
Dell, J. F., Esq. .. .. Staplehurst, Kent
Dendy, W. C. Esq. .. .. Perry Vale, Forest Hill, S.E.
Dickinson, W., G., Esq. .. .. High Street, Wandsworth
Dill, John F. Gordon, Esq. .. .. 6, Brunswick Place, Hove, Brighton
Dill, R., M.D. .. .. 19, Regency Square, Brighton
Dixey, A. C., Esq. .. .. 12, Castle Street, Dover
Dodd, A. H., Esq. .. .. 93, Sackville Road, West Brighton
Dodd, H. A., Esq. .. .. 12, Selborne Road, West Brighton
Dolton, W. Blucher, Esq. .. .. 2, Blackheath Park Terrace, Blackheath
Donald, D., M.D. .. .. Streatham, S.W.
Donkin, C., Esq. .. .. Broughton, Faversham
Dorin, A. F. L., Esq. .. .. Clapham Road
Doubleday James, Esq. .. .. Chiddingfold, Godalming
Doudney, E., Esq. .. .. New Romney
Dowding, A. W., Esq. .. .. St. Leonard's-on-Sea
Duke, Benjamin, Esq. .. .. Windmill House, Clapham Common, S.W.
Dunbar, J. J. M., M.D. .. .. Hedingham House, Clapham Common, S.W
Dutton, Thomas, Esq. .. .. Sidlesham, Chichester
Edwards, E. N., Esq. .. .. Goldsmid Road, Brighton
Elliot, John, Esq. .. .. Belvedere
Elliot, Norman, Esq. .. .. 93, Denmark Hill, S.E.
Embleton, D., M.B. .. .. Great Doods, Reigate
England, R., M.D. .. .. 30, Pencester Road, Dover
Erskine, W., M.D. .. .. Peak Hill, Sydenham
Evershed, C. L., Esq. .. .. Arundel
Fairland, S. T., Esq. .. .. Woolwich
Fiaser, J. M., M.D. .. .. Eastbourne
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Fitzmaurice, R. Esq. .. .. Lindfield, Sussex
Flint, A., Esq. .. .. Adrian Square, Westgate-on-Sea
Forsyth, Alexander, M.D. .. .. 11, Park Terrace, Greenwich
Fowler, C. R., M.B. .. .. 1, Nelson Terrace, Clapham
Fraser, Frank, Esq. .. .. Tunbridge Wells
Frazer, Robert J., L.R.C.P. .. .. 5, Sisters Terrace, Lavender Hill, Clapham
Frew, W. S., M.B. .. .. Knapphill, Woking
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Fuller, L. H., Esq. .. .. Streatham Hill, S.W.
Gadd, J. P. A., M.D. .. .. Guildford
Gamgee, A., M.D., F.R.S. .. .. St. Leonard's-on-Sea
Garnham, R. W., Esq. .. .. 74, Loudon Road, Herne Hill, S.E.
Gasquet, J. R., Esq. .. .. 102, Eastern Road, Brighton

Gooding, Ralph, M.D. .. .. Blackheath
Grayling, Francis, Esq. .. .. Sittingbourne
Greenway, A. S., M.D. .. .. Abbey Road, Belvedere, Kent
Gresham, F. C., M.D. .. .. Bromley Common, Kent.
Guthrie, James, M.D. .. .. Esher
Hague, Samuel, M.D. .. .. 277, Southampton Street, Camberwell
Hanly, Edward, M.D. .. .. Alfred Road, Brighton
Harrison, G., Esq. .. .. 11, Paragon, Brixton Hill
Hasell, E. S., Esq. .. .. Northern Branch Dispensary, Brighton
Hastings, G., M.D. .. .. Ashtead
Harvey, T. P., Esq. .. .. St. Leonard's
Haughton, E., M.D. .. .. Upper Norwood
Head, R. L. B., Esq. .. .. 172, Hartfield Road, Wimbledon
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Ilott, Herbert J., M.D. .. .. Bromley
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Jackson, John, M.D. .. .. 5, Brunswick Terrace, Brighton
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Hewetson, H. B., Esq.	Hanover Square, Leeds
Hewetson, Richard, Esq. ..	Bootham, York
Hey, Samuel, Esq.	Albion Place, Leeds
Higgins, G. Hodgson, Esq ..	Beckett Terrace, Leeds
Hinchliffe, Matthew, M.D. ..	Wellington Road, Dewsbury
Hindle, F. T., Esq.	Askerne, Doncaster
Hingston, J. T., Esq.	North Riding Asylum, Clifton, York
Hirst, S. C., Esq.	Bowling, Bradford
Hobson, L. J., M.D.	Scarborough Lodge, Victoria Park, Harrogate
Holdsworth, S., M.D.	West Parade, Wakefield
Holdsworth, S. R., Esq. ..	7, Clarendon Terrace, Kenilworth
Hollings, Robert, M.D. ..	Grove House, Wakefield
Hood, William, Esq.	Castlegate, York
Horne, J. F., Esq.	Barnsley
Horne, John, M.D.	117, Albemarle Crescent, Scarborough
Howard, James, Esq.	Attofts, Normanton
Hunt, H. J., Esq.	Harrogate
Hunter, W. L., M.B.	Pudsey
Hutchinson, C. F., M.D. ..	South Cliff, Scarborough
Ingham, Amos, M.D.	Haworth near Keighley
Inkster, S. M., M.D.	Fulwood Road, Sheffield
Irving, J., M.B.	2, Greenhead Road, Huddersfield
Jackson, Arthur, Esq.	Wilkinson Street, Sheffield
Jackson, Ed., M.B.	81, Osborne Road, Newcastle-on-Tyne
Jacob, Ernest Henry, M.D. ..	12, Park Street, Leeds
Jalland, W. H., Esq.	St. Leonard's House, Museum Street, York

Jessop, T. R., Esq. .. .. Park Square, Leeds
Johnson T., Esq. .. .. Knottingley
Johnson, W. J., Esq. .. .. Bawtry
Johnston, J., Esq. .. .. 13, Whetley Hill, Bradford
Johnston, S., M.D .. .. Bradford
Johnstone, Thomas, M.D. .. The Grove, Ilkley
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Jubb, Abraham, Esq. .. .. Aked's Road, Halifax
Kebbell Alfred, Esq. .. .. Flaxton, York
Keeling, J. H., M.D. .. .. Glossop Road, Sheffield
Keighley, R. D., Esq. .. .. Batley, near Dewsbury
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Lambert, J., Esq. .. .. 358, Leeds Road, Bradford
Lambert, John, Esq. .. .. Farsley, Leeds
Laver, A. H., Esq. .. .. Cemetery Road, Sheffield
Laverick, John V., Esq. .. Poplar House, Hinderwell
Leach, Matthew, Esq. .. .. 26, Surrey Street, Sheffield
Leak, Thomas Mallorie, Esq. .. Hemsworth, Pontefract
Lee, F. B., Esq., F.R.C.P. .. Liversidge, near Heckmondwike
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McCracken, John, Esq. .. Easingwold, Yorks
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March, F. K., Esq. .. .. Tennyson Place, Bradford
Margetson, W. E., Esq. .. Dewsbury
Marshall, J. I. F., Esq. .. 28, St. Saviour's Gate York
Martin, J., Esq. .. .. Huddersfield
Martin, John, Esq. .. .. York
Martin, J. W., M.D. .. .. Brunswick Street, Sheffield
Mason, W. H., Esq. .. .. Leeds
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Mossop, Isaac, Esq. .. .. Hallfield Road, Bradford
Muil, William, M.D. .. .. Kirby-Moorside
Murray, J. Ivor, M.D. .. .. 8, Huntress Row, Scarborough
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Pickles, J. J., Esq. .. .. 66, Camp Road, Leeds
Pinder, W. M., M.D. .. .. Horsforth, Leeds
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Rabagliati, A. C. Francisco, M.D. .. 9, Walmer Villas, Bradford
Ramsay, James, M.D. .. .. 90, Minster Yard, York
Ramsden, W. T., Esq. .. .. Birkdale, Dewsbury
Ramskill, Josiah, Esq. .. .. 29, Meadow Lane, Leeds
Reckitt, Edward Bass, Esq. .. Boston, Lincolnshire
Reckless, Alfred, Esq. .. .. Shalesmoor, Sheffield
Rhodes, G. W., Esq. .. .. Huddersfield
Richardson, Charles, Esq. .. Brunswick Place, North Street, Leeds
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Roberts, A. M., Esq. .. .. Attercliffe, Sheffield
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Robinson, George, Esq. .. .. Burngreave Road, Sheffield
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Shera, Henry A., Esq. .. .. Glossop Road, Sheffield
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Snell, S., Esq. .. .. 17, Eyre Street, Sheffield
Spence, W. J., Esq. .. .. Syston, Leicester
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Spencer, H. M. Esq. .. .. Woodbury, near Exeter
Spowart, Thomas, Esq. .. .. 77, Montgomery Terrace Road, Sheffield
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Teale, J. W., Esq. .. .. St. Nicholas Parade, Scarborough
Teale, Thomas Pridgin, M.B. .. 20, Park Row, Leeds
Thomas, W. R., M.D. .. .. Clarke House Road, Sheffield
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Young, J., M.D. .. .. 91, Hanover Street, Sheffield

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Atkinson, G. T. A., Esq. .. North Park Road, Harrogate
Aylward, E., Esq. .. .. 9, Minster Yard, York
Bacon, A. T., Esq. .. .. Kirkstall Road, Leeds
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Birch, De Burgh, M.D. .. 16, De Gray Terrace, Leeds
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Cassidi, F. R., M.B.	Sharrow Street, Sheffield
Cautley, W. Clapham, Esq.	Killinghall, Ripley
Chadwick, C. M., Esq.	3, Park Square, Leeds
Chadwick, G. F., Esq.	The Infirmary, Dewsbury
Chestnutt, J., Esq.	Howden
Clarke, John C., Esq.	Bank House, Morley, near Leed
Clarke, H. J., M.D.	20, Hall Gate, Doncaster
Clarkson, F. R., Esq.	Tockwith, near York
Clunn, T. R. H., Esq.	County Asylum, Prestwich
Cockcroft, W., Esq.	Catterick
Colby, Geo., Esq.	New Malton
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Corry, W. W. S., Esq.	Pickering, Yorkshire
Coward, F. A., Esq.	Huddersfield
Craig, J. W., M.D.	Bingley
Cross, T. B., Esq.	6, Queen Square, Scarborough
Dale, F., Esq.	4, Belvoir Terrace, Scarborough
Dalton, H., M.D.	Harrogate
Davies, H. H., Esq.	Soainton, York
Davy, J., M.D.	156, Osborne Place, Halifax
Dearden, J. W., Esq.	Lowmoor, Bradford
Deming, John Vere C., Esq.	West Vale, Greetland, Halifax
Denton, A. H., Esq.	St. Philip's Road, Sheffield
Dobson, H., M.D.	Craiglands, Ilkley
Dobson, T., M.D.	Holbeck, Leeds
Duncan, A. G., M.B.	Clayton West, Huddersfield
Edgar, J. W., M.D.	Settle, Yorkshire
Edward, J., Esq.	H.M. Prison, Leeds
Ellis, E., Esq.	Osborne House, Halifax
Ellis, W. H., Esq.	Shipley Hall, Yorkshire
Fairmann, J.B., Esq.	336, Grimes, Thorpe Road, Sheffield
Farquhar, J., M.D.	Harrogate
Fisher, G. E., Esq.	Skipton-in-Craven
Fletcher, H. B., Esq.	Dronfield
Fligg, W., Esq.	35, Falsgrave Road, Scarborough
Forsyth, R., Esq.	Birstall, near Leeds
Fowler, A., M.D.	Carlin How, Saltburn-by-the-Sea
Frobisher, W. M., Esq.	189, Woodhouse Lane, Leeds
Garson, T. W. H., Esq.	Dolcross
Garstang, T. W. H., Esq.	Dobcross
Gelston, J. S., Esq.	General Infirmary, Doncaster
Gibson, J., M.B.	West Vale, Halifax
Gill, W., Esq.	Somerset House, St. Philip's Road, Sheffield
Glaister, J., Esq.	Rothwell, near Leeds
Gloster, E., Esq.	Eston
Goldie, G., Esq.	123, Hyde Park, Leeds
Granger, E. B., Esq.	Grassington, Skipton
Griffiths, T. Y. N., M.B.	Leeds
Gruggen, W., Esq.	Little Huthwaite, Sheffield
Hadden, W. E., M.D.	73, Micklegate, York
Haley, William Henry, Esq.	Garden Street, Wakefield
Hallilay, John, Esq.	Burley Road, Leeds
Halliwell, R. N., Esq.	Dewsbury
Halton, M. C., Esq.	Barnsley
Hamilton, A. A., Esq.	Epworth, by Doncaster
Hamilton, R., Esq.	Cawood, Selby
Harral, Chas. H., Esq.	Kirkgate, Leeds.
Harrison, A., Esq.	Sharrow Lane, Sheffield
Harrison, H. B., Esq.	38, Hanover Square, Leeds
Harrison, Joseph, Esq.	2, Hustler Terrace, Bradford
Hartley, Joshua, Esq.	New Malton
Hartley, J. F., M.B.	Ripon
Hebblethwaite, J. E., M.D.	Boston Spa, Tadcaster
Hepworth, Wm., Esq.	Yeadon, near Leeds
Herbert, Johnson, Esq.	Abbey Terrace, West Cliff, Whitby
Hick, H., Esq.	New Wortley, Leeds
Hick, J., Esq.	Public Dispensary, Leeds
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Horsfall, J. S., Esq.	Wharf Street, Sowerby Bridge
Horsfall, John, Esq.	Leeds
Howell, E. B., Esq.	Park Square, Leeds
Hudson, O. H., Esq.	Meersbrook Park, North Sheffield
Hunt, L. G., Esq.	Sheffield
Hunt, R., Esq.	Brunswick Place, Leeds
Inwood, T. B., Esq.	Tadcaster East
Jackson, Alfred, Esq.	Market Weighton
Jackson, T., Esq.	Welton, near Brough
Jefferson, R. P., Esq.	39, Leopold Street, Leeds
Johnson, C. J. B., Esq.	Kirkby Overblow, Wetherby, York
Johnson, W. J., Esq.	Bawtry
Jowett, J. E.	Bradford
Kaye, J. Somerville, Esq.	56, Spital Hill, Sheffield
Kenworthy, Robert D., Esq.	Batley
Kemp, E., Esq.	Westgate End House, Wakefield
Kerr, A. F., M.D.	Kirkleatham, Redcar
Kerry, J. D., M.D.	Treeton, Rotherham

Kernot, Abraham B., Esq.	Reeth, Richmond, Yorkshire
Kershaw, Hugh, Esq.	Pudsey, near Leeds
Kidd, P. H. Esq.	Bishopsthorpe Road, York
Leadman, A. D. H., Esq.	Borough Bridge
Le Tall, F. T., Esq.	Woodhouse, Sheffield
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Mason, W. H., Esq.	Leeds
Marsden, R. S., M.B.	Rillington, Yorkshire
Matthews, R. H., Esq.	404, London Road, Sheffield
Mathews, Samson, M.D.	222, Intake Road, Sheffield
Mawson, J. H., Esq.	c.o. Dr. Waddington, Armley, Leeds
Meade, H., Esq.	Eldon Mount, Bradford
Megginson, A. M., M.B.	Scarborough
McGregor, A. G., M.D.	Wilsden Bingley, near Leeds
McLean, C. J. R., M.B	Yeadon, Leeds
McLintock, J., M.D.	Marsden, Yorkshire
McMillan, H., Esq.	Sheffield Road, Barnsley
McNab, J., Esq.	Manningham Lane, Bradford
Major Herbert C., M.D.	Bradford
Marshall, T. H., Esq.	17, Hampton Place, Bradford
Mayo, F. H. Esq.	25, Park Square, Leeds
Mercer, R., Esq.	Whekey Hill, Bradford
Millhouse, G., Esq.	4, Church Street, Kirkstall, Leeds
Montgomery, Saml., Esq.	Ovenden, Halifax
Morison, D., M.B.	Thirsk
Morton, Samuel, Esq.	Burngreave Road, Sheffield
Morton, T. H., M.D.	Don House, Brightside, Sheffield
Mossman, R. A., Esq.	Elloughton, Brough
Munro, A. B., M.D.	Bradford
Musgrave, F. E., M.B.	181, Belle Vue Road, Leeds
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Rose, R. D., Esq.	St. Leonard's House, York
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Rutherford, J. J., Esq.	Shipley, Leeds
Salter, F. W., Esq.	9, Lyddon Terrace, Leeds
Scatchard, T. E., Esq.	Boston, Tadcaster
Scott, Robert, M.D.	Infirmary, Halifax
Sedgwick, James, M.D.	Ladywell House, Borough Bridge
Sharpe, G. M., Esq.	Farnley, near Leeds
Shirley, M. B., Esq.	Grove House Batley, Yorkshire
Shives, J., M.D.	Liversedge, Yorks
Skinner, Wm., Esq.	174, St. George's Road, Sheffield
Smith, T. H., M.D.	Headingley, Leeds
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Strickland, F. G., Esq.	14, Ward's End, Halifax
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Tacey, Dalton, Esq.	53, Hallgate, Doncaster
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Upton, Thomas Sisson, Esq.	Tadcaster
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Waddington, Isaac, M.D.	Bradford
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Wallis, F., Esq.	Doncaster
Ward. W. S., Esq.	Hamlet Road, Leeds

Watson, T. H., M.B.	..	Westbourne Road, Sheffield
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White, W., Esq.	..	Barnsley
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Wiseman, J. G., Esq.	..	Ossett, near Wakefield

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ARMY AND NAVY.

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